

JOB NO.: TCS00975/18

CEDD CONTRACT AGREEMENT NO. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O

MONTHLY ENVIRONMENTAL MONITORING & AUDITING REPORT OF THE PROJECT – JANUARY 2019

PREPARED FOR CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
18 February 2019	TCS00975/18/600/R0127v2	Http	Am

Martin Li (Environmental Consultant)

Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	12 February 2019	First Submission
2	18 February 2019	Amended against IEC's comments



Acuity Sustainability Consulting Limited – Nature & Technologies (HK) Limited Joint Venture



Our ref: ASCL-2018009

AECOM Asia Company Limited 8/F., Grand Central Plaza, Tower 2 138 Shatin Rural Committee Road Shatin, New Territories, Hong Kong

Attention: Mr. Conrad NG

19 February 2019

Dear Sir,

Contract No. NE/2017/07 Cross Bay Link, Tseung Kwan O – Main Bridge and Associated Works Monthly EM&A Report for January 2019

I refer to the email of ET concerning the Monthly EM&A Report for January 2019 (Version 2) with Ref. No. TCS00975/18/600/R0127v2. We have no further comment on it and verify the captioned according to section 1.9 of Environmental Permit with No. EP-459-2013.

Yours faithfully,

R

Li Wai Ming Kevin Independent Environmental Checker

cc. Mr. Tam (ETL) Simon Wong (CEDD)



EXECUTIVE SUMMARY

- ES01 Civil Engineering and Development Department (hereafter referred as "CEDD") is the Project Proponent and the Permit Holder of the Project Cross Bay Link, Tseung Kwan O (hereinafter referred as "the Project") which is a Designated Project to be implemented under Environmental Permit number EP-459/2013 (hereinafter referred as "the EP-459/2013" or "the EP").
- ES02 AUES was awarded the CEDD Contract Agreement No. EDO/04/2018 Environmental Team for Cross Bay Link, Tseung Kwan O (hereinafter called "the Service Contract"). The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the Approved EM&A Manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Agreement No. CE 43/2008 (HY) Cross Bay Link, Tseung Kwan O - Investigation and other relevant statutory requirements.
- ES03 To facilitate management, the proposed Works of the project was divided into two Civil Engineering and Development Department (CEDD) Works contracts included Contract 1 (Contract No. NE/2017/07) and Contract 2 (Contract No. NE/2017/08). The date for commencement of Contract 1 was 3rd December 2018 while the date for commencement of Contract 2 is 17th January 2019.
- ES04 According to the Approved Environmental Monitoring & Audit (EM&A) Manual, air quality, noise and water quality monitoring are required to be conducted during the construction phase of the Project. As part of the EM&A programme, baseline monitoring shall undertake before the Project construction work commencement to determine the ambient environment condition. The baseline air quality, background noise and water quality monitoring has been carried out between 21st September 2018 and 13th November 2018 at the designated and interim locations. The baseline monitoring report under the EP-459/2013 has been compiled by the ET and verified by Independent Environmental Checker (hereinafter the "IEC") prior submitted to EPD on 19th November 2018 for endorsement.
- ES05 This is the 2^{nd} Monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from 1^{th} to 31^{st} January 2019 (hereinafter 'the Reporting Period').

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES06 Environmental monitoring activities under the EM&A program in this Reporting Period are summarized in the following table.



Table ES-4 Summary Environmental Monitoring Activities Undertaken in the Reporting Period

Issues	Enviro	Sessions	
Air Quality	1-Hour TSF		18
Air Quality	24-Hr TSP	6	
Construction Noise	Leq (30min	5	
Water Quality	Marine Wat	Marine Water Sampling ^(Note 1)	
Inspection / Audit	Contract 1	ET Regular Environmental Site Inspection	5
	Contract 1	Joint site audit with Project Consultant and IEC	1
	Contract 2	ET Regular Environmental Site Inspection	2
	Contract 2	Joint site audit with Project Consultant and IEC	0

Note 1 Total sessions are counted by monitoring days

Note 2 IEC inspection for Contract 2 was conducted on 9 January 2018

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES07 No air quality, construction noise and marine water quality monitoring exceedance was recorded in this Reporting Period. Therefore, no NOEs were issued to relevant parties during the reporting period. The statistics of environmental exceedance, NOE issued and investigation of exceedance are summarized in the following table.

Table ES-5 Summary Environmental Monitoring Parameter Exceedance in the Reporting Period

Environmental	Monitoring	Action Limit Level Level	I imit	Event & Action		
Issues	Parameters		NOE Issued	Investigation	Corrective Actions	
Air Quality	1-Hour TSP	0	0	0		
Air Quality	24-Hr TSP	0	0	0		
Construction Noise	Leq _{30min} Daytime	0	0	0		
Water Quality (Marine Water)	DO	0	0	0		
	Turbidity	0	0	0	NA	NA
	SS	0	0	0	INA	NA

Note: NOE – *Notification of Exceedance*

ES08 For Suspended Solid exceedance recorded in the last reporting period (19, 29 and 31 December 2018), investigations were conducted and it is concluded that the exceedances were unlikely caused by the Project. Nevertheless, the Contractor was reminded to check the implementation of silt curtain regularly to ensure no seepage of muddy water into the marine water body.

ENVIRONMENTAL COMPLAINT

ES09 No environmental complaint was recorded in this Reporting Period for the Project. The statistics of environmental complaint are summarized in the following table.

Table ES-6 Summary Environmental Complaint Records in the Reporting Period

	Environ	Related with the		
Reporting Period	Frequency	Cumulative	Complaint Nature	Works Contract(s)
1 – 31 January 2019	0	0	NA	NA

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES10 No environmental summons or prosecutions was received in this Reporting Period for the Project. The statistics of environmental summons or prosecutions are summarized in the following tables.



Table ES-7 Summary Environmental Summons Records in the Reporting Period

	Environ	Related with		
Reporting Period	Frequency	Cumulative	Nature	the Works Contract(s)
1 – 31 January 2019	0	0	NA	NA

Table ES-8 Summary Environmental Prosecutions Records in the Reporting Period

	Environ	Related with		
Reporting Period	Frequency	Cumulative	Nature	the Works Contract(s)
1 – 31 January 2019	0	0	NA	NA

REPORTING CHANGE

ES11 There is no reporting change made for this monthly report.

SITE INSPECTION BY EXTERNAL PARTIES

ES12 No site inspection was undertaken by external parties i.e. EPD or AFCD within the Reporting Period.

FUTURE KEY ISSUES

- ES13 Due to the coming month is dry and windy season for Hong Kong, the Contractor was reminded that all the works to undertaking must be fulfill environmental statutory requirement, especially construction dust come from working sites of the Project.
- ES14 In regards to the marine works, special attention should be paid on excavation works for the bridge pier foundations underway in which water quality mitigation measures such as erection of silt curtain should be properly implemented and maintained.



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1. INTRODUCTION

1.1 **PROJECT BACKGROUND**

- 1.1.1 Civil Engineering and Development Department (hereafter referred as "CEDD") is the Project Proponent and the Permit Holder of the Project Cross Bay Link, Tseung Kwan O (hereinafter referred as "the Project") which is a Designated Project to be implemented under Environmental Permit number EP-459/2013 (hereinafter referred as "the EP-459/2013" or "the EP").
- 1.1.2 AUES was awarded the CEDD Contract Agreement No. EDO/04/2018 Environmental Team for Cross Bay Link, Tseung Kwan O (hereinafter called "the Service Contract"). The Services under the Service Contract is to provide environmental monitoring and audit (EM&A) services for the Works Contracts pursuant to the requirement of Environmental Team (ET) under the Approved EM&A Manual to ensure that the environmental performance of the Works Contracts comply with the requirement specified in the EM&A Manual and EIA Report of Agreement No. CE 43/2008 (HY) Cross Bay Link, Tseung Kwan O - Investigation and other relevant statutory requirements.
- 1.1.3 To facilitate management, the proposed Works of *Cross Bay Link, Tseung Kwan O* (hereinafter called "the Project') was divided into two Civil Engineering and Development Department (CEDD) Works contracts included *Contract 1 (Contract No. NE/2017/07)* and *Contract 2 (Contract No. NE/2017/08)*. The details of each contract Works are summarized below and the delineation of each contract is shown in *Appendix A*.

Contract 1 (Contract No. NE/2017/07)

- (i) 400m section of marine viaducts of steel deck sections including the Eternal Arch Bridge;
- (ii) 600m section of marine viaducts of concrete deck sections;
- (iii) An E&M Plantroom and associated building services; and
- (iv) E&M provisions.

Contract 2 (Contract No. NE/2017/08)

- (i) Elevated deck structures along Road D9;
- (ii) A 210m section of cycle track and footpath ramp bridge;
- (iii) A 630m section of noise semi-enclosure covering the entire length of Road D9, and;
- (iv) Lift, staircase, modification of existing seawall along Road D9, landscaping and miscellaneous works.
- 1.1.4 The date for commencement of Contract 1 was 3^{rd} December 2018 while the date for commencement of Contract 2 is 17^{th} January 2019.
- 1.1.5 As part of the EM&A programme, baseline monitoring shall undertake before the Project construction work commencement to determine the ambient environmental condition. The baseline air quality, background noise and water quality monitoring has been carried out between **21**st September 2018 and 13th November 2018 at the designated and interim locations. The baseline monitoring report under the EP-459/2013 has been compiled by the ET and verified by Independent Environmental Checker (hereinafter the "IEC") prior submitted to EPD on 19th November 2018 for endorsement.
- 1.1.6 This is the 2nd Monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from 1st to 31st January 2019 (hereinafter 'the Reporting Period').

1.2 REPORT STRUCTURE

1.2.1 The Environmental Monitoring and Audit (EM&A) Monthly Report is structured into the following sections:-

Section 1	Introduction
Section 2	Project Organization and Construction Progress
Section 3	Summary of Impact Monitoring Requirements
Section 4	Air Quality Monitoring



Section 5	Construction Noise Monitoring
Section 6	Water Quality Monitoring
Section 7	Waste Management
Section 8	Site Inspections
Section 9	Landfill Gas Monitoring
Section 10	Environmental Complaints and Non-Compliance
Section 11	Implementation Status of Mitigation Measures
Section 12	Conclusions and Recommendations



2. PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS AND SUBMISSION

2.1 **PROJECT ORGANIZATION**

2.1.1 The project organization is shown in *Appendix B*. The responsibilities of respective parties are:

The Project Consultant

- 2.1.2 The Project Consultant (hereinafter "the Consultant") is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the Consultant with respect to EM&A are:
 - Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
 - Monitor Contractors', ET's and IEC's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
 - Facilitate ET's implementation of the EM&A programme
 - Participate in joint site inspection by the ET and IEC
 - Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
 - Adhere to the procedures for carrying out complaint investigation

The Contractor(s) of Works Contract(s)

- 2.1.3 There will be one contractor for each individual works contract. The Contractor(s) should report to the Consultant. The duties and responsibilities of the Contractor are:
 - Comply with the relevant contract conditions and specifications on environmental protection
 - Participate in the site inspections by the ET and IEC, and undertake any corrective actions
 - Provide information / advice to the ET regarding works programme and activities which may contribute to the generation of adverse environmental impacts
 - Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event / Action Plans
 - Implement measures to reduce impact where Action and Limit levels are exceeded
 - Adhere to the procedures for carrying out complaint investigation

Environmental Team (ET)

- 2.1.4 ET shall not be in any way an associated body of the Contractor(s) and employed by the Permit Holder (i.e., CEDD) to conduct the EM&A programme. The ET should be managed by the ET Leader. The ET Leader shall be a person who has at least 7 years' experience in EM&A and has relevant professional qualifications. Suitable qualified staff should be included in the ET, and resources for the implementation of the EM&A programme should be allocated in time under the Contract(s), to enable fulfillment of the Project's EM&A requirements as specified in the EM&A Manual during construction of the Project. ET shall report to the Project Proponent and the duties shall include:
 - Conduct baseline monitoring, impact monitoring and post-construction monitoring and the associated in-situ and laboratory tests to monitor various environmental parameters as required in the EM&A Manual and the EP
 - Analyze the environmental monitoring and audit data, review the success of EM&A programme and the adequacy of mitigation measures implemented, confirm the validity of the EIA predictions and identify any adverse environmental impacts arising
 - Carry out regular site inspection to investigate and audit the Contractors' site practice, equipment/plant and work methodologies with respect to pollution control and environmental mitigation, and effect proactive action to pre-empt problems
 - Monitor compliance with conditions in the EP, environmental protection, pollution prevention and control regulations and contract specifications

- Audit environmental conditions on site
- Report on the environmental monitoring and audit results to EPD, the Consultant, the IEC and Contractor(s) or their delegated representatives
- Recommend suitable mitigation measures to the Contractor in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans
- Liaise with the IEC on all environmental performance matters and timely submit all relevant EM&A proforma for approval by IEC
- Advise the Contractor(s) on environmental improvement, awareness, enhancement measures etc., on site
- Adhere to the procedures for carrying out complaint investigation
- Set up a dedicated web site where the project information, all environmental monitoring and audit data and reports described in Condition 5.2 of the EP, and all finalized submissions and plans required under the EP are to be placed for public inspection
- Upload the environmental monitoring results to the dedicated web site in accordance with requirements of the EP and EM&A Manual
- To carry out the Operational Phase Landfill Gas monitoring during effluent drainage system maintenance for one year

Independent Environmental Checker (IEC)

- 2.1.5 IEC will be employed for this Project. The Independent Environmental Checker (IEC) should not be in any way an associated body of the Contractor(s) or the ET for the Project. The IEC should be employed by the Permit Holder (i.e., CEDD) prior to the commencement of the construction of the Project. The IEC should have at least 7 years' experience in EM&A and have relevant professional qualifications. The duty of IEC should be:
 - Provide proactive advice to the Project Consultant and the Project Proponent on EM&A matters related to the project, independent from the management of construction works, but empowered to audit the environmental performance of construction
 - Review and audit all aspects of the EM&A programme implemented by the ET
 - Review and verify the monitoring data and all submissions in connection with the EP and EM&A Manual submitted by the ET
 - Arrange and conduct regular, at least monthly site inspections of the works during construction phase, and ad hoc inspections if significant environmental problems are identified
 - Check compliance with the agreed Event / Action Plan in the event of any exceedance
 - Check compliance with the procedures for carrying out complaint investigation
 - Check the effectiveness of corrective measures
 - Feedback audit results to ET by signing off relevant EM&A proforma
 - Check that the mitigation measures are effectively implemented
 - Report the works conducted, the findings, recommendation and improvement of the site inspections, after reviewing ET's and Contractor's works, and advices to the Project Consultant and Project Proponent on a monthly basis

2.2 CONSTRUCTION PROGRESS

2.2.1 3-month rolling construction program of the each Works Contract is enclosed in *Appendix C*; and the major construction activities undertaken in the Reporting Period is presented in below sub-sections.

Contract 1 (Contract No. NE/2017/07)

- 2.2.2 The major construction activities of Contract 1 undertaken in this Reporting Period are:-
 - Site Clearance Work at Works Area A
 - Site Office Setup at Works Area A
 - Pre-drilling works at Portion II
 - Piling works at Portion II



Contract 2 (Contract No. NE/2017/08)

- 2.2.3 The major construction activities of Contract 1 undertaken in this Reporting Period are:-
 - Site Clearance Work at Portion III and VI
 - UU Detection Work at Portion III and VI
 - Fencing Erection Work at Portion III and VI

2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.3.1 To according with the EP stipulation, the required documents list below shall be to submit to EPD for retention:

	Table 2-1	Documents Submission under Environmental Permit Requirement
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EP condition	Submission to EPD	Requirement	Situation
	construction of the Project	prior to the	• Contract 2 notified EPD on 12
	the Community Liaison Group (CLG), the membership, the terms of reference and the contact details	the commencement of construction of the Project	
	Management Organization of Main Construction Companies		Contract 1 was submitted to EPD on 2 October 2018
2.5	(WMP)	before commencement of	 WMP of Contract 1 was submitted to EPD in 11 October 2018 WMP of Contract 2 was submitted to EPD in 14 December 2018
	Plan (LSMP)	before commencement of construction of the Project	LSMP was submitted on 1 Nov 2018
	Landfill Gas Hazards Assessment (QLGHA)		QLGHA of the Project was submitted to EPD on 1 November 2018

- 2.3.2 Upon completed baseline monitoring, a Baseline Monitoring Report was verified by IEC on 19 November 2018 and submitted to EPD on that day for endorsement.
- 2.3.3 The notification of Project dedicated web site to EPD was made on 9 January 2019.
- 2.3.4 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project are presented in *Table 2-2*.



		License/Permit Status				
Item	Description	Permit no./	Valid Period			
Item	Description	Account no./ Ref. no.	From	То	Status	
1	Notification pursuant to Air pollution Control (Construction Dust) Regulation				Notified on 11 July 2018	
2	Chemical Waste Producer Registration	5213-839-C1232 -19	28 August 2018	N/A		
3	Water Pollution Control Ordinance - Discharge License	In progress (Ref:435897)		-	Application submitted on 24 July 2018	
		In progress (Ref:438585)			Application submitted on 23 October 2018	
4	BillingAccountforDisposalofConstruction Waste	7031412	24 July 2018	N/A		
	BillingAccountforDisposalofConstructionWaste(throughVesseldelivering)	7032666	10 January 2019	10 April 2019	Valid until 10 April 2019	
5	Marine Dumping Permit	In progress (Ref:439218)			Application submitted on 9 November 2018	
6	Construction Noise Permit	GW-RE0752-19	26 January 2019	3 March 2019	Valid until 3 March 2019	

Table 2-2 Status of Environmental Licenses and Permits of the Project Works (Contract 1)

Table 2-3 Status of Environmental Licenses and Permits of the Project Works (Contract 2)

			License/Per	mit Status	
Item	Description	Permit no./	Valid Period		
nem	Description	Account no./ Ref. no.	From	То	Status
1	Notification pursuant to Air pollution Control (Construction Dust) Regulation				Notified on 31 October 2018
2	Chemical Waste Producer Registration	5213-839-B2500 -04	22 November 2018	N/A	
3	Water Pollution Control Ordinance - Discharge License	In progress			Application submitted on 20 December 2018
4	BillingAccountforDisposalofConstruction Waste	7032702	8 November 2018	N/A	
5	Construction Noise Permit	GW-RE0905-18	10 December 2018	27 March 2019	Valid until 27 March 2019



3. SUMMARY OF ENVIRONMENTAL MONITORING PROGRAMMES AND REQUIREMENTS

3.1 GENERAL

3.1.1 The Environmental Monitoring and Audit Programmes and requirements are set out in the Approved EM&A manual. Environmental issues such as air quality, construction noise and water quality were identified as the key issues during the construction phase of the Project. A summary of EM&A programmes and requirements are presented in the sub-sections below.

3.2 MONITORING PARAMETERS

3.2.1 Monitoring parameters of air quality, noise and water quality are summarized in *Table 3-1*.

Environmental Issue	Parameters				
Air Quality 1-hour TSP by Real-Time Portable Dust Meter; and 24-hour TSP by High Volume Air Sampler 					
Noise	 Leq (30min) in six consecutive Leq(5 min) between 07:00-19:00 on normal weekdays Supplementary information for data auditing, statistical results such as L₁₀ and L₉₀ shall also be obtained for reference. 				
Water Quality	 In-situ measurement – Dissolved Oxygen (DO) concentration (mg/L) & saturation (%), pH, Salinity (mg/L), Temperature (°C) and Turbidity (NTU); and Laboratory analysis – SS (mg/L) 				

Table 3-1 Summary of EM&A Requirements

3.3 MONITORING LOCATIONS

Air Quality and Construction Noise

3.3.1 According to the Approved EM&A Manual Section 5.4 and Section 6.3, three (3) representative air sensitive receivers (ASR) and four (4) representative noise sensitive receivers were designated as monitoring stations. The designated air quality and noise monitoring locations are listed in *Table 3-2* and *Table 3-3*, and illustrated in *Appendix D*.

Table 3-2 Designated Air Quality Monitoring Location recommended in EM&A Manual

ID	Location in the EM&A Manual	Currently Situation
AM1	Tung Wah Group of Hospitals Aided Primary School & Secondary School	Not yet construct
AM2	Lohas Park Stage 2 (Planned Development in Area 86)	Under Construction
AM3	Lohas Park Stage 3 (Planned Development in Area 86)	Under Construction

Table 3-3 Designated Construction Noise Monitoring Location recommended by EM&A Manual

ID	Location	Currently Situation
CNMS-1	Lohas Park Stage 1(Planned Development in Area 86, Package 5) (Southeast facade)	Under Construction
CNMS-2	Lohas Park Stage 1 (Planned Development in Area 86, Package 6) (Southeast facade)	Under Construction
CNMS-3	Lohas Park Stage 3 (Planned Development in Area 86,Package 11) (West facade)	Under Construction
CNMS-4	Tung Wah Group of Hospitals Aided Primary School & Secondary School (Southwest facade)	Not yet construct

3.3.2 As observed and confirmed by ET and IEC during the joint site visit on 29th August 2018, the designated air quality and noise monitoring locations are under construction or yet to construct. It is considered that these designated locations are not appropriate to perform air quality and noise monitoring. In this regard, alternative locations were proposed as interim arrangement to carry out air quality and noise monitoring before occupation of the designated monitoring location. A letter enclosed with the alternative location proposal and IEC verification (Our Ref: TCS00975/18/300/L0038) was sent to EPD on 19th October 2018 and the proposal was agreed by

EPD. Therefore, air quality and construction noise impact monitoring would be performed at the agreed alternative locations until the designated sensitive receivers occupied and granted the premises.

3.3.3 The agreed alternative monitoring location for impact air quality and noise monitoring are summarized in Table 3-4 and illustrated in *Appendix D*.

Location ID Monitoring Parameter		Location	
AM4 1-Hour TSP Air Quality Podium of Lohas Park Phase 2A (Le Prest		Podium of Lohas Park Phase 2A (Le Prestige)	
AM5	24-Hour TSP Air Quality	Boundary of Site Office near Junction of Wan Po Road and Wan O Road	
CNMS-5 Noise (L _{eq} , L ₁₀ & L ₉₀)		Podium of Lohas Park Phase 2A (Le Prestige)	

 Table 3-4
 Interim alternative location for air quality and noise monitoring

Remark: Since 24-Hour TSP Air Quality monitoring is not granted at AM4 Lohas Park Phase 2A, the 24-Hour TSP monitoring was therefore proposed at AM5 which is located at the boundary of the project site office.

Water Quality

3.3.4 According to Table 7.1 of the approved EM&A Manual Section 7.4, two Control Stations (C3 & C4), six (6) sensitive receivers (CC1, CC2, CC3, CC4, CC13 & SWI1) and one (1) Gradient station (I1) are recommended to perform water quality monitoring. Details and coordinate of these water quality monitoring stations are described in *Table 3-5* and the locations is shown in *Appendix D*.

 Table 3-5
 Location of Water Quality Monitoring Station

Station	Coord	linates	Description	
Station	Easting	Northing	Description	
CC1	843201	816416	Sensitive Receiver – Coral Sites at Chiu Keng Wan	
CC2	844076	817091	Sensitive Receiver – Coral Sites at Junk Bay	
CC3	844606	817941	Sensitive Receiver – Coral Sites at Junk Island	
CC4	845444	815595	Sensitive Receiver – Coral Sites at Fat Tong Chau West	
CC13	844200	817495	Sensitive Receiver – Coral Sites at Junk Bay near Chiu Keng Wan	
SWI1	845512	817442	Sensitive Receiver – Tseung Kwan O Salt Water Intake	
C3	843821	816211	Control Station (Ebb Tide) – within Junk Bay	
C4	844621	815770	Control Station (Flood Tide) – within Junk Bay	
I1	844602	817675	Gradient Station – in between Lam Tin Tunnel (LTT) and CBL	

3.4 MONITORING FREQUENCY AND PERIOD

3.4.1 To according with the approved *EM&A Manual*, impact monitoring requirements are presented as follows.

Air Quality Monitoring

- 3.4.2 Air quality impact monitoring frequency is as follows:
 - Once every 6 days of 24-hour TSP and 3 times of 1-hour TSP monitoring; during course of works throughout the construction period

Construction Noise Monitoring

- 3.4.3 Construction noise monitoring frequency is as follows:
 - One set of Leq_(30min) measurements in a weekly basis between 07:00 and 19:00 hours on normal weekdays during course of works as throughout the construction period

Water Quality (Marine Water) Monitoring

- 3.4.4 Marine water impact monitoring frequency is as follows:
 - Three days a week, at mid ebb and mid flood tides during course of pile excavation works for the bridge pier foundations underway. Moreover, the intervals between 2 consecutive sets of monitoring day shall not be less than 36 hours.



3.5 MONITORING EQUIPMENT

Air Quality Monitoring

3.5.1 The 24-hour and 1-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50)*, Appendix *B*. If the ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to the IEC to prove that the instrument is capable of achieving a comparable results to the HVS. The instrument should be calibrated regularly, and the 1-hour sampling shall be determined on yearly basis by the HVS to check the validity and accuracy of the results measured by direct reading method. The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory. The equipment used for air quality monitoring is listed in *Table 3-6*.

	Equipment	Model			
24-hour TSP	High Volume Air Sampler	TISCH High Volume Air Sampler, HVS Model TE-5170			
	Calibration Kit	TISCH Model TE-5025A			
1- hour TSP	Portable Dust Meter	Laser Dust Monitor Sibata LD-3B Laser Dust Monitor (S/N: 3Y6501)			

Table 3-6 Air Quality Monitoring Equipment

Noise Monitoring

3.5.2 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in ms⁻¹. Noise equipment will be used for impact monitoring is listed in *Table 3-7*.

 Table 3-7
 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2238
Calibrator	B&K Type 4231
Portable Wind Speed Indicator	Anemometer AZ Instrument 8908

Water Quality Monitoring

- 3.5.3 For water quality monitoring, the equipment should fulfill the requirement under the Approved *EM&A Manual Section 7.2.* The requirement is summarized below:
 - **Dissolved Oxygen and Temperature Measuring Equipment** The instrument should be a portable, weatherproof dissolved oxygen measuring instrument completed with cable, sensor, comprehensive operation manuals, and should be operable from a DC power source. It should be capable of measuring: dissolved oxygen levels in the range of 0-20 mg/L and 0-200% saturation; and a temperature of 0-45 degrees Celsius. It should have a membrane electrode with automatic temperature compensation complete with a cable of not less than 35 m in length. Sufficient stocks of spare electrodes and cable should be available for replacement where necessary.
 - *Turbidity Measurement Equipment* The instrument shall be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment shall use a DC power source. It shall have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU.
 - Salinity Measurement Instrument A portable salinometer capable of measuring salinity in the range of 0-40 ppm should be provided for measuring salinity of the water at each monitoring location.
 - *Water Depth Detector* A portable, battery-operated echo sounder should be used for the determination of water depth at each designated monitoring station. A detector affixed to the bottom of the works boat, if the same vessel is to be used throughout the monitoring programme, is preferred.
 - *Positioning Device* hand-held or boat-fixed type digital Global Positioning System (GPS) with way point bearing indication or other equipment instrument of similar accuracy, should

be provided and used during water quality monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

• *Water Sampling Equipment* – A water sampler, consisting of a transparent PVC or glass cylinder of not less than two liters, which can be effectively sealed with cups at both ends, should be used. The water sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth.

3.5.4 Equipment used for water quality impact monitoring is listed in *Table 3-8*.

Equipment	Model				
A Digital Global Positioning System	GPS12 Garmin				
Water Depth Detector	Eagle Sonar CUDA 300				
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both				
water Sampler	ends				
Thermometer & DO meter	YSI ProDSS Digital Sampling System Water Quality				
Thermometer & DO meter	Meter/YSI Professional Plus Water Quality Meter				
nH motor	YSI ProDSS Digital Sampling System Water Quality				
pH meter	Meter/YSI Professional Plus Water Quality Meter				
Turbidimeter	YSI ProDSS Digital Sampling System Water Quality Meter/				
Turbidimeter	Hach 2100Q Portable Turbidimeter				
Salinometer	YSI ProDSS Digital Sampling System Water Quality				
Samoneter	Meter/YSI Professional Plus Water Quality Meter				
Sample Container	High density polythene bottles (provided by laboratory)				
Storage Container	'Willow' 33-litter plastic cool box with Ice pad				

Table 3-8 Water Monitoring Equipment

3.6 MONITORING PROCEDURES <u>Air Quality</u>

1-hour TSP

- 3.6.1 The 1-hour TSP monitor was a brand named "*Sibata LD-3 Laser Dust monitor Particle Mass Profiler & Counter*" which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90° light scattering. The 1-hour TSP monitor consists of the following:
 - (a.) A pump to draw sample aerosol through the optic chamber where TSP is measured;
 - (b.) A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and
 - (c.) A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

24-hour TSP

- 3.6.2 The equipment used for 24-hour TSP measurement is TISCH, Model TE-5170 TSP High Volume Air Sampler, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The High Volume Air Sampler (HVS) consists of the following:
 - (a.) An anodized aluminum shelter;
 - (b.) A 8"x10" stainless steel filter holder;
 - (c.) A blower motor assembly;
 - (d.) A continuous flow/pressure recorder;
 - (e.) A motor speed-voltage control/elapsed time indicator;
 - (f.) A 7-day mechanical timer, and
 - (g.) A power supply of 220v/50 Hz
- 3.6.3 For HVS for 24-hour TSP monitoring, the HVS is mounted in a metallic cage with a top for protection and also it is sat on the existing ground or the roof of building. The flow rate of the HVS between 0.6m³/min and 1.7m³/min will be properly set in accordance with the manufacturer's instruction to within the range recommended in *EPA Code of Federal Regulation, Appendix B to Part 50*. Glass Fiber Filter 8" x 10" of TE-653 will be used for

24-Hour TSP monitoring and would be supplied by laboratory. The general procedures of sampling are described as below:-

- A horizontal platform with appropriate support to secure the samples against gusty wind should be provided;
- No two samplers should be placed less than 2 meters apart;
- The distance between the sampler and an obstacle, such as building, must be at least twice the height that the obstacle protrudes above the sample;
- A minimum of 2 meters of separation from any supporting structure, measured horizontally is required;
- Before placing any filter media at the HVS, the power supply will be checked to ensure the sampler work properly;
- The filter paper will be set to align on the screen of HVS to ensure that the gasket formed an air tight seal on the outer edges of the filter. Then filter holder frame will be tightened to the filter hold with swing bolts. The holding pressure should be sufficient to avoid air leakage at the edge.
- The mechanical timer will be set for a sampling period of 24 hours (00:00 mid-night to 00:00 mid-night next day). Information will be recorded on the field data sheet, which would be included the sampling data, starting time, the weather condition at current and the filter paper ID with the initial weight;
- After sampling, the filter paper will be collected and transfer from the filter holder of the HVS to a sealed envelope and sent to a local HOKLAS accredited laboratory for quantifying.
- 3.6.4 All the sampled 24-hour TSP filters will be kept in normal air conditioned room conditions, i.e. 70% HR (Relative Humidity) and 25°C, for six months prior to disposal.
- 3.6.5 The HVS used for 24-hour TSP monitoring will be calibrated in two months interval for in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A) to establish a relationship between the follow recorder meter reading in cfm (cubic feet per minute) and the standard flow rate, Qstd, in m³/min. Motor brushes of HVS will be regularly replaced. The calibration certificates of the air quality monitoring equipment used for the impact monitoring and the HOKLAS accredited certificate of laboratory was provided in Appendix G.

Noise Monitoring

- 3.6.6 As referred to in the Technical Memorandum (TM) issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications shall be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter shall be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements may be accepted as valid only if the calibration levels from before and after the noise measurement agree to within 1.0 dB.
- 3.6.7 All noise measurements will be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq). Leq_(30 min) in six consecutive Leq_(5 min) measurements will be used as the monitoring parameter for the time period between 07:00-19:00 hours on weekdays throughout the construction period.
- 3.6.8 The sound level meter will be mounted on a tripod at a height of 1.2 m and placed at the assessment point and oriented such that the microphone is pointed to the site with the microphone facing perpendicular to the line of sight. The windshield will be fitted for all measurements. Where a measurement is to be carried out at a building, the assessment point would normally be at a position 1 m from the exterior of the building façade. Where a measurement is to be made for noise being received at a place other than a building, the assessment point would be at a position 1.2 m above the ground in a free-field situation, i.e. at least 3.5 m away from reflective surfaces such as adjacent buildings or walls.



- 3.6.9 Immediately prior to and following each noise measurement the accuracy of the sound level meter will be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements will be accepted as valid only if the calibration level from before and after the noise measurement agrees to within 1.0 dB.
- 3.6.10 Noise measurements will not be made in fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed will be checked with a portable wind speed meter capable of measuring the wind speed in m/s.
- 3.6.11 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis. The calibration certificates of noise monitoring equipment used for the impact monitoring was provided in Appendix G.

Marine Water Quality

- 3.6.12 Marine water quality monitoring would be conducted at all designated locations in accordance with Table 7.1 of the approved EM&A Manual. The procedures of water sampling, in-situ measurement and chemical analysis are described as below:
 - A Global Positioning System (GPS) will be used to ensure that the correct location was selected prior to sample collection. A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.
 - The marine water sampler will be lowered into the water body at a predetermined depth. The trigger system of the sampler is activated with a messenger and opening ends of the sampler are closed accordingly then the sample of water is collected.
 - During the sampling, the sampling container will be rinsed to use a portion of the marine water sample before the water sample is transferred to the container. Upon sampling completion, the container will be sealed with a screw cap.
 - Before the sampling process, general information such as the date and time of sampling, weather condition and tidal condition as well as the personnel responsible for the monitoring will be recorded on the monitoring field data sheet.
 - In-situ measurement including water temperature, turbidity, dissolved oxygen, salinity, pH and water depth will be recorded at the identified monitoring station and depth. At each station, marine water samples will be collected at three depths: 1m below water surface, 1m above sea bottom and at mid-depth when the water depth exceeds 6m. Samples at 1m below water surface and 1m above sea bottom will be collected when the water depth is between 3m and 6m. And sample at mid-depth will be taken when the water depth is below 3m.
 - For the in-situ measurement, two consecutive measurements of sampling depth, temperature, dissolved oxygen, salinity, turbidity and pH concentration will be measured at the sea. The YSI ProDSS Multifunctional Meter will be retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of each set is more than 25% of the value of the first reading, the reading is discarded and further readings is taken.
 - Marine water sample will be collected by using a water sampler. The high-density polythene bottles will be filled after the water sample collected from the sea. Before the water sample being fills into the sampling bottles, the sampling bottles will be pre-rinsed with the same water sample. The sampling bottles will then be packed in cool-boxes (cooled at 4°C without being frozen), and delivered to HOKLAS accredited laboratory for the chemical analysis as followed APHA *Standard Methods for the Examination of Water and Wastewater* 19ed 2540D, unless otherwise specified.
- 3.6.13 Before each round of monitoring, the dissolved oxygen probe will be calibrated by wet bulb method; a zero check in distilled water will be performed with the turbidity and salinity probes. The turbidity probe also will be checked with a standard solution of known NTU and known value of the pH standard solution were used to check the accuracy of pH value before each monitoring day. Moreover, all in-situ measurement equipment used marine water monitoring will be calibrated at three months interval.

Laboratory Analysis

3.6.14 All water samples included the duplicate samples, was tested with chemical analysis as specified in the EM&A Manual by a HOKALS accredited laboratory - ALS Technichem (HK) Pty Ltd. The chemicals analysis method and reporting limit show *Table 3-9*.

 Table 3-9
 Testing Method and Reporting Limit of the Chemical Analysis

Parameter	ALS Method Code	In-house Method Reference (1)	Reporting Limit
Total Suspended Solids	EA025	APHA 2540D	1 mg/L

Note:

1. The exact method shall depend on the laboratory accredited method. APHA = Standard Methods for the Examination of Water and Wastewater by the American Public Health Association.

3.6.15 The determination works will start within 24 hours after collection of the water samples or within the holding time as advised by the laboratory.

Meteorological Information

- 3.6.16 The meteorological information including wind direction, wind speed, humidity and temperature etc. of impact monitoring is extracted from the closest Tseung Kwan O Hong Kong Observatory Station. Moreover, the data of rainfall and air pressure would be extracted from King's Park Station.
- 3.6.17 For marine water quality monitoring, tidal information would be referred to tide gauge at Tai Miu Wan.

3.7 DETERMINATION OF ACTION/LIMIT (A/L) LEVELS

3.7.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. A summary of the Action/Limit (A/L) Levels for air quality, construction noise and water quality are shown in *Tables 3-10*, *3-11* and *3-12* respectively.

Table 3-10Action & Limit Levels of Air Quality (1-Hour & 24-Hr TSP)

Monitoring Station	Action Level (µg /m ³)		Limit Level (µg/m ³)		
Monitoring Station	1-Hour TSP	24-Hr TSP	1-Hour TSP	24-Hr TSP	
AM4	278	NA	500	NA	
AM5	NA	190	NA	260	
Note: 1-Hour & 24-Hr TSP of Action Level = $(Average Baseline Results \times 1.3 + Limit level)/2$					

Table 3-11Action and Limit Levels for Construction Noise, dB(A)

Mo	nitoring Location	Action Level	Limit Level (Leq30min)						
	8	Time Period: 0700-1900 hours on normal weekdays							
	CNMS-5	When one or more documented complaints are received	75 dB(A)						
Ren 1. 2. 3. 4.	CNMS-3 and CNM The designated lo are still under com The designated lo When the school o reduced to 65dB(A If construction w	IS4 once they are available and permission cations CNMS-1, CNMS-2 and CNMS-3 struction, Limit Level of 75dB(A) will be a contion CNMS-4 is located at planned s coccupied and operated, Limit Level of 70 A) during examination period; and	are located at residential building which adopted until they are occupied; school and still not yet to construction. DdB(A) should be adopted and should be nours, the conditions stipulated in the						



Monitoring		Depth Average					
Station	Actio	on Level		imit Level			
CC1	7.8	OR 120% of upstream control	9.3	OR 130% of upstream control			
CC2	9.0	station at the same tide of the same day	9.2	station at the same tide of the same day			
CC3	8.2	(Control Station C3	9.0	(Control Station C3			
CC4	13.8	at Ebb tide and Control Station C4 at	15.4	at Ebb tide and Control Station C4 at			
CC13	8.9	Flood tide), whichever is higher	10.3	Flood tide), whichever is higher			
SWI1	8	mg/L		10 mg/L			
		Dissolved Oxy	gen (mg/L)				
Monitoring Location	Depth Average of S	Surface and Mid-depth		Bottom			
Location	Action Level	Limit Level	Action Leve	el Limit Level			
CC1	5.8	5.7	5.3	5.2			
CC2	5.8	5.7	5.3	5.1			
CC3	5.5	5.4	4.9	4.7			
CC4	5.7	5.7	5.5	5.4			
CC13	5.6	5.5	5.3	5.2			
SWI1	5.4	4.8	5.1	5.0			
Monitoring		Depth Average of T	oth Average of Turbidity (NTU)				
Location	Actie	on Level		imit Level			
CC1	5.8	OR 120% of	6.0	OR 130% of			
CC2	4.6	upstream control station at the same	5.5	upstream control station at the same			
CC3	4.8	tide of the same day (Control Station C3	5.4	tide of the same day (Control Station C3			
CC4	6.1	at Ebb tide and	7.1	at Ebb tide and			
CC13 6.0		Control Station C4 at Flood tide),	6.3	Control Station C4 at Flood tide),			
SWI1	6.1	whichever is higher	7.1	whichever is higher			

Table 3-12 Action and Limit Levels for Water Quality

3.7.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in *Appendix E*.

3.8 DATA MANAGEMENT AND DATA QA/QC CONTROL

- 3.8.1 All monitoring data will be handled by the ET's in-house data recording and management system. The monitoring data recorded in the equipment will be downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data will input into a computerized database properly maintained by the ET. The laboratory results will be input directly into the computerized database and checked by personnel other than those who input the data.
- 3.8.2 For monitoring parameters that require laboratory analysis, the local laboratory shall follow the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory tests.



4. AIR QUALITY MONITORING

4.1 GENERAL

- 4.1.1 In the Reporting Period, 1-Hour TSP and 24-Hr TSP of air quality monitoring were respectively performed at interim alternative monitoring locations AM4 and AM5. The air quality monitoring schedule is presented in *Appendix F*.
- 4.1.2 Valid calibration certificates of monitoring equipment are shown in *Appendix G* and the monitoring results are summarized in the following sub-sections

4.2 **RESULTS OF AIR QUALITY MONITORING IN THE REPORTING MONTH**

4.2.1 During the Reporting Period, *18* sessions of 1-hour TSP and *6* sessions of 24-hours TSP monitoring were carried out and the monitoring results are summarized in *Table 4-1*. The detailed 24-hour TSP monitoring data are presented in *Appendix H* and the relevant graphical plots are shown in *Appendix I*.

	M5	AM4										
24-Hr TS	$P(\mu g/m^3)$		1-H	lour TSP (µg/	[/] m ³)							
Date	Meas. Result	Date	Start Time	1 st Meas.	2 nd Meas.	3 rd Meas.						
3-Jan-19	120	2-Jan-19	8:45	69	70	78						
9-Jan-19	142	7-Jan-19	13:00	66	67	64						
15-Jan-19	180	12-Jan-19	9:43	64	66	68						
21-Jan-19	177	18-Jan-19	9:07	118	118	113						
26-Jan-19	114	24-Jan-19	9:28	66	64	62						
29-Jan-19	78	30-Jan-19	9:20	67	88	72						

 Table 4-1
 1-Hour and 24-Hour TSP Air Quality Impact Monitoring Results

- 4.2.2 As shown in *Table 4-1*, all the 1-hour TSP and 24-hour TSP monitoring results were below the Action / Limit Levels. No Notification of Exceedance (NOE) was issued in this Reporting Period.
- 4.2.3 The meteorological data during impact monitoring period is summarized in *Appendix J*.



5. CONSTRUCTION NOISE MONITORING

5.1 GENERAL

- 5.1.1 In the Reporting Period, construction noise quality monitoring was performed at interim alternative monitoring location CNMS-5. The noise quality monitoring schedule is presented in *Appendix F*.
- 5.1.2 Valid calibration certificates of monitoring equipment is shown in *Appendix G* and the construction noise monitoring results are summarized in the following sub-sections

5.2 **RESULTS OF NOISE MONITORING**

5.2.1 **5** sessions of construction noise monitoring were performed at the interim alternative location in the reporting period. The noise monitoring results at interim alternative location is summarized in *Table 5-1*. The detailed noise monitoring data are presented in *Appendix H* and the relevant graphical plots are shown in *Appendix I*.

