



CONTRACT NO. STW 01/2021

**ENVIRONMENTAL TEAM FOR
RELOCATION OF SHA TIN SEWAGE TREATMENT
WORKS TO CAVERNS – SITE PREPARATION
AND ACCESS TUNNEL CONSTRUCTION**

UNDER ENVIRONMENTAL PERMIT NO. EP-533/2017

**QUARTERLY ENVIRONMENTAL MONITORING &
AUDIT SUMMARY REPORT**

- DECEMBER 2021 TO FEBRUARY 2022 -

CLIENTS:

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CERTIFIED BY:

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DATE:

24 March 2022



Date: 30 March 2022

Your Ref.:

Our Ref.: PL-202203053

AECOM Asia Limited
c/o Site Office
21 Hang Tai Road,
Ma On Shan, N.T.

Attn: Mr. Simon Leung, CRE

Dear Mr. Leung,

Contract No. DC/2018/05

**Relocation of Sha Tin Sewage Treatment Works to Cavern – Site Preparation and
Access Tunnel Construction**

Verification of Quarterly EM&A Report (December 2021 to February 2022)

Reference is made to the Quarterly EM&A Report (December 2021 to February 2022) provided by the Environmental Team on 24 March 2022.

Please be informed that we have no adverse comments on the captioned submission. We hereby verify the report in accordance with Condition 1.9 of the Environmental Permit No. EP-533/2017.

Thank you for your attention.

Yours sincerely,

For and on behalf of

Acuity Sustainability Consulting Limited

Dr. C.F. Ng

Independent Environmental Checker

cc. Drainage Services Department
Lam Environmental Services Limited
China State Joint Venture

Attn.: Mr. Stanley Hung By e-mail
Attn.: Mr. Derek Lo By e-mail
Attn.: Mr. F. M. Chung By e-mail



TABLE OF CONTENTS

1 INTRODUCTION 7

1.1 Scope of the Report 7

1.2 Structure of the Report 7

2 PROJECT BACKGROUND 8

2.1 Background..... 8

2.2 Scope of the Project and Site Description 8

2.3 Project Organization and Contact Personnel 9

2.4 Construction Activities 10

3 MONITORING REQUIREMENTS 12

3.1 Air Monitoring 12

3.2 Noise Monitoring..... 13

3.3 Marine Water Quality Monitoring 14

4. MONITORING RESULTS 17

4.1 Air Monitoring Results 17

4.2 Noise Monitoring Results..... 17

4.3 Water Quality Monitoring Results 17

4.4 Waste Management 18

5 LAND CONTAMINATION 20

6 COMPLIANCE AUDIT 21

6.1 Air Monitoring 21

6.2 Noise Monitoring..... 21

6.3 Marine Water Quality Monitoring 21

6.4 Review of the Reasons for and the Implications of Non-compliance 21

6.5 Summary of action taken in the event of and follow-up on non-compliance
21

7 COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION 22

8 CONCLUSION 24



LIST OF TABLES

Table 2.1 *Schedule 2 Designated Projects under this Project*
Table 2.2 *Contact Details of Key Personnel*
Table 3.1 *Air Monitoring Station*
Table 3.2 *Noise Monitoring Station*
Table 4.1 *Details of Waste Disposal for Contract no. DC/2018/05*
Table 7.1 *Cumulative Statistics on Complaints*
Table 7.2 *Cumulative Statistics on Successful Prosecutions*

LIST OF FIGURES

[Figure 2.1](#) [Project Layout](#)
[Figure 2.2](#) [Project Organization Chart](#)
[Figure 3.1](#) [Locations of Environmental Monitoring Station](#)

LIST OF APPENDICES

[Appendix 2.1](#) [Environmental Mitigation Implementation Schedule](#)
[Appendix 3.1](#) [Action and Limit Level](#)
[Appendix 4.1](#) [Air Quality Monitoring Results and Graphical Presentations](#)
[Appendix 4.2](#) [Noise Monitoring Results and Graphical Presentations](#)
[Appendix 4.3](#) [Water Quality Monitoring Results and Graphical Presentations](#)
[Appendix 4.4](#) [Monthly Summary Waste Flow Table](#)
[Appendix 6.1](#) [Event and Action Plans](#)
[Appendix 7.1](#) [Complaint Log](#)
[Appendix 8.1](#) [Construction Programme of Individual Contracts](#)



EXECUTIVE SUMMARY

- i. This is the Quarterly Environmental Monitoring and Audit (EM&A) Summary Report – [December 2021 to February 2022](#) of Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction under Environmental Permit no. EP-533/2017 (Hereafter as “the Project”). The report presenting the environmental monitoring findings and information recorded during the period of [1 December 2021 to 28 February 2021](#).

Construction activities for the reporting period

During this reporting period, the principal work activities are included as follow:

Contract no. DC/2018/05 - Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction

December 2021	January 2022	February 2022
<ul style="list-style-type: none"> Retaining wall construction Road construction Drainage works Watermain installation Tunnelling works Slope stabilization works Landscape works 	<ul style="list-style-type: none"> Retaining wall construction Road construction Drainage works Watermain installation Tunnelling works Slope stabilization works Landscape works 	<ul style="list-style-type: none"> Retaining wall construction Road construction Drainage works Tunnelling works Landscape works Tree felling works

Contract no. DC/2020/05 - Relocation of Sha Tin Sewage Treatment Works to Caverns – Main Caverns Construction

The contact was commenced on 5 July 2021

December 2021	January 2022	February 2022
<ul style="list-style-type: none"> Hoarding erection Tree transplant and felling works Demolition of DSD staff quarter Site clearance Blast door erection Site formation works at ventilation shaft Construction of temporary drainage system Haul road construction 	<ul style="list-style-type: none"> Hoarding erection Tree transplant and felling works Demolition of DSD staff quarter Site clearance Blast door erection Site formation works at ventilation shaft Construction of temporary drainage system Haul road construction 	<ul style="list-style-type: none"> Hoarding erection Tree transplant and felling works Site clearance Ground investigation Construction of RC wall Construction of temporary drainage system Haul road construction Slope stabilization works Construction of temporary explosive magazine Tunneling works



		<ul style="list-style-type: none">• Site office construction• Rigid barrier construction• Construction of temporary explosive magazine
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Air Quality Monitoring

- ii. 1-hour Total Suspended Particulates (TSP) monitoring would be conducted at five monitoring stations. The sampling frequency is 3 times in every 6 days.
- iii. Air quality monitoring for the stations AM1 and AM2 were commenced on 12 April 2019 while station AM5 was commenced on 18 April 2019. Air quality monitoring for the station AM4 was commenced on 3 May 2019. The proposal for proposed fine adjustment for air and noise monitoring station at Kowloon City Baptist Church Hay Nien Primary School was agreed by EPD on 17 December 2020, therefore, air quality monitoring for the station AM3(B) was commenced on 18 December 2020. Air quality monitoring for the station AM6 was commenced on 2 November 2021 since the demolition of DSD staff quarter and ended on 31 December 2021.
- iv. No action or limit level exceedance was determined in the reporting period for the stations of AM1, AM2, AM4, AM5 and AM6.

Noise Monitoring

- v. Noise monitoring would be conducted at five noise monitoring stations once per week.
- vi. Noise monitoring for stations CM4 and CM5 were commenced on 13 April 2019 and 18 April 2019 respectively. Noise monitoring for stations CM1 and CM3 were commenced on 2 May 2019. The proposal for proposed fine adjustment for air and noise monitoring station at Kowloon City Baptist Church Hay Nien Primary School was agreed by EPD on 17 December 2020, therefore, noise monitoring for station CM2(B) was commenced on 18 December 2020. Noise monitoring for stations DM1, DM2 and DM3 were commenced on 2 November 2021 since the demolition of DSD staff quarter and ended on 31 December 2021.
- vii. Additional weekly noise monitoring from 19:00 to 23:00 was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21 and GW-RN0044-22. All the results are within the baseline level range after baseline correction.
- viii. Additional weekly night time noise monitoring from 23:00 to 07:00 on next day was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21 and GW-RN0044-22.. All the results are within the baseline level range after baseline correction.
- ix. No action or limit level exceedance was determined in the reporting period for the stations of CM1, CM3, CM4, CM5, DM1, DM2 and DM3.

Water Quality Monitoring

- x. Inspection of THEES tunnel was conducted from 30 November 2021 to 31 December 2021, during the inspection of the THEES tunnel, temporary suspension of the normal THEES operation with effluent bypass into the Tolo Harbour to provide a safe and dry zone within the THEES tunnel for the necessary inspection / maintenance works. Marine water quality monitoring programme is recommended for the THEES tunnel suspension of this Project to confirm the water quality impact of the THEES maintenance discharge.
- xi. Total 16 monitoring stations, i.e. 15 impact stations and 1 control station, as listed in Table 2.1 below. They are at the WSD flushing water intakes at Sha Tin (W1) and Tai Po (W2), cooling water intake at Chinese University of Hong Kong (CUHK) Marine Science Laboratory (C1), Yim Tin Tsai Fish Culture Zone (FCZ) (F1), Yim Tin Tsai East FCZ (F2), Yung Shue Au FCZ and Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove (F3), Lo Fu Wat FCZ (F4), Potential Subzone of Yim Tin Tsai FCZ/ Gradient Station (G1), corals at Tai Po Industrial Estate (CR1), Science Park (CR15), Sha Tin Hoi North (CR16) and Sha Tin Hoi South (CR17), Gradient Station (G1*), Pak Sha Tau Corals (C1*) and Tai Po Lung Mei Beach (TPLMB)), and finally CR9 as control station, are shown Figure 3.1 to represent the marine water sensitive receivers, which are likely affected by the Project during the THEES maintenance or emergency discharge.

Site Inspection and Audit

- xii. Within this reporting period, weekly environmental site audits, bi-weekly landscape site audits and monthly ecology site audits were conducted by Environmental Team, ER and the Contractor, IEC attended the joint site inspection on 30 December 2021 and 27 January 2022.

Complaints, Notifications of Summons and Successful Prosecutions

- xiii. ET subsequently received a public complaint regarding construction noise referred by AECOM on 3 December 2021
- xiv. The complainant reported to 1823 online dated on 1 December 2021 that the construction noise (heavy vehicle and drilling works) generated from the construction site at A Kung Lok Shan Road was causing noise nuisance to complainant's son.
- xv. According to the relevant site information provided by the Contractor of DC/2020/05, preparation works for sheet pile driving, which included machinery and materials mobilization, were carried out on 1 December 2021. Sheet pile work was commenced on 2 December 2021.
- xvi. Based on review on noise monitoring data, no exceedances were recorded at the noise monitoring station CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor

(located nearest to the concerned area) during the scheduled Leq30 min noise monitoring in November 2021. ET conducted regular noise monitoring on 3 December 2021, no exceedances was record at the noise monitoring stations CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor. Weekly noise monitoring was conducted on 7 December 2021, no exceedances was recorded at the noise monitoring station CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor. Site inspection was conducted on 8 December 2021, it is observed that breaking /drilling works by other contractor was conducted next to The Neighbourhood Advice-Action Council Harmony Manor. No heavy vehicles passing by A Kung Lok Shan Road during noise monitoring.

- xvii. After receiving the complaint, additional noise mitigation measures, including wrapping up the breaker tip with acoustic mat and deploying of temporary noise barrier have been implemented by the Contractor of DC/2020/05.
- xviii. The Contractor of DC/2020/05 was reminded to enhance the noise mitigation measures by providing sufficient temporary noise barrier. Contractor is advised to make good communication with The Neighbourhood Advice-Action Council Harmony Manor and consider scheduling the time of sheet piling and machinery / materials mobilization in order to avoid further complaint.
- xix. No notification of summons and successful prosecutions was received in the reporting period.

1 Introduction

1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) no. EP-533/2017 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction (Register No.: AEIAR-202/2016).
- 1.1.2. This report documents the finding of EM&A works for this project and during the period of [1 December 2021 to February 2022](#).
- 1.1.3. In accordance with Section 13.5 of the Project EM&A Manual, the Quarterly EM&A Summary Report should be prepared and submitted to the IEC, the ER and EPD.

1.2 Structure of the Report

Section 1 **Introduction** – details the scope and structure of the report.

Section 2 **Project Background** – summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.

Section 3 **Monitoring Requirements** – summarizes all monitoring parameters, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.

Section 4 **Monitoring Results** – summarizes the monitoring results obtained in the reporting period.

Section 5 **Compliance Audit** – summarizes the auditing of monitoring results, all exceedances environmental parameters.

Section 6 **Complaints, Notification of summons and Prosecution** – summarizes the cumulative statistics on complaints, notification of summons and prosecution

Section 7 **Conclusion**

2 Project Background

2.1 Background

- 2.1.1. The Relocation of Sha Tin Sewage Treatment Works (STSTW) to Caverns (the Project) is implemented so as to release the existing site, of a size about 28 hectares, for other uses.
- 2.1.2. In May 2012, Drainage Services Department (DSD), the Project Proponent commenced a detailed feasibility study on “Relocation of Sha Tin Sewage Treatment Works to Caverns” (the Feasibility Study). The findings of Feasibility Study affirmed that relocating the STSTW to caverns to be constructed at Nui Po Shan of A Kung Kok is technically feasible and financially viable.
- 2.1.3. The Project is a Designated Project (DP) under the Environmental Impact Assessment Ordinance (EIAO). An application for an Environmental Impact Assessment (EIA) Study Brief under section 5(1)(a) of the EIAO was submitted on 12 May 2014 with a Project Profile (No. PP-508/2014) for the Project. An EIA Study Brief (No. ESB-273/2014) was issued in September 2014. An EIA for the Project was then undertaken, as part of the Assignment, in accordance with this EIA Study Brief and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM). The location of the Project is shown [Figure 2.1](#).

2.2 Scope of the Project and Site Description

- 2.2.1. The Project covers the following DP elements as specified in Schedule 2 of the EIAO (Cap.499), **Table 2.1** summarises the DPs under this Project.

Table 2.1 Schedule 2 Designated Projects under this Project

Item	Designated Project	EIAO Reference
DP1	Sewage treatment works with an installed capacity of more than 15,000 m3 per day under Item F.1	Schedule 2, Part I,
DP2	Sewage treatment works under Item F.2 <ul style="list-style-type: none"> • With an installed capacity of more than 5,000 m3 per day; and • A boundary of which is less than 200m from the nearest boundary of an existing or planned residential area, educational institution and health care institution. 	Schedule 2 Part I
DP3	An activity for the reuse of treated sewage effluent from a treatment plant under Item F.4	Schedule 2 Part I

DP4	Underground rock caverns under Item Q.2	Schedule 2 Part I
DP5	An explosives depot in a stand-alone, purpose built building under Item K.10	Schedule 2 Part I;
DP6	Decommissioning of an explosives depot under Item 11	Schedule 2 Part II

2.3 Project Organization and Contact Personnel

2.3.1 Drainage Services Department is the overall project controllers for the Project. For the construction phase of the Project, Project Engineer, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.

2.3.2 The proposed project organization and lines of communication with respect to environmental protection works are shown in [Figure 2.2](#). Key personnel and contact particulars are summarized in **Table 2.2**:

Table 2.2 Contact Details of Key Personnel

Party	Role	Post	Name	Contact No.	Contact Fax
AECOM	Engineer's Representative	Chief Resident Engineer	Mr .Leung Chi Man, Simon	6393 8645	3914 5888
China State Joint Venture (DC/2018/05)	Contractor	Site Agent	Mr. Kenny Poon	9589 8156	3914 5951
		Environmental Officer	Ms. Yeung Ka Ching, Tiffany	6761 8726	
		Environmental Supervisor	TSANG Chiu Fat	9137 8733	
			CHAN Chin Ming	9128 9993	
China State – Alchmex Joint Venture (DC/2020/05)	Contractor	Site Agent	Mr. KONG Ming, Elvis	9186 2081	2672 2501
		Environmental Officer	Mr. LAM Moon Lin	9489 4641	
		Environmental Supervisor	TSANG Chiu Fat	9137 8733	



Acuity Sustainability Consulting Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Dr. Chung Fai Ng	2698 6833	2698 9383
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Derek Lo	2882 3939	2882 3331
Hotline telephone number for the public to make enquiries:				3142 2256	

2.4 Construction Activities

2.4.1 In the reporting period, the principal work activities conducted are as follow.

Contract no. DC/2018/05 - Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation and Access Tunnel Construction

December 2021	January 2022	February 2022
<ul style="list-style-type: none"> Retaining wall construction Road construction Drainage works Watermain installation Tunnelling works Slope stabilization works Landscape works 	<ul style="list-style-type: none"> Retaining wall construction Road construction Drainage works Watermain installation Tunnelling works Slope stabilization works Landscape works 	<ul style="list-style-type: none"> Retaining wall construction Road construction Drainage works Tunnelling works Landscape works Tree felling works

Contract no. DC/2020/05 - Relocation of Sha Tin Sewage Treatment Works to Caverns – Main Caverns Construction

The contact was commenced on 5 July 2021

December 2021	January 2022	February 2022
<ul style="list-style-type: none"> Hoarding erection Tree transplant and felling works Demolition of DSD staff quarter Site clearance Blast door erection Site formation works at ventilation shaft Construction of temporary drainage system Haul road construction 	<ul style="list-style-type: none"> Hoarding erection Tree transplant and felling works Demolition of DSD staff quarter Site clearance Blast door erection Site formation works at ventilation shaft Construction of temporary drainage system Haul road construction 	<ul style="list-style-type: none"> Hoarding erection Tree transplant and felling works Site clearance Ground investigation Construction of RC wall Construction of temporary drainage system Haul road construction Slope stabilization works Construction of temporary explosive magazine Tunneling works



		<ul style="list-style-type: none">• Site office construction• Rigid barrier construction• Construction of temporary explosive magazine
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2.4.2 Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor in this reporting period. The Environmental Mitigation Implementation Schedule (EMIS) such as air quality, construction noise, water quality, Ecological, Landscape & Visual Impact and wastes management is presented in [Appendix 2.1](#)

3 Monitoring Requirements

3.1 Air Monitoring

AIR QUALITY MONITORING STATIONS

3.1.1. Air monitoring stations AM1 and AM2 were setup and commencement of monitoring on 12 April 2019 while AM5 was setup and commencement of monitoring on 18 April 2019. Air quality monitoring for the station AM4 was commenced on 3 May 2019. The proposal for proposed fine adjustment for air and noise monitoring station at Kowloon City Baptist Church Hay Nien Primary School was agreed by EPD on 17 December 2020, therefore, air quality monitoring for the station AM3(B) was commenced on 18 December 2020.

3.1.2. A change of the monitoring location in subsequent impact monitoring for AM3(A) - Kowloon City Baptist Church Hay Nien Primary School was identified necessary as access was not granted for setting up the onsite monitoring station. The new monitoring location AM3(B) – ground level of outside A Kung Kok Street Garden for impact air quality monitoring station was proposed based on the criteria as stated in section 2.2.4.2 and 2.2.4.3 of EM&A Manual by ET and approved by ER and verified by IEC and submitted to EPD for agreement on 5 September 2019. The proposal was agreed by EPD on 17 December 2020.

Air quality monitoring station AM6 was setup and commencement of monitoring on 2 November 2021 since the demolition of DSD staff quarter and ended on 31 December 2021. The proposal was verified by IEC and approved by EPD on 9 May 2019.

3.1.3. The air monitoring stations for the Project are listed and shown in **Table 3.1** and **Figure 3.1**.

Table 3.1 Air Monitoring Station

Monitoring Station ID	Monitoring Location	Level (in terms of no. of floor)
AM1	Ah Kung Kok Fishermen Village	G/F
AM2	Block H, Kam Tai Court	Roof
AM3(B)	Outside A Kung Kok Street Garden	G/F
AM4	Wellborn Kindergarten	G/F
AM5	The Neighbourhood Advice-Action Council Harmony Manor	Roof
AM6	Seaview Villa	G/F

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

- 3.1.4. One-hour TSP levels should be measured to indicate the impacts of construction dust on air quality.
- 3.1.5. The sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs.

3.2 Noise Monitoring

NOISE MONITORING STATIONS

- 3.2.1. Noise monitoring stations CM4 and CM5 were setup and commencement of monitoring on 13 April 2019 and 18 April 2019 respectively. Noise monitoring for stations CM1 and CM3 were commenced on 2 May 2019. The proposal for proposed fine adjustment for air and noise monitoring station at Kowloon City Baptist Church Hay Nien Primary School was agreed by EPD on 17 December 2020, therefore, noise monitoring for station CM2(B) was commenced on 18 December 2020. [Noise monitoring for stations DM1, DM2 and DM3 were commenced on 2 November 2021 since the demolition of DSD staff quarter and ended on 31 December 2021.](#)
- 3.2.2. A change of the monitoring location in subsequent impact monitoring for CM2(A) - Kowloon City Baptist Church Hay Nien Primary School was identified necessary as access was not granted for setting up the onsite monitoring station. The new monitoring location CM2(B) – ground level of outside A Kung Kok Street Garden for impact air quality monitoring station was proposed based on the criteria as stated in section 2.2.4.2 and 2.2.4.3 of EM&A Manual by ET and approved by ER and verified by IEC and submitted to EPD for agreement on 5 September 2019. The proposal was agreed by EPD on 17 December 2020.
- 3.2.3. The noise monitoring stations for the Project are listed and shown in **Table 3.2** and [Figure 3.1](#).

Table 3.2 Noise Monitoring Station

Monitoring Station ID	Monitoring Location	Measurement Type	Level (in terms of no. of floor)
CM1	Wellborn Kindergarten	Free field	G/F
CM2(B)	Outside A Kung Kok Street Garden	Free field	G/F
CM3	S.K.H. Ma On Shan Holy Spirit Primary School	Façade	Roof
CM4	Ah Kung Kok Fishermen Village	Free field	G/F
CM5	The Neighbourhood Advice-Action Council Harmony Manor	Façade	Roof
DM1	Seaview Villa	Free field	G/F
DM2	Racecourse Gardens	Free field	G/F
DM3	S.K.H. Ma On Shan Holy Spirit Primary School	Façade	Roof

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

- 3.2.4. Noise monitoring shall be carried out at all the designated monitoring stations. The monitoring frequency shall depend on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities are underway:
- One set of measurements between 0700-1900 hours on normal weekdays;
 - One set of measurements between 1900-2300 hours;
 - One set of measurements between 2300-0700 hours of next day; and
 - One set of measurements between 0700-2300 hours on holidays (three consecutive Leq/5min readings).
- 3.2.5. If construction works are extended to include works during the hours of 1900-0700, additional weekly impact monitoring shall be carried out during evening and night-time works for the latter 3 sets of measurements specified in Section 3.2.3 above, one set of measurements shall at least include 3 consecutive Leq (5min) results.
- 3.2.6. [Additional weekly noise monitoring from 19:00 to 23:00 was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21 and GW-RN0044-22. All the results are within the baseline level range after baseline correction.](#)
- 3.2.7. [Additional weekly night time noise monitoring from 23:00 to 07:00 on next day was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21 and GW-RN0044-22. All the results are within the baseline level range after baseline correction.](#)
- 3.2.8. Supplementary information for data auditing, statistical results such as L10 and L90 shall also be obtained for reference.
- 3.2.9. If a school exists near the construction activity, noise monitoring shall be carried out at the monitoring stations for the schools during the examination periods. The ET leader shall liaise with the school's personnel and the examination authority to ascertain the exact dates and times of all examination periods during the course of the contract.

3.3 Marine Water Quality Monitoring

MARINE WATER MONITORING STATIONS

- 3.3.1 [Under THEES maintenance or emergency discharge events, effluent would be discharged into the Tolo Harbour from the existing emergency outfalls of STSTW and TPSTW. THEES tunnel was suspended on 30 November 2021 and resumed on 1 December 2021. The discharged](#)

- volume of treated effluent from STSTW and TPSTW were 230315 m³ and 108138 m³ respectively, with a total discharged volume of 338453 m³.
- 3.3.2 A marine water quality monitoring programme was recommended for the THEES tunnel maintenance during both construction and operational phases of this Project to confirm the water quality impact of the THEES maintenance discharge.
- 3.3.3 Total 16 monitoring stations, i.e. 15 impact stations and 1 control station, are listed in Table 3.3 below. They are at at the WSD flushing water intakes at Sha Tin (W1) and Tai Po (W2), cooling water intake at Chinese University of Hong Kong (CUHK) Marine Science Laboratory (C1), Yim Tin Tsai Fish Culture Zone (FCZ) (F1), Yim Tin Tsai East) FCZ (F2), Yung Shue Au FCZ and Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove (F3), Lo Fu Wat FCZ (F4), Potential Subzone of Yim Tin Tsai FCZ/ Gradient Station (G1), corals at Tai Po Industrial Estate (CR1), Science Park (CR15), Sha Tin Hoi North (CR16) and Sha Tin Hoi South (CR17), Gradient Station (G1*), Pak Sha Tau Corals (C1*) and Tai Po Lung Mei Beach (TPLMB)), and finally CR9 as control station, are shown in [Figure 3.1](#) to represent the marine water sensitive receivers, which are likely affected by the Project during the THEES maintenance or emergency discharge.
- 3.3.4 Station G1 (Subzone of Yim Tin Tsai Fish Culture Zone) was also proposed as a gradient station to assist in the identification of the source of any impact at monitoring station F1. Station CR9 is far away from the Project discharge points and would unlikely be affected by the Project and will therefore serve as a control station.
- 3.3.5 The coordinates of the proposed monitoring stations are listed in **Table 3.3** and **Figure 3.1**.

Table 3.3 Proposed Marine Water Quality Monitoring Stations

No.	Station	Description	Easting	Northing
1	W1	WSD Seawater Intake at Sha Tin	840238	830127
2	W2	WSD Seawater Intake at Tai Po	837753	834606
3	C1	Cooling Water Intake at CUHK Marine Science Laboratory	840142	831908
4	F1	Yim Tin Tsai Fish Culture Zone	839387	834907
5	F2	Yim Tin Tsai (East) Fish Culture Zone	840885	835077
6	F3	Yung Shue Au Fish Culture Zone / Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove	846778	832054
7	F4	Lo Fu Wat Fish Culture Zone	846364	836709
8	CR1	Corals at Tai Po Industrial Estate	837888	834489
9	CR15	Corals at Science Park	839193	832710
10	CR16	Corals at Sha Tin Hoi North	840310	831665
11	CR17	Corals at Sha Tin Hoi South	840224	830692
12	G1	Potential Subzone of Yim Tin Tsai Fish Culture Zone / Gradient Station	840521	833311
13	CR9	Gruff Head Corals (Control Station)	850995	838008

14	G1*	Gradient Station	838475	834702
15	C1*	Pak Sha Tau Corals	843779	834659
16	TPLMB	Tai Po Lung Mei Beach	841651	836817

MARINE WATER QUALITY MONITORING PARAMETERS, FREQUENCY AND DURATION

3.3.6 **Table 3.4** summarizes the monitoring parameters of the water quality monitoring.

Table 3.4 Water Quality Monitoring Parameters

In-situ Measurement	Laboratory Measurement
Dissolved Oxygen	Suspended Solids (SS)
pH	5-day Biochemical Oxygen Demand (BOD5)
Temperature	Total Inorganic Nitrogen (TIN)
Salinity	Ammonia Nitrogen (NH3-N)
Turbidity	Nitrate-nitrogen (NO3-N)
	Nitrite-nitrogen (NO2-N)
	Unionized Ammonia (UIA)
	Chlorophyll-a
	E. coli

3.3.7 For THEES maintenance, marine water quality data shall be collected throughout the whole discharge period at a frequency of 3 times per week until the baseline water quality is restored or at least 4 weeks after the end of maintenance period. During each monitoring event, water samples shall be collected at both mid-flood and mid-ebb tides and the interval between 2 monitoring events should not be less than 36 hours.

3.3.8 In view of marine safety concern due to limited visibility for safe navigation during night-time, the monitoring time at the mid-flood and mid-ebb will be shifted to the available flood/ebb tide during daytime.

4. Monitoring Results

4.0.1 The environmental monitoring will be implemented based on the division of works areas of each designed projects. Overall layout showing work areas and monitoring stations is shown in [Figure 2.1](#) and [Figure 3.1](#) respectively.

4.1 Air Monitoring Results

4.1.1 1-hour TSP monitoring was conducted at AM1, AM2, AM3(B), AM4, AM5 and AM6 in the reporting period.

4.1.2 No action or limit level exceedance was determined in the reporting period at stations of AM1, AM2, AM3(B), AM4, AM5 and AM6.

4.1.3 Air quality monitoring results measured in this reporting period for AM1, AM2, AM3(B), AM4, AM5 and AM6 are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in [Appendix 4.1](#).

4.2 Noise Monitoring Results

4.2.1 Noise monitoring was conducted at CM1, CM2(B), CM3, CM4, CM5, DM1, DM2 and DM3 in the reporting period.

4.2.2 Additional weekly noise monitoring from 19:00 to 23:00 was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0510-21, GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21. All the results are within the baseline level range after baseline correction.

4.2.3 Additional weekly night time noise monitoring from 23:00 to 07:00 on next day was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0510-21, GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21. All the results are within the baseline level range after baseline correction.

4.2.4 No action or limit level exceedance was determined in the reporting period at stations of CM1, CM2(B), CM3, CM4, CM5, DM1, DM2 and DM3.

4.2.5 Noise monitoring results measured in this reporting period for CM1, CM2(B), CM3, CM4, CM5, DM1, DM2 and DM3 are reviewed and summarized. Details of noise monitoring results and graphical presentation can be referred in [Appendix 4.2](#).

4.3 Water Quality Monitoring Results

4.3.1 Due to THEES maintenance or emergency discharge events, effluent has been discharged into the Tolo Harbour from the existing emergency outfalls of STSTW and TPSTW. THEES tunnel was suspended on 30 November 2021 and resumed on 1 December 2021. The discharged volume of treated effluent from STSTW and TPSTW were 230315 m³ and 108138 m³ respectively, with a total discharged volume of 338453 m³.

4.3.2 The marine water quality impact monitoring was conducted from 30 November 2021 to 31 December 2021 at a frequency of 3 times per week. Details of the marine water quality monitoring results from 30 November 2021 to 31 December 2021 of in-situ measurement and laboratory measurement as well as the graphical presentations of the results can be referred in [Appendix 4.3](#).

4.3.3 The graphs in [Appendix 4.3](#) show that the levels of salinity and turbidity were within baseline water quality conditions. The level of dissolved oxygen for surface occasionally exceeded the baseline level but were within the WQO levels, which were likely due to natural fluctuation.

4.3.4 Based on the water quality monitoring results, the baseline water quality has been restored and the overall water quality in the Tolo Harbour was considered acceptable during the monitoring period. The results did not reveal any evidence showing that the overflow event from STSTW and TPSTW has caused any adverse marine water quality impact to the surrounding water body.

4.4 Waste Management

4.4.1 The quantities of waste for disposal in the Reporting Period are summarized in **Table 4.1**. The updated Monthly Summary waste Flow Table is shown in [Appendix 4.4](#). Whenever possible, materials were reused on-site as far as practicable.

Table 4.1 Details of Waste Disposal for Contract no. DC/2018/05

Waste Type	Quantity this report period	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m ³	175	12,017	Fill Bank at Tuen Mun Area 38
	31872	241,847	Taylor Recycled Aggregated Ltd. & Lam Tei Quarry (Alternative Disposal Ground)
Inert C&D materials recycled, m ³	543	2,311	Fill Bank at Tuen Mun Area 38 (Broken concrete)
Non-inert C&D materials disposed, tonne	62.45	1397.01	NENT
Non-inert C&D materials recycled, kg	250	2,141	Golden Sino Management Limited (Waste paper)
	0	14	Golden Sino Management Limited (Plactic)
	40	19,843	Golden Sino Management Limited (Metals)
Chemical waste disposed, L	251	1,090	Collected by licensed chemical waste collector_ Ecospace Limited
Asbestos waste disposed, Kg	0	300	WENT

Table 4.2 Details of Waste Disposal for Contract no. DC/2020/05

Waste Type	Quantity this month	Cumulative Quantity-to-Date	Disposal / Dumping Grounds
Inert C&D materials disposed, m³	6011	6,604	Fill Bank at Tuen Mun Area 38
Inert C&D materials recycled, m³	283	447	Fill Bank at Tuen Mun Area 38 (Broken concrete)
Non-inert C&D materials disposed, tonne	346.29	358.21	SENT
Non-inert C&D materials recycled, kg	0	0	Golden Sino Management Limited (Waste Paper)
	0	0	Golden Sino Management Limited (Plastic)
	0	75,270	Golden Sino Management Limited (Metals)
Chemical waste disposed, L	0	0	Collected by licensed chemical collector: Ecospace Limited (Spent Lube Oil)
Asbestos waste disposed, Kg	560	560	WENT



5 Land Contamination

5.0 Land decontamination work for the DSD staff quarter at existing STSTW started on 16 June 2021, the Remediation Report was submitted to EPD for approval on 9 September 2021. The Remediation Report was accepted by EPD on 8 November 2021.

6 Compliance Audit

6.0.1 The Event Action Plan for construction noise, air quality are presented in [Appendix 6.1](#).

6.1 Air Monitoring

6.1.1 No action or limit level exceedance was determined in the reporting period at stations of AM1, AM2, AM3(B), AM4, AM5 and AM6.

6.2 Noise Monitoring

6.2.1 Additional weekly noise monitoring from 19:00 to 23:00 was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0510-21, GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21. All the results are within the baseline level range after baseline correction.

6.2.2 Additional weekly night time noise monitoring from 23:00 to 07:00 on next day was carried out at CM4 with respect to the restricted hour works under CNP GW-RN0510-21, GW-RN0535-21, GW-RN0802-21 and GW-RN0824-21. All the results are within the baseline level range after baseline correction.

6.2.3 No action or limit level exceedance was determined in the reporting period at stations of CM1, CM2(B), CM3, CM4, CM5, DM1, DM2 and DM3.

6.3 Marine Water Quality Monitoring

6.3.1 The marine water quality impact monitoring was conducted for 13 monitoring stations within the Tolo Harbour from 30 November 2021 to 31 December.

6.3.2 Based on the water quality monitoring results, the baseline water quality has been restored and the overall water quality in the Tolo Harbour was considered acceptable during the monitoring period. The results did not reveal any evidence showing that the overflow event from STSTW and TPSTW has caused any adverse marine water quality impact to the surrounding water body.

6.4 Review of the Reasons for and the Implications of Non-compliance

6.4.1 No environmental non-compliance was recorded in the reporting period.

6.5 Summary of action taken in the event of and follow-up on non-compliance

6.5.1 There was no particular action taken since no non-compliance was recorded in the reporting period.

7 Complaints, Notification of Summons and Prosecution

- 7.0.1 A public complaint regarding construction noise referred by AECOM on 3 December 2021 was subsequently received by ET on 3 December 2021.
- 7.0.2 The complainant reported to 1823 online dated on 1 December 2021 that the construction noise (heavy vehicle and drilling works) generated from the construction site at A Kung Lok Shan Road was causing noise nuisance to complainant's son.
- 7.0.3 According to the relevant site information provided by the Contractor of DC/2020/05, preparation works for sheet pile driving, which included machinery and materials mobilization, were carried out on 1 December 2021. Sheet pile work was commenced on 2 December 2021.
- 7.0.4 Based on review on noise monitoring data, no exceedances were recorded at the noise monitoring station CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor (located nearest to the concerned area) during the scheduled Leq30 min noise monitoring in November 2021. ET conducted regular noise monitoring on 3 December 2021, no exceedances was record at the noise monitoring stations CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor. Weekly noise monitoring was conducted on 7 December 2021, no exceedances was recorded at the noise monitoring station CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor. Site inspection was conducted on 8 December 2021, it is observed that breaking /drilling works by other contractor was conducted next to The Neighbourhood Advice-Action Council Harmony Manor. No heavy vehicles passing by A Kung Lok Shan Road during noise monitoring.
- 7.0.5 After receiving the complaint, additional noise mitigation measures, including wrapping up the breaker tip with acoustic mat and deploying of temporary noise barrier have been implemented by the Contractor of DC/2020/05.
- 7.0.6 The Contractor of DC/2020/05 was reminded to enhance the noise mitigation measures by providing sufficient temporary noise barrier. Contractor is advised to make good communication with The Neighbourhood Advice-Action Council Harmony Manor and consider scheduling the time of sheet piling and machinery / materials mobilization in order to avoid further complaint.
- 7.0.7 No notification of summons and successful prosecutions was received in the reporting period.
- 7.0.8 The details of cumulative complaint log and updated summary of complaints are presented in [Appendix 7.1](#).
- 7.0.9 Cumulative statistic on complaints and successful prosecutions are summarized in [**Table 7.1**](#) and [**Table 7.2**](#) respectively.



Table 7.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
December 2021 to February 2022	1
Total	4

Table 7.2 Cumulative Statistics on Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions in this reporting period (Offence Date)	Cumulative No. Project-to-Date
Air	-	0	0
Noise	-	0	0
Waste	-	0	0
Total	-	0	0

8 Conclusion

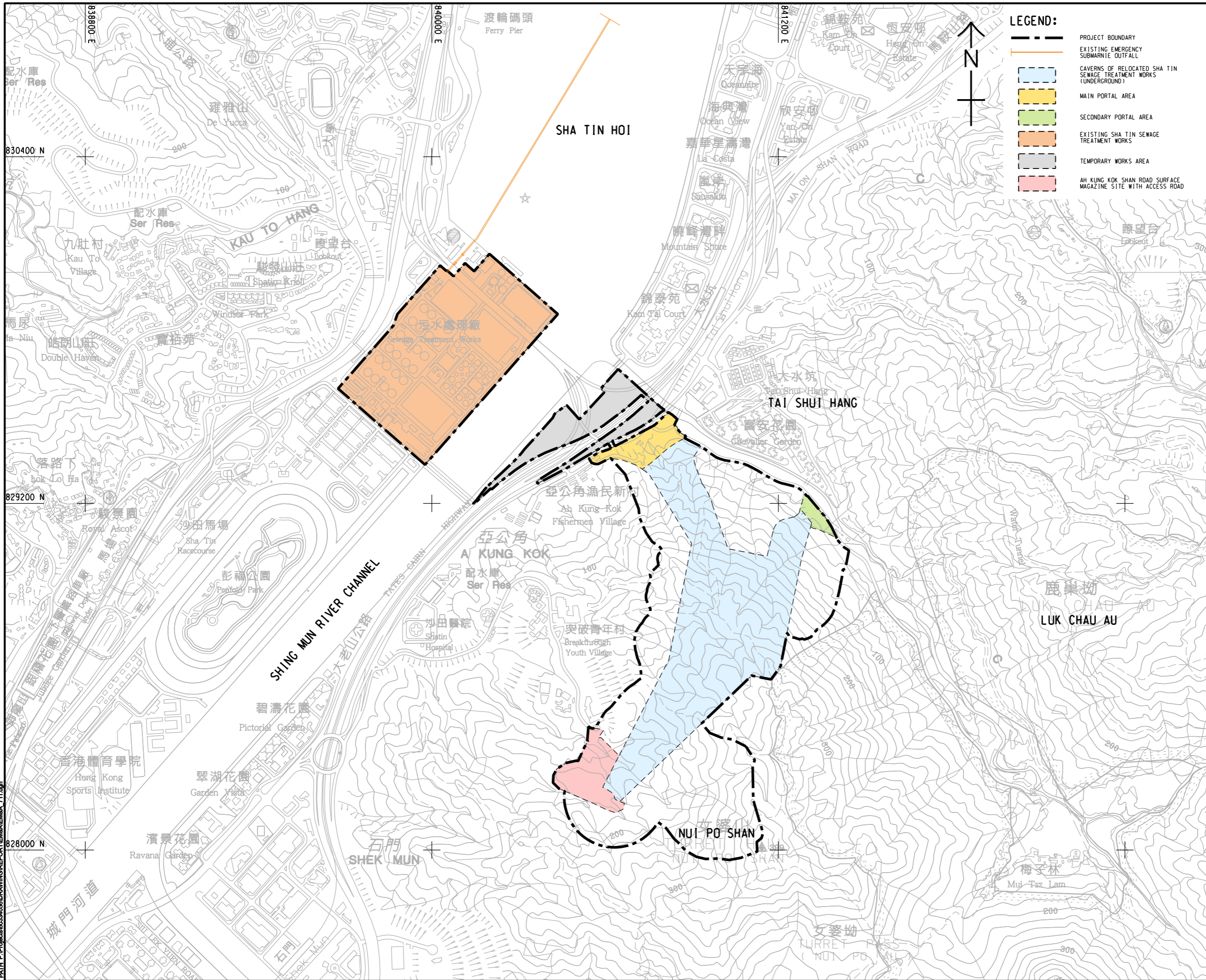
- 8.0.1 The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 8.0.2 No non-compliances were noted and no prosecutions were received during the reporting period.
- 8.0.3 Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor in this reporting period. Weekly environmental site audits, bi-weekly landscape site audits and monthly ecology site audits were conducted by Environmental Team, ER and the Contractor and no cumulative environmental impact was identified in the reporting period. Hence, the EM&A programme was considered effective and shall be maintained.
- 8.0.4 The construction programmes of individual contracts are provided in [Appendix 8.1](#)



Figure 2.1

Project Layout

ISO A1 594mm x 841mm
 Approved:
 Checked:
 Designer:
 Project Management Initials:
 Pld File by: PENGM 2016/02/24
 PATH: P:\proj\60334056\DRAWING\REPORT\EM&A\MA_711.dgn



LEGEND:

- PROJECT BOUNDARY
- EXISTING EMERGENCY SUBMARINE OUTFALL
- CAVERNS OF RELOCATED SHA TIN SEWAGE TREATMENT WORKS (UNDERGROUND)
- MAIN PORTAL AREA
- SECONDARY PORTAL AREA
- EXISTING SHA TIN SEWAGE TREATMENT WORKS
- TEMPORARY WORKS AREA
- AH KUNG KOK SHAN ROAD SURFACE MAGAZINE SITE WITH ACCESS ROAD

AECOM

PROJECT
 RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
 渠務署
 Drainage Services Department

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程顧問公司

ISSUE/REVISION

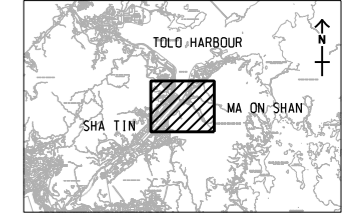
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STATUS
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DIMENSION UNIT
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KEY PLAN A3 1: 50000



PROJECT NO.
 項目編號: 60334056

CONTRACT NO.
 合約編號: CE 30/2014 (DS)

SHEET TITLE
 圖紙名稱: LOCATION PLAN OF THE PROJECT

SHEET NUMBER
 圖紙編號: 60334056/EM&A/1.01

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Figure 2.2
Project Organization Chart



Project Organization Chart

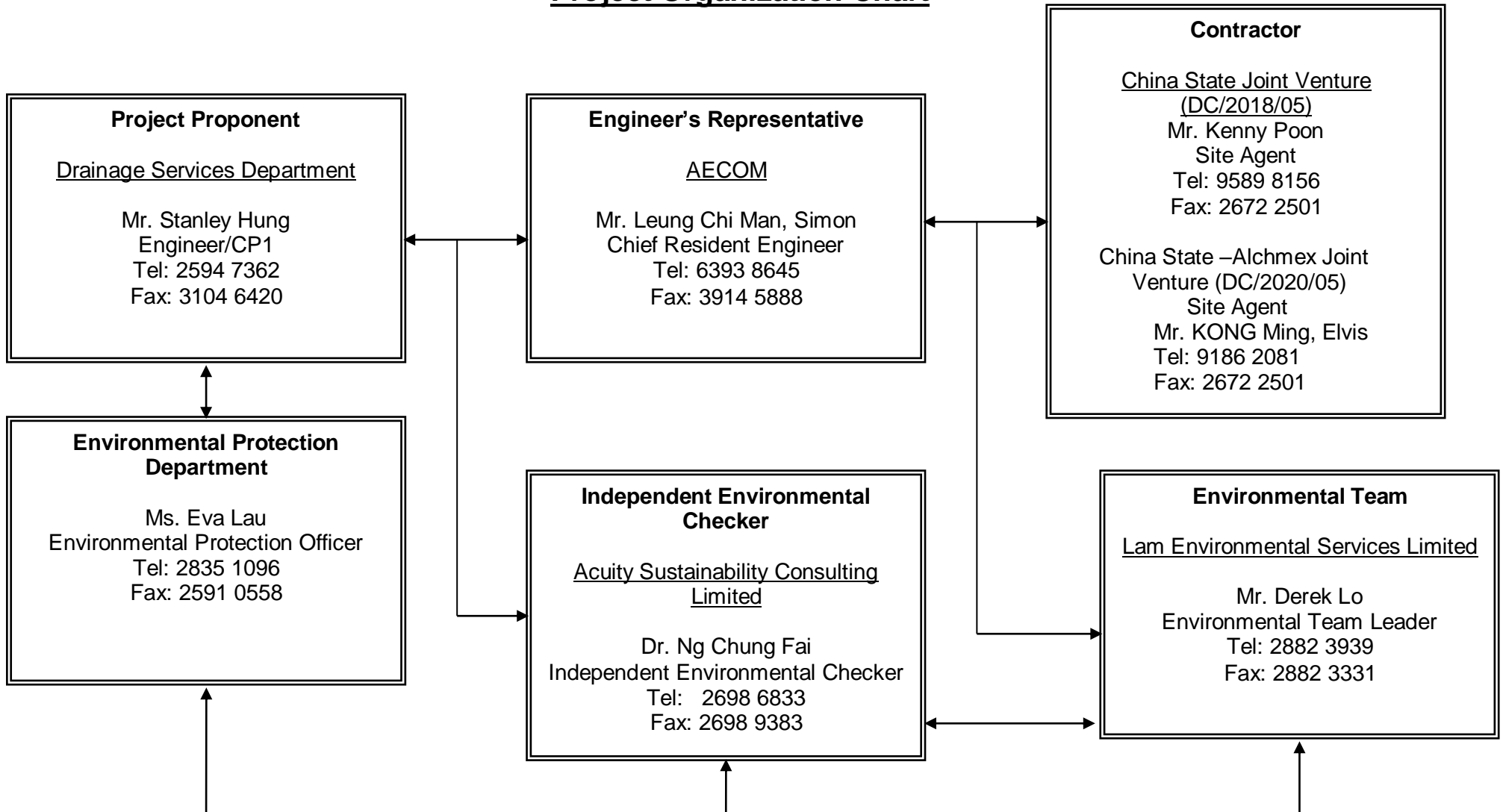


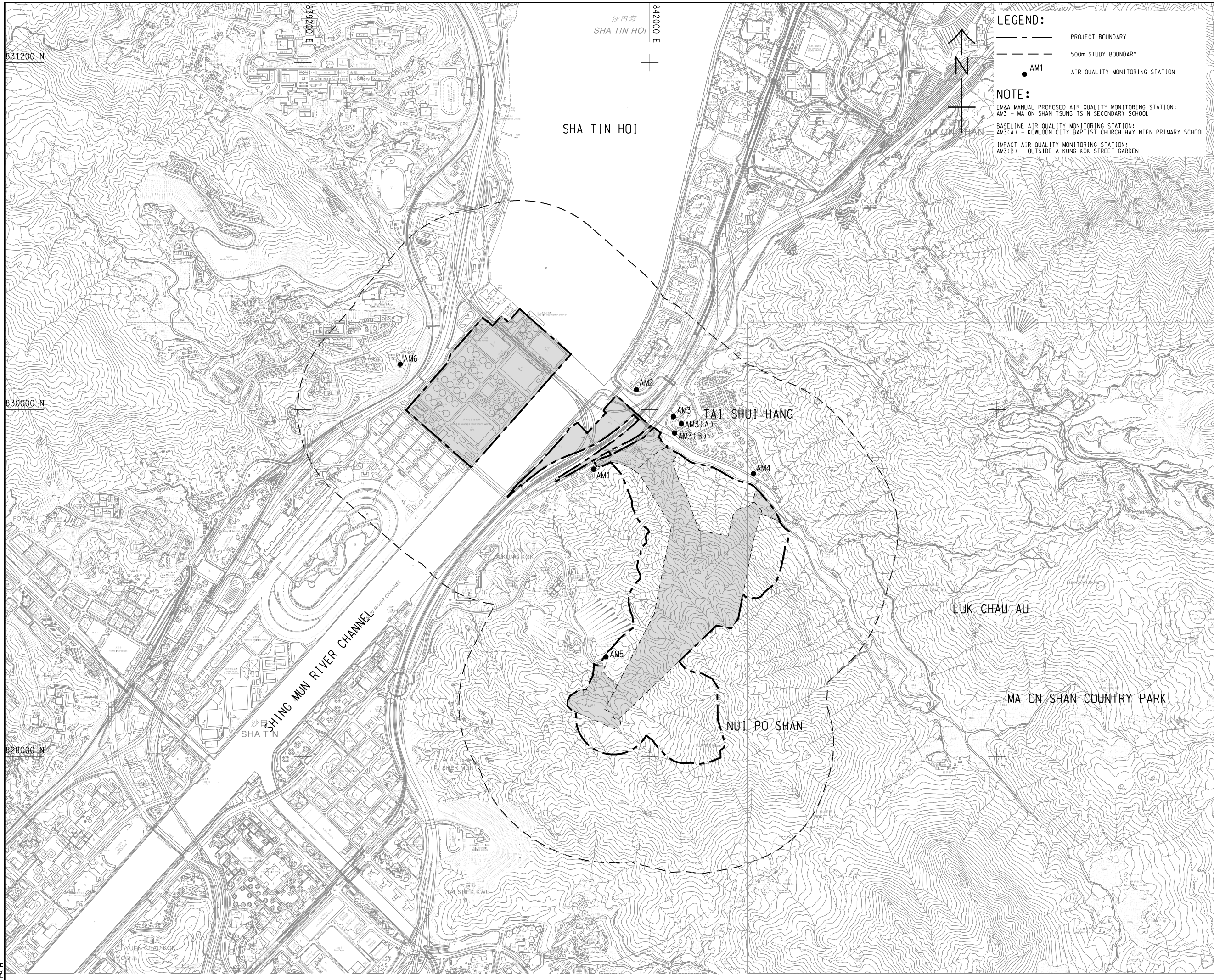
Figure 2.2



Figure 3.1

Locations of Environmental Monitoring Station

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 Checked: _____
 Designer: _____
 Project Management Initials: _____
 9/2/2020
 Plot File by: \$USERS
 PATH



LEGEND:
 - - - - - PROJECT BOUNDARY
 - - - - - 500m STUDY BOUNDARY
 ● AM1 AIR QUALITY MONITORING STATION

NOTE:
 EM&A MANUAL PROPOSED AIR QUALITY MONITORING STATION:
 AM3 - MA ON SHAN TSUNG TSIN SECONDARY SCHOOL
 BASELINE AIR QUALITY MONITORING STATION:
 AM3(A) - KOWLOON CITY BAPTIST CHURCH HAY NIEN PRIMARY SCHOOL
 IMPACT AIR QUALITY MONITORING STATION:
 AM3(B) - OUTSIDE A KUNG KOK STREET GARDEN

AECOM

PROJECT
 項目
RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
 客戶
 渠務署
 Drainage Services Department

CONSULTANT
 顧問公司
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程師/顧問公司

ISSUE/REVISION
 修訂

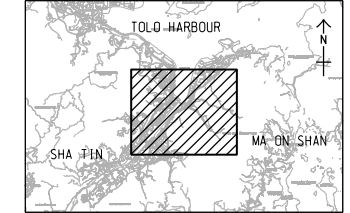
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修訂	日期	修訂內容	校核

STATUS
 情況

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 比例尺 尺寸單位

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KEY PLAN A3 1: 400000
 索引圖



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號

60334056 CE 30/2014 (DS)

SHEET TITLE
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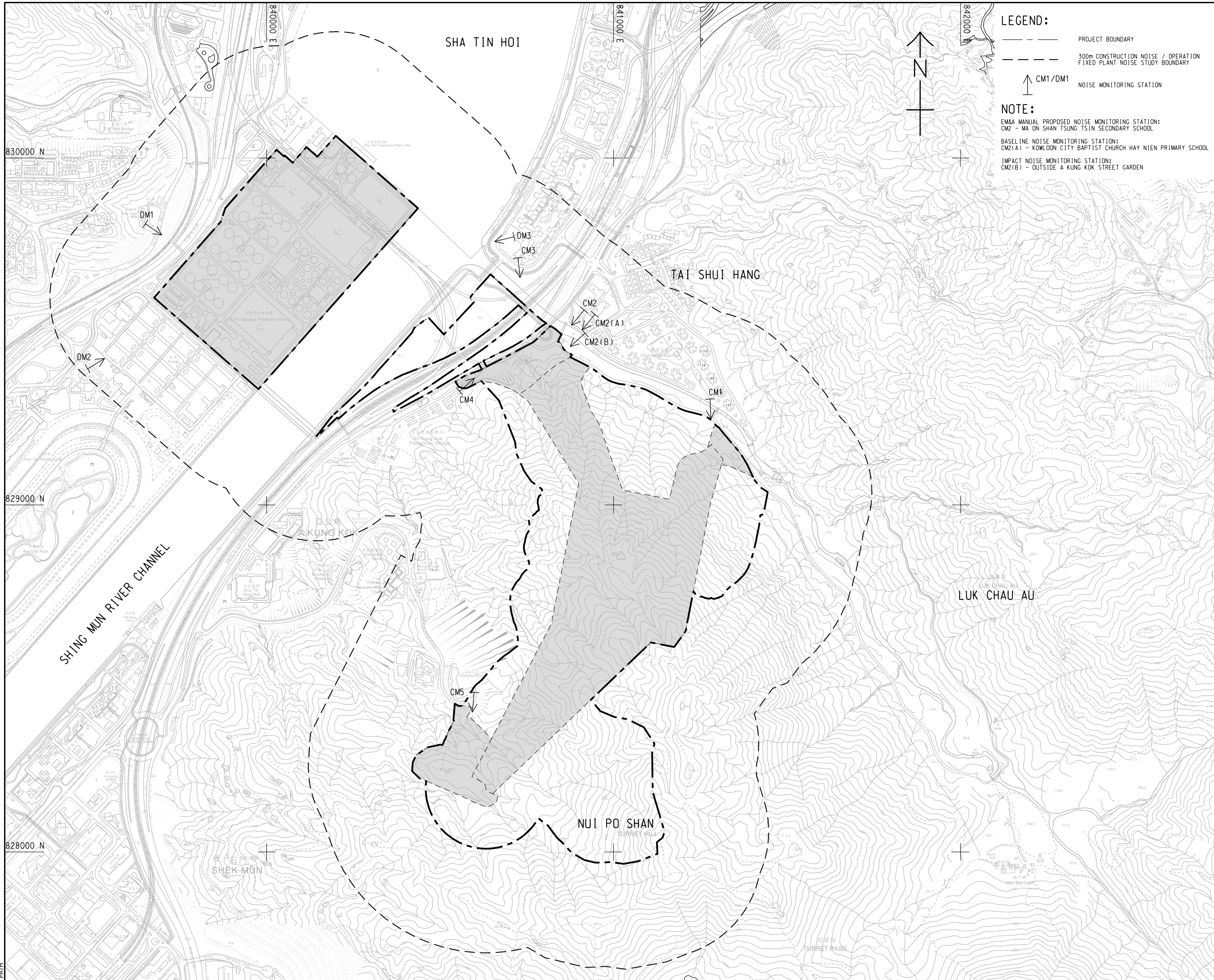
LOCATION OF AIR QUALITY MONITORING STATION DURING CONSTRUCTION PHASE

SHEET NUMBER
 圖紙編號

60334056/EM&A/2.01

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 Designer: _____
 Project Management Initials: _____
 9/2/2020
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 PATH



LEGEND:

- PROJECT BOUNDARY
- 300m CONSTRUCTION NOISE / OPERATION FIXED PLANT NOISE STUDY BOUNDARY
- ↑ CM1/DM1 NOISE MONITORING STATION

NOTE:

EM&A MANUAL PROPOSED NOISE MONITORING STATION:
 CM2 - MA ON SHAN TSUNG TSIN SECONDARY SCHOOL

BASELINE NOISE MONITORING STATION:
 CM2(A) - KOWLOON CITY BAPTIST CHURCH HAY NIEN PRIMARY SCHOOL

IMPACT NOISE MONITORING STATION:
 CM2(B) - OUTSIDE A KUNG KOK STREET GARDEN

AECOM

PROJECT
 項目

RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
 業主

渠務署
Drainage Services Department

CONSULTANT
 顧問公司

AECOM Asia Company Ltd.
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SUB-CONSULTANTS
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STATUS
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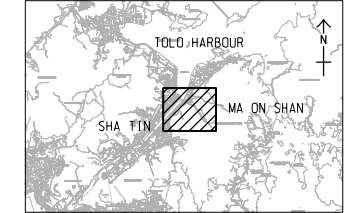
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DIMENSION UNIT
 尺寸單位

METRES

KEY PLAN A3 1 : 500000



PROJECT NO.
 項目編號

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CONTRACT NO.
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CE 30/2014 (DS)

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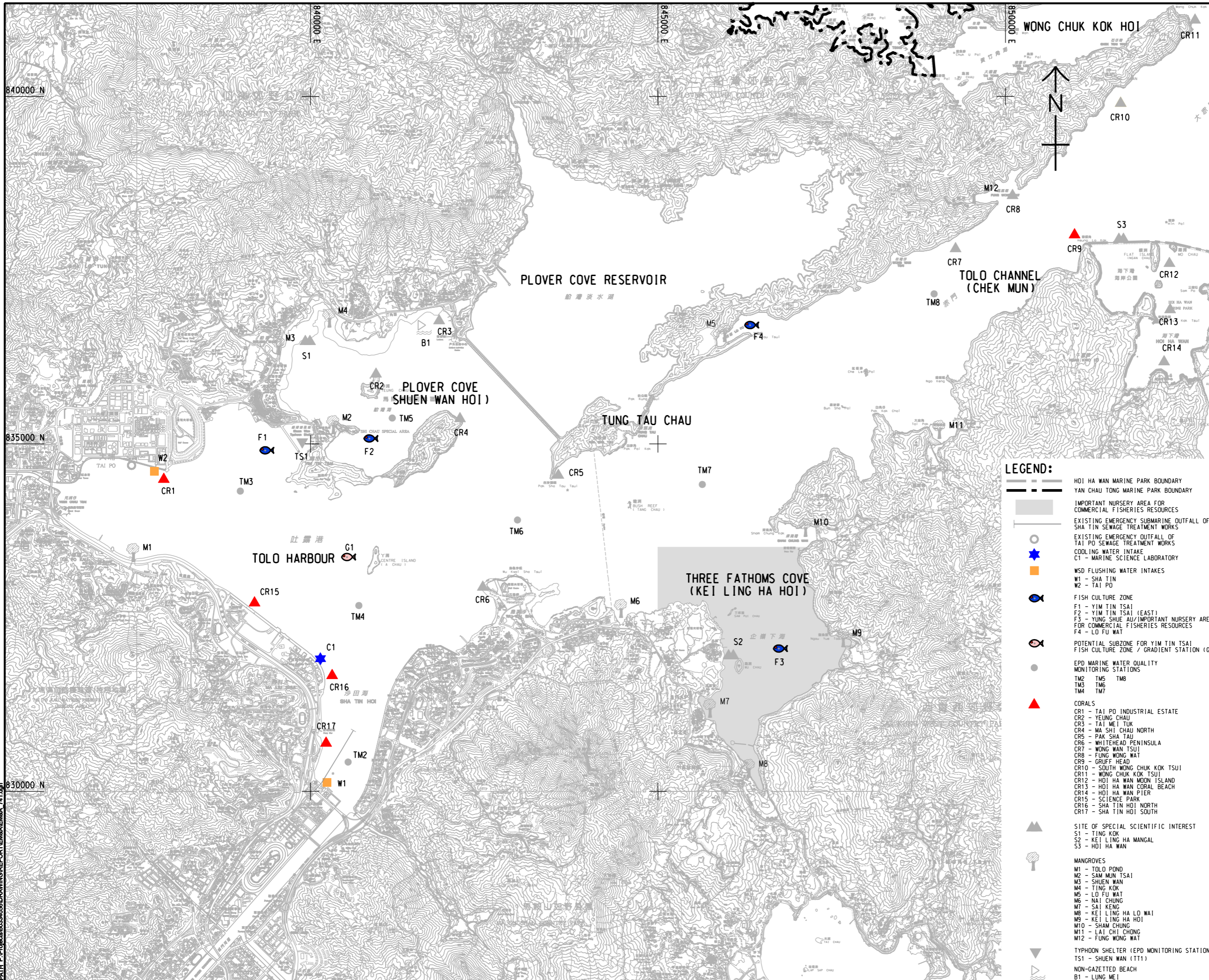
LOCATION OF CONSTRUCTION PHASE TRAFFIC NOISE MONITORING STATION

SHEET NUMBER
 圖紙編號

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 Project Management Initials:
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PROJECT
 項目
RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
 業主
 渠務署
 Drainage Services Department

CONSULTANT
 工程顧問公司
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程顧問公司

LEGEND:

- HOI HA WAN MARINE PARK BOUNDARY
- YAN CHAU TONG MARINE PARK BOUNDARY
- IMPORTANT NURSERY AREA FOR COMMERCIAL FISHERIES RESOURCES
- EXISTING EMERGENCY SUBMARINE OUTFALL OF SHA TIN SEWAGE TREATMENT WORKS
- EXISTING EMERGENCY OUTFALL OF TAI PO SEWAGE TREATMENT WORKS
- COOLING WATER INTAKE
- C1 - MARINE SCIENCE LABORATORY
- WSD FLUSHING WATER INTAKES
- W1 - SHA TIN
- W2 - TAI PO
- FISH CULTURE ZONE
- F1 - YIM TIN TSAI
- F2 - YIM TIN TSAI (EAST)
- F3 - YUNG SHUE AU/IMPORTANT NURSERY AREA FOR COMMERCIAL FISHERIES RESOURCES
- F4 - LO FU WAT
- POTENTIAL SUBZONE FOR YIM TIN TSAI
- FISH CULTURE ZONE / GRADIENT STATION (G1)
- EPD MARINE WATER QUALITY MONITORING STATIONS
- TM2 TM5 TM8
- TM3 TM6
- TM4 TM7
- CORALS
- CR1 - TAI PO INDUSTRIAL ESTATE
- CR2 - YEUNG CHAU
- CR3 - TAI MEI TUK
- CR4 - MA SHI CHAU NORTH
- CR5 - PAK SHA TAU
- CR6 - WHITEHEAD PENINSULA
- CR7 - WONG WAN TSUI
- CR8 - FUNG WONG WAT
- CR9 - GRUFF HEAD
- CR10 - SOUTH WONG CHUK KOK TSUI
- CR11 - WONG CHUK KOK TSUI
- CR12 - HOI HA WAN MOON ISLAND
- CR13 - HOI HA WAN CORAL BEACH
- CR14 - HOI HA WAN PIER
- CR15 - SCIENCE PARK
- CR16 - SHA TIN HOI NORTH
- CR17 - SHA TIN HOI SOUTH
- SITE OF SPECIAL SCIENTIFIC INTEREST
- S1 - TING KOK
- S2 - KEI LING HA MANGAL
- S3 - HOI HA WAN
- MANCROVES
- M1 - TOLO POND
- M2 - SAM MUN TSAI
- M3 - SHUEN WAN
- M4 - TING KOK
- M5 - LO FU WAT
- M6 - NAI CHUNG
- M7 - SAI KENG
- M8 - KEI LING HA LO WAI
- M9 - KEI LING HA HOI
- M10 - SHAM CHUNG
- M11 - LAI CHI CHONG
- M12 - FUNG WONG WAT
- TYPHOON SHELTER (EPD MONITORING STATION)
- TS1 - SHUEN WAN (TT1)
- NON-GAZETTED BEACH
- B1 - LUNG MEI

ISSUE/REVISION
 修訂

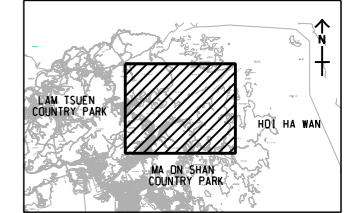
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SCALE
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DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖
 A3 1: 120000



PROJECT NO.
 項目編號
 60334056

CONTRACT NO.
 合約編號
 CE 30/2014 (DS)

SHEET TITLE
 圖號
 LOCATIONS OF MARINE WATER QUALITY MONITORING STATIONS

SHEET NUMBER
 圖號
 60334056/EM&A/4.01

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Appendix 2.1

Environmental Mitigation Implementation Schedule

APPENDIX C IMPLEMENTATION SCHEDULE OF RECOMMENDED MITIGATION MEASURES

C.1 Introduction

C.1.1 This section presents the implementation schedule of mitigation measures for the Project. **Table C.1** summarises the details of the recommended mitigation measures for all works areas. For each recommended mitigation measures, both the location and timing for the measure have clearly been identified as well as the parties responsible for implementing the measure and for maintenance (where applicable).

Table C.1 Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
Air Quality Impact									
Construction Phase									
Table 3.5	2.4.1	The rock crushing plant is configured as an enclosed system. Dust collector with dust removal efficiency of 99% will be provided at the exhaust of the rock crusher during rock crushing. Watering will be provided to maintain material in wet condition. Vehicles would be required to pass through the wheel washing facilities provided at site exit.	Rock Crushing Plant / Construction Phase	Contractor	√	√		√	Air Pollution Control Ordinance (APCO)
3.8.1	2.4.1	Watering eight times a day on active works areas, exposed areas and unpaved haul roads to reduce dust emission by 87.5%.	All active works areas, exposed areas and unpaved haul roads	Contractor		√		√	APCO

¹ Des = Design; C = Construction; O = Operation; Dec = Decommissioning

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
3.8.1	2.4.1	<p>Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:</p> <ul style="list-style-type: none"> • Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. • Use of frequent watering for particularly dusty construction areas and areas close to ASRs. • Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. • Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. • Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area 	Construction Sites	Contractor		√		√	APCO and Air Pollution Control (Construction Dust) Regulation

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<p>where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</p> <ul style="list-style-type: none"> • Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. • Imposition of speed controls for vehicles on site haul roads. • Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs. • Every stock of more than 20 bags of cement or dry PFA should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. • Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise. 							

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
	Operation Phase								
3.5.2	-	Sludge tanks with totally enclosed design proven by DSD should be deployed for transporting sludge. With thorough cleaning practice and regular condition test of the sludge tanks, odour emission and leachate leakage during storage and transportation are not anticipated.	Cavern Sewage Treatment Works (CSTW) / Operation Phase	Project Proponent / Operator	√		√		-
3.6.2, 3.7.2	2.4.2	All treatment units with potential odour emission will be covered and the exhausted air will be conveyed to the deodouriser (with 80 – 97% odour removal efficiency) for treatment before discharge to the environment.	CSTW / Operation Phase	Design team / Project Proponent / Operator	√		√		-
3.7.2	2.4.2	The following appropriate odour control measures would be implemented. (i) Adopting the advantage of caverns as natural barriers for odour control; (ii) Covering up of odour sources; (iii) Preventing odour leakage through the access tunnels by applying negative pressure inside caverns; (iv) Installing deodourizing units to clean up the collected foul air; (v) Discharging exhausted air at height to further enhance the dilution effect; and (vi) Enhancing the odour management of the sludge transportation.	CSTW / Operation Phase	Design team / Project Proponent / Operator	√		√		-

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
3.10.2	2.3.1	Odour monitoring at the inlet and outlet of the deodourizing units is proposed to be conducted for first three years of the operation of CSTW, quarterly in the first year, and once every 6 months in the second and third years if monitoring results remain below the limit levels.	CSTW / Operation Phase	Project Proponent / Operator	√		√		-
3.10.2	2.3.2	An Odour Complaint Registration System is also proposed in the EM&A programme to check whether the deodorizing units can fulfill the recommended odour removal performance.	CSTW / Operation Phase	Operator			√		-
3.10.2	-	Any unexpected leakage from tanks could be observed with monitoring equipment. Monitoring equipment would be installed in the CSTW to monitor the concentration of H ₂ S, CO and CO ₂ and methane. Investigation and repair works would be carried out immediately if abrupt increase of these concentrations are reported. Emergency Plan would be established for these upset conditions.	CSTW / Operation Phase	Project Proponent / Operator	√		√		-
Noise Impact									
Construction Phase									
4.5.1.6	-	Re-provision of 220m length noise barrier with 10mPD on temporary access haul road to replace the existing 150m length noise barrier with 9.2mPD to 10mPD on Ma On Sha Road. The	Proposed temporary access / Construction Phase	Contractor		√			Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), Noise Control Ordinance (NCO)

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		location of the relocated noise barrier is shown in Figure No. 60334056/EIA/4.02 and Appendix 4.07 . Once the construction work for the CSTW is completed, the temporary access roads would be demolished and the relevant section of Ma On Shan Road and associated noise barrier would be recovered as before.							
4.8.1	3.8.1	The use of quiet plant associated with the construction works is prescribed in British Standard "Code of practice for noise and vibration control on construction and open sites, BS5228" which contains the SWLs for specific quiet PME.	All Construction Work Sites	Contractor		√		√	EIAO-TM, NCO
4.8.1	3.8.1	To alleviate the construction noise impact on the affected NSRs, movable noise barrier for Air Compressor, Bar Bender and Cutter, Breaker, Chisel, Saw, Compactor, Mixers, Pump, Crane, Desander, Drilling Rig, Dump Truck, Excavator, Generator, Grab, Lorry, Paver, Poker and Roller are proposed.	All Construction Work Sites	Contractor		√		√	EIAO-TM, NCO
4.8.1	3.8.1	Provision of noise barrier/acoustic mats for Drilling Jumbo so as to have screening effecting with 10 dB(A) noise attenuation	Drilling Jumbo operate outside the portal and within 20m inside the portal	Contractor		√			EIAO-TM, NCO
4.8.1	3.8.1	To further alleviate the construction noise impact on the Neighbourhood Advice-Action Council Harmony	Construction Site for access road for	Contractor		√		√	EIAO-TM, NCO

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		Manor, it is proposed to limit the number of on-time operating PMEs within 120m of this NSR during construction of access road.	magazine at A Kung Kok Road						
4.9.1	3.8.1	<p>In addition to the above-mentioned mitigation measures, good site practices listed below shall be adopted by all the contractors to further ameliorate the noise impacts.</p> <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. • Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction program. • Mobile plant, if any, should be sited as far away from NSRs as possible. • Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. 	All Construction Work Sites	Contractor		√		√	EIAO-TM, NCO

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					Des	C	O	Dec	
		<ul style="list-style-type: none"> Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities. 							
	Operation Phase								
4.7.4	3.8.2	The maximum allowable sound power levels for the ventilation shaft, ventilation buildings at main portal and emergency portal, ventilation fan for chiller plant room and cooling tower at the administration building as presented in Table 4.16 of the EIA Report should be achieved such that the nearest affected NSRs can be in compliance with the noise criteria	Ventilation Shaft, Administration Building and Ventilation Buildings/ Operation Phase	Project Proponent	√		√		EIAO-TM, NCO
4.11.2	3.8.2	Prior to the operational phase of the Project, a commissioning test for the ventilation buildings, the ventilation shaft, ventilation fan for chiller plant room at administration building and cooling tower at the administration building would be conducted to ensure compliance with the relevant allowable maximum sound power levels.	Ventilation Shaft, Administration Building and Ventilation Buildings/ Operation Phase	Contractor			√		EIAO-TM, NCO

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					Des	C	O	Dec	
Water Quality Impact									
Construction Phase									
5.7.2	4.10	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.	Construction Sites / Construction Phase	Contractor		√			Water Pollution Control Ordinance (WPCO), EIAO-TM
5.7.2	4.10	All vehicles and plant should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Construction Sites / Construction Phase	Contractor		√			Professional Persons Environmental Consultative Committee (ProPECC) Practice Note (PN) 1/94, WPCO, Waste Disposal Ordinance (WDO)
5.7.2	4.10	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM

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					Des	C	O	Dec	
5.7.2	4.10	The site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be followed where applicable to minimise surface run-off and the chance of erosion.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, ProPECC PN 1/94
5.7.2	4.10	There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS). The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence which is under the ambit of RO of EPD.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, (TM-DSS)
5.7.2	4.10	Contractor must register as a chemical waste producer if chemical wastes would be produced from the	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, WDO

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					Des	C	O	Dec	
		construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.							
5.7.2	4.10	Any service shop and maintenance facilities should be located on hard standings within a bonded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM
5.7.2	4.10	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance should be followed to avoid leakage or spillage of chemicals.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, WDO
5.7.2	4.10	Sufficient chemical toilets should be provided in the works areas. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM

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					Des	C	O	Dec	
5.7.2	4.10	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM
5.7.2	4.10	The practices outlined in ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should also be adopted where applicable to minimise the water quality impacts upon any natural streams or surface water systems.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, ETWB TC (Works) No. 5/2005
5.7.2	4.10	Appropriate measures during the construction of the cavern construction should be implemented to minimise the groundwater infiltration.	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM
5.7.2	4.10	No directly discharge of groundwater from contaminated areas should be adopted. Prior to any excavation works within the potentially contaminated areas at the existing STSTW site, the baseline groundwater quality in these areas should be reviewed based on the relevant SI data and any additional groundwater quality measurements to be performed with reference to <i>Guidance Note for Contaminated Land Assessment and Remediation</i> and the review results should be submitted to EPD for examination. If the review results indicated that the groundwater to be generated from the excavation	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, Guidance Note for Contaminated Land Assessment and Remediation

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		works would be contaminated, this contaminated groundwater should be either properly treated or properly recharged into the ground in compliance with the requirements of the TM-DSS. If wastewater treatment is to be deployed for treating the contaminated groundwater, the wastewater treatment unit shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as TPH) to an undetectable range. All treated effluent from the wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be either discharged into the foul sewers or tankered away for proper disposal.							
5.7.2	4.10	If deployment of wastewater treatment is not feasible for handling the contaminated groundwater, groundwater recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in section 2.3 of the TM-DSS. The baseline groundwater quality should be determined prior to the selection of the recharge wells, and submit a working plan to EPD for agreement. Pollution	Construction Sites / Construction Phase	Contractor		√			WPCO, EIAO-TM, TM-DSS

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Groundwater monitoring wells should be installed near the recharge points to monitor the effectiveness of the recharge wells and to ensure that no likelihood of increase of groundwater level and transfer of pollutants beyond the site boundary. Prior to recharge, free products should be removed as necessary by installing the petrol interceptor. The Contractor should apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater recharge operation or discharge of treated groundwater							
5.7.2	4.10	THEES connection works should be synchronized with the THEES maintenance, for a duration not longer than 4 weeks each outside the algae blooming season (January to May) and frequency of THEES maintenance shall be no more than once per year during the construction phase of the Project.	Tolo Harbour / Construction Phase	Project Proponent / Contractor	√	√			EIAO-TM
Construction and Operation Phases									
5.10.2	4.10	Shutdown of the THEES for maintenance should be shortened as far as possible. It is recommended that the maintenance of the THEES tunnel should be avoided during the algae blooming season (January to May).	Tolo Harbour / Construction and Operation Phase	Project Proponent		√	√		WPCO, EIAO-TM

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					Des	C	O	Dec	
5.10.2	4.10	Relevant government departments including EPD, WSD, AFCD as well as the key stakeholders for mariculture and fisheries in Tolo Harbour should be informed of the maintenance event prior to any discharge.	Tolo Harbour / Construction and Operation Phase	Project Proponent		√	√		WPCO, EIAO-TM
5.10.3	4.2-4.5	An event and action plan and a water quality monitoring programme (as presented in the EM&A Manual) should be implemented for the THEES maintenance discharge	Tolo Harbour / Construction and Operation Phase	Project Proponent		√	√		WPCO, EIAO-TM
5.10.1	4.10	Silt screen may be installed at the flushing water intakes during the THEES maintenance discharge should it appear necessary. Close communication between DSD and WSD should be maintained to minimize any impact on the flushing water intakes due to THEES maintenance discharge.	WSD flushing water intakes / Construction and Operation Phase	WSD / Project Proponent		√	√		WPCO, EIAO-TM
Design and Operation Phases									
5.8.3	4.6	In case adverse impact on KTN is identified based on the result of the three-month monitoring programme after commissioning of the project, the operation conditions of the treatment and THEES system should be investigated, and corrective and remedial action should be implemented to improve the effluent discharge from the CSTW. Furthermore, DSD should extend the water quality monitoring	Project site / Design and Operation Phases	Project Proponent			√		WPCO, EIAO-TM

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		programme for at least three months or as agreed by the Director of Environmental Protection.							
5.11.2	4.10	Dual power supply or ring main supply from CLP Power Hong Kong Ltd. CLP should be provided for the CSTW to prevent the occurrence of power failure. In addition, standby facilities for the main treatment units and standby equipment parts / accessories should also be provided in order to minimise the chance of emergency discharge. CLP should be consulted in order to ascertain the power supply for normal plant operation within the caverns. It is recommended that government departments including EPD, WSD and AFCD as well as the key stakeholders for mariculture and fisheries in Tolo Harbour should be informed as soon as possible in case of any emergency discharge so that appropriate actions can be taken.	Project site / Design and Operation Phases	Project Proponent	√		√		WPCO, EIAO-TM
5.11.2	4.10	In case of emergency discharge, the plant operators of CSTW should carry out necessary follow-up actions according to the procedures of the current contingency plan formulated for the existing STSTW to minimise the water quality impact.	Project site / Operation Phase	Project Proponent			√		WPCO, EIAO-TM
5.11.2	4.10	WSD may also consider, should it appear necessary, to shut down the Sha Tin seawater pumping station for a short period of time in case of	Sha Tin seawater pumping station / Operation Phase	WSD / Project Proponent			√		WPCO, EIAO-TM

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					Des	C	O	Dec	
		emergency discharge in order to minimize any adverse impacts.							
5.13.2	4.10	<p>Best Management Practices to reduce storm water and non-point source pollution are also proposed as follows:</p> <p><u>Design Measures</u></p> <ul style="list-style-type: none"> Exposed surface shall be avoided within the road and portal sites to minimise soil erosion. The access road and the portal areas shall be either hard paved or covered by landscaping area where appropriate. Streams near the Project site will be retained to maintain the original flow path. The drainage system will be designed to avoid flooding. Green areas / planting etc. should be introduced alongside the access road and within the portal areas, as far as possible, to minimise runoff pollution. <p><u>Devices/ Facilities to Control Pollution</u></p> <ul style="list-style-type: none"> Screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening off large substances such as fallen leaves and rubbish should be provided at the inlet of drainage system. Road gullies with standard design and silt traps should be provided to 	Project site / Design and Operation Phase	Project Proponent	√		√		WPCO, ProPECC PN 5/93

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					Des	C	O	Dec	
		remove particles present in stormwater runoff, where appropriate. <u>Administrative Measures</u> <ul style="list-style-type: none"> • Good management measures such as regular cleaning and sweeping of road surface/ open areas are suggested. The road surface/ open area cleaning should also be carried out prior to occurrence rainstorm. • Manholes, as well as stormwater gullies, ditches provided at the Project site should be regularly inspected and cleaned (e.g. monthly). Additional inspection and cleansing should be carried out before forecast heavy rainfall. 							
Land Contamination									
6.7.1	-	Further site walkover and/or detailed land contamination assessment will be required for sites that are inaccessible or currently in operation / yet to be constructed (i.e. existing STSTW, David Camp and part of existing Sha Tin VDC, and proposed A Kung Kok Shan Road surface magazine site within the Project boundary). The site walkover, detailed land contamination assessment and if necessary, remediation works should be carried out after decommissioning of the sites	Existing STSTW, David Camp and VDC / Construction Phase	Project Proponent / Contractor		√		√ (for existing STS TW)	Guidance Note for Contaminated Land Assessment and Remediation, Practice Guide for Investigation and Remediation of Contaminated Land, Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management

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					Des	C	O	Dec	
		<p>but prior to re-development and should include the following:</p> <ul style="list-style-type: none"> • Prior to the commencement of the SI works, review the CAP to confirm whether the proposed SI works (e.g. sampling locations, testing parameters etc.) are still valid and to confirm the appropriate RBRGs land use scenario for the development; • Submit supplementary CAP(s), presenting the findings of the above review for EPD endorsement. If land contamination issues were identified within David Camp or part of existing VDC / proposed A Kung Kok Shan Road surface magazine site within the Project boundary in the further site walkover, findings of the site walkover and the proposal for SI works should also be presented in the supplementary CAP(s); • Carry out SI works according to the supplementary CAP endorsed by EPD; • Submit CAR(s), detailing findings of the SI works and nature/extent of any soil/groundwater contamination, and, if contaminated identified, RAP(s), discussing the appropriate remedial methods and mitigation 							

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					Des	C	O	Dec	
		measures, for the identified contamination, for EPD agreement; and <ul style="list-style-type: none"> Carry out soil/groundwater remediation works according to EPD agreed RAP and submit RR(s) afterwards for EPD agreement. The remediation works and agreement of RR should be completed prior to re-development. 							
6.7.2	-	If contamination were identified, mitigation measures as recommended in the RAP should be followed and should include the following: <ul style="list-style-type: none"> Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; Excavation shall be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; Supply of suitable clean backfill material (or treated soil) after excavation; Stockpiling site(s) shall be lined with impermeable sheeting and bunded. Stockpiles shall be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent 	Project Site / Construction Phase	Contractor		√		√ (for existing STS TW)	Guidance Note for Contaminated Land Assessment and Remediation, Practice Guide for Investigation and Remediation of Contaminated Land, Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management

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					Des	C	O	Dec	
		<p>usage, regular watering shall be applied. However, watering shall be avoided on stockpiles of contaminated soil to minimise contaminated runoff.</p> <ul style="list-style-type: none"> • Vehicles containing any excavated materials shall be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates shall be sealed to prevent any discharge during transport or during wet conditions; • Speed control for the trucks carrying contaminated materials shall be enforced; • Vehicle wheel and body washing facilities at the site's exist points shall be established and used; and • Pollution control measures for air emissions (e.g. from biopile blower and handling of cement), noise emissions (e.g. from blower or earthmoving equipment), and water discharges (e.g. runoff control from treatment facility) shall be implemented and complied with relevant regulations and guidelines. 							

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					Des	C	O	Dec	
Hazard to Life									
Construction Phase									
7.14.1	6.2.2	<p>The following recommendations are justified to be implemented to meet the EIAO-TM requirements:</p> <ul style="list-style-type: none"> The truck should be designed to minimise the amount of combustible in the cabin. The fuel carried in the fuel tank should also be minimised to reduce the duration of any fire; The accident involvement frequency of the explosives delivery truck should be minimised through implementation of several administrative measures, such as providing training programme to the driver, regular "tool box" briefing session, implementing a defensive driving attitude, selecting driver with good safety record, and providing regular medical checks for the driver; Avoidance of returning unused explosives to the magazine, only the required quantity of explosives for a particular blast should be transported; Maintain a minimum headway of 10 minutes between two 	Explosives delivery route / Construction Phase	Contractor	√	√			EIAO-TM

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					Des	C	O	Dec	
		consecutive truck convoys whenever practicable; and <ul style="list-style-type: none"> The fire involvement frequency should be minimised by carrying better types of fire extinguishers and with bigger capacity onboard of the explosives delivery truck. Emergency plans and trainings could also be provided to make sure that the fire extinguishers are used adequately. 							
7.14.2	6.2.3	The magazine should be designed, built, operated and maintained in accordance with Mines Division's guidelines and appropriate industry best practice. In addition, the following recommendations should be implemented: <ul style="list-style-type: none"> The security plan should address different alert security level to reduce opportunity for arson or deliberate initiation of explosives; Emergency plan should be developed to address uncontrolled fire in magazine area, and drill of the emergency plan should be regularly carried out; Suitable work control system should be set-up, such as an operational manual including Permit-to-Work system, to ensure that work activities undertaken 	Magazine Site/ Construction Phase	Contractor	√	√			-

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					Des	C	O	Dec	
		during operation of the magazine are properly controlled; <ul style="list-style-type: none"> • Good house-keeping within the magazine to ensure no combustible materials are accumulated; • Good house-keeping outside the magazine stores to ensure no combustible materials are accumulated; and • Regular checking of the magazine store to ensure no water seepage through the roof, walls or floor. 							
7.14.3	6.2.4	The following recommendations should be implemented: <ul style="list-style-type: none"> • Emergency plan should be developed to address uncontrolled fire during transport. Case of fire near an explosive delivery truck in jammed traffic should be included in the plan. Activation of fuel and battery isolation switches on vehicle when fire breaks out should also be included in the emergency plan to reduce likelihood of prolonged fire leading to explosion; • Working guideline should be developed to define procedure for explosives transport during adverse weather such as thunderstorm; 	To and from Magazine Site / Construction Phase	Contractor	√	√			-

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					Des	C	O	Dec	
		<ul style="list-style-type: none"> • Detonators should be transported separately from other Class 1 explosives. Separation of vehicles should also be maintained through the trip; • Develop procedure to ensure the availability of parking space on site for the explosives delivery truck. Delivery should not be commenced if parking space on site is not secured; • Hot work or other activities should be banned in the vicinity of the explosives offloading or charging activities; • Lining should be provided within the transportation box on the vehicle; • Fire screen should be used between cabin and the load on the vehicle; • Ensure packaging of detonators remains intact until handed over at blasting site; • Ensure that cartridged emulsion packages are not damaged before every trip; and • Use experienced driver with good safety record. 							

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					Des	C	O	Dec	
7.14.4	6.2.5	<p>The following recommendations should be implemented for the safe use of explosives:</p> <ul style="list-style-type: none"> • Blast Charge Weight should be within MIC as specified for the given blast face; • Temporary mitigation measures such as blast doors or heavy duty blast curtains should be installed at the portals or shafts and at suitable locations underground to prevent flyrock and control the air overpressure; • Multiple faces blasting will be carried out for the construction of cavern in this project. Good communication and control will need to be adopted in ensuring that the works are carried out safely; • It is not intended to carry out complete evacuation of the construction areas and secure refuge areas should be identified to workers in the areas; • A Chief Shotfirer and a Blasting Engineer shall be employed in addition to the normal blasting personnel to ensure that the works are safe and coordinated between blasting areas; • Shotfirer to be provided with a lightning detector, and appropriate 	CSTW / Construction Phase	Contractor	√	√			-

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					Des	C	O	Dec	
		control measures should be in place; <ul style="list-style-type: none"> • Speed limit for the diesel vehicle truck and bulk emulsion truck in the access tunnel and cavern should be imposed. The truck may be escorted while underground to ensure route is clear from hazards and obstructions; and • Hot work should be suspended during passage of the diesel vehicle truck and bulk emulsion truck in the access tunnel and cavern. • A boulder survey should be undertaken based on the likely PPV values that would result from the blasting process. Those boulders subject to the vibration higher than the allowable limit should be strengthened, removed, or constructed with boulder fence, prior to the commencement of blasting. 							
	Operation Phase								
		Nil							

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					Des	C	O	Dec	
Ecological Impact (Terrestrial and Marine)									
Construction Phase									
8.8.2	7.2.1	Construction of access roads and other temporary works should be carefully designed (e.g. elevated road for crossing streams) to avoid / minimise habitat loss and fragmentation.	Project site – areas access road / Pre-Construction Phase	Design team / Project Proponent	√				-
8.8.3	7.2.2	Minimise habitat loss to nearby habitats and associated wildlife by implementing the following mitigation measures: - <ul style="list-style-type: none"> • confining the works within the site boundary; • controlling access of site staff to avoid damage to the vegetation in surrounding areas; and • placement of equipment or stockpile in the existing disturbed / urbanised land within the site boundary of the Project to minimise disturbance to vegetated areas; 	Project site / Construction Phase	Contractor		√			-
8.8.3	7.2.2	Reinstatement planting should be implemented upon the completion of construction works to minimise the ecological impact arising from the temporary habitat loss	Project Site (Main Portal Area / Secondary Portal Area / Access Road / Temporary Works Area) /Construction Phase	Project Proponent	√	√		√	

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					Des	C	O	Dec	
8.8.2, 8.8.3 & 8.10	7.2.2	<p>Detailed Vegetation Survey shall be conducted by a suitably qualified botanist / ecologist within the works area requiring vegetation clearance prior to commencement of works to identify plant species of conservation importance.</p> <p>The potentially affected individuals shall be tagged and fenced off for preservation, and in the case of unavoidable loss, for transplantation to nearby suitable habitat(s).</p>	Proposed works areas (Main Portal, Secondary Portal, Access Road) / Pre-Construction Phase	Project Proponent / Qualified botanist or ecologist		√			
8.8.2, 8.8.3 & 8.10	7.3.1	<p>A Protection and Transplantation Proposal including the subsequent monitoring visit for the affected plant species should be prepared and conducted by a suitably qualified local ecologist. The Proposal should be submitted for approval at least one month before works commencement.</p> <p>To review the performance of the transplantation exercise, monitoring of transplanted flora should be conducted monthly after the transplantation throughout the construction phase. The parameters to be monitored should include the health condition and survival rate of the transplanted flora and presence of weedy species. Any observations and recommendations should be reported in monthly EM&A reports</p>	Recipient Site for transplanted species / Construction Phase	Project Proponent / Qualified botanist or ecologist		√			

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					Des	C	O	Dec	
8.8.3	7.2.2	<p>Mitigation measures should be implemented to control runoff from the construction site, as well as the adopting guidelines and good site practices for handling and disposal of construction discharges in order to minimise the potential indirect impact on the streams (particularly S2) resulting from site runoff.</p> <p>Precautionary measures should also be implemented to minimise indirect impacts to the streams, such as isolating the work site by placing sandbags and silt curtains, covering up construction materials, debris and spoil to avoid being washed into the stream, and properly collecting and treating construction effluent and sewage.</p>	Access Road on Nui Po Shan / Construction Phase	Contractor		√			ETWB TCW No. 5/2005
8.8.3	7.2.2	<p>Implement good site practice to further minimise impacts from disturbance such as noise, air quality and water quality issues, such as: -</p> <ul style="list-style-type: none"> the use of quiet plant and EPD's QPME and the availability of British Standards 5228 has been considered; the use of movable noise barrier; the use of temporary noise screening structures or purpose-built temporary noise barriers; 	Project site / Construction Phase	Contractor		√			-

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<ul style="list-style-type: none"> install site hoarding as temporary noise barrier where construction works are undertaken; only well-maintained plant should be operated on site and plant should be serviced regularly during the construction programme; Mitigation measures stipulated in the ProPECC PN 1/94 "Construction Site Drainage" should be complied to minimise water quality impact; Installation of stand-by pump, emergency power supply and telemetry system to avoid sewage overflow and surcharge to sewerage system due to power/equipment failure. 							
8.8.3	7.2.2	Minimise groundwater infiltration during cavern construction with the following water control strategies:- <ul style="list-style-type: none"> Probing Ahead: As a normal practice, the Contractor will undertake rigorous probing of the ground ahead of excavation works to identify zones of significant water inflow. The probe drilling results will be evaluated to determine specific grouting requirements in line with the tunnel / cavern advance. In such zones of significant water inflow that could occur as a result of discrete, permeable features, the intent 	Project site / Construction Phase	Contractor		√			-

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<p>would be to reduce overall inflow by means of cut-off grouting executed ahead of the tunnel / cavern advance;</p> <ul style="list-style-type: none"> • Pre-grouting: Where water inflow quantities are excessive, pre-grouting will be required to reduce the water inflow into the tunnel / cavern. The pre-grouting will be achieved via a systematic and carefully specified protocol of grouting; • In principle, the grout pre-treatment would be designed on the basis of probe hole drilling ahead of the tunnel / cavern face; • The installation of waterproof lining would also be adopted after the formation of the tunnels and caverns. 							
8.8.3	7.2.2	<p>In the event of excessive infiltration being observed as a result of the tunnelling or excavation works even after incorporation of the water control strategies, post-grouting should be applied as far as practicable as described below:</p> <ul style="list-style-type: none"> • Post-grouting: Groundwater drawdown will be most likely due to inflows of water into the tunnel / cavern that have not been sufficiently controlled by the pre-grouting measures in high permeability area. Where this 	Project site / Construction Phase	Contractor		√			-

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<p>occurs post grouting will be undertaken before the lining is installed. Whilst unlikely to be required in significant measure, such a contingency should be allowed for reduction in permeability of the tunnel / cavern surround (by grouting) to limit inflow to acceptable levels.</p> <p>The practical groundwater control measures stated above are proven technologies and have been extensively applied in other past projects. These measures or other similar methods, as approved by the Engineer to suit the works condition shall be applied to minimise the groundwater infiltration.</p>							
8.8.3	7.2.2	<p>In case seepage of groundwater occurs, groundwater should be pumped out from works areas and discharged to the storm system via silt trap. Uncontaminated groundwater from dewatering process should also be discharged to the storm system via silt removal facilities.</p>	Project site / Construction Phase	Contractor		√			-

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					Des	C	O	Dec	
8.8.3	7.2.2	<p>Mitigation measures recommended in the water quality impact assessment for controlling water quality impact will also serve to protect marine ecological resources from indirect impacts and ensure no unacceptable impact on marine ecological resources.</p> <p>Relevant government departments including EPD, WSD and AFCD as well as key stakeholders for mariculture and fisheries in Tolo Harbour should be informed of the THEES maintenance / emergency discharge event prior to any discharge.</p> <p>It is recommended that the temporary effluent bypass event and the THEES maintenance period should be shortened as far as possible.</p>	Tolo Harbour / Construction Phase	Contractor and Operator		√			-
Construction and Operation Phase									
8.8.3	7.2.2	<p>Overall reduction of glare during both construction and operation phase should be considered. A balance between lighting for safety, and avoiding excessive lighting can be achieved through the use of directional lighting to avoid light spill into sensitive areas, and control/timing of lighting periods of some facilities, particularly at the secondary portal which lies approximately 200 m northwest of Ma On Shan Country Park.</p>	Project site / Construction and Operation Phase	Contractor and Operator		√	√		-

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
8.8.3	7.2.2	During the decommissioning and demolition of the existing STSTW, the direction and lighting periods should be controlled during ardeid breeding season (March to August) to minimise the potential indirect impact on Penfold Park Egretty and the ardeids flying over the existing STSTW.	Existing STSTW / Decommissioning / March to August	Contractor				√	-
8.10	7.3	It is anticipated that the construction of rock caverns would not have adverse impacts on groundwater in Nui Po Shan. Nonetheless, surface water level or groundwater level near the caverns will be closely monitored during the construction and operation stage.	Project site / Construction and Operation Phase	Contractor and Operator		√	√		-
Compensatory Planting									
8.8.4& 8.10.1	7.2.3	Compensatory planting would be provided at main and secondary portal areas, and along the access road.	Main portal, secondary portal, and along access road	Project Proponent	√	√			DEVB TC(W) No. 7/2015
8.8.4 & 8.10.1	7.2.3	To facilitate successful planting, a detailed Woodland Compensation Plan should be prepared by local ecologists with at least 10 years relevant experience to form the basis of the proposed compensatory planting. The Woodland Compensation Plan should include implementation details, management requirement, as well as monitoring requirements (e.g. frequency and parameters) of the	Compensatory planting area (Main portal, secondary portal, and along access road) / pre-construction	Project Proponent	√	√			

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		compensatory planting area. Approval of the Plan should be obtained from EPD at least three months before the prior to commencement of compensatory woodland planting.							
8.8.4 & 8.10.1	7.2.3	Upon the completion of planting, monitoring of the woodland compensation areas should be implemented, with maintenance works (e.g. irrigation, weeding, pruning, control of pests and diseases, replacement planting, repair of damage, etc.) conducted as necessary.	Compensatory planting area (Main portal, secondary portal, and along access road) / Operation	Project Proponent / CSTW Operator			√		
Fisheries Impact									
9.6	8.2	Potential impacts on fisheries resources and fishing operations arising from the Project have been avoided and minimised by construction of a connection pipes to the existing emergency outfall of STSTW by trenchless method underneath Shing Mun River with the least water quality impact. In addition, the temporary effluent bypass event for THEES connection work would be synchronized within regular THEES maintenance. Therefore, additional water quality impact and fisheries impact from changes of water quality have been avoided. Furthermore, the THEES maintenance discharge would avoid the blooming season of algae (i.e. January to May) to minimise the potential water quality impacts. It is	Tolo Harbour /Construction and Operation Phase	Project Proponent / Contractor	√	√			-

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					Des	C	O	Dec	
		recommended that any THEES maintenance period should be shortened as far as possible.							
9.6	8.2	Mitigation measures recommended in the water quality impact assessment for controlling water quality impact will also serve to protect fisheries from indirect impacts and ensure no unacceptable impact on fisheries resources and operations. For more detailed mitigation measures regarding water quality refer to Sections 5.7.2 and 5.13.2 of the EIA Report.	Construction and Operation Phase	Contractor and Operator		√	√		-
9.6	8.2	Relevant government departments including EPD, WSD and AFCD as well as key stakeholders for mariculture and fisheries in Tolo Harbour should be informed prior to the THEES maintenance / emergency discharge events.	Tolo Harbour / Construction and Operation Phase	Project Proponent		√	√		
Landscapes and Visual Impact									
Table 10.10	-	CM1 - Preservation of Existing Vegetation	Construction Sites/ Construction Phase	Project Proponent	√	√		√	DEVB TCW No. 7/2015 and latest Guidelines on Tree Preservation during Development issued by GLTM Section of DEVB
Table 10.10	-	CM2 - Transplanting of Affected Trees	Construction Sites/ Construction Phase	Project Proponent	√	√		√	DEVB TCW No. 7/2015 and the latest Guidelines on Tree Transplanting issued by GLTM Section of DEVB

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
Table 10.10	-	CM3 - Compensatory Tree Planting	Construction Sites/ Construction Phase	Project Proponent	√	√		√	DEVB TCW No. 7/2015
Table 10.10	-	CM4 - Control of Night-time Lighting Glare	Construction Sites/ Construction Phase	Project Proponent	√	√		√	
Table 10.10	-	CM5 - Erection of Decorative Screen Hoarding	Construction Sites/ Construction Phase	Project Proponent	√	√		√	
Table 10.10	-	CM6 - Management of Construction Activities and Facilities	Construction Sites/ Construction Phase	Project Proponent	√	√		√	
Table 10.10	-	CM7 - Reinstatement of Temporarily Disturbed Landscape Areas	Construction Sites/ Construction Phase	Project Proponent	√	√		√	
Table 10.11	-	OM1 - Tree and Shrub Planting at the Temporary Project Magazine Site after Completion of Engineering Works	Temporary Project Magazine Site / Operation Phase	Project Proponent	√	√	√		
Table 10.11	-	OM2 - Aesthetically pleasing design of Aboveground Structures	Tunnel Portals, Administration Building, Ventilation Buildings, Electrical Substations and Ventilation Shaft / Operation Phase	Project Proponent	√	√	√		

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					Des	C	O	Dec	
Table 10.11	-	OM3 - Aesthetically pleasing design of Highways Structures	Access Road to Ventilation Shaft / Operation Phase	Highways Department	√	√	√		
Table 10.11	-	OM4 - Reprovision of Cycle Track	Cycle track / Operation Phase	Highways Department	√	√	√		
Table 10.11	-	OM5 - Provision of Green Roof	Administration Building and Ventilation Buildings / Operation Phase	Project Proponent	√	√	√		
Table 10.11	-	OM6 - Provision of Buffer Planting	Main and Secondary Portal Areas / Operation Phase	Project Proponent	√	√	√		
Table 10.11	-	OM7 - Hydroseeding on the disturbed ground surface after demolition works prior to future redevelopment of the existing STSTW	Existing STSTW / Operation Phase	Lands Department (LandsD) or future development agent in existing STSTW	√	√	√		
Table 10.11	-	OM8 - Woodland Mix Planting on Soil Slopes	Soil Slopes / Operation Phase	Project Proponent	√	√	√		

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
Cultural Heritage Impact									
11.5.1.1	10.1.1	No potential direct or indirect impact to cultural heritage resource is anticipated, and therefore no mitigation measures are required.	N/A	N/A					EIAO EIAO-TM Antiquities and Monuments Ordinance Guidelines for Cultural Heritage Impact Assessment
Wastes Management Implications									
12.6.2	11.2.2	<p>Appropriate waste handling, transportation and disposal methods for all waste arising generated during the construction works for the Project should be implemented to ensure that construction wastes do not enter the nearby streams or drainage channel.</p> <p>It is anticipated that adverse impacts would not arise on the construction site, provided that good site practices are strictly followed. Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> Nomination of approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility. 	Project Site Area / Construction Phase	Contractor		√		√	Waste Disposal Ordinance

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<ul style="list-style-type: none"> • Training of site personnel in proper waste management and chemical waste handling procedures. • Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter. • Arrangement for regular collection of waste for transport off-site and final disposal. • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. • A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed. • A Waste Management Plan should be prepared and should be submitted to the Engineer for approval. One may make reference to ETWB TCW No. 19/2005 for details. <p>In order to monitor the disposal of C&D material at landfills and public filling areas, as appropriate, and to control fly tipping, a trip-ticket system should be included as one of the contractual</p>							

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					Des	C	O	Dec	
		requirements to be implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. One may make reference to DEVB TCW No.6/2010 for details.							
12.6.3	11.2.3	<p>Good management and control of construction site activities / processes can minimise the generation of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> • Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. • Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors. • Any unused chemicals or those with remaining functional capacity shall be recycled. • Maximising the use of reusable steel formwork to reduce the amount of C&D material. • Prior to disposal of C&D waste, it is recommended that wood, steel 	Project Site Area / Construction Phase	Contractor		√		√	Waste Disposal Ordinance

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<p>and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill.</p> <ul style="list-style-type: none"> On-site crushing and sorting facilities are being considered to reduce the rock size to fulfill the size requirements from relevant waste collection / transfer / disposal facilities; Adopt proper storage and site practices to minimise the potential for damage to, or contamination of, construction materials. Plan the delivery and stock of construction materials carefully to minimise the amount of surplus waste generated. Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as much as possible; and Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering. <p>In addition to the above measures, other specific mitigation measures are recommended below to minimise environmental impacts during handling, transportation and disposal of wastes.</p>							

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					Des	C	O	Dec	
12.6.4	11.2.4	<p>Storage of materials on site may induce adverse environmental impacts if not properly managed, recommendations to minimise the impacts include:</p> <ul style="list-style-type: none"> Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution; Maintain and clean storage areas routinely; Stockpiling area should be provided with covers as much as practicable and water spraying system to prevent materials from wind-blown or being washed away; and Different locations should be designated to stockpile each material to enhance reuse. 	Project Site Area / Construction Phase	Contractor		√		√	-
12.6.4	11.2.4	<p>Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be enforced to minimise the potential adverse impacts:</p> <ul style="list-style-type: none"> Remove waste in timely manner; Waste collectors should only collect wastes prescribed by their permits; Impacts during transportation, such as dust and odour, should be 	Project Site Area / Construction Phase	Contractor		√		√	<p>Waste Disposal Ordinance</p> <p>Waste Disposal (Charges for Disposal of Construction Waste) Regulation</p> <p>Land (Miscellaneous Provisions) Ordinance</p>

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		mitigated by the use of covered trucks or in enclosed containers; <ul style="list-style-type: none"> Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); Waste should be disposed of at licensed waste disposal facilities; and Maintain records of quantities of waste generated, recycled and disposed. 							
12.6.4	11.2.4	Land transport will be used for transportation of excavated and stockpile materials. It is expected there will be 1260 vehicles per day for transporting waste during peak construction phase. The tentative transportation routings for the disposal of various types of wastes are shown in Table 12.4. The transportation routing may be changed subject to the traffic conditions. Nevertheless, it is anticipated that there is no adverse impact from the waste during transportation with the implementation of appropriated measures (e.g. using water-tight containers and covered trucks).	Transportation Route of Waste / Construction Phase	Contractor		√			-

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
12.6.4	11.2.4	In order to monitor the disposal of C&D materials at PFRFs and landfills and to control fly-tipping, a trip-ticket system should be established in accordance with DEVB TCW No. 6/2010. A recording system for the amount of waste generated, recycled and disposed, including the disposal sites, should also be set up. Warning signs should be put up to remind the designated disposal sites. Close-circuited television should be installed at the vehicular entrance and exit of the site as additional measures to prevent fly-tipping.	Project Site Area / Construction Phase	Contractor		√		√	DEVB TCW No. 6/2010
12.6.4	11.2.5	In addition to the above general measures, other specific mitigation measures on handling the C&D materials and materials generated from site formation and demolition work are recommended below, which should form the basis of the WMP to be prepared by the contractor(s) in construction phase.	Project Site Area / Construction Phase	Contractor		√		√	Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site
12.6.5	11.2.5	In order to minimise the impact resulting from collection and transportation of C&D materials for off-site disposal, the excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below:	Project Site Area / Construction Phase	Contractor		√		√	Waste Disposal Ordinance ETWB TCW No.19/2005 DEVB TCW No. 6/2010

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<ul style="list-style-type: none"> A WMP, which becomes part of the EMP, should be prepared in accordance with ETWB TCW No.19/2005; A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and In order to monitor the disposal of C&D materials at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to DEVB TCW No. 6/2010). <p>It is recommended that specific areas should be provided by the Contractors for sorting and to provide temporary storage areas (if required) for the sorted materials.</p>							
12.6.5	11.2.5	The Contactor should prepare and implement an EMP in accordance with ETWB TCW No.19/2005, which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should	Project Site Area / Construction Phase	Contractor		√			ETWB TCW No.19/2005

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					Des	C	O	Dec	
		be submitted to the Engineer for approval. The Contractor should implement waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor, preferably on a monthly basis.							
12.6.5	11.2.5	All surplus C&D materials arising from or in connection with construction works should become the property of the Contractor when it is removed unless otherwise stated. The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimise temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.	Project Site Area / Construction Phase	Contractor		√		√	-
12.6.6	11.2.6	The practices of good housekeeping for CSTW listed below should be followed to ameliorate any odour impact from handling, collection, transportation and disposal of sludge:	Operation Phases	Operator			√		Waste Disposal Ordinance

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<ul style="list-style-type: none"> • Screens should be cleaned regularly to remove any accumulated organic debris • Grit and screening transfer systems should be flushed regularly with water to remove organic debris and grit • Grit and screened materials should be transferred to closed containers • Scum and grease collection wells and troughs should be emptied and flushed regularly to prevent putrefaction of accumulated organics • Skim and remove floating solids and grease from primary clarifiers regularly • Frequent sludge withdrawal from tanks is necessary to prevent the production of gases • Sludge should be transported to the STF by water-tight containers to avoid Hydrogen Sulphide (H₂S)/odour emission and ingress of water into the containers which would lower the sludge dryness during transportation • Sludge cake should be transferred to closed containers • Sludge containers should be flushed with water regularly 							

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		<ul style="list-style-type: none"> Sludge trucks and containers should be washed thoroughly before leaving the CSTW to avoid any odour nuisance during transportation 							
12.6.6	11.2.6	In addition, all wastewater generated from the sludge dewatering process and all contaminated water from the cleaning operations recommended for odour control will be diverted to the relocated STSTW for proper treatment.	Operation Phases	Operator			√		Waste Disposal Ordinance
12.6.7	11.2.7	If chemical wastes are produced at the construction site or during operation, the Contractor during construction or the operator during operation will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to the licensed Chemical Waste Treatment Centre, or other	Construction and Operation Phases	Contractor / Operator		√	√		Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Implementation Stage ¹				Relevant Legislation & Guidelines
					Des	C	O	Dec	
		licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.							
12.6.8	11.2.8	Recycling of waste paper, aluminium cans and plastic bottles should be encouraged, it is recommended to place clearly labelled recycling bins at designated locations which could be accessed conveniently. Other general refuse should be separated from chemical and industrial waste by providing separated bins for storage to maximise the recyclable volume.	Construction and Operation Phases	Contractor / Operator		√	√		Public Health and Municipal Services Ordinance (Cap.132)
12.6.8	11.2.8	A reputable licensed waste collector should be employed to remove general refuse on a daily basis to minimise odour, pest and litter impacts.	Construction and Operation Phases	Contractor / Operator		√	√		Public Health and Municipal Services Ordinance (Cap. 132)
Health Impact									
-	-	Not applicable.							



Appendix 3.1

Action and Limit Level



Action and Limit Level

Action and Limit Level for Noise Monitoring

Monitoring Station	Action Level	Limit Level (dB(A))		
		0700-1900 hrs on normal weekdays	0700-2300 hrs on holidays (including Sundays); and 1900-2300 hrs on all days ²	2300-0700 hrs of all days ²
CM1	When one documented complaint is received	65 / 70 ¹	60 / 65 / 70 ³	45 / 50 / 55 ³
CM2(A)		65 / 70 ¹		
CM3		65 / 70 ¹		
CM4		75		
CM5		75		
DM1		75		
DM2		75		
DM3		65 / 70 ¹		

Remark 1: Limit level of CM1, CM2(A), CM3 and DM3 reduce to 65 dB (A) during examination periods if any.

Remark 2: Construction noise during restricted hours is under the control of Noise Control Ordinance Limit Level to be selected based on Area Sensitivity Rating.

Remark 3: Limit Level for restricted hour monitoring shall act as reference level only. Investigation would be conducted on CNP compliance if exceedance recorded during restricted hour noise monitoring period.

Action and Limit Level for Air Quality Monitoring

Monitoring Locations	1-hour TSP Level in µg/m3	
	Action Level	Limit Level
AM1	294	500
AM2	325	500
AM3(A)	360	500
AM4	297	500
AM5	349	500
AM6	312	500



Appendix 4.1

Air Quality Monitoring Results and Graphical Presentations



Report on 1-hour TSP monitoring at AM1 - Ah Kung Kok Fishermen Village

Action Level ($\mu\text{g}/\text{m}^3$) - 294
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	Fine	13:00	44
1-Dec-21	Fine	14:01	36
1-Dec-21	Fine	15:02	48
7-Dec-21	Fine	13:00	54
7-Dec-21	Fine	14:01	47
7-Dec-21	Fine	15:02	52
13-Dec-21	Fine	13:00	72
13-Dec-21	Fine	14:01	78
13-Dec-21	Fine	15:02	68
18-Dec-21	Fine	13:00	76
18-Dec-21	Fine	14:01	84
18-Dec-21	Fine	15:02	87
24-Dec-21	Cloudy	8:24	82
24-Dec-21	Cloudy	9:25	94
24-Dec-21	Cloudy	10:26	97
30-Dec-21	Cloudy	8:40	42
30-Dec-21	Cloudy	9:41	50
30-Dec-21	Cloudy	10:42	66
5-Jan-22	Cloudy	8:33	25
5-Jan-22	Cloudy	9:34	29
5-Jan-22	Cloudy	10:35	34
11-Jan-22	Fine	13:00	40
11-Jan-22	Fine	14:01	32
11-Jan-22	Fine	15:02	38
17-Jan-22	Cloudy	8:43	42
17-Jan-22	Cloudy	9:44	36
17-Jan-22	Cloudy	10:45	39
22-Jan-22	Cloudy	8:23	33
22-Jan-22	Cloudy	9:24	37
22-Jan-22	Cloudy	10:25	43
28-Jan-22	Fine	8:02	12
28-Jan-22	Fine	9:03	16
28-Jan-22	Fine	10:04	20
9-Feb-22	Cloudy	14:22	28
9-Feb-22	Cloudy	15:23	29
9-Feb-22	Cloudy	16:24	32
15-Feb-22	Fine	13:00	27
15-Feb-22	Fine	14:01	20
15-Feb-22	Fine	15:02	22
21-Feb-22	Rainy	8:20	7
21-Feb-22	Rainy	9:21	4
21-Feb-22	Rainy	10:22	9
26-Feb-22	Fine	8:29	61
26-Feb-22	fine	9:30	79
26-Feb-22	Fine	10:31	72



Report on 1-hour TSP monitoring at AM2 - Block H, Kam Tai Court

Action Level ($\mu\text{g}/\text{m}^3$) - 325
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	Fine	14:04	61
1-Dec-21	Fine	15:05	66
1-Dec-21	Fine	16:06	57
7-Dec-21	Fine	10:12	40
7-Dec-21	Fine	13:00	34
7-Dec-21	Fine	14:01	38
13-Dec-21	Fine	10:55	68
13-Dec-21	Fine	13:00	64
13-Dec-21	Fine	14:01	61
18-Dec-21	Fine	8:58	86
18-Dec-21	Fine	9:59	90
18-Dec-21	Fine	10:00	83
24-Dec-21	Cloudy	8:56	103
24-Dec-21	Cloudy	9:57	92
24-Dec-21	Cloudy	10:58	94
30-Dec-21	Cloudy	9:02	43
30-Dec-21	Cloudy	10:03	45
30-Dec-21	Cloudy	11:04	48
5-Jan-22	Fine	8:55	61
5-Jan-22	Fine	9:56	60
5-Jan-22	Fine	10:57	56
11-Jan-22	Fine	8:58	47
11-Jan-22	Fine	9:59	66
11-Jan-22	Fine	10:00	55
17-Jan-22	Cloudy	13:00	39
17-Jan-22	Cloudy	14:01	44
17-Jan-22	Cloudy	15:02	51
22-Jan-22	Cloudy	8:56	40
22-Jan-22	Cloudy	9:57	32
22-Jan-22	Cloudy	10:58	48
28-Jan-22	Fine	9:39	30
28-Jan-22	Fine	10:40	30
28-Jan-22	Fine	11:41	29
9-Feb-22	Cloudy	14:22	28
9-Feb-22	Cloudy	15:23	29
9-Feb-22	Cloudy	16:24	32
15-Feb-22	Fine	13:00	27
15-Feb-22	Fine	14:01	20
15-Feb-22	Fine	15:02	22
21-Feb-22	Rainy	8:20	7
21-Feb-22	Rainy	9:21	4
21-Feb-22	Rainy	10:22	9
26-Feb-22	Fine	8:29	61
26-Feb-22	fine	9:30	79
26-Feb-22	Fine	10:31	72

Report on 1-hour TSP monitoring at AM3(B) - Outside A Kung Kok Street Garden

Action Level ($\mu\text{g}/\text{m}^3$) - 360
 Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	Fine	8:40	53
1-Dec-21	Fine	9:41	57
1-Dec-21	Fine	10:42	48
7-Dec-21	Fine	13:34	56
7-Dec-21	Fine	14:35	49
7-Dec-21	Fine	15:36	49
13-Dec-21	Fine	8:55	66
13-Dec-21	Fine	9:56	56
13-Dec-21	Fine	10:57	52
18-Dec-21	Fine	8:25	74
18-Dec-21	Fine	9:26	70
18-Dec-21	Fine	10:27	77
24-Dec-21	Cloudy	8:34	78
24-Dec-21	Cloudy	9:35	86
24-Dec-21	Cloudy	10:36	93
30-Dec-21	Cloudy	8:48	53
30-Dec-21	Cloudy	9:49	61
30-Dec-21	Cloudy	10:50	57
5-Jan-22	Cloudy	8:43	33
5-Jan-22	Cloudy	9:44	36
5-Jan-22	Cloudy	10:45	27
11-Jan-22	Fine	8:40	42
11-Jan-22	Fine	9:41	38
11-Jan-22	Fine	10:42	35
17-Jan-22	Cloudy	8:50	34
17-Jan-22	Cloudy	9:51	43
17-Jan-22	Cloudy	10:52	45
22-Jan-22	Cloudy	8:35	47
22-Jan-22	Cloudy	9:36	52
22-Jan-22	Cloudy	10:37	40
28-Jan-22	hazy	8:10	33
28-Jan-22	hazy	9:11	27
28-Jan-22	hazy	10:12	25
9-Feb-22	Cloudy	9:28	37
9-Feb-22	Cloudy	10:29	34
9-Feb-22	Cloudy	13:00	38
15-Feb-22	Fine	13:00	26
15-Feb-22	Fine	14:01	23
15-Feb-22	Fine	15:02	21
21-Feb-22	Rainy	8:40	34
21-Feb-22	Rainy	9:41	43
21-Feb-22	Rainy	10:42	45
26-Feb-22	Fine	8:42	47
26-Feb-22	fine	9:43	52
26-Feb-22	Fine	10:44	40



Report on 1-hour TSP monitoring at AM4 - Wellborn Kindergarten

Action Level ($\mu\text{g}/\text{m}^3$) - 297
Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	Fine	14:14	50
1-Dec-21	Fine	15:15	48
1-Dec-21	Fine	16:16	42
7-Dec-21	Fine	8:31	56
7-Dec-21	Fine	9:32	55
7-Dec-21	Fine	10:33	46
13-Dec-21	Fine	14:02	62
13-Dec-21	Fine	15:03	59
13-Dec-21	Fine	16:04	58
18-Dec-21	Fine	8:29	86
18-Dec-21	Fine	9:30	80
18-Dec-21	Fine	10:31	85
24-Dec-21	Cloudy	8:30	85
24-Dec-21	Cloudy	9:31	94
24-Dec-21	Cloudy	10:32	99
30-Dec-21	Cloudy	8:54	49
30-Dec-21	Cloudy	9:55	53
30-Dec-21	Cloudy	10:56	44
5-Jan-22	Cloudy	8:48	42
5-Jan-22	Cloudy	9:49	38
5-Jan-22	Cloudy	10:50	31
11-Jan-22	Fine	8:44	29
11-Jan-22	Fine	9:45	40
11-Jan-22	Fine	10:46	36
17-Jan-22	Cloudy	8:55	44
17-Jan-22	Cloudy	9:56	41
17-Jan-22	Cloudy	10:57	51
22-Jan-22	Cloudy	8:42	42
22-Jan-22	Cloudy	9:43	46
22-Jan-22	Cloudy	10:44	50
28-Jan-22	hazy	8:18	24
28-Jan-22	hazy	9:19	27
28-Jan-22	hazy	10:20	28
9-Feb-22	Cloudy	9:31	39
9-Feb-22	Cloudy	10:32	35
9-Feb-22	Cloudy	13:00	34
15-Feb-22	Fine	8:21	27
15-Feb-22	Fine	9:22	23
15-Feb-22	Fine	10:23	24
21-Feb-22	Rainy	8:32	5
21-Feb-22	Rainy	9:33	5
21-Feb-22	Rainy	10:34	4
26-Feb-22	Fine	8:37	51
26-Feb-22	fine	9:38	55
26-Feb-22	Fine	10:39	49

Report on 1-hour TSP monitoring at AM5 - The NAAC Harmony Manor

Action Level ($\mu\text{g}/\text{m}^3$) - 349
 Limit Level ($\mu\text{g}/\text{m}^3$) - 500

Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	Fine	8:10	48
1-Dec-21	Fine	9:34	55
1-Dec-21	Fine	10:35	41
7-Dec-21	Fine	8:20	58
7-Dec-21	Fine	9:21	63
7-Dec-21	Fine	10:22	52
13-Dec-21	Fine	8:35	64
13-Dec-21	Fine	9:36	57
13-Dec-21	Fine	10:37	60
18-Dec-21	Fine	8:10	88
18-Dec-21	Fine	9:11	94
18-Dec-21	Fine	10:12	96
24-Dec-21	Cloudy	8:15	80
24-Dec-21	Cloudy	9:16	87
24-Dec-21	Cloudy	10:17	95
30-Dec-21	Cloudy	8:15	64
30-Dec-21	Cloudy	9:16	60
30-Dec-21	Cloudy	10:17	55
5-Jan-22	Cloudy	8:20	31
5-Jan-22	Cloudy	9:21	38
5-Jan-22	Cloudy	10:22	35
11-Jan-22	Fine	8:28	47
11-Jan-22	Fine	9:29	55
11-Jan-22	Fine	10:30	51
17-Jan-22	Cloudy	8:33	60
17-Jan-22	Cloudy	9:34	62
17-Jan-22	Cloudy	10:35	66
22-Jan-22	Cloudy	8:15	44
22-Jan-22	Cloudy	9:16	53
22-Jan-22	Cloudy	10:17	55
28-Jan-22	hazy	8:57	39
28-Jan-22	hazy	9:58	31
28-Jan-22	hazy	10:59	42
9-Feb-22	Cloudy	10:54	30
9-Feb-22	Cloudy	13:00	25
9-Feb-22	Cloudy	14:01	29
15-Feb-22	Fine	8:11	15
15-Feb-22	Fine	9:12	19
15-Feb-22	Fine	10:13	21
21-Feb-22	Rainy	8:08	4
21-Feb-22	Rainy	9:09	5
21-Feb-22	Rainy	10:10	4
26-Feb-22	Fine	8:12	60
26-Feb-22	fine	9:13	66
26-Feb-22	Fine	10:14	71



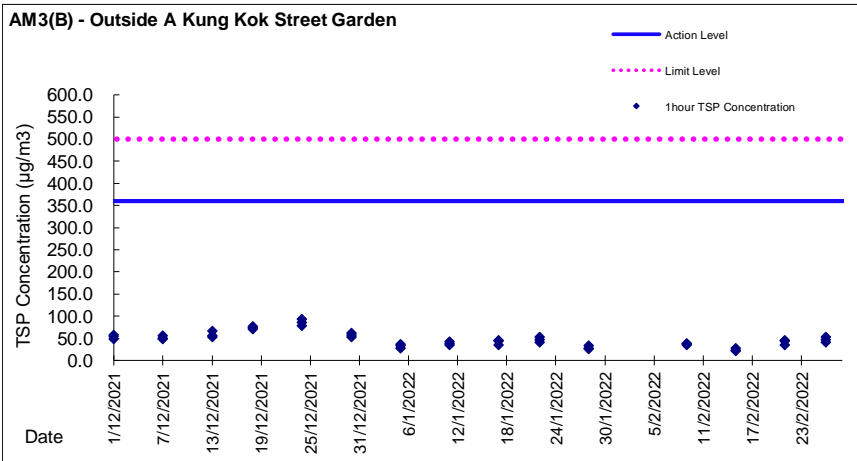
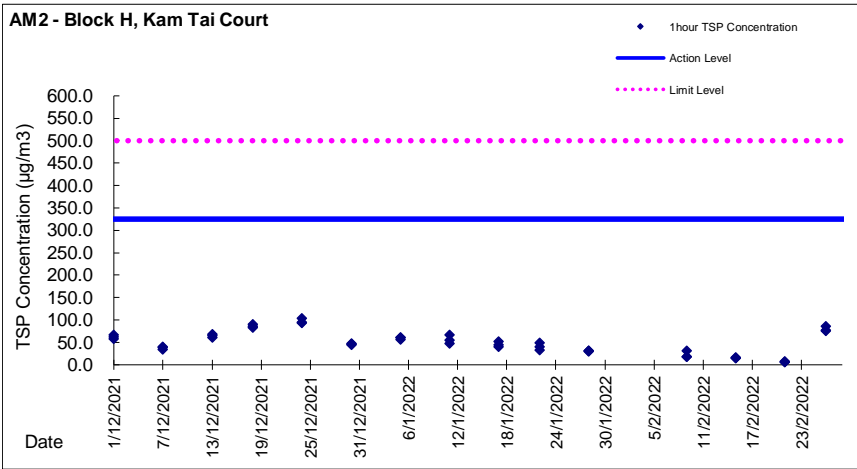
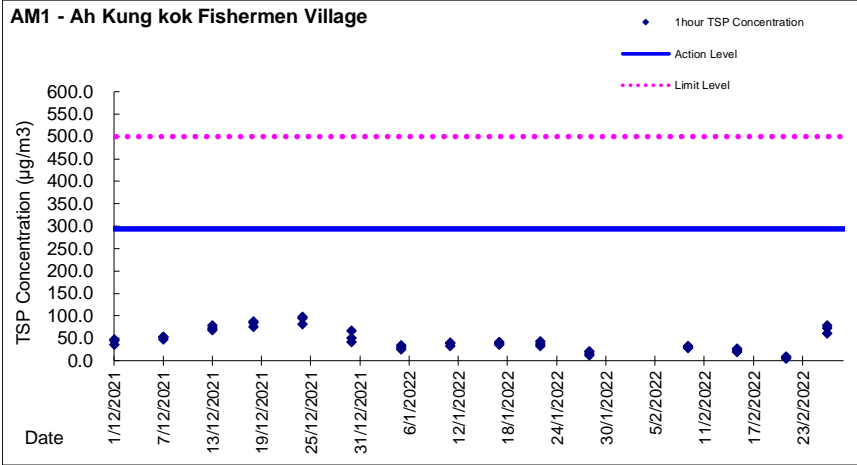
Report on 1-hour TSP monitoring at AM6 - Seaview Villa

Action Level ($\mu\text{g}/\text{m}^3$) - 312

Limit Level ($\mu\text{g}/\text{m}^3$) - 500

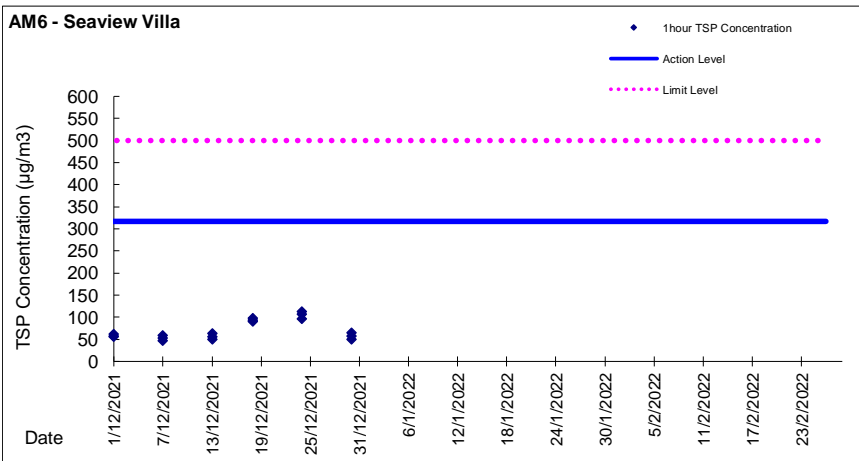
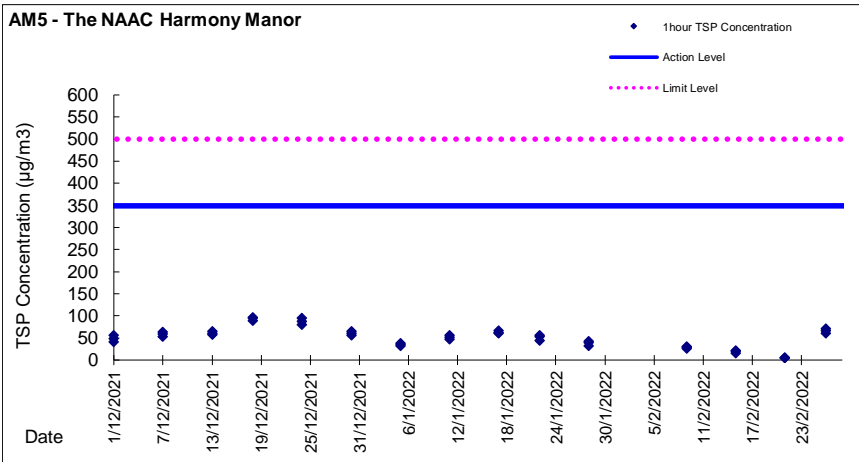
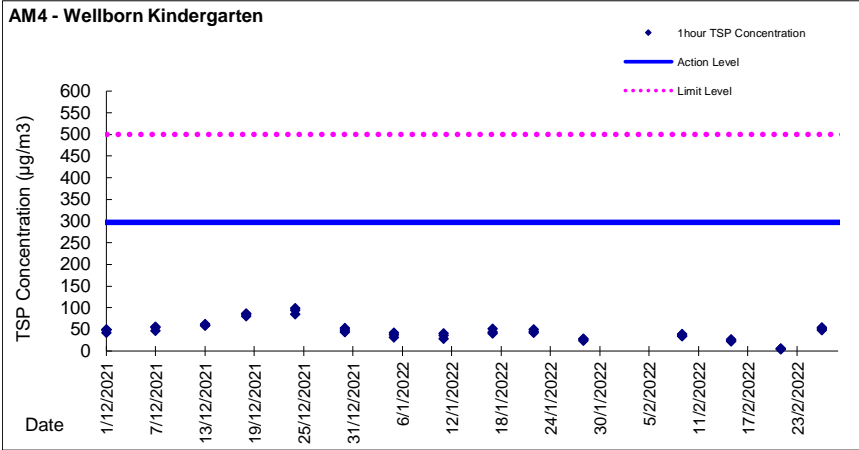
Date	Weather Condition	Time	Mass Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	Fine	8:08	62
1-Dec-21	Fine	9:09	57
1-Dec-21	Fine	10:10	55
7-Dec-21	Fine	13:00	53
7-Dec-21	Fine	14:01	59
7-Dec-21	Fine	15:02	46
13-Dec-21	Fine	8:22	50
13-Dec-21	Fine	9:23	63
13-Dec-21	Fine	10:24	56
18-Dec-21	Fine	8:52	93
18-Dec-21	Fine	9:53	97
18-Dec-21	Fine	10:54	90
24-Dec-21	Cloudy	13:40	107
24-Dec-21	Cloudy	14:41	112
24-Dec-21	Cloudy	15:42	96
30-Dec-21	Cloudy	13:10	57
30-Dec-21	Cloudy	14:11	50
30-Dec-21	Cloudy	15:12	64

Graphic Presentation of TSP Result





Graphic Presentation of TSP Result





Appendix 4.2

Noise Monitoring Results and Graphical Presentations



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: CM1 - G/F, Wellborn Kindergarten

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
04/12/2021	8:55	Fine	0.0	52.1	57.8	49.4	70
09/12/2021	8:35	Fine	0.0	52.8	56.6	50.1	70
13/12/2021	15:17	Fine	0.0	53.4	55.1	49.8	70
22/12/2021	14:50	Fine	0.0	54.0	57.9	51.1	70
28/12/2021	8:18	Cloudy	0.0	52.4	55.8	50.2	70
04/01/2022	8:20	Fine	0.0	55.3	57.7	48.2	70
13/01/2022	8:30	Fine	0.0	52.2	55.9	49.7	70
17/01/2022	8:38	Fine	0.0	53.5	56.7	50.2	70
28/01/2022	8:45	Haze	0.0	53.0	55.4	48.7	70
31/01/2022	10:03	Cloudy	0.1	53.8	54.5	47.2	70
09/02/2022	9:36	Cloudy	0.0	52.9	55.4	48.8	70
16/02/2022	14:40	Fine	0.0	54.2	58.4	50.5	70
23/02/2022	14:50	Cloudy	0.0	55.2	59.4	49.7	70

* Limit level of noise monitoring station CM1 was adjusted to 65dB(A) during examination period.