Data	Time of	Time of	Measurement Result (dB(A))				
Date	Starting	Finishing	L _{eq30min}	Façade Correction			
2-Jan-19	10:29	10:59	67.3	NA			
7-Jan-19	13:00	13:30	58.8	NA			
18-Jan-19	11:30	12:00	65.4	NA			
24-Jan-19	13:07	13:37	66.3	NA			
30-Jan-19	11:01	11:31	67.3	NA			

 Table 5-1
 Construction Noise Impact Monitoring Results

5.2.2 As shown in *Table 5-1*, all the measured results were below 75dB(A) of the acceptance criteria. Furthermore, no complaint on construction noise was registered, indicating no exceedance of Action Level. No non-compliance was therefore found during the Reporting Period.



6. WATER QUALITY MONITORING

6.1 GENERAL

- 6.1.1 The water quality monitoring schedule is presented in *Appendix F* and the monitoring results are summarized in the following sub-sections.
- 6.1.2 Valid calibration certificates of monitoring equipment and the laboratory accredited certificate is shown in *Appendix G*. The water quality monitoring results are summarized in the following sub-sections.

6.2 **RESULTS OF WATER QUALITY MONITORING**

6.2.1 In this Reporting Period, a total of *13* sampling days were performed for marine water monitoring at the nine designated locations. Monitoring results of 3 key parameters: dissolved oxygen (DO), turbidity and suspended solids are summarized in *Tables 6-1* to *6-4*.

Tidal	Sampling date	CC1	CC2	CC3	CC4	CC13	SWI1	C3	C4	I1
	2-Jan-19	7.5	7.6	7.3	7.5	7.3	7.3	7.5	7.5	7.3
	4-Jan-19	7.7	7.8	7.4	8.0	7.9	7.4	7.7	7.7	7.5
	7-Jan-19	7.8	7.5	7.5	7.4	7.5	7.3	7.8	7.7	7.6
	9-Jan-19	7.6	7.6	7.7	7.5	7.5	7.5	7.7	7.6	7.7
	11-Jan-19	7.6	7.6	7.6	7.7	7.6	7.5	7.6	7.7	7.7
	14-Jan-19	7.7	7.7	7.6	7.6	7.6	7.7	7.7	7.6	7.5
Mid-Ebb	16-Jan-19	7.6	7.6	7.3	7.6	7.6	7.4	7.6	7.7	7.4
	18-Jan-19	7.8	7.7	7.7	7.8	7.7	7.7	7.7	7.9	7.6
	21-Jan-19	7.8	7.9	7.7	7.7	7.8	7.9	7.6	7.8	7.8
	23-Jan-19	7.8	7.8	7.9	7.8	7.9	7.8	7.8	7.7	7.8
	25-Jan-19	8.2	8.0	8.3	8.0	8.0	8.3	7.9	8.0	8.0
	28-Jan-19	9.2	9.1	9.6	9.1	9.4	9.7	9.1	8.6	9.7
	30-Jan-19	9.0	9.4	8.8	8.6	9.3	8.7	8.8	9.0	9.1
	2-Jan-19	7.6	7.6	7.4	7.6	7.4	7.3	7.5	7.5	7.3
	4-Jan-19	7.9	7.8	7.9	7.8	7.7	7.8	7.7	7.7	7.7
	7-Jan-19	7.4	7.5	7.5	7.3	7.5	7.3	7.5	7.6	7.5
	9-Jan-19	7.6	7.5	7.7	7.4	7.5	7.4	7.6	7.7	7.6
	11-Jan-19	7.6	7.5	7.4	7.6	7.5	7.5	7.4	7.8	7.6
	14-Jan-19	7.6	7.7	7.5	7.8	7.5	7.6	7.7	7.6	7.5
Mid-Flood	16-Jan-19	7.7	7.6	7.5	7.7	7.6	7.6	7.7	7.6	7.4
	18-Jan-19	7.8	7.9	7.7	7.9	7.8	7.8	7.9	7.9	7.8
	21-Jan-19	8.0	8.0	7.9	8.0	7.8	8.0	7.8	8.0	7.9
	23-Jan-19	7.8	7.7	7.8	7.7	7.9	7.9	7.7	7.8	7.8
	25-Jan-19	8.0	7.8	8.1	7.8	7.8	8.1	7.7	7.8	7.8
	28-Jan-19	8.7	8.8	9.1	9.0	8.6	9.6	9.1	8.7	9.0
	30-Jan-19	9.1	9.1	9.4	9.4	9.2	10.0	9.6	9.4	9.1

 Table 6-1
 Results Summary of Depth Average (Surface & Middle Layer) of DO (mg/L)

 Table 6-2
 Results Summary of Bottom Depth of DO (mg/L)

Tidal	Sampling date	CC1	CC2	CC3	CC4	CC13	SWI1	C3	C4	I1
	2-Jan-19	7.4	7.4	7.3	NA	7.2	7.2	7.4	7.4	7.2
	4-Jan-19	7.6	7.8	7.3	NA	7.8	7.4	7.5	7.5	7.3
	7-Jan-19	7.8	7.3	7.4	NA	7.4	7.4	7.6	7.6	7.5
Mid-Ebb	9-Jan-19	7.5	7.4	7.4	NA	7.4	7.5	7.6	7.5	7.4
MIG-EDD	11-Jan-19	7.5	7.4	7.7	NA	7.6	7.6	7.5	7.5	7.7
	14-Jan-19	7.6	7.6	7.4	NA	7.5	7.7	7.6	7.6	7.3
	16-Jan-19	7.5	7.5	7.2	NA	7.6	7.4	7.6	7.6	7.1
	18-Jan-19	7.6	7.6	7.6	NA	7.6	7.7	7.6	7.8	7.6

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Monthly Environmental Monitoring & Audit Report – January 2019



Tidal	Sampling date	CC1	CC2	CC3	CC4	CC13	SWI1	С3	C4	I1
	21-Jan-19	7.8	7.9	7.8	NA	7.7	7.8	7.6	7.8	7.6
	23-Jan-19	7.7	7.6	7.9	NA	7.8	7.9	7.8	7.6	7.9
	25-Jan-19	8.1	7.8	8.3	NA	7.9	8.3	8.0	8.0	8.1
	28-Jan-19	8.4	8.6	8.3	NA	8.6	9.5	8.4	8.4	9.0
	30-Jan-19	9.3	8.7	8.4	NA	9.3	8.9	8.6	8.8	8.9
	2-Jan-19	7.6	7.5	7.3	NA	7.3	7.3	7.4	7.4	7.3
	4-Jan-19	7.9	7.4	7.5	NA	7.5	7.9	7.5	7.4	7.5
	7-Jan-19	7.4	7.3	7.4	NA	7.4	7.4	7.4	7.5	7.4
	9-Jan-19	7.5	7.3	7.5	NA	7.5	7.5	7.4	7.5	7.5
	11-Jan-19	7.5	7.5	7.4	NA	7.4	7.6	7.4	7.7	7.5
	14-Jan-19	7.6	7.6	7.2	NA	7.5	7.5	7.5	7.5	7.3
Mid-Flood	16-Jan-19	7.6	7.6	7.1	NA	7.5	7.7	7.6	7.5	7.1
	18-Jan-19	7.8	7.7	7.6	NA	7.7	7.9	7.8	7.8	7.8
	21-Jan-19	8.0	8.0	7.7	NA	7.8	7.9	7.7	7.7	7.7
	23-Jan-19	7.8	7.7	7.7	NA	7.6	7.8	7.6	7.9	7.7
	25-Jan-19	7.9	7.6	8.1	NA	7.7	8.1	7.8	7.8	7.9
	28-Jan-19	8.7	8.4	8.3	NA	8.6	9.5	8.5	8.5	8.3
	30-Jan-19	9.4	8.6	9.0	NA	9.1	10.1	8.6	8.8	9.0

Remark: No Dissolved Oxygen (Bottom) monitoring data available for CC4 due to the water depth measured at CC4 during the monitoring days were less than 3 meters.

Table 6-3	Results Summary of Depth Average of Turbidity (NTU)
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Tidal	Sampling date	CC1	CC2	CC3	CC4	CC13	SWI1	C3	C4	I1
	2-Jan-19	1.9	1.6	2.1	1.7	2.2	1.9	2.2	2.1	2.0
	4-Jan-19	1.7	1.8	1.9	1.8	1.9	1.8	1.8	1.8	2.0
	7-Jan-19	1.3	1.6	1.2	1.6	1.6	1.3	1.5	1.5	1.3
	9-Jan-19	1.3	1.7	1.5	1.4	1.8	1.7	2.3	2.0	1.3
	11-Jan-19	2.9	2.5	1.5	1.4	1.1	0.8	2.8	1.5	1.1
	14-Jan-19	0.9	0.7	1.1	0.4	0.7	0.5	1.3	1.5	1.2
Mid-Ebb	16-Jan-19	0.9	0.4	1.3	0.7	0.4	1.1	1.3	1.3	1.4
	18-Jan-19	0.8	0.7	0.8	0.8	1.0	0.9	0.8	0.5	0.9
	21-Jan-19	0.9	0.8	1.0	1.0	0.9	1.2	1.0	1.0	1.2
	23-Jan-19	1.1	1.1	1.2	1.0	1.1	1.1	1.0	1.1	1.1
	25-Jan-19	1.2	1.2	1.2	1.1	2.1	0.8	1.3	1.2	1.2
	28-Jan-19	1.2	1.4	1.4	1.3	1.5	1.5	1.9	1.3	1.2
	30-Jan-19	1.1	1.4	1.5	1.7	1.3	1.3	1.1	0.9	1.5
	2-Jan-19	1.6	1.6	1.9	1.6	2.0	1.9	1.9	1.9	1.9
	4-Jan-19	1.5	1.6	1.3	1.7	1.4	1.5	1.5	1.5	1.3
	7-Jan-19	1.9	1.7	1.1	1.8	1.5	1.0	1.7	1.7	1.4
	9-Jan-19	1.6	1.8	1.2	1.7	1.9	1.4	1.9	1.8	1.1
	11-Jan-19	1.2	1.7	0.9	1.2	1.6	1.3	1.5	1.6	1.3
	14-Jan-19	0.5	0.4	1.1	0.5	1.2	0.6	1.6	1.7	0.9
Mid-Flood	16-Jan-19	0.7	0.4	0.9	0.5	0.5	0.8	0.4	0.9	1.4
	18-Jan-19	0.7	0.9	0.9	0.9	0.8	0.8	1.1	1.1	0.8
	21-Jan-19	0.8	0.6	1.1	0.9	0.8	1.2	0.9	1.1	1.0
	23-Jan-19	1.2	1.3	1.3	1.2	1.2	1.2	1.7	1.7	1.3
	25-Jan-19	1.1	1.1	1.1	1.0	2.0	0.7	1.1	1.0	1.2
	28-Jan-19	1.3	1.6	1.4	0.9	1.9	1.2	1.0	1.3	1.5
	30-Jan-19	1.2	1.4	1.5	1.1	1.9	0.9	1.5	1.2	1.6



Tidal	Sampling	CC1	CC2	CC3	CC4	CC13	SWI1	C3	C4	I1
	date									
	2-Jan-19	2.0	2.4	1.7	2.1	1.9	2.7	3.7	3.1	2.6
	4-Jan-19	2.7	2.7	1.6	2.3	2.4	3.1	3.2	3.3	3.6
	7-Jan-19	2.3	3.1	1.7	3.5	2.9	2.7	1.2	1.5	1.2
	9-Jan-19	2.7	3.7	1.5	3.2	4.6	3.1	1.8	3.2	3.7
	11-Jan-19	1.2	1.6	1.4	1.1	1.4	1.0	1.5	1.5	1.9
	14-Jan-19	1.4	1.2	1.0	1.0	1.4	1.1	1.2	1.1	1.0
Mid-Ebb	16-Jan-19	2.8	2.2	2.8	2.3	1.8	3.0	2.4	2.6	3.7
	18-Jan-19	1.4	1.4	1.2	1.4	1.8	1.7	1.4	1.3	1.4
	21-Jan-19	1.1	1.0	1.0	2.2	1.3	1.6	1.7	1.7	1.7
	23-Jan-19	4.3	3.9	3.8	3.5	4.0	4.1	4.9	3.8	2.3
	25-Jan-19	4.0	1.6	3.1	4.3	4.1	2.3	2.2	2.9	2.6
	28-Jan-19	4.6	4.7	4.5	2.8	6.7	5.6	5.4	4.2	3.4
	30-Jan-19	3.4	4.4	2.4	2.6	3.2	3.7	4.0	3.2	3.8
	2-Jan-19	2.6	1.8	1.9	2.4	2.2	3.4	2.6	2.0	2.2
	4-Jan-19	2.5	3.1	2.6	2.9	2.5	2.6	3.0	3.3	4.1
	7-Jan-19	2.7	1.4	3.4	4.3	3.5	3.1	4.2	4.4	3.2
	9-Jan-19	3.4	2.9	1.5	2.8	3.8	2.9	2.4	3.2	3.0
	11-Jan-19	1.9	1.9	1.4	2.1	1.8	3.0	3.2	2.2	1.2
	14-Jan-19	1.1	1.0	1.0	1.1	1.8	1.6	1.0	1.0	1.0
Mid-Flood	16-Jan-19	3.0	1.9	2.5	3.5	2.6	3.5	3.1	3.3	2.2
	18-Jan-19	1.6	1.2	1.8	1.9	1.6	1.5	1.0	1.2	1.4
	21-Jan-19	1.3	1.6	1.6	3.9	2.8	1.7	1.8	2.3	2.6
	23-Jan-19	3.3	2.3	2.5	3.8	2.5	3.5	3.7	4.8	3.1
	25-Jan-19	2.8	3.0	1.1	1.8	3.5	1.4	5.6	2.6	2.1
	28-Jan-19	6.8	5.8	4.4	2.8	6.0	5.3	4.3	3.0	6.7
	30-Jan-19	4.3	4.3	4.3	4.3	4.3	4.9	3.8	6.0	3.7

 Table 6-4
 Results Summary of Depth Average of Suspended Solids (mg/L)

- 6.2.2 During the Reporting Period, field measurements showed that temperatures of marine water were within 17.2°C to 18.6°C; the salinity concentrations within 33.2 to 35.1 ppt and pH values within 8.1 to 8.6.
- 6.2.3 The monitoring results including in-situ measurements and laboratory testing results are provided in *Appendix H*. The graphical plots are shown in *Appendix I*.
- 6.2.4 A summary of exceedances for the four parameters: dissolved oxygen (DO), turbidity and suspended solids (SS) are shown in *Table 6-5*.

Station	DO (Ave of Top & mid-depth)		DO (Bottom Depth)		Turbidity (Depth Ave)		SS (Depth Ave)		Total Exceedance for the Station	
	AL	LL	AL	LL	AL	LL	AL	LL	AL	LL
CC1	0	0	0	0	0	0	0	0	0	0
CC2	0	0	0	0	0	0	0	0	0	0
CC3	0	0	0	0	0	0	0	0	0	0
CC4	0	0	NA	NA	0	0	0	0	0	0
CC13	0	0	0	0	0	0	0	0	0	0
SWI1	0	0	0	0	0	0	0	0	0	0
No of Exceedance	0	0	0	0	0	0	0	0	0	0

 Table 6-5
 Summary of Water Quality Exceedance



- 6.2.5 In this Reporting Period, no marine water quality exceedance was recorded.
- 6.2.6 For exceedances recorded in last reporting period (19, 29 and 31 December 2018), no pile excavation for the bridge pier foundations was undertaken at the monitoring days as advised by the Contractor of Contract 1. As water quality mitigation measures, silt curtains were properly implemented and maintained at locations in accordance with EP's condition. No abnormal and turbid discharge made from the construction site was observed during the course of marine water sampling. It is considered that the exceedances of turbidity and suspended solid recorded in this period were unlikely caused by the Project. Nevertheless, the Contractor was reminded to check the implementation of silt curtain regularly to ensure no seepage of muddy water into the marine water body.



7. WASTE MANAGEMENT

7.1 GENERAL WASTE MANAGEMENT

7.1.1 Waste management would be carried out by an on-site Environmental Officer or an Environmental Consultant from time to time.

7.2 **RECORDS OF WASTE QUANTITIES**

- 7.2.1 All types of waste arising from the construction work are classified into the following:
 - Construction & Demolition (C&D) Material;
 - Chemical Waste; and
 - General Refuse
- 7.2.2 According to the information provided by Contractor of Contract 1 and Contract 2, waste disposal was made in the Reporting period are summarized in *Tables 7-1* and *7-2*.

 Table 7-1
 Summary of Quantities of Inert C&D Materials

	Cont	ract 1	Contract 2		
Type of Waste	Quantity	Disposal Location	Quantity	Disposal Location	
C&D Materials (Inert) ('000m ³)	0.845	TKO 137	0.358	TKO 137	
Reused in this Contract (Inert) ('000m ³)	0	-	0	-	
Reused in other Projects (Inert) ('000m ³)	0	-	0	-	
Disposal as Public Fill (Inert) ('000m ³)	0.845	TKO 137	0.358	TKO 137	

Table 7-2 Summary of Quantities of C&D Wastes

	Contract 1		Contract 2	
Type of Waste	Quantity	Disposal Location	Quantity	Disposal Location
Recycled Metal ('000kg)	0	-	0	-
Recycled Paper / Cardboard Packing ('000kg)	0.023	Collected by paper recycling	0	-
Recycled Plastic ('000kg)	0	-	0	-
Chemical Wastes ('000kg)	0	-	0	-
General Refuses ('000m ³)	0.077	NENT	356.7	NENT

7.2.3 The Monthly Summary Waste Flow Table of the Contracts 1 and Contract 2 are shown in *Appendix K*.

8. SITE INSPECTION

8.1 **REQUIREMENTS**

8.1.1 According to the approved EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

8.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

Contract 1

- 8.2.1 In this Reporting Month, weekly joint site inspection to evaluate site environmental performance for the *Contract 1* was carried out by the Project Consultant, ET and the Contractor on 2, 9, 16, 23 & 30 January 2019. Moreover, the Independent Environmental Checker (IEC) perform monthly site inspection was on 9 January 2019. During site inspections, no non-compliance was noted.
- 8.2.2 The findings / deficiencies of *Contract 1* that observed during the weekly site inspection are listed in *Table 8-1* and the site layout plan was provided in **Appendix A**.

Date	Findings / Deficiencies	Follow-Up Status	
2 January 2019	• No environmental issue was observed during the site inspection	• Nil	
9 January 2019	 <u>Observation:</u> Edge of jack up barge should be sealed properly to prevent run-off leakage into the water body. (Jack up barge E7P4 at Portion II) 	 Proper mitigation measure was implemented to avoid fun-off leakage into the water body. (Rectified on 16 January 2019) 	
	• Drip tray should be provided for chemical storage on-site. (Jack up barge E7P4 at Portion II)	• Chemical containers were placed inside drip tray. (Rectified on 16 January 2019)	
16 January 2019	• No environmental issue was observed during the site inspection	• Nil	
23 January 2019	 <u>Observation:</u> NRMM label should be displayed properly for NRMM using on-site. (Barge KMS 3 at Portion II – Generator and Power Pack). 	• NRMM labels for generator and power pack were under application and those plant will be idle until the NRMM label was granted.	
30 January 2019	 <u>Observation:</u> Three side and top shelter should be provided for bag cement more than 20 bags storage on-site. (Works Area A) Hole in the drip tray should be pluged to prevent leakage. (Works Area A) 	• To be follow up in next reporting period.	

Table 8-1Site Observations of the Contract 1

Contract 2

- 8.2.3 In this Reporting Month, weekly joint site inspection to evaluate site environmental performance for the *Contract 2* was carried out by the Project Consultant, ET and the Contractor on 23 & 30 *January 2019*. During site inspections, no non-compliance was noted.
- 8.2.4 The findings / deficiencies of *Contract 2* that observed during the weekly site inspection are listed in *Table 8-2* and the site layout plan was provided in **Appendix A**.



Table 8-2Site Observations of the Contract 2

Date	Findings / Deficiencies	Follow-Up Status
23 January 2019	• No environmental issue was observed during the site inspection	• Nil
30 January 2019	• No environmental issue was observed during the site inspection	• Nil



9. LANDFILL GAS MONITORING

9.1 GENERAL REQUIREMENT

- 9.1.1 Pursuant to Section 13 of the Project's EM&A Manual, Landfill gas monitoring shall perform during construction activities within the 250m Consultation Zone of Tseung Kwan O Stage II & III Landfill. For landfill gas monitoring requirements, pre entry and routine measurement shall be undertaken in accordance with the *Factories and Industrial Undertaking (Confined Spaces) Regulation.*
- 9.1.2 According to Environmental Mitigation Implementation Schedule (EMIS) S14.7.6, portable monitoring equipment can be used to conduct landfill gas monitoring. Moreover, the frequency and areas to be monitored should be set down prior to commencement of the works either by the Safety Officer or by an appropriately qualified person.

9.2 LIMIT LEVELS AND EVENT AND ACTION PLAN

9.2.1 In event of the trigger levels specified in Table 14.6 of the EIA report being exceeded, a person, such as the Safety Officer, shall be nominated, with deputies, to be responsible for dealing with any emergency which may occur due to LFG. In an emergency situation the nominated person, or his deputies, shall have the necessary authority and shall ensure that the confined space is evacuated and the necessary works implemented for reducing the concentrations of gas. The Limit levels and relevant Action Plans for landfill gas detected in utilities and any on-site areas following construction is listed in *Table 9-1*.

Parameter	Limit Level	Actions		
	>10% LEL (i.e.	Post "No Smoking" signs		
	>0.5% by volume)	Prohibit hot works		
Methane		• Ventilate to restore methane to <10% LEL		
Wiethalle	>20% LEL (i.e.	Stop excavation works		
	>1% by volume)	• Evacuate personnel/prohibit entry		
		• Increase ventilation to restore methane to <10% LEL		
	>0.5%	• Ventilate to restore carbon dioxide to <0.5%		
Carbon	>1.5%	Stop excavation works		
dioxide		Evacuate personnel/prohibit entry		
		• Increase ventilation to restore carbon dioxide to <0.5%		
	<19%	Ventilation to restore oxygen >19%		
Oxygen	<18%	Stop excavation works		
Oxygen		• Evacuate personnel/prohibit entry		
		 Increase ventilation to restore oxygen to >19% 		

 Table 9-1
 Actions in the Event of Landfill Gas Being Detected in Excavations

9.2.2 In the event of the trigger levels specified in Table 9-1 being exceeded, the Safety Officer shall be responsible for dealing with any emergency which may occur due to landfill gas.

9.3 LANDFILL GAS MONITORING

9.3.1 Since the major construction activities under the Project were not yet commenced within the 250m Consultation Zone of Tseung Kwan O Stage II & III Landfill, no landfill gas monitoring was undertaken by the Contractors in the Reporting Period.



10. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

10.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

10.1.1 In the Reporting Period, no environmental complaint, summons and prosecution under the EM&A Programme was lodged for the project. The statistical summary table of environmental complaint is presented in *Tables 10-1, 10-2* and *10-3*.

 Table 10-1
 Statistical Summary of Environmental Complaints

Demonstra Denied Contract		Environmental Complaint Statistics		
Reporting Period	no.	Frequency	Cumulative	Complaint Nature
1 – 31 January 2019	1	0	0	NA
1 – 31 January 2019	2	0	0	NA

Table 10-2 Statistical Summary of Environmental Summons

Demonstring Deviced Contract		Environmental Summons Statistics		
Reporting Period	no.	Frequency	Cumulative	Summons Nature
1 – 31 January 2019	1	0	0	NA
1 – 31 January 2019	2	0	0	NA

Table 10-3 Statistical Summary of Environmental Prosecution

Donorting Doriod	Contract		Environmental Prosecution Statistics		
Reporting Period	no.	Frequency	Cumulative	Prosecution Nature	
1 – 31 January 2019	1	0	0	NA	
1 – 31 January 2019	2	0	0	NA	



11. IMPLEMENTATION STATUS OF MITIGATION MEASURES

11.1 GENERAL REQUIREMENTS

- 11.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in *Appendix L*.
- 11.1.2 The Contractors had been implementing the required environmental mitigation measures according to the Environmental Monitoring and Audit Manual subject to the site condition. Environmental mitigation measures generally implemented by the Contractors in this Reporting Month are summarized in *Table 11-1*.

Issues	Environmental Mitigation Measures
Construction	• Regularly to maintain all plants, so only the good condition plants were used
Noise	on-site ;
	• If possible, all mobile plants onsite operation has located far from NSRs;
	• When machines and plants (such as trucks) were not in using, it was switched off;
	• Wherever possible, plant was prevented oriented directly the nearby NSRs;
	• Provided quiet powered mechanical equipment to use onsite;
	 Weekly noise monitoring was conducted to ensure construction noise meet the criteria.
Air Quality	
All Quality	 Stockpile of dusty material was covered entirely with impervious sheeting or sprayed with water so as to maintain the entire surface wet;
	 The construction plants regularly maintained to avoid the emissions of black smoke;
	• The construction plants switched off when it not in use;
	• Water spraying on haul road and dry site area was provided regularly;
	• Where a vehicle leaving the works site is carrying a load of dusty materials, the
	load has covered entirely with clean impervious sheeting; and
	• Before any vehicle leaving the works site, wheel watering has been performed.
Water Quality	Debris and refuse generated on-site collected daily;
	Oils and fuels were stored in designated areas;
	• The chemical waste storage as sealed area provided;
	• Site hoarding with sealed foot were provided surrounding the boundary of working site to prevent wastewater or site surface water runoff get into public areas; and
	• Portable chemical toilets were provided on-site. A licensed contractor was regularly disposal and maintenance of these facilities.
	 Silt curtain was installed and maintained in accordance with EP condition
Waste and	 Excavated material reused on site as far as possible to minimize off-site disposal.
Chemical	• Scrap metals or abandoned equipment should be recycled if possible;
Management	• Waste arising kept to a minimum and be handled, transported and disposed of in a
_	suitable manner;
	• Disposal of C&D wastes to any designated public filling facility and/or landfill
	followed a trip ticket system; and
	• Chemical waste handled in accordance with the Code of Practice on the Packaging,
	Handling and Storage of Chemical Wastes.
General	The site is generally kept tidy and clean.Mosquito control is performed to prevent mosquito breeding on site.
	· mosquito control is performed to prevent mosquito orecaning on site.

 Table 11-1
 Environmental Mitigation Measures in the Reporting Month

11.2 TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

11.2.1 Tentative construction activities to be undertaken in **February 2019** should be included:-

<u>Contract 1</u>

- Site Clearance Work at Works Area A
- Setup of Site Office at Works Area A
- Pre-drilling Works at Portion 2
- Piling Works at Portion 2



Contract 2

- Site Clearance Work at Portion VI
- Initial Survey Work at Portion III and VI
- UU Detection Work at Portion III and VI
- Trail Pit Work at Portion III and VI
- Pre-drill Work at Portion III and VI
- Silt Curtain Installation Work at Portion III and VI

11.3 IMPACT FORECAST

- 11.3.1 Potential environmental impacts arising from the works of the Contracts 1 include:
 - Construction waste
 - Air quality
 - Construction noise
 - Water quality
- 11.3.2 Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule in Appendix L to ensure site environmental performance is acceptable.



12. CONCLUSIONS AND RECOMMENDATIONS

12.1 CONCLUSIONS

- 12.1.1 This is the monthly EM&A report as presented the monitoring results and inspection findings for the reporting period from 1^{st} to 31^{st} January 2019.
- 12.1.2 In this Reporting Period, no construction noise monitoring results that triggered the Limit Level was recorded. No Notification on Exceedance (NOE) or the associated corrective actions were therefore issued. Moreover, no noise complaint (which is an Action Level exceedance) was received by the Project Consultant, EPD and the Contractors.
- 12.1.3 In this Reporting Period, no 1-Hour TSP or 24-Hr TSP air quality monitoring exceedance was recorded. No NOE or the associated corrective actions were therefore issued.
- 12.1.4 For marine water quality monitoring, no exceedance was recorded in the reporting period. No NOE was therefore issued.
- 12.1.5 No documented complaint, notification of summons or prosecution were received and recorded for the Project.

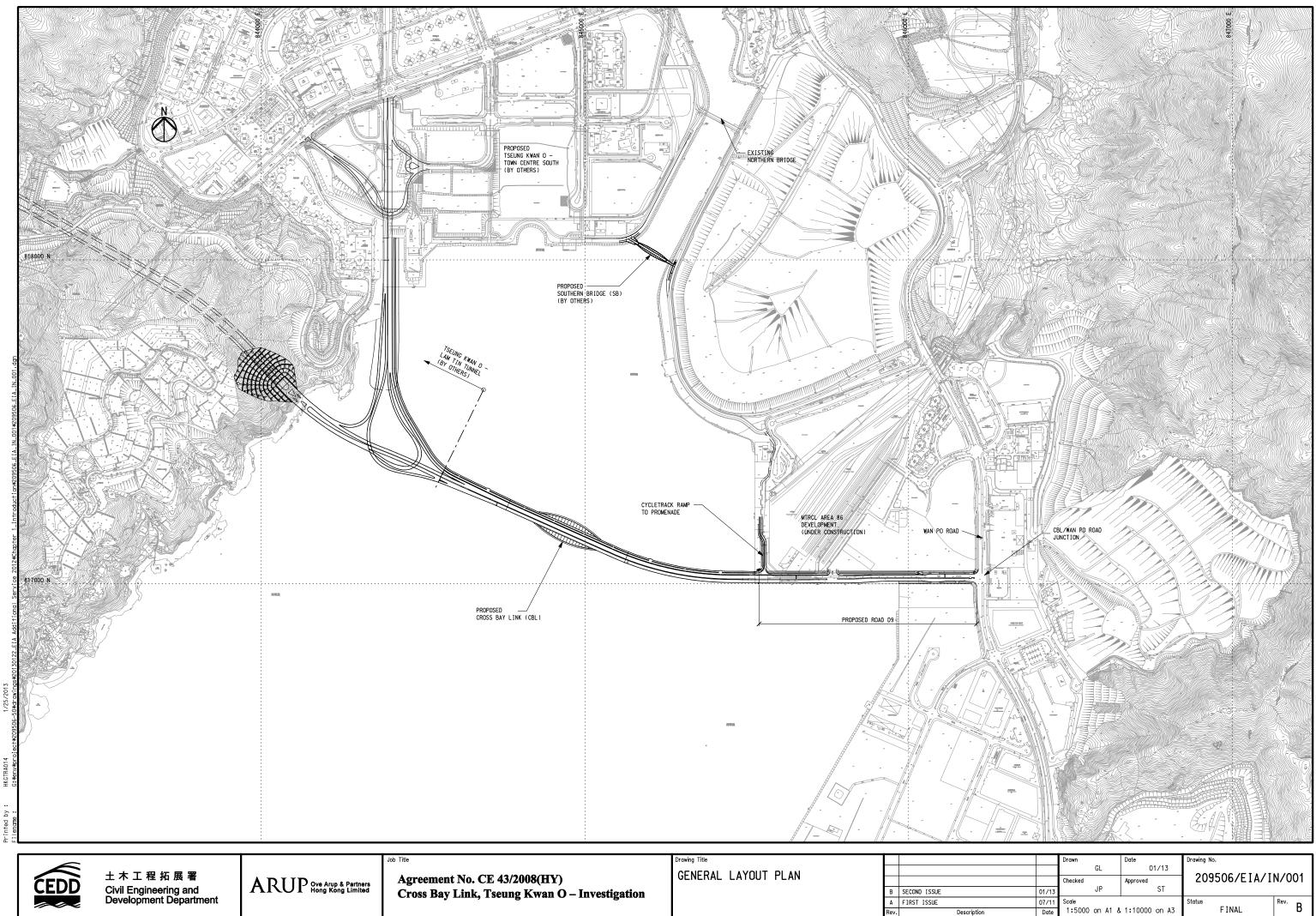
12.2 RECOMMENDATIONS

- 12.2.1 Due to the coming month is dry and windy season for Hong Kong, the Contractor was reminded that all the works to undertaking must be fulfill environmental statuary requirement, especially construction dust come from working sites of the Project.
- 12.2.2 In regards to the marine works, special attention should be paid on excavation works for the bridge pier foundations underway in which water quality mitigation measures such as erection of silt curtain should be properly implemented and maintained.

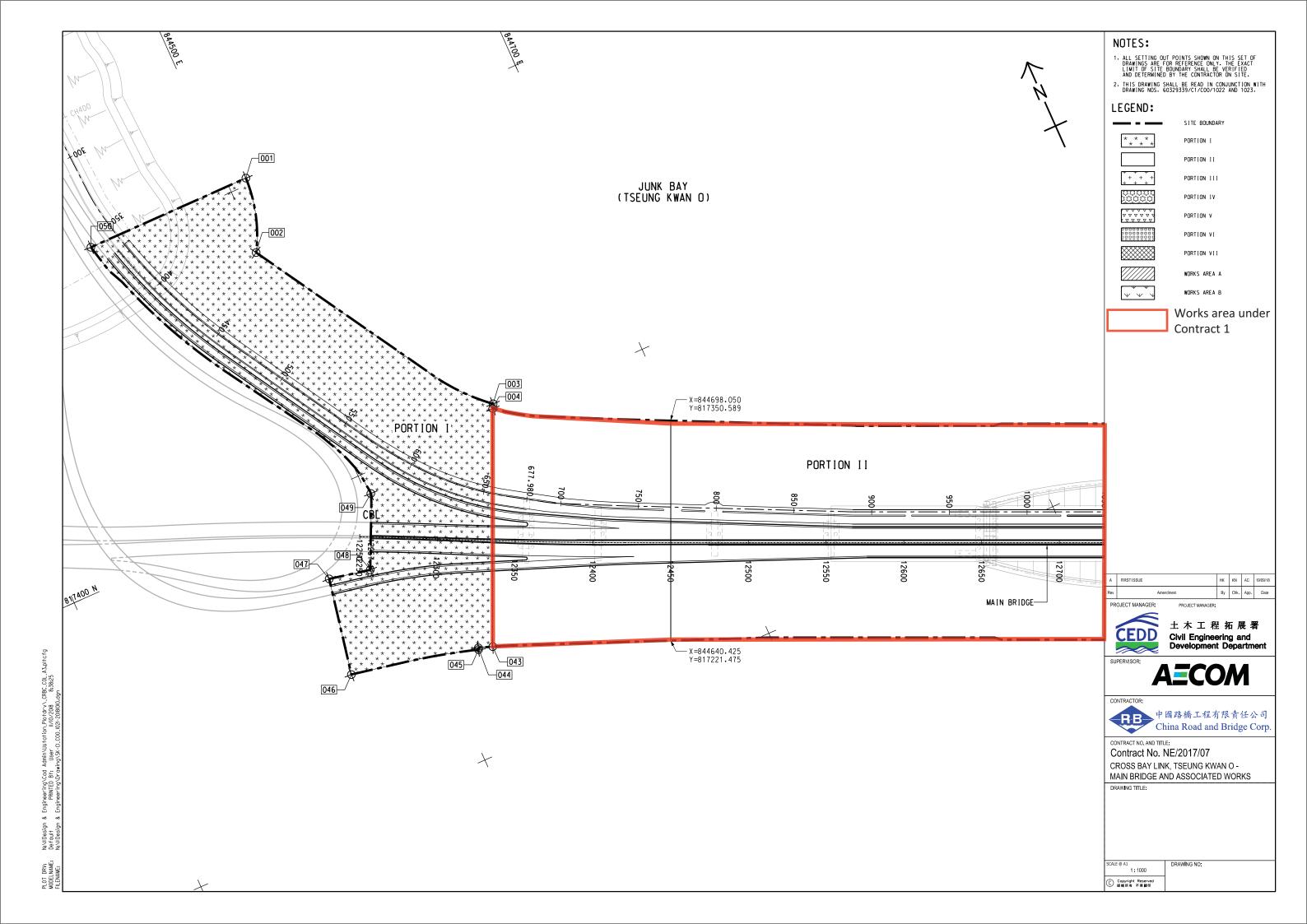


Appendix A

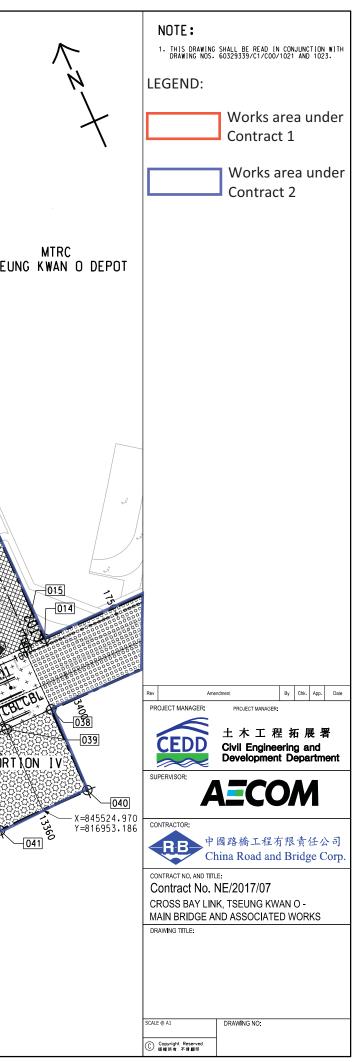
Project Layout Plan

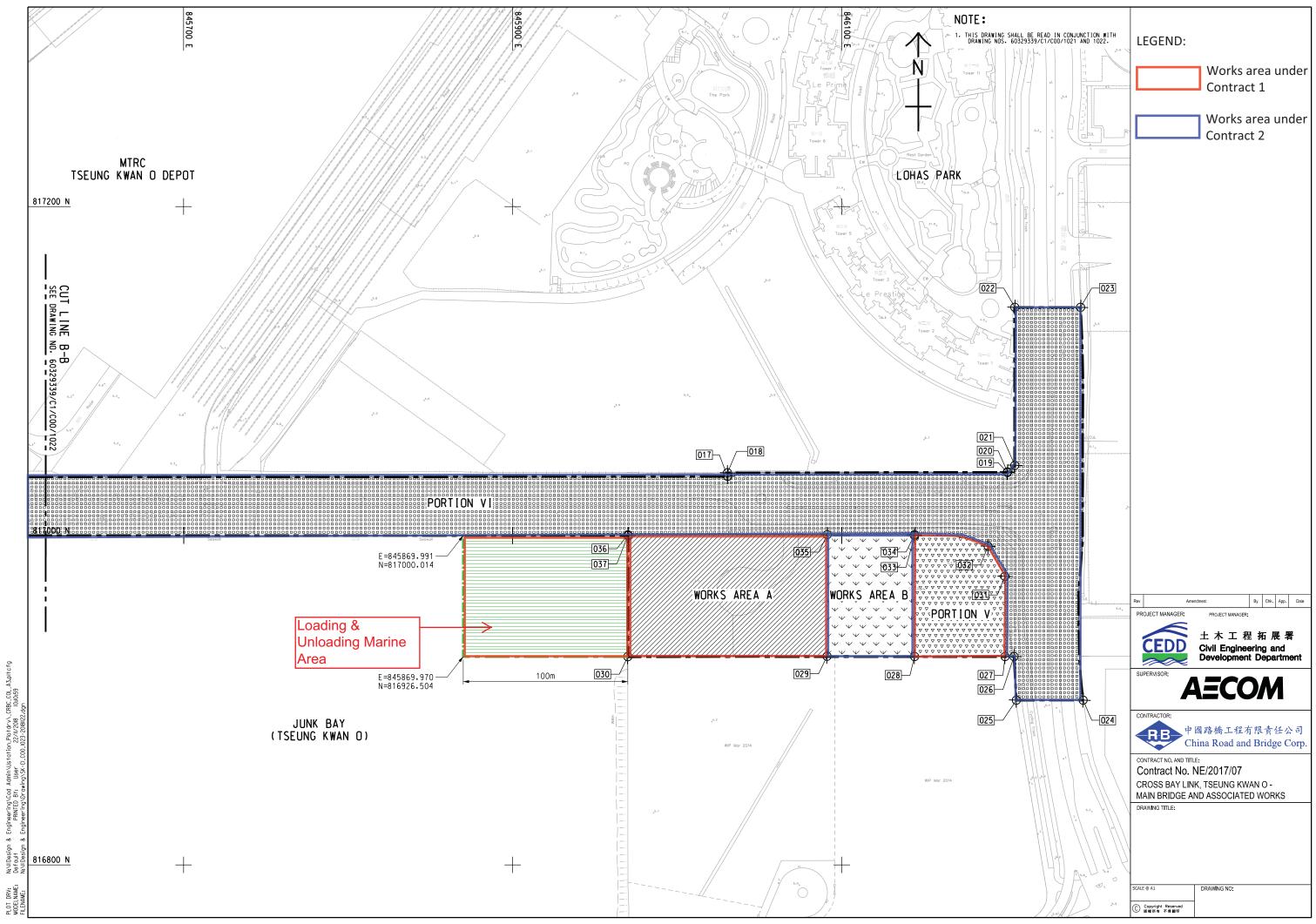


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001 844512.175 817604.422 002 844498.695 817557.993	026 846204.700 816926.589 027 846199.263 816926.590	-	
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004 844596.769 817404.339 005 845132.374 817153.641	029 846091.080 816926.744 030 845969.970 816926.504	-	
006 845500.00 817088.580	031 846199.197 816975.364		
007 845524.969 817088.226 008 845524.909 817236.307	032 846188.983 816993.582		
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016 845524.969 817035.670 017 846030.606 817036.089	041 845500.00 816952.636	-	***
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020 846200.700 817038.796 021 846205.200 817042.796	045 844525.199 817266.527 046 844444.018 817285.203	-	
022 846205.200 817138.796	047 844456.043 817347.194	-	
023 846245.180 817138.796 024 846246.698 816900.099	048 844482.530 817341.743 049 844502.889 817386.445	-	
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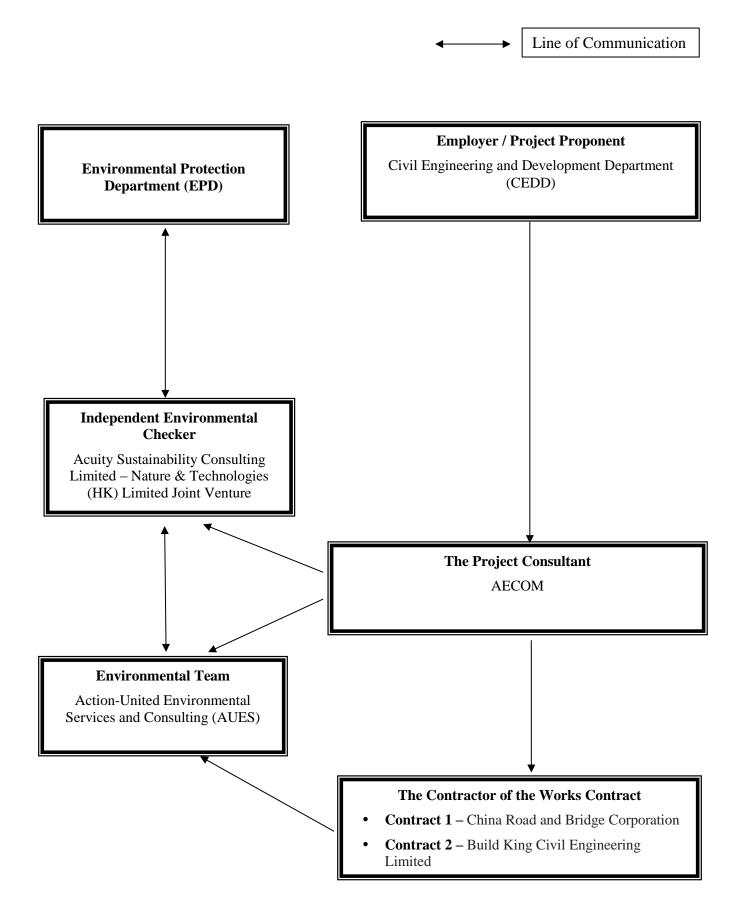


Appendix B

Project Organization Chart & Contact Details of Key Personnel for the Project



Project Organization Structure





Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
CEDD	Project Proponent	CK Lam	2301 1398	2714 5174
CEDD	Project Proponent	Simon Wong	2301 1398	2714 5174
AECOM	Senior Resident Engineer	Jackie Chan	3595 8045	3596 6118
AECOM	Resident Engineer	Kingman Chan	3595 8045	3596 6118
ASC – N&T JV	Independent Environmental Checker	Kevin Li	2698 6833	2698 9383
ASC – N&T JV	Principal Environmental Consultant	Pan Fong	2698 6833	2698 9383
ASC – N&T JV	Senior Environmental Consultant	Tandy Tse	2698 6833	2698 9383
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Martin Li	2959 6059	2959 6079
CRBC	Site Agent	Raymond Cheng	6026 5971	2283 1689
CRBC	Environmental Officer	Calvin So	9724 6254	2283 1689
CRBC	Environmental Supervisor	Lila Lui	9790 5433	2283 1689
Build King	Site Agent	Stephen Leung	9071 7657	TBA
Build King	Environmental Officer	Stephen Leung	9071 7657	TBA
Build King	Environmental Supervisor	Walter Wong	6584 7065	TBA

Contact Details of Key Personnel for the Project

Legend:

CEDD (Employer) – Civil Engineering and Development Department

AECOM (Project Consultant) – AECOM Asia Co. Ltd.

ASC – N&T JV (IEC) – Acuity Sustainability Consulting Limited – Nature & Technologies (HK) Limited Joint Venture

AUES (ET) – Action-United Environmental Services & Consulting

CRBC (the Main Contractor of the Works Contract 1) – China Road and Bridge Corporation

Build King (the Main Contractor of the Works Contract 2) - Build King Civil Engineering Limited



Appendix C

3-Month Rolling Construction Programme



Contract 1

Data Date : 08-Jan-19

Page: 1

Contract No. NE/2017/07 Cross Bay Link, Tseng Kwan O - Main Bridge and Associated Works

Autive Summing P Section 2 SP10920 SP10920 SP10940 P Section 5 SP1260 SP10940 P Section 5 SP1260 SP10940 SP10400 SP10400 SP10400 SP10400 SP10440 SP10450 SP10460 SP10450 SP10450 SP10500 F SP10500 SP10500 SP10500 SP10500 SP10600 SP10600	Seung Kwan O Main Bridge and Associated Works (Jan-19) nary Programme of Works-All Works within Portion II,III,IV and VI BL Main Bridge and Marine Viaduet re-drilling Works liling Works of the Works-All Works within Portion V (CBL E&M Plantroom) tructural Works Contractor's Design & Method Statement Submission & Approval emporary Works Design Maior Construction Works Contractor's Design Submission and Approval literative Design Submission and Approval eneral Submission roject Manager's Acceptance of Subcontractors reliminaries	1306 1306 1219 1219 1219 286 721 203 203 1000 414 718 917 300 843 1000	1162 29-Jun-18 A 1162 29-Jun-18 A 1162 17-Sep-18 A 1162 17-Sep-18 A 1162 17-Sep-18 A 121 17-Sep-18 A 203 02-Apr-19 203 02-Apr-19 203 02-Apr-19 354 13-Auz-18 A 653 27-Auz-18 A 213 24-Auz-18 A	29-Jun-18 29-Jun-18 24-Sep-18 24-Sep-18 24-Sep-18 08-Dec-18 02-Apr-19 02-Apr-19 29-Jun-18	14-Mar-22 14-Mar-22 14-Mar-22 14-Mar-22 08-May-19 10-Nov-20 21-Oxer.19	24-Jan-22 24-Jan-22 24-Jan-22 24-Jan-22 06-Jul-19	-30 -30 -30 -30 450	4.68% 0	-49 -49 -49 -49 -49	
P Section 2 SP10920 C SP109400 F P Section 5 S P Section 5 S P Section 5 S SP10400 F SP10400 S SP10400 F SP10500 F SP10620 F	of Works-Ail Works within Portion II,III,IV and VI BL Main Bridge and Marine Viaduet re-drilling Works tiling Works of the Works-Ail Works within Portion V (CBL E&M Plantroom) tructural Works Contractor's Design & Method Statement Submission & Approval emporary Works Design fethod Statement Submission for Major Construction Works Contractor's Design Submission and Approval Alternative Design Submission and Approval General Submission roject Manager's Acceptance of Subcontractors	1219 1219 286 721 203 1000 414 718 917 300	1162 17-Sep-18 A 1162 17-Sep-18 A 121 17-Sep-18 A 673 23-Nov-18 A 203 02-Apr-19 203 02-Apr-19 854 29-Jun-18 A 345 13-Aug-18 A 635 27-Aug-18 A	24-Sep-18 24-Sep-18 24-Sep-18 08-Dec-18 02-Apr-19 02-Apr-19	14-Mar-22 14-Mar-22 08-May-19 10-Nov-20	24-Jan-22 24-Jan-22	-30 -30		-49 -49	
SP10920 C SP10940 F SP10960 F P Section 5 S SP11260 S SP10900 T SP10400 T SP10400 T SP10400 S SP10400 F SP10500 F SP10520 F SP10620 F SP10620 F SP10620 F SP10640 F	BL Main Bridge and Marine Viaduet re-drilling Works tiling Works of the Works-All Works within Portion V (CBL E&M Plantroom) tructural Works Contractor's Design & Method Statement Submission & Approval emporary Works Design fethod Statement Submission for Major Construction Works Contractor's Design Submission and Approval Alternative Design Submission and Approval General Submission roject Manager's Acceptance of Subcontractors	1219 286 721 203 203 1000 414 718 917 300	1162 17-Sep-18 A 121 17-Sep-18 A 673 23-Nov-18 A 203 02-Apr-19 203 02-Apr-19 854 29-Jun-18 A 345 13-Aug-18 A 635 27-Aug-18 A	24-Sep-18 24-Sep-18 08-Dec-18 02-Apr-19 02-Apr-19	14-Mar-22 08-May-19 10-Nov-20	24-Jan-22	-30		-49	
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P10960 F Section 5 P11260 S P11260 S S P10400 T P10400 T P10420 N P10440 C P10440 C P10480 C P10520 F P10620 F P10620 F P10620 F P10620 F P10620 F P10620 F P10620 F	tiling Works of the Works-All Works within Portion V (CBL E&M Plantroom) tructural Works Contractor's Design & Method Statement Submission & Approval emporary Works Design (ethod Statement Submission for Major Construction Works Contractor's Design Submission and Approval Uternative Design Submission and Approval General Submission roject Manager's Acceptance of Subcontractors	721 203 203 1000 414 718 917 300	673 23-Nov-18 A 203 02-Apr-19 203 02-Apr-19 854 29-Jun-18 A 345 13-Aug-18 A 635 27-Aug-18 A	08-Dec-18 02-Apr-19 02-Apr-19	10-Nov-20	06-Jul-19	450	57 (00)	50	
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P11260 S minaries, I P10400 P P10400 P P10420 N P10420 N P P P10440 C P P P10440 C P P P10460 Z P P P10450 F P P P10520 F P P P10620 F P P P10620 F P P P10640 F P P P10640 F P P	tructural Works Contractor's Design & Method Statement Submission & Approval emporary Works Design Aethod Statement Submission for Major Construction Works Contractor's Design Submission and Approval Uternative Design Submission and Approval General Submission roject Manager's Acceptance of Subcontractors	203 1000 414 718 917 300	203 02-Apr-19 854 29-Jun-18 A 345 13-Aug-18 A 635 27-Aug-18 A	02-Apr-19	21-Oct-19	27-Nov-20	1	6.66% 0	17	
P10400 7 P10400 7 P10420 N P10440 C P10440 C P10440 C P10440 C P10440 C P10440 C P10450 F P10450 F P10500 F P10620 F P10620 F P10620 F P10640 F	Contractor's Design & Method Statement Submission & Approval Cemporary Works Design Aethod Statement Submission for Major Construction Works Contractor's Design Submission and Approval Iternative Design Submission and Approval General Submission roject Manager's Acceptance of Subcontractors	1000 414 718 917 300	854 29-Jun-18 A 345 13-Aug-18 A 635 27-Aug-18 A			21-Oct-19	17		0	
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P10420 N PP10440 C PP10440 C SP10460 Z SP10480 C SP10500 F SP10520 F SP10600 F SP10600 F SP10640 F SP10640 F SP10640 F	Aethod Statement Submission for Maior Construction Works Contractor's Design Submission and Approval Iternative Design Submission and Approval General Submission roject Manager's Acceptance of Subcontractors	718 917 300	635 27-Aug-18 A	13-Sep-18	18-Dec-19	31-Oct-19	413	16.67% 0	-48	
SP10460 A SP10480 C SP10500 F SP10520 F SP10600 F SP10620 F SP10640 F minaries, C	Alternative Design Submission and Approval Beneral Submission roject Manager's Acceptance of Subcontractors	300		01-Sep-18	03-Oct-20	18-Aug-20	2	11.56% 0	-46	
SP10480 C SP10500 F SP10520 F SP10600 F SP10620 F SP10640 F minaries, C	ieneral Submission roject Manager's Acceptance of Subcontractors		854 13-Aug-18 A	20-Sep-18	10-May-21	24-Mar-21	161	6.87% 0	-47	
SP10500 F SP10520 F SP10600 F SP10620 F SP10640 F minaries, C	roject Manager's Acceptance of Subcontractors	843	224 07-Aug-18 A	28-Jan-19	19-Aug-19	23-Nov-19	207	25.33% 0	96	
SP10520 F SP10600 F SP10620 F SP10640 F minaries, C			650 29-Jun-18 A	29-Jun-18	18-Oct-20	18-Oct-20	63	22.89% 0	0	
SP10600 F SP10620 F SP10640 F minaries, C	reliminaries	662	517 23-Aug-18 A	16-Aug-18	07-Jun-20	07-Jun-20	119	21.9% 0	0	
SP10620 F SP10640 F minaries, C		213	58 07-Sep-18 A	12-Jul-18	06-Mar-19	09-Feb-19	-30	72.77% 0	-25	
SP10640 F minaries, C	recasting of Precast Shell	610	610 08-Nov-18 A	08-Jan-19	08-Sep-20	08-Sep-20	177	0% 0	0	
minaries, C	abrication of Precast Box Girder abrication of Steel Arch Bridge and Side Spans	642 469	596 10-Nov-18 A 469 18-Feb-19	22-Dec-18 18-Feb-19	25-Aug-20 31-May-20	23-Sep-20 31-May-20	236	7.17% 0 0% 0	0	-
porary Wo	ontractor's Design & Method Statement Submission & Approval	341	224 07-Aug-18 A	13-Sep-18	19-Aug-19	19-Aug-19	263		0	
	ks Design	241	141 13-Aug-18 A	13-Sep-18	20-Jun-19	20-Jun-19	277		0	
	ormwork design for V-shaped pier and crossbeam construction (incl. 21 days TRA)	39	39 08-Jan-19	08-Jan-19	21-Feb-19	21-Feb-19	167	0% 21	0	
	emporary falsework design for V-shaped pier and crossbeam construction (incl. 21 days TRA) teel mould design for precast box girder (incl. 21 days TRA)	56 48	56 22-Feb-19 6 10-Nov-18 A	22-Feb-19 08-Dec-18	27-Apr-19 14-Jan-19	27-Apr-19 01-Feb-19	167 21	0% 21 87.5% 21	0	Steel mould design for
S2080 I	Design of lifting frame for full-span lifting of precast box girder (incl. 35 days TRA)	63	63 15-Jan-19	15-Jan-19	28-Mar-19	28-Mar-19	349	0% 35	0	
	Construction engineering for superstructure of steel arch bridge (incl. 21 days TRA) Design of temporary works for superstructure of steel bridge (incl. 35 days TRA)	127 141	53 13-Aug-18 A 141 08-Jan-19	13-Sep-18 08-Jan-19	09-Mar-19 20-Jun-19	07-Feb-19 20-Jun-19	-28 268	58.27% 21 0% 35	-26	
	ent Submission for Major Construction Works	197	138 30-Oct-18 A	31-Oct-18	17-Jun-19	17-Jun-19	200	070 55	0	
DS1040 N	Aethod statement submission for fabrication of precast shell (incl. 35 days TRA)	59	14 30-Oct-18 A	31-Oct-18	23-Jan-19	07-Jan-19	109	76.27% 35	-14	Method statement submission for
	Aethod statement submission for E&M plant room (incl. 21 days TRA) Aethod statement submission for installation of precast shell (incl. 35 days TRA)	42 61	42 12-Feb-19	12-Feb-19	01-Apr-19	01-Apr-19	19 279	0% 21 0% 35	0	
	Acthod statement submission for fabrication of steel deck (incl. 21 days TRA)	77	61 08-Apr-19 77 07-Feb-19	08-Apr-19 07-Feb-19	17-Jun-19 07-May-19	17-Jun-19 07-May-19	-11	0% 55	0	
DS1130 N	Aethod statement submission for fabrication of arch ribs (incl. 21 days TRA)	70	70 07-Feb-19	07-Feb-19	29-Apr-19	29-Apr-19	-4	0% 21	0	
	Iethod statement submission for geometry control (incl. 21 days TRA)	67 191	67 07-Feb-19 191 08-Jan-19	07-Feb-19 08-Jan-19	25-Apr-19 17-Aug-19	25-Apr-19 17-Aug-19	-1 98	0% 21	0	
	Design of Electrical system for the E&M plant room (incl. 21 days TRA)	127	127 08-Jan-19	08-Jan-19	04-Jun-19	04-Jun-19	14	0% 21	0	
OS1200 I	Design of Structural health monitoring system (incl. 35 days TRA)	172	172 30-Jan-19	30-Jan-19	17-Aug-19	17-Aug-19	98	0% 35	0	
	ign Submission and Approval	192	192 07-Aug-18 A	08-Jan-19	19-Aug-19	19-Aug-19	178		0	
	Design memorandum for bridge deck (incl. 35 days TRA) IP submission for bridge deck of entrusted works of TKOI Viaduct (incl. 35 days TRA)	66 81	0 07-Aug-18 A 81 08-Jan-19	28-Jan-19 08-Jan-19	05-Oct-18 A 11-Apr-19	13-Apr-19 11-Apr-19	178	100% 35 0% 35	164	
	DDA submission for bridge deck of entrusted works of TKOI Viaduct (incl. 35 days TRA)	111	111 12-Apr-19	12-Apr-19	19-Aug-19	19-Aug-19	178	0% 35	0	
	ubmission, Subcontracting and Procument	201	140 08-Nov-18 A	08-Nov-18	27-May-19	27-May-19	221		0	
eneral Submi	ssion	140	140 08-Jan-19	08-Jan-19	27-May-19	27-May-19	-33		0	
P-GS1480 S	teel main bridge shop drawings submission and approval (incl. 7 days TRA)	140	140 08-Jan-19	08-Jan-19	27-May-19	27-May-19	-33	0% 7	0	
	ubmit the details of proposed steel work fabrication vard (incl. 14 days TRA) er's Acceptance of Subcontractors	21 48	21 28-Jan-19 48 08-Jan-19	28-Jan-19 08-Jan-19	17-Feb-19 24-Feb-19	17-Feb-19 24-Feb-19	6 313	0% 14	0	
	CE for E&M Works	0	0		08-Jan-19	08-Jan-19	16	0% 0	0	ICE for E&M Works
	ublic Relation Service	0	0		08-Jan-19	08-Jan-19	64	0% 0	0	Public Relation Service Physical Model CBL Bridge
	hysical Model CBL Bridge Design.supply and installation of SHMS	0	0		08-Jan-19 08-Jan-19	08-Jan-19 08-Jan-19	-31 361	0% 0 0% 0	0	Design, supply and installation of SHMS
P-SP1380 F	abrication of precast box girder	0	0		08-Jan-19	08-Jan-19	24	0% 0	0	 Fabrication of precast box girder Transportation and installation of precast box girder
	ransportation and installation of precast box girder abrication of steel side spans and steel arch bridge	0	0		08-Jan-19 08-Jan-19	08-Jan-19 08-Jan-19	296 -33	0% 0 0% 0	0	Fabrication of steel side spans and steel arch bridge
P-SP1440 7	ransportation and installation of steel side spans and steel arch bridge	0	0		20-Feb-19	20-Feb-19	302	0% 0	0	R.C. structure for pilecap, pier and in-situ deck
P-SP1500 F P-SP1520 F	t.C. structure for pilecap,pier and in-situ deck restressing,bearing and movement joints	0	0		08-Jan-19 04-Feb-19	08-Jan-19 04-Feb-19	210 333	0% 0 0% 0	0	R.C. surcture for phecap, pier and in-situ deck
P-SP1540 V	Vaterproofing Works	0	0		14-Jan-19	14-Jan-19	140	0% 0	0	Waterproofing Works Civil and structure works for E&M plantroom
	ivil and structure works for E&M plantroom	0	0		08-Jan-19 24-Feb-19	08-Jan-19 24-Feb-19	106 136	0% 0 0% 0	0	Civil and structure works for E&M plantroom
P-SP1760 I	Building services for E&M plantroom	0	0		08-Jan-19	08-Jan-19	174	0% 0	0	Building services for E&M plantroom
reliminaries		96	47 08-Nov-18 A	08-Nov-18	06-Mar-19	06-Mar-19	-23		0	
	Design & Erection of project manager's site office	47 47	24 19-Nov-18 A 24 19-Nov-18 A	08-Dec-18 08-Dec-18	04-Feb-19* 04-Feb-19*	04-Feb-19 04-Feb-19	0	48.94% 0 48.94% 0	0	Design & Erection Design & Erection
P-P11160 I	Design & Erection of Community liasion centre	47	47 08-Jan-19	08-Jan-19	06-Mar-19*	06-Mar-19	-23	0% 0	0	
	etun Temporary loading/unloading points hysical Model for the marine viaducts of Cross Bay Link	60 47	0 08-Nov-18 A 47 08-Jan-19	08-Nov-18 08-Jan-19	05-Jan-19 A 06-Mar-19*	19-Jan-19 06-Mar-19	-23	100% 0 0% 0	13	Setup Temporary loading/unloading poi
	brication Works	213	196 08-Nov-18 A	22-Dec-18	22-Jul-19	22-Jul-19	274	0/0 0	0	
	Precast Shell and Precast Segments	161	161 08-Nov-18 A	08-Jan-19	17-Jun-19	17-Jun-19	309		0	
recast Shell		161	161 08-Nov-18 A	08-Jan-19	17-Jun-19	17-Jun-19	309		0	
	etting up precasting vard for precast shell (incl. 35 days TRA)	81	50 08-Nov-18 A	08-Jan-19	26-Feb-19	29-Mar-19	309	38.27% 35	31	
P-PS3080 F	abrication of Precast shell for pile cap of Marine viaduct and main bridge(1st batch 4 nos) (incl. 35 days TRA	111	111 27-Feb-19	27-Feb-19	17-Jun-19	17-Jun-19	309	0% 35	0	
	abrication of Precast shell for pile cap of Marine viaduct and main bridge(2nd batch 4 nos) (incl. 35 days TR/ Precast Box Girder	111 170	111 18-Feb-19 125 10-Nov-18 A	18-Feb-19 22-Dec-18	08-Jun-19 12-May-19	08-Jun-19 09-Jun-19	102 236	0% 35	28	
	etting up precasting vard for box girder (incl. 14 days TRA)	170	125 10-Nov-18 A	22-Dec-18	12-May-19	09-Jun-19	134	26.47% 14	28	
BG1376 I	rocurement and delivery of prestress tendons & anchorage (incl. 35 days TRA)	81	81 08-Feb-19	08-Feb-19	29-Apr-19	29-Apr-19	249	0% 35	0	
	Steel Arch Bridge and Side Spans	155	155 18-Feb-19	18-Feb-19	22-Jul-19	22-Jul-19	24		0	
PF1040 S PF1050 F	etting up steel work fabrication vard rocurement and delivery of steel material (incl. 35 days TRA)	60 125	60 18-Feb-19 125 20-Mar-19	18-Feb-19 20-Mar-19	18-Apr-19 22-Jul-19	18-Apr-19 22-Jul-19	6 24	0% 0 0% 35	0	•
ion 2 of Wo	rks-All Works within Portion II,III,IV and VI	222	125 20-Mar-19 170 15-Oct-18 A	08-Dec-18	22-Jui-19 26-Jun-19	17-Jul-19	401	070 33	21	
	ge and Marine Viaduct	222	170 15-Oct-18 A	08-Dec-18	26-Jun-19	17-Jul-19	401		21	
re-drilling Wo		176	96 15-Oct-18 A	08-Dec-18	08-May-19	17-Jul-19	366		57	
	re-drilling Works for W3 (57m length.4m socket) - rig No.1	24	20 19-Dec-18 A	08-Dec-18 08-Jan-19	30-Jan-19	04-Feb-19	64	16.67% 0	4	Pre-drilling Works
	re-drilling Works for W1 (56-57m length.4m socket) - rig No.1	64	52 13-Dec-18 A	31-Jan-19	04-Apr-19	23-Apr-19	64	18.75% 0	12	
Remai	ning Level of Effort Remaining Work \blacklozenge Mile:					CDDC				Date Rev
	6					CRBC				08-Jan-19 Monthly updated on 8 Jan
Primar	y Baseline Critical Remaining Work VIII Sum	nmary		т	hree Mont	h Rolling	Program	mma		

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	Preliminaries					
F				C 1/		
Formwo	ork design for V-shaped pier	and crossbear	n construct	on (incl. 2	21 days I	Ter
ecast box	girder (incl. 21 days TRA)	D	cian of lifti	na fromo	for full a	non lifting
	Construction e	ngineering for	superstruc	ture of ste	el arch b	ridge (incl.
ication of	precast shell (incl. 35 days	TRA)				
	preedust shien (inten 55 days		Method	statement	submiss	ion for E&
			-			:
						Mathi
						Methodological
				D	esion me	morandum
					submissi	on for bridg
				· · · · · · · · · · · · · · · · · · ·		
	tails of proposed steel work					
	tails of proposed steel work ect Manager's Acceptance o					
Proj	ect Manager's Acceptance o	f Subcontracto	ns	days TR.		
Proj		f Subcontracto	ns	days TR.		
Transport	ect Manager's Acceptance o	f Subcontracto	ns	days TR.		
Transport	ect Manager's Acceptance o	f Subcontracto	ns	days TR.		
Transport nd move	ect Manager's Acceptance o	f Subcontracto	ns	days TR.		
Transport nd move	ect Manager's Acceptance o ation and installation of stee ment joints	f Subcontracto	ns	days TR.		
Transport nd move Arc	eet Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries anager's site office	f Subcontracto	ns	days TR.		
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries nanager's site office r's site office	f Subcontracto 1 side spans ar antroom	ns id steel arch	days TR		
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom	ns id steel arch ty liasion co	days TR.	4)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries nanager's site office r's site office	f Subcontracto I side spans ar antroom	ns id steel arch ty liasion co	days TR.	4)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom	ns id steel arch ty liasion co	days TR.	4)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom	ns id steel arch ty liasion co	days TR.	4)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	recast shell
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi r the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi r the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi r the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	recast shell
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi r the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	recast shell
Transport nd move Arc	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto I side spans ar antroom of Communi r the marine vi	id steel arch ty liasion co aducts of C	days TR.	A)	recast shell
Proj Proj Proj Proj Proj Proj Proj Proj Proj Proj	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries anager's site office r's site office Design & Erection Design & Erection	f Subcontracto	id steel arch ty liasion co aducts of C	days TR.	A)	recast shell
Proj Proj Proj Proj Proj Proj Proj Proj Proj Proj	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries ianager's site office r's site office Design & Erection	f Subcontracto	id steel arch ty liasion co aducts of C	days TR.	A)	recast shell
Proj Proj Project n contract	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries anager's site office r's site office Design & Erection Design & Erection	f Subcontracto	id steel arch ty liasion co aducts of C etting up pr	days TR.	A)	recast shell
Proj Proj Proj entractor Project n contractor W3 (57r VW3 (57r	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries anager's site office r's site office Design & Erection Design & Erection	I side spans ar antroom of Communi the marine vi	id steel arch ty liasion co aducts of C etting up pr	days TR.	A)	recast shell
Proj Proj Proj Proj Proj Proj Proj Proj Proj Proj	ect Manager's Acceptance o ation and installation of stee ment joints hitectural works for E&M pl Preliminaries anager's site office r's site office Design & Erection Design & Erection	I side spans ar antroom of Communi the marine vi	id steel arch ty liasion co aducts of C etting up pr	days TR.	A)	recast shell

Data Date : 08-Jan-19

Page: 2

Contract No. NE/2017/07 Cross Bay Link, Tseng Kwan O - Main Bridge and Associated Works

ivityID	ActivityName	Original	Remaining Duration Start	Planned Start	Finish	Planned Finish	Total Float	Activity % Complete	TRA	Variance - Finish Date		ل	lanuary 2019	Э			February2	2019
		Duration								23	30	06	13	20	27	03	10	17
	Pre-drilling Works for W4 (52m length.4m socket) - rig No.1	24	24 06-Apr-19	06-Apr-19	08-Mav-19	08-Mav-19	230	0%	0	0								
S2-PD2140	Pre-drilling Works for E1 (54-55m length.4m socket) - rig No.2	64	12 15-Oct-18 A	08-Dec-18	21-Jan-19	27-Feb-19	1	81.25%	0	29								
S2-PD2160	Pre-drilling Works for E4 (51m length,4m socket) - rig No.2	24	0 23-Oct-18 A	09-Jan-19	24-Nov-18 A	08-Feb-19		100%	0	60								ling Works
S2-PD2180	Pre-drilling Works for E7 (56m length,4m socket) - rig No.2	24	4 26-Nov-18 A	29-Dec-18	25-Jan-19	26-Jan-19	35	83.33%	0	1		<u> </u>			L Pre-di	rilling Wo	orks for E7 ((56m leng
S2-PD2200	Pre-drilling Works for E5(57m length.4m socket) - rig No.2	24	20 10-Dec-18 A	26-Jan-19	21-Feb-19	26-Feb-19	35	16.67%	0	4								
S2-PD2220	Pre-drilling Works for E6 (53m length,4m socket) - rig No.2	24	24 22-Feb-19	22-Feb-19	21-Mar-19	21-Mar-19	214	0%	0	0								
S2-PD2240	Pre-drilling Works for E2(51m length,4m socket) - rig No.2	24	24 22-Mar-19	22-Mar-19	23-Apr-19	23-Apr-19	312	0%	0	0								
S2-PD2260	Pre-drilling Works for E3(52m length.4m socket) - rig No.2	24	12 05-Nov-18 A	19-Jun-19	08-Mav-19	17-Jul-19	366	50%	0	57								
Piling Works	5	201	170 17-Nov-18 A	08-Dec-18	26-Jun-19	26-Jun-19	316			0								
S2-PW1010	Procurement and delivery of steel casing	50	9 23-Nov-18 A	08-Dec-18	16-Jan-19	26-Jan-19	0	82%	0	10					 Procu 	rement a	nd delivery	of steel ca
) Mobilization of piling plant	24	3 17-Nov-18 A	29-Dec-18	10-Jan-19	21-Jan-19	10	87.5%		11				- Mol	bilization	of piling	g plant	
Pier W2		101	101 17-Jan-19	17-Jan-19	27-Apr-19	27-Apr-19	376			0			-					
S2-PW20	Piling platform installation - W2	3	3 17-Jan-19	17-Jan-19	19-Jan-19	19-Jan-19	0	0%	0	0			_	Piling	platform	installati	on - W2	
S2-PW20	Installation of bored piles(6 nos) - W2	60	60 21-Jan-19	21-Jan-19	03-Apr-19	03-Apr-19	0	0%	0	0					_			
S2-PW20	Sonic Test, interface core and full core for bored pile - W2	21	21 04-Apr-19	04-Apr-19	27-Apr-19	27-Apr-19	322	0%	0	0								
Pier E7		63	63 18-Mar-19	18-Mar-19	11-Jun-19	11-Jun-19				0								
S2-PW23	Piling platform installation - E7	3	3 18-Mar-19	18-Mar-19	20-Mar-19	20-Mar-19	1	0%	0	0								
S2-PW23	Installation of bored piles(6 nos) - E7	60	60 21-Mar-19	21-Mar-19	11-Jun-19	11-Jun-19	1	0%	0	0								
Pier E4			82 19-Dec-18 A	23-Jan-19	13-Apr-19	13-Apr-19	374			0								
S2-PW23	Piling platform installation - E4	3	0 19-Dec-18 A	23-Jan-19	24-Dec-18 A	25-Jan-19		100%	0	26				_	 Piling 	olatform i	installation -	- E4
S2-PW23	Installation of bored piles(6 nos) - E4	66	47 26-Dec-18 A	23-Jan-19	20-Mar-19	13-Apr-19	1	28.79%	0	20				_				
S2-PW23	Sonic Test, interface core and full core for bored pile - E4	21	21 21-Mar-19	21-Mar-19	13-Apr-19	13-Apr-19	320	0%	0	0								
Pier E5		63	63 01-Apr-19	01-Apr-19	26-Jun-19	26-Jun-19				0								
S2-PW24	Piling platform installation - E5	3	3 01-Apr-19	01-Apr-19	03-Apr-19	03-Apr-19	0	0%		0								
S2-PW25	Installation of bored piles(6 nos) - E5	60	60 04-Apr-19	04-Apr-19	26-Jun-19	26-Jun-19	0	0%	0	0								
Section 5 of t	he Works-All Works within Portion V (CBL E&M Plantroom)	15	15 02-Apr-19	02-Apr-19	24-Apr-19	24-Apr-19	14			0								
S5-PR1995	Installation of Sheet Pile	15	15 02-Apr-19	02-Apr-19	24-Apr-19	24-Apr-19	14	0%			-							

Remaining Level of Effort Remaining Work	♦ Milestone	CRBC	Date	Revision
Primary Baseline Critical Remaining Work	Summarv		08-Jan-19	Monthly updated on 8 Jan 2019
		Three Month Rolling Programme		
Actual Work \diamond \diamond Baseline Milestone				

			March	2019				April 2019		
	24	03	10	17	24	31	07	14	21	28
ength,4	E4 (5 m soo	1m length ket) - rig 1	,4m sock No.2	tet) - rig N E5(57m l	55m length No.2 ength,4m s Pre-drilling	socket) -	rig No.2		4m socke	
casing						In	stallation	of bored p	oiles(6 no	▼ Pie s) - V Sot
				💻 Pil	ling platfor	rm instal	lation - E	7		
				_				Pier E4		
									ion of bo est, interf	
						Pi	ling platfo	orm install	ation - E:	5
						-			- Se	ection

sion	Checked	Annerovad
SUL	Checkeu	Approved
019		



Contract 2

Z:\Jobs\2018\TCS00975 (EDO-04-2018)\600\EM&A Report Submission\Monthly EM&A Report\January 2019\R00127v2.docx

	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Float	November 2018			1		ber 2018	1	-		January 2019
SC1050	Temporary Water and Power Supply	Duranoti	-	ti-Jan-19	-	15-Jan-19	- Mai	8 04 11	18	25	02	09	16	23	-	30 06	13 20 mporary Water and Power Supply,
SC1060	Temporary Hoarding, Fences & Project Signboard	0		14-Dec-18		06-Feb-19	55					12.00	nporary Hoard	ng, Fences & Pro	piect Sign	board	derest come and come onbold
SC1000	Erection of Contractor's Site Office	0		17-Dec-18	-	16-Dec-18				1		2.10		Centractor's Sit			
SC1080	Landscaping Works	0		31-Dec-18		10-Dec-18 28-Jan-19	29			1			LI OSIMI O	- manufa di		Lands caping Works,	
the standard				and the second second		and the second second	and the second s	1									wranhar
SC1090	Construction Video Film & Photographer	0		31-Dec-18		18-Aug-21	962			1						Construction Video Film & Photo	yı apı idi,
SC1100	Public Relation Services	0		31-Dec-18		27-Mar-19	87									Public Relation Services,	
SC1110	Traffic Consultant	0		28-Dec-18		27-Dec-18	0									Consultant	
SC1120	Uderground Cables Detection Services	0		17-Dec-18		05-Oct-19	293						• Udergrous	d Cables Detect			23 - C
SC1130	Ground Investigation & Proof Dnilling	0		31-Dec-18		12-Apr-19	103							- services	2	Ground Investigation & Proof Dri	ling,
SC1140	Bored Piling Works	0		31-Jan-19		23-May-19	113		and the second	1							
SC1150	Prebored Socketed H-piling Works	0		28-Jan-19		20-May-19	112									ê l	
SC1160	ELS Installation & Exacavation Works	0		31-Jan-19		24-Sep-19	237			1						6	
SC1170	RC structures for elevated deck, U-trough & pad footings	0		29-Mar-19		24-Sep-19	180			1						6	
C1180	Lifts installation	0		01-Jul-19		04-Feb-20	219									£	
SC1190	Seawall modification	0		29-Mar-19		16-Mar-21	719			Contraction in the				-			
SC1200	Noise Barriers	0		29-Sep-20		06-Jan-21	100			1						£ .	
SC1210	Roads & Drainage Works	0		01-Jul-19		17-Jul-20	383			1						£	
SC1220	Irrigation Sytem	0		01-Jul-19		13-May-21	683			-							
NE201708-AD.IIIa	and some on the design of the other sectors and the sector of the sector	120	14-Dec-18	12-Apr-19	14-Feb-19	13-Jun-19	62			1		-			-		
																	Inter Description of the Providence of the
AD1500	Alternative Designs - Prepare AIP Submission to relevant Authonities	24	14-Dec-18	06-Jan-19	14-Feb-19	09-Mar-19	62									Alternative Desi	igns - Prepare AIP Submission to r
AD1510	Alternative Designs - Consultation & Approval of AIP by relevant Authoritie		07-Jan-19	30-Jan-19	10-Mar-19	02-Apr-19	62			1							
AD1520	Alternative Designs - Prepare DDA Submission to relevant Authorities	in the second	31-Jan-19	23-Feb-19	03-Apr-19	26-Apr-19	62										
AD1530	Alternative Designs - Consultation & Approval of DDA by relevant Authori		24-Feb-19	12-Apr-19	27-Apr-19	13-Jun-19	62	*				_		1.			
NE201708-AD.IV	Construction Works	1167	24-Nov-18	02-Feb-22	28-Dec-18	03-Mar-22	29	E									and the second of the second o
NE201708-AD.IV.3	3 Preliminaries	90	24-Nov-18	21-Feb-19	04-Jan-19	01-Sep-21	923		-								
PREL1010	1st Independent Safety Audit Scheme Audit	2	17-Dec-18	18-Dec-18	17-Mar-19	18-Mar-19	90			1			1st inc	ependent Safety	Audi Sch	eme Audit	
PREL1020	Tree Survey & Trees Felling Application		31-Dec-18	04-Feb-19	15-Jul-21	18-Aug-21	751			1			-		-		
PREL1030	Utilities Detection, Installation of Protection System to MTR LOHAS Park		04-Jan-19	08-Feb-19	24-Oct-19	25-Nov-19	238			-						-	
PREL1040	Erection of Contractor Site Office		04-Jan-19	31-Jan-19	04-Jan-19	31-Jan-19	0			1						-	
PREL1050	General Ske Clearance		08-Feb-19	21-Feb-19	19-Aug-21	01-Sep-21	751				******	*********					
PREL1060	Erection of hoarding/chain link fence		31-Dec-18	28-Jan-19	19-Feb-19	18-Mar-19	39			1					-		
PREL1070	Pre-construction Condition Survey		24-Nov-18	20-Jan-19 21-Dec-18	23-Mar-19	24-Apr-19	96			1				Pre-constructio	Condel	an Survey	
NE201708-AD.IV.1		383	24-NOV-18 02-Jul-19	21-Dec-18 12-Oct-20	23-Mar-19 21-Nov-19	03-Mar-22	412			1				·	- SHOTWICK	in some start	
	12 Construction Works of Porton I 12.1 Portion I - Construction of At-grade Cycle Track Ramp	205	02-10-10	18.500.20	20 Oct 20	21 Dec 24	412			1					1	4	
POR-I-2010	U/G cable derection & Trial Pit excavation	4	02-Jul-19 02-Jul-19	18-Sep-20 05-Jul-19	30-Oct-20 30-Oct-20	03-Nov-20	397				*****						
= POR-1-2020	Install sheet piles (2 rigs)	30	06-Jul-19	09-Aug-19	04-Nov-20	08-Dec-20	397								1	1	
POR-1-2020	Open cut excavation	120	10-Aug-19	03-Jan-20	09-Dec-20	08-Dec-20 08-May-21	397			1						£ D	
					and the second se											£	
POR-1-2040	Construct Cycle Track Ramp U-Trough Structures, incl. plate load tests (Restific Stopp 1 to exceeded activation of health include the U.T. South	120	16-Sep-19	11-Feb-20	16-Jan-21	15-Jun-21	397									L	
POR-1-2050	Backfill - Stage 1 to proposed ground level and backfill inside the U-Troug	50	12-Feb-20	14-Apr-20	16-Jun-21	13-Aug-21	397								Lennie Line		
POR-1-2060	Backfill - Stage 2 behind Abutment 1A to road formation level after comple	30	11-Jul-20	14-Aug-20	21-Oct-21	24-Nov-21	381									l .	
POR-1-2070	Install balustrade, lighting, landscape and finishing works		15-Aug-20	18-Sep-20	25-Nov-21	31-Dec-21	381			100						111	
	12.2 Portion I - Construction of Elevated Cycle Track Ramp Bridge	363	02-Jul-19	16-Sep-20	21-Nov-19	31-Dec-21	383			1						1	
POR-1-2109	U/G cable detection & Trial Pt excavation	4	02-Jul-19	05-Jul-19	21-Nov-19	25-Nov-19	119			1					1	ĥ.	
POR-I-2110	Additional drill hole for site investigation (1 hole, 1 rig)	10	06-Jul-19	17-Jul-19	26-Nov-19	06-Dec-19	119										
POR-I-2120	Predrilling & determination of founding level, incl. preliminary report (10 hc	35	18-Jul-19	27-Aug-19	28-Oct-20	07-Dec-20	381			-							
POR-I-2130	Pre-bored socketed H-piles installation (24 nos, dia 610, 4 rigs)	35	28-Aug-19	10-Oct-19	08-Dec-20	20-Jan-21	381										
POR-I-2140	Pile load tests, incl. reports	21	11-Oct-19	04-Nov-19	21-Jan-21	17-Feb-21	381			1							
POR-I-2150	Install ELS works (2 rigs)	35	05-Nov-19	14-Dec-19	18-Feb-21	30-Mar-21	381			1					1	6	
POR-1-2160	Excavate to the final excavation level with installation of wailing and strut	21	16-Dec-19	11-Jan-20	31-Mar-21	27-Apr-21	381										
POR-I-2180	Construct the pile cap at Abutment 1A, and structure of Abutment 1A.	36	13-Jan-20	26-Feb-20	28-Apr-21	10-Jun-21	381										
POR-1-2190	Bearings installation at Abutment 1A	8	27-Feb-20	06-Mar-20	11-Jun-21	21-Jun-21	381							1 1		Ê.	
POR-1-2200	Construct the pile caps, piers of Elevated Cycle Track Ramp Bridge and I	45	07-Mar-20	05-May-20	22-Jun-21	13-Aug-21	381			1					1		
POR-1-2210	Cast in-situ the deck of Elevated Cycle Track Ramp Bridge (Abutment 1A	55	06-May-20	10-Jul-20	14-Aug-21	20-Oct-21	381			10				1 1			
POR-1-2220	Construct remaining deck of Elevated Cycle Track Ramp Bridge (CH108.	28	11-Jul-20	12-Aug-20	23-Oci-21	24-Nov-21	383			1							
= POR-1-2230	Install balustrade, lighting, landscape and finishing works		13-Aug-20	16-Sep-20	25-Nov-21	31-Dec-21	383							44 400000000000000000000000000000000000			
- NE201708-AD.IV.1		383	02-10-19	12-Oct. 20	03-Dec.10	03-Mar 22	412			10							
POR-I-2231	U/G cable detection & Trial Pit excavation	4	02-Jul-19	05-Jul-19	03-Dec-19	06-Dec-19	129			100							
POR-1-2235	Predrilling & determination of founding level, incl. preliminary reports (1 h	10	18-Jul-19	29-Jul-19	07-Dec-19	18-Dec-19	119			1							
POR-1-2240	Pre-bored socketed H-piles installation (14 nos, dia, 610, 2 rigs)		30-Jul-19	07-Sep-19	19-Dec-19	04-Feb-20	119			8							
POR-1-2250	Pile load tests, incl. reports		09-Sep-19	04-Oct-19	05-Feb-20	28-Feb-20	119		***********	**********		******	*******	**********			
POR-1-2260	Construction of pile cap of Lift and Staircase		23-Oct-19	13-Dec-19	29-Feb-20	25-Apr-20	105			1							
POR-1-2200																Ê.	
POR-1-22/0	Construct substructure of Lift and Staircase (lower portion, i.e. below Ele		14-Dec-19	21-Jan-20	27-Apr-20	02-Jun-20	412										
POR-1-2280	Construct superstructure of Lift and Staircase (upper portion, i.e. above Installation of Lift and associated E&M system, and finishing works, incl. t		27-Feb-20 14-May-20	13-May-20 12-Oct-20	20-Jul-21 29-Sep-21	28-Sep-21 03-Mar-22	412			1							
	Instaliation of Lift and associated E&M system, and thishing works, incl. t Construction Works of Portion II	1414	States and the	10. 0.01.00		100 100 mer.	412		+								
NE201708-AD.IV.1	Construction Works of Portion II Installation monitoring system to existing building/structure/seawall at Por		24-Dec-18 24-Dec-18	15-Apr-20 09-Mar-19	19-Feb-19	02-Jun-20	43								1		
POR-II-ZA2315	and the second		and the second se	and the second		04-May-19	43			1					-		
	Utilities Detection & Install Safety Protection along MoE and Safety Protection 3 Portion II - Construction of Abutment 2A and adjacent 2 bays of Ek	28	29-Jan-19	05-Mar-19	19-Mar-19	24-Apr-19	39			1						Ê.	
		28	24-080-19 24-1en-19	28-Eat 10	19-Mar-19	02-001-20 24-0ct 10	39										
	Prepare and implement Site TTA Stage 1A for piling works		and the second se	28-Feb-19	19-Mar-19	24-Apr-19	43										
	Additional drill hole for site investigation (1 hole) Predrilling & determination of founding level, incl. preliminary reports (8 +		06-Mar-19	16-Mar-19	25-Apr-19	07-May-19	39			1							
PUR-II-ZA2360	Precising a determination of founding level, incl. preaminary reports (8 +	41	06-Mar-19	26-Apr-19	25-Apr-19	13-Jun-19	39					_					
					1				1			_	-	Det	-		lou
Actual Level	l of Effort					C	ontrac	No. NE/2017/08		-		-	-	Date	-	Revision	Checker
Actual Work		-				100 C 10	2 31 31 111						18	Dec-18	Thre	ee Month Rolling Progra	amme StL
	「「「「」」「「」」「「」」「」「」」「「」」「」」「」」「」」「」」「」」「	狛 展署						k, Tseung Kwan O -		12				-			
Remaining V	K Nork maining Work 上木工程 Civil En					Road	D9 an	Associated Works									
Critical Rem	Civil En	ginee	ring a	nd					1	D.		1 2 2	100				
		mont	Dones	tmant		Inree		Rolling Programme			uild		2				
 Milestone 	Develop	ment	Depar	unent	-		1	ige 2 of 4					-0				
		A REAL PROPERTY OF		1.				W1.9 3010	1	-							