Location: CM2(B) - G/F, Kowloon City Baptist Church Hay Nien Primary School

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30-min)			
04/12/2021	9:30	Fine	0.0	60.7	65.4	57.5	70
09/12/2021	9:15	Fine	0.0	61.5	64.6	58.2	70
13/12/2021	15:58	Fine	0.0	62.9	64.1	58.8	70
22/12/2021	15:29	Fine	0.0	62.8	65.0	57.7	70
28/12/2021	8:55	Cloudy	0.0	58.9	62.6	54.2	70
04/01/2022	8:53	Fine	0.0	62.8	64.8	58.3	70
13/01/2022	9:07	Fine	0.0	60.6	64.2	57.5	70
17/01/2022	9:15	Fine	0.0	61.6	64.5	58.1	70
28/01/2022	9:20	Haze	0.0	62.4	64.8	56.1	70
31/01/2022	10:50	Cloudy	0.0	61.5	65.8	55.0	70
09/02/2022	10:11	Cloudy	0.0	61.5	64.5	57.8	70
16/02/2022	15:30	Fine	0.0	59.9	63.4	57.2	70
23/02/2022	15:28	Fine	0.0	61.6	64.5	58.1	70

* Limit level of noise monitoring station CM2(A) was adjusted to 65dB(A) during examination period.

Location: CM3 - R/F, S.K.H. Ma On Shan Holy Spirit Primary School

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
03/12/2021	15:11	Fine	0.0	64.3	65.8	60.7	70
10/12/2021	16:39	Fine	0.0	63.8	65.4	61.3	70
17/12/2021	16:05	Cloudy	0.4	64.0	66.3	60.6	70
23/12/2021	14:30	Fine	0.0	63.5	67.1	60.3	70
31/12/2021	15:14	Fine	0.8	65.1	66.7	62.8	70
05/01/2022	16:20	Fine	0.0	64.1	65.7	61.2	70
11/01/2022	16:11	Fine	0.0	63.5	65.1	61.0	70
17/01/2022	14:47	Cloudy	0.0	63.9	65.8	60.9	70
28/01/2022	15:25	Hazy	0.0	64.3	65.9	61.8	70
31/01/2022	10:50	Cloudy	0.8	62.0	63.4	59.6	70
09/02/2022	14:58	Cloudy	0.0	63.3	65.1	59.9	70
15/02/2022	10:15	Cloudy	0.0	64.4	68.0	55.6	70
26/02/2022	9:30	Fine	0.0	63.2	67.0	60.1	70



Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
08/12/2021	17:20	Fine	0.0	65.1	69.4	58.8	75
14/12/2021	16:30	Fine	0.0	62.6	66.9	58.0	75
22/12/2021	16:50	Fine	0.0	64.8	67.4	60.3	75
28/12/2021	17:00	Cloudy	0.0	64.3	66.9	59.4	75
04/01/2022	17:00	Fine	0.0	63.9	68.4	60.2	75
11/01/2022	17:00	Fine	0.0	65.6	68.8	61.2	75
19/01/2022	16:30	Fine	0.0	64.2	68.0	60.6	75
26/01/2022	17:00	Cloudy	0.0	66.6	69.8	61.2	75
04/02/2022	17:00	Cloudy	0.0	64.7	68.1	61.5	75
07/02/2022	17:00	Fine	0.0	65.9	68.8	61.8	75
16/02/2022	16:40	Fine	0.0	66.3	68.9	62.5	75
23/02/2022	17:00	Fine	0.0	66.0	70.4	59.7	75

Location: CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
03/12/2021	11:16	Fine	0.8	72.8	80.0	51.6	75
07/12/2021	10:17	Fine	0.6	65.8	65.4	48.3	75
13/12/2021	10:52	Fine	0.0	50.9	52.7	46.0	75
23/12/2021	10:16	Fine	0.0	48.0	48.9	45.1	75
28/12/2021	10:25	Cloudy	1.0	52.6	55.1	49.5	75
04/01/2022	10:17	Fine	0.0	51.0	53.2	46.9	75
13/01/2022	10:51	Cloudy	0.0	52.6	50.5	45.1	75
17/01/2022	11:28	Cloudy	0.0	49.9	51.2	45.6	75
28/01/2022	11:25	Hazy	1.0	54.7	58.0	46.2	75
31/01/2022	9:59	Cloudy	1.0	53.6	56.9	46.0	75
09/02/2022	10:58	Cloudy	0.0	50.8	52.9	46.5	75
15/02/2022	9:30	Cloudy	0.0	57.3	60.7	45.0	75
23/02/2022	8:11	Fine	0.0	54.2	58.4	47.9	75

Location: DM1 - G/F, Seaview Villa

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
04/12/2021	10:10	Fine	0.0	64.8	68.5	60.4	75
07/12/2021	14:30	Fine	0.0	66.6	69.8	60.1	75
14/12/2021	16:00	Fine	0.0	65.1	68.4	61.6	75
23/12/2021	8:20	Cloudy	0.0	67.4	69.6	60.8	75

Location: DM2 - G/F, Racecourse Gardens

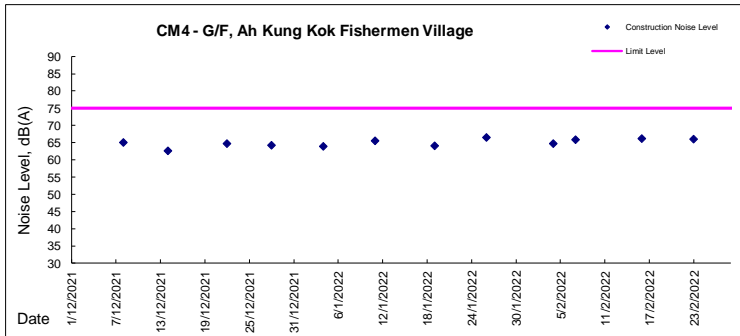
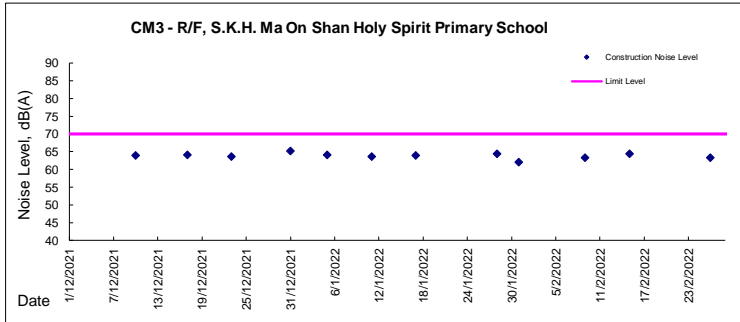
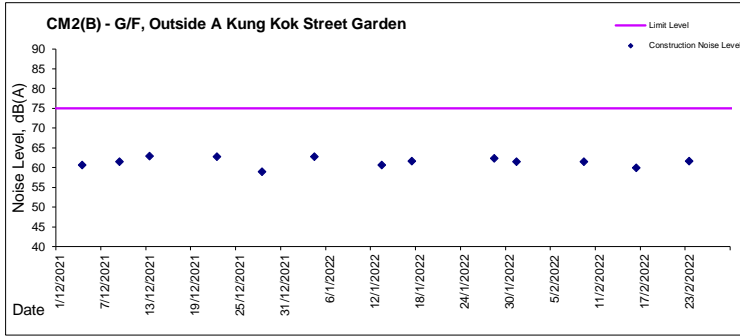
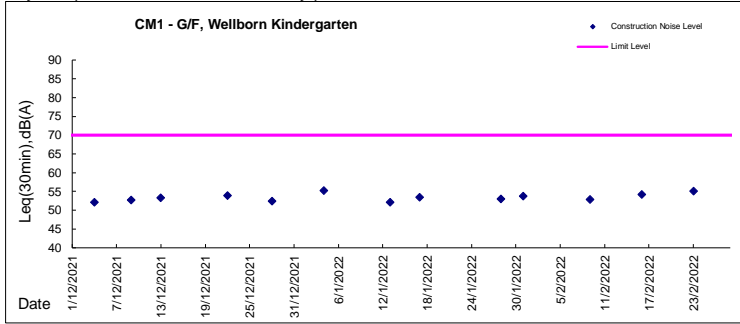
Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
04/12/2021	9:20	Fine	0.0	63.7	66.4	59.8	75
07/12/2021	14:00	Fine	0.0	62.4	66.6	60.2	75
14/12/2021	15:40	Fine	0.0	64.8	67.2	61.5	75
23/12/2021	9:00	Cloudy	0.0	64.4	68.0	60.7	75
30/12/2021	9:45	Fine	0.0	63.1	67.4	60.1	75

Location: DM3 - R/F, S.K.H. Ma On Shan Holy Spirit Primary School

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Limit Level
				Leq	L10	L90	Leq
				Unit: dB(A), (30min)			
03/12/2021	15:11	Fine	0.0	64.3	65.8	60.7	70
10/12/2021	16:39	Fine	0.0	63.8	65.4	61.3	70
17/12/2021	16:05	Cloudy	0.4	64.0	66.3	60.6	70
23/12/2021	14:30	Fine	0.0	63.5	67.1	60.3	70
31/12/2021	15:14	Fine	0.8	65.1	66.7	62.8	70

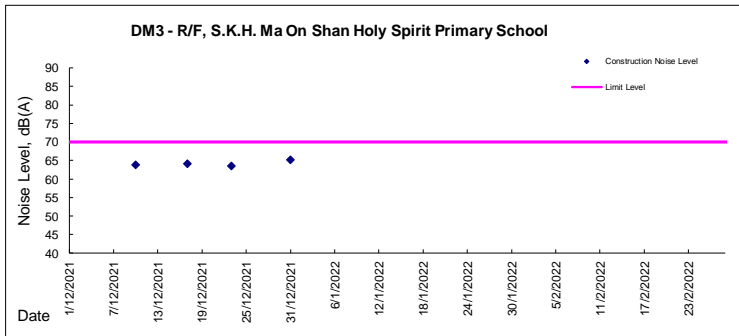
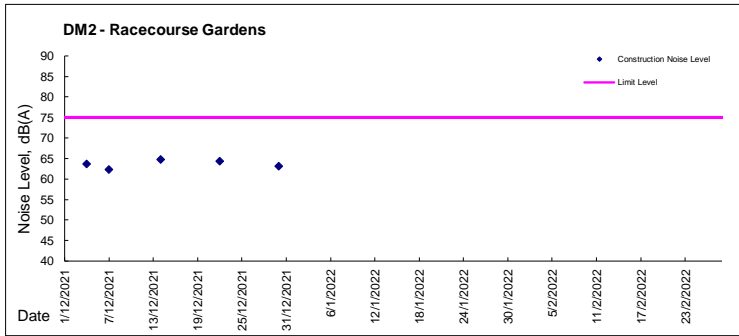
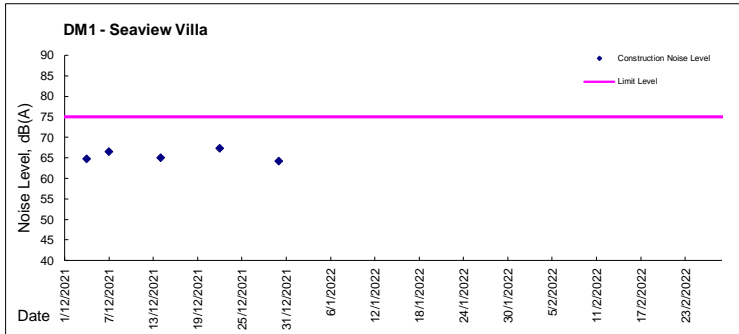
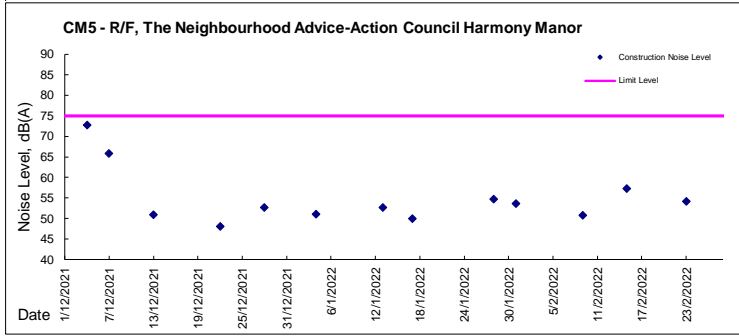
Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)



Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)





Noise Monitoring Result

Evening Time (1900 - 2300hrs)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Weather	Time	Measurement Noise Level			Mean Noise Level Leq (5min)	Baseline Level Range (mean level) Leq	Construction Noise Level (baseline correction) Leq	Major Construction Noise Source(s)	Other Noise Source(s)
			Leq	L10	L90					
			dB(A), (5-min)			Unit: dB(A), (5-min)				
8/12/2021	Fine	20:00	61.1	64.8	58.5	65	53.5-70.9 (mean 56.7)	64	nil	Traffic
		20:05	61.8	64.4	59.3					
		20:10	67.5	70.7	63.6					
		20:15	63.4	67.9	60.2					
		20:20	70.7	74.6	64.4					
14/12/2021	Fine	20:25	63.2	66.6	60.3	63	53.5-70.9 (mean 56.7)	62	nil	Traffic
		20:30	64.4	66.6	61.2					
		20:35	65.7	67.6	60.9					
		20:40	61.0	64.4	58.7					
		20:45	62.8	66.5	60.4					
22/12/2021	Fine	20:50	62.7	65.1	60.3	64	53.5-70.9 (mean 56.7)	63	nil	Traffic
		20:55	63.5	66.2	60.6					
		19:30	66.6	68.9	62.3					
		19:35	71.2	74.6	64.4					
		19:40	62.2	65.7	60.5					
28/12/2021	Cloudy	19:45	61.8	64.5	59.4	64	53.5-70.9 (mean 56.7)	63	nil	Traffic
		19:50	62.2	66.6	60.6					
		19:55	61.3	64.0	58.7					
		20:30	63.7	66.1	59.4					
		20:35	65.6	67.4	61.8					
		20:40	64.2	65.9	61.5					
		20:45	61.8	64.6	59.3					
		20:50	63.5	66.6	58.4					
		20:55	64.6	66.8	60.5					



Noise Monitoring Result

Evening Time (1900 - 2300hrs)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Weather	Time	Measurement Noise Level			Mean Noise Level Leq (5min)	Baseline Level Range (mean level) Leq	Construction Noise Level (baseline correction) Leq	Major Construction Noise Source(s)	Other Noise Source(s)
			Leq	L10	L90					
			dB(A), (5-min)			Unit: dB(A), (5-min)				
4/1/2022	Fine	19:30	63.3	67.5	60.7	65	53.5-70.9 (mean 56.7)	64	nil	Traffic
		19:35	62.1	65.6	60.2					
		19:40	65.8	68.9	61.2					
		19:45	67.4	70.2	63.7					
		19:50	66.6	69.5	63.2					
19:55	62.9	66.4	60.1							
14/12/2021	Fine	20:30	64.4	66.6	61.2	63	53.5-70.9 (mean 56.7)	62	nil	Traffic
		20:35	65.7	67.6	60.9					
		20:40	61.0	64.4	58.7					
		20:45	62.8	66.5	60.4					
		20:50	62.7	65.1	60.3					
20:55	63.5	66.2	60.6							
19/1/2022	Fine	20:00	62.7	67.4	59.5	64	53.5-70.9 (mean 56.7)	63	nil	Traffic
		20:05	67.2	70.6	63.1					
		20:10	64.3	66.9	61.3					
		20:15	62.5	66.6	59.2					
		20:20	63.4	66.8	60.1					
20:25	65.6	68.6	59.4							
26/1/2022	Cloudy	20:30	64.1	66.9	60.4	63	53.5-70.9 (mean 56.7)	62	nil	Traffic
		20:35	63.5	66.7	61.4					
		20:40	62.3	66.6	60.6					
		20:45	62.7	65.9	60.1					
		20:50	64.5	67.6	59.4					
20:55	63.5	66.9	60.2							



Noise Monitoring Result

Evening Time (1900 - 2300hrs)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Weather	Time	Measurement Noise Level			Mean Noise Level	Baseline Level Range (mean level)	Construction Noise Level (baseline correction)	Major Construction Noise Source(s)	Other Noise Source(s)
			Leq	L10	L90	Leq (5min)	Leq	Leq		
			dB(A), (5-min)			Unit: dB(A), (5-min)				
4/2/2022	Fine	19:00	64.7	66.6	62.0	65	53.5-70.9 (mean 56.7)	64	nil	Traffic
		19:05	63.5	67.4	61.2					
		19:10	66.2	68.5	62.6					
		19:15	65.4	69.1	61.6					
		19:20	64.4	67.8	63.0					
		19:25	65.9	68.0	61.9					
7/2/2022	Fine	20:00	63.3	66.9	60.5	64	53.5-70.9 (mean 56.7)	64	nil	Traffic
		20:05	65.0	67.2	62.1					
		20:10	63.7	67.5	61.5					
		20:15	63.9	65.7	62.2					
		20:20	64.5	66.6	62.4					
		20:25	65.6	68.1	60.7					
16/2/2022	Fine	20:00	63.4	66.1	58.7	63	53.5-70.9 (mean 56.7)	62	nil	Traffic
		20:05	62.9	65.6	59.4					
		20:10	63.4	66.2	61.0					
		20:15	63.8	66.3	60.1					
		20:20	62.5	65.4	58.2					
		20:25	62.0	64.3	57.2					
23/2/2022	Fine	19:00	59.7	65.1	57.6	62	53.5-70.9 (mean 56.7)	61	nil	Traffic
		19:05	62.4	66.0	60.1					
		19:10	63.6	66.8	60.1					
		19:15	63.3	66.5	60.6					
		19:20	60.9	65.4	58.7					
		19:25	62.2	65.8	60.4					



Noise Monitoring Result

Night Time (2300 - 0700hrs on next day)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Weather	Time	Measurement Noise Level			Mean Noise Level	Baseline Level Range (mean level)	Construction Noise Level (baseline correction)	Major Construction Noise Source(s)	Other Noise Source(s)
			Leq	L10	L90					
			dB(A), (5-min)			Unit: dB(A), (5-min)				
9/12/2021	Fine	0:05	58.4	59.8	56.4	58	45.6-63.2 (mean 52.8)	56	nil	Traffic
		0:10	58.7	60.5	57.2					
		0:15	60.8	62.6	58.6					
		0:20	56.2	59.7	55.0					
		0:25	55.5	56.8	53.6					
0:30	57.2	59.6	55.5							
15/12/2021	Fine	0:00	60.6	62.9	59.3	58	45.6-63.2 (mean 52.8)	57	nil	Traffic
		0:05	58.1	60.7	56.6					
		0:10	58.4	60.2	57.0					
		0:15	58.8	61.8	56.5					
		0:20	57.9	59.4	56.2					
0:25	56.7	59.8	55.4							
23/12/2021	Fine	0:30	57.2	59.6	56.0	58	45.6-63.2 (mean 52.8)	56	nil	Traffic
		0:35	58.3	61.1	56.5					
		0:40	55.6	58.2	54.4					
		0:45	59.3	61.5	58.0					
		0:50	56.9	60.5	54.2					
0:55	58.6	62.2	55.4							
29/12/2021	Cloudy	3:30	59.4	61.8	58.0	58	45.6-63.2 (mean 52.8)	57	nil	Traffic
		3:35	58.7	61.5	56.6					
		3:40	58.2	61.4	55.9					
		3:45	57.8	60.6	55.5					
		3:50	58.6	60.9	56.1					
3:55	56.8	59.4	55.3							



Noise Monitoring Result

Night Time (2300 - 0700hrs on next day)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Weather	Time	Measurement Noise Level			Mean Noise Level	Baseline Level Range (mean level)	Construction Noise Level (baseline correction)	Major Construction Noise Source(s)	Other Noise Source(s)
			Leq	L10	L90	Leq (5min)	Leq	Leq		
			dB(A), (5-min)			Unit: dB(A), (5-min)				
5/1/2022	Fine	0:30	56.4	58.2	54.5	55	45.6-63.2 (mean 52.8)	52	nil	Traffic
		0:35	56.1	58.3	53.8					
		0:40	58.4	60.4	55.6					
		0:45	54.1	56.9	53.2					
		0:50	52.6	56.3	50.9					
	0:55	54.7	57.2	52.6						
15/1/2022	Fine	0:00	58.4	61.2	56.6	57	45.6-63.2 (mean 52.8)	54	nil	Traffic
		0:05	55.9	58.2	54.3					
		0:10	56.1	58.0	54.4					
		0:15	56.6	58.3	55.1					
		0:20	55.4	57.2	54.2					
	0:25	57.6	59.8	53.9						
20/1/2022	Fine	0:10	54.6	56.4	51.9	56	45.6-63.2 (mean 52.8)	54	nil	Traffic
		0:15	57.1	58.6	53.5					
		0:20	56.2	58.0	54.7					
		0:25	55.8	57.6	53.5					
		0:30	56.5	58.1	54.0					
	0:35	58.2	61.5	54.4						
27/1/2022	Cloudy	1:00	56.1	57.8	55.3	56	45.6-63.2 (mean 52.8)	53	nil	Traffic
		1:05	52.9	56.4	51.5					
		1:10	59.0	63.3	56.3					
		1:15	56.8	58.2	53.6					
		1:20	54.5	56.1	53.2					
	1:25	55.3	57.2	51.6						



Noise Monitoring Result

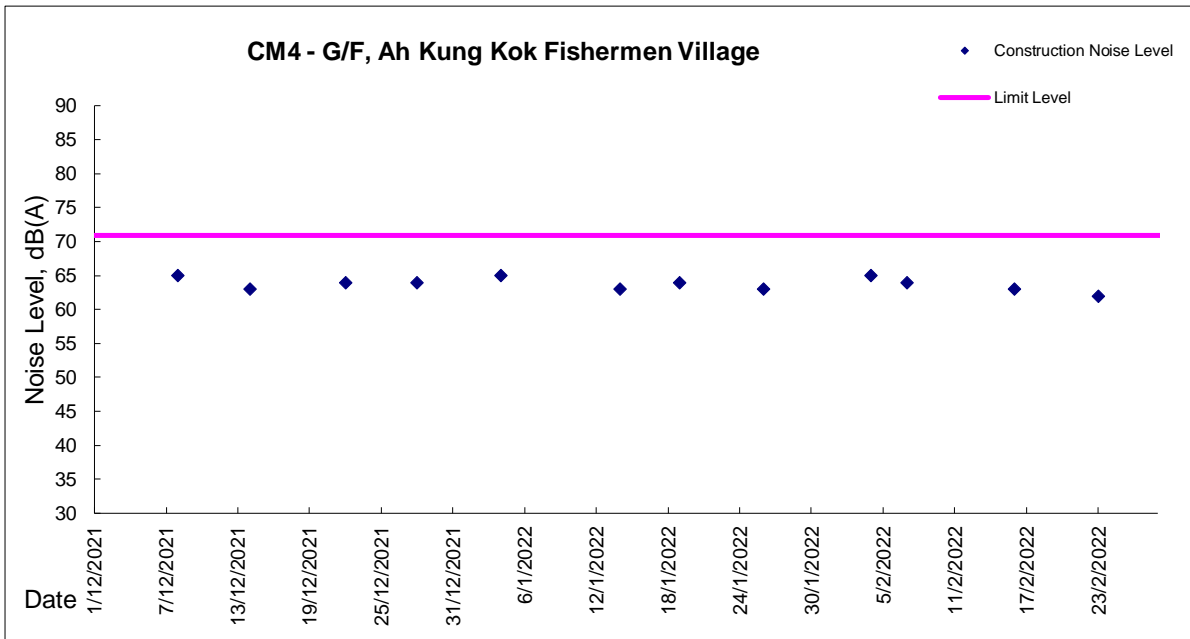
Night Time (2300 - 0700hrs on next day)

Location: CM4 - G/F, Ah Kung Kok Fishermen Village

Date	Weather	Time	Measurement Noise Level			Mean Noise Level	Baseline Level Range (mean level)	Construction Noise Level (baseline correction)	Major Construction Noise Source(s)	Other Noise Source(s)
			Leq	L10	L90					
			dB(A), (5-min)			Unit: dB(A), (5-min)				
4/2/2022	Fine	23:05	53.9	56.2	52.2	54	45.6-63.2 (mean 52.8)	49	nil	Traffic
		23:10	54.5	57.4	53.1					
		23:15	54.8	56.9	52.6					
		23:20	55.2	57.8	50.3					
		23:25	54.6	57.3	49.4					
		23:30	53.5	55.8	48.9					
8/2/2022	Fine	0:00	54.1	56.4	47.6	55	45.6-63.2 (mean 52.8)	50	nil	Traffic
		0:05	54.5	56.2	48.9					
		0:10	54.4	57.3	48.0					
		0:15	55.5	56.9	49.4					
		0:20	53.4	56.0	48.8					
		0:25	56.5	58.1	50.7					
17/2/2022	Fine	0:00	53.7	55.5	48.2	55	45.6-63.2 (mean 52.8)	50	nil	Traffic
		0:05	53.4	57.1	48.0					
		0:10	55.2	58.6	49.4					
		0:15	54.6	57.3	50.3					
		0:20	54.1	56.5	49.8					
		0:25	56.1	58.4	51.6					
23/2/2022	Fine	23:05	53.7	55.6	48.9	55	45.6-63.2 (mean 52.8)	50	nil	Traffic
		23:10	54.1	56.4	48.5					
		23:15	54.4	55.9	48.1					
		23:20	55.5	58.1	48.7					
		23:25	54.8	59.2	50.4					
		23:30	56.2	60.9	49.4					

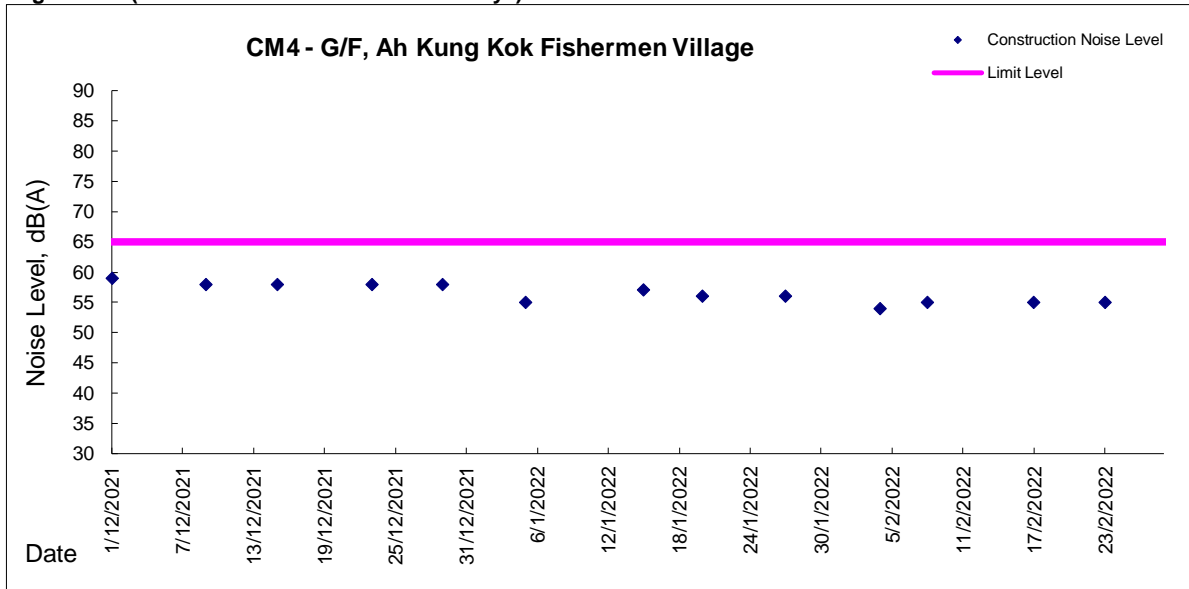


Graphic Presentation of Noise Monitoring Result
Evening Time (1900 - 2300hrs on normal weekdays)





Graphic Presentation of Noise Monitoring Result
Night Time (2300 - 0700hrs on normal weekdays)





Appendix 4.3

Water Quality Monitoring Results and Graphical Presentations



Water Monitoring Result at W1 - WSD Seawater Intake at Sha Tin Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
			m		°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average		
30/11/2021	14:10	Fine	Surface	1.0	23.75	23.75	23.75	8.56	8.54	8.55	28.82	28.75	28.79	113.0	101.8	107.4	8.01	7.30	7.66	1.36	1.38	1.37
	14:12		Middle	3.5	23.75	23.74	23.75	8.45	8.47	8.46	29.05	29.03	29.04	88.1	86.5	87.3	6.31	6.26	6.29	1.05	1.09	1.07
	14:14		Bottom	6.0	23.66	23.63	23.65	8.48	8.40	8.44	29.38	29.68	29.53	80.3	78.4	79.4	5.75	5.66	5.71	1.52	1.57	1.55
1/12/2021	14:10	Fine	Surface	1.0	22.62	22.62	22.62	8.79	8.80	8.80	27.81	27.86	27.84	87.9	87.1	87.5	6.45	6.41	6.43	2.07	2.02	2.05
	14:03		Middle	3.5	22.59	22.58	22.59	8.79	8.79	8.79	28.11	28.10	28.10	84.1	83.3	83.7	6.18	6.12	6.15	2.05	1.86	1.96
	14:05		Bottom	6.0	23.44	23.45	23.45	8.73	8.74	8.74	29.51	29.48	29.50	65.7	65.3	65.5	4.71	4.69	4.70	1.70	1.61	1.66
2/12/2021	14:25	Fine	Surface	1.0	22.39	22.40	22.40	8.91	8.90	8.91	28.40	28.43	28.42	98.4	97.1	97.8	7.23	7.14	7.19	2.40	2.44	2.42
	14:28		Middle	3.0	22.68	22.60	22.64	8.70	8.73	8.72	29.60	29.63	29.62	78.6	79.0	78.8	5.72	5.75	5.74	2.53	2.43	2.48
	14:30		Bottom	5.0	22.66	22.65	22.66	8.82	8.85	8.84	29.79	29.80	29.80	79.2	79.6	79.4	5.76	5.78	5.77	2.58	2.37	2.48
3/12/2021	14:40	Fine	Surface	1.0	21.72	21.72	21.72	8.86	8.90	8.88	29.97	27.94	28.96	126.8	127.5	127.2	9.47	9.55	9.51	1.77	1.84	1.81
	14:42		Middle	3.0	21.90	21.86	21.88	8.82	8.84	8.83	28.64	28.69	28.67	114.3	115.1	114.7	8.50	8.54	8.52	1.01	1.07	1.04
	14:45		Bottom	5.0	22.57	22.59	22.58	8.80	8.77	8.79	29.84	29.84	29.84	112.0	111.5	111.8	8.31	8.28	8.30	1.75	1.62	1.69
6/12/2021	7:42	Fine	Surface	1.0	21.43	21.45	21.44	8.66	8.68	8.67	30.33	30.55	30.44	75.9	75.3	75.6	5.66	5.59	5.63	2.05	2.11	2.08
	7:45		Middle	3.0	21.54	21.56	21.55	8.89	8.85	8.87	30.44	30.42	30.43	79.4	78.5	79.0	5.89	5.82	5.86	1.51	1.46	1.49
	7:49		Bottom	5.0	21.66	21.66	21.66	8.88	8.84	8.86	30.69	30.74	30.72	71.9	72.5	72.2	5.31	5.36	5.34	2.24	2.30	2.27
8/12/2021	9:25	Fine	Surface	1.0	20.49	20.49	20.49	8.17	8.17	8.17	31.45	31.29	31.37	82.1	82.0	82.1	6.15	6.12	6.14	1.10	1.14	1.12
	9:27		Middle	3.0	20.88	20.90	20.89	8.31	8.32	8.32	32.70	32.76	32.73	94.9	93.6	94.3	7.00	6.87	6.94	0.95	0.99	0.97
	9:29		Bottom	5.0	21.12	21.25	21.18	8.38	8.38	8.38	33.55	33.59	33.57	65.6	64.9	65.3	4.80	4.75	4.78	1.32	1.38	1.35
10/12/2021	11:43	Fine	Surface	1.0	21.23	21.32	21.28	8.42	8.44	8.43	32.20	32.16	32.18	97.4	98.7	98.1	7.17	7.15	7.16	0.94	1.01	0.98
	11:53		Middle	3.0	21.06	21.07	21.07	8.55	8.56	8.56	32.72	32.74	32.73	100.5	100.1	100.3	7.38	7.35	7.37	0.66	0.67	0.67
	11:57		Bottom	5.0	20.94	20.92	20.93	8.61	8.61	8.61	33.27	33.23	33.25	102.0	102.3	102.2	7.49	7.52	7.51	1.36	1.41	1.39
13/12/2021	16:01	Fine	Surface	1.0	22.14	22.16	22.15	8.35	8.39	8.37	33.21	32.25	32.73	84.7	84.0	84.4	6.19	6.15	6.17	1.05	1.09	1.07
	16:03		Middle	3.0	21.93	21.95	21.94	8.29	8.26	8.28	32.61	32.57	32.59	83.6	82.5	83.1	6.12	6.06	6.09	1.36	1.29	1.33
	16:06		Bottom	5.0	21.98	21.10	21.54	8.16	8.18	8.17	32.92	33.01	32.97	76.1	75.4	75.8	5.56	5.52	5.54	1.42	1.40	1.41
15/12/2021	14:05	Cloudy	Surface	1.0	21.95	21.95	21.95	8.17	8.15	8.16	32.39	32.41	32.40	97.7	96.4	97.1	7.21	7.11	7.16	1.09	1.14	1.12
	14:09		Middle	3.5	22.03	22.05	22.04	8.25	8.26	8.26	32.87	32.85	32.86	91.5	90.1	90.8	6.70	6.60	6.65	0.82	0.78	0.80
	14:11		Bottom	6.0	21.94	21.94	21.94	8.58	8.55	8.57	33.16	33.12	33.14	51.0	50.3	50.7	3.73	3.68	3.71	0.69	0.73	0.71
17/12/2021	14:35	Cloudy	Surface	1.0	22.46	22.46	22.46	8.26	8.28	8.27	32.04	32.10	32.07	106.1	107.7	106.9	7.79	7.90	7.85	0.95	1.03	0.99
	14:37		Middle	3.0	22.39	22.40	22.40	8.51	8.85	8.68	32.45	32.74	32.60	105.7	104.4	105.1	7.73	7.64	7.69	1.13	1.18	1.16
	14:40		Bottom	5.0	22.27	22.25	22.26	8.69	8.66	8.68	33.01	32.97	32.99	87.0	86.7	86.9	6.36	6.32	6.34	1.28	1.24	1.26
20/12/2021	17:23	Cloudy	Surface	1.0	20.45	20.45	20.45	8.86	8.88	8.87	33.02	33.04	33.03	81.4	80.4	80.9	6.15	6.06	6.11	1.26	1.31	1.29
	17:25		Middle	3.5	20.61	20.60	20.61	8.52	8.53	8.53	33.37	33.40	33.39	79.8	80.3	80.1	6.00	6.04	6.02	0.75	0.88	0.82
	17:27		Bottom	6.0	20.71	20.72	20.72	8.38	8.35	8.37	33.71	33.68	33.70	78.8	78.0	78.4	5.90	5.83	5.87	1.48	1.55	1.52
22/12/2021	8:40	Cloudy	Surface	1.0	20.09	20.11	20.10	8.27	8.30	8.29	32.88	32.91	32.90	76.7	77.3	77.0	5.78	5.84	5.81	1.29	1.23	1.26
	8:44		Middle	3.0	20.63	20.62	20.63	8.44	8.45	8.45	33.07	33.05	33.06	70.5	68.9	69.7	5.29	5.17	5.23	1.55	1.62	1.59
	8:46		Bottom	2.0	20.85	20.82	20.84	8.38	8.40	8.39	33.47	33.50	33.49	63.0	64.1	63.6	4.71	4.79	4.75	1.96	1.84	1.90
24/12/2021	9:10	Cloudy	Surface	1.0	20.87	20.88	20.88	8.36	8.36	8.36	31.85	32.86	32.36	83.3	83.9	83.6	6.22	6.25	6.24	1.15	1.21	1.18
	9:12		Middle	3.0	20.96	20.97	20.97	8.25	8.23	8.24	33.09	33.07	33.08	83.4	82.6	83.0	6.22	6.15	6.19	0.93	0.88	0.91
	9:14		Bottom	5.0	20.88	20.80	20.84	8.13	8.12	8.13	33.36	33.36	33.36	80.6	82.0	81.3	6.01	6.11	6.06	0.65	0.56	0.61
27/12/2021	12:10	Cloudy	Surface	1.0	19.21	19.22	19.22	7.90	7.88	7.89	32.53	32.53	32.53	82.9	82.1	82.5	6.37	6.31	6.34	1.54	1.62	1.58
	12:14		Middle	3.0	19.57	19.57	19.57	7.78	7.77	7.78	32.70	32.72	32.71	85.7	85.2	85.5	6.56	6.52	6.54	1.19	1.12	1.16
	12:16		Bottom	5.0	19.67	19.66	19.67	7.57	7.55	7.56	32.93	32.90	32.92	82.9	82.6	82.8	6.32	6.30	6.31	1.02	1.11	1.07
29/12/2021	13:40	Fine	Surface	1.0	20.01	20.01	20.01	8.49	8.50	8.50	33.26	33.27	33.27	97.2	96.8	97.0	7.39	7.37	7.38	1.04	1.10	1.07
	13:43		Middle	3.5	19.80	19.80	19.80	8.42	8.40	8.41	33.58	33.60	33.59	86.3	85.5	85.9	6.57	6.52	6.05	1.53	1.44	1.49
	13:45		Bottom	6.0	19.79	19.79	19.79	8.29	8.28	8.29	33.29	33.20	33.25	83.8	83.4	83.6	6.37	6.35	6.36	2.03	1.88	1.96



Water Monitoring Result at W1 - WSD Seawater Intake at Sha Tin Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
			m		°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average		
30/11/2021	8:15	Fine	Surface	1.0	23.26	23.26	23.26	8.23	8.23	8.23	28.50	28.63	28.57	94.2	93.8	94.0	6.83	6.80	6.82	1.74	1.77	1.76
	8:18		Middle	3.0	23.43	23.43	23.43	8.23	8.23	8.23	29.50	29.43	29.47	85.8	85.1	85.5	6.16	6.12	6.14	1.09	0.86	0.98
	8:20		Bottom	5.0	23.33	23.33	23.33	8.26	8.27	8.27	29.73	29.73	29.73	82.0	81.8	81.9	5.89	5.87	5.88	0.71	0.63	0.67
1/12/2021	8:12	Fine	Surface	1.0	22.05	22.05	22.05	8.82	8.84	8.83	28.36	28.39	28.38	86.1	85.4	85.8	6.57	6.31	6.44	2.37	2.10	2.24
	8:14		Middle	3.5	22.24	22.25	22.25	8.82	8.81	8.82	28.71	28.72	28.72	81.5	79.7	80.6	6.01	5.87	5.94	1.40	1.34	1.37
	8:16		Bottom	6.0	22.29	22.30	22.30	8.82	8.83	8.83	29.00	29.01	29.01	76.7	75.8	76.3	5.64	5.56	5.60	1.34	1.32	1.33
2/12/2021	8:33	Fine	Surface	1.0	20.84	20.90	20.87	8.89	8.90	8.90	29.05	29.05	29.05	73.5	74.7	74.1	5.55	5.62	5.59	3.80	3.71	3.76
	8:35		Middle	3.5	21.83	21.90	21.87	8.93	8.90	8.92	29.75	29.80	29.78	70.2	68.9	69.6	5.14	5.08	5.11	2.28	2.22	2.25
	8:38		Bottom	6.0	22.63	22.60	22.62	8.91	8.88	8.90	30.22	30.15	30.19	66.1	65.5	65.8	4.79	4.70	4.75	2.09	1.88	1.99
3/12/2021	8:55	Fine	Surface	1.0	20.57	20.52	20.55	8.89	8.92	8.91	28.53	28.22	28.38	91.0	91.5	91.3	6.93	7.00	6.97	2.24	1.94	2.09
	8:57		Middle	3.5	21.84	21.79	21.82	8.75	8.78	8.77	29.92	29.94	29.93	87.1	87.5	87.3	6.42	6.43	6.43	1.30	1.00	1.15
	8:59		Bottom	6.0	22.16	22.18	22.17	8.79	8.76	8.78	30.01	30.08	30.05	85.7	83.5	84.6	6.28	6.11	6.20	0.83	0.95	0.89
6/12/2021	15:15	Fine	Surface	1.0	22.08	22.08	22.08	8.52	8.50	8.51	30.43	30.47	30.45	95.7	95.0	95.4	7.02	6.97	6.97	1.40	1.33	1.37
	15:18		Middle	3.5	22.07	22.05	22.06	8.44	8.40	8.42	30.65	30.66	30.66	95.6	95.0	95.3	7.01	6.98	7.00	0.85	0.90	0.88
	15:23		Bottom	6.0	21.96	21.96	21.96	8.27	8.25	8.26	30.88	30.92	30.90	95.8	96.3	96.3	7.02	7.07	7.05	0.73	0.80	0.77
8/12/2021	16:01	Fine	Surface	1.0	21.44	21.42	21.43	8.74	8.75	8.75	33.20	33.01	33.11	103.2	104.4	103.8	7.53	7.62	7.58	0.70	0.77	0.74
	16:03		Middle	3.0	21.22	21.22	21.22	8.77	8.77	8.77	33.06	33.07	33.07	99.6	99.0	99.3	7.29	7.26	7.28	0.54	0.60	0.57
	16:05		Bottom	5.0	21.21	21.21	21.21	8.74	8.73	8.74	33.31	33.32	33.32	78.9	79.1	79.0	5.77	5.79	5.78	1.15	1.05	1.10
10/12/2021	18:33	Fine	Surface	1.0	21.72	21.70	21.71	8.79	8.79	8.79	32.61	32.60	32.61	111.7	112.5	112.1	8.12	8.18	8.15	0.86	0.82	0.84
	18:35		Middle	3.0	21.38	21.38	21.38	8.81	8.81	8.81	32.77	32.77	32.77	116.4	115.1	115.8	8.50	8.41	8.46	1.26	1.31	1.29
	18:37		Bottom	5.0	21.06	21.07	21.07	8.77	8.77	8.77	33.23	33.22	33.23	86.6	86.8	86.7	6.35	6.36	6.36	1.09	1.12	1.11
13/12/2021	7:42	Fine	Surface	1.0	21.45	21.48	21.47	8.46	8.48	8.47	32.24	32.27	32.26	88.0	88.5	88.3	6.56	6.58	6.57	1.18	1.15	1.17
	7:44		Middle	3.0	21.64	21.64	21.64	8.42	8.42	8.42	32.49	32.49	32.49	87.3	87.7	87.5	6.47	6.50	6.49	0.88	0.92	0.90
	7:48		Bottom	5.0	21.87	21.89	21.88	8.53	8.54	8.54	33.07	33.10	33.09	78.4	78.0	78.2	5.78	5.76	5.77	0.77	0.80	0.79
15/12/2021	9:05	Cloudy	Surface	1.0	21.60	21.63	21.62	8.43	8.40	8.42	32.32	32.32	32.32	84.5	85.7	85.1	6.31	6.40	6.36	1.14	1.11	1.13
	9:08		Middle	3.0	21.89	21.90	21.90	8.18	8.21	8.20	33.01	32.95	32.98	76.5	75.6	76.1	5.61	5.54	5.58	0.68	0.74	0.71
	9:12		Bottom	5.0	21.87	21.84	21.86	8.08	8.09	8.09	33.32	33.38	33.35	74.7	74.9	74.8	5.48	5.49	5.49	0.51	0.44	0.48
17/12/2021	9:30	Cloudy	Surface	1.0	22.25	22.25	22.25	8.49	8.49	8.49	32.69	32.69	32.69	95.2	94.7	95.0	6.98	6.93	6.96	0.55	0.55	0.55
	9:34		Middle	3.0	22.26	22.26	22.26	8.28	8.27	8.28	31.80	32.80	32.30	94.1	94.3	94.2	6.89	6.90	6.90	0.45	0.48	0.47
	9:36		Bottom	5.0	22.19	22.19	22.19	8.09	8.10	8.10	33.34	33.27	33.31	83.6	82.8	83.2	6.10	6.04	6.07	0.21	0.27	0.24
20/12/2021	11:40	Cloudy	Surface	1.0	20.09	20.11	20.10	8.45	8.41	8.43	33.11	33.07	33.09	99.8	98.0	98.9	7.58	7.52	7.55	1.83	1.77	1.80
	11:42		Middle	3.5	20.31	20.33	20.32	8.22	8.18	8.20	33.26	33.28	33.27	82.2	82.7	82.5	6.21	6.26	6.24	1.23	1.28	1.26
	18:46		Bottom	6.0	20.78	20.82	20.80	8.39	8.36	8.38	33.66	33.67	33.67	76.6	75.7	76.2	5.73	5.67	5.70	0.96	1.02	0.99
22/12/2021	14:57	Cloudy	Surface	1.0	20.74	20.74	20.74	8.58	8.57	8.58	33.16	33.19	33.18	76.2	75.5	75.9	5.71	5.66	5.69	1.16	1.21	1.19
	14:59		Middle	3.0	20.64	20.65	20.65	8.41	8.42	8.42	33.39	33.40	33.40	73.0	72.1	72.6	5.48	5.41	5.45	1.39	1.32	1.36
	15:01		Bottom	5.0	20.83	20.82	20.83	8.40	8.40	8.40	33.66	33.64	33.65	58.3	57.5	57.9	4.35	4.29	4.32	2.46	2.52	2.49
27/12/2021	19:00	Cloudy	Surface	1.0	19.07	19.07	19.07	8.39	8.39	8.39	33.28	33.27	33.28	76.2	75.3	75.8	5.89	5.83	5.86	1.48	1.55	1.52
	19:02		Middle	3.0	19.61	19.58	19.60	8.34	8.33	8.34	33.54	33.56	33.55	74.2	74.6	74.4	5.66	5.69	5.68	1.07	1.12	1.10
	19:04		Bottom	5.0	19.63	19.63	19.63	8.28	8.28	8.28	33.70	33.72	33.71	72.8	73.4	73.1	5.56	5.60	5.58	1.16	1.06	1.11
29/12/2021	7:45	Fine	Surface	1.0	19.37	19.38	19.38	7.84	7.84	7.84	32.82	32.82	32.82	75.9	76.4	76.2	5.83	5.86	5.85	1.71	1.66	1.69
	7:48		Middle	3.0	19.44	19.44	19.44	7.67	7.64	7.66	33.17	33.17	33.17	77.0	76.2	76.6	5.88	5.82	5.85	1.66	1.68	1.67
	7:50		Bottom	5.0	19.46	19.46	19.46	7.50	7.47	7.49	33.30	33.29	33.30	75.2	75.4	75.3	5.74	5.75	5.75	1.48	1.41	1.45
31/12/2021	9:10	Cloudy	Surface	1.0	19.25	19.25	19.25	8.31	8.33	8.32	31.97	31.98	31.98	84.5	84.0	84.3	6.53	6.48	6.51	1.35	1.26	1.31
	9:13		Middle	3.0	19.69	19.70	19.70	8.11	8.08	8.10	32.23	32.25	32.24	79.5	79.2	79.4	6.04	6.02	6.03	0.87	0.84	0.86
	9:15		Bottom	5.0	19.82	19.72	19.77	7.99	8.01	8.00	32.68	32.70	32.69	78.2	77.3	77.8	5.94	5.87	5.91	0.83	0.84	0.84



Water Monitoring Result at W2 - WSD Seawater Intake at Tai Po
Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average
30/11/2021	16:12	Fine	Surface	1.0	24.24	24.25	24.25	8.61	8.64	8.63	29.49	29.53	29.51	55.0	59.4	57.2	3.89	4.05	3.97	2.00	2.01	2.01
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:15		Bottom	4.0	23.92	23.89	23.91	8.46	8.85	8.65	30.35	30.41	30.38	29.2	26.4	27.8	2.17	1.88	2.03	6.19	6.66	6.43
1/12/2021	15:13	Fine	Surface	1.0	23.57	23.61	23.59	8.80	8.80	8.80	29.81	29.84	29.83	60.3	60.1	60.2	4.31	4.28	4.30	0.82	0.88	0.85
	15:15		Middle	3.0	23.33	23.30	23.32	8.84	8.81	8.83	30.02	29.99	30.01	67.0	65.8	66.4	4.81	4.72	4.77	2.79	2.58	2.69
	15:17		Bottom	5.0	23.44	23.42	23.43	8.76	8.78	8.77	30.16	30.18	30.17	55.4	56.0	55.7	3.97	3.99	3.98	3.33	3.42	3.38
2/12/2021	15:40	Fine	Surface	1.0	22.96	23.00	22.98	8.80	8.82	8.81	29.48	29.45	29.47	87.5	88.2	87.9	6.34	6.37	6.36	1.73	2.00	1.87
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:42		Bottom	4.0	23.14	22.18	22.66	8.72	8.75	8.74	29.84	29.82	29.83	68.8	68.3	68.6	4.96	4.92	4.94	2.67	2.43	2.55
3/12/2021	16:11	Fine	Surface	1.0	22.85	22.84	22.85	8.76	8.78	8.77	30.44	30.40	30.42	84.9	84.6	84.8	6.13	6.12	6.13	1.67	1.52	1.60
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16:13		Bottom	4.0	22.62	22.63	22.63	8.75	8.76	8.76	30.56	30.62	30.59	80.7	79.1	79.9	5.84	5.72	5.78	2.05	2.11	2.08
6/12/2021	9:38	Fine	Surface	1.0	21.65	21.66	21.66	8.52	8.50	8.51	30.12	30.15	30.14	83.6	82.5	83.1	6.20	6.12	6.16	2.96	2.94	2.95
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:41		Bottom	4.0	22.00	21.99	22.00	8.61	8.63	8.62	30.72	30.75	30.74	71.9	72.9	72.4	5.28	5.45	5.37	3.99	3.93	3.96
8/12/2021	5:53	Fine	Surface	1.0	21.21	21.24	21.23	8.74	8.72	8.73	32.97	32.98	32.98	92.8	91.2	92.0	6.80	6.69	6.75	4.25	4.33	4.29
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:55		Bottom	4.0	21.04	21.02	21.03	8.74	8.72	8.73	33.09	33.09	33.09	90.3	91.1	90.7	6.63	6.69	6.66	3.96	4.01	3.99
10/12/2021	13:07	Fine	Surface	1.0	21.77	21.77	21.77	8.72	8.72	8.72	32.97	32.95	32.96	101.6	102.9	102.3	7.35	7.44	7.40	3.01	2.95	2.98
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:08		Bottom	4.0	21.11	21.12	21.12	8.73	8.74	8.74	33.29	33.28	33.29	77.0	78.1	77.6	5.64	5.73	5.69	2.46	2.39	2.43
13/12/2021	12:27	Fine	Surface	1.0	22.83	22.82	22.83	8.62	8.61	8.62	32.09	32.10	32.10	91.0	90.1	90.6	6.59	6.53	6.56	1.29	1.34	1.32
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:29		Bottom	4.0	22.11	22.13	22.12	8.23	8.20	8.22	32.60	32.60	32.60	71.1	71.0	71.1	5.20	5.19	5.20	2.34	2.28	2.31
15/12/2021	15:13	Cloudy	Surface	1.0	22.64	22.64	22.64	8.37	8.38	8.38	33.16	33.16	33.17	89.3	90.2	89.8	6.46	6.55	6.51	1.04	1.11	1.08
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:15		Bottom	4.0	22.45	22.43	22.44	8.24	8.25	8.25	33.38	33.42	33.40	87.2	86.0	86.6	6.34	6.25	6.30	1.29	1.22	1.26
17/12/2021	15:40	Cloudy	Surface	1.0	22.53	22.54	22.54	8.81	8.84	8.83	33.38	33.39	33.39	98.3	97.7	98.0	7.13	7.08	7.11	1.50	1.44	1.47
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:42		Bottom	4.0	22.29	22.29	22.29	8.64	8.61	8.63	33.65	33.67	33.66	89.9	88.5	89.2	6.54	6.43	6.49	1.88	1.82	1.85
20/12/2021	15:54	Cloudy	Surface	1.0	21.20	21.19	21.20	8.62	8.63	8.63	33.13	33.11	33.12	78.7	79.0	78.9	5.86	5.88	5.87	2.28	2.22	2.25
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:56		Bottom	4.0	21.57	21.58	21.58	8.40	8.38	8.39	33.59	33.62	33.61	64.8	63.6	64.2	4.77	4.69	4.73	3.71	3.64	3.68
22/12/2021	10:05	Cloudy	Surface	1.0	20.80	20.80	20.80	8.54	8.55	8.55	33.58	33.60	33.59	66.3	67.3	66.8	4.94	5.02	4.98	0.85	0.79	0.82
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:07		Bottom	4.0	20.95	20.95	20.95	8.49	8.46	8.48	33.63	33.62	33.63	62.7	62.2	62.5	4.65	4.63	4.64	2.74	2.87	2.81
24/12/2021	10:14	Cloudy	Surface	1.0	20.95	20.95	20.95	8.80	8.80	8.80	32.94	32.92	32.93	78.0	79.0	78.5	5.81	5.89	5.85	1.82	1.76	1.79
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:16		Bottom	4.0	20.99	21.00	21.00	8.56	8.54	8.55	33.38	33.35	33.37	55.6	55.9	55.8	4.13	4.15	4.14	3.73	3.58	3.66
27/12/2021	13:24	Cloudy	Surface	1.0	20.26	20.25	20.26	8.70	8.72	8.71	32.66	32.65	32.66	65.7	66.1	65.9	4.97	5.00	4.99	1.63	1.73	1.68
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:26		Bottom	4.0	20.48	20.48	20.48	8.55	8.53	8.54	32.94	32.92	32.93	62.3	62.9	62.6	4.69	4.73	4.71	1.84	1.75	1.80
29/12/2021	14:51	Fine	Surface	1.0	2.40	20.40	11.40	8.44	8.45	8.45	33.29	33.30	33.30	85.7	85.2	85.5	6.44	6.40	6.42	2.57	2.44	2.51
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:53		Bottom	4.0	20.16	20.15	20.16	8.49	8.50	8.50	33.65	33.64	33.65	84.8	84.0	84.4	6.39	6.34	6.37	1.88	1.75	1.82



Water Monitoring Result at W2 - WSD Seawater Intake at Tai Po

Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation			DO		Turbidity				
					°C			-		ppt			%			mg/L		NTU				
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
30/11/2021	10:28	Fine	Surface	1.0	23.85	23.87	23.86	8.13	8.18	8.16	30.42	30.61	30.52	66.1	68.1	67.1	4.72	4.82	4.77	0.86	0.94	0.90
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:30		Bottom	4.0	23.93	23.94	23.94	7.97	7.96	7.97	30.57	30.55	30.56	65.4	65.6	65.5	4.69	4.70	4.70	1.30	1.22	1.26
1/12/2021	9:25	Fine	Surface	1.0	23.26	23.29	23.28	8.79	8.78	8.79	30.01	30.07	30.04	55.5	54.9	55.2	3.98	3.93	3.96	2.92	2.74	2.83
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:27		Bottom	4.0	23.54	23.49	23.52	8.76	8.76	8.76	30.12	30.14	30.13	51.2	51.3	51.3	3.66	3.66	3.66	1.95	1.87	1.91
2/12/2021	9:48	Fine	Surface	1.0	22.77	22.79	22.78	8.78	8.77	8.78	30.11	30.05	30.08	51.8	55.3	53.6	3.75	3.98	3.87	0.96	1.02	0.99
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:50		Bottom	4.0	23.06	23.09	23.08	8.84	8.84	8.84	30.29	30.28	30.29	53.3	53.4	53.4	3.84	3.84	3.84	2.46	2.74	2.60
3/12/2021	10:14	Fine	Surface	1.0	22.38/	22.37	22.37	8.70	8.68	8.69	29.65	29.70	29.68	65.9	65.3	65.6	4.81	4.77	4.79	2.40	2.17	2.29
	10:16		Middle	3.0	22.54	22.56	22.55	8.62	8.66	8.64	29.98	30.02	30.00	64.6	63.5	64.1	4.70	4.60	4.65	1.95	2.06	2.01
	10:18		Bottom	5.0	22.76	22.79	22.78	8.64	8.65	8.65	30.27	30.33	30.30	60.0	58.4	59.2	4.34	4.22	4.28	3.06	3.11	3.09
6/12/2021	13:06	Fine	Surface	1.0	22.32	22.31	22.32	8.45	8.43	8.44	30.11	30.16	30.14	84.9	83.6	84.3	6.19	6.10	6.15	3.08	3.03	3.06
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:09		Bottom	4.0	22.06	22.08	22.07	8.39	8.39	8.39	30.50	30.55	30.53	71.4	70.7	71.1	5.22	5.18	5.20	3.02	3.06	3.04
8/12/2021	14:20	Fine	Surface	1.0	21.52	21.54	21.53	8.78	8.78	8.78	33.06	33.03	33.05	98.4	97.1	97.8	7.17	7.08	7.13	3.25	3.20	3.23
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:22		Bottom	4.0	21.44	21.43	21.44	8.79	8.79	8.79	33.08	33.08	33.08	95.9	95.3	95.6	7.00	6.96	6.98	3.76	3.81	3.79
10/12/2021	17:46	Fine	Surface	1.0	22.16	22.16	22.16	8.68	8.68	8.68	32.89	32.90	32.90	101.1	100.9	101.0	7.27	7.26	7.27	2.00	2.06	2.03
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:48		Bottom	4.0	22.03	22.00	22.02	8.71	8.71	8.71	33.02	33.02	33.02	107.8	108.6	108.2	7.79	7.84	7.82	2.74	2.65	2.70
13/12/2021	9:21	Fine	Surface	1.0	22.53	22.53	22.53	8.67	8.67	8.67	32.48	32.50	32.49	86.1	85.7	85.9	6.28	6.24	6.26	1.42	1.40	1.41
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:23		Bottom	4.0	22.01	22.03	22.02	8.72	8.72	8.72	33.13	33.13	33.13	44.7	44.0	44.4	3.28	3.23	3.26	2.62	2.67	2.65
15/12/2021	10:26	Cloudy	Surface	1.0	22.38	22.39	22.39	8.16	8.14	8.15	33.45	33.44	33.45	101.6	101.3	101.5	7.39	7.37	7.38	0.77	0.82	0.80
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:28		Bottom	4.0	22.13	22.13	22.13	8.32	8.35	8.34	33.85	33.84	33.85	107.1	106.7	106.9	7.81	7.79	7.80	2.82	2.73	2.78
17/12/2021	10:40	Cloudy	Surface	1.0	22.55	22.56	22.56	8.88	8.86	8.87	33.46	33.42	33.44	94.6	94.0	94.3	6.88	6.83	6.86	1.58	1.62	1.60
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:42		Bottom	4.0	22.25	22.21	22.23	8.57	8.59	8.58	33.74	33.79	33.77	75.1	73.5	74.3	5.48	5.37	5.43	3.13	3.07	3.10
20/12/2021	13:06	Cloudy	Surface	1.0	21.30	21.30	21.30	8.62	8.63	8.63	33.34	33.36	33.35	76.4	76.6	76.5	5.67	5.68	5.68	2.89	2.82	2.86
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:08		Bottom	3.0	21.40	21.42	21.41	8.45	8.42	8.44	33.53	33.54	33.54	74.6	73.0	73.8	5.52	5.40	5.46	3.17	3.11	3.14
22/12/2021	13:17	Cloudy	Surface	1.0	21.11	21.11	21.11	8.39	8.42	8.41	33.14	33.12	33.13	68.9	69.4	69.2	5.11	5.15	5.13	1.07	1.02	1.05
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:19		Bottom	4.0	21.04	21.05	21.05	8.46	8.48	8.47	33.47	33.45	33.46	67.6	66.3	67.0	5.01	4.92	4.97	1.72	1.66	1.69
27/12/2021	17:28	Cloudy	Surface	1.0	20.31	20.30	20.31	8.47	8.49	8.48	33.12	33.14	33.13	73.6	74.1	73.9	5.55	5.58	5.57	2.72	2.59	2.66
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17:29		Bottom	4.0	20.56	20.56	20.56	8.34	8.34	8.34	33.59	33.57	33.58	60.3	61.0	60.7	4.52	4.57	4.55	3.03	3.09	3.06
29/12/2021	9:12	Fine	Surface	1.0	19.84	19.84	19.84	7.90	7.88	7.89	33.14	33.16	33.15	80.7	79.8	80.3	6.13	6.07	6.10	2.25	2.11	2.18
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:14		Bottom	4.0	19.91	19.90	19.91	7.62	7.61	7.62	33.40	33.41	33.41	86.7	87.3	87.0	6.56	6.60	6.58	2.79	2.88	2.84
31/12/2021	10:18	Cloudy	Surface	1.0	19.99	19.98	19.99	8.36	8.38	8.37	33.24	33.21	33.23	79.7	78.1	78.9	6.05	5.91	5.98	1.90	1.84	1.87
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:20		Bottom	4.0	20.04	20.04	20.04	8.33	8.32	8.33	33.69	33.73	33.71	75.3	75.8	75.6	5.69	5.73	5.71	2.13	2.04	2.09



Water Monitoring Result at C1 - Cooling Water Intake at CUHK Marine Science Laboratory
Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation		DO		Turbidity					
					°C			-		ppt			%		mg/L		NTU					
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
30/11/2021	14:59	Fine	Surface	1.0	23.88	23.89	23.89	8.68	8.68	8.68	29.30	29.29	29.30	76.3	76.0	76.2	5.44	5.43	5.44	1.65	1.78	1.72
	15:01		Middle	3.5	23.78	23.76	23.77	8.64	8.66	8.65	29.52	29.54	29.53	79.3	78.0	78.7	5.66	5.57	5.62	0.97	0.76	0.87
	15:04		Bottom	6.0	23.74	23.73	23.74	8.68	8.69	8.69	29.69	29.70	29.70	78.4	77.2	77.8	5.59	5.51	5.55	0.86	0.79	0.83
1/12/2021	14:44	Fine	Surface	1.0	22.96	22.92	22.94	8.93	8.94	8.94	28.25	28.22	28.24	79.4	79.6	79.5	5.79	5.80	5.80	1.65	1.67	1.66
	14:46		Middle	4.0	22.91	22.90	22.91	8.86	8.88	8.87	29.06	29.08	29.07	72.4	70.0	71.2	5.26	5.09	5.18	1.31	1.40	1.36
	14:48		Bottom	7.0	22.92	22.92	22.92	8.87	8.87	8.87	29.43	29.46	29.45	65.7	65.2	65.5	4.76	4.73	4.75	2.18	1.99	2.09
2/12/2021	16:25	Fine	Surface	1.0	22.60	22.59	22.60	8.78	8.80	8.79	28.60	28.70	28.65	95.8	96.0	95.9	7.01	7.02	7.02	1.84	1.60	1.72
	16:28		Middle	4.0	22.58	22.59	22.59	8.83	8.83	8.83	28.98	29.00	28.99	94.2	94.0	94.1	6.88	6.87	6.88	1.16	1.21	1.19
	16:31		Bottom	7.0	22.51	22.49	22.50	8.86	8.89	8.88	29.22	29.25	29.24	94.4	94.7	94.6	6.90	6.92	6.91	0.71	0.84	0.78
3/12/2021	15:25	Fine	Surface	1.0	21.94	21.98	21.96	8.88	8.86	8.87	29.30	29.39	29.35	113.9	114.3	114.1	8.41	8.43	8.42	1.56	1.62	1.59
	15:27		Middle	3.5	22.00	22.02	22.01	8.78	8.81	8.80	29.62	29.68	29.65	116.3	116.8	116.6	8.56	8.60	8.58	0.90	0.97	0.94
	15:29		Bottom	6.0	22.04	22.04	22.04	8.72	8.78	8.75	29.76	29.72	29.74	112.0	111.7	111.9	8.23	8.21	8.22	1.33	1.40	1.37
6/12/2021	8:38	Fine	Surface	1.0	21.21	21.22	21.22	8.77	8.75	8.76	30.82	30.80	30.81	84.6	85.9	85.3	6.31	6.40	6.36	0.79	0.75	0.77
	8:41		Middle	3.5	21.45	21.46	21.46	8.75	8.72	8.74	30.87	30.90	30.89	87.0	86.5	86.8	6.45	6.42	6.44	0.69	0.66	0.68
	8:45		Bottom	6.0	21.75	21.77	21.76	8.56	8.52	8.54	31.06	31.09	31.08	65.4	66.0	65.7	4.81	4.86	4.84	3.33	3.39	3.36
8/12/2021	10:08	Fine	Surface	1.0	20.78	20.80	20.79	8.61	8.61	8.61	33.13	33.13	33.13	80.7	79.5	80.7	5.93	5.84	5.89	1.07	1.05	1.06
	10:10		Middle	3.0	20.82	20.84	20.83	8.65	8.66	8.66	33.15	33.15	33.15	90.6	90.8	90.7	6.68	6.69	6.69	0.82	0.78	0.80
	10:12		Bottom	5.0	21.11	21.10	21.11	8.59	8.56	8.58	33.28	33.28	33.28	71.3	71.7	71.5	5.26	5.26	5.26	1.11	1.19	1.15
10/12/2021	12:33	Fine	Surface	1.0	21.40	21.40	21.40	8.77	8.77	8.77	32.50	32.48	32.49	115.6	115.1	115.4	8.45	8.41	8.43	1.25	1.19	1.22
	12:36		Middle	3.5	21.13	21.14	21.14	8.80	8.80	8.80	32.86	32.85	32.86	111.7	112.5	112.1	8.21	8.25	8.23	0.68	0.72	0.70
	12:38		Bottom	6.0	21.07	21.05	21.06	8.72	8.73	8.73	33.56	33.57	33.57	54.4	55.7	55.1	3.98	4.07	4.03	1.02	0.97	1.00
13/12/2021	13:50	Fine	Surface	1.0	22.51	22.51	22.51	8.52	8.54	8.53	32.50	32.55	32.53	89.5	89.9	89.7	6.50	6.53	6.52	2.02	2.07	2.05
	13:54		Middle	3.5	22.26	22.23	22.25	8.31	8.28	8.30	32.59	32.57	32.58	90.0	90.8	90.4	6.54	6.61	6.58	1.14	1.09	1.12
	13:58		Bottom	6.0	21.85	21.88	21.87	8.23	8.22	8.23	32.89	31.92	32.41	84.8	83.9	84.4	6.22	6.14	6.18	3.65	3.58	3.62
15/12/2021	14:41	Cloudy	Surface	1.0	22.12	22.12	22.12	8.43	8.46	8.45	32.74	32.70	32.72	91.0	81.5	86.3	6.68	6.72	6.70	1.54	14.47	8.01
	14:43		Middle	3.5	22.23	22.23	22.23	8.58	8.57	8.58	32.96	32.96	32.96	89.7	88.4	89.1	6.57	6.46	6.52	0.88	0.94	0.91
	14:45		Bottom	6.0	22.04	22.03	22.04	8.63	8.66	8.65	33.34	33.36	33.35	59.9	59.1	59.5	4.38	4.33	4.36	1.28	1.33	1.31
17/12/2021	15:04	Cloudy	Surface	1.0	22.60	22.60	22.60	8.72	8.75	8.74	32.32	32.35	32.34	105.0	105.6	105.3	7.65	7.70	7.68	0.67	0.75	0.71
	15:06		Middle	35.0	22.55	22.53	22.54	8.76	8.75	8.76	32.69	33.72	33.21	111.1	110.7	110.9	8.09	8.06	8.08	0.75	0.69	0.72
	15:08		Bottom	6.0	22.03	22.04	22.04	8.68	8.66	8.67	33.37	33.42	33.40	54.0	53.3	53.7	3.95	3.90	3.93	0.94	0.89	0.92
20/12/2021	16:40	Cloudy	Surface	1.0	20.66	20.66	20.66	8.74	8.75	8.75	33.14	33.17	33.16	94.1	93.8	94.0	7.08	7.05	7.07	0.94	0.85	0.90
	16:43		Middle	3.5	21.15	21.16	21.16	8.56	8.54	8.55	33.55	33.54	33.55	96.2	96.0	96.1	7.14	7.13	7.14	0.68	0.61	0.65
	16:45		Bottom	6.0	21.36	21.38	21.37	8.33	8.35	8.34	33.82	33.84	33.83	84.0	85.2	84.6	6.20	6.29	6.25	0.74	0.79	0.77
22/12/2021	9:25	Cloudy	Surface	1.0	20.32	20.33	20.33	8.58	8.56	8.57	33.12	33.14	33.13	80.7	80.2	80.5	6.10	6.06	6.08	2.47	2.37	2.42
	9:27		Middle	3.5	20.37	20.37	20.37	8.44	8.45	8.45	33.40	33.37	33.39	86.6	86.1	86.4	6.53	6.50	6.52	1.92	1.09	1.50
	9:28		Bottom	6.0	30.79	20.77	25.78	8.48	8.47	8.48	33.84	33.81	33.83	82.1	82.5	82.3	6.12	6.14	6.13	4.10	4.22	4.16
24/12/2021	9:40	Cloudy	Surface	1.0	20.98	20.97	20.98	8.60	8.59	8.60	32.84	32.87	32.86	79.7	79.3	79.5	5.94	5.91	5.93	0.60	0.66	0.63
	9:43		Middle	3.5	20.99	21.00	21.00	8.55	8.55	8.55	33.37	33.36	33.37	73.0	74.3	73.7	5.42	5.53	5.48	0.51	0.44	0.48
	9:45		Bottom	6.0	21.01	21.01	21.01	8.53	8.52	8.53	33.61	33.58	33.60	53.9	54.5	54.2	3.99	4.04	4.02	1.98	1.77	1.88
27/12/2021	12:47	Cloudy	Surface	1.0	19.71	19.73	19.72	8.68	8.65	8.67	32.23	32.20	32.22	76.6	77.8	77.2	5.87	5.96	5.92	2.02	1.94	1.98
	12:49		Middle	3.5	19.73	19.72	19.73	8.74	8.75	8.75	32.59	32.61	32.60	80.6	80.1	80.4	6.17	6.14	6.16	2.18	2.22	2.20
	12:50		Bottom	6.0	19.75	19.75	19.75	8.81	8.83	8.82	32.85	32.87	32.86	76.8	77.7	77.3	5.88	5.94	5.91	1.65	1.77	1.71
29/12/2021	14:17	Fine	Surface	1.0	19.94	19.93	19.94	8.77	8.75	8.76	32.66	32.68	32.67	93.8	94.3	94.1	7.14	7.18	7.16	1.11	1.04	1.08
	14:19		Middle	3.0	19.65	19.66	19.66	7.55	7.55	7.55	32.97	33.00	32.99	93.6	93.2	93.4	7.15	7.12	7.14	0.59	0.65	0.62
	14:20		Bottom	5.0	19.62	19.62	19.62	7.63	7.64	7.64	33.34	33.32	33.33	89.0	89.3	89.2	6.80	6.82	6.81	0.74	0.66	0.70



**Water Monitoring Result at F1 - Yim Tin Tsai Fish Culture Zone
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity				
					°C			-			ppt			%		mg/L		NTU				
					Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	
30/11/2021	15:27	Fine	Surface	1.0	24.07	24.09	24.08	8.69	8.69	8.69	30.02	30.00	30.01	61.3	59.2	60.3	4.34	4.19	4.27	1.45	1.22	1.34
	15:30		Middle	3.0	24.13	24.14	24.14	8.66	8.66	8.66	30.12	30.20	30.16	60.7	61.0	60.9	4.29	4.31	4.30	1.22	1.01	1.12
	15:32		Bottom	5.0	23.73	23.65	23.69	8.56	8.53	8.55	30.50	30.59	30.55	50.2	45.0	47.6	3.56	3.20	3.38	0.68	0.59	0.64
1/12/2021	15:50	Fine	Surface	1.0	23.23	23.24	23.24	8.91	8.88	8.90	29.10	29.24	29.17	69.8	68.0	68.9	5.04	4.91	4.98	1.02	1.06	1.04
	15:53		Middle	3.5	23.37	23.36	23.37	8.89	8.90	8.90	29.35	29.36	29.36	70.1	68.1	69.1	5.05	4.90	4.98	0.89	0.59	0.74
	15:56		Bottom	6.0	23.42	23.45	23.44	8.85	8.82	8.84	29.55	29.62	29.59	62.5	61.8	62.2	4.49	4.46	4.48	0.66	0.54	0.60
2/12/2021	16:45	Fine	Surface	1.0	22.66	22.67	22.67	8.81	8.81	8.81	29.15	29.18	29.17	87.0	85.5	86.3	6.35	6.24	6.30	1.24	1.12	1.18
	16:48		Middle	3.5	22.79	22.82	22.81	8.80	8.78	8.79	29.27	29.30	29.29	83.3	83.3	83.3	6.05	6.30	6.18	1.46	1.51	1.49
	16:50		Bottom	6.0	23.08	23.07	23.08	8.71	8.71	8.71	29.86	29.88	29.87	61.5	60.7	61.1	4.44	4.38/	4.44	2.25	2.74	2.50
3/12/2021	16:40	Fine	Surface	1.0	22.39	22.40	22.40	8.88	8.87	8.88	29.86	29.90	29.88	92.2	93.0	92.6	6.73	6.79	6.76	1.25	1.27	1.26
	16:43		Middle	3.5	22.41	22.45	22.43	8.72	8.70	8.71	29.86	29.84	29.85	98.6	98.3	98.5	7.27	7.17	7.22	0.86	0.85	0.86
	16:45		Bottom	6.0	22.45	22.47	22.46	8.77	8.75	8.76	29.97	30.30	30.14	82.1	81.6	81.9	5.98	5.95	5.97	1.54	1.60	1.57
6/12/2021	10:10	Fine	Surface	1.0	21.42	21.43	21.43	8.45	8.48	8.47	30.74	30.78	30.76	73.5	72.7	73.1	5.46	5.40	5.43	0.33	0.34	0.34
	10:12		Middle	3.5	21.82	21.82	21.82	8.32	8.31	8.32	31.01	31.01	31.01	65.0	64.1	64.6	4.79	4.72	4.76	0.62	0.66	0.64
	10:15		Bottom	6.0	21.84	21.84	21.84	8.28	8.28	8.28	31.35	31.39	31.37	59.1	60.3	59.7	4.34	4.44	4.39	1.38	1.43	1.41
8/12/2021	11:15	Fine	Surface	1.0	20.85	20.87	20.86	8.70	8.71	8.71	33.12	33.12	33.12	98.6	98.0	98.3	7.24	7.21	7.23	0.98	0.92	0.95
	11:17		Middle	3.0	20.77	20.78	20.78	8.73	8.73	8.73	33.17	33.17	33.17	90.0	89.5	89.8	6.63	6.60	6.62	0.68	0.59	0.64
	11:19		Bottom	5.0	20.71	20.70	20.71	8.73	8.71	8.72	33.28	33.28	33.28	77.1	76.3	76.7	5.67	5.61	5.64	0.51	0.47	0.49
10/12/2021	13:30	Fine	Surface	1.0	21.30	21.32	21.31	8.79	8.79	8.79	33.21	33.22	33.22	101.4	102.0	101.7	7.40	7.42	7.41	0.66	0.67	0.67
	13:32		Middle	3.5	21.04	21.03	21.04	8.77	8.77	8.77	33.41	33.41	33.41	82.8	83.6	83.2	6.08	6.12	6.10	0.54	0.60	0.57
	13:35		Bottom	6.0	20.88	20.88	20.88	8.75	8.74	8.75	33.56	33.56	33.56	79.5	79.1	79.3	5.83	5.72	5.78	0.78	0.82	0.80
13/12/2021	11:55	Fine	Surface	1.0	22.43	22.43	22.43	8.33	8.33	8.33	32.22	32.22	32.22	95.4	94.2	94.8	6.94	6.86	6.90	0.87	0.92	0.90
	11:57		Middle	3.0	22.20	22.21	22.21	8.23	8.23	8.23	32.44	32.42	32.43	85.7	87.2	86.5	6.26	6.36	6.31	0.53	0.52	0.53
	11:59		Bottom	5.0	22.03	22.05	22.04	8.12	8.13	8.13	32.89	32.90	32.90	58.9	57.9	58.4	4.31	4.23	4.27	2.87	2.92	2.90
15/12/2021	15:35	Cloudy	Surface	1.0	22.24	22.26	22.25	8.70	8.72	8.71	33.50	33.55	33.53	93.4	93.9	93.7	6.81	6.84	6.83	0.51	0.55	0.53
	15:37		Middle	3.5	22.19	22.18	22.19	8.53	8.55	8.54	33.66	33.61	33.64	97.1	97.8	97.5	7.09	7.14	7.12	0.66	0.69	0.68
	15:40		Bottom	6.0	21.65	21.66	21.66	8.44	8.41	8.43	33.83	33.85	33.84	100.7	101.8	101.3	7.40	7.48	7.44	0.76	0.68	0.72
17/12/2021	16:01	Cloudy	Surface	1.0	22.34	22.34	22.34	8.79	8.81	8.80	33.67	33.64	33.66	92.8	93.0	92.9	6.74	6.75	6.75	0.33	0.37	0.35
	16:04		Middle	3.0	22.24	22.22	22.23	8.85	8.84	8.85	33.79	33.76	33.78	91.5	92.1	91.8	6.66	6.70	6.68	0.29	0.25	0.27
	16:05		Bottom	5.0	22.12	22.09	22.11	8.66	8.63	8.65	33.82	33.84	33.83	79.5	79.9	79.7	5.80	5.83	5.82	0.79	0.86	0.83
20/12/2021	14:40	Cloudy	Surface	1.0	20.76	20.75	20.76	8.70	8.73	8.72	33.14	33.16	33.15	6.8	75.6	41.2	5.75	5.65	5.70	1.66	1.57	1.62
	14:42		Middle	3.0	20.91	20.92	20.92	8.44	8.45	8.45	33.45	33.44	33.45	74.6	74.0	74.3	5.57	5.54	5.56	1.15	1.12	1.14
	14:44		Bottom	5.0	21.08	21.09	21.09	8.48	8.49	8.49	33.77	33.74	33.76	62.2	61.9	62.1	4.61	4.59	4.60	0.64	0.73	0.69
22/12/2021	10:26	Cloudy	Surface	1.0	20.68	20.68	20.68	8.62	8.64	8.63	33.29	33.33	33.31	54.3	55.3	54.8	4.07	4.14	4.11	0.46	0.51	0.49
	10:28		Middle	3.5	20.96	20.97	20.97	8.53	8.53	8.53	33.47	33.46	33.47	55.8	56.3	56.1	4.14	4.17	4.16	1.02	0.97	1.00
	10:30		Bottom	6.0	20.95	20.95	20.95	8.48	8.46	8.47	33.52	33.53	33.53	60.9	60.0	60.5	4.53	4.46	4.50	3.22	3.14	3.18
24/12/2021	10:35	Cloudy	Surface	1.0	21.03	21.03	21.03	8.75	8.73	8.74	32.88	32.84	32.86	79.3	78.8	79.1	5.91	5.89	5.90	0.16	0.16	0.16
	10:37		Middle	3.0	20.90	20.91	20.91	8.70	8.70	8.70	33.14	33.14	33.14	75.4	74.6	75.0	5.62	5.56	5.59	0.83	0.75	0.79
	10:39		Bottom	5.0	20.92	20.94	20.93	8.49	8.50	8.50	33.35	33.36	33.36	68.3	67.3	67.8	5.08	5.01	5.05	0.77	0.69	0.73
27/12/2021	13:44	Cloudy	Surface	1.0	19.94	19.95	19.95	8.60	8.58	8.59	33.14	33.15	33.15	67.0	67.3	67.2	5.09	5.11	5.10	1.00	0.92	0.96
	13:47		Middle	3.0	19.97	19.97	19.97	8.55	8.55	8.55	33.12	33.12	33.12	64.0	63.6	63.8	4.85	4.82	4.84	0.78	0.74	0.76
	13:49		Bottom	5.0	20.32	20.33	20.33	8.40	8.42	8.41	33.54	33.56	33.55	62.8	63.3	63.1	4.72	4.76	4.74	0.60	0.66	0.63
29/12/2021	15:10	Fine	Surface	1.0	20.16	20.16	20.16	8.54	8.55	8.55	33.29	33.29	33.29	83.1	82.7	82.9	6.27	6.24	6.26	1.09	1.04	1.07
	15:12		Middle	3.0	20.03	20.03	20.03	8.32	8.30	8.31	33.67	33.64	33.66	88.4	87.2	87.8	6.70	6.61	6.66	1.31	1.25	1.28
	15:13		Bottom	5.0	20.09	20.10	20.10	8.40	8.40	8.40	33.82	33.85	33.84	86.7	85.9	86.3	6.55	6.49	6.52	1.15	1.09	1.12

**Water Monitoring Result at F1 - Yim Tin Tsai Fish Culture Zone****Mid-Ebb Tide**

Date	Time	Weather	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
			m	°C			-			ppt			%			mg/L		NTU				
				Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	
30/11/2021	11:15	Fine	Surface	1.0	24.14	24.17	24.16	9.46	9.54	9.50	30.45	30.41	30.43	73.2	73.1	73.2	5.16	5.16	5.16	0.91	0.92	0.92
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:17		Bottom	4.0	23.64	23.66	23.65	8.03	8.00	8.02	30.60	30.71	30.66	48.0	46.7	47.4	3.40	3.33	3.37	2.25	2.41	2.33
1/12/2021	9:58	Fine	Surface	1.0	22.90	22.95	22.93	8.78	8.79	8.79	30.51	30.32	30.42	51.2	52.1	51.7	3.69	3.72	3.71	1.22	1.07	1.15
	10:00		Middle	3.0	23.15	23.14	23.15	8.80	8.81	8.81	30.29	30.22	30.26	55.4	52.9	54.2	3.98	3.80	3.89	1.23	1.20	1.22
	10:02		Bottom	5.0	23.21	23.19	23.20	8.81	8.80	8.81	30.26	30.29	30.28	53.1	51.5	52.3	3.81	3.69	3.75	1.29	1.28	1.29
2/12/2021	10:34	Fine	Surface	1.0	22.48	22.47	22.48	8.81	8.81	8.81	29.61	29.74	29.68	56.8	58.0	57.4	4.17	4.23	4.20	0.63	0.62	0.63
	10:36		Middle	3.0	22.42	22.44	22.43	8.83	8.83	8.83	29.80	29.83	29.82	57.3	56.8	57.1	4.18	4.15	4.17	0.28	0.39	0.34
	0:00		Bottom	5.0	22.46	22.44	22.45	8.84	8.85	8.85	29.88	29.89	29.89	56.1	56.8	56.5	4.12	4.14	4.13	0.28	0.35	0.32
3/12/2021	10:40	Fine	Surface	1.0	22.30	22.30	22.30	8.68	8.71	8.70	30.37	30.39	30.38	64.5	65.5	65.0	4.70	4.77	4.74	1.07	1.05	1.06
	10:42		Middle	3.0	22.46	22.47	22.47	8.55	8.60	8.58	30.68	30.72	30.70	58.6	57.5	58.1	4.25	4.17	4.21	0.73	0.95	0.84
	10:44		Bottom	5.0	22.44	22.45	22.45	8.49	8.45	8.47	30.72	30.79	30.76	55.7	55.2	55.5	4.04	4.00	4.02	0.91	0.88	0.90
6/12/2021	12:30	Fine	Surface	1.0	21.76	21.76	21.76	8.83	8.84	8.84	30.48	30.58	30.53	82.5	83.5	83.0	6.07	6.14	6.11	0.53	0.56	0.55
	12:32		Middle	3.5	21.99	21.98	21.99	8.89	8.9	8.89	30.88	30.88	30.88	70.3	69.6	70.0	5.14	5.09	5.12	0.88	0.82	0.85
	12:35		Bottom	6.0	21.90	21.90	21.90	8.82	8.82	8.82	30.98	30.96	30.97	68.4	66.7	67.6	5.00	4.88	4.94	2.07	2.11	2.09
8/12/2021	13:55	Fine	Surface	1.0	21.44	21.42	21.43	8.77	8.77	8.77	33.19	33.16	33.18	91.1	91.3	91.2	6.68	6.70	6.69	0.95	0.90	0.93
	13:57		Middle	3.0	20.89	20.85	20.87	8.79	8.78	8.79	33.13	33.15	33.14	90.0	89.2	89.6	6.65	6.58	6.62	0.68	0.74	0.71
	13:59		Bottom	5.0	20.77	20.76	20.77	8.79	8.79	8.79	33.21	33.18	33.20	88.2	86.8	87.5	6.50	6.39	6.45	0.87	0.82	0.85
10/12/2021	16:30	Fine	Surface	1.0	21.74	21.72	21.73	7.45	7.46	7.46	33.03	33.04	33.04	98.8	99.2	99.0	7.24	7.20	7.22	1.59	1.72	1.66
	16:31		Middle	3.0	21.25	21.27	21.26	7.82	7.82	7.82	33.18	33.18	33.18	89.3	89.6	89.5	6.53	6.54	6.54	1.77	1.72	1.75
	16:33		Bottom	5.0	21.04	21.02	21.03	7.94	7.94	7.94	33.40	33.39	33.40	84.8	85.1	85.0	6.55	6.25	6.40	1.32	1.32	1.32
13/12/2021	9:39	Fine	Surface	1.0	22.19	22.20	22.20	8.69	8.70	8.70	32.44	32.44	32.44	85.3	85.9	85.6	6.26	6.29	6.28	1.84	1.79	1.82
	9:41		Middle	3.0	22.35	22.34	22.35	8.52	8.52	8.52	32.95	32.97	32.96	88.7	89.0	88.9	6.48	6.50	6.49	1.28	1.25	1.27
	9:44		Bottom	5.0	22.15	22.14	22.15	8.41	8.41	8.41	33.38	33.39	33.39	53.9	55.8	54.9	3.94	4.08	4.01	1.33	1.38	1.36
15/12/2021	10:52	Cloudy	Surface	1.0	22.26	22.26	22.26	8.59	8.56	8.58	32.87	32.84	32.86	86.8	86.2	86.5	6.26	6.23	6.25	1.13	1.06	1.10
	10:54		Middle	3.0	22.23	22.22	22.23	8.44	8.42	8.43	33.01	33.03	33.02	81.2	80.8	81.0	5.91	5.89	5.90	0.84	0.87	0.86
	10:56		Bottom	5.0	22.08	22.07	22.08	8.12	8.10	8.11	33.74	33.71	33.73	56.3	57.5	56.9	4.11	4.19	4.15	2.68	2.74	2.71
17/12/2021	11:05	Cloudy	Surface	1.0	22.46	22.47	22.47	8.78	8.75	8.77	33.90	32.91	32.91	87.1	86.8	87.0	6.35	6.33	6.34	0.68	0.61	0.65
	11:07		Middle	3.0	22.18	22.20	22.19	8.60	8.58	8.59	33.24	33.27	33.26	84.7	85.1	84.9	6.19	6.22	6.21	0.44	0.47	0.46
	11:09		Bottom	5.0	21.96	21.96	21.96	8.45	8.47	8.46	33.57	33.55	33.56	63.9	64.2	64.1	4.69	4.71	4.70	1.38	1.32	1.35
20/12/2021	13:20	Cloudy	Surface	1.0	21.14	21.14	21.14	8.60	8.63	8.62	33.47	33.42	33.45	76.1	74.7	75.4	5.65	5.55	5.60	1.78	1.82	1.80
	13:22		Middle	3.0	21.17	21.15	21.16	8.49	8.46	8.48	33.59	33.60	33.60	70.6	69.7	70.2	5.25	5.18	5.22	1.23	1.21	1.22
	13:23		Bottom	5.0	21.57	21.55	21.56	8.24	8.27	8.26	33.94	33.90	33.92	45.4	45.9	45.7	3.33	3.38	3.36	2.66	2.73	2.70
22/12/2021	12:48	Cloudy	Surface	1.0	21.11	21.11	21.11	8.56	8.56	8.56	32.89	32.92	32.91	76.7	77.1	76.9	5.71	5.74	5.73	0.93	0.98	0.96
	12:52		Middle	3.0	21.05	21.05	21.05	8.73	8.31	8.52	33.16	33.17	33.17	81.5	80.7	81.1	6.05	5.99	6.02	0.89	0.83	0.86
	12:54		Bottom	5.0	21.06	21.07	21.07	8.37	8.37	8.37	33.51	33.53	33.52	70.7	71.7	71.2	5.24	5.31	5.28	2.51	2.44	2.48
27/12/2021	17:08	Cloudy	Surface	1.0	19.71	19.72	19.72	8.33	8.32	8.33	33.20	33.18	33.19	67.8	66.7	67.3	5.17	5.09	5.13	1.71	1.84	1.78
	17:10		Middle	3.0	19.95	19.94	19.95	8.20	8.20	8.20	33.35	33.36	33.36	70.7	70.9	70.8	5.37	5.39	5.38	1.54	1.47	1.51
	17:11		Bottom	5.0	20.19	20.19	20.19	8.14	8.12	8.13	33.86	33.62	33.74	63.5	63.9	63.7	4.80	4.83	4.82	0.86	0.76	0.81
29/12/2021	9:30	Fine	Surface	1.0	19.56	19.57	19.57	8.38	8.40	8.39	33.27	33.27	33.27	64.5	63.5	64.0	4.92	4.84	4.88	0.58	0.66	0.62
	9:32		Middle	3.0	19.63	19.64	19.64	8.02	8.03	8.03	33.14	33.15	33.15	62.8	63.0	62.9	4.78	4.80	4.79	0.47	0.44	0.46
	9:34		Bottom	5.0	19.90	19.90	19.90	8.11	8.11	8.11	33.39	33.40	33.40	61.5	62.0	61.8	4.65	4.69	4.67	0.42	0.45	0.44
31/12/2021	10:37	Cloudy	Surface	1.0	19.99	20.00	20.00	8.69	8.71	8.70	33.34	33.36	33.35	76.2	76.7	76.5	5.77	5.80	5.79	1.32	1.28	1.30
	10:10		Middle	3.0	20.13	20.14	20.14	8.33	8.34	8.34	33.58	33.59	33.59	78.2	78.6	78.4	5.90	5.93	5.92	1.40	1.34	1.37
	10:42		Bottom	5.0	20.16	20.17	20.17	8.39	8.40	8.40	33.67	33.66	33.67	62.0	62.7	62.4	4.67	4.73	4.70	1.23	1.31	1.27



**Water Monitoring Result at F2 -Yim Tin Tsai (East) Fish Culture Zone
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	16:35	Fine	Surface	1.0	23.77	23.78	23.78	8.64	8.65	8.65	28.71	28.71	28.71	65.9	66.6	66.3	4.07	4.77	4.42	0.70	0.81	0.76
	16:37		Middle	3.5	23.72	23.71	23.72	8.67	8.67	8.67	28.86	28.82	28.84	72.8	71.8	72.3	5.22	5.15	5.19	1.59	1.75	1.67
	16:39		Bottom	6.0	23.77	23.77	23.77	8.64	8.62	8.63	29.10	29.12	29.11	72.7	71.0	71.9	5.20	5.08	5.14	2.30	1.99	2.15
1/12/2021	16:10	Fine	Surface	1.0	22.58	22.65	22.62	8.70	8.64	8.67	30.70	30.02	30.36	54.5	55.2	54.9	3.96	4.00	3.98	0.85	0.88	0.87
	16:12		Middle	3.5	22.83	22.87	22.85	8.66	8.70	8.68	30.06	29.98	30.02	65.5	56.6	61.1	4.08	4.10	4.09	0.47	0.53	0.50
	16:15		Bottom	6.0	23.10	23.12	23.11	8.60	8.68	8.64	30.48	30.47	30.48	49.8	46.1	48.0	3.58	3.31	3.45	1.92	2.08	2.00
2/12/2021	16:10	Fine	Surface	1.0	22.27	22.30	22.29	8.74	8.70	8.72	30.36	30.31	30.34	76.8	77.3	77.1	5.60	5.64	5.62	1.15	1.09	1.12
	16:12		Middle	3.5	22.17	22.20	22.19	8.75	8.73	8.74	30.51	30.55	30.53	74.2	74.8	74.5	5.42	5.46	5.44	0.39	0.88	0.63
	16:15		Bottom	6.0	22.12	22.15	22.14	8.75	8.75	8.75	30.60	30.63	30.62	78.0	76.8	77.4	5.70	5.61	5.66	0.34	0.66	0.50
3/12/2021	17:00	Fine	Surface	1.0	21.59	21.61	21.60	8.76	8.72	8.74	30.32	30.33	30.33	85.1	83.2	84.2	6.28	6.14	6.21	1.42	1.47	1.45
	17:02		Middle	3.5	21.56	21.55	21.56	8.75	8.74	8.75	30.34	30.38	30.36	86.2	86.6	86.4	6.37	6.40	6.39	1.65	1.70	1.68
	17:05		Bottom	6.0	21.57	21.56	21.57	8.77	8.77	8.77	30.44	30.44	30.44	89.7	88.9	89.3	6.62	6.56	6.59	1.89	1.83	1.86
6/12/2021	10:30	Fine	Surface	1.0	20.93	20.92	20.93	8.68	8.65	8.67	30.66	30.69	30.68	69.3	78.9	74.1	5.20	5.28	5.24	1.71	1.77	1.74
	10:32		Middle	3.5	21.10	21.11	21.11	8.40	8.37	8.39	30.82	30.83	30.83	68.1	66.6	67.4	5.09	4.97	5.03	1.18	1.14	1.16
	10:35		Bottom	6.0	21.14	21.15	21.15	8.36	8.35	8.36	31.00	31.06	31.03	67.2	69.6	68.4	5.01	5.03	5.02	2.42	2.45	2.44
8/12/2021	11:37	Fine	Surface	1.0	20.55	20.57	20.56	8.64	8.64	8.64	33.26	33.26	33.26	80.6	80.3	80.5	5.96	5.99	5.98	0.78	0.75	0.77
	11:39		Middle	3.5	20.49	20.50	20.50	8.65	8.66	8.66	33.26	33.26	33.26	85.2	84.8	85.0	6.32	6.29	6.31	0.66	0.61	0.64
	11:42		Bottom	6.0	20.37	20.36	20.37	8.66	8.66	8.66	33.05	33.05	33.05	76.7	76.2	76.5	5.69	5.66	5.68	1.03	1.07	1.05
10/12/2021	13:48	Fine	Surface	1.0	21.21	21.21	21.21	8.69	8.69	8.69	33.20	31.90	32.55	87.3	86.8	87.1	6.38	6.35	6.37	0.53	0.59	0.56
	13:50		Middle	3.5	21.04	21.04	21.04	8.69	8.69	8.69	33.30	33.30	33.30	90.5	91.4	91.0	6.65	6.71	6.68	0.42	0.40	0.41
	13:52		Bottom	6.0	20.92	20.93	20.93	8.70	8.70	8.70	33.33	33.33	33.33	83.6	84.2	83.9	6.14	6.19	6.17	0.77	0.85	0.81
13/12/2021	12:45	Fine	Surface	1.0	22.13	22.14	22.14	8.21	8.21	8.21	32.60	32.60	32.60	69.3	68.9	69.1	5.07	5.03	5.05	0.59	0.64	0.62
	12:47		Middle	3.0	22.05	22.04	22.05	8.13	8.13	8.13	32.27	32.27	32.27	75.8	74.8	75.3	5.56	5.48	5.52	0.60	0.66	0.63
	12:49		Bottom	5.0	21.98	21.96	21.97	8.08	8.08	8.08	32.18	32.20	32.19	70.6	69.5	70.1	5.19	5.09	5.14	2.67	2.59	2.63
15/12/2021	16:02	Cloudy	Surface	1.0	22.15	22.16	22.16	8.35	8.34	8.35	33.30	33.30	33.30	97.1	97.8	97.5	7.09	7.15	7.12	0.40	0.35	0.38
	16:05		Middle	3.5	22.02	22.01	22.02	8.18	8.15	8.17	33.37	33.35	33.36	76.3	75.4	75.9	5.59	5.53	5.56	0.33	0.36	0.35
	16:07		Bottom	6.0	22.10	22.12	22.11	8.09	8.10	8.10	33.84	33.89	33.87	52.0	52.9	52.5	3.79	3.86	3.83	2.76	2.68	2.72
17/12/2021	16:20	Cloudy	Surface	1.0	22.53	22.56	22.55	8.75	8.80	8.78	33.72	33.74	33.73	78.6	77.4	78.0	5.67	5.59	5.63	0.04	0.09	0.07
	16:23		Middle	3.5	22.64	22.62	22.63	8.43	8.46	8.45	33.79	33.82	33.81	79.1	78.2	78.7	5.72	5.66	5.69	0.37	0.43	0.40
	16:25		Bottom	6.0	22.27	22.28	22.28	8.44	8.43	8.44	33.94	33.97	33.96	36.2	35.7	36.0	2.63	2.59	2.63	3.62	3.74	3.68
20/12/2021	14:55	Cloudy	Surface	1.0	20.80	20.77	20.79	8.42	8.44	8.43	33.26	33.23	33.25	94.0	95.5	94.8	7.00	7.11	7.06	1.14	1.06	1.10
	14:57		Middle	3.0	20.88	20.90	20.89	8.29	8.30	8.30	33.50	33.52	33.51	102.3	103.6	103.0	7.62	7.72	7.67	2.54	2.43	2.49
	14:58		Bottom	5.0	20.83	20.81	20.82	8.20	8.22	8.21	33.69	33.72	33.71	77.7	77.0	77.4	5.84	5.79	5.82	2.74	2.82	2.78
22/12/2021	10:45	Cloudy	Surface	1.0	20.24	20.25	20.25	8.66	8.68	8.67	33.64	33.62	33.63	63.3	62.6	63.0	4.78	4.72	4.75	1.13	1.19	1.16
	10:47		Middle	3.5	20.33	20.34	20.34	8.40	8.40	8.40	33.56	33.57	33.56	58.1	59.3	58.7	4.38	4.46	4.42	0.61	0.66	0.64
	10:50		Bottom	6.0	20.32	20.32	20.32	8.42	8.41	8.42	33.70	33.72	33.71	52.1	51.5	51.8	3.92	3.88	3.90	1.79	1.68	1.74
24/12/2021	10:53	Cloudy	Surface	1.0	20.91	20.92	20.92	8.64	8.63	8.64	33.07	33.05	33.06	67.7	66.6	67.2	5.04	4.96	5.00	0.44	0.55	0.50
	10:55		Middle	3.0	20.88	20.88	20.88	8.55	8.54	8.55	33.34	33.31	33.33	66.2	65.3	65.8	4.93	4.86	4.90	0.06	0.11	0.09
	10:57		Bottom	5.0	20.77	20.79	20.78	8.49	8.48	8.49	33.50	33.52	33.51	55.4	55.0	55.2	4.14	4.12	4.13	1.07	0.99	1.03
27/12/2021	14:00	Cloudy	Surface	1.0	19.64	19.64	19.64	8.11	8.12	8.12	33.08	33.08	33.08	80.4	81.1	80.8	6.13	6.18	6.16	1.86	1.75	1.81
	14:02		Middle	3.0	19.75	19.74	19.75	8.06	8.06	8.06	33.02	33.03	33.03	83.1	83.7	83.4	6.33	6.38	6.36	1.52	1.56	1.54
	14:04		Bottom	5.0	19.77	19.77	19.77	7.97	7.96	7.97	32.89	32.88	32.89	88.0	87.5	87.8	6.69	6.65	6.67	0.76	0.67	0.72
29/12/2021	15:30	Fine	Surface	1.0	20.04	20.05	20.05	8.72	8.74	8.73	33.67	33.65	33.66	74.1	74.8	74.5	5.62	5.67	5.65	1.10	1.06	1.08
	15:32		Middle	3.5	19.41	19.41	19.41	8.50	8.48	8.49	33.55	33.52	33.54	75.6	74.4	75.0	5.79	5.69	5.74	1.35	1.29	1.32
	15:34		Bottom	6.0	19.33	19.32	19.33	8.43	8.43	8.43	33.50	33.47	33.49	69.6	70.3	70.0	5.33	5.38	5.36	1.41	1.44	1.43



**Water Monitoring Result at F2 -Yim Tin Tsai (East) Fish Culture Zone
Mid-Ebb Tide**

Date	Time	Weater Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation		DO		Turbidity					
					°C			-		ppt		%		mg/L		NTU						
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
30/11/2021	11:31	Fine	Surface	1.0	23.47	23.57	23.52	8.05	8.10	8.08	28.67	28.64	28.66	63.9	62.7	63.3	4.60	4.52	4.56	0.55	0.45	0.50
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:33		Bottom	4.0	23.68	23.69	23.69	8.10	8.10	8.10	28.70	28.88	28.79	65.8	68.0	66.9	4.73	4.88	4.81	0.55	0.44	0.50
1/12/2021	10:25	Fine	Surface	1.0	23.39	22.42	22.91	8.72	7.73	8.23	30.08	30.07	30.08	50.3	49.6	50.0	3.65	3.60	3.63	1.29	1.22	1.26
	10:27		Middle	3.0	23.73	22.73	23.23	8.76	8.77	8.77	30.32	30.27	30.30	51.5	52.3	51.9	3.72	3.79	3.76	0.84	0.81	0.83
	10:30		Bottom	5.0	22.89	22.88	22.89	8.74	8.74	8.74	30.58	30.63	30.61	48.7	49.7	49.2	3.51	3.58	3.55	0.78	0.72	0.75
2/12/2021	10:55	Fine	Surface	1.0	22.02	22.03	22.03	8.73	8.73	8.73	29.61	29.64	29.63	52.9	52.3	52.6	3.89	3.85	3.87	1.05	0.86	0.96
	10:58		Middle	3.0	22.04	22.03	22.04	8.74	8.76	8.75	29.85	29.85	29.85	55.6	54.9	55.3	4.09	4.03	4.06	0.76	0.74	0.75
	11:01		Bottom	5.0	22.05	22.05	22.05	8.74	8.71	8.73	30.07	30.06	30.07	55.1	54.8	54.9	4.04	4.02	4.03	0.33	0.56	0.45
3/12/2021	11:00	Fine	Surface	1.0	21.60	21.61	21.61	8.68	8.70	8.69	29.03	29.61	29.32	64.8	65.7	65.3	4.81	4.87	4.84	1.00	1.07	1.04
	11:02		Middle	3.0	21.49	21.49	21.49	8.65	8.66	8.66	29.75	29.79	29.77	66.8	66.0	66.4	4.96	4.90	4.93	1.94	1.86	1.90
	11:04		Bottom	5.0	21.50	21.49	21.50	8.68	8.65	8.67	29.86	29.90	29.88	67.0	67.2	67.1	4.97	4.99	4.98	1.48	1.44	1.46
6/12/2021	13:27	Fine	Surface	1.0	21.26	21.25	21.26	8.60	8.57	8.59	30.37	30.32	30.35	86.3	85.6	86.0	6.41	6.36	6.39	1.57	1.52	1.55
	13:29		Middle	3.0	21.20	21.20	21.20	8.68	8.66	8.67	30.47	30.50	30.49	84.1	85.1	84.6	6.24	6.33	6.29	0.79	0.85	0.82
	13:32		Bottom	5.0	21.08	21.09	21.09	8.74	8.72	8.73	30.56	30.59	30.58	83.8	84.4	84.1	6.25	6.28	6.26	2.26	2.32	2.29
8/12/2021	14:37	Fine	Surface	1.0	20.92	20.94	20.93	8.73	8.73	8.73	33.30	33.31	33.31	84.7	84.3	84.5	6.23	6.19	6.21	3.76	3.72	3.74
	14:38		Middle	3.0	20.74	20.73	20.74	8.72	8.72	8.72	33.26	33.27	33.27	88.2	88.5	88.4	6.51	6.54	6.53	2.68	2.73	2.71
	14:04		Bottom	5.0	20.59	20.59	20.59	8.71	8.70	8.71	33.31	33.31	33.31	8.8	87.3	48.0	6.48	6.45	6.47	3.06	3.11	3.09
10/12/2021	16:46	Fine	Surface	1.0	21.38	21.40	21.39	8.12	8.13	8.13	33.12	33.12	33.12	94.6	93.7	94.2	6.90	6.83	6.87	0.72	0.80	0.76
	16:48		Middle	3.0	21.14	21.14	21.14	8.22	8.22	8.22	33.26	33.28	33.27	92.4	92.8	92.6	6.77	6.80	6.79	0.49	0.44	0.47
	16:50		Bottom	5.0	21.04	21.04	21.04	8.27	8.27	8.27	33.28	33.29	33.29	89.3	89.8	89.6	6.55	6.59	6.57	0.82	0.77	0.80
13/12/2021	10:07	Fine	Surface	1.0	21.97	21.98	21.98	8.57	8.57	8.57	32.59	32.59	32.59	70.4	69.7	70.1	5.15	5.10	5.13	0.61	0.66	0.64
	10:09		Middle	3.5	21.95	21.95	21.95	8.36	8.35	8.36	32.81	32.82	32.82	81.7	82.0	81.9	5.98	6.01	6.00	1.02	1.03	1.03
	10:11		Bottom	6.0	21.92	21.92	21.92	8.14	8.15	8.15	33.13	33.15	33.14	76.7	77.4	77.1	5.62	5.67	5.65	2.11	2.13	2.12
15/12/2021	11:12	Cloudy	Surface	1.0	22.02	22.04	22.03	8.55	8.58	8.57	32.94	32.97	32.96	76.9	77.4	77.2	5.65	5.68	5.67	1.27	1.18	1.23
	11:14		Middle	3.0	22.04	22.04	22.04	8.32	8.35	8.34	33.23	33.20	33.22	80.4	80.8	80.6	5.90	5.92	5.91	0.87	0.82	0.85
	11:16		Bottom	5.0	22.09	21.09	21.59	8.38	8.40	8.39	33.58	33.57	33.58	53.8	52.8	53.3	3.93	3.86	3.90	1.12	1.17	1.15
17/12/2021	11:20	Cloudy	Surface	1.0	22.53	22.54	22.54	8.46	8.48	8.47	33.05	33.09	33.07	76.1	74.7	75.4	5.51	5.43	5.47	0.22	0.28	0.25
	11:22		Middle	3.5	22.50	22.50	22.50	8.34	8.31	8.33	33.50	33.51	33.51	78.2	78.0	78.1	5.69	5.67	5.68	0.16	0.12	0.14
	11:24		Bottom	6.0	22.26	22.24	22.25	8.38	8.36	8.37	33.97	33.92	33.95	44.4	43.6	44.0	3.23	3.18	3.21	0.74	0.77	0.76
20/12/2021	13:38	Cloudy	Surface	1.0	20.80	20.79	20.80	8.30	8.30	8.30	33.03	33.07	33.05	66.1	65.3	65.7	4.93	4.88	4.91	0.41	0.38	0.40
	13:40		Middle	3.0	20.84	20.83	20.84	8.18	8.20	8.19	33.22	33.26	33.24	68.7	69.2	69.0	5.15	5.16	5.16	0.69	0.74	0.72
	13:41		Bottom	5.0	20.82	20.80	20.81	8.15	8.15	8.15	33.56	33.59	33.58	68.7	68.0	68.4	5.12	5.07	5.10	0.94	0.90	0.92
22/12/2021	13:35	Cloudy	Surface	1.0	20.41	20.39	20.40	8.54	8.56	8.55	33.37	33.35	33.36	63.3	63.9	63.6	4.76	4.81	4.79	0.90	0.95	0.93
	13:37		Middle	3.5	20.36	20.36	20.36	8.47	8.47	8.47	33.25	33.26	33.26	61.3	61.9	61.6	4.62	4.66	4.64	1.44	1.38	1.41
	13:38		Bottom	6.0	20.33	20.33	20.33	8.44	8.45	8.45	33.31	33.32	33.32	62.8	63.9	63.4	4.74	4.82	4.78	2.54	2.45	2.50
27/12/2021	17:43	Cloudy	Surface	1.0	19.85	19.84	19.85	7.93	7.93	7.93	32.62	32.63	32.63	65.1	64.0	64.6	4.95	4.87	4.91	1.11	1.05	1.08
	17:44		Middle	3.0	19.84	19.84	19.84	7.82	7.83	7.83	32.55	32.53	32.54	83.8	84.8	84.3	6.37	6.45	6.41	0.84	0.80	0.82
	17:45		Bottom	5.0	19.86	19.85	19.86	7.74	7.72	7.73	32.67	32.64	32.66	89.6	89.4	89.5	6.81	6.80	6.81	0.52	0.46	0.49
29/12/2021	9:50	Fine	Surface	1.0	19.32	19.32	19.32	8.55	8.56	8.56	33.16	33.16	33.16	59.0	58.3	58.7	4.52	4.47	4.50	0.66	0.61	0.64
	9:52		Middle	3.0	19.33	19.33	19.33	8.34	8.34	8.34	33.27	33.25	33.26	60.5	60.3	60.4	4.63	4.62	4.63	0.72	0.78	0.75
	9:55		Bottom	5.0	19.28	19.27	19.28	8.07	8.08	8.08	33.33	33.32	33.33	58.5	58.8	58.7	4.48	4.51	4.50	0.47	0.44	0.46
31/12/2021	11:00	Cloudy	Surface	1.0	19.70	19.70	19.70	8.83	8.81	8.82	33.16	33.19	33.18	71.2	72.3	71.8	5.42	5.51	5.47	1.25	1.14	1.20
	11:02		Middle	3.0	19.76	19.75	19.76	8.56	8.53	8.55	33.44	33.47	33.46	74.1	73.5	73.8	5.69	5.59	5.64	1.12	1.09	1.11
	11:04		Bottom	5.0	19.71	19.71	19.71	8.49	8.50	8.50	33.64	33.61	33.63	67.9	68.5	68.2	5.18	5.22	5.20	1.36	1.30	1.33



Water Monitoring Result at F3 - Yung Shue Au Fish Culture Zone / Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average		
30/11/2021	12:45	Fine	Surface	1.0	24.00	24.00	24.00	8.06	8.06	8.06	33.13	33.13	33.13	96.9	96.7	97.8	6.70	6.82	6.76	2.83	2.80	2.82
	12:47		Middle	3.5	24.10	24.10	24.10	8.24	8.24	8.24	33.01	33.01	33.01	94.1	95.5	94.8	6.50	6.60	6.55	2.75	2.70	2.73
	12:49		Bottom	6.0	24.20	24.20	24.20	8.31	8.31	8.31	33.02	33.02	33.02	82.2	92.4	87.3	6.36	6.38	6.37	2.61	2.65	2.63
1/12/2021	14:18	Fine	Surface	1.0	20.60	20.60	20.60	8.45	8.45	8.45	33.11	33.11	33.11	97.7	97.3	97.5	7.24	7.21	7.23	3.24	3.27	3.26
	14:20		Middle	4.0	20.50	20.50	20.50	8.46	8.46	8.46	33.14	33.14	33.14	96.8	96.9	96.9	7.18	7.11	7.15	3.16	3.20	3.18
	14:22		Bottom	7.0	20.40	20.40	20.40	8.48	8.48	8.48	33.13	33.13	33.13	97.7	96.3	97.0	7.25	7.14	7.20	2.72	2.91	2.82
2/12/2021	14:31	Fine	Surface	1.0	20.40	20.40	20.40	8.41	8.41	8.41	33.36	33.36	33.36	98.3	97.9	98.1	7.29	7.26	7.28	4.03	4.06	4.05
	14:33		Middle	3.5	20.40	20.40	20.40	8.42	8.42	8.42	33.28	33.28	33.28	95.0	95.8	95.4	7.05	7.11	7.08	4.00	3.89	3.95
	14:35		Bottom	6.0	20.40	20.40	20.40	8.42	8.42	8.42	33.28	33.28	33.28	94.9	94.5	94.7	7.04	7.01	7.03	3.98	4.10	4.04
3/12/2021	16:55	Fine	Surface	1.0	20.20	20.20	20.20	8.49	8.49	8.49	33.30	33.30	33.30	96.5	94.0	95.3	7.19	7.00	7.10	2.85	3.05	2.95
	16:57		Middle	3.5	20.20	20.20	20.20	8.51	8.51	8.51	33.29	33.29	33.29	93.4	92.0	92.7	6.96	6.85	6.91	3.25	3.23	3.24
	16:59		Bottom	6.0	20.20	20.20	20.20	8.51	8.51	8.51	33.28	33.29	33.29	93.9	94.1	94.0	7.00	7.02	7.01	3.29	3.30	3.30
6/12/2021	9:31	Fine	Surface	1.0	21.50	21.50	21.50	8.38	8.38	8.38	33.02	33.02	33.02	94.1	96.6	95.4	6.85	6.03	6.44	4.01	4.08	4.05
	9:33		Middle	3.5	21.50	21.50	21.50	8.40	8.40	8.40	33.06	33.06	33.06	94.7	93.7	94.2	6.89	6.81	6.85	3.98	3.92	3.95
	9:35		Bottom	6.0	21.50	21.50	21.50	8.42	8.42	8.42	33.06	33.06	33.06	92.4	94.0	93.2	6.72	6.84	6.78	4.10	4.07	4.09
8/12/2021	10:51	Fine	Surface	1.0	23.10	23.20	23.15	8.44	8.44	8.44	33.11	33.12	33.12	95.1	94.9	95.0	6.72	6.70	6.71	2.93	2.95	2.94
	10:53		Middle	3.5	23.20	23.20	23.20	8.47	8.47	8.47	33.11	33.11	33.11	94.8	95.3	95.1	6.69	6.75	6.72	2.90	3.02	2.96
	10:55		Bottom	6.0	23.20	23.20	23.20	8.47	8.47	8.47	33.11	33.11	33.11	94.0	93.8	93.9	6.67	6.65	6.66	2.87	2.89	2.88
10/12/2021	13:42	Fine	Surface	1.0	22.70	22.70	22.70	8.41	8.41	8.41	32.90	32.90	32.90	90.6	93.4	92.0	6.46	6.95	6.71	2.53	2.50	2.52
	13:44		Middle	3.5	22.70	22.70	22.70	8.44	8.44	8.44	32.88	32.88	32.88	96.4	96.0	96.2	6.88	6.84	6.86	2.59	2.57	2.58
	13:46		Bottom	6.0	22.80	22.70	22.75	8.44	8.44	8.44	32.88	32.88	32.88	92.8	92.8	92.8	6.82	6.65	6.74	2.54	2.51	2.53
13/12/2021	15:21	Fine	Surface	1.0	22.50	22.50	22.50	8.41	8.41	8.41	33.38	33.38	33.38	95.2	96.4	95.8	6.80	6.89	6.85	2.52	2.50	2.51
	15:23		Middle	3.5	22.50	22.50	22.50	8.41	8.41	8.41	33.31	33.31	33.31	91.3	92.1	91.7	6.53	6.64	6.59	2.47	2.45	2.46
	15:25		Bottom	6.0	22.50	22.50	22.50	8.45	8.45	8.45	33.31	33.31	33.31	89.4	89.9	89.7	6.41	6.51	6.46	2.42	2.49	2.46
15/12/2021	15:32	Cloudy	Surface	1.0	21.40	21.40	21.40	8.53	8.53	8.53	33.22	33.22	33.22	94.5	92.3	93.4	6.89	6.72	6.81	2.47	2.45	2.46
	15:34		Middle	4.0	21.40	21.40	21.40	8.53	8.53	8.53	33.22	33.22	33.22	91.5	94.3	92.9	6.67	6.87	6.77	2.40	2.37	2.39
	15:36		Bottom	7.0	21.40	21.40	21.40	8.53	8.53	8.53	33.22	33.22	33.22	92.1	94.2	93.2	6.70	6.86	6.78	2.46	2.43	2.45
17/12/2021	16:32	Cloudy	Surface	1.0	20.80	20.80	20.80	8.50	8.50	8.50	33.21	33.21	33.21	90.9	92.3	91.6	6.70	6.82	6.76	2.81	2.86	2.84
	16:34		Middle	3.5	20.80	20.80	20.80	8.50	8.50	8.50	33.21	33.21	33.21	84.5	89.2	86.9	6.22	6.57	6.40	2.90	2.88	2.89
	16:36		Bottom	6.0	20.80	20.80	20.80	8.51	8.51	8.51	33.21	33.21	33.21	96.3	94.1	95.2	7.09	6.93	7.01	2.80	2.76	2.78
20/12/2021	16:50	Cloudy	Surface	1.0	18.50	18.50	18.50	8.43	8.43	8.43	33.27	33.27	33.27	85.6	84.8	85.2	6.59	6.53	6.56	2.65	2.67	2.66
	16:52		Middle	3.5	18.50	18.50	18.50	8.44	8.44	8.44	33.47	33.47	33.47	82.7	81.1	81.9	6.37	6.25	6.31	2.60	2.62	2.61
	16:54		Bottom	6.0	18.40	18.40	18.40	8.44	8.44	8.44	33.45	33.45	33.45	76.4	77.8	77.1	5.88	6.01	5.95	2.63	2.64	2.64
22/12/2021	9:11	Cloudy	Surface	1.0	20.80	20.80	20.80	8.42	8.42	8.42	33.08	33.08	33.08	85.8	84.8	85.3	6.32	6.24	6.28	2.43	2.40	2.42
	9:13		Middle	3.5	20.80	20.80	20.80	8.42	8.42	8.42	33.08	33.08	33.08	80.3	81.5	80.9	5.92	6.00	5.96	2.44	2.46	2.45
	9:15		Bottom	6.0	20.80	20.80	20.80	8.43	8.43	8.43	33.09	33.09	33.09	74.3	73.3	73.8	5.48	5.40	5.44	2.38	2.36	2.37
24/12/2021	9:55	Cloudy	Surface	1.0	20.40	20.40	20.40	8.29	8.29	8.29	32.98	32.98	32.98	81.8	81	81.9	6.07	5.99	6.03	2.25	2.23	2.24
	9:57		Middle	4.0	20.50	20.50	20.50	8.30	8.30	8.30	32.94	32.94	32.94	78.3	75.6	77.0	5.82	5.61	5.72	2.20	2.18	2.19
	9:59		Bottom	7.0	20.50	20.50	20.50	8.30	8.30	8.30	32.93	32.93	32.93	77.0	74.9	76.0	5.72	5.56	5.64	2.27	2.29	2.28
27/12/2021	11:24	Cloudy	Surface	1.0	16.00	16.00	16.00	8.35	8.35	8.35	32.85	32.85	32.85	96.5	96.4	96.5	7.80	7.79	7.80	2.60	2.56	2.58
	11:26		Middle	3.5	16.00	16.00	16.00	8.37	8.37	8.37	32.88	32.88	32.88	93.5	92.9	93.2	7.56	7.52	7.54	2.54	2.56	2.55
	11:28		Bottom	6.0	16.00	15.90	15.95	8.38	8.38	8.38	32.88	32.88	32.88	91.7	91.1	91.4	7.43	7.37	7.40	2.51	2.48	2.50
29/12/2021	15:14	Fine	Surface	1.0	21.70	21.70	21.70	8.41	8.41	8.41	33.45	33.45	33.45	96.1	95.4	95.8	6.91	6.84	6.88	2.52	2.50	2.51
	15:16		Middle	3.5	21.90	21.90	21.90	8.44	8.44	8.44	33.28	33.28	33.28	93.2	93.9	93.5	6.67	6.72	6.70	2.56	2.59	2.58
	15:18		Bottom	6.0	21.80	21.80	21.80	8.46	8.46	8.46	33.30	33.30	33.30	78.6	87.0	82.8	6.87	6.81	6.84	2.48	2.46	2.47