1	Activity Name	Original Early Sta Duration	-	Late Start	Late Finish	Total Float	November 2	018		1		ber 2018	1	11			nuary 2019	18-	_
POR-II-ZA2365	Bored piles installation (8 nos in AD of Abutment 2A + 2 nos remain in CD	93 13-Apr-	9 06-Aug-19	17-Jun-19	05-Oct-19	50	8 04 11	18	25	02	09	16	23	30	0 06		13	20	-
	Pre-bored socketed H-piles (changed CD 4 bored piles to AD 10 sockete	18 27-Apr-	and the second se	14-Jun-19	05-Jul-19	39													
	Prepare and implement Ste TTA Stage 1B for piling works	14 20-May-		06-Jul-19	22-Jul-19	39	§												
	Pre-bored socketed H-piles (changed CD 4 bored piles to AD 10 sockete Sonic & core drilling test of bored piles and pile load tests of prebored so	18 05-Jun- 60 27-Jun-		23-Jul-19 13-Aug-19	12-Aug-19 24-Oct-19	39													
	Sonic & core draining test or bored piles and pile load tests or prebored sor Open cut excavation to pile cap formation level and cast binding layer	28 06-Sep-	and the second se	13-Aug-19 25-Oct-19	24-Oct-19 26-Nov-19	39	1		Î										
	Construct the pile cap of Abutment 2A, incl. triming of pile heads, and Cor	64 12-Oct-		27-Nov-19	15-Feb-20	39			1										
	Construct pile caps for adjacent 2 bays Elevated Deck, incl. preparation (21 02-Dec-	the second s	20-Jan-20	15-Feb-20	39	ā		1										
	Construct plens for adjacent 2 bays of Elevated Deck	21 28-Dec-	1	17-Feb-20	11-Mar-20	39			1										
	Backfill to the ground level around Abutment 2A and 2 bays of Elevated D	10 23-Jan-2		12-Mar-20	23-Mar-20	39													
	Bearings installation at Abutment 2A	10 07-Feb-	· · · · · · · · · · · · · · · · · · ·	24-Mar-20	03-Apr-20	39			1					1					
	Construct deck for adjacent 2 bays of Elevated Deck Instruction Works of Portion III	45 19-Feb-		06-Apr-20 25-Dec-18	02-Jun-20 31-Dec-21	-39			ł.					1					_
	Install monitoring system to existing building/structure/seawall at Portion III			19-Mar-19	01-Jun-19	67	************************************	********					-	1			_		
	Utilities Detection and Install Safety Protection along MoE and Safety Prol	28 24-Dec-	T	28-Mar-19	04-May-19	75			\$				-						
NE201708-AD.IV.2.4 P	Portion III - Construction of the Elevated Deck and Abutment 2B	801 24-Dec-	8 06-Sep-21	15-Jul-19	31-Dec-21	95	1		1					-		_		_	_
	Prepare and implement Site TTA Stage 1A - for piling works	28 24-Dec-	- /	22-Jul-19	22-Aug-19	167	1						+	1					_
	Predrilling & determination of founding level, incl. preliminary reports (11 +	104 06-Mar-		15-Jul-19	15-Nov-19	105													
	Bored piles installation (3 nos. of Abutment 2B in CD and 8 nos remain in Pre-bored socketed H-piles installation (changed CD 8 bored piles to AD	120 16-Apr-1 65 16-Apr-1		23-Aug-19 04-Sep-19	16-Jan-20 21-Nov-19	105	1												
	Sonic & core drilling test of bored piles and pile load tests of prebored so.	60 19-Jul-1	1	22-Nov-19	06-Feb-20	105			1										
	Prepare and implement Site TTA Stage 3 - (refer to Drawing No. 4.17) fo	14 18-Jan-2	and the second design of the s	18-Jan-20	06-Feb-20	0			1										
POR-III-ZA2540 C	Open cut excavation of Abutment 2B and to pile caps formation level - "P	60 07-Feb-	0 21-Apr-20	07-Feb-20	21-Apr-20	0			1										
	Construct the pile caps - "Phase 1 Structure Works" (grid A to C) incl. trir	50 18-Apr-2	and the second second	16-Apr-20	15-Jun-20	0			1										
	Construct the piers - "Phase 1 Structure Works" (grid A to C)	44 04-Jun-2		04-Jun-20	27-Jul-20	0													
	Cast in-situ the beams, slabs and walls - "Phase 1 Structure Works" (gri	105 23-Jun-2	and the second s	23-Jun-20	28-Oct-20	0			1										
	Construct Abutment 2B - "Phase 1 Structure Works" (grid A to C) Backfill to the ground level of Abutment 2B and pile caps in "Phase 1 Strue	45 22-Apr-2 20 16-Jun-2		26-Jun-20 19-Aug-20	18-Aug-20 10-Sep-20	53	1												
and the second se	Bearings installation at Abutment 2B in "Phase 1 Structure Works"	8 11-Jul-2	the state of the s	19-Aug-20 11-Sep-20	10-Sep-20 19-Sep-20	53		*********	·····						******		*****		
	Construct remaining Elevated Deck in "Phase 1 Structure Works" (from)	30 21-Jul-2	and the second se	21-Sep-20	28-Oct-20	53													
POR-III-ZA2610 P	Prepare and implement TTA Stage 4 - (refer to Drawing No., 4.18) for "Pf	14 29-Oct-2		24-Feb-21	11-Mar-21	95								1					
	nstall sheet piles (at grid D) (2 rigs)	30 14-Nov-2		12-Mar-21	19-Apr-21	95			1					1					_
	Open cut excavation to pile caps formation level - "Phase 2 Structure We	21 19-Dec-2	the second	20-Apr-21	14-May-21	95	1		i										
	Construct the pile caps - "Phase 2 Structure Works" (grid C to D) incl. tri	30 11-Jan-2		10-May-21	15-Jun-21	95			1										
	Construct the piers - "Phase 2 Structure Works" (grid C to D) Rackfill to proposed ground level of pile caps "Phase 2 Structure Works"	30 03-Feb-2 30 13-Mar-2		03-Jun-21 10-Jul-21	09-Jul-21	95			-										
	acknill to proposed ground level or pie caps "Phase 2 Structure Works" Sast in-situ the beams, slabs amd walls - "Phase 2 Structure Works" (fro	30 13-Mar-2 65 21-Apr-2	and the second se	10-Jul-21 14-Aug-21	13-Aug-21 01-Nov-21	95													
	Construct remaining Abutment 2B in "Phase 2 Structure Works" (from gri	45 16-Jan-2		28-Aug-21	22-Oct-21	182			-										
	learings installation (remaining) at Abutment 2B In "Phase 2 Structure W	8 13-Mar-2		23-Oct-21	01-Nov-21	182	**************************************												,,,,,,
	construct Elevated Deck (remaining portion) in (remaining) (from grid 1C	30 10-Jul-2	13-Aug-21	02-Nov-21	06-Dec-21	95			1										
	stall parapet Type L2, lighting, landscape and finishing works	150 08-Mar-2	1 06-Sep-21	05-Jul-21	31+Dec-21	95	1							e con					
	ortion III - Construction of the U-Trough Structures	971 24-Dec-1	3 20-Aug-21	18-Apr-19	31-Dec-21	133	Contract of the second s									-			
	repare and implement Site TTA Stage 1A for piling works dditional driff hole for site investigation (1 hole)	28 24-Dec-1 10 29-Jan-1		18-Apr-19 25-May-19	24-May-19 05-Jun-19	92			······								*****		
	domonal drill hole for site investigation (1 hole) redrilling & determination of founding level, incl. preliminary reports (24 r	10 29-Jan-1 77 29-Jan-1		25-May-19 25-May-19	24-Aug-19	92	and a second sec												
	ored piles installation (8 nos remain in CD along seawall side, dia 2000,	90 13-Apr-1		01-Aug-19	16-Nov-19	88			1					-					
POR-111-282760 P	re-bored socketed H-piles (change CD 8 bored piles to AD 40 socketed	33 11-Jun-1	19-Jul-19	24-Sep-19	02-Nov-19	88													
POR-III-ZB2770 PI	repare and implement Site TTA Stage 2B for piling works	14 04-Nov-1	9 19-Nov-19	04-Nov-19	19-Nov-19	0			1										
	re-bored Socketed H-piles (change CD 8 bored piles to AD 40 socketec	33 20-Nov-1		20-Nov-19	30-Dec-19	0													
	onic & core drilling test of bored piles and pile load tests of prebored so	45 23-Nov-1		23-Nov-19	17-Jan-20	0								1					
	repare and implement Site TTA Stage 3 for "Phase 1 Structure Works"	14 18-Jan-2		21-Mar-20	07-Apr-20	51			1					1					
	pen cut excavation to base slabs (pile caps) soffit level - Phase 1 (grid late load test - "Phase 1 Structure Works" (grid (A to C) (4 nos, 2 sets c	30 07-Feb-2 20 13-Mar-2		08-Apr-20 19-May-20	18-May-20 10-Jun-20	51			1					-					
	ast in-situ the base slabs (pile caps) - "Phase 1 Structure Works" (grid	63 07-Apr-2		19-May-20 11-Jun-20	25-Aug-20	51			· · · · · · · · · · · · · · · · · · ·			**********			**************			***>*******	****
	ast in-situ the wall of U-Trough Structures - "Phase 1 Structure Works"	86 25-Apr-2	and the second second second second	27-Jun-20	08-Oct-20	51			1										
	acidil within and around U-Trough Structures - "Phase 1 Structure Wor	30 08-Aug-2	and the second se	09-Oct-20	13-Nov-20	51			-										
POR-III-ZB2850 Pr	repare and implement Site TTA Stage 4 for "Phase 2 Structure Works"	14 29-Oct-2	13-Nov-20	29-Oct-20	13-Nov-20	0													
	stall sheet piles (at grid D) for "Phase 2 Structure Works"	20 14-Nov-2		14-Nov-20	07-Dec-20	0													
	pen cut excavation to base siabs (pile caps) soffit level - "Phase 2 Stru	35 08-Dec-2		08-Dec-20	20-Jan-21	0			1										
	ate load test - "Phase 2 Structure Works" (grid (C to D) (4 nos, 2 sets -	20 21-Jan-2		21-Jan-21	09-Feb-21	0													
	ast in-situ the base slabs (pile caps) - "Phase 2 Structure Works" (grid ast in-situ the wall of U-Trough Structures - "Phase 2 Structure Works"	60 10-Feb-2 83 27-Feb-2	and a second	10-Feb-21 27-Feb-21	27-Apr-21 09-Jun-21	0													
a statut statut free	ast in-situ the wall of 0-1 rough Structures - "Phase 2 Structure Works" ackfill within U-Trough Structures - "Phase 2 Structure Works" (grid C h	90 10-Apr-2	28-Jul-21	27-Feb-21 10-Apr-21	28-Jul-21	0													
	stall parapet Type L2, lighting, landscape and finishing works	150 19-Feb-2		05-Jul-21	31-Dec-21	109	***************************************											*********	****
NE201708-AD.IV.2.6 Po	ortion III - Construction of the At-grade Noise Semi Enclosures	614 28-Dec-1	01-Sep-20	28-Dec-18	06-Mar-21	186							-	-					_
	P Application for Works at Wan O Road & Wan Po Road	90 28-Dec-1	and the second se	28-Dec-18	27-Mar-19	0							-						
	repare and implement Site TTA Stage 1A for piling works	28 28-Mar-1		28-Mar-19	04-May-19	0			1										
	nvironmental land drillhole EBH7 and EBH8, incl. (2 holes, 1 rig)	15 06-May-1		06-May-19	22-May-19	0													
	ubmission and approval of Sediment Plan and Investigation Report prior stitional drill hole for site investigation (6 holes, 1rigs)	60 23-May-1 41 23-May-1		02-Jun-19 23-May-19	31-Jul-19 11-Jul-19	10													
	redrilling and determination of founding level, incl. preliminary reports (2:	41 23-May-19 86 23-May-19		23-May-19 23-May-19	02-Sep-19	0													
the second s	epare and implement Site TTA Stage 1C for piling works	14 12-Jul-19		16-Jul-19	31-Jul-19	3			1					E.					
17 A. 1. 1. 1. 1. 1.			1	1			ALL PAR SULATIONS	T	- 1			1	Date	1	Devi	ision		Checked	d A
Actual Level of E	Effort				C	ontract	No. NE/2017/08		-			1.0		Theres				Checked	_
Actual Work		历展署			Cross	Bay Lin	k, Tseung Kwan O -					18-	Dec-18	I hree N	Aonth Rolling	Program	ne	StL	S
Remaining Work	CEDD 土木工程	拓展署 gineering	and the second							1000									
	Civil En	gineering	and				Associated Works		D.	and and	1/:	-							
Critical Remainin	Develop	mont Des	artman		Three	Month I	Rolling Programme		BI	uild	NIC	19							
Milestone	Develop	ment Dep	arunen			P	age 3 of 4					· D							
wiestone																			

y ID	Activity Name	I Orient	Cash Olard			NE/2017/08			ing roound				sociated	a vvoika	-	_										18-Dec
	Psarriy name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Float	28		-	ovember 201		1	_			ecember 2		i			-		ary 2019		_
POR-III-ZC2940	Pre-bored H piles installation (piles reduced from 275 nos. to 86 nos. in A	50	01-Aug-19	28-Sep-19	01-Aug-19	28-Sep-19	0	20	04	_	11	18	25		02	09	-	16	23	-	30	06		13	20	
	Prepare and implement Site TTA Stage 2A for piling works	28	30-Sep-19	02-Nov-19	30-Sep-19	02-Nov-19	0	a - anhalterrare				***********	*****			***********		Include a state of the state of								
	Pre-bared H piles installation (piles reduced from 275 nos. to 86 nos. in A		04-Nov-19	03-Jan-20	12-May-20	10-Jul-20	151	1.1						-						1						
	Prepare and implement Site TTA Stage 2C for piling works	14	16-Dec-19	03-Jan-20	23-Jun-20	10-Jul-20	151	1 90						1						3						
	Pre-bored H piles installation (piles reduced from 275 nos. to 86 nos. in A	20	04-Jan-20	30-Jan-20	11-Jul-20	03-Aug-20	151	1 22						1												
	Pile load tests, incl. reports	21	31-Jan-20	24-Feb-20	04-Aug-20	27-Aug-20	151																			
and the second sec	Install sheet piles (2 rigs)	15	25-Feb-20	12-Mar-20	28-Aug-20	14-Sep-20	151			*******	*********		*****												******	
and the second s	Open cut excavation to pile caps formation level of Noise Semi Enclosure	30	13-Mar-20	21-Apr-20	15-Sep-20	21-Oct-20	151							1												
	Construct the substructures ple caps and plinths of Noise Semi Enclosu	90	22-Apr-20	08-Aug-20	22-Oct-20	08-Feb-21	151							1												
	Install sheet piles (2 rigs)	90	04-Nov-19	22-Feb-20	11-Dec-19	31-Mar-20	32							1						1						
	Open cut excavation to footing formation level of Noise Semi Enclosures	90	09-Dec-19	28-Mar-20	18-Jan-20	12-May-20	32							1												
POR-III-ZC3060		60	06-Feb-20	20-Apr-20	14-Mar-20	and the second second	32		************						***********					and sugar						
			12-Mar-20	07-Aug-20	23-Apr-20	29-May-20 14-Sep-20	32							1.												
POR-III-ZC3080		50	06-Jul-20	01-Sep-20	05-Jan-21	06-Mar-21	151							1												
the second se	Indification of Seawall (Portion II and III)	610	29-Mar-19	27-Nov-20		03-Mar-21		1.4						1												
POR-III-ZB3130	Modification of seawall (Type 2) next to Abutment 2A (75m)	28			10-Apr-21		461													1.1						
POR-III-ZB3140		20	10-Jul-20	11-Aug-20	09-Oct-21	11-Nov-21	373	and the familes				*******		ALINAMORE	*********											
POR-III-2C3090	Modification of seawall (Type 2) along the rest of Portion III (229m) Method Statement and application for minor marine works operation to M.	1	12-Aug-20	27-Nov-20	12-Nov-21	03-Mar-22	373																			
POR-III-ZC3100		60	29-Apr-19	27-Jun-19	10-Aug-21	08-Oct-21	834							1						1						
POR-III-2C3100	Install Safety and Monitoring System along Seawall, and place silt curtain	30	29-Mar-19	08-May-19	02-Sep-21	08-Oct-21	721	1						1						1						
	Modification of seawall (Type 1) (196m)	150	04-Jan-20	09-Jul-20	10-Apr-21	08-Oct-21	373							1						1						
	rection of Noise Semi Enclosures (Portion II and III)	277	26-Jan-21	31-Dec-21	08-Mar-21	07-Jian-22	5																			
POR-III-ZB3210	Erection of main frame Al-grade (CH13635.3-CH14021.2)	130	26-Jan-21	07-Jul-21	08-Mar-21	13-Aug-21	32							1						1						
POR-III-ZC3220	Erection of sub-frame and installation of panels Al-grade (CH13878.6-C)	60	08-Jul-21	15-Sep-21	14-Aug-21	25-Oct-21	32							1						1						
POR-III-ZC3230	Erection of sub-frame and installation of panels At-grade (CH13635.3-C)	60	16-Sep-21	27-Nov-21	27-Oct-21	07-Jan-22	32							4						1						
POR-III-ZC3240	Erection of main frame at Elevated Deck and U-trough, incl. erection on C	49	20-Sep-21	18-Nov-21	20-Sep-21	18-Nov-21	0	1.1						1												
POR-III-ZC3250	Erection of sub-frame and installation of panels, incl. erection on CBL Ma	29	19-Nov-21	22-Dec-21	19-Nov-21	22-Dec-21	0	1																		
POR-III-ZC3260	Installation of fall arrest system, fire breaker, cat ladder & miscellaneous i	23	03-Dec-21	31-Dec-21	03-Dec-21	31-Dec-21	0	1						1											*****	
	load Works and Drainage Works (Portion I, II and III)	473	22-Jun-20	21-Jan-22	11-Aug-20	03-Mar-22	32	13						1												
RD3350	Drainage system - At-grade works at Portion III	120	04-Jul-20	24-Nov-20	11-Aug-20	04-Jan-21	32																			
😑 RD3355	Sign gantry Installation - At-grade works at Portion III	21	31-Oct-20	24-Nov-20	08-Dec-20	04-Jan-21	32							1												
😑 RD3360	Road pavement up to base couse level and footpath pavement - At-grade	.50	25-Nov-20	25-Jan-21	05-Jan-21	06-Mar-21	32							-												
RD3365	Road pavement for final wearing layer - At-grade works at Portion II/III	30	29-Nov-21	05-Jan-22	08-Jan-22	15-Feb-22	-32	1	************		***********			1111			**********				hereesee					
RD3370	Road marking and street furniture installation - At-grade works at Portion	20	29-Dec-21	21-Jan-22	09-Feb-22	03-Mar-22	32	1.3						1												
RD3375	Drainage system - underneath/on/above structures at Portion III.	25	29-Jul-21	26-Aug-21	29-Jul-21	26-Aug-21	0													1						
RD3380	Sign gantty installation - above structures at Portion III	21	03-Aug-21	26-Aug-21	03-Aug-21	26-Aug-21	0	1.1						1												
RD3385	Road pavement base couse level - on Sstructures/At-grade/Ramp at Pol	20	27-Aug-21	18-Sep-21	27-Aug-21	18-Sep-21	0	1						1												
RD3390	Road pavement for final wearing layer - on Sstructures/At-grade/Ramp a	20	19-Nov-21	11-Dec-21	13-Jan-22	08-Feb-22	44	1			~~~~					**********		000000000000000000000000000000000000000		tora gradeta						+++++++++++++++++++++++++++++++++++++++
RD3395	Road marking and street furniture installation - on Structures/At-grade/Ra	20	13-Dec-21	07-Jan-22	09-Feb-22	03-Mar-22	44							1												
RD3400	Drainage system - Al-grade/Ramp at Portion I	60	22-Jun-20	01-Sep-20	21-Oct-21	31-Dec-21	396							1												
RD3430	Drainage system - underneath/on/above Structures at Portion I	60	22-Jun-20	01-Sep-20	21-Oct-21	31-Dec-21	396							1												
RD3440	Pavement cycle track & footpath - on Structures/At-grade/Ramp at Portic	21	02-Sep-20	25-Sep-20	03-Jan-22	26-Jan-22	396							1												
RD3450	Road pavement for final wearing layer - on Structures/Ramp at Portion I	14	26-Sep-20	14-Oct-20	27-Jan-22	15-Feb-22	396									******		*********	******	****	*******	*********	****		*****	*******
RD3460	Road marking and street furniture installation - on Structures/At-grade/Rs	.14	15-Oct-20	31-Oct-20	16-Feb-22	03-Mar-22	396							1						1.1						
NE201708-AD.IV.11	Free Protection Works (Portion I, II and III)	1130	31-Dec-18	02-Feb-22	29-Jan-19	03-Mar-22	29							1						1				_		
TR3500	Tree planting, transplanting, survery works and control of pest and disea	1130	31-Dec-18	02-Feb-22	29-Jan-19	03-Mar-22	29	1												2.		_	-	_		
A STATE OF THE OWNER OF THE OWNER OF	scellaneous Works (Portion I, II and III)	1524	31-Dec-18	03-Mar-23	09-Jan-19	03-Mar-23	0													No.						
MISC4000	Maintain 3m Mean of Escape (MoE)						0	e desirie												-						
the second s	Landscape works and irrigation system	1150	31-Dec-18	22-Feb-22	09-Jan-19	03-Mar-22	9	1						6						-						
	Establishment works	270	27-Mar-21	21-Dec-21	07-Jun-21	03-Mar-22	72	11						5												
101004020	Polyamod in the Line of Line o	365	04-Mar-22	03-Mar-23	04-Mar-22	03-Mar-23	0													1						

Actual Level of Effort Actual Work Remaining Work Critical Remaining Work Milestone

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CEDD Civil Engineering and Development Department

Contract No. NE/2017/08 Cross Bay Link, Tseung Kwan O -Road D9 and Associated Works Three Month Rolling Programme Page 4 of 4



Date Revision Checked Appro... 18-Dec-18 Three Month Rolling Programme StL SL

	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Float	November 2018 28 04 11 18	25	02	Decemb 09	16	23	30	06	January 2019 13	20	27
201708-AD N	E201708 - Cross Bay Link TKO Road D9	1585	31-Oct-18	03-Mar-23	31-Oct-18	03-Mar-23	0			1	-		-	1		1	1	-
	Project Key Dates	1585	31-Oct-18	03-Mar-23	31-Oct-18	03-Mar-23	0			-								
SD1000	Starting Date	0	31-Oct-18		31-Oct-18		0	Starting Date, 31-Oct-18										
NE201708-AD.I.1		243	31-Oct-18	01-Jul-19	3D-Nov-18	07-Nov-19	129			:				1				
POS1010	Possession of Portion I	0	01-Jul-19		07-Nov-19		129											
POS1020 POS1030	Possession of Portion II Possession of Portion III	0	31-Oct-18		30-Nov-18 30-Nov-18		30	Possession of Portion II, 31-Oct-16* Possession of Portion III, 31-Oct-16*					-				***********	
POS1040	Possession of Portion IV	0	31-Oct-18 31-Oct-18		30-Nov-18		30	Possession of Portion IV, 31-Oct-18*					******				*************	**********
NE201708-AD.I.2		639	02-Jun-20	03-Mar-22	02-Jun-20	03-Mar-22	0											
KD0001	Key Date 1- Completion of Eastern Abutment in Portion II	0		02-Jun-20		02-Jun-20	0						1000000000					
KD0002	Key Date 2 - Completion of Works within Portion I,II,III & IV for TCSS of a	0		31-Dec-21		31-Dec-21	0			1								
KD0003	Key Date 3 - Completion of All Works within Portion I,II, III & IV	0		03-Mar-22		03-Mar-22	0			1				E .				
NE201708-AD.I.3	Sectional Completion Dates	365	03-Mar-22	03-Mar-23	03-Mar-22	03-Mar-23	0			1								
CD1010	S1 - Completion of All Works within Portion I S2 - Completion of All Works within Portion II, III & IV and remainder of th	0	-	03-Mar-22 03-Mar-22		03-Mar-22 03-Mar-22	0			1				1				
CD1030	S3 - Completion of All Landscape Softworks	0		03-Mar-22		03-Mar-22	0									***************		
CD1040	S4 - Completion of Establishment Works	0	1	03-Mar-23		03-Mar-23	0											
CD1050	S5 - Completion of Preservation and Protection of Existing Trees	0	1	03-Mar-22		03-Mar-22	0							4 . E				
E201708-AD.III	Design and Method Statement, Materials Submission	759	31-Oct-18	27-Nov-20	31-Oct-18	20-Oct-21	327							-				
NE201708-AD.III.		516	01-Jul-19	27-Nov-20	07-Jan-21	28-Sep-21	305											
PD1010	Design of Noise Barrier Structure	60	29-Sep-20	27-Nov-20	07-Jan-21	07-Mar-21	100			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
PD1020	Design of E&M Works for Lift Installation	48	01+Jul-19	17-Aug-19	12-Aug-21	28-Sep-21	773											
PD1030	Design of Irrigation System	24	01-Jul-19	24-Jul-19	14-May-21	06-Jun-21	683							1				
NE201708-AD.III.2		182	29-Mar-19	26-Sep-19	25-Sep-19	20-Oct-21	755			1				100				
TW1010	ELS for Excavation of pile caps, raft footings & pad footings ELS for Abutment 1A	120	29-Mar-19 10-Aug-19	26-Jul-19 26-Sep-19	25-Sep-19 03-Sep-21	22-Jan-20 20-Oct-21	180				*********							
TW1020	Falsework & Formwork Design for Construction of Main Elevated Deck	48	10-Aug-19 29-Mar-19	26-Sep-19 15-May-19	21-Dec-19	20-Oct-21 06-Feb-20	267			1								
TW1040	Falsework & Formwork Design for Construction of U-trough	-48	29-Mar-19	15-May-19	20-Feb-20	07-Apr-20	328							and a				
TW1050	Falsework & Formwork Design for Construction of Cycle Track Ramp	24	29-Mar-19	21-Apr-19	25-Jan-21	17-Feb-21	668			1								
TW1060	Falsework & Formwork Design for Construction of Lift Tower	24	29-Mar-19	21-Apr-19	05-Feb-20	28-Feb-20	313			1								
TW1070	ELS for Drainage Works	24	01-Jul-19	24-Jul-19	18-Jul-20	10-Aug-20	383											
TW1080	Formwork Design for Abutment 2A & 2B	24	29-Mar-19	21-Apr-19	01-Oct-19	24-Oct-19	186			1	-							
NE201708-AD.III.3		313	14-Dec-18	22-Oct-19	17-Dec-18	20-Oct-21	729			1	-		Allether	d Canadanta	- Exection of Manufi	ng & Chain Link Fence		
MS1010 MS1020	Method Statement for Erection of Hoarding & Chain Link Fence Method Statement for Erection of Contractor Accommodation	12	14-Dec-18 17-Dec-18	25-Dec-18 03-Jan-19	07-Feb-19 17-Dec-18	18-Feb-19 03-Jan-19	55					+	Method	1 Statement for		t for Erection of Cont		dation
MS1020	Method Statement submission for G.I. works	12	31-Dec-18	11-Jan-19	13-Apr-19	24-Apr-19	103						*************				nt submission for O	
MS1040	Method Statement submission for Bored Pile Construction	24	31-Jan-19	23-Feb-19	24-May-19	16-Jun-19	113			1			1	1-1				1-1
MS1050	Method Statement submission for Prebored Socket H-pile Construction	24	29-Jan-19	21-Feb-19	21-May-19	13-Jun-19	112			1	1 1			1				-
MS1060	Method Statement submission for Construction of Main Elevated Deck	24	29-Mar-19	21-Apr-19	14-Jan-20	06-Feb-20	291											
MS1070	Method Statement submission for Construction of U-trough	24	29-Mar-19	21-Apr-19	18-May-20	10-Jun-20	416	1										
MS1080	Method Statement submission for Construction of Cycle Track Ramp	24	29-Sep-19	22-Oct-19	04-Apr-21	27-Apr-21	553			1								
MS1090	Method Statement submission for Construction of Lift Tower	24	29-Sep-19	22-Oct-19	05-Feb-20	28-Feb-20	129	1										
MS1100 MS1110	Method Statement submission for Modification of Seawall Method Statement submission for Road & Drainage Works	24	29-Mar-19 01-Jul-19	21-Apr-19	17-Mar-21 09-Oct-21	09-Apr-21 20-Oct-21	719 831											
NE201708-AD.III.4		580	31-Oct-18	12-Jul-19 01-Jun-20	31-Oct-18	09-Aug-21	434		_									
GS1010	Preparation & submission of First Programme	10	31-Oct-18	09-Nov-18	31-Oct-18	09-Nov-18	0	Preparation & submission of First P	gramme		*********	*************					**********	111000000000000000000000000000000000000
GS1020	Acceptance of First Programme	23	10-Nov-18	02-Dec-18	10-Nov-18	02-Dec-18	0	6	-	Acceptance of First P	rogramme		-					
GS1030	Preparation & submission of Detailed programme	60	03-Dec-18	31-Jan-19	03-Dec-18	31-Jan-19	0		-	3 -			-					
GS1040	Preparation & submission of First Three month Rolling Programme	14	31-Oct-18	13-Nov-18	19-Nov-18	02-Dec-18	19	Preparation & submission										
GS1050	Preparation & submission of Draft Construction Health & Safety Plan	9	31-Oct-18	08-Nov-18	31-Oct-18	08-Nov-18	0	Preparation & submission of Draft Cx										amman
GS1060 GS1070	Preparation & submission of Construction Health & Safety Plan	30	31-Oct-18	29-Nov-18	01-Nov-18 02-Nov-18	30-Nov-18 16-Nov-18	1	Distance in the		Preparation & submission of C romental Management Plan	onstruction	meann & Safety I	an	5				
GS1070 GS1080	Preparation & submission of Draft Environmental Management Plan Preparation & submission of Environmental Management Plan	40	31-Oct-18 31-Oct-18	14-Nov-18 09-Dec-18	02-Nov-18 01-Nov-18	16-Nov-18 10-Dec-18	2	Preparenori & Submes	an or Linait Erivi		naration &	ubmission of Env	omental Manan	and ent Plan				
GS1090	Preparation & submission of Environmental Management Plan Preparation & submission of Sub-contractor Management Plan	24	31-Oct-18 31-Oct-18	23-Nov-18	02-Nov-18	25-Nov-18	2		Preparation &	ubmission of Sub-contractor M				Contraction of the second				
GS1100	Preparation & submission of Waste Management Plan	30	31-Oct-18	29-Nov-18	26-Mar-19	24-Apr-19	146			Preparation & submission of V				4				
GS1110	Preparation & submission of Site Management Plan for Implementation of	45	31-Oct-18	14-Dec-18	01-Nov-18	15-Dec-18	1				P	eparation & subm	ission of Site Ma	inagément Pla	a for Implementation	of Trip Ticket System	m	
GS1120	Preparation & submission of Hoarding Plan	24	31-Oct-18	23-Nov-18	14-Jan-19	06-Feb-19	75		Preparation & s	ubmission of Hoarding Plan			-					
GS1130	Application of Marine Department Notice (MDN)	60	31-Oct-18	29-Dec-18	11-Jun-21	09-Aug-21	954	-		4				Application	of Marine Departme	nt Notice (MDN)		
GS1140	Set up Site Liaison Group	30	31-Oct-18	29-Nov-18	27-Dec-18	25-Jan-19	57	4		Set up Site Liaison Group		-						
GS1150	Submission of Contractor PII Policy Submission of ICE PII Policy	30	31-Oct-18	29-Nov-18	26-Nov-18	25-Dec-18	26	· · · · · · · · · · · · · · · · · · ·		Submission of Contractor PII	rolley							
GS1160 GS1170	Submission of ICE PII Policy Submission of Designer PII Policy	1 60	30-May-19 28-Dec-18	30-May-19 25-Feb-19	24-Oct-19 15-Apr-19	24-Oct-19 13-Jun-19	147						1		_	_		
GS1170 GS1180	Submission of Designer Pill Policy Materials submissions	580	28-Dec-18 31-Oct-18	25-Feb-19 01-Jun-20	15-Apr-19 29-Jul-19	13-Jun-19 27-Feb-21	271					-		2				
GS1190	Preparation & submission of SQR for Env. Boreholes EBH7 & EBH8	36	31-Dec-18	04-Feb-19	24-Jan-19	28-Feb-19	24	1000						-			_	
GS1200	Submission of Site Traffic Management Plan	21	31-Oct-18	20-Nov-18	22-Nov-18	12-Dec-18	22	Subm	sion of Site Traf	lic Management Plan								
NE201708-AD.III.5	Project Manager Acceptance of Sub-Contractors	655	14-Dec-18	29-Sep-20	16-Dec-18	18-Aug-21	-324				-							
SC1010	Design Consultancy Services	0		14-Dec-18		13-Feb-19	62	-			• Des	ign Consultancy	Services,		and the second		di Castana	
SC1011	Environmental Consultant for SQR & Landfill Gas Detection	0		31-Dec-18		23-Jan-19	24	1							r Civil Works,	for SQR & Landfill Ga	as Detection,	
SC1020	ICE for Civil Works	0		31-Dec-18 31-Mar-19	_	24-Aug-19	237	1		1				▼ ICE M	GIVE WORKS,			
SC1030 SC1040	ICE for E&M Works Site Security Services	0		31-Mar-19 31-Dec-18		24-Aug-19 18-Feb-19	147							Site C	ecurity Services,		**********	******
				- 01- 00 Sec 19	1			The second se					Date	T	Revisi	00	Chack	ed Appro
 Actual Leve 						C	ontra	No. NE/2017/08	-			100		Therest				
Actual Work		いて見	12 12			Cross	Bay I	nk, Tseung Kwan O -				18-0	Dec-18	Li nree Ma	onth Rolling Pr	ogramme	StL	SL
Remaining \	Work CEDD TAL	ETU/IX		1.00				Associated Works		100 C								
		ngine	ering a	and							1.	-						
	haining Work Develo	nman	t Done	rtmont		Three	Mont	Rolling Programme		uild		2						
 Milestone 	Develo	hunen	r neba	unient				Page 1 of 4	_			-0						

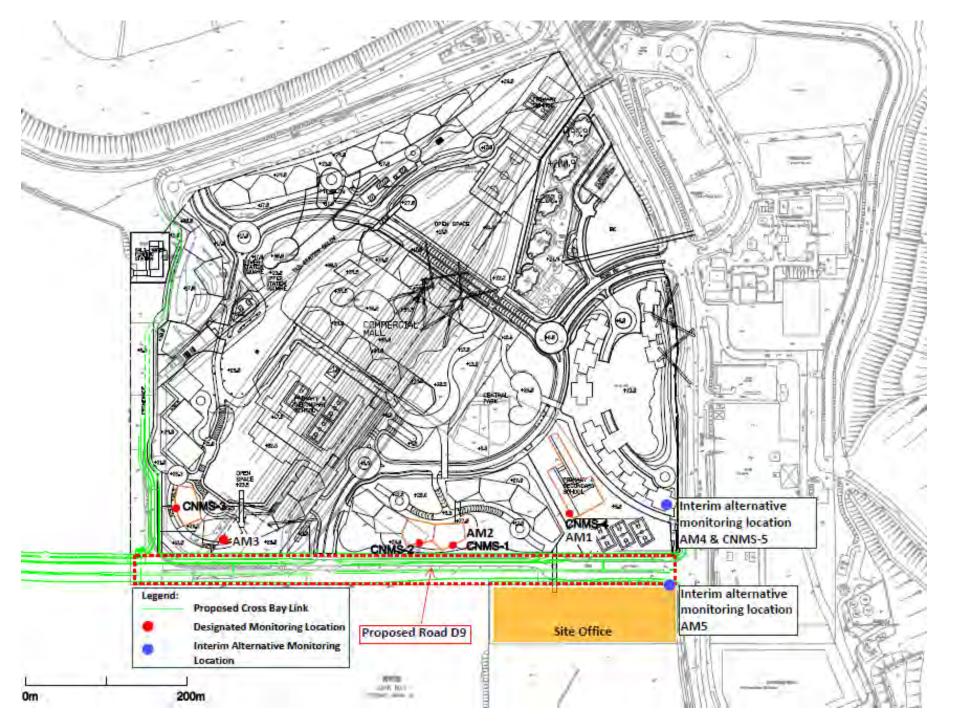


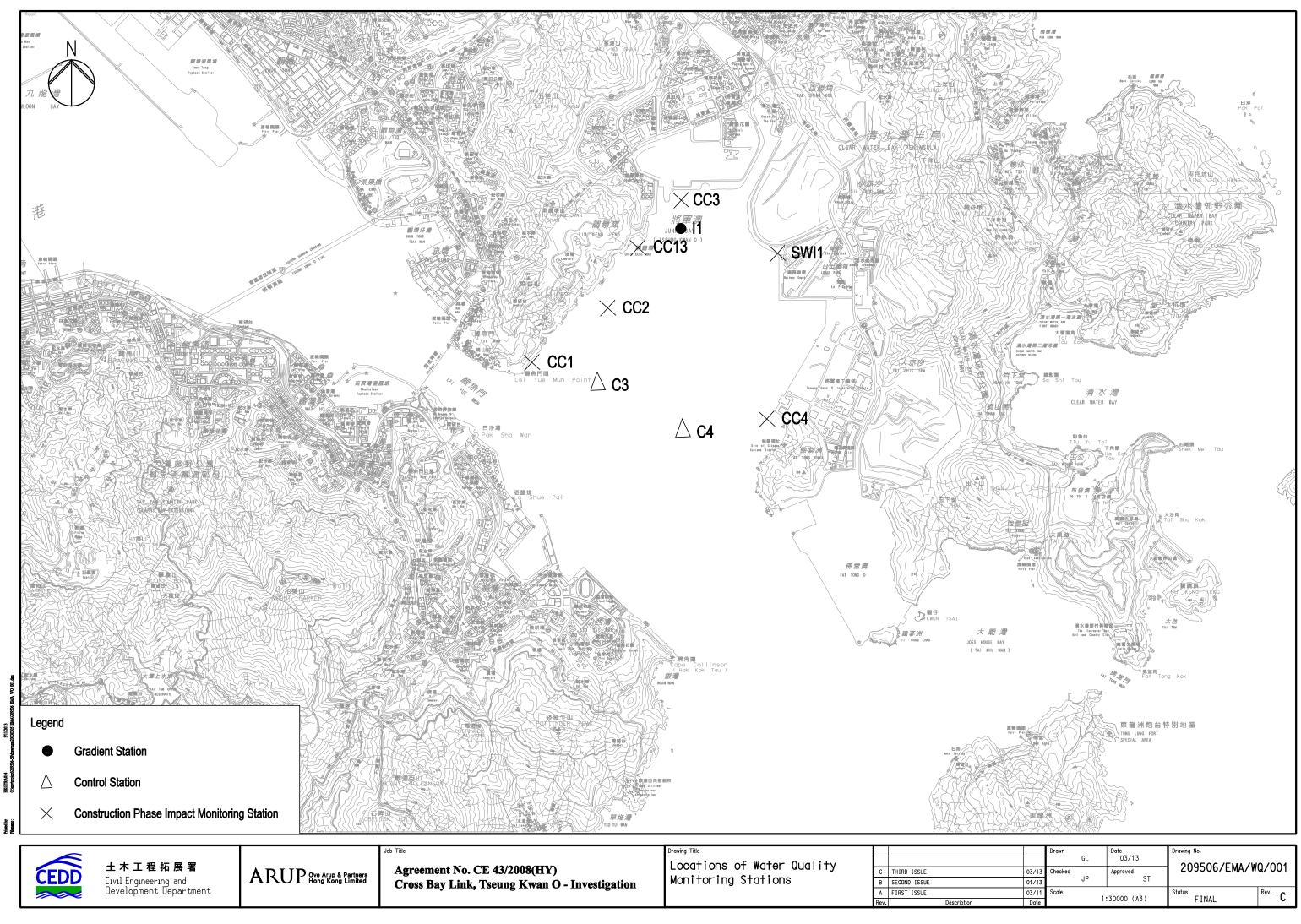
Appendix D

Monitoring Location (Air Quality, Noise and Water Quality)

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Designated and Interim Alternative Air Quality and Noise Monitoring Location

AUES





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03/13	Checked	10	Approved	209506/EMA/W	u/001
01/13		JP	ST		
03/11	Scale	4.	20000 (17)	Status	Rev. C
Date		13	30000 (A3)	FINAL	U U



Appendix E

Event and Action Plan



		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
ACTION LEVEL				
Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and Project Consultant; Repeat measurement to confirm finding; Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
Exceedance for two or more consecutive samples	 Identify source; Inform IEC and Project Consultant; Advise the Project Consultant on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and Project Consultant; If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Submit proposals for remedial actions to IEC within working days of notification; Implement the agreed proposals; Amend proposal if appropriate.



		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
LIMIT LEVEL				
Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform Project Consultant, Contractor, IEC and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Project Consultant informed of the results. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the Project Consultant on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within working days of notification; Implement the agreed proposals; Amend proposal if appropriate.

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Event and Action Plan for Air Quality Monitoring



		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
LIMIT LEVEL		1		
Exceedance for two or more consecutive samples	 Notify IEC, Project Consultant, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and Project Consultant to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Project Consultant informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst Project Consultant, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the Project Consultant accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; 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. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the Project Consultant until the exceedance is abated.

		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
Action Level	 Notify IEC and contractor; Carry out investigation; Report the results of investigation to the IEC, Project Consultant and Contractor; Discuss with the Contractor and formulate remedial measures; Increase monitoring frequency to check mitigation effectiveness. 	 Review the analysed results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the Project Consultant accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented 	 Submit noise mitigation proposals to IEC; Implement noise mitigation proposals.
Limit Level	 Identify source; Inform IEC, Project Consultant, EPD and Contractor; Repeat measurements to confirm findings; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, Project Consultant and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and Project Consultant informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst Project Consultant, ET, and Contractor on the potential remedial actions; Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the Project Consultant accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures properly implemented; 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. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the Project Consultant until the exceedance is abated.



		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
Action level being exceeded by one sampling day at water sensitive receiver(s)	 Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the control stations as appropriate; If exceedance is found to be caused by the marine works, repeat <i>in-situ</i> measurement to confirm findings; Inform IEC and contractor; Check monitoring data, all plant, equipment and Contractor's working methods; If exceedance occurs at WSD salt water intake, inform WSD; Discuss mitigation measures with IEC and Contractor; Repeat measurement on next day of exceedance. 	 Discuss mitigation measures with ET and Contractor; Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss proposed mitigation measures with IEC; Make agreement on the mitigation proposal. 	 Inform the Project Consultant and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Amend working methods if appropriate; Discuss with ET and IEC and propose mitigation measures to IEC and Project Consultant; Implement the agree mitigation measures.
Action level being exceeded by two or more consecutive sampling days at water sensitive receiver(s)	 Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the control stations as appropriate; If exceedance is found to be caused by the marine works, repeat <i>in-situ</i> measurement to confirm findings; Inform IEC and contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, and Contractor; Ensure mitigation measures are 	 Discuss mitigation measures with ET and Contractor; Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss proposed mitigation measures with IEC; Make agreement on the mitigation proposal; Assess the effectiveness of the implemented mitigation measures. 	 Inform the Project Consultant and confirm notification of the noncompliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Discuss with ET, IEC and Project Consultant and propose mitigation measures to IEC and Project Consultant within 3 working



		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
	 implemented; 7. Prepare to increase the monitoring frequency to daily; 8. If exceedance occurs at WSD salt water intake, inform WSD; 9. Repeat measurement on next day of exceedance. 			days; 5. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day at water sensitive receiver(s)	 Identify the source(s) of impact by comparing the results with those collected at the gradient stations and the control stations as appropriate; If exceedance is found to be caused by the marine works, repeat <i>in-situ</i> measurement to confirm findings; Inform IEC, contractor and EPD Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, ER and Contractor; Ensure mitigation measures are implemented; If exceedance occurs at WSD salt water intake, inform WSD. ET should contact AFCD if the limit level is exceeded by one sampling day or two or more consecutive sampling days at water sensitive receiver(s). 	 Discuss mitigation measures with ET and Contractor; Review proposal on mitigation measures submitted by Contractor and advise the Project Consultant accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss proposed mitigation measures with IEC, ET and Contractor; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures. 	 Inform the Project Consultant and confirm notification of the noncompliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Discuss with ET, IEC and Project Consultant and submit proposal of mitigation measures to IEC and Project Consultant within 3 working days of notification; Implement the agreed mitigation measures.
Limit level	1. Identify the source(s) of impact by	1. Discuss mitigation	1. Discuss proposed	1. Inform the Project
being exceeded	comparing the results with those	measures with ET and	mitigation measures with	Consultant and confirm
by two or more	collected at the gradient stations and the	Contractor;	IEC, ET and Contractor;	notification of the



		ACTION		
EVENT	Environmental Team (ET)	Independent Environmental Checker (IEC)	Project Consultant	Contractor
sampling days at 2	control stations as appropriate; 2. If exceedance is found to be caused	2. Review proposal on mitigation measures	2. Request Contractor to critically review the	noncompliance in writing;2. Rectify unacceptable
water sensitive receiver(s) m 3 4 4 e m 5 1 1 6 6 iii 7 ff 8 8 9	by the marine works, repeat <i>in-situ</i> measurement to confirm findings; 3. Inform IEC, contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. If exceedance occurs at WSD salt water intake, inform WSD; 9. Repeat measurement on next day of exceedance.	submitted by Contractor and advise the Project Consultant accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	 working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. 	practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET, IEC and Project Consultant and submit proposal of mitigation measures to IEC and Project Consultant within 3 working days of notification; 5. Implement the agreed mitigation measures; 6. As directed by the Engineer, to slow down or to stop all or part of the construction activities.



Appendix F

Impact Monitoring Schedule of the Reporting Month and Coming Month

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Monthly Environmental Monitoring & Audit Report – January 2019



Impact Monitoring Schedule for coming month – January 2019

	Data	Noise Monitoring	Air Qualit	y Monitoring	Water Orality
	Date	(Leq30min)	1-Hour TSP	24-Hour TSP	Water Quality
Tue	1-Jan-19				
Wed	2-Jan-19	✓	√		✓
Thu	3-Jan-19			✓	
Fri	4-Jan-19				✓
Sat	5-Jan-19				
Sun	6-Jan-19				
Mon	7-Jan-19	✓	√		✓
Tue	8-Jan-19				
Wed	9-Jan-19			✓	✓
Thu	10-Jan-19				
Fri	11-Jan-19				✓
Sat	12-Jan-19		✓		
Sun	13-Jan-19				
Mon	14-Jan-19				✓
Tue	15-Jan-19			✓	
Wed	16-Jan-19				✓
Thu	17-Jan-19				
Fri	18-Jan-19	✓	✓		✓
Sat	19-Jan-19				
Sun	20-Jan-19				
Mon	21-Jan-19			✓	✓
Tue	22-Jan-19				
Wed	23-Jan-19				✓
Thu	24-Jan-19	✓	✓		
Fri	25-Jan-19				✓
Sat	26-Jan-19			✓	
Sun	27-Jan-19				
Mon	28-Jan-19				✓
Tue	29-Jan-19			✓	
Wed	30-Jan-19	✓	√		✓
Thu	31-Jan-19				
-	✓	Monitoring Day			
		Sunday or Public Hol	iday		

Marine Water Quality Monitoring Schedule

Schodulod Monito	Scheduled Monitoring Day		i Miu Wan	Proposed Sampling Time (#)		
Scheduled Molito			Mid-Flood	Mid-Ebb	Mid-Flood	
2-Jan-19	Wed	09:41	15:29	08:00 - 11:26*	13:44 - 17:14	
4-Jan-19	Fri	11:23	16:41	09:38 - 13:08	14:56 - 18:26	
7-Jan-19	Mon	13:14	08:03*	11:29 - 14:59	08:00-09:48*	
9-Jan-19	Wed	14:26	09:13*	12:41 – 16:11	08:00 - 10:58*	
11-Jan-19	Fri	15:52	10:26	14:07 - 17:37	08:41 - 12:11	
14-Jan-19	Mon	18:52*	12:28	16:30 - 20:37*	10:43 - 14:13	
16-Jan-19	Wed	07:14*	13:47	08:00-09:20*	12:02 - 15:32	
18-Jan-19	Fri	09:38*	15:13	08:00 - 11:23*	13:18 - 16:58	
21-Jan-19	Mon	12:20	17:44	10:35 - 14:05	15:59 - 19:29	
23-Jan-19	Wed	13:56	08:30*	12:11 - 15:41	08:00 - 10:15*	
25-Jan-19	Fri	15:35	09:58	13:50 - 17:20	08:13 - 11:43	
28-Jan-19	Mon	18:52*	12:17	16:30 - 20:37*	10:32 - 14:02	
30-Jan-19	Wed	08:08*	13:57	08:00-09:53*	12:12 - 15:42	

Remark: The water quality sampling will be undertaken within a three and half hour window of 1.75 hour before and 1.75 hour after mid flood and mid-ebb tides.

(*) Due to safety reason, the sampling time will be started at 08:00 or 16:30

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Monthly Environmental Monitoring & Audit Report – January 2019



Impact Monitoring Schedule for coming month – Februar	V 2019

	Date	Noise Monitoring		y Monitoring	Water Quality	
	Date	(Leq30min)	1-Hour TSP	24-Hour TSP		
Fri	1-Feb-19				✓	
Sat	2-Feb-19			✓		
Sun	3-Feb-19					
Mon	4-Feb-19	\checkmark	\checkmark		\checkmark	
Tue	5-Feb-19				*	
Wed	6-Feb-19				*	
Thu	7-Feb-19				*	
Fri	8-Feb-19		✓	✓	✓	
Sat	9-Feb-19					
Sun	10-Feb-19					
Mon	11-Feb-19				✓	
Tue	12-Feb-19					
Wed	13-Feb-19	✓	✓		✓	
Thu	14-Feb-19			✓		
Fri	15-Feb-19				✓	
Sat	16-Feb-19					
Sun	17-Feb-19					
Mon	18-Feb-19				✓	
Tue	19-Feb-19	\checkmark	✓			
Wed	20-Feb-19			✓	✓	
Thu	21-Feb-19					
Fri	22-Feb-19				✓	
Sat	23-Feb-19					
Sun	24-Feb-19					
Mon	25-Feb-19	✓	✓		✓	
Tue	26-Feb-19			✓		
Wed	27-Feb-19				✓	
Thu	28-Feb-19					
-	√	Monitoring Day				
		Sunday or Public Hol	iday			

Sunday or Public Holiday

* No impact water monitoring will carry out during the period of Lunar New Year due to site closure.

Marine Water Quality Monitoring Schedule

Scheduled Monitoring Day		Tides of Ta	i Miu Wan	Proposed Sampling Time (#)			
Scheduled Molito	ring Day	Mid-Ebb	Mid-Flood	Mid-Ebb	Mid-Flood		
1-Feb-19	Fri	10:24	15:34	08:39 - 12:09	13:49 - 17:19		
4-Feb-19	Mon	12:23	07:10*	10:38 - 14:08	08:00-08:55*		
8-Feb-19	Fri	14:37	08:58*	12:52 - 16:22	08:00-09:43*		
11-Feb-19	Mon	16:45	10:32	15:00 - 18:30	08:47 - 12:17		
13-Feb-19	Wed	18:58*	11:51	16:30 - 20:43*	10:06 - 13:36		
15-Feb-19	Fri	08:02*	13:30	08:00-09:47*	11:45 – 15:15		
18-Feb-19	Mon	11:25	16:46	09:40 - 13:10	15:01 – 18:31		
20-Feb-19	Wed	12:56	18:38*	11:11 – 14:41	16:30 - 20:23*		
22-Feb-19	Fri	14:23	08:36*	12:38 - 16:08	08:00 - 10:21*		
25-Feb-19	Mon	16:49	10:29	15:04 - 18:34	08:44 - 12:14		
27-Feb-19	Wed	20:35*	11:57	16:30 - 22:20*	10:12 - 15:42		

Remark: The water quality sampling will be undertaken within a three and half hour window of 1.75 hour before and 1.75 hour after mid flood and mid-ebb tides.

(*) Due to safety reason, the sampling time will be started at 08:00 or 16:30



Appendix G

Calibration Certificates of Equipment and Accreditation Laboratory Certificate



Hong Kong Accreditation Service 香港認可處

Certificate of Accreditation

認可證書

This is to certify that 特此證明

ALS TECHNICHEM (HK) PTY LIMITED

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

香港新界葵涌永業街1-3號忠信針織中心11樓

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a 為香港認可處執行機關根據認可諮詢委員會建議而接受的

HOKLAS Accredited Laboratory

「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO / IEC 17025 : 2005 – General requirements for the competence 此實驗所符合ISO / IEC 17025 : 2005 –《測試及校正實驗所能力的通用規定》所訂的要求, of testing and calibration laboratories and it has been accredited for performing specific tests or calibrations as 獲認可進行載於香港實驗所認可計劃《認可實驗所名冊》內下述測試類別中的指定 listed in the HOKLAS Directory of Accredited Laboratories within the test category of 測試或校正工作

Environmental Testing 環境測試

This laboratory is accredited in accordance with the recognised International Standard ISO / IEC 17025 : 2005. 本實驗所乃根據公認的國際標準 ISO / IEC 17025 : 2005 獲得認可。 This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory 這項認可資格演示在指定範疇所需的技術能力及實驗所質量管理體系的運作 quality management system (see joint IAF-ILAC-ISO Communiqué). (見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive 香港認可處根據認可處執行機關的權限在此蓋上通用印章

CHAN Sing Sing, Terence, Executive Administrator 執行幹事 陳成城 Issue Date : 5 May 2009 簽發日期:二零零九年五月五日

Registration Number: HOKLAS 066 註冊號碼:



Date of First Registration: 15 September 1995 首次註冊日期:一九九五年九月十五日

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	: Junctior	n of Wan	Po Roa	d and Wan () R	load	Date of C	Calib	ration: 27-D	ec-18			
Location 1	ID :	AM5				Ν	Jext Calibra	atior	n Date: 27-Fe	eb-19			
Name and	l Model: '	TISCH H	HVS Mo	del TE-5170)		Τ	Tech	nician: Ho				
					(CONDI	TIONS						
				F							F		
	Se	a Level I	Pressure	(hPa)		1016.6			Corrected P	ressure (mn	n Hg)	762	.45
		Temp	perature	(°C)		20.6			Temp	erature (K)		4	294
				CA		BRATIO	N ORIFICE						
				t		CTT.			o 1 0		Б		
				Make->					Qstd SI	-		2.02017	
				Model->					Qstd Inter	cept ->	Ŀ	-0.0369	l
				Serial # ->	161	.2							
					0	ALIBR	ΔΤΙΟΝ						
Plate	H20 (L)	H2O (R)	H20	Qstd		Ι	IC			LINEAR			
No.	(in)	(in)	(in)	(m3/min)	(0	chart)	corrected		R	EGRESSIC	N		
18	4.40	4.40	8.8	1.500		59	59.98		S	Slope = 29	.0238		
13	3.30	3.30	6.6	1.302		55	55.91		Inte	rcept = 17	.2225		
10	2.40	2.40	4.8	1.113		49	49.81	Corr. coeff. = 0.9966					
7	1.60	1.60	3.2	0.912		43	43.71						
5	1.30	1.30	2.6	0.824		40	40.66						
Calculatio	-			(mm) () () () ()		70.0	0		FLOW RAT	E CHART			ı
Qstd = 1/1				/Ta))-b]									
IC = I[Squ	rt(Pa/Pstc	l)(Tstd/T	a)]			60.0	00						
Ostal sta		4											
Qstd = sta IC = corre			22			50.0							
I = actual		-	5			-				/			
m = calibr		-				se (l							
b = calibra	-	-	t			ü 40.0	00		•				
	-	-		oration (deg	, K	t.							
	-		_	ation (mm I		0.08 cha	00						
	F		-8		-0	Actual chart response (IC)							
For subs	equent ca	alculatio	n of san	pler flow:		8 20.0	0						
1/m((I)[S	Sqrt(298/	Tav)(Pav	/760)] - t))									
						10.0	00						
m = samp	ler slope												
b = samp	ler interc	ept				0.0							
I = chart r	response					0.0	0.000	0.5	500 1.0	000 1	.500	2.0	00
Tav = dai	ly averag	e temper	ature					\$	Standard Flow	Rate (m3/min)			
Pav = dail	ly averag	e pressur	e		L								
1													



RECALIBRATION DUE DATE: February 13, 2019

Cal. Date:	February 13	. 2018	Rootsn	neter S/N: 4	138320	Ta: 2	.93	°К	
Operator:	Jim Tisch					Pa: 763.3		mm Hg	
					1612	r a. 7	05.5	11111116	
Calibration	Model #:	TE-5025A	Calib	rator S/N:	1012				
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔH	1	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)		
	1	1	2	1	1.3970	3.2	2.00	1	
	2	3	4	1	1.0000	6.3	4.00	1	
	3	5	6	1	0.8900	7.9	5.00	1	
	4	7	8	1	0.8440	8.7	5.50		
	5	9	10	1	0.7010	12.6	8.00]	
	-		D	ata Tabulat	ion			1	
			[/ Pa	V/ Tetd)				1	
	Vstd	Qstd	√∆H(<u>Pa</u> Pstd	$\frac{Tstd}{Ta}$		Qa 1	∆Н(Та/Ра)	1	
	(m3)	(x-axis)	(y-axis)		Va	(x-axis)	(y-axis)		
	1.0172	0.7281	1.4293		0.9958	0.7128	0.8762	1	
	1.0130	1.0130	2.0213		0.9917	0.9917	1.2392		
	1.0109	1.1358	2.2599		0.9896	1.1120	1.3854		
	1.0098	1.1964	2.3702		0.9886	1.1713	1.4530		
	1.0046	1.4331	2.858	36	0.9835	1.4030	1.7524		
	1.5	m=	2.020	17		m=	1.26500		
	QSTD	QSTD b= -0.03691 r= 0.99988			QA	b=	-0.02263		
				0.99988		r=	0.99988		
				Calculation	IS]	
	Vstd=	Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)				Va= ΔVol((Pa-ΔP)/Pa)			
	Qstd=	Vstd/∆Time			Qa= Va/ΔTime				
			For subsequ	ent flow rat	e calculatio	ns:			
	Qstd=	1/m ((\\ \ \ \ H (Pa <u>Tstd</u>))-b)	Qa= $1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$				
-	Standard	Conditions							
Tstd				[RECALIBRATION				
Pstd	-	mm Hg			LIS EPA roc	ommends an	nual recalibrati	on ner 100	
	tor manomet	(ey er reading (i	n H2O)						
	eter manomet				40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the				
	absolute tem						ended Particula		
	parometric pr						re, 9.2.17, page		
b: intercep					u	ie Autospile	10, 5.2.17, page	50	
m: slope									

Tisch Environmental, Inc.

145 South Miami Avenue

Village of Cleves, OH 45002

www.tisch-env.cor TOLL FREE: (877)263-761(FAX: (513)467-900

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



	SUB-CONTRACTING REPORT						
CONTACT	: MR BEN TAM	WORK ORDER	HK1825888				
CLIENT	ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING						
ADDRESS	RM A 20/F., GOLD KING IND BLDG, NO. 35-41 TAI LIN PAI ROAD, KWAI CHUNG, N.T. HONG KONG	SUB-BATCH DATE RECEIVED DATE OF ISSUE	: 1 : 12-APR-2018 : 19-APR-2018				
PROJECT	: 	NO. OF SAMPLES CLIENT ORDER	: 1				

General Comments

- Sample(s) were received in ambient condition.
- Sample(s) analysed and reported on an as received basis.
- Calibration was subcontracted to and analysed by Action United Enviro Services.

Position

Signatories

Richard Fung

Signatories

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

012

General Manager

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

HK1825888-001	S/N: 3Y6501	Equipments	12-Apr-2018	S/N: 3Y6501	
ALS Lab	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.	
PROJECT	ACTION UNITED EN	(ALS)			
SUB-BATCH	1				
NORK ORDER	: HK1825888				

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	3Y6501
Equipment Ref:	EQ111
Job Order	HK1825888

Standard Equipment:

Standard Equipment:	Higher Volume Sampler	
Location & Location ID:	AUES office (calibration room)	
Equipment Ref:	HVS 018	
Last Calibration Date:	27 February 2018	

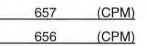
Equipment Verification Results:

Calibration Date:

12 & 13 March 2018

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
2hr07min	9:50 ~ 11:57	19.6	1019.0	0.073	4211	33.3
2hr14min	12:05 ~ 14:19	19.6	1019.0	0.075	4313	32.1
2hr17min	9:50 ~ 12:07	20.9	1016.7	0.075	4771	34.7

Sensitivity Adjustment Scale Setting (Before Calibration) Sensitivity Adjustment Scale Setting (After Calibration)



Linear Regression of Y or X

Slope (K-factor): Correlation Coefficient (R)

0.0022
0.9979
0.9979

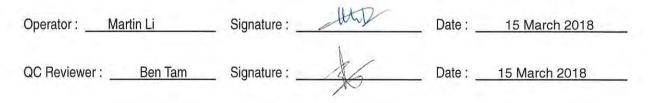
Remarks:

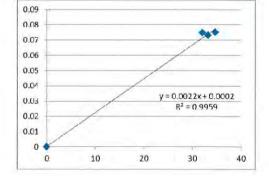
Date of Issue

1. Strong Correlation (R>0.8)

2. Factor 0.0022 should be apply for TSP monitoring

*If R<0.5, repair or re-verification is required for the equipment





TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung Location ID : Calibration Room						Date of Calibration: 27-Feb-18 Next Calibration Date: 27-May-18			
					C	ONDITI	ONS		
Sea Level Pressure (hPa)1017.3Temperature (°C)19.1						Corrected Pressure (mm Hg) 762.975 Temperature (K) 292			
					CALIBR	RATION	ORIFICE		
Make-> TISC Model-> 502: Calibration Date-> 28-Fe						A	Qstd Slope -> 2.11965 Qstd Intercept -> -0.02696 Expiry Date-> 28-Feb-18		
					CA	LIBRA	TION		
Plate No.					I (chart	t) or	IC	LINEAR REGRESSION	
18 13 10 8 5	6.2 5.1 3.9 2.6 1.7	6.2 5.1 3.9 2.6 1.7	12.4 10.2 7.8 5.2 3.4	1.694 1.538 1.346 1.101 0.893	52 46 40 30 20	52.63 46.55 40.48 30.36		Slope = 39.8525 Intercept = -14.3322 Corr. coeff. = 0.9974	
C = I[Sqn] $Qstd = sta$ $C = correcorrecorrecorrecorrecorrecorrecorr$	n[Sqrt(H2 rt(Pa/Pstd) endard flow ected chart chart resp rator Qstd ator Qstd i al tempera ual pressu	(Tstd/Ta v rate respone onse slope ntercept ture during lculation	a)] es g calibra n of san	pration (deg ation (mm F apler flow:	K) -	60.00 50.00 40.00 30.00 20.00 20.00		FLOW RATE CHART	
n = samp = samp = chart r Cav = dail	ler interce	pt tempera	ature	9		10.00 0.00 0.	.000	0.500 1.000 1.500 2.000 Standard Flow Rate (m3/min)	



Certificate No. : C183441 證書編號

ITEM TESTED / 送檢項	目 (Job No. / 序引編號: IC18-0867)	Date of Receipt / 收件日期: 13 June 2018
Description / 儀器名稱 :	Integrating Sound Level Meter (EQ008)	
Manufacturer / 製造商 :	Brüel & Kjær	
Model No. / 型號 :	2238	
Serial No. / 編號 :	2285690	
Supplied By / 委託者 :	Action-United Environmental Services and	Consulting
	Unit A, 20/F., Gold King Industrial Buildin	ng,
	35-41 Tai Lin Pai Road, Kwai Chung, N.T.	

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Line Voltage / 電壓 : --- Relative Humidity / 相對濕度 : (50±25)%

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 23 June 2018

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only. The results do not exceed manufacturer's specification. The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By 測試	K C Lee Engineer		
Certified By 核證	: Ocn the Chan H C Chan Engineer	Date of Issue : 簽發日期	29 June 2018

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Certificate No.: C183441 證書編號

- 1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- 2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.4.
- 3. The results presented are the mean of 3 measurements at each calibration point.
- 4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C180024
CL281	Multifunction Acoustic Calibrator	PA160023

- 5. Test procedure : MA101N.
- 6. Results :
- 6.1 Sound Pressure Level
- 6.1.1 Reference Sound Pressure Level
- 6.1.1.1 Before Self-calibration

	UUTS	Setting	Applied	UUT		
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
50 - 130	LAFP	A	F	94.00	1	94.2

6.1.1.2 After Self-calibration

UUT Setting			Applie	d Value	UUT	IEC 60651	
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Type 1 Spec. (dB)
50 - 130	LAFP	A	F	94.00	1	94.1	± 0.7

6.1.2 Linearity

	UU	Γ Setting	Applied Value		UUT	
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)
50 - 130	LAFP	А	F	94.00	1	94.1 (Ref.)
				104.00		104.1
				114.00		114.0

IEC 60651 Type 1 Spec. : \pm 0.4 dB per 10 dB step and \pm 0.7 dB for overall different.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.



Certificate No. : C183441 證書編號

6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting			Applie	d Value	UUT	IEC 60651	
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	Reading (dB)	Type 1 Spec. (dB)
50 - 130	LAFP	А	F	94.00	1	94.1	Ref.
	LASP		S			94.2	± 0.1
	L _{AIP}		I			94.1	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

	UUT	Setting		App	lied Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration	Reading Type 1 S (dB) (dB)	
30 - 110	LAFP	Α	F	106.0	Continuous	106.0	Ref.
	LAFMax		1 - <u>-</u> 1		200 ms	105.0	-1.0 ± 1.0
	LASP		S		Continuous	106.0	Ref.
	L _{ASMax}			-	500 ms	102.0	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

	UUT	Setting		Appli	ed Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Type 1 Spec. (dB)
50 - 130	LAFP	A	F	94.00	31.5 Hz	54.8	-39.4 ± 1.5
					63 Hz	68.0	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.0
					250 Hz	85.4	-8.6 ± 1.0
					500 Hz	90.8	-3.2 ± 1.0
					1 kHz	94.1	Ref.
					2 kHz	95.3	$+1.2 \pm 1.0$
				4	4 kHz	95.1	$+1.0 \pm 1.0$
				8 kHz	93.0	-1.1 (+1.5 ; -3.0)	
					12.5 kHz	89.9	-4.3 (+3.0 ; -6.0)

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。



Certificate No. : C183441 證書編號

6.3.2 C-Weighting

Timo Au

	UUT	Setting		Appli	ed Value	UUT	IEC 60651
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.	Reading (dB)	Type 1 Spec. (dB)
50 - 130	L _{CFP}	С	F	94.00	31.5 Hz	91.2	-3.0 ± 1.5
				63 Hz	93.3	-0.8 ± 1.5	
				125 Hz	93.9	-0.2 ± 1.0	
					250 Hz	94.1	0.0 ± 1.0
					500 Hz	94.1	0.0 ± 1.0
					1 kHz	94.1	Ref.
			2 kHz	93.9	-0.2 ± 1.0		
				4 kHz	93.3	-0.8 ± 1.0	
		1	8 kHz	91,1	-3.0 (+1.5 ; -3.0)		
		· · · · · · · · · · · · · · · · · · ·	-		12.5 kHz	88.0	-6.2 (+3.0 ; -6.0)

6.4

1.00	UUI	Setting			Aj	Applied Value			UUT	IEC 60804				
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)	Reading Type 1 (dB) Spec. (dB)					
30 - 110 L _{Aeq}	L _{Aeq} A 10 sec. 60 sec. 5 min.	10 sec.	4 1	1	1/10	110.0	100	99.9	± 0.5					
								1.1	1/10	$1/10^{2}$		90	89.7	± 0.5
					1/103	/10 ³	80	79.7	± 1.0					
				1/104	1	70	69.7	± 1.0						

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2812705

- Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :	94 dB : 31.5 Hz - 125 Hz	$\pm 0.35 dB$
current and critical provider and compared of the		$:\pm 0.30 \text{ dB}$
	1 kHz	$\pm 0.20 \text{ dB}$
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
	104 dB : 1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
	114 dB : 1 kHz	$\pm 0.10 \text{ dB}$ (Ref. 94 dB)
	Burst equivalent level	: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :

Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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ALS Technichem (HK) Pty Ltd 11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong T: +852 2610 1044 | F: +852 2610 2021

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: CLIENT:	MR BEN TAM ACTION UNITED ENVIRONMENT SERVICES AND CONSULTING	WORK ORDER:	HK1860886
ADDRESS:	RM A 20/F., GOLD KING IND BLDG,	SUB-BATCH:	0
	NO. 35-41 TAI LIN PAI ROAD,	LABORATORY:	HONG KONG
	KWAI CHUNG,	DATE RECEIVED:	21-Nov-2018
	N.T., HONG KONG.	DATE OF ISSUE:	27-Dec-2018

COMMENTS

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

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

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

Scope of Test:	Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature
Equipment Type:	Multifunctional Meter
Brand Name:	YSI
Model No .:	Professional DSS
Serial No.:	15H102620/ 15H103928
Equipment No.:	EQW018
Date of Calibration:	28 November, 2018

<u>NOTES</u>

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Cha Ai

Mr Chan Siu Ming, Vico Manager - Inorganic

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER:	HK1860886		ALS
SUB-BATCH: DATE OF ISSUE: CLIENT:	0 27-Dec-2018 ACTION UNITED ENVIRONMEN	T SERVICES AND CONSULTING	
Equipment Type: Brand Name: Model No.: Serial No.: Equipment No.: Date of Calibration:	Multifunctional Meter YSI Professional DSS 15H102620/ 15H103928 EQW018 28 November, 2018	Date of Next Calibration:	28 February, 2019

PARAMETERS:

Conductivity

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

Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)			
146.9	159.8	+8.8			
6667	6492	-2.6			
12890	12526	-2.8			
58670	55801	-4.9			
	Tolerance Limit (%)	±10.0			

Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.17	3.05	-0.12
5.95	5.92	-0.03
8.19	8.29	+0.10
	Tolerance Limit (mg/L)	±0.20

pH Value

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

Expected Deciding (pl Lupit)	Displayed Deading (pll unit)	Toloropoo (pl. l. upit)
Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.10	+0.10
7.0	7.13	+0.13
10.0	9.99	-0.01
	Tolerance Limit (pH unit)	±0.20

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

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Mr Chan Siu Ming, Vico Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER:	HK1860886		ALS
SUB-BATCH: DATE OF ISSUE: CLIENT:	0 27-Dec-2018 ACTION UNITED ENVIRONMEN	T SERVICES AND CONSULTING	
Equipment Type: Brand Name: Model No.: Serial No.: Equipment No.: Date of Calibration:	Multifunctional Meter YSI Professional DSS 15H102620/ 15H103928 EQW018 28 November, 2018	Date of Next Calibration:	28 February, 2019
PARAMETERS: Salinity	Method Ref: APHA (21st edition), 2520B	
5	Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
	0	0.01	
	10	10.23	+2.3
	20	21.02	+5.1
	30	29.83	-0.6
		Tolerance Limit (%)	±10.0
Temperature		ational Accreditation New Zealand ch 2008: Working Thermometer Ca	

Guide No. 3 Second edition Marc	n 2008: working Thermometer Car	Ibration Procedure.
Expected Reading (°C)	Displayed Reading (^o C)	Tolerance (°C)
10.0	11.2	+1.2
22.0	21.7	-0.3
41.0	40.8	-0.2
	Tolerance Limit (°C)	±2.0

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

Cha A

Mr Chan Siu Ming, Vico Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER:	HK1860886		ALS
SUB-BATCH: DATE OF ISSUE: CLIENT:	0 27-Dec-2018 ACTION UNITED ENVIRONMENT	SERVICES AND CONSULTING	
Equipment Type: Brand Name: Model No.: Serial No.: Equipment No.: Date of Calibration:	Multifunctional Meter YSI Professional DSS 15H102620/ 15H103928 EQW018 05 December, 2018	Date of Next Calibration:	05 March, 2019
PARAMETERS:			
Turbidity	Method Ref: APHA (21st edition)	, 2130B	
	Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
	0	O.14	
	4	3.60	-10.0
	40	41.49	+ 3.7
	80	74.42	-7.0
	400	426.8	+6.7

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

803.89

Tolerance Limit (%)

800

Cha Ai

+0.5

 ± 10.0

Mr Chan Siu Ming, Vico Manager - Inorganic



Appendix H

Database of Monitoring Results

24-hour TSP	• Monitoring	Data for A	M5												
DATE	SAMPLE NUMBER	ELA	APSED TIN	/IE	CHAI	RT REA	DING	AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WI	EIGHT (g)	DUST WEIGHT COLLECTED	24-hr TSP
	NUMBER	INITIAL	FINAL	(min)	MIN	MAX	AVG	(°C)	(hPa)	(m ³ /min)	(std m ³)	INITIAL	FINAL	(g)	$(\mu g/m^3)$
3-Jan-19	23540	14157.04	14180.65	1416.60	47	48	47.5	16.2	1024.3	1.08	1526	2.6710	2.8538	0.1828	120
9-Jan-19	23674	14180.65	14204.36	1422.60	58	58	58.0	17.8	1022.3	1.44	2046	2.6631	2.9529	0.2898	142
15-Jan-19	23678	14204.36	14228.48	1447.20	59	59	59.0	19.0	1018.8	1.47	2121	2.6760	3.0588	0.3828	180
21-Jan-19	23677	14228.48	14252.88	1464.00	58	59	58.5	16	1021.8	1.46	2140	2.6706	3.0503	0.3797	177
26-Jan-19	23684	14252.88	14276.52	1418.40	59	59	59.0	18.2	1023.1	1.47	2089	2.6585	2.8973	0.2388	114
29-Jan-19	62023	14276.52	14300.12	1416.00	57	57	57.0	18.5	1021.4	1.40	1983	2.7036	2.8574	0.1538	78

Noise Measure	uremen	t Resul	ts (dB) a	of CNM	S5															
	Start	1st	Leq (5n	nin)	2nd	Leq (51	min)	3rd	Leq (51	nin)	4th	Leq (5r	nin)	5th	Leq (5r	nin)	6th	Leq (5n	nin)	
Date	Time	0.0	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq,	L10,	L90,	Leq30min, dB(A)
	Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
2-Jan-19	10:29	65.7	68.5	61.0	67.3	70.0	62.5	66.7	69.5	62.5	67.8	70.5	62.5	68.1	71.0	62.5	67.7	70.5	62.5	67.3
7-Jan-19	13:00	58.9	62.5	50.1	59.0	62.4	51.2	59.0	63.2	51.3	59.6	62.8	51.0	58.3	62.6	61.3	58.0	62.0	51.3	58.8
18-Jan-19	11:30	65.9	69.0	60.0	64.4	67.0	60.5	65.9	68.0	61.0	66.0	68.5	60.5	64.9	68.0	59.0	65.2	68.0	60.0	65.4
24-Jan-19	13:07	65.8	67.7	62.6	66.6	68.6	63.9	66.9	69.0	63.5	65.5	67.4	62.7	66.8	69.7	62.3	65.7	68.0	62.4	66.3
30-Jan-19	11:01	66.9	70.5	56.5	67.4	70.5	67.0	67.4	71.0	58.5	68.0	71.5	58.5	66.6	70.0	59.0	67.6	71.0	59.0	67.3

mpning Dutter	2-Jan-19												
		т:д-*	Co-or	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	рН	ss
Date / Time	Location	Tide*	East	North	m	m	ະ	mg/L	Saturation %	NTU	ppt	unit	mg/
						1.00	18.3	7.51 7.48	98.4 98.0	1.75 1.79	35.09 35.10	8.32 8.32	2.1
10:46	CC1	ME	843201	816416	7.32	3.66	18.3 18.3	7.44	97.6	1.86	35.10	8.34	1.8
							18.3	7.43 7.43	97.5 97.5	1.87 2.20	35.10 35.10	8.34 8.34	2
						6.32	18.3 18.3	7.43 7.70	97.5 100.8	2.21 1.62	35.10 35.10 35.01	8.34 8.32	2.2
						1.00	18.3	7.66	100.3	1.57	35.03	8.32	1.8
10:52	CC2	ME	844076	817091	12.91	6.46	18.3	7.44 7.43	97.6 97.4	1.64	35.11 35.11	8.32 8.32	2.8
						11.91	18.3 18.3	7.41	97.2 97.2	1.67	35.10 35.10	8.33 8.33	3.2
						1.00	18.6	7.33	96.5	1.82	35.06	8.33	1.2
11:14	CC3	ME	844606	817941	9.53	4.77	18.6 18.5	7.29 7.28	96.0 95.8	1.73 2.12	35.06 35.11	8.33 8.34	<1 1.5
11:14	<i>ccs</i>	ME	844606	81/941	9.55		18.5 18.5	7.29 7.28	95.9 95.7	2.13 2.38	35.11 35.11	8.34 8.35	1.8
						8.53	18.5	7.28	95.7	2.29	35.11	8.35	2.0
10:20	CC4	ME	845444	815595	1.9	0.95	18.2 18.2	7.52 7.48	98.4 97.9	1.68	35.08 35.09	8.30 8.30	1.8
							18.2	7.48	91.9	1.00	33.09	8.50	2.5
						1.00	18.5	7.37	97.0	1.95	35.06	8.31	1.6
						1.00	18.5	7.36	96.8	1.89	35.05	8.31	1.4
10:59	CC13	ME	844200	817495	7.11	3.56	18.5 18.5	7.25 7.25	95.5 95.4	2.37 2.38	35.11 35.11	8.33 8.33	1.4 1.8
						6.11	18.5 18.5	7.22 7.22	95.1 95.0	2.37 2.39	35.11 35.11	8.34 8.34	2.6
						1.00	18.3	7.29	95.6	1.86	35.06	8.27	2.5
10:13	SWI1	ME	845512	817442	4.1		18.3	7.24	95.0	1.85	35.06	8.27	2.5
10.15	SWII	ME	843312	61/442	4.1		18.4	7.19	94.4	1.89	35.10	8.28	3
						3.10	18.4	7.19	94.4	1.80	35.10	8.28	2.9
						1.00	18.3	7.55 7.51	99.0 98.5	1.90	35.10 35.10	8.33 8.33	4.2
10:36	C3	ME	843821	816211	14.64	7.32	18.3	7.47	97.9	2.04	35.10	8.34	3.5
						13.64	18.3 18.3	7.46 7.37	97.9 96.6	1.98 2.75	35.11 35.09	8.35 8.34	3.0
							18.3 18.2	7.38 7.61	96.7 99.7	2.61 2.06	35.10 35.07	8.34 8.31	3.2
						1.00	18.3	7.59	99.5	2.08	35.09	8.31	2.3
10:28	C4	ME	844621	815770	14.6	7.30	18.3 18.3	7.45	97.6 97.7	2.15 2.07	35.10 35.11	8.34 8.34	3.2
						13.60	18.3 18.3	7.43 7.43	97.5 97.4	2.09 2.05	35.10 35.10	8.35 8.35	3.5
						1.00	18.5	7.28	95.7	1.68	34.99	8.35	2.4
							18.5 18.5	7.28	95.8 95.3	1.73 2.18	35.01 35.10	8.35 8.35	2.8
11:06	11	ME	844602	817675	9.16	4.58	18.5	7.23	95.2 94.9	2.17 2.19	35.11	8.35	2.6
						8.16	18.5 18.5	7.21 7.21	94.9	2.19	35.11 35.11	8.35 8.35	2.6
							183	7.65	100.2	1.71	35.07	8.36	2 3
						1.00	18.3	7.63	100.0	1.75	35.08	8.36	2.1
14:18	CC1	MF	843201	816416	6.7	3.35	18.4 18.4	7.56 7.56	99.2 99.2	1.58	35.10 35.10	8.36 8.36	2.1
						5.70	18.4	7.55	99.0	1.51	35.09	8.36	3.7
						1.00	18.4 18.3	7.55 7.59	99.0 99.4	1.59 1.41	35.10 35.09	8.37 8.36	3.5
							18.3	7.57	99.2 98.6	1.40	35.09 35.10	8.36 8.36	2.4
14:27	CC2	MF	844076	817091	12.51	6.26	18.3	7.52	98.6	1.53	35.10	8.36	1.6
						11.51	18.3 18.3	7.49 7.47	98.2 97.9	1.74	35.10 35.10	8.36 8.36	1.2
						1.00	18.5 18.5	7.44 7.40	97.8 97.3	1.84	34.96 34.99	8.34 8.35	1
14:50	CC3	MF	844606	817941	9.37	4.69	18.5	7.36	96.9	1.76	35.05	8.35	2.2
							18.6 18.5	7.35 7.30	96.8 96.0	1.75	35.06 35.10	8.35 8.36	1.7
						8.37	18.4	7.28	95.7	2.20	35.11	8.36	2.6
									-	-			
13:54	CC4	MF	845444	815595	2.34	1.17	18.3 18.3	7.56	99.0 98.8	1.62	35.09 35.10	8.35 8.36	2.0
						1.00	18.5	7.45	98.0	2.11	35.01	8.35	2.2
14.27	0012	ME	044000	017405	0.00		18.5 18.5	7.43 7.38	97.8 97.1	2.08 1.90	35.02 35.06	8.35 8.35	2.8
14:35	CC13	MF	844200	817495	8.38	4.19	18.5	7.37 7.33	96.9	1.84 1.97	35.07 35.09	8.35 8.36	1.8
						7.38	18.5 18.4	7.32	96.3 96.3	1.99	35.10	8.36	2
						1.00	18.4 18.4	7.33	96.3 96.2	1.79	35.07 35.07	8.42 8.40	2.9
13:46	SWI1	MF	845512	817442	4.39								
						3.39	18.4	7.30	95.9	1.89	35.08	8.39	3.
	┥ ┥						18.4 18.3	7.30 7.55	95.8 98.9	1.92 1.77	35.09 35.06	8.39 8.35	3.2
						1.00	18.3	7.55	98.9	1.76	35.07	8.35	2.
14:11	C3	MF	843821	816211	15.37	7.69	18.3 18.3	7.51 7.48	98.4 98.1	1.77 1.70	35.09 35.10	8.36 8.36	2.5
						14.37	18.3	7.41	97.1	2.09	35.09	8.36	3.
						1.00	18.3 18.3	7.41 7.63	97.1 99.9	2.09 1.69	35.09 35.08	8.36 8.36	2.9
			l				18.3 18.3	7.60 7.46	99.6 97.7	1.67 1.90	35.09 35.09	8.36 8.36	1.0
14:02	C4	MF	844621	815770	16.24	8.12	18.3	7.45	97.6	1.89	35.10	8.36	1.7
						15.24	18.3 18.3	7.44 7.44	97.4 97.4	2.02 2.00	35.09 35.09	8.37 8.37	2.6
							18.6	7.34	96.7	1.82	35.05	8.37	1.6
						1.00				1.80			1.4
14:42	11	MF	844602	817675	10.06	5.03	18.6 18.5 18.5	7.34 7.26 7.27	96.7 95.6 95.6	1.80 1.76 1.71	35.04 35.11 35.10	8.37 8.37 8.37	1.4 2.3 2.9

Remarks: MF - Middle Flood tide ME - Middle Ebb tide For SS, if the monitoring result is less than Limit of Report 1mg/L, the result value will be assumed as 1 for the calculation.