Water Monitoring Result at F3 - Yung Shue Au Fish Culture Zone / Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity				
			m		°C			-			ppt			%		mg/L		NTU				
					Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average			
30/11/2021	8:45	Fine	Surface	1.0	23.00	23.00	23.00	8.09	8.09	8.09	32.58	32.58	32.58	93.7	91.9	92.8	6.67	6.65	6.66	4.33	4.31	4.32
	8:47		Middle	3.0	23.00	23.00	23.00	8.32	8.00	8.16	32.92	32.92	32.92	93.2	93.0	93.1	6.63	6.62	6.63	4.37	4.42	4.40
	8:49		Bottom	6.0	23.00	23.00	23.00	8.35	8.35	8.35	32.74	32.74	32.74	93.5	94.2	93.9	6.66	6.71	6.69	4.36	4.37	4.37
1/12/2021	12:21	Fine	Surface	1.0	20.10	20.10	20.10	8.45	8.45	8.45	33.17	33.17	33.17	94.7	92.5	93.6	7.07	6.91	6.99	3.31	3.30	3.31
	12:23		Middle	3.5	20.10	20.10	20.10	8.45	8.45	8.45	33.17	33.17	33.17	94.9	93.3	94.1	7.09	6.94	7.02	3.34	3.36	3.35
	12:25		Bottom	6.0	20.10	20.10	20.10	8.45	8.45	8.45	33.17	33.17	33.17	92.1	93.2	92.7	6.99	6.97	6.98	3.29	3.27	3.28
2/12/2021	10:10	Fine	Surface	1.0	21.10	21.10	21.10	8.43	8.43	8.43	33.21	33.21	33.21	96.9	96.4	96.7	7.15	7.10	7.13	3.59	3.56	3.58
	10:12		Middle	3.5	20.80	21.00	20.90	8.44	8.44	8.44	33.27	33.27	33.27	95.0	96.6	95.8	7.02	7.13	7.08	3.50	3.42	3.46
	10:14		Bottom	6.0	20.80	20.70	20.75	8.45	8.45	8.45	33.27	33.27	33.27	92.9	95.9	94.4	6.87	7.07	6.97	3.29	3.17	3.23
3/12/2021	11:48	Fine	Surface	1.0	21.00	21.00	21.00	8.46	8.46	8.46	33.32	33.32	33.32	96.0	97.2	96.6	7.05	7.15	7.10	5.02	5.06	5.04
	11:50		Middle	3.5	20.80	20.80	20.80	8.48	8.48	8.48	33.33	33.33	33.33	95.3	95.8	95.6	7.01	7.04	7.03	5.12	5.10	5.11
	11:52		Bottom	6.0	20.80	20.80	20.80	8.49	8.49	8.49	33.34	33.34	33.34	93.8	96.6	95.2	6.90	7.02	6.96	4.98	4.76	4.87
6/12/2021	14:34	Fine	Surface	1.0	23.70	23.40	23.55	8.47	8.47	8.47	33.22	33.22	33.22	92.4	93.7	93.1	6.49	6.45	6.47	2.80	2.78	2.79
	14:36		Middle	3.5	23.30	23.20	23.25	8.48	8.48	8.48	33.19	33.19	33.19	96.1	95.5	95.8	4.75	6.71	5.73	2.69	2.74	2.72
	14:38		Bottom	6.0	23.50	23.50	23.50	8.48	8.48	8.48	33.19	33.20	33.20	97.8	95.4	96.6	6.86	6.70	6.78	2.79	2.71	2.75
8/12/2021	16:12	Fine	Surface	1.0	21.30	21.30	21.30	8.47	8.47	8.47	33.11	33.11	33.11	94.0	93.2	93.6	6.84	6.78	6.81	2.75	2.71	2.73
	16:14		Middle	3.5	21.30	21.30	21.30	8.47	8.47	8.47	33.29	33.29	33.29	92.2	91.7	92.0	6.73	6.69	6.71	2.70	2.67	2.69
	16:16		Bottom	6.0	21.30	21.30	21.30	8.48	8.48	8.48	33.25	33.25	33.25	90.3	90.8	90.6	6.59	6.63	6.61	2.63	2.69	2.66
10/12/2021	18:00	Fine	Surface	1.0	20.80	20.80	20.80	8.51	8.51	8.51	33.08	33.08	33.08	93.8	92.3	93.1	6.92	6.81	6.87	2.56	2.58	2.57
	18:02		Middle	3.5	20.80	20.80	20.80	8.53	8.53	8.53	33.08	33.08	33.08	86.2	84.2	85.2	6.36	6.21	6.29	2.64	2.61	2.63
	18:04		Bottom	6.0	20.80	20.80	20.80	8.53	8.53	8.53	33.08	33.08	33.08	82.3	81.1	81.7	6.07	5.98	6.03	2.60	2.53	2.57
13/12/2021	9:04	Fine	Surface	1.0	22.40	22.50	22.45	8.23	8.23	8.23	33.19	33.15	33.17	93.4	96.7	95.1	6.67	6.90	6.79	2.60	2.64	2.62
	9:06		Middle	3.0	22.70	22.70	22.70	8.41	8.41	8.41	33.03	33.03	33.03	93.8	91.4	92.6	6.69	6.52	6.61	2.53	2.50	2.52
	9:08		Bottom	6.0	22.70	22.70	22.70	8.43	8.43	8.43	33.01	33.01	33.01	98.3	98.3	98.3	7.01	7.01	7.01	2.57	2.59	2.58
15/12/2021	10:06	Cloudy	Surface	1.0	21.60	21.60	21.60	8.24	8.24	8.24	32.74	32.74	32.74	87.4	83.4	85.4	6.14	6.07	6.11	2.88	2.90	2.89
	10:08		Middle	3.5	21.60	21.60	21.60	8.33	8.33	8.33	32.81	32.81	32.81	95.9	96.5	96.2	6.97	7.02	7.00	2.85	2.82	2.84
	10:10		Bottom	6.0	21.60	21.60	21.60	8.37	8.37	8.37	32.82	32.82	32.82	92.8	90.3	91.6	6.76	6.57	6.67	2.91	2.87	2.89
17/12/2021	10:10	Cloudy	Surface	1.0	22.30	22.30	22.30	8.27	8.27	8.27	33.03	33.03	33.03	87.7	87.1	87.4	6.30	6.23	6.27	2.35	2.40	2.38
	10:12		Middle	3.5	22.20	22.20	22.20	8.29	8.29	8.29	33.06	33.06	33.06	88.1	88.4	88.3	6.33	6.36	6.35	2.29	2.25	2.27
	10:14		Bottom	6.0	22.20	22.20	22.20	8.35	8.35	8.35	33.09	33.09	33.09	88.0	90.8	89.4	6.33	6.52	6.43	2.26	2.23	2.25
20/12/2021	11:45	Cloudy	Surface	1.0	16.90	16.90	16.90	8.40	8.40	8.40	33.21	33.21	33.21	93.1	93.3	93.2	7.39	7.41	7.40	2.67	2.72	2.70
	11:47		Middle	3.5	16.90	16.90	16.90	8.41	8.41	8.41	33.21	33.21	33.21	89.8	85.4	87.6	7.14	6.78	6.96	2.75	2.74	2.75
	11:49		Bottom	6.0	16.90	16.90	16.90	8.40	8.40	8.40	33.22	33.22	33.22	86.5	86.0	86.3	6.87	6.82	6.85	2.64	2.69	2.67
22/12/2021	15:08	Cloudy	Surface	1.0	21.40	21.40	21.40	8.45	8.45	8.45	33.16	33.16	33.16	83.4	83.2	83.3	6.18	6.16	6.17	2.60	2.62	2.61
	15:10		Middle	3.5	21.60	21.60	21.60	8.46	8.46	8.46	33.06	33.06	33.06	84.1	82.4	83.3	6.20	6.10	6.15	2.54	2.51	2.53
	15:12		Bottom	6.0	21.60	21.60	21.60	8.46	8.46	8.46	33.06	33.06	33.06	80.9	81.7	81.3	5.98	6.02	6.00	2.50	2.55	2.53
27/12/2021	19:35	Cloudy	Surface	1.0	16.50	16.50	16.50	8.47	8.47	8.47	33.29	33.29	33.29	83.4	83.1	83.3	6.64	6.62	6.63	2.58	2.63	2.61
	19:37		Middle	4.0	16.40	16.40	16.40	8.47	8.47	8.47	33.31	33.31	33.31	81.3	82.0	81.7	6.48	6.54	6.51	2.60	2.64	2.62
	19:39		Bottom	7.0	16.40	16.40	16.40	8.47	8.47	8.47	33.32	33.32	33.32	81.7	81.8	81.8	6.52	6.52	6.52	2.53	2.50	2.52
29/12/2021	9:01	Fine	Surface	1.0	22.30	22.30	22.30	8.37	8.37	8.37	32.86	32.86	32.86	93.5	95.3	94.4	6.70	6.83	6.77	2.28	2.25	2.27
	9:03		Middle	3.5	22.30	22.30	22.30	8.39	8.39	8.39	32.80	32.80	32.80	95.6	95.9	95.8	6.86	6.89	6.88	2.21	2.24	2.23
	9:05		Bottom	6.0	22.30	22.30	22.30	8.39	8.39	8.39	32.74	32.74	32.74	85.8	85.2	85.5	6.15	6.09	6.12	2.18	2.20	2.19
31/12/2021	9:38	Cloudy	Surface	1.0	19.21	19.19	19.20	8.02	8.02	8.02	31.86	31.86	31.86	84.4	84.5	84.5	6.45	6.46	6.46	1.80	1.82	1.81
	9:40		Middle	3.5	19.33	19.32	19.33	8.05	8.05	8.05	32.20	32.20	32.20	89.4	89.0	89.2	6.81	6.78	6.80	1.56	1.59	1.58
	9:42		Bottom	6.0	19.32	19.31	19.32	7.99	7.98	7.99	32.37	32.38	32.38	79.5	79.3	79.4	6.05	6.03	6.04	2.31	2.35	2.33



**Water Monitoring Result at F4 - Lo Fu Wat Fish Culture Zone
Mid-Flood Tide**

Date	Time	Weater Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average		
30/11/2021	14:42	Fine	Surface	1.0	23.40	23.40	23.40	8.43	8.43	8.43	33.13	33.13	33.13	98.9	99.3	99.1	6.94	6.96	6.95	2.78	2.35	2.57
	14:44		Middle	6.0	23.60	23.60	23.60	8.45	8.45	8.45	33.10	33.10	33.10	98.0	98.3	98.2	6.87	6.88	6.88	2.25	2.15	2.20
	14:46		Bottom	11.0	23.70	23.70	23.70	8.45	8.45	8.45	33.10	33.10	33.10	97.1	97.8	97.5	6.79	6.84	6.82	2.13	2.11	2.12
1/12/2021	15:15	Fine	Surface	1.0	20.90	20.90	20.90	8.49	8.49	8.49	33.36	33.36	33.36	96.2	96.7	96.5	7.09	7.13	7.11	2.70	2.78	2.74
	15:17		Middle	6.0	20.70	20.70	20.70	8.49	8.49	8.49	33.36	33.36	33.36	96.0	96.3	96.2	7.08	7.10	7.09	2.71	2.76	2.74
	15:19		Bottom	11.0	20.70	20.60	20.65	8.49	8.49	8.49	33.36	33.36	33.36	93.9	94.9	94.4	6.93	7.01	6.97	2.84	2.80	2.82
2/12/2021	15:50	Fine	Surface	1.0	20.60	20.60	20.60	8.47	8.47	8.47	33.40	33.40	33.40	96.0	96.3	96.2	7.10	7.13	7.12	2.17	2.15	2.16
	15:52		Middle	6.0	20.60	20.60	20.60	8.47	8.47	8.47	33.47	33.47	33.47	97.1	95.4	96.3	7.19	7.06	7.13	2.10	2.12	2.11
	15:54		Bottom	10.0	20.50	20.50	20.50	8.47	8.47	8.47	33.43	33.43	33.43	98.7	98.0	98.4	7.31	7.26	7.29	2.14	2.21	2.18
3/12/2021	15:18	Fine	Surface	1.0	20.10	20.10	20.10	8.48	8.48	8.48	33.44	33.44	33.44	96.1	96.4	96.3	7.18	7.40	7.29	2.63	2.70	2.67
	15:20		Middle	6.0	19.90	20.00	19.95	8.48	8.48	8.48	33.45	33.45	33.45	93.0	92.1	92.6	6.95	6.89	6.92	2.84	2.87	2.86
	15:22		Bottom	11.0	19.80	19.80	19.80	8.48	8.48	8.48	33.46	33.46	33.46	92.5	93.3	92.9	6.92	6.99	6.96	2.91	3.11	3.01
6/12/2021	10:55	Fine	Surface	1.0	21.70	21.70	21.70	8.47	8.47	8.47	33.34	33.34	33.34	96.8	98.7	97.8	7.01	7.15	7.08	2.92	2.98	2.95
	10:57		Middle	6.0	21.60	21.60	21.60	8.47	8.47	8.47	33.35	33.35	33.35	95.2	95.0	95.1	6.90	6.90	6.90	2.86	2.90	2.88
	10:59		Bottom	11.0	21.60	21.60	21.60	8.48	8.48	8.48	33.35	33.35	33.35	93.7	94.9	94.3	6.80	6.89	6.85	2.94	2.87	2.91
8/12/2021	12:56	Fine	Surface	1.0	22.00	22.00	22.00	8.53	8.53	8.53	33.31	33.31	33.31	93.1	96.6	94.9	6.71	6.96	6.84	2.92	2.96	2.94
	12:58		Middle	5.5	22.00	22.00	22.00	8.53	8.53	8.53	33.31	33.31	33.31	94.1	93.9	94.0	6.68	6.66	6.67	2.98	2.93	2.96
	13:00		Bottom	10.0	22.00	22.00	22.00	8.53	8.53	8.53	33.31	33.31	33.31	95.0	94.7	94.9	6.71	6.68	6.70	2.90	2.84	2.87
10/12/2021	15:21	Fine	Surface	1.0	21.60	21.60	21.60	8.49	8.49	8.49	33.36	33.36	33.36	91.9	93.2	92.6	6.67	6.76	6.72	2.57	2.60	2.59
	15:23		Middle	5.5	21.60	21.60	21.60	8.49	8.49	8.49	33.35	33.35	33.35	92.7	91.0	91.9	6.73	6.60	6.67	2.55	2.52	2.54
	15:25		Bottom	10.0	21.60	21.60	21.60	8.49	8.49	8.49	33.35	33.35	33.35	86.7	86.3	86.5	6.29	6.26	6.28	2.50	2.53	2.52
13/12/2021	13:06	Fine	Surface	1.0	21.40	21.40	21.40	8.51	8.51	8.51	33.53	33.51	33.52	93.9	93.6	93.8	6.83	6.80	6.82	2.39	2.41	2.40
	13:08		Middle	6.0	21.40	21.40	21.40	8.51	8.51	8.51	33.51	33.51	33.51	80.7	80.6	80.7	5.88	5.87	5.88	2.34	2.37	2.36
	13:10		Bottom	11.0	21.40	21.40	21.40	8.51	8.51	8.51	33.46	33.46	33.46	85.7	84.7	85.2	6.24	6.16	6.20	2.40	2.43	2.42
15/12/2021	13:43	Cloudy	Surface	1.0	21.30	21.30	21.30	8.53	8.53	8.53	33.31	33.31	33.31	94.4	94.8	94.6	6.89	6.94	6.92	2.34	2.36	2.35
	13:45		Middle	6.0	21.30	21.30	21.30	8.53	8.53	8.53	33.31	33.31	33.31	93.2	92.9	93.1	6.69	6.78	6.74	2.40	2.37	2.39
	13:47		Bottom	11.0	21.30	21.30	21.30	8.53	8.53	8.53	33.31	33.31	33.31	88.2	89.1	88.7	6.44	6.49	6.47	2.31	2.33	2.32
17/12/2021	14:51	Cloudy	Surface	1.0	20.80	20.80	20.80	8.52	8.52	8.52	33.48	33.48	33.48	93.9	91.1	92.5	6.95	6.71	6.83	2.59	2.66	2.63
	14:53		Middle	5.5	20.80	20.80	20.80	8.52	8.52	8.52	33.49	33.49	33.49	88.1	90.3	89.2	6.49	6.64	6.57	2.64	2.61	2.63
	14:55		Bottom	10.0	20.80	20.80	20.80	8.52	8.52	8.52	33.49	33.49	33.49	92.4	91.9	92.2	6.80	6.79	6.80	2.55	2.48	2.52
20/12/2021	15:23	Cloudy	Surface	1.0	18.00	18.00	18.00	8.48	8.48	8.48	33.72	33.72	33.72	86.2	83.5	84.9	6.68	6.48	6.58	2.45	2.40	2.43
	15:25		Middle	5.5	17.80	17.80	17.80	8.48	8.48	8.48	33.73	33.73	33.73	81.9	82.6	82.3	6.29	6.41	6.35	2.50	2.54	2.52
	15:27		Bottom	10.0	17.80	17.80	17.80	8.48	8.48	8.48	33.73	33.73	33.73	884.9	83.0	484.0	6.58	6.45	6.52	2.47	2.42	2.45
22/12/2021	11:15	Cloudy	Surface	1.0	20.50	20.50	20.50	8.46	8.46	8.46	33.51	33.51	33.51	90.1	90.5	90.3	6.66	6.70	6.68	2.41	2.39	2.40
	11:17		Middle	6.0	20.50	20.50	20.50	8.46	8.46	8.46	33.51	33.51	33.51	81.7	82.0	81.9	6.04	6.06	6.05	2.34	2.37	2.36
	11:19		Bottom	11.0	20.50	20.50	20.50	8.46	8.46	8.46	33.51	33.51	33.51	83.0	82.9	83.0	6.14	6.13	6.14	2.28	2.30	2.29
24/12/2021	11:22	Cloudy	Surface	1.0	20.20	20.20	20.20	8.43	8.43	8.43	33.16	33.16	33.16	92.5	96.4	94.5	6.90	7.17	7.04	2.20	2.18	2.19
	1:24		Middle	6.0	20.20	20.20	20.20	8.44	8.44	8.44	33.15	33.15	33.15	90.6	89.2	89.9	6.73	6.63	6.68	2.16	2.13	2.15
	11:26		Bottom	11.0	20.20	20.20	20.20	8.44	8.44	8.44	33.15	33.15	33.15	84.4	84.8	84.6	6.29	6.31	6.30	2.21	2.24	2.23
27/12/2021	13:08	Cloudy	Surface	1.0	17.20	17.20	17.20	8.43	8.43	8.43	33.53	33.53	33.53	85.1	84.5	84.8	6.70	6.65	6.68	2.99	2.95	2.97
	13:10		Middle	5.5	17.00	16.90	16.95	8.43	8.43	8.43	33.53	33.53	33.53	84.0	85.7	84.9	6.62	6.76	6.69	2.92	2.90	2.91
	13:12		Bottom	10.0	16.90	16.90	16.90	8.43	8.43	8.43	33.67	33.67	33.67	85.3	85.3	85.3	6.72	6.73	6.73	2.96	2.94	2.95
29/12/2021	13:13	Fine	Surface	1.0	21.70	21.70	21.70	8.46	8.46	8.46	33.51	33.51	33.51	93.5	93.9	93.7	6.77	6.83	6.80	2.34	2.30	2.32
	13:15		Middle	5.5	21.70	21.70	21.70	8.47	8.47	8.47	33.51	33.51	33.51	88.1	87.6	87.9	6.92	6.87	6.90	2.36	2.39	2.38
	13:17		Bottom	10.0	21.70	21.70	21.70	8.47	8.47	8.47	33.51	33.51	33.51	87.4	87.6	87.5	6.34	6.36	6.35	2.35	2.31	2.33



Water Monitoring Result at F4 - Lo Fu Wat Fish Culture Zone

Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	10:10	Fine	Surface	1.0	22.30	22.30	22.30	8.44	8.44	8.44	33.01	33.01	33.01	95.6	95.9	95.8	6.57	6.89	6.73	3.64	3.69	3.67
	10:12		Middle	5.5	22.30	22.30	22.30	8.46	8.46	8.46	32.98	32.98	32.98	95.1	96.7	95.9	6.85	6.96	6.91	3.71	3.67	3.69
	10:14		Bottom	10.0	22.40	22.40	22.40	8.48	8.48	8.48	32.99	32.99	32.99	93.3	96.9	95.1	6.69	6.95	6.82	3.45	3.42	3.44
1/12/2021	11:08	Fine	Surface	1.0	21.60	21.60	21.60	8.46	8.46	8.46	33.27	33.27	33.27	94.2	97.7	96.0	6.88	6.92	6.90	3.06	3.01	3.04
	11:10		Middle	6.0	21.30	21.30	21.30	8.46	8.46	8.46	33.33	33.33	33.33	93.3	93.0	93.2	6.83	6.81	6.82	3.04	3.02	3.03
	11:12		Bottom	11.0	21.30	21.30	21.30	8.46	8.46	8.46	33.33	33.33	33.33	94.2	95.6	94.9	6.91	7.00	6.96	2.98	2.95	2.97
2/12/2021	11:35	Fine	Surface	1.0	21.40	21.40	21.40	8.45	8.45	8.45	33.43	33.43	33.43	93.0	93.9	93.5	6.78	6.86	6.82	2.89	2.99	2.94
	11:37		Middle	6.0	21.20	21.20	21.20	8.45	8.45	8.45	33.47	33.47	33.47	92.7	94.2	93.5	6.77	6.89	6.83	3.07	3.04	3.06
	11:39		Bottom	11.0	21.10	21.10	21.10	8.45	8.45	8.45	33.48	33.48	33.48	93.3	93.9	93.6	6.82	6.87	6.85	3.08	3.05	3.07
3/12/2021	13:17	Fine	Surface	1.0	20.90	20.90	20.90	8.46	8.46	8.46	33.48	33.48	33.48	97.0	97.0	97.0	7.14	7.15	7.15	4.58	4.55	4.57
	13:19		Middle	6.0	20.70	20.70	20.70	8.46	8.46	8.46	33.48	33.48	33.48	96.1	96.4	96.3	7.07	7.10	7.09	4.62	4.58	4.60
	13:21		Bottom	11.0	20.70	20.70	20.70	8.46	8.46	8.46	33.48	33.48	33.48	94.6	97.0	95.8	6.97	7.14	7.06	4.56	4.50	4.53
6/12/2021	13:19	Fine	Surface	1.0	22.40	22.40	22.40	8.47	8.47	8.47	33.48	33.48	33.48	97.4	99.0	98.2	6.95	7.07	7.01	3.47	3.39	3.43
	13:21		Middle	5.5	22.40	22.40	22.40	8.47	8.47	8.47	33.44	33.47	33.46	97.0	96.6	96.8	6.92	6.98	6.95	3.25	3.23	3.24
	13:23		Bottom	10.0	22.50	22.50	22.50	8.47	8.47	8.47	33.44	33.45	33.45	95.6	97.1	96.4	6.82	6.92	6.87	3.18	3.15	3.17
8/12/2021	15:015	Fine	Surface	1.0	20.80	20.80	20.80	8.53	8.53	8.53	33.33	33.33	33.33	93.8	93.1	93.5	6.82	6.77	6.80	2.52	2.41	2.47
	15:07		Middle	5.5	20.80	20.80	20.80	8.53	8.53	8.53	33.33	33.33	33.33	91.0	91.4	91.2	6.62	6.65	6.64	2.45	2.51	2.48
	15:09		Bottom	10.0	20.80	20.80	20.80	8.53	8.53	8.53	33.33	33.33	33.33	94.1	94.6	94.4	6.85	6.90	6.88	2.47	2.44	2.46
10/12/2021	17:02	Fine	Surface	1.0	20.20	20.20	20.20	8.55	8.55	8.55	33.35	33.35	33.35	95.3	94.7	95.0	7.09	7.04	7.07	2.34	2.37	2.36
	17:04		Middle	5.5	20.20	20.20	20.20	8.55	8.55	8.55	33.35	33.35	33.35	90.8	93.2	92.0	6.76	6.94	6.85	2.34	2.38	2.36
	17:06		Bottom	10.0	20.20	20.20	20.20	8.55	8.55	8.55	33.35	33.35	33.35	93.0	81.2	87.1	6.90	6.79	6.85	2.34	2.32	2.33
13/12/2021	10:24	Fine	Surface	1.0	22.20	22.20	22.20	8.46	8.46	8.46	33.45	33.45	33.45	94.2	95.3	94.8	6.75	6.86	6.81	2.46	2.41	2.44
	10:26		Middle	6.0	22.30	22.30	22.30	8.46	8.46	8.46	33.45	33.45	33.45	87.8	89.4	88.6	6.29	6.40	6.35	2.40	2.37	2.39
	10:28		Bottom	11.0	22.30	22.30	22.30	8.46	8.46	8.46	33.45	33.45	33.45	89.3	89.4	89.4	6.39	6.40	6.40	2.42	2.49	2.46
15/12/2021	11:42	Cloudy	Surface	1.0	21.30	21.30	21.30	8.47	8.47	8.47	33.34	33.34	33.34	96.2	93.7	95.0	7.02	6.84	6.93	2.54	2.51	2.53
	11:44		Middle	5.5	21.30	21.30	21.30	8.47	8.47	8.47	33.79	33.79	33.79	93.6	97.7	95.7	6.83	7.14	6.99	2.53	2.48	2.51
	11:46		Bottom	10.0	21.30	21.30	21.30	8.48	8.48	8.48	33.32	33.32	33.32	98.9	97.2	98.1	7.22	7.08	7.15	2.50	2.56	2.53
17/12/2021	12:23	Cloudy	Surface	1.0	21.70	21.70	21.70	8.44	8.44	8.44	33.48	33.48	33.48	94.9	94.5	94.7	6.89	6.85	6.87	2.47	2.50	2.49
	12:25		Middle	5.5	21.90	21.90	21.90	8.46	8.46	8.46	33.47	33.47	33.47	97.3	95.6	96.5	7.06	6.93	7.00	2.41	2.38	2.40
	12:27		Bottom	10.0	21.70	21.70	21.70	8.46	8.46	8.46	33.47	33.47	33.47	95.4	92.4	93.9	6.91	6.70	6.81	2.45	2.42	2.44
20/12/2021	13:05	Cloudy	Surface	1.0	17.70	17.70	17.70	8.43	8.43	8.43	33.62	33.62	33.62	88.9	88.5	88.7	6.95	6.90	6.93	2.89	2.91	2.90
	13:07		Middle	5.5	17.60	17.60	17.60	8.43	8.43	8.43	33.64	33.64	33.64	83.2	83.8	83.5	6.49	6.54	6.52	2.71	2.68	2.70
	13:09		Bottom	10.0	17.60	17.60	17.60	8.44	8.44	8.44	33.65	33.65	33.65	83.6	85.0	84.3	6.53	6.63	6.58	2.66	2.65	2.66
22/12/2021	13:33	Cloudy	Surface	1.0	21.30	21.30	21.30	7.47	7.47	7.47	33.49	33.49	33.49	94.2	93.9	94.1	6.96	6.94	6.95	2.53	2.50	2.52
	13:35		Middle	5.5	21.30	21.30	21.30	7.47	7.47	7.47	33.49	33.49	33.49	92.5	95.6	94.1	7.04	7.07	7.06	2.47	2.49	2.48
	13:37		Bottom	10.0	21.30	21.30	21.30	7.47	7.47	7.47	33.49	33.49	33.49	92.5	93.1	92.8	6.84	6.86	6.85	2.44	2.41	2.43
27/12/2021	17:39	Cloudy	Surface	1.0	16.30	16.30	16.30	8.50	8.50	8.50	33.70	33.70	33.70	96.0	91.9	94.0	7.75	7.38	7.57	2.65	2.64	2.65
	17:41		Middle	6.0	16.30	16.30	16.30	8.50	8.50	8.50	33.69	33.69	33.69	91.3	90.5	90.9	7.33	7.27	7.30	2.60	2.58	2.59
	17:43		Bottom	11.0	16.30	16.30	16.30	8.50	8.50	8.50	33.69	33.69	33.69	87.0	89.4	88.2	6.99	7.18	7.09	2.51	2.57	2.54
29/12/2021	10:08	Fine	Surface	1.0	21.30	21.30	21.30	8.46	8.46	8.46	33.53	33.53	33.53	96.8	97.1	97.0	7.05	7.07	7.06	2.57	2.47	2.52
	10:10		Middle	5.5	21.20	21.20	21.20	8.46	8.46	8.46	33.53	33.53	33.53	87.3	86.7	87.0	6.84	6.32	6.58	2.52	2.49	2.51
	10:12		Bottom	10.0	21.20	21.20	21.20	8.46	8.46	8.46	33.53	33.53	33.53	84.0	86.9	85.5	6.12	6.33	6.23	2.41	2.44	2.43
31/12/2021	10:52	Cloudy	Surface	1.0	19.39	19.40	19.40	8.16	8.16	8.16	32.00	32.01	32.01	101.1	101.2	101.2	7.70	7.71	7.71	1.46	1.43	1.45
	10:54		Middle	6.0	19.34	19.35	19.35	8.10	8.11	8.11	32.52	32.52	32.52	88.0	87.9	88.0	6.69	6.68	6.69	1.89	1.93	1.91
	10:56		Bottom	11.0	19.28	19.29	19.29	8.09	8.09	8.09	32.71	32.69	32.70	84.4	84.1	84.3	6.41	6.39	6.40	2.26	2.29	2.28



**Water Monitoring Result at CR1 - Corals at Tai Po Industrial Estate
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation		DO		Turbidity					
					°C			-		ppt			%		mg/L		NTU					
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
30/11/2021	15:58	Fine	Surface	1.0	24.12	24.12	24.12	8.68	8.70	8.69	30.33	30.29	30.31	59.1	57.8	58.5	4.17	4.13	4.15	1.62	1.60	1.61
	16:00		Middle	3.0	23.66	23.66	23.66	8.54	8.53	8.54	30.98	31.01	31.00	39.7	38.7	39.2	2.82	2.74	2.78	4.08	3.57	3.83
	16:02		Bottom	5.0	23.58	23.58	23.58	8.49	8.45	8.47	31.09	31.10	31.10	36.9	36.1	36.5	2.62	2.56	2.59	8.30	8.25	8.28
1/12/2021	15:25	Fine	Surface	1.0	23.65	23.62	23.64	8.87	8.87	8.87	29.04	29.09	29.07	71.8	71.2	71.5	5.15	5.11	5.13	1.34	1.30	1.32
	15:27		Middle	3.5	23.41	23.39	23.40	8.86	8.82	8.84	29.39	29.42	29.41	70.2	70.7	70.5	5.09	5.08	5.08	0.67	0.69	0.68
	15:30		Bottom	6.0	23.50	23.52	23.51	8.75	8.70	8.73	29.68	29.72	29.70	58.4	57.4	57.9	4.18	4.11	4.15	2.36	2.09	2.23
2/12/2021	15:50	Fine	Surface	1.0	22.24	23.27	22.76	8.87	8.88	8.88	29.47	29.40	29.44	99.6	100.0	99.8	7.18	7.21	7.20	2.39	2.55	2.47
	15:52		Middle	3.0	22.93	22.90	22.92	8.82	8.82	8.82	29.66	29.70	29.68	95.6	94.7	95.2	6.92	6.85	6.89	1.88	1.75	1.82
	15:55		Bottom	5.0	23.22	23.27	23.25	8.67	8.67	8.67	29.93	29.95	29.94	71.7	71.2	71.5	5.14	5.11	5.13	3.42	3.60	3.51
3/12/2021	15:59	Fine	Surface	1.0	22.70	22.72	22.71	8.89	8.94	8.92	29.49	29.52	29.51	96.7	96.2	96.5	7.03	6.99	7.01	2.71	2.65	2.68
	16:01		Middle	3.0	22.45	22.47	22.46	8.80	8.82	8.81	29.65	29.68	29.67	86.5	85.8	86.2	6.31	6.27	6.29	2.62	2.43	2.53
	16:03		Bottom	5.0	22.74	21.77	22.26	8.64	8.70	8.67	30.16	30.20	30.18	69.9	68.7	69.3	5.06	4.97	5.02	4.18	4.06	4.12
6/12/2021	9:20	Fine	Surface	1.0	21.46	21.48	21.47	8.87	8.85	8.86	30.23	30.27	30.25	76.0	76.5	76.3	5.65	5.67	5.66	1.96	1.91	1.94
	9:22		Middle	3.0	21.93	21.90	21.92	8.64	8.67	8.66	30.89	30.92	30.91	54.6	52.8	53.7	4.01	3.87	3.94	4.42	4.39	4.41
	9:25		Bottom	5.0	21.95	21.95	21.95	8.50	8.52	8.51	30.96	30.96	30.96	54.7	57.2	56.0	4.17	4.20	4.19	4.61	4.70	4.66
8/12/2021	10:39	Fine	Surface	1.0	21.42	21.40	21.41	8.69	8.68	8.69	32.99	32.98	32.99	99.1	99.8	99.5	7.24	7.29	7.27	3.19	3.23	3.21
	10:41		Middle	3.0	21.07	21.09	21.08	8.71	8.71	8.71	33.10	33.06	33.08	88.4	87.9	88.2	6.48	6.45	6.47	2.90	2.94	2.92
	10:43		Bottom	5.0	20.97	20.99	20.98	8.70	8.71	8.71	33.13	33.11	33.12	87.4	87.1	87.3	6.39	6.37	6.38	3.36	3.41	3.39
10/12/2021	13:00	Fine	Surface	1.0	22.18	22.15	22.17	8.78	8.77	8.78	32.91	32.92	32.92	116.4	116.8	116.6	8.38	8.40	8.39	2.03	2.07	2.05
	13:01		Middle	3.0	21.22	21.22	21.22	8.80	8.86	8.83	33.22	33.21	33.22	95.1	94.0	94.6	6.96	6.98	6.97	1.74	1.80	1.77
	13:03		Bottom	5.0	21.04	21.04	21.04	8.74	8.74	8.74	33.41	33.40	33.41	67.5	66.4	67.0	4.94	4.86	4.90	1.30	1.25	1.28
13/12/2021	12:15	Fine	Surface	1.0	22.54	22.55	22.55	8.69	8.90	8.80	37.97	37.97	37.97	94.8	94.1	94.5	6.89	6.84	6.87	1.84	1.77	1.81
	12:17		Middle	3.0	22.34	22.34	22.34	8.20	8.33	8.27	33.18	33.18	33.18	90.1	91.3	90.7	6.58	6.66	6.62	1.09	1.03	1.06
	12:19		Bottom	5.0	21.97	21.98	21.98	8.06	8.08	8.07	33.85	33.86	33.86	57.9	56.4	57.2	4.23	4.13	4.18	1.29	1.34	1.32
15/12/2021	15:04	Cloudy	Surface	1.0	22.44	22.43	22.44	8.68	8.65	8.67	33.35	33.36	33.36	94.1	95.0	94.6	6.84	6.91	6.88	1.14	1.19	1.17
	15:07		Middle	3.5	22.41	22.40	22.41	8.38	8.41	8.40	33.43	33.43	33.43	87.4	88.1	87.8	6.36	6.41	6.39	1.22	1.25	1.24
	15:08		Bottom	6.0	22.35	22.34	22.35	8.24	8.23	8.24	33.56	33.57	33.57	76.0	75.7	75.9	5.53	5.51	5.52	1.24	1.19	1.22
17/12/2021	15:30	Cloudy	Surface	1.0	22.53	22.52	22.53	8.84	8.85	8.85	33.13	33.11	33.12	97.0	96.5	96.8	7.04	7.00	7.02	0.89	0.95	0.92
	15:32		Middle	3.0	22.40	22.41	22.41	8.62	8.60	8.61	33.40	33.44	33.42	92.6	93.1	92.9	6.74	6.77	6.76	0.76	0.73	0.69
	15:33		Bottom	5.0	22.08	22.06	22.07	8.52	8.55	8.54	33.84	33.86	33.85	45.1	46.5	45.8	3.29	3.39	3.34	0.66	0.70	0.68
20/12/2021	15:45	Cloudy	Surface	1.0	20.92	20.91	20.92	8.28	8.30	8.29	32.84	32.87	32.86	80.8	79.7	80.3	6.06	5.95	6.01	2.09	2.02	2.06
	14:47		Middle	3.0	21.23	21.24	21.24	8.46	8.44	8.45	33.25	33.27	33.26	78.1	77.4	77.8	5.79	5.72	5.76	2.15	2.09	2.12
	15:48		Bottom	5.0	21.70	21.72	21.71	8.39	8.38	8.39	33.74	33.72	33.73	48.4	47.5	48.0	3.55	3.48	3.52	3.37	3.32	3.35
22/12/2021	9:48	Cloudy	Surface	1.0	20.75	20.75	20.75	8.73	8.71	8.72	33.69	33.67	33.68	66.1	65.0	65.6	4.94	4.86	4.90	1.54	1.61	1.58
	9:50		Middle	3.0	20.91	20.90	20.91	8.62	8.62	8.62	33.82	33.83	33.83	62.9	63.2	63.1	4.69	4.71	4.70	1.00	1.03	1.02
	9:52		Bottom	5.0	20.93	20.92	20.93	8.49	8.46	8.48	33.94	33.92	33.93	62.3	62.5	62.4	4.63	4.65	4.64	4.32	4.17	4.25
24/12/2021	10:05	Cloudy	Surface	1.0	20.95	20.96	20.96	8.71	8.72	8.72	32.77	32.75	32.76	71.5	71.0	71.3	5.34	5.30	5.32	1.20	1.23	1.22
	10:07		Middle	3.0	20.99	21.00	21.00	8.64	8.64	8.64	32.95	32.97	32.96	65.5	66.5	66.0	4.88	4.96	4.92	1.37	1.29	1.33
	10:08		Bottom	5.0	21.06	21.06	21.06	8.50	8.50	8.50	33.19	33.22	33.21	55.1	54.6	54.9	4.10	4.06	4.08	1.58	1.66	1.62
27/12/2021	13:15	Cloudy	Surface	1.0	20.12	20.13	20.13	8.89	8.88	8.89	32.74	32.75	32.75	82.4	82.8	82.6	6.24	6.27	6.26	1.59	1.65	1.62
	13:17		Middle	3.0	20.37	20.38	20.38	8.85	8.85	8.85	32.88	32.88	32.88	81.8	82.0	81.9	6.17	6.18	6.18	1.57	1.54	1.56
	13:18		Bottom	5.0	20.48	20.46	20.47	8.90	8.98	8.94	33.04	33.03	33.04	83.1	83.5	83.3	6.24	6.27	6.26	1.26	1.22	1.24
29/12/2021	14:42	Fine	Surface	1.0	20.45	20.46	20.46	8.89	8.90	8.90	33.07	33.09	33.08	78.5	77.4	78.0	5.92	5.84	5.88	1.86	1.93	1.90
	14:43		Middle	3.0	20.07	20.06	20.07	8.44	8.42	8.43	33.35	33.37	33.36	83.4	82.7	83.1	6.32	6.27	6.30	1.30	1.36	1.33
	14:45		Bottom	5.0	20.09	20.08	20.09	8.38	8.38	8.38	33.56	33.55	33.56	79.3	79.6	79.5	6.00	3.02	4.51	1.28/	1.22	1.22



**Water Monitoring Result at CR1 - Corals at Tai Po Industrial Estate
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO			Turbidity		
			m		°C			-			ppt			%			mg/L			NTU		
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	10:48	Fine	Surface	1.0	23.80	23.97	23.89	8.23	8.24	8.24	29.59	28.63	29.11	71.0	72.0	71.5	5.08	5.14	5.11	1.52	1.33	1.43
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10:50		Bottom	4.0	24.04	24.06	24.05	8.14	8.14	8.14	28.92	28.90	28.91	69.7	69.2	69.5	4.97	4.95	4.96	1.26	1.20	1.23
1/12/2021	9:34	Fine	Surface	1.0	23.25	23.29	23.27	8.88	8.88	8.88	29.69	29.70	29.70	64.0	64.1	64.1	4.60	4.61	4.61	1.95	1.88	1.92
	9:36		Middle	3.0	23.24	23.23	23.24	8.87	8.88	8.88	29.81	29.82	29.82	63.7	63.6	63.7	4.58	4.57	4.58	0.63	0.62	0.63
	9:38		Bottom	5.0	23.46	24.44	23.95	8.79	8.78	8.79	30.07	30.07	30.07	53.8	52.7	53.3	3.81	3.76	3.79	2.60	2.49	2.55
2/12/2021	10:05	Fine	Surface	1.0	23.01	23.05	23.03	8.78	8.76	8.77	30.13	30.15	30.14	55.8	55.2	55.5	4.02	3.99	4.01	4.17	4.34	4.26
	10:07		Middle	3.0	27.28	23.28	23.28	7.75	8.75	8.25	30.27	30.29	30.28	46.3	45.6	46.0	3.32	3.26	3.29	6.68	6.23	6.46
	10:10		Bottom	5.0	23.24	23.24	23.24	8.76	8.72	8.74	30.37	30.39	30.38	43.0	45.8	44.4	3.08	3.28	3.18	6.37	6.30	6.34
3/12/2021	10:03	Fine	Surface	1.0	22.25	22.27	22.26	8.72	8.76	8.74	30.18	30.42	30.30	62.5	63.3	62.9	4.56	4.61	4.59	2.53	2.39	2.46
	10:05		Middle	3.0	22.33	22.35	22.34	8.66	8.68	8.67	30.53	30.52	30.53	61.1	61.3	61.2	4.45	4.46	4.46	1.58	1.70	1.64
	10:07		Bottom	5.0	22.75	22.79	22.77	8.56	8.59	8.58	30.82	30.83	30.83	57.8	56.5	57.2	4.07	4.07	4.07	4.79	5.03	4.91
6/12/2021	12:55	Fine	Surface	1.0	22.23	22.21	22.22	8.61	8.58	8.60	30.22	30.18	30.20	101.1	102.8	102.0	7.39	7.52	7.46	2.25	2.30	2.28
	12:57		Middle	3.0	22.03	22.02	22.03	8.52	8.50	8.51	30.45	30.48	30.47	99.1	99.5	99.3	7.25	7.29	7.27	2.12	2.09	2.11
	13:00		Bottom	5.0	21.80	21.97	21.89	8.46	8.47	8.47	30.56	30.55	30.56	105.2	105.7	105.5	7.70	7.74	7.72	1.92	1.94	1.93
8/12/2021	14:09	Fine	Surface	1.0	21.58	21.58	21.58	8.81	8.81	8.81	33.13	33.15	33.14	110.0	108.5	109.3	7.99	7.88	7.94	2.52	2.56	2.54
	14:11		Middle	3.0	21.09	21.09	21.09	8.78	8.75	8.77	33.12	33.10	33.11	92.4	93.3	92.9	6.77	6.84	6.81	2.84	2.78	2.81
	14:13		Bottom	5.0	21.05	21.06	21.06	8.75	8.75	8.75	33.15	33.11	33.13	79.4	80.2	79.8	5.83	5.88	5.86	4.05	4.01	4.03
10/12/2021	17:39	Fine	Surface	1.0	22.14	22.14	22.14	8.66	8.67	8.67	32.98	32.98	32.98	121.4	122.6	122.0	8.74	8.83	8.79	2.64	2.59	2.62
	17:40		Middle	3.0	21.91	21.92	21.92	8.70	8.70	8.70	33.06	33.06	33.06	109.1	108.5	108.8	7.89	7.85	7.87	1.46	1.51	1.49
	17:42		Bottom	5.0	21.18	21.20	21.19	8.65	8.65	8.65	33.21	33.27	33.24	72.8	71.4	72.1	5.32	5.22	5.27	1.39	1.38	1.39
13/12/2021	9:12	Fine	Surface	1.0	21.96	21.95	21.96	8.70	8.71	8.71	32.40	32.42	32.41	85.1	84.6	84.9	6.26	6.22	6.24	2.06	1.99	2.03
	9:14		Middle	3.0	22.16	22.16	22.16	8.68	8.68	8.68	32.94	32.95	32.95	93.7	94.0	93.9	6.86	6.87	6.87	1.11	1.14	1.13
	9:16		Bottom	5.0	21.86	21.86	21.86	8.74	8.73	8.74	33.29	33.29	33.29	51.8	541.0	296.4	3.80	3.74	3.77	3.19	3.12	3.16
15/12/2021	10:15	Cloudy	Surface	1.0	22.43	22.40	22.42	8.32	8.34	8.33	33.21	33.25	33.23	89.8	88.9	89.4	6.54	6.47	6.51	0.90	0.87	0.89
	10:17		Middle	3.0	22.31	22.33	22.32	8.28	8.27	8.28	33.37	33.36	33.37	86.3	85.2	85.8	6.29	6.21	6.25	0.84	0.82	0.83
	10:20		Bottom	5.0	22.04	22.20	22.12	8.64	8.64	8.64	33.72	33.73	33.73	47.2	47.6	47.4	3.45	3.48	3.47	1.02	1.16	1.09
17/12/2021	10:33	Cloudy	Surface	1.0	22.50	22.48	22.49	8.61	8.64	8.63	33.40	33.42	33.41	95.7	93.9	94.8	6.95	6.81	6.88	0.89	0.94	0.92
	10:35		Middle	3.0	22.23	22.22	22.23	8.44	8.45	8.45	33.65	33.63	33.64	88.0	88.7	88.4	6.41	6.47	6.44	0.77	0.71	0.74
	10:37		Bottom	5.0	21.96	21.95	21.96	8.38	8.39	8.39	33.95	33.90	33.92	52.4	51.5	52.0	3.83	3.76	3.80	0.64	0.69	0.67
20/12/2021	12:48	Cloudy	Surface	1.0	21.28	21.28	21.28	8.46	8.52	8.49	33.25	33.22	33.24	75.3	73.7	74.5	5.59	5.43	5.51	2.25	2.32	2.29
	12:50		Middle	3.0	21.25	21.26	21.26	8.33	8.36	8.35	33.34	33.37	33.36	77.9	79.2	78.6	5.78	5.88	5.83	1.89	1.82	1.86
	12:51		Bottom	5.0	21.35	21.36	21.36	8.27	8.30	8.29	33.50	33.53	33.52	67.5	66.6	67.1	5.00	4.94	4.97	2.99	3.06	3.03
22/12/2021	13:10	Cloudy	Surface	1.0	21.04	21.04	21.04	8.60	8.58	8.59	33.19	33.20	33.20	79.4	78.3	78.9	5.91	5.83	5.87	1.38	1.27	1.33
	13:11		Middle	3.0	20.98	20.98	20.98	8.43	8.42	8.43	33.36	33.35	33.36	77.8	788.6	433.2	5.78	5.84	5.81	0.94	1.03	0.99
	13:13		Bottom	5.0	21.01	21.02	21.02	8.48	8.47	8.48	33.49	33.51	33.50	76.8	75.8	76.3	5.70	5.32	5.51	1.84	1.76	1.80
27/12/2021	17:33	Cloudy	Surface	1.0	20.23	20.22	20.23	8.30	8.30	8.30	33.18	33.19	33.19	67.8	67.0	67.4	5.12	5.06	5.09	1.81	1.72	1.77
	17:35		Middle	3.0	20.40	20.42	20.41	8.24	8.25	8.25	33.46	33.45	33.46	65.2	64.0	64.6	4.90	4.81	4.86	1.38	1.44	1.41
	17:36		Bottom	5.0	20.49	20.47	20.48	8.21	8.19	8.20	33.69	33.72	33.71	60.6	60.9	60.8	4.54	4.57	4.56	1.61	1.67	1.64
29/12/2021	9:02	Fine	Surface	1.0	19.70	19.71	19.71	7.87	7.88	7.88	32.87	32.88	32.88	61.9	64.4	63.2	4.94	4.90	4.92	2.35	2.26	2.31
	9:04		Middle	3.0	19.89	19.89	19.89	7.63	7.65	7.64	33.25	33.27	33.26	64.1	64.5	64.3	4.86	4.89	4.88	1.65	1.70	1.68
	9:05		Bottom	5.0	19.97	19.98	19.98	7.55	7.54	7.55	33.62	33.60	33.61	63.1	62.6	62.9	4.78	4.74	4.76	1.44	1.38	1.41
31/12/2021	10:08	Cloudy	Surface	1.0	19.92	19.92	19.92	8.44	8.46	8.45	33.12	33.15	33.14	93.4	93.9	93.7	7.09	7.13	7.11	1.53	1.46	1.50
	10:10		Middle	3.0	19.95	19.95	19.95	8.20	8.18	8.19	33.37	33.37	33.37	81.4	80.9	81.2	6.16	6.13	6.15	1.14	1.21	1.18
	10:11		Bottom	5.0	20.08	20.09	20.09	7.99	7.95	7.97	33.69	33.71	33.70	61.6	63.0	62.3	4.64	4.75	4.70	0.78	0.72	0.75



**Water Monitoring Result at CR15 - Corals at Science Park
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average		
30/11/2021	10:10	Fine	Surface	1.0	23.76	23.79	23.78	8.21	8.21	8.21	29.41	29.41	29.41	71.5	71.6	71.6	5.10	5.11	5.11	1.57	1.37	1.47
	10:12		Middle	3.0	23.80	23.81	23.81	8.23	8.23	8.23	29.51	29.55	29.53	73.4	72.9	73.2	5.24	5.20	5.22	1.12	0.90	1.01
	10:14		Bottom	5.0	23.81	23.81	23.81	8.22	8.20	8.21	29.65	29.68	29.67	71.9	71.4	71.7	5.12	5.10	5.11	1.27	1.06	1.17
1/12/2021	9:09	Fine	Surface	1.0	22.87	22.86	22.87	8.90	8.89	8.90	29.76	29.82	29.79	62.7	64.0	63.4	4.54	4.63	4.59	2.53	2.48	2.51
	9:11		Middle	3.5	22.90	22.91	22.91	8.90	8.84	8.87	29.88	29.93	29.91	64.4	64.9	64.7	4.65	4.69	4.67	1.05	1.02	1.04
	9:14		Bottom	6.0	23.45	23.37	23.41	8.70	8.78	8.74	30.46	30.15	30.31	43.9	44.4	44.2	3.13	3.15	3.14	3.14	2.92	3.03
2/12/2021	9:30	Fine	Surface	1.0	22.56	22.53	22.55	8.91	8.94	8.93	30.14	30.23	30.19	65.0	64.2	64.6	4.72	4.67	4.70	1.52	1.47	1.50
	9:32		Middle	3.5	22.49	22.48	22.49	8.95	8.90	8.93	30.30	30.36	30.33	68.1	66.8	67.5	4.95	4.85	4.90	1.76	1.89	1.83
	9:35		Bottom	6.0	22.47	22.48	22.48	8.98	8.92	8.95	30.39	30.41	30.40	68.3	67.7	68.0	4.97	4.92	4.95	1.14	0.96	1.05
3/12/2021	9:44	Fine	Surface	1.0	22.01	22.05	22.03	8.86	8.82	8.84	29.42	29.44	29.43	88.7	87.0	87.9	6.52	6.54	6.53	1.06	1.19	1.13
	9:46		Middle	3.5	22.10	22.09	22.10	8.78	8.71	8.75	29.57	29.59	29.58	82.1	81.9	82.0	6.04	6.02	6.03	0.89	1.12	1.01
	9:49		Bottom	6.0	22.18	22.20	22.19	8.82	8.85	8.84	29.89	29.92	29.91	77.9	77.1	77.5	5.71	5.65	5.68	1.55	1.74	1.65
6/12/2021	14:20	Fine	Surface	1.0	21.78	21.78	21.78	8.54	8.55	8.55	30.03	30.08	30.06	96.7	96.2	96.5	7.15	7.12	7.14	1.71	1.67	1.69
	14:22		Middle	3.5	21.86	21.85	21.86	8.29	8.32	8.31	30.47	30.50	30.49	83.2	82.4	82.8	6.13	6.06	6.10	2.33	2.25	2.29
	14:25		Bottom	6.0	21.88	21.88	21.88	8.25	8.23	8.24	30.94	31.00	30.97	69.5	69.2	69.4	5.10	5.08	5.09	4.08	4.04	4.06
8/12/2021	15:21	Fine	Surface	1.0	21.82	21.84	21.83	8.77	8.77	8.77	33.11	33.14	33.13	102.1	101.5	101.8	7.40	7.37	7.39	1.21	1.26	1.24
	15:23		Middle	3.5	21.40	21.43	21.42	8.78	8.78	8.78	33.12	33.14	33.13	99.3	98.5	98.9	7.24	7.19	7.22	0.94	0.85	0.90
	15:25		Bottom	6.0	21.04	21.04	21.04	8.75	8.75	8.75	33.19	33.23	33.21	72.6	72.1	72.4	5.33	5.30	5.32	1.66	1.70	1.68
10/12/2021	17:58	Fine	Surface	1.0	21.84	21.84	21.84	8.69	8.70	8.70	32.88	32.88	32.88	122.4	121.2	121.8	8.87	8.78	8.83	1.42	1.39	1.41
	18:00		Middle	3.0	21.19	21.17	21.18	8.71	8.71	8.71	33.38	31.38	32.38	78.0	77.4	77.7	5.71	5.68	5.70	1.63	1.74	1.69
	18:01		Bottom	5.0	21.08	21.09	21.09	8.63	8.63	8.63	33.59	33.58	33.59	53.4	53.1	53.3	3.97	3.88	3.93	0.86	0.92	0.89
13/12/2021	8:45	Fine	Surface	1.0	21.70	21.71	21.71	8.68	8.69	8.69	33.12	33.13	33.13	86.8	87.3	87.1	6.39	6.42	6.41	0.44	0.41	0.43
	8:47		Middle	3.0	21.76	21.77	21.77	8.64	8.65	8.65	33.39	33.41	33.40	85.2	85.7	85.5	6.26	6.29	6.28	0.49	0.45	0.47
	8:50		Bottom	5.0	21.81	21.80	21.81	8.43	8.42	8.43	33.86	33.85	33.86	48.6	47.3	48.0	3.56	3.46	3.51	1.53	1.58	1.56
15/12/2021	10:04	Cloudy	Surface	1.0	22.14	22.14	22.14	8.48	8.49	8.49	33.26	33.23	33.25	92.0	93.2	92.6	6.72	6.80	6.76	1.00	0.94	0.97
	10:06		Middle	3.0	22.08	22.09	22.09	8.23	8.22	8.23	33.21	33.22	33.22	94.6	94.0	94.3	6.93	6.89	6.91	0.65	0.71	0.68
	10:08		Bottom	5.0	22.00	22.01	22.01	8.64	8.70	8.67	33.43	33.44	33.44	60.2	58.9	59.6	4.41	4.31	4.36	0.95	0.99	0.97
17/12/2021	10:14	Cloudy	Surface	1.0	22.42	22.45	22.44	8.81	8.83	8.82	33.41	33.14	33.28	79.5	78.4	79.4	5.48	5.70	5.74	1.10	1.06	1.08
	10:16		Middle	3.0	22.43	22.43	22.43	8.58	8.55	8.57	33.38	33.42	33.40	84.6	83.8	84.2	6.15	6.11	6.13	0.66	0.68	0.67
	10:18		Bottom	5.0	22.07	22.05	22.06	8.37	8.40	8.39	33.84	33.81	33.83	54.7	53.8	54.3	3.99	3.93	3.96	0.81	0.86	0.84
20/12/2021	12:32	Cloudy	Surface	1.0	20.97	20.99	20.98	8.84	8.82	8.83	33.16	33.19	33.18	81.5	80.7	81.1	6.07	6.01	6.04	0.66	0.70	0.68
	12:33		Middle	3.5	21.20	21.19	21.20	8.57	8.55	8.56	33.61	33.56	33.59	74.7	74.4	74.6	5.55	6.52	6.04	1.32	1.29	1.31
	12:35		Bottom	6.0	21.59	21.60	21.60	8.42	8.43	8.43	33.98	33.95	33.97	39.9	38.7	39.3	2.93	2.82	2.88	4.82	4.65	4.74
22/12/2021	14:15	Cloudy	Surface	1.0	20.80	20.80	20.80	8.41	8.42	8.42	33.27	33.28	33.28	77.7	77.1	77.4	5.81	5.77	5.79	1.00	1.06	1.03
	14:17		Middle	3.0	20.81	20.80	20.81	8.28	8.30	8.29	33.44	33.45	33.45	71.4	72.1	71.8	5.35	5.40	5.38	1.09	1.04	1.07
	14:19		Bottom	5.0	21.00	21.01	21.01	8.36	8.36	8.36	33.53	33.55	33.54	58.6	59.2	58.9	4.35	4.39	4.37	2.53	2.39	2.46
27/12/2021	18:28	Cloudy	Surface	1.0	19.59	19.58	19.59	8.52	8.53	8.53	33.14	33.15	33.15	78.5	78.3	78.4	6.01	5.99	6.00	1.22	1.16	1.19
	18:30		Middle	3.0	19.72	19.72	19.72	8.44	8.43	8.44	33.40	33.38	33.39	76.3	75.3	75.8	5.82	5.74	5.78	1.01	0.93	0.97
	18:31		Bottom	5.0	19.94	19.94	19.94	8.32	8.31	8.32	33.68	33.67	33.68	69.0	69.7	69.4	5.24	5.29	5.27	0.84	0.89	0.87
29/12/2021	8:47	Fine	Surface	1.0	19.58	19.58	19.58	7.82	7.80	7.81	32.36	32.37	32.37	82.6	83.1	82.9	6.33	6.37	6.35	1.55	1.48	1.52
	8:49		Middle	3.5	19.81	19.82	19.82	7.69	7.69	7.69	32.51	32.54	32.53	77.3	78.0	77.7	5.89	5.94	5.92	2.12	2.25	2.19
	8:51		Bottom	6.0	19.87	19.87	19.87	7.44	7.45	7.45	32.63	32.63	32.63	73.2	72.9	73.1	5.57	5.55	5.56	1.29	1.22	1.26
31/12/2021	9:51	Cloudy	Surface	1.0	19.54	19.54	19.54	8.66	8.68	8.67	32.70	32.72	32.71	89.2	88.5	88.9	6.83	6.77	6.80	1.17	1.22	1.20
	9:53		Middle	3.0	19.64	19.65	19.65	8.56	8.54	8.55	32.94	32.92	32.93	96.7	96.3	96.5	7.37	7.34	7.36	0.82	0.89	0.86
	9:55		Bottom	5.0	19.79	19.80	19.80	8.52	8.52	8.52	33.35	33.37	33.36	90.5	89.8	90.2	6.85	6.80	6.83	0.61	0.61	0.61



Water Monitoring Result at CR16 - Corals at Sha Tin Hoi North
Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation		DO		Turbidity					
					°C			-		ppt			%		mg/L		NTU					
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
30/11/2021	14:43	Fine	Surface	1.0	23.71	23.74	23.73	8.66	8.65	8.66	29.87	29.85	29.86	77.6	77.9	77.8	5.53	5.55	5.54	1.35	1.28	1.32
	14:45		Middle	3.5	23.72	23.72	23.72	8.66	8.65	8.66	29.75	29.79	29.77	79.2	81.3	80.3	5.65	5.80	5.73	0.74	0.88	0.81
	14:47		Bottom	6.0	23.71	23.69	23.70	8.64	8.64	8.64	29.51	29.54	29.53	80.1	80.1	80.1	5.72	5.73	5.73	0.37	0.37	0.37
1/12/2021	14:34	Fine	Surface	1.0	22.68	22.70	22.69	8.89	8.88	8.89	29.11	29.20	29.16	74.4	75.0	74.7	5.40	5.45	5.43	1.97	2.02	2.00
	14:36		Middle	3.5	22.87	22.87	22.87	8.82	8.84	8.83	29.98	29.99	29.99	65.1	66.4	65.8	4.71	4.80	4.76	1.44	1.35	1.40
	14:38		Bottom	6.0	22.84	22.86	22.85	8.84	8.84	8.84	30.16	30.18	30.17	64.0	63.5	63.8	4.62	4.60	4.61	2.40	2.34	2.37
2/12/2021	14:55	Fine	Surface	1.0	22.44	22.45	22.45	8.89	8.91	8.90	29.76	29.66	29.71	96.9	95.2	96.1	7.07	6.94	7.01	1.76	1.80	1.78
	14:57		Middle	3.5	22.44	22.43	22.44	8.85	8.82	8.84	30.20	30.22	30.21	90.1	88.1	89.1	6.56	6.41	6.49	0.49	0.70	0.60
	14:59		Bottom	6.0	22.48	22.50	22.49	8.80	8.82	8.81	30.40	30.45	30.43	79.0	78.3	78.7	5.74	5.68	5.71	1.29	1.20	1.25
3/12/2021	15:10	Fine	Surface	1.0	21.90	21.92	21.91	8.82	8.84	8.83	29.24	29.27	29.26	113.4	114.8	114.1	8.38	8.46	8.42	2.12	2.19	2.16
	15:12		Middle	4.0	22.05	22.06	22.06	8.80	8.78	8.79	29.77	29.70	29.74	107.9	106.7	107.3	7.92	7.84	7.88	1.03	1.07	1.05
	15:15		Bottom	7.0	22.17	22.20	22.19	8.75	8.72	8.74	30.12	30.19	30.16	94.7	93.8	94.3	6.93	6.86	6.90	3.99	3.85	3.92
6/12/2021	8:20	Fine	Surface	1.0	21.33	21.33	21.33	8.82	8.80	8.81	30.56	30.52	30.54	91.1	92.2	91.7	6.79	6.87	6.83	1.69	1.72	1.71
	8:23		Middle	3.0	21.44	21.46	21.45	8.81	8.78	8.80	30.62	30.60	30.61	101.8	101.4	101.6	7.57	7.54	7.56	0.75	0.80	0.78
	8:26		Bottom	5.0	21.64	21.63	21.64	8.74	8.75	8.75	30.81	30.87	30.84	99.7	99.8	99.8	7.38	7.39	7.39	0.28	0.33	0.31
8/12/2021	9:50	Fine	Surface	1.0	20.92	20.90	20.91	8.56	8.55	8.56	33.07	33.10	33.09	85.0	85.6	85.3	6.26	6.30	6.28	0.95	0.90	0.93
	9:52		Middle	3.5	20.73	20.75	20.74	8.64	8.64	8.64	33.25	33.24	33.25	82.7	83.0	82.9	6.09	6.11	6.10	1.04	1.01	1.03
	9:54		Bottom	6.0	21.11	21.06	21.09	8.57	8.56	8.57	33.62	33.62	33.62	63.1	62.2	62.7	4.62	4.55	4.59	0.88	0.90	0.89
10/12/2021	12:21	Fine	Surface	1.0	21.18	21.17	21.18	8.74	8.75	8.75	32.74	32.74	32.74	114.2	113.6	113.9	8.39	8.34	8.37	1.87	1.91	1.89
	12:23		Middle	3.5	20.84	20.82	20.83	8.77	8.77	8.77	32.99	32.99	32.99	105.3	105.8	105.6	7.77	7.80	7.79	1.40	1.33	1.37
	12:25		Bottom	6.0	21.11	21.10	21.11	8.66	8.66	8.66	33.41	33.43	33.42	55.2	54.9	55.1	4.04	4.02	4.03	1.11	1.15	1.13
13/12/2021	14:20	Fine	Surface	1.0	22.35	22.36	22.36	8.65	8.61	8.63	32.26	32.30	32.28	90.3	90.9	90.6	6.58	6.63	6.61	0.45	0.51	0.48
	14:24		Middle	4.0	22.22	22.19	22.21	8.27	8.27	8.27	32.84	32.88	32.86	88.2	88.9	88.6	6.45	6.50	6.48	0.32	0.38	0.35
	14:27		Bottom	7.0	21.80	21.82	21.81	8.19	8.22	8.21	33.24	33.17	33.21	78.9	79.9	79.4	5.80	5.87	5.84	1.85	1.78	1.82
15/12/2021	14:33	Cloudy	Surface	1.0	22.05	22.03	22.04	8.48	8.50	8.49	33.27	33.24	33.26	90.8	91.8	91.3	6.65	6.72	6.69	0.98	0.94	0.96
	14:35		Middle	3.5	22.09	22.08	22.09	8.54	8.57	8.56	33.60	33.61	33.61	69.9	68.5	69.2	5.11	5.01	5.06	0.93	0.95	0.94
	14:37		Bottom	6.0	21.98	21.96	21.97	8.60	8.62	8.61	33.81	33.84	33.83	48.9	49.6	49.3	3.57	3.62	3.60	0.78	0.71	0.75
17/12/2021	14:55	Cloudy	Surface	1.0	22.48	22.49	22.49	8.74	8.69	8.72	32.70	32.74	32.72	102.4	102.1	102.3	7.46	7.41	7.44	0.44	0.41	0.43
	14:58		Middle	3.5	22.46	22.44	22.45	8.85	8.83	8.84	32.88	32.86	32.87	108.8	106.5	107.7	7.92	7.76	7.84	0.56	0.62	0.59
	15:00		Bottom	6.0	22.36	22.32	22.34	8.77	8.76	8.77	33.42	33.38	33.40	51.4	52.0	51.7	3.75	3.80	3.78	0.23	0.29	0.26
20/12/2021	16:56	Cloudy	Surface	1.0	20.63	20.62	20.63	8.68	8.65	8.67	33.19	33.19	33.19	82.3	82.0	82.2	6.19	6.17	6.18	1.48	1.54	1.51
	16:58		Middle	3.0	20.78	20.79	20.79	8.40	8.42	8.41	33.40	33.43	33.42	82.8	83.7	83.3	6.20	6.22	6.21	1.16	1.07	1.12
	17:00		Bottom	5.0	21.20	21.20	21.20	8.29	8.27	8.28	33.88	33.85	33.87	70.3	70.7	70.5	5.21	5.24	5.23	1.36	1.32	1.34
22/12/2021	9:10	Cloudy	Surface	1.0	20.03	20.34	20.19	8.69	8.66	8.68	33.42	33.43	33.43	76.4	76.7	76.6	5.76	5.77	5.77	1.92	1.84	1.88
	9:13		Middle	3.5	20.37	20.38	20.38	8.55	8.55	8.55	33.64	33.65	33.65	72.1	73.0	72.6	5.44	5.50	5.47	1.26	1.31	1.29
	9:15		Bottom	6.0	20.49	20.48	20.49	8.52	8.50	8.51	33.89	33.86	33.88	70.8	69.9	70.4	5.32	5.25	5.29	1.07	1.11	1.09
24/12/2021	9:30	Cloudy	Surface	1.0	21.11	21.11	21.11	8.60	8.59	8.60	32.84	32.81	32.83	72.4	71.5	72.0	5.37	5.32	5.34	0.78	0.71	0.75
	9:32		Middle	3.5	21.01	21.00	21.01	8.47	8.47	8.47	33.06	33.08	33.07	69.1	69.8	69.5	5.14	5.19	5.17	0.58	0.63	0.61
	9:33		Bottom	6.0	20.93	20.92	20.93	8.25	8.25	8.25	33.67	33.65	33.66	56.3	55.8	56.1	4.19	4.15	4.17	0.61	0.66	0.64
27/12/2021	12:37	Cloudy	Surface	1.0	19.66	19.68	19.67	8.46	8.44	8.45	33.09	33.09	33.09	72.2	75.7	74.0	5.82	5.77	5.80	1.33	1.24	1.29
	12:39		Middle	3.5	19.68	19.68	19.68	8.15	8.15	8.15	33.12	33.14	33.13	80.2	79.7	80.0	6.12	6.08	6.10	0.95	1.03	0.99
	12:41		Bottom	6.0	19.70	19.71	19.71	7.98	7.95	7.97	33.24	33.21	33.23	75.5	76.7	76.1	5.75	5.84	5.80	0.86	0.78	0.82
29/12/2021	14:06	Fine	Surface	1.0	19.73	19.74	19.74	8.82	8.82	8.82	32.71	32.75	32.73	95.4	96.3	95.9	7.29	7.36	7.33	1.35	1.26	1.30
	14:08		Middle	4.0	19.55	19.54	19.55	8.68	8.65	8.67	32.98	33.01	33.00	84.7	85.5	85.1	6.48	6.55	6.52	0.69	0.77	0.73
	14:10		Bottom	7.0	19.69	19.69	19.69	8.45	8.43	8.44	33.24	33.26	33.25	81.9	82.9	82.4	6.24	6.32	6.28	0.55	0.48	0.52



Water Monitoring Result at CR16 - Corals at Sha Tin Hoi North Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	9:15	Fine	Surface	1.0	23.26	23.30	23.28	8.26	8.26	8.26	28.41	28.55	28.48	74.8	76.1	75.5	5.42	5.50	5.46	1.30	1.29	1.30
	9:18		Middle	3.5	23.44	23.43	23.44	8.24	8.24	8.24	28.98	29.88	29.43	75.1	74.1	74.6	5.41	5.34	5.38	0.92	0.62	0.77
	9:20		Bottom	6.0	23.46	23.46	23.46	8.22	8.21	8.22	29.14	29.14	29.14	71.4	70.1	70.8	5.14	5.04	5.09	0.59	0.50	0.55
1/12/2021	8:42	Fine	Surface	1.0	22.21	22.19	22.20	8.86	8.86	8.86	28.47	28.39	28.43	64.7	65.5	65.1	4.78	4.83	4.81	20.40	2.41	11.41
	8:45		Middle	4.0	22.81	22.85	22.83	8.88	8.89	8.89	29.76	28.79	29.28	66.5	66.6	66.6	4.85	4.85	4.85	2.10	1.91	2.01
	8:47		Bottom	7.0	23.08	23.05	23.07	8.90	8.92	8.91	29.18	29.24	29.21	65.9	65.2	65.6	4.77	4.73	4.75	1.84	2.01	1.93
2/12/2021	9:04	Fine	Surface	1.0	22.25	22.26	22.26	8.90	8.95	8.93	29.60	29.60	29.60	66.5	66.8	66.7	4.87	4.84	4.86	1.43	1.49	1.46
	9:07		Middle	4.0	22.36	22.40	22.38	8.92	8.89	8.91	29.79	29.81	29.80	67.7	66.7	67.2	4.95	4.87	4.91	1.04	1.07	1.06
	9:09		Bottom	7.0	22.50	22.49	22.50	8.95	8.98	8.97	30.03	30.05	30.04	67.1	66.9	67.0	4.89	4.87	4.88	1.80	1.87	1.84
3/12/2021	9:20	Fine	Surface	1.0	21.89	21.90	21.90	8.82	8.85	8.84	29.46	29.42	29.44	80.8	81.6	81.2	5.97	6.02	6.00	3.47	3.69	3.58
	9:23		Middle	4.0	22.02	22.02	22.02	8.86	8.88	8.87	29.75	29.77	29.76	84.0	84.9	84.5	6.17	6.24	6.21	2.31	2.16	2.24
	9:26		Bottom	7.0	22.12	22.14	22.13	8.91	8.89	8.90	30.03	30.07	30.05	81.1	80.1	80.6	5.98	5.87	5.93	1.27	1.45	1.36
6/12/2021	14:48	Fine	Surface	1.0	21.97	21.95	21.96	8.09	88.10	48.10	30.68	30.72	30.70	98.0	97.9	98.0	7.20	7.18	7.19	1.08	1.15	1.12
	14:51		Middle	0.4	21.96	21.96	21.96	8.14	8.13	8.14	30.95	30.97	30.96	105.2	106.5	105.9	7.71	7.81	7.76	0.70	0.76	0.73
	14:54		Bottom	6.0	21.92	21.94	21.93	7.92	7.95	7.94	31.32	31.33	31.33	79.9	78.2	79.1	5.84	5.72	5.78	2.03	1.96	2.00
8/12/2021	15:41	Fine	Surface	1.0	21.56	21.58	21.57	8.78	8.79	8.79	33.05	33.06	33.05	100.4	100.8	100.6	7.31	7.34	7.33	1.40	1.32	1.36
	15:42		Middle	3.5	20.80	20.79	20.80	8.80	8.80	8.80	33.13	33.15	33.14	97.9	98.1	98.0	7.22	7.24	7.23	0.65	0.56	0.61
	15:44		Bottom	6.0	20.76	20.76	20.76	8.78	8.78	8.78	33.28	33.29	33.29	86.9	87.2	87.1	6.38	6.41	6.40	1.84	1.92	1.88
10/12/2021	18:25	Fine	Surface	1.0	21.62	21.62	21.62	8.75	8.76	8.76	32.72	32.70	32.71	116.2	115.8	116.0	8.47	8.45	8.46	1.11	10.60	5.86
	18:27		Middle	3.5	21.04	21.05	21.05	8.76	8.75	8.76	33.08	33.08	33.08	96.7	97.7	97.2	7.11	7.18	7.15	0.65	0.71	0.68
	18:29		Bottom	6.0	21.14	21.12	21.13	8.68	8.67	8.68	33.53	33.52	33.53	66.4	65.2	65.8	4.86	4.77	4.82	0.97	1.02	1.00
13/12/2021	8:08	Fine	Surface	1.0	21.63	21.63	21.63	8.56	8.55	8.56	32.62	32.64	32.63	86.1	86.5	86.3	6.35	6.40	6.38	0.54	0.52	0.53
	8:10		Middle	3.5	21.80	21.81	21.81	8.52	88.52	48.52	33.01	33.02	33.02	95.0	94.5	94.8	6.99	6.95	6.97	0.18	0.22	0.20
	8:12		Bottom	6.0	21.69	21.68	21.69	8.44	8.43	8.44	33.33	33.34	33.34	81.8	80.1	81.0	6.02	5.89	5.96	1.34	1.40	1.37
15/12/2021	9:38	Cloudy	Surface	1.0	22.18	22.20	22.19	8.34	8.39	8.37	32.85	32.80	32.83	86.0	86.6	86.3	6.28	6.32	6.30	1.03	1.06	1.05
	9:40		Middle	3.0	22.11	22.11	22.11	8.47	8.44	8.46	33.06	33.09	33.08	80.5	81.1	80.8	5.87	5.92	5.90	0.79	0.73	0.76
	9:43		Bottom	5.0	22.04	22.03	22.04	8.78	8.81	8.80	33.48	33.52	33.50	67.2	66.6	66.9	4.91	4.87	4.89	1.11	1.06	1.09
17/12/2021	9:58	Cloudy	Surface	1.0	22.29	22.27	22.28	8.87	8.85	8.86	32.43	32.46	32.45	100.3	101.6	101.0	7.35	7.45	7.40	0.72	0.68	0.70
	10:00		Middle	3.6	22.25	22.25	22.25	8.42	8.40	8.41	33.05	33.09	33.07	104.4	105.1	104.8	7.63	7.68	7.66	0.42	0.39	0.41
	10:02		Bottom	6.0	21.93	21.90	21.92	8.29	8.32	8.31	33.44	33.46	33.45	73.1	73.4	73.3	5.36	5.38	5.37	0.50	0.46	0.48
20/12/2021	12:07	Cloudy	Surface	1.0	20.54	20.53	20.54	8.71	8.74	8.73	32.82	32.78	32.80	85.0	85.5	85.3	6.40	6.45	6.43	0.74	0.69	0.72
	12:09		Middle	3.5	21.09	21.11	21.10	8.52	8.55	8.54	33.25	32.22	32.74	81.3	81.9	81.6	6.05	6.10	6.08	0.38	0.42	0.40
	12:11		Bottom	6.0	21.20	21.19	21.20	8.50	8.48	8.49	33.61	33.64	33.63	71.0	70.2	70.6	5.27	5.21	5.24	0.76	0.81	0.79
22/12/2021	14:38	Cloudy	Surface	1.0	20.62	20.62	20.62	8.49	8.47	8.48	33.26	33.25	33.26	76.5	77.0	76.8	5.75	5.78	5.77	2.00	1.94	1.97
	14:40		Middle	3.5	20.53	20.54	20.54	8.36	8.36	8.36	33.52	33.52	33.52	75.4	74.0	74.7	5.67	5.56	5.62	1.00	1.07	1.04
	14:42		Bottom	6.0	20.59	20.60	20.60	8.35	8.34	8.35	33.84	33.86	33.85	68.1	68.9	68.5	5.10	5.16	5.13	0.85	0.79	0.82
27/12/2021	18:45	Cloudy	Surface	1.0	19.64	19.65	19.65	8.38	8.38	8.38	33.33	33.34	33.34	78.1	77.5	77.8	5.97	5.92	5.95	4.47	4.72	4.60
	18:47		Middle	3.0	19.66	19.66	19.66	8.33	8.35	8.34	33.48	33.52	33.50	78.9	79.5	79.2	6.03	6.08	6.06	3.34	3.15	3.25
	18:49		Bottom	5.0	19.69	19.67	19.68	8.32	8.31	8.32	33.63	33.63	33.63	77.3	77.1	77.2	5.91	5.89	5.90	2.48	2.56	2.52
29/12/2021	8:11	Fine	Surface	1.0	19.37	19.37	19.37	8.08	8.06	8.07	32.72	32.73	32.73	77.5	78.4	78.0	5.94	6.02	5.98	1.25	1.15	1.20
	8:13		Middle	3.5	19.47	19.47	19.47	7.84	7.84	7.84	32.90	32.91	32.91	82.2	82.0	82.1	6.29	6.27	6.28	0.83	0.75	0.79
	8:15		Bottom	6.0	19.61	19.62	19.62	7.65	7.68	7.67	31.11	31.07	31.09	85.9	87.1	86.5	6.50	6.64	6.57	0.93	0.87	0.90
31/12/2021	9:20	Cloudy	Surface	1.0	19.46	19.46	19.46	8.33	8.34	8.34	32.61	32.60	32.61	85.4	84.3	84.9	6.55	6.46	6.51	0.97	0.92	0.95
	9:22		Middle	3.5	19.67	19.66	19.67	8.28	8.28	8.28	32.94	32.93	32.94	85.8	84.7	85.3	6.52	6.44	6.48	0.82	0.85	0.84
	9:23		Bottom	6.0	19.78	19.78	19.78	8.25	8.23	8.24	33.12	33.15	33.14	82.2	81.3	81.8	6.23	6.16	6.20	0.60	0.66	0.63



Water Monitoring Result at CR17 - Corals at Sha Tin Hoi South Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation		DO		Turbidity					
					°C			-		ppt			%		mg/L		NTU					
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
30/11/2021	14:28	Fine	Surface	1.0	23.77	23.77	23.77	8.53	8.50	8.52	28.85	28.87	28.86	78.5	78.0	78.3	5.63	5.59	5.61	1.22	1.27	1.25
	14:30		Middle	3.0	23.59	23.18	23.39	8.54	8.54	8.54	29.14	29.13	29.14	75.3	73.7	74.5	5.40	5.29	5.35	1.25	1.37	1.31
	14:32		Bottom	5.0	23.58	23.59	23.59	8.57	8.59	8.58	29.33	29.35	29.34	73.8	73.0	73.4	5.29	5.23	5.26	0.98	0.90	0.94
1/12/2021	14:20	Fine	Surface	1.0	22.73	22.77	22.75	8.84	8.84	8.84	28.24	28.23	28.24	78.0	78.7	78.4	5.71	5.76	5.74	2.99	2.87	2.93
	14:22		Middle	3.0	23.08	23.05	23.07	8.76	8.77	8.77	29.13	29.06	29.10	65.1	65.0	65.1	4.72	4.71	4.72	2.74	2.50	2.62
	14:25		Bottom	5.0	23.17	23.55	23.36	8.80	8.78	8.79	29.70	29.67	29.69	63.5	62.7	63.1	4.57	4.51	4.54	4.05	3.11	3.58
2/12/2021	14:42	Fine	Surface	1.0	22.26	22.27	22.27	8.82	8.86	8.84	28.60	28.63	28.62	98.4	99.6	99.0	7.25	7.33	7.29	2.68	2.71	2.70
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:44		Bottom	4.0	22.58	22.60	22.59	8.66	8.70	8.68	29.77	29.83	29.80	95.8	95.7	95.8	6.97	6.96	6.97	2.60	2.66	2.63
3/12/2021	14:53	Fine	Surface	1.0	21.96	21.98	21.97	8.89	8.92	8.91	29.63	29.65	29.64	122.3	122.0	122.2	9.01	8.99	9.00	1.01	1.08	1.05
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:55		Bottom	4.0	22.04	22.02	22.03	8.83	8.80	8.82	29.90	29.95	29.93	128.4	123.2	125.8	9.13	9.02	9.08	1.05	1.10	1.08
6/12/2021	8:05	Fine	Surface	1.0	21.38	21.37	21.38	8.70	8.65	8.68	30.35	30.39	30.37	80.1	79.2	79.7	5.97	5.93	5.95	0.80	0.84	0.82
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:08		Bottom	4.0	21.64	21.66	21.65	8.62	8.60	8.61	30.76	30.72	30.74	69.6	68.3	69.0	5.15	5.05	5.10	1.96	1.89	1.93
8/12/2021	9:40	Fine	Surface	1.0	20.71	20.70	20.71	8.54	8.55	8.55	32.72	32.77	32.75	93.9	92.9	93.4	6.94	6.88	6.91	1.01	1.06	1.04
	9:42		Middle	3.0	20.98	21.00	20.99	8.54	8.54	8.54	33.26	33.27	33.27	71.8	72.1	72.0	5.26	5.28	5.27	0.87	0.91	0.89
	9:44		Bottom	5.0	21.08	21.05	21.07	8.52	8.52	8.52	33.44	33.44	33.44	68.7	69.2	69.0	5.03	5.06	5.05	1.33	1.30	1.32
10/12/2021	12:08	Fine	Surface	1.0	21.07	21.07	21.07	8.70	8.70	8.70	32.66	32.66	32.66	105.9	106.6	106.3	7.78	7.83	7.81	1.22	1.25	1.24
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:10		Bottom	4.0	21.01	21.02	21.02	8.71	8.71	8.71	33.18	33.18	33.18	97.1	96.6	96.9	7.13	7.09	7.11	2.44	2.36	2.40
13/12/2021	15:49	Fine	Surface	1.0	22.04	22.07	22.06	8.57	8.52	8.55	32.18	32.21	32.20	91.0	90.9	91.0	6.66	6.65	6.66	0.80	0.87	0.84
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:51		Bottom	4.0	21.96	21.94	21.95	8.40	8.36	8.38	32.44	33.47	32.96	96.9	95.7	96.3	7.10	7.01	7.06	3.03	2.95	2.99
15/12/2021	14:24	Cloudy	Surface	1.0	21.98	21.99	21.99	8.35	8.38	8.37	32.96	32.93	32.95	87.4	86.8	87.1	6.42	6.38	6.40	0.84	0.90	0.87
	14:26		Middle	3.0	22.02	21.04	21.53	8.30	8.29	8.29	33.14	33.15	33.15	85.1	84.4	84.8	6.23	6.19	6.21	1.22	1.14	1.18
	14:28		Bottom	5.0	22.06	22.06	22.06	8.35	8.32	8.34	33.42	33.47	33.45	62.5	61.3	61.9	4.57	4.48	4.53	2.24	2.14	2.19
17/12/2021	14:45	Cloudy	Surface	1.0	22.44	22.45	22.45	8.88	8.85	8.87	32.48	32.50	32.49	92.4	92.8	92.6	6.75	6.78	6.77	1.07	1.13	1.10
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:47		Bottom	4.0	22.36	22.36	22.36	8.79	8.76	8.78	32.84	32.87	32.86	91.2	90.6	90.9	6.66	6.62	6.64	1.02	0.96	0.99
20/12/2021	17:10	Cloudy	Surface	1.0	20.61	20.61	20.61	8.86	8.84	8.85	33.09	33.12	33.11	80.8	81.4	81.1	6.08	6.12	6.10	0.82	0.88	0.85
	17:12		Middle	3.0	20.77	20.79	20.78	8.50	8.57	8.54	33.37	33.35	33.36	83.4	82.7	83.1	6.25	6.19	6.22	1.11	1.04	1.08
	17:13		Bottom	5.0	20.81	20.80	20.81	8.35	8.37	8.36	33.47	33.48	33.48	79.8	79.1	79.5	5.97	5.92	5.95	0.78	0.85	0.82
22/12/2021	8:54	Cloudy	Surface	1.0	20.50	20.52	20.51	8.38	84.00	46.19	33.54	33.57	33.56	70.6	71.1	70.9	5.35	5.37	5.36	1.36	1.43	1.40
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:56		Bottom	4.0	20.55	20.56	20.56	8.51	8.50	8.51	33.63	33.62	33.63	70.3	69.1	69.7	5.28	5.18	5.23	1.88	1.97	1.93
24/12/2021	9:21	Cloudy	Surface	1.0	20.93	20.93	20.93	8.52	8.54	8.53	32.91	32.94	32.93	81.9	81.3	81.6	6.10	6.06	6.08	0.84	0.79	0.82
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:23		Bottom	4.0	20.96	20.96	20.96	8.33	8.31	8.32	33.47	33.45	33.46	84.9	85.2	85.1	6.32	6.34	6.33	0.69	0.64	0.67
27/12/2021	12:24	Cloudy	Surface	1.0	19.16	16.16	17.66	8.22	8.20	8.21	32.48	32.45	32.47	81.5	81.8	81.7	6.32	6.34	6.33	1.90	1.79	1.85
	12:26		Middle	3.0	19.38	19.39	19.39	8.03	8.01	8.02	32.34	32.33	32.34	86.6	87.4	87.0	6.67	6.73	6.70	1.81	1.74	1.78
	12:27		Bottom	5.0	19.47	19.48	19.48	7.86	7.85	7.86	32.17	32.17	32.17	86.4	85.5	86.0	6.64	6.57	6.61	1.69	1.77	1.73
29/12/2021	13:55	Fine	Surface	1.0	19.89	19.87	19.88	8.72	8.72	8.72	32.84	32.85	32.85	92.5	91.6	92.1	7.05	6.98	7.02	1.10	1.23	1.17
	13:57		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13:58		Bottom	4.0	19.66	19.66	19.66	8.33	8.33	8.33	33.43	33.42	33.43	89.4	88.8	89.1	6.82	6.77	6.80	1.23	1.27	1.25



Water Monitoring Result at CR17 - Corals at Sha Tin Hoi South Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth		Water Temperature			pH		Salinity			DO Saturation			DO		Turbidity				
					°C			-		ppt			%			mg/L		NTU				
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average			
30/11/2021	8:48	Fine	Surface	1.0	23.37	23.40	23.39	8.23	8.22	8.23	28.38	28.19	28.29	75.4	77.5	76.5	5.43	5.61	5.52	0.98	1.06	1.02
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:50		Bottom	4.0	23.40	23.41	23.41	8.24	8.22	8.23	29.16	29.26	29.21	85.8	82.4	84.1	6.17	5.93	6.05	0.51	0.55	0.53
1/12/2021	08:30	Fine	Surface	1.0	22.41	22.40	22.41	8.83	8.80	8.82	28.98	28.97	28.98	68.1	68.4	68.3	5.00	5.02	5.01	1.31	1.34	1.33
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8:32		Bottom	4.5	22.55	22.54	22.55	8.84	8.83	8.84	29.26	29.25	29.26	66.5	66.0	66.3	4.86	4.83	4.85	2.18	2.12	2.15
2/12/2021	8:48	Fine	Surface	1.0	22.18	22.14	22.16	8.88	8.90	8.89	29.83	29.72	29.78	89.8	86.3	88.1	6.58	6.33	6.46	1.52	1.32	1.42
	8:50		Middle	3.0	22.50	22.50	22.50	8.91	8.91	8.91	30.04	30.10	30.07	76.5	75.5	76.0	5.57	5.52	5.55	1.15	1.35	1.25
	8:53		Bottom	5.0	22.38	22.39	22.39	8.94	8.92	8.93	29.98	29.92	29.95	70.0	71.6	70.8	5.11	5.22	5.17	1.25	1.02	1.14
3/12/2021	9:08	Fine	Surface	1.0	21.29	21.25	21.27	8.87	8.89	8.88	28.80	28.95	28.88	96.1	96.3	96.2	7.20	7.21	7.21	1.47	1.39	1.43
	9:10		Middle	3.0	22.07	22.09	22.08	8.95	8.92	8.94	29.82	29.83	29.83	97.8	96.2	97.0	7.18	7.06	7.12	0.79	1.01	0.90
	9:13		Bottom	5.0	22.13	22.15	22.14	8.71	8.77	8.74	30.10	30.12	30.11	90.3	87.9	89.1	6.61	6.43	6.52	2.22	2.17	2.20
6/12/2021	15:04	Fine	Surface	1.0	22.06	22.06	22.06	8.22	8.24	8.23	30.47	30.37	30.42	102.6	103.0	102.8	7.54	7.56	7.55	1.16	1.09	1.13
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15:07		Bottom	4.0	22.05	22.06	22.06	8.58	8.20	8.39	30.69	30.74	30.72	100.5	101.1	100.8	7.37	7.41	7.39	0.69	0.68	0.69
8/12/2021	15:52	Fine	Surface	1.0	21.48	21.46	21.47	8.76	8.76	8.76	32.93	32.95	32.94	98.5	98.0	98.3	7.18	7.13	7.16	2.30	2.22	2.26
	15:54		Middle	3.0	21.33	21.32	21.33	8.78	8.78	8.78	33.04	33.05	33.05	96.9	96.6	96.8	7.09	7.08	7.09	2.31	2.22	2.27
	15:56		Bottom	5.0	21.18	21.20	21.19	8.76	8.74	8.75	33.33	33.35	33.34	78.6	77.8	78.2	5.75	5.69	5.72	2.64	2.58	2.61
10/12/2021	18:41	Fine	Surface	1.0	21.67	21.67	21.67	8.77	8.77	8.77	32.62	32.60	32.61	118.1	117.2	117.7	8.60	8.53	8.57	1.24	1.20	1.22
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:43		Bottom	4.0	21.15	21.13	21.14	8.76	8.77	8.77	33.21	33.21	33.21	83.8	83.2	83.5	6.14	6.10	6.12	1.53	1.48	1.51
13/12/2021	7:55	Fine	Surface	1.0	21.84	21.84	21.84	8.47	8.47	8.47	32.75	32.75	32.75	81.8	81.1	81.5	6.02	5.96	5.99	0.29	0.30	0.30
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7:58		Bottom	4.0	21.95	21.95	21.95	8.52	8.51	8.52	33.19	33.22	33.21	76.9	74.3	75.6	5.64	5.44	5.54	1.66	1.71	1.69
15/12/2021	9:23	Cloudy	Surface	1.0	21.72	21.70	21.71	8.72	8.69	8.71	33.65	32.60	33.13	97.9	98.2	98.1	7.20	7.21	7.21	0.86	0.81	0.84
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:26		Bottom	4.0	22.04	22.05	22.05	8.39	8.42	8.41	32.86	32.89	32.88	76.2	75.5	75.9	5.57	5.52	5.55	0.88	0.94	0.91
17/12/2021	9:50	Cloudy	Surface	1.0	22.26	22.27	22.27	8.79	8.80	8.80	32.62	32.64	32.63	97.6	98.3	98.0	7.15	7.19	7.17	0.47	0.42	0.45
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:52		Bottom	4.0	22.30	22.29	22.30	8.62	88.63	48.63	32.98	33.01	33.00	105.9	106.1	106.0	7.73	7.75	7.74	0.35	0.33	0.34
20/12/2021	12:54	Cloudy	Surface	1.0	20.43	20.45	20.44	8.61	8.63	8.62	32.61	32.64	32.63	81.5	82.3	81.9	6.17	6.22	6.20	1.26	1.30	1.28
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12:56		Bottom	4.0	20.79	20.82	20.81	8.46	8.44	8.45	33.12	33.16	33.14	76.6	75.9	76.3	5.73	5.67	5.70	1.54	1.49	1.52
22/12/2021	14:48	Cloudy	Surface	1.0	20.71	20.71	20.71	8.48	8.48	8.48	33.36	33.38	33.37	66.3	67.0	66.7	4.96	5.01	4.99	0.88	0.83	0.86
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14:50		Bottom	4.0	20.56	20.51	20.54	8.35	8.36	8.36	33.53	33.52	33.53	69.0	68.2	68.6	5.17	5.11	5.14	1.34	1.39	1.37
27/12/2021	18:54	Cloudy	Surface	1.0	19.58	19.58	19.58	8.64	8.66	8.65	33.40	33.42	33.41	84.0	83.3	83.7	6.42	6.36	6.39	2.07	2.15	2.11
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18:55		Bottom	4.0	19.66	19.67	19.67	8.53	8.50	8.52	33.67	33.65	33.66	94.1	93.7	93.9	7.17	7.15	7.16	2.31	2.25	2.28
29/12/2021	7:58	Fine	Surface	1.0	19.38	19.37	19.38	7.90	7.89	7.90	32.34	32.37	32.36	71.9	71.2	71.6	5.51	5.47	5.49	2.24	2.11	2.18
	0:00		Middle	3.0	19.72	19.70	19.71	8.49	8.50	8.50	33.06	33.05	33.06	92.4	92.0	92.2	7.06	7.03	7.05	1.04	1.11	1.08
	8:01		Bottom	5.0	19.50	19.51	19.51	7.63	7.63	7.63	32.74	32.74	32.74	72.4	73.1	72.8	5.54	5.60	5.57	1.35	1.29	1.32
31/12/2021	9:31	Cloudy	Surface	1.0	19.48	19.49	19.49	8.04	8.04	8.04	32.55	32.57	32.56	73.3	72.3	72.8	5.62	5.54	5.58	1.89	1.96	1.93
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9:33		Bottom	4.0	19.79	19.79	19.79	8.38	8.36	8.37	32.84	32.84	32.84	66.6	66.0	66.3	5.05	5.01	5.03	2.02	2.10	2.06



**Water Monitoring Result at G1 - Potential Subzone of Yim Tin Tsai Fish Culture Zone / Gradient Station
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity				
					°C			-			ppt			%		mg/L		NTU				
					Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	
30/11/2021	17:00	Fine	Surface	1.0	23.75	23.76	23.76	8.85	8.85	8.85	28.87	28.96	28.92	72.0	73.0	72.5	5.16	5.23	5.20	1.58	1.39	1.49
	17:03		Middle	4.5	23.82	23.83	23.83	8.84	8.81	8.83	29.27	29.30	29.29	74.8	75.1	75.0	5.34	5.35	5.35	0.68	0.72	0.70
	17:07		Bottom	8.0	23.80	23.82	23.81	8.82	8.82	8.82	29.51	29.60	29.56	72.3	71.8	72.1	5.15	5.12	5.14	0.28	0.34	0.31
1/12/2021	17:05	Fine	Surface	1.0	22.73	22.79	22.76	8.78	8.81	8.80	29.88	29.86	29.87	63.1	63.7	63.4	4.58	4.62	4.60	0.94	0.95	0.95
	17:08		Middle	5.0	22.89	22.96	22.93	8.90	8.88	8.89	30.05	30.06	30.06	65.1	65.9	65.5	4.71	4.76	4.74	0.67	0.55	0.61
	17:12		Bottom	9.0	22.85	22.88	22.87	8.86	8.82	8.84	30.34	30.30	30.32	61.2	60.0	60.6	4.42	4.33	4.38	1.47	1.29	1.38
2/12/2021	17:33	Fine	Surface	1.0	22.66	22.70	22.68	8.80	8.83	8.82	29.52	29.51	29.52	97.6	96.1	96.9	7.10	6.99	7.05	2.41	2.28	2.35
	17:35		Middle	4.5	22.55	22.52	22.54	8.85	8.82	8.84	29.88	29.89	29.89	88.0	85.2	86.6	6.40	6.20	6.30	1.26	1.23	1.25
	17:39		Bottom	8.0	22.57	22.61	22.59	8.81	8.78	8.80	30.32	30.35	30.34	78.1	77.1	77.6	5.66	5.59	5.63	1.31	1.55	1.43
3/12/2021	17:23	Fine	Surface	1.0	21.96	21.99	21.98	8.94	8.92	8.93	30.12	30.18	30.15	93.2	93.9	93.6	6.84	6.87	6.86	1.50	1.42	1.46
	17:25		Middle	5.0	22.18	22.20	22.19	8.86	8.88	8.87	30.17	30.19	30.18	98.3	98.7	98.5	7.19	7.22	7.21	1.00	1.08	1.04
	17:28		Bottom	9.0	22.26	22.28	22.27	8.76	8.76	8.76	30.53	30.60	30.57	87.1	85.6	86.4	6.34	6.23	6.29	1.99	1.84	1.92
6/12/2021	11:05	Fine	Surface	1.0	21.18	21.20	21.19	8.72	8.75	8.74	30.55	30.51	30.53	89.6	90.3	90.0	6.69	6.75	6.72	0.96	0.89	0.93
	11:08		Middle	4.5	21.34	21.34	21.34	8.68	8.69	8.69	30.92	30.93	30.93	83.1	83.6	83.4	6.18	6.22	6.20	0.53	0.58	0.56
	11:12		Bottom	8.0	21.66	21.67	21.67	8.62	8.62	8.62	31.11	31.10	31.11	68.5	67.9	68.2	5.05	5.00	5.03	1.41	1.44	1.43
8/12/2021	12:10	Fine	Surface	1.0	20.83	20.81	20.82	8.70	8.70	8.70	33.14	33.16	33.15	10.2	101.3	55.8	7.51	7.46	7.49	1.34	1.29	1.32
	12:12		Middle	4.5	20.68	20.66	20.67	8.75	8.75	8.75	33.21	33.22	33.22	101.7	101.0	101.4	7.50	7.45	7.48	1.42	1.38	1.40
	12:14		Bottom	8.0	20.56	20.58	20.57	8.74	8.74	8.74	33.29	33.31	33.30	93.4	93.7	93.6	6.90	6.92	6.91	2.08	2.13	2.11
10/12/2021	14:20	Fine	Surface	1.0	21.35	21.36	21.36	8.78	8.78	8.78	33.10	33.09	33.10	115.2	116.2	115.7	8.44	8.51	8.48	1.04	0.98	1.01
	14:23		Middle	4.5	20.92	20.94	20.93	8.82	8.82	8.82	33.34	33.35	33.35	111.6	111.9	111.8	8.20	8.22	8.21	0.84	0.89	0.87
	14:27		Bottom	8.0	20.84	20.84	20.84	8.85	8.85	8.85	33.70	33.71	33.71	83.8	83.0	83.4	6.16	6.08	6.12	1.15	1.09	1.12
13/12/2021	13:15	Fine	Surface	1.0	22.38	22.40	22.39	8.29	8.28	8.29	33.29	33.31	33.30	90.1	90.8	90.5	6.56	6.61	6.59	2.81	2.69	2.75
	13:18		Middle	4.5	21.86	21.87	21.87	8.37	8.36	8.37	33.68	33.68	33.68	77.2	76.6	76.9	5.67	5.62	5.65	1.53	1.56	1.55
	13:21		Bottom	8.0	21.57	21.57	21.57	8.13	8.13	8.13	33.84	33.85	33.85	58.4	57.7	58.1	4.29	4.24	4.27	0.61	0.72	0.67
15/12/2021	16:50	Cloudy	Surface	1.0	22.08	22.00	22.04	8.66	8.70	8.68	33.52	33.55	33.54	94.7	95.5	95.1	6.91	6.97	6.94	0.40	0.44	0.42
	16:54		Middle	5.0	21.86	21.85	21.86	8.42	8.44	8.43	33.70	33.75	33.73	68.6	67.5	68.1	5.02	4.94	4.98	0.09	0.12	0.11
	16:57		Bottom	9.0	21.58	21.56	21.57	8.04	8.07	8.06	33.79	33.80	33.80	56.7	55.1	55.9	4.15	4.06	4.11	0.18	0.22	0.20
17/12/2021	17:48	Cloudy	Surface	1.0	22.29	22.31	22.30	8.68	8.66	8.67	33.30	33.29	33.30	95.3	95.9	95.6	6.94	6.98	6.96	0.53	0.48	0.51
	17:51		Middle	5.0	22.02	22.03	22.03	8.52	8.55	8.54	33.87	33.84	33.86	63.1	63.4	63.3	4.61	4.63	4.62	0.27	0.34	0.31
	17:53		Bottom	9.0	21.56	21.52	21.54	8.40	8.42	8.41	33.57	33.62	33.60	51.5	50.9	51.2	3.78	3.74	3.76	0.74	0.68	0.71
20/12/2021	15:52	Cloudy	Surface	1.0	18.00	18.00	18.00	8.49	8.49	8.49	33.94	33.94	33.94	85.6	87.0	86.3	6.62	6.73	6.68	3.00	3.02	3.01
	15:54		Middle	12.5	18.00	18.00	18.00	8.49	8.49	8.49	33.94	33.94	33.94	86.7	84.0	85.4	6.79	6.50	6.65	3.13	3.16	3.15
	15:56		Bottom	24.0	17.90	17.90	17.90	8.49	8.49	8.49	33.95	33.95	33.95	88.7	88.0	88.4	6.87	6.80	6.84	3.06	3.28	3.17
22/12/2021	11:18	Cloudy	Surface	1.0	20.75	20.74	20.75	8.67	8.68	8.68	33.54	33.57	33.56	65.7	64.6	65.2	4.91	4.82	4.87	1.66	1.74	1.70
	11:20		Middle	4.5	20.58	20.55	20.57	8.40	8.42	8.41	33.50	33.48	33.49	64.5	65.5	65.0	4.83	4.90	4.87	0.95	0.89	0.92
	11:22		Bottom	8.0	20.69	20.70	20.70	8.42	8.43	8.43	33.77	33.76	33.77	67.5	67.8	67.7	5.02	5.05	5.04	2.41	2.34	2.38
24/12/2021	11:25	Cloudy	Surface	1.0	20.72	20.73	20.73	8.84	8.83	8.84	33.12	33.15	33.14	788.5	78.7	433.6	5.87	5.88	5.88	1.18	1.09	1.14
	11:28		Middle	4.5	20.77	20.77	20.77	8.56	8.58	8.57	33.60	33.63	33.62	74.1	72.9	73.5	5.53	5.44	5.49	0.70	0.63	0.67
	11:30		Bottom	8.0	20.77	20.78	20.78	8.36	8.35	8.36	33.89	33.87	33.88	55.5	56.3	55.9	4.13	4.19	4.16	2.02	1.89	1.96
27/12/2021	14:21	Cloudy	Surface	1.0	19.76	19.76	19.76	8.48	8.46	8.47	33.25	33.26	33.26	76.4	77.0	76.7	5.80	5.84	5.82	1.71	1.65	1.68
	14:23		Middle	5.0	19.88	19.87	19.88	8.35	8.36	8.36	33.31	33.30	33.31	75.1	76.1	75.6	5.70	5.77	5.74	0.97	1.04	1.01
	14:25		Bottom	9.0	20.38	20.36	20.37	8.29	8.30	8.30	33.70	33.72	33.71	44.5	44.8	44.7	3.33	3.36	3.35	0.66	0.53	0.60
29/12/2021	15:57	Fine	Surface	1.0	19.99	19.98	19.99	8.84	8.86	8.85	33.22	33.21	33.22	87.8	88.4	88.1	6.67	6.72	6.70	1.48	1.54	1.51
	16:00		Middle	4.5	19.90	19.90	19.90	8.43	8.41	8.42	33.67	33.65	33.66	855.9	86.9	471.4	6.53	6.60	6.57	1.05	0.98	1.02
	16:02		Bottom	8.0	19.85	19.86	19.86	8.48	8.48	8.48	33.84	33.89	33.87	77.5	78.1	77.8	5.87	5.92	5.90	0.84	0.89	0.87



**Water Monitoring Result at G1 - Potential Subzone of Yim Tin Tsai Fish Culture Zone / Gradient Station
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	Value	Average		
30/11/2021	12:02	Fine	Surface	1.0	23.84	23.86	23.85	8.23	8.25	8.24	28.57	29.48	29.03	77.4	74.9	76.2	5.52	5.34	5.43	1.33	1.11	1.22
	12:05		Middle	4.0	23.81	23.82	23.82	8.25	8.23	8.24	29.95	30.00	29.98	68.2	65.3	66.8	4.85	4.62	4.74	0.68	0.53	0.61
	12:07		Bottom	7.0	23.53	23.52	23.53	8.09	8.09	8.09	30.72	30.77	30.75	45.9	45.0	45.5	3.26	3.21	3.24	0.57	0.74	0.66
1/12/2021	9:34	Fine	Surface	1.0	21.40	21.40	21.40	8.55	8.56	8.56	32.80	32.80	32.80	97.1	95.4	96.3	7.13	7.01	7.07	3.52	3.46	3.49
	9:36		Middle	4.5	21.30	21.40	21.35	8.55	8.55	8.55	32.82	32.82	32.82	94.9	96.2	95.6	6.97	7.05	7.01	3.32	3.40	3.36
	9:38		Bottom	8.0	21.20	21.20	21.20	8.55	8.55	8.55	32.82	32.82	32.82	97.5	97.5	97.5	7.17	7.15	7.16	3.44	3.47	3.46
2/12/2021	11:30	Fine	Surface	1.0	22.51	22.50	22.51	8.41	8.48	8.45	29.61	29.62	29.62	53.9	59.6	56.8	4.32	4.39	4.36	2.55	2.33	2.44
	11:33		Middle	4.0	22.57	22.57	22.57	8.50	8.52	8.51	29.66	29.67	29.67	59.7	58.7	59.2	4.35	4.27	4.31	1.82	1.64	1.73
	11:36		Bottom	7.0	22.62	22.62	22.62	8.58	8.58	8.58	29.85	29.86	29.86	56.6	56.3	56.5	4.11	4.09	4.10	1.04	1.08	1.06
3/12/2021	11:30	Fine	Surface	1.0	22.01	22.03	22.02	8.80	8.85	8.83	29.74	29.71	29.73	77.0	77.7	77.4	5.66	5.70	5.68	1.27	1.32	1.30
	11:33		Middle	4.5	22.16	22.15	22.16	8.18	8.75	8.47	29.97	29.99	29.98	81.2	80.3	80.8	5.95	5.89	5.92	0.89	0.82	0.86
	11:37		Bottom	8.0	22.11	21.14	21.63	8.84	8.86	8.85	30.21	30.25	30.23	76.3	76.8	76.6	5.59	5.62	5.61	0.29	0.33	0.31
6/12/2021	14:00	Fine	Surface	1.0	21.65	21.67	21.66	8.23	8.20	8.22	29.90	29.94	29.92	93.9	94.1	94.0	6.94	6.97	6.96	1.07	1.11	1.09
	14:03		Middle	4.5	21.63	21.63	21.63	8.41	8.44	8.43	30.61	30.65	30.63	85.1	84.4	84.8	6.26	6.21	6.24	0.54	0.61	0.58
	14:06		Bottom	8.0	21.69	21.71	21.70	8.06	8.10	8.08	30.90	30.97	30.94	80.8	79.9	80.4	5.94	5.87	5.91	2.31	2.26	2.29
8/12/2021	15:03	Fine	Surface	1.0	21.28	21.28	21.28	8.74	8.77	8.76	33.07	33.08	33.08	102.8	102.8	102.8	7.61	7.56	7.59	2.19	2.58	2.39
	15:06		Middle	4.5	20.58	20.60	20.59	8.79	8.79	8.79	33.15	33.15	33.15	106.1	106.1	106.1	7.82	7.85	7.84	0.74	692.29	0.74
	15:10		Bottom	8.0	20.55	20.56	20.56	8.76	8.75	8.76	33.37	33.38	33.38	92.3	93.3	92.8	6.82	6.90	6.86	0.80	0.92	0.86
10/12/2021	17:12	Fine	Surface	1.0	21.06	21.07	21.07	8.79	8.79	8.79	33.14	33.15	33.15	97.1	97.4	97.3	7.13	7.15	7.14	1.04	1.10	1.07
	17:14		Middle	4.0	20.75	20.74	20.75	8.70	8.75	8.73	33.47	33.46	33.47	92.5	91.8	92.2	6.77	6.74	6.76	0.65	0.69	0.67
	17:17		Bottom	7.0	20.78	20.75	20.77	8.66	8.62	8.64	33.84	33.84	33.84	81.7	81.1	81.4	6.01	5.96	5.99	0.77	0.65	0.71
13/12/2021	10:33	Fine	Surface	1.0	22.12	22.13	22.13	8.88	8.82	8.85	32.81	32.82	32.82	87.9	88.7	88.3	6.44	6.50	6.47	0.76	0.72	0.74
	10:35		Middle	4.5	21.87	21.86	21.87	8.54	8.54	8.54	33.28	33.30	33.29	85.7	84.6	85.2	6.29	6.22	6.26	0.18	0.22	0.20
	10:38		Bottom	8.0	21.58	21.57	21.58	8.38	8.37	8.38	33.74	33.77	33.76	57.4	55.9	56.7	4.22	4.11	4.17	2.60	2.54	2.57
15/12/2021	11:40	Cloudy	Surface	1.0	21.95	21.95	21.95	8.87	8.89	8.88	33.42	33.38	33.40	93.0	93.7	93.4	6.83	6.86	6.85	0.51	0.56	0.54
	11:43		Middle	4.5	21.82	21.83	21.83	8.76	8.74	8.75	33.72	33.73	33.73	75.0	74.0	74.5	5.50	5.43	5.47	0.24	0.29	0.27
	11:47		Bottom	8.0	21.68	21.66	21.67	8.52	8.52	8.52	33.89	33.86	33.88	46.5	45.3	45.9	3.41	3.32	3.37	0.69	0.74	0.72
17/12/2021	11:45	Cloudy	Surface	1.0	22.55	22.56	22.56	8.89	8.91	8.90	32.47	32.50	32.49	97.8	98.8	98.3	7.13	7.20	7.17	1.18	1.11	1.15
	11:48		Middle	4.0	21.94	21.92	21.93	8.46	8.42	8.44	33.32	33.38	33.35	75.6	74.0	74.8	5.54	5.48	5.51	0.30	0.38	0.34
	11:50		Bottom	7.0	21.69	21.67	21.68	8.52	8.55	8.54	33.89	33.84	33.87	45.2	47.3	46.3	3.32	3.47	3.40	0.48	0.53	0.51
20/12/2021	13:56	Cloudy	Surface	1.0	21.01	21.01	21.01	8.53	8.53	8.53	33.40	33.37	33.39	74.3	74.7	74.5	5.53	5.55	5.54	0.47	0.44	0.46
	13:58		Middle	4.5	21.00	21.00	21.00	8.31	8.34	8.33	33.79	33.75	33.77	77.2	77.6	77.4	5.74	5.76	5.75	1.28	1.32	1.30
	14:00		Bottom	8.0	21.20	21.21	21.21	8.25	8.27	8.26	33.88	33.93	33.91	661.1	66.4	363.8	4.88	4.90	4.89	1.10	1.05	1.08
22/12/2021	14:00	Cloudy	Surface	1.0	20.88	20.90	20.89	8.34	8.33	8.34	33.07	33.08	33.08	65.3	65.8	65.6	4.87	4.91	4.89	1.04	1.06	1.05
	14:03		Middle	4.5	20.69	20.69	20.69	8.41	8.46	8.44	33.52	33.54	33.53	66.2	66.8	66.5	4.96	5.01	4.99	1.04	0.98	1.01
	14:05		Bottom	8.0	20.66	20.67	20.67	8.43	8.42	8.43	33.69	33.68	33.69	68.1	68.4	68.3	5.09	5.11	5.10	0.52	0.62	0.57
27/12/2021	18:00	Cloudy	Surface	1.0	19.91	19.90	19.91	8.22	8.23	8.23	33.15	33.12	33.14	76.6	76.9	76.8	5.81	5.83	5.82	1.23	1.18	1.21
	18:03		Middle	4.5	19.93	19.91	19.92	8.08	8.05	8.07	33.52	33.55	33.54	75.6	77.0	76.3	5.73	5.84	5.79	1.74	1.62	1.68
	18:05		Bottom	8.0	20.26	20.25	20.26	8.34	8.36	8.35	33.87	33.85	33.86	46.5	46.1	46.3	7.23	3.45	5.34	0.32	0.44	0.38
29/12/2021	10:20	Fine	Surface	1.0	19.54	19.54	19.54	8.10	8.10	8.10	32.97	32.95	32.96	91.8	91.2	91.5	7.03	6.98	7.01	2.34	2.27	2.31
	10:23		Middle	4.0	19.51	19.52	19.52	7.88	7.89	7.89	33.24	33.27	33.26	101.9	100.8	101.4	7.79	7.70	7.75	1.79	1.83	1.81
	10:25		Bottom	7.0	19.58	19.58	19.58	7.83	7.82	7.83	33.45	33.44	33.45	106.1	105.0	105.6	8.70	8.01	8.36	0.75	0.63	0.69
31/12/2021	11:26	Cloudy	Surface	1.0	19.84	19.84	19.84	8.88	8.86	8.87	33.29	33.34	33.32	81.4	80.5	81.0	6.17	6.10	6.14	1.32	1.23	1.28
	11:28		Middle	4.5	19.99	19.99	19.99	8.46	8.44	8.45	33.53	33.50	33.52	84.0	83.3	83.7	6.35	6.29	6.32	1.66	1.57	1.62
	11:30		Bottom	8.0	19.84	19.80	19.82	8.41	8.42	8.42	33.77	33.76	33.77	73.1	72.4	72.8	5.53	5.47	5.50	2.02	1.96	1.99



**Water Monitoring Result at CR9 - Gruff Head Corals (Control Station)
Mid-Flood Tide**

Date	Time	Weater Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	13:18	Fine	Surface	1.0	24.00	24.00	24.00	8.42	8.42	8.42	33.36	33.36	33.36	93.4	94.2	93.8	6.62	6.55	6.59	3.09	3.04	3.07
	13:20		Middle	12.5	24.00	24.00	24.00	8.42	8.42	8.42	33.39	33.39	33.39	94.1	98.0	96.1	6.54	6.60	6.57	2.95	2.98	2.97
	13:22		Bottom	24.0	24.00	24.00	24.00	8.42	8.42	8.42	33.39	33.39	33.39	96.0	96.5	96.3	6.68	6.71	6.70	3.01	3.00	3.01
1/12/2021	14:54	Fine	Surface	1.0	20.50	20.50	20.50	8.47	8.47	8.47	33.63	33.63	33.63	90.8	90.0	90.4	6.73	6.68	6.71	2.50	2.54	2.52
	14:56		Middle	13.0	20.40	20.40	20.40	8.47	8.47	8.47	33.61	33.61	33.61	92.5	92.0	92.3	6.87	6.82	6.85	2.42	2.44	2.43
	14:58		Bottom	25.0	20.40	20.40	20.40	8.47	8.47	8.47	33.61	33.62	33.62	91.0	90.5	90.8	6.76	6.72	6.74	2.49	2.53	2.51
2/12/2021	15:25	Fine	Surface	1.0	20.40	20.40	20.40	8.46	8.46	8.46	33.64	33.64	33.64	98.6	97.4	98.0	7.31	7.23	7.27	3.55	3.41	3.48
	15:27		Middle	13.0	20.30	20.30	20.30	8.46	8.46	8.46	33.64	33.64	33.64	96.3	96.6	96.5	7.14	7.16	7.15	3.51	3.53	3.52
	15:29		Bottom	25.0	20.30	20.30	20.30	8.46	8.46	8.46	33.64	33.64	33.64	96.4	95.0	95.7	7.14	7.08	7.11	3.50	3.43	3.47
3/12/2021	15:45	Fine	Surface	1.0	19.70	19.70	19.70	8.48	8.48	8.48	33.70	33.70	33.70	92.5	92.3	92.4	6.93	6.91	6.92	4.17	4.10	4.14
	15:47		Middle	13.0	19.70	19.70	19.70	8.48	8.48	8.48	33.71	33.71	33.71	91.7	91.1	91.4	6.88	6.84	6.86	4.68	4.60	4.64
	15:48		Bottom	25.0	19.70	19.70	19.70	8.48	8.48	8.48	33.71	33.71	33.71	92.1	92.4	92.3	6.90	6.92	6.91	4.86	4.93	4.90
6/12/2021	10:10	Fine	Surface	1.0	21.50	21.50	21.50	8.47	8.47	8.47	33.63	33.63	33.63	93.0	92.4	92.7	6.70	6.70	6.70	3.93	3.98	3.96
	10:12		Middle	13.0	21.40	21.40	21.40	8.47	8.47	8.47	33.63	33.63	33.63	92.2	91.3	91.8	6.70	6.64	6.67	3.99	4.09	4.04
	10:14		Bottom	25.0	21.40	21.40	21.40	8.47	8.47	8.47	33.63	33.63	33.63	94.2	94.8	94.5	6.85	6.90	6.88	4.18	4.16	4.17
8/12/2021	12:20	Fine	Surface	1.0	21.80	21.80	21.80	8.48	8.48	8.48	33.43	33.43	33.43	92.1	94.3	93.2	6.66	6.82	6.74	3.04	2.96	3.00
	12:22		Middle	12.5	21.80	21.80	21.80	8.48	8.48	8.48	33.43	33.43	33.43	93.7	94.0	93.9	6.78	6.81	6.80	2.98	3.14	3.06
	12:24		Bottom	24.0	21.80	21.80	21.80	8.48	8.48	8.48	33.43	33.43	33.43	94.0	92.5	93.3	6.80	6.70	6.75	2.99	3.07	3.03
10/12/2021	14:27	Fine	Surface	1.0	21.40	21.40	21.40	8.49	8.49	8.49	33.64	33.64	33.64	89.8	88.8	89.3	6.52	6.45	6.49	2.90	2.84	2.87
	14:29		Middle	12.5	21.40	21.40	21.40	8.49	8.49	8.49	33.64	33.62	33.63	87.8	87.6	87.7	6.38	6.36	6.37	3.20	3.15	3.18
	14:31		Bottom	24.0	21.40	21.40	21.40	8.49	8.49	8.49	33.62	33.62	33.62	88.5	88.2	88.4	6.13	6.40	6.27	2.69	2.72	2.71
13/12/2021	14:26	Fine	Surface	1.0	21.10	21.10	21.10	8.50	8.50	8.50	33.79	33.79	33.79	81.7	81.4	81.6	5.97	5.95	5.96	2.82	2.75	2.79
	14:28		Middle	13.0	21.10	21.10	21.10	8.48	8.48	8.48	33.78	33.79	33.79	81.4	82.7	82.1	5.94	6.04	5.99	2.72	2.70	2.71
	14:30		Bottom	25.0	21.10	21.10	21.10	8.48	8.48	8.48	33.78	33.78	33.78	81.6	81.2	81.4	5.96	5.92	5.94	2.79	2.85	2.82
15/12/2021	14:11	Cloudy	Surface	1.0	21.30	21.30	21.30	8.47	8.47	8.47	33.70	33.70	33.70	95.4	92.4	93.9	6.94	6.71	6.83	2.60	2.57	2.59
	14:13		Middle	13.0	21.30	21.30	21.30	8.47	8.47	8.47	33.70	33.70	33.70	88.9	91.7	90.3	6.46	6.66	6.56	2.66	2.69	2.68
	14:15		Bottom	25.0	21.40	21.40	21.40	8.47	8.47	8.47	33.70	33.70	33.70	90.2	89.6	89.9	6.55	6.51	6.53	2.73	2.71	2.72
17/12/2021	15:20	Cloudy	Surface	1.0	20.60	20.60	20.60	8.50	8.50	8.50	33.83	33.83	33.83	94.2	95.0	93.7	6.70	6.90	6.80	2.61	2.58	2.60
	15:22		Middle	12.5	20.60	20.60	20.60	8.50	8.50	8.50	33.83	33.83	33.83	94.2	94.0	94.1	6.83	6.80	6.82	2.64	2.66	2.65
	15:24		Bottom	24.0	20.60	20.60	20.60	8.50	8.50	8.50	33.83	33.83	33.83	93.1	94.8	94.0	6.76	6.87	6.82	2.69	2.71	2.70
20/12/2021	15:16	Cloudy	Surface	1.0	21.04	21.06	21.05	8.30	8.30	8.30	32.95	33.01	32.98	82.3	81.8	82.1	6.12	6.08	6.10	0.39	0.33	0.36
	15:19		Middle	4.5	21.11	21.13	21.12	8.22	8.23	8.23	33.39	33.42	33.41	74.5	75.5	75.0	5.54	5.61	5.58	0.78	0.69	0.74
	15:21		Bottom	8.0	21.27	21.25	21.27	8.25	8.26	8.26	33.74	33.70	33.72	63.4	64.8	64.1	4.69	4.77	4.73	1.52	1.59	1.56
22/12/2021	10:23	Cloudy	Surface	1.0	20.40	20.40	20.40	8.46	8.46	8.46	33.77	33.77	33.77	83.9	85.2	84.6	6.21	6.30	6.26	2.63	2.72	2.68
	10:25		Middle	13.0	20.40	20.40	20.40	8.46	8.46	8.46	33.75	33.75	33.75	92.2	93.9	93.1	6.81	6.94	6.88	2.80	2.74	2.77
	10:27		Bottom	25.0	20.40	20.40	20.40	8.46	8.46	8.46	33.76	33.76	33.76	95.4	95.0	95.2	7.05	7.02	7.04	2.55	2.53	2.54
24/12/2021	10:38	Cloudy	Surface	1.0	20.30	20.30	20.30	8.49	8.49	8.49	32.28	32.28	32.28	85.4	85.0	85.2	6.35	6.31	6.33	2.28	2.26	2.27
	10:40		Middle	13.0	20.30	20.30	20.30	8.49	8.49	8.49	32.28	32.28	32.28	90.5	89.0	89.8	6.72	6.61	6.67	2.23	2.21	2.22
	10:42		Bottom	25.0	20.30	20.30	20.30	8.49	8.49	8.49	32.28	32.28	32.28	92.3	94.9	93.6	6.88	7.06	6.97	2.17	2.19	2.18
27/12/2021	12:30	Cloudy	Surface	1.0	16.70	16.70	16.70	8.46	8.46	8.46	33.87	33.87	33.87	92.7	92.3	92.5	7.34	7.31	7.33	2.72	2.75	2.74
	12:32		Middle	12.5	16.60	16.60	16.60	8.47	8.47	8.47	33.91	33.91	33.91	90.1	91.1	90.6	7.13	7.21	7.17	2.76	2.73	2.75
	12:34		Bottom	24.0	16.60	16.60	16.60	8.47	8.47	8.47	33.92	33.92	33.92	93.4	93.7	93.6	7.40	7.42	7.41	2.70	2.76	2.73
29/12/2021	13:55	Fine	Surface	1.0	21.90	21.90	21.90	8.48	8.48	8.48	33.43	33.43	33.43	88.8	88.1	88.5	6.42	6.35	6.39	2.71	2.60	2.66
	13:57		Middle	12.5	21.90	21.90	21.90	8.48	8.48	8.48	33.44	33.44	33.44	92.6	92.3	92.5	6.69	6.66	6.68	2.54	2.47	2.51
	13:59		Bottom	24.0	21.90	21.90	21.90	8.48	8.48	8.48	33.47	33.47	33.47	84.2	85.0	84.6	6.14	6.22	6.18	2.58	2.62	2.60

**Water Monitoring Result at CR9 - Gruff Head Corals (Control Station)****Mid-Flood Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	9:38	Fine	Surface	1.0	22.80	22.80	22.80	8.45	8.45	8.45	33.10	33.10	33.10	96.3	94.2	95.3	6.85	6.70	6.78	3.26	3.20	3.23
	9:40		Middle	12.0	22.80	22.80	22.80	8.45	8.45	8.45	33.12	33.12	33.12	94.0	94.6	94.3	6.68	6.72	6.70	3.18	3.15	3.17
	9:42		Bottom	23.0	22.90	22.80	22.85	8.44	8.44	8.44	33.13	33.13	33.13	95.0	97.5	96.3	6.72	6.91	6.82	2.98	3.00	2.99
1/12/2021	11:30	Fine	Surface	1.0	21.60	21.60	21.60	8.46	8.46	8.46	33.59	33.59	33.59	95.6	96.5	96.1	6.94	7.02	6.98	5.42	5.40	5.41
	11:32		Middle	13.0	21.60	21.60	21.60	8.46	8.46	8.46	33.61	33.61	33.61	96.3	96.0	96.2	7.01	6.98	7.00	5.27	5.20	5.24
	11:34		Bottom	25.0	21.30	21.30	21.30	8.46	8.46	8.46	33.60	33.60	33.60	95.8	95.6	95.7	6.97	6.95	6.96	5.11	5.06	5.09
2/12/2021	11:05	Fine	Surface	1.0	21.20	21.20	21.20	8.46	8.46	8.46	33.64	33.64	33.64	93.5	95.6	94.6	6.84	7.00	6.92	3.87	3.70	3.79
	11:07		Middle	12.5	20.90	20.90	20.90	8.46	8.46	8.46	33.65	33.65	33.65	94.3	94.9	94.6	6.90	6.95	6.93	3.74	3.78	3.76
	11:09		Bottom	24.0	20.90	20.90	20.90	8.46	8.46	8.46	33.65	33.65	33.65	97.7	95.3	96.5	6.93	6.98	6.96	3.58	3.68	3.63
3/12/2021	12:45	Fine	Surface	1.0	20.50	20.50	20.50	8.47	8.47	8.47	33.63	33.63	33.63	95.3	94.6	95.0	7.06	7.00	7.03	2.71	2.68	2.70
	12:49		Middle	13.0	20.40	20.40	20.40	8.47	8.47	8.47	33.65	33.65	33.65	96.3	97.4	96.9	7.13	7.21	7.17	2.85	2.80	2.83
	12:49		Bottom	25.0	20.30	20.30	20.30	8.47	8.47	8.47	33.66	33.66	33.66	97.4	96.8	97.1	7.22	7.17	7.20	2.73	2.77	2.75
6/12/2021	13:40	Fine	Surface	1.0	22.60	22.60	22.60	8.47	8.47	8.47	33.58	33.58	33.58	97.6	96.1	96.9	6.95	6.85	6.90	2.76	2.79	2.78
	13:42		Middle	12.5	22.60	22.60	22.60	8.47	8.47	8.47	33.59	33.59	33.59	95.5	94.7	95.1	6.80	6.75	6.78	2.82	2.80	2.81
	13:44		Bottom	24.0	22.60	22.60	22.60	8.47	8.47	8.47	33.59	33.59	33.59	93.4	94.0	93.7	6.63	6.70	6.67	2.68	2.79	2.74
8/12/2021	15:35	Fine	Surface	1.0	21.10	21.10	21.10	8.53	8.53	8.53	33.30	33.30	33.30	91.0	93.6	92.3	6.80	6.86	6.83	2.87	2.90	2.89
	15:36		Middle	12.5	21.10	21.10	21.10	8.53	8.53	8.53	33.30	33.30	33.30	92.9	91.0	92.0	6.80	6.66	6.73	2.70	2.79	2.75
	15:38		Bottom	24.0	21.10	21.10	21.10	8.53	8.53	8.53	33.30	33.30	33.30	97.1	98.6	97.9	7.11	7.23	7.17	2.67	2.74	2.71
10/12/2021	17:19	Fine	Surface	1.0	20.00	20.00	20.00	8.54	8.54	8.54	33.45	33.45	33.45	90.5	93.2	91.9	6.75	6.95	6.85	2.33	2.30	2.32
	17:21		Middle	12.5	20.00	20.00	20.00	8.54	8.54	8.54	33.44	33.44	33.44	95.5	95.6	95.6	7.14	7.14	7.14	2.27	2.26	2.27
	17:23		Bottom	24.0	20.00	20.00	20.00	8.54	8.54	8.54	33.44	33.44	33.44	96.9	95.1	96.0	7.23	7.10	7.17	2.36	2.38	2.37
13/12/2021	9:44	Fine	Surface	1.0	21.80	21.80	21.80	8.48	8.48	8.48	33.74	33.75	33.75	90.3	90.9	90.6	6.52	6.58	6.55	2.88	2.90	2.89
	9:46		Middle	13.0	21.80	21.80	21.80	8.48	8.48	8.48	33.73	33.73	33.73	86.5	85.6	86.1	6.23	6.26	6.25	2.85	2.82	2.84
	9:48		Bottom	25.0	21.90	21.90	21.90	8.48	8.48	8.48	33.70	33.70	33.70	82.0	81.7	81.9	5.90	5.88	5.89	2.91	2.94	2.93
15/12/2021	11:13	Cloudy	Surface	1.0	21.20	21.20	21.20	8.49	8.49	8.49	33.53	33.54	33.54	92.6	90.3	91.5	6.79	6.61	6.70	2.61	2.64	2.63
	11:15		Middle	12.5	21.20	21.20	21.20	8.49	8.49	8.49	33.53	33.53	33.53	89.6	91.4	90.5	6.55	6.68	6.62	2.58	2.57	2.58
	11:17		Bottom	24.0	21.20	21.20	21.20	8.46	8.46	8.46	33.54	33.54	33.54	80.6	84.5	82.6	5.89	6.18	6.04	2.46	2.52	2.49
17/12/2021	11:04	Cloudy	Surface	1.0	21.90	21.90	21.90	8.47	8.47	8.47	33.70	33.70	33.70	90.2	87.3	88.8	6.51	6.30	6.41	2.60	2.57	2.59
	11:06		Middle	12.5	21.90	21.90	21.90	8.47	8.47	8.47	33.70	33.70	33.70	84.2	86.2	85.2	6.10	6.20	6.15	2.64	2.66	2.65
	11:08		Bottom	24.0	21.90	21.90	21.90	8.47	8.47	8.47	33.70	33.70	33.70	89.2	90.6	89.9	6.46	6.55	6.51	2.47	2.49	2.48
20/12/2021	12:16	Cloudy	Surface	1.0	17.50	17.50	17.50	8.46	8.46	8.46	33.92	33.92	33.92	86.7	86.1	86.4	6.78	6.72	6.75	3.42	3.48	3.45
	12:18		Middle	12.5	17.50	17.50	17.50	8.46	8.46	8.46	33.92	33.92	33.92	76.1	77.5	76.8	5.94	6.05	6.00	3.55	3.57	3.56
	12:20		Bottom	24.0	17.40	17.40	17.40	8.47	8.47	8.47	33.93	33.93	33.93	78.8	79.4	79.1	6.16	6.21	6.19	3.26	3.19	3.23
22/12/2021	14:14	Cloudy	Surface	1.0	21.20	21.20	21.20	8.48	8.48	8.48	33.61	33.61	33.61	93.5	92.6	93.1	6.97	6.85	6.91	2.46	2.43	2.45
	14:16		Middle	12.5	21.10	21.10	21.10	8.48	8.48	8.48	33.62	33.62	33.62	88.4	88.8	88.6	6.59	6.61	6.60	2.35	2.39	2.37
	14:18		Bottom	24.0	21.10	21.10	21.10	8.48	8.48	8.48	33.62	33.62	33.62	87.4	88.0	87.7	6.49	6.54	6.52	2.37	2.42	2.40
27/12/2021	18:22	Cloudy	Surface	1.0	16.30	16.30	16.30	8.51	8.51	8.51	33.87	33.87	33.87	91.2	91.0	91.1	7.38	7.36	7.37	3.17	3.19	3.18
	18:24		Middle	13.0	16.30	16.30	16.30	8.51	8.51	8.51	33.87	33.87	33.87	90.2	88.5	89.4	7.23	7.09	7.16	3.12	3.10	3.11
	18:26		Bottom	25.0	16.30	16.30	16.30	8.51	8.51	8.51	33.89	33.89	33.89	84.3	85.1	84.7	6.77	6.82	6.80	3.18	3.14	3.16
29/12/2021	9:42	Fine	Surface	1.0	21.20	21.20	21.20	8.49	8.49	8.49	33.46	33.46	33.46	92.5	95.5	94.0	6.74	6.94	6.84	2.56	2.53	2.55
	9:44		Middle	12.5	21.30	21.30	21.30	8.49	8.49	8.49	33.46	33.46	33.46	94.5	93.0	93.8	6.89	6.78	6.84	2.59	2.52	2.56
	9:46		Bottom	24.0	21.30	21.30	21.30	8.49	8.49	8.49	33.46	33.46	33.46	93.7	93.2	93.5	6.84	6.79	6.82	2.50	2.48	2.49
31/12/2021	10:19	Cloudy	Surface	1.0	19.19	19.18	19.19	8.16	8.16	8.16	32.05	32.04	32.05	100.3	100.4	100.4	7.66	7.67	7.67	1.47	1.50	1.49
	10:21		Middle	11.0	19.18	19.18	19.18	8.08	8.08	8.08	32.63	32.63	32.63	86.1	86.3	86.2	6.56	6.58	6.57	2.35	2.32	2.34
	10:23		Bottom	21.0	19.17	19.17	19.17	8.08	8.08	8.08	32.65	32.64	32.65	85.7	85.8	85.8	6.52	6.53	6.53	3.38	3.35	3.37