	4-Jan-19					1			r				
Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	рН	ss
			East	North	m	m	ĉ	mg/L	%	NTU	ppt	unit	mg/
						1.00	17.3	7.87 7.87	100.8 101.2	1.67	34.64 34.44	8.34 8.34	3.1
11:52	CC1	ME	843201	816416	7.43	3.72	17.7 17.7	7.63 7.62	98.6 98.5	1.71 1.73	34.61 34.62	8.33 8.33	2.8 3.2
						6.43	17.7	7.58	98.0 98.0	1.71	34.64 34.64	8.33 8.33	2.2
						1.00	17.5	7.82	100.4	1.79	34.28	8.34	3.2
12:01	CC2	ME	844076	017001	10.76		17.5 17.5	7.83 7.79	100.5 100.1	1.81	34.28 34.35	8.34 8.33	2.1
12:01	002	ME	844076	817091	10.76	5.38	17.5 17.5	7.79 7.79	100.0 100.0	1.85	34.35 34.25	8.33 8.33	3.6
						9.76	17.5	7.79	100.0	1.75	34.26	8.33	2.1
						1.00	18.2	7.31 7.36	95.4 96.1	1.86	34.86 34.85	8.33 8.33	1.5
12:27	CC3	ME	844606	817941	9.6	4.80	18.1 18.1	7.37 7.36	96.3 96.1	1.56	34.95 34.97	8.33 8.33	1.3
						8.60	18.2	7.28	95.1	2.44	35.00	8.33	3
							18.2	7.27	95.0	2.23	35.00	8.33	1.8
11.21	664	ME	045444	815505	1.06	0.08	17.8	7.97	103.1	1.84	34.50	8.35	2.
11:31	CC4	ME	845444	815595	1.96	0.98	17.8	7.99	103.4	1.85	34.49	8.35	2.4
							17.1		101.0	4.00	21.00		
						1.00	17.4 17.4	7.87 7.88	101.0 101.0	1.82	34.22 34.22	8.34 8.34	2.
12:08	CC13	ME	844200	817495	7.15	3.58	17.5	7.86 7.86	100.9 100.9	1.93	34.27 34.27	8.34 8.34	2.4
						6.15	17.5	7.85	100.7 100.7	1.90 1.93	34.28	8.34	1
						1.00	18.2	7.42	97.1	1.67	34.99	8.37	3
11:24	SWI1	ME	845512	817442	4.09	1.00	18.2	7.39	96.6	1.68	34.98	8.34	3.
11.24	SWII	ME	843312	81/442	4.09		18.2	7.39	96.6	1.90	34.99	8.35	2.
						3.09	18.2	7.39	96.6	1.93	34.99	8.35	3.
						1.00	17.5 17.6	7.80 7.76	100.3 100.0	1.74	34.64 34.51	8.33 8.33	2.
11:47	C3	ME	843821	816211	15.05	7.53	17.7 17.7	7.67 7.65	99.0 98.8	1.71 1.67	34.57 34.59	8.33 8.33	2.
						14.05	17.9	7.52	97.6	1.87	34.81	8.33	3.
						1.00	17.9 17.4	7.47 7.82	97.1 100.3	1.95 1.76	34.86 34.23	8.33 8.33	4.
							17.4 17.7	7.82 7.61	100.3 98.4	1.81 1.70	34.23 34.67	8.33 8.33	3
11:39	C4	ME	844621	815770	15.31	7.66	17.8	7.59	98.2	1.69	34.69	8.33	2.
						14.31	17.9	7.50 7.41	97.4 96.7	1.94 2.17	34.84 34.98	8.33 8.33	2.
						1.00	17.7 17.8	7.81 7.78	100.9 100.6	1.56 1.56	34.43 34.41	8.34 8.34	2.
12:16	I1	ME	844602	817675	10.22	5.11	18.1	7.26	94.6	2.33	34.87	8.33	3.
						9.22	18.1 18.1	7.22 7.26	94.2 94.8	2.72 2.09	34.94 35.00	8.33 8.33	3.
						9.22	18.1	7.27	95.0	2.00	35.00	8.33	4.
						1.00	17.7	7.93	102.3	1.39	34.39	8.35	2.
15:33	CC1	MF	843201	816416	7.22	3.61	17.7 17.7	7.93 7.89	102.2 101.9	1.39	34.40 34.44	8.35 8.34	2.
15.55	cer	WIT	843201	810410	1.22		17.7	7.88 7.87	101.7 101.7	1.45	34.45 34.45	8.34 8.34	1.
						6.22	17.7	7.87	101.6 101.3	1.53	34.46	8.34	1.
						1.00	17.4 17.6	7.94	102.2	1.56 1.54	34.50 34.37	8.34 8.34	3. 2.
15:41	CC2	MF	844076	817091	12.2	6.10	17.7 17.7	7.8 7.74	100.7 100.1	1.49	34.58 34.63	8.34 8.33	3.
						11.20	18 18.1	7.47 7.41	97.3 96.7	1.83 1.91	34.92 34.94	8.33 8.33	3.
						1.00	17.8	7.98	103.2	1.29	34.26	8.35	3.
16:06	CC3	MF	844606	817941	9.45	4.73	17.8 17.9	8.00 7.84	103.4 101.5	1.29	34.26 34.56	8.35 8.34	3.
10.00	ces	MIF	844000	81/941	9.45		17.9 18.1	7.80 7.55	101.2 98.4	1.32 1.30	34.59 34.93	8.34 8.33	1.
						8.45	18.1	7.49	97.8	1.28	34.96	8.33	2.
15:09	CC4	MF	845444	815595	2.24	1.12	17.7 17.7	7.81 7.81	100.9 100.9	1.68	34.51 34.51	8.34 8.34	2.
						1.00	17.9 17.7	7.81 7.83	100.8 100.9	1.40 1.52	34.01 34.25	8.34 8.34	2.
15:50	CC13	MF	844200	817495	9.2	4.60	18.1	7.47	97.3	1.28	34.79	8.33	2.
			0.1200				18 18.1	7.52 7.53	97.8 98.1	1.25	34.72 34.83	8.33 8.33	2
						8.20	18.1 17.8	7.50 7.82	97.8 101.1	1.35 1.44	34.88 34.39	8.33 8.38	2.
						1.00	17.8	7.86	101.1	1.44	34.39	8.38	3.
15:01	SWI1	MF	845512	817442	4.09								
						3.09	17.7 17.7	7.90 7.90	101.9 101.9	1.48 1.45	34.40 34.41	8.38 8.37	2.
						1.00	17.8	7.79	100.8	1.48	34.50 34.49	8.34	2.
15:25	C3	MF	843821	816211	15.71	7.86	17.8 17.8	7.77	100.6	1.45 1.47	34.49	8.34 8.34	3.
		1411	0 10021	070211			17.9 17.9	7.63 7.59	99.0 98.6	1.48 1.47	34.75 34.76	8.34 8.34	3.
						14.71	18	7.47	97.2	1.49	34.86	8.33	2.
						1.00	17.6 17.6	7.89 7.89	101.4 101.5	1.69 1.69	34.21 34.21	8.34 8.34	3.
15:17	C4	MF	844621	815770	15.25	7.63	18 18	7.47 7.44	97.2 96.9	1.33 1.34	34.86 34.87	8.33 8.33	2.
						14.25	18	7.38	96.1	1.55	34.90	8.33	3.
						1.00	18 17.8	7.37 7.83	96.0 101.2	1.60 1.42	34.91 34.06	8.33 8.34	3.
10.00			0.447-5	012/22	0.55		17.9 18	7.84 7.62	101.3 99.1	1.40 1.19	34.04 34.73	8.34 8.33	3. 4.
15:58	11	MF	844602	817675	9.68	4.84	18	7.59	98.7	1.26	34.77	8.33	4.
	1		1	1	1	8.68	18	7.58 7.45	98.6 97.0	1.26	34.79 34.88	8.33 8.33	4.

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

Contract No. EDO/04/2018 Cross Bay Link, Tseung Kwan O

mpling Date:	7-Jan-19					er Quality !							
Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pН	SS
Date / Time	Location	The	East	North	m	m	ĉ	mg/L	%	NTU	ppt	unit	mg/L
						1.00	17.7	7.83	100.8 100.7	1.31	34.16 34.16	8.34 8.34	3.4
11:53	CC1	ME	843201	816416	7.39	3.70	17.7	7.81	100.6	1.33	34.18	8.34	1.4
						6.39	17.7	7.80	100.5	1.29	34.19 34.20	8.34 8.34	2.3
							17.7	7.78	100.3 98.1	1.29	34.20 34.41	8.34 8.32	2
						1.00	18	7.54	97.8	1.34	34.41	8.32	2.6
12:00	CC2	ME	844076	817091	11.39	5.70	18 18	7.45 7.43	96.6 96.4	1.44 1.45	34.44 34.45	8.32	3.6
						10.39	18 18	7.32	95.0 94.9	1.95 1.84	34.47 34.47	8.31 8.31	3.6 2.8
						1.00	18	7.48	97.0	0.97	34.31	8.31	1.6
12:33	CC3	ME	844606	817941	9.16	4.58	18	7.54 7.52	97.7 97.6	0.96	34.31 34.40	8.31 8.32	1.7 <1.0
12.55	ces	ME	844000	81/941	9.10		18 18	7.48 7.45	97.0 96.6	1.28	34.42 34.45	8.32 8.32	1.4
						8.16	18	7.40	96.1	1.61	34.45	8.32	1.7
													_
11:37	CC4	ME	845444	815595	2.04	1.02	18	7.45	96.7 96.6	1.63	34.45 34.45	8.33 8.33	3.5
							18	7.44	90.0	1.05	34.45	8.55	5.5
						1.00	18	7.54	97.8	1.32	34.39	8.31	1
						1.00	18	7.52	97.6	1.37	34.39	8.31	1.7
12:06	CC13	ME	844200	817495	7.56	3.78	18 18	7.45 7.46	96.7 96.8	1.45 1.44	34.44 34.42	8.32 8.32	3.8 4
						6.56	18 18	7.40	96.0 95.6	1.86 1.92	34.46 34.46	8.32 8.32	3.5 3.6
						1.00	18	7.31	94.9	1.23	34.41	8.37	3.4
11:30	SWI1	ME	845512	817442	4.29		18	7.33	95.1	1.21	34.42	8.36	4.3
11.50	SWII	ME	843312	81/442	4.29		18	7.38	95.7	1.27	34.44	8.35	1.5
						3.29	18	7.38	95.8	1.30	34.44	8.34	1.6
						1.00	17.6 17.6	7.86 7.86	101.0 101.0	1.28 1.25	34.10 34.10	8.35 8.35	<1.0 <1.0
11:47	C3	ME	843821	816211	16.62	8.31	17.7 17.7	7.74 7.69	99.8 99.2	1.40 1.44	34.24 34.28	8.34 8.34	1.8 <1.0
						15.62	17.8	7.58	97.9	1.69	34.30	8.33	1.2
							17.8 17.6	7.57 7.79	97.8 100.3	1.76 1.52	34.30 34.15	8.33 8.34	1.4
						1.00	17.7 17.8	7.79	100.3	1.48	34.15	8.34	<1.0
11:41	C4	ME	844621	815770	16.24	8.12	17.8	7.62	98.3 98.3	1.54 1.50	34.26 34.26	8.33 8.33	<1.0 1.8
						15.24	17.8 17.8	7.58	97.9 97.7	1.62	34.30 34.32	8.33 8.33	2.4
						1.00	17.8	7.73	99.9	1.29	34.48	8.33	1.1
12:27	11	ME	844602	817675	9.2		17.9 17.9	7.69 7.59	99.6 98.4	1.27 1.25	34.35 34.37	8.33 8.33	1.1
12.27	11	ME	844002	81/0/5	9.2	4.60	17.9 17.9	7.58	98.2 96.8	1.29	34.38 34.43	8.33 8.32	<1.0
						8.20	17.9	7.47	96.6	1.40	34.43	8.32	1.9
							17.9	7.48	96.9	1.84	34.44	8.31	3.2
						1.00	17.9	7.45	96.5	1.84	34.44	8.31	2.4
9:07	CC1	MF	843201	816416	7.44	3.72	17.9 17.9	7.43	96.3 96.4	1.70	34.44 34.44	8.30 8.30	2.5
						6.44	17.9 17.9	7.41 7.41	96.1 96.1	2.07 2.12	34.44 34.44	8.30 8.30	2.6 2.5
						1.00	17.9	7.52	97.4	1.42	34.39	8.30	1.5
			0.1.10.5.5	0.000	10.00		17.9 17.9	7.49 7.46	97.0 96.7	1.29	34.39 34.41	8.30 8.31	1.7
9:18	CC2	MF	844076	817091	12.56	6.28	17.9 18	7.44 7.35	96.5 95.3	1.56 2.19	34.43 34.47	8.31 8.31	1.1
						11.56	18	7.34	95.3	2.17	34.47	8.31	1.6
						1.00	17.9 17.9	7.52	97.3 97.3	1.37	34.34 34.35	8.31 8.31	3.7
9:36	CC3	MF	844606	817941	9.05	4.53	18	7.47	96.9	1.08	34.44	8.31	2.6
						8.05	18 18	7.46	96.8 96.7	1.02	34.44 34.49	8.31 8.31	4.3
						8.05	18.1	7.42	96.5	0.99	34.51	8.31	3.7
							1.5.0		05.4	4.00	21.11		1
8:50	CC4	MF	845444	815595	2.13	1.07	17.9 17.9	7.34 7.34	95.1 95.1	1.82	34.41 34.46	8.29 8.29	4.1 4.5
						1.00	17.9	7.57	97.9	1.30	34.31	8.31	3.1
	1		844200	017402	7.26		17.9 17.9	7.54 7.42	97.6 96.1	1.35 1.59	34.32 34.40	8.31	3 3.5
0.24	CC12	ME		817495	7.35	3.68		7.41	96.0	1.56	34.39 34.41	8.31 8.31	4.3
9:24	CC13	MF	044200				17.9 17.9			1.64			4.5
9:24	CC13	MF	044200			6.35	17.9 17.9	7.40 7.39	95.9 95.8	1.64	34.43	8.31	
9:24	CC13	MF	044200			6.35 1.00	17.9	7.40	95.9			8.31 8.32 8.32	2.8
9:24	CC13 SWI1	MF	845512	817442	3.97		17.9 17.9 17.9	7.40 7.39 7.27	95.9 95.8 94.3	1.77 1.00	34.43 34.42	8.32	2.8
				817442	3.97	1.00	17.9 17.9 17.9 17.9 17.9	7.40 7.39 7.27 7.33 7.35	95.9 95.8 94.3 95.0 95.4	1.77 1.00 0.95	34.43 34.42 34.43 34.43	8.32 8.32 8.31	2.8 3.7 3.3
				817442	3.97	1.00	17.9 17.9 17.9 17.9 17.9 18 18	7.40 7.39 7.27 7.33 7.35 7.35	95.9 95.8 94.3 95.0	1.77 1.00 0.95 1.03 1.07	34.43 34.42 34.43 34.47 34.47	8.32 8.32 8.31 8.31	2.8 3.7 3.3 2.4
				817442	3.97	1.00	17.9 17.9 17.9 17.9 17.9 18 18 18 17.8 17.8	7.40 7.39 7.27 7.33 7.35 7.35 7.35 7.57 7.54	95.9 95.8 94.3 95.0 95.4 95.4 95.4 97.9 97.6	1.77 1.00 0.95 1.03 1.07 1.65 1.60	34.43 34.42 34.43 34.47 34.47 34.47 34.35 34.36	8.32 8.32 8.31 8.31 8.32 8.32 8.32	2.8 3.7 3.3 2.4 3.9 2.9
				817442	3.97	1.00	17.9 17.9 17.9 17.9 17.9 18 18 18 18 17.8	7.40 7.39 7.27 7.33 7.35 7.35 7.57	95.9 95.8 94.3 95.0 95.4 95.4 95.4 97.9	1.77 1.00 0.95 1.03 1.07 1.65	34.43 34.42 34.43 34.47 34.47 34.47 34.35 34.36 34.39 34.38	8.32 8.32 8.31 8.31 8.32	2.8 3.7 3.3 2.4 3.9
8:41	SWI1	MF	845512			1.00 2.97 1.00	17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.9 17.9 17.9	7.40 7.39 7.27 7.33 7.35 7.35 7.35 7.57 7.54 7.44 7.44 7.42	95.9 95.8 94.3 95.0 95.4 95.4 97.9 97.6 96.3 96.3 96.1	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.66 1.71 1.82	34.43 34.42 34.43 34.47 34.47 34.35 34.36 34.39 34.38 34.40	8.32 8.31 8.31 8.32 8.31 8.32 8.31 8.32 8.31 8.32 8.31 8.32	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.9 4.8 4.5
8:41	SWI1	MF	845512			1.00 2.97 1.00 7.44 13.87	17.9 17.9 17.9 17.9 17.9 17.9 18 17.8 17.8 17.9 17.9 17.9 17.9 17.9 17.9	7.40 7.39 7.27 7.33 7.35 7.35 7.57 7.54 7.54 7.44 7.44 7.42 7.41 7.64	95.9 95.8 94.3 95.0 95.4 95.4 97.6 96.3 96.3 96.1 96.0 98.7	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.71 1.82 1.84 1.59	34.43 34.42 34.43 34.47 34.47 34.35 34.36 34.39 34.38 34.39 34.38 34.40 34.41 34.31	8.32 8.32 8.31 8.31 8.32 8.32 8.32 8.31 8.31 8.31 8.31 8.31	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.8 4.5 4.2 5
8:41 9:01	SWI1 C3	MF MF	845512 843821	816211	14.87	1.00 2.97 1.00 7.44 13.87 1.00	17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.8 17.9 17.9 17.9 17.9	7.40 7.39 7.27 7.33 7.35 7.35 7.35 7.57 7.54 7.44 7.44 7.42 7.41	95.9 95.8 94.3 95.0 95.4 95.4 97.9 97.9 97.6 96.3 96.3 96.1 96.0	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.71 1.82 1.84	34.43 34.42 34.43 34.47 34.47 34.47 34.35 34.36 34.39 34.38 34.40 34.41	8.32 8.32 8.31 8.31 8.32 8.32 8.32 8.31 8.31 8.31	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.8 4.5 4.2
8:41	SWI1	MF	845512			1.00 2.97 1.00 7.44 13.87	17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9	7.40 7.39 7.27 7.33 7.35 7.55 7.54 7.54 7.44 7.44 7.44 7.44 7.4	95.9 95.8 94.3 95.0 95.4 95.4 97.9 96.3 96.3 96.3 96.0 96.0 96.0 98.7 98.3 97.9 97.8	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.71 1.82 1.84 1.59 1.62 1.78 1.73	34.43 34.42 34.43 34.47 34.47 34.35 34.36 34.39 34.38 34.40 34.41 34.31 34.31 34.31 34.32	8.32 8.31 8.31 8.32 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.32 8.32 8.32 8.32	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.8 4.5 4.2 5 3.8 3.7 5.3
8:41 9:01	SWI1 C3	MF MF	845512 843821	816211	14.87	1.00 2.97 1.00 7.44 13.87 1.00	17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.9	7.40 7.39 7.27 7.33 7.35 7.35 7.57 7.54 7.44 7.44 7.44 7.42 7.41 7.61 7.58 7.57 7.57 7.57 7.54 7.42 7.41	95.9 95.8 94.3 95.0 95.4 95.4 95.4 95.4 95.4 95.4 95.4 97.6 96.3 96.1 96.0 98.7 98.3 97.9 97.8 97.9 97.8 96.6 97.9	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.71 1.82 1.84 1.59 1.62 1.78 1.73 1.88 1.85	$\begin{array}{r} 34.43\\ 34.42\\ 34.43\\ \hline \\ 34.43\\ \hline \\ 34.47\\ \hline \\ 34.35\\ \hline \\ 34.36\\ \hline \\ 34.39\\ \hline \\ 34.30\\ \hline \\ 34.41\\ \hline \\ 34.31\\ \hline \\ 34.31\\ \hline \\ 34.32\\ \hline \\ 34.36\\ \hline \\ 34.36\\ \hline \end{array}$	8.32 8.32 8.31 8.31 8.32 8.32 8.32 8.31 8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.31 8.31	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.9 4.5 4.5 5 3.8 3.7
8:41 9:01	SWI1 C3	MF MF	845512 843821	816211	14.87	1.00 2.97 1.00 7.44 13.87 1.00 7.39	17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.8 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8	7.40 7.39 7.27 7.33 7.35 7.57 7.54 7.44 7.42 7.44 7.42 7.44 7.64 7.64 7.61 7.57 7.47 7.47 7.46	95.9 95.8 94.3 95.0 95.4 95.4 95.4 95.4 97.9 97.6 96.3 96.3 96.3 96.3 96.0 98.7 97.9 97.8 97.9 97.8 96.6 96.6 98.3	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.71 1.82 1.84 1.59 1.62 1.73 1.88 1.85 1.12	34.43 34.42 34.42 34.47 34.47 34.35 34.36 34.36 34.38 34.40 34.31 34.31 34.31 34.31 34.32 34.32 34.32 34.32 34.36	8.32 8.32 8.31 8.31 8.32 8.32 8.32 8.31 8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.33 8.32 8.31 8.31 8.32	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.8 4.5 5 3.8 3.7 5.3 3.7 5.3 4.4 4.4 3.6
8:41 9:01	SWI1 C3	MF MF	845512 843821	816211	14.87	1.00 2.97 1.00 7.44 13.87 1.00 7.39 13.77	17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.9	7.40 7.39 7.27 7.33 7.35 7.35 7.57 7.54 7.44 7.44 7.44 7.42 7.41 7.61 7.58 7.57 7.57 7.57 7.54 7.42 7.41	95.9 95.8 94.3 95.0 95.4 95.4 95.4 95.4 95.4 95.4 95.4 97.6 96.3 96.1 96.0 98.7 98.3 97.9 97.8 97.9 97.8 96.6 97.9	1.77 1.00 0.95 1.03 1.07 1.65 1.60 1.66 1.71 1.82 1.84 1.59 1.62 1.78 1.73 1.88 1.85	$\begin{array}{r} 34.43\\ 34.42\\ 34.43\\ \hline \\ 34.43\\ \hline \\ 34.47\\ \hline \\ 34.35\\ \hline \\ 34.36\\ \hline \\ 34.39\\ \hline \\ 34.30\\ \hline \\ 34.41\\ \hline \\ 34.31\\ \hline \\ 34.31\\ \hline \\ 34.32\\ \hline \\ 34.36\\ \hline \\ 34.36\\ \hline \end{array}$	8.32 8.32 8.31 8.31 8.32 8.32 8.32 8.31 8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.31 8.31	2.8 3.7 3.3 2.4 3.9 2.9 4.9 4.9 4.5 5 4.2 5 3.8 3.7 5 3.8 3.7 5.3 4.3 4.4

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

Contract No. EDO/04/2018 Cross Bay Link, Tseung Kwan O

	9-Jan-19					er Quality l		0ait					
		an: -	Co-ore	linates	Water	Sampling	Temp	DO Conc	DO	Turbidity	Salinity	pН	SS
Date / Time	Location	Tide*	East	North	Depth m	Depth m	°C	mg/L	Saturation %	NTU	ppt	unit	mg/
			Last	North		1.00	17.9	7.59	98.2	1.20	34.20	8.33	3.1
							17.9 17.9	7.59 7.58	98.2 98.1	1.24	34.20 34.21	8.33 8.33	3.1
13:15	CC1	ME	843201	816416	9.14	4.57	17.9	7.58	98.0	1.32	34.21	8.33	2.5
						8.14	17.9 17.9	7.53	97.4 97.4	1.46	34.22 34.22	8.33 8.33	2.4
						1.00	17.8 17.8	7.66 7.65	99.0 98.9	2.32 2.61	34.19 34.19	8.32 8.32	3.4 3.8
13:22	CC2	ME	844076	817091	12.43	6.22	17.9	7.46	96.5	1.16	34.24	8.32	4.1
10.22	002		011070	017071	12.15		17.9 17.9	7.46 7.36	96.6 95.2	1.16	34.24 34.27	8.32 8.32	3.7
						11.43	17.9	7.35	95.2	1.48	34.27	8.32	3.8
						1.00	18 18	7.74	100.2 100.3	1.11 1.12	34.17 34.18	8.34 8.34	1.2
14:04	CC3	ME	844606	817941	9.11	4.56	17.9 17.9	7.64 7.61	99.0 98.6	1.34 1.42	34.23 34.24	8.34 8.34	1.1
						8.11	18	7.41	96.1	2.11	34.28	8.33	1.8
							18	7.37	95.6	2.15	34.28	8.33	1.4
							17.9	7.47	96.7	1.44	34.24	8.31	3.2
12:48	CC4	ME	845444	815595	1.99	1.00	17.9	7.47	96.6	1.44	34.24	8.31	3.2
						1.00	17.9	7.59	98.1	2.16	34.18	8.32	4.8
13:28	CC13	ME	844200	817495	8.12	4.06	17.9 17.9	7.58 7.45	97.9 96.4	2.43	34.18 34.24	8.32 8.32	4.9
13.20		IVIL:	044200	01/475	0.12		17.9 17.9	7.44 7.36	96.3 95.3	1.48 1.75	34.24 34.27	8.32 8.31	4.8
						7.12	17.9	7.36	95.3	1.73	34.27	8.31	4
						1.00	17.9 17.9	7.46 7.46	96.5 96.5	1.70 1.70	34.22 34.22	8.32 8.32	2.6 2.9
12:41	SWI1	ME	845512	817442	3.11								
						2.11	17.9	7.47	96.6	1.60	34.23	8.32	3.4
							17.9	7.47 7.81	96.7 100.4	1.60 4.22	34.23 34.06	8.32 8.33	3.4
						1.00	17.6	7.81	100.4	4.14	34.06	8.33	1.7
13:07	C3	ME	843821	816211	11.73	5.87	17.7 17.7	7.65 7.64	98.6 98.5	1.34	34.15 34.15	8.33 8.33	2
						10.73	17.7	7.57	97.6 97.6	1.32	34.15 34.15	8.33	1.8
						1.00	17.7	7.73	99.5	1.84	34.10	8.32	3.2
12.54		N.C.	044(21	016770	12.2		17.7 17.7	7.72 7.54	99.4 97.3	1.86 1.96	34.11 34.16	8.32	2.7
12:54	C4	ME	844621	815770	12.2	6.10	17.7	7.54 7.48	97.3	1.96 2.05	34.15	8.33	3.4
						11.20	17.8 17.8	7.48	96.7 96.7	2.05	34.19 34.19	8.32 8.32	3.6
						1.00	17.9 17.9	7.80 7.80	101.0 100.9	1.07	34.13 34.13	8.34 8.34	4.3
13:56	11	ME	844602	817675	10.17	5.09	17.9	7.54	97.5	1.25	34.23	8.33	3.5
						9.17	17.9 17.9	7.54 7.41	97.5 95.9	1.23 1.55	34.23 34.26	8.33 8.32	3.6
						2.17	17.9	7.41	95.9	1.55	34.26	8.32	3.4
						1.00	17.8	7.65	98.8	1.71	34.17	8.31	3.8
							17.8 17.8	7.65 7.55	98.7 97.5	1.51 1.62	34.17 34.19	8.31 8.32	3.2
10:18	CC1	MF	843201	816416	8.13	4.07	17.8	7.55	97.5	1.62	34.19	8.32	3.3
						7.13	17.8 17.8	7.51 7.51	97.1 97.1	1.70	34.20 34.20	8.32 8.32	3.2
						1.00	17.9 17.9	7.55 7.55	97.6 97.6	1.24	34.18 34.19	8.32 8.32	3.1
10:29	CC2	MF	844076	817091	12.11	6.06	17.9	7.41	95.8	1.88	34.26	8.32	2.8
10.29	002		011070	017071	.2		17.9 17.9	7.41 7.34	95.8 95.0	1.95 2.37	34.26 34.27	8.32	3.4
						11.11							
							17.9	7.33	95.0	2.30	34.27	8.31 8.31	2.5
10.50						1.00	18 18	7.71	100.0 99.9	2.30 1.92 0.92	34.27 34.16 34.17	8.31 8.31 8.32 8.32	2.5 1.1 1.9
10:52	CC3	MF	844606	817941	9.1	1.00 4.55	18 18 17.8	7.71 7.71 7.63	100.0 99.9 98.6	2.30 1.92 0.92 0.96	34.27 34.16 34.17 34.20	8.31 8.31 8.32 8.32 8.32	2.5 1.1 1.9 1.7
10:52	CC3	MF	844606	817941	9.1	4.55	18 18 17.8 17.8 18	7.71 7.71 7.63 7.63 7.45	100.0 99.9 98.6 98.6 96.6	2.30 1.92 0.92 0.96 0.97 1.08	34.27 34.16 34.17 34.20 34.19 34.26	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32	2.5 1.1 1.9 1.7 1.5 1.7
10:52	CC3	MF	844606	817941	9.1		18 18 17.8 17.8	7.71 7.71 7.63 7.63	100.0 99.9 98.6 98.6	2.30 1.92 0.92 0.96 0.97	34.27 34.16 34.17 34.20 34.19	8.31 8.31 8.32 8.32 8.32 8.32 8.32	
						4.55 8.10	18 17.8 17.8 18 18	7.71 7.63 7.63 7.45 7.45	100.0 99.9 98.6 98.6 96.6 96.6	2.30 1.92 0.92 0.96 0.97 1.08 1.07	34.27 34.16 34.17 34.20 34.19 34.26 34.26	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32	2.5 1.1 1.9 1.7 1.5 1.7 1.2
9:50	CC3 CC4	MF MF	844606 845444	817941 815595	9.1	4.55	18 18 17.8 17.8 18	7.71 7.71 7.63 7.63 7.45	100.0 99.9 98.6 98.6 96.6	2.30 1.92 0.92 0.96 0.97 1.08	34.27 34.16 34.17 34.20 34.19 34.26	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32	2.5 1.1 1.9 1.7 1.5 1.7 1.2
						4.55 8.10	18 18 17.8 17.8 18 18 18 17.9 17.9	7.71 7.71 7.63 7.63 7.45 7.45 7.45 7.43 7.43	100.0 99.9 98.6 96.6 96.6 96.1 96.1	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68	34.27 34.16 34.17 34.20 34.19 34.26 34.26 34.26 34.24 34.24	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32	2.5 1.1 1.9 1.7 1.5 1.7 1.2 2.5
						4.55 8.10	18 18 17.8 17.8 18 18 17.9 17.9 17.9	7.71 7.71 7.63 7.63 7.45 7.45 7.45 7.43 7.43 7.43	100.0 99.9 98.6 96.6 96.6 96.1 96.1 96.1 96.7	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68 1.25	34.27 34.16 34.17 34.20 34.19 34.26 34.26 34.26 34.24 34.24 34.24	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30	2.5 1.1 1.9 1.7 1.5 1.7 1.2 2.5 3
9:50	CC4	MF	845444	815595	2.27	4.55 8.10 1.14 1.00	18 18 17.8 17.8 18 18 18 17.9 17.9 17.9 17.8 17.8 17.8 17.9	7.71 7.71 7.63 7.65 7.45 7.45 7.45 7.45 7.43 7.43 7.43 7.49 7.49 7.49	100.0 99.9 98.6 96.6 96.6 96.1 96.1 96.7 96.7 96.7 96.8	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68 1.25 1.26 1.70	34.27 34.16 34.17 34.20 34.19 34.26 34.26 34.26 34.24 34.24 34.24 34.12 34.12 34.12	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.32 8.32 8.32	2.5 1.1 1.5 1.7 1.5 1.7 1.2 2.5 3 4 4 3.5 4.2
						4.55 8.10 1.14 1.00 4.00	18 18 17.8 17.8 18 18 17.9 17.9 17.9 17.8 17.8	7.71 7.71 7.63 7.63 7.45 7.45 7.45 7.45 7.43 7.43 7.43	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.7 96.7	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68 1.25 1.26	34.27 34.16 34.17 34.20 34.26 34.26 34.26 34.24 34.24 34.24 34.24 34.12	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.32	2.3 1.1 1.5 1.7 1.7 1.7 1.7 2.3 3 4 4.2 3.5 4.2 3.5 4.2 3.5 4.2 3.5 4.2 3.5 4.2 4.2 4.2 3.5 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2
9:50	CC4	MF	845444	815595	2.27	4.55 8.10 1.14 1.00 4.00 7.00	18 18 17.8 17.8 18 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.8 17.8 17.8 17.8 18 18 18 18 18 18 18 18 18 1	7.71 7.71 7.63 7.63 7.45 7.45 7.45 7.45 7.45 7.43 7.43 7.43 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 96.6 96.6 96.1 96.1 96.7 96.7 96.7 96.7 96.8 96.8 96.9 96.9	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68 1.25 1.26 1.70 1.69 2.45 2.77	34.27 34.16 34.17 34.20 34.20 34.26 34.26 34.24 34.24 34.24 34.24 34.12 34.12 34.12 34.19 34.19 34.20	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.30 8.32	2.5 1.1 1.5 1.7 1.5 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7
9:50	CC4	MF	845444	815595	2.27	4.55 8.10 1.14 1.00 4.00	18 18 17.8 17.8 18 18 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9	7.71 7.71 7.63 7.65 7.45 7.45 7.45 7.43 7.43 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 96.6 96.6 96.1 96.1 96.1 96.7 96.7 96.7 96.8 96.8 96.8 96.9	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68 1.25 1.26 1.70 1.69 2.45	34.27 34.16 34.17 34.20 34.20 34.26 34.26 34.26 34.24 34.24 34.24 34.12 34.12 34.12 34.12 34.12 34.12	8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32	2.5 1.1 1.5 1.7 1.5 1.7 1.2 2.5 3 3 4 4.2 3.9 4.2 3.9 3.1 3.8 2.4
9:50	CC4	MF	845444	815595	2.27	4.55 8.10 1.14 1.00 4.00 7.00	18 18 17.8 17.8 18 18 17.9 17.9 17.8 17.9	7.71 7.71 7.63 7.63 7.45 7.45 7.45 7.45 7.43 7.43 7.43 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 96.6 96.6 96.1 96.1 96.7 96.7 96.7 96.7 96.8 96.8 96.9 96.9 95.4	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.73 1.68 1.25 1.26 1.70 1.69 2.45 2.77 1.55	34.27 34.16 34.17 34.20 34.26 34.26 34.26 34.26 34.24 34.24 34.24 34.24 34.12 34.12 34.12 34.12 34.12 34.12 34.12 34.20	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32	2.3 1.1 1.5 1.5 1.5 1.5 1.5 1.5 1.5
9:50	CC4 CC13	MF	845444 844200	815595 817495	2.27	4.55 8.10 1.14 1.00 4.00 7.00	18 18 17.8 17.8 17.8 18 18 17.9 17.9 17.8 17.9	7.71 7.73 7.63 7.65 7.45 7.45 7.45 7.45 7.45 7.45 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.7 96.8 96.9 95.4 95.7	230 192 092 096 097 1.08 1.07 1.73 1.68 1.25 1.26 1.70 1.69 2.45 2.45 2.45 2.45 1.44	34 27 34.16 34.17 34.20 34.26 34.26 34.26 34.26 34.24 34.24 34.24 34.12 34.12 34.19 34.19 34.20 34.20 34.21 34.20 34.21	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.30 8.31	2.2.1 1.1.1 1.5.2 1.7.1 1.7.1 1.7.1 2.2.3 3.3 4.4 3.9.9 4.4 3.9.9 4.2 3.3.1 3.8.8 2.4.2 2.6.6 3.3.2 4.5.7 1.5
9:50	CC4 CC13	MF	845444 844200	815595 817495	2.27	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61	18 18 17.8 17.8 18 18 17.9 17.7	7.71 7.71 7.63 7.63 7.45 7.45 7.45 7.43 7.43 7.43 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.7 96.8 96.9 95.4 95.4 95.7 95.4 95.7	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.08 1.07 1.08 1.25 1.26 1.26 1.26 2.45 2.77 1.55 1.44	34.27 34.16 34.17 34.20 34.26 34.26 34.26 34.26 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.22 34.21 34.20 34.21 34.23 34.23 34.23	8.31 8.31 8.32 8.33 8.31	2.5.2.5 1.1.1.1 1.5.5 1.7.7 1.2.2 3.3 4.4.2 3.5.9 4.2.4 2.6.6 3.2.2.4 3.4.4 2.6.6 3.2.2.4 3.4.4 2.6.6 3.4.4 2.6.6 3.4.4 2.6.6 3.4.4 2.6.6 3.4.4 2.6.6 3.4.4 2.6.6 3.4.4 2.6.6 3.6.7 3.6.6 3.6.7 3.7.7 3.7
9:50 10:37 9:37	CC4 CC13 SWI1	MF MF MF	845444 844200 845512	815595 817495 817442	2.27 8 3.61	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61 1.00	18 18 17.8 17.8 18 18 17.9 17.7	7.71 7.71 7.63 7.45 7.45 7.45 7.45 7.45 7.45 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.7 96.7 96.8 96.9 96.9 95.7 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7	2.30 1.92 0.92 0.97 1.08 1.73 1.68 1.25 1.26 1.70 1.69 1.70 1.69 1.70 1.69 1.70 1.64 1.70 1.44 1.33 1.39 1.75	34.27 34.16 34.17 34.20 34.26 34.26 34.26 34.26 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.20 34.20 34.20 34.20 34.21 34.23 34.23 34.15	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.30 8.30 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32	2.5. 1.1.1 1.5. 1.7. 1.5. 1.7. 1.2. 2.5. 3. 4.2. 3.5. 3.1. 4.2. 4
9:50 10:37	CC4 CC13	MF	845444 844200	815595 817495	2.27	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61	18 17.8 17.8 17.8 18 18 18 17.9 17.7 17.8	7.71 7.71 7.63 7.45 7.45 7.45 7.45 7.45 7.45 7.43 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.7 96.7 96.8 96.9 96.8 96.9 95.4 95.7 95.7 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 97.1 97.1	2.30 1.92 0.92 0.97 0.97 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08	$\begin{array}{r} 34.27\\ 34.16\\ 34.17\\ 34.19\\ 34.19\\ 34.26\\ 34.26\\ 34.26\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.20\\ 34.20\\ 34.20\\ 34.21\\ 34.23\\ 34.21\\ 34.23\\ 34.21\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.23\\ 34.15\\ 34.18\\ 34$	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32	2.5.1 1.1.1 1.5.1 1.7.7 1.5.5 1.5.5 1.7.7 1.5.5 1.7.7 1.5.5 1.
9:50 10:37 9:37	CC4 CC13 SWI1	MF MF MF	845444 844200 845512	815595 817495 817442	2.27 8 3.61	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61 1.00	18 18 17.8 17.8 17.8 18 18 18 17.9 17.9 17.8 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.7 17.7 17.7	7.71 7.63 7.63 7.45 7.45 7.45 7.45 7.45 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.8 96.9 96.8 96.9 95.4 95.7 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 95.7 95.7 95.7 95.7 95.7 95.7 95	2.30 1.92 0.92 0.97 1.08 1.73 1.68 1.25 1.26 1.68 1.25 1.26 2.45 2.45 2.45 1.33 1.39 1.73 1.48 1.33 1.39 1.73 1.487 1.847 1.847	$\begin{array}{c} 34.27\\ 34.16\\ 34.17\\ 34.20\\ 34.26\\ 34.26\\ 34.26\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.25\\ 34.24\\ 34.24\\ 34.25\\ 34.24\\ 34.25\\ 34.24\\ 34.24\\ 34.25\\ 34.24\\ 34.25\\ 34.24\\ 34.25\\ 34.25\\ 34.24\\ 34.25\\ 34$	8 31 8 31 8 31 8 32 8 32 8 32 8 32 8 32 8 32 8 32 8 32	2.5. 1.1. 1.9. 1.7. 1.7. 1.7. 2.3. 3.3 4.4. 2.4. 3.5. 3.1. 3.8. 2.4. 2.6. 2.6. 2.2. 2
9:50 10:37 9:37	CC4 CC13 SWI1	MF MF MF	845444 844200 845512	815595 817495 817442	2.27 8 3.61	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61 1.00 7.66	18 17.8 17.8 17.8 18 18 17.9 17.9 17.8 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.8 17.8 17.8 17.9 17.9 17.7 17.7 17.7 17.7 17.7 17.6	7.71 7.71 7.63 7.45 7.45 7.45 7.45 7.45 7.45 7.45 7.45	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.7 96.7 96.8 96.9 95.4 95.4 95.4 95.4 95.4 95.4 95.5 97.2 97.1 96.2 96.2 96.2 96.5 96.5 96.5 97.2 97.1 96.2 97.5	2.30 1.92 0.92 0.97 1.08 1.73 1.68 1.25 1.26 1.25 1.26 1.27 1.55 2.47 1.44 1.33 1.79 1.73 1.73 1.68 2.45 2.45 2.45 2.45 2.45 2.45 2.45 2.45	$\begin{array}{c} 34.27\\ 34.16\\ 34.16\\ 34.19\\ 34.19\\ 34.26\\ 34.26\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.19\\ 34.20\\ 34.20\\ 34.21\\ 34.15\\ 34.15\\ 34.23\\ 34.15\\ 34.15\\ 34.18\\ 34.18\\ 34.18\\ 34.18\\ 34.22\\ 34.22\\ 34.02\\ 34$	8.31 8.31 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31	2.2.1 1.1.1 1.5.1 1.1.1 1.
9:50 10:37 9:37 10:11	CC4 CC13 SW11 C3	MF MF MF MF	845444 844200 845512 843821	815595 817495 817442 816211	2.27 8 3.61 15.31	4.55 8.10 1.14 1.00 4.00 7.00 1.00 7.00 1.00 7.66 14.31 1.00	18 18 17.8 17.8 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.8 17.9	7.71 7.71 7.63 7.45 7.45 7.45 7.45 7.45 7.45 7.43 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.8 96.9 96.8 96.9 95.4 95.7 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 96.9 95.7 95.7 95.7 95.7 95.7 95.7 95.7 95	2.30 1.92 0.92 0.97 0.97 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.08 1.07 1.08 1.08 1.07 1.08 1.08 1.07 1.07 1.08 1.07 1.07 1.08 1.07 1.07 1.07 1.07 1.07 1.07 1.07 1.07	34.27 34.16 34.17 34.19 34.19 34.20 34.24 34.26 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.24 34.20 34.20 34.20 34.20 34.21 34.22 34.21 34.23 34.23 34.23 34.15 34.18 34.22	8 31 8 31 8 32 8 31 8 31	2.2.1 1.1.1 1.5.1 1.7.7 1.5.7 1.7.7 1.2 2.9.9 3.3 3.4 4.2 4.2 4.2 3.4 4.2 2.3 3.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2
9:50 10:37 9:37	CC4 CC13 SWI1	MF MF MF	845444 844200 845512	815595 817495 817442	2.27 8 3.61	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61 1.00 7.66 14.31	18 17.8 17.8 17.8 18 18 17.9 17.6 17.8 17.8 17.6 17.8	7.71 7.71 7.63 7.45 7.45 7.45 7.45 7.45 7.45 7.45 7.43 7.43 7.49 7.49 7.49 7.49 7.49 7.49 7.49 7.49	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.7 96.7 96.7 96.8 96.8 96.8 96.9 95.4 95.4 95.4 95.7 96.7 95.4 95.7 95.7 96.7 95.9 96.7 95.9 95.4 95.7 95.9 95.4 95.7 95.7 95.7 95.7 95.7 95.7 95.7 95.7	2.30 1.92 0.92 0.96 0.97 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.07 1.08 1.25 1.26 2.45 1.26 1.26 1.26 1.26 1.27 1.68 1.25 1.26 1.27 1.69 2.45 1.33 1.33 1.33 1.73 1.73 1.73 1.73 1.87 1.87 1.87 1.87 1.87 1.87 1.87 1.87	$\begin{array}{r} 34.27\\ 34.16\\ 34.17\\ 34.20\\ 34.26\\ 34.26\\ 34.26\\ 34.26\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.20\\ 34$	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.33 8.33 8.33 8.32	2.9.9 1.1.1 1.5.1 1.
9:50 10:37 9:37 10:11	CC4 CC13 SW11 C3	MF MF MF MF	845444 844200 845512 843821	815595 817495 817442 816211	2.27 8 3.61 15.31	4.55 8.10 1.14 1.00 4.00 7.00 1.00 7.00 1.00 7.66 14.31 1.00	18 17.8 17.8 17.8 18 18 17.9 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8	$\begin{array}{c} 7.71\\ 7.71\\ 7.63\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.49\\ 7.53\\ 7.53\\ 7.53\\ 7.57\\ 7.46\\$	100.0 90.9 98.6 98.6 98.6 96.6 96.1 96.1 96.1 96.7 96.8 96.7 96.8 96.9 95.4 95.7 96.7 96.8 96.7 96.8 96.7 96.7 96.7 96.7 96.7 96.7 96.7 96.7 95.4 95.7 96.7 96.7 96.7 96.7 95.4 97.1 99.5 99.5 97.6 97.6 96.3	2.30 1.92 0.92 0.92 0.97 1.08 1.07 1.08 1.07 1.08 1.25 1.26 1.26 1.26 2.45 2.47 1.48 1.33 1.39 1.73 1.43 1.33 1.39 1.73 1.73 1.43 1.43 1.43 1.43 1.43 1.43 1.43 1.4	$\begin{array}{r} 34.27\\ 34.16\\ 34.16\\ 34.26\\ 34.26\\ 34.26\\ 34.26\\ 34.26\\ 34.24\\ 34.25\\ 34$	8.31 8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.30 8.30 8.31 8.32 8.32 8.32 8.33 8.32 8.32 8.32 8.33 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.33 8.33 8.33 8.33 8.33 8.31 8.31 8.33 8.32 8.31 8.33 8.32 8.33 8.33 8.33 8.33 8.33 8.31 8.31 8.31 8.31	2.5.5 1.1.1 1.9.1 1.7.1 1.5.1 1.7.7 1.2 2.5.5 3 3 4 4 3.9.9 4.2 3.9 4.2 3.9 3.1 3.8 2.4 4.2 4.4 2.9 2.3 3.2 2.7.2 2.7.2 2.4 3.3 3.1 3.8 2.4 4.2 4.4 2.9 2.3 3.2 2.7.2 2.5 3.3 3.1 3.8 3.9 4.2 4.2 4.4 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 5.5 1.7.7 1.2 2.5 1.7.7 1.2 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2
9:50 10:37 9:37 10:11	CC4 CC13 SW11 C3	MF MF MF MF	845444 844200 845512 843821	815595 817495 817442 816211	2.27 8 3.61 15.31	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61 1.00 7.66 14.31 1.00 8.01	18 18 17.8 17.8 17.9 17.8 17.9 17.8 17.7 17.8 17.6 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 <td>$\begin{array}{c} 7.71\\ 7.71\\ 7.63\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.40\\ 7.43\\ 7.63\\ 7.63\\ 7.62\\ 7.53\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.56\\ 7.46\\ 7.6\\ 7.$</td> <td>100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.8 96.9 96.9 95.7 95.7 96.9 95.7 95.7 96.9 95.7 95.7 95.7 96.9 95.4 95.7 95.7 95.7 95.7 95.7 95.7 95.7 95.7</td> <td>2.30 1.92 0.92 0.97 1.08 1.73 1.68 1.25 1.26 1.70 1.68 1.25 1.26 1.70 1.68 1.25 1.26 1.70 1.68 1.25 1.26 1.70 1.68 1.25 1.25 1.26 1.70 1.68 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.25</td> <td>$\begin{array}{r} 34.27\\ 34.16\\ 34.17\\ 34.19\\ 34.19\\ 34.19\\ 34.26\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.19\\ 34.20\\ 34.20\\ 34.20\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34$</td> <td>8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33</td> <td>2.5.5 1.1 1.9 1.7 1.5 1.7 1.5 1.7 1.5 1.7 1.5 1.7 1.7 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 5.5 3.3 3.3 3.3 3.3 3.3 3.3 3</td>	$\begin{array}{c} 7.71\\ 7.71\\ 7.63\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.49\\ 7.40\\ 7.43\\ 7.63\\ 7.63\\ 7.62\\ 7.53\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.57\\ 7.56\\ 7.46\\ 7.6\\ 7.$	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.8 96.9 96.9 95.7 95.7 96.9 95.7 95.7 96.9 95.7 95.7 95.7 96.9 95.4 95.7 95.7 95.7 95.7 95.7 95.7 95.7 95.7	2.30 1.92 0.92 0.97 1.08 1.73 1.68 1.25 1.26 1.70 1.68 1.25 1.26 1.70 1.68 1.25 1.26 1.70 1.68 1.25 1.26 1.70 1.68 1.25 1.25 1.26 1.70 1.68 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.25	$\begin{array}{r} 34.27\\ 34.16\\ 34.17\\ 34.19\\ 34.19\\ 34.19\\ 34.26\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.24\\ 34.19\\ 34.20\\ 34.20\\ 34.20\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34.23\\ 34.23\\ 34.21\\ 34.23\\ 34$	8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33	2.5.5 1.1 1.9 1.7 1.5 1.7 1.5 1.7 1.5 1.7 1.5 1.7 1.7 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 3.3 3.3 4.4 2.5 5.5 3.3 3.3 3.3 3.3 3.3 3.3 3
9:50 10:37 9:37 10:11	CC4 CC13 SW11 C3	MF MF MF MF	845444 844200 845512 843821	815595 817495 817442 816211	2.27 8 3.61 15.31	4.55 8.10 1.14 1.00 4.00 7.00 1.00 2.61 1.00 7.66 14.31 1.00 8.01 15.02	18 18 17.8 17.8 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.9 17.7 17.8 17.9 17.9 17.9 17.9 17.9 17.7 17.8 17.7 17.8 17.9 17.8 17.9 17.6 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.9	$\begin{array}{c} 7.71\\ 7.71\\ 7.63\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.45\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.43\\ 7.49\\ 7.5\\ 7.5\\ 7.5\\ 7.46\\ 7.$	100.0 99.9 98.6 98.6 96.6 96.6 96.1 96.1 96.1 96.1 96.7 96.7 96.7 96.7 96.8 96.9 95.4 95.4 95.4 95.7 95.4 95.7 95.4 95.7 95.4 95.7 95.4 95.7 95.7 95.9 95.4 95.7 95.7 95.7 95.7 95.7 95.7 95.7 95.7	2.30 1.92 0.92 0.97 0.97 1.08 1.07 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08	$\begin{array}{r} 34.27\\ 34.16\\ 34.17\\ 34.19\\ 34.19\\ 34.26\\ 34.24\\ 34$	8.31 8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.30 8.30 8.30 8.30 8.30 8.30 8.31 8.32 8.32 8.32 8.33 8.32 8.32 8.32 8.33 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.33 8.33 8.33 8.33 8.33 8.31 8.31 8.33 8.32 8.31 8.33 8.32 8.33 8.33 8.33 8.33 8.33 8.31 8.31 8.31 8.31	2.5.5 1.1.1 1.9.1 1.7.1 1.5.1 1.7.7 1.2 2.5.5 3 3 4 4 3.9.9 4.2 3.9 4.2 3.9 3.1 3.8 2.4 4.2 4.4 2.9 2.3 3.2 2.7.2 2.7.2 2.4 3.3 3.1 3.8 2.4 4.2 4.4 2.9 2.3 3.2 2.7.2 2.5 3.3 3.1 3.8 3.9 4.2 4.2 4.2 4.4 2.9 2.3 3.2 2.7 2.7 2.7 3.3 3.1 3.8 3.9 3.1 3.8 3.9 3.1 3.8 3.9 3.1 3.8 3.9 3.1 3.8 3.9 3.1 3.8 3.9 3.1 3.8 3.9 3.1 3.8 3.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