**Water Monitoring Result at G1* -Gradient Station
Mid-Ebb Tide**

Date	Time	Weater Condition	Sampling Depth m		Water Temperature			pH		Salinity			DO Saturation			DO		Turbidity				
					°C			-		ppt			%			mg/L		NTU				
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
30/11/2021	15:45	Fine	Surface	1.0	24.00	24.01	24.01	8.62	8.60	8.61	30.42	30.48	30.45	60.8	57.8	59.3	4.30	4.09	4.20	1.12	1.12	1.12
	15:47		Middle	3.0	23.85	23.83	23.84	8.55	8.55	8.55	30.52	30.52	30.52	73.4	71.9	72.7	5.20	5.12	5.16	0.68	0.86	0.77
	15:49		Bottom	5.0	23.56	23.56	23.56	8.53	8.53	8.53	30.71	30.73	30.72	52.8	52.4	52.6	3.76	3.73	3.75	0.32	0.34	0.33
1/12/2021	15:35	Fine	Surface	1.0	23.74	23.80	23.77	8.90	8.92	8.91	29.77	29.74	29.76	77.1	78.5	77.8	5.50	5.59	5.55	1.20	1.29	1.25
	15:38		Middle	3.5	23.34	23.31	23.33	8.88	8.86	8.87	30.01	30.02	30.02	67.8	65.7	66.8	4.86	4.72	4.79	0.70	0.61	0.66
	15:42		Bottom	6.0	23.25	23.25	23.25	8.85	8.80	8.83	30.20	30.22	30.21	62.1	60.9	61.5	4.46	4.37	4.42	1.18	1.39	1.29
2/12/2021	16:08	Fine	Surface	1.0	23.13	23.14	23.14	8.89	8.91	8.90	29.82	29.81	29.82	100.2	101.5	100.9	7.22	7.31	7.27	2.18	1.99	2.09
	16:10		Middle	3.5	22.86	22.85	22.86	8.87	8.88	8.88	29.99	30.01	30.00	98.9	99.3	99.1	7.15	7.19	7.17	1.62	1.85	1.74
	16:13		Bottom	6.0	23.13	23.14	23.14	8.70	8.66	8.68	30.36	30.47	30.42	65.4	65.3	65.4	4.69	4.68	4.69	2.85	2.97	2.91
3/12/2021	16:24	Fine	Surface	1.0	22.76	22.78	22.77	8.73	8.75	8.74	29.78	29.78	29.78	89.7	89.2	89.5	6.51	6.48	6.50	2.36	2.29	2.33
	16:26		Middle	3.5	22.76	22.75	22.76	8.84	8.82	8.83	29.94	29.94	29.94	86.5	87.1	86.8	6.28	6.32	6.30	1.57	1.48	1.53
	16:28		Bottom	6.0	22.59	22.60	22.60	8.77	8.75	8.76	30.28	30.28	30.28	75.5	75.0	75.3	5.48	5.44	5.46	2.29	2.32	2.31
6/12/2021	9:52	Fine	Surface	1.0	21.78	21.80	21.79	8.45	8.48	8.47	30.56	30.59	30.58	78.4	77.7	78.1	5.77	5.72	5.75	1.65	1.69	1.67
	9:55		Middle	3.5	22.20	21.99	22.10	8.36	8.37	8.37	30.99	31.01	31.00	63.8	64.5	64.2	4.67	4.73	4.70	0.94	0.91	0.93
	9:58		Bottom	6.0	21.80	21.82	21.81	8.24	8.25	8.25	31.36	31.40	31.38	65.4	64.9	65.2	4.80	4.76	4.78	1.09	1.05	1.07
8/12/2021	11:04	Fine	Surface	1.0	21.16	21.16	21.16	8.73	8.74	8.74	33.14	33.14	33.14	96.1	95.1	95.6	7.03	6.96	7.00	2.31	2.39	2.35
	11:06		Middle	3.0	20.84	20.82	20.83	8.76	8.76	8.76	33.06	33.05	33.06	95.1	93.3	94.2	7.01	6.86	6.94	1.17	1.20	1.19
	11:08		Bottom	5.0	20.74	20.74	20.74	8.77	8.78	8.78	33.13	33.18	33.16	98.6	97.9	98.3	7.29	7.25	7.27	1.43	1.33	1.38
10/12/2021	13:17	Fine	Surface	1.0	22.11	22.10	22.11	8.80	8.80	8.80	32.87	32.88	32.88	118.5	116.5	117.5	8.57	8.40	8.49	1.22	1.16	1.19
	13:19		Middle	3.0	21.29	21.28	21.29	8.82	8.82	8.82	33.13	33.13	33.13	106.1	106.9	106.5	7.75	7.81	7.78	2.09	2.12	2.11
	13:20		Bottom	5.0	21.21	22.20	21.71	8.81	8.81	8.81	33.24	33.25	33.25	95.6	93.8	94.7	6.99	6.87	6.93	2.40	2.34	2.37
13/12/2021	12:04	Fine	Surface	1.0	22.57	22.55	22.56	8.50	8.50	8.50	32.37	32.38	32.38	94.0	94.4	94.2	6.82	6.84	6.83	0.91	0.88	0.90
	12:07		Middle	3.0	22.36	22.35	22.36	8.26	8.27	8.27	32.54	32.58	32.56	86.9	86.5	86.7	6.32	6.29	6.31	0.72	0.67	0.70
	12:10		Bottom	5.0	21.97	21.97	21.97	8.19	8.19	8.19	32.78	32.74	32.76	77.4	76.7	77.1	5.66	5.61	5.64	0.74	0.76	0.75
15/12/2021	15:25	Cloudy	Surface	1.0	22.46	22.47	22.47	8.70	8.74	8.72	32.89	32.85	32.87	94.6	93.3	94.0	6.90	6.80	6.85	1.27	1.22	1.25
	15:27		Middle	3.5	22.34	22.32	22.33	8.38	8.40	8.39	33.12	33.13	33.13	89.6	88.2	88.9	6.54	6.44	6.49	1.33	1.29	1.31
	15:29		Bottom	6.0	21.95	21.93	21.94	8.12	8.11	8.12	33.71	33.74	33.73	56.0	54.8	55.4	4.10	3.99	4.05	3.03	3.12	3.08
17/12/2021	15:50	Cloudy	Surface	1.0	22.49	22.50	22.50	8.48	8.51	8.50	33.33	33.30	33.32	94.7	93.8	94.3	6.88	6.80	6.84	0.69	0.74	0.72
	15:53		Middle	3.5	22.11	22.10	22.11	8.25	8.23	8.24	33.64	33.67	33.66	75.2	75.9	75.6	5.49	5.54	5.52	1.35	1.28	1.32
	15:54		Bottom	6.0	21.90	21.88	21.89	8.29	8.32	8.31	33.87	33.84	33.86	49.6	49.9	49.8	3.63	3.65	3.64	2.05	2.12	2.09
20/12/2021	15:34	Cloudy	Surface	1.0	21.23	21.23	21.23	8.46	8.45	8.46	33.08	33.11	33.10	72.9	72.5	72.7	5.42	5.38	5.40	1.97	2.02	2.00
	15:36		Middle	3.0	21.44	21.46	21.45	8.59	8.57	8.58	33.34	33.38	33.36	62.6	61.8	62.2	4.62	4.56	4.59	1.61	1.60	1.61
	15:37		Bottom	5.0	21.60	21.61	21.61	8.47	8.45	8.46	33.89	33.86	33.88	54.5	53.8	54.2	4.00	3.95	3.98	0.97	1.02	1.00
22/12/2021	10:15	Cloudy	Surface	1.0	20.72	20.72	20.72	8.70	8.71	8.71	33.33	33.36	33.35	67.6	68.5	68.1	5.05	5.12	5.09	0.56	0.61	0.59
	10:17		Middle	3.0	20.93	20.92	20.93	8.59	8.53	8.56	33.57	33.55	33.56	64.7	61.1	62.9	4.80	4.76	4.78	0.73	0.68	0.71
	10:18		Bottom	5.0	20.90	20.91	20.91	8.55	8.55	8.55	33.56	33.55	33.56	66.0	66.2	66.1	4.90	4.92	4.91	1.36	1.25	1.31
24/12/2021	10:24	Cloudy	Surface	1.0	20.95	20.96	20.96	8.66	8.66	8.66	33.01	33.03	33.02	79.1	80.7	79.9	5.89	6.01	5.95	0.41	0.46	0.44
	10:27		Middle	3.0	21.00	21.00	21.00	8.60	8.58	8.59	33.34	33.35	33.35	67.9	67.5	67.7	5.04	5.01	5.03	0.54	0.62	0.58
	10:29		Bottom	5.0	21.00	21.01	21.01	8.43	8.43	8.43	33.56	33.56	33.56	57.3	56.4	56.9	4.25	4.20	4.23	1.41	1.31	1.36
27/12/2021	13:33	Cloudy	Surface	1.0	20.28	20.29	20.29	8.78	8.75	8.77	33.04	33.05	33.05	68.2	67.6	67.9	5.15	5.10	5.13	2.06	2.11	2.09
	13:35		Middle	3.5	20.29	20.29	20.29	8.53	8.53	8.53	33.14	33.14	33.14	72.9	73.1	73.0	5.50	5.51	5.51	1.39	1.27	1.33
	13:37		Bottom	6.0	20.50	20.51	20.51	8.38	8.40	8.39	33.62	33.65	33.64	61.9	61.6	61.8	4.64	4.61	4.63	1.68	1.75	1.72
29/12/2021	14:58	Fine	Surface	1.0	20.49	20.49	20.49	8.64	8.64	8.64	33.07	33.05	33.06	89.7	90.5	90.1	6.73	6.82	6.78	1.84	1.90	1.87
	15:00		Middle	3.5	20.07	20.09	20.08	8.48	8.47	8.48	33.30	33.28	33.29	93.6	94.0	93.8	7.08	7.11	7.10	1.85	1.74	1.80
	15:01		Bottom	6.0	19.99	19.98	19.99	8.32	8.34	8.33	33.52	33.51	33.52	94.7	93.8	94.3	7.16	7.10	7.13	1.60	1.53	1.57



**Water Monitoring Result at G1* -Gradient Station
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation			DO		Turbidity			
					°C			-			ppt			%			mg/L		NTU			
					Value	Average		Value	Average		Value	Average		Value	Average		Value	Average		Value	Average	
30/11/2021	10:59	Fine	Surface	1.0	23.99	24.01	24.00	8.38	8.38	8.38	29.30	29.26	29.28	83.8	84.6	84.2	5.96	6.01	5.99	2.57	2.51	2.54
	0:00		Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11:02		Bottom	4.0	24.08	24.08	24.08	8.14	8.05	8.10	29.52	29.81	29.67	76.8	74.9	75.9	5.45	5.36	5.41	1.70	1.62	1.66
1/12/2021	9:45	Fine	Surface	1.0	23.03	23.07	23.05	8.85	8.85	8.85	29.10	29.16	29.13	63.8	62.1	63.0	4.63	4.49	4.56	1.22	1.27	1.25
	9:47		Middle	3.5	23.10	23.70	23.40	8.88	8.86	8.87	29.33	29.35	29.34	61.8	61.9	61.9	4.47	4.47	4.47	1.09	1.21	1.15
	9:49		Bottom	6.0	23.18	23.19	23.19	8.85	8.84	8.85	29.62	29.65	29.64	57.4	56.0	56.7	4.13	4.03	4.08	1.84	1.75	1.80
2/12/2021	10:20	Fine	Surface	23.0	22.97	8.85	15.91	8.82	29.70	19.26	29.70	29.77	29.74	64.1	64.8	64.5	4.64	4.66	4.65	2.89	2.75	2.82
	10:22		Middle	23.0	22.98	8.88	15.93	8.88	29.85	19.37	29.85	29.87	29.86	65.7	65.4	65.6	4.74	4.72	4.73	2.26	2.53	2.40
	10:25		Bottom	23.0	23.10	8.89	16.00	8.85	30.01	19.43	30.04	30.04	30.04	65.8	64.6	65.2	4.75	4.66	4.71	2.55	2.01	2.28
3/12/2021	10:25	Fine	Surface	1.0	22.34	22.34	22.34	8.65	8.69	8.67	29.90	29.92	29.91	70.1	69.3	69.7	5.12	5.06	5.09	2.26	2.35	2.31
	10:28		Middle	3.5	22.39	22.38	22.39	8.70	8.65	8.68	30.24	30.25	30.25	68.8	68.1	68.5	5.01	4.96	4.99	1.45	1.73	1.59
	10:30		Bottom	6.0	22.45	22.47	22.46	8.79	8.77	8.78	30.48	30.54	30.51	69.1	68.7	68.9	5.02	4.99	5.01	2.43	2.16	2.30
6/12/2021	12:43	Fine	Surface	1.0	22.00	21.99	22.00	8.77	8.78	8.78	30.03	30.06	30.05	87.5	87.0	87.3	6.43	6.38	6.41	2.13	2.08	2.11
	12:45		Middle	3.5	21.85	21.85	21.85	8.70	8.71	8.71	30.27	30.30	30.29	80.1	79.1	79.6	5.89	5.81	5.85	0.78	0.80	0.79
	12:48		Bottom	6.0	21.86	21.86	21.86	8.59	8.62	8.61	30.48	30.45	30.47	65.2	64.6	64.9	4.78	4.73	4.76	2.77	2.73	2.75
8/12/2021	14:08	Fine	Surface	1.0	21.46	21.47	21.47	8.81	8.80	8.81	33.10	33.09	33.10	107.0	107.6	107.3	7.79	7.85	7.82	2.89	2.84	2.87
	14:07		Middle	3.5	21.31	21.28	21.30	8.80	8.80	8.80	33.15	33.15	33.15	91.7	92.1	91.9	6.74	6.77	6.76	2.75	2.78	2.77
	14:09		Bottom	6.0	20.68	20.66	20.67	8.80	8.78	8.79	33.11	33.11	33.11	92.7	93.0	92.9	6.84	6.86	6.85	3.03	3.08	3.06
10/12/2021	17:29	Fine	Surface	1.0	22.02	22.01	22.02	8.47	8.48	8.48	33.00	33.00	33.00	117.4	117.8	117.6	8.48	8.51	8.50	1.55	1.58	1.57
	17:30		Middle	3.0	21.89	21.89	21.89	8.60	8.60	8.60	32.90	32.92	32.91	101.6	102.2	101.9	7.41	7.45	7.43	0.99	1.00	1.00
	17:32		Bottom	5.0	21.14	21.12	21.13	8.57	8.56	8.57	33.47	33.48	33.48	62.7	62.0	62.4	4.59	4.54	4.57	0.72	0.74	0.73
13/12/2021	9:24	Fine	Surface	1.0	22.39	22.39	22.39	8.70	8.71	8.71	21.23	21.24	21.24	89.8	89.0	89.4	6.57	6.51	6.54	1.06	1.10	1.08
	9:27		Middle	3.0	22.36	22.37	22.37	8.66	8.65	8.66	32.39	32.41	32.40	94.7	95.1	94.9	6.92	6.95	6.94	0.62	0.57	0.60
	9:29		Bottom	5.0	22.01	22.01	22.01	8.62	8.62	8.62	33.10	33.08	33.09	87.0	85.9	86.5	6.39	6.32	6.36	0.75	0.80	0.77
15/12/2021	10:40	Cloudy	Surface	1.0	22.31	22.32	22.32	8.63	8.58	8.61	32.73	32.72	32.73	101.4	101.7	101.6	7.41	7.43	7.42	0.81	0.77	0.79
	10:43		Middle	3.5	22.24	22.24	22.24	8.45	8.42	8.44	32.94	32.77	32.86	91.7	92.2	92.0	6.72	6.76	6.74	0.64	0.68	0.66
	5:45		Bottom	6.0	21.98	21.95	21.97	8.61	8.62	8.62	33.22	33.27	33.25	39.6	39.2	39.4	2.83	2.88	2.86	2.82	2.84	2.83
17/12/2021	9:47	Cloudy	Surface	1.0	22.42	22.44	22.43	8.79	8.81	8.80	32.89	32.93	32.91	98.4	97.6	98.0	7.17	7.11	7.14	0.78	0.84	0.81
	9:49		Middle	3.0	22.19	22.20	22.20	8.52	8.49	8.51	33.36	33.35	33.36	95.4	96.2	95.8	7.09	7.02	7.06	0.56	0.52	0.54
	9:52		Bottom	5.0	22.08	22.06	22.07	8.44	8.41	8.43	33.72	33.73	33.73	61.3	62.3	61.8	4.47	4.56	4.52	0.99	0.93	0.96
20/12/2021	13:10	Cloudy	Surface	1.0	21.38	21.37	21.38	8.52	8.53	8.53	33.29	33.31	33.30	71.0	70.0	70.5	5.26	5.19	5.23	2.80	2.74	2.77
	13:12		Middle	3.0	21.35	21.35	21.35	8.38	8.36	8.37	33.58	33.55	33.57	70.1	69.3	69.7	5.19	5.13	5.16	2.02	1.95	1.99
	13:14		Bottom	5.0	21.63	21.65	21.64	8.20	8.23	8.22	33.84	33.82	33.83	40.2	40.7	40.5	2.94	2.98	2.96	4.05	4.12	4.09
22/12/2021	13:01	Cloudy	Surface	1.0	21.02	21.02	21.02	8.57	8.54	8.56	32.97	32.95	32.96	71.0	70.3	70.7	5.28	5.23	5.26	0.71	0.64	0.68
	13:03		Middle	3.5	21.01	21.01	21.01	8.42	8.43	8.43	33.28	33.30	33.29	68.7	68.9	68.8	5.10	5.11	5.11	0.79	0.74	0.77
	13:05		Bottom	6.0	20.97	20.98	20.98	8.46	8.48	8.47	33.54	33.53	33.54	63.8	64.3	64.1	4.73	4.77	4.75	1.22	1.16	1.19
27/12/2021	17:18	Cloudy	Surface	1.0	19.91	19.91	19.91	8.19	8.20	8.20	33.14	33.16	33.15	69.9	70.5	70.2	5.31	5.34	5.33	1.53	1.46	1.50
	17:19		Middle	3.0	20.04	20.02	20.03	8.14	8.14	8.14	33.47	33.47	33.47	68.5	69.3	68.9	5.20	5.26	5.23	1.14	1.08	1.11
	17:21		Bottom	5.0	20.33	20.33	20.33	8.10	8.11	8.11	33.86	33.89	33.88	60.3	60.8	60.6	4.54	4.58	4.56	0.78	0.77	0.78
29/12/2021	9:22	Fine	Surface	1.0	19.72	19.73	19.73	7.89	7.87	7.88	33.09	33.11	33.10	72.5	71.9	72.2	5.51	5.46	5.49	1.85	1.79	1.82
	9:24		Middle	3.0	19.83	19.81	19.82	7.74	7.74	7.74	33.33	33.35	33.34	69.5	68.8	69.2	5.27	5.22	5.25	1.87	1.81	1.84
	9:26		Bottom	5.0	20.07	20.07	20.07	7.54	7.55	7.55	33.60	33.58	33.59	66.5	66.8	66.7	5.02	5.04	5.03	1.40	1.32	1.36
31/12/2021	10:25	Cloudy	Surface	1.0	19.97	19.97	19.97	8.16	8.16	8.16	33.04	33.07	33.06	79.7	79.9	79.8	6.01	6.05	6.03	0.83	0.73	0.78
	10:28		Middle	3.5	20.14	20.15	20.15	8.06	8.05	8.06	33.39	33.36	33.38	76.2	75.2	75.7	5.75	5.68	5.72	0.64	0.66	0.65
	10:30		Bottom	6.0	20.12	20.12	20.12	8.10	8.08	8.09	33.61	33.65	33.63	69.3	68.2	68.8	5.23	5.14	5.19	0.39	0.44	0.42



**Water Monitoring Result at C1* - Pak Sha Tau Corals
Mid-Ebb Tide**

Date	Time	Weater Condition	Sampling Depth		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity				
					°C			-			ppt			%		mg/L		NTU				
					Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	
30/11/2021	16:06	Fine	Surface	1.0	24.1	24.1	24.10	8.5	8.5	8.48	33.0	33.0	32.95	94.7	97.5	96.1	6.6	6.6	6.6	23.90	2.30	13.10
	16:08		Middle	3.0	24.0	24.0	24.00	8.5	8.5	8.49	33.0	33.0	32.95	96.8	97.1	97.0	6.7	6.8	6.7	2.14	2.11	2.13
	16:10		Bottom	5.0	24.1	24.1	24.10	8.5	8.5	8.49	33.0	33.0	32.95	98.5	97.1	97.8	6.9	6.8	6.8	2.04	2.06	2.05
1/12/2021	17:01	Fine	Surface	1.0	21.0	21.0	21.00	8.5	8.5	8.47	33.4	33.4	33.36	91.7	92.5	92.1	6.7	6.8	6.8	3.15	3.03	3.09
	17:03		Middle	3.0	20.9	20.9	20.90	8.5	8.5	8.47	33.4	33.4	33.36	91.3	90.5	90.9	6.7	6.7	6.7	3.00	2.95	2.98
	17:05		Bottom	5.0	20.8	20.8	20.80	8.5	8.5	8.47	33.4	33.4	33.36	91.2	91.4	91.3	6.7	6.7	6.7	2.89	2.85	2.87
2/12/2021	16:37	Fine	Surface	1.0	20.6	20.6	20.60	8.5	8.5	8.49	33.3	33.3	33.33	97.4	97.6	97.5	7.2	7.2	7.2	2.89	3.96	3.43
	16:39		Middle	3.0	20.6	20.6	20.60	8.5	8.5	8.50	33.3	33.3	33.33	96.3	94.6	95.5	7.1	7.0	7.1	3.99	4.05	4.02
	16:41		Bottom	5.0	20.6	20.6	20.60	8.5	8.5	8.50	33.3	33.3	33.33	95.6	94.8	95.2	7.1	7.0	7.1	3.97	3.91	3.94
3/12/2021	14:48	Fine	Surface	1.0	20.6	20.6	20.60	8.5	8.5	8.50	33.3	33.3	33.26	94.1	98.5	96.3	6.9	7.3	7.1	5.54	5.74	5.64
	14:50		Middle	3.0	20.6	20.6	20.60	8.5	8.5	8.50	33.3	33.3	33.29	95.0	96.1	95.6	7.0	7.1	7.1	6.01	6.10	6.06
	14:52		Bottom	5.0	20.4	20.4	20.40	8.5	8.5	8.50	33.3	33.3	33.29	92.5	94.7	93.6	6.9	7.0	6.9	6.46	6.52	6.49
6/12/2021	11:36	Fine	Surface	1.0	20.8	20.8	20.80	8.5	8.5	8.52	33.2	33.2	33.15	96.4	94.1	95.3	7.1	6.9	7.0	3.79	3.75	3.77
	11:38		Middle	3.0	20.8	20.8	20.80	8.5	8.5	8.52	33.2	33.2	33.15	98.4	95.3	96.9	7.3	7.0	7.1	3.86	3.84	3.85
	11:40		Bottom	5.0	20.8	20.8	20.80	8.5	8.5	8.52	33.2	33.2	33.16	98.0	97.2	97.6	7.2	7.2	7.2	3.61	3.67	3.64
8/12/2021	13:27	Fine	Surface	1.0	21.2	21.2	21.20	8.5	8.5	8.52	33.3	33.3	33.27	93.5	93.2	93.4	6.8	6.7	6.7	2.96	3.05	3.01
	13:29		Middle	3.0	21.2	21.2	21.20	8.5	8.5	8.52	33.3	33.3	33.27	92.4	94.0	93.2	6.7	6.8	6.8	2.87	2.81	2.84
	13:31		Bottom	5.0	21.2	21.2	21.20	8.5	8.5	8.52	33.3	33.3	33.27	94.4	94.9	94.7	6.8	6.9	6.9	2.68	2.66	2.67
10/12/2021	15:53	Fine	Surface	1.0	21.2	21.2	21.20	8.5	8.5	8.53	33.2	33.2	33.16	93.7	96.7	95.2	6.9	7.1	7.0	2.43	2.52	2.48
	15:55		Middle	3.0	21.2	21.2	21.20	8.5	8.5	8.53	33.2	33.2	33.16	97.6	97.8	97.7	7.1	7.2	7.1	2.50	2.46	2.48
	15:57		Bottom	5.0	21.2	21.2	21.20	8.5	8.5	8.53	33.2	33.2	33.16	94.1	94.9	94.5	6.9	7.0	7.0	2.41	2.38	2.40
13/12/2021	12:43	Fine	Surface	1.0	21.4	21.4	21.40	8.5	8.5	8.54	33.3	33.3	33.26	92.9	91.9	92.4	6.8	6.7	6.7	2.55	2.52	2.54
	12:45		Middle	3.0	21.5	21.5	21.50	8.5	8.5	8.54	33.2	33.2	33.22	91.0	90.6	90.8	6.6	6.6	6.6	2.51	2.53	2.52
	12:47		Bottom	5.0	21.5	21.5	21.50	8.5	8.5	8.54	33.2	33.3	33.28	91.0	93.2	92.1	6.6	6.8	6.7	2.60	2.63	2.62
15/12/2021	13:10	Cloudy	Surface	1.0	21.4	21.4	21.40	8.5	8.5	8.54	33.2	33.2	33.15	95.8	94.1	95.0	7.0	6.9	6.9	2.55	2.57	2.56
	13:12		Middle	3.0	21.4	21.4	21.40	8.5	8.5	8.54	33.2	33.2	33.15	90.6	91.7	91.2	6.6	6.7	6.7	2.52	2.50	2.51
	13:14		Bottom	5.0	21.4	21.4	21.40	8.5	8.5	8.53	33.2	33.2	33.15	87.6	88.9	88.3	6.4	6.5	6.4	2.53	2.49	2.51
17/12/2021	14:12	Cloudy	Surface	1.0	21.4	21.4	21.40	8.5	8.5	8.54	33.2	33.2	33.23	96.0	95.5	95.8	7.0	6.9	7.0	2.48	2.43	2.46
	14:14		Middle	3.0	21.4	21.4	21.40	8.5	8.5	8.54	33.2	33.2	33.23	92.4	92.0	92.2	6.7	6.7	6.7	2.46	2.50	2.48
	14:16		Bottom	5.0	21.4	21.4	21.40	8.5	8.5	8.54	33.2	33.2	33.23	81.2	83.9	82.6	5.9	6.1	6.0	2.55	2.53	2.54
20/12/2021	14:46	Cloudy	Surface	1.0	18.8	18.8	18.80	8.5	8.5	8.46	33.4	33.4	33.44	77.6	79.1	78.4	6.0	6.1	6.0	2.77	2.75	2.76
	14:48		Middle	3.0	18.6	18.6	18.60	8.5	8.5	8.46	33.4	33.4	33.44	76.9	75.5	76.2	5.9	5.8	5.8	2.72	2.79	2.76
	14:50		Bottom	5.0	18.6	18.6	18.60	8.5	8.5	8.46	33.4	33.4	33.44	81.8	84.1	83.0	6.3	6.3	6.3	2.78	2.81	2.80
22/12/2021	12:01	Cloudy	Surface	1.0	20.4	20.4	20.40	8.5	8.5	8.46	33.1	33.1	33.10	88.1	83.0	85.6	6.6	6.2	6.4	2.66	2.62	2.64
	12:03		Middle	3.0	20.4	20.4	20.40	8.5	8.5	8.46	33.1	33.1	33.10	87.6	88.5	88.1	6.5	6.6	6.5	2.50	2.55	2.53
	12:05		Bottom	5.0	20.4	20.4	20.40	8.5	8.5	8.46	33.1	33.1	33.10	84.3	86.4	85.4	6.3	6.4	6.3	2.52	2.54	2.53
24/12/2021	12:01	Cloudy	Surface	1.0	20.3	20.3	20.30	8.5	8.5	8.49	33.1	33.1	33.05	83.5	81.7	82.6	6.2	6.1	6.2	2.29	2.25	2.27
	12:03		Middle	3.0	20.3	20.3	20.30	8.5	8.5	8.49	33.1	33.1	33.05	84.8	84.2	84.5	6.3	6.2	6.3	2.32	2.30	2.31
	9:45		Bottom	6.0	21.0	21.0	21.01	8.5	8.5	8.53	33.6	33.6	33.60	53.9	54.5	54.2	4.0	4.0	4.0	1.98	1.77	1.88
27/12/2021	13:39	Cloudy	Surface	1.0	16.7	16.7	16.70	8.5	8.5	8.48	33.5	33.5	33.52	90.6	90.4	90.5	7.2	7.2	7.2	2.61	2.63	2.62
	13:41		Middle	3.0	16.6	16.6	16.60	8.5	8.5	8.48	33.5	33.5	33.52	88.4	88.2	88.3	7.1	7.1	7.1	2.58	2.56	2.57
	13:43		Bottom	5.0	16.6	16.6	16.60	8.5	8.5	8.48	33.5	33.5	33.54	91.2	90.4	90.8	7.3	7.2	7.3	2.53	2.55	2.54
29/12/2021	12:12	Fine	Surface	1.0	21.4	21.4	21.40	8.4	8.4	8.43	33.8	33.8	33.78	93.1	94.1	93.6	6.8	6.8	6.8	3.13	3.19	3.16
	12:14		Middle	3.0	21.4	21.4	21.40	8.4	8.4	8.43	33.8	33.8	33.76	93.7	95.5	94.6	6.8	6.9	6.9	2.99	2.92	2.96
	12:16		Bottom	5.0	21.4	21.4	21.40	8.4	8.4	8.43	33.8	33.8	33.76	93.1	93.4	93.3	6.8	6.8	6.8	2.80	2.87	2.84



**Water Monitoring Result at C1* - Pak Sha Tau Corals
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m		Water Temperature			pH			Salinity			DO Saturation		DO		Turbidity				
					°C			-			ppt			%		mg/L		NTU				
					Value	Average		Value	Average		Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	
30/11/2021	11:01	Fine	Surface	1.0	22.7	22.6	22.65	6.3	6.2	6.25	32.0	32.0	32.02	98.8	98.5	98.7	7.0	7.0	7.0	3.32	3.30	3.31
	11:03		Middle	3.0	22.7	22.7	22.70	6.1	6.1	6.10	32.0	32.0	32.02	93.5	93.3	93.4	6.7	6.7	6.7	3.27	3.28	3.28
	11:05		Bottom	5.0	22.6	22.6	22.60	6.1	6.1	6.07	32.0	32.0	32.02	94.3	94.7	94.5	6.7	6.8	6.7	3.24	3.21	3.23
1/12/2021	10:27	Fine	Surface	1.0	21.1	21.1	21.10	8.5	8.5	8.47	33.2	33.2	33.24	92.0	93.1	92.6	6.8	6.9	6.8	2.14	2.10	2.12
	10:29		Middle	3.0	21.1	21.1	21.10	8.5	8.5	8.47	33.2	33.2	33.24	93.2	92.4	92.8	6.9	6.8	6.8	2.07	2.04	2.06
	10:31		Bottom	5.0	20.9	20.9	20.90	8.5	8.5	8.47	33.3	33.3	33.25	92.9	93.4	93.2	6.8	6.9	6.9	2.13	2.11	2.12
2/12/2021	12:16	Fine	Surface	1.0	21.4	21.4	21.40	8.5	8.5	8.47	33.4	33.4	33.35	95.0	95.8	95.4	6.9	7.0	6.9	2.63	2.60	2.62
	12:18		Middle	3.0	21.4	21.4	21.40	8.5	8.5	8.47	33.4	33.4	33.35	94.4	92.6	93.5	6.9	6.7	6.8	2.71	2.74	2.73
	12:20		Bottom	5.0	21.4	21.4	21.40	8.5	8.5	8.47	33.4	33.4	33.36	93.6	92.3	93.0	6.8	6.7	6.8	2.64	2.59	2.62
3/12/2021	13:54	Fine	Surface	1.0	20.5	20.5	20.50	8.5	8.5	8.49	33.3	33.3	33.26	98.0	98.5	98.3	7.3	7.3	7.3	2.89	2.94	2.92
	13:56		Middle	3.0	20.5	20.5	20.50	8.5	8.5	8.49	33.3	33.3	33.28	97.6	97.3	97.5	7.2	7.2	7.2	2.86	2.88	2.87
	13:58		Bottom	5.0	20.4	20.4	20.40	8.5	8.5	8.49	33.3	33.3	33.29	96.1	97.4	97.4	7.1	7.3	7.2	2.98	3.00	2.99
6/12/2021	12:33	Fine	Surface	1.0	20.6	20.7	20.65	8.5	8.5	8.53	33.1	33.1	33.12	94.7	94.5	94.6	7.0	7.0	7.0	3.47	3.49	3.48
	12:35		Middle	3.0	20.6	20.6	20.60	8.5	8.5	8.53	33.1	33.1	33.13	97.2	97.0	97.1	7.2	7.17	7.2	3.45	3.39	3.42
	12:37		Bottom	5.0	20.6	20.6	20.60	8.5	8.5	8.53	33.1	33.1	33.13	94.8	94.2	94.5	7.0	7.0	7.0	3.34	3.43	3.39
8/12/2021	14:32	Fine	Surface	1.0	21.1	21.1	21.10	8.5	8.5	8.51	33.6	33.6	33.59	94.3	93.8	94.1	6.9	6.9	6.9	3.32	3.19	3.26
	14:34		Middle	3.0	21.0	21.0	21.00	8.5	8.5	8.51	33.6	33.6	33.60	91.7	92.6	92.2	6.7	6.8	6.8	3.25	3.13	3.19
	14:36		Bottom	5.0	21.0	21.0	21.00	8.5	8.5	8.50	33.6	33.6	33.61	92.1	91.5	91.8	6.8	6.7	6.7	3.10	3.16	3.13
10/12/2021	16:45	Fine	Surface	1.0	21.2	21.2	21.20	8.5	8.5	8.54	33.2	33.2	33.18	91.0	90.2	90.6	6.7	6.6	6.7	2.64	2.61	2.63
	16:47		Middle	3.0	21.2	21.2	21.20	8.5	8.5	8.54	33.2	33.2	33.19	88.0	88.2	88.1	6.8	6.9	6.8	2.60	2.58	2.59
	16:49		Bottom	5.0	21.2	21.2	21.20	8.5	8.5	8.54	33.2	33.2	33.19	92.2	91.0	91.6	6.7	6.7	6.7	2.67	2.71	2.69
13/12/2021	11:00	Fine	Surface	1.0	21.7	21.7	21.70	8.5	8.5	8.54	33.2	33.2	33.21	90.7	92.5	91.6	6.6	6.7	6.6	2.60	2.55	2.58
	11:02		Middle	3.0	21.7	21.7	21.70	8.5	8.5	8.54	33.2	33.2	33.21	81.3	85.8	83.6	5.9	6.2	6.1	2.51	2.53	2.52
	11:04		Bottom	5.0	21.7	21.7	21.70	8.5	8.5	8.54	33.2	33.2	33.21	88.5	87.7	88.1	6.4	6.3	6.4	2.58	2.54	2.56
15/12/2021	12:11	Cloudy	Surface	1.0	21.2	21.2	21.20	8.5	8.5	8.53	33.2	33.2	33.18	93.9	92.1	93.0	6.9	6.8	6.8	2.62	2.59	2.61
	12:13		Middle	3.0	21.2	21.2	21.20	8.5	8.5	8.53	33.2	33.2	33.19	84.4	84.0	84.2	6.2	6.2	6.2	2.56	2.67	2.62
	12:15		Bottom	5.0	21.2	21.2	21.20	8.5	8.5	8.53	33.2	33.2	33.19	81.6	82.1	81.9	6.0	6.0	6.0	2.60	2.54	2.57
17/12/2021	13:12	Cloudy	Surface	1.0	21.8	21.8	21.80	8.5	8.5	8.52	33.2	33.2	33.19	92.1	95.7	93.9	6.7	6.9	6.8	2.44	2.42	2.43
	13:14		Middle	3.0	21.8	21.8	21.80	8.5	8.5	8.52	33.2	33.2	33.19	93.7	948.9	521.3	6.8	6.9	6.8	2.40	2.38	2.39
	13:16		Bottom	5.0	21.8	21.8	21.80	8.5	8.5	8.53	33.2	33.2	33.20	92.4	95.1	93.8	6.7	7.0	6.8	2.42	2.48	2.45
20/12/2021	14:02	Cloudy	Surface	1.0	17.7	17.7	17.70	8.5	8.5	8.46	33.5	33.5	33.45	91.9	90.8	91.4	7.2	7.1	7.2	2.72	2.70	2.71
	14:04		Middle	3.0	17.7	17.7	17.70	8.5	8.5	8.46	33.5	33.5	33.46	88.0	87.8	87.9	6.9	6.8	6.9	2.74	2.71	2.73
	14:06		Bottom	5.0	17.7	17.7	17.70	8.5	8.5	8.46	33.5	33.5	33.52	74.2	74.9	74.6	5.8	5.9	5.8	2.68	2.72	2.70
22/12/2021	12:54	Cloudy	Surface	1.0	20.9	20.9	20.90	8.5	8.5	8.45	33.1	33.1	33.08	88.4	90.2	89.3	6.6	6.7	6.6	2.86	2.83	2.85
	12:56		Middle	3.0	20.9	20.9	20.90	8.5	8.5	8.45	33.1	33.1	33.07	84.8	86.3	85.6	6.3	6.4	6.3	2.69	2.79	2.74
	12:58		Bottom	5.0	20.9	20.9	20.90	8.4	8.4	8.44	33.1	33.1	33.06	83.3	83.0	83.2	6.1	6.1	6.1	2.74	2.68	2.71
27/12/2021	17:10	Cloudy	Surface	1.0	17.7	17.7	17.70	8.5	8.5	8.48	33.4	33.4	33.40	82.6	81.3	82.0	6.4	6.4	6.4	2.86	2.64	2.75
	17:12		Middle	3.0	17.6	17.6	17.60	8.5	8.5	8.48	33.5	33.5	33.50	80.7	80.3	80.5	6.3	6.3	6.3	2.72	2.70	2.71
	0:00		Bottom	5.0	17.6	17.6	17.60	8.5	8.5	8.48	33.5	33.5	33.50	80.5	79.4	80.0	6.3	6.2	6.2	2.66	2.69	2.68
29/12/2021	10:48	Fine	Surface	1.0	21.1	21.1	21.10	8.5	8.5	8.45	33.6	33.6	33.62	81.3	83.4	82.4	5.9	6.1	6.0	2.68	2.70	2.69
	10:50		Middle	3.0	21.1	21.1	21.10	8.5	8.5	8.45	33.6	33.6	33.62	81.9	81.7	81.8	6.0	6.0	6.0	2.65	2.62	2.64
	10:52		Bottom	5.0	21.1	21.1	21.10	8.4	8.4	8.44	33.7	33.7	33.65	77.2	78.7	78.0	5.6	5.8	5.7	2.60	2.67	2.64
31/12/2021	10:25	Cloudy	Surface	1.0	20.0	20.0	19.97	8.2	8.2	8.16	33.0	33.1	33.06	79.7	79.9	79.8	6.0	6.1	6.0	0.83	0.73	0.78
	10:28		Middle	3.5	20.1	20.2	20.15	8.1	8.1	8.06	33.4	33.4	33.38	76.2	75.2	75.7	5.8	5.7	5.7	0.64	0.66	0.65
	10:30		Bottom	6.0	20.1	20.1	20.12	8.1	8.1	8.09	33.6	33.7	33.63	69.3	68.2	68.8	5.2	5.1	5.2	0.39	0.44	0.42



Water Monitoring Result at W2 - WSD Seawater Intake at Tai Po Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	8:15	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		0.03	0.03		<0.001	0.001		0.03	0.03		3	3		9	8	47	47	57
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	16:15		Bottom	4.0	4	4	0.03	0.03		<0.01	0.01		0.12	0.12		0.003	0.003		0.09	0.09		3	3		8	8	67	67	
1/12/2021	15:13	Fine	Surface	1.0	4	4	0.12	0.12		<0.01	0.01		0.20	0.20		0.024	0.024		0.09	0.09		<2	2		6	6	NOT DETECTED	1	1
	15:15		Middle	3.0	5	5	0.02	0.02	0.06	<0.01	0.01	0.01	0.05	0.05	0.10	0.005	0.005	0.012	0.02	0.02	0.04	<2	2	2	7	6	NOT DETECTED	1	
	15:17		Bottom	5.0	4	4	0.03	0.03		<0.01	0.01		0.06	0.06		0.006	0.006		0.02	0.02		2	2		6	6	1	1	
2/12/2021	15:40	Fine	Surface	1.0	4	4	0.05	0.05		<0.01	0.01		0.06	0.06		0.009	0.009		0.02	0.02		2	2		11	11	NOT DETECTED	1	3
	-		Middle	-	5	5	0.03	0.03	0.03	<0.01	0.01	0.01	0.05	0.05	0.05	0.006	0.006	0.006	0.02	0.02	0.02	<2	2	2	10	11	3	3	
	15:42		Bottom	4.0	5	5	0.02	0.02		<0.01	0.01		0.03	0.03		0.003	0.003		0.02	0.02		<2	2		10	10	5	5	
3/12/2021	16:11	Fine	Surface	1.0	6	6	0.31	0.31		0.01	0.01		0.36	0.36		0.056	0.056		0.04	0.04		2	2		6	6	28	28	61
	-		Middle	-	-	-	-	-	0.23	-	-	0.01	-	-	0.27	-	-	0.041	-	-	0.04	-	-	3	-	7	-	-	
	16:13		Bottom	4.0	10	10	0.14	0.14		<0.01	0.01		0.17	0.17		0.025	0.025		0.03	0.03		3	3		8	8	93	93	
6/12/2021	9:38	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		24	24	35	35	54
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	4	-	22	-	-	
	9:41		Bottom	4.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		20	20	73	73	
8/12/2021	5:53	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10	10	36	36	51
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	10	-	-	
	10:55		Bottom	4.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		11	11	65	65	
10/12/2021	13:07	Fine	Surface	1.0	2	2	0.15	0.15		0.01	0.01		0.17	0.17		0.020	0.020		<0.01	0.01		4	4		14	14	11	11	7
	-		Middle	-	-	-	-	-	0.10	-	-	0.01	-	-	0.11	-	-	0.013	-	-	0.01	-	-	4	-	10	-	-	
	13:08		Bottom	4.0	<2	2	0.04	0.04		<0.01	0.01		0.04	0.04		0.006	0.006		<0.01	0.01		3	3		7	7	3	3	
13/12/2021	12:27	Fine	Surface	1.0	<2	2	0.16	0.16		0.01	0.01		0.19	0.19		0.022	0.022		0.02	0.02		4	4		13	13	150	150	103
	-		Middle	-	-	-	-	-	0.09	-	-	0.01	-	-	0.11	-	-	0.012	-	-	0.02	-	-	4	-	13	-	-	
	12:29		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		12	12	56	56	
15/12/2021	15:13	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10	10	18	18	21
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	10	-	-	
	15:15		Bottom	4.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	24	24	
17/12/2021	15:40	Cloudy	Surface	1.0	<2	2	0.08	0.08		<0.01	0.01		0.10	0.10		0.015	0.015		0.02	0.02		3	3		7	7	4	4	4
	-		Middle	-	-	-	-	-	0.08	-	-	0.01	-	-	0.09	-	-	0.014	-	-	0.02	-	-	3	-	7	-	-	
	15:42		Bottom	4.0	<2	2	0.07	0.07		<0.01	0.01		0.08	0.08		0.013	0.013		0.01	0.01		3	3		7	7	3	3	
20/12/2021	15:54	Cloudy	Surface	1.0	2	2	0.10	0.10		<0.01	0.01		0.16	0.16		0.013	0.013		0.05	0.05		3	3		7	7	250	250	335
	-		Middle	-	-	-	-	-	0.08	-	-	0.01	-	-	0.13	-	-	0.009	-	-	0.04	-	-	3	-	7	-	-	
	15:56		Bottom	4.0	3	3	0.06	0.06		<0.01	0.01		0.10	0.10		0.005	0.005		0.03	0.03		2	2		7	7	420	420	
22/12/2021	10:05	Cloudy	Surface	1.0	<2	2	0.12	0.12		<0.01	0.01		0.16	0.16		0.013	0.013		0.03	0.03		<2	2		4	4	48	48	37
	-		Middle	-	-	-	-	-	0.23	-	-	0.01	-	-	0.27	-	-	0.022	-	-	0.04	-	-	2	-	4	-	-	
	10:07		Bottom	4.0	<2	2	0.33	0.33		<0.01	0.01		0.38	0.38		0.031	0.031		0.05	0.05		<2	2		4	4	26	26	
24/12/2021	10:14	Cloudy	Surface	1.0	<2	2	0.02	0.02		<0.01	0.01		0.04	0.04		0.003	0.003		0.02	0.02		<2	2		8	8	220	220	290
	-		Middle	-	-	-	-	-	0.06	-	-	0.01	-	-	0.09	-	-	0.007	-	-	0.03	-	-	2	-	8	-	-	
	10:16		Bottom	4.0	<2	2	0.10	0.10		<0.01	0.01		0.14	0.14		0.010	0.010		0.04	0.04		<2	2		8	8	360	360	
27/12/2021	13:24	Cloudy	Surface	1.0	2	2	0.05	0.05		<0.01	0.01		0.07	0.07		0.007	0.007		0.02	0.02		2	2		9	9	6	6	11
	-		Middle	-	-	-	-	-	0.05	-	-	0.01	-	-	0.07	-	-	0.006	-	-	0.02	-	-	2	-	8	-	-	
	13:26		Bottom	4.0	3	3	0.05	0.05		<0.01	0.01		0.07	0.07		0.005	0.005		0.02	0.02		2	2		8	8	15	15	
29/12/2021	14:51	Fine	Surface	1.0	6	6	0.13	0.13		<0.01	0.01		0.17	0.17		0.006	0.006		0.04	0.04		<2	2		3	3	720	720	615
	-		Middle	-	-	-	-	-	0.10	-	-	0.01	-	-	0.13	-	-	0.006	-	-	0.04	-	-	2	-	4	-	-	
	14:53		Bottom	4.0	7	7	0.06	0.06		<0.01	0.01		0.09	0.09		0.006	0.006		0.03	0.03		2	2		4	4	510	510	



Water Monitoring Result at W2 - WSD Seawater Intake at Tai Po Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
				m			mg/L			mg/L			mg/L			mg/L			mg/L			mg/L			mg/m ³		CFU/100mL		
30/11/2021	10:28	Fine	Surface	1.0	8	8	0.40	0.40		0.02	0.02		0.95	0.95		0.021	0.021		0.53	0.53		4	4	14	14	180	180	133	
	-		Middle	-	-	-	-	-	0.26	-	-	0.02	-	-	0.63	-	-	0.013	-	-	0.36	-	-	4	-	-	-		-
	10:30		Bottom	4.0	6	6	0.11	0.11		<0.01	0.01		0.30	0.30		0.004	0.004		0.19	0.19		3	3	13	13	85	85		
1/12/2021	9:25	Fine	Surface	1.0	6	6	0.42	0.42		0.02	0.02		0.91	0.91		0.084	0.084		0.47	0.47		<2	2	5	5	67	67	48	
	-		Middle	-	-	-	-	-	0.33	-	-	0.02	-	-	0.71	-	-	0.064	-	-	0.37	-	-	2	-	6	-		-
	9:27		Bottom	4.0	6	6	0.23	0.23		0.01	0.01		0.50	0.50		0.044	0.044		0.26	0.26		<2	2	6	6	28	28		
2/12/2021	9:48	Fine	Surface	1.0	3	3	0.48	0.48		<0.01	0.01		0.56	0.56		0.093	0.093		0.08	0.08		<2	2	7	7	150	150	102	
	-		Middle	-	5	5	0.33	0.33	0.29	<0.01	0.01	0.01	0.39	0.39	0.35	0.064	0.064	0.057	0.06	0.06	0.05	<2	2	2	7	8	110		110
	9:50		Bottom	4.0	5	5	0.07	0.07		<0.01	0.01		0.09	0.09		0.014	0.014		0.02	0.02		<2	2	9	9	46	46		
3/12/2021	10:14	Fine	Surface	1.0	7	7	0.16	0.16		<0.01	0.01		0.19	0.19		0.026	0.026		0.03	0.03		2	2	6	6	230	230	223	
	-		Middle	-	7	7	0.16	0.16	0.19	<0.01	0.01	0.01	0.20	0.20	0.23	0.022	0.022	0.029	0.03	0.03	0.03	<2	2	2	8	7	200		200
	10:18		Bottom	5.0	6	6	0.26	0.26		<0.01	0.01		0.30	0.30		0.039	0.039		0.04	0.04		<2	2	7	7	240	240		
6/12/2021	13:06	Fine	Surface	1.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		5	5	22	22	4	4	3	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	5	-	21	-		-
	13:09		Bottom	4.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4	20	20	1	1		
8/12/2021	14:20	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	11	11	110	110	105	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	12	-		-
	14:22		Bottom	4.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	13	13	99	99		
10/12/2021	17:46	Fine	Surface	1.0	<2	2	0.02	0.02		<0.01	0.01		<0.02	0.02		0.002	0.002		<0.01	0.01		3	3	7	7	20	20	14	
	-		Middle	-	-	-	-	-	0.02	-	-	0.01	-	-	0.02	-	-	0.002	-	-	0.01	-	-	3	-	8	-		-
	17:48		Bottom	4.0	3	3	0.01	0.01		<0.01	0.01		<0.02	0.02		0.002	0.002		<0.01	0.01		2	2	8	8	8	8		
13/12/2021	9:21	Fine	Surface	1.0	<2	2	0.02	0.02		<0.01	0.01		0.05	0.05		0.004	0.004		0.03	0.03		4	4	15	15	300	300	290	
	-		Middle	-	-	-	-	-	0.07	-	-	0.01	-	-	0.10	-	-	0.012	-	-	0.03	-	-	4	-	14	-		-
	9:23		Bottom	4.0	<2	2	0.12	0.12		<0.01	0.01		0.14	0.14		0.019	0.019		0.02	0.02		3	3	13	13	280	280		
15/12/2021	10:26	Cloudy	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		2	2	12	12	220	220	170	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	2	-	11	-		-
	10:28		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	10	10	120	120		
17/12/2021	10:40	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	8	8	30	30	17	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	7	-		-
	10:42		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	6	6	3	3		
20/12/2021	13:06	Cloudy	Surface	1.0	<2	2	2.99	2.99		0.04	0.04		3.21	3.21		0.375	0.375		0.18	0.18		2	2	10	10	240	240	200	
	-		Middle	-	-	-	-	-	2.28	-	-	0.03	-	-	2.45	-	-	0.257	-	-	0.14	-	-	2	-	11	-		-
	13:08		Bottom	3.0	4	4	1.57	1.57		0.02	0.02		1.68	1.68		0.139	0.139		0.09	0.09		2	2	13	13	160	160		
22/12/2021	13:17	Cloudy	Surface	1.0	<2	2	0.09	0.09		<0.01	0.01		0.12	0.12		0.007	0.007		0.03	0.03		<2	2	5	5	3	3	4	
	-		Middle	-	-	-	-	-	0.07	-	-	0.01	-	-	0.10	-	-	0.006	-	-	0.03	-	-	2	-	4	-		-
	13:19		Bottom	4.0	<2	2	0.05	0.05		<0.01	0.01		0.07	0.07		0.004	0.004		0.02	0.02		<2	2	4	4	4	4		
27/12/2021	17:28	Cloudy	Surface	1.0	4	4	0.07	0.07		<0.01	0.01		0.09	0.09		0.006	0.006		0.02	0.02		2	2	8	8	19	19	170	
	-		Middle	-	-	-	-	-	0.70	-	-	0.02	-	-	0.77	-	-	0.047	-	-	0.06	-	-	2	-	8	-		-
	17:29		Bottom	4.0	5	5	1.32	1.32		0.02	0.02		1.44	1.44		0.088	0.088		0.10	0.10		2	2	7	7	320	320		
29/12/2021	9:12	Fine	Surface	1.0	8	8	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		2	2	4	4	8	8	13	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	2	-	4	-		-
	9:14		Bottom	4.0	8	8	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		2	2	4	4	17	17		
31/12/2021	10:18	Cloudy	Surface	1.0	3	3	0.03	0.03		<0.01	0.01		0.05	0.05		0.002	0.002		0.02	0.02	0.02	<2	2	15	15	100	100	110	
	0:00		Middle	-	-	-	-	-	0.03	-	-	0.01	-	-	0.04	-	-	0.002	-	-		-	-	2	-	11	-		-
	10:20		Bottom	4.0	2	2	0.02	0.02		<0.01	0.01		0.03	0.03		0.001	0.001		0.01	0.01		<2	2	7	7	120	120		



Water Monitoring Result at F2-Yim Tin Tsai (East) Fish Culture Zone
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	11:31	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	1	1	
	0:00		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	2
	11:33		Bottom	4.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	2	2	
1/12/2021	10:25	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
	10:27		Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	4	NOT DETECTED	1	1
	10:30		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
2/12/2021	10:55	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	10:58		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	3	2	2	2
	11:01		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	3	3	
3/12/2021	11:00	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	4	10	10	
	11:02		Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	4	3	3	5
	11:04		Bottom	5.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	3	3	
6/12/2021	13:27	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3	3	11	11	
	13:29		Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	3	1	1	6
	13:32		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3	3	6	6	
8/12/2021	14:37	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2	3	1	1	
	14:38		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	3	3	NOT DETECTED	1	2
	14:04		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	3	3	
10/12/2021	16:46	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2	2	NOT DETECTED	1	
	16:48		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1	2
	16:50		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2	2	4	4	
13/12/2021	10:07	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	20	20	
	10:09		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	13	13	14
	10:11		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	9	9	
15/12/2021	11:12	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	22	22	
	11:14		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	11	11	13
	11:16		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	5	5	
17/12/2021	11:20	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	5	5	
	11:22		Middle	3.5	<2	2	0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	3	3	2	2	3
	11:24		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3	3	1	1	
20/12/2021	13:38	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	5	5	
	13:40		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	7
	13:41		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	14	14	
22/12/2021	13:35	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	2	2	
	13:37		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	5	5	9
	13:38		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	20	20	
27/12/2021	17:43	Cloudy	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	13	13	
	17:44		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	12	12	11
	17:45		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	9	9	
29/12/2021	9:50	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3	3	1	1	
	9:52		Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	3	4
	9:55		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	8	8	
31/12/2021	11:00	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01	0.01	<2	2		4	4	13	13	
	11:02		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	13	13	12
	11:04		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	10	10	



Water Monitoring Result at F3 - Yung Shue Au Fish Culture Zone / Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL				
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average		
30/11/2021	12:45	Fine	Surface	1.0	3	3	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	4	4	9	
	12:47		Middle	3.5	5	5		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	6	8	8		
	12:49		Bottom	6.0	5	5		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	6	16	16		
1/12/2021	14:18	Fine	Surface	1.0	3	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	14:20		Middle	4.0	4	4		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1		
	14:22		Bottom	7.0	4	4		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1		
2/12/2021	14:31	Fine	Surface	1.0	3	3	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	4	3	
	14:33		Middle	3.5	2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	4	4		
	14:35		Bottom	6.0	2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	2	2		
3/12/2021	16:55	Fine	Surface	1.0	4	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	1	3	3	4		
	16:57		Middle	3.5	4	4		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	1	4		4	
	16:59		Bottom	6.0	5	5		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		0	0	4		4	
6/12/2021	9:31	Fine	Surface	1.0	2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	4	6	6	5	
	9:33		Middle	3.5	2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	4	4		
	9:35		Bottom	6.0	3	3		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	5	5		
8/12/2021	10:51	Fine	Surface	1.0	4	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	4	4	NOT DETECTED	1	1	
	10:53		Middle	3.5	3	3		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	4	1	1		
	10:55		Bottom	6.0	4	4		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	4	NOT DETECTED	1		
10/12/2021	13:42	Fine	Surface	1.0	<2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	13:44		Middle	3.5	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	1	1		
	13:46		Bottom	6.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1		
13/12/2021	15:21	Fine	Surface	1.0	<2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1	1	
	15:23		Middle	3.5	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	1	1		
	15:25		Bottom	6.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	1	1		
15/12/2021	15:32	Cloudy	Surface	1.0	<2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	12	12	11	
	15:34		Middle	4.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	4	9	9		
	15:36		Bottom	7.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	4	11	11		
17/12/2021	16:32	Cloudy	Surface	1.0	<2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	4	3	4	4	6	
	16:34		Middle	3.5	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4	3	6	6		
	16:36		Bottom	6.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4	3	7	7		
20/12/2021	16:50	Cloudy	Surface	1.0	<2	2	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	5	4	9	9	8
	16:52		Middle	3.5	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	4	9	9		
	16:54		Bottom	6.0	4	4		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	4	5	5		
22/12/2021	9:11	Cloudy	Surface	1.0	<2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	5	5	4	
	9:13		Middle	3.5	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	2	2		
	9:15		Bottom	6.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	6	6		
24/12/2021	9:55	Cloudy	Surface	1.0	<2	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	4	5	
	9:57		Middle	4.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	4	4	4		
	9:59		Bottom	7.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	7	7		
27/12/2021	11:24	Cloudy	Surface	1.0	3	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	1	1	3	
	11:26		Middle	3.5	3	3		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	6	4	4		
	11:28		Bottom	6.0	<2	2		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	6	3	3		
29/12/2021	15:14	Fine	Surface	1.0	4	4	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	2	
	15:16		Middle	3.5	3	3		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	4	4		
	15:18		Bottom	6.0	3	3		<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4	4	2	2		



Water Monitoring Result at F3 - Yung Shue Au Fish Culture Zone / Important Nursery Area for Commercial Fisheries Resources at Three Fathoms Cove
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100ml		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*
30/11/2021	8:45	Fine	Surface	1.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	5	78	78	
	8:47		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	5	360	360	177
	8:49		Bottom	6.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.01	0.01	0.01	<2	2	2	4	5	93	93	
1/12/2021	12:21	Fine	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	
	12:23		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	1	1	1
	12:25		Bottom	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	2	2	
2/12/2021	10:10	Fine	Surface	1.0	7	7	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	1	1	1
	10:12		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	1
	10:14		Bottom	6.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	1	1	
3/12/2021	11:48	Fine	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	3	4	4	4
	11:50		Middle	3.5	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	6	6	4
	11:52		Bottom	6.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	3	
6/12/2021	14:34	Fine	Surface	1.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	3	3	3
	14:36		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	4	4	3
	14:38		Bottom	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	3	
8/12/2021	16:12	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	
	16:14		Middle	3.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1	1
	16:16		Bottom	6.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	
10/12/2021	18:00	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	
	18:02		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	2	1	1	1
	18:04		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1	
13/12/2021	9:04	Fine	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	
	9:06		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1
	9:08		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	
15/12/2021	10:06	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	7	7	NOT DETECTED	1	
	10:08		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	8	7	NOT DETECTED	1	1
	10:10		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	7	1	1	
17/12/2021	10:10	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	2	2	
	10:12		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	4	3	3	2
	10:14		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	
20/12/2021	11:45	Cloudy	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	9	9	
	11:47		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	11	11	9
	11:49		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	7	7	
22/12/2021	15:08	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	5	1	1	
	15:10		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	5	2	2	1
	15:12		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	1	1	
27/12/2021	19:35	Cloudy	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	4	4	
	19:37		Middle	4.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	2	2	3
	19:39		Bottom	7.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	3	3	
29/12/2021	9:01	Fine	Surface	1.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	1	1	
	9:03		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	1	1	1
	9:05		Bottom	6.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	
31/12/2021	9:38	Cloudy	Surface	1.0	3	3	<0.01	0.01	0.																				



**Water Monitoring Result at F4 - Lo Fu Wat Fish Culture Zone
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	14:42	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	14:44		Middle	6.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1	1
	14:46		Bottom	11.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		1	1	
1/12/2021	15:15	Fine	Surface	1.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	NOT DETECTED	1	
	15:17		Middle	6.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	1
	15:19		Bottom	11.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5		1	1	
2/12/2021	15:50	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
	15:52		Middle	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1
	15:54		Bottom	10.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		NOT DETECTED	1	
3/12/2021	15:18	Fine	Surface	1.0	9	9	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	15:20		Middle	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1
	15:22		Bottom	11.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
6/12/2021	10:55	Fine	Surface	1.0	9	9	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	NOT DETECTED	1	
	10:57		Middle	6.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1
	10:59		Bottom	11.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4		1	1	
8/12/2021	12:56	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	12:58		Middle	5.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1
	13:00		Bottom	10.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		1	1	
10/12/2021	15:21	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2	2	NOT DETECTED	1	
	15:23		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1
	15:25		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		NOT DETECTED	1	
13/12/2021	13:06	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2	2	NOT DETECTED	1	
	13:08		Middle	6.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1
	13:10		Bottom	11.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		NOT DETECTED	1	
15/12/2021	13:43	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	13:45		Middle	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1
	13:47		Bottom	11.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
17/12/2021	14:51	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		2	2	NOT DETECTED	1	
	14:53		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1	1
	14:55		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		NOT DETECTED	1	
20/12/2021	15:23	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
	15:25		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1
	15:27		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
22/12/2021	11:15	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
	11:17		Middle	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1
	11:19		Bottom	11.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		NOT DETECTED	1	
24/12/2021	11:22	Cloudy	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	1:24		Middle	6.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	2	2	1
	11:26		Bottom	11.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		1	1	
27/12/2021	13:08	Cloudy	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	13:10		Middle	5.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1
	13:12		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
29/12/2021	13:13	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3	3	NOT DETECTED	1	
	13:15		Middle	5.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1
	13:17		Bottom	10.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	



Water Monitoring Result at F4 - Lo Fu Wat Fish Culture Zone
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL			
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average	
30/11/2021	10:10	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.01	0.01	0.01	<2	2	2	3	3	2	2	3	3
	10:12		Middle	5.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	3	3	
	10:14		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	2	3	3	3	3	
1/12/2021	11:08	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	4	NOT DETECTED	1	1	
	11:10		Middle	6.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	11:12		Bottom	11.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	4	4	NOT DETECTED	1	1	
2/12/2021	11:35	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	5	NOT DETECTED	1	1	
	11:37		Middle	6.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	1	
	11:39		Bottom	11.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	5	5	NOT DETECTED	1	1	
3/12/2021	13:17	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1	1	
	13:19		Middle	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	13:21		Bottom	11.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	3	3	NOT DETECTED	1	1	
6/12/2021	13:19	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	13:21		Middle	5.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	13:23		Bottom	10.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	3	3	NOT DETECTED	1	1	
8/12/2021	15:015	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	2	2	NOT DETECTED	1	1	
	15:07		Middle	5.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1	
	15:09		Bottom	10.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	2	2	1	1		
10/12/2021	17:02	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1	
	17:04		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1	
	17:06		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	2	2	NOT DETECTED	1	1	
13/12/2021	10:24	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1	1	
	10:26		Middle	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	1	
	10:28		Bottom	11.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	2	2	NOT DETECTED	1	1	
15/12/2021	11:42	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	11:44		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	11:46		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	4	4	NOT DETECTED	1	1	
17/12/2021	12:23	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	3	3	NOT DETECTED	1	1
	12:25		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
	12:27		Bottom	10.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	3	3	1	1		
20/12/2021	13:05	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	13:07		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	13:09		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	2	3	3	1	1	
22/12/2021	13:33	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	13:35		Middle	5.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	1	1		
	13:37		Bottom	10.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	4	4	NOT DETECTED	1	1	
27/12/2021	17:39	Cloudy	Surface	1.0	6	6	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	1	
	17:41		Middle	6.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	3	NOT DETECTED	1	1	
	17:43		Bottom	11.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	3	3	NOT DETECTED	1	1	
29/12/2021	10:08	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	10:10		Middle	5.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	10:12		Bottom	10.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	2	4	4	NOT DETECTED	1	1	
31/12/2021	10:52	Cloudy	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	1	
	10:54		Middle	6.0	2	2	<0.01	0.01	0.01																					



**Water Monitoring Result at CR1 - Corals at Tai Po Industrial Estate
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	15:58	Fine	Surface	1.0	4	4	0.10	0.10	0.01	<0.01	0.01	0.01	0.29	0.29	0.14	0.017	0.017	0.19	0.19	0.07	0.07	0.09	3	3	6	6	89	89	54
	16:00		Middle	3.0	4	4	0.03	0.03	0.05	<0.01	0.01	0.01	0.09	0.09	0.014	0.004	0.004	0.008	0.07	0.07	0.09	<2	2	2	6	6	47	47	
	16:02		Bottom	5.0	7	7	0.01	0.01		<0.01	0.01	0.01	0.04	0.04		0.002	0.002		0.02	0.02		<2	2	2	7	7	27	27	
1/12/2021	15:25	Fine	Surface	1.0	5	5	0.06	0.06		<0.01	0.01	0.01	0.12	0.12		0.014	0.014		0.07	0.07		2	2	8	8	NOT DETECTED	1	13	
	15:27		Middle	3.5	4	4	0.02	0.02	0.03	<0.01	0.01	0.01	0.04	0.04	0.07	0.004	0.004	0.007	0.02	0.02	0.04	<2	2	2	9	8	33		33
	15:30		Bottom	6.0	4	4	0.02	0.02		<0.01	0.01	0.01	0.04	0.04		0.004	0.004		0.02	0.02		2	2	2	8	8	4		4
2/12/2021	15:50	Fine	Surface	1.0	4	4	0.02	0.02		<0.01	0.01	0.01	0.03	0.03		0.005	0.005		0.01	0.01		3	3	13	13	3	3	8	
	15:52		Middle	3.0	4	4	0.02	0.02	0.02	<0.01	0.01	0.01	<0.02	0.02	0.02	0.003	0.003	0.003	<0.01	0.01	0.01	2	2	2	11	12	4		4
	15:55		Bottom	5.0	5	5	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		12	12	16		16
3/12/2021	15:59	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	14	14	17	17	34	
	16:01		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	11	12	56	56		
	16:03		Bottom	5.0	7	7	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	10	10	29	29		
6/12/2021	9:20	Fine	Surface	1.0	5	5	0.02	0.02		<0.01	0.01	0.01	0.02	0.02		0.004	0.004		<0.01	0.01		4	4	15	15	6	6	8	
	9:22		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.002	<0.01	0.01	0.01	3	3	3	9	11	14		14
	9:25		Bottom	5.0	9	9	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	9	9	3	3		
8/12/2021	10:39	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	11	11	93	93	83	
	10:41		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	10	9	81	81		
	10:43		Bottom	5.0	5	5	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	6	6	74	74		
10/12/2021	13:00	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4	13	13	8	8	4	
	13:01		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	10	3		3
	13:03		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	10	10	2	2		
13/12/2021	12:15	Fine	Surface	1.0	<2	2	0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		0.002	0.002		<0.01	0.01		4	4	8	8	41	41	40	
	12:17		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	4	10	9	48		48
	12:19		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	9	9	31	31		
15/12/2021	15:04	Cloudy	Surface	1.0	<2	2	0.03	0.03		<0.01	0.01	0.01	0.04	0.04		0.004	0.004		0.02	0.02		3	3	20	20	14	14	10	
	15:07		Middle	3.5	<2	2	<0.01	0.01	0.02	<0.01	0.01	0.01	<0.02	0.02	0.03	<0.001	0.001	0.002	<0.01	0.01	0.01	2	2	2	13	15	7		7
	15:08		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	11	11	10	10		
17/12/2021	15:30	Cloudy	Surface	1.0	<2	2	0.04	0.04		<0.01	0.01	0.01	0.05	0.05		0.009	0.009		0.01	0.01		3	3	6	6	1	1	1	
	15:32		Middle	3.0	<2	2	0.01	0.01	0.02	<0.01	0.01	0.01	<0.02	0.02	0.03	0.002	0.002	0.004	<0.01	0.01	0.01	3	3	3	7	6	NOT DETECTED		1
	15:33		Bottom	5.0	<2	2	0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		0.001	0.001		<0.01	0.01		3	3	6	6	1	1		
20/12/2021	15:45	Cloudy	Surface	1.0	3	3	0.04	0.04		<0.01	0.01	0.01	0.06	0.06		0.002	0.002		0.02	0.02		3	3	13	13	320	320	383	
	14:47		Middle	3.0	3	3	0.03	0.03	0.03	<0.01	0.01	0.01	0.06	0.06	0.05	0.002	0.002	0.002	0.03	0.03	0.02	3	3	3	9	10	450		450
	15:48		Bottom	5.0	4	4	0.02	0.02		<0.01	0.01	0.01	0.03	0.03		0.001	0.001		0.01	0.01		3	3	8	8	380	380		
22/12/2021	9:48	Cloudy	Surface	1.0	<2	2	0.07	0.07		<0.01	0.01	0.01	0.09	0.09		0.010	0.010		0.02	0.02		<2	2	5	5	62	62	42	
	9:50		Middle	3.0	<2	2	<0.01	0.01	0.05	<0.01	0.01	0.01	<0.02	0.02	0.06	<0.001	0.001	0.005	<0.01	0.01	0.02	<2	2	2	6	5	26		26
	9:52		Bottom	5.0	<2	2	0.06	0.06		<0.01	0.01	0.01	0.07	0.07		0.005	0.005		0.02	0.02		<2	2	4	4	37	37		
24/12/2021	10:06	Cloudy	Surface	1.0	<2	2	0.02	0.02		<0.01	0.01	0.01	0.05	0.05		0.002	0.002		0.04	0.04		2	2	9	9	93	93	82	
	10:07		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.03	<0.001	0.001	0.001	0.03	0.03	0.03	<2	2	2	9	9	89		89
	10:08		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2	9	9	64	64		
27/12/2021	13:15	Cloudy	Surface	1.0	2	2	0.05	0.05		<0.01	0.01	0.01	0.07	0.07		0.010	0.010		0.02	0.02		2	2	8	8	4	4	3	
	13:17		Middle	3.0	4	4	0.04	0.04	0.04	<0.01	0.01	0.01	0.06	0.06	0.05	0.008	0.008	0.007	0.01	0.01	0.01	2	2	2	7	7	3		3
	13:18		Bottom	5.0	4	4	0.02	0.02		<0.01	0.01	0.01	<0.02	0.02		0.004	0.004		<0.01	0.01		2	2	8	8	1	1		
29/12/2021	14:42	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2	4	4	600	600	397	
	14:43		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	380		380
	14:45		Bottom	5.0	7	7	<0.01	0.01		<0.01	0.01	0.01	<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	6	6	210	210		



Water Monitoring Result at CR1 - Corals at Tai Po Industrial Estate
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	10:48	Fine	Surface	1.0	2	2	0.34	0.34		<0.01	0.01		0.46	0.46		0.023	0.023		0.12	0.12		3	3		12		51	51	
	-		Middle	-	-	-	-	-	0.25	-	-	0.01	-	-	0.33	-	-	0.016	-	-	0.09	-	-	3	12	-	-	37	
	10:50		Bottom	4.0	4	4	0.15	0.15		<0.01	0.01		0.20	0.20		0.009	0.009		0.05	0.05		3	3		13		22	22	
1/12/2021	9:34	Fine	Surface	1.0	3	3	0.11	0.11		<0.01	0.01		0.21	0.21		0.025	0.025		0.10	0.10		<2	2		7		22	22	
	9:36		Middle	3.0	5	5	0.10	0.10	0.08	<0.01	0.01	0.01	0.17	0.17	0.16	0.022	0.022	0.019	0.08	0.08	0.07	<2	2	2	7	7	26	26	
	9:38		Bottom	5.0	8	8	0.04	0.04		<0.01	0.01		0.09	0.09		0.009	0.009		0.04	0.04		<2	2		7		23	23	
2/12/2021	10:05	Fine	Surface	1.0	5	5	0.04	0.04		<0.01	0.01		0.06	0.06		0.008	0.008		0.02	0.02		2	2		12		320	320	
	10:07		Middle	3.0	6	6	0.02	0.02	0.03	<0.01	0.01	0.01	0.03	0.03	0.04	<0.001	0.001	0.004	0.01	0.01	0.01	2	2	2	11	11	180	180	
	10:10		Bottom	5.0	9	9	0.02	0.02		<0.01	0.01		0.02	0.02		0.004	0.004		<0.01	0.01		<2	2		10		120	120	
3/12/2021	10:03	Fine	Surface	1.0	5	5	0.02	0.02		<0.01	0.01		0.03	0.03		0.003	0.003		0.01	0.01		2	2		8		310	310	
	10:05		Middle	3.0	5	5	0.03	0.03	0.03	<0.01	0.01	0.01	0.04	0.04	0.04	0.004	0.004	0.004	0.01	0.01	0.01	2	2	2	8	8	330	330	
	10:07		Bottom	5.0	6	6	0.04	0.04		<0.01	0.01		0.04	0.04		0.005	0.005		<0.01	0.01		2	2		8		220	220	
6/12/2021	12:55	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		13		3	3	
	12:57		Middle	3.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	15	13	4	4	
	13:00		Bottom	5.0	8	8	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10		2	2	
8/12/2021	14:09	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		18		4	4	
	14:11		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	14	15	26	26	
	14:13		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		13		34	34	
10/12/2021	17:39	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8		1	1	
	17:40		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	7	2	2	
	17:42		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7		NOT DETECTED	1	
13/12/2021	9:12	Fine	Surface	1.0	<2	2	0.08	0.08		<0.01	0.01		0.11	0.11		0.013	0.013		0.03	0.03		4	4		15		280	280	
	9:14		Middle	3.0	<2	2	0.03	0.03	0.04	<0.01	0.01	0.01	0.07	0.07	0.07	0.005	0.005	0.006	0.04	0.04	0.03	4	4	4	14	13	320	320	
	9:16		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		3	3		10		310	310	
15/12/2021	10:15	Cloudy	Surface	1.0	<2	2	0.08	0.08		<0.01	0.01		0.11	0.11		0.006	0.006		0.03	0.03		3	3		16		530	530	
	10:17		Middle	3.0	<2	2	0.23	0.23	0.16	<0.01	0.01	0.01	0.28	0.28	0.20	0.015	0.015	0.015	0.06	0.06	0.04	3	3	3	14	14	740	740	
	10:20		Bottom	5.0	<2	2	0.18	0.18		<0.01	0.01		0.22	0.22		0.024	0.024		0.04	0.04		3	3		12		630	630	
17/12/2021	10:33	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		8		22	22	
	10:35		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	7	7	15	15	
	10:37		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8		7	7	
20/12/2021	12:48	Cloudy	Surface	1.0	4	4	0.02	0.02		<0.01	0.01		<0.02	0.02		0.002	0.002		<0.01	0.01		3	3		16		32	32	
	12:50		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	11	13	24	24	
	12:51		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		12		10	10	
22/12/2021	13:10	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		1	1	
	13:11		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	NOT DETECTED	1	
	13:13		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5		5	5	
27/12/2021	17:33	Cloudy	Surface	1.0	6	6	0.05	0.05		<0.01	0.01		0.06	0.06		0.003	0.003		0.01	0.01		2	2		8		23	23	
	17:35		Middle	3.0	5	5	0.03	0.03	0.03	<0.01	0.01	0.01	0.04	0.04	0.04	0.002	0.002	0.002	0.01	0.01	0.01	2	2	2	7	8	6	6	
	17:36		Bottom	5.0	5	5	0.02	0.02		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8		4	4	
29/12/2021	9:02	Fine	Surface	1.0	4	4	0.02	0.02		<0.01	0.01		0.03	0.03		<0.001	0.001		0.01	0.01		<2	2		5		16	16	
	9:04		Middle	3.0	4	4	0.02	0.02	0.02	<0.01	0.01	0.01	0.03	0.03	0.03	<0.001	0.001	0.001	0.01	0.01	0.01	2	2	2	4	5	23	23	
	9:05		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		23	23	
31/12/2021	10:08	Cloudy	Surface	1.0	<2	2	0.03	0.03		<0.01	0.01		0.05	0.05		0.002	0.002		0.02	0.02	0.01	<2	2		5		310	310	
	10:10		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.03	<0.001	0.001	0.001	0.01	0.01		<2	2	2	6	6	280	280	
	10:11		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		130	130	



**Water Monitoring Result at CR15 - Corals at Science Park
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	15:12	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10		92	92	94
	15:15		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	10	10	93	93	
	15:17		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10		98	98	
1/12/2021	14:57	Fine	Surface	1.0	6	6	0.03	0.03		<0.01	0.01		0.05	0.05		0.007	0.007		0.03	0.03		3	3		16		2	2	1
	15:00		Middle	3.5	6	6	0.03	0.03	0.03	<0.01	0.01	0.01	0.06	0.06	0.05	0.007	0.007	0.006	0.03	0.03	0.03	3	3	3	17	16	NOT DETECTED	1	
	15:02		Bottom	6.0	4	4	0.02	0.02		<0.01	0.01		0.04	0.04		0.004	0.004		0.02	0.02		2	2		14		1	1	
2/12/2021	15:25	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		7		NOT DETECTED	1	1
	15:27		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	7	7	NOT DETECTED	1	
	15:29		Bottom	6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8		NOT DETECTED	1	
3/12/2021	15:39	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		11		NOT DETECTED	1	1
	15:41		Middle	3.5	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	4	9	10	NOT DETECTED	1	
	15:44		Bottom	6.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		5	5		9		NOT DETECTED	1	
6/12/2021	9:00	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		8		5	5	12
	9:02		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	12	8	11	11	
	9:04		Bottom	5.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		4		21	21	
8/12/2021	10:22	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10		6	6	4
	10:24		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	8	9	5	5	
	10:26		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9		2	2	
10/12/2021	12:46	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		6		NOT DETECTED	1	1
	12:48		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	NOT DETECTED	1	
	12:50		Bottom	6.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		8		NOT DETECTED	1	
13/12/2021	13:29	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.04	0.04		<0.001	0.001		0.04	0.04		2	2		3		99	99	107
	13:31		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.09	<0.001	0.001	0.001	<0.01	0.01	0.09	2	2	2	3	3	13	13	
	13:34		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		0.21	0.21		<0.001	0.001		0.21	0.21		2	2		3		210	210	
15/12/2021	14:49	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		9		5	5	3
	14:51		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	12	11	3	3	
	14:53		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		11		NOT DETECTED	1	
17/12/2021	15:16	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		9		1	1	2
	15:17		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	4	8	8	2	2	
	15:19		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7		2	2	
20/12/2021	16:10	Cloudy	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8		29	29	22
	16:13		Middle	3.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	8	25	25	
	16:15		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7		13	13	
22/12/2021	9:35	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10		6	6	7
	9:37		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	5	5	
	9:39		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9		10	10	
24/12/2021	9:51	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.04	0.04		<0.001	0.001		0.04	0.04		<2	2		7		19	19	11
	9:53		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.03	<0.001	0.001	0.001	0.02	0.02	0.02	<2	2	2	9	8	6	6	
	9:54		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		9		7	7	
27/12/2021	12:58	Cloudy	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9		37	37	38
	13:00		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	28	28	
	13:01		Bottom	6.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10		49	49	
29/12/2021	14:28	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6		9	9	8
	14:30		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	7	10	10	
	14:32		Bottom	6.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		7		4	4	



**Water Monitoring Result at CR15 - Corals at Science Park
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	10:10	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10	9	640	640	560
	10:12		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	9	740	740	
	10:14		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8		300	300	
1/12/2021	9:09	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.02	0.02		2	2		9	9	7	7	20
	9:11		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	0.08	0.08	0.06	<0.001	0.001	0.001	0.08	0.08	0.06	2	2	2	9	9	25	25	
	9:14		Bottom	6.0	4	4	<0.01	0.01		<0.01	0.01		0.07	0.07		<0.001	0.001		0.07	0.07		<2	2		9		27	27	
2/12/2021	9:30	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8	8	1	1	1
	9:32		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	9	8	1	1	
	9:35		Bottom	6.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8		1	1	
3/12/2021	9:44	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		10	10	3	3	2
	9:46		Middle	3.5	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	11	10	1	1	
	9:49		Bottom	6.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10		1	1	
6/12/2021	14:20	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	7	NOT DETECTED	1	1
	14:22		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	2	5	7	NOT DETECTED	1	
	14:25		Bottom	6.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9		NOT DETECTED	1	
8/12/2021	15:21	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	8	2	2	8
	15:23		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	9	8	6	6	
	15:25		Bottom	6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		9		17	17	
10/12/2021	17:58	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	5	NOT DETECTED	1	1
	18:00		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	5	5	NOT DETECTED	1	
	18:01		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		1	1	
13/12/2021	8:45	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.05	0.05		<0.001	0.001		0.05	0.05		<2	2		3	4	80	80	34
	8:47		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.03	<0.001	0.001	0.001	<0.01	0.01	0.02	<2	2	2	4	4	8	8	
	8:50		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		5		15	15	
15/12/2021	10:04	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	8	19	19	16
	10:06		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	8	13	13	
	10:08		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		9		17	17	
17/12/2021	10:14	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.02	0.02		<0.001	0.001		0.02	0.02		2	2		7	7	17	17	15
	10:16		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.02	0.02	0.02	2	2	2	6	7	23	23	
	10:18		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7		4	4	
20/12/2021	12:32	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.08	0.08		<0.001	0.001		0.08	0.08		2	2		8	8	410	410	167
	12:33		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.04	<0.001	0.001	0.001	0.01	0.01	0.03	2	2	2	6	8	63	63	
	12:35		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9		27	27	
22/12/2021	14:15	Cloudy	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.02	0.02		<2	2		7	7	19	19	52
	14:17		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	0.14	0.14	0.07	<0.001	0.001	0.001	0.14	0.14	0.07	<2	2	2	6	7	89	89	
	14:19		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		0.04	0.04		<0.001	0.001		0.04	0.04		<2	2		8		48	48	
27/12/2021	18:28	Cloudy	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		2	2		9	8	82	82	1561
	18:30		Middle	3.0	4	4	0.02	0.02	0.01	<0.01	0.01	0.01	0.19	0.19	0.09	0.002	0.002	0.001	0.17	0.17	0.08	2	2	2	7	8	2700	2700	
	18:31		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		0.07	0.07		<0.001	0.001		0.07	0.07		2	2		8		1900	1900	
29/12/2021	8:47	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	6	NOT DETECTED	1	1
	8:49		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	1	1	
	8:51		Bottom	6.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6		NOT DETECTED	1	
31/12/2021	9:51	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01	0.04	<2	2		4	4	8	8	55
	9:53		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.04	0.04	0.05	<0.001	0.001	0.001	0.04	0.04		<2	2	2	5	4	36	36	
	9:55		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		0.08	0.08		<0.001	0.001		0.08	0.08		<2	2		4		120	120	



**Water Monitoring Result at CR16 - Corals at Sha Tin Hoi North
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	14:43	Fine	Surface	1.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	NOT DETECTED	1	2
	14:45		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	1	1	2
	14:47		Bottom	6.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	5	5	2
1/12/2021	14:34	Fine	Surface	1.0	13	13	0.17	0.17	0.13	0.02	0.02	0.01	0.25	0.25	0.19	0.039	0.039	0.028	0.07	0.07	0.06	3	3	3	18	15	2	2	2
	14:36		Middle	3.5	12	12	0.14	0.14	0.13	<0.01	0.01	0.01	0.21	0.21	0.19	0.030	0.030	0.028	0.07	0.07	0.06	3	3	3	15	15	2	2	2
	14:38		Bottom	6.0	12	12	0.07	0.07	0.13	<0.01	0.01	0.01	0.11	0.11	0.19	0.016	0.016	0.028	0.04	0.04	0.06	2	2	2	11	11	2	2	2
2/12/2021	14:55	Fine	Surface	1.0	5	5	0.01	0.01	0.01	<0.01	0.01	0.01	0.08	0.08	0.04	0.003	0.003	0.002	0.06	0.06	0.03	5	5	3	34	26	NOT DETECTED	1	1
	14:57		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.04	<0.001	0.001	0.002	0.03	0.03	0.03	3	3	3	21	21	1	1	1
	14:59		Bottom	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.04	<0.001	0.001	0.002	0.01	0.01	0.03	2	2	2	21	21	2	2	1
3/12/2021	15:10	Fine	Surface	1.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	4	13	13	NOT DETECTED	1	1
	15:12		Middle	4.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	4	14	14	2	2	1
	15:15		Bottom	7.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	11	11	NOT DETECTED	1	1
6/12/2021	8:20	Fine	Surface	1.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	1	1	1
	8:23		Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	8	8	NOT DETECTED	1	1
	8:26		Bottom	5.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	NOT DETECTED	1	1
8/12/2021	9:50	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	7	9	9	9
	9:52		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	14	14	9
	9:54		Bottom	6.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	7	5	5	9
10/12/2021	12:21	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	6	6	2	2	1
	12:23		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	6	6	NOT DETECTED	1	1
	12:25		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	1	1	1
13/12/2021	14:20	Fine	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	5	NOT DETECTED	1	1
	14:24		Middle	4.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	4	4	NOT DETECTED	1	1
	14:27		Bottom	7.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	4	4	NOT DETECTED	1	1
15/12/2021	14:33	Cloudy	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	11	11	2	2	5
	14:35		Middle	3.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	9	3	3	5
	14:37		Bottom	6.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	7	7	9	9	5
17/12/2021	14:55	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	1	1	1
	14:58		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	5	2	2	1
	15:00		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	5	NOT DETECTED	1	1
20/12/2021	16:56	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	9	9	43	43	37
	16:58		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	9	9	31	31	37
	17:00		Bottom	5.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	9	9	36	36	37
22/12/2021	9:10	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.01	0.01	0.01	2	2	2	7	7	12	12	12
	9:13		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	9	10	10	12
	9:15		Bottom	6.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	14	14	12
24/12/2021	9:30	Cloudy	Surface	1.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	0.04	0.04	0.04	<0.001	0.001	0.001	0.04	0.04	0.04	<2	2	2	7	7	63	63	35
	9:32		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	0.05	0.05	0.04	<0.001	0.001	0.001	0.05	0.05	0.04	<2	2	2	3	3	24	24	35
	9:33		Bottom	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.04	<0.001	0.001	0.001	0.03	0.03	0.04	<2	2	2	8	8	19	19	35
27/12/2021	12:37	Cloudy	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	9	NOT DETECTED	1	4
	12:39		Middle	3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	8	8	6	6	4
	12:41		Bottom	6.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	6	6	4



Water Monitoring Result at CR16 - Corals at Sha Tin Hoi North
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	9:15	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	7	8	8	11
	9:18		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	7	12	12	
	9:20		Bottom	6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6		12	12	
1/12/2021	8:42	Fine	Surface	1.0	5	5	0.08	0.08		<0.01	0.01		0.12	0.12		0.019	0.019		0.03	0.03		<2	2		9	8	28	28	20
	8:45		Middle	4.0	6	6	0.08	0.08	0.08	<0.01	0.01	0.01	0.12	0.12	0.12	0.017	0.017	0.018	0.03	0.03	0.03	<2	2	2	8	8	18	18	
	8:47		Bottom	7.0	6	6	0.09	0.09		<0.01	0.01		0.12	0.12		0.019	0.019		0.03	0.03		<2	2		9		13	13	
2/12/2021	9:04	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		9	8	NOT DETECTED	1	1
	9:07		Middle	4.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	8	8	NOT DETECTED	1	
	9:09		Bottom	7.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		7		NOT DETECTED	1	
3/12/2021	9:20	Fine	Surface	1.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10	9	2	2	1
	9:23		Middle	4.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	9	1	1	
	9:26		Bottom	7.0	6	6	0.01	0.01		<0.01	0.01		<0.02	0.02		0.002	0.002		<0.01	0.01		2	2		9		NOT DETECTED	1	
6/12/2021	14:48	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		6	6	NOT DETECTED	1	1
	14:51		Middle	0.4	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	6	6	NOT DETECTED	1	
	14:54		Bottom	6.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7		NOT DETECTED	1	
8/12/2021	15:41	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	6	NOT DETECTED	1	1
	15:42		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	6	NOT DETECTED	1	
	15:44		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6		NOT DETECTED	1	
10/12/2021	18:25	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4	5	3	3	2
	18:27		Middle	3.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	
	18:29		Bottom	6.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		1	1	
13/12/2021	8:08	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4	4	NOT DETECTED	1	1
	8:10		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	4	4	2	2	
	8:12		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4		NOT DETECTED	1	
15/12/2021	9:38	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		9	8	19	19	14
	9:40		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	8	8	13	13	
	9:43		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8		9	9	
17/12/2021	9:58	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	7	19	19	17
	10:00		Middle	3.6	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	6	7	20	20	
	10:02		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		6		12	12	
20/12/2021	12:07	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		8	9	61	61	88
	12:09		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	8	9	130	130	
	12:11		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		11		73	73	
22/12/2021	14:38	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		8	8	3	3	4
	14:40		Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	8	3	3	
	14:42		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9		5	5	
27/12/2021	18:45	Cloudy	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	4	4	4
	18:47		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	2	9	9	3	3	
	18:49		Bottom	5.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10		4	4	
29/12/2021	8:11	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		0.02	0.02		<0.001	0.001		0.02	0.02	0.01	2	2		5	6	NOT DETECTED	1	1
	8:13		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	6	1	1	
	8:15		Bottom	6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7		NOT DETECTED	1	
31/12/2021	9:20	Cloudy	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		0.02	0.02		<0.001	0.001		0.02	0.02		<2	2		6	6	8	8	9
	9:22		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	6	6	
	9:23		Bottom	6.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		12	12	



Water Monitoring Result at CR17 - Corals at Sha Tin Hoi South Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL				
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	
30/11/2021	14:28	Fine	Surface	1.0	6	6	0.11	0.11	0.08	<0.01	0.01	0.01	0.14	0.14	0.10	0.014	0.014	0.010	0.03	0.03	0.02	2	2	2	8	7	7	4	4	4	3
	14:30		Middle	3.0	5	5	0.11	0.11	0.08	<0.01	0.01	0.01	0.14	0.14	0.10	0.014	0.014	0.010	0.03	0.03	0.02	3	3	2	7	7	2	2	2	3	
	14:32		Bottom	5.0	5	5	<0.01	0.01	0.08	<0.01	0.01	0.01	<0.02	0.02	0.10	<0.001	0.001	0.010	0.01	0.01	0.02	2	2	2	7	7	4	4	4	3	
1/12/2021	14:20	Fine	Surface	1.0	6	6	0.30	0.30	0.29	0.02	0.02	0.02	0.45	0.45	0.43	0.064	0.064	0.060	0.13	0.13	0.12	4	4	3	19	17	17	9	9	11	
	14:22		Middle	3.0	7	7	0.32	0.32	0.29	0.02	0.02	0.02	0.46	0.46	0.43	0.060	0.060	0.060	0.12	0.12	0.12	3	3	3	15	17	17	17	17	11	
	14:25		Bottom	5.0	7	7	0.26	0.26	0.29	0.02	0.02	0.02	0.38	0.38	0.43	0.055	0.055	0.060	0.10	0.10	0.12	3	3	3	15	17	17	6	6	11	
2/12/2021	14:42	Fine	Surface	1.0	6	6	0.07	0.07	0.07	<0.01	0.01	0.01	0.16	0.16	0.16	0.066	0.066	0.068	0.10	0.10	0.09	6	6	6	45	41	41	1	1	1	
	-		Middle	-	-	-	-	-	0.07	-	-	0.01	-	-	0.16	-	-	0.068	-	-	0.09	-	-	6	-	41	-	-	-	1	
	14:44		Bottom	4.0	5	5	0.07	0.07	0.07	0.01	0.01	0.01	0.16	0.16	0.16	0.070	0.070	0.068	0.08	0.08	0.09	5	5	6	37	37	37	NOT DETECTED	1	1	
3/12/2021	14:53	Fine	Surface	1.0	7	7	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	6	6	5	25	23	23	NOT DETECTED	1	1	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	5	-	23	-	-	-	1	
	14:55		Bottom	4.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	5	21	21	21	NOT DETECTED	1	1	
6/12/2021	8:05	Fine	Surface	1.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.02	2	2	3	10	9	9	NOT DETECTED	1	1	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.02	-	-	3	-	9	-	-	-	4	
	8:08		Bottom	4.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	0.02	0.02	0.02	<0.001	0.001	0.001	0.02	0.02	0.02	3	3	3	9	9	9	6	6	6	
8/12/2021	9:40	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	6	4	4	4	
	9:42		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	6	5	5	4	
	9:44		Bottom	5.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	6	3	3	4	
10/12/2021	12:08	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	6	6	4	4	4	
	0:00		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	6	-	-	-	4	
	12:10		Bottom	4.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	6	6	6	4	4	4	
13/12/2021	15:49	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	5	5	1	1	1	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	5	-	-	-	1	
	15:51		Bottom	4.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	5	5	5	NOT DETECTED	1	1	
15/12/2021	14:24	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	8	8	4	4	6	
	14:26		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	8	8	8	8	6	
	14:28		Bottom	5.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	8	8	8	6	6	6	
17/12/2021	14:45	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	6	6	9	9	10	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.02	-	-	0.001	-	-	0.01	-	-	3	-	6	-	-	-	10	
	14:47		Bottom	4.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	7	10	10	10	
20/12/2021	17:10	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.03	0.03	0.03	2	2	2	7	8	8	32	32	44	
	17:12		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	8	8	53	53	44	
	17:13		Bottom	5.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	2	7	8	8	47	47	44	
22/12/2021	8:54	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.03	<0.001	0.001	0.001	0.03	0.03	0.02	2	2	2	7	7	7	36	36	25	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.03	-	-	0.001	-	-	0.02	-	-	2	-	7	-	-	-	25	
	8:56		Bottom	4.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.02	2	2	2	6	7	7	14	14	25	
24/12/2021	9:21	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.04	0.04	0.04	<0.001	0.001	0.001	0.04	0.04	0.04	<2	2	2	6	6	6	30	30	27	
	-		Middle	-	-	-	-	-	0.01	-	-	0.01	-	-	0.04	-	-	0.001	-	-	0.04	-	-	2	-	6	-	-	-	27	
	9:23		Bottom	4.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.03	<0.001	0.001	0.001	0.03	0.03	0.04	<2	2	2	6	6	6	24	24	27	
27/12/2021	12:24	Cloudy	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.03	<0.001	0.001	0.001	0.03	0.03	0.03	3	3	3	10	10	10	11	11	10	
	12:26		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	0.03	0.03	0.03	<0.001	0.001	0.001	0.03	0.03	0.03	3	3	3	10	10	10	12	12	10	
	12:27		Bottom	5.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.02	0.02	0.03	3	3	3	9	10	10	7	7	10	
29/12/2021	13:55	Fine	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	0.06	0.06	0.05	<0.001	0.001	0.001	0.06	0.06	0.05	2	2	2	9	8	8	27	27		



**Water Monitoring Result at CR17 - Corals at Sha Tin Hoi South
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	8:48	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10	10	31	31	30
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	8:50		Bottom	4.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10	10	28	28	
1/12/2021	08:30	Fine	Surface	1.0	4	4	0.33	0.33		0.02	0.02		0.44	0.44		0.069	0.069		0.09	0.09		<2	2		7	7	62	62	62
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	8:32		Bottom	4.5	4	4	0.36	0.36		0.01	0.01		0.47	0.47		0.076	0.076		0.10	0.10		<2	2		8	8	61	61	
2/12/2021	8:48	Fine	Surface	1.0	4	4	0.10	0.10		<0.01	0.01		0.17	0.17		0.022	0.022		0.07	0.07		2	2		18	18	1	1	2
	8:50		Middle	3.0	3	3	0.09	0.09		<0.01	0.01		0.15	0.15		0.022	0.022		0.06	0.06		2	2		16	16	2	2	
	8:53		Bottom	5.0	3	3	0.06	0.06		<0.01	0.01		0.10	0.10		0.016	0.016		0.04	0.04		<2	2		15	15	3	3	
3/12/2021	9:08	Fine	Surface	1.0	7	7	0.02	0.02		<0.01	0.01		0.09	0.09		0.005	0.005		0.06	0.06		4	4		29	29	11	11	5
	9:10		Middle	3.0	6	6	0.02	0.02		<0.01	0.01		0.03	0.03		0.004	0.004		0.02	0.02		4	4		17	20	1	1	
	9:13		Bottom	5.0	6	6	0.02	0.02		<0.01	0.01		0.03	0.03		0.003	0.003		0.02	0.02		3	3		16	16	2	2	
6/12/2021	15:04	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		5	5	NOT DETECTED	1	1
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	15:07		Bottom	4.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	7	NOT DETECTED	1	
8/12/2021	15:52	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	6	3	3	2
	15:54		Middle	3.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	6	2	2	
	15:56		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		5	5	NOT DETECTED	1	
10/12/2021	18:41	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		5	5	19	19	18
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	18:43		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		5	5	16	16	
13/12/2021	7:55	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	1
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	7:58		Bottom	4.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		2	2	NOT DETECTED	1	
15/12/2021	9:23	Cloudy	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		9	9	4	4	5
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	9:26		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8	8	5	5	
17/12/2021	9:50	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	7	43	43	41
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	9:52		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	7	39	39	
20/12/2021	12:54	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.02	0.02		<0.001	0.001		0.02	0.02		2	2		8	8	82	82	176
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	12:56		Bottom	4.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		2	2		8	8	270	270	
22/12/2021	14:48	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		0.05	0.05		<0.001	0.001		0.05	0.05		2	2		7	7	9	9	5
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	14:50		Bottom	4.0	2	2	<0.01	0.01		<0.01	0.01		0.03	0.03		<0.001	0.001		0.03	0.03		2	2		7	7	1	1	
27/12/2021	18:54	Cloudy	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		10	10	11	11	10
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	18:55		Bottom	4.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		6	6	9	9	
29/12/2021	7:58	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		0.05	0.05		<0.001	0.001		0.05	0.05		3	3		7	7	NOT DETECTED	1	1
	-		Middle	3.0	4	4	<0.01	0.01		<0.01	0.01		0.03	0.03		<0.001	0.001		0.03	0.03		2	2		6	6	NOT DETECTED	1	
	8:01		Bottom	5.0	6	6	<0.01	0.01		<0.01	0.01		0.03	0.03		<0.001	0.001		0.03	0.03		2	2		7	7	1	1	
31/12/2021	9:31	Cloudy	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		0.03	0.03		<0.001	0.001		0.03	0.03		2	2		4	4	8	8	10
	-		Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
	9:33		Bottom	4.0	5	5	<0.01	0.01		<0.01	0.01		0.02	0.02		<0.001	0.001		0.02	0.02		<2	2		7	7	11	11	



Water Monitoring Result at G1 - Potential Subzone of Yim Tin Tsai Fish Culture Zone / Gradient Station
Mid-Flood Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	17:00	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	6	6	3	3		
	17:03		Middle	4.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	3	6	6	1	1	2
	17:07		Bottom	8.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	6	6	NOT DETECTED	1		
1/12/2021	17:05	Fine	Surface	1.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	5	5	NOT DETECTED	1		
	17:08		Middle	5.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	5	5	NOT DETECTED	1	1
	17:12		Bottom	9.0	8	8	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	5	5	NOT DETECTED	1		
2/12/2021	17:33	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	9	9	13	13		
	17:35		Middle	4.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	7	7	11
	17:39		Bottom	8.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	10	10	12	12		
3/12/2021	17:23	Fine	Surface	1.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	7	7	8	8		
	17:25		Middle	5.0	7	7	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	8	11	11	8
	17:28		Bottom	9.0	14	14	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	9	9	4	4		
6/12/2021	11:05	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	8	8	17	17		
	11:08		Middle	4.5	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	10	9	44	44	37
	11:12		Bottom	8.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	9	9	51	51		
8/12/2021	12:10	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	5	5	NOT DETECTED	1		
	12:12		Middle	4.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	NOT DETECTED	1	1
	12:14		Bottom	8.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	8	8	1	1		
10/12/2021	14:20	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	5	5	NOT DETECTED	1		
	14:23		Middle	4.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	3	6	5	1	1	1
	14:27		Bottom	8.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	5	5	NOT DETECTED	1		
13/12/2021	13:15	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	6	6	8	8		
	13:18		Middle	4.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	3	6	6	5	5	6
	13:21		Bottom	8.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	5	5	4	4		
15/12/2021	16:50	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	5	5	NOT DETECTED	1		
	16:54		Middle	5.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	6	NOT DETECTED	1	1
	16:57		Bottom	9.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	6	6	NOT DETECTED	1		
17/12/2021	17:48	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	7	7	5	5		
	17:51		Middle	5.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	NOT DETECTED	1	2
	17:53		Bottom	9.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	6	6	1	1		
20/12/2021	15:52	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	11	11	2	2		
	15:54		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	3	3	2
	15:56		Bottom	24.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	9	9	NOT DETECTED	1		
22/12/2021	11:18	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	3	3	11	11		
	11:20		Middle	4.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	18	18	16
	11:22		Bottom	8.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	7	7	18	18		
24/12/2021	11:25	Cloudy	Surface	1.0	<2	2	0.03	0.03		<0.01	0.01		0.07	0.07		0.005	0.005		0.04	0.04		<2	2	6	6	210	210		
	11:28		Middle	4.5	3	3	0.01	0.01	0.02	<0.01	0.01	0.01	0.03	0.03	0.04	0.001	0.001	0.002	0.02	0.02	0.02	<2	2	2	6	6	190	190	157
	11:30		Bottom	8.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2	6	6	72	72		
27/12/2021	14:21	Cloudy	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	10	10	37	37		
	14:23		Middle	5.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	10	46	46	46
	14:25		Bottom	9.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3	9	9	56	56		
29/12/2021	15:57	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		2	2	4	4	72	72		
	16:00		Middle	4.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.01	0.01	0.01	<2	2	2	5	5	76	76	68
	16:02		Bottom	8.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2	6	6	57	57		



**Water Monitoring Result at CR9 - Gruff Head Corals (Control Station)
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL				
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average		
30/11/2021	13:18	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	13:20		Middle	12.5	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	13:22		Bottom	24.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		4	4	NOT DETECTED	1	
1/12/2021	14:54	Fine	Surface	1.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
	14:56		Middle	13.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	2	3	2	NOT DETECTED	1	1
	14:58		Bottom	25.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
2/12/2021	15:25	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		4	4	NOT DETECTED	1	
	15:27		Middle	13.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	15:29		Bottom	25.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
3/12/2021	15:45	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	15:47		Middle	13.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	15:48		Bottom	25.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
6/12/2021	10:10	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		4	4	NOT DETECTED	1	
	10:12		Middle	13.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	NOT DETECTED	1	1	
	10:14		Bottom	25.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
8/12/2021	12:20	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	12:22		Middle	12.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	12:24		Bottom	24.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
10/12/2021	14:27	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
	14:29		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	2	NOT DETECTED	1	1
	14:31		Bottom	24.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	1	1	
13/12/2021	14:26	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	14:28		Middle	13.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	14:30		Bottom	25.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
15/12/2021	14:11	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	14:13		Middle	13.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	14:15		Bottom	25.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
17/12/2021	15:20	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	15:22		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	15:24		Bottom	24.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
20/12/2021	15:16	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
	15:19		Middle	4.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	2	3	2	NOT DETECTED	1	1
	15:21		Bottom	8.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
22/12/2021	10:23	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
	10:25		Middle	13.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	NOT DETECTED	1	1	
	10:27		Bottom	25.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		3	3	NOT DETECTED	1	
24/12/2021	10:38	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		4	4	1	1	
	10:40		Middle	13.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	3	3	NOT DETECTED	1	1	
	10:42		Bottom	25.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		2		2	2	1	1	
27/12/2021	12:30	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
	12:32		Middle	12.5	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	2	NOT DETECTED	1	1
	12:34		Bottom	24.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		2		2	2	NOT DETECTED	1	
29/12/2021	13:55	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01												



Water Monitoring Result at CR9 - Gruff Head Corals (Control Station)
Mid-Ebb Tide

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL			
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average	
30/11/2021	9:38	Fine	Surface	1.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	20	20	7
	9:40		Middle	12.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	
	9:42		Bottom	23.0	8	8	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	
1/12/2021	11:30	Fine	Surface	1.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	1
	11:32		Middle	13.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	
	11:34		Bottom	25.0	6	6	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	
2/12/2021	11:05	Fine	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	1
	11:07		Middle	12.5	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	
	11:09		Bottom	24.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	
3/12/2021	12:45	Fine	Surface	1.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	1	1	1
	12:49		Middle	13.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	4	1	1	
	12:49		Bottom	25.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	4	1	1	
6/12/2021	13:40	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	1	1	1
	13:42		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	1	1	
	13:44		Bottom	24.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	1	1	
8/12/2021	15:35	Fine	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	1	1	1
	15:36		Middle	12.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1		
	15:38		Bottom	24.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1		
10/12/2021	17:19	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	1	1	1
	17:21		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1		
	17:23		Bottom	24.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1		
13/12/2021	9:44	Fine	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	1
	9:46		Middle	13.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
	9:48		Bottom	25.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
15/12/2021	11:13	Cloudy	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	1
	11:15		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	1	1		
	11:17		Bottom	24.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	1	1		
17/12/2021	11:04	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	3	1	1	1
	11:06		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
	11:08		Bottom	24.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
20/12/2021	12:16	Cloudy	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	1	1	1
	12:18		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	1	1		
	12:20		Bottom	24.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
22/12/2021	14:14	Cloudy	Surface	1.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	4	1	1	1
	14:16		Middle	12.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
	14:18		Bottom	24.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
27/12/2021	18:22	Cloudy	Surface	1.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	2	4	4	2
	18:24		Middle	13.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	4	4		
	18:26		Bottom	25.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	1	1		
29/12/2021	9:42	Fine	Surface	1.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	5	1	1	1
	9:44		Middle	12.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	1	1		
	9:46		Bottom	24.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2							



**Water Monitoring Result at G1* -Gradient Station
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
				30/11/2021	15:45	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7
15:47	Middle	3.0	3	3	<0.01		0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	7	7	2	2	1	
15:49	Bottom	5.0	3	3	<0.01		0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		7	7	NOT DETECTED	1		
1/12/2021	15:35	Fine	Surface	1.0	4	4	0.01	0.01		<0.01	0.01		0.04	0.04		0.003	0.003		0.03	0.03		3	3		10	6	NOT DETECTED	1	
15:38	Middle		3.5	4	4	0.02	0.02	0.01	<0.01	0.01	0.01	0.03	0.03	0.03	0.004	0.004	0.003	0.01	0.01	0.02	2	2	2	7	6	3	3	2	
15:42	Bottom		6.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		3	3	NOT DETECTED	1		
2/12/2021	16:08	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		12	11	5	5	
16:10	Middle		3.5	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	10	11	2	2	3	
16:13	Bottom		6.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		12	11	2	2		
3/12/2021	16:24	Fine	Surface	1.0	5	5	0.02	0.02		<0.01	0.01		0.03	0.03		0.003	0.003		0.01	0.01		2	2		8	8	25	25	
16:26	Middle		3.5	6	6	0.01	0.01	0.02	<0.01	0.01	0.01	0.03	0.03	0.03	0.003	0.003	0.003	0.02	0.02	0.01	3	3	3	7	8	47	47	44	
16:28	Bottom		6.0	6	6	0.02	0.02		<0.01	0.01		0.03	0.03		0.004	0.004		0.01	0.01		3	3		8	8	59	59		
6/12/2021	9:52	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10	11	1	1	
9:55	Middle		3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	13	11	1	1	1	
9:58	Bottom		6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		9	11	NOT DETECTED	1		
8/12/2021	11:04	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	8	4	4	
11:06	Middle		3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	9	8	20	20	12	
11:08	Bottom		5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		8	8	12	12		
10/12/2021	13:17	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		4	4		15	12	3	3	
13:19	Middle		3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	4	4	4	11	12	10	10	6	
13:20	Bottom		5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		11	12	6	6		
13/12/2021	12:04	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		11	9	27	27	
12:07	Middle		3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	8	9	26	26	24	
12:10	Bottom		5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	9	20	20		
15/12/2021	15:25	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		12	9	2	2	
15:27	Middle		3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	10	9	4	4	3	
15:29	Bottom		6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	9	3	3		
17/12/2021	15:50	Cloudy	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		9	7	8	8	
15:53	Middle		3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	7	7	11	11	8	
15:54	Bottom		6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	7	4	4		
20/12/2021	15:34	Cloudy	Surface	1.0	3	3	0.16	0.16		<0.01	0.01		0.19	0.19		0.014	0.014		0.03	0.03		3	3		10	9	360	360	
15:36	Middle		3.0	3	3	0.08	0.08	0.10	<0.01	0.01	0.01	0.09	0.09	0.11	0.009	0.009	0.009	0.02	0.02	0.02	3	3	3	9	9	190	190	206	
15:37	Bottom		5.0	4	4	0.05	0.05		<0.01	0.01		0.05	0.05		0.004	0.004		<0.01	0.01		2	2		8	9	68	68		
22/12/2021	10:15	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		5	5	3	3	
10:17	Middle		3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	3	3	3	
10:18	Bottom		5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	4	4		
24/12/2021	10:24	Cloudy	Surface	1.0	3	3	0.11	0.11		<0.01	0.01		0.14	0.14		0.015	0.015		0.03	0.03		<2	2		8	9	280	280	
10:27	Middle		3.0	3	3	<0.01	0.01	0.04	<0.01	0.01	0.01	<0.02	0.02	0.06	<0.001	0.001	0.006	<0.01	0.01	0.02	2	2	2	10	9	94	94	136	
10:29	Bottom		5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8	9	33	33		
27/12/2021	13:33	Cloudy	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		11	9	2	2	
13:35	Middle		3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	7	9	14	14	16	
13:37	Bottom		6.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	31	31		
29/12/2021	14:58	Fine	Surface	1.0	2	2	0.05	0.05		<0.01	0.01		0.06	0.06		0.006	0.006		0.01	0.01		2	2		4	5	140	140	
15:00	Middle		3.5	3	3	0.04	0.04	0.04	<0.01	0.01	0.01	0.05	0.05	0.05	0.003	0.003	0.004	0.01	0.01	0.01	<2	2	2	5	5	150	150	140	
15:01	Bottom		6.0	3	3	0.02	0.02		<0.01	0.01		0.04	0.04		0.002	0.002		0.01	0.01		2	2		5	5	130	130		



**Water Monitoring Result at G1* -Gradient Station
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	10:59	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		5	5		30	30	1	1	
			Middle	-	-	-	-	-		-	-		-	-		-	-		-	-		-	-		-	-	-	-	
			Bottom	4.0	7	7	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		6	6		35	35	NOT DETECTED	1	
1/12/2021	9:45	Fine	Surface	1.0	5	5	0.04	0.04		<0.01	0.01		0.08	0.08		0.008	0.008		0.04	0.04		<2	2		7	7	5	5	
			Middle	3.5	5	5	0.03	0.03	0.03	<0.01	0.01	0.01	0.05	0.05	0.06	0.006	0.006	0.007	0.02	0.02	0.03	<2	2	2	7	7	7	7	
			Bottom	6.0	5	5	0.03	0.03		<0.01	0.01		0.05	0.05		0.007	0.007		0.02	0.02		<2	2		7	7	3	3	
2/12/2021	10:20	Fine	Surface	23.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		13	13	11	11	
			Middle	23.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	14	14	6	6	
			Bottom	23.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		16	16	9	9	
3/12/2021	10:25	Fine	Surface	1.0	5	5	0.06	0.06		<0.01	0.01		0.07	0.07		0.008	0.008		0.01	0.01		<2	2		7	7	210	210	
			Middle	3.5	6	6	0.04	0.04	0.05	<0.01	0.01	0.01	0.06	0.06	0.06	0.007	0.007	0.008	0.01	0.01	0.01	<2	2	2	8	8	290	290	227
			Bottom	6.0	6	6	0.04	0.04		<0.01	0.01		0.05	0.05		0.008	0.008		0.01	0.01		<2	2		8	8	180	180	
6/12/2021	12:43	Fine	Surface	1.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		19	19	NOT DETECTED	1	
			Middle	3.5	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	12	13	NOT DETECTED	1	1
			Bottom	6.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	NOT DETECTED	1	
8/12/2021	14:08	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		14	14	1	1	
			Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	3	9	11	1	1	1
			Bottom	6.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		9	9	NOT DETECTED	1	
10/12/2021	17:29	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		7	7	NOT DETECTED	1	
			Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	3	3	3	5	6	4	4	3
			Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	6	3	3	
13/12/2021	9:24	Fine	Surface	1.0	<2	2	0.05	0.05		<0.01	0.01		0.05	0.05		0.009	0.009		<0.01	0.01		3	3		13	13	110	110	
			Middle	3.0	<2	2	0.02	0.02	0.03	<0.01	0.01	0.01	<0.02	0.02	0.03	0.002	0.002	0.004	<0.01	0.01	0.01	3	3	3	13	12	140	140	117
			Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		10	10	100	100	
15/12/2021	10:40	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	NOT DETECTED	1	
			Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	9	8	2	2	2
			Bottom	6.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8	8	3	3	
17/12/2021	9:49	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	7	44	44	
			Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	6	7	19	19	27
			Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		7	7	18	18	
20/12/2021	13:10	Cloudy	Surface	1.0	2	2	0.03	0.03		<0.01	0.01		0.03	0.03		0.003	0.003		<0.01	0.01		4	4		20	20	7	7	
			Middle	3.0	2	2	<0.01	0.01	0.02	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.002	<0.01	0.01	0.01	3	3	3	18	15	5	5	4
			Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		3	3		8	8	1	1	
22/12/2021	13:01	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	6	1	1	
			Middle	3.5	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	1	1	1
			Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	1	1	
27/12/2021	17:18	Cloudy	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	14	14	
			Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	8	8	9	9	13
			Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		9	9	15	15	
29/12/2021	9:22	Fine	Surface	1.0	5	5	0.19	0.19		<0.01	0.01		0.21	0.21		0.004	0.004		0.02	0.02		2	2		5	5	1	1	
			Middle	3.0	6	6	0.11	0.11	0.12	<0.01	0.01	0.01	0.13	0.13	0.13	0.002	0.002	0.002	0.02	0.02	0.02	2	2	2	5	5	23	23	15
			Bottom	5.0	6	6	0.05	0.05		<0.01	0.01		0.06	0.06		<0.001	0.001		0.01	0.01		2	2		5	5	20	20	
31/12/2021	10:25	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01	0.01	<2	2		6	6	43	43	
			Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01		<2	2	2	6	6	61	61	51
			Bottom	6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	6	49	49	



**Water Monitoring Result at C1* - Pak Sha Tau Corals
Mid-Flood Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL					
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average			
30/11/2021	16:06	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		5	4	4	2	2		2	
	16:08		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	4	4		2	2		2	
	16:10		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4			NOT DETECTED	1			
1/12/2021	17:01	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
	17:03		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3		NOT DETECTED	1		1	
	17:05		Bottom	5.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3			NOT DETECTED	1			
2/12/2021	16:37	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
	16:39		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4		NOT DETECTED	1		1	
	16:41		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
3/12/2021	14:48	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
	14:50		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3		NOT DETECTED	1		1	
	14:52		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
6/12/2021	11:36	Fine	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4			NOT DETECTED	1			
	11:38		Middle	3.0	5	5	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	4	4		NOT DETECTED	1		1	
	11:40		Bottom	5.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4			NOT DETECTED	1			
8/12/2021	13:27	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			1	1			
	13:29		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4		NOT DETECTED	1		1	
	13:31		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
10/12/2021	15:53	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
	15:55		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3		NOT DETECTED	1		1	
	15:57		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
13/12/2021	12:43	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
	12:45		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3		NOT DETECTED	1		1	
	12:47		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3			NOT DETECTED	1			
15/12/2021	13:10	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
	13:12		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4		NOT DETECTED	1		1	
	13:14		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
17/12/2021	14:12	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4			NOT DETECTED	1			
	14:14		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	3	3		NOT DETECTED	1		1	
	14:16		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4			1	1			
20/12/2021	14:46	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5			NOT DETECTED	1			
	14:48		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	5		NOT DETECTED	1		1	
	14:50		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6			NOT DETECTED	1			
22/12/2021	12:01	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		5			10	10			
	12:03		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	0.01	0.01	0.01	<2	2	2	3	4		10	10	10	11	
	12:05		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		5			14	14			
24/12/2021	12:01	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
	12:03		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5		1	1		6	
	9:45		Bottom	6.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		8			16	16			
27/12/2021	13:39	Cloudy	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
	13:41		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	3	4		NOT DETECTED	1		1	
	13:43		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4			NOT DETECTED	1			
29/12/2021	12:12	Fine	Surface	1.0	5	5	<0.01	0.01		<0.01	0.01		<0.02	0.02																		



**Water Monitoring Result at C1* - Pak Sha Tau Corals
Mid-Ebb Tide**

Date	Time	Weather Condition	Sampling Depth m	Suspended Solids mg/L			Ammonia Nitrogen mg/L			Nitrite-nitrogen mg/L			Total Inorganic Nitrogen mg/L			Unionized Ammonia mg/L			Nitrate-nitrogen mg/L			BOD mg/L			Chlorophyll-a mg/m ³		E. coli CFU/100mL		
				Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	V*	Average	Value	Average	Value	V*	Average
30/11/2021	11:01	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	5	5	7
	11:03		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	12	12	
	11:05		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		3	3	
1/12/2021	10:27	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	NOT DETECTED	1	
	10:29		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	
	10:31		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		NOT DETECTED	1	
2/12/2021	12:16	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	1	1	
	12:18		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	
	12:20		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		NOT DETECTED	1	
3/12/2021	13:54	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	13:56		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	3	3	NOT DETECTED	1	
	13:58		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
6/12/2021	12:33	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		5	5	NOT DETECTED	1	
	12:35		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	4	4	NOT DETECTED	1	
	12:37		Bottom	5.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		4		NOT DETECTED	1	
8/12/2021	14:32	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6	5	NOT DETECTED	1	
	14:34		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	NOT DETECTED	1	
	14:36		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
10/12/2021	16:45	Fine	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	1	1	
	16:47		Middle	3.0	2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	3	NOT DETECTED	1	
	16:49		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
13/12/2021	11:00	Fine	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3	3	NOT DETECTED	1	
	11:02		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	3	3	NOT DETECTED	1	
	11:04		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
15/12/2021	12:11	Cloudy	Surface	1.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
	12:13		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	
	12:15		Bottom	5.0	2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		NOT DETECTED	1	
17/12/2021	13:12	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3	3	NOT DETECTED	1	
	13:14		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	2	2	2	3	3	NOT DETECTED	1	
	13:16		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		2	2		3		NOT DETECTED	1	
20/12/2021	14:02	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		5	5	NOT DETECTED	1	
	14:04		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	5	5	12	12	
	14:06		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		NOT DETECTED	1	
22/12/2021	12:54	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		4	4	4	4	
	12:56		Middle	3.0	<2	2	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	9	9	
	12:58		Bottom	5.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		4		9	9	
27/12/2021	17:10	Cloudy	Surface	1.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4	4	NOT DETECTED	1	
	17:12		Middle	3.0	4	4	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	4	4	NOT DETECTED	1	
	0:00		Bottom	5.0	4	4	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		4		NOT DETECTED	1	
29/12/2021	10:48	Fine	Surface	1.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		0.01	0.01		<2	2		2	2	NOT DETECTED	1	
	10:50		Middle	3.0	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	2	2	NOT DETECTED	1	
	10:52		Bottom	5.0	6	6	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		3		NOT DETECTED	1	
31/12/2021	10:25	Cloudy	Surface	1.0	<2	2	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01	0.01	<2	2		6	6	43	43	
	10:28		Middle	3.5	3	3	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.02	0.02	0.02	<0.001	0.001	0.001	<0.01	0.01	0.01	<2	2	2	6	6	61	61	
	10:30		Bottom	6.0	3	3	<0.01	0.01		<0.01	0.01		<0.02	0.02		<0.001	0.001		<0.01	0.01		<2	2		6		49	49	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 24
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2148100
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 30-Nov-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 14-Dec-2021
Project	: ---			No. of samples received	: 89
Order number	: ---	Quote number	: HKE/1217/2021_V2	No. of samples analysed	: 89
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 30-Nov-2021 to 14-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2148100

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 18:20.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_middle_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit		HK2148100-001	HK2148100-002	HK2148100-003	HK2148100-004	HK2148100-005
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		6	4	4	6	5
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.06	0.10	0.09	0.11	0.11
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		0.004	0.006	0.006	0.014	0.014
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.04	0.05	0.05	0.03	0.03
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.10	0.14	0.14	0.14	0.14
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		11.1	9.3	9.6	7.9	7.2
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	3	3	2	3
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		37	48	53	4*	2*



Sub-Matrix: WATER				Sample ID	CR17_bottom_Flo od	CR16_surface_Flo od	CR16_middle_Flo od	CR16_bottom_Flo od	C1_surface_Flo od
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-006	HK2148100-007	HK2148100-008	HK2148100-009	HK2148100-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	4	3	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	6.2	6.1	5.8	8.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	NOT DETECTED	1*	5*	28	



Sub-Matrix: WATER				Sample ID	C1_middle_Flood	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-011	HK2148100-012	HK2148100-013	HK2148100-014	HK2148100-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	5	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.4	8.2	10.2	9.5	9.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	15	22	92	93	98	



Sub-Matrix: WATER				Sample ID	CR1_surface_Flood	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	G1*_middle_Flood_dup
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-016	HK2148100-017	HK2148100-018	HK2148100-019	HK2148100-021	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	7	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.10	0.03	0.01	0.56	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.017	0.004	0.002	0.085	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	0.03	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.19	0.07	0.02	0.99	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.29	0.09	0.04	1.58	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	6.3	7.0	6.1	2.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	<2	<2	3	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	89	47	27	360	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	W2_bottom_Flood	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-022	HK2148100-023	HK2148100-024	HK2148100-025	HK2148100-026	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	3	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.003	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.09	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.12	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.6	6.5	7.2	7.0	8.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	<2	<2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	67	NOT DETECTED	2*	NOT DETECTED	3*	



Sub-Matrix: WATER				Sample ID	F1_middle_Flood	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-027	HK2148100-028	HK2148100-029	HK2148100-030	HK2148100-031	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	3	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	6.8	6.2	5.8	6.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	1*	3*	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F2_surface_Flood	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	C1*_surface_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-032	HK2148100-033	HK2148100-034	HK2148100-035	HK2148100-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	4	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.02	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.7	4.6	2.5	4.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	6*	6*	7*	3*	2*	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-039	HK2148100-040	HK2148100-041	HK2148100-042	HK2148100-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.4	4.1	2.6	3.1	2.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	NOT DETECTED	NOT DETECTED	1*	1*	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-044	HK2148100-045	HK2148100-046	HK2148100-047	HK2148100-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	5	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.2	3.2	3.6	5.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	4*	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-049	HK2148100-050	HK2148100-051	HK2148100-052	HK2148100-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	3	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.03	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.03	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	5.7	8.5	7.7	7.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	8	16	47	10	39	



Sub-Matrix: WATER				Sample ID	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-054	HK2148100-056	HK2148100-057	HK2148100-058	HK2148100-059	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	5	3	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.9	10.0	9.1	5.6	6.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	31	28	8	12	12	



Sub-Matrix: WATER				Sample ID	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-060	HK2148100-061	HK2148100-062	HK2148100-063	HK2148100-064	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	6	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.7	5.6	6.2	10.0	8.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	45	32	15	640	740	



Sub-Matrix: WATER				Sample ID	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_bottom_Ebb	W2_surface_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-065	HK2148100-066	HK2148100-067	HK2148100-069	HK2148100-070	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	2	4	8	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.34	0.15	0.40	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.023	0.009	0.021	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.12	0.05	0.53	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.46	0.20	0.95	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.4	8.7	12.1	12.6	14.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	3	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	300	240	51	22	180	



Sub-Matrix: WATER				Sample ID	W2_bottom_Ebb	G1*_surface_Ebb	G1*_bottom_Ebb	F1_surface_Ebb	F1_bottom_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-072	HK2148100-073	HK2148100-075	HK2148100-076	HK2148100-078	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	4	7	6	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.11	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.004	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.19	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.30	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	13.0	29.5	35.0	10.4	8.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	5	6	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	85	1*	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	G1_surface_Ebb	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_bottom_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-079	HK2148100-080	HK2148100-081	HK2148100-082	HK2148100-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.2	7.5	8.0	4.9	4.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	6*	2*	1*	2*	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up	C1*_bottom_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-085	HK2148100-088	HK2148100-089	HK2148100-090	HK2148100-091	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	7	3	2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.8	3.6	3.5	3.5	3.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	5*	12	3*	5*	



Sub-Matrix: WATER				Sample ID	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021
Compound	CAS Number	LOR	Unit	HK2148100-092	HK2148100-093	HK2148100-094	HK2148100-095	HK2148100-096	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	<2	3	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.5	3.0	2.4	3.5	3.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	3*	3*	20	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb	---
				Sampling date / time	30-Nov-2021	30-Nov-2021	30-Nov-2021	30-Nov-2021	----
Compound	CAS Number	LOR	Unit	HK2148100-097	HK2148100-098	HK2148100-099	HK2148100-100	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	8	5	3	3	---	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	---	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	---	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	---	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	---	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	---	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.3	6.0	3.8	4.2	---	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	---	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	78	360	93	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047995)								
HK2148100-021	G1*_middle_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047997)								
HK2148100-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047999)								
HK2148100-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048001)								
HK2148100-091	C1*_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048003)								
HK2148100-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048031)								
HK2148100-021	G1*_middle_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048032)								
HK2148100-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048033)								
HK2148100-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048034)								
HK2148100-091	C1*_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048035)								
HK2148100-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4048180)								
HK2148100-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	11.1	10.5	5.6
EP: Aggregate Organics (QC Lot: 4048181)								
HK2148100-022	W2_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.6	8.4	10.0
EP: Aggregate Organics (QC Lot: 4048182)								
HK2148100-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	2.8	19.4
EP: Aggregate Organics (QC Lot: 4048183)								
HK2148100-065	CR15_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.4	8.6	2.4
EP: Aggregate Organics (QC Lot: 4048184)								
HK2148100-092	F4_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.5	2.8	11.3



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
EA/ED: Physical and Aggregate Properties (QC Lot: 4073908)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073909)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	92.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073910)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073911)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073912)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	87.5	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047995)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	101	----	78.8	120	----	----
				<0.01	0.4 mg/L	103	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047997)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	104	----	78.8	120	----	----
				<0.01	0.4 mg/L	103	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047999)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	105	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048001)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	106	----	78.8	120	----	----
				<0.01	0.4 mg/L	105	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048003)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	104	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048031)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048032)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.5	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048033)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.9	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048034)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.5	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048035)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.0	----	92.2	108	----	----
EP: Aggregate Organics (QC Lot: 4048180)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4048181)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.3	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4048182)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4048183)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.7	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4048184)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.3	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4048726)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4048727)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	99.4	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4048728)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	99.7	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4048729)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	97.6	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4048730)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047995)										
HK2148100-021	G1*_middle_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047997)										
HK2148100-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	106	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4047999)										
HK2148100-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	108	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048001)										
HK2148100-091	C1*_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	106	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048003)										
HK2148100-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048031)										
HK2148100-021	G1*_middle_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	98.8	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048032)										
HK2148100-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	95.9	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048033)										
HK2148100-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.4	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048034)										
HK2148100-091	C1*_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.5	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4048035)										
HK2148100-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	88.5	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 27
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2148109
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 01-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 15-Dec-2021
Project	: ---			No. of samples received	: 96
Order number	: ---	Quote number	: HKE/1217/2021_V2	No. of samples analysed	: 96
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 01-Dec-2021 to 15-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2148109

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 17:50.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_middle_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit		HK2148109-001	HK2148109-002	HK2148109-003	HK2148109-004	HK2148109-005
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		12	6	10	6	7
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.37	0.39	0.41	0.30	0.32
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		0.072	0.075	0.074	0.064	0.060
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		0.02	0.02	0.02	0.02	0.02
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.12	0.12	0.12	0.13	0.12
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.51	0.52	0.54	0.45	0.46
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		24.6	19.2	17.3	19.4	15.4
EP030: Biochemical Oxygen Demand	----	2	mg/L		4	3	3	4	3
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		9	33	22	9	17



Sub-Matrix: WATER				Sample ID	CR17_bottom_Flo od	CR16_surface_Flo od	CR16_middle_Flo d	CR16_bottom_Flo d	C1_surface_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-006	HK2148109-007	HK2148109-008	HK2148109-009	HK2148109-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	7	13	12	12	13	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.26	0.17	0.14	0.07	0.16	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.055	0.039	0.030	0.016	0.042	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	0.02	0.02	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.10	0.07	0.07	0.04	0.07	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.38	0.25	0.21	0.11	0.24	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	15.4	18.4	14.9	11.2	16.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	6*	2*	2*	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1_middle_Flood	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-011	HK2148109-012	HK2148109-013	HK2148109-014	HK2148109-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	12	6	6	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.07	<0.01	0.03	0.03	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.016	<0.001	0.007	0.007	0.004	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	<0.01	0.03	0.03	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.10	<0.02	0.05	0.06	0.04	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.8	5.7	16.0	17.1	14.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	2*	NOT DETECTED	1*	



Sub-Matrix: WATER				Sample ID	CR1_surface_Flood	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_middle_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-016	HK2148109-017	HK2148109-018	HK2148109-019	HK2148109-020	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	4	4	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.06	0.02	0.02	0.12	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.014	0.004	0.004	0.024	0.005	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.07	0.02	0.02	0.09	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.12	0.04	0.04	0.20	0.05	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.1	8.8	8.1	5.9	7.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	33	4*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	W2_middle_Flood _dup	W2_bottom_Flood	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood
Sampling date / time				01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2148109-021	HK2148109-022	HK2148109-023	HK2148109-024	HK2148109-025	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	4	4	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.06	0.03	0.01	0.02	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.013	0.006	0.003	0.004	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.02	0.03	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.09	0.06	0.04	0.03	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.9	5.8	9.5	7.1	2.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	1*	NOT DETECTED	3*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F1_surface_Flood	F1_middle_Flood	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-026	HK2148109-027	HK2148109-028	HK2148109-029	HK2148109-030	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	4	6	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.004	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.02	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.02	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.06	0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.1	9.3	8.6	5.0	5.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	4*	11	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	G1_bottom_Flood	F2_surface_Flood	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-031	HK2148109-032	HK2148109-033	HK2148109-034	HK2148109-035	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	8	6	5	5	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.002	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.3	3.4	2.4	3.0	2.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	NOT DETECTED	3*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_surface_Flood	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-038	HK2148109-039	HK2148109-040	HK2148109-041	HK2148109-042	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	5	6	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	3.1	2.8	4.7	4.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_bottom_Flood	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood
Sampling date / time				01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2148109-043	HK2148109-044	HK2148109-045	HK2148109-046	HK2148109-047	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	6	6	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	2.3	2.6	2.5	2.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_surface_Flood	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-048	HK2148109-049	HK2148109-050	HK2148109-051	HK2148109-052	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.49	0.49	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.098	0.099	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.12	0.12	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.62	0.62	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.8	2.8	3.2	7.1	3.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	94	96	



Sub-Matrix: WATER				Sample ID	W1_bottom_Ebb	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-053	HK2148109-054	HK2148109-056	HK2148109-057	HK2148109-058	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	5	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.45	0.33	0.36	0.08	0.08	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.090	0.069	0.076	0.019	0.017	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	0.01	0.02	0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.11	0.09	0.10	0.03	0.03	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.57	0.44	0.47	0.12	0.12	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	7.4	7.8	8.9	7.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	84	62	61	28	18	



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-059	HK2148109-060	HK2148109-061	HK2148109-062	HK2148109-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	4	4	5	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.09	0.07	0.06	0.03	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.019	0.016	0.016	0.007	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.03	0.04	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.12	0.11	0.10	0.05	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	6.2	7.4	7.5	9.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	13	9	11	7*	7*	



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_middle_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-064	HK2148109-065	HK2148109-066	HK2148109-067	HK2148109-068	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	3	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.11	0.10	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.025	0.022	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.08	0.07	0.01	0.10	0.08	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.08	0.07	<0.02	0.21	0.17	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.9	8.6	8.5	6.6	6.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	25	27	9	22	26	



Sub-Matrix: WATER				Sample ID	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-069	HK2148109-070	HK2148109-072	HK2148109-073	HK2148109-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	8	6	6	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.42	0.23	0.04	0.03	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.009	0.084	0.044	0.008	0.006	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.02	0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.47	0.26	0.04	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.09	0.91	0.50	0.08	0.05	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.8	5.3	5.9	7.2	6.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	23	67	28	5*	7*	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-075	HK2148109-076	HK2148109-077	HK2148109-078	HK2148109-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	3	5	6	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.007	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.05	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.6	4.5	4.9	4.5	6.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	NOT DETECTED	2*	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-080	HK2148109-081	HK2148109-082	HK2148109-083	HK2148109-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	5	3	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.4	6.4	3.5	3.3	3.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up	C1*_bottom_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit		HK2148109-085	HK2148109-088	HK2148109-089	HK2148109-090	HK2148109-091
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		2	3	3	2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.08	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.08	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		0.9	4.8	4.7	4.2	4.7
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED



Sub-Matrix: WATER				Sample ID	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-092	HK2148109-093	HK2148109-094	HK2148109-095	HK2148109-096	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	5	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.0	4.1	4.3	2.6	2.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb	TPLMB_surface_E bb_dup
				Sampling date / time	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021	01-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148109-097	HK2148109-098	HK2148109-099	HK2148109-100	HK2148109-101	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	4	4	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.08	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	0.08	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.5	4.7	5.4	4.7	1.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_FI	---	---	---	---
				Sampling date / time	ood_dup	---	---	---	---
Compound	CAS Number	LOR	Unit	01-Dec-2021	---	---	---	---	---
				HK2148109-102	---	---	---	---	---
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	---	---	---	---	---
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	---	---	---	---	---
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	---	---	---	---	---
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	---	---	---	---	---
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	---	---	---	---	---
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.03	---	---	---	---	---
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.3	---	---	---	---	---
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	---	---	---	---	---
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4052030)								
HK2148109-002	W1_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.0
HK2148109-011	C1_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4052031)								
HK2148109-021	W2_middle_Flood_dup	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.0
HK2148109-031	G1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4052032)								
HK2148109-043	F4_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	6	7	0.0
HK2148109-053	W1_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4052033)								
HK2148109-064	CR15_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2148109-075	G1*_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	5	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4052034)								
HK2148109-085	TPLMB_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2148109-098	F3_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	4	5	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050667)								
HK2148109-020	W2_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.03	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050668)								
HK2148109-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050669)								
HK2148109-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050670)								
HK2148109-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050671)								
HK2148109-102	TPLMB_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050674)								
HK2148109-020	W2_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050676)								
HK2148109-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050678)								
HK2148109-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050680)								
HK2148109-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050682)								
HK2148109-102	TPLMB_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4050938)								
HK2148109-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	24.6	22.0	11.2
EP: Aggregate Organics (QC Lot: 4050939)								
HK2148109-021	W2_middle_Flood_dup	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.9	5.9	15.6
EP: Aggregate Organics (QC Lot: 4050940)								
HK2148109-043	F4_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	5.1	12.5
EP: Aggregate Organics (QC Lot: 4050941)								
HK2148109-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.9	9.1	2.2
EP: Aggregate Organics (QC Lot: 4050942)								
HK2148109-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	0.9	1.0	11.5

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
						LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 4052030)												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	84.4	116	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 4052031)												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	84.4	116	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 4052032)												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	84.4	116	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 4052033)												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	84.4	116	----	----	
EA/ED: Physical and Aggregate Properties (QC Lot: 4052034)												
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	84.4	116	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050667)												
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.8	----	92.2	108	----	----	



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050667) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050668)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.2	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050669)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050670)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050671)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	92.8	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050674)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	95.0	---	78.8	120	---	---
				<0.01	0.4 mg/L	101	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050676)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050678)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	100	---	78.8	120	---	---
				<0.01	0.4 mg/L	101	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050680)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	102	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050682)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	112	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4050938)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	106	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4050939)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	106	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4050940)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High	Value
EP: Aggregate Organics (QC Lot: 4050940) - Continued												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	100	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4050941)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.7	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4050942)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	100	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4050981)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	98.8	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4050982)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4050983)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	100	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4050984)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	101	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4050985)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	101	----	81.9	113	----	----	



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050667)											
HK2148109-020	W2_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.8	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050668)											
HK2148109-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	92.2	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050669)											
HK2148109-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	89.3	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050670)											
HK2148109-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.2	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050671)											
HK2148109-102	TPLMB_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	91.5	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050674)											
HK2148109-020	W2_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050676)											
HK2148109-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	99.1	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050678)											
HK2148109-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.4	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050680)											
HK2148109-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4050682)											
HK2148109-102	TPLMB_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 25
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2148112
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Amendment	: 2
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com	Date Samples Received	: 02-Dec-2021
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Issue Date	: 25-Jan-2022
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	No. of samples received	: 95
Project	: ---	Quote	: HKE/1217/2021_V2	No. of samples analysed	: 95
Order number	: ---	number			
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 02-Dec-2021 to 04-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2148112

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 18:25.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

This is an amendment of the Certificate of Analysis.