ampling Date:	11-Jan-19			In	ipact wat	er Quality	vionitorii	ig result					
amping Date:	11-Jan-19		Co-ord	lingtes	Water	Sampling	Tomp	DO Conc	DO	Turbidity	Salinity	ъЦ	SS
Date / Time	Location	Tide*	East	North	Depth	Depth	Temp °C		Saturation %	NTU	-	pH	
			East	North	m	m 1.00	18.4	mg/L 7.62	99.4	6.87	ppt 34.01	unit 8.29	mg/L 1.6
							18.4 18.2	7.61 7.64	99.3 99.4	6.14 0.98	34.02 34.08	8.29 8.29	1.3
14:36	CC1	ME	843201	816416	8.22	4.11	18.2 17.9	7.64 7.49	99.3 96.8	1.00	34.08 34.10	8.29 8.28	<1.0 1.1
						7.22	17.9	7.48	96.7	1.20	34.10	8.28	<1.0
						1.00	18.3 18.3	7.59 7.59	98.8 98.8	5.19 4.25	33.96 33.98	8.29 8.29	2.1
14:44	CC2	ME	844076	817091	12.04	6.02	18 17.9	7.61 7.60	98.5 98.4	1.13	34.09 34.10	8.3 8.3	<1.0 1.5
						11.04	17.9	7.41	95.7	1.68	34.12	8.29	1.9
							17.9 18.4	7.40 7.61	95.6 99.2	1.68 3.12	34.12 33.75	8.29 8.30	1.4 1.5
						1.00	18.4	7.61	99.2 99.4	1.81 1.02	33.76	8.30	1.3
15:18	CC3	ME	844606	817941	9.22	4.61	18.1 18.1	7.66 7.66	99.4	1.00	34.11 34.11	8.31 8.31	1.5 1.5
						8.22	17.9 17.9	7.66	99.1 99.0	0.98 0.97	34.12 34.13	8.31 8.31	1.1
14:16	CC4	ME	845444	815595	2.82	1.41	18	7.65	98.2	1.38	34.11	8.30	1.1
							18	7.69	98.5	1.35	34.11	8.30	<1.0
							18.3	7.57	98.7	1.11	34.04	8.28	1.4
						1.00	18.3	7.57	98.6	1.10	34.05	8.28	1.2
14:49	CC13	ME	844200	817495	8.12	4.06	18.1 18.1	7.61	98.7 98.8	1.02	34.09 34.09	8.29 8.29	1.7
						7.12	17.9	7.55	97.7 97.6	1.29	34.11 34.11	8.29 8.29	1.6
						1.00	18.6	7.48	98.1	0.43	34.01	8.39	<1.0
14-00	CN/1	ME	945510	017440	2.22	1.00	18.6	7.50	98.2	0.45	34.02	8.39	<1.0
14:09	SWI1	ME	845512	817442	2.32		18	7.55	97.8	1.18	34.11	8.30	<1.0
						1.32	18	7.55	97.7	1.20	34.11	8.30	<1.0
						1.00	18 17.9	7.64 7.66	98.9 99.1	6.39 5.48	33.94 34.00	8.31 8.31	1.4
14:30	C3	ME	843821	816211	15.2	7.60	17.7 17.7	7.58 7.58	97.7 97.7	1.00 0.97	34.06 34.06	8.29 8.29	1.2
						14.20	17.8	7.45	96.1	1.38	34.08	8.28	1.8
							17.8 17.8	7.45 7.68	96.1 99.0	1.37 1.49	34.08 33.89	8.28 8.31	1.8
						1.00	17.8	7.70	99.3	1.49	33.92	8.31	1.5
14:21	C4	ME	844621	815770	13.83	6.92	17.7 17.7	7.64 7.64	98.4 98.4	1.52 1.52	34.02 34.02	8.29 8.29	<1.0 1.2
						12.83	17.7 17.7	7.50 7.50	96.7 96.6	1.56	34.07 34.07	8.28 8.28	1.8
						1.00	18.2	7.65	99.4	1.47	34.10	8.30	1.6
16.12		N.C.	044602	017/76	10.00		18.2 18	7.65	99.5 100.3	0.97 0.91	34.10 34.11	8.30 8.31	1.7
15:12	11	ME	844602	817675	10.06	5.03	18 17.9	7.74 7.67	100.3 99.2	0.90	34.11 34.14	8.31 8.31	1.7
						9.06	17.9	7.65	98.9	1.11	34.14	8.30	2.3
							17.9	7.66	99.1	1.11	34.10	8.32	1
						1.00	17.9	7.66	99.1	1.10	34.10	8.32	1.6
11:31	CC1	MF	843201	816416	7.16	3.58	17.9 17.9	7.62 7.61	98.5 98.4	1.30	34.10 34.10	8.32	2.3
						6.16	17.9 17.8	7.55 7.51	97.5 97.1	1.00 1.67	34.10 34.20	8.32 8.32	2.4 2.2
						1.00	18.1	7.57	98.2	2.46	33.94	8.33	1.8
		1.07	0.1.105.6	0.000	10.00		18 17.8	7.56	98.0 97.0	2.36	34.01 34.11	8.33 8.32	1.8
11:43	CC2	MF	844076	817091	12.08	6.04	17.8 17.8	7.51 7.45	96.9 96.2	1.39 1.42	34.11 34.11	8.32 8.31	1.8 2.2
						11.08	17.8	7.45	96.2	1.44	34.11	8.31	1.8
						1.00	18.4	7.28 7.28	94.2 94.3	0.46	32.75 33.00	8.30 8.30	1.2
12:07	CC3	MF	844606	817941	9.12	4.56	17.9	7.61	98.5	0.91	34.15	8.32	1.8
						8.12	17.9 17.9	7.62 7.43	98.6 96.1	0.87	34.15 34.18	8.32 8.31	1.2
						0.12	17.9	7.41	95.9	1.27	34.18	8.31	1.3
							17.0	2.56	07.0	116	24.10	0.32	2
11:10	CC4	MF	845444	815595	2.11	1.06	17.9 17.9	7.56 7.56	97.8 97.8	1.15 1.18	34.10 34.10	8.32 8.32	2 2.2
						1.00	18.4	7.56	98.6	2.44	33.73	8.33	2.3
11:53	CC13	MF	844200	817495	7.86	3.93	18.3 17.9	7.55 7.53	98.2 97.3	2.43 1.16	33.82 34.10	8.33 8.32	1.5 1.5
11.35	0015	wiГ	044200	01/493	/.00		17.9 17.9	7.53 7.42	97.4 95.9	1.14	34.10 34.13	8.32 8.31	1.7
						6.86	17.9	7.42	95.9	1.32	34.13	8.31	1.8
						1.00	17.9 17.9	7.50 7.51	97.0 97.1	0.99 1.01	34.11 34.12	8.37 8.37	3.5 3.6
10:59	SWI1	MF	845512	817442	3.11								
						2.11	17.9	7.62	98.4	1.55	34.12	8.34	2.7
							17.9 18	7.62 7.48	98.4 96.8	1.55 1.49	34.12 34.11	8.34	2.2 3.1
						1.00	18 17.8	7.47 7.41	96.7 95.7	1.48 1.36	34.11 34.11	8.31 8.31	3.3 2.9
11:25	C3	MF	843821	816211	15.84	7.92	17.8	7.41	95.7	1.32	34.11	8.31	2.9
						14.84	17.8 17.8	7.42 7.42	95.7 95.7	1.83	34.10 34.10	8.31 8.31	3.6 3.2
						1.00	17.6	7.79	100.1	1.56	34.01	8.34	2.7
11:15	C4	MF	844621	815770	16.05	8.03	17.6 17.6	7.79 7.73	100.1 99.2	1.57 1.46	34.01 34.02	8.34 8.33	2.1 1.8
	<u> </u>				. 0.00		17.6 17.6	7.72 7.65	99.2 98.3	1.44	34.02 34.02	8.33 8.32	2.1
						15.05	17.6	7.65	98.3	1.69	34.02	8.32	2.3
						1.00	18 18	7.54 7.55	97.8 97.9	2.74 0.76	34.06 34.07	8.32 8.32	<1.0 1.3
	11	MF	844602	817675	9.54	4.77	17.9	7.59	98.3	0.82	34.11	8.32	<1.0
12:00	I1	IVII	044002	01/0/5	2.21	4.77	17.9	7.59	98.2	0.82	34.11	8.32	1.3

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

Contract No. EDO/04/2018 Cross Bay Link, Tseung Kwan O

	14-Jan-19												-
Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	рН	ss
Date / Time	Location	Tide"	East	North	m	m	°	mg/L	%	NTU	ppt	unit	mg/I
						1.00	17.9	7.80	100.7	1.76	33.94	8.32	1.2
16.61	001	ME	842201	016416	0.46		18	7.78 7.63	100.7 98.7	1.88 0.45	33.88 33.89	8.32 8.32	1.1
16:51	CC1	ME	843201	816416	9.46	4.73	18	7.62	98.6 98.4	0.45	33.89	8.32	1.7
						8.46	18 17.9	7.61 7.61	98.4	0.42 0.43	33.89 33.89	8.32 8.32	1.4
						1.00	18 18	7.73	100.1 100.0	0.98	33.87 33.88	8.32 8.32	1.6
16:59	CC2	ME	844076	817091	12.1	6.05	18	7.70	99.5	0.89	33.89	8.32	<1.0
10.59	CC2	MIL	844070	81/091	12.1		18 17.9	7.70 7.60	99.5 98.3	0.33 0.65	33.89	8.32	<1.0 <1.0
						11.10	17.9	7.58	98.5	0.63	33.89 33.90	8.32 8.32	<1.0
						1.00	18.3 18.3	7.60 7.60	98.8 98.7	1.46 1.36	33.67 33.67	8.32 8.32	<1.0 <1.0
17:33	CC3	ME	844606	817941	9.57	4.79	18.2	7.53	98.7	0.73	33.94	8.31	<1.0
17.55	ces	ME	844000	61/941	9.57		18.2 18.2	7.53 7.44	97.9 96.7	0.73 1.05	33.94 33.99	8.31 8.31	<1.0 <1.0
						8.57	18.2	7.44	96.3	1.10	34.00	8.31	<1.0
16:36	CC4	ME	845444	815595	3.12	1.56	17.9	7.65	98.9	0.35	33.90	8.32	<1.0
10.50	CC4	MIL	845444	815595	5.12	1.50	17.9	7.64	98.8	0.36	33.90	8.32	<1.0
						1.00	18.1 18.1	7.65 7.64	99.1 99.0	0.74	33.86 33.86	8.31 8.31	1.9
17:05	CC13	ME	844200	817495	8.31	4.16	18.1	7.61	99.0	0.74	33.88	8.31	1.3
17.05	CC15	ME	844200	81/495	8.51	4.10	18	7.61	98.5	0.52	33.88	8.31	<1.0
						7.31	18	7.53 7.52	97.4 97.3	0.75 0.75	33.90 33.90	8.32 8.32	1.2
						1.00	18.2	7.67	99.6	0.49	33.93	8.33	<1.0
16.21	CWII	ME	945512	817442	4.47		18.2	7.67	99.6	0.50	33.93	8.33	<1.0
16:31	SWI1	ME	845512	81/442	4.47		18.2	2.62	00.5	0.55	22.04	0.22	<1.0
						3.47	18.2	7.67 7.66	99.5 99.5	0.55 0.57	33.94 33.94	8.33 8.33	<1.0 1.3
						1.00	17.8	7.75	99.9 99.9	1.36	33.80	8.32	<1.0
16.47	<i>C</i> 2	ME	042021	816311	15.00		17.8	7.76 7.69	99.9	1.35	33.80 33.84	8.32 8.32	<1.0
16:47	C3	ME	843821	816211	15.99	8.00	17.8	7.68	99.1	1.27	33.85	8.32	<1.0
						14.99	17.9	7.63	98.4 98.4	1.35	33.85 33.85	8.32 8.32	<1.0
						1.00	17.9	7.65	98.7	1.40	33.85	8.32	<1.0
16.40					16.01		17.9	7.64	98.7 97.7	1.40 1.52	33.85 33.87	8.32 8.32	<1.0
16:40	C4	ME	844621	815770	16.91	8.46	17.9	7.57	97.7	1.53	33.87	8.32	<1.0
						15.91	17.9	7.55 7.55	97.4 97.4	1.57	33.86 33.86	8.32 8.32	1.2
						1.00	18.2	7.62	98.8	0.93	33.71	8.31	<1.0
							18.2	7.61 7.41	98.8 96.4	0.89	33.72 33.96	8.31 8.30	<1.0 <1.0
17:28	11	ME	844602	817675	10.24	5.12	18.2	7.39	96.1	1.38	33.98	8.30	<1.0
						9.24	18.1 18.1	7.27 7.26	94.3 94.3	1.44 1.44	33.99 33.99	8.30 8.30	<1.0 <1.0
							10.1	7.20	71.5	1.11	55.77	0.50	-1.0
						1.00	18	7.65	98.9	0.49	33.87	8.32	1
12.25	001	ME	0.42201	016416	0.00		18	7.65	98.9 98.8	0.48 0.54	33.87 33.88	8.32 8.32	<1.0
13:25	CC1	MF	843201	816416	8.08	4.04	18	7.64	98.8	0.56	33.88	8.32	1.3
						7.08	17.9 17.9	7.59 7.59	98.2 98.1	0.54	33.89 33.89	8.31 8.31	1.1 <1.0
						1.00	18	7.68	99.4	0.32	33.88	8.30	<1.0
							18	7.68 7.63	99.4 98.7	0.31 0.46	33.88 33.88	8.30 8.31	<1.0 <1.0
13:32	CC2	MF	844076	817091	12.1	6.05	18	7.63	98.7	0.48	33.88	8.31	<1.0
						11.10	18	7.57	97.9 97.9	0.37	33.91 33.91	8.31 8.31	<1.0 <1.0
						1.00	18.3	7.46	97.0	0.77	33.71	8.30	<1.0
							18.3	7.47	97.1 97.2	0.75	33.74 33.94	8.30 8.31	<1.0
13:52	CC3	MF	844606	817941	9.41	4.71	18.2	7.47	97.1	0.83	33.95	8.31	<1.0
								7.26		1.53	34.03		1.1 <1.0
						8.41	18.2		94.5	1.55		8.30 8.30	-1.0
						8.41	18.2 18.2	7.28	94.5 94.1	1.61	34.03	8.30	
							18.2	7.23	94.1	1.61	34.03	8.30	<1.0
13:07	CC4	MF	845444	815595	2.05	8.41				0.53 0.52			<1.0 1.1
13:07	CC4	MF	845444	815595	2.05		18.2	7.23	94.1 101.0	0.53	34.03 33.89	8.30 8.33	
13:07	CC4	MF	845444	815595	2.05	1.03	18.2 17.9 17.9 18	7.23 7.81 7.80 7.59	94.1 101.0 100.9 98.2	1.61 0.53 0.52 1.29	34.03 33.89 33.89 33.89	8.30 8.33 8.33 8.31	1.1
						1.03	18.2 17.9 17.9 18 18	7.23 7.81 7.80 7.59 7.58	94.1 101.0 100.9 98.2 98.0	1.61 0.53 0.52 1.29 1.26	34.03 33.89 33.89 33.89 33.88 33.88	8.30 8.33 8.33 8.31 8.31	1.1 1.6 1.6
13:07	CC4 CC13	MF	845444 844200	815595 817495	2.05	1.03	18.2 17.9 17.9 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51	94.1 101.0 100.9 98.2 98.0 97.2 97.2	1.61 0.53 0.52 1.29 1.26 1.67 1.66	34.03 33.89 33.89 33.89 33.88 33.89 33.88 33.88	8.30 8.33 8.33 8.31 8.31 8.31 8.31	1.1 1.6 1.6 1.8 1.7
						1.03	18.2 17.9 17.9 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.51	94.1 101.0 100.9 98.2 98.0 97.2 97.2 96.8	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73	34.03 33.89 33.89 33.89 33.88 33.89 33.88 33.88 33.88 33.89	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31	1.1 1.6 1.6 1.8 1.7 2.2
						1.03 1.00 4.20 7.40	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.49 7.49 7.58	94.1 101.0 100.9 98.2 98.0 97.2 97.2 96.8 96.9 98.3	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61	34.03 33.89 33.89 33.88 33.89 33.88 33.89 33.88 33.89 33.89 33.89 33.93	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31	1.1 1.6 1.6 1.8 1.7 2.2 1.9 1.7
13:38	CC13	MF	844200	817495	8.4	1.03 1.00 4.20	18.2 17.9 17.9 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.49 7.49	94.1 101.0 100.9 98.2 98.0 97.2 97.2 97.2 96.8 96.9	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70	34.03 33.89 33.89 33.89 33.88 33.89 33.88 33.88 33.88 33.89 33.89	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31	1.1 1.6 1.6 1.8 1.7 2.2 1.9 1.7
						1.03 1.00 4.20 7.40	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.59 7.58 7.51 7.51 7.51 7.51 7.49 7.49 7.49 7.58 7.57	94.1 101.0 100.9 98.2 98.0 97.2 97.2 96.8 96.9 96.9 98.3 98.2	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60	34.03 33.89 33.89 33.89 33.88 33.89 33.88 33.88 33.88 33.89 33.93 33.93	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39	1.1 1.6 1.6 1.8 1.7 2.2 1.9 1.7 1.6
13:38	CC13	MF	844200	817495	8.4	1.03 1.00 4.20 7.40	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.51 7.51 7.51 7.51 7.58 7.57 7.53	94.1 101.0 100.9 98.2 98.0 97.2 97.2 96.8 96.9 98.3 98.2 97.7	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60 0.51	34.03 33.89 33.89 33.89 33.88 33.89 33.88 33.89 33.89 33.89 33.93 33.93 33.93	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.39 8.39 8.39	1.1 1.6 1.6 1.8 1.7 2.2 1.9 1.7 1.6 1.4
13:38	CC13	MF	844200	817495	8.4	1.03 1.00 4.20 7.40 1.00 3.32	18.2 17.9 17.9 18 18 18 18 18 18 18.1 18.1 18.1 18.1 17.5	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.51 7.49 7.49 7.49 7.49 7.49 7.53 7.53 7.53 7.81	94.1 101.0 100.9 98.2 98.0 97.2 96.8 96.9 98.3 98.2 98.2 97.7 97.7 97.7 100.3	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60 0.51 1.68	34.03 33.89 33.89 33.89 33.88 33.88 33.88 33.89 33.89 33.89 33.93 33.93 33.95 34.14	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.39 8.33 8.33 8.33	1.1 1.6 1.6 1.8 1.7 2.2 1.9 1.7 1.6 1.4 1.8 1
13:38	CC13	MF	844200	817495	8.4	1.03 1.00 4.20 7.40 1.00	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.51 7.49 7.49 7.49 7.57 7.57 7.53 7.53 7.53 7.53 7.53	94.1 101.0 100.9 98.2 98.0 97.2 96.8 96.9 98.3 98.2 97.7 97.7 97.7 97.7 100.3 100.2	1.61 0.53 0.52 1.29 1.29 1.67 1.66 0.73 0.70 0.61 0.60 0.51 1.68 1.64	34.03 33.89 33.89 33.89 33.88 33.88 33.88 33.89 33.93 33.93 33.93 33.93 33.93 33.93 33.95 35.55 35	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.33 8.33 8.33 8.34 8.34	1.1 1.6 1.6 1.8 1.7 2.2 1.9 1.7 1.6 1.4 1.4 1.8 1 1.1
13:38	CC13	MF	844200	817495	8.4	1.03 1.00 4.20 7.40 1.00 3.32	18.2 17.9 17.9 18 18 18 18 18 18 18.1 18.1 18.1 18.1 17.5	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.51 7.49 7.49 7.49 7.49 7.49 7.53 7.53 7.53 7.81	94.1 101.0 100.9 98.2 98.0 97.2 96.8 96.9 98.3 98.2 98.2 97.7 97.7 97.7 100.3	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60 0.51 1.68	34.03 33.89 33.89 33.89 33.88 33.88 33.88 33.88 33.89 33.89 33.93 33.93 33.95 33.95 34.14	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.39 8.33 8.33 8.33	1.1 1.6 1.66 1.88 1.7 2.2 1.9 1.7 1.6 1.4 1.8 1. 1.1 <1.0
13:38 13:00	CC13 SW11	MF MF	844200 845512	817495 817442	8.4 4.32	1.03 1.00 4.20 7.40 1.00 3.32 1.00	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.51 7.59 7.53 7.53 7.53 7.53 7.53 7.53 7.53 7.53	94.1 101.0 100.9 98.2 98.0 97.2 97.2 97.2 96.8 96.9 98.2 97.7 97.7 100.3 100.2 98.4 98.4 97.5	1.61 0.53 0.52 1.29 1.26 1.67 1.666 0.73 0.70 0.70 0.60 0.51 0.51 1.64 1.42 1.42 1.64	34.03 33.89 33.89 33.89 33.88 33.89 33.88 33.89 33.89 33.93 33.93 33.93 33.93 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.87 33.87 33.87 33.87 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.93 33.93 33.95 33.95 33.95 33.95 33.95 33.89 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.87 33.95 33.95 33.95 33.95 33.87 33.95 33.95 33.95 33.95 33.95 33.87 33.95 33.95 33.95 33.95 33.87 33.95 33.95 33.87 33.95 33.95 33.95 33.95 33.95 33.87 33.95 33.95 33.87 33.95 33.87 33.95 33.95 33.95 33.95 33.95 33.87 33.95 33.95 33.87 33.95 33.87 33.95 33.87 33.95 33.87 33.87 33.95 33.87 33.87 33.87 33.95 33.87 33.87 33.87 33.95 33.87 33	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.39 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.31 8.32 8.33 8.32 8.33 8.33 8.32 8.32 8.32 8.33 8.33 8.32 8.32 8.33 8.32	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.4\\ 1.8\\ 1\\ 1.1\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ \end{array}$
13:38	CC13 SW11	MF MF	844200 845512	817495 817442	8.4 4.32	1.03 1.00 4.20 7.40 1.00 3.32 1.00 7.76 14.52	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.51 7.51 7.51 7.59 7.53 7.53 7.53 7.53 7.81 7.79 7.62 7.62 7.62 7.54	94.1 101.0 100.9 98.2 98.0 97.2 96.8 96.9 98.2 96.8 98.2 98.2 97.7 97.7 97.7 100.2 98.4 98.3	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60 0.51 1.64 1.64 1.64	34.03 33.89 33.89 33.88 33.88 33.88 33.88 33.88 33.89 33.93 33.93 33.93 33.93 33.93 33.93 33.93 33.95 33.95 33.95 33.95 33.87 33.87 33.87 33.87	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.33 8.34 8.33 8.34 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.33 8.35	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.4\\ 1.8\\ 1\\ 1.1\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1$
13:38 13:00	CC13 SW11	MF MF	844200 845512	817495 817442	8.4 4.32	1.03 1.00 4.20 7.40 1.00 3.32 1.00 7.76	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.51 7.51 7.51 7.49 7.58 7.51 7.49 7.53 7.53 7.53 7.53 7.53 7.53 7.53 7.53	94.1 101.0 100.9 98.2 98.0 97.2 97.2 96.8 98.3 98.2 98.3 98.2 97.7 97.7 100.3 100.2 98.4 97.7 97.7 97.7 97.7 97.7 97.0 98.4 98.3 97.7 97.4 97.7 97.9 97.7 97.9 97.7 97.7 97.9 97.4 97.7 97.9 97.4 97.7 97.4 97.5 97.4 97.5 97	1.61 0.53 0.52 1.29 1.26 1.66 0.73 0.70 0.61 0.60 0.51 0.51 1.68 1.64 1.42 1.42 1.42 1.44 1.64 1.76	34.03 33.89 33.89 33.89 33.89 33.88 33.89 33.88 33.89 33.93 33.93 33.93 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.87 33.87 33.87 33.87 33.87 33.87 33.87 33.87 33.87 33.87 33.87 33.88 33.95 33.87 33.88 33.88 33.88 33.88 33.88 33.88 33.88 33.95 33.87 33.88 33	8.30 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.32 8.32 8.33 8.33	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.1\\ 1.1\\ -1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0$
13:38 13:00	CC13 SW11	MF MF	844200 845512	817495 817442	8.4 4.32	1.03 1.00 4.20 7.40 1.00 3.32 1.00 7.76 14.52	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.58 7.51 7.51 7.49 7.49 7.49 7.58 7.57 7.53 7.53 7.53 7.53 7.53 7.53 7.53	94.1 101.0 100.9 98.2 98.0 97.2 97.2 96.8 96.8 96.9 98.2 97.7 97.7 100.3 100.2 98.4 98.4 98.4 97.5 97.5 97.4	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60 0.51 0.64 1.64 1.64 1.64 1.64 1.64 1.64 1.79 1.76	34.03 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.89 33.93 33.93 33.95 33.95 33.95 33.95 33.95 33.87 33.87 33.87 33.89 33.89 33.89 33.89 33.89 33.95 33.87 33.95 33.87 33.85 33.87 33.87 33.87 33.87 33.87 33.87 33.87 33.85 33.87 33	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.39 8.33 8.34 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.33 8.33 8.34 8.33 8.35	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.4\\ 1.8\\ 1\\ 1.1\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1.0\\ <1$
13:38 13:00 13:20	CC13 SWII C3	MF MF MF	844200 845512 843821	817495 817442 816211	8.4 4.32 15.52	1.03 1.00 4.20 7.40 1.00 7.76 14.52 1.00 8.05	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.59 7.51 7.51 7.51 7.49 7.49 7.49 7.49 7.49 7.49 7.57 7.53 7.53 7.53 7.53 7.53 7.53 7.53	94.1 101.0 100.9 98.2 98.0 97.2 97.2 97.2 96.8 96.9 96.9 98.2 97.7 97.7 100.2 98.4 98.3 97.5 97.5 97.5 97.9 97.9 97.9 97.9 97.9 97.1	1.61 0.53 0.52 1.29 1.20 1.67 1.66 0.73 0.70 0.60 0.51 0.51 1.64 1.64 1.64 1.64 1.79 1.79 1.76 1.56 1.55 1.58	34.03 33.89 33.89 33.89 33.88 33.89 33.89 33.89 33.89 33.93 33.93 33.93 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.87 33.87 33.87 33.87 33.87	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.32 8.33 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.33 8.34 8.33 8.34 8.33 8.33 8.34 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.32 8.33 8.34 8.35	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.1\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ < 1.0\\ <$
13:38 13:00 13:20	CC13 SWII C3	MF MF MF	844200 845512 843821	817495 817442 816211	8.4 4.32 15.52	1.03 1.00 4.20 7.40 1.00 3.32 1.00 7.76 14.52 1.00 8.05 15.09	18.2 17.9 17.9 18 18 18 18 18 18.1 18.1 17.7 17.9 17.7 17.9 17.7 17.9	7.23 7.81 7.89 7.58 7.51 7.49 7.49 7.49 7.49 7.49 7.57 7.53 7.53 7.53 7.53 7.57 7.53 7.57 7.62 7.62 7.62 7.62 7.64 7.54 7.67 7.54 7.55 7.54 7.55 7.55 7.55	94.1 101.0 100.9 98.2 98.0 97.2 97.2 97.2 97.2 97.2 96.8 96.9 98.2 97.7 100.3 100.2 98.4 98.4 98.4 98.5 97.5 97.5 97.4 97.5 97.9 97.9 97.9 97.9 97.9 97.9 97.9 97.9 97.7 97.9 97.9 97.9 97.9 97.9 97.9 97.9 97.9 97.9 97.7 97.7 97.8 97.7 97.1 97.1 97.1 97.1 97.1	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.70 0.51 0.60 0.51 1.64 1.42 1.44 1.44 1.44 1.44 1.44 1.64 1.67 1.57 1.80 1.57 1.80 1.57 1.80 1.79	34,03 33,89 33,89 33,88 33,89 33,88 33,89 33,88 33,89 33,93 33,93 33,93 33,93 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,87 33	8.30 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.39 8.39 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34	$\begin{array}{c} 1.1\\ 1.6\\ 1.6.\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.4\\ 1.8\\ 1.1\\ 1.1\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0\\ 1.0$
13:38 13:00 13:20	CC13 SWII C3	MF MF MF	844200 845512 843821	817495 817442 816211	8.4 4.32 15.52	1.03 1.00 4.20 7.40 1.00 7.76 14.52 1.00 8.05	18.2 17.9 17.9 18 18 18 18 18 18 18 18 18 18	7.23 7.81 7.80 7.58 7.51 7.51 7.49 7.49 7.49 7.58 7.57 7.53 7.53 7.53 7.53 7.57 7.62 7.55 7.54 7.67 7.67 7.58 7.55 7.58 7.52 7.59	94.1 101.0 100.9 98.2 98.0 97.2 97.2 97.2 96.8 96.8 96.8 98.2 97.7 77.7 100.3 100.2 98.4 98.4 98.4 97.5 97.5 97.5 97.9 97.9 97.8 97.9 97.8 97.1 97.1 97.9 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1 97.1	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.60 0.51 0.60 0.51 1.64 1.42 1.42 1.42 1.42 1.42 1.44 1.64 1.64 1.57 1.80 1.57 1.80 0.58 1.79 0.96 1.79 0.96 1.79 0.70 0.60 0.51 1.64 1.75 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.57 1.80 1.64 1.57 1.57 1.80 1.57 1.57 1.80 1.57 1	34.03 33.89 33.88 33.89 33.88 33.88 33.88 33.88 33.88 33.89 33.93 33.93 33.93 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.87 33.89 33.89 33.89 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.95 33.87 33.77 33	8.30 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.39 8.39 8.39 8.33 8.33 8.33 8.34 8.33 8.34 8.33 8.33 8.32 8.32 8.32 8.32 8.32 8.31 8.32 8.32 8.32 8.31	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.1\\ 1.1\\ 1.1\\ 1.1\\ 1.1\\ 1.1\\ 1.1$
13:38 13:00 13:20	CC13 SWII C3	MF MF MF	844200 845512 843821	817495 817442 816211	8.4 4.32 15.52	1.03 1.00 4.20 7.40 1.00 3.32 1.00 7.76 14.52 1.00 8.05 15.09	18.2 17.9 18 18 18 18 18 18 18 18 18 18 18 18 18 18 17.7 17.9 1	7.23 7.81 7.80 7.58 7.58 7.51 7.49 7.49 7.49 7.49 7.49 7.48 7.57 7.53 7.53 7.53 7.53 7.53 7.53 7.53	94.1 101.0 100.9 98.2 98.0 97.2 96.8 96.8 96.9 98.3 98.2 97.7 97.7 100.2 98.4 98.3 97.5 97.5 97.5 97.9 97.1	1.61 0.53 0.52 1.29 1.26 1.67 1.66 0.73 0.70 0.61 0.60 0.51 1.64 1.64 1.64 1.64 1.64 1.79 1.56 1.55 1.57 1.56 1.56 1.57 1.56 1.56 1.56 1.56 1.56 1.56 1.64 1.56 1.50 1.56 1.50 1	34,03 33,89 33,89 33,89 33,88 33,89 33,89 33,89 33,89 33,89 33,93 33,93 33,93 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,87 33,87 33,89 33,89 33,87 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,95 33,95 33,95 33,95 33,95 33,95 33,89 33,89 33,89 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,95 33,89 33,89 33,89 33,95 33,95 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,95 33,95 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,89 33,95 33,89 33,89 33,89 33,95 33,89 33,89 33,89 33,89 33,95 33,95 33,95 33,89 33,89 33,89 33,89 33,89 33,89 33,95 33,89 33	8.30 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.34 8.33 8.34 8.33 8.34 8.33 8.34 8.33 8.32 8.33 8.32 8.33 8.32 8.32 8.32 8.32 8.32 8.32	$\begin{array}{c} 1.1\\ 1.6\\ 1.6\\ 1.6\\ 1.8\\ 1.7\\ 2.2\\ 1.9\\ 1.7\\ 1.6\\ 1.4\\ 1.1\\ 1.1\\ 1.1\\ 1.1\\ 1.1\\ 1.0\\ 1.0\\ 1.0$

Remarks: MF - Middle Flood tide ME - Middle Ebb tide For SS, if the monitoring result is less than Limit of Report 1mg/L, the result value will be assumed as 1 for the calculation.