The sample ID of HK2148112-086 has been amended.

The sample ID for HK2148112-036 has been amended.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit		HK2148112-001	HK2148112-002	HK2148112-003	HK2148112-004	HK2148112-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		6	6	8	6	5
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.09	0.06	0.01	0.07	0.07
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		0.022	0.010	0.003	0.066	0.070
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		0.01	<0.01	<0.01	<0.01	0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.12	0.10	0.03	0.10	0.08
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.23	0.16	0.04	0.16	0.16
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		29.8	19.7	10.3	44.8	37.4
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	3	<2	6	5
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		9	1*	2*	1*	NOT DETECTED



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-007	HK2148112-008	HK2148112-009	HK2148112-010	HK2148112-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	4	5	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.003	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.06	0.03	0.01	0.06	0.04	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.08	0.03	<0.02	0.06	0.04	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	34.3	20.8	21.4	28.3	21.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	5	3	2	4	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	2*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-012	HK2148112-013	HK2148112-014	HK2148112-015	HK2148112-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	2	3	3	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.005	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	0.03	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	13.4	6.9	6.7	7.5	12.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	3*	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_middle_Flood	W2_bottom_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-017	HK2148112-018	HK2148112-019	HK2148112-020	HK2148112-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	4	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	<0.01	0.05	0.03	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.003	<0.001	0.009	0.006	0.003	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.06	0.05	0.03	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.3	11.5	11.3	10.4	10.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	16	NOT DETECTED	3*	5*	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-023	HK2148112-024	HK2148112-025	HK2148112-026	HK2148112-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	5	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.02	0.03	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.004	0.006	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.02	0.03	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.04	0.06	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.7	10.3	12.1	5.0	6.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	5*	2*	2*	5*	10	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-028	HK2148112-029	HK2148112-030	HK2148112-031	HK2148112-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	3	3	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.003	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.03	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.6	9.1	10.0	9.7	2.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	3	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	23	13	7*	12	3*	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_Dup	C1*_surface_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-033	HK2148112-034	HK2148112-035	HK2148112-036	HK2148112-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	7	5	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	0.03	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.02	0.03	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	3.6	2.1	1.9	4.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	19	2*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-039	HK2148112-040	HK2148112-041	HK2148112-042	HK2148112-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	3	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.9	4.2	4.3	4.2	4.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-044	HK2148112-045	HK2148112-046	HK2148112-047	HK2148112-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	3	4	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.6	1.8	3.1	3.1	4.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	4*	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-049	HK2148112-050	HK2148112-051	HK2148112-052	HK2148112-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	3	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.20	0.20	0.18	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.042	0.049	0.043	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.11	0.10	0.09	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.31	0.30	0.28	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.7	3.7	16.1	18.3	17.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	2*	12	11	17	



Sub-Matrix: WATER				CR17_surface_Ebb	CR17_middle_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
Sample ID				02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Sampling date / time				02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-054	HK2148112-055	HK2148112-056	HK2148112-057	HK2148112-058
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	2	mg/L	4	3	3	3	3
ED/EK: Inorganic Nonmetallic Parameters								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.10	0.09	0.06	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.022	0.022	0.016	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.07	0.06	0.04	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.17	0.15	0.10	<0.02	<0.02
EP: Aggregate Organics								
EP008F: Chlorophyll a	----	0.1	mg/m ³	18.2	16.1	14.7	8.5	8.4
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	<2	<2
EM: Microbiological Testing								
EM019: Escherichia coli	----	1	CFU/100mL	1*	2*	3*	NOT DETECTED	NOT DETECTED



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-059	HK2148112-060	HK2148112-061	HK2148112-062	HK2148112-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	5	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.2	7.1	7.4	7.5	7.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	2*	NOT DETECTED	NOT DETECTED	1*	



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-064	HK2148112-065	HK2148112-067	HK2148112-068	HK2148112-069	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	5	6	9	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.04	0.02	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.008	<0.001	0.004	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.06	0.03	0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	8.1	11.6	11.1	10.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	1*	320	180	120	



Sub-Matrix: WATER				Sample ID	W2_surface_Ebb	W2_middle_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-070	HK2148112-071	HK2148112-072	HK2148112-073	HK2148112-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	5	5	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.48	0.33	0.07	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.093	0.064	0.014	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.08	0.06	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.56	0.39	0.09	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.6	7.1	8.8	12.7	13.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	150	110	46	11	6*	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-075	HK2148112-076	HK2148112-077	HK2148112-078	HK2148112-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	3	3	4	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.02	0.02	0.03	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	0.004	0.005	0.006	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.02	0.02	0.02	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.04	0.05	0.05	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	16.1	6.9	5.7	7.1	11.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	9	10	19	22	23	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-080	HK2148112-081	HK2148112-082	HK2148112-083	HK2148112-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	2	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.8	12.7	3.0	3.5	3.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	26	17	NOT DETECTED	2*	3*	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up
Sampling date / time				02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2148112-085	HK2148112-086	HK2148112-088	HK2148112-089	HK2148112-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	3	3	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.3	3.5	4.3	3.8	3.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-091	HK2148112-092	HK2148112-093	HK2148112-094	HK2148112-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	2	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	4.4	5.0	4.6	2.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb
				Sampling date / time	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021	02-Dec-2021
Compound	CAS Number	LOR	Unit	HK2148112-096	HK2148112-097	HK2148112-098	HK2148112-099	HK2148112-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	7	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	2.8	5.2	4.9	5.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	1*	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053346)								
HK2148112-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.02	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053347)								
HK2148112-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053348)								
HK2148112-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053349)								
HK2148112-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053350)								
HK2148112-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053391)								
HK2148112-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053393)								
HK2148112-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053395)								
HK2148112-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053397)								
HK2148112-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053399)								
HK2148112-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4053275)								
HK2148112-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	29.8	28.4	4.8
EP: Aggregate Organics (QC Lot: 4053276)								
HK2148112-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	11.7	13.6	15.0
EP: Aggregate Organics (QC Lot: 4053277)								
HK2148112-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.6	3.1	14.9
EP: Aggregate Organics (QC Lot: 4053278)								
HK2148112-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	7.8	9.8
EP: Aggregate Organics (QC Lot: 4053279)								
HK2148112-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.3	3.1	7.2



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
EA/ED: Physical and Aggregate Properties (QC Lot: 4054918)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4054919)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	109	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4054920)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4054921)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4054922)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053346)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.1	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053347)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.4	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053348)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.2	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053349)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.6	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053350)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.4	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053391)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	95.2	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053393)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	98.8	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053395)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	98.4	----	78.8	120	----	----
				<0.01	0.4 mg/L	102	----	96.3	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053397)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	97.0	---	78.8	120	---	---
				<0.01	0.4 mg/L	100.0	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053399)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	86.4	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4053275)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	96.7	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4053276)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	104	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4053277)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	101	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4053278)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	100	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4053279)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	100	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4053307)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	101	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4053308)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	99.7	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4053309)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	107	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4053310)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	101	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4053311)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	103	---	81.9	113	---	---



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053346)											
HK2148112-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.8	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053347)											
HK2148112-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	90.3	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053348)											
HK2148112-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.1	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053349)											
HK2148112-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	88.8	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053350)											
HK2148112-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.3	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053391)											
HK2148112-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053393)											
HK2148112-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	96.4	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053395)											
HK2148112-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	96.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053397)											
HK2148112-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	87.1	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4053399)											
HK2148112-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2149088
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 03-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 17-Dec-2021
Project	: ---			No. of samples received	: 96
Order number	: ---	Quote number	: HKE/1217/2021_V2	No. of samples analysed	: 96
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 03-Dec-2021 to 17-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2149088

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 18:40.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-001	HK2149088-002	HK2149088-003	HK2149088-004	HK2149088-006	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	6	4	7	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.003	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.02	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	20.3	23.0	14.4	25.0	20.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	4	4	6	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	2*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-007	HK2149088-008	HK2149088-009	HK2149088-010	HK2149088-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	5	5	4	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	13.3	14.2	10.8	13.1	10.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	4	3	4	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	2*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-012	HK2149088-013	HK2149088-014	HK2149088-015	HK2149088-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	6	6	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.0	10.8	9.2	9.2	13.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	4	4	5	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	17	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _Dup	W2_bottom_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-017	HK2149088-018	HK2149088-019	HK2149088-020	HK2149088-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	7	6	6	10	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.31	0.28	0.14	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.056	0.052	0.025	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.01	0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.04	0.04	0.03	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.36	0.34	0.17	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.7	10.0	6.2	6.8	7.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	3	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	56	29	28	23	93	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-023	HK2149088-024	HK2149088-025	HK2149088-026	HK2149088-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	6	6	5	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.01	0.02	0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.003	0.003	0.004	0.002	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.02	0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.03	0.03	0.03	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.7	7.2	7.6	3.0	7.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	3	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	25	47	59	19	42	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-028	HK2149088-029	HK2149088-030	HK2149088-031	HK2149088-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	7	7	7	14	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	7.4	8.8	7.5	2.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	52	8	11	4*	2*	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_Dup	C1*_surface_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-033	HK2149088-034	HK2149088-035	HK2149088-036	HK2149088-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	4	10	7	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.0	2.1	2.9	1.6	3.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	4*	1*	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-039	HK2149088-040	HK2149088-041	HK2149088-042	HK2149088-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	2	9	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.9	2.8	3.0	2.5	2.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-044	HK2149088-045	HK2149088-046	HK2149088-047	HK2149088-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	4	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.4	2.9	2.8	1.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	3*	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-049	HK2149088-050	HK2149088-051	HK2149088-052	HK2149088-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	5	11	12	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.02	0.02	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.005	0.003	0.003	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.07	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.10	0.04	0.03	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	0.4	15.1	20.1	15.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	4*	13	NOT DETECTED	2*	



Sub-Matrix: WATER				Sample ID	CR17_surface_Ebb	CR17_middle_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-054	HK2149088-055	HK2149088-056	HK2149088-057	HK2149088-058	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	7	6	6	7	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.02	0.02	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.005	0.004	0.003	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.06	0.02	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.09	0.03	0.03	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	28.6	16.7	16.1	9.7	9.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	4	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	11	1*	2*	2*	1*	



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-059	HK2149088-060	HK2149088-061	HK2149088-062	HK2149088-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	7	7	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.0	10.6	10.1	9.5	9.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	3*	



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb_dup	CR1_surface_Ebb	CR1_middle_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-064	HK2149088-065	HK2149088-066	HK2149088-067	HK2149088-068	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	6	5	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.02	0.03	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.003	0.004	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.03	0.04	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.2	10.0	10.7	7.8	7.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	1*	1*	310	330	



Sub-Matrix: WATER				Sample ID	CR1_bottom_Ebb	W2_surface_Ebb	W2_middle_Ebb	W2_bottom_Ebb	G1*_surface_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-069	HK2149088-070	HK2149088-071	HK2149088-072	HK2149088-073	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	7	7	6	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.16	0.16	0.26	0.06	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.005	0.026	0.022	0.039	0.008	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.03	0.03	0.04	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	0.19	0.20	0.30	0.07	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.0	6.4	7.6	6.9	6.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	220	230	200	240	210	



Sub-Matrix: WATER				Sample ID	G1*_middle_Ebb	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-074	HK2149088-075	HK2149088-076	HK2149088-077	HK2149088-078	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	6	5	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	0.03	0.02	0.04	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.007	0.008	0.005	0.003	0.004	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.01	<0.01	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.06	0.05	0.03	0.04	0.04	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.4	7.9	6.3	5.5	5.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	290	180	41	32	23	



Sub-Matrix: WATER				Sample ID	G1_surface_Ebb	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-079	HK2149088-080	HK2149088-081	HK2149088-082	HK2149088-083	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	6	3	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.9	8.2	8.7	3.1	3.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	8	5*	10	3	



Sub-Matrix: WATER				Sample ID	F2_bottom_Ebb	TPLMB_surface_E bb	TPLMB_surface_E bb_Dup	C1*_surface_Ebb	C1*_middle_Ebb
Sampling date / time				03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2149088-084	HK2149088-085	HK2149088-086	HK2149088-088	HK2149088-089	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	7	6	5	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	2.5	2.3	3.3	3.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Ebb_d up	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb
				Sampling date / time	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit		HK2149088-090	HK2149088-091	HK2149088-092	HK2149088-093	HK2149088-094
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		4	4	3	4	4
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		3.0	3.4	3.1	3.1	3.1
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED



Sub-Matrix: WATER				CR9_surface_Ebb	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb
Sample ID								
Sampling date / time				03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021	03-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149088-095	HK2149088-096	HK2149088-097	HK2149088-098	HK2149088-099
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	5	4	5
ED/EK: Inorganic Nonmetallic Parameters								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics								
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.4	3.2	4.2	3.5	2.9
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2
EM: Microbiological Testing								
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	4*	6*



Sub-Matrix: WATER				Sample ID	F3_bottom_Ebb	---	---	---	---
				Sampling date / time	03-Dec-2021	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2149088-100	---	---	---	---	---
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	---	---	---	---	---
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	---	---	---	---	---
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	---	---	---	---	---
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	---	---	---	---	---
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	---	---	---	---	---
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	---	---	---	---	---
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.0	---	---	---	---	---
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	---	---	---	---	---
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055230)								
HK2149088-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055232)								
HK2149088-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055234)								
HK2149088-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055236)								
HK2149088-083	F2_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055238)								
HK2149088-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055633)								
HK2149088-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.14	0.14	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055634)								
HK2149088-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055635)								
HK2149088-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055636)								
HK2149088-083	F2_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055637)								
HK2149088-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4057384)								
HK2149088-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	20.3	20.9	2.9
EP: Aggregate Organics (QC Lot: 4057385)								
HK2149088-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.7	8.2	6.3
EP: Aggregate Organics (QC Lot: 4057386)								
HK2149088-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	2.9	15.9
EP: Aggregate Organics (QC Lot: 4057387)								
HK2149088-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	11.2	11.6	3.5
EP: Aggregate Organics (QC Lot: 4057388)								
HK2149088-084	F2_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	4.6	2.2



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
EA/ED: Physical and Aggregate Properties (QC Lot: 4060881)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060882)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060883)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060884)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060885)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055230)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	98.0	----	78.8	120	----	----
				<0.01	0.4 mg/L	103	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055232)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	111	----	78.8	120	----	----
				<0.01	0.4 mg/L	105	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055234)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	----	78.8	120	----	----
				<0.01	0.4 mg/L	106	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055236)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	90.0	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055238)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	102	----	78.8	120	----	----
				<0.01	0.4 mg/L	102	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055633)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.3	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055634)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.0	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055635)											
ED/EK: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	92.6	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055636)											
ED/EK: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.3	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055637)											
ED/EK: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	----	92.2	108	----	----
EP: Aggregate Organics (QC Lot: 4055650)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4055651)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	98.2	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4055652)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4055653)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	95.8	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4057384)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	97.0	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4057385)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	100	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4057386)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	96.1	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4057387)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4057388)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4059945)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	107	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4059946)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	103	----	81.9	113	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055230)										
HK2149088-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055232)										
HK2149088-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055234)										
HK2149088-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.9	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055236)										
HK2149088-083	F2_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.1	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055238)										
HK2149088-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	99.1	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055633)										
HK2149088-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.1	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055634)										
HK2149088-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	97.4	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055635)										
HK2149088-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055636)										
HK2149088-083	F2_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	92.2	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4055637)										
HK2149088-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	108	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2149452
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 06-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 20-Dec-2021
Project	: ---			No. of samples received	: 94
Order number	: ---	Quote number	: HKE/1217/2021_V2	No. of samples analysed	: 94
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 06-Dec-2021 to 20-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2149452

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 17:00.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit		HK2149452-001	HK2149452-002	HK2149452-003	HK2149452-004	HK2149452-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		3	3	4	5	4
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	0.02
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	<0.02	<0.02	0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		9.8	11.5	10.8	9.6	9.3
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	3	3	2	3
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		33	10	NOT DETECTED	NOT DETECTED	6*



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-007	HK2149452-008	HK2149452-009	HK2149452-010	HK2149452-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.2	7.9	7.2	7.3	6.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	24	18	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-012	HK2149452-013	HK2149452-014	HK2149452-015	HK2149452-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	5	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.004	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	8.1	11.7	4.3	14.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	7*	5*	11	21	6*	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _dup	W2_bottom_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-017	HK2149452-018	HK2149452-019	HK2149452-021	HK2149452-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	9	4	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.0	8.9	23.8	26.2	20.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	4	5	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	14	3*	35	69	73	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-023	HK2149452-024	HK2149452-025	HK2149452-026	HK2149452-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	3	<2	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.2	12.5	9.2	5.0	9.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	1*	NOT DETECTED	10	63	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-028	HK2149452-029	HK2149452-030	HK2149452-031	HK2149452-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	9	4	5	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.1	7.5	9.6	9.4	2.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	24	17	44	51	4*	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-033	HK2149452-034	HK2149452-035	HK2149452-036	HK2149452-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	6	6	6	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	2.6	2.1	2.0	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	29	37	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-039	HK2149452-040	HK2149452-041	HK2149452-042	HK2149452-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	9	6	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.7	4.3	4.8	3.8	3.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-044	HK2149452-045	HK2149452-046	HK2149452-047	HK2149452-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	3	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	4.0	4.1	3.4	3.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	6*	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-049	HK2149452-050	HK2149452-051	HK2149452-052	HK2149452-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	4	3	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.3	3.7	5.4	6.8	7.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	5*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb
Sample ID				06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Sampling date / time				06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-054	HK2149452-056	HK2149452-057	HK2149452-058	HK2149452-059
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	4	4
ED/EK: Inorganic Nonmetallic Parameters								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics								
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.3	6.5	5.7	6.3	7.4
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3
EM: Microbiological Testing								
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED



Sub-Matrix: WATER				Sample ID	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-060	HK2149452-061	HK2149452-062	HK2149452-063	HK2149452-064	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	5	3	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	6.0	6.3	6.3	4.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit		HK2149452-065	HK2149452-066	HK2149452-067	HK2149452-068	HK2149452-069
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		6	7	5	6	8
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		9.4	9.4	13.2	15.4	10.0
EP030: Biochemical Oxygen Demand	----	2	mg/L		2	2	4	3	3
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		NOT DETECTED	NOT DETECTED	3*	4*	2*



Sub-Matrix: WATER				Sample ID	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb	G1*_bottom_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-070	HK2149452-072	HK2149452-073	HK2149452-074	HK2149452-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	7	6	5	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	21.9	20.3	19.1	12.1	9.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	5	4	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb	G1_middle_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-076	HK2149452-077	HK2149452-078	HK2149452-079	HK2149452-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.2	10.0	9.4	4.5	8.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	<2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	16	19	7*	28	



Sub-Matrix: WATER				Sample ID	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb	TPLMB_surface_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-081	HK2149452-082	HK2149452-083	HK2149452-084	HK2149452-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	4	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.1	3.2	3.6	2.8	1.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	16	11	1*	6*	3*	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up	C1*_bottom_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-086	HK2149452-088	HK2149452-089	HK2149452-090	HK2149452-091	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	3	3	3	8	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.4	4.8	4.0	4.1	4.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149452-092	HK2149452-093	HK2149452-094	HK2149452-095	HK2149452-096	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	5	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.3	3.1	3.1	2.4	2.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb	---
				Sampling date / time	06-Dec-2021	06-Dec-2021	06-Dec-2021	06-Dec-2021	----
Compound	CAS Number	LOR	Unit	HK2149452-097	HK2149452-098	HK2149452-099	HK2149452-100	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	4	4	---	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	---	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	---	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	---	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	---	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	---	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	1.9	2.1	3.0	---	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	---	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	3*	4*	3*	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4060871)								
HK2149452-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2149452-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4060872)								
HK2149452-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.0
HK2149452-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4060873)								
HK2149452-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2149452-054	CR17_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4060874)								
HK2149452-065	CR15_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.0
HK2149452-076	F1_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4060875)								
HK2149452-086	TPLMB_surface_Ebb_dup	EA025: Suspended Solids (SS)	----	2	mg/L	6	5	0.0
HK2149452-097	CR9_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060499)								
HK2149452-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060500)								
HK2149452-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060501)								
HK2149452-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060502)								
HK2149452-085	TPLMB_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060503)								
HK2149452-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061078)								
HK2149452-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061080)								
HK2149452-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061082)								
HK2149452-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061084)								
HK2149452-085	TPLMB_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061086)								
HK2149452-088	C1*_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4060203)								
HK2149452-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	9.8	10.2	4.0
EP: Aggregate Organics (QC Lot: 4060204)								
HK2149452-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	10.2	10.8	5.7
EP: Aggregate Organics (QC Lot: 4060205)								
HK2149452-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	3.7	8.1
EP: Aggregate Organics (QC Lot: 4060206)								
HK2149452-065	CR15_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	9.4	9.2	2.2
EP: Aggregate Organics (QC Lot: 4060207)								
HK2149452-086	TPLMB_surface_Ebb_dup	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.4	2.3	5.2

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4060871)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060872)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060873)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060874)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4060875)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060499)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.5	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060499) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060500)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.6	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060501)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060502)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.8	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060503)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	101	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061078)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	104	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061080)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	116	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061082)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	114	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061084)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	98.0	---	78.8	120	---	---
				<0.01	0.4 mg/L	103	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061086)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	101	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4060203)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	106	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4060204)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	105	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4060205)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP: Aggregate Organics (QC Lot: 4060205) - Continued											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	104	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4060206)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	101	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4060207)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	106	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4067330)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4067331)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4067332)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	97.1	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4069621)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4069622)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	108	----	81.9	113	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060499)											
HK2149452-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	97.3	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060500)											
HK2149452-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.0	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060501)											
HK2149452-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	112	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060502)											
HK2149452-085	TPLMB_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	95.1	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4060503)											
HK2149452-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	117	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061078)											
HK2149452-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061080)											
HK2149452-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061082)											
HK2149452-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	97.3	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061084)											
HK2149452-085	TPLMB_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4061086)											
HK2149452-086	TPLMB_surface_Ebb_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 27
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2149457
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 08-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 22-Dec-2021
Project	: ---			No. of samples received	: 96
Order number	: ---	Quote number	: HKE/1217/2021_V2	No. of samples analysed	: 96
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 08-Dec-2021 to 22-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2149457

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 17:30.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR); * denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_middle_Flood
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit		HK2149457-001	HK2149457-002	HK2149457-003	HK2149457-004	HK2149457-005
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.13	0.06	0.02	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.13	0.06	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		7.8	8.5	7.2	5.5	5.7
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	2	2	2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		54	38	4*	4*	5*



Sub-Matrix: WATER				Sample ID	CR17_bottom_Flo od	CR16_surface_Flo od	CR16_middle_Flo d	CR16_bottom_Flo d	C1_surface_Flo od
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-006	HK2149457-007	HK2149457-008	HK2149457-009	HK2149457-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	2	2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	7.4	6.2	7.4	7.4	7.4
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	9	14	5*	10	10



Sub-Matrix: WATER				Sample ID	C1_middle_Flood	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-011	HK2149457-012	HK2149457-013	HK2149457-014	HK2149457-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	2	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.5	7.1	9.5	8.1	8.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	16	4*	6*	5*	2*	



Sub-Matrix: WATER				Sample ID	CR1_surface_Flood	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood_dup
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-016	HK2149457-017	HK2149457-018	HK2149457-019	HK2149457-021	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	5	5	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.0	9.9	6.4	10.4	12.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	93	81	74	36	52	



Sub-Matrix: WATER				Sample ID	W2_bottom_Flood	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-022	HK2149457-023	HK2149457-024	HK2149457-025	HK2149457-026	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	3	3	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.5	6.9	8.9	8.1	3.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	65	4*	20	12	1*	



Sub-Matrix: WATER				Sample ID	F1_middle_Flood	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-027	HK2149457-028	HK2149457-029	HK2149457-030	HK2149457-031	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	3	2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.0	5.3	4.7	5.5	7.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	5*	NOT DETECTED	NOT DETECTED	1*	



Sub-Matrix: WATER				Sample ID	F2_surface_Flood	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-032	HK2149457-033	HK2149457-034	HK2149457-035	HK2149457-036	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	4	<2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.08	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.08	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.3	2.7	3.2	1.5	2.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	4*	72	4*	2*	



Sub-Matrix: WATER				Sample ID	C1*_surface_Flood	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-038	HK2149457-039	HK2149457-040	HK2149457-041	HK2149457-042	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	3	<2	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.7	3.6	2.5	2.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_bottom_Flood	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood
Sampling date / time				08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2149457-043	HK2149457-044	HK2149457-045	HK2149457-046	HK2149457-047	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	2	3	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	2.9	1.2	3.0	3.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_surface_Flood	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-048	HK2149457-049	HK2149457-050	HK2149457-051	HK2149457-052	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	3	4	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	4.0	3.4	5.7	5.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	W1_bottom_Ebb	CR17_surface_Ebb	CR17_middle_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-053	HK2149457-054	HK2149457-055	HK2149457-056	HK2149457-057	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	<2	<2	<2	<2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.8	6.3	6.4	5.2	6.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	3*	2*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR16_middle_Ebb	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-058	HK2149457-059	HK2149457-060	HK2149457-061	HK2149457-062	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	3	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.2	6.2	4.7	5.9	6.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR15_surface_Ebb	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-063	HK2149457-064	HK2149457-065	HK2149457-066	HK2149457-067	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	4	3	4	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.7	9.4	8.8	9.0	18.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	6*	17	11	4*	



Sub-Matrix: WATER				Sample ID	CR1_middle_Ebb	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-068	HK2149457-069	HK2149457-070	HK2149457-072	HK2149457-073	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	2	5	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	14.4	13.4	10.6	13.2	14.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	26	34	110	99	1*	



Sub-Matrix: WATER				Sample ID	G1*_middle_Ebb	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-074	HK2149457-075	HK2149457-076	HK2149457-077	HK2149457-078	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	2	2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	8.5	6.9	6.3	8.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	1*	3*	3*	



Sub-Matrix: WATER				Sample ID	G1_surface_Ebb	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-079	HK2149457-080	HK2149457-081	HK2149457-082	HK2149457-083	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	2	<2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.6	5.1	7.0	2.4	2.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F2_bottom_Ebb	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb
Sampling date / time				08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2149457-084	HK2149457-085	HK2149457-086	HK2149457-088	HK2149457-089	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	6	5	3	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.9	2.1	3.3	5.7	5.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Ebb_d up	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit		HK2149457-090	HK2149457-091	HK2149457-092	HK2149457-093	HK2149457-094
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		2	4	3	2	4
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		3.3	5.0	2.3	2.4	2.2
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	2	2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*



Sub-Matrix: WATER				Sample ID	CR9_surface_Ebb	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb
				Sampling date / time	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021	08-Dec-2021
Compound	CAS Number	LOR	Unit	HK2149457-095	HK2149457-096	HK2149457-097	HK2149457-098	HK2149457-099	HK2149457-099
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	<2	2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.3	2.2	2.3	3.4	3.2	3.2
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*



Sub-Matrix: WATER				Sample ID	F3_bottom_Ebb	---	---	---	---
				Sampling date / time	08-Dec-2021	---	---	---	---
Compound	CAS Number	LOR	Unit	HK2149457-100	---	---	---	---	---
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	---	---	---	---	---
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	---	---	---	---	---
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	---	---	---	---	---
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	---	---	---	---	---
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	---	---	---	---	---
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	---	---	---	---	---
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	---	---	---	---	---
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	---	---	---	---	---
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	---	---	---	---	---



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4067064)								
HK2149457-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2149457-011	C1_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4067065)								
HK2149457-022	W2_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	5	5	0.0
HK2149457-032	F2_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4067066)								
HK2149457-043	F4_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.0
HK2149457-053	W1_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4067067)								
HK2149457-063	CR15_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
HK2149457-074	G1*_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4067068)								
HK2149457-084	F2_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.0
HK2149457-095	CR9_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066635)								
HK2149457-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066636)								
HK2149457-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066637)								
HK2149457-062	C1_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066638)								
HK2149457-083	F2_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066639)								
HK2149457-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068902)								
HK2149457-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068904)								
HK2149457-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068906)								
HK2149457-062	C1_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068908)								
HK2149457-083	F2_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068910)								
HK2149457-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4065983)								
HK2149457-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.8	7.2	8.0
EP: Aggregate Organics (QC Lot: 4065984)								
HK2149457-022	W2_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	10.5	11.2	6.5
EP: Aggregate Organics (QC Lot: 4065985)								
HK2149457-043	F4_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	1.9	0.0
EP: Aggregate Organics (QC Lot: 4065986)								
HK2149457-063	CR15_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	5.7	6.2	8.4
EP: Aggregate Organics (QC Lot: 4065987)								
HK2149457-084	F2_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.9	2.9	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4067064)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4067065)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4067066)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4067067)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4067068)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	109	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066635)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.6	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066635) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066636)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.3	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066637)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.6	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066638)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	105	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066639)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.6	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068902)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	93.8	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068904)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	89.2	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068906)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	99.2	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068908)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	98.8	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068910)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	100	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4065983)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	102	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4065984)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	105	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4065985)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit	
EP: Aggregate Organics (QC Lot: 4065985) - Continued												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4065986)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4065987)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4070649)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	100	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4070650)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	101	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4070651)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	101	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4070652)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	101	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4070653)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	89.1	----	81.9	113	----	----	



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066635)											
HK2149457-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	121	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066636)											
HK2149457-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	118	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066637)											
HK2149457-062	C1_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	108	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066638)											
HK2149457-083	F2_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.3	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4066639)											
HK2149457-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	113	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068902)											
HK2149457-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	99.4	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068904)											
HK2149457-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	100	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068906)											
HK2149457-062	C1_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068908)											
HK2149457-083	F2_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4068910)											
HK2149457-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
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Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Issue Date	: 24-Jan-2022
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	No. of samples received	: 95
Project	: ---	Quote	: HKE/1217/2021_V3	No. of samples analysed	: 95
Order number	: ---	number			
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 10-Dec-2021 to 24-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2150068

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 19:25.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR); * denoted the estimated count; Result based on a count outside of standard method's countable range.

This is an amendment of the Certificate of Analysis.

The sample ID of HK2150068-068 has been amended.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

		Sample ID		W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
		Sampling date / time		10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-001	HK2150068-002	HK2150068-003	HK2150068-004	HK2150068-006
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics								
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	5.7	5.5	5.1	6.3
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	3	3
EM: Microbiological Testing								
EM019: Escherichia coli	----	1	CFU/100mL	11	6*	8	4*	4*



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-007	HK2150068-008	HK2150068-009	HK2150068-010	HK2150068-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.2	6.4	6.7	6.0	5.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	NOT DETECTED	1*	NOT DETECTED	1*	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-012	HK2150068-013	HK2150068-014	HK2150068-015	HK2150068-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.4	6.1	6.8	8.0	13.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	NOT DETECTED	NOT DETECTED	NOT DETECTED	8	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _dup	W2_bottom_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-017	HK2150068-018	HK2150068-019	HK2150068-021	HK2150068-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.15	0.12	0.04	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	---	---	0.020	0.020	---	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	---	---	0.006	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.01	0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.17	0.13	0.04	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	10.1	13.9	13.1	6.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	4	4	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	2*	11	30	3*	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-023	HK2150068-024	HK2150068-025	HK2150068-026	HK2150068-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	15.4	10.7	11.1	4.5	4.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	4	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	10	6*	NOT DETECTED	2*	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-028	HK2150068-029	HK2150068-030	HK2150068-031	HK2150068-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.1	4.7	5.8	4.9	1.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	2	3	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-033	HK2150068-034	HK2150068-035	HK2150068-036	HK2150068-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.4	2.3	2.0	1.1	2.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	2*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-039	HK2150068-040	HK2150068-041	HK2150068-042	HK2150068-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	2.9	2.2	2.0	2.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-044	HK2150068-045	HK2150068-046	HK2150068-047	HK2150068-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.2	2.0	2.2	2.4	2.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-049	HK2150068-050	HK2150068-051	HK2150068-052	HK2150068-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.6	3.0	4.4	5.3	5.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	8	11	3*	



Sub-Matrix: WATER				Sample ID	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-054	HK2150068-056	HK2150068-057	HK2150068-058	HK2150068-059	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.4	4.9	4.4	5.2	6.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	19	16	3*	NOT DETECTED	1*	



Sub-Matrix: WATER				Sample ID	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-060	HK2150068-061	HK2150068-062	HK2150068-063	HK2150068-064	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	3	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.3	5.2	7.2	5.6	4.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	3*	2*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb
Sampling date / time				10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2150068-065	HK2150068-066	HK2150068-067	HK2150068-068	HK2150068-069	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	5.9	7.9	6.8	6.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	1*	1*	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	W2_surface_Ebb	W2_surface_Ebb_ dup	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
Sampling date / time				10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2150068-070	HK2150068-071	HK2150068-072	HK2150068-073	HK2150068-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	3	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.02	0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	0.003	0.002	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	7.5	8.4	7.3	5.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	2	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	20	25	8	NOT DETECTED	4*	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-075	HK2150068-076	HK2150068-077	HK2150068-078	HK2150068-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	3	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.2	4.8	4.7	5.7	5.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	1*	NOT DETECTED	4*	1*	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-080	HK2150068-081	HK2150068-082	HK2150068-083	HK2150068-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.9	5.0	1.8	1.9	2.3	2.3
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	1*	4*	4*



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-085	HK2150068-086	HK2150068-088	HK2150068-089	HK2150068-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	2.0	2.9	2.4	2.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb
				Sampling date / time	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021	10-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150068-096	HK2150068-097	HK2150068-098	HK2150068-099	HK2150068-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.7	2.0	2.2	2.5	2.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*	1*	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4072451)								
HK2150068-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150068-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4072452)								
HK2150068-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
HK2150068-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4072453)								
HK2150068-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150068-054	CR17_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4072454)								
HK2150068-065	CR15_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2150068-075	G1*_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4072455)								
HK2150068-085	TPLMB_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2150068-096	CR9_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070617)								
HK2150068-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070619)								
HK2150068-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070621)								
HK2150068-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070623)								
HK2150068-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070625)								
HK2150068-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072416)								
HK2150068-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072417)								
HK2150068-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072418)								
HK2150068-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072419)								
HK2150068-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072420)								
HK2150068-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4070178)								
HK2150068-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	6.8	12.5
EP: Aggregate Organics (QC Lot: 4070179)								
HK2150068-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	15.4	18.6	18.8
EP: Aggregate Organics (QC Lot: 4070180)								
HK2150068-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.2	2.4	8.7
EP: Aggregate Organics (QC Lot: 4070181)								
HK2150068-065	CR15_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	5.8	3.4
EP: Aggregate Organics (QC Lot: 4070182)								
HK2150068-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	1.8	5.4

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4072451)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4072452)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4072453)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4072454)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4072455)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070617)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	101	----	78.8	120	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070617) - Continued											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070619)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	109	---	78.8	120	---	---
				<0.01	0.4 mg/L	103	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070621)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	107	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070623)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070625)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	111	---	78.8	120	---	---
				<0.01	0.4 mg/L	105	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072416)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072417)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.6	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072418)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.4	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072419)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.0	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072420)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	94.1	---	92.2	108	---	---
EP: Aggregate Organics (QC Lot: 4070178)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	100	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4070179)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	97.9	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4070180)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit	
EP: Aggregate Organics (QC Lot: 4070180) - Continued												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.7	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4070181)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4070182)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	104	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4073815)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4073816)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	108	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4073817)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	110	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4073818)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4073819)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	110	----	81.9	113	----	----	



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070617)										
HK2150068-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	112	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070619)										
HK2150068-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070621)										
HK2150068-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070623)										
HK2150068-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4070625)										
HK2150068-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	105	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072416)										
HK2150068-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	97.2	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072417)										
HK2150068-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.3	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072418)										
HK2150068-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072419)										
HK2150068-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	97.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4072420)										
HK2150068-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.9	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2150069
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 13-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 28-Dec-2021
Project	: ---			No. of samples received	: 94
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 94
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 13-Dec-2021 to 28-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2150069

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 17:00.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit		HK2150069-001	HK2150069-002	HK2150069-003	HK2150069-004	HK2150069-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	2	<2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		8.6	5.8	7.0	5.1	5.4
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	3	3	3	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		3*	5*	1*	1*	NOT DETECTED



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-007	HK2150069-008	HK2150069-009	HK2150069-010	HK2150069-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	<2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	4.2	4.2	4.6	4.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	7*	1*	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-012	HK2150069-013	HK2150069-014	HK2150069-015	HK2150069-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.04	<0.01	0.21	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.04	<0.02	0.21	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.3	3.3	3.4	2.7	8.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	99	13	210	41	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_middle_Flood _dup	W2_bottom_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-017	HK2150069-018	HK2150069-019	HK2150069-021	HK2150069-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.16	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.022	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.19	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.0	9.0	13.2	13.7	11.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	3	4	4	4	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	48	31	150	47	56	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-023	HK2150069-024	HK2150069-025	HK2150069-026	HK2150069-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.0	8.4	6.8	5.9	5.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	27	26	20	160	130	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-028	HK2150069-029	HK2150069-030	HK2150069-031	HK2150069-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.2	5.8	6.4	4.6	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	2	3	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	110	8	5*	4*	4*	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-033	HK2150069-034	HK2150069-035	HK2150069-036	HK2150069-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	3.3	2.1	2.6	2.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	23	12	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-039	HK2150069-040	HK2150069-041	HK2150069-042	HK2150069-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.0	2.9	1.8	1.9	1.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
Sampling date / time				13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2150069-044	HK2150069-045	HK2150069-046	HK2150069-047	HK2150069-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.9	2.4	3.3	3.3	2.7	2.7
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-049	HK2150069-050	HK2150069-051	HK2150069-052	HK2150069-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	2.6	5.1	4.9	4.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	1*	4*	9	2*	



Sub-Matrix: WATER				Sample ID	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-054	HK2150069-056	HK2150069-057	HK2150069-058	HK2150069-059	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.3	2.4	4.1	3.7	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-060	HK2150069-061	HK2150069-062	HK2150069-063	HK2150069-064	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.05	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.05	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.9	3.6	3.3	3.3	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	80	8	



Sub-Matrix: WATER				Sample ID	CR15_bottom_Ebb	CR15_bottom_Ebb_dup	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-065	HK2150069-066	HK2150069-067	HK2150069-068	HK2150069-069	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.08	0.03	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.013	0.005	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.03	0.04	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.11	0.07	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.1	3.7	15.1	13.9	10.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	4	4	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	15	16	280	320	310	



Sub-Matrix: WATER				Sample ID	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb	G1*_bottom_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-070	HK2150069-072	HK2150069-073	HK2150069-074	HK2150069-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.12	0.05	0.02	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.004	0.019	0.009	0.002	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.02	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.05	0.14	0.05	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	15.1	12.6	12.7	13.1	9.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	4	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	300	280	110	140	100	



Sub-Matrix: WATER				Sample ID	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb	G1_middle_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-076	HK2150069-077	HK2150069-078	HK2150069-079	HK2150069-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.8	6.1	6.4	5.6	5.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	170	180	28	91	150	



Sub-Matrix: WATER				Sample ID	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb	TPLMB_surface_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-081	HK2150069-082	HK2150069-083	HK2150069-084	HK2150069-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.9	3.0	3.0	3.3	2.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	14	20	13	9	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150069-092	HK2150069-093	HK2150069-094	HK2150069-095	HK2150069-096	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.2	2.1	2.1	3.0	3.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb	---
				Sampling date / time	13-Dec-2021	13-Dec-2021	13-Dec-2021	13-Dec-2021	----
Compound	CAS Number	LOR	Unit	HK2150069-097	HK2150069-098	HK2150069-099	HK2150069-100	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	---
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	---
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	---
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.5	3.8	4.2	4.1	4.1	---
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	---
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	---



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4073937)								
HK2150069-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150069-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4073938)								
HK2150069-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150069-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4073939)								
HK2150069-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2150069-054	CR17_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4073940)								
HK2150069-065	CR15_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2150069-076	F1_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4073941)								
HK2150069-086	TPLMB_surface_Ebb_dup	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150069-097	CR9_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075077)								
HK2150069-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075078)								
HK2150069-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075079)								
HK2150069-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075080)								
HK2150069-085	TPLMB_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075081)								
HK2150069-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075089)								
HK2150069-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075091)								
HK2150069-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075093)								
HK2150069-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075095)								
HK2150069-085	TPLMB_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075097)								
HK2150069-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4079612)								
HK2150069-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	7.9	8.5
EP: Aggregate Organics (QC Lot: 4079613)								
HK2150069-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	11.0	10.7	2.8
EP: Aggregate Organics (QC Lot: 4079614)								
HK2150069-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.9	2.6	10.9
EP: Aggregate Organics (QC Lot: 4079615)								
HK2150069-065	CR15_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	5.1	5.8	12.8
EP: Aggregate Organics (QC Lot: 4079616)								
HK2150069-086	TPLMB_surface_Ebb_dup	EP008F: Chlorophyll a	----	0.1	mg/m ³	1.5	1.8	18.2

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4073937)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073938)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073939)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073940)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4073941)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075077)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.4	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075077) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075078)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	94.9	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075079)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.1	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075080)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.9	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075081)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.3	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075089)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	116	---	78.8	120	---	---
				<0.01	0.4 mg/L	99.5	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075091)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	93.2	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075093)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	93.4	---	78.8	120	---	---
				<0.01	0.4 mg/L	99.3	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075095)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	113	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075097)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	106	---	78.8	120	---	---
				<0.01	0.4 mg/L	103	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4078615)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	104	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4078616)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	107	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4078617)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
EP: Aggregate Organics (QC Lot: 4078617) - Continued											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4078618)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4078619)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4079612)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4079613)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	105	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4079614)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	99.2	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4079615)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.0	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4079616)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	104	----	93.7	108	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075077)											
HK2150069-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	97.7	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075078)											
HK2150069-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075079)											
HK2150069-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.4	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075080)											
HK2150069-085	TPLMB_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075081)											
HK2150069-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.2	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075089)											
HK2150069-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075091)											
HK2150069-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075093)											
HK2150069-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075095)											
HK2150069-085	TPLMB_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4075097)											
HK2150069-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	105	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2150474
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 15-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 30-Dec-2021
Project	: ---			No. of samples received	: 95
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 95
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 15-Dec-2021 to 30-Dec-2021.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2150474

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 18:00.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_middle_Flood
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit		HK2150474-001	HK2150474-002	HK2150474-003	HK2150474-004	HK2150474-005
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		11.9	9.9	10.0	8.6	6.1
EP030: Biochemical Oxygen Demand	----	2	mg/L		2	2	2	2	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		14	14	5*	4*	8



Sub-Matrix: WATER				Sample ID	CR17_bottom_Flo od	CR16_surface_Flo od	CR16_middle_Flo d	CR16_bottom_Flo d	C1_surface_Flood
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-006	HK2150474-007	HK2150474-008	HK2150474-009	HK2150474-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	2	2	2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.9	11.3	8.6	6.9	6.9	15.6
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	3
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	6*	2*	3*	9	9	7*



Sub-Matrix: WATER				Sample ID	C1_middle_Flood	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-011	HK2150474-012	HK2150474-013	HK2150474-014	HK2150474-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	13.4	11.5	9.2	11.6	11.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	6*	5*	5*	3*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR1_surface_Flood	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood_dup
Sampling date / time				15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2150474-016	HK2150474-017	HK2150474-018	HK2150474-019	HK2150474-021	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.004	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	19.9	12.5	11.2	10.3	9.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	14	7*	10	18	23	



Sub-Matrix: WATER				Sample ID	W2_bottom_Flood	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-022	HK2150474-023	HK2150474-024	HK2150474-025	HK2150474-026	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.4	12.3	10.1	5.6	6.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	24	2*	4*	3*	5*	



Sub-Matrix: WATER				Sample ID	F1_middle_Flood	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-027	HK2150474-028	HK2150474-029	HK2150474-030	HK2150474-031	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.2	7.5	5.3	6.1	6.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	16	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F2_surface_Flood	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-032	HK2150474-033	HK2150474-034	HK2150474-035	HK2150474-036	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.1	3.2	4.0	2.8	2.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	8	16	8	3*	5*	



Sub-Matrix: WATER				Sample ID	C1*_surface_Flood	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-038	HK2150474-039	HK2150474-040	HK2150474-041	HK2150474-042	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.9	3.6	3.9	2.7	2.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_surface_Flood	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-048	HK2150474-049	HK2150474-050	HK2150474-051	HK2150474-052	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.04	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.04	0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.8	4.5	3.4	7.5	7.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	12	9	11	26	11	



Sub-Matrix: WATER				Sample ID	W1_bottom_Ebb	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-053	HK2150474-054	HK2150474-056	HK2150474-057	HK2150474-058	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.5	8.6	8.3	8.8	8.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	14	4*	5*	19	13	



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-059	HK2150474-060	HK2150474-061	HK2150474-062	HK2150474-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.5	9.9	9.3	8.2	7.2	7.2
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	9	17	16	12	19	19



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_middle_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-064	HK2150474-065	HK2150474-066	HK2150474-067	HK2150474-068	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.08	0.23	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.006	0.015	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.03	0.06	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.11	0.28	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.8	8.8	8.5	15.6	13.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	13	17	10	530	740	



Sub-Matrix: WATER				Sample ID	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-069	HK2150474-070	HK2150474-072	HK2150474-073	HK2150474-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.18	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.024	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.22	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	12.4	12.3	9.8	8.5	8.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	630	220	120	NOT DETECTED	2*	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-075	HK2150474-076	HK2150474-077	HK2150474-078	HK2150474-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.2	10.8	11.2	9.5	6.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	9	6*	5*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-080	HK2150474-081	HK2150474-082	HK2150474-083	HK2150474-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	3
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.7	6.5	4.5	4.0	4.0	4.0
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	22	11	5*	5*



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up
Sampling date / time					15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-085	HK2150474-086	HK2150474-088	HK2150474-089	HK2150474-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	6	2	<2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	1.6	3.5	4.3	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	5*	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-091	HK2150474-092	HK2150474-093	HK2150474-094	HK2150474-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.3	3.7	3.8	3.6	3.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*



Sub-Matrix: WATER				Sample ID	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb
				Sampling date / time	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021	15-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150474-096	HK2150474-097	HK2150474-098	HK2150474-099	HK2150474-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.5	3.6	6.9	7.5	6.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4082466)								
HK2150474-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150474-011	C1_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4082467)								
HK2150474-022	W2_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2150474-032	F2_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4082468)								
HK2150474-043	F4_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150474-053	W1_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4082469)								
HK2150474-064	CR15_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150474-075	G1*_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4082470)								
HK2150474-085	TPLMB_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.0
HK2150474-096	CR9_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080886)								
HK2150474-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080887)								
HK2150474-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080888)								
HK2150474-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080889)								
HK2150474-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080890)								
HK2150474-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080938)								
HK2150474-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080940)								
HK2150474-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080942)								
HK2150474-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080944)								
HK2150474-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080946)								
HK2150474-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4087809)								
HK2150474-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	11.9	12.2	2.5
EP: Aggregate Organics (QC Lot: 4087810)								
HK2150474-022	W2_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	9.4	9.8	4.2
EP: Aggregate Organics (QC Lot: 4087811)								
HK2150474-043	F4_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	3.3	16.4
EP: Aggregate Organics (QC Lot: 4087812)								
HK2150474-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.8	9.6	8.7
EP: Aggregate Organics (QC Lot: 4087813)								
HK2150474-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	1.9	1.8	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4082466)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4082467)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4082468)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4082469)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4082470)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	109	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080886)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.7	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080886) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080887)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	101	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080888)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080889)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.2	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080890)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.6	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080938)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	97.4	----	78.8	120	----	----
				<0.01	0.4 mg/L	102	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080940)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	105	----	78.8	120	----	----
				<0.01	0.4 mg/L	103	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080942)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	101	----	78.8	120	----	----
				<0.01	0.4 mg/L	101	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080944)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	102	----	78.8	120	----	----
				<0.01	0.4 mg/L	105	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080946)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	94.0	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
EP: Aggregate Organics (QC Lot: 4082480)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4082481)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	107	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4082482)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
EP: Aggregate Organics (QC Lot: 4082482) - Continued											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4082483)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4082484)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4087809)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	104	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4087810)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	100	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4087811)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4087812)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	101	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4087813)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080886)										
HK2150474-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	108	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080887)										
HK2150474-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080888)										
HK2150474-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	125	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080889)										
HK2150474-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	106	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080890)										
HK2150474-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	92.4	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080938)										
HK2150474-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080940)										
HK2150474-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080942)										
HK2150474-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080944)										
HK2150474-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	105	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4080946)										
HK2150474-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2150908
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 17-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 03-Jan-2022
Project	: ---			No. of samples received	: 94
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 94
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 17-Dec-2021 to 03-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2150908

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 17:55.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit		HK2150908-001	HK2150908-002	HK2150908-003	HK2150908-004	HK2150908-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.04	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.04	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		6.0	7.0	7.5	5.3	6.9
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	3	3	3	3
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		18	18	12	9	10



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-007	HK2150908-008	HK2150908-009	HK2150908-010	HK2150908-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.6	5.3	5.1	5.8	5.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	2*	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-012	HK2150908-013	HK2150908-014	HK2150908-015	HK2150908-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.04
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.009
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	0.05
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	9.3	7.7	6.9	6.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	4	4	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	2*	2*	1*	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _dup	W2_bottom_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-017	HK2150908-018	HK2150908-019	HK2150908-021	HK2150908-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.01	0.01	0.08	0.06	0.07	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	0.001	0.015	0.009	0.013	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.02	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.10	0.08	0.08	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.8	6.3	7.3	6.0	6.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	4*	1*	3*	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-023	HK2150908-024	HK2150908-025	HK2150908-026	HK2150908-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.7	6.9	6.8	7.2	7.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	8	11	4*	6*	4*	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-028	HK2150908-029	HK2150908-030	HK2150908-031	HK2150908-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.3	7.3	6.8	5.5	3.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	10	5*	NOT DETECTED	1*	15	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-033	HK2150908-034	HK2150908-035	HK2150908-036	HK2150908-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.02	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.6	3.4	3.0	3.0	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	10	7*	8	28	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-039	HK2150908-040	HK2150908-041	HK2150908-042	HK2150908-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.1	3.5	2.3	2.2	2.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-044	HK2150908-045	HK2150908-046	HK2150908-047	HK2150908-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	2.2	3.0	2.4	3.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	4*	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-049	HK2150908-050	HK2150908-051	HK2150908-052	HK2150908-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	3.5	6.7	6.9	7.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	6*	7*	43	45	42	



Sub-Matrix: WATER				Sample ID	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-054	HK2150908-056	HK2150908-057	HK2150908-058	HK2150908-059	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.3	6.6	7.2	6.4	6.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	43	39	19	20	12	



Sub-Matrix: WATER				Sample ID	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-060	HK2150908-061	HK2150908-062	HK2150908-063	HK2150908-064	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.4	5.9	5.9	7.0	6.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	31	30	12	17	23	



Sub-Matrix: WATER				Sample ID	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb
Sampling date / time				17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2150908-065	HK2150908-066	HK2150908-067	HK2150908-068	HK2150908-069	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.0	6.3	7.5	6.6	8.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	3	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	9	22	15	7*	



Sub-Matrix: WATER				Sample ID	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb	G1*_bottom_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-070	HK2150908-072	HK2150908-073	HK2150908-074	HK2150908-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.8	6.2	7.4	6.1	6.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	30	3*	44	19	18	



Sub-Matrix: WATER				Sample ID	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb	G1_middle_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-076	HK2150908-077	HK2150908-078	HK2150908-079	HK2150908-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	<0.01	0.02	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.007	<0.001	0.002	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	<0.01	0.03	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.08	<0.02	0.05	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.3	6.3	5.2	6.7	6.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	130	52	130	51	50	



Sub-Matrix: WATER				Sample ID	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb	TPLMB_surface_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-081	HK2150908-082	HK2150908-083	HK2150908-084	HK2150908-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	0.03
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.5	3.5	2.9	2.8	2.3	2.3
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	31	5*	2*	1*	2*	2*



Sub-Matrix: WATER				Sample ID	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021
Compound	CAS Number	LOR	Unit	HK2150908-092	HK2150908-093	HK2150908-094	HK2150908-095	HK2150908-096	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.3	2.7	3.1	3.0	3.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb	---
				Sampling date / time	17-Dec-2021	17-Dec-2021	17-Dec-2021	17-Dec-2021	----
Compound	CAS Number	LOR	Unit	HK2150908-097	HK2150908-098	HK2150908-099	HK2150908-100	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	---
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	----
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	----
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	----
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	----
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	4.3	3.4	3.5		---
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	----
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	2*	3*	NOT DETECTED		---



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4088662)								
HK2150908-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150908-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4088663)								
HK2150908-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2150908-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4088664)								
HK2150908-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150908-054	CR17_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4088665)								
HK2150908-065	CR15_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150908-076	F1_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4088666)								
HK2150908-086	TPLMB_surface_Ebb_dup	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2150908-097	CR9_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085769)								
HK2150908-002	W1_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085771)								
HK2150908-024	G1*_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085773)								
HK2150908-045	CR9_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085775)								
HK2150908-066	CR15_bottom_Ebb_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085777)								
HK2150908-088	C1*_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085862)								
HK2150908-002	W1_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085863)								
HK2150908-024	G1*_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085864)								
HK2150908-045	CR9_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085865)								
HK2150908-066	CR15_bottom_Ebb_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085866)								
HK2150908-088	C1*_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4085460)								
HK2150908-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	7.0	15.4
EP: Aggregate Organics (QC Lot: 4085461)								
HK2150908-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.7	9.5	8.8
EP: Aggregate Organics (QC Lot: 4085462)								
HK2150908-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.7	3.1	13.8
EP: Aggregate Organics (QC Lot: 4085463)								
HK2150908-065	CR15_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.0	7.0	0.0
EP: Aggregate Organics (QC Lot: 4085464)								
HK2150908-086	TPLMB_surface_Ebb_dup	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.6	2.8	7.4

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4088662)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4088663)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4088664)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4088665)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4088666)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085769)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	85.8	----	78.8	120	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085769) - Continued											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.4 mg/L	100.0	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085771)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	107	----	78.8	120	----	----
				<0.01	0.4 mg/L	101	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085773)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	99.2	----	78.8	120	----	----
				<0.01	0.4 mg/L	103	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085775)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	88.6	----	78.8	120	----	----
				<0.01	0.4 mg/L	100	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085777)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	97.4	----	78.8	120	----	----
				<0.01	0.4 mg/L	100	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085862)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.2	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085863)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.3	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085864)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.0	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085865)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.9	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085866)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.6	----	92.2	108	----	----
EP: Aggregate Organics (QC Lot: 4085460)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	96.4	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4085461)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	101	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4085462)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit	
EP: Aggregate Organics (QC Lot: 4085462) - Continued												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	96.0	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4085463)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	101	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4085464)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4088299)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4088300)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	104	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4088301)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	104	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4088302)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	104	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4088303)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	101	----	81.9	113	----	----	



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085769)										
HK2150908-001	W1_surface_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085771)										
HK2150908-023	G1*_surface_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085773)										
HK2150908-044	CR9_surface_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085775)										
HK2150908-065	CR15_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085777)										
HK2150908-086	TPLMB_surface_Ebb_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085862)										
HK2150908-001	W1_surface_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.9	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085863)										
HK2150908-023	G1*_surface_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.6	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085864)										
HK2150908-044	CR9_surface_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.8	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085865)										
HK2150908-065	CR15_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	104	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4085866)										
HK2150908-086	TPLMB_surface_Ebb_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.4	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2151369
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 20-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 04-Jan-2022
Project	: ---			No. of samples received	: 95
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 95
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 20-Dec-2021 to 04-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2151369

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 18:15.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_middle_Flood
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit		HK2151369-001	HK2151369-002	HK2151369-003	HK2151369-004	HK2151369-005
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.02	0.01	0.01	0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		8.3	8.6	6.7	7.0	8.7
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	3	3	2	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		73	61	58	32	53



Sub-Matrix: WATER				Sample ID	CR17_bottom_Flood	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-006	HK2151369-007	HK2151369-008	HK2151369-009	HK2151369-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.9	9.1	8.5	8.7	8.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	47	43	31	36	51	



Sub-Matrix: WATER				Sample ID	C1_middle_Flood	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-011	HK2151369-012	HK2151369-013	HK2151369-014	HK2151369-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	3	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	4.0	8.0	9.2	7.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	41	27	29	25	13	



Sub-Matrix: WATER				Sample ID	CR1_surface_Flood	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood_dup
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-016	HK2151369-017	HK2151369-018	HK2151369-019	HK2151369-021	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	4	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.03	0.02	0.10	0.18	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	0.002	0.001	0.013	0.022	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.03	0.01	0.05	0.10	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.06	0.06	0.03	0.16	0.28	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	12.9	9.4	8.4	6.8	5.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	320	450	380	250	320	



Sub-Matrix: WATER				Sample ID	W2_bottom_Flood	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-022	HK2151369-023	HK2151369-024	HK2151369-025	HK2151369-026	HK2151369-026
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	3	4	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.06	0.16	0.08	0.05	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.005	0.014	0.009	0.004	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.03	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.10	0.19	0.09	0.05	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.6	10.1	8.8	7.9	5.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	420	360	190	68	18	



Sub-Matrix: WATER				Sample ID	F1_middle_Flood	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-027	HK2151369-028	HK2151369-029	HK2151369-030	HK2151369-031	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.1	9.5	10.7	9.8	8.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	22	32	2*	3*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F2_surface_Flood	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-032	HK2151369-033	HK2151369-034	HK2151369-035	HK2151369-036	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	3	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	4.1	4.6	5.6	5.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	11	9	18	3*	9	



Sub-Matrix: WATER				Sample ID	C1*_surface_Flood	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-038	HK2151369-039	HK2151369-040	HK2151369-041	HK2151369-042	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.9	4.3	5.5	3.8	3.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_bottom_Flood	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood
Sampling date / time				20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2151369-043	HK2151369-044	HK2151369-045	HK2151369-046	HK2151369-047	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	2.4	2.2	2.6	2.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_surface_Flood	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-048	HK2151369-049	HK2151369-050	HK2151369-051	HK2151369-052	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	4	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.3	4.7	5.6	4.8	8.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	9	9	5*	210	87	



Sub-Matrix: WATER				Sample ID	W1_bottom_Ebb	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-053	HK2151369-054	HK2151369-056	HK2151369-057	HK2151369-058	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.02	0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.2	7.5	7.6	7.6	7.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	68	82	270	61	130	



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-059	HK2151369-060	HK2151369-061	HK2151369-062	HK2151369-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.08	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	0.08	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.9	7.4	9.0	7.3	7.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	3	3	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	73	61	51	32	410	



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb _dup	CR1_surface_Ebb	CR1_middle_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-064	HK2151369-065	HK2151369-066	HK2151369-067	HK2151369-068	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.02	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	9.3	8.4	16.1	11.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	63	27	16	32	24	



Sub-Matrix: WATER				Sample ID	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-069	HK2151369-070	HK2151369-072	HK2151369-073	HK2151369-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	<2	4	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	2.99	1.57	0.03	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	0.375	0.139	0.003	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.04	0.02	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.18	0.09	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	3.21	1.68	0.03	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.8	9.8	12.5	19.5	17.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	4	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	10	240	160	7*	5*	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-075	HK2151369-076	HK2151369-077	HK2151369-078	HK2151369-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.5	11.9	10.4	7.8	8.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	2*	3*	22	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-080	HK2151369-081	HK2151369-082	HK2151369-083	HK2151369-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.0	7.5	3.8	2.6	3.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	2*	5*	NOT DETECTED	14	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up
Sampling date / time				20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2151369-085	HK2151369-086	HK2151369-088	HK2151369-089	HK2151369-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.6	5.0	5.0	5.4	5.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	10	1*	NOT DETECTED	12	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-091	HK2151369-092	HK2151369-093	HK2151369-094	HK2151369-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.9	3.2	3.3	2.3	2.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb
				Sampling date / time	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021	20-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151369-096	HK2151369-097	HK2151369-098	HK2151369-099	HK2151369-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.2	2.5	3.8	3.5	4.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	9	11	7*	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4091498)								
HK2151369-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151369-011	C1_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4091499)								
HK2151369-022	W2_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2151369-032	F2_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4091500)								
HK2151369-043	F4_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151369-053	W1_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4091501)								
HK2151369-064	CR15_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151369-075	G1*_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4091502)								
HK2151369-085	TPLMB_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2151369-096	CR9_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093052)								
HK2151369-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.18	0.18	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093053)								
HK2151369-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093054)								
HK2151369-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093055)								
HK2151369-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093056)								
HK2151369-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093076)								
HK2151369-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093078)								
HK2151369-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093080)								
HK2151369-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093082)								
HK2151369-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093084)								
HK2151369-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4090349)								
HK2151369-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.3	7.9	4.9
EP: Aggregate Organics (QC Lot: 4090350)								
HK2151369-022	W2_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.6	7.5	12.8
EP: Aggregate Organics (QC Lot: 4090351)								
HK2151369-043	F4_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.8	11.1
EP: Aggregate Organics (QC Lot: 4090352)								
HK2151369-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	6.2	3.3
EP: Aggregate Organics (QC Lot: 4090353)								
HK2151369-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.6	4.4	4.4

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4091498)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4091499)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4091500)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4091501)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4091502)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093052)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093052) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093053)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	96.9	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093054)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.5	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093055)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.5	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093056)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.5	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093076)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	109	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093078)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	100	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093080)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	105	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093082)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	101	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093084)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	102	---	78.8	120	---	---
				<0.01	0.4 mg/L	101	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4090349)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	98.2	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4090350)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	97.2	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4090351)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High	Value
EP: Aggregate Organics (QC Lot: 4090351) - Continued												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	104	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4090352)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4090353)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	99.6	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4093968)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	87.3	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4093969)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	87.7	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4093970)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	93.0	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4093971)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	88.0	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4093972)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	86.1	----	81.9	113	----	----	



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER

					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093052)										
HK2151369-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.7	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093053)										
HK2151369-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.1	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093054)										
HK2151369-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.3	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093055)										
HK2151369-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093056)										
HK2151369-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	112	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093076)										
HK2151369-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093078)										
HK2151369-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093080)										
HK2151369-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093082)										
HK2151369-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	101	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4093084)										
HK2151369-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	90.5	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2151370
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 22-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 06-Jan-2022
Project	: ---			No. of samples received	: 94
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 94
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 22-Dec-2021 to 06-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2151370

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 16:20.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR); * denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit		HK2151370-001	HK2151370-002	HK2151370-003	HK2151370-004	HK2151370-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.03	0.02	0.02	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		0.002	0.001	0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.10	0.10	0.03	0.03	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.14	0.11	0.04	0.03	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		5.6	7.0	8.0	6.8	6.3
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	2	2	2	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		130	99	48	36	14



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-007	HK2151370-008	HK2151370-009	HK2151370-010	HK2151370-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.2	9.3	10.4	9.2	10.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	12	10	14	13	6*	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
Sampling date / time				22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2151370-012	HK2151370-013	HK2151370-014	HK2151370-015	HK2151370-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.07	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.010	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	0.09	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.9	9.5	10.4	9.1	4.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	8	6*	5*	10	62	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _dup	W2_bottom_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-017	HK2151370-018	HK2151370-019	HK2151370-021	HK2151370-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.06	0.12	0.06	0.33	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	0.005	0.013	0.006	0.031	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.02	0.03	0.02	0.05	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.07	0.16	0.08	0.38	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.6	3.8	3.8	4.4	4.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	26	37	48	31	26	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-023	HK2151370-024	HK2151370-025	HK2151370-026	HK2151370-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.05	0.05	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.006	0.005	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	0.04	0.03	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.09	0.08	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	4.6	4.8	3.1	3.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	3*	4*	1*	11	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-028	HK2151370-029	HK2151370-030	HK2151370-031	HK2151370-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	3	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.6	3.3	4.9	7.2	2.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	10	11	18	18	3*	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-033	HK2151370-034	HK2151370-035	HK2151370-036	HK2151370-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	3	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.02	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	0.002	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.01	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.8	2.0	2.1	2.3	5.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	4*	1*	NOT DETECTED	10	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-039	HK2151370-040	HK2151370-041	HK2151370-042	HK2151370-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.3	4.5	4.0	4.3	4.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	10	14	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-044	HK2151370-045	HK2151370-046	HK2151370-047	HK2151370-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.2	3.1	3.1	4.7	4.7
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	5*



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-049	HK2151370-050	HK2151370-051	HK2151370-052	HK2151370-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.02	0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.002	0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.09	0.04	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.11	0.06	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.8	5.1	5.8	7.2	9.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	6*	32	16	10	



Sub-Matrix: WATER				Sample ID	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-054	HK2151370-056	HK2151370-057	HK2151370-058	HK2151370-059	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.05	0.03	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.05	0.03	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.0	7.2	7.7	7.1	9.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	9	1*	3*	3*	5*	



Sub-Matrix: WATER				Sample ID	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-060	HK2151370-061	HK2151370-062	HK2151370-063	HK2151370-064	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.02	<0.01	0.02	0.14	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.02	<0.02	<0.02	<0.02	0.14	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.1	6.6	7.7	7.0	6.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	7*	12	19	89	



Sub-Matrix: WATER				Sample ID	CR15_bottom_Ebb	CR15_bottom_Ebb_dup	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-065	HK2151370-066	HK2151370-067	HK2151370-068	HK2151370-069	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	<2	<2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.9	8.0	5.6	5.5	5.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	48	12	1*	NOT DETECTED	5*	



Sub-Matrix: WATER				Sample ID	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb	G1*_bottom_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-070	HK2151370-072	HK2151370-073	HK2151370-074	HK2151370-075	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.09	0.05	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.007	0.004	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.02	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.12	0.07	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.6	4.2	5.9	5.8	5.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	3*	4*	1*	1*	1*	



Sub-Matrix: WATER				Sample ID	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb	G1_middle_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-076	HK2151370-077	HK2151370-078	HK2151370-079	HK2151370-080	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.07	0.04	0.03	0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.007	0.007	0.002	0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.05	0.03	0.02	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.12	0.08	0.06	0.03	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.2	4.0	4.3	5.4	4.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	3*	6*	14	37	



Sub-Matrix: WATER				Sample ID	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb	TPLMB_surface_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-081	HK2151370-082	HK2151370-083	HK2151370-084	HK2151370-085	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.1	2.6	3.1	3.0	3.1	3.1
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	45	2*	5*	20	NOT DETECTED	NOT DETECTED



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up	C1*_bottom_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit		HK2151370-086	HK2151370-088	HK2151370-089	HK2151370-090	HK2151370-091
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.03	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		0.003	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.04	0.01	0.01	0.01	0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.07	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		2.2	3.8	4.2	4.0	4.0
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		1*	4*	9	9	7*



Sub-Matrix: WATER				Sample ID	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151370-092	HK2151370-093	HK2151370-094	HK2151370-095	HK2151370-096	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.6	3.5	3.9	3.9	3.2	3.2
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED



Sub-Matrix: WATER				Sample ID	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb	---
				Sampling date / time	22-Dec-2021	22-Dec-2021	22-Dec-2021	22-Dec-2021	----
Compound	CAS Number	LOR	Unit	HK2151370-097	HK2151370-098	HK2151370-099	HK2151370-100	-----	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	---
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	---
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	---
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	---
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.3	5.5	5.6	5.2	5.2	---
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	---
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	2*	1*	1*	---



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4096637)								
HK2151370-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151370-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4096638)								
HK2151370-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151370-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4096639)								
HK2151370-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151370-054	CR17_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4096640)								
HK2151370-065	CR15_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2151370-076	F1_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4096641)								
HK2151370-086	TPLMB_surface_Ebb_dup	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151370-097	CR9_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096187)								
HK2151370-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.33	0.33	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096188)								
HK2151370-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.02	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096189)								
HK2151370-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096190)								
HK2151370-085	TPLMB_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096191)								
HK2151370-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098933)								
HK2151370-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098935)								
HK2151370-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098937)								
HK2151370-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098939)								
HK2151370-085	TPLMB_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098941)								
HK2151370-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4096294)								
HK2151370-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	5.6	4.9	13.3
EP: Aggregate Organics (QC Lot: 4096295)								
HK2151370-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	4.8	6.5
EP: Aggregate Organics (QC Lot: 4096296)								
HK2151370-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.4	3.1	9.2
EP: Aggregate Organics (QC Lot: 4096297)								
HK2151370-065	CR15_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.9	7.4	6.5
EP: Aggregate Organics (QC Lot: 4096298)								
HK2151370-086	TPLMB_surface_Ebb_dup	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.2	2.1	4.7

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4096637)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4096638)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4096639)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4096640)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4096641)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096187)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.2	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096187) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096188)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.7	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096189)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	101	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096190)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.3	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096191)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.6	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098933)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	93.0	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098935)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	81.4	---	78.8	120	---	---
				<0.01	0.4 mg/L	102	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098937)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	83.4	---	78.8	120	---	---
				<0.01	0.4 mg/L	103	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098939)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	100	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098941)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	83.0	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4096294)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	102	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4096295)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	97.2	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4096296)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High	Value
EP: Aggregate Organics (QC Lot: 4096296) - Continued												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	98.0	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4096297)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	105	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4096298)												
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	96.0	----	93.7	108	----	----	
EP: Aggregate Organics (QC Lot: 4099102)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	108	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4099103)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	107	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4099104)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4099105)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	110	----	81.9	113	----	----	
EP: Aggregate Organics (QC Lot: 4099106)												
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	104	----	81.9	113	----	----	



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096187)											
HK2151370-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	115	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096188)											
HK2151370-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	120	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096189)											
HK2151370-064	CR15_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	93.4	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096190)											
HK2151370-085	TPLMB_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	92.8	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4096191)											
HK2151370-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	114	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098933)											
HK2151370-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	105	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098935)											
HK2151370-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098937)											
HK2151370-064	CR15_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	106	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098939)											
HK2151370-085	TPLMB_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	104	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4098941)											
HK2151370-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	103	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 15
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2151628
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 24-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 10-Jan-2022
Project	: ---			No. of samples received	: 47
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 47
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 24-Dec-2021 to 10-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2151628

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 12:30.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit		HK2151628-001	HK2151628-002	HK2151628-003	HK2151628-004	HK2151628-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	2	<2	2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.07	0.09	0.04	0.04	0.03
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.07	0.09	0.04	0.04	0.03
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		6.8	7.6	8.9	5.6	6.2
EP030: Biochemical Oxygen Demand	----	2	mg/L		2	<2	2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		39	51	17	30	24



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-007	HK2151628-008	HK2151628-009	HK2151628-010	HK2151628-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	4	3	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.05	0.03	0.06	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	0.05	0.03	0.06	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.5	3.1	8.1	5.6	7.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	63	24	19	81	42	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-012	HK2151628-013	HK2151628-014	HK2151628-015	HK2151628-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.04	0.02	0.01	0.01	0.04
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.04	<0.02	<0.02	<0.02	0.05
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.5	7.2	8.8	8.5	8.7	8.7
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	16	19	6*	7*	93	93



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _dup	W2_bottom_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-017	HK2151628-018	HK2151628-019	HK2151628-021	HK2151628-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	<2	<2	<2	<2
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.02	0.03	0.10	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.003	0.005	0.010	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.01	0.02	0.02	0.04	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.03	<0.02	0.04	0.06	0.14	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.0	8.9	7.7	8.8	8.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	89	64	220	270	360	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-023	HK2151628-024	HK2151628-025	HK2151628-026	HK2151628-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	3	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.11	<0.01	<0.01	0.08	0.03	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.015	<0.001	<0.001	0.013	0.004	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	<0.01	<0.01	0.05	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.14	<0.02	<0.02	0.13	0.05	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.4	9.8	8.0	5.3	6.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	280	94	33	250	180	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-028	HK2151628-029	HK2151628-030	HK2151628-031	HK2151628-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	3	4	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	0.03	0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	0.005	0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.04	0.02	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.05	0.07	0.03	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	5.7	6.4	6.4	2.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	160	210	190	72	9	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-033	HK2151628-034	HK2151628-035	HK2151628-036	HK2151628-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	2.8	2.5	3.8	4.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	5*	6*	NOT DETECTED	2*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-039	HK2151628-040	HK2151628-041	HK2151628-042	HK2151628-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	3	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.5	4.7	3.0	3.4	3.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	2*	NOT DETECTED	2*	1*	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021	24-Dec-2021
Compound	CAS Number	LOR	Unit	HK2151628-044	HK2151628-045	HK2151628-046	HK2151628-047	HK2151628-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.4	3.4	2.2	2.0	4.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	1*	4*	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	---	---	---
				Sampling date / time	24-Dec-2021	24-Dec-2021	---	---	---
Compound	CAS Number	LOR	Unit	HK2151628-049	HK2151628-050	---	---	---	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	---	---	---	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	---	---	---	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	---	---	---	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	---	---	---	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	---	---	---	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	---	---	---	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.6	4.4	---	---	---	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	---	---	---	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	7*	---	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4099541)								
HK2151628-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2151628-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4099542)								
HK2151628-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2151628-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4099543)								
HK2151628-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099550)								
HK2151628-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099552)								
HK2151628-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099554)								
HK2151628-050	F3_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099556)								
HK2151628-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.10	0.10	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099557)								
HK2151628-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099558)								
HK2151628-050	F3_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4100134)								
HK2151628-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.8	7.4	8.5
EP: Aggregate Organics (QC Lot: 4100135)								
HK2151628-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	8.4	8.9	5.8
EP: Aggregate Organics (QC Lot: 4100136)								
HK2151628-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.4	3.9	12.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4099541)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4099542)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4099543)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099550)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	81.2	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099552)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	89.2	----	78.8	120	----	----
				<0.01	0.4 mg/L	106	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099554)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	----	78.8	120	----	----
				<0.01	0.4 mg/L	106	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099556)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.8	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099557)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	94.8	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099558)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.8	----	92.2	108	----	----
EP: Aggregate Organics (QC Lot: 4099969)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4099970)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4099971)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	104	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4100134)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High	Value
EP: Aggregate Organics (QC Lot: 4100135)												
EP008F: Chlorophyll a		----	0.1	mg/m ³	<0.1	10 mg/m ³	101	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4100136)												
EP008F: Chlorophyll a		----	0.1	mg/m ³	<0.1	10 mg/m ³	96.1	----	93.7	108	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					Laboratory sample ID	Sample ID	Method: Compound	CAS Number	MS	MSD
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099550)										
HK2151628-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	88.1	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099552)										
HK2151628-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.2	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099554)										
HK2151628-050	F3_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099556)										
HK2151628-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	92.6	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099557)										
HK2151628-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	120	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4099558)										
HK2151628-050	F3_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	107	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2152124
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 27-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 10-Jan-2022
Project	: ---			No. of samples received	: 95
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 95
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 27-Dec-2021 to 10-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2152124

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 20:50.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_middle_Flood
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-001	HK2152124-002	HK2152124-003	HK2152124-004	HK2152124-005	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	2	2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.08	0.03	0.02	0.03	0.03	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.08	0.03	<0.02	0.03	0.03	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	11.3	10.4	11.2	9.9	10.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	3	3	3	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	63	47	12	11	12	



Sub-Matrix: WATER				Sample ID	CR17_bottom_Flo d	CR16_surface_Flo od	CR16_middle_Flo d	CR16_bottom_Flo d	C1_surface_Flood
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-006	HK2152124-007	HK2152124-008	HK2152124-009	HK2152124-010	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	4	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.2	8.8	8.3	9.6	8.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	7*	NOT DETECTED	6*	6*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1_middle_Flood	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-011	HK2152124-012	HK2152124-013	HK2152124-014	HK2152124-015	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	3	4	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.8	9.4	9.2	10.2	9.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	5*	3*	37	28	49	



Sub-Matrix: WATER				Sample ID	CR1_surface_Flood	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood_dup
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-016	HK2152124-017	HK2152124-018	HK2152124-019	HK2152124-021	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	4	4	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.04	0.02	0.05	0.04	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.010	0.008	0.004	0.007	0.006	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.01	<0.01	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.07	0.06	<0.02	0.07	0.06	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.7	6.8	7.5	8.5	7.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	3*	1*	6*	5*	



Sub-Matrix: WATER				Sample ID	W2_bottom_Flood	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-022	HK2152124-023	HK2152124-024	HK2152124-025	HK2152124-026	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	3	2	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.005	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.07	<0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.9	10.9	6.8	8.8	5.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	15	2*	14	31	10	



Sub-Matrix: WATER				Sample ID	F1_middle_Flood	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-027	HK2152124-028	HK2152124-029	HK2152124-030	HK2152124-031	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	3	2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	5.4	9.7	10.4	9.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	19	42	37	46	56	



Sub-Matrix: WATER				Sample ID	F2_surface_Flood	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-032	HK2152124-033	HK2152124-034	HK2152124-035	HK2152124-036	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	4	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	3.4	3.7	2.2	2.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	9	7*	8	NOT DETECTED	2*	



Sub-Matrix: WATER				Sample ID	C1*_surface_Flood	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-038	HK2152124-039	HK2152124-040	HK2152124-041	HK2152124-042	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	3	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	3.4	3.6	2.7	3.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_bottom_Flood	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood
Sampling date / time				27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	
Compound	CAS Number	LOR	Unit	HK2152124-043	HK2152124-044	HK2152124-045	HK2152124-046	HK2152124-047	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.01	0.02	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	2.3	2.3	2.4	2.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_surface_Flood	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-048	HK2152124-049	HK2152124-050	HK2152124-051	HK2152124-052	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	<2	5	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.03	0.06	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.03	0.06	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.5	6.5	6.9	10.1	9.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	4*	3*	21	34	



Sub-Matrix: WATER				Sample ID	W1_bottom_Ebb	CR17_surface_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-053	HK2152124-054	HK2152124-056	HK2152124-057	HK2152124-058	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	5	4	5	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.03	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	10.6	10.2	6.1	9.2	8.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	37	11	9	4*	3*	



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-059	HK2152124-060	HK2152124-061	HK2152124-062	HK2152124-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	5	4	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	9.6	9.8	10.4	10.5	8.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	9	6*	12	82	



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb_dup	CR1_surface_Ebb	CR1_middle_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-064	HK2152124-065	HK2152124-066	HK2152124-067	HK2152124-068	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	4	4	6	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	<0.01	<0.01	0.05	0.03	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	<0.001	<0.001	0.003	0.002	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.17	0.07	0.02	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.19	0.07	0.02	0.06	0.04	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.4	8.2	8.4	8.2	7.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2700	1900	370	23	6*	



Sub-Matrix: WATER				Sample ID	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-069	HK2152124-070	HK2152124-072	HK2152124-073	HK2152124-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	4	5	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.07	1.32	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	0.006	0.088	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.02	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.02	0.10	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	0.09	1.44	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.6	8.4	7.1	8.7	8.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	19	320	14	9	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-075	HK2152124-076	HK2152124-077	HK2152124-078	HK2152124-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	5	7	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.01	0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	8.6	5.6	5.4	6.1	10.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	15	9	23	62	77	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-080	HK2152124-081	HK2152124-082	HK2152124-083	HK2152124-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	3	5	5	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	17.2	10.0	3.9	3.7	3.7	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	53	82	13	12	9	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-085	HK2152124-086	HK2152124-088	HK2152124-089	HK2152124-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	4	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.6	2.7	3.6	4.0	4.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-091	HK2152124-092	HK2152124-093	HK2152124-094	HK2152124-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	6	5	5	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	3.3	3.8	3.3	2.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb
				Sampling date / time	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021	27-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152124-096	HK2152124-097	HK2152124-098	HK2152124-099	HK2152124-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	4	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.3	2.5	5.8	5.8	6.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	NOT DETECTED	4*	2*	3*	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4100477)								
HK2152124-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2152124-011	C1_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4100478)								
HK2152124-022	W2_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2152124-032	F2_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4100479)								
HK2152124-043	F4_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2152124-053	W1_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4100480)								
HK2152124-064	CR15_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.0
HK2152124-075	G1*_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4100481)								
HK2152124-085	TPLMB_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2152124-096	CR9_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100349)								
HK2152124-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100350)								
HK2152124-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100351)								
HK2152124-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100352)								
HK2152124-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100353)								
HK2152124-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100445)								
HK2152124-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100447)								
HK2152124-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100449)								
HK2152124-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100451)								
HK2152124-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100453)								
HK2152124-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4100431)								
HK2152124-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	11.3	11.7	3.5
EP: Aggregate Organics (QC Lot: 4100432)								
HK2152124-022	W2_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.9	7.9	0.0
EP: Aggregate Organics (QC Lot: 4100433)								
HK2152124-043	F4_bottom_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	3.4	5.1
EP: Aggregate Organics (QC Lot: 4100434)								
HK2152124-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.4	7.0	5.6
EP: Aggregate Organics (QC Lot: 4100435)								
HK2152124-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	2.6	2.6	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4100477)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4100478)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4100479)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4100480)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4100481)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100349)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.2	----	92.2	108	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100349) - Continued											
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100350)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.2	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100351)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.5	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100352)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.1	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100353)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	96.3	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100445)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	83.0	---	78.8	120	---	---
				<0.01	0.4 mg/L	105	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100447)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	96.6	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100449)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	104	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100451)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	109	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100453)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	95.4	---	78.8	120	---	---
				<0.01	0.4 mg/L	103	---	96.3	108	---	---
EP: Aggregate Organics (QC Lot: 4100431)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	98.7	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4100432)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	101	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4100433)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP: Aggregate Organics (QC Lot: 4100433) - Continued											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4100434)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	99.0	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4100435)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	100	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4102318)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	108	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4102319)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	107	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4102320)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	107	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4102321)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4102322)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100349)											
HK2152124-021	W2_surface_Flood_dup	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	106	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100350)											
HK2152124-042	F4_middle_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	116	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100351)											
HK2152124-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	96.2	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100352)											
HK2152124-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	95.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100353)											
HK2152124-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	92.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100445)											
HK2152124-021	W2_surface_Flood_dup	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	106	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100447)											
HK2152124-042	F4_middle_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.4	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100449)											
HK2152124-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	105	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100451)											
HK2152124-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4100453)											
HK2152124-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	107	----	75.0	125	----	----	





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 26
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2152162
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 29-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 12-Jan-2022
Project	: ---			No. of samples received	: 95
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 95
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 29-Dec-2021 to 12-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2152162

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 17:25.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Flood	W1_middle_Flood	W1_bottom_Flood	CR17_surface_Flood	CR17_bottom_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit		HK2152162-001	HK2152162-002	HK2152162-003	HK2152162-004	HK2152162-006
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		2	2	3	4	4
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.14	0.14	0.05	0.06	0.04
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.14	0.14	0.05	0.06	0.04
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		9.4	7.7	7.3	8.7	7.1
EP030: Biochemical Oxygen Demand	----	2	mg/L		3	2	2	2	2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		41	12	27	27	19



Sub-Matrix: WATER				Sample ID	CR16_surface_Flood	CR16_middle_Flood	CR16_bottom_Flood	C1_surface_Flood	C1_middle_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-007	HK2152162-008	HK2152162-009	HK2152162-010	HK2152162-011	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	4	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.0	5.4	7.0	7.4	6.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	4*	5*	2*	



Sub-Matrix: WATER				Sample ID	C1_bottom_Flood	CR15_surface_Flood	CR15_middle_Flood	CR15_bottom_Flood	CR1_surface_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-012	HK2152162-013	HK2152162-014	HK2152162-015	HK2152162-016	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	2	3	7	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.8	5.8	6.6	7.2	4.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	9	10	4*	600	



Sub-Matrix: WATER				Sample ID	CR1_middle_Flood	CR1_bottom_Flood	W2_surface_Flood	W2_surface_Flood _dup	W2_bottom_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-017	HK2152162-018	HK2152162-019	HK2152162-021	HK2152162-022	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	7	6	7	7	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.13	0.27	0.06	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	0.006	0.011	0.006	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.04	0.06	0.03	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.17	0.33	0.09	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.4	5.6	3.4	3.7	4.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	380	210	720	670	510	



Sub-Matrix: WATER				Sample ID	G1*_surface_Flood	G1*_middle_Flood	G1*_bottom_Flood	F1_surface_Flood	F1_middle_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-023	HK2152162-024	HK2152162-025	HK2152162-026	HK2152162-027	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	<2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.04	0.02	0.03	0.03	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.006	0.003	0.002	0.003	0.002	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.01	0.01	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.06	0.05	0.04	0.05	0.05	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.4	4.9	4.7	1.7	2.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	140	150	130	4*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F1_bottom_Flood	G1_surface_Flood	G1_middle_Flood	G1_bottom_Flood	F2_surface_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-028	HK2152162-029	HK2152162-030	HK2152162-031	HK2152162-032	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	4	4	3	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.01	0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.04	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.4	3.7	4.6	5.7	1.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	<2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	38	72	76	57	1*	



Sub-Matrix: WATER				Sample ID	F2_middle_Flood	F2_bottom_Flood	TPLMB_surface_Flood	TPLMB_surface_Flood_dup	C1*_surface_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-033	HK2152162-034	HK2152162-035	HK2152162-036	HK2152162-038	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	4	3	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.01	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.5	1.8	2.5	2.3	1.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	2*	4*	NOT DETECTED	1*	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_middle_Flood	C1*_bottom_Flood	F4_surface_Flood	F4_middle_Flood	F4_bottom_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-039	HK2152162-040	HK2152162-041	HK2152162-042	HK2152162-043	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	5	3	2	2	7	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	1.7	2.5	2.9	2.7	2.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_surface_Flood	CR9_surface_Flood_dup	CR9_middle_Flood	CR9_bottom_Flood	F3_surface_Flood
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-044	HK2152162-045	HK2152162-046	HK2152162-047	HK2152162-048	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	4	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	4.3	4.0	3.7	3.9	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F3_middle_Flood	F3_bottom_Flood	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-049	HK2152162-050	HK2152162-051	HK2152162-052	HK2152162-053	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	5	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	0.08	0.05	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	0.08	0.05	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.7	3.9	8.5	7.8	8.3	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	3	3	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	4*	2*	1*	1*	1*	



Sub-Matrix: WATER				CR17_surface_Ebb	CR17_middle_Ebb	CR17_bottom_Ebb	CR16_surface_Ebb	CR16_middle_Ebb
Sample ID				29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Sampling date / time				29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-054	HK2152162-055	HK2152162-056	HK2152162-057	HK2152162-058
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	6	5	3
ED/EK: Inorganic Nonmetallic Parameters								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.05	0.03	0.03	0.02	<0.01
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.05	0.03	0.03	0.02	<0.02
EP: Aggregate Organics								
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.2	6.4	6.5	5.2	7.0
EP030: Biochemical Oxygen Demand	----	2	mg/L	3	2	2	2	2
EM: Microbiological Testing								
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	1*



Sub-Matrix: WATER				Sample ID	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb	C1_bottom_Ebb	CR15_surface_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-059	HK2152162-060	HK2152162-061	HK2152162-062	HK2152162-063	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	5	3	3	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.6	5.8	6.0	7.3	6.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	1*	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb_dup	CR1_surface_Ebb	CR1_middle_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-064	HK2152162-065	HK2152162-066	HK2152162-067	HK2152162-068	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	5	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.02	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.03	0.03	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	6.2	6.0	6.1	4.6	4.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	NOT DETECTED	NOT DETECTED	16	23	



Sub-Matrix: WATER				Sample ID	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb	G1*_surface_Ebb	G1*_middle_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-069	HK2152162-070	HK2152162-072	HK2152162-073	HK2152162-074	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	8	8	5	6	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	0.19	0.11	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	0.004	0.002	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	0.01	0.01	0.02	0.02	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.21	0.13	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	4.0	4.3	4.7	4.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	2	2	2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	23	8	17	1*	23	



Sub-Matrix: WATER				Sample ID	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb	F1_bottom_Ebb	G1_surface_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-075	HK2152162-076	HK2152162-077	HK2152162-078	HK2152162-079	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	3	3	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.02	0.02	0.02	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	0.002	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.02	0.02	0.02	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.06	0.05	0.04	0.03	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.8	2.6	2.8	3.2	7.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	<2	<2	<2	3	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	20	8	4*	20	6*	



Sub-Matrix: WATER				Sample ID	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb	F2_middle_Ebb	F2_bottom_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-080	HK2152162-081	HK2152162-082	HK2152162-083	HK2152162-084	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	4	5	5	4	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	7.6	7.7	2.7	2.6	3.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	2	2	2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	6*	4*	1*	3*	8	



Sub-Matrix: WATER				Sample ID	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb	C1*_middle_Ebb	C1*_middle_Ebb_d up
Sampling date / time					29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-085	HK2152162-086	HK2152162-088	HK2152162-089	HK2152162-090	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	4	3	3	4	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	0.02	0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	2.9	2.4	2.0	2.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb	F4_bottom_Ebb	CR9_surface_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-091	HK2152162-092	HK2152162-093	HK2152162-094	HK2152162-095	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	6	3	4	4	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	2.5	3.9	4.1	3.6	4.6	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb	F3_middle_Ebb	F3_bottom_Ebb
				Sampling date / time	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021	29-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152162-096	HK2152162-097	HK2152162-098	HK2152162-099	HK2152162-100	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	3	3	5	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.2	5.4	4.6	4.5	5.4	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	1*	NOT DETECTED	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4103964)								
HK2152162-001	W1_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	2	0.0
HK2152162-012	C1_bottom_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4103965)								
HK2152162-023	G1*_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
HK2152162-033	F2_middle_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4103966)								
HK2152162-044	CR9_surface_Flood	EA025: Suspended Solids (SS)	----	2	mg/L	2	3	0.0
HK2152162-054	CR17_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4103967)								
HK2152162-064	CR15_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
HK2152162-075	G1*_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4103968)								
HK2152162-085	TPLMB_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	4	0.0
HK2152162-096	CR9_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	3	3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103079)								
HK2152162-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103081)								
HK2152162-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103083)								
HK2152162-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103085)								
HK2152162-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103087)								
HK2152162-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103102)								
HK2152162-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.06	0.07	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103103)								
HK2152162-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103104)								
HK2152162-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103105)								
HK2152162-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103106)								
HK2152162-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4103064)								
HK2152162-001	W1_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	9.4	9.6	2.1
EP: Aggregate Organics (QC Lot: 4103065)								
HK2152162-023	G1*_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.4	4.7	6.6
EP: Aggregate Organics (QC Lot: 4103066)								
HK2152162-044	CR9_surface_Flood	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	3.9	2.5
EP: Aggregate Organics (QC Lot: 4103067)								
HK2152162-064	CR15_middle_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	6.2	6.2	0.0
EP: Aggregate Organics (QC Lot: 4103068)								
HK2152162-085	TPLMB_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	3.2	3.3	3.1

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4103964)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4103965)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4103966)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4103967)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4103968)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103079)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	96.6	----	78.8	120	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103079) - Continued											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.4 mg/L	103	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103081)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	97.4	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103083)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	100	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103085)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	101	---	78.8	120	---	---
				<0.01	0.4 mg/L	103	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103087)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	---	78.8	120	---	---
				<0.01	0.4 mg/L	104	---	96.3	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103102)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	94.3	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103103)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	94.4	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103104)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	94.4	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103105)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.6	---	92.2	108	---	---
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103106)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	93.4	---	92.2	108	---	---
EP: Aggregate Organics (QC Lot: 4103058)											
EP030: Biochemical Oxygen Demand	---	---	mg/L	---	198 mg/L	101	---	81.9	113	---	---
EP: Aggregate Organics (QC Lot: 4103064)											
EP008F: Chlorophyll a	---	0.1	mg/m ³	<0.1	10 mg/m ³	100	---	93.7	108	---	---
EP: Aggregate Organics (QC Lot: 4103065)											



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP: Aggregate Organics (QC Lot: 4103065) - Continued											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	97.0	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4103066)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	96.4	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4103067)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	103	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4103068)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	104	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4103875)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	103	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4103876)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	105	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4103877)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	103	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4103878)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	103	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4103879)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103079)										
HK2152162-022	W2_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	108	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103081)										
HK2152162-043	F4_bottom_Flood	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103083)										
HK2152162-063	CR15_surface_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	108	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103085)										
HK2152162-084	F2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103087)										
HK2152162-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	106	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103102)										
HK2152162-022	W2_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	98.2	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103103)										
HK2152162-043	F4_bottom_Flood	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103104)										
HK2152162-063	CR15_surface_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	97.9	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103105)										
HK2152162-084	F2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	107	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4103106)										
HK2152162-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.2	----	75.0	125	----	----





CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 15
Contact	: DEREK LO	Contact	: Richard Fung	Work Order	: HK2152164
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: DerekLo@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2882 3939	Telephone	: +852 2610 1044	Date Samples Received	: 31-Dec-2021
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021	Issue Date	: 14-Jan-2022
Project	: ---			No. of samples received	: 47
Order number	: ---	Quote number	: HKE/1217/2021_V3	No. of samples analysed	: 47
C-O-C number	: ---				
Site	:				

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This document has been signed by those names that appear on this report and are the authorised signatories.

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics
		
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV



General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 31-Dec-2021 to 14-Jan-2022.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2152164

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Microbiological sample(s) was/ were collected in 125mL sterile plastic bottles. Sample(s) arrived at the laboratory at 12:50.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

* denoted the estimated count; Result based on a count outside of standard method's countable range.

EK055K - Result of Unionized Ammonia was calculated from Ammoniacal Nitrogen (NH₃-N) and in-situ measurement of temperature, pH and Salinity. Ammoniacal Nitrogen results are determined by the laboratory and in-situ measurement results were provided by the client.

EK063A - Total Inorganic Nitrogen is the sum of the Total Oxidizable Nitrogen and Ammonical Nitrogen.

EP008F - For marine and freshwater samples, chlorophyll b, if present, may cause some interference to the analysis of chlorophyll a.



Analytical Results

Sub-Matrix: WATER

				Sample ID	W1_surface_Ebb	W1_middle_Ebb	W1_bottom_Ebb	CR17_surface_Ebb	CR17_bottom_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit		HK2152164-051	HK2152164-052	HK2152164-053	HK2152164-054	HK2152164-056
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		4	3	2	2	5
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.06	0.03	0.01	0.03	0.02
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		0.06	0.03	<0.02	0.03	0.02
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		7.2	7.4	6.4	4.1	6.6
EP030: Biochemical Oxygen Demand	----	2	mg/L		2	2	<2	2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		20	15	10	8	11



Sub-Matrix: WATER				CR16_surface_Ebb	CR16_middle_Ebb	CR16_bottom_Ebb	C1_surface_Ebb	C1_middle_Ebb
Sample ID								
Sampling date / time				31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-057	HK2152164-058	HK2152164-059	HK2152164-060	HK2152164-061
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)	----	2	mg/L	3	3	2	2	<2
ED/EK: Inorganic Nonmetallic Parameters								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.01	<0.01	<0.01	0.02
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.02	<0.02	<0.02	<0.02	<0.02
EP: Aggregate Organics								
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.8	6.2	6.2	4.9	4.7
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	<2	2	<2
EM: Microbiological Testing								
EM019: Escherichia coli	----	1	CFU/100mL	8	6*	12	3*	4*



Sub-Matrix: WATER				Sample ID	C1_bottom_Ebb	CR15_surface_Ebb	CR15_middle_Ebb	CR15_bottom_Ebb	CR15_bottom_Ebb _dup
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit		HK2152164-062	HK2152164-063	HK2152164-064	HK2152164-065	HK2152164-066
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L		<2	<2	2	2	3
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EK057A: Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		<0.01	0.01	0.04	0.08	0.03
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L		<0.02	<0.02	0.04	0.08	0.03
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³		5.7	3.7	4.5	3.6	4.8
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	<2	<2	<2	<2
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL		15	8	36	120	110



Sub-Matrix: WATER				Sample ID	CR1_surface_Ebb	CR1_middle_Ebb	CR1_bottom_Ebb	W2_surface_Ebb	W2_bottom_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-067	HK2152164-068	HK2152164-069	HK2152164-070	HK2152164-072	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	<2	3	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.03	<0.01	<0.01	0.03	0.02	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	0.002	<0.001	<0.001	0.002	0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.01	<0.01	0.02	0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	0.05	<0.02	<0.02	0.05	0.03	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.0	5.9	6.2	14.8	7.1	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	310	260	130	100	120	



Sub-Matrix: WATER				Sample ID	G1*_surface_Ebb	G1*_middle_Ebb	G1*_bottom_Ebb	F1_surface_Ebb	F1_middle_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-073	HK2152164-074	HK2152164-075	HK2152164-076	HK2152164-077	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	3	3	<2	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	5.8	6.1	2.9	4.8	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	43	61	49	67	29	



Sub-Matrix: WATER				Sample ID	F1_bottom_Ebb	G1_surface_Ebb	G1_middle_Ebb	G1_bottom_Ebb	F2_surface_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-078	HK2152164-079	HK2152164-080	HK2152164-081	HK2152164-082	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	2	2	3	<2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.2	5.6	6.5	7.5	3.5	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	32	NOT DETECTED	1*	1*	13	



Sub-Matrix: WATER				Sample ID	F2_middle_Ebb	F2_bottom_Ebb	TPLMB_surface_E bb	TPLMB_surface_E bb_dup	C1*_surface_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-083	HK2152164-084	HK2152164-085	HK2152164-086	HK2152164-088	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	3	2	<2	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.5	3.9	2.5	3.0	4.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	13	10	5*	2*	1*	



Sub-Matrix: WATER				Sample ID	C1*_middle_Ebb	C1*_middle_Ebb_d up	C1*_bottom_Ebb	F4_surface_Ebb	F4_middle_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-089	HK2152164-090	HK2152164-091	HK2152164-092	HK2152164-093	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	2	3	3	4	2	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	3.7	3.8	1.5	4.1	3.2	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	NOT DETECTED	1*	NOT DETECTED	NOT DETECTED	



Sub-Matrix: WATER				Sample ID	F4_bottom_Ebb	CR9_surface_Ebb	CR9_middle_Ebb	CR9_bottom_Ebb	F3_surface_Ebb
				Sampling date / time	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021	31-Dec-2021
Compound	CAS Number	LOR	Unit	HK2152164-094	HK2152164-095	HK2152164-096	HK2152164-097	HK2152164-098	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	2	2	4	3	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.01	<0.01	<0.01	0.03	<0.01	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	<0.02	0.03	<0.02	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	3.7	3.7	1.4	4.0	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	1*	2*	2*	NOT DETECTED	11	



Sub-Matrix: WATER				Sample ID	F3_middle_Ebb	F3_bottom_Ebb	---	---	---
				Sampling date / time	31-Dec-2021	31-Dec-2021	---	---	---
Compound	CAS Number	LOR	Unit	HK2152164-099	HK2152164-100	---	---	---	
EA/ED: Physical and Aggregate Properties									
EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	---	---	---	
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	---	---	---	
EK055K: Unionized Ammonia (as N)	----	0.001	mg/L	<0.001	<0.001	---	---	---	
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	---	---	---	
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	---	---	---	
EK063A: Total Inorganic Nitrogen as N	----	0.02	mg/L	<0.02	<0.02	---	---	---	
EP: Aggregate Organics									
EP008F: Chlorophyll a	----	0.1	mg/m ³	5.4	3.8	---	---	---	
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	<2	---	---	---	
EM: Microbiological Testing									
EM019: Escherichia coli	----	1	CFU/100mL	NOT DETECTED	6*	---	---	---	



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4105241)								
HK2152164-051	W1_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	4	4	0.0
HK2152164-062	C1_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4105242)								
HK2152164-073	G1*_surface_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
HK2152164-083	F2_middle_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4105243)								
HK2152164-094	F4_bottom_Ebb	EA025: Suspended Solids (SS)	----	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105191)								
HK2152164-072	W2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.02	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105192)								
HK2152164-093	F4_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105193)								
HK2152164-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105220)								
HK2152164-072	W2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105222)								
HK2152164-093	F4_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105224)								
HK2152164-100	F3_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0
EP: Aggregate Organics (QC Lot: 4105204)								
HK2152164-051	W1_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	7.2	6.9	4.3
EP: Aggregate Organics (QC Lot: 4105205)								
HK2152164-073	G1*_surface_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	5.9	6.1	3.3
EP: Aggregate Organics (QC Lot: 4105206)								
HK2152164-094	F4_bottom_Ebb	EP008F: Chlorophyll a	----	0.1	mg/m ³	4.0	3.7	7.8

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4105241)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4105242)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	84.4	116	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4105243)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	84.4	116	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105191)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.3	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105192)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	95.0	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105193)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	97.2	----	92.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105220)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	100	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105222)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	----	78.8	120	----	----
				<0.01	0.4 mg/L	104	----	96.3	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105224)											
EK057A: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.05 mg/L	103	----	78.8	120	----	----
				<0.01	0.4 mg/L	103	----	96.3	108	----	----
EP: Aggregate Organics (QC Lot: 4105204)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	100	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4105205)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4105206)											
EP008F: Chlorophyll a	----	0.1	mg/m ³	<0.1	10 mg/m ³	102	----	93.7	108	----	----
EP: Aggregate Organics (QC Lot: 4105261)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	81.9	113	----	----



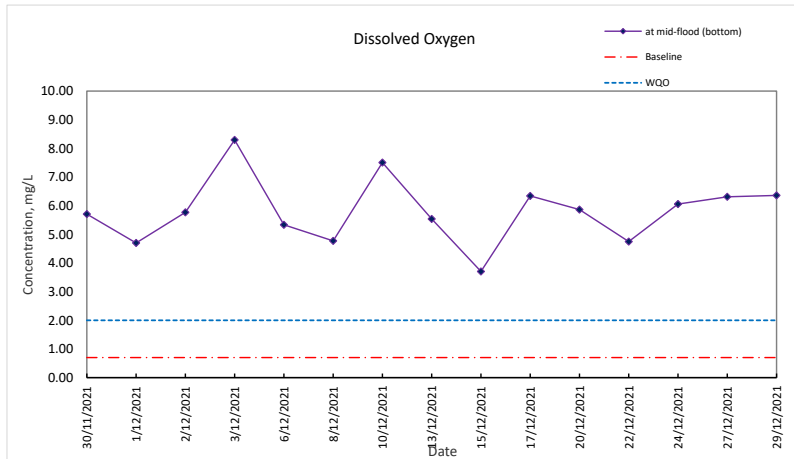
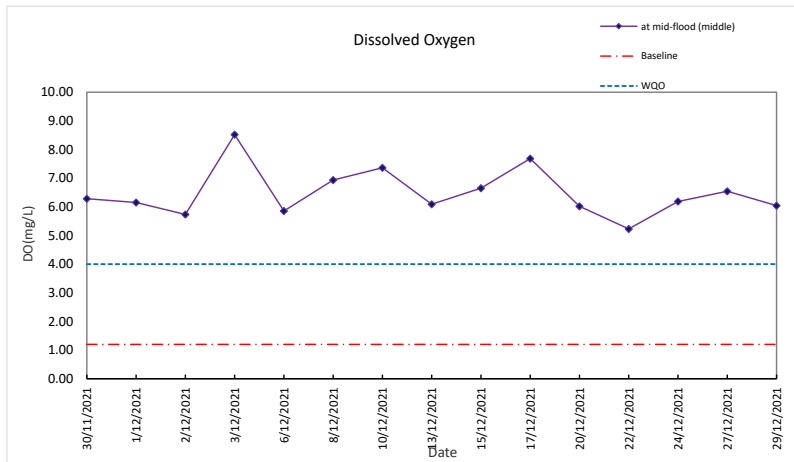
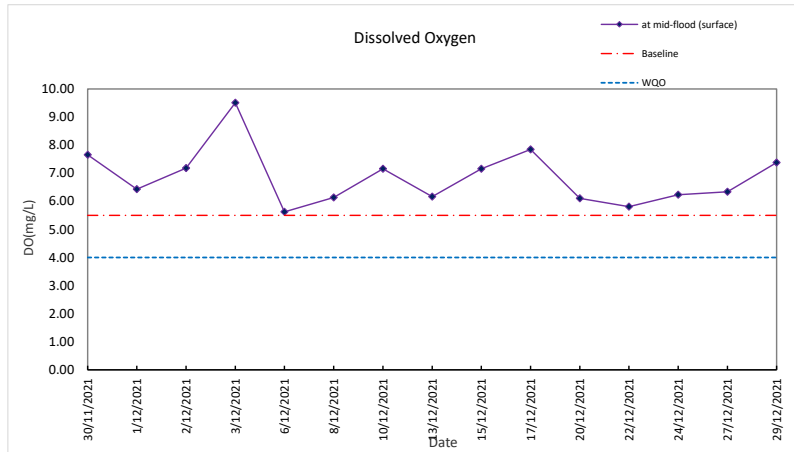
Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP: Aggregate Organics (QC Lot: 4105265)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	98.9	----	81.9	113	----	----
EP: Aggregate Organics (QC Lot: 4105266)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	102	----	81.9	113	----	----

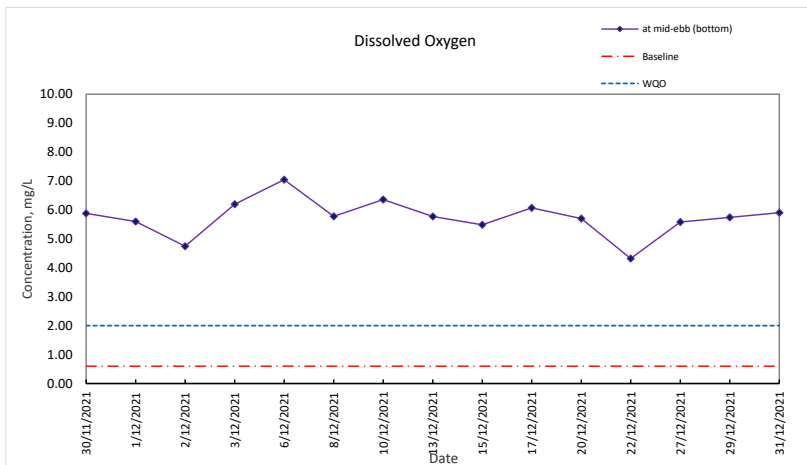
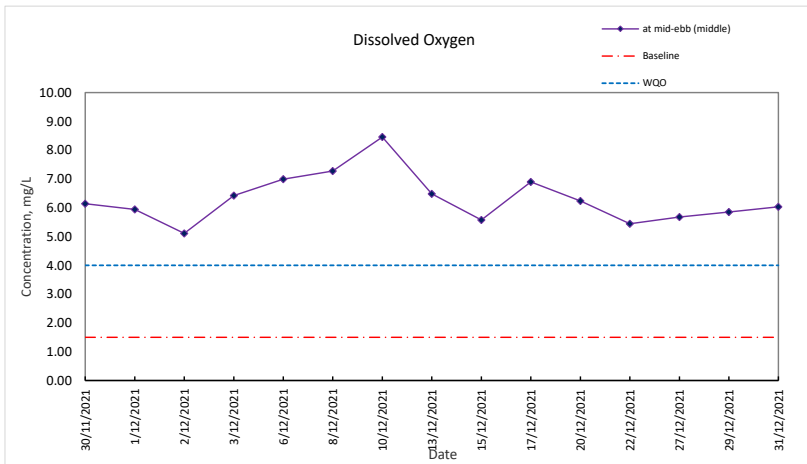
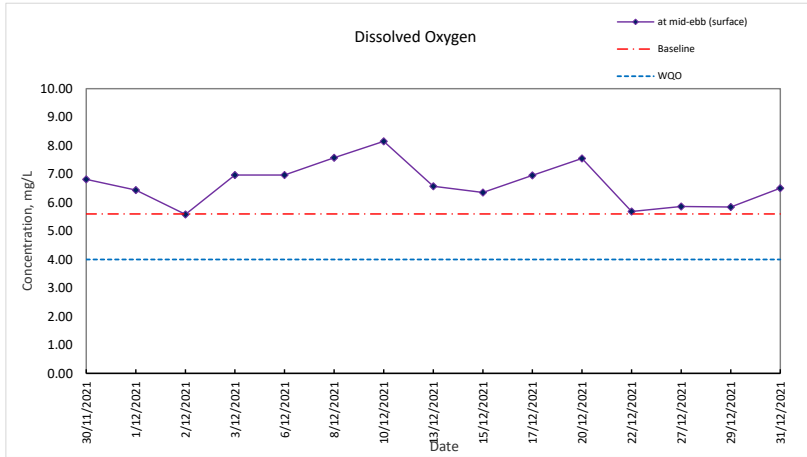
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

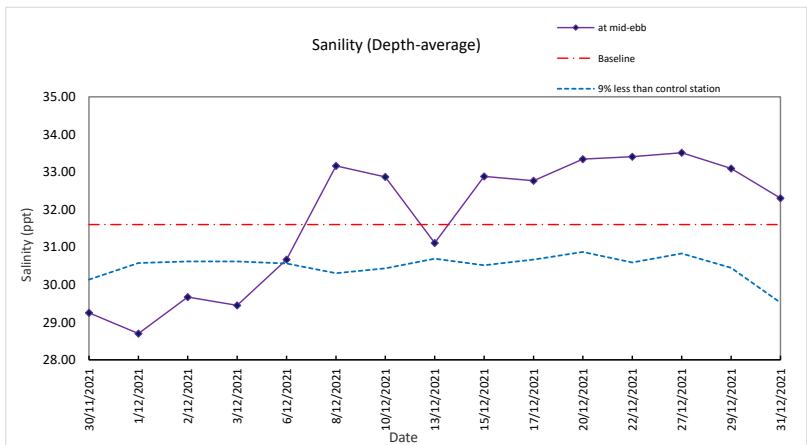
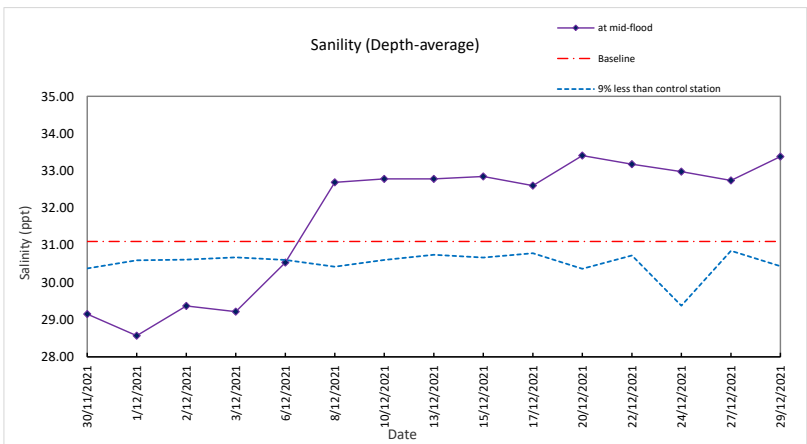
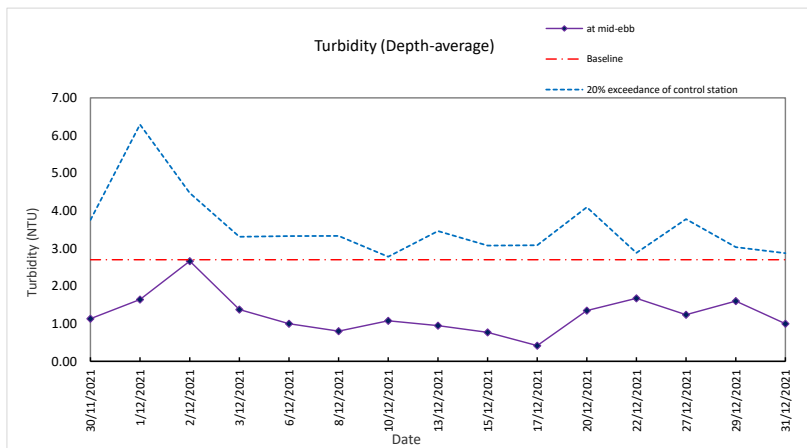
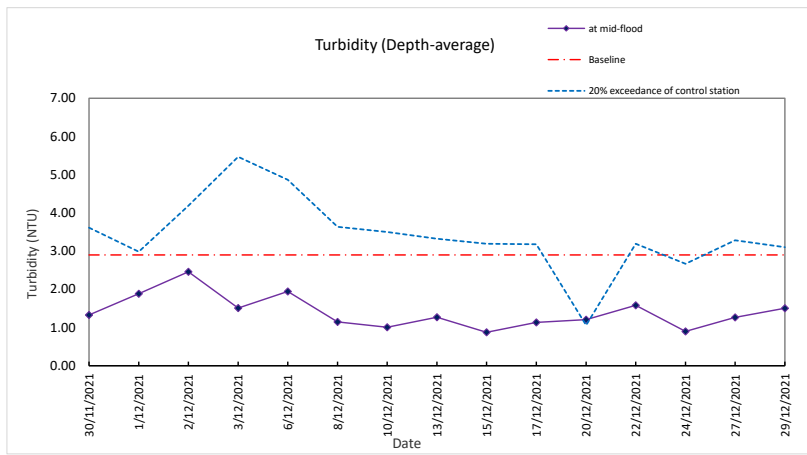
Matrix: WATER					Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
					MS	MSD	Low	High	Value	Control Limit	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105191)											
HK2152164-072	W2_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	108	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105192)											
HK2152164-093	F4_middle_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	104	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105193)											
HK2152164-100	F3_bottom_Ebb	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	106	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105220)											
HK2152164-072	W2_bottom_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	98.8	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105222)											
HK2152164-093	F4_middle_Ebb	EK057A: Nitrite as N	14797-65-0	0.25 mg/L	102	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4105224)											
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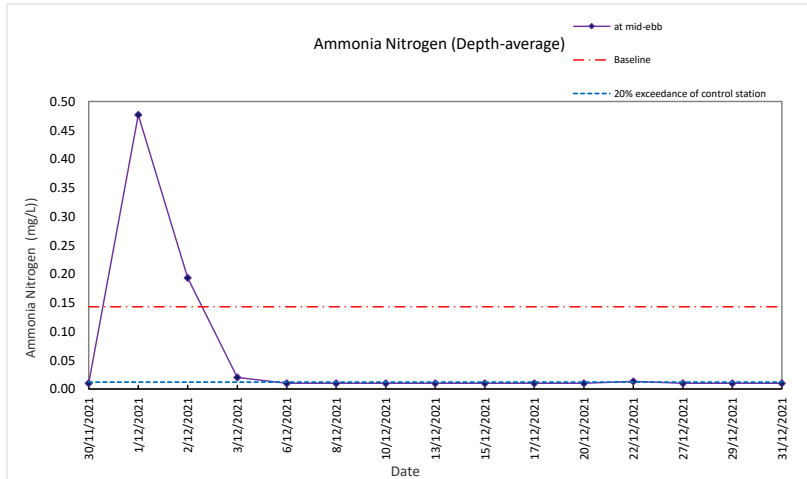
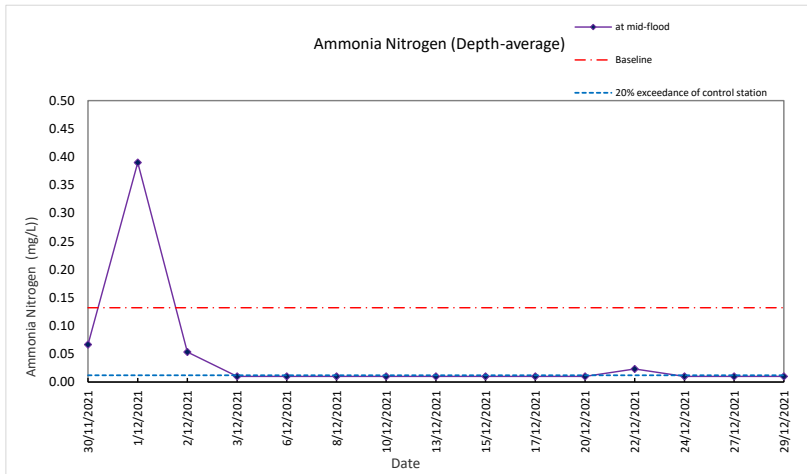
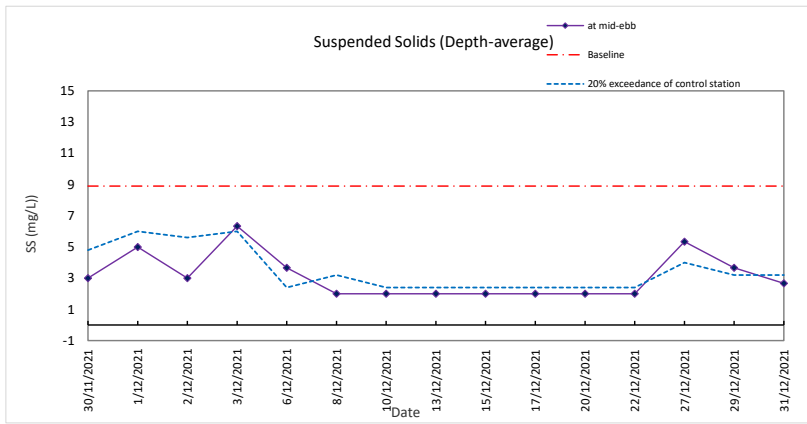
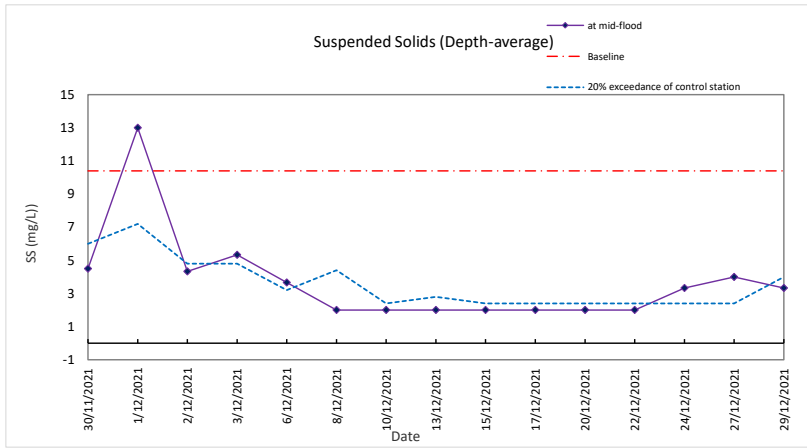


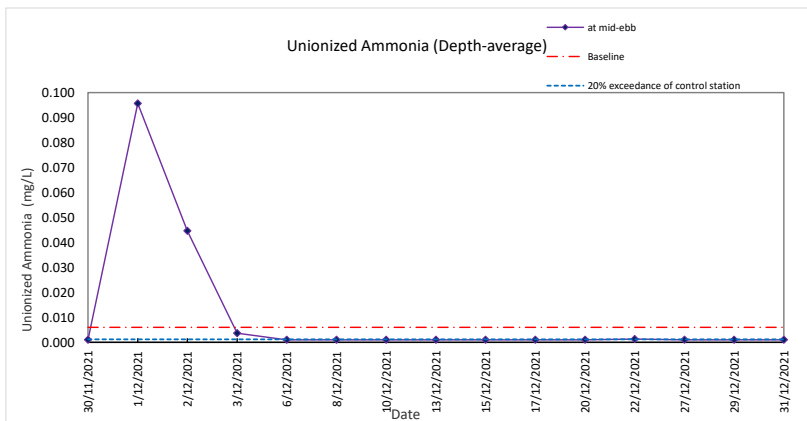
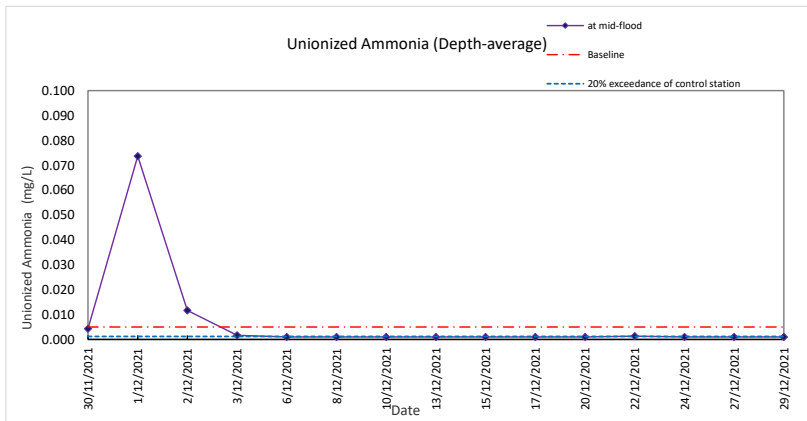
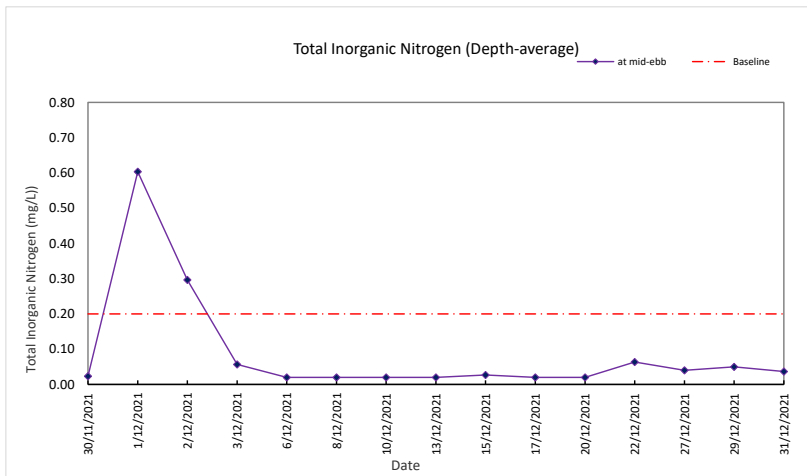
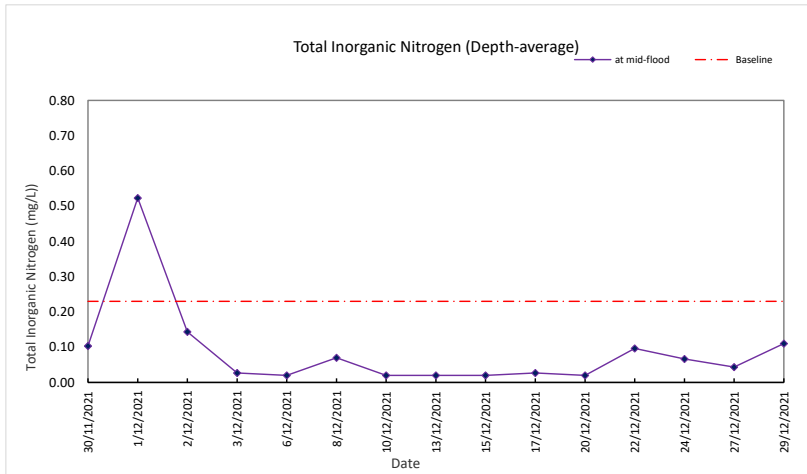
Graphic Presentation of Water Quality Result of
W1 - WSD Seawater Intake at Sha Tin

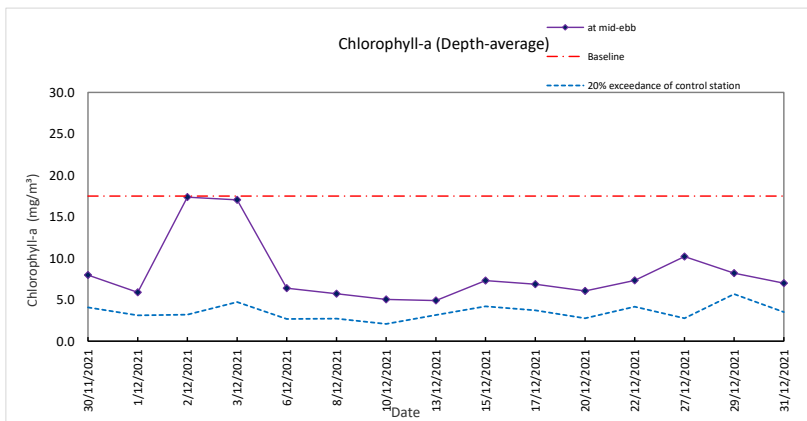
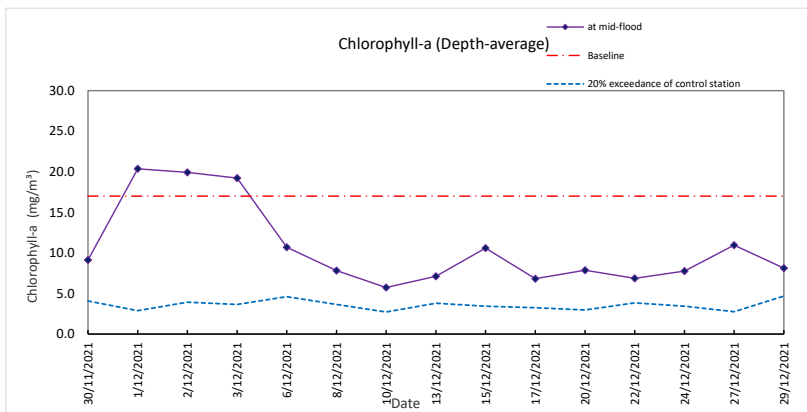
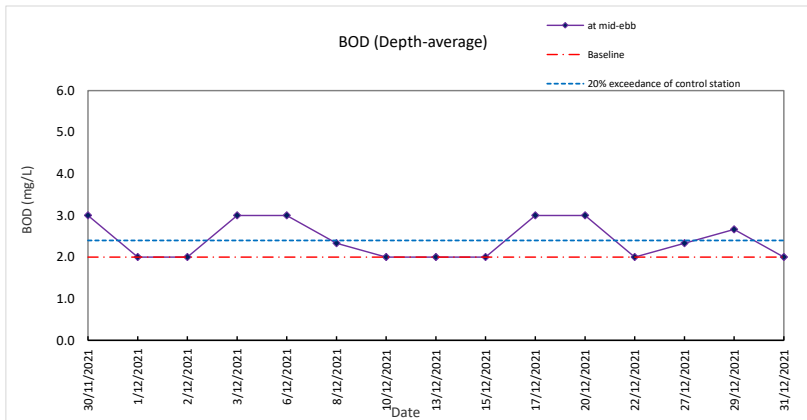
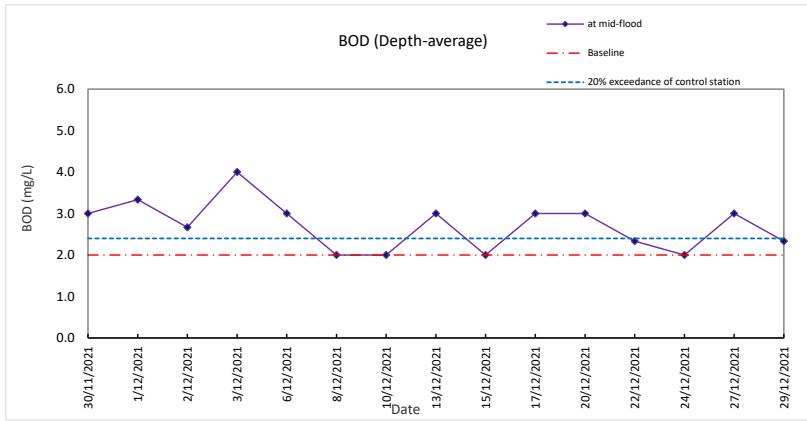


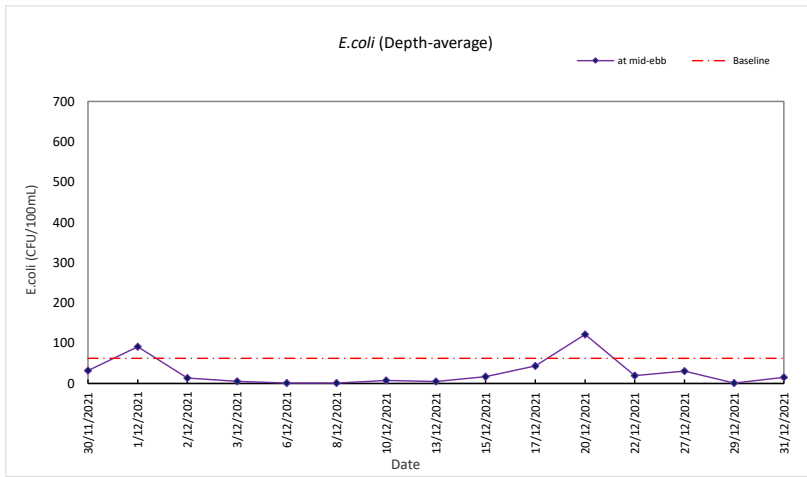
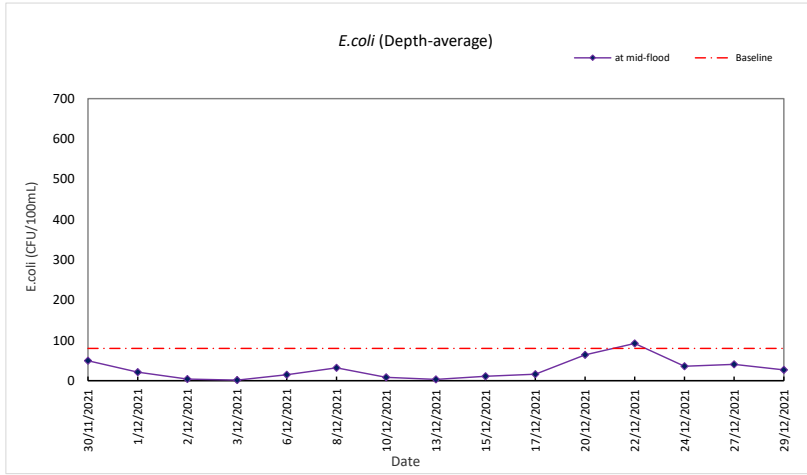






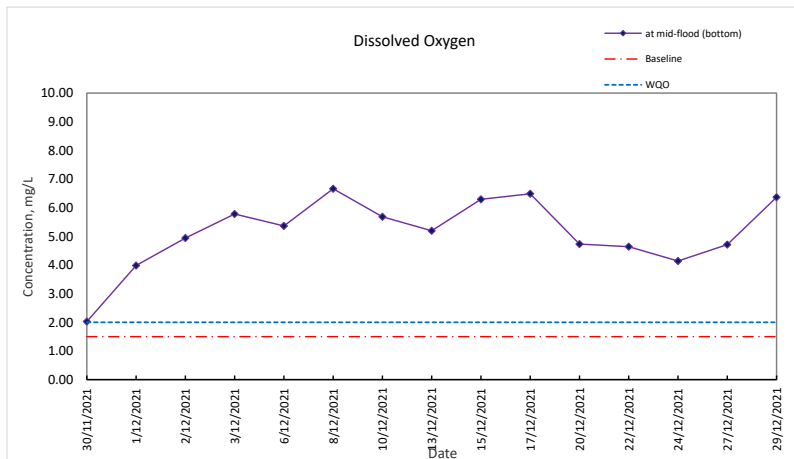
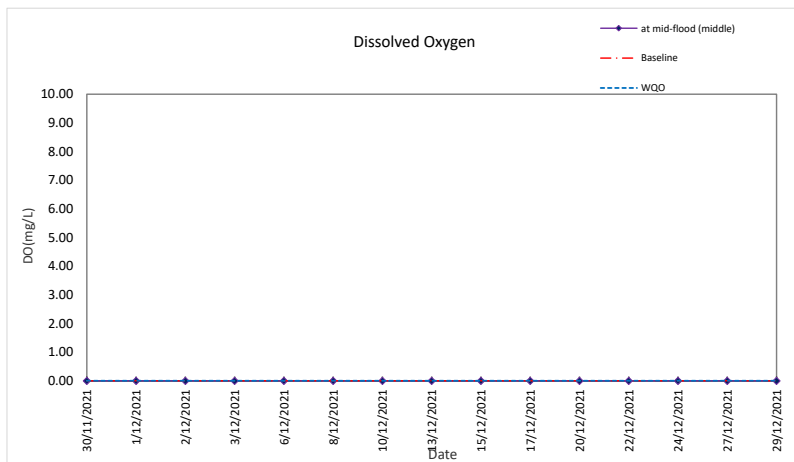
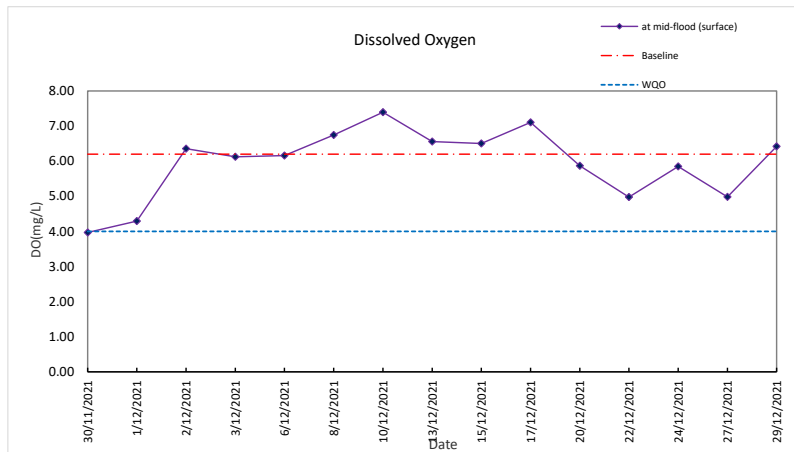


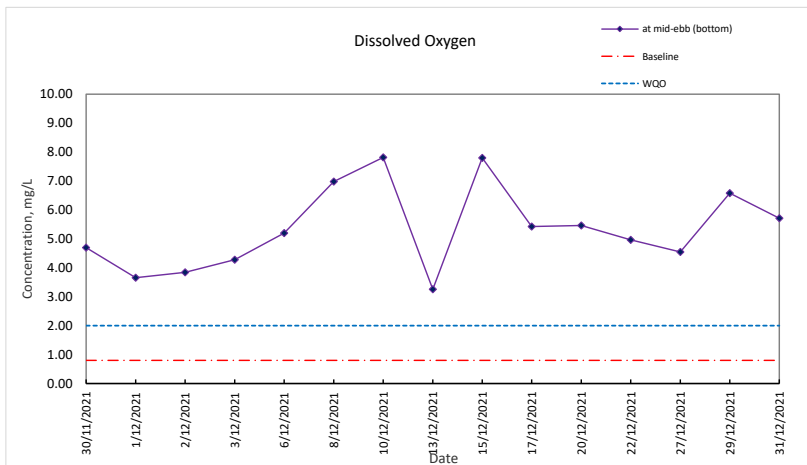
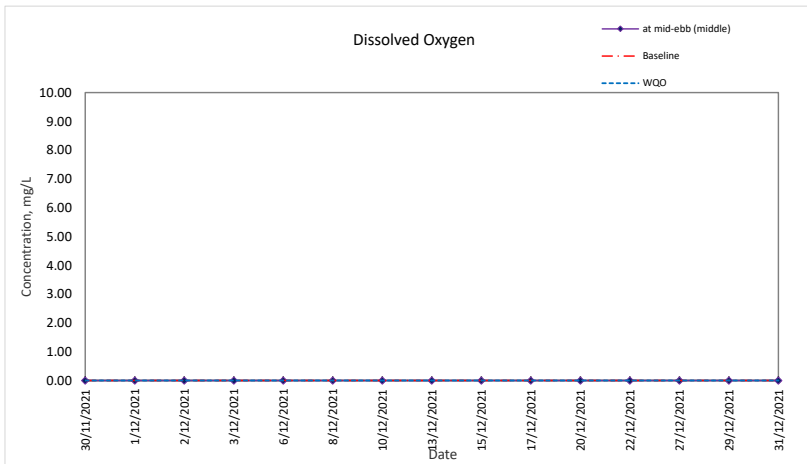
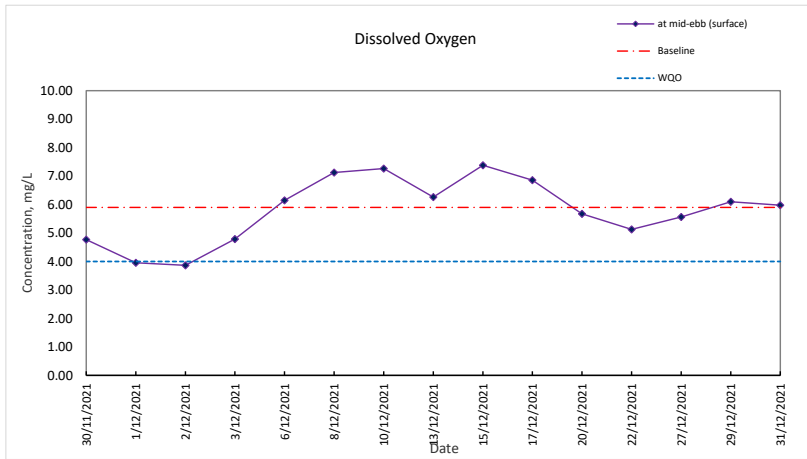


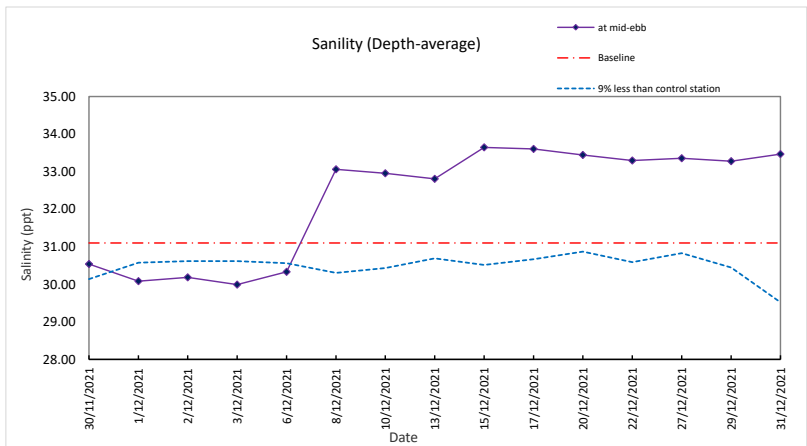
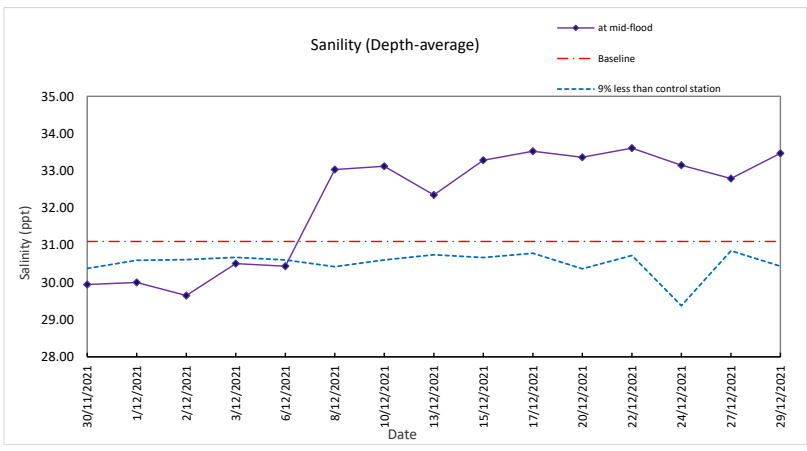
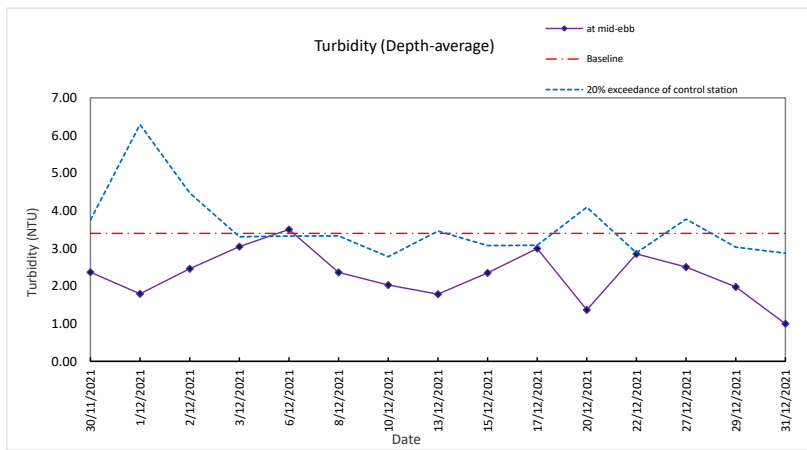
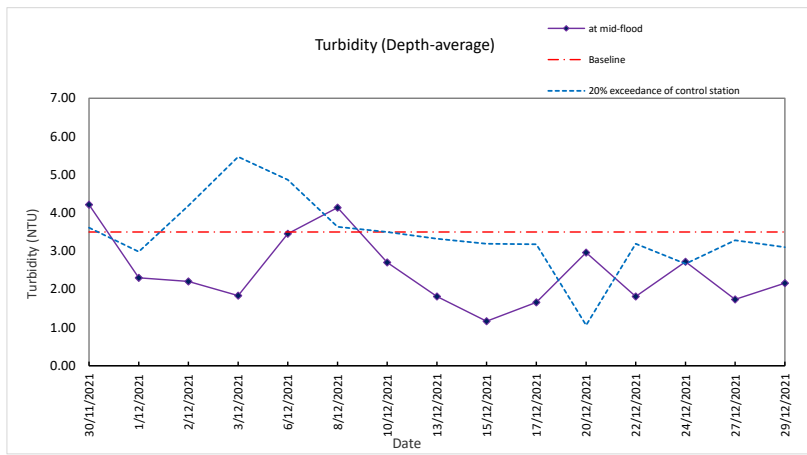


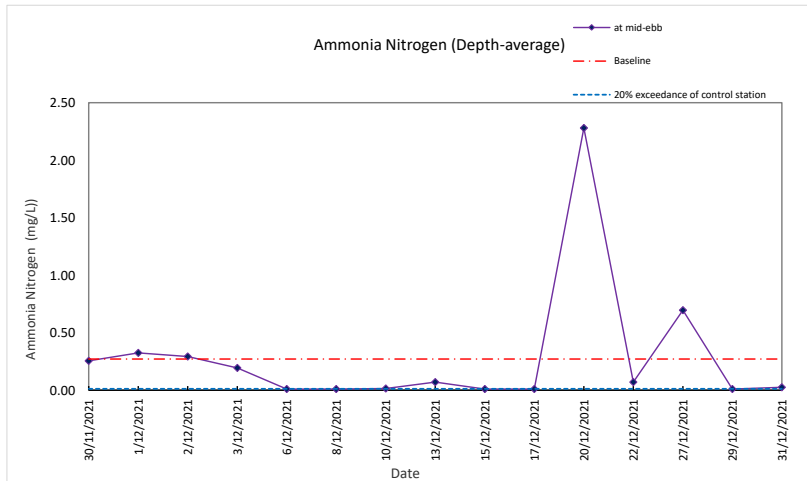
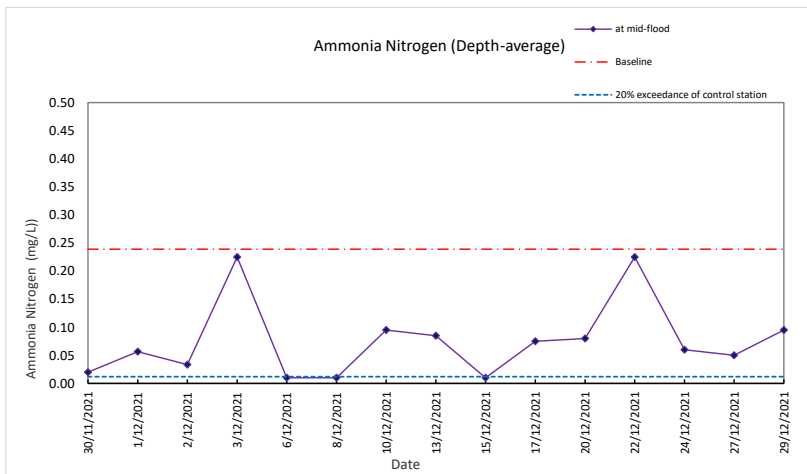
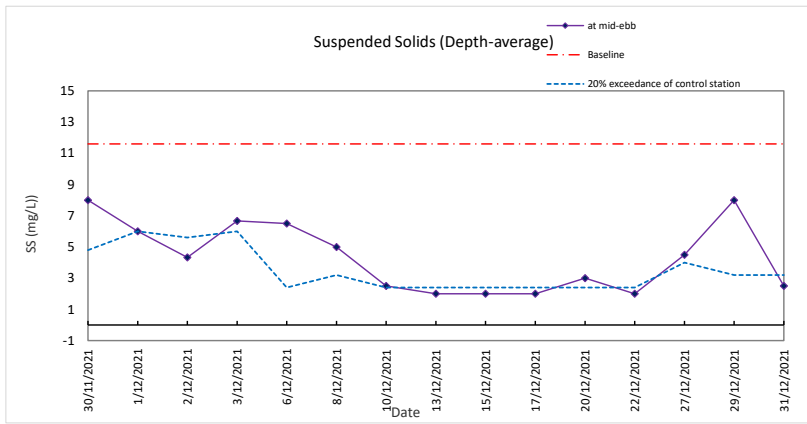
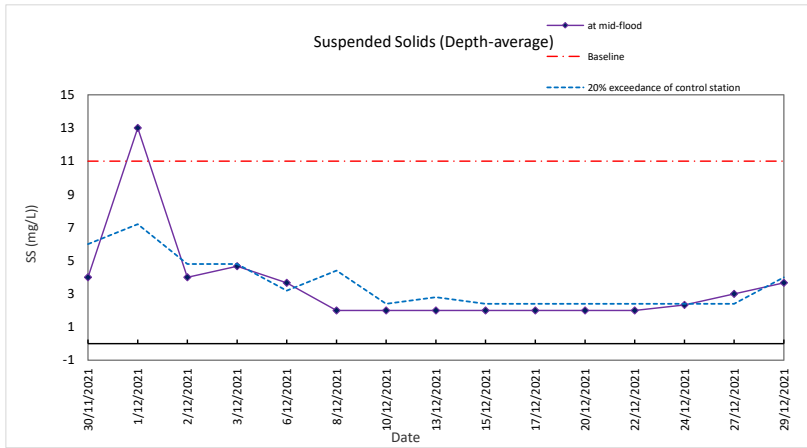


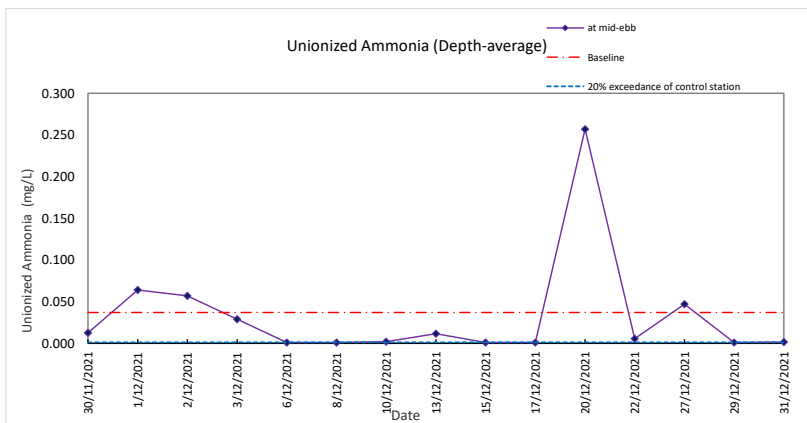
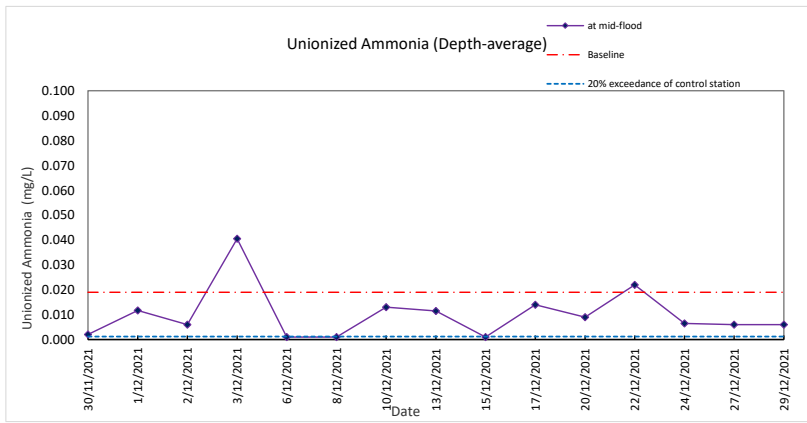
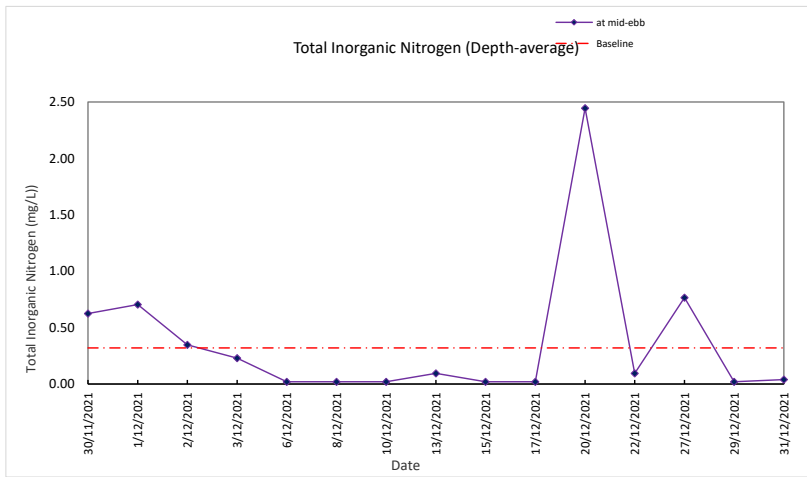
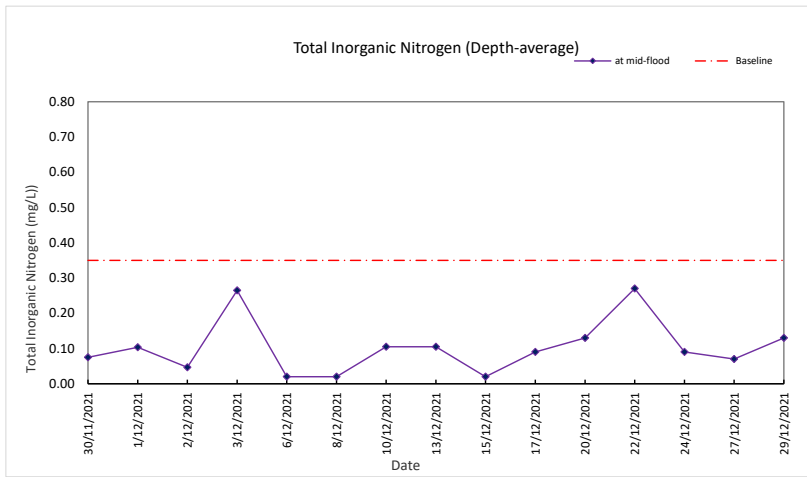
Graphic Presentation of Water Quality Result of
W2 - WSD Seawater Intake at Tai Po

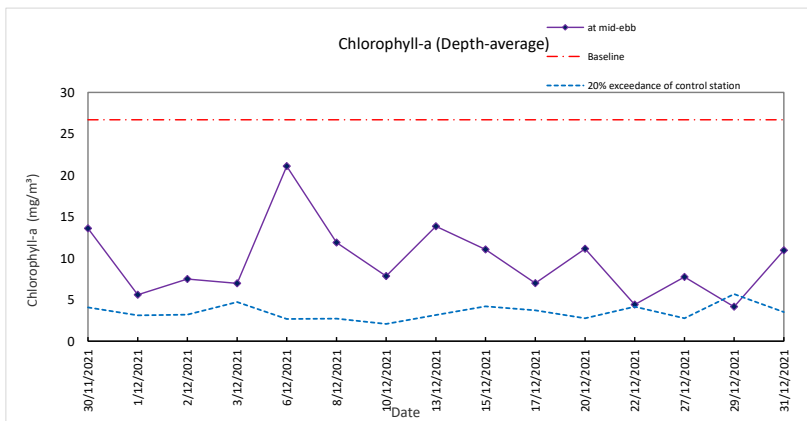
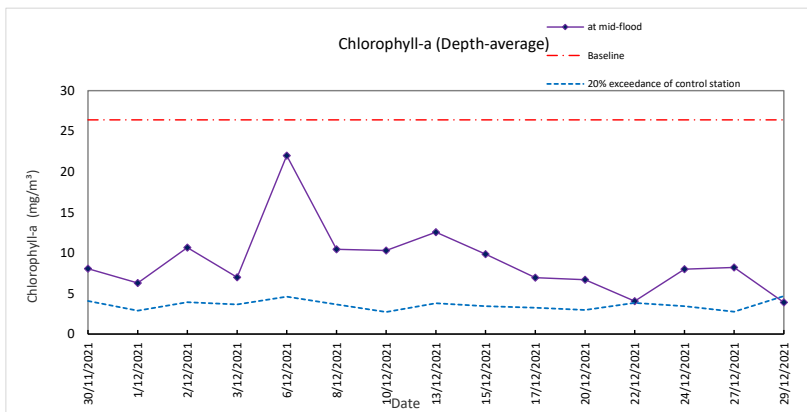
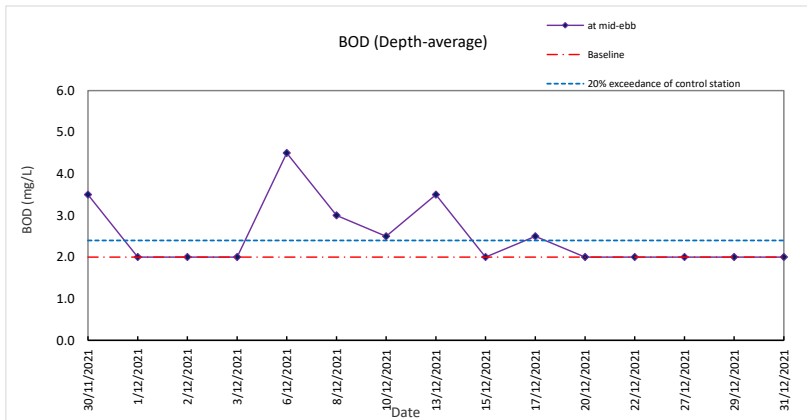
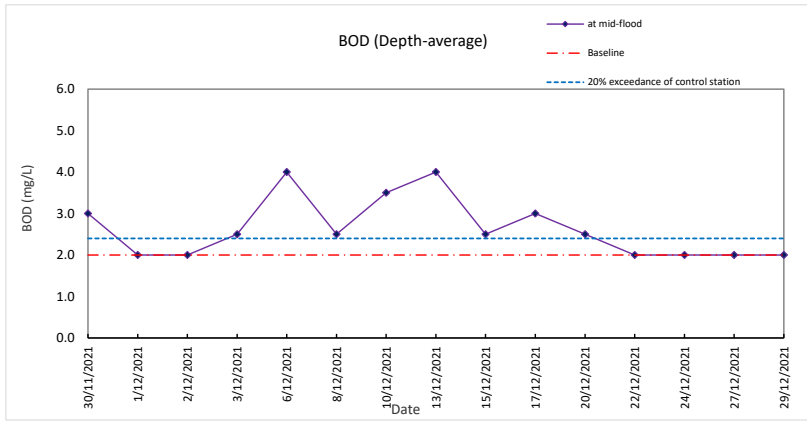


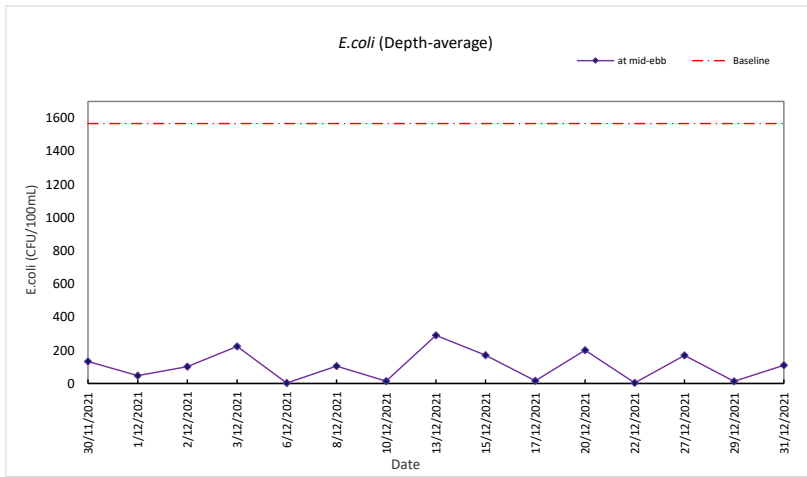
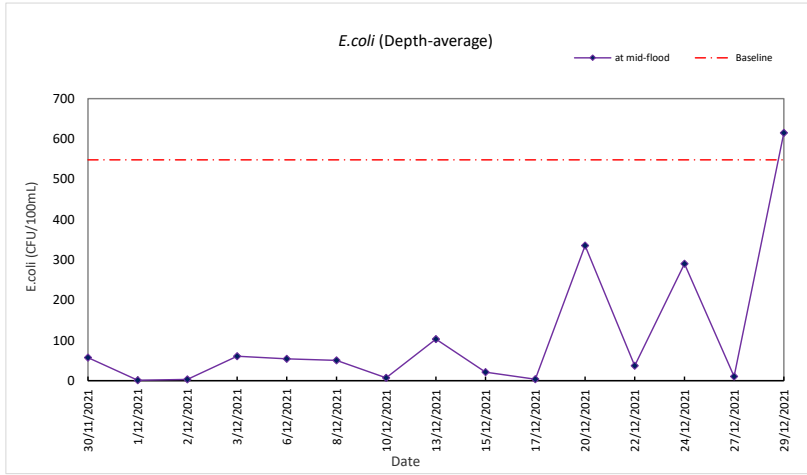






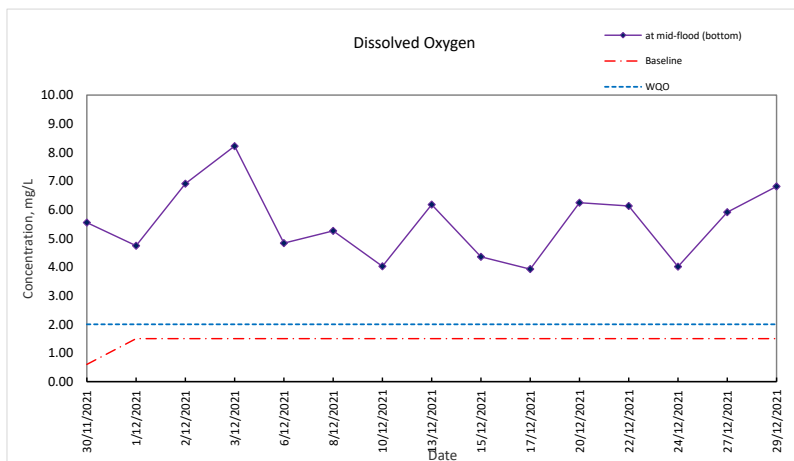
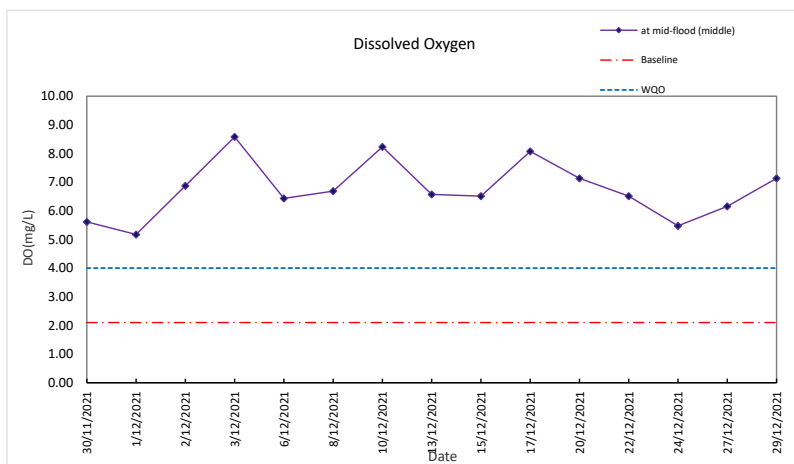
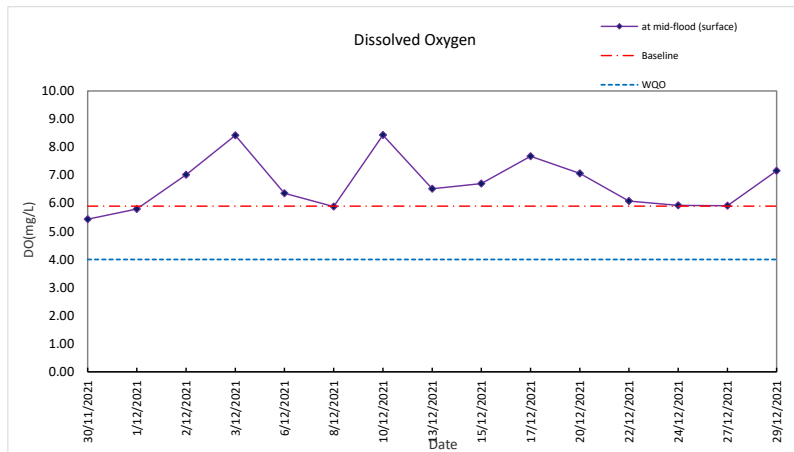


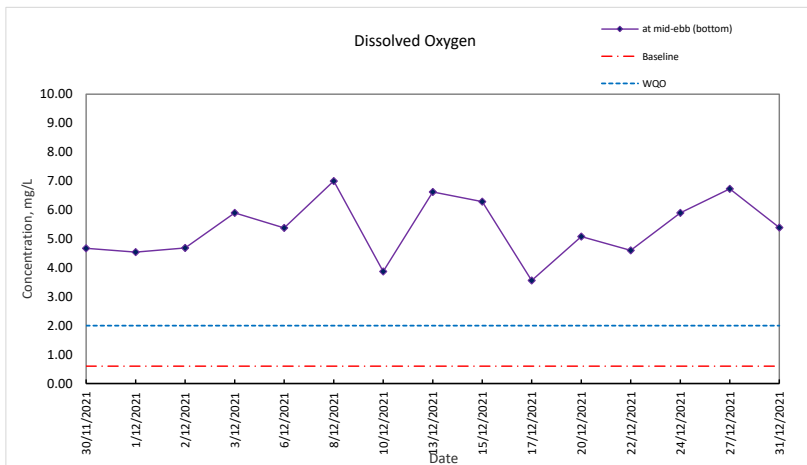
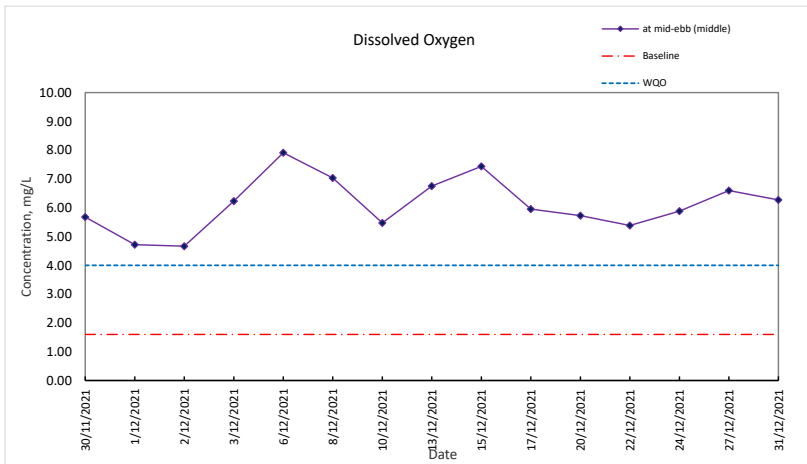
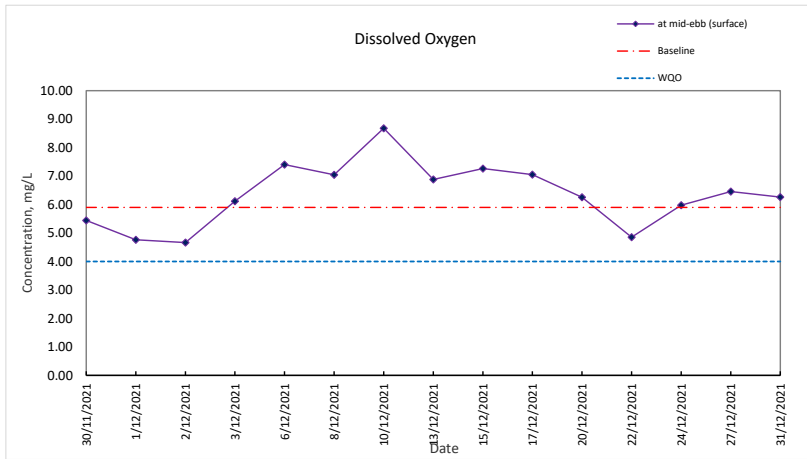


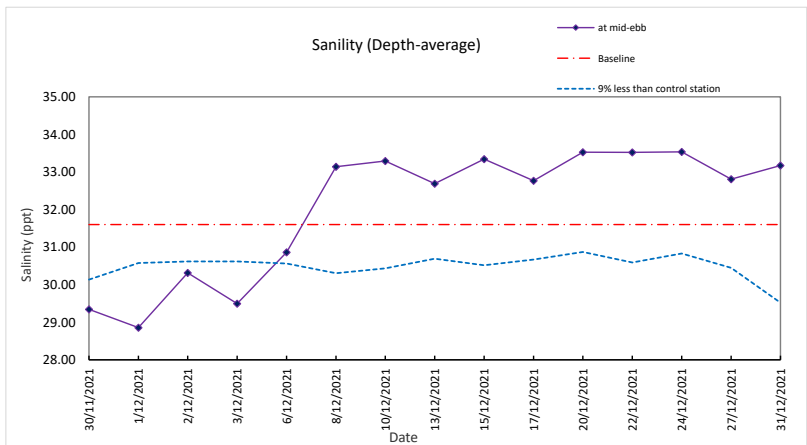
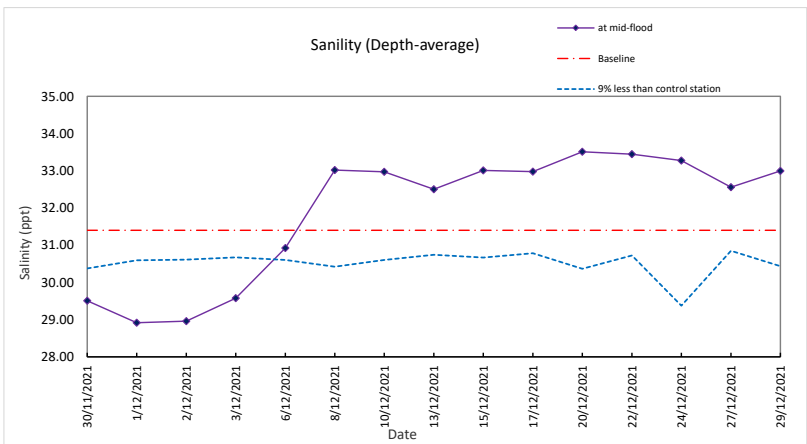
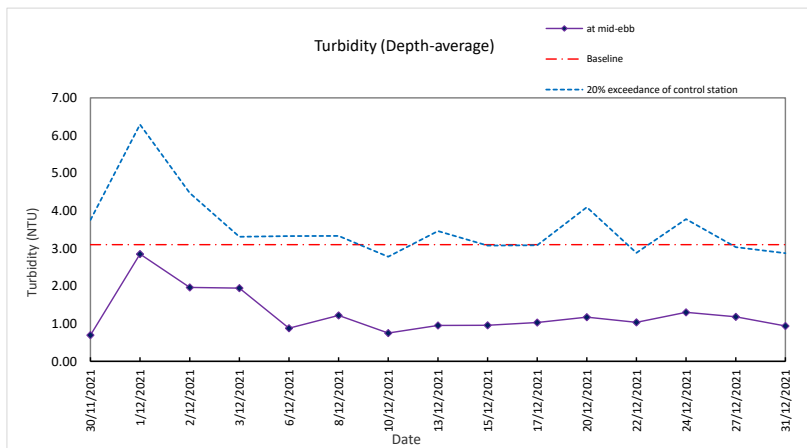
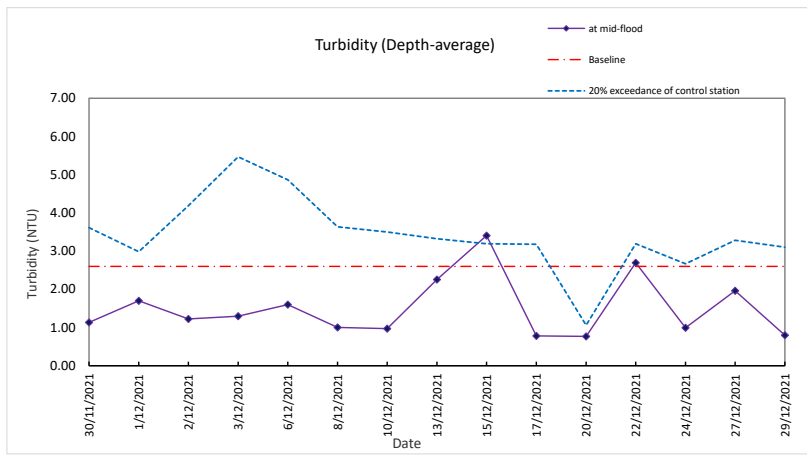


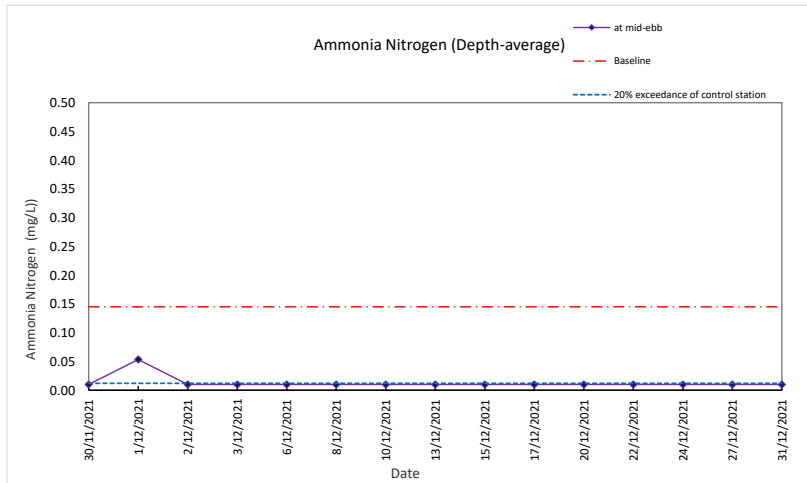
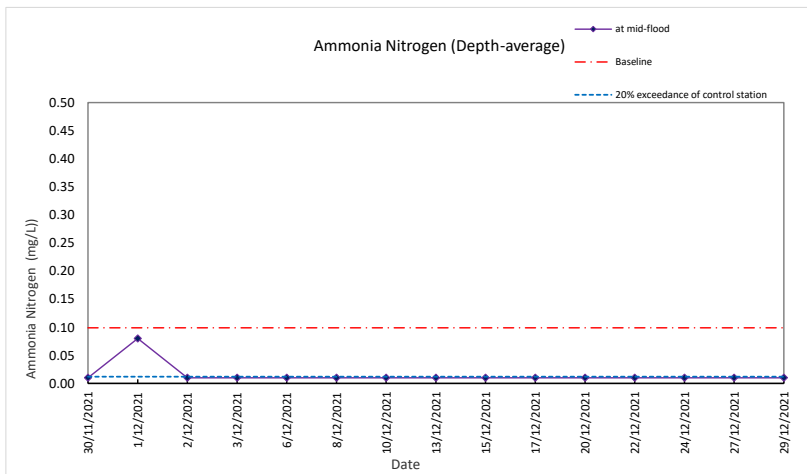
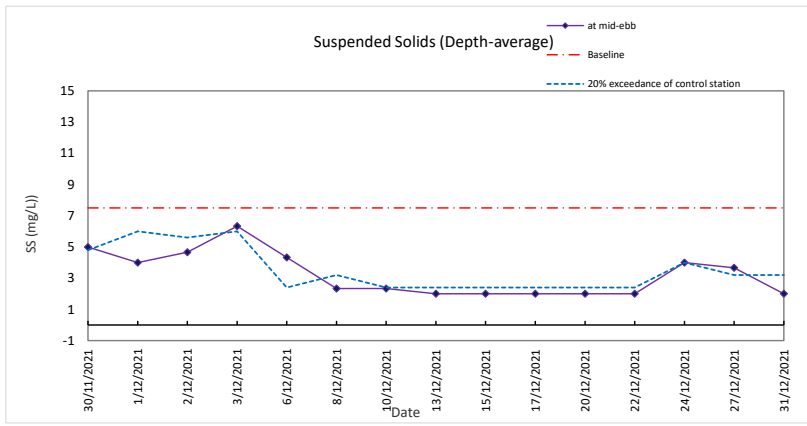
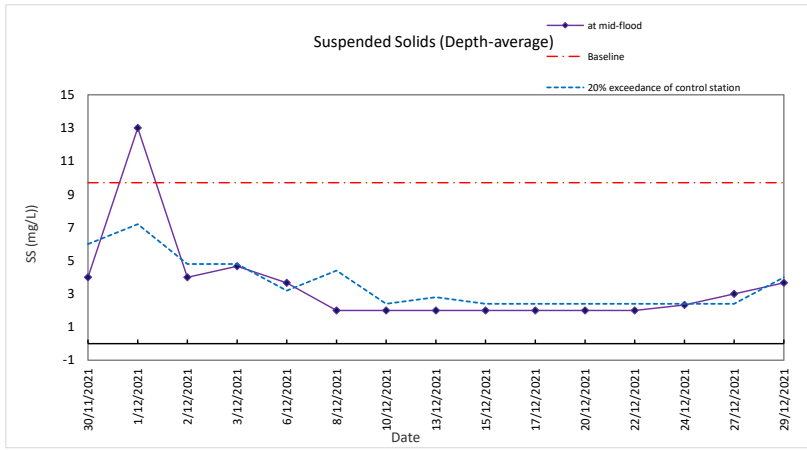


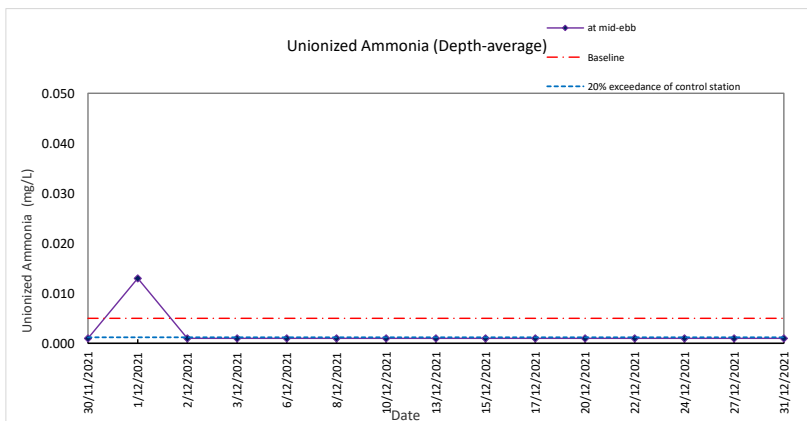
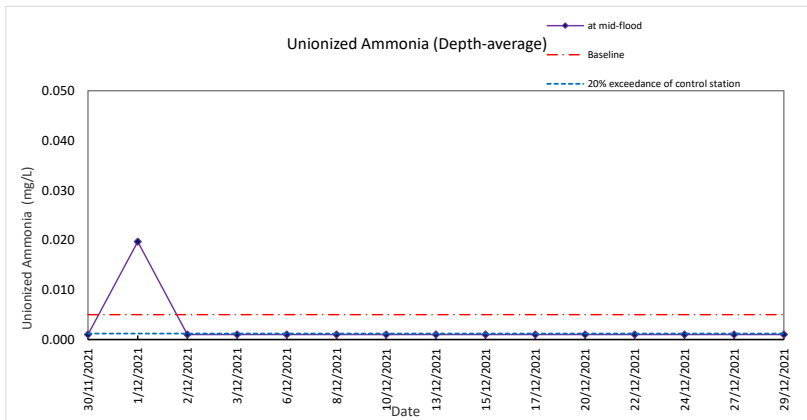
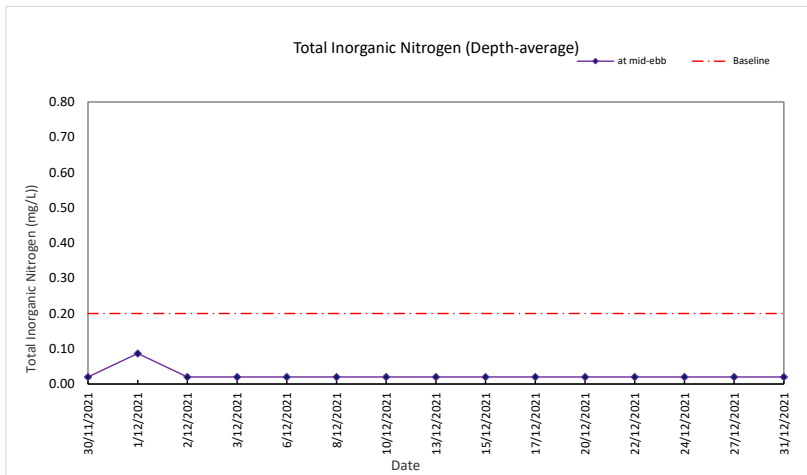
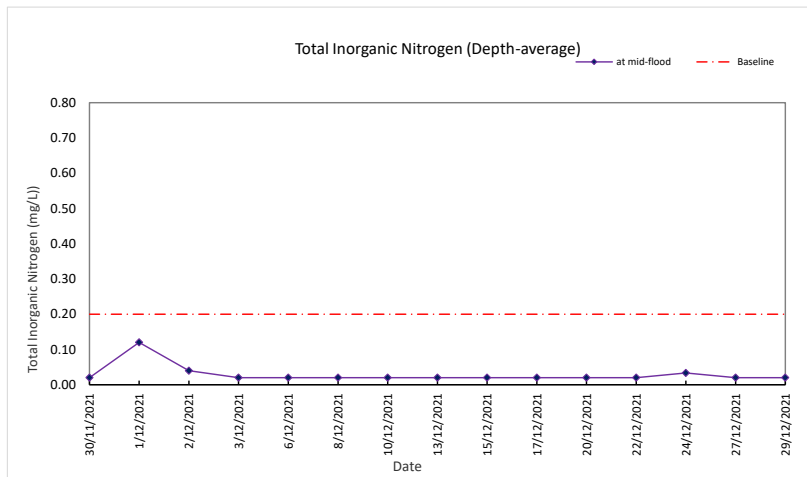
Graphic Presentation of Water Quality Result of C1 - Cooling Water Intake at CUHK Marine Science Laboratory

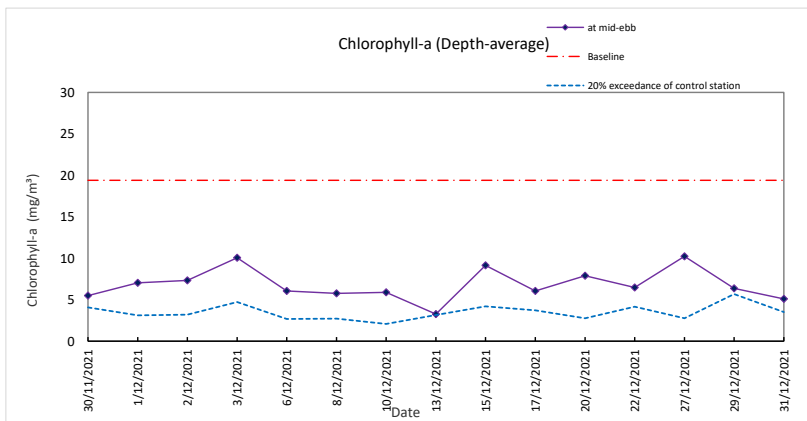
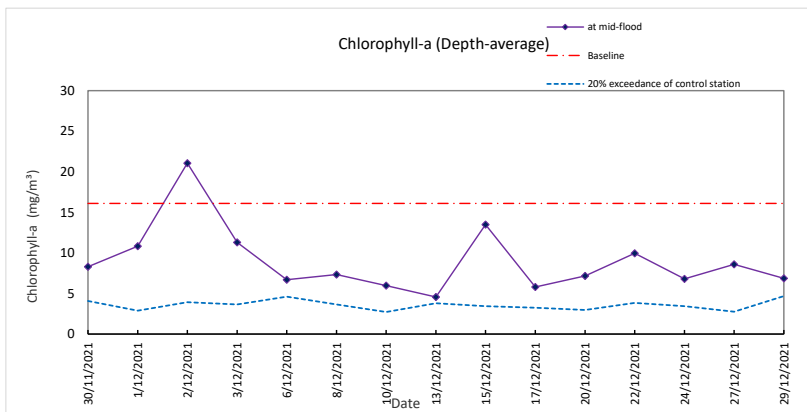
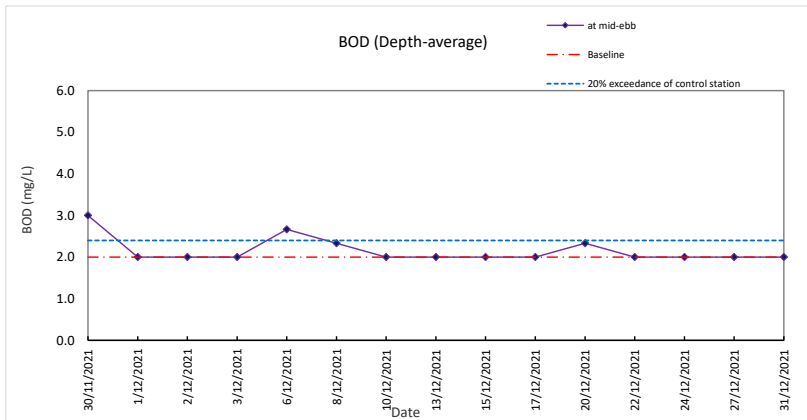
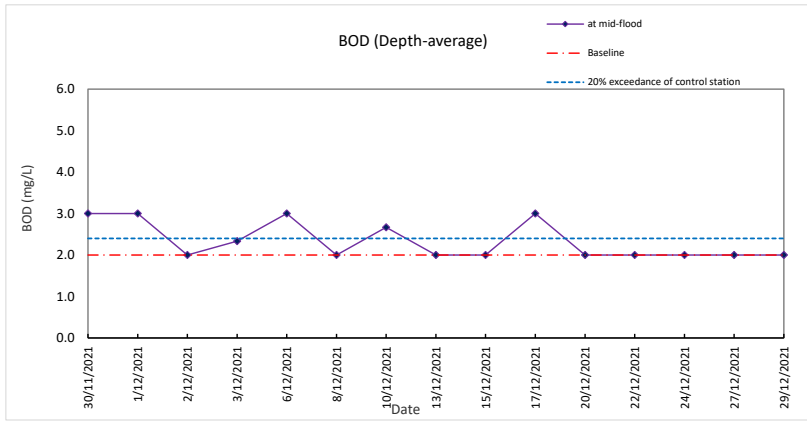


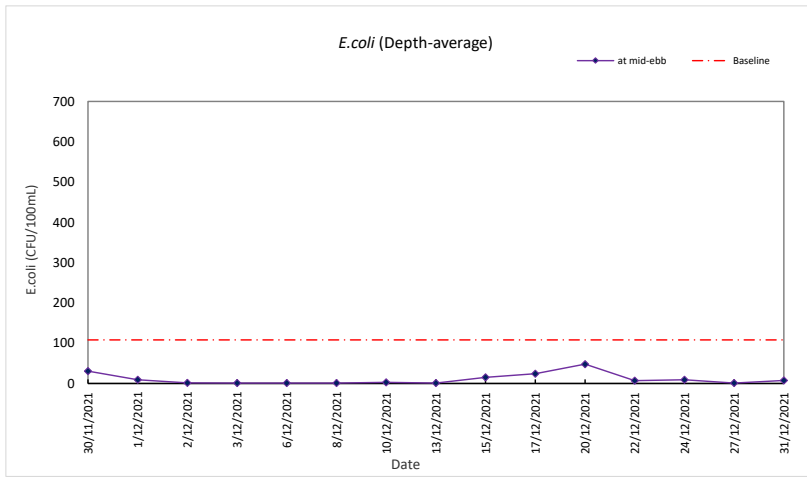
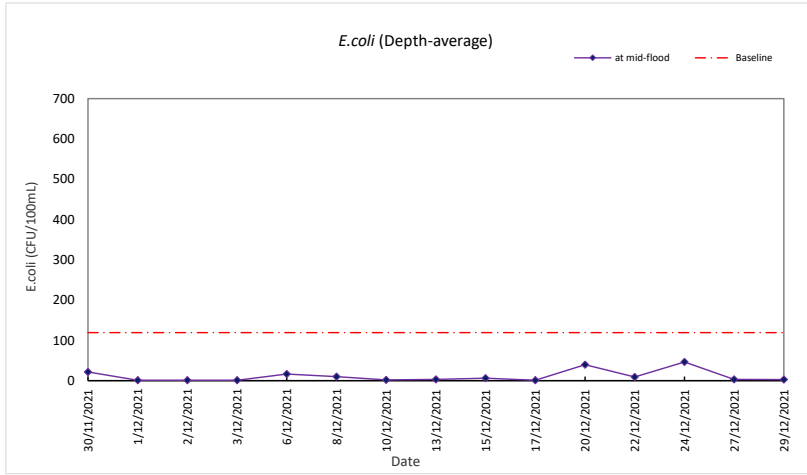






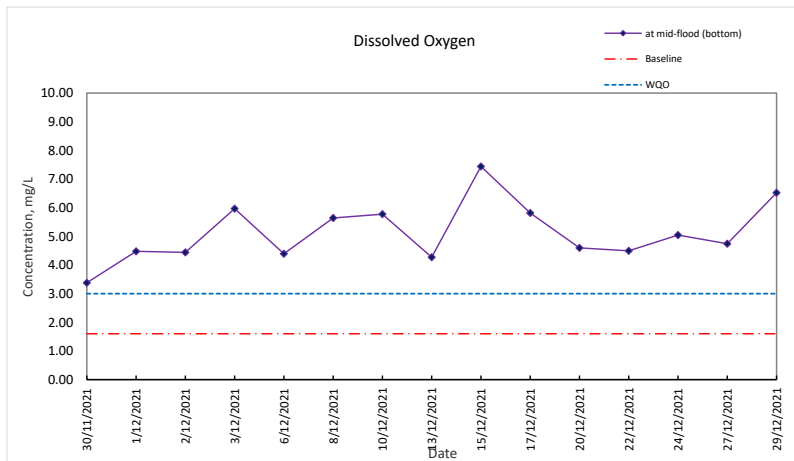
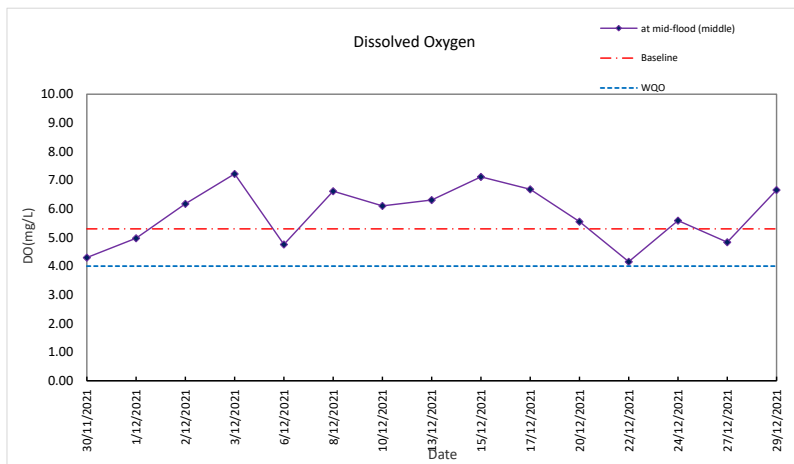
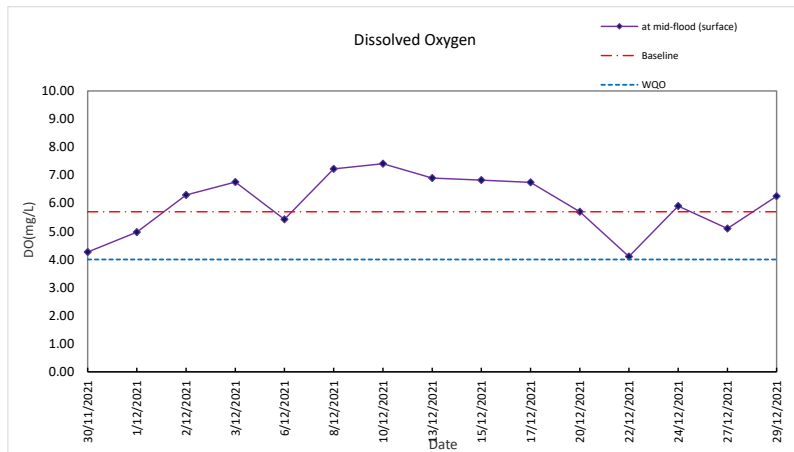


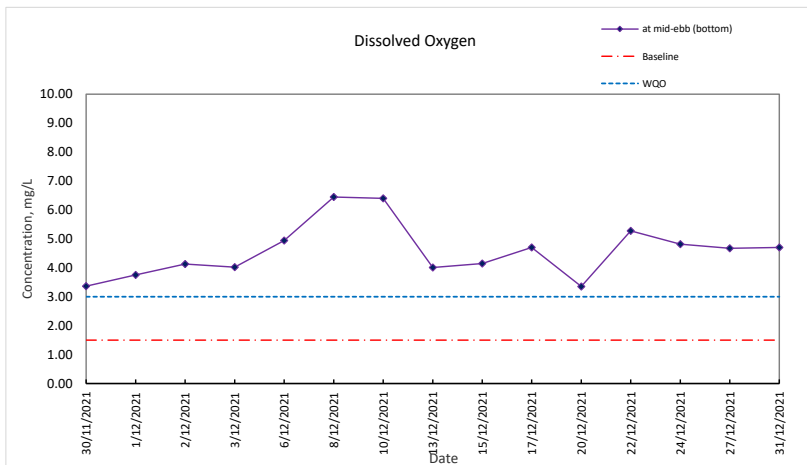
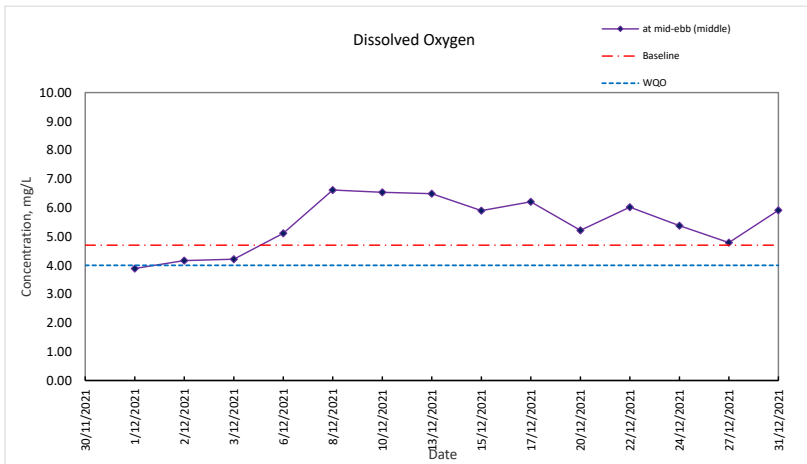
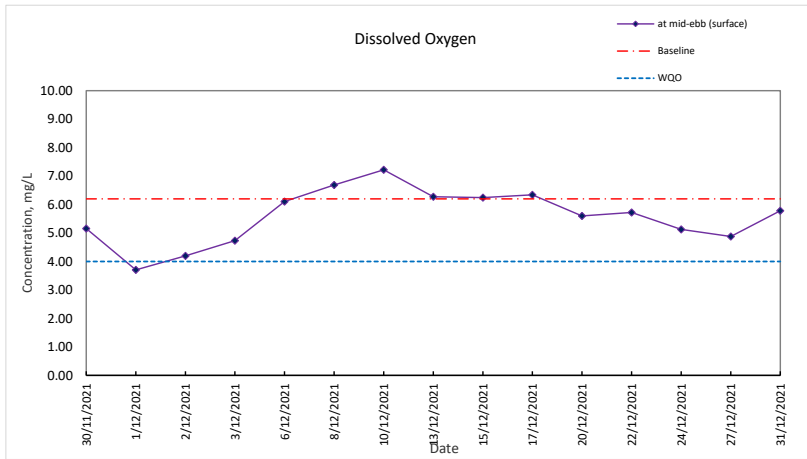


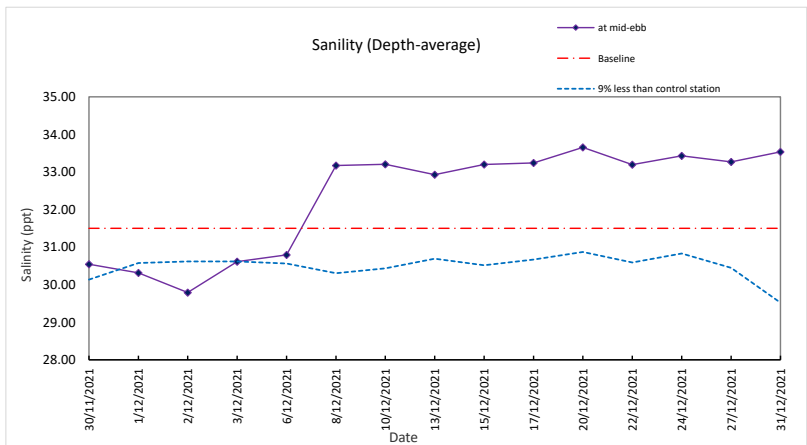
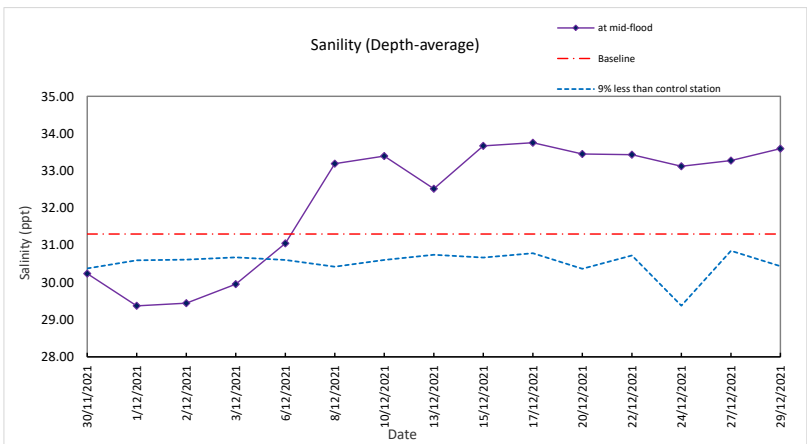
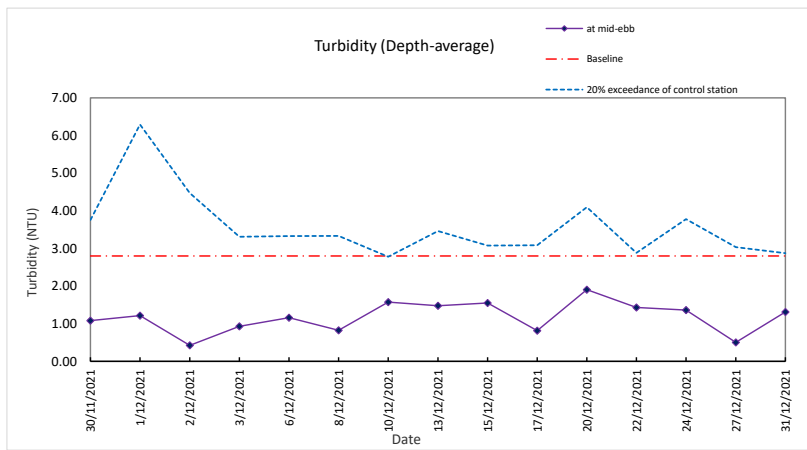
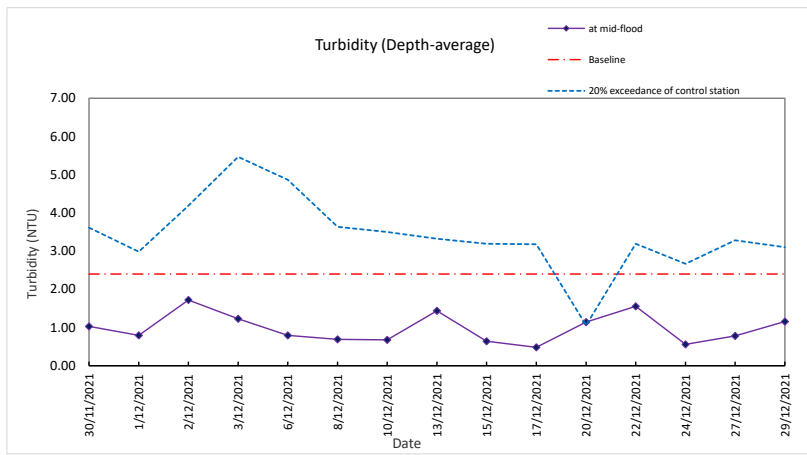


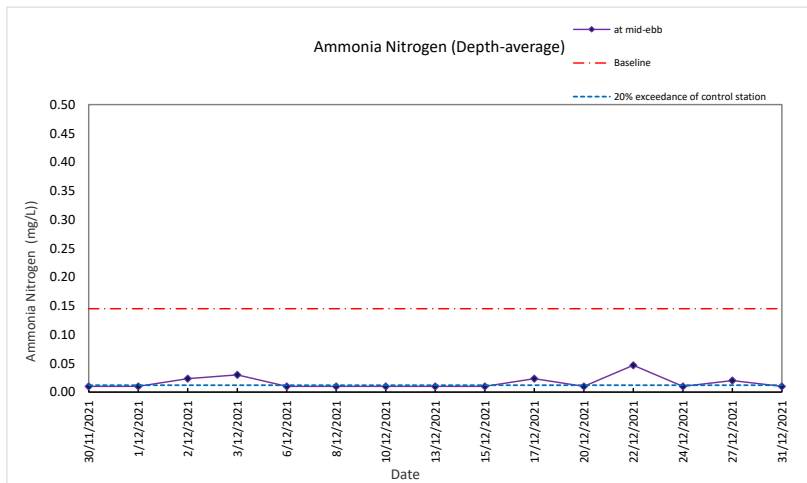
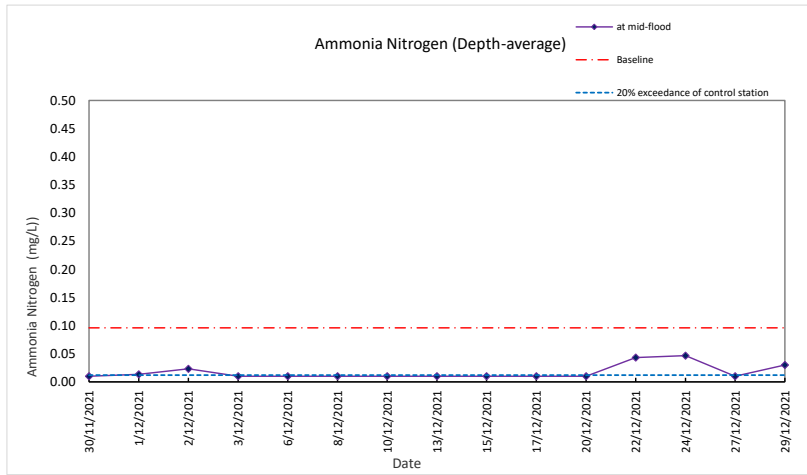
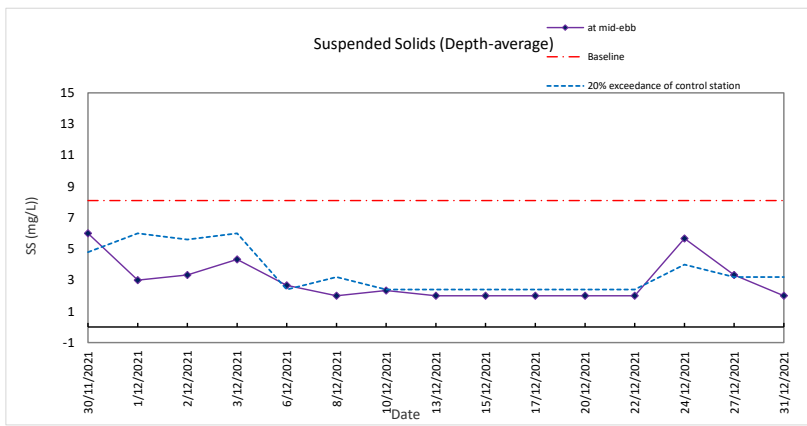
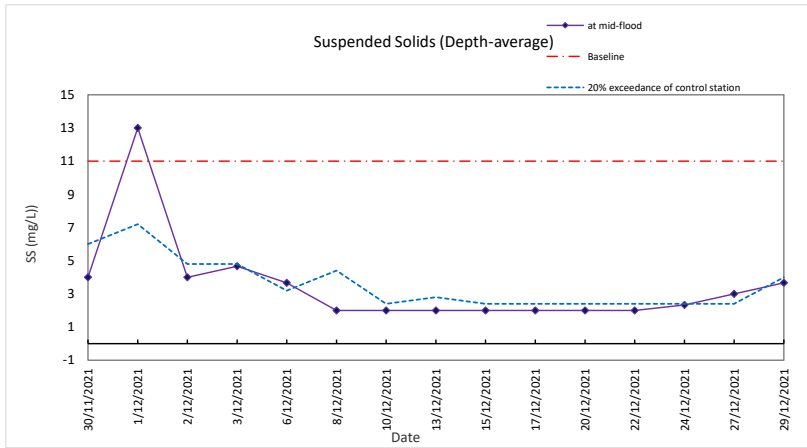


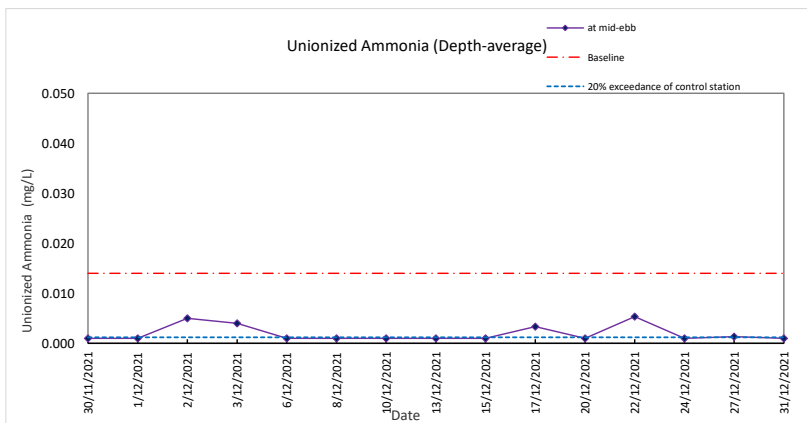
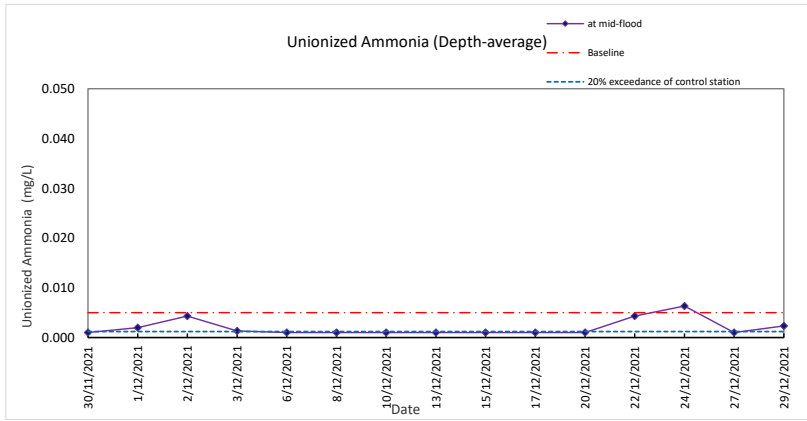
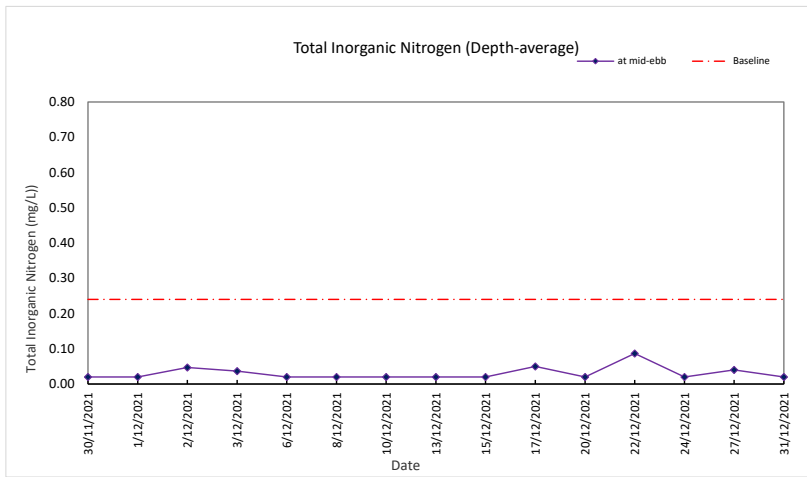
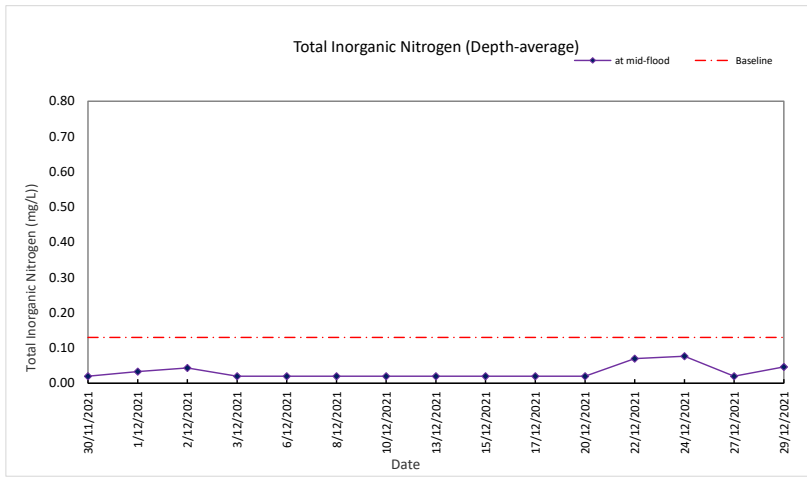
Graphic Presentation of Water Quality Result of
F1 - Yim Tin Tsai Fish Culture Zone

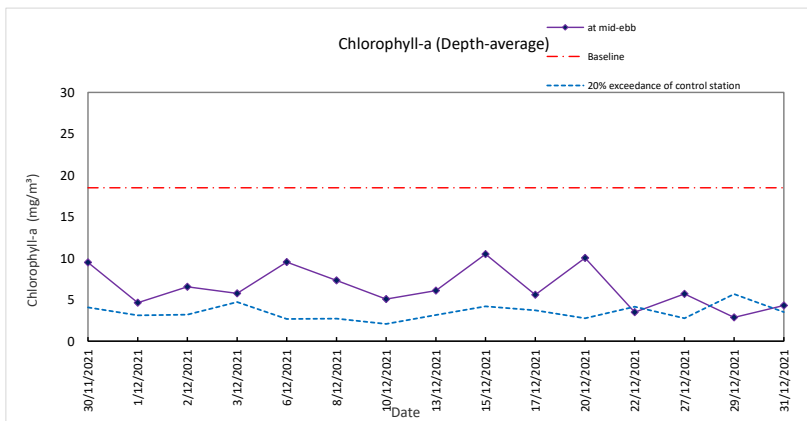
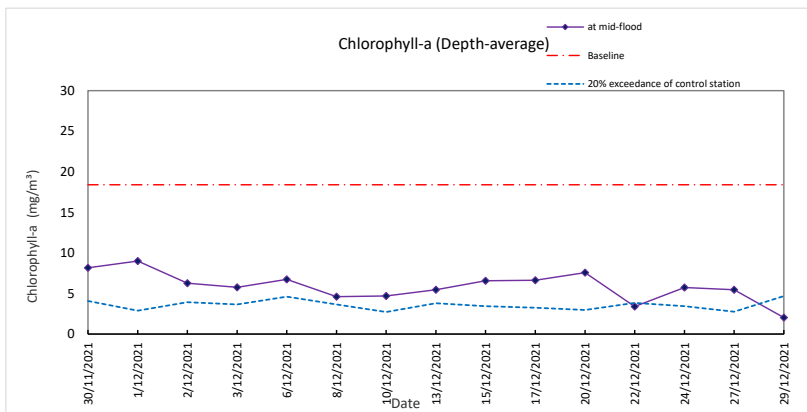
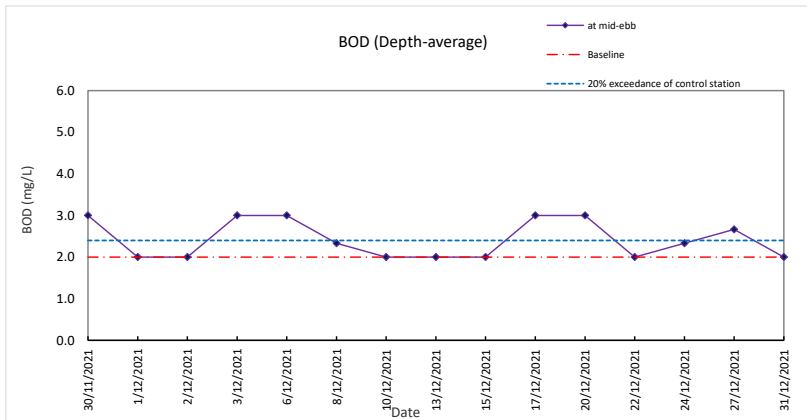
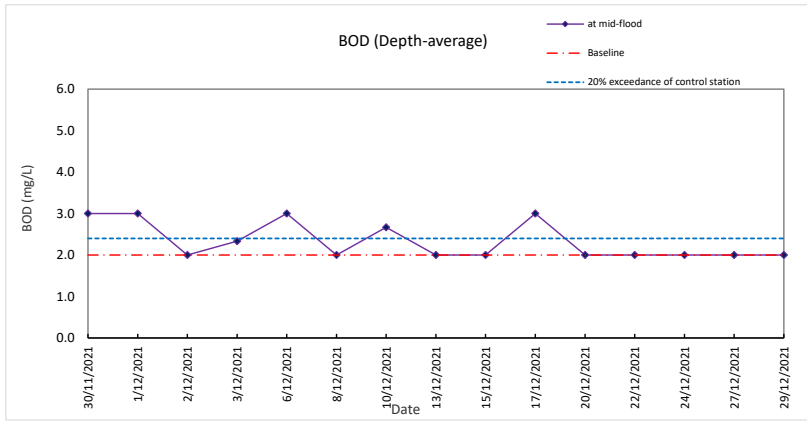


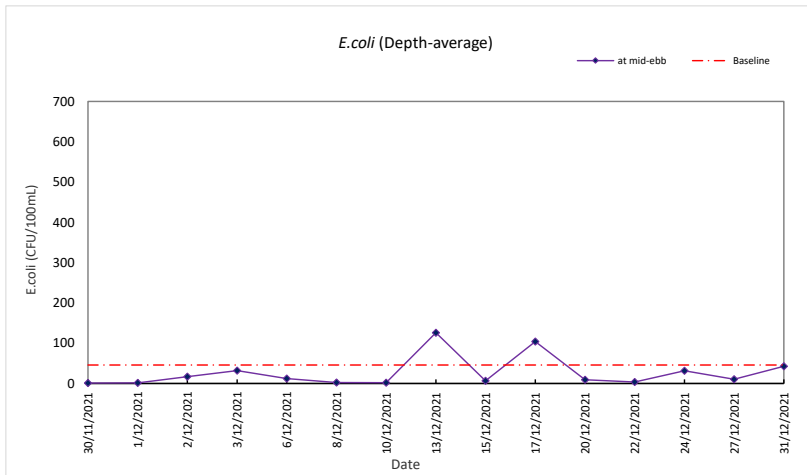
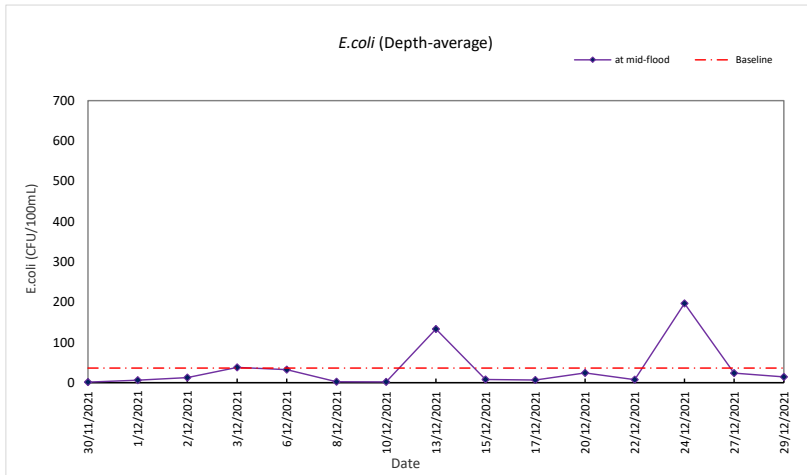






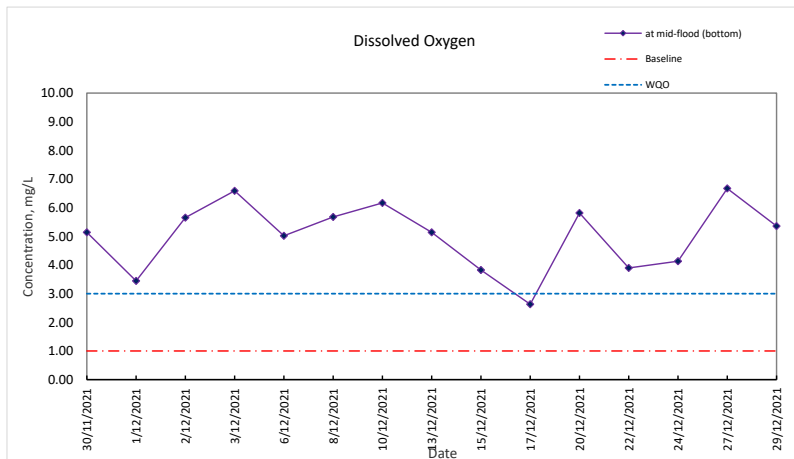
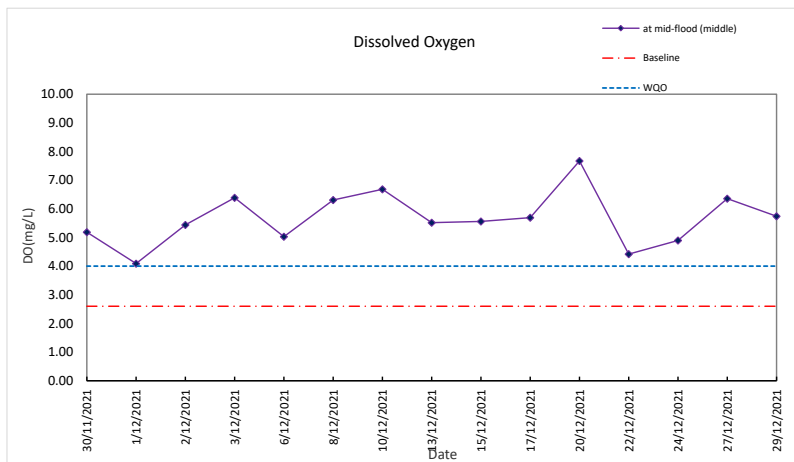
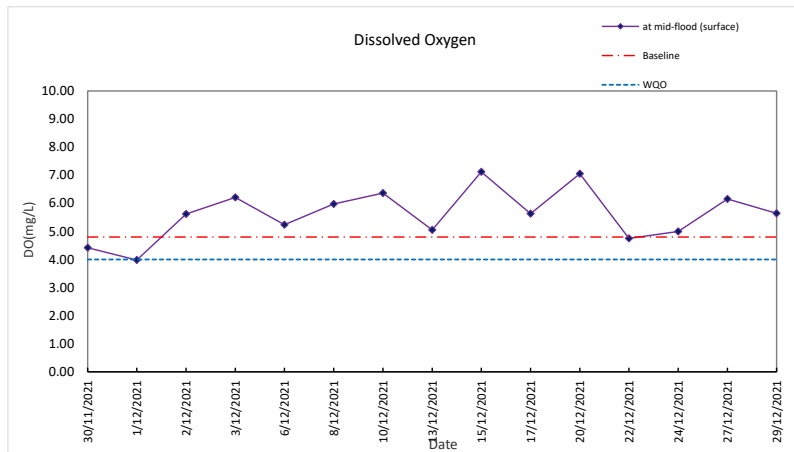


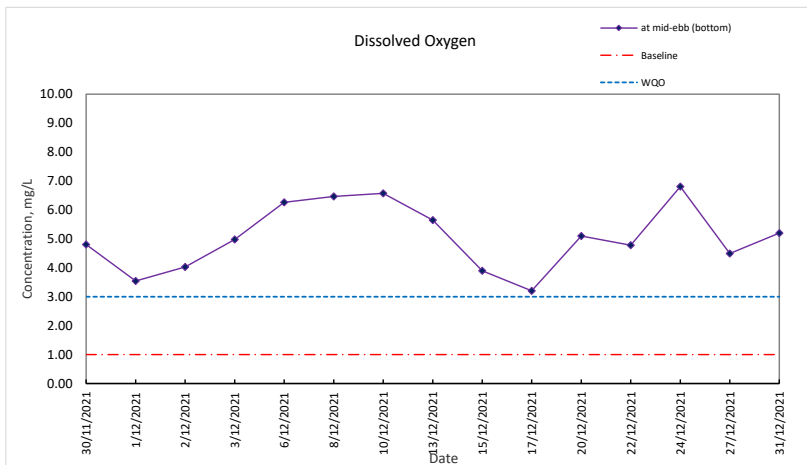
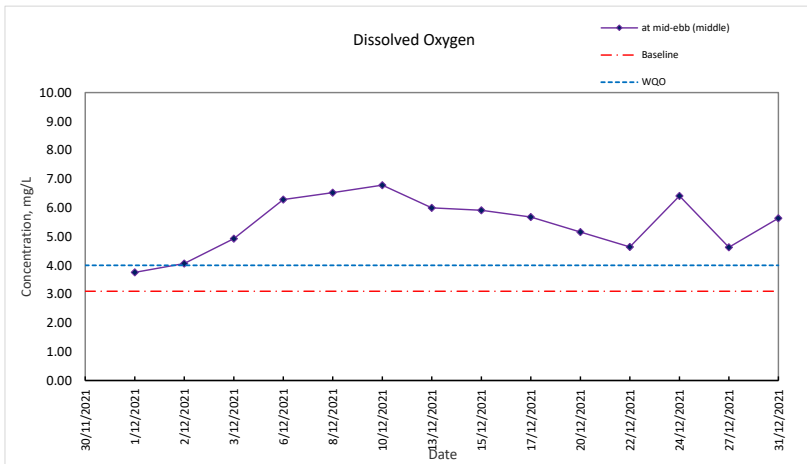
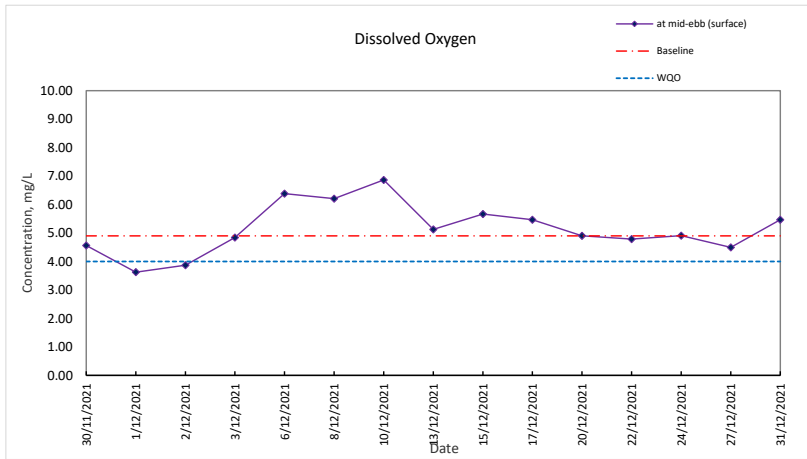


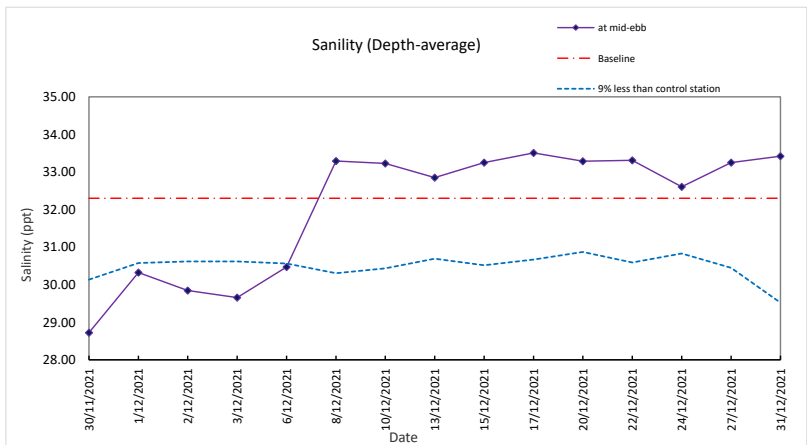
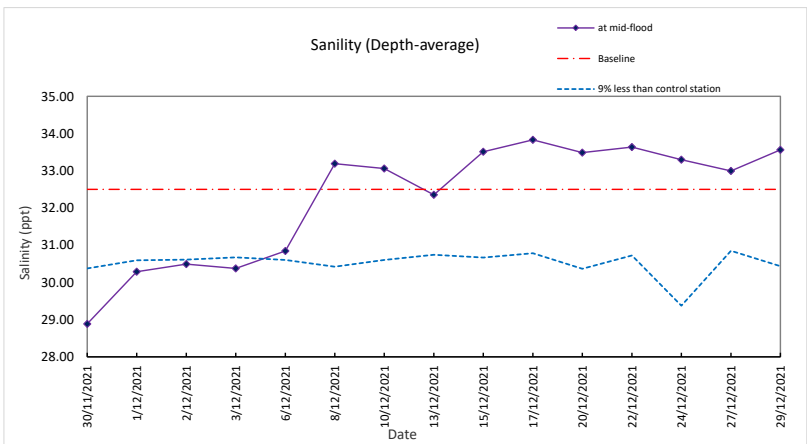
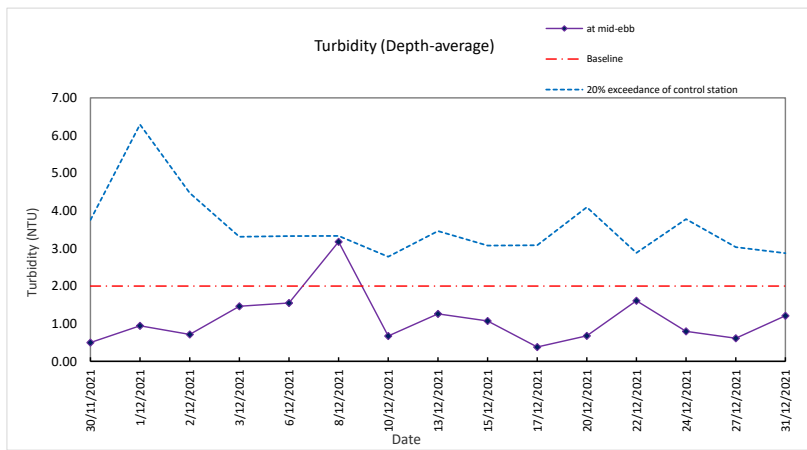
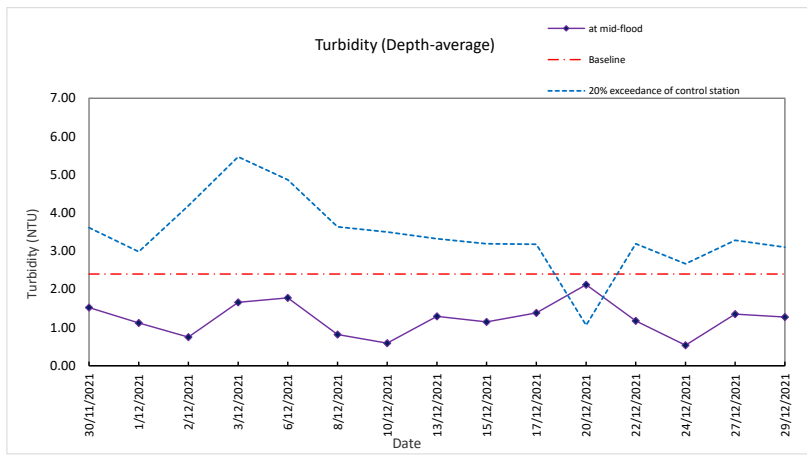


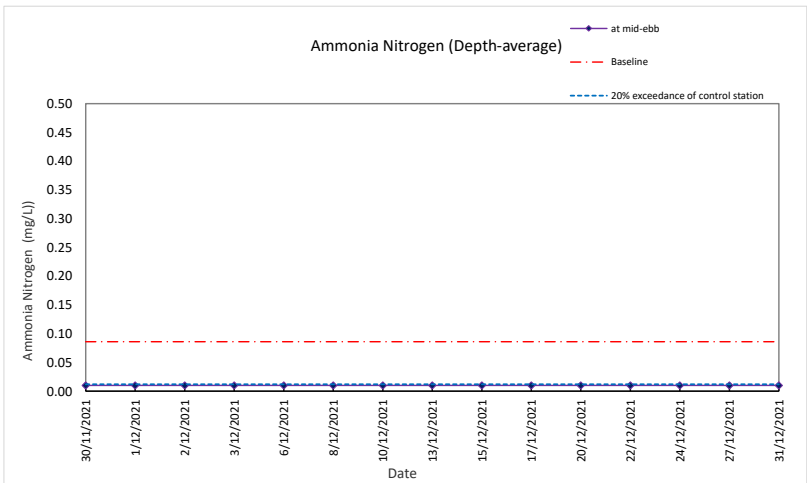
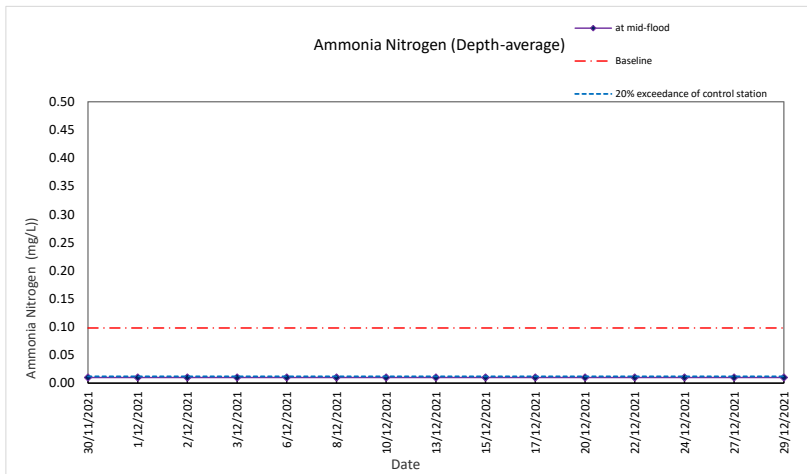
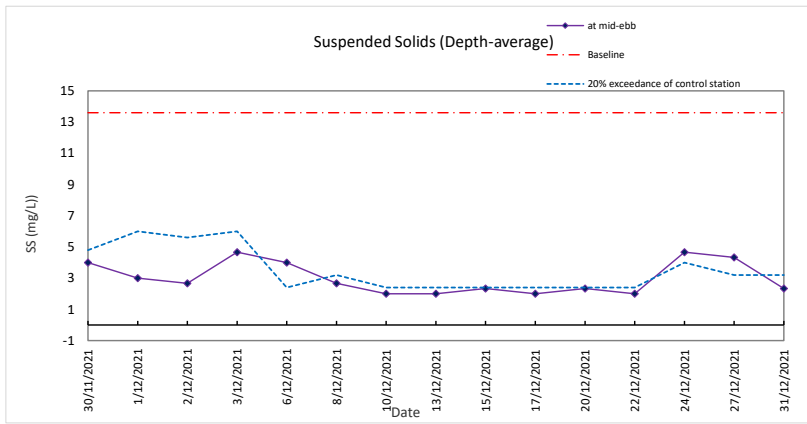
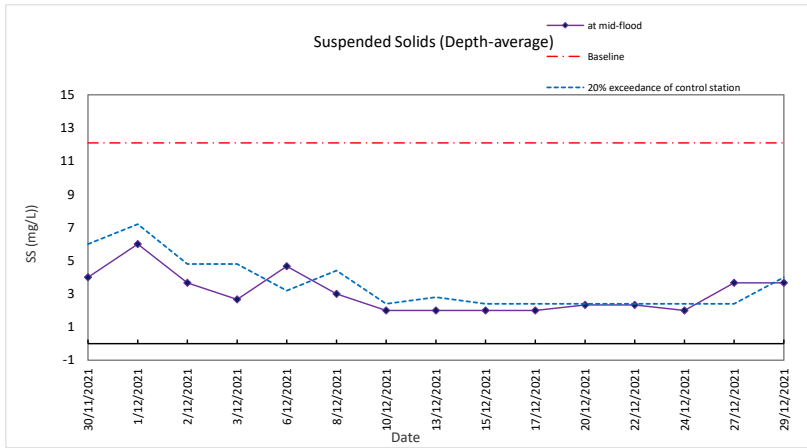


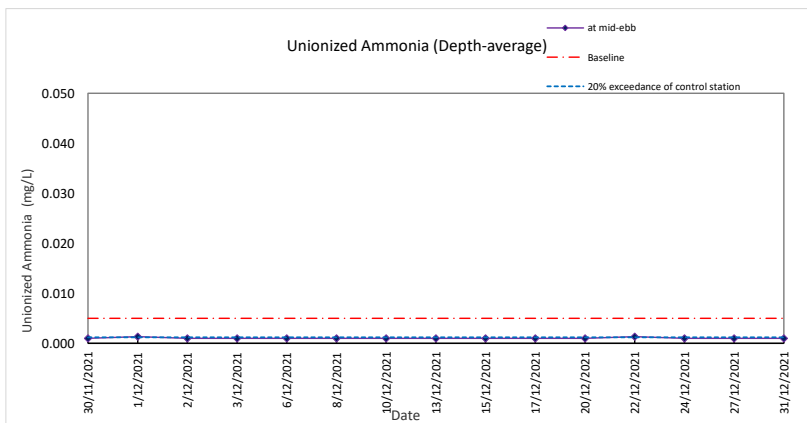
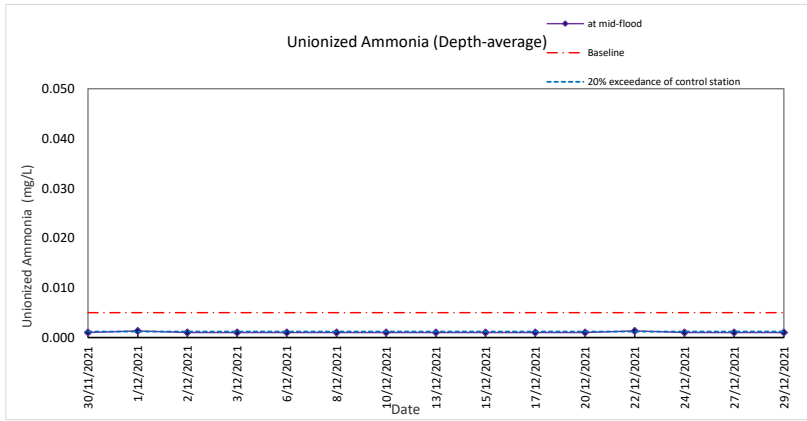
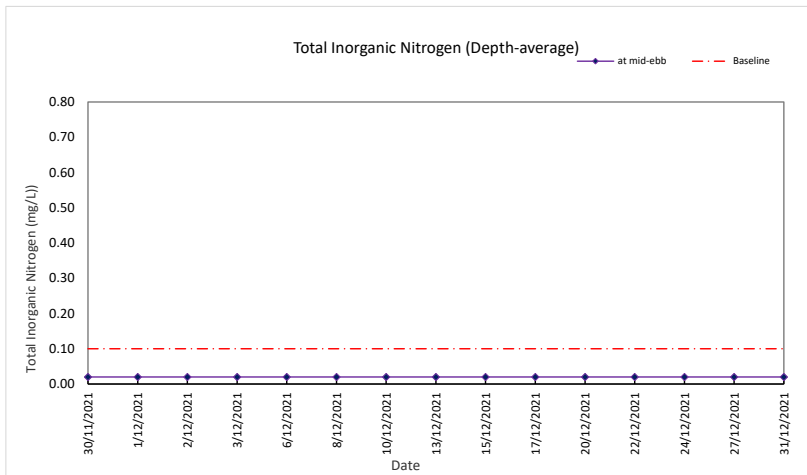
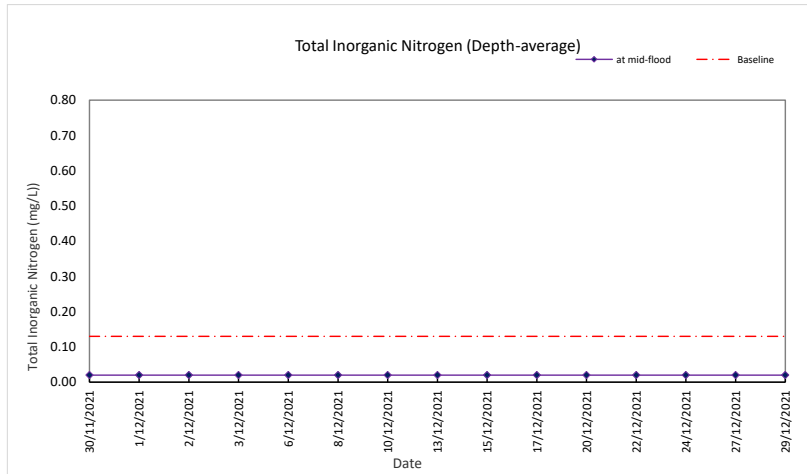
Graphic Presentation of Water Quality Result of
F2 - Yim Tin Tsai (East) Fish Culture Zone

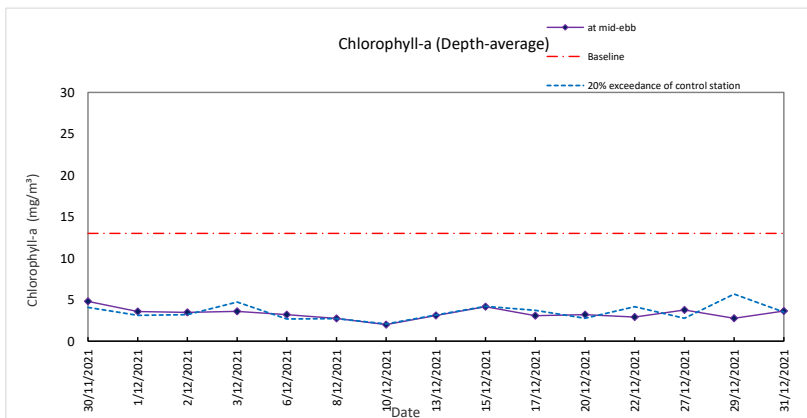
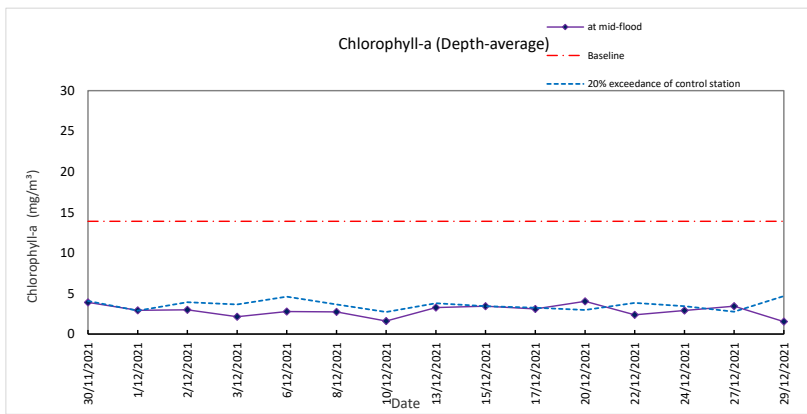
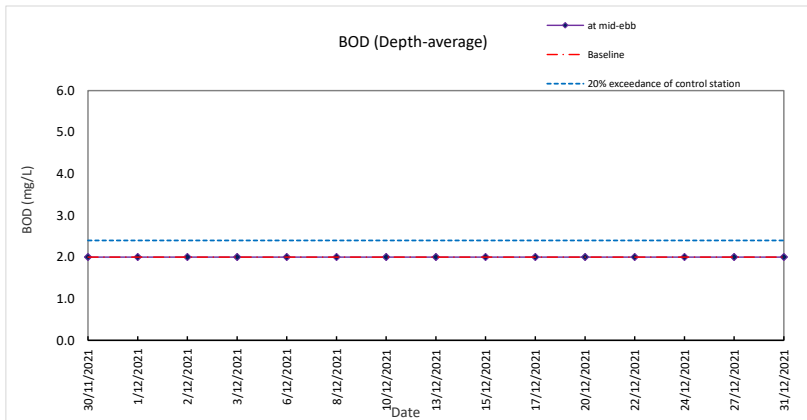
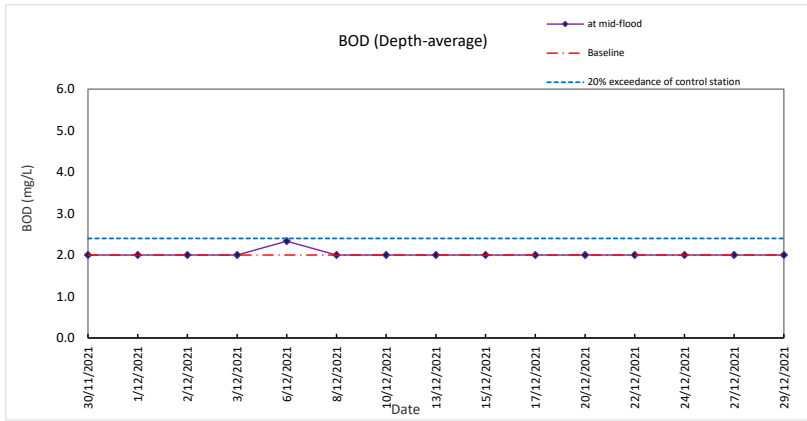


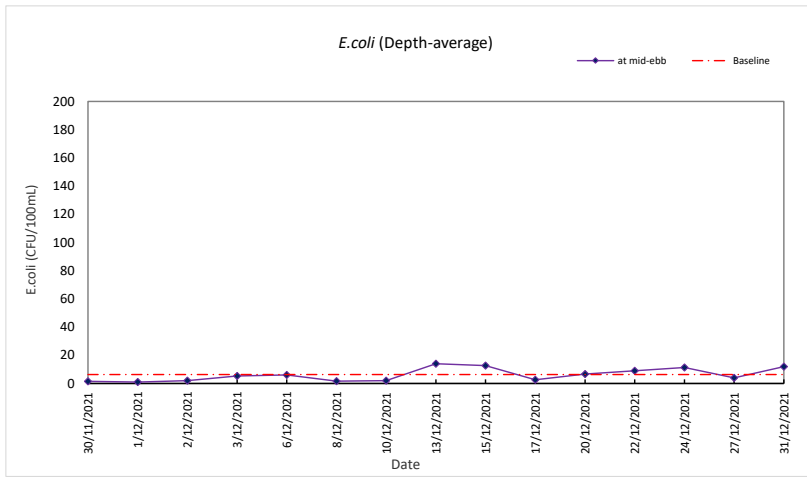
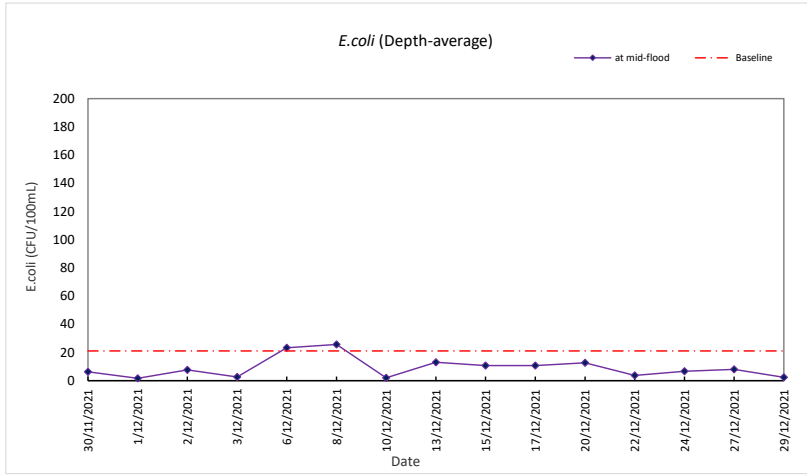






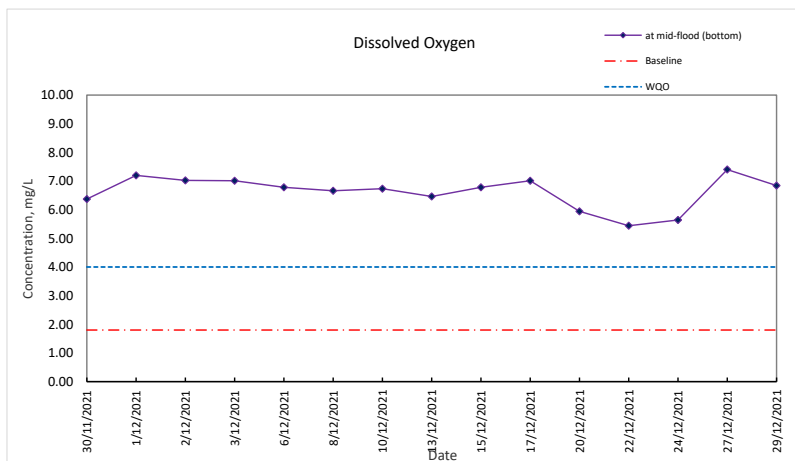
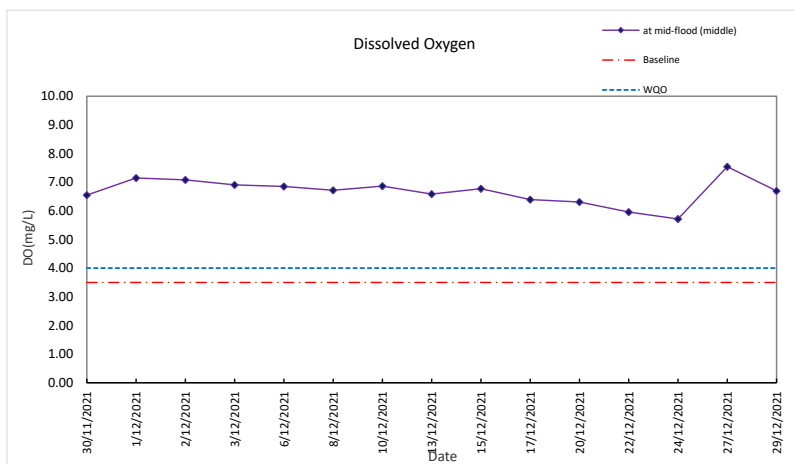
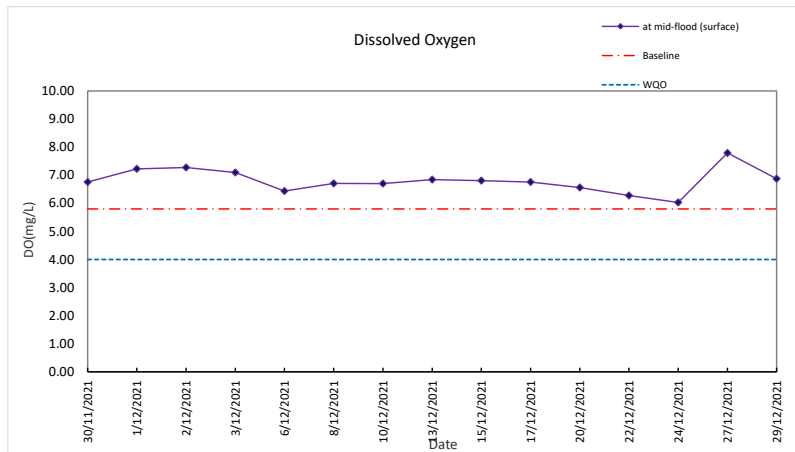


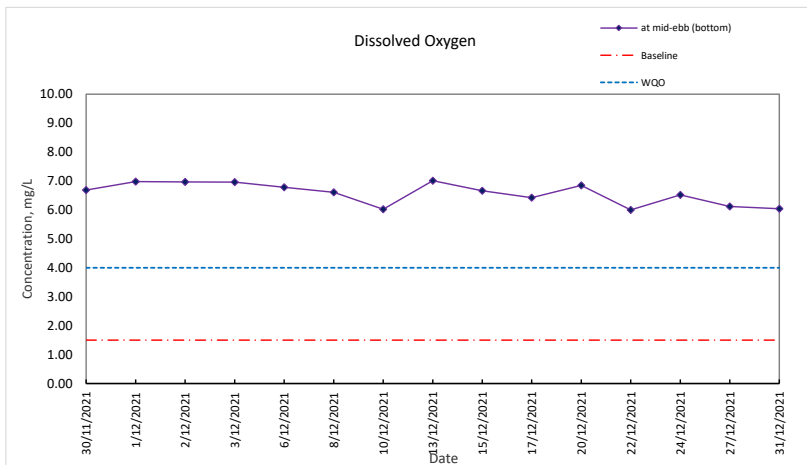
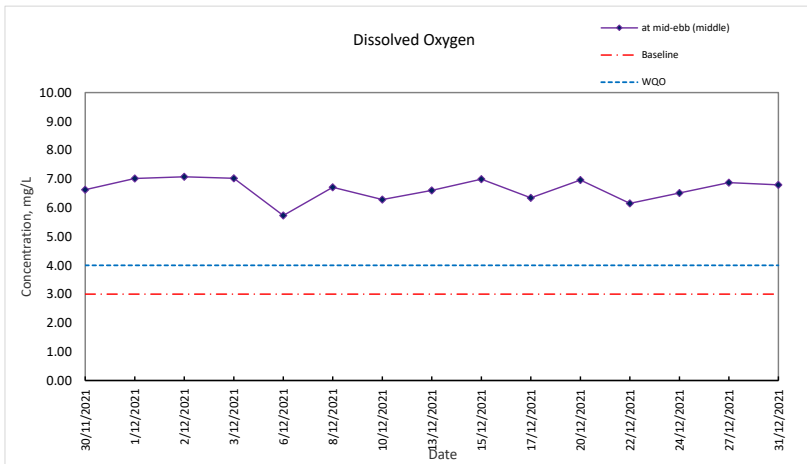
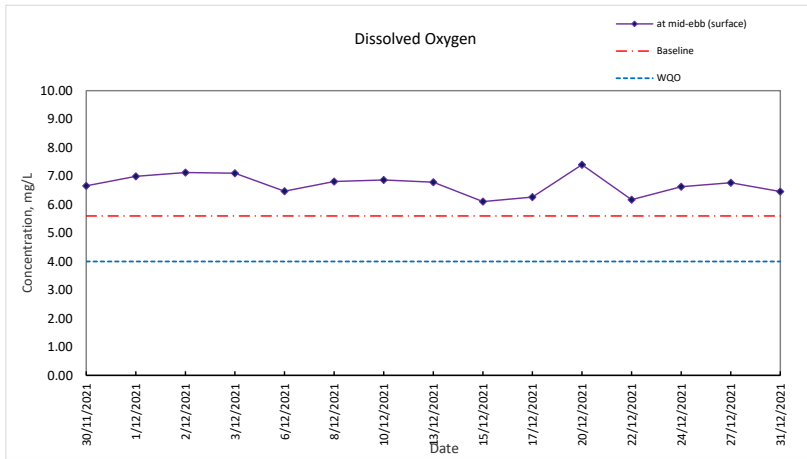


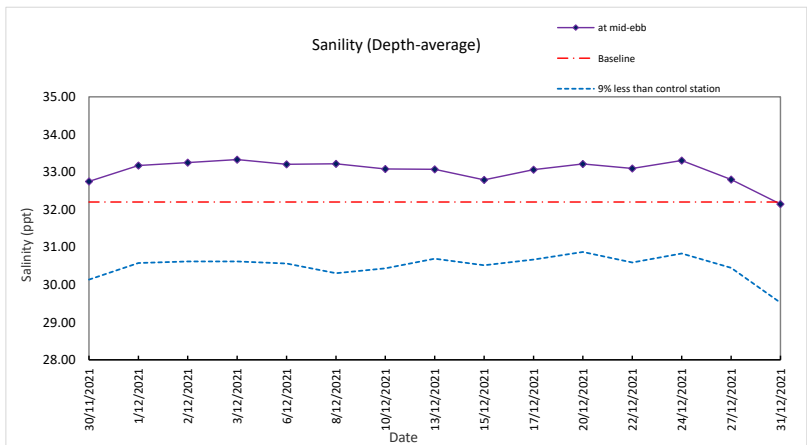
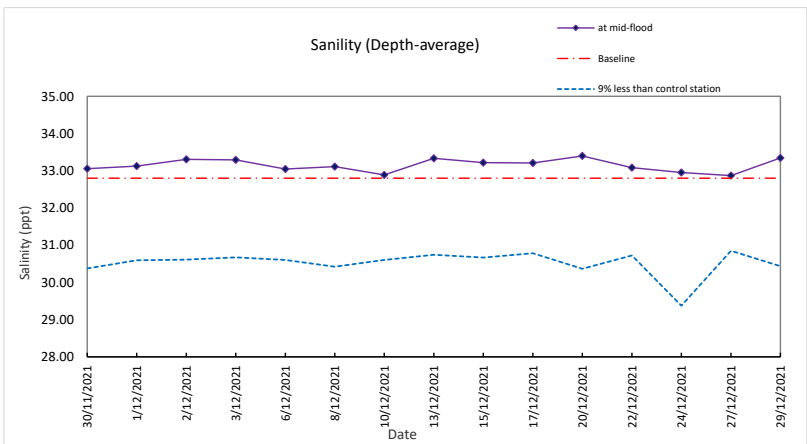
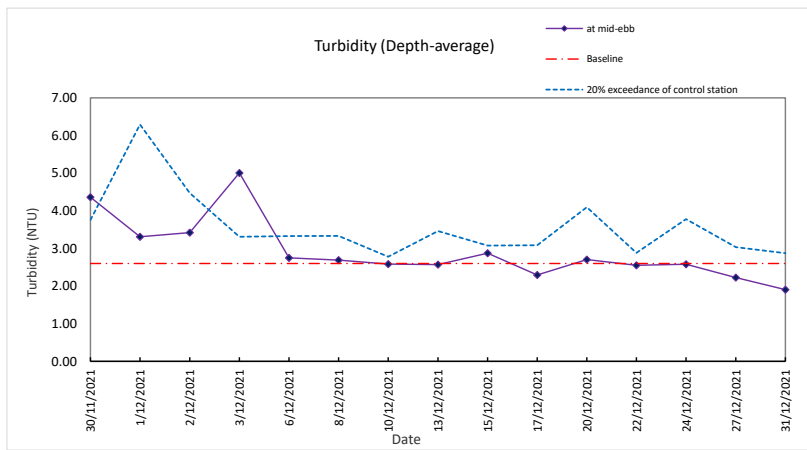
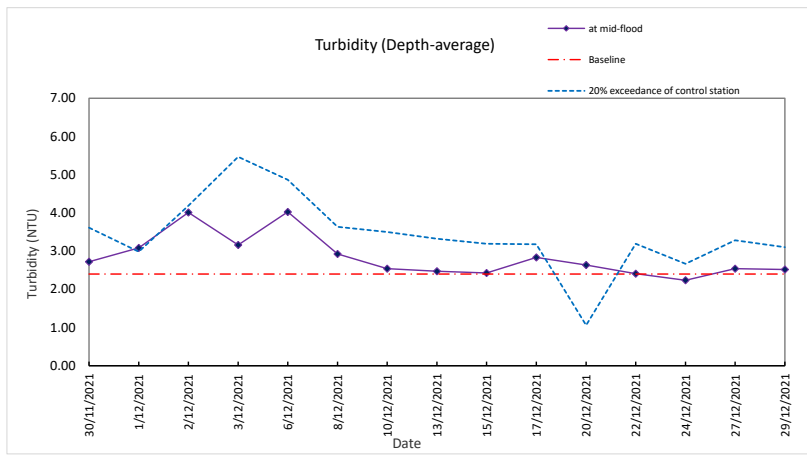


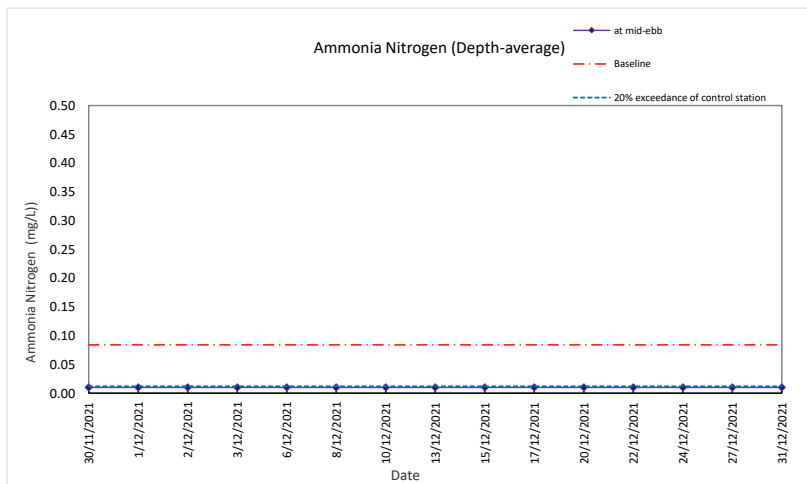
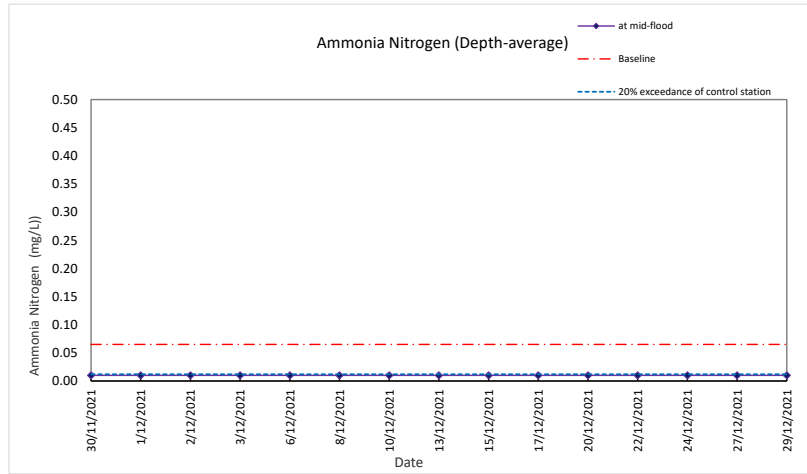
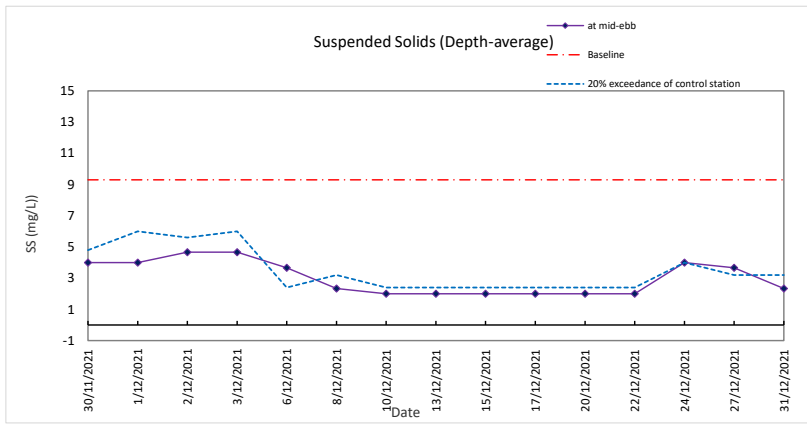
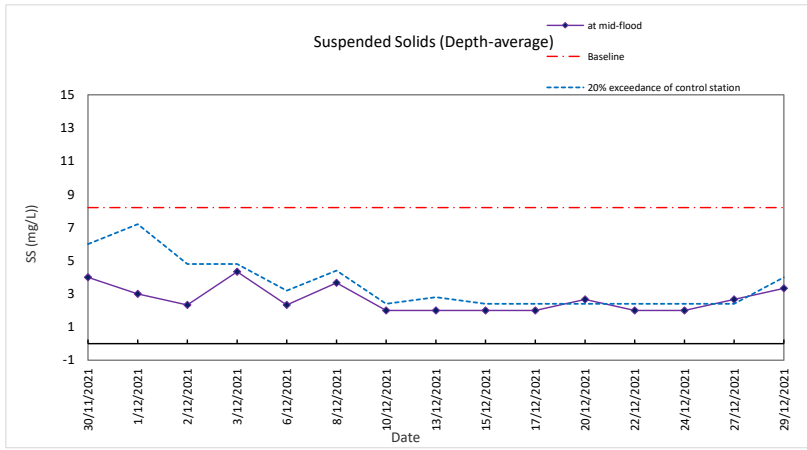


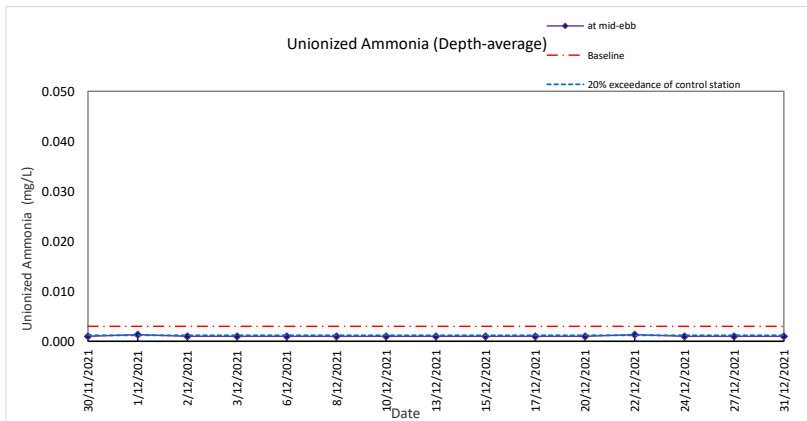
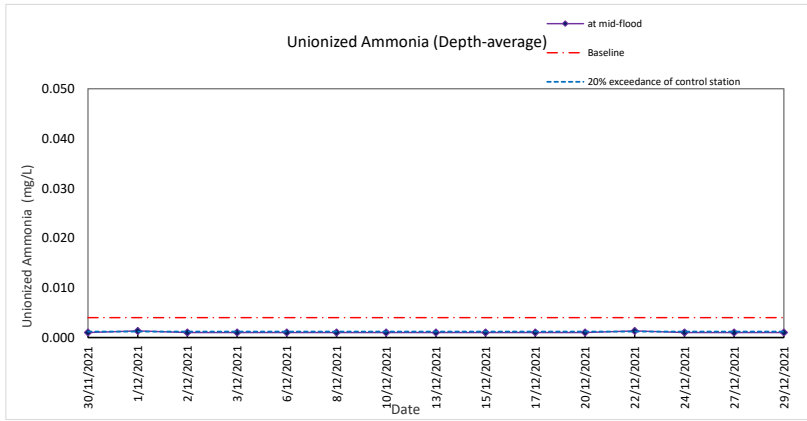
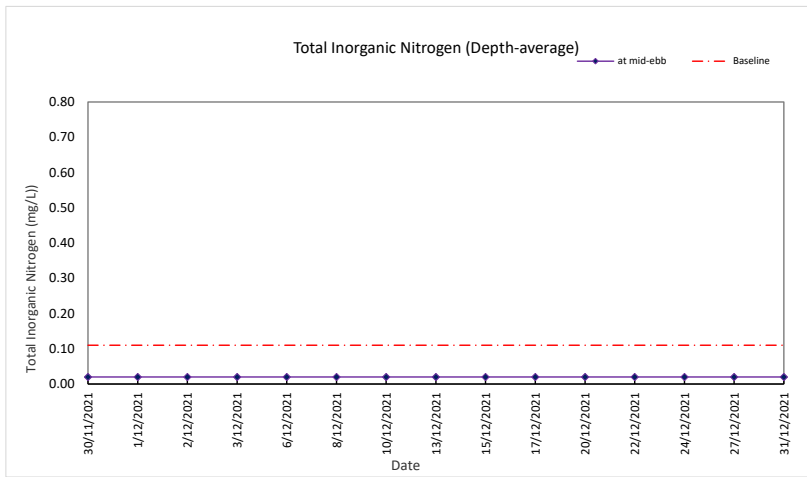
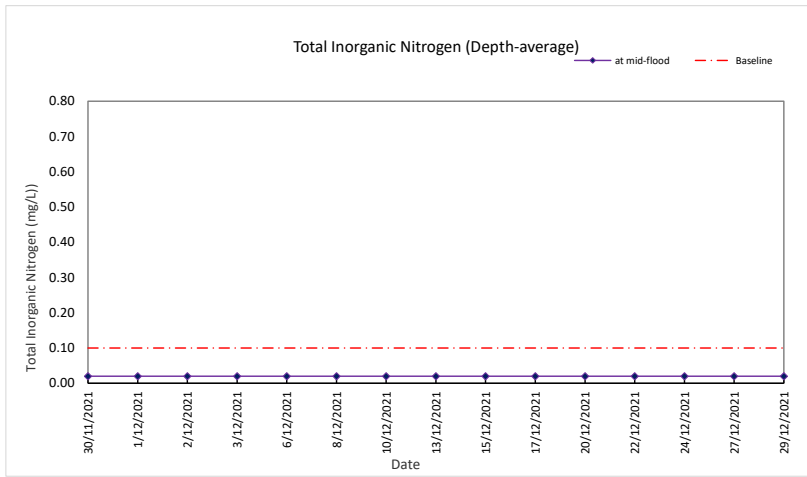
**Graphic Presentation of Water Quality Result of
F3 -Yung Shue Au Fish Culture Zone / Important Nursery Area for Commercial Fisheries
Resources at Three Fathoms Cove**

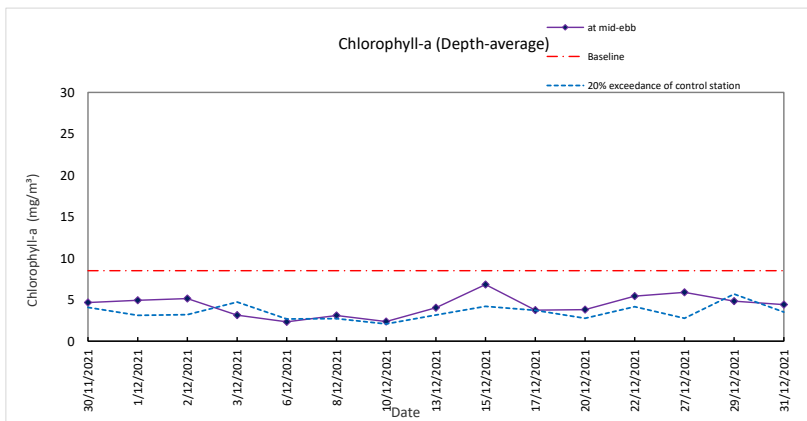
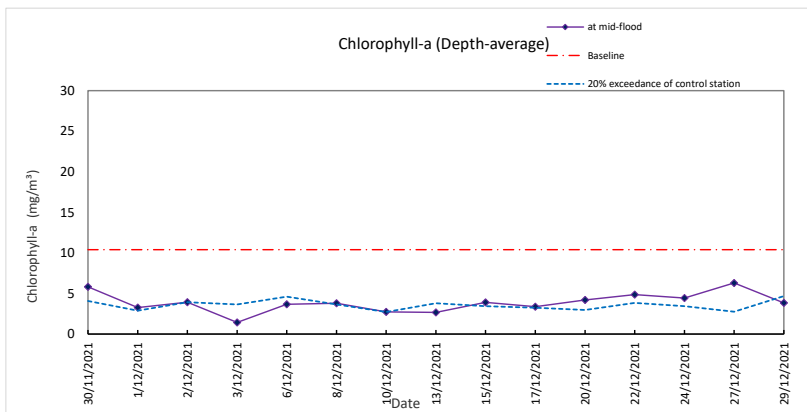
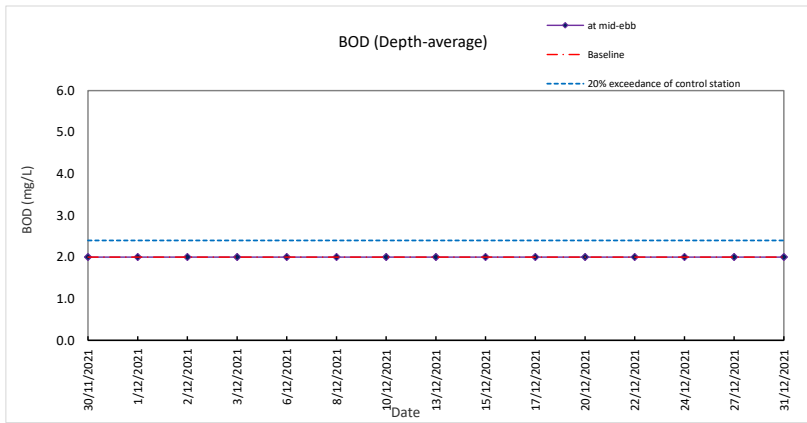
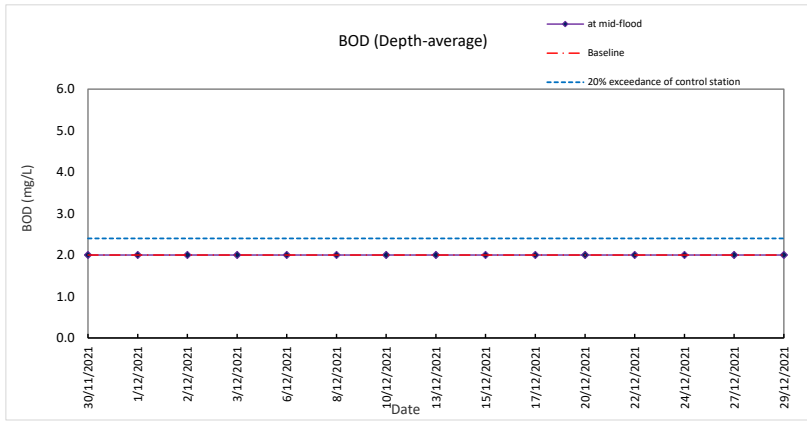


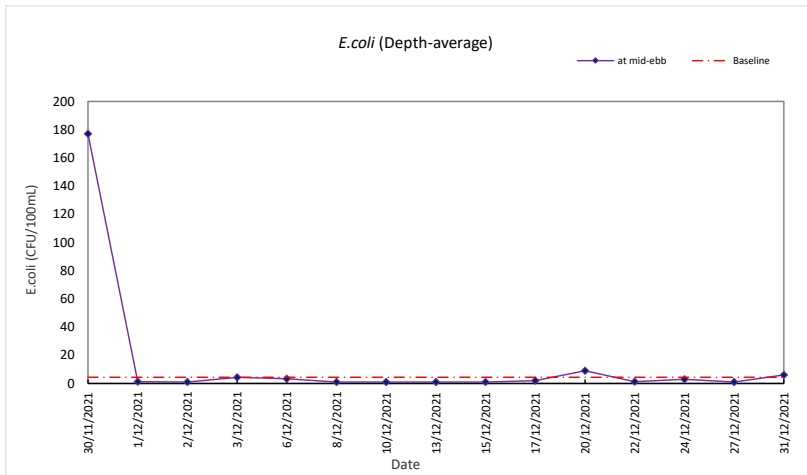
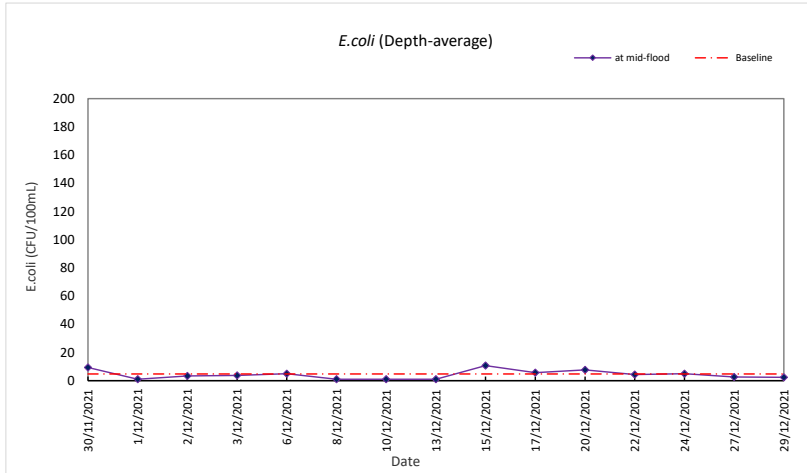






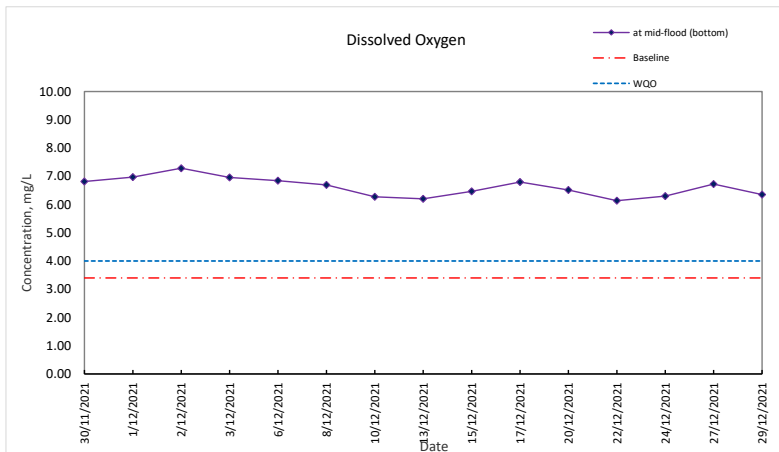
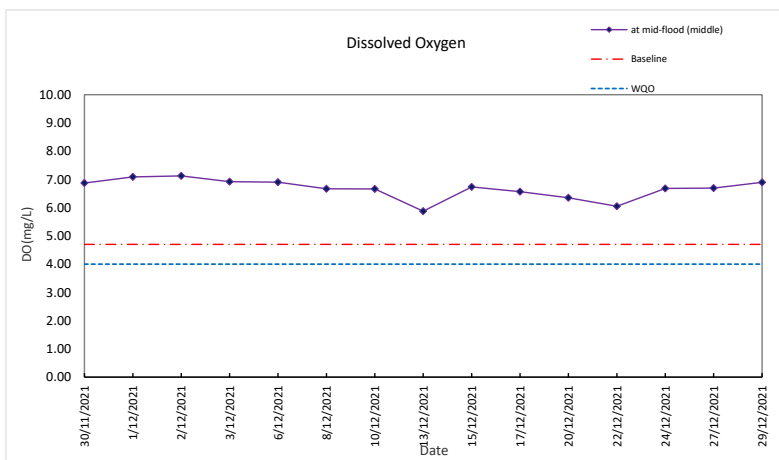
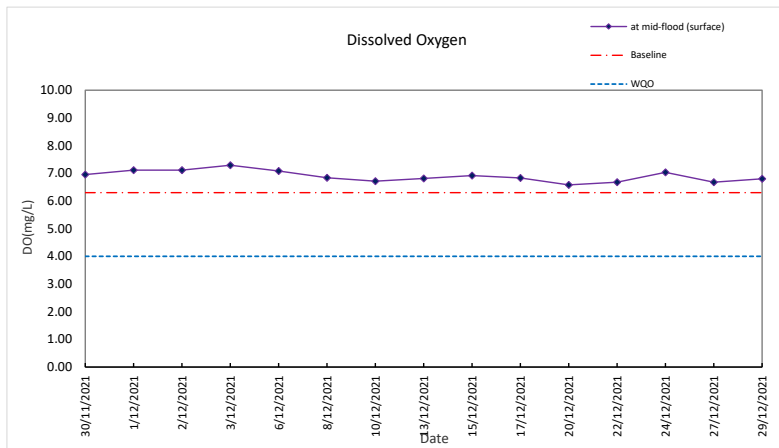


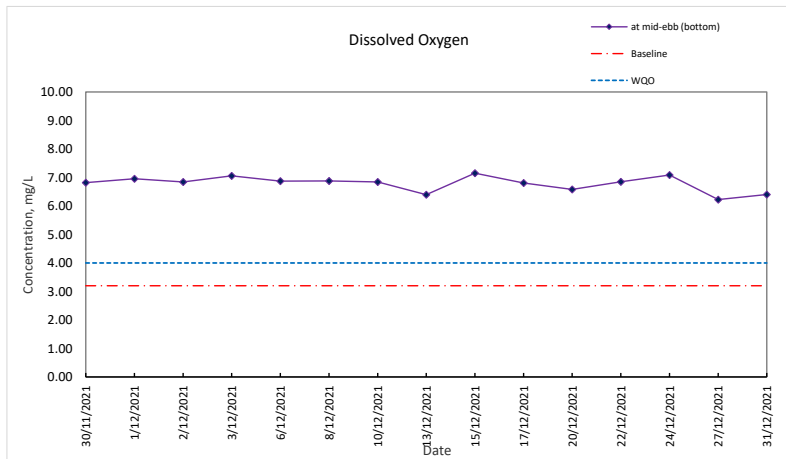
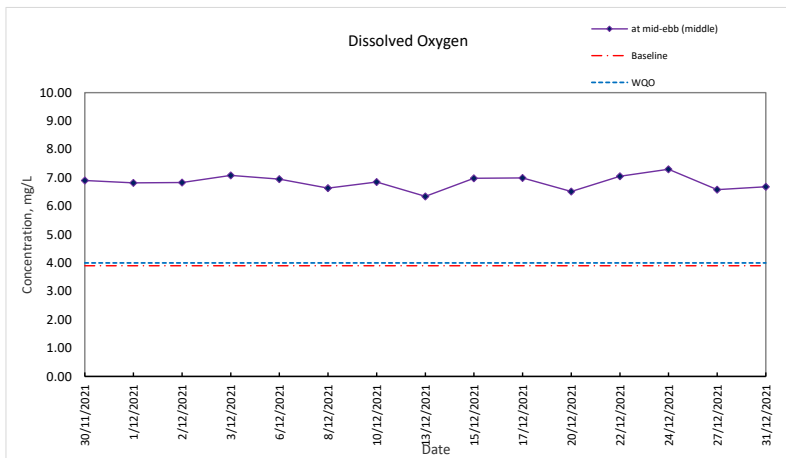
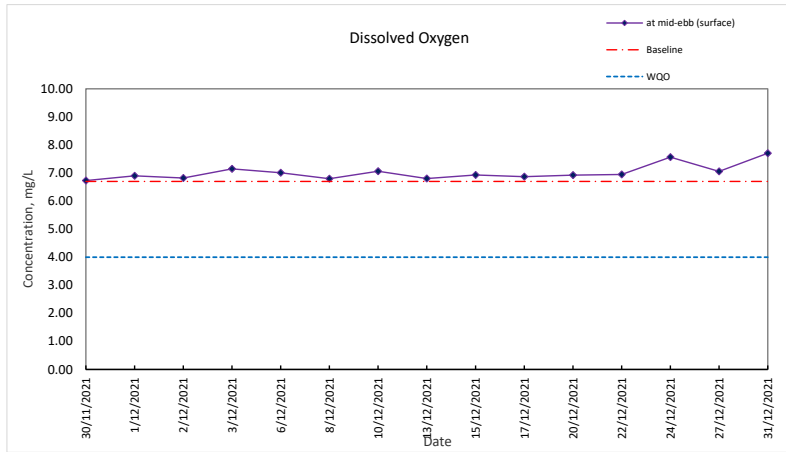


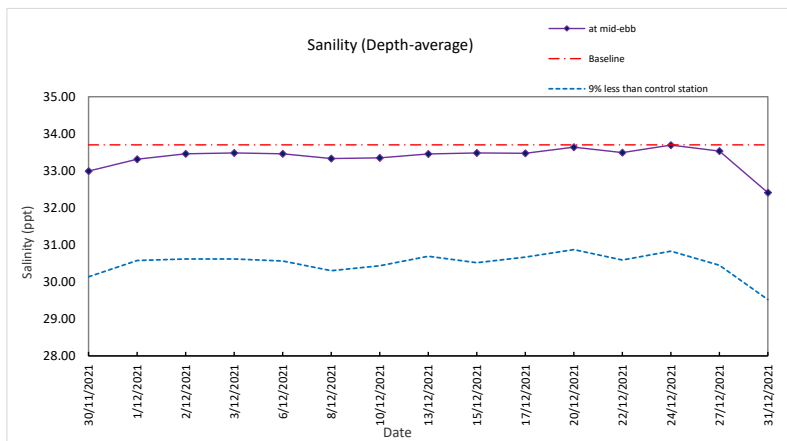
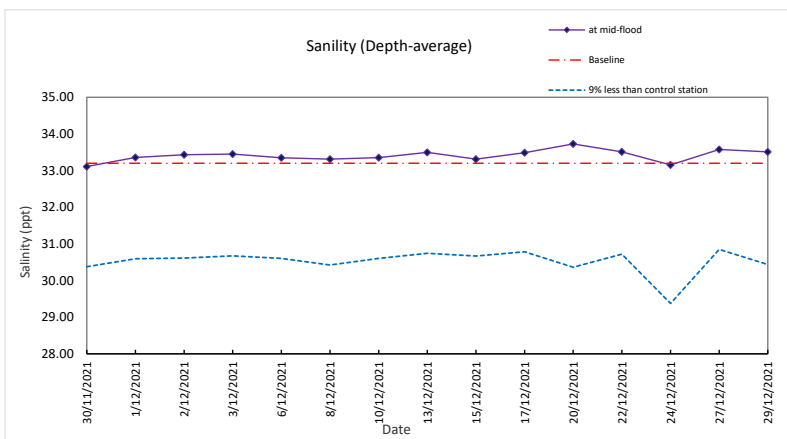
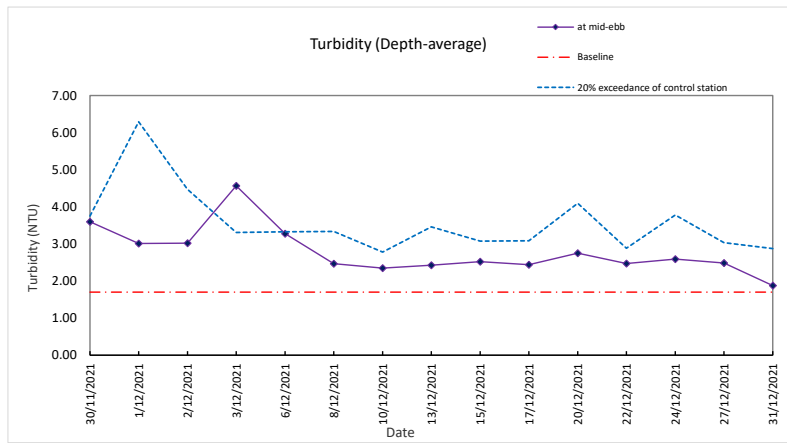
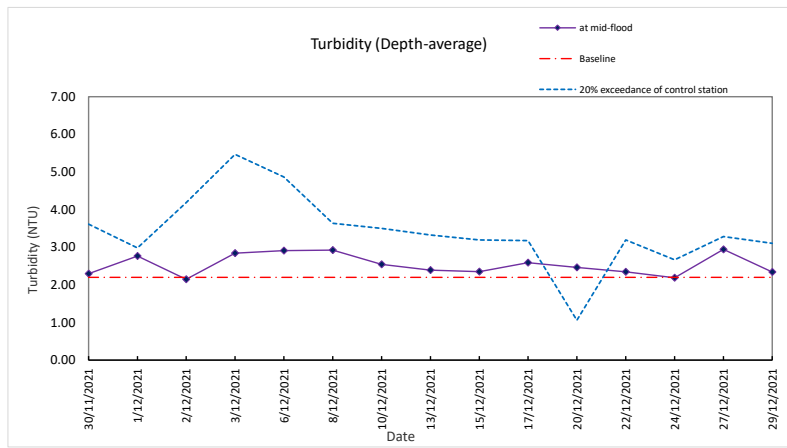


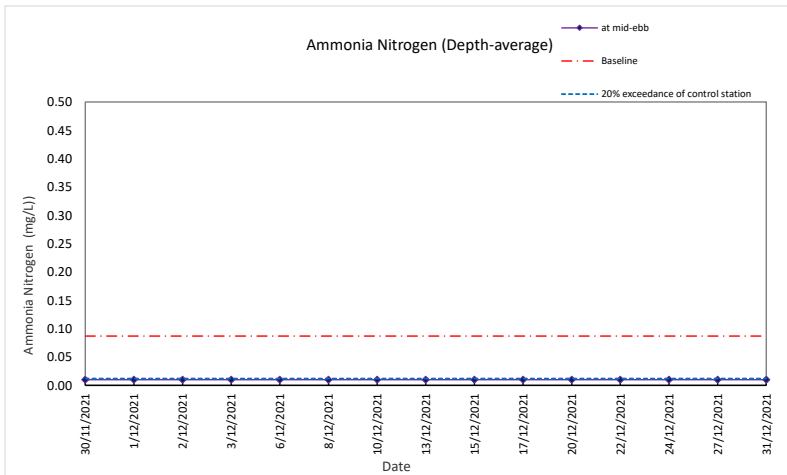
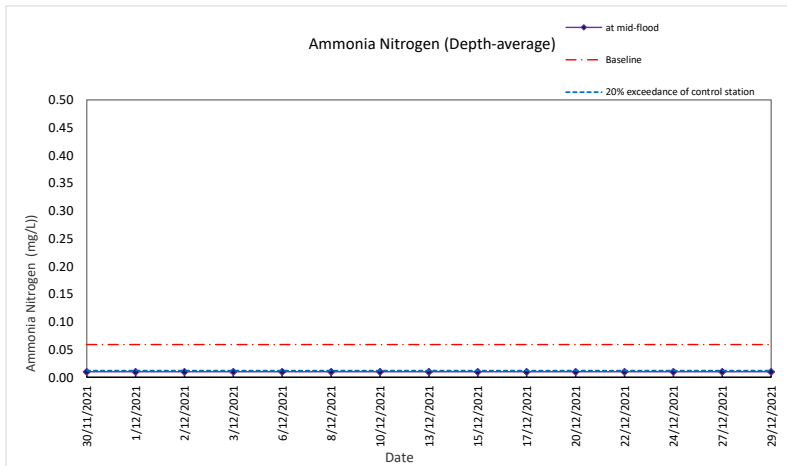
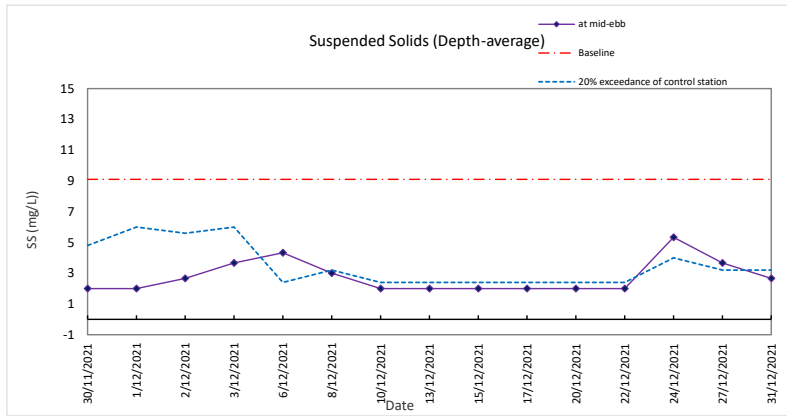
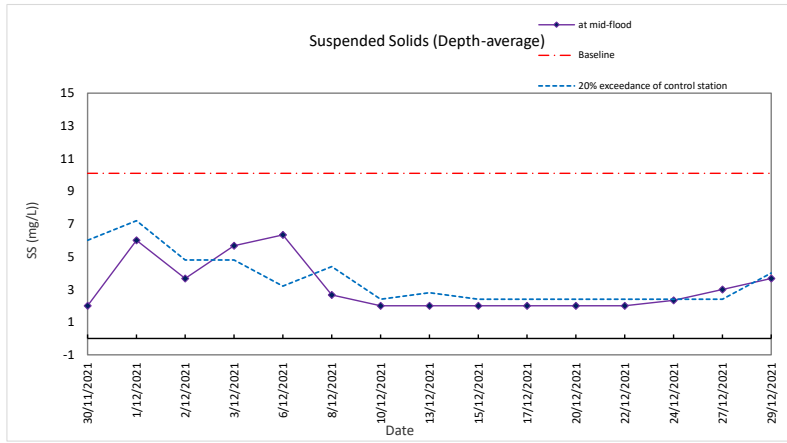


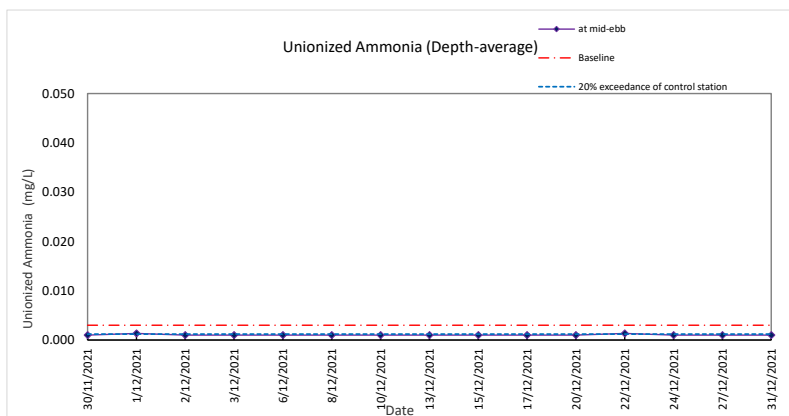
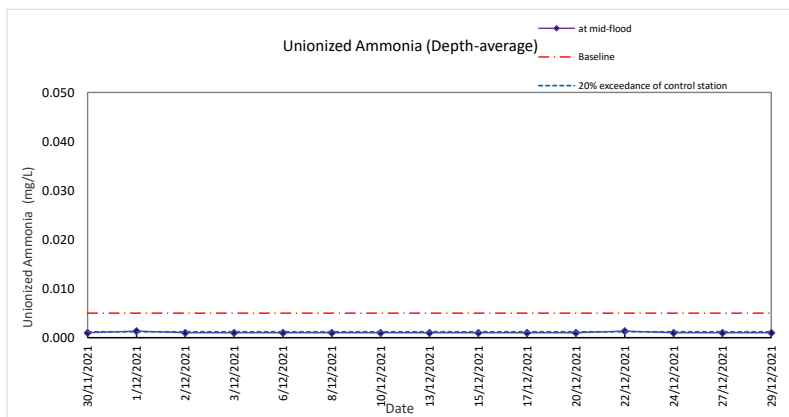
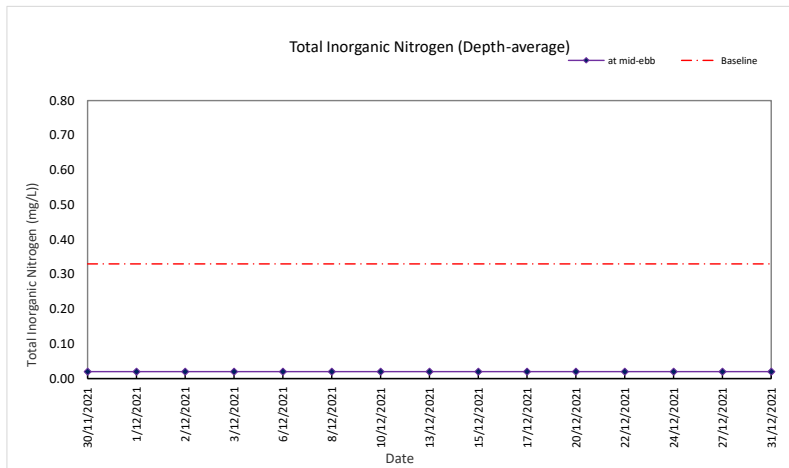
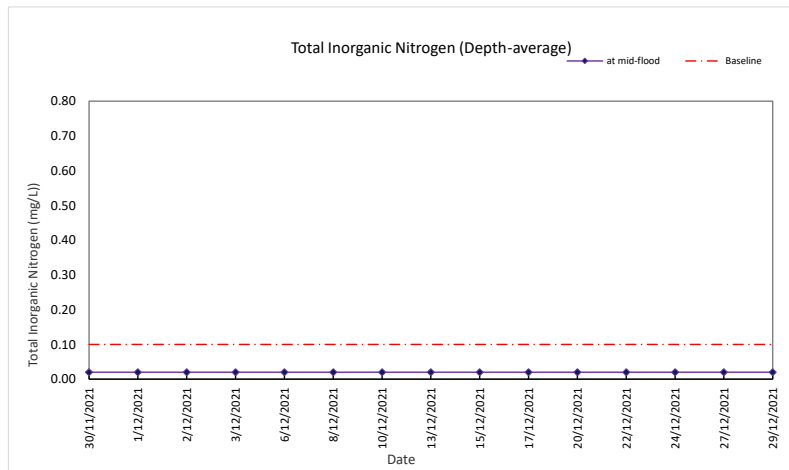
Graphic Presentation of Water Quality Result of F4 -Lo Fu Wat Fish Culture Zone

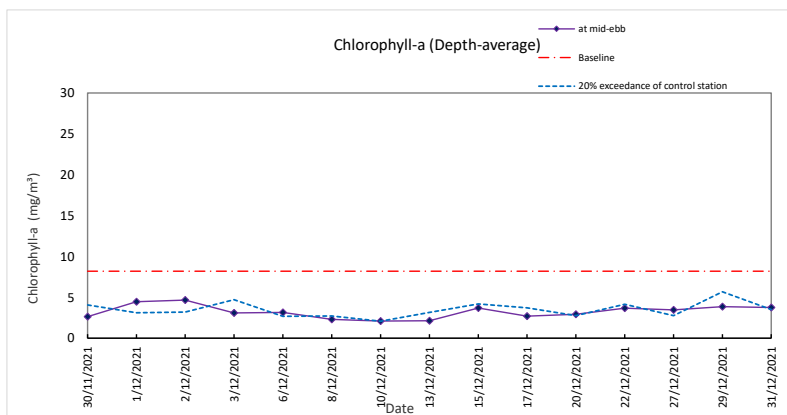
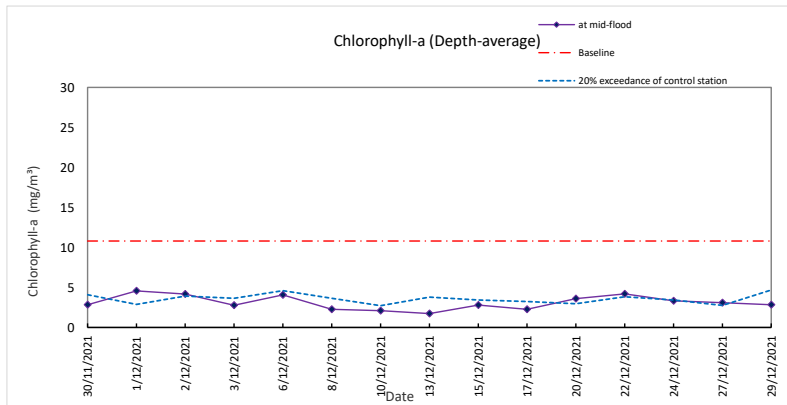
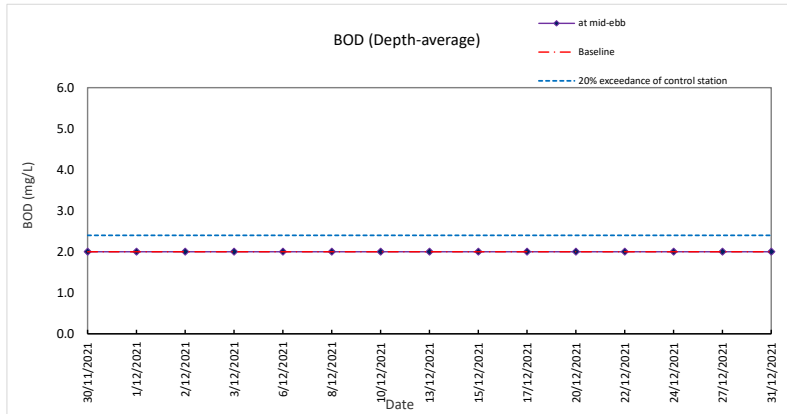
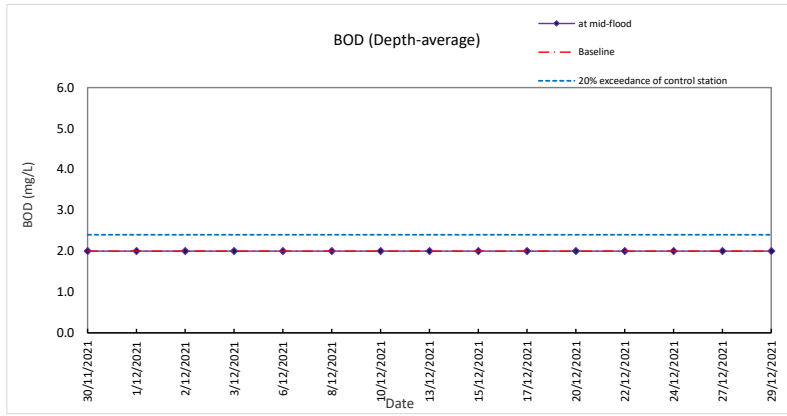


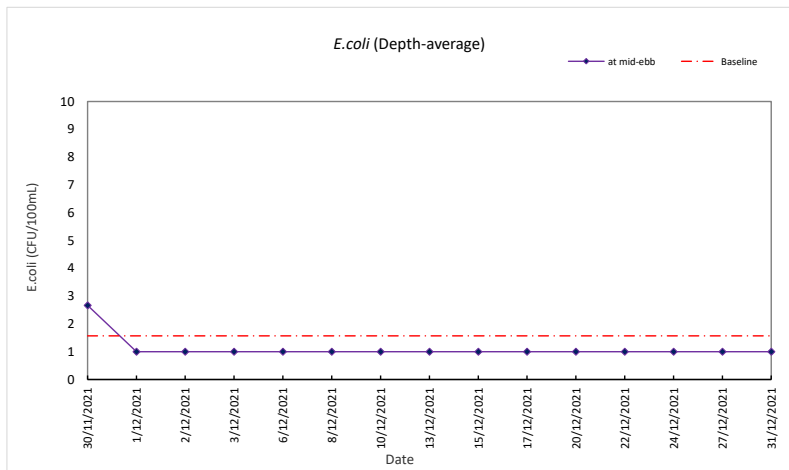
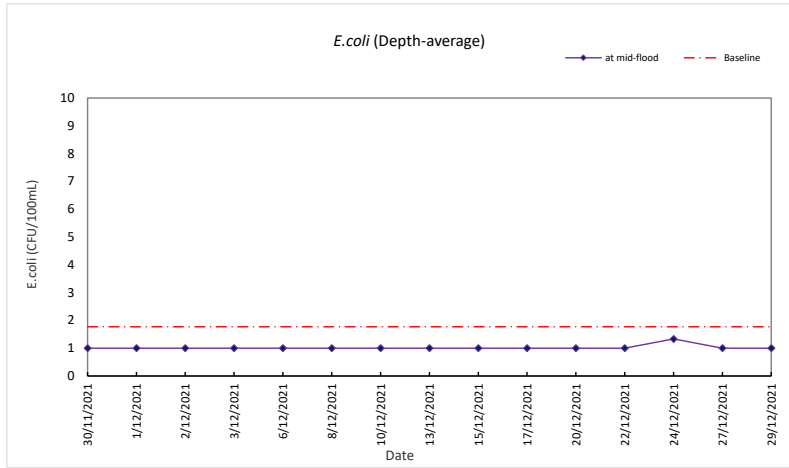






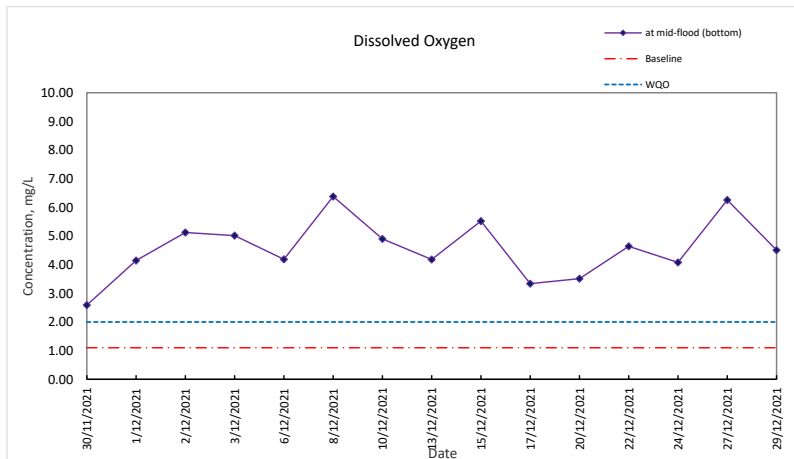
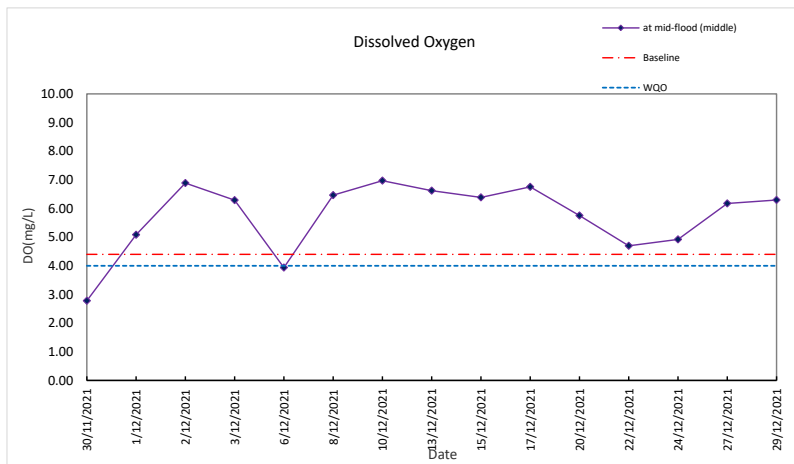
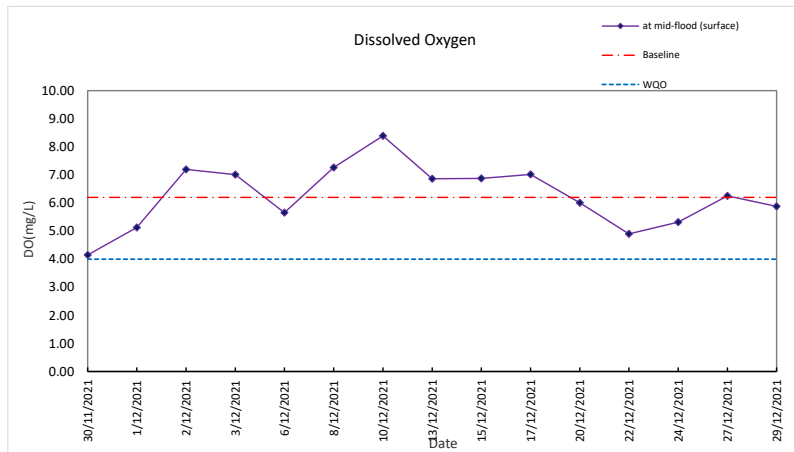


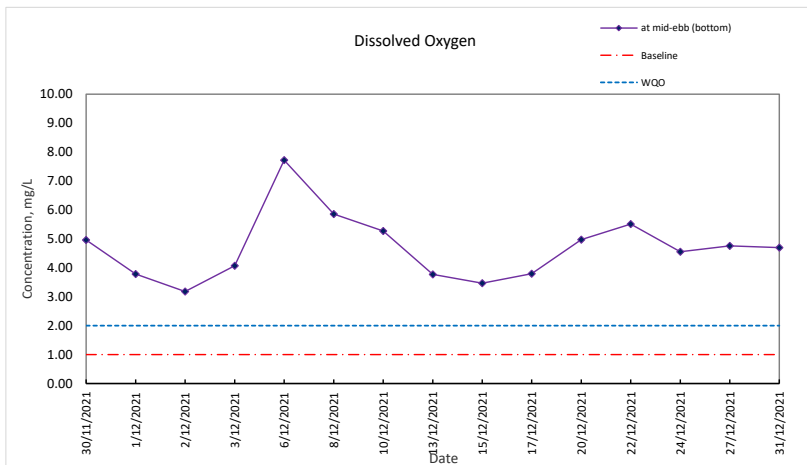
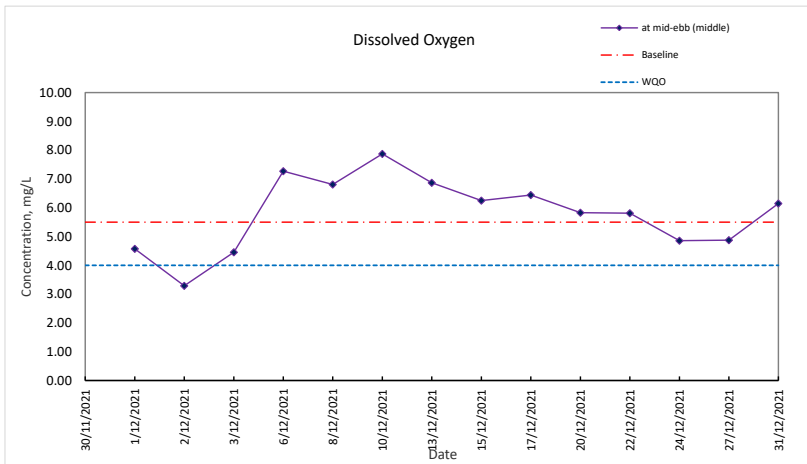
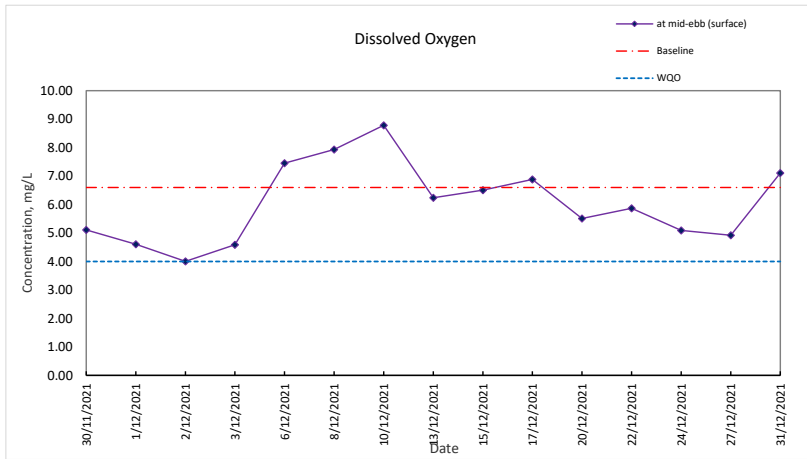


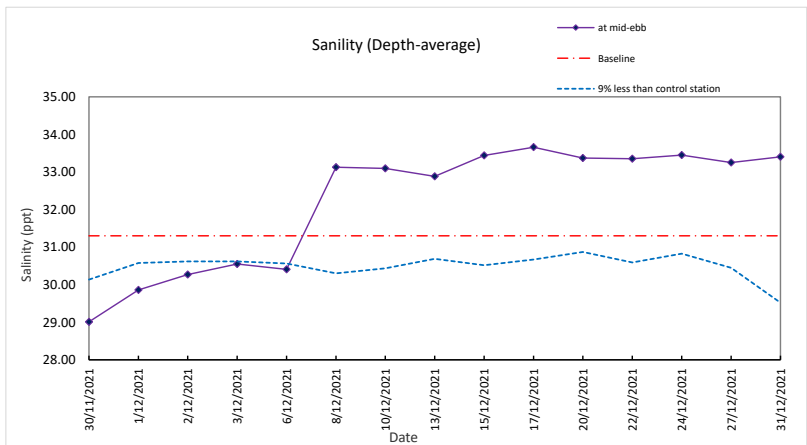
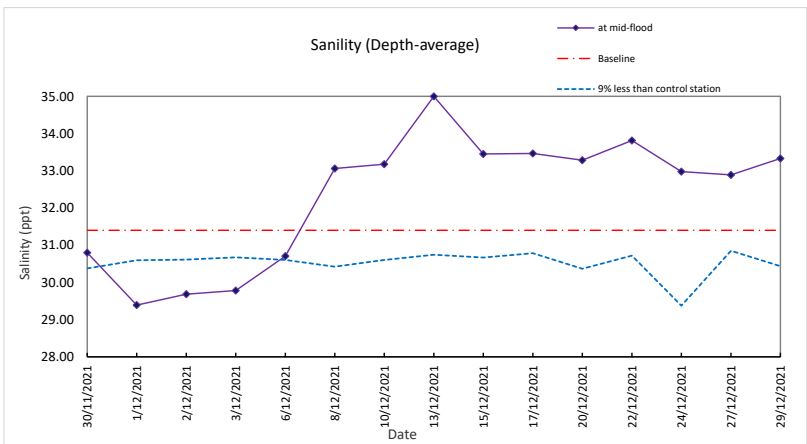
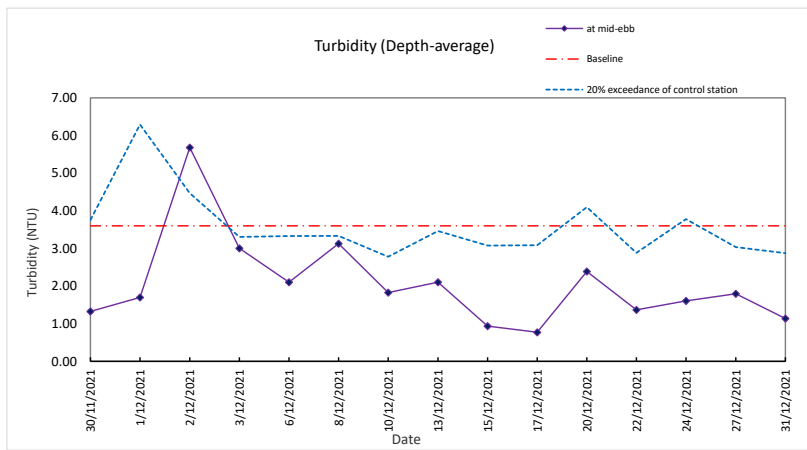
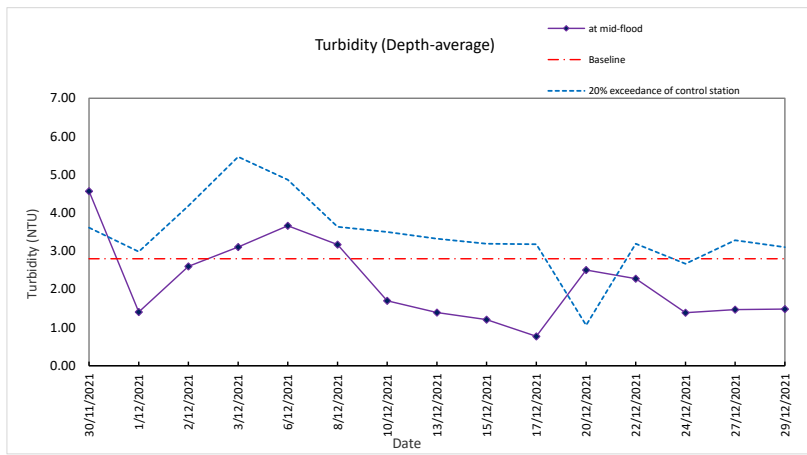


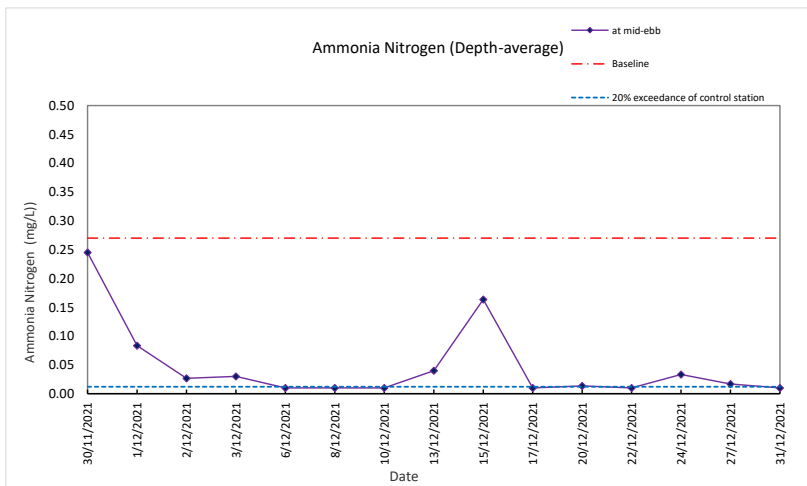
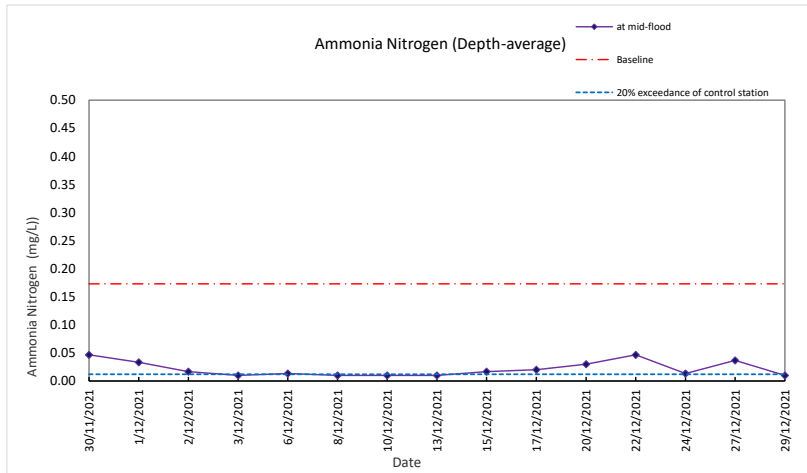
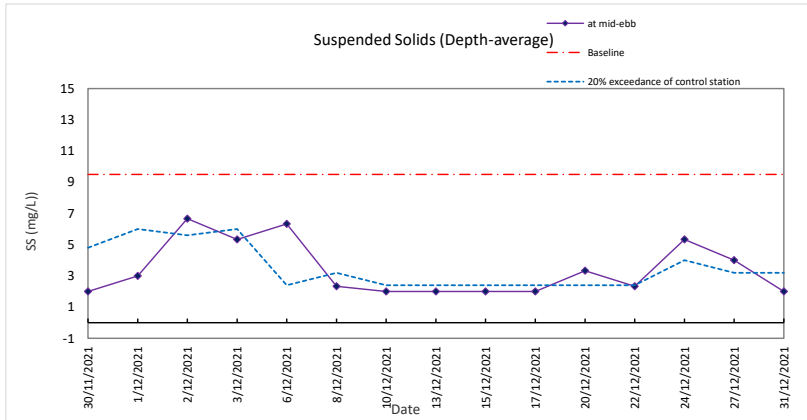
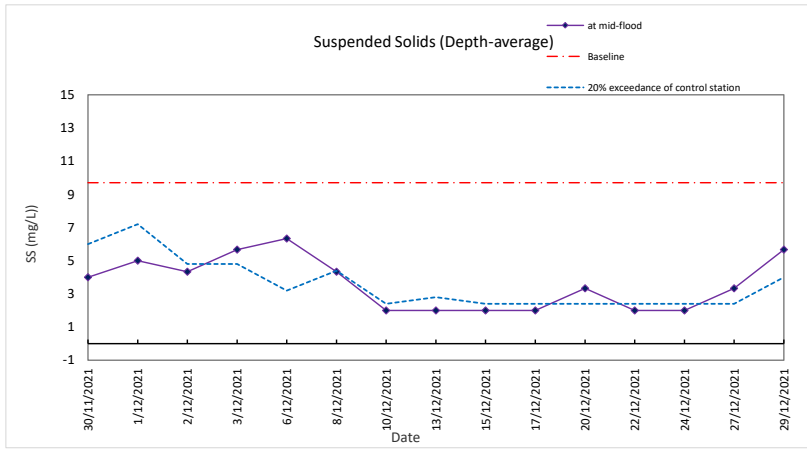


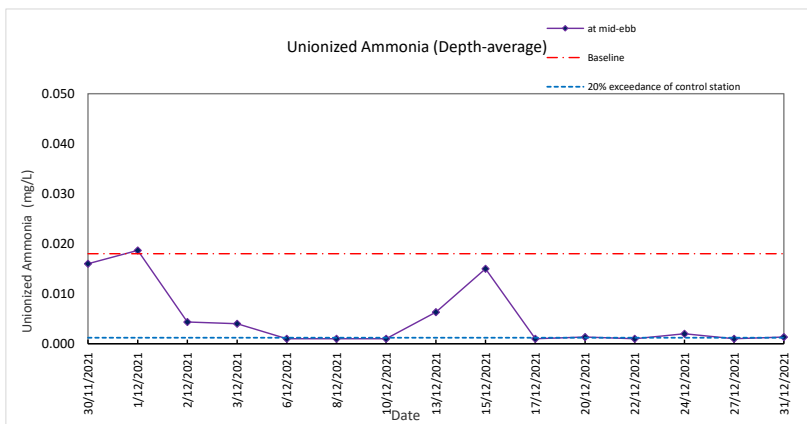
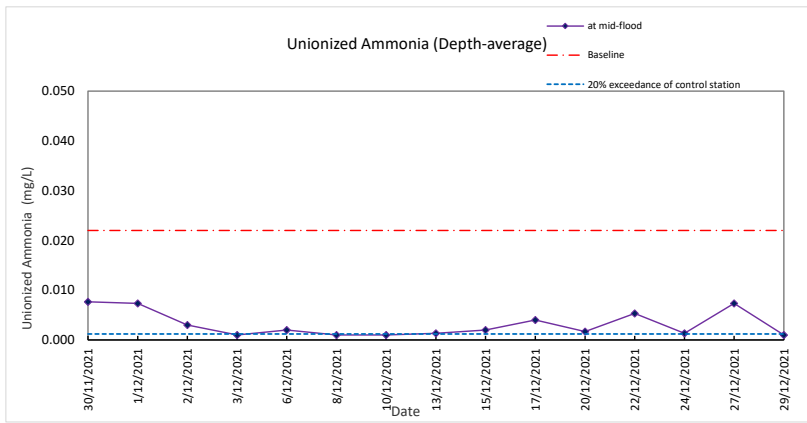
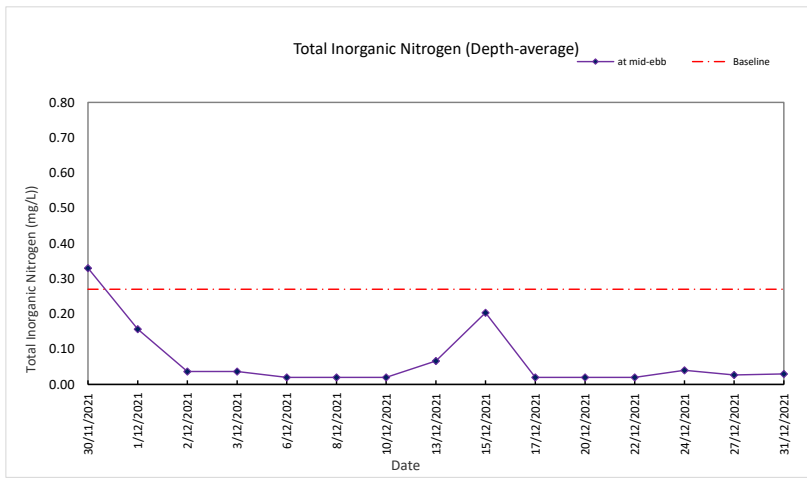
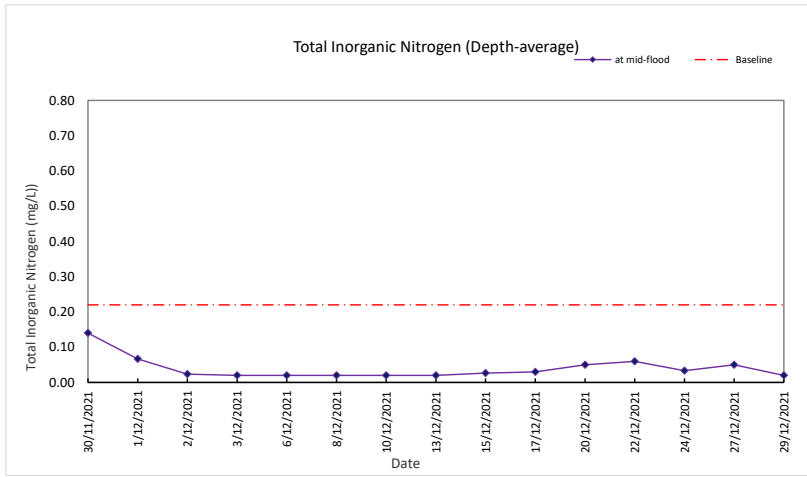
Graphic Presentation of Water Quality Result of
CR1 -Corals at Tai Po Industrial Estate

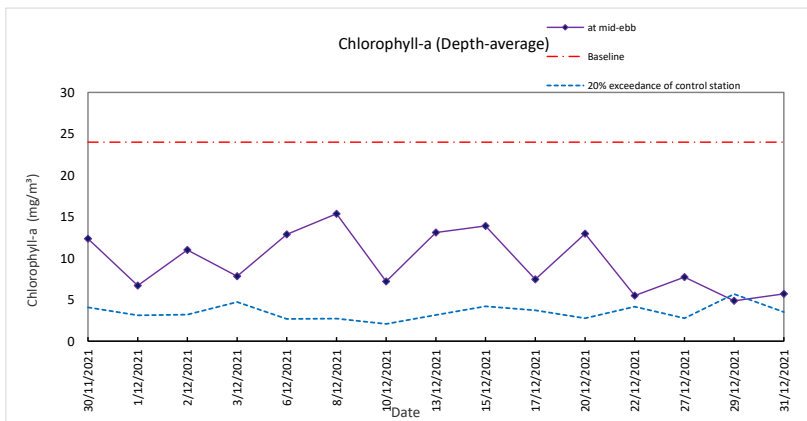
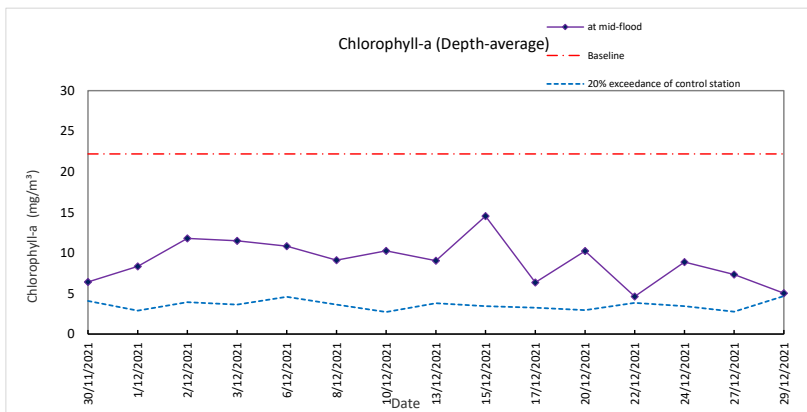
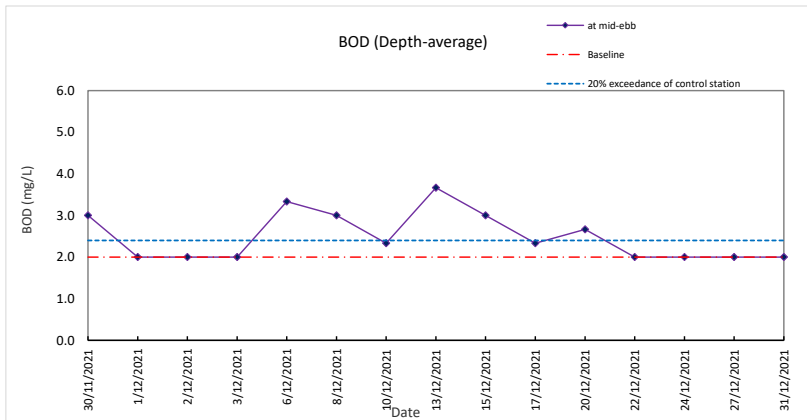
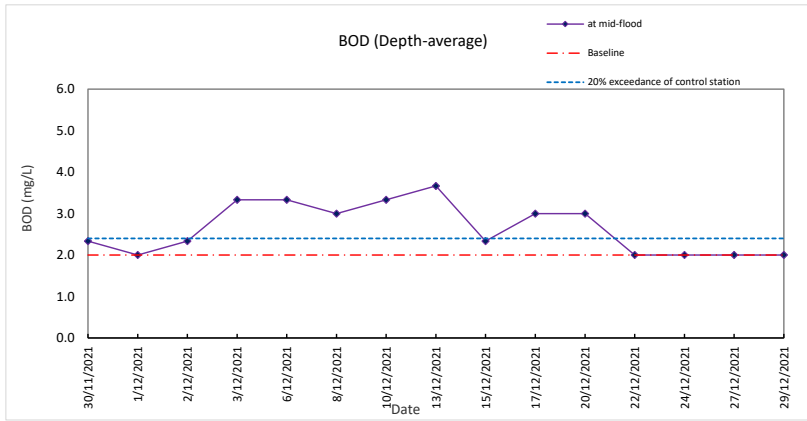


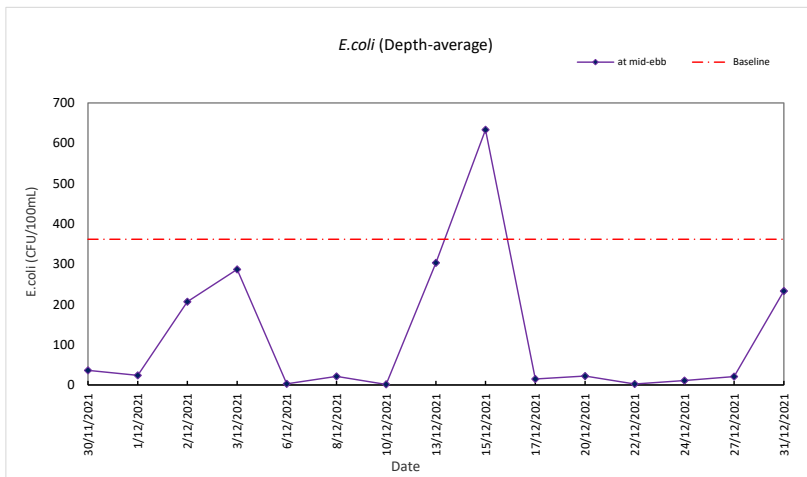
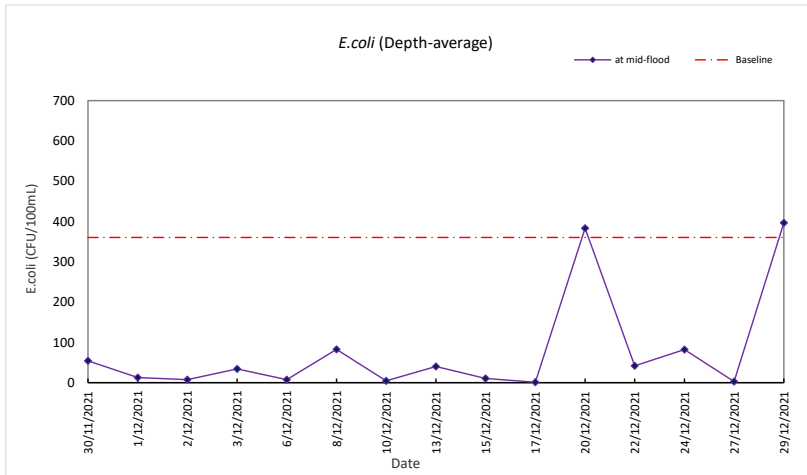






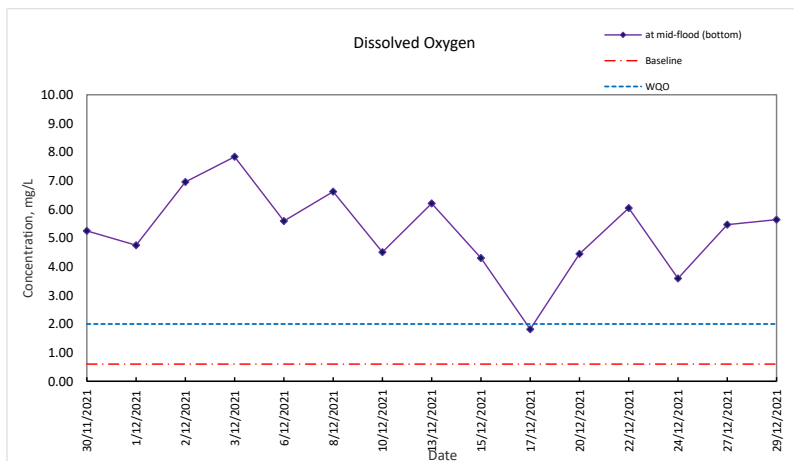
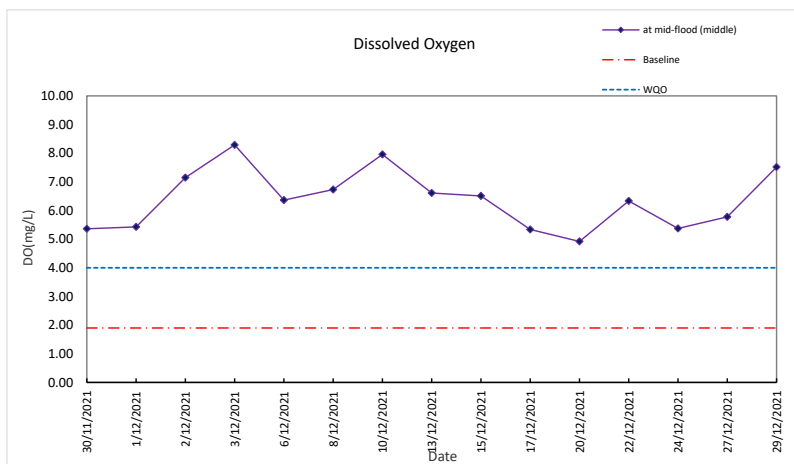
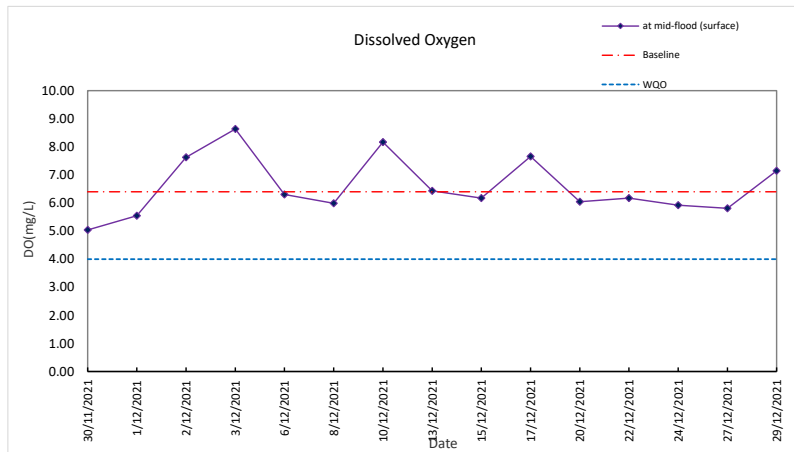


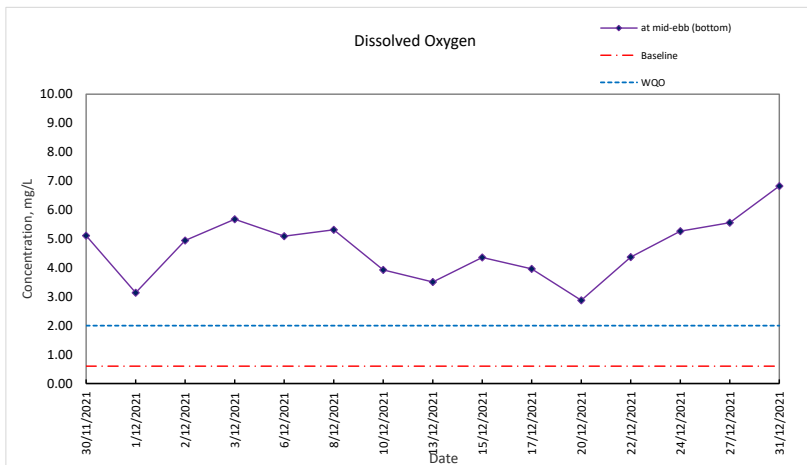
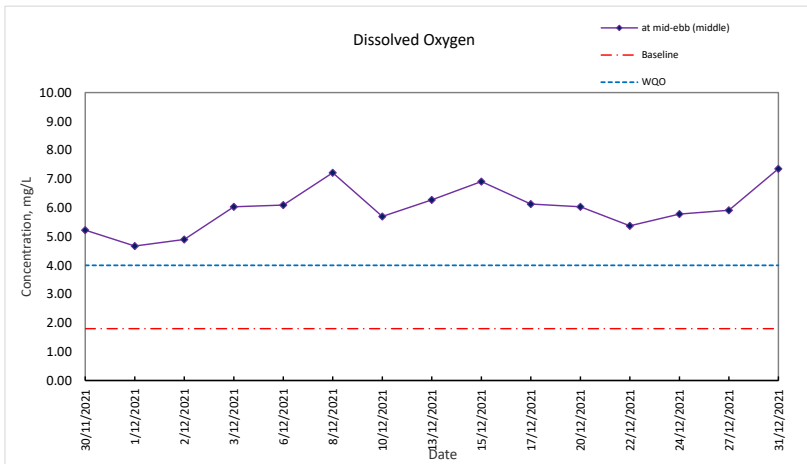
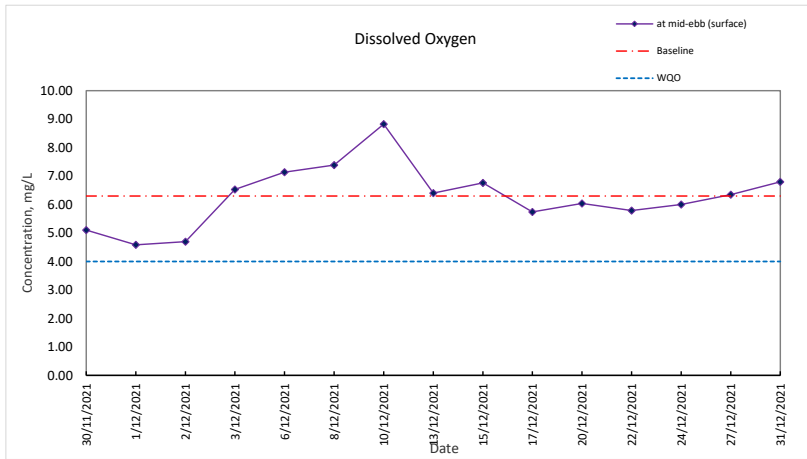


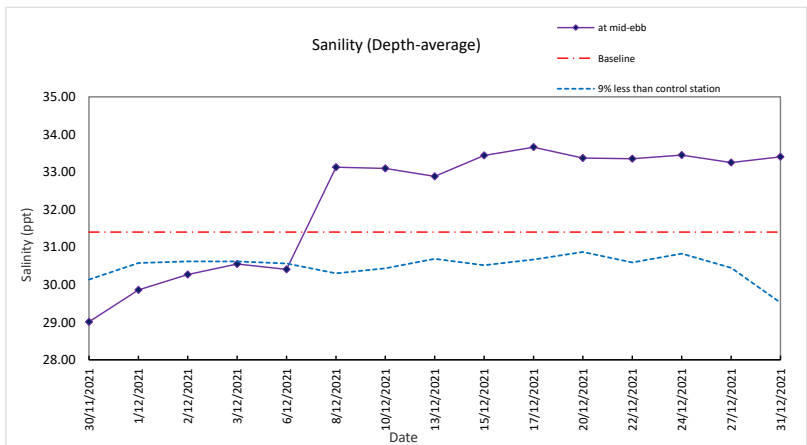
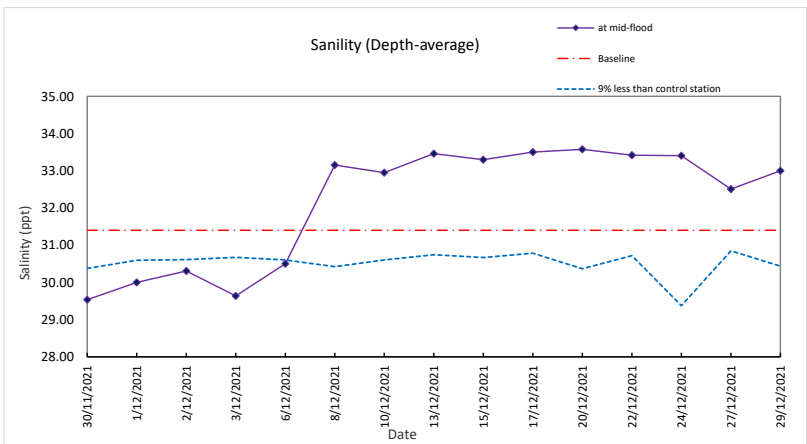
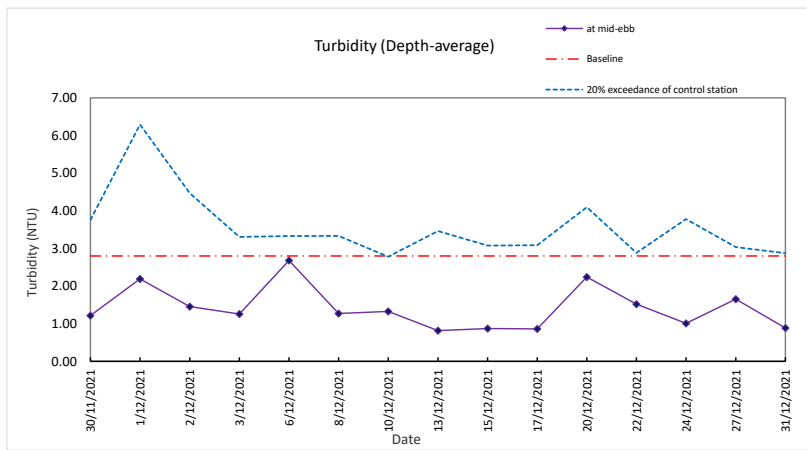
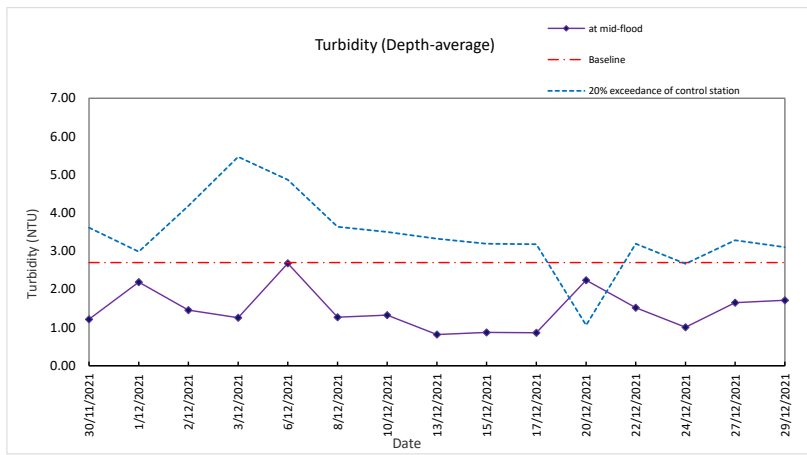


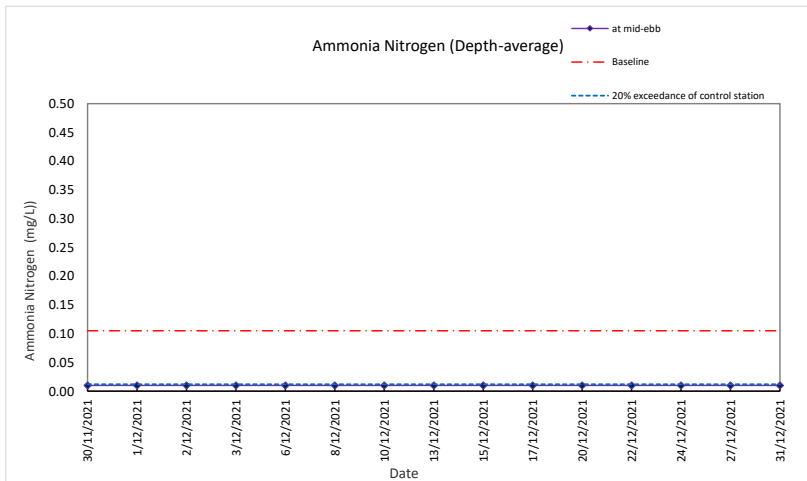
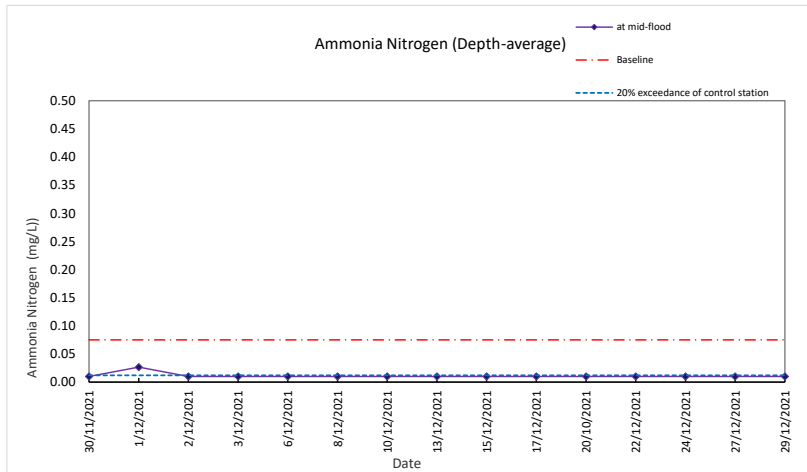
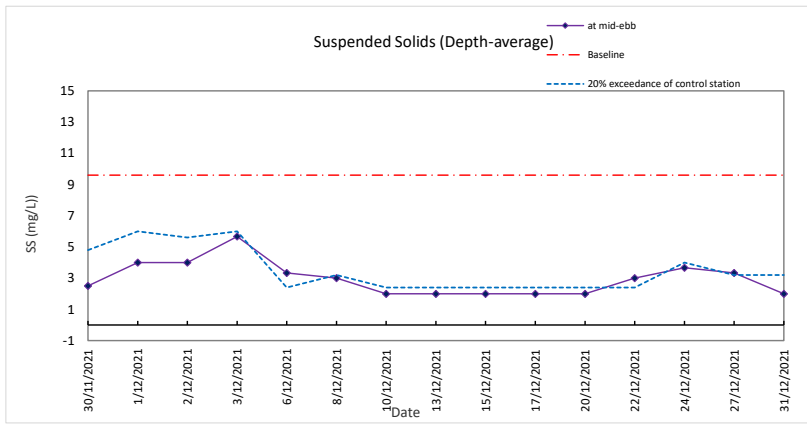
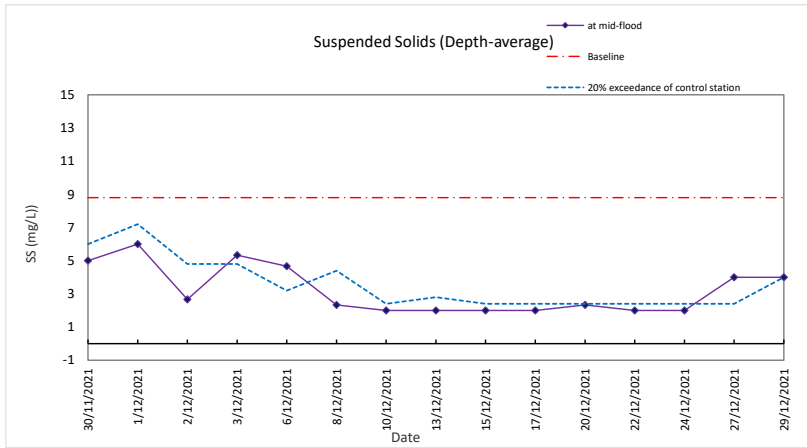


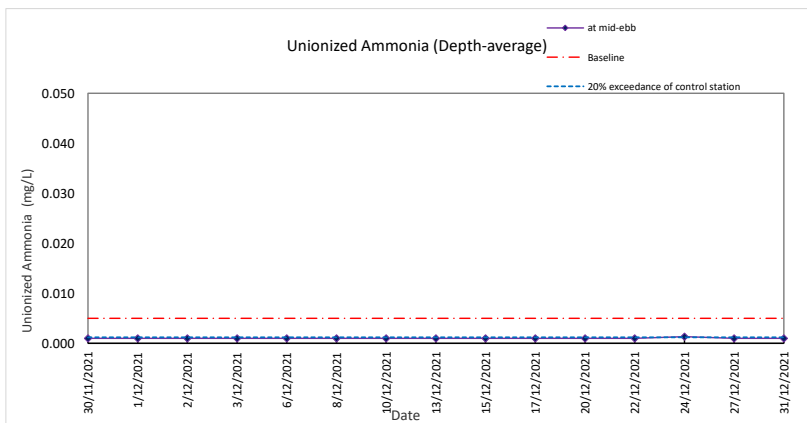
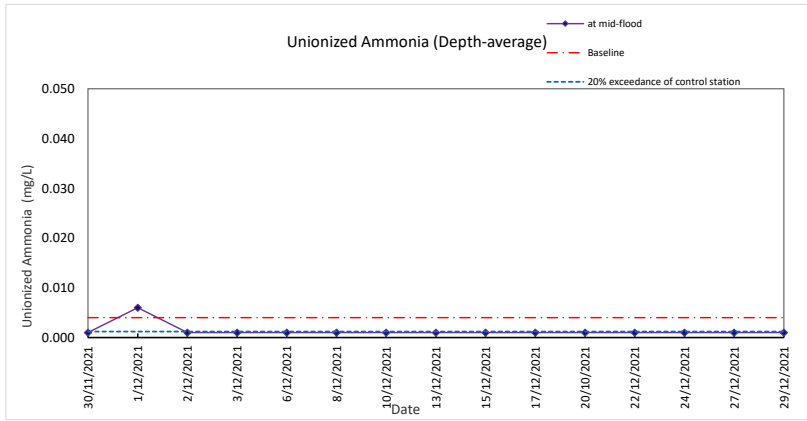
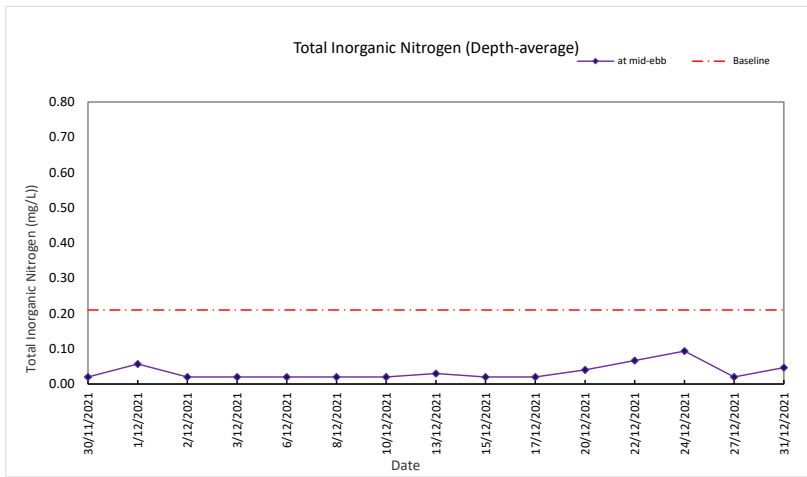
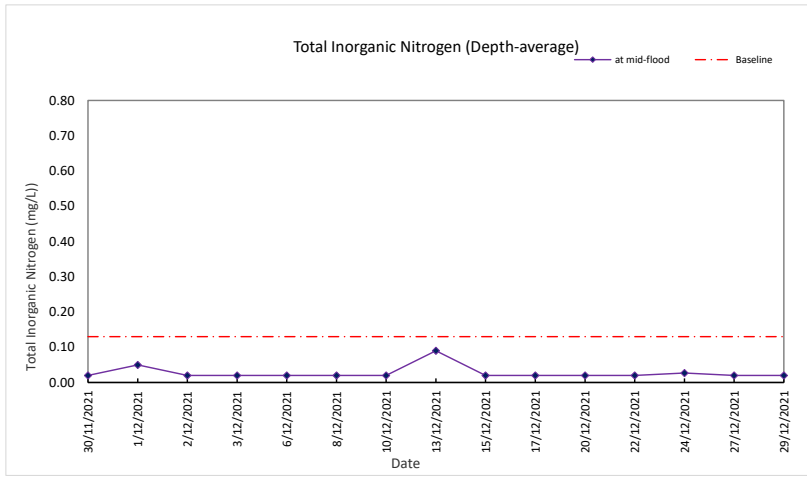
Graphic Presentation of Water Quality Result of CR15 -Corals at Science Park

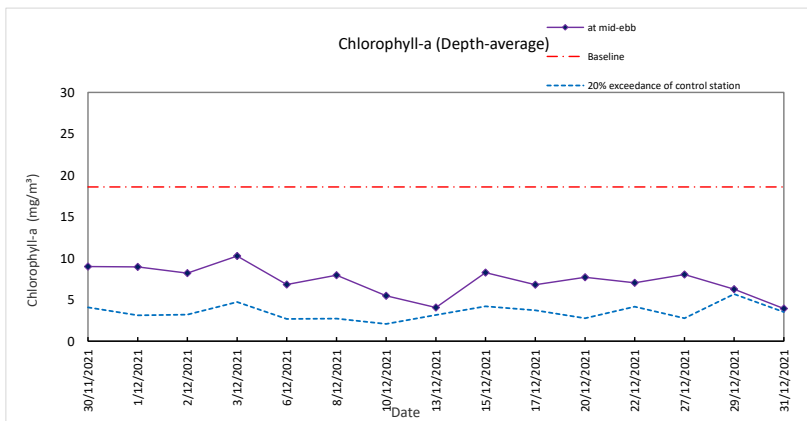
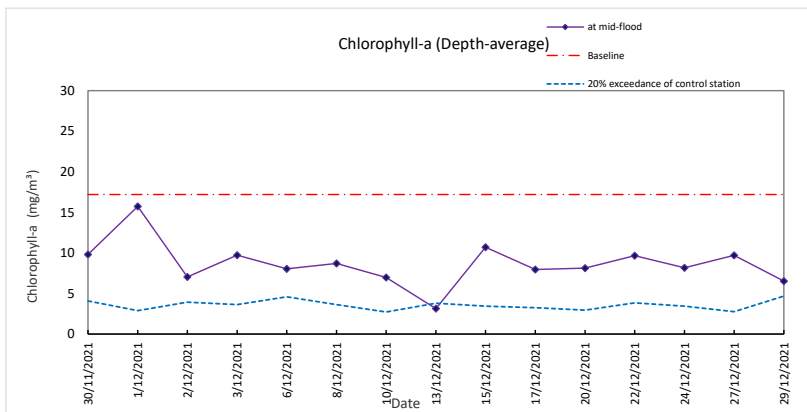
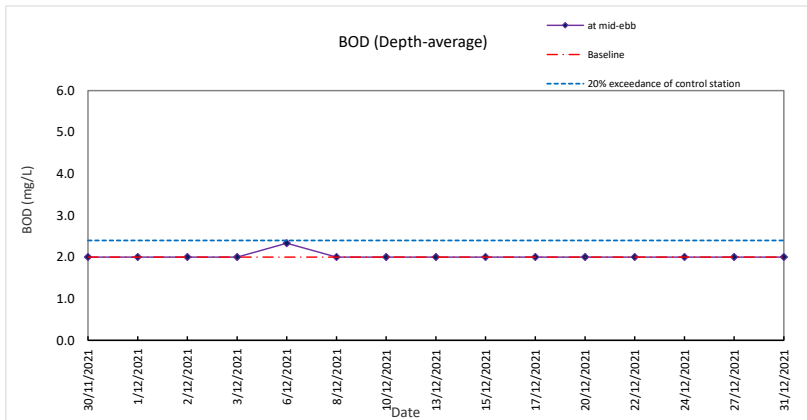
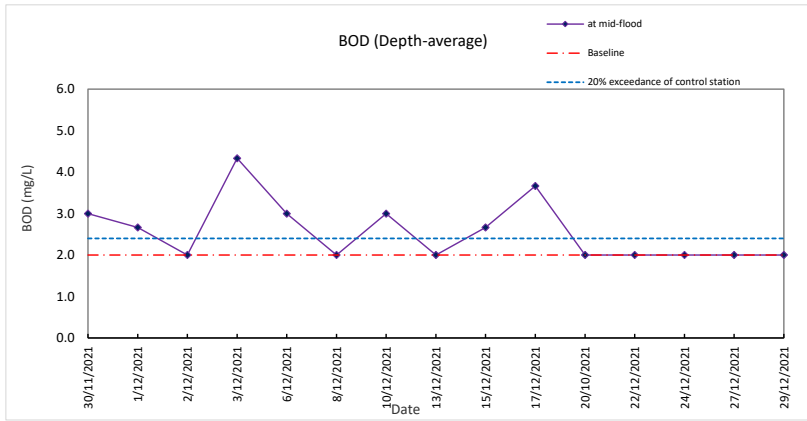


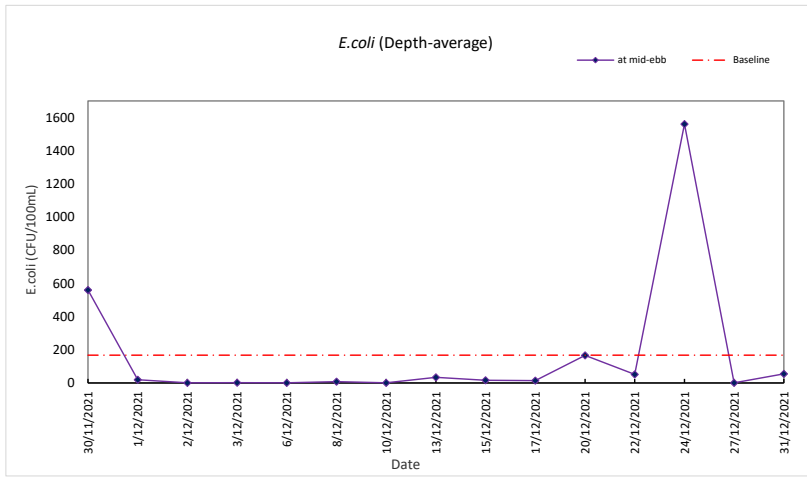
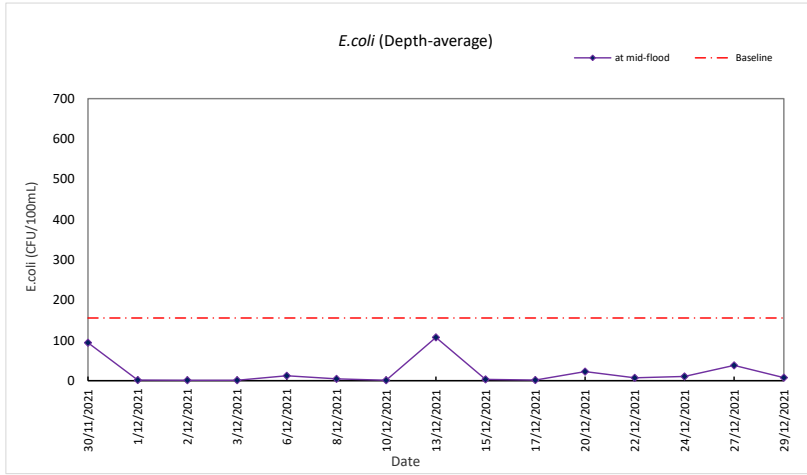






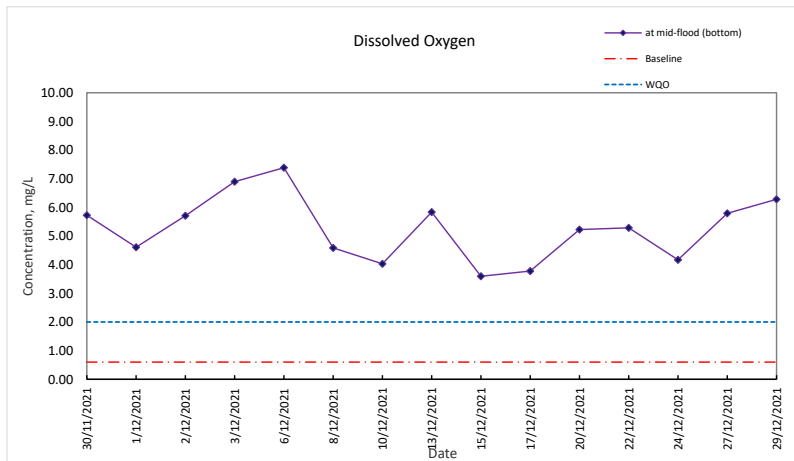
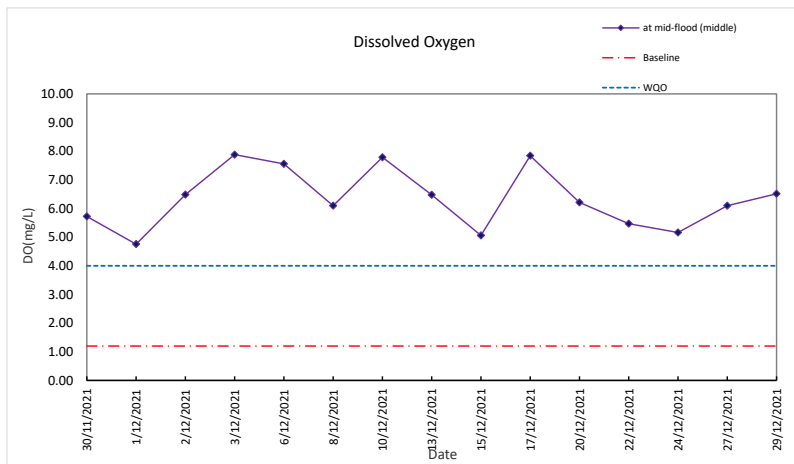
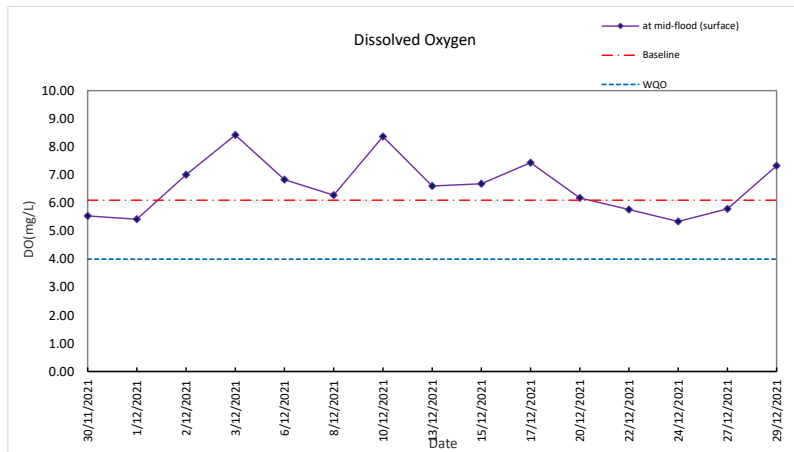


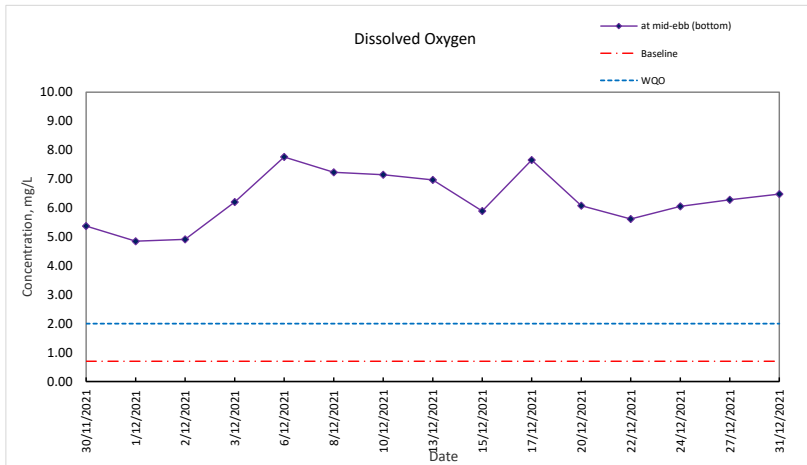
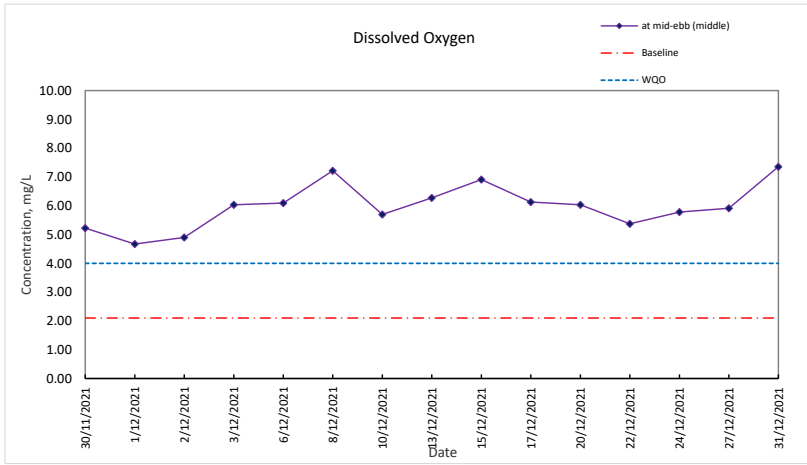
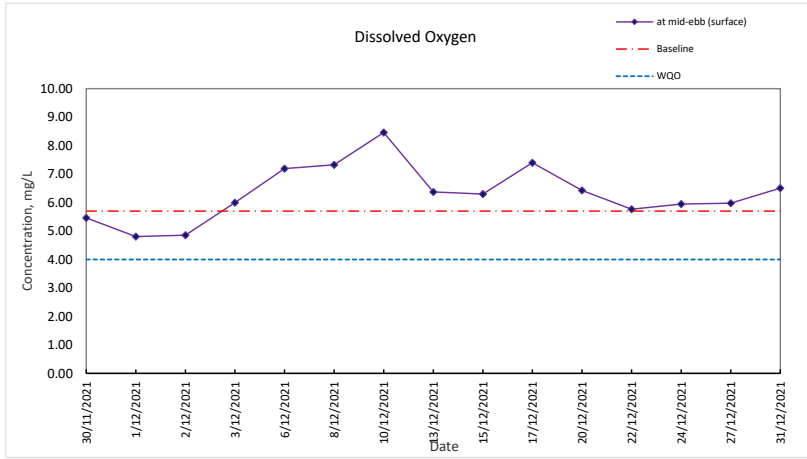


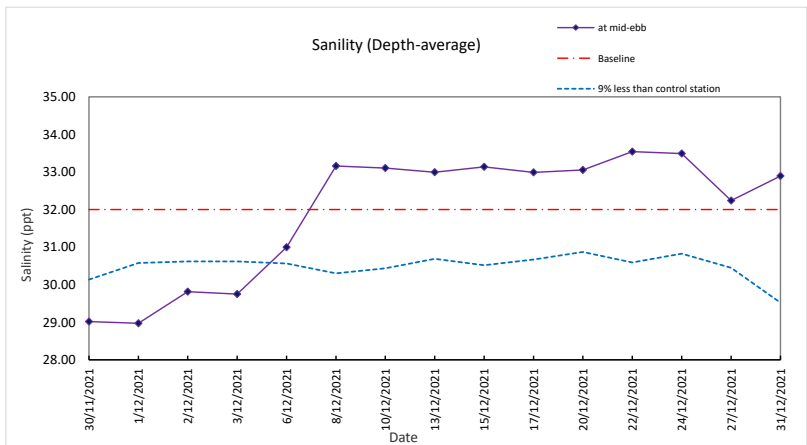
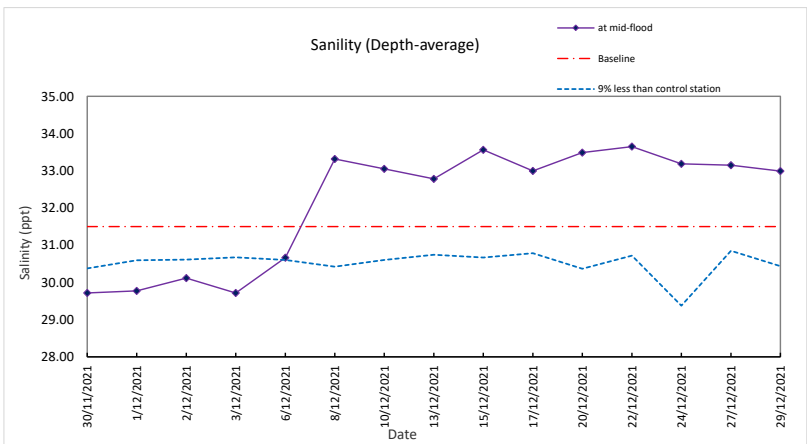
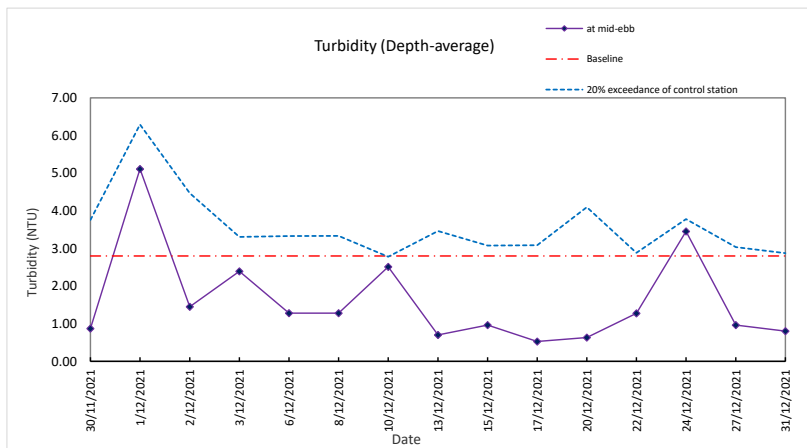
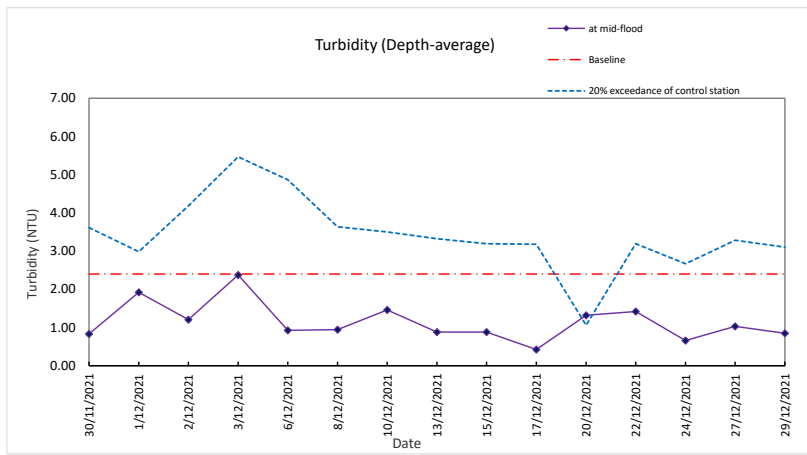


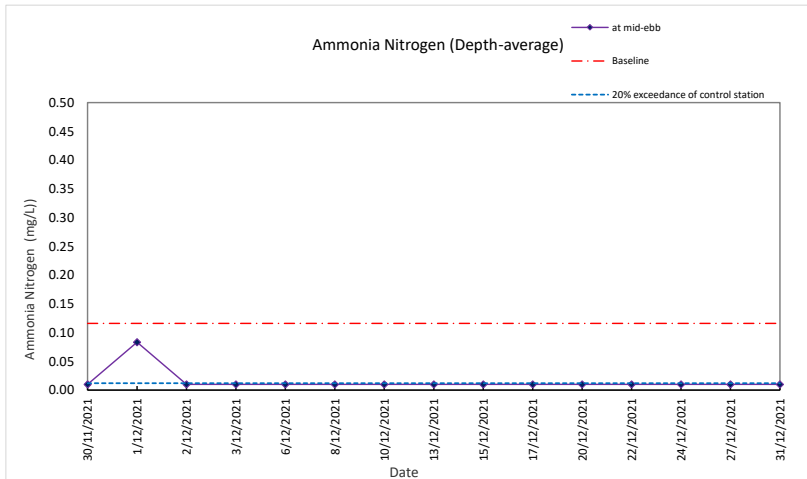
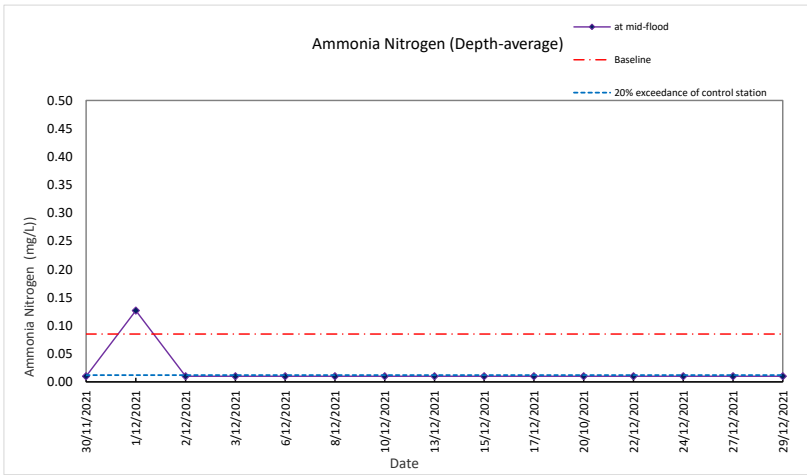
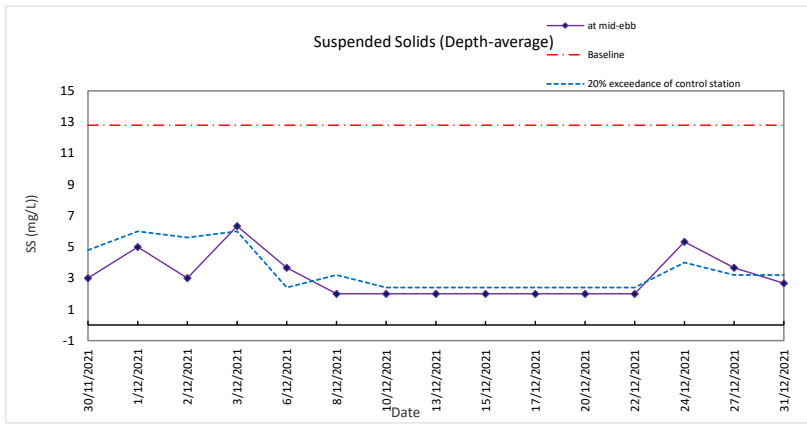
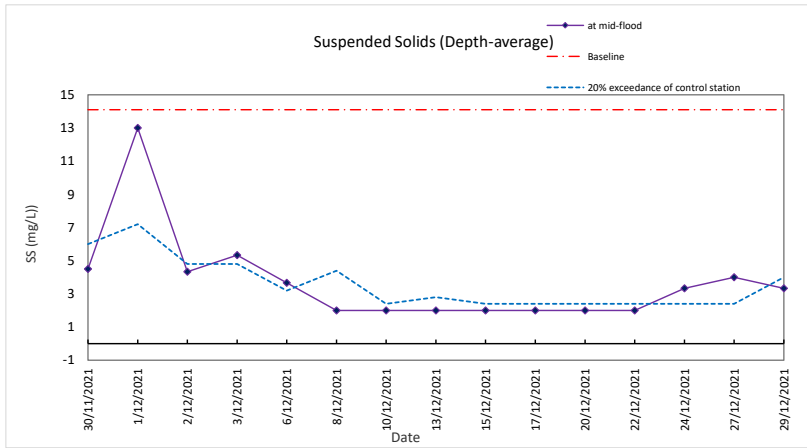


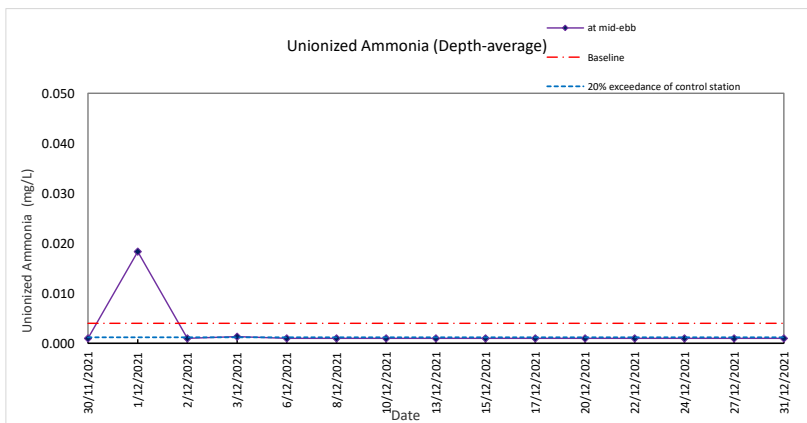
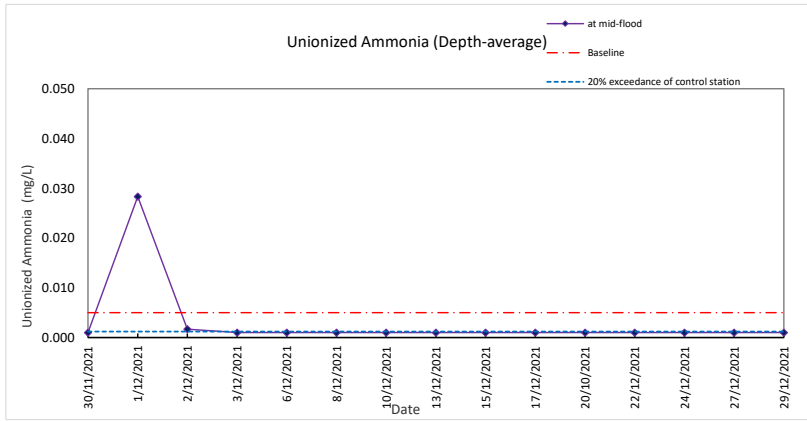
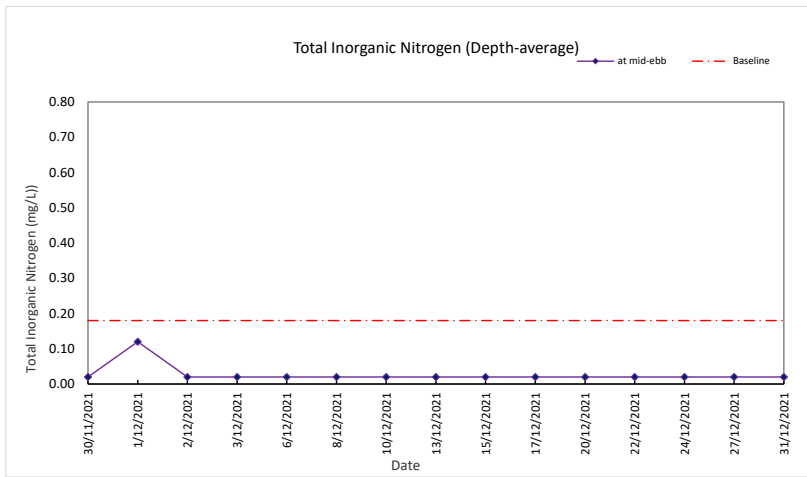
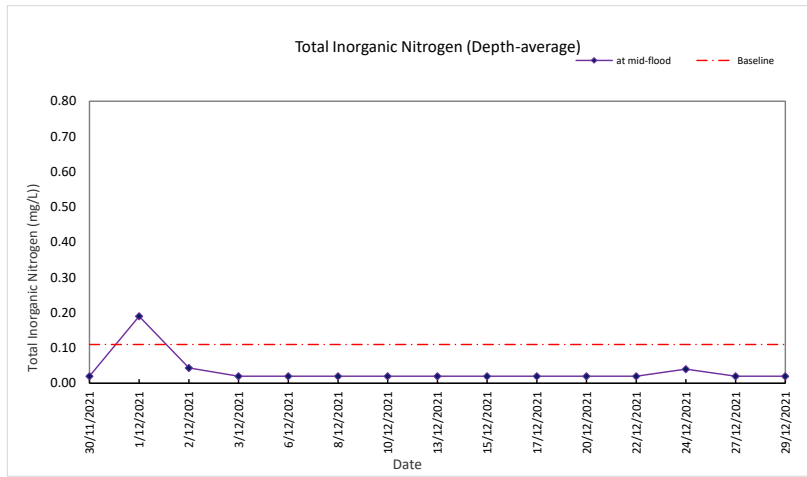
Graphic Presentation of Water Quality Result of
CR16 -Corals at Sha Tin Hoi North

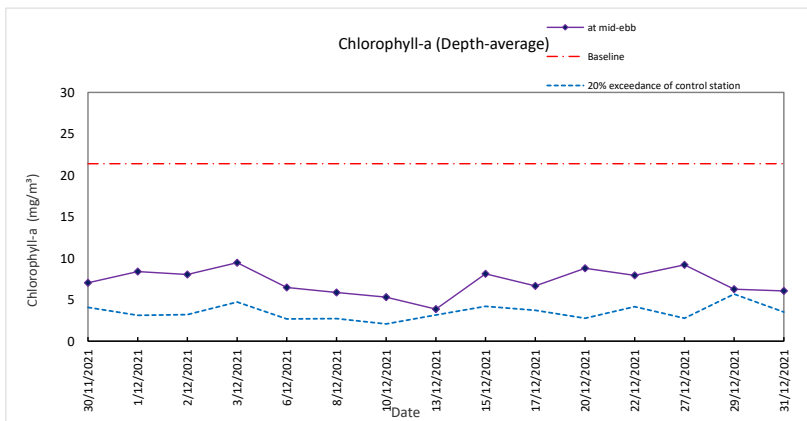
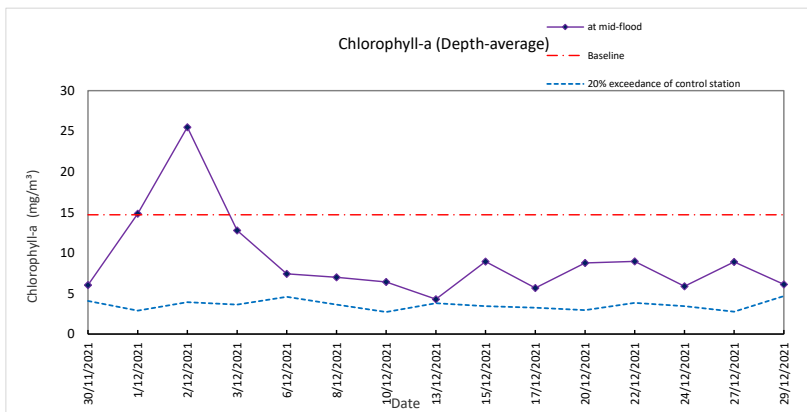
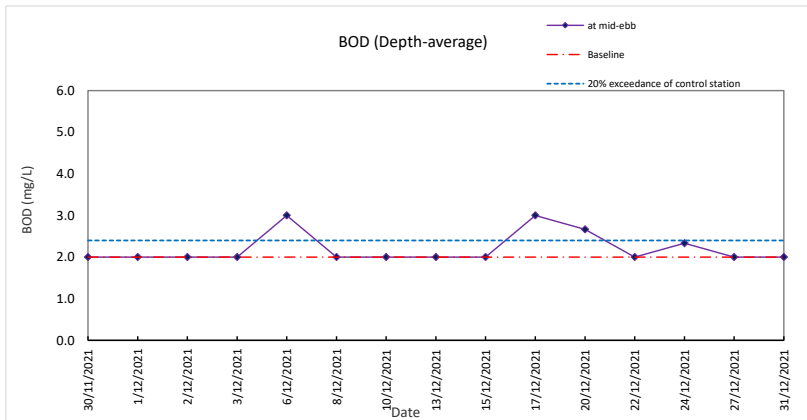
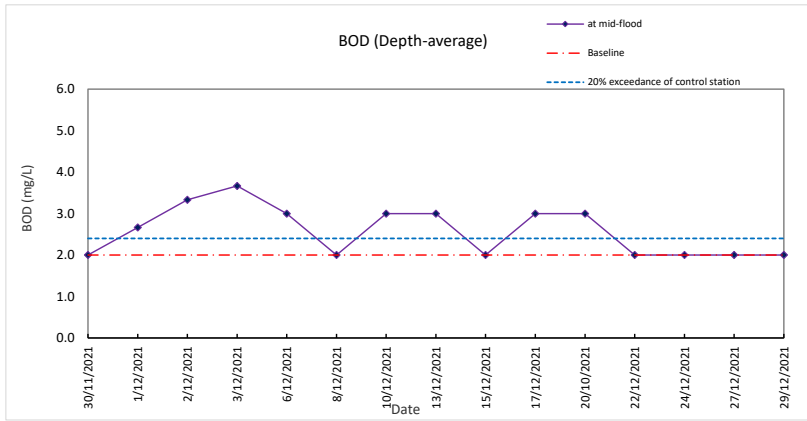


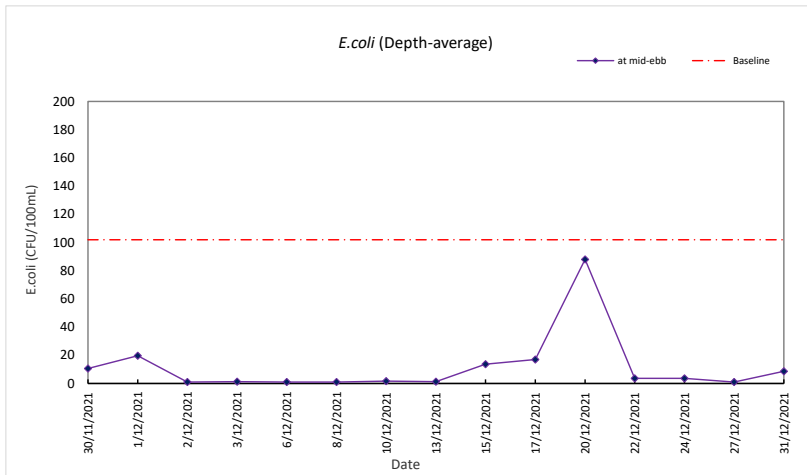
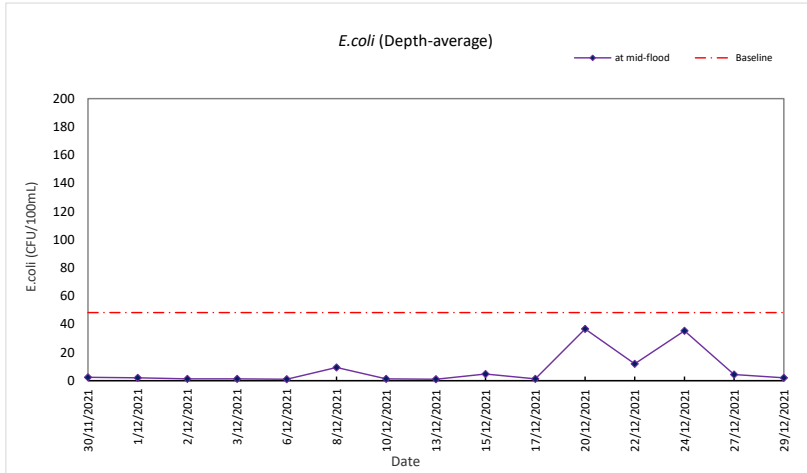






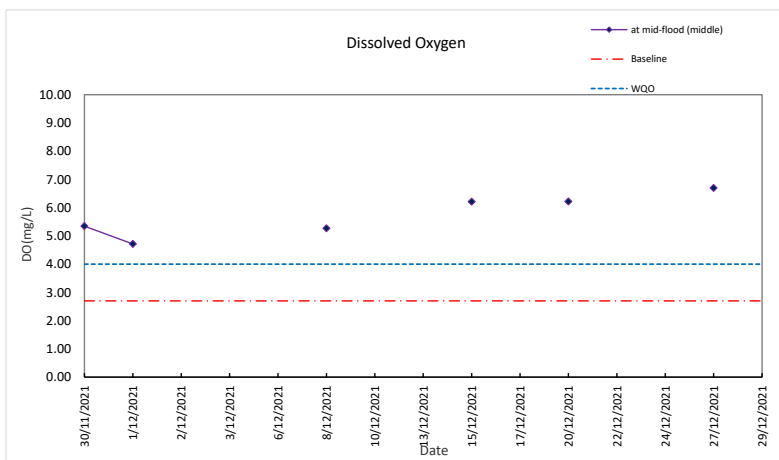
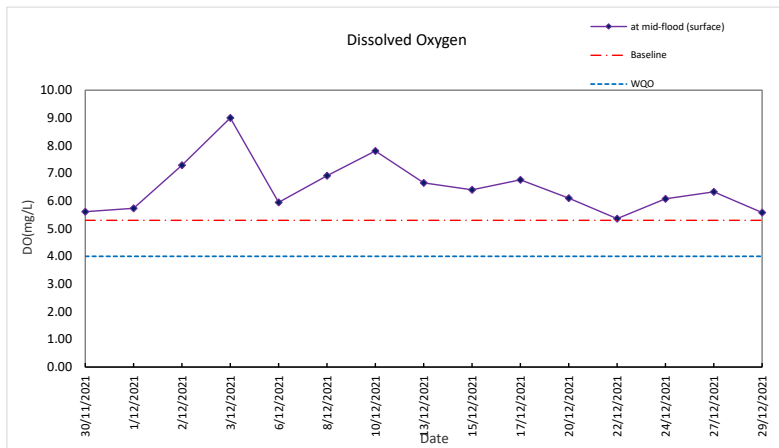




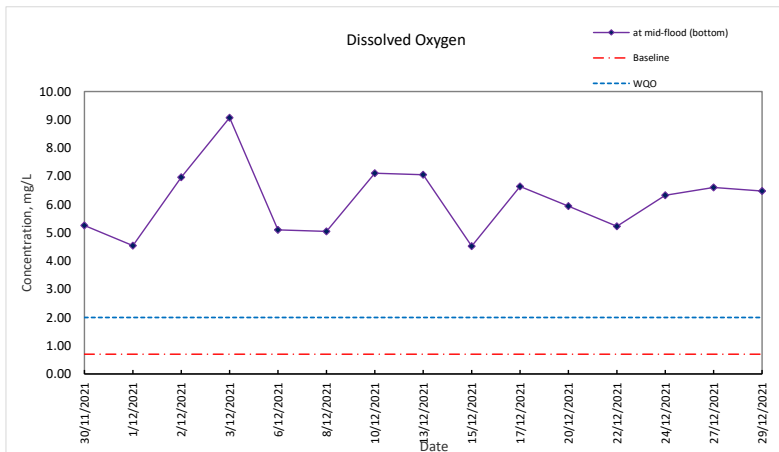


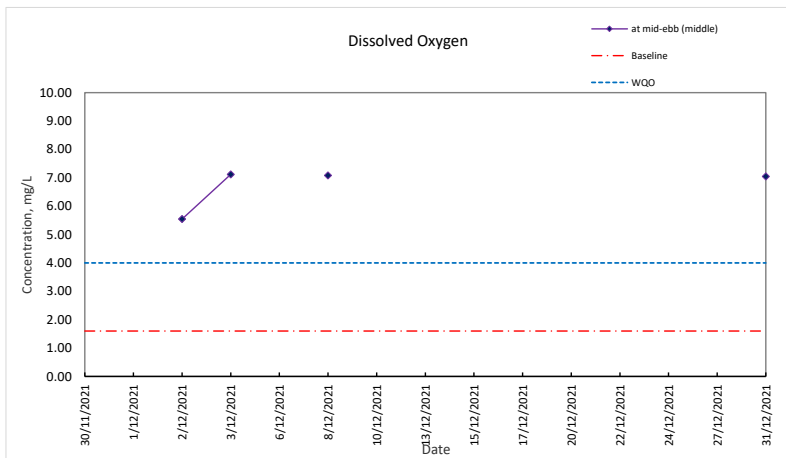
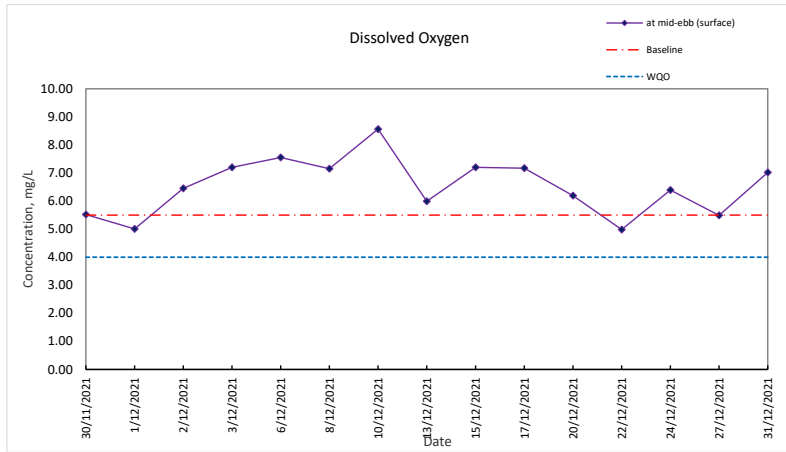


Graphic Presentation of Water Quality Result of CR17 -Corals at Sha Tin Hoi South

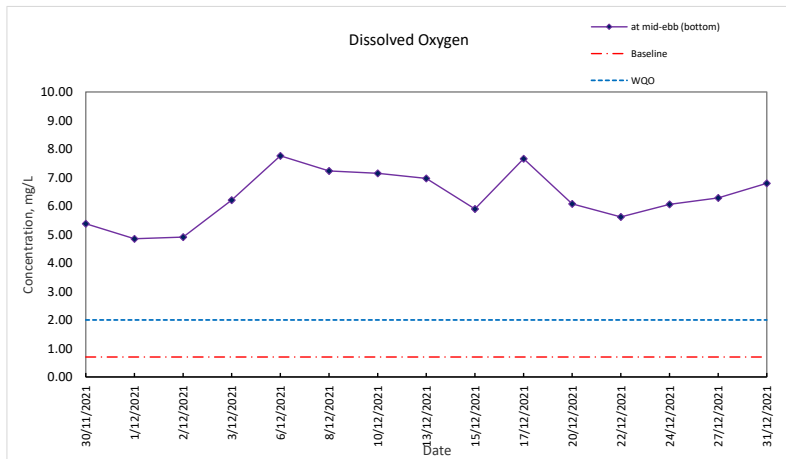


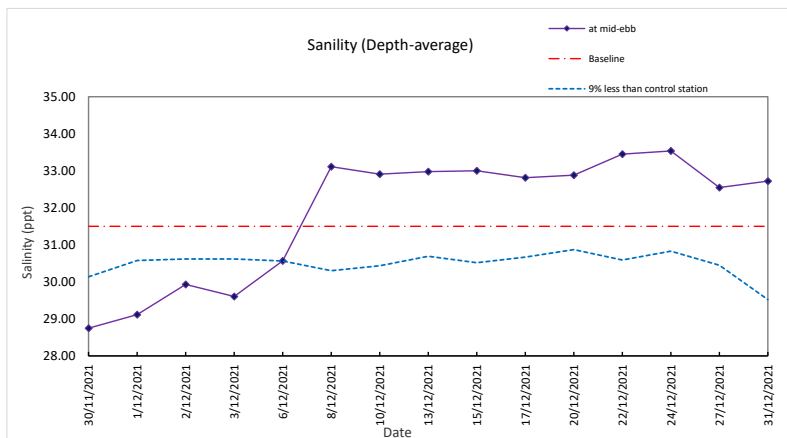
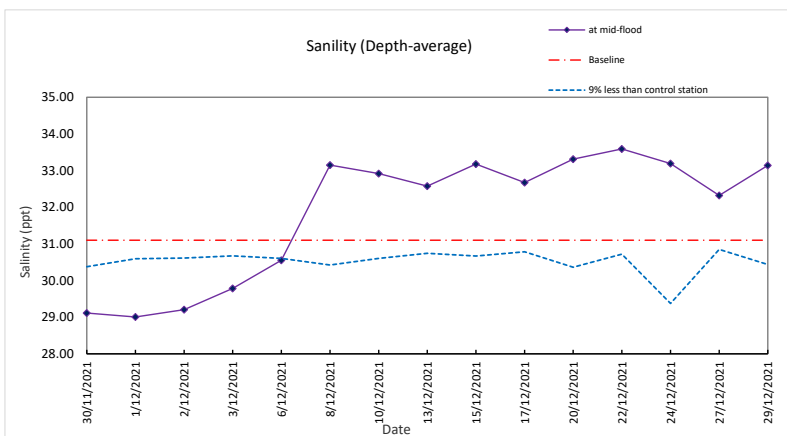
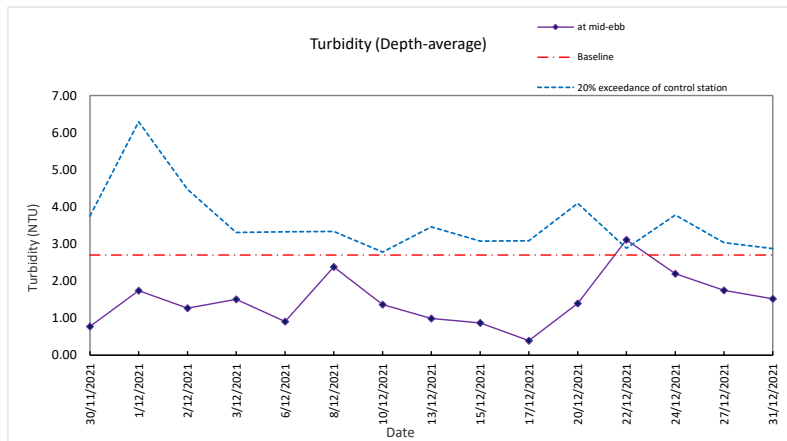
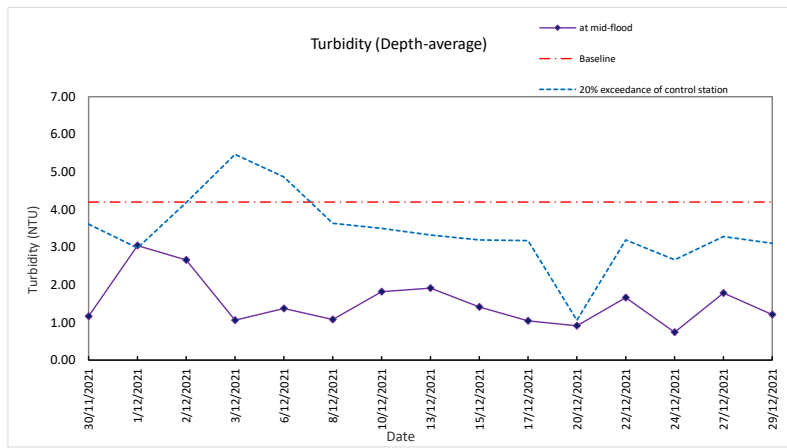
Note: No sample was taken on some dates as sampling depth is <5m

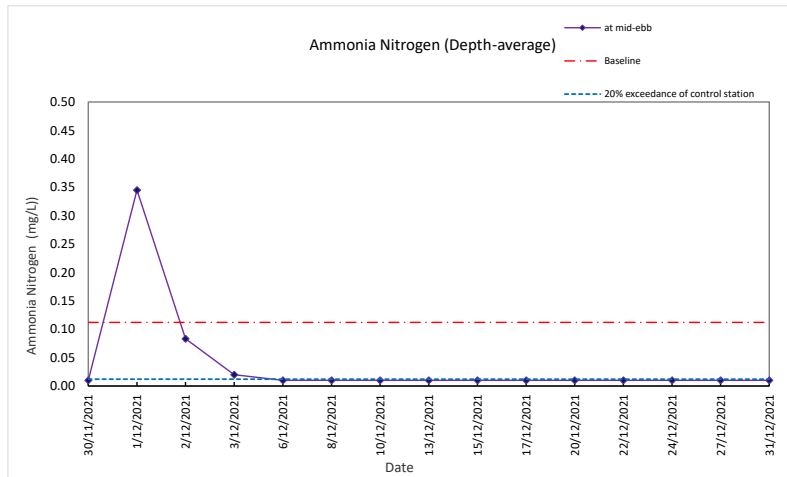
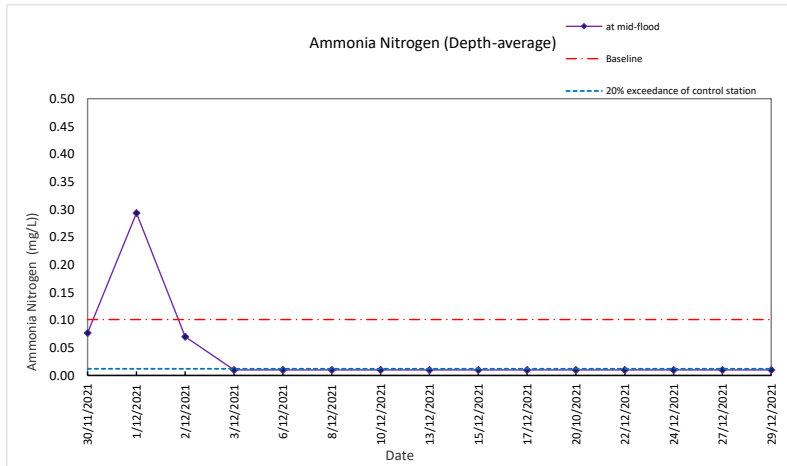
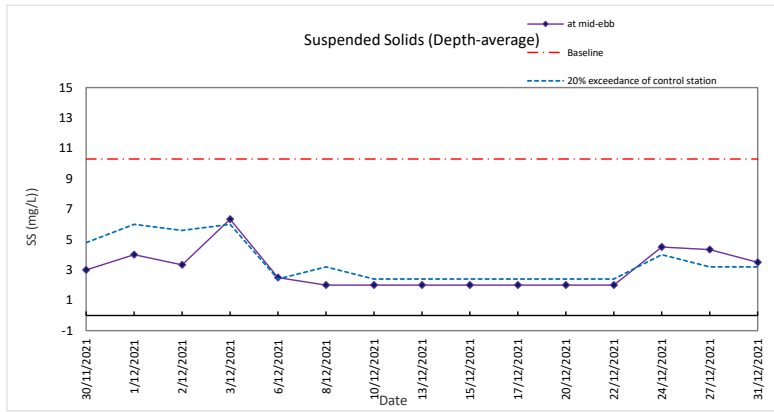
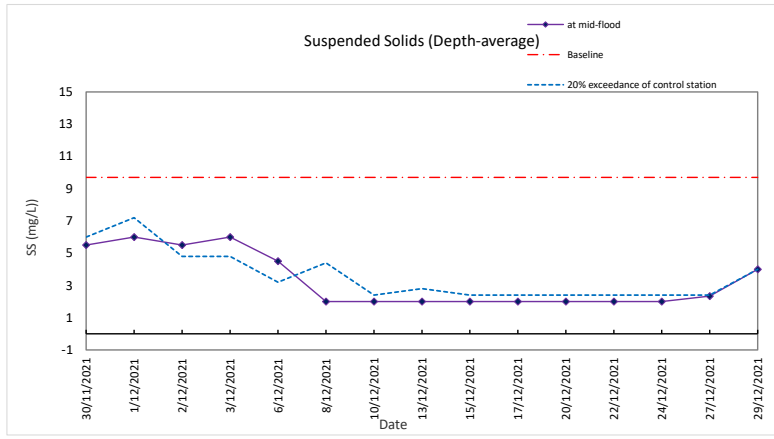


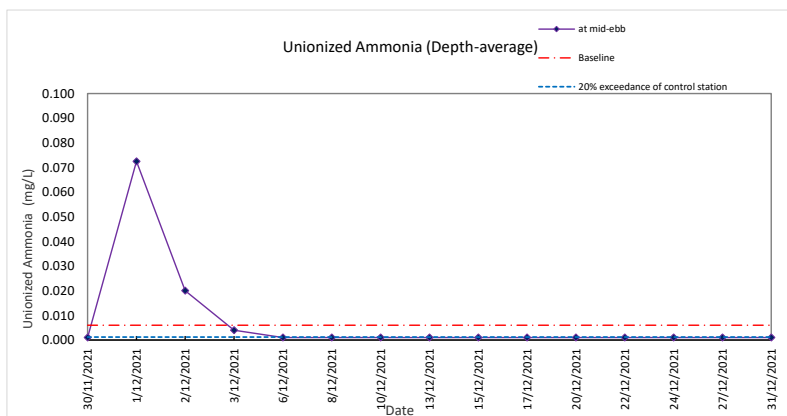
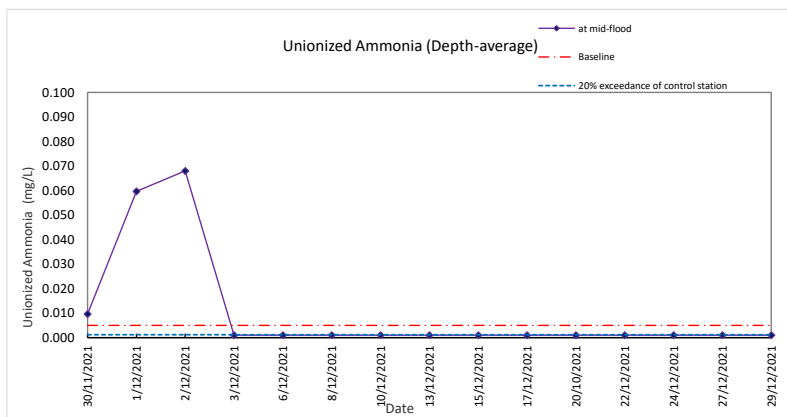
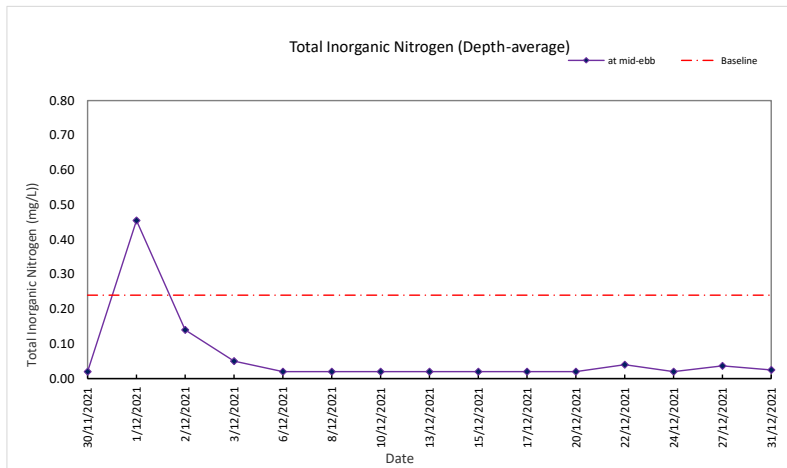
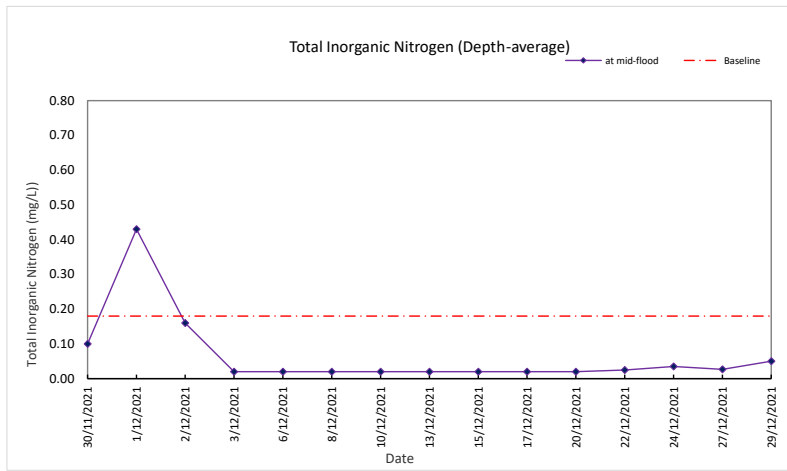


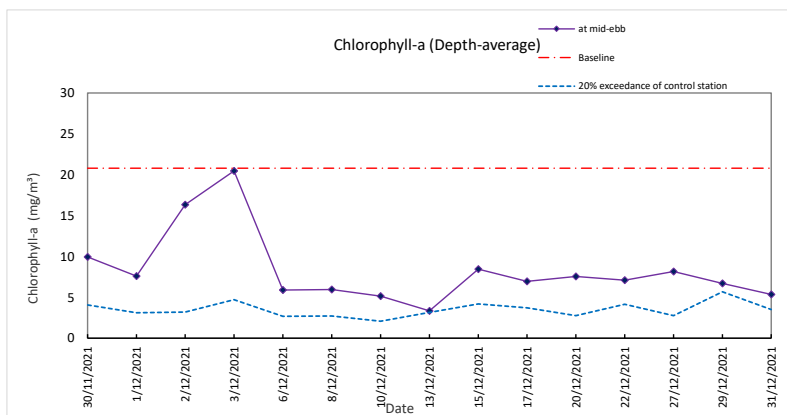
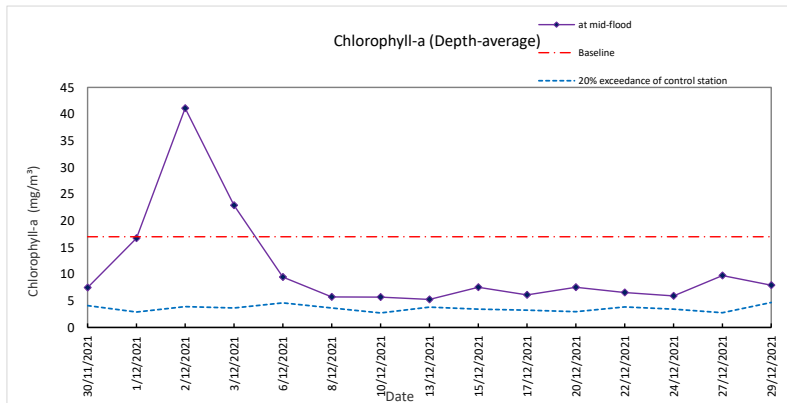
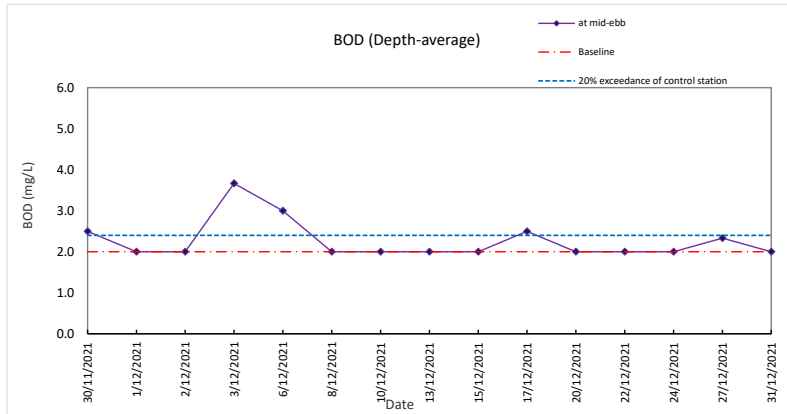
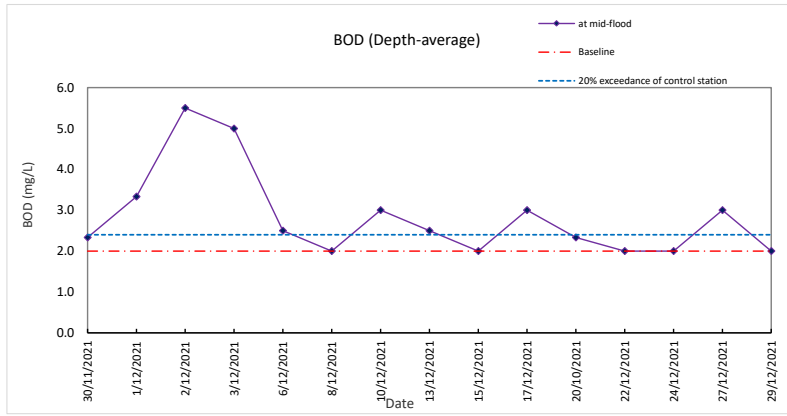
Note: No sample was taken on some dates as sampling depth is <5m

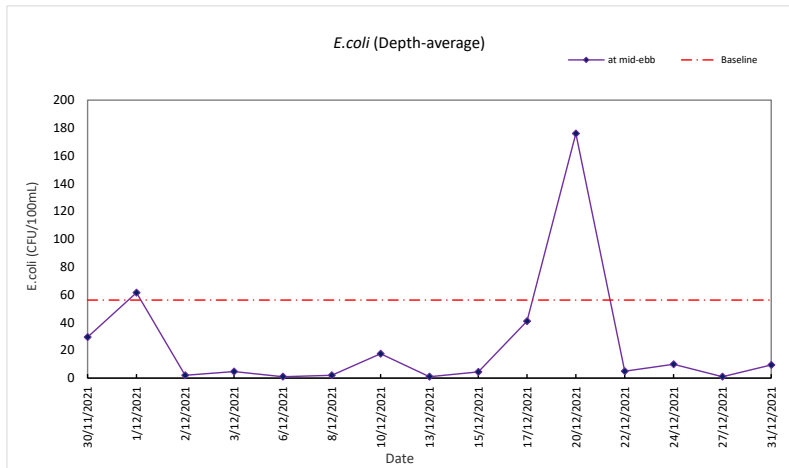
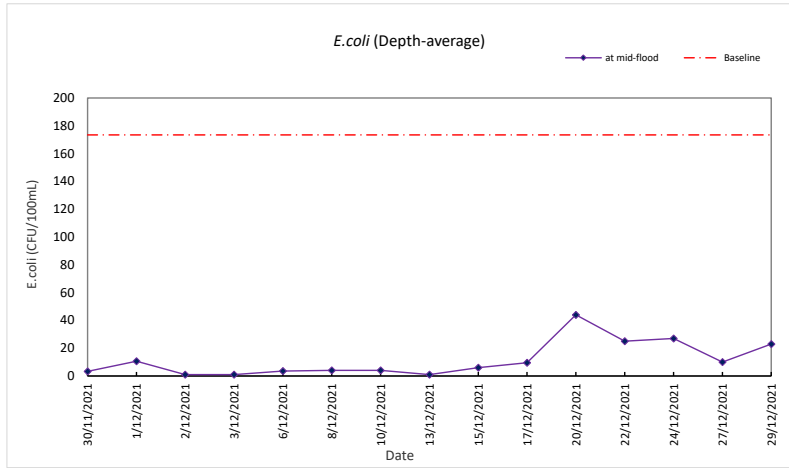






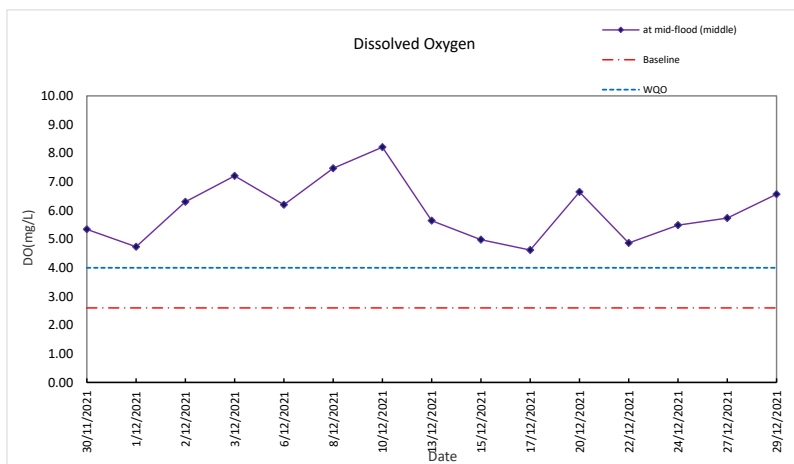
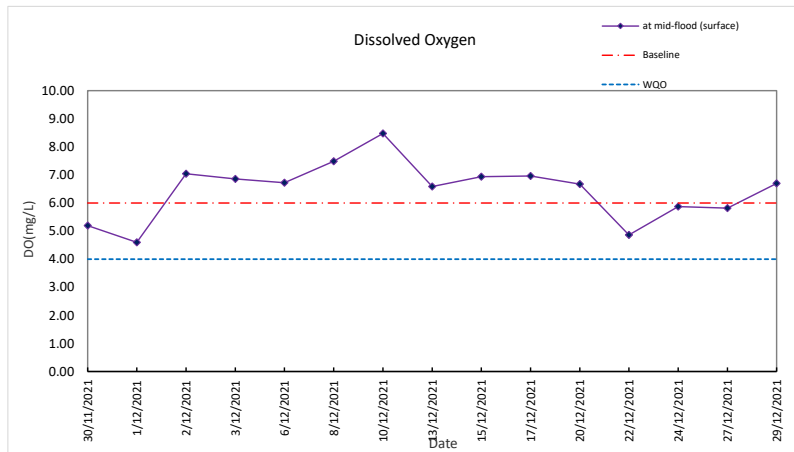




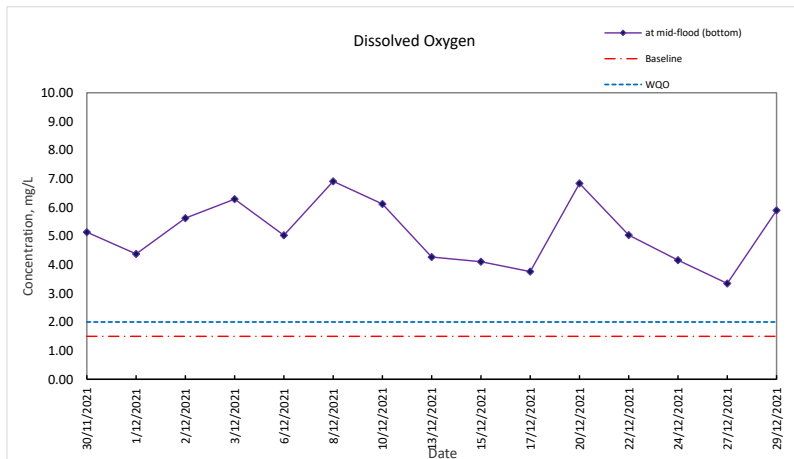


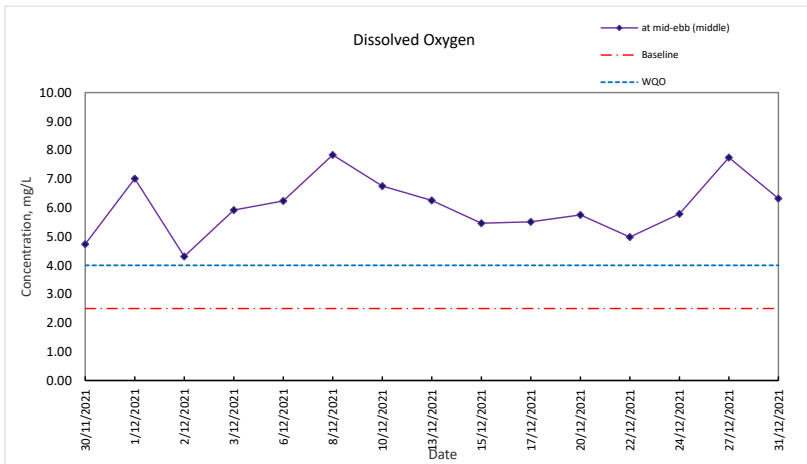
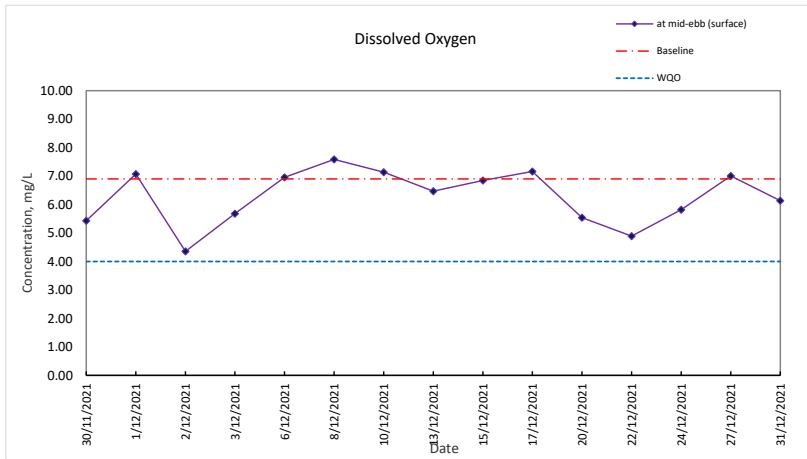


Graphic Presentation of Water Quality Result of
G1 -Potential Subzone of Yim Tin Tsai Fish Culture Zone / Gradient Station

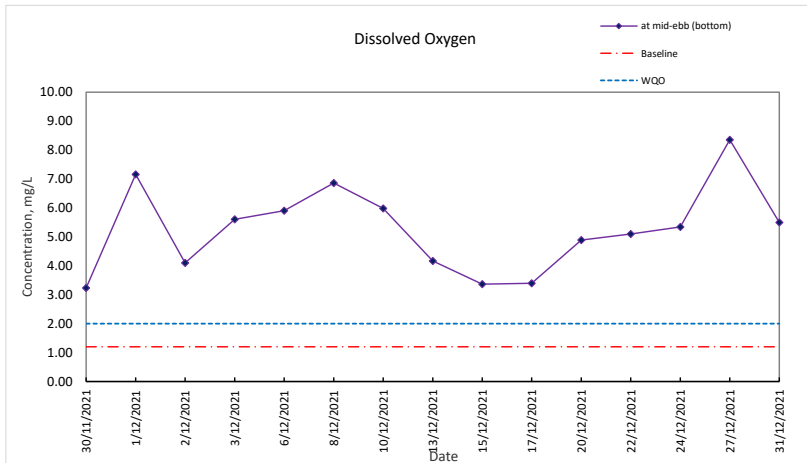


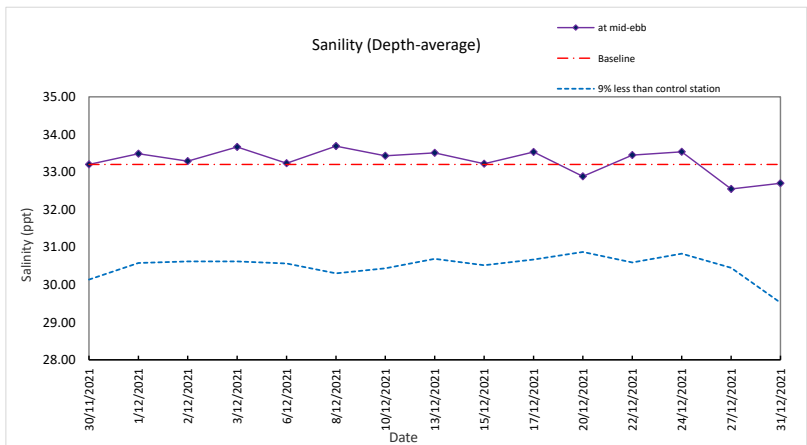
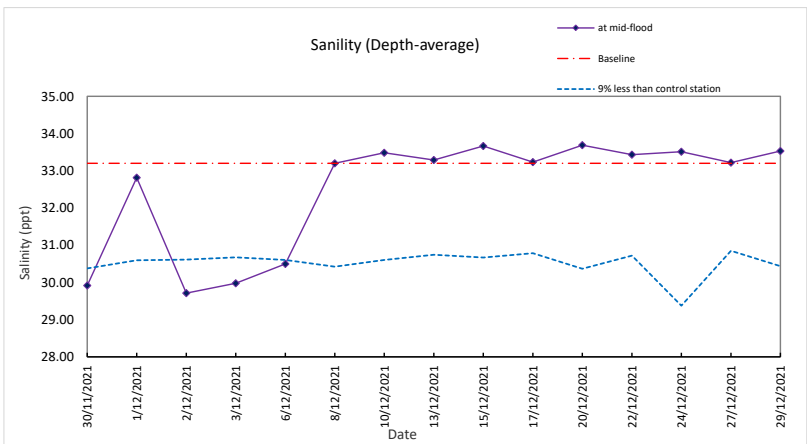
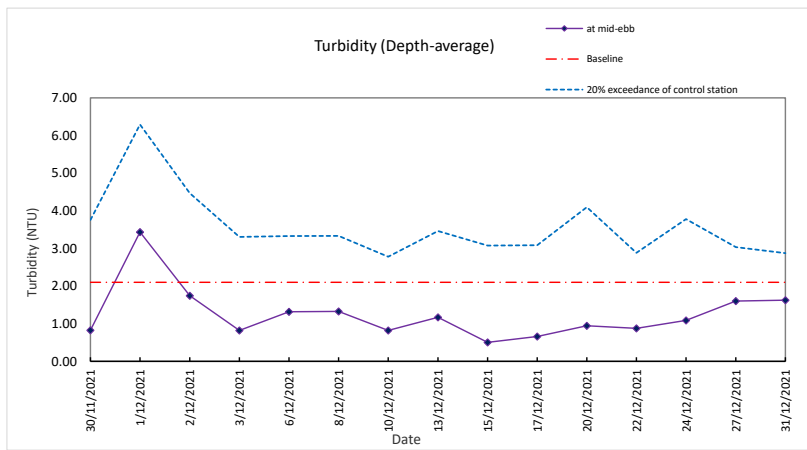
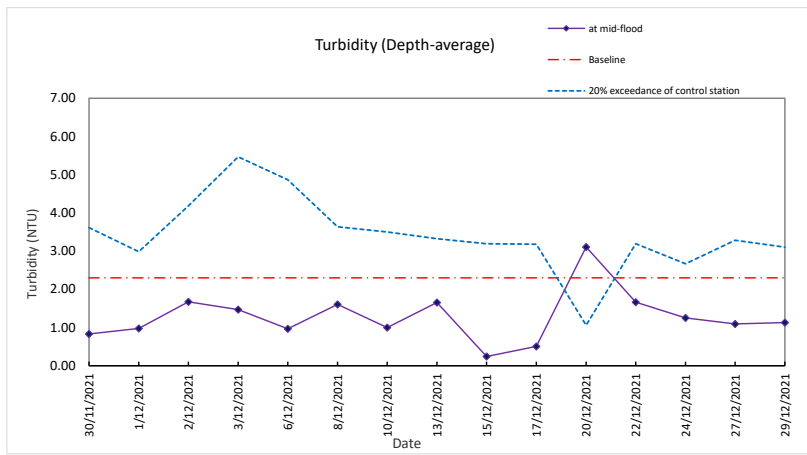
Note: No sample was taken on some dates as sampling depth is <5m

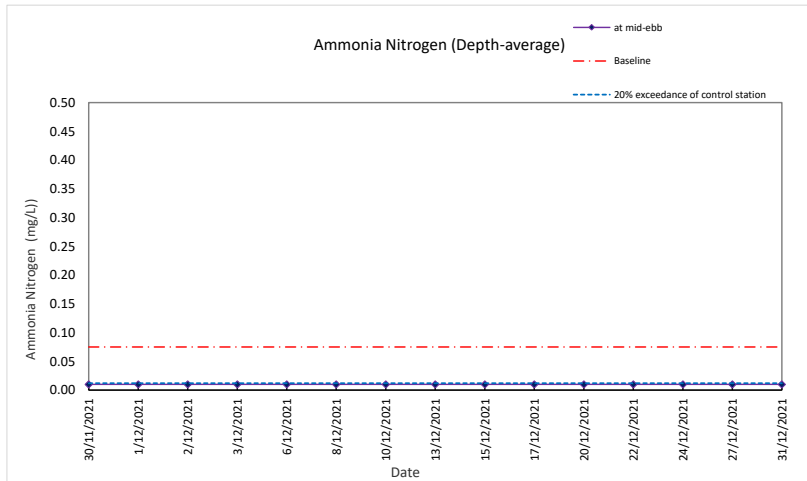
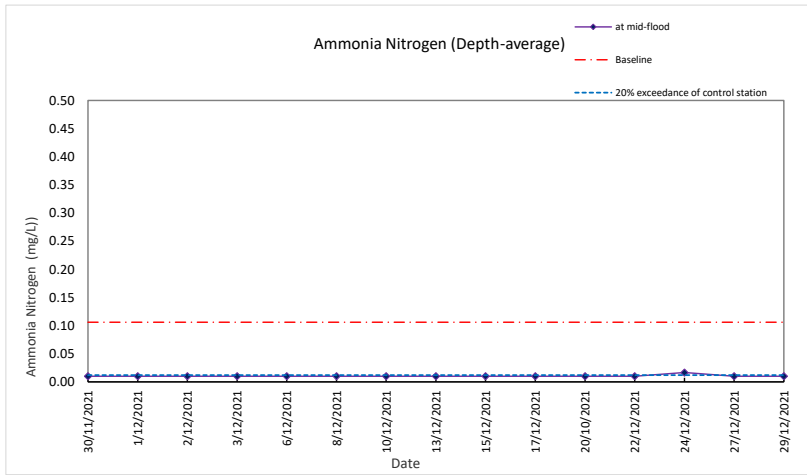
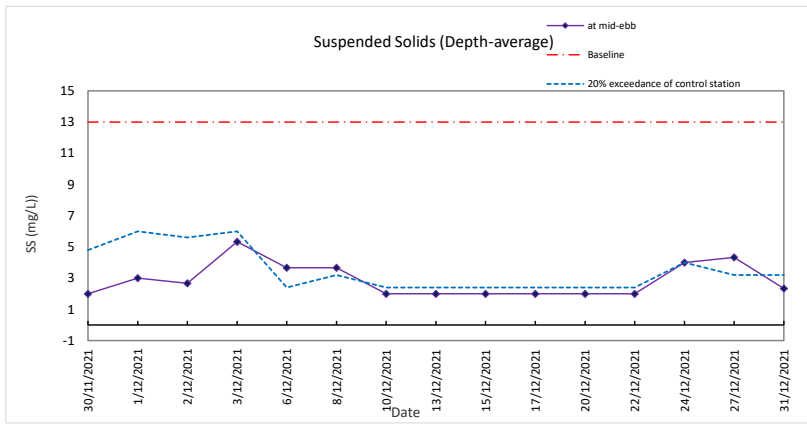
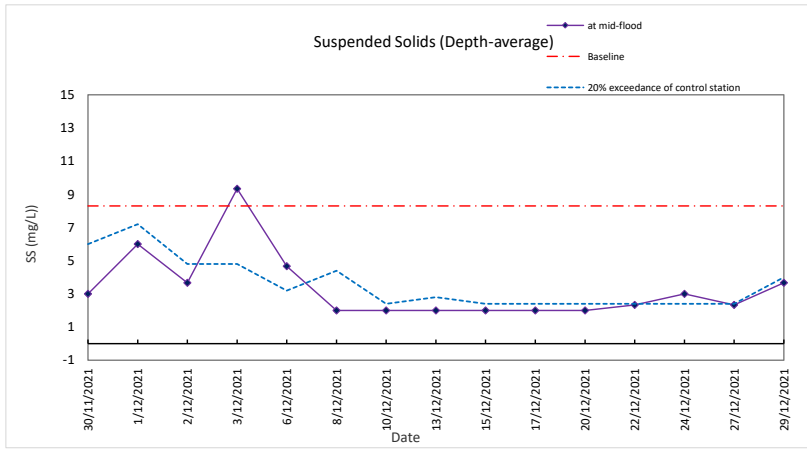


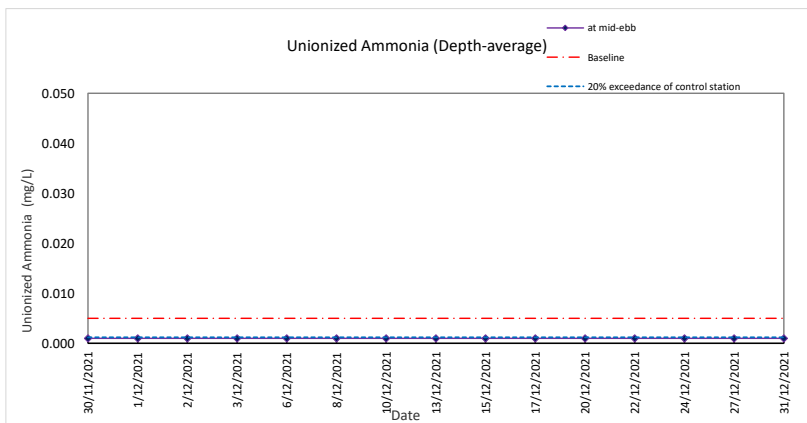
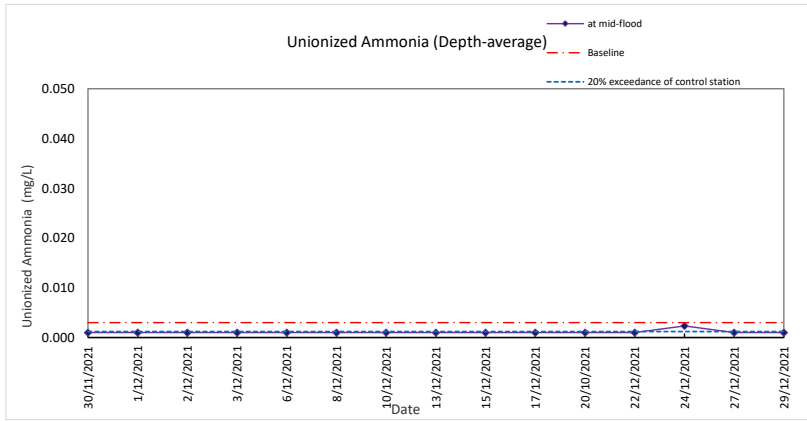
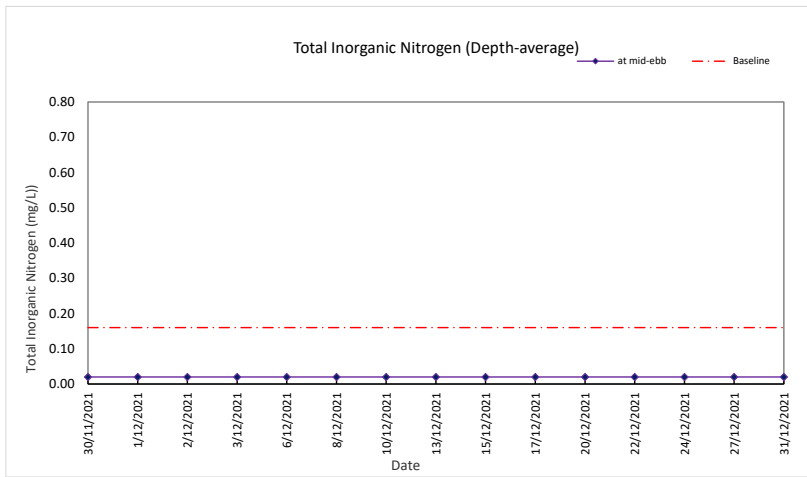
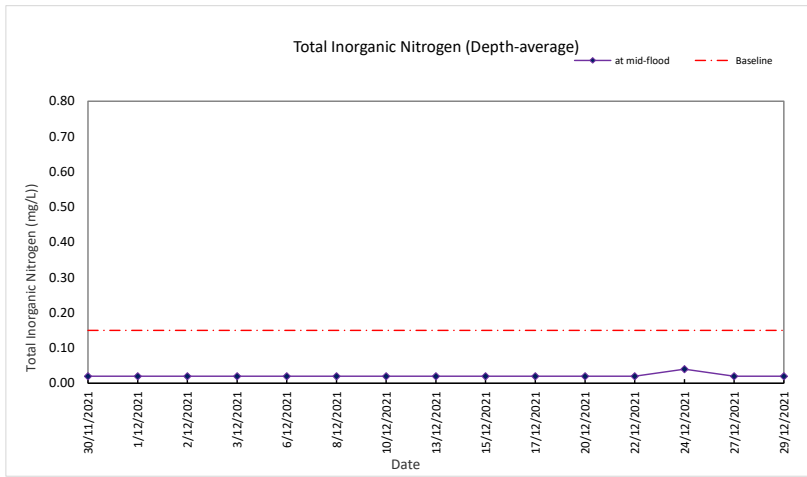


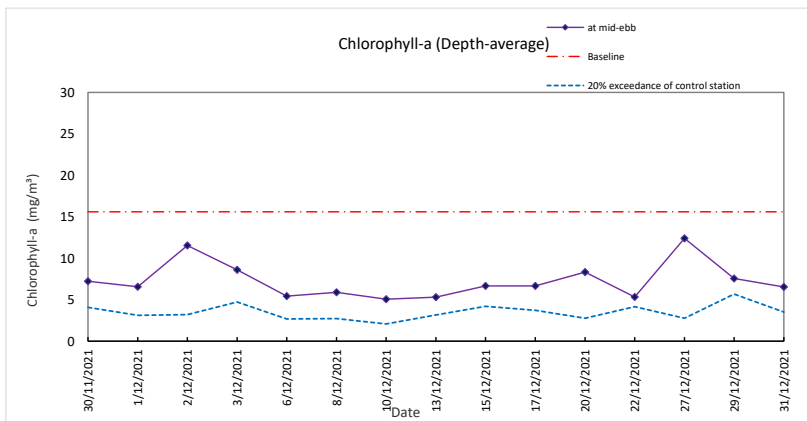
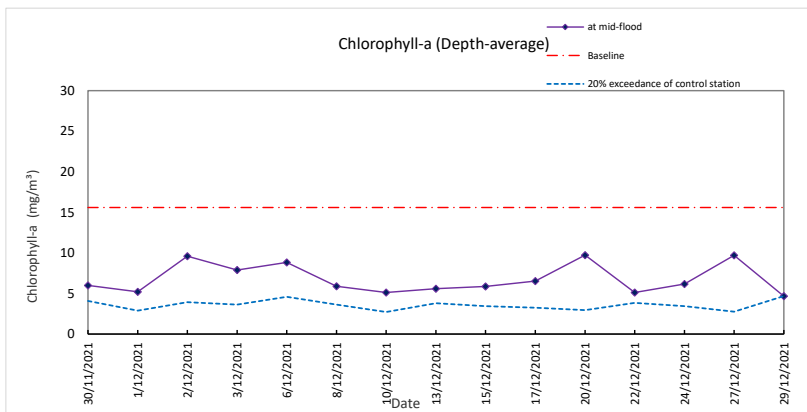
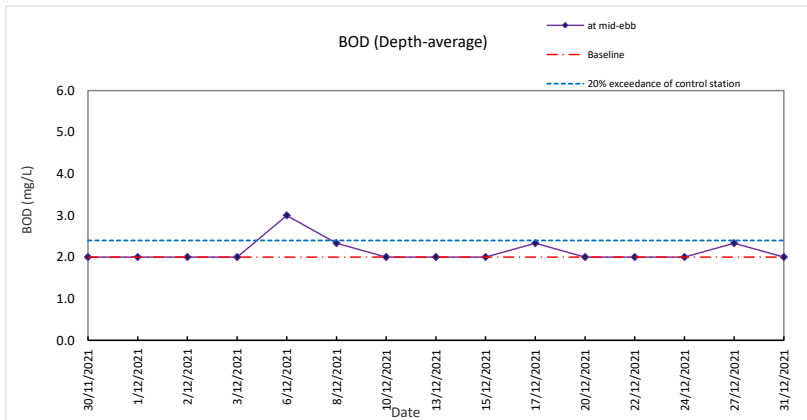
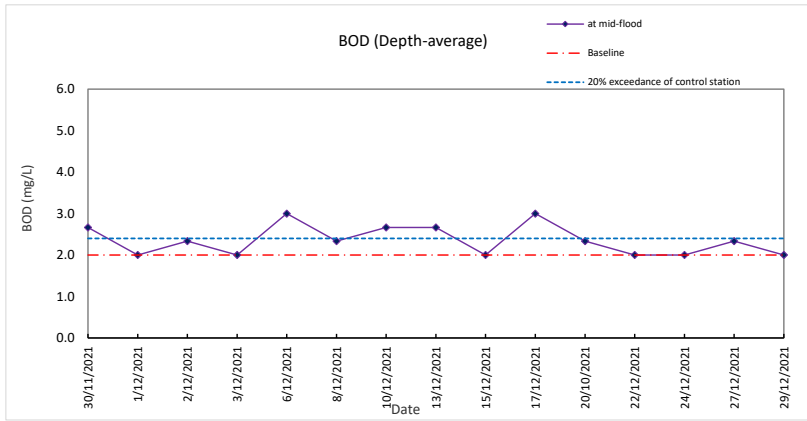
Note: No sample was taken on some dates as sampling depth is <5m

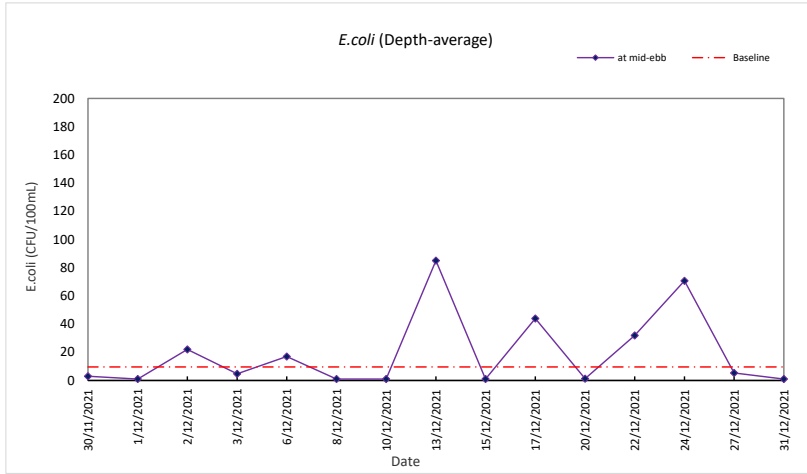
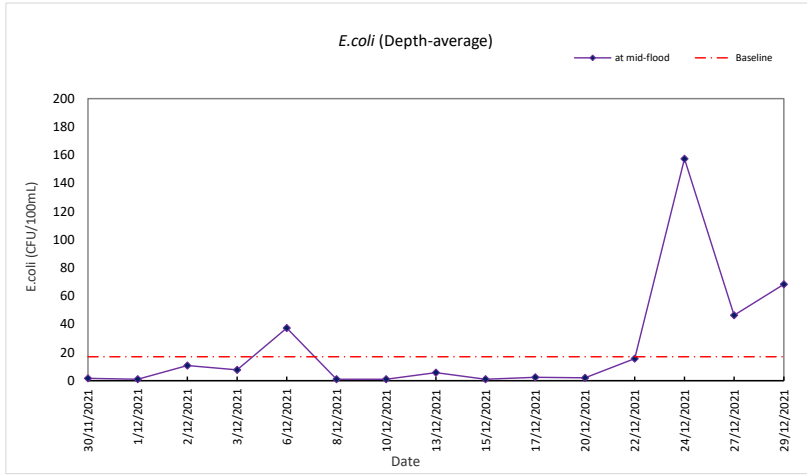






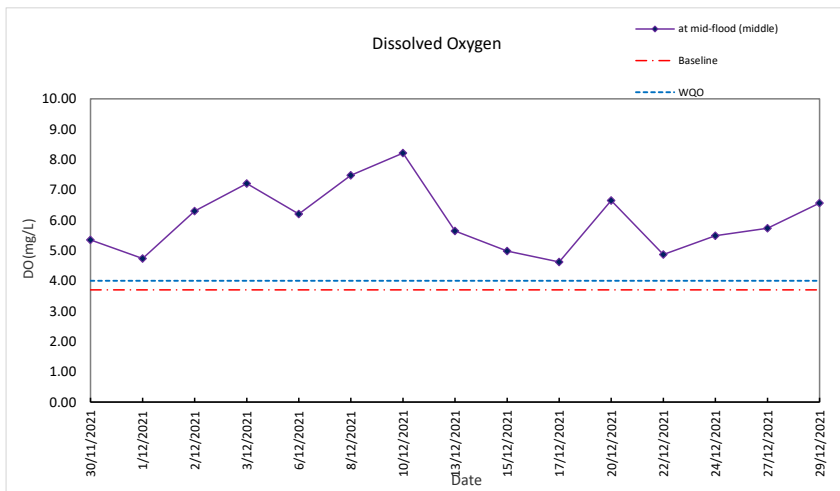
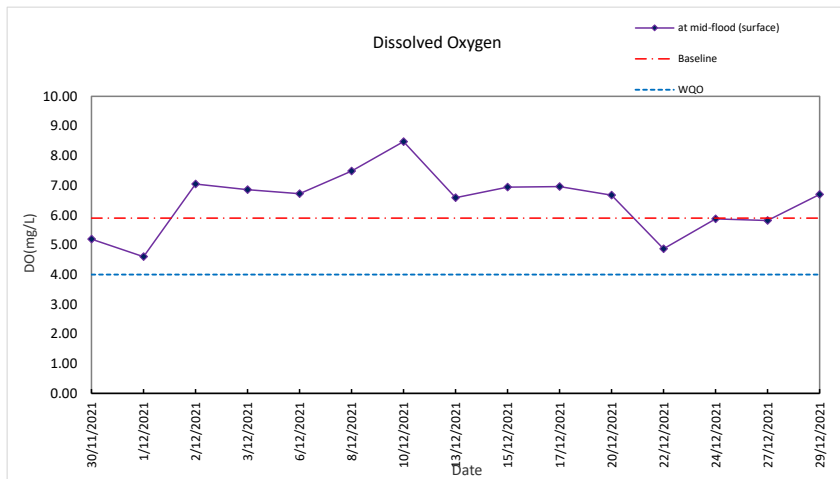




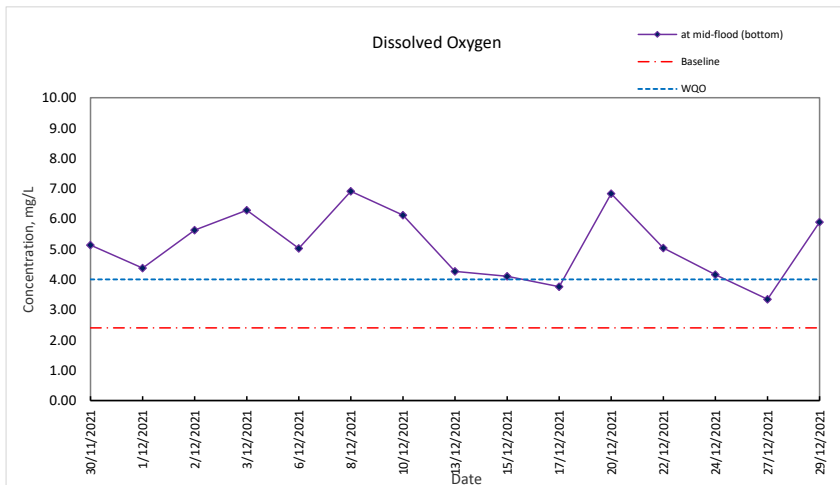


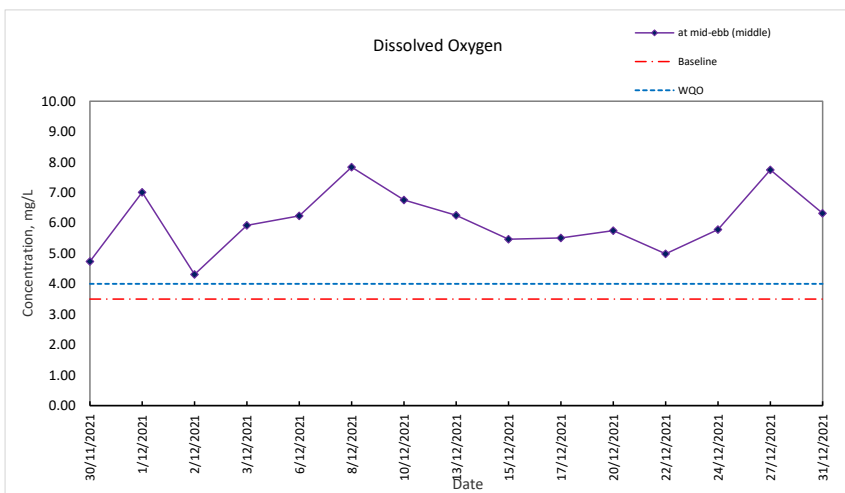
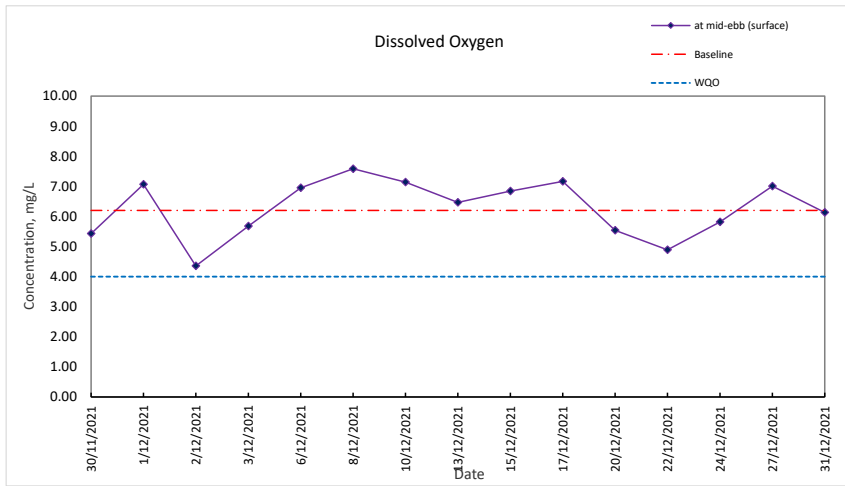


Graphic Presentation of Water Quality Result of CR9 -Gruff Head Corals (Control Station)

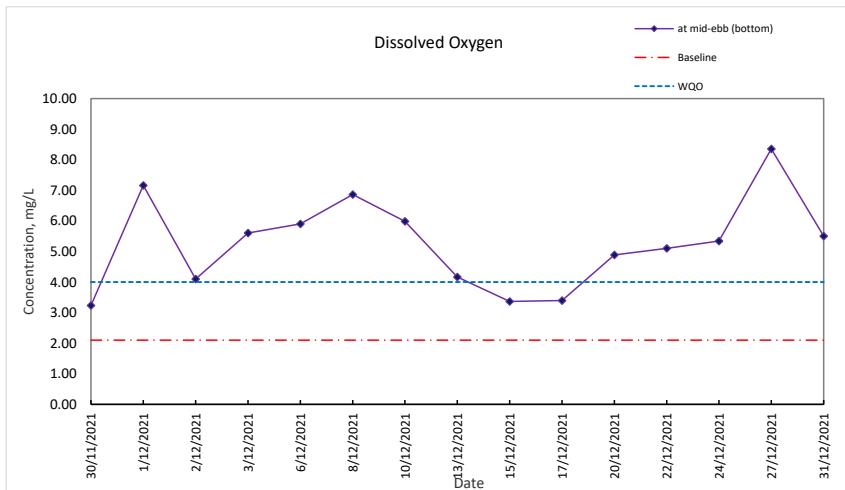


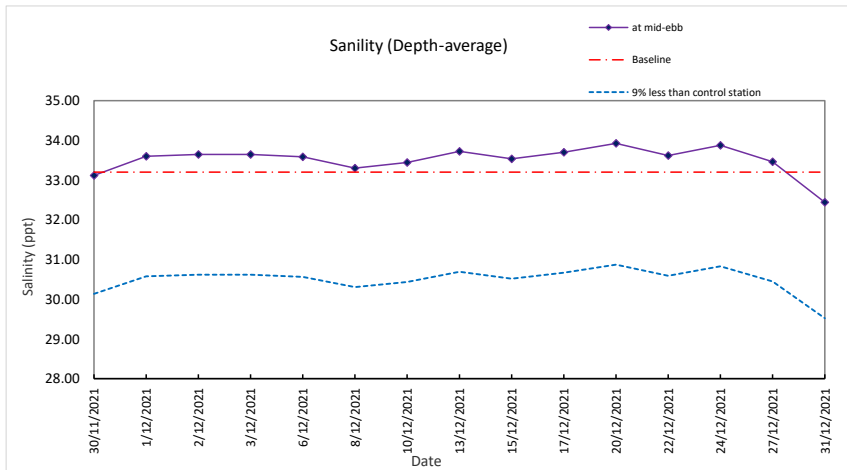
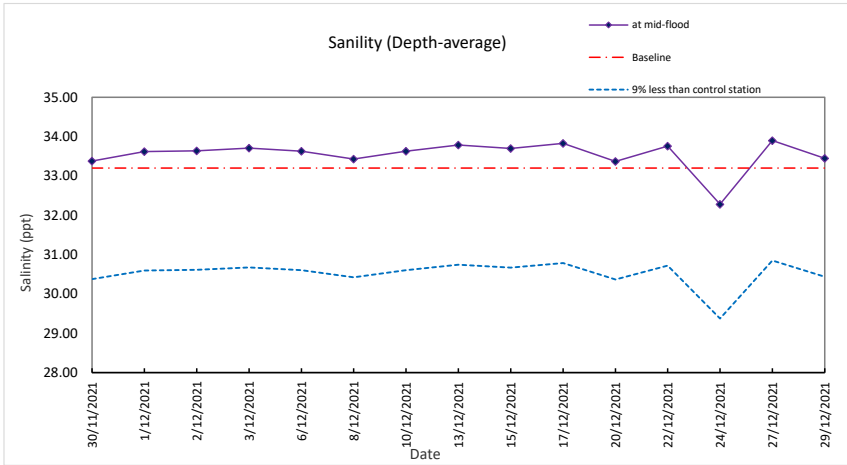
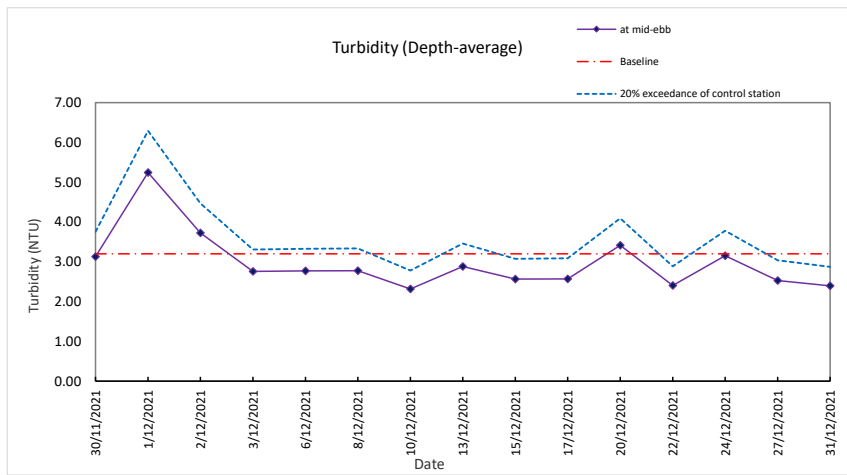
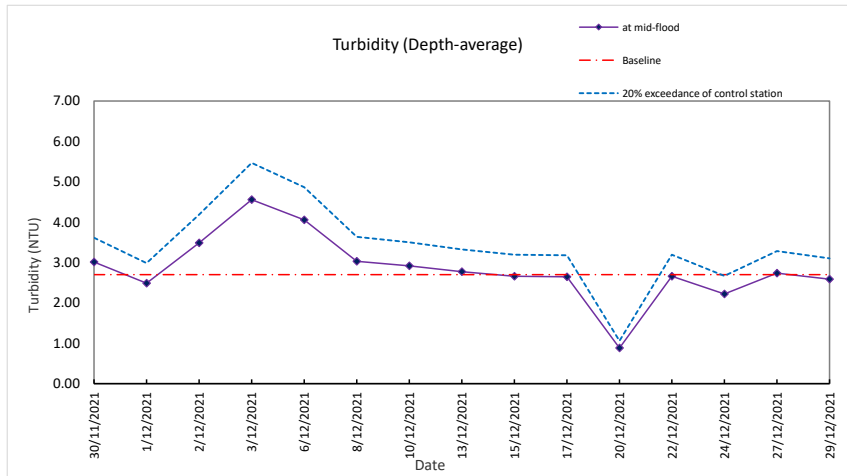
Note: No sample was taken on some dates as sampling depth is <5m





Note: No sample was taken on some dates as sampling depth is <5m







Appendix 4.4

Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table

Name of Department: Drainage Services Department

Contract No.: DC/2018/05

Monthly Summary Waste Flow Table for December 2021 [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 3)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed as Public Fill	(f) Metals	(g) Paper/cardboard packaging	(h) Plastics (see Note 2)	(i) Chemical Waste	(j) Others, e.g. general refuse disposed at Landfill
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in L)	(in tonne)
Jan-21	17.798	0.389	1.648	15.516	0.245	0.000	0.300	0.000	0.000	190.10
Feb-21	15.555	0.176	0.034	15.092	0.253	0.030	0.250	0.000	0.220	27.65
Mar-21	13.422	0.032	2.050	11.078	0.263	0.000	0.000	0.000	0.000	38.61
Apr-21	27.113	0.107	4.999	21.851	0.157	0.000	0.000	0.000	0.000	60.40
May-21	11.323	0.019	0.684	10.332	0.289	0.000	0.000	0.000	0.000	30.93
Jun-21	17.561	0.000	0.669	16.527	0.365	0.000	0.000	0.000	0.000	51.46
Sub-total	102.771	0.721	10.084	90.395	1.572	0.030	0.550	0.000	0.220	399.15
Jul-21	4.124	0.218	0.500	3.098	0.309	0.034	0.350	0.000	0.300	38.02
Aug-21	2.865	0.286	0.365	2.041	0.173	19.670	0.000	0.000	0.000	21.19
Sep-21	2.555	0.100	0.215	2.125	0.115	0.045	0.350	0.000	0.000	27.46
Oct-21	3.714	0.041	0.195	3.455	0.024	0.000	0.000	0.000	0.000	57.29
Nov-21	9.577	0.087	0.106	7.224	2.160	0.000	0.000	0.000	0.000	26.86
Dec-21	11.618	0.013	0.085	11.466	0.054	0.040	0.000	0.000	0.250	19.01
Total	137.225	1.466	11.550	119.802	4.408	19.819	1.250	0.000	0.770	588.98

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastics bottles/containers, plastic sheets/foam from packaging material.
 - (3) Broken concrete for recycling into aggregates.
 - (4) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 5 m³ by volume.
 - (5) Conversion factors for reporting purpose:
Excavated: rock = 2.0 tonnes/m³, soil = 1.8 tonnes/m³, broken concrete and bitumen = 2.4 tonnes/m³, Slurry = 2.8 tonnes/m³

Monthly Summary Waste Flow Table

Name of Department: Drainage Services Department

Contract No.: DC/2020/05

Monthly Summary Waste Flow Table for December 2021 [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 3)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed as Public Fill	(f) Metals	(g) Paper/cardboard packaging	(h) Plastics (see Note 2)	(i) Chemical Waste	(j) Others, e.g. general refuse disposed at Landfill
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in tonne)
Jan-21	-	-	-	-	-	-	-	-	-	-
Feb-21	-	-	-	-	-	-	-	-	-	-
Mar-21	-	-	-	-	-	-	-	-	-	-
Apr-21	-	-	-	-	-	-	-	-	-	-
May-21	-	-	-	-	-	-	-	-	-	-
Jun-21	-	-	-	-	-	-	-	-	-	-
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul-21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Aug-21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Sep-21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Oct-21	0.026	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.560	11.92
Nov-21	0.761	0.164	0.030	0.000	0.567	75.270	0.000	0.000	0.000	0.000
Dec-21	1.456	0.146	0.025	0.000	1.286	0.000	0.000	0.000	0.000	20.210
Total	2.243	0.309	0.055	0.000	1.879	75.270	0.000	0.000	0.560	32.130

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastics bottles/containers, plastic sheets/foam from packaging material.
 - (3) Broken concrete for recycling into aggregates.
 - (4) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 5 m³ by volume.
 - (5) Conversion factors for reporting purpose:
Excavated: rock = 2.0 tonnes/m³, soil = 1.8 tonnes/m³, broken concrete and bitumen = 2.4 tonnes/m³, Slurry = 2.8 tonnes/m³

Monthly Summary Waste Flow Table

Name of Department: Drainage Services Department

Contract No.: DC/2018/05

Monthly Summary Waste Flow Table for February 2022 [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 3)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed as Public Fill	(f) Metals	(g) Paper/cardboard packaging	(h) Plastics (see Note 2)	(i) Chemical Waste	(j) Others, e.g. general refuse disposed at Landfill
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in L)	(in tonne)
Jan-22	10.122	0.076	0.073	9.951	0.023	0.000	0.000	0.000	0.000	34.29
Feb-22	11.071	0.454	0.065	10.455	0.098	0.000	0.000	0.000	0.000	9.15
Mar-22										
Apr-22										
May-22										
Jun-22										
Sub-total	21.193	0.529	0.138	20.405	0.121	0.000	0.000	0.000	0.000	43.44
Jul-22										
Aug-22										
Sep-22										
Oct-22										
Nov-22										
Dec-22										
Total	21.193	0.529	0.138	20.405	0.121	0.000	0.000	0.000	0.000	43.44

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastics bottles/containers, plastic sheets/foam from packaging material.
 - (3) Broken concrete for recycling into aggregates.
 - (4) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 5 m³ by volume.
 - (5) Conversion factors for reporting purpose:
Excavated: rock = 2.0 tonnes/m³, soil = 1.8 tonnes/m³, broken concrete and bitumen = 2.4 tonnes/m³, Slurry = 2.8 tonnes/m³

Monthly Summary Waste Flow Table

Name of Department: Drainage Services Department

Contract No.: DC/2020/05

Monthly Summary Waste Flow Table for February 2022 [to be submitted not later than the 15th day of each month following reporting month]

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 3)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed as Public Fill	(f) Metals	(g) Paper/cardboard packaging	(h) Plastics (see Note 2)	(i) Chemical Waste	(j) Others, e.g. general refuse disposed at Landfill
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in tonne)
Jan-22	0.141	0.061	0.000	0.000	0.080	0.000	0.000	0.000	0.000	302.470
Feb-22	4.756	0.077	0.000	0.035	4.645	0.000	0.000	0.000	0.000	23.610
Sub-total	4.897	0.137	0.000	0.035	4.725	0.000	0.000	0.000	0.000	326.080
Total	4.897	0.137	0.000	0.035	4.725	0.000	0.000	0.000	0.000	326.080

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastics bottles/containers, plastic sheets/foam from packaging material.
 - (3) Broken concrete for recycling into aggregates.
 - (4) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 5 m³ by volume.
 - (5) Conversion factors for reporting purpose:
Excavated: rock = 2.0 tonnes/m³, soil = 1.8 tonnes/m³, broken concrete and bitumen = 2.4 tonnes/m³, Slurry = 2.8 tonnes/m³



Appendix 6.1

Event and Action Plans



Event and Action Plan for Construction Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Action level being exceedance by one sampling	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor, IEC and ER; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source(s), investigate the causes of exceedance and propose remedial measures; 2. Implement remedial measures; and 3. Amend working methods agreed with the ER as appropriate
2. Action level being exceeded by two or more consecutive sampling	1. Identify source; 2. Inform Contractor, IEC and ER; 3. Advise the Contractor and ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with Contractor, IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source and investigate the causes of exceedance; 2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal as appropriate.



Event and Action Plan for Construction Air Quality (Con't)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
LIMIT LEVEL				
1. Limit level exceedance by one sampling	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor, IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; and 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 4. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
2. Limit level exceedance by two or more consecutive sampling	<ol style="list-style-type: none"> 1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET; 2. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 4. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Event and Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; and 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and 3. Supervise the implementation of remedial measures 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analyzed noise problem; and 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC; and 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposal if problem still not under control; and 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.



Appendix 7.1

Complaint Log



Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
190808	29 July 2019	DSD	Construction site area Portion 6	Exposed slope surface without any covering was observed at Portion 6	<p>A public complaint regarding construction dust received by DSD on 29 July 2019 was subsequently referred to ET on 6 August 2019. The complainant reported that exposed slope surface without any covering at Portion 6. Based on the information provided by the Contractor, the concerned area was under slope cutting and filling works for temporary haul road construction.</p> <p>Based on the observation on 6 August 2019 and weekly site inspection on 7 August 2019, the concerned slope was observed covered with the tarpaulin sheets to alleviate the potential dust impact to the surroundings.</p> <p>Upon review on the monitoring data, no exceedances were recorded at the air quality monitoring stations AM2 - Block H, Kam Tai Court and AM4 - Wellborn Kindergarten (located nearest to the concerned slope) during the 1hr TSP monitoring on 23 July 2019 and 29 July 2019 respectively.</p> <p>Follow up site inspection was conducted by the Environmental Team on 07 August 2019 and it was observed that the slope at Portion 6 was properly covered.</p> <p>Nevertheless, in view of the public concern, the Contractor of DC/2018/05 was reminded to enhance the dust suppression measure by providing adequate watering to any exposed surface during cutting slope and fill works to avoid potential dust impact to the surroundings.</p>	Interim investigation report was issue on 16 August 2019
201112	12 November 2020	DSD	Outside site boundary of Portion 11	water contamination / ecological impact	<p>A letter from Kadoorie Farm and Botanic Garden (KFBG) regarding water contamination / ecological impact received by DSD on 12 November 2020 was subsequently referred to ET on 12 November 2020. The KFBG alleged that:</p> <ul style="list-style-type: none">- Extracting water directly from the stream,- Surface run-off silt smothering forest understorey	Interim investigation report was issue on 14 December 2020



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>and silting the stream,</p> <ul style="list-style-type: none">- Cement has been disposed into the forest understorey and the stream , and- Diesel fuel leaking from pumps and generators at Portion 11. <p>The concerned area is natural stream near slope cutting and filling works for temporary haul road construction, outside of the DC/2018/05 construction site boundary.</p> <p>The Contractor, RSS conducted walk-through survey on 17 November 2020 starting from around the tree tag T9511/ T9512 and ending at the pool of the natural stream near Portion 11 of DC/2018/05.</p> <p>Additional site inspection with EPD, DSD, RSS, ET and the Contractor was conducted on 17 November 2020, additional site inspection with KFBG, DSD, RSS, ET and the Contractor was conducted on 19 November 2020.</p> <p>No Pollutants were observed being discharged to the stream, the natural stream was clean with running water during above inspections. However, few spots were found with cement and silt on the bedding of the stream.</p> <p>According to the Contractor, the water pumps were the emergency pumps and it had been removed away from the natural stream. No pump was observed during above inspections.</p> <p>There was no sign of any diesel fuel leaking from pumps or generators. The nearest generator for the construction work has been located far away from the concerned location. By the walk-through survey along the natural stream, there was no oil-strain or diesel likes contamination being observed.</p> <p>By the walk-through survey, various locations were found with silting / sand. The sources of the silt were not necessary from the construction site of DC/2018/05. It could also be contributed by the natural erosion from both sides of the stream.</p> <p>Nevertheless, in view of the public concern, the</p>	



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					Contractor of DC/2018/05 was willing to clean up the stream to address the concerns from KFBG to protect the environment. The Contractor also reminded to keep review the performance of mitigation measures including well cover slope / area with exposed soil with tarpaulin sheets to prevent surface runoff, using cellular confinement system to prevent soil erosion.	
210127	27 January 2021	DSD	Construction Area at Portion 6 (Tunnel)	Air Quality	<p>A public complaint regarding construction dust referred by DSD on 27 January 2021 was subsequently received by ET on 27 January 2021. The complainant reported that:</p> <ul style="list-style-type: none">- Construction dust emission arising from blasting works in tunnel was observed near Block 6, Chevalier Garden. <p>Blasting in the tunnel was carried out under Contract DC/2018/05 at the concerned area</p> <p>According to the relevant site information provided by the Contractor of DC/2018/05, there are total of 13nos. of blasting works was carried out in January 2021 in the tunnel.</p> <p>The blasting works was carried out in the tunnel. Dust screen, mist curtain, sprinkler system and mist cannon were installed / operated when blasting, the blast door was tightly closed during blasting.</p> <p>Based on review on air quality monitoring data, no exceedances were recorded at the air quality monitoring stations AM3(B) - Outside A Kung Kok Street Garden and AM4 - Wellborn Kindergarten (located nearest to the concerned area) during the scheduled 1hr TSP monitoring in January 2021.</p> <p>Ad-hoc TSP monitoring and inspection was carried out on 29 January and 1 February 2021 during blasting, no exceedances were recorded at the air</p>	Interim investigation report was issue on 7 February 2021



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>quality monitoring stations AM3(B) - Outside A Kung Kok Street Garden and AM4 - Wellborn Kindergarten.</p> <p>Based on the site inspection on 28 January 2021, 2nos. mist cannons have been installed and operated on the top of blast door during / after the blast door opened to reduce fumes / mists emission.</p> <p>The Contractor of DC/2018/05 was reminded to enhance the dust suppression measure by providing adequate watering after the blast door opened. Contractor is requested to consider extend the time to open the blast door after blasting in order to the fumes and rock dust have been settled in the tunnel.</p> <p>Also, the Contractor of DC/2018/05 was reminded that the ventilation system in the tunnel should be maintained in good condition.</p>	
20211201	1 December 2021	AECOM	Construction Area at Portion 12 (The Neighbourhood Advice-Action Council Harmony Manor)	Noise	<p>A public complaint regarding construction noise referred by AECOM on 3 December 2021 was subsequently received by ET on 3 December 2021.</p> <p>The complainant reported to 1823 online dated on 1 December 2021 that the construction noise (heavy vehicle and drilling works) generated from the construction site at A Kung Lok Shan Road was causing noise nuisance to complainant's son.</p> <p>According to the relevant site information provided by the Contractor of DC/2020/05, preparation works for sheet pile driving, which included machinery and materials mobilization, were carried out on 1 December 2021. Sheet pile work was commenced on 2 December 2021.</p> <p>Based on review on noise monitoring data, no exceedances were recorded at the noise monitoring station CM5 - R/F, The Neighbourhood Advice-Action</p>	Interim investigation report was issue on 10 December 2021



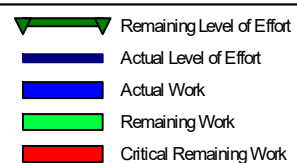
Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>Council Harmony Manor (located nearest to the concerned area) during the scheduled Leq30 min noise monitoring in November 2021. ET conducted regular noise monitoring on 3 December 2021, no exceedances was record at the noise monitoring stations CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor. Weekly noise monitoring was conducted on 7 December 2021, no exceedances was recorded at the noise monitoring station CM5 - R/F, The Neighbourhood Advice-Action Council Harmony Manor. Site inspection was conducted on 8 December 2021, it is observed that breaking /drilling works by other contractor was conducted next to The Neighbourhood Advice-Action Council Harmony Manor. No heavy vehicles passing by A Kung Lok Shan Road during noise monitoring.</p> <p>After receiving the complaint, additional noise mitigation measures, including wrapping up the breaker tip with acoustic mat and deploying of temporary noise barrier have been implemented by the Contractor of DC/2020/05.</p> <p>The Contractor of DC/2020/05 was reminded to enhance the noise mitigation measures by providing sufficient temporary noise barrier. Contractor is advised to make good communication with The Neighbourhood Advice-Action Council Harmony Manor and consider scheduling the time of sheet piling and machinery / materials mobilization in order to avoid further complaint.</p>	



Appendix 8.1

Construction Programme of Individual Contracts

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Late Start	Late Finish	2022							
								Jan	Feb	Mar	Apr	May	Jun		
Relocation of Sha Tin Sewage Treatment Works to Caverns - Site Preparation & Access Tunnel															
Contract Particular															
General															
General															
A10190	Contract Completion Date	0		25-Mar-22*	0		25-Mar-22								
Sectional Completion															
Sectional Completion															
Sect040	Sect 4 (1034d) - Comprises works not covered in any other Sections	0		07-Mar-22*	-7		28-Feb-22								
Sect060	Sect 6 (1064d) - Completion of fully coordinated as-built BIM model	0		02-Apr-22*	1		03-Apr-22								
SectCE205	CE205 - All Western Access Tunnel Entrustment Works Complete	0		12-Apr-22*	18		30-Apr-22								
Preliminary Works															
Preliminary Works															
Preliminary Works															
A11990	Completion of fully coordinated as-built BIM model	23	08-Mar-22	02-Apr-22	0	08-Mar-22	02-Apr-22								
Mui Tsz Lam Road															
Road Works															
Mui Tsz Lam Road Realignment															
A10520	Road Marking	6	14-Feb-22*	19-Feb-22	7	22-Feb-22	28-Feb-22								
A13120	Street Lighting & bollard	6	21-Feb-22	26-Feb-22	50	25-Apr-22	30-Apr-22								
Main Portal Area															
Retaining Wall for Main Portal															
Retaining Wall RMP5 - CSD															
A17180	Retaining Wall wall structure to 7.5mpd (Bay 1)-CSD RMP5 (at WAT portal area)	12	04-Feb-22 A	12-Feb-22	-6	25-Jan-22	29-Jan-22								
A17190	Retaining Wall wall structure to 16mpd (Bay 1)-CSD RMP5 (at WAT portal area)	9	14-Feb-22	23-Feb-22	-6	31-Jan-22	16-Feb-22								
A17200	Retaining Wall wall structure to 23mpd (Bay 1)-CSD RMP5 (at WAT portal area)	10	24-Feb-22	07-Mar-22	-6	17-Feb-22	28-Feb-22								
A17230	300 dia drainage pipe from RMP6 to SMH2010	22	20-Dec-21 A	16-Feb-22	29	14-Mar-22	22-Mar-22								
A17235	Catch pits at RMP5	30	08-Mar-22	12-Apr-22	13	23-Mar-22	30-Apr-22								
A17240	450 dia drainage pipe from RMP5 to SMH2010	30	08-Mar-22	12-Apr-22	13	23-Mar-22	30-Apr-22								
A17250	Manhole SMH2007 to 2010	24	08-Feb-22	07-Mar-22	43	30-Mar-22	30-Apr-22								
Tunnel															
Hard Rock 284m, Tunnel Excavation by Drill and Blast															
B10760	Permanent bolt and shotcrete - Bottom Bench	264	13-Mar-21 A	22-Feb-22	5	14-Feb-22	28-Feb-22								
Permanent Lining															
A14160	Modified the access ramp to the final profile	4	08-Feb-22	11-Feb-22	14	24-Feb-22	28-Feb-22								
A14170	Backfill 200 thick Grade 200 rock fill for tunnel	108	13-Oct-21 A	26-Feb-22	2	09-Feb-22	28-Feb-22								
CE205 - Western Access Tunnel Entrustment Works															
General															
General															
E01010	All Western Access Tunnel Entrustment Works Complete	0		09-Apr-22*	15		30-Apr-22								
Western Access Tunnel															
Site Formation for Western Tunnel Portal															
E11110	Excavation (+13 to +8mpd) rock breaking (RHS)	76	22-Nov-21 A	28-Feb-22	29	14-Mar-22	02-Apr-22								
Soft Ground Tunnel Excavation by Drill and Break															
E11120	Bottom bench excavation (Ch171 - 222)	92	30-Dec-21 A	09-Apr-22	15	25-Feb-22	30-Apr-22								



Project ID: MP006 (2202)
 Layout: 3 Month Rolling Programme
 Data Date: 08-Feb-22
 Page 1 of 1
 Primavera Systems, Inc.

Contract No. DC/2018/05
Relocation of Sha Tin Sewage Treatment Works to Caverns -
Site Preparation and Access Tunnel Construction
3 Month Rolling Programme



Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
Updated Programme (as of 8 Feb 2022) - Relocation of STST to Caverns - Main Caverns Construction-vt														
Preliminary Works & Preparation Works														
Subletting and Procurement														
2nd Batch														
C1031	[Summary] Sub-letting & procurement for the 2nd batch sub-contract (other minor packages)	85%	22d	10-Aug-21 A	04-Mar-22	130d	12-Aug-22	12-Aug-22						
C1031-RP02	Sub-letting 2nd batch - P2 & P4 Access construction	80%	2d	10-Aug-21 A	09-Feb-22	68d	04-May-22	05-May-22						
C1031-RP28	Sub-letting 2nd batch - pipe jacking for effluent pipeline	70%	18d	10-Aug-21 A	28-Feb-22	88d	28-May-22	18-Jun-22						
C1031-RP38	Sub-letting 2nd batch - Portion 10 - piling works (Soldier Pile wall)	70%	22d	10-Aug-21 A	04-Mar-22	130d	19-Jul-22	12-Aug-22						
3rd Batch														
C1032	[Summary] Sub-letting & procurement for the 3rd batch sub-contract	62%	28d	01-Sep-21 A	11-Mar-22	1442d	05-Feb-27	05-Feb-27						
C1032-RP04	Sub-letting 3rd batch - Temp Explosive Magazine (M&E works)	60%	16d	08-Sep-21 A	25-Feb-22	66d	30-Apr-22	20-May-22						
C1032-RP06	Sub-letting 3rd batch - Noise Barrier NB4 (steelwork & panels)	60%	22d	15-Sep-21 A	04-Mar-22	1406d	20-Nov-26	15-Dec-26						
C1032-RP08	Sub-letting 3rd batch - Noise Barrier NB4 (r.c. works)	50%	28d	15-Sep-21 A	11-Mar-22	1328d	18-Aug-26	18-Sep-26						
C1032-RP20	Sub-letting 3rd batch - Blasting Works (2) - CAV3 &4, BD1,2,3,4, VA	20%	28d	27-Sep-21 A	11-Mar-22	136d	26-Jul-22	26-Aug-22						
C1032-RP30	Sub-letting 3rd batch - Blasting Works (3) - CAV5, SD, BD1,2,3,4, SAT	10%	2d	04-Oct-21 A	09-Feb-22	336d	31-Mar-23	01-Apr-23						
C1032-RP40	Sub-letting 3rd batch - Blasting Works (4) - Ventilation Shaft VS	10%	22d	04-Oct-21 A	04-Mar-22	320d	13-Mar-23	11-Apr-23						
C1032-RP50	Sub-letting 3rd batch - apply for temp power supply for Cavern Tunneling Works	10%	22d	04-Oct-21 A	04-Mar-22	1448d	12-Jan-27	05-Feb-27						
C1032-RP60	Sub-letting 3rd batch - apply for temp water supply for Cavern Tunneling Works	10%	22d	04-Oct-21 A	04-Mar-22	1448d	12-Jan-27	05-Feb-27						
Procurement of Major Construction Plant														
Procurement of Tunneling Equipment														
A20322	Procurement of Drill Jumbo (1st) (for CBAR2, 1 no.) - order and delivery	100%	52d	01-Jan-22 A	31-Mar-22	97d	16-May-22	06-Jul-22						
A20332	Procurement of Drill Jumbo (2nd) (for CBAR2, 1 no.) - order and delivery	0%	82d	01-Jan-22 A	30-Apr-22	1743d	17-Nov-26	06-Feb-27						
A21090	Procurement of Spraying Machine - process of contract award	0%	52d	02-Nov-21 A	31-Mar-22	1743d	17-Nov-26	07-Jan-27						
A21092	Procurement of Spraying Machine - order and delivery	0%	30d	01-Apr-22	30-Apr-22	1743d	08-Jan-27	06-Feb-27						
A21100	Procurement of Wheel Loader - process of contract award	0%	52d	02-Dec-21 A	31-Mar-22	1743d	17-Nov-26	07-Jan-27						
A21102	Procurement of Wheel Loader - order and delivery	0%	30d	01-Apr-22	30-Apr-22	1743d	08-Jan-27	06-Feb-27						
A21104	Procurement of Articulated Dump Truck - process of contract award	0%	52d	02-Dec-21 A	31-Mar-22	1743d	17-Nov-26	07-Jan-27						
A21106	Procurement of Articulated Dump Truck - order and delivery	0%	30d	01-Apr-22	30-Apr-22	1743d	08-Jan-27	06-Feb-27						

Remaining Level of Effort
 Actual Level of Effort
 Actual Work
 Remaining Work
 Critical Remaining Work
 Milestone
 Crit. Milestone

Project File: C2-UP002-(22-02)
 Layout: MPR - 3M Rolling Prog (submission)
 Data Date: 08-Feb-22
 Page 1 of 7

Contract No. DC/2020/05
Relocation of Sha Tin Sewage Treatment Works to Caverns -
Main Caverns Construction
3 Months Rolling Programme (Feb to Apr 2022)



Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
A21230	Procurement of Ventilation Fan & Duct - order and delivery	0%	21d	07-Dec-21 A	28-Feb-22	1804d	17-Jan-27	06-Feb-27						
Off-Site Fabrication for Cavern Complex														
Off-site Fabrication of Lining Shutter for Cavern Complex														
A20340	Lining Shutter - Design preparation, review and accept by PM	5%	18d	09-Dec-21 A	28-Feb-22	13d	23-Feb-22	15-Mar-22						
A20350	Lining Shutter - Place Order, Factory Fabrication and Delivery	0%	34d	01-Mar-22	09-Apr-22	13d	16-Mar-22	28-Apr-22						
A20360	Lining Shutter - Assembling on site	0%	30d	11-Apr-22	20-May-22	13d	29-Apr-22	06-Jun-22						
Off-site Fabrication of Travelling Formworks for Cavern Complex														
A20370	Travelling Formwork - Design preparation, review and accept by PM	0%	45d	11-Apr-22	08-Jun-22	210d	24-Dec-22	24-Feb-23						
BIM Management [PS App 29.1]														
BIM Training														
A24870	BIM Training - nominate staffs or sub-contractor's staff to attend training course	0%	22d	08-Feb-22	01-Mar-22	17d	25-Feb-22	18-Mar-22						
A24880	BIM Training - Liaise with CIC for schedule of training courses	0%	90d	02-Mar-22	30-May-22	17d	19-Mar-22	16-Jun-22						
General Site Preparation Works														
Tree Preservation and Protection														
C1050	Preservation and Protection of Existing Trees	0%	1444d	05-Jul-21 A	06-Jan-27	1d	09-Feb-22	07-Jan-27						
Hoarding														
Hoarding Erection														
A10050	Hoarding erection - WA4	0%	40d	08-Feb-22	25-Mar-22	1400d	13-Nov-26	31-Dec-26						
Site Office at WA2														
Site Office Erection at WA2														
A10480	WA2 Site office - design preparation and submission	80%	11d	17-Aug-21 A	19-Feb-22	1459d	25-Jan-27	05-Feb-27						
A10490	WA2 Site office - design approval	0%	18d	10-Jan-22 A	28-Feb-22	1452d	16-Jan-27	05-Feb-27						
A10500	WA2 Site office - off-site fabrication	0%	55d	17-Jan-22 A	13-Apr-22	82d	21-May-22	26-Jul-22						
A10510	WA2 Site office - unit delivery to site	0%	6d	14-Apr-22	23-Apr-22	82d	27-Jul-22	02-Aug-22						
A10520	WA2 Site office - Erection & installation	0%	50d	14-Apr-22	17-Jun-22	82d	27-Jul-22	24-Sep-22						
WA3 Rock Crushing Plant Design, Procurement and Installation														
WA3 Rock Crushing Plant - Design														
A21010	WA3 - Rock Crushing Plant - PM, ET review and acceptance	90%	21d	22-Oct-21 A	28-Feb-22	1764d	08-Dec-26	28-Dec-26						
WA3 Rock Crushing Plant - Application of Specific Process License														
A21022	WA3 - Rock Crushing Plant - Submit Form 1 to EPD	0%	1d	08-Feb-22	08-Feb-22	1784d	28-Dec-26	28-Dec-26						
A21030	WA3 - Rock Crushing Plant - EPD grant Specific Process License	0%	3d	01-Mar-22	03-Mar-22	1764d	29-Dec-26	31-Dec-26						
A21040	WA3 - Rock Crushing Plant - submit report to EPD	0%	7d	25-Apr-22	01-May-22	1742d	31-Jan-27	06-Feb-27						
WA3 Rock Crushing Plant - Application of Variation of Environmental Permit (VEP)														
A20480	[Summary] VEP & Specified Process under APCO - Prepare and make application to EPD	0%	42d	20-Sep-21 A	21-Mar-22	1783d	06-Feb-27	06-Feb-27						
A21120	WA3 - Rock Crushing Plant - VEP - liaison with EPD & update information of AQIA to ERR	90%	5d	18-Dec-21 A	12-Feb-22	1783d	27-Dec-26	31-Dec-26						

Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
A21130	WA3 - Rock Crushing Plant - VEP - submit Form 5 to EPD	0%	30d	13-Feb-22	14-Mar-22	1783d	01-Jan-27	30-Jan-27						
A21140	WA3 - Rock Crushing Plant - VEP - EPD grant VEP	0%	7d	15-Mar-22	21-Mar-22	1783d	31-Jan-27	06-Feb-27						
WA3 Rock Crushing Plant - Procurement														
A21050	WA3 - Rock Crushing Plant - plant procurement & fabrication	40%	18d	15-Dec-21 A	28-Feb-22	1402d	16-Nov-26	05-Dec-26						
WA3 Rock Crushing Plan - Installation of Rock Crushing Plant														
A21060	WA3 - Rock Crushing Plant - instalation	0%	20d	03-Mar-22	25-Mar-22	1400d	07-Dec-26	31-Dec-26						
A21070	WA3 - Rock Crushing Plant - Plant commissioning trial	0%	30d	26-Mar-22	24-Apr-22	1742d	01-Jan-27	30-Jan-27						
Temporary Explosive Magazine														
General														
A18390	Temp Explosive Mag. - Method statement approval by mines dept & relevant authorities.	0%	18d	05-Nov-21 A	28-Feb-22	0d	08-Feb-22	28-Feb-22						
A18470	Temp Explosive Mag. - Submit information of Expbsive Delivery Vehicle (EVD) and drivers	0%	31d	29-Mar-22	11-May-22	20d	27-Apr-22	04-Jun-22						
Temporary Explosive Magazine														
A18190	Temp Explosive Mag. - Construct Temporary Explosive Store No.1	0%	43d	07-Feb-22 A	29-Mar-22	18d	01-Mar-22	23-Apr-22						
A18200	Temp Explosive Mag. - Construct Temporary Explosive Store No.2	0%	45d	01-Mar-22	26-Apr-22	0d	01-Mar-22	26-Apr-22						
A18210	Temp Explosive Mag. - Construct Temporary Explosive Store No.3	0%	45d	01-Mar-22	26-Apr-22	0d	01-Mar-22	26-Apr-22						
A18290	Temp Explosive Mag. - Construct Berm around stores	0%	30d	11-Apr-22	20-May-22	0d	11-Apr-22	20-May-22						
A18360	Temp Explosive Mag. - BS instalation and FS installation	0%	42d	11-Apr-22	04-Jun-22	0d	11-Apr-22	04-Jun-22						
Main Portal Area and Main Access Tunnel (MAT, MATE, MATW)														
Provision of P2 Access and P4 Access														
Design of P2 Access and P4 Access														
A10550	P2 access - obtain consent from relevant authorities	70%	18d	17-Sep-21 A	28-Feb-22	52d	11-Apr-22	05-May-22						
Noise Barrier NB4														
NB4 - Design of Noise Barrier														
A10190	Noise Barrier NB4 - design preparation	70%	18d	09-Sep-21 A	28-Feb-22	1318d	06-Aug-26	26-Aug-26						
A10200	Noise Barrier NB4 - design approval	0%	21d	01-Mar-22	21-Mar-22	1640d	27-Aug-26	16-Sep-26						
Secondary Portal Area and Secondary Access Tunnel (SAT)														
Secondary Portal Area - Site Formation & Landscaping for Secondary Portal														
Secondary Portal Area - Temp Haul Road and Site Drainage														
A11374	SAT - Construct temp site drainage	70%	18d	19-Nov-21 A	28-Feb-22	1452d	16-Jan-27	05-Feb-27						
Secondary Portal Area - Boulder Survey and Stabilization Works														
A20272	SAT - Boulder - Remove hazardous boulders	0%	72d	30-Dec-21 A	07-May-22	22d	05-Mar-22	04-Jun-22						
Secondary Portal Area - Slope SSP1 - Portal Slope Excavation														
A11105	Slope SSP1 - Portal Slope Excavation [1500m3]	20%	34d	31-Dec-21 A	18-Mar-22	35d	21-Mar-22	04-May-22						
A11130	Slope SSP1 - Secondary Tunnel ready to start	0%	0d	19-Mar-22		87d	08-Jul-22							
Secondary Portal Area - Flexible Barrier														
Secondary Portal Area - Flexible Barrier - Design & Procurement														

◆ Slope SSP1 - Secondary Tunnel ready

Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
A11530	Flexible Barrier - Flexible barrier design preparation	0%	43d	19-Mar-22	14-May-22	35d	05-May-22	25-Jun-22						
Secondary Access Tunnel (SAT)														
SAT - General Works														
A20130	SAT - Application of CNP	0%	40d	07-Apr-22	28-May-22	249d	15-Feb-23	01-Apr-23						
A20140	SAT - Temporary Power for Tunnel work	20%	29d	18-Sep-21 A	12-Mar-22	159d	22-Aug-22	26-Sep-22						
SAT - CBAR5 Blasting Permit														
A20050	SAT - CBAR5 - [Summary] Blasting Permit application	0%	182d	18-Dec-21 A	08-Aug-22	86d	02-Nov-22	02-Nov-22						
A20100	SAT - CBAR5 - Preparation and submission draft CBAR to PM	50%	22d	18-Dec-21 A	01-Mar-22	86d	05-May-22	26-May-22						
A20102	SAT - CBAR5 - PM comment to CBAR	0%	21d	02-Mar-22	22-Mar-22	86d	27-May-22	16-Jun-22						
A20103	SAT - CBAR5 - response to PM's comments	0%	14d	23-Mar-22	05-Apr-22	86d	17-Jun-22	30-Jun-22						
A20105	SAT - CBAR5 - submit CBAR to GEO & Mines Division	0%	1d	06-Apr-22	06-Apr-22	86d	01-Jul-22	01-Jul-22						
A20110	SAT - CBAR5 - CBAR review by GEO & Mines Division	0%	28d	07-Apr-22	04-May-22	86d	02-Jul-22	29-Jul-22						
SAT - CBAR5 Blasting Method Statement														
A20060	SAT - CBAR5 - BMS - prepare and submit to PM	0%	36d	30-Mar-22	04-May-22	86d	24-Jun-22	29-Jul-22						
SAT - CBAR5 Tunnel Temporary Works Design														
A22950	SAT - CBAR5 - Tunnel Temp Work Design - prepare and submit tunnel temp work design to PM	0%	0d	02-Mar-22	02-Mar-22	97d	06-Jun-22	06-Jun-22						
A22960	SAT - CBAR5 - Tunnel Temp Work Design - PM review and comment	0%	21d	02-Mar-22	22-Mar-22	97d	07-Jun-22	27-Jun-22						
A22970	SAT - CBAR5 - Tunnel Temp Work Design - response to PM's comments and PM's accept	0%	14d	13-Mar-22	26-Mar-22	97d	18-Jun-22	01-Jul-22						
SAT - CBAR5 Blast Door Design and Installation														
A20070	SAT - CBAR5 - Blast Door Design preparation & submission	85%	18d	18-Sep-21 A	28-Feb-22	103d	16-Jun-22	07-Jul-22						
A20080	SAT - CBAR5 - Blast Door Design review and accept by PM	0%	21d	01-Mar-22	24-Mar-22	103d	08-Jul-22	01-Aug-22						
A20082	SAT - CBAR5 - Blast Door fabrication	0%	14d	12-Apr-22	30-Apr-22	89d	02-Aug-22	17-Aug-22						
SAT - Instrumentation and Monitoring														
A11600	SAT - Vibration monitoring station installation (Portion 10) [8 nos.]	25%	18d	28-Dec-21 A	28-Feb-22	109d	23-Jun-22	14-Jul-22						
SAT - Soft Ground Excavation (Drill & Break)														
SAT - Design & Fabrication of Steel Arch														
A11702	SAT - Design preparation and submission of steel arch for soft ground excavation	60%	5d	08-Nov-21 A	12-Feb-22	82d	21-May-22	26-May-22						
A11704	SAT - Design approval of steel arch for soft ground excavation	0%	21d	13-Feb-22	05-Mar-22	103d	27-May-22	16-Jun-22						
A11706	SAT - Steel arch fabrication and delivery	0%	26d	07-Mar-22	06-Apr-22	81d	17-Jun-22	18-Jul-22						
SAT - Excavation (Ch140 - Ch144)														
A11710	SAT - Mobilization (Site set up)	0%	6d	19-Mar-22	25-Mar-22	87d	08-Jul-22	14-Jul-22						
A11720	SAT - Long Canopy Tube (Ch140 - 144)	0%	2d	26-Mar-22	28-Mar-22	87d	15-Jul-22	16-Jul-22						
A11730	SAT - Tunnel excavation (Ch140 - 144)	0%	4d	29-Mar-22	01-Apr-22	87d	18-Jul-22	21-Jul-22						
A11740	SAT - Steel rib & Shortcrete installation (Ch140 - 144)	0%	4d	07-Apr-22	11-Apr-22	81d	19-Jul-22	22-Jul-22						

Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
SAT - Excavation (Ch144 - Ch148)														
A11750	SAT - Probing and PEG (4nos.,30m)	0%	1d	12-Apr-22	12-Apr-22	81d	23-Jul-22	23-Jul-22						
A11760	SAT - Long Canopy Tube (Ch144 - 148)	0%	2d	13-Apr-22	14-Apr-22	81d	25-Jul-22	26-Jul-22						
A11770	SAT - Tunnel excavation (Ch144 - 148)	0%	4d	19-Apr-22	22-Apr-22	81d	27-Jul-22	30-Jul-22						
A11780	SAT - Steel rib & Shortcrete installation (Ch144 - 148)	0%	4d	20-Apr-22	23-Apr-22	81d	28-Jul-22	01-Aug-22						
SAT - Excavation (Ch148 - Ch152)														
A11790	SAT - Long Canopy Tube (Ch148 - 152)	0%	2d	25-Apr-22	26-Apr-22	81d	02-Aug-22	03-Aug-22						
A11800	SAT - Tunnel excavation (Ch148- 152)	0%	4d	27-Apr-22	30-Apr-22	81d	04-Aug-22	08-Aug-22						
A11810	SAT - Steel rib & Shortcrete installation (Ch148 - 152)	0%	4d	28-Apr-22	03-May-22	81d	05-Aug-22	09-Aug-22						
Cavern Complex														
Cavern Complex - Preparation Works														
Cavern Complex - Conveyor Belt System														
A12610	Prepare detail method statement for Conveyor belt system erection	0%	30d	12-Mar-22	20-Apr-22	66d	06-Jun-22	11-Jul-22						
A12620	PM approval	0%	21d	21-Apr-22	17-May-22	66d	12-Jul-22	04-Aug-22						
A12640	Submit application and obtain consent from HyD, TD consent for bridge over across Mui Tsz Lam road	0%	180d	21-Apr-22	24-Nov-22	66d	12-Jul-22	20-Feb-23						
A12645	Submit application and obtain consent from EPD	0%	90d	21-Apr-22	08-Aug-22	156d	28-Oct-22	20-Feb-23						
A12650	Submit application and obtain consent from MTRC	0%	180d	21-Apr-22	24-Nov-22	66d	12-Jul-22	20-Feb-23						
A12655	Submit application and obtain consent from DSD for Sea wall modification	0%	180d	21-Apr-22	24-Nov-22	66d	12-Jul-22	20-Feb-23						
A12660	Coordinate with Utility company for cable diversion under MOS rail	0%	60d	21-Apr-22	04-Jul-22	186d	02-Dec-22	20-Feb-23						
Cavern Complex - CBAR2 Blasting Permit														
A21350	==== CBAR2 - Summary of Blasting Permit Application =====	0%	125d	08-Nov-21 A	12-Jul-22	124d	08-Dec-22	08-Dec-22						
A21354	CBAR2 Blasting Permit - GEO & Mines review CBAR2	50%	28d	26-Jan-22 A	07-Mar-22	149d	07-Jul-22	03-Aug-22						
A21356	CBAR2 Blasting Permit - response GEO & Mines comments via PM	0%	21d	08-Mar-22	28-Mar-22	149d	04-Aug-22	24-Aug-22						
A21366	CBAR2 Blasting Permit - close out comments from GEO & Mines	0%	24d	29-Mar-22	29-Apr-22	126d	01-Sep-22	30-Sep-22						
Cavern Complex - CBAR2 Blasting Method Statement														
A21390	[TG] CBAR2 - Summary of Blasting Method Statement (BMS) Submission and approval	0%	111d	08-Mar-22	26-Jun-22	149d	04-Aug-22	22-Nov-22						
A21400	CBAR2 Blasting Method Statement (BMS) - Prepare & submit to PM	0%	35d	08-Mar-22	11-Apr-22	149d	04-Aug-22	07-Sep-22						
A21402	CBAR2 Blasting Method Statement (BMS) - PM reiew and comment	0%	21d	02-Apr-22	22-Apr-22	149d	29-Aug-22	18-Sep-22						
A21410	CBAR2 Blasting Method Statement (BMS) - response to PM's comments	0%	14d	22-Apr-22	05-May-22	149d	18-Sep-22	01-Oct-22						
Cavern Complex - CBAR2 Tunnel Temporary Works Design														
A24432	CBAR2 Tunnel Temporary Work Design (CBAR 2A) - PM review and comment	80%	8d	31-Dec-21 A	15-Feb-22	171d	29-Jul-22	05-Aug-22						
A24442	CBAR2 Tunnel Temporary Work Design (CBAR 2A) - response to PM's comments	0%	23d	16-Feb-22	10-Mar-22	171d	06-Aug-22	28-Aug-22						

Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
A24452	CBAR2 Tunnel Temporary Work Design (CBAR 2B) - prepare and submit to PM	0%	8d	08-Jan-22 A	15-Feb-22	236d	02-Oct-22	09-Oct-22						
A24462	CBAR2 Tunnel Temporary Work Design (CBAR 2B) - PM review and comment	0%	21d	16-Feb-22	08-Mar-22	236d	10-Oct-22	30-Oct-22						
A24472	CBAR2 Tunnel Temporary Work Design (CBAR 2B) - response to PM's comments	0%	23d	09-Mar-22	31-Mar-22	236d	31-Oct-22	22-Nov-22						
Cavern Complex - Temporary Ventilation System														
Cavern Complex - Temp Ventilation (For CBAR1)														
A12616	[Summary] Cavern Complex - Temp tunnel ventilation facilities procurement (Stage 1) - refer to Activity A21160	0%	18d	01-Oct-21 A	28-Feb-22	1452d	29-Dec-21	05-Feb-27						
A12625	Cavern Complex - Temp tunnel ventilation and temp fire & smoke extraction system (Stage 1) installation	30%	29d	19-Jan-22 A	12-Mar-22	1441d	04-Jan-27	05-Feb-27						
Cavern Complex - Temp Ventilation (For Stages after CBAR1)														
A20200	Cavern Complex - Temp tunnel ventilation design (Stage 2) preparation	20%	18d	31-Jan-22 A	28-Feb-22	12d	22-Feb-22	14-Mar-22						
A20210	Cavern Complex - Temp tunnel ventilation design (Stage 2) approval	0%	18d	01-Mar-22	21-Mar-22	12d	15-Mar-22	04-Apr-22						
A20220	Cavern Complex - Temp tunnel ventilation facilities procurement (Stage 2)	0%	70d	22-Mar-22	18-Jun-22	12d	06-Apr-22	04-Jul-22						
Main Access Tunnel, MAT (ch288 - 297)														
MAT - Hard Rock Excavation (Drill & Blast) - Top Heading														
P14244	MAT - Top Heading - (R103, Ch288.6 - 296.6) - 8m, 4 nos. Blasts @2m Pull length, 455m3 each	80%	3d	21-Jan-22 A	10-Feb-22	93d	04-Jun-22	07-Jun-22						
PA14400	MAT - Top Permanent Support - (R103, Ch288 - 297) - Bolt and spray concrete [8m]	60%	18d	22-Jan-22 A	28-Feb-22	102d	15-Jun-22	06-Jul-22						
Ventilation Shaft and Ventilation Adit														
Ventilation Shaft (VS)														
VS - CBAR3 Blasting Permit														
A18600	[Summary] VS - Blasting Permit License - review by Mines Department & issue Permit/license	0%	108d	13-Dec-21 A	21-Jun-22	233d	06-Apr-23	06-Apr-23						
A23108	VS - CBAR3 Blasting Permit - closing out GEO & Mines comments	30%	14d	15-Jan-22 A	21-Feb-22	384d	27-Feb-23	12-Mar-23						
VS - CBAR3 Blasting Method Statement														
A18580	[Summary] VS - CBAR3 Method statement for Blasting Works	0%	71d	21-Dec-21 A	06-May-22	19d	30-May-22	30-May-22						
A23090	VS - CBAR3 Blasting Method Statement (BMS) - Prepare & submit to PM	30%	18d	21-Dec-21 A	25-Feb-22	24d	04-Mar-22	21-Mar-22						
A23092	VS - CBAR3 Blasting Method Statement (BMS) - PM review and comment	0%	21d	19-Feb-22	11-Mar-22	24d	15-Mar-22	04-Apr-22						
A23102	VS - CBAR3 Blasting Method Statement (BMS) - response to PM's comments	0%	14d	12-Mar-22	25-Mar-22	24d	05-Apr-22	18-Apr-22						
A23202	VS - CBAR3 Blasting Method Statement (BMS) - Formal submit BMS to Mines	0%	1d	26-Mar-22	26-Mar-22	24d	19-Apr-22	19-Apr-22						
A23302	VS - CBAR3 Blasting Method Statement (BMS) - Mines review BMS	0%	28d	26-Mar-22	22-Apr-22	24d	19-Apr-22	16-May-22						
A24402	VS - CBAR3 Blasting Method Statement (BMS) - close out Mines comments and Mines approve	0%	14d	23-Apr-22	06-May-22	24d	17-May-22	30-May-22						
VS - Design of Protective Enclosure														
A18562	VS - Protective (Noise) Enclosure - Design review and accept by PM	95%	0d	24-Dec-21 A	08-Feb-22	240d	28-Nov-22	28-Nov-22						
VS - Design of Blast Cover														
A24600	VS - Blast Cover - PM review and comment	95%	0d	22-Dec-21 A	08-Feb-22	258d	19-Dec-22	19-Dec-22						
VS - Construct Temporary R.C. Wall														
A24550	VS - Temp R.C. Wall - construct wall (2 pours)	1%	23d	07-Feb-22 A	05-Mar-22	205d	19-Oct-22	14-Nov-22						

Activity ID	Activity Name	% Complete	Remaining Duration	Start	Finish	Total Float	Late Start	Late Finish	2022					
									Jan	Feb	Mar	Apr	May	
									A24560	VS - Temp R.C. Wall - backfill to protective enclosure footing founding level [3.5m thk @150mm/layer]	0%	12d	07-Mar-22	19-Mar-22
A24570	VS - Temp R.C. Wall - backfill to protective enclosure footing founding level [3.5m thk @150mm/layer]	0%	12d	22-Apr-22	06-May-22	205d	29-Dec-22	12-Jan-23						
VS - Erect Protective Enclosure														
A18564	VS - Protective Enclosure - construct footing	0%	24d	21-Mar-22	21-Apr-22	205d	29-Nov-22	28-Dec-22						
VS - Erect Blast Cover														
A24610	VS - Blast Cover - Fabrication	0%	48d	03-Mar-22	03-May-22	238d	20-Dec-22	23-Feb-23						