ampling Date:	16-Jan-19					er Quality 1							
		70° 1 ↔	Co-or	linates	Water	Sampling	Temp	DO Conc	DO	Turbidity	Salinity	рН	SS
Date / Time	Location	Tide*	East	North	Depth m	Depth m	ĉ	mg/L	Saturation %	NTU	ppt	unit	mg/I
						1.00	17.8 17.8	7.61 7.60	98.1 97.9	1.22	33.81 33.81	8.33 8.33	2.8 2.9
8:49	CC1	ME	843201	816416	8.08	4.04	17.8	7.53	97.0	0.49	33.82	8.33	1.8
						7.08	17.8 17.8	7.52 7.49	97.0 96.5	0.49 1.04	33.82 33.82	8.33 8.33	2.1 3.6
							17.8 17.8	7.49 7.67	96.5 98.9	1.03 0.46	33.82 33.78	8.33 8.32	3.4
						1.00	17.8 17.8	7.65 7.57	98.6 97.6	0.43 0.33	33.78 33.80	8.32 8.33	3.3 1.8
8:57	CC2	ME	844076	817091	12.01	6.01	17.8	7.57	97.6	0.32	33.80	8.33	2.2
						11.01	17.8 17.8	7.52	96.9 96.9	0.54	33.81 33.81	8.33 8.33	1.4
						1.00	18.1 18.2	7.29 7.27	94.5 94.3	1.06	33.83 33.82	8.30 8.31	3.5 2.9
9:14	CC3	ME	844606	817941	9.01	4.51	18.1	7.27	94.3	1.00	33.89	8.32	2.1
						8.01	18.1 18.1	7.27 7.19	94.3 93.3	1.00	33.88 33.92	8.32 8.31	2.3
						0.01	18.1	7.16	92.9	1.96	33.93	8.31	3.1
							17.8	7.58	97.7	0.67	33.84	8.36	2.5
8:30	CC4	ME	845444	815595	2.83	1.42	17.8	7.58	97.7	0.67	33.84	8.36	2.1
						1.00	17.8 17.8	7.62 7.60	98.1 97.9	0.37 0.39	33.74 33.75	8.33 8.33	2.6 2.9
9:03	CC13	ME	844200	817495	8.35	4.18	17.8	7.54	97.2	0.46	33.77	8.33	1.4
						7.35	17.8 17.8	7.55 7.57	97.3 97.5	0.45 0.41	33.77 33.77	8.33 8.33	1.7
							17.8 17.9	7.57 7.39	97.5 95.4	0.44 1.06	33.77 33.82	8.33 8.41	<1.0 3.2
						1.00	17.9	7.37	95.2	1.05	33.82	8.41	2.9
8:20	SWI1	ME	845512	817442	4.35								
						3.35	17.9 17.9	7.38	95.3 95.2	1.20	33.87 33.87	8.38 8.38	3.1
						1.00	17.8	7.69	99.0	1.28	33.80	8.34	1.4
8:44	C3	ME	843821	816211	15.36	7.68	17.8 17.8	7.67 7.57	98.8 97.6	1.30 1.41	33.80 33.81	8.34 8.34	1.1 3.6
8:44	C3	ME	843821	816211	15.36		17.8 17.8	7.57 7.55	97.5 97.3	1.41 1.33	33.81 33.80	8.34 8.35	3.4 2.7
						14.36	17.8	7.55	97.3	1.33	33.80	8.35	2.1
						1.00	17.7	7.74	99.5 99.3	1.24	33.74 33.75	8.35 8.35	2.5
8:35	C4	ME	844621	815770	16.13	8.07	17.8	7.61	97.9	1.44	33.80	8.35	2.9
						15.13	17.8 17.8	7.61 7.58	97.9 97.6	1.44 1.40	33.80 33.79	8.35 8.36	2.1
							17.8 18.1	7.58 7.52	97.6 97.4	1.41 1.15	33.79 33.74	8.36 8.31	2.9
						1.00	18.1	7.49	97.1	1.17	33.75	8.31	4
9:09	11	ME	844602	817675	10.03	5.02	18.2 18.2	7.23	93.9 93.8	1.29	33.90 33.90	8.31 8.31	3.5 3.9
						9.03	18.1 18.1	7.09 7.08	91.9 91.8	1.66	33.93 33.93	8.31 8.31	3.6 3.8
						1.00	17.9 17.9	7.72	99.7 99.6	1.49	33.77 33.77	8.32 8.32	3.4
12:41	CC1	MF	843201	816416	7.58	3.79	17.9	7.61	98.2	0.38	33.79	8.32	2.8
						6.58	17.9 17.9	7.61 7.6	98.1 98.1	0.37 0.39	33.79 33.79	8.32 8.32	2.7 2.8
							17.9 18.1	7.6 7.62	98.1 98.6	0.37 0.33	33.79 33.79	8.32 8.32	2.6
						1.00	18.1	7.61	98.6	0.33	33.79	8.32	1.5
12:51	CC2	MF	844076	817091	12.12	6.06	17.9 17.9	7.59 7.59	97.9 97.9	0.35	33.81 33.81	8.32 8.32	1.9 1.6
						11.12	17.8 17.8	7.56	97.4 97.4	0.43 0.46	33.81 33.81	8.32 8.32	2.7
						1.00	18.3	7.55 7.54	98.0	0.62	33.73	8.31	3.4
12-26	CC3	MF	844606	817941	9.61	4.81	18.3 18	7.54 7.47	98.0 96.7	0.75 0.70	33.73 33.83	8.31 8.31	3.9
13:26	CC3	NIF	844000	81/941	9.01		18 18.2	7.47 7.13	96.6 92.6	0.69	33.84 33.92	8.31 8.30	2.6
						8.61	18.2	7.13	92.6	1.29	33.92	8.30	1.6
12:19	CC4	MF	845444	815595	2.04	1.02	18.1	7.67 7.66	99.3 99.3	0.47 0.45	33.83 33.83	8.32 8.32	3.3 3.6
										0110	00100	0.0 2	
						1.00	18	7.62	98.6	0.49	33.78	8.31	2.1
10.5-					0		18 17.9	7.61 7.59	98.4 98.0	0.48 0.31	33.78 33.78	8.31 8.32	2.5
12:57	CC13	MF	844200	817495	9.99	5.00	17.9	7.59	98.0	0.31	33.78	8.32	2.8
						8.99	17.9 17.9	7.55	97.3 97.3	0.70	33.80 33.80	8.32 8.32	2.7
						1.00	18 18	7.57 7.56	98.0 97.8	0.65	33.85 33.85	8.37 8.36	3.1 3.9
12.12	SWI1	MF	845512	817442	5.15								
12:13						4.15	18	7.65	99.0	0.94	33.85	8.35	3.7
12.13	<u> </u>						18 17.9	7.68 7.69	99.4 99.2	0.96	33.85 33.80	8.35 8.32	3.2 2.6
12.13						1.00	17.9	7.68	99.1	0.53	33.80	8.32	3
12.13			843821	816211	15.68	7.84	17.8 17.8	7.62	98.2 98.2	0.30 0.27	33.78 33.78	8.32 8.33	2.8 2.4
12:15	C3	MF	043021				17.8	7.60	97.8	0.31	33.78	8.33	3.4
	C3	MF	043021			14.68		7 50	97.8	0 33	33.78	833	
	C3	MF	043021				17.8 17.9	7.59 7.65	97.8 98.8	0.33 2.95	33.78 33.82	8.33 8.31	2.7
12:35				915770	16.2	1.00	17.8						
	C3 C4	MF	844621	815770	16.3	1.00 8.15	17.8 17.9 17.9 17.9 17.9 17.9	7.65 7.63 7.54 7.55	98.8 98.6 97.3 97.3	2.95 0.37 0.42 0.42	33.82 33.82 33.81 33.81	8.31 8.31 8.31 8.31	2.7 2.6 3.4 3.6
12:35				815770	16.3	1.00	17.8 17.9 17.9 17.9 17.9 17.8 17.8	7.65 7.63 7.54 7.55 7.49 7.48	98.8 98.6 97.3 97.3 96.6 96.5	2.95 0.37 0.42 0.42 0.67 0.75	33.82 33.82 33.81 33.81 33.81 33.81 33.81	8.31 8.31 8.31 8.31 8.31 8.31	2.7 2.6 3.4 3.6 3.9 3.3
12:35				815770	16.3	1.00 8.15	17.8 17.9 17.9 17.9 17.9 17.8 17.8 17.8 18.3	7.65 7.63 7.54 7.55 7.49 7.48 7.53	98.8 98.6 97.3 97.3 96.6 96.5 97.9	2.95 0.37 0.42 0.42 0.67 0.75 2.02	33.82 33.82 33.81 33.81 33.81 33.81 33.81 33.81 33.65	8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.30	2.7 2.6 3.4 3.6 3.9 3.3 2.9
12:35				815770	16.3	1.00 8.15 15.30	17.8 17.9 17.9 17.9 17.9 17.8 17.8	7.65 7.63 7.54 7.55 7.49 7.48	98.8 98.6 97.3 97.3 96.6 96.5	2.95 0.37 0.42 0.42 0.67 0.75	33.82 33.82 33.81 33.81 33.81 33.81 33.81	8.31 8.31 8.31 8.31 8.31 8.31	2.7 2.6 3.4 3.6 3.9 3.3

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide
 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

mpling Date:	18-Jan-19												
Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pН	ss
Date / Thic	Estation	That	East	North	m	m	ç	mg/L	%	NTU	ppt	unit	mg/
						1.00	17.6 17.6	7.87 7.87	101.0 100.9	0.91 0.89	33.69 33.69	8.31 8.31	1.2
10:21	CC1	ME	843201	816416	7.48	3.74	17.6	7.74	99.4	0.76	33.71	8.33	1.3
						6.48	17.6 17.6	7.74 7.72	99.4 99.1	0.76 0.73	33.71 33.71	8.33 8.33	1.9
							17.8 17.7	7.49 7.80	96.5 100.2	1.03 0.76	33.82 33.69	8.33 8.3	1.9 1.6
						1.00	17.7	7.79	100.1	0.75	33.69	8.3	1.1
10:29	CC2	ME	844076	817091	12.09	6.05	17.7 17.7	7.68	98.6 98.6	0.68	33.72 33.72	8.32 8.32	1.3
						11.09	17.7	7.64	98.2 98.1	0.73	33.71 33.71	8.33	1.4
						1.00	17.7	7.77	99.9	0.78	33.72	8.32	1.3
	000	ME	044606	017041	0.04		17.7 17.7	7.76	99.8 98.6	0.77 0.73	33.71 33.73	8.32 8.33	1.5
11:14	CC3	ME	844606	817941	9.84	4.92	17.7	7.66	98.5 97.8	0.73	33.73	8.33	1
						8.84	17.7 17.7	7.61 7.62	97.8	0.82 0.80	33.73 33.73	8.33 8.33	1.3
9:59	CC4	ME	845444	815595	2.06	1.03	17.6 17.6	7.82 7.80	100.3 100.1	0.77	33.67 33.67	8.28 8.28	1.2
							17.6	7.80	100.1	0.77	33.07	8.28	1.0
							17.6	7.80	100.1	0.97	33.68	8.31	1.6
						1.00	17.6	7.78	99.9	0.89	33.69	8.31	1.5
10:35	CC13	ME	844200	817495	8.12	4.06	17.7 17.7	7.69 7.67	98.8 98.6	0.96	33.71 33.71	8.32 8.32	1.7
						7.12	17.7 17.7	7.61 7.61	97.8 97.8	1.04	33.72 33.72	8.32 8.32	1.8
						1.00	17.7	7.73	99.4	0.92	33.69	8.13	1.5
9:50	SWI1	ME	845512	817442	4.51		17.7	7.73	99.3	0.88	33.69	8.14	1.3
7.30	3W11	ME	040012	01/442	4.31		17.7	7.67	98.6	0.82	33.71	8.21	1.5
						3.51	17.7	7.67	98.6	0.83	33.71	8.22	2.1
						1.00	17.6	7.80 7.79	100.1 100.0	0.78	33.70 33.70	8.30 8.30	1.1
10:16	C3	ME	843821	816211	15.33	7.67	17.6 17.6	7.67 7.67	98.5 98.5	0.80 0.82	33.71 33.71	8.32 8.32	1.1
						14.33	17.6	7.62	97.9	0.82	33.70	8.33	<1.
							17.6 17.6	7.63 7.93	97.9 101.7	0.81 0.60	33.70 33.69	8.33 8.30	1.3
						1.00	17.6	7.93	101.6	0.58	33.69	8.30	1.
10:06	C4	ME	844621	815770	16.03	8.02	17.6 17.6	7.86 7.86	100.8 100.8	0.51 0.52	33.70 33.70	8.31 8.31	1.1
						15.03	17.6 17.6	7.83 7.83	100.4	0.52 0.54	33.69 33.69	8.32 8.32	1.9
						1.00	17.7	7.64	98.1	0.93	33.54	8.33	- 1.9
11.04	11	ME	044602	017675	10.01		17.7	7.64 7.64	98.2 98.2	0.93 0.81	33.66 33.73	8.33 8.34	1.4
11:04	11	ME	844602	817675	10.91	5.46	17.7 17.7	7.63 7.61	98.1 97.8	0.74 0.95	33.73 33.73	8.34 8.33	1.5 <1.
						9.91	17.7	7.61	97.8	0.95	33.73	8.33	1.2
							17.7	7.83	100.6	0.63	33.67	8.33	1.8
						1.00	17.7	7.82	100.5	0.65	33.67	8.33	1.3
14:08	CC1	MF	843201	816416	6.39	3.20	17.7	7.79 7.78	100.1 100.1	0.71 0.73	33.71 33.71	8.34 8.34	1.8
						5.39	17.7 17.7	7.78	100.0	0.70	33.71 33.71	8.35 8.35	1.6
						1.00	17.7	7.89	101.3	0.67	33.65	8.34	1.3
14:18	CC2	MF	844076	817091	12.15		17.7 17.7	7.88 7.82	101.2 100.5	0.67 0.75	33.65 33.69	8.34 8.35	1.6
14.18	002	MIF	844076	817091	12.13	6.08	17.7 17.7	7.82 7.66	100.4 98.5	0.78	33.69 33.71	8.35 8.35	1.1
						11.15	17.7	7.65	98.3	1.40	33.71	8.35	1
						1.00	17.8 17.8	7.75	99.8 99.7	0.84 0.82	33.64 33.64	8.34 8.34	1.5
14:35	CC3	MF	844606	817941	9.47	4.74	17.8 17.8	7.67 7.67	98.8 98.7	0.77	33.74 33.74	8.35 8.35	1.8
						8.47	17.8	7.62	98.2	0.94	33.75	8.35	1.8
							17.8	7.61	97.9	0.98	33.75	8.35	2.1
							17.7	7.97	102.3	0.81	33.69	8.34	1.9
13:52	CC4	MF	845444	815595	2.19	1.10	17.7	7.83	102.5	0.81	33.69	8.34	1.8
						1.00	17.6 17.6	7.85 7.85	100.7 100.7	0.67	33.72 33.71	8.34 8.34	1.5
14:24	CC13	MF	844200	817495	8.47	4.24	17.7	7.79	100.1	0.76	33.70	8.35	1.8
	0015		0.1200	01,775	0.77		17.7	7.77 7.66	100.0 98.5	0.77 1.00	33.70 33.73	8.35 8.35	1.4
	<u> </u>					7.47	17.7	7.66	98.5	1.04	33.73	8.35	1.0
						1.00	17.8 17.8	7.78 7.79	100.1 100.1	0.81 0.82	33.69 33.69	8.33 8.33	1.5
13:46	SWI1	MF	845512	817442	3.15								
						2.15	17.7 17.7	7.85	101.0 101.0	0.73	33.69 33.69	8.38 8.38	1.4
						1.00	17.7	7.89	101.3	0.72 0.61	33.70	8.37	<1.
11.05					10		17.7	7.89 7.88	101.4	0.61	33.70 33.70	8.37 8.37	<1.
14:03	C3	MF	843821	816211	12.99	6.50	17.7	7.88	101.2	1.28	33.70	8.37	<1.
						11.99	17.6 17.6	7.82 7.80	100.4 100.2	1.34 1.33	33.69 33.69	8.37 8.37	<1.2
						1.00	17.7	7.90 7.90	101.5	0.63 0.62	33.69 33.69	8.35	1.:
13:56	C4	MF	844621	815770	16.19	8.10	17.6	7.91	101.6	1.22	33.70	8.36	1.2
							17.6 17.6	7.92 7.78	101.6 99.8	1.29	33.70 33.69	8.36 8.36	<1.3
						15.19	17.6	7.78	99.8 100.3	1.34	33.69	8.36	1.1
						1.00	17.7 17.7	7.81 7.80	100.3	0.91 0.91	33.57 33.57	8.34 8.34	1.3 1.3
14:31	11	MF	844602	817675	10.56	5.28	17.7 17.7	7.81 7.81	100.4 100.4	0.69 0.67	33.71 33.71	8.35 8.35	1.8
										0.78	33.71		1.1

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide
 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

Contract No. EDO/04/2018 Cross Bay Link, Tseung Kwan O

ampning Date:	21-Jan-19												
			Co-or	dinates	Water	Sampling	Temp	DO Conc	DO	Turbidity	Salinity	рН	SS
Date / Time	Location	Tide*	East	North	Depth m	Depth m	ເ	mg/L	Saturation %	NTU	ppt .	unit	mg/I
						1.00	17.6	7.87	100.9	0.87	33.49 33.49	8.34	1.2
12:58	CC1	ME	843201	816416	7.78	3.89	17.6 17.6	7.86 7.80	100.7 100.0	0.83 0.90	33.50	8.34	1.2
12.50			010201	010110	1.10		17.6 17.6	7.79 7.80	99.9 99.9	0.92 0.93	33.50 33.50		1.3 <1.0
						6.78	17.6 17.8	7.79 7.83	99.8 100.8	0.92 0.77	33.49	8.34	<1.0 <1.0
						1.00	17.8	7.83	100.7	0.75	33.53 33.53	8.33	<1.0
13:05 CC	CC2	ME	844076	817091	11.29	5.65	17.6 17.5	7.86	100.7 101.0	0.73 0.73	33.47 33.46		1.1
						10.29	17.5	7.93	101.3	0.75	33.46 33.46	8.35	1
						1.00	17.9	7.81	100.6	1.03	33.46	8.34	<1.0
							18 17.8	7.80 7.70	100.5 99.0	0.98 0.92			<1.0
13:21	CC3	ME	844606	817941	9.51	4.76	17.7	7.67	98.6	0.94	33.54	8.34	<1.0
						8.51	17.8 17.7	7.77 7.80	99.8 100.2	1.19 1.12	33.55	8.34 8.34	1.1
12:41	CC4	ME	845444	815595	2.1	1.05	17.7	7.75	99.5 99.3	1.04	33.53	8.32	2.2
							17.7	/./4	99.3	1.05	33.53	8.32	2.2
							17.8	7.82	100.6	0.86	33 54	8 3 3	1.4
						1.00	17.8	7.81	100.5	0.89	33.54	8.33	1.5
13:11	CC13	ME	844200	817495	7.29	3.65	17.7 17.7	7.73 7.73	99.3 99.4	0.94 0.96	33.54	8.33	1.5
						6.29	17.8 17.7	7.73 7.72	99.4 99.2	0.92 0.93	33.53 33.53	8 34 8 34 8 <td><1.0</td>	<1.0
	1		1			1.00	17.8	7.89	101.5	1.13	33.58		1.2
12:34	SWI1	ME	845512	817442	4.74		17.8	7.88	101.4	1.13	33.58	8.34	1.6
12:34	SWII	ME	845512	81/442	4./4		17.8	7.84	100.8	1.28	33.58	8 3/	1.7
						3.74	17.8	7.83	100.7	1.21	33.58	8.32 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.35 8.36 8.36 8.36 8.36 8.37 8.38 8.33 8.34 8.35 8.35 8.35 8.35 8.35 8.35	1.8
						1.00	17.8 17.8	7.72	99.4 99.2	0.88			1.7
12:53	C3	ME	843821	816211	15.27	7.64	17.7	7.56 7.55	97.0 96.9	1.06	33.53	8.33	1.7
						14.27	17.7 17.6	7.57	97.0	1.10	33.50	8.33	1.5 1.4
							17.6	7.59 7.86	97.2 100.7	1.09 0.85	33.50 33.48		1.8
12:45 C4						1.00	17.6	7.84	100.5	0.88	33.48	8.33	1.7
	C4	ME	844621	815770	16.5	8.25	17.5 17.5	7.80 7.80	99.8 99.7	0.94 0.92			1.6
						15.50	17.5 17.5	7.76	99.2 99.1	1.27 1.35	33.47	8.34	1.4
						1.00	18	7.81	100.8	1.01	33.44	8.34	1.8
			844602	017675	0.14		18 17.8	7.80	100.6 99.4	1.08			2.4
13:17	I1	ME	844602	817675	9.14	4.57	17.8	7.71	99.2	1.37	33.53	8.34	1.5
						8.14	17.8 17.8	7.65	98.4 98.3	1.38 1.31	33.53		1.4
			_				17.0	9.01	102.0	1.04	22.40	0.26	1.4
						1.00	17.8 17.8	8.01 8.01	102.9 103.0	1.04 0.96	33.49	8.36	1.4 1.3
16:26	CC1	MF	843201	816416	8.61	4.31	17.7	7.99 7.98	102.7	0.75			1.2
						7.61	17.7	7.96	102.2	0.78	33.49	8.36	1.2
						1.00	17.7 17.7	7.95 7.99	101.9 102.5	0.78 0.56			1.4
			(T) 01108(17.7 17.6	7.99 8	102.5 102.5	0.59 0.63	33.46	8.34	1.8
16:32	CC2	MF	844076	817091	12.57	6.29	17.6	8	102.5	0.65	33.46 8.44 33.52 8.34 33.52 8.34 33.55 8.34 33.55 8.34 33.55 8.34 33.55 8.34 33.55 8.34 33.55 8.34 33.55 8.34 33.55 8.34 33.54 8.33 33.53 8.32 33.54 8.33 33.53 8.33 33.54 8.33 33.53 8.34 33.53 8.33 33.53 8.34 33.53 8.33 33.53 8.33 33.53 8.33 33.53 8.33 33.53 8.33 33.50 8.33 33.51 8.33 33.53 8.33 33.48 8.33 33.50 8.33 33.47 8.34 33.53 8.33 33.47 8.34 </td <td>8.34</td> <td>1.4</td>	8.34	1.4
						11.57	17.5 17.5	7.96	101.8 101.7	0.70		8.34 8.34 8.34 8.34 8.34 8.34 8.33 8.34 8.33 8.33 8.34 8.33 8.34 8.33 8.34 8.33 8.34 8.35 8.34 8.34 8.34 8.34 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34	1.1
						1.00	17.9 17.9	7.91	101.9	0.97	33.45	8.35	2.3
16:49	CC3	MF	844606	817941	9.91	4.96	17.9	7.89 7.84	101.7 101.0	1.08			1.4
10.49	ces	WII ⁻	844000	81/941	9.91		17.8 17.8	7.82	100.6 99.7	1.09 1.14			1.5
						8.91	17.8	7.74	99.5	1.13			1.6
16:10	CC4	MF	845444	815595	2.09	1.05	17.8 17.8	8.04 8.05	103.4 103.5	0.89 0.93			4.1 3.6
							. 7.0	0.00					5.0
						1.00	17.8	7.81	100.3	0.87			2.1
							17.8 17.7	7.80 7.79	100.2 100.0	0.88 0.84	33.47	8.32	3 3.5
16:38	CC13	MF	844200	817495	8.77	4.39	17.7	7.81	100.2	0.83	33.50	8.34	2.7
						7.77	17.6 17.6	7.81	100.2 100.0	0.83 0.84			2.6
						1.00	17.7	7.96	102.2	1.13	33.55	8.33	2.1
16:03	SWI1	MF	845512	817442	4.3		17.7	7.95	102.2	1.18	33.34	0.34	1.9
10.00	5.11	1411	010012	01/742			17.7	7.94	102.1	1.20	33.55	8.34	1.7
						3.30	17.8	7.95	102.2	1.26	33.56	8.34	1.2
						1.00	17.7 17.7	7.81 7.80	100.3 100.1	0.85 0.84	33.50	8.33	2.3
16:20	C3	MF	843821	816211	15.06	7.53	17.7 17.7	7.74 7.73	99.4 99.3	0.86	33.50	8.34	<1.
						14.06	17.7	7.68	98.5	0.90	33.49	8.33	2.4
			 				17.6 17.6	7.67 8.01	98.3 102.6	0.88 0.96	33.49 33.46	8.33 8.35	1.8
						1.00	17.6	8.01	102.6	0.97	33.46	8.35	<1.
16:14	C4	MF	844621	815770	15.77	7.89	17.6 17.6	7.95 7.90	101.8 101.2	1.04 1.05	33.47 33.49		2.3
						14.77	17.6 17.5	7.72 7.72	98.8 98.8	1.19 1.18	33.49 33.49		3.1
	1		1			1.00	18	7.92	102.2	0.67	33.41	8.31	2.8
16.44		M.	044600	017/7/	10.20		18 17.9	7.91 7.80	102.1 100.5	0.65	33.42 33.53	8.32 8.32	2.1
16:44	11	MF	844602	817675	10.28	5.14	17.9	7.78	100.2	0.94	33.54	8.33	2
	1		1			9.28	17.8 17.8	7.72 7.70	99.3 99.0	1.18 1.30	33.54 33.54	8.33 8.33	3.5

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide
 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

mpning Date	: 23-Jan-19)	-				-						
Date / Time	Location	Tide*	Co-ore	linates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidit v	Salinity	рН	SS
			East	North	m	m	°C	mg/L	%	NTU	ppt	unit	mg/l
						1.00	17.9 17.9	7.81	100.6	1.45 1.36	33.45 33.44	8.32 8.32	4.1
13:01	CC1	ME	843201	816416	8.4	4.20	17.7 17.6	7.74	99.3 99.2	0.98	33.44 33.44	8.32 8.32	4.1 4.8
						7.40	17.5	7.71	98.5 98.3	1.04	33.43	8.33	4.3
						1.00	17.9	7.70 7.81	100.6	1.06 0.93	33.43 33.46	8.31	4.4
							17.9 17.5	7.80	100.5 98.4	0.92	33.46 33.44	8.31	4.3
13:11	CC2	ME	844076	817091	12.13	6.07	17.5	7.69	98.3	1.12	33.44	8.32	3.9
						11.13	17.5 17.5	7.64 7.62	97.6 97.4	1.18 1.20	33.44 33.44	8.33 8.32	3.1 3.8
						1.00	17.9 17.9	7.89 7.89	101.6 101.6	1.40 1.50	33.37 33.38	8.33	3.4
13:27	CC3	ME	844606	817941	9.32	4.66	17.6	7.85	100.5	1.02	33.44	8.34	3.7
10.27	005		011000	01/211	7.52	-	17.5 17.4	7.86 7.92	100.6 101.2	0.99 1.04	33.44 33.45		3.2
						8.32	17.4	7.93	101.2	1.06	33.45	8.35	4.2
							12.2		00.6	1.04	22.42	0.21	
12:41	CC4	ME	845444	815595	2.44	1.22	17.7 17.7	7.77 7.76	99.6 99.5	1.04	33.43 33.43	8.31 8.31	3.5
						1.00	17.5	7.93	101.3	1.20	33.45	8.35	3.5
12.17	0012	ME	844200	017405	0.20		17.5 17.6	7.91 7.84	101.1 100.5	1.16	33.44 33.41		3.5
13:16	CC13	CC13 ME 844200	817495	8.39	4.20	17.6 17.5	7.84 7.81	100.4 99.9	1.07 0.99	33.41 33.42	8.34	3.9	
						7.39	17.5	7.80	99.7	0.99	33.43	8.34	4.8
						1.00	17.8 17.8	7.73	99.4 100.5	0.99	33.42 33.43		4.5
12:35	SWI1	ME	845512	817442	4.06		1110					010 0	
						3.06	17.7	7.85	100.6	1.16	33.43	8.36	3.9
							17.7 17.7	7.85 7.82	100.7 100.4	1.14 0.98	33.43 33.44	8.31 8.31 8.31 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.33 8.33 8.33 8.34 8.35 8.31 8.31 8.33 8.33 8.34 8.35 8.34 8.34 8.35 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.35 8.34 8.36 8.36 8.36 8.36 8.31 8.32 8.33 8.34 8.32 8.31 8.32 8.31 8.32 8.31 8.32 8.31 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.33 8.34 8.34 8.34 8.33 8.33 8.33 <td>3.9</td>	3.9
						1.00	17.7	7.81	100.3	0.98	33.45	8.31	4.8
12:56	C3	ME	843821	816211	15.05	7.53	17.5	7.76	99.2 99.2	1.07	33.43 33.43	4 8.32 4 8.33 4 8.33 4 8.33 4 8.33 4 8.34 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.35 5 8.34 2 8.34 2 8.36 3 8.36 3 8.31 5 8.31 3 8.31 2 8.30 2 8.30 2 8.31 3 8.31 3 8.31 3 8.31 3 8.32 3 8.34	3.6
						14.05	17.3 17.3	7.75 7.76	98.8 98.8	1.02 1.00	33.41 33.41		6.5
						1.00	17.7	7.73	99.1	1.05	33.42	8.34 8.35 8.35 8.35 8.35 8.35 8.31 8.31 8.35 8.31 8.35 8.34 8.34 8.34 8.35 8.36 8.36 8.36 8.37 8.36 8.38 8.34 8.34 8.34 8.35 8.36 8.31 8.31 8.32 8.33 8.31 8.31 8.32 8.32 8.33 8.34 8.34 8.34 8.35 8.36 8.36 8.36 8.32 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.35 8.36 8.33 8.33 8.33 8.33 8.34 8.34 8.35 <td>3.2</td>	3.2
12.40			0.44(2)	015770	14.10	-	17.7 17.5	7.71 7.61	98.9 97.3	1.06	33.42 33.43		3.3
12:48	C4	ME	844621	815770	16.19	8.10	17.5	7.61	97.2 97.2	1.19	33.43 33.42	8.31	3.2
						15.19	17.4 17.3	7.62	97.2	1.21	33.42	2 8.30 3 8.31 3 8.31 2 8.32 2 8.32 1 8.31 1 8.31 1 8.31 3 8.32 3 8.33 5 8.34 5 8.34 3 8.34 3 8.34 3 8.34 3 8.34 3 8.35 2 8.35	4.9
						1.00	17.8 17.8	7.85	100.9 100.8	1.09 1.06	33.41 33.41		2.1
13:23	11	ME	844602	817675	10.01	5.01	17.4	7.82	99.9	1.03	33.43	8.32	2.3
						9.01	17.4 17.3	7.83	100.0	1.02	33.43 33.45		2.2
						9.01	17.3	7.94	101.1	1.11	33.45	8.34	2.5
						1.00	17.4	7.85	100.1	1.13	33.43	8.34	3.5
						-	17.4 17.4	7.85	100.0 99.8	1.15	33.43 33.42		3.5
9:23	CC1	MF	843201	816416	9.46	4.73	17.4	7.82	99.7	1.16	33.42	8.35	3.8
						8.46	17.4 17.3	7.81	99.6 99.5	1.23	33.42 33.43	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.8
						1.00	17.5 17.5	7.87 7.85	100.6	1.12	33.45 33.45		2.7
9:30	CC2	MF	844076	817091	12.13	6.07	17.5	7.64	97.6	1.17	33.45	8.33 8.33 8.33 8.34 8.34 8.35 8.35 8.35 8.31 8.35 8.35 8.35 8.31 8.31 8.33 8.34 8.34 8.35 8.31 8.31 8.34 8.34 8.34 8.35 8.35 8.36 8.36 8.36 8.36 8.36 8.37 8.33 8.38 8.31 8.31 8.33 8.33 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 <td>2.3</td>	2.3
						11.13	17.5 17.3	7.63 7.66	97.5 97.7	1.24	33.45 33.45		2.1
						-	17.3	7.67	97.7 99.4	1.56	33.45 33.37	0.04	1.8
						1.00	17.4	7.79	99.3	1.18	33.37	8.34	3.6
9:48	CC3	MF	844606	817941	9.79	4.90	17.4 17.4	7.76	98.9 98.9	1.16	33.39 33.40		2.2
						8.79	17.4 17.4	7.69 7.67	98.1 97.8	1.40 1.46	33.44 33.45	8.35	1.4
							17.4	7.07	97.8	1.40	33.43	8.33	1.7
0.00	004	ME	045444	015505	2.14	1.07	17.5	7.72	98.6	1.19	33.42	8.33	4
9:00	CC4	MF	845444	815595	2.14	1.07	17.5	7.71	98.5	1.17	33.42	8.33	3.5
						1.00	17.3 17.3	8.02 8.00	102.1 101.9	1.09	33.38 33.38		2.6
9:37	CC13	MF	844200	817495	8.02	4.01	17.4	7.81	99.5	1.19	33.40	8.34	2.2
	-					7.02	17.4 17.4	7.81 7.63	99.5 97.3	1.17 1.40	33.40 33.47	8.32 8.33 8.32 8.33 8.32 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.35 8.36 8.37 8.38 8.31 8.34 8.35 8.36 8.36 8.36 8.36 8.36 8.37 8.38 8.39 8.30 8.31 8.32 8.33 8.34 8.35 8.36 8.37 8.38 8.31 8.32 8.33 8.34 8.35 8.36 8.37 8.38 8.33 8.34 8.34 8.34	2.4
	+ -						17.4 17.3	7.63 7.95	97.3 101.3	1.39 1.13	33.46 33.45	8.35	2.8
						1.00	17.3	7.93	101.3	1.13	33.43		3.5
8:51	SWI1	MF	845512	817442	4.28								
						3.28	17.3 17.3	7.81	99.6 99.5	1.24	33.45		3.7
						1.00	17.4	7.81 7.69	98.2	1.25 1.59	33.45 33.44	8.33	2.7
0.15			0.4207.1	01/011	10.01		17.4	7.69 7.63	98.2 97.4	1.58	33.44 33.44		3.1
9:15	C3	MF	843821	816211	15.56	7.78	17.4	7.62	97.4	1.87	33.44	8.34	4.6
						14.56	17.4 17.4	7.62	97.3 97.2	1.78 1.74	33.44 33.44	8.35	4
						1.00	17.5 17.4	7.86 7.85	100.4 100.2	1.70 1.51	33.41 33.41	8.31 8.32	4.7
9:08	C4	MF	844621	815770	16.27	8.14	17.3	7.81	99.4	1.32	33.43	8.35	3.6
							17.3 17.2	7.81 7.89	99.4 100.2	1.40 1.92	33.43 33.42	8.35 8.37	3.2
	┥					15.27	17.2	7.90 7.83	100.3 99.8	2.12	33.42 33.39	8.37 8.35	6.8
						1.00	17.3	7.83	99.8	1.19	33.39	8.35	3.4
9:43	11	MF	844602	817675	8.73	4.37	17.3 17.3	7.80 7.80	99.4 99.4	1.28	33.40 33.40	8.35 8.35	3.3
	1		1	1	1	H	17.4	7.74	98.6	1.35	33.40	8.35	2.7

Contract No. EDO/04/2018 Cross Bay Link, Tseung Kwan O

Remarks: MF - Middle Flood tide ME - Middle Ebb tide

	: 25-Jan-19)			Water	Sampling		T	DO	Turbidit			1
Date / Time	Location	Tide*	Co-ore	dinates	Depth	Depth	Temp	DO Conc	Saturation	I urblatt	Salinity	рН	ss
			East	North	m	m	2 18.2	mg/L 8.23	% 106.7	NTU 1.50	ppt 33.37	unit	mg/I 3
						1.00	18.2	8.25	106.8	1.14	33.37	8.33	2.1
14:19	CC1	ME	843201	816416	7.65	3.83	18.1	8.22 8.18	106.1 105.6	1.13	33.36 33.36	8.32	2
						6.65	17.8 17.8	8.10 8.10	104.1 104.1	1.13	33.37 33.37	unit 8.32 8.32 8.32 8.32 8.32 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.34 8.35 8.35 8.35 8.30 8.30 8.32 8.33 8.31 8.32	30* 10.9
						1.00	18	8.00	103.3	0.96	33.38	8.11 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.34 8.34 8.35 8.35 8.36 8.35 8.37 8.32 8.30 8.30 8.31 8.35 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.35 8.35 8.34 8.31 8.35 8.35 8.34 8.31 8.35 8.33 8.31 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.34 8.11 8.11 8.12 8.11 8.13 8.13 8.14 <td>1.6</td>	1.6
			0.1.10.85				18	8.01 8.02	103.3 103.0	1.15	33.38 33.37		1.9
14:25	CC2	ME	844076	817091	11.52	5.76	17.7 17.5	8.02 7.85	102.9 100.4	1.15	33.37 33.38	8.31	2
						10.52	17.5	7.83	100.1	1.43	33.37	8.31	2.1
						1.00	18.3 18.3	8.23 8.23	106.6 106.6	1.74	33.18 33.23		1.5 2.8
14:42	CC3	ME	844606	817941	9.35	4.68	17.9	8.30	106.9	0.92	33.35	8.34	0.4
						8.35	17.8 17.6	8.33 8.34	107.2 106.8	0.97	33.35 33.41	8.35	1.6 9
						0.55	17.6	8.21	105.2	1.25	33.42	8.35	42.3
							17.6	0.01	102 (1.16	22.27	0.20	
14:03	CC4	ME	845444	815595	2.14	1.07	17.6 17.6	8.01 8.02	102.6 102.7	1.15	33.37 33.37		4.4
						1.00	17.7	8.00	102.6	1.95	33.36		3.3
14-21	6612	MC	844200	817405	0 51		17.7 17.7	8.01 8.04	102.7 103.2	1.93 2.09	33.36 33.36		4.3
14:31	CC13	ME	844200	817495	8.56	4.28	17.7 17.6	8.04 7.95	103.2 101.8	2.30 2.33	33.36 33.36	8.32	4.5
						7.56	17.6	7.93	101.5	2.29	33.37	8.32	3.8
						1.00	18.1	8.32 8.33	107.6	0.78	33.45 33.46		2.5
13:57	SWI1	ME	845512	817442	4.07			0.00		0110	00110	8.31 8.31 8.31 8.31 8.31 8.34 8.34 8.35 8.30 8.34 8.35 8.35 8.30 8.33 8.30 8.33 8.30 8.35 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.32 8.32 8.33 8.33 8.31 8.31 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 8.33 <td></td>	
						3.07	18	8.34	107.7	0.80	33.42		1.6
							18	8.34 7.99	107.7 103.2	0.81 1.82	33.41 33.38		2.2
						1.00	18	8.00	103.3	1.09	33.38	8.31	2.6
14:14	C3	ME	843821	816211	15.32	7.66	17.5	7.82 7.80	99.9 99.7	1.35	33.38 33.38		1.7
						14.32	17.3 17.3	7.95 7.96	101.2 101.3	1.02	33.38 33.38	8.32	1.4
						1.00	17.8	7.97	102.3	1.10	33.37	8.30	2.9
							17.8	8.00 8.00	102.8 102.3	1.07	33.37 33.39		3.6
14:06	C4	ME	844621	815770	15.65	7.83	17.5	8.00	102.2	1.17	33.39	8.31	3
						14.65	17.3	8.00 8.00	101.9 101.9	1.25	33.38 33.38		3.1 2.5
						1.00	18.1 18.1	8.02 8.03	103.7 103.9	1.42 0.94	33.35 33.35		2.3
14:38	I1	ME	844602	817675	10.09	5.05	17.6	8.05	103.1	1.03	33.37	8.33	2.2
						9.09	17.6	8.05 8.07	103.1 103.1	1.01	33.37 33.41	8.34	3.3
						9.09	17.5	8.08	103.3	1.35	33.41	8.34	3.6
						1.00	18.2	8.03	105.5	1.37	33.33	8.11	2.8
						1.00	18.2 18.2	8.05 8.02	105.6 104.9	1.01 1.12	33.33 33.33		2.2
10:28	CC1	MF	843201	816416	7.32	3.66	18.2	7.98	104.4	1.12	33.33	8.11	3.4
						6.32	18.2	7.9 7.9	102.9	1.12 0.99	33.33 33.33		2.2 3.3
						1.00	18.3	7.8	102.1	0.83	33.28 33.28	8.24	3.2 2.5
10:40	CC2	MF	844076	817091	12.44	6.22	18.3 18.3	7.81 7.82	102.1 101.8	1.04	33.34	8.24	3.4
10.40	002	NII .	011070	017071	12.44		18.3	7.82 7.65	101.7 99.2	1.02	33.32 33.36	8.33 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.32 8.32 8.33 8.34 8.34 8.34 8.35 8.35 8.30 8.30 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8.33 8.33 8.31 8.31 8.31 8.31 8.31 8.31 8.31 8.33 8.33 8.33 8.34 8.31 8.31 8.33 8.33 8.33 8.34 8.33 8.33 8.33 8.34 8.31 8.11 8.11 8.12 <td>2.9</td>	2.9
						11.44	18.1	7.63	98.9	1.30	33.36		2.8
						1.00	18.2	8.03 8.03	105.4 105.4	1.61 0.94	33.23 33.24		<1.0
10:58	CC3	MF	844606	817941	8.93	4.47	18.2 18.2	8.10 8.13	105.7 106.0	0.79 0.84	33.33 33.33		<1.0
						7.93	18.2	8.14	105.6	1.09	33.38	8.14	1.8
						1.55	18.2	8.01	104.0	1.12	33.47	8.14	1
							18.2	7.91	101.4	1.02	33.35	8.00	2.2
10:11	CC4	MF	845444	815595	2.01	1.01	18.3 18.3	7.81 7.82	101.4	1.02	33.35		1.3
			1	1	1	1.00	18.1	7.80	101.4	1.82	33.24		3.8
10.46	CC13	MF	844200	917405	7.22		18.1 18.2	7.81 7.84	101.5 102.0	1.80 1.96	33.21 33.29		2.7
10:46	CCIS	IVIT'	044200	817495	1.22	3.61	18.2 18.2	7.84 7.75	102.0 100.6	2.17 2.20	33.28 33.35	8.11	3.9 2.7
					ļ	6.22	18.2	7.73	100.3	2.16	33.32	8.11	3.8
						1.00	18.1	8.12 8.13	106.4 106.5	0.65	33.31 33.32		1.5
10:03	SWI1	MF	845512	817442	3.85								
10:03						2.85	18.1	8.14	106.5	0.67	33.36		1.3
10:03							18.1 18.2	8.14 7.79	106.5 102.0	0.68	33.36 33.24		1.2
10:03			1			1.00	18.2	7.80	102.1	0.96	33.25	8.22	6.9
10:03			843821	816211	14.75	7.38	18.2 18.2	7.62 7.60	98.7 98.5	1.22	33.28 33.27		2.3 3.6
10:03	C3	MF	843821	816211					100.0				7.9
	C3	MF	843821	816211		13.75	18.2	7.75	100.0	0.89	33.29		
	C3	MF	843821	816211			18.2 18.3	7.76 7.77	100.1 101.1	0.89 0.97	33.36 33.25	8.11 8.09	7
10:22						1.00	18.2 18.3 18.2	7.76 7.77 7.80	100.1 101.1 101.6	0.89 0.97 0.94	33.36 33.25 33.25	8.11 8.09 8.09	7 3.1 2.1
	C3 C4	MF	843821 844621	816211 815770	14.64		18.2 18.3 18.2 18.1 18.1	7.76 7.77 7.80 7.80 7.80 7.80	100.1 101.1 101.6 101.1 101.0	0.89 0.97 0.94 1.05 1.04	33.36 33.25 33.25 33.21 33.21	8.11 8.09 8.09 8.22 8.22	7 3.1 2.1 2.5 2.2
10:22					14.64	1.00	18.2 18.3 18.2 18.1 18.1 18.1 18 18	7.76 7.77 7.80 7.80 7.80 7.80 7.80 7.80 7.80	100.1 101.1 101.6 101.1 101.0 100.7 100.7	0.89 0.97 0.94 1.05 1.04 1.12 1.13	33.36 33.25 33.25 33.21 33.21 33.21 33.25 33.25	8.11 8.09 8.22 8.22 8.22 8.22 8.22 8.22	7 3.1 2.5 2.2 2.5 3
10:22					14.64	1.00 7.32	18.2 18.3 18.2 18.1 18.1 18.1 18 18 18 18.1	7.76 7.77 7.80 7.80 7.80 7.80 7.80 7.80 7.80	100.1 101.1 101.6 101.1 101.0 100.7 100.7 102.5	0.89 0.97 0.94 1.05 1.04 1.12 1.13 1.29	33.36 33.25 33.25 33.21 33.21 33.25 33.25 33.25 33.06	8.11 8.09 8.09 8.22 8.22 8.22 8.22 8.22 8.22 8.22 8.22 8.11	7 3.1 2.5 2.5 2.5 3 <1.0
10:22					9.01	1.00 7.32 13.64	18.2 18.3 18.2 18.1 18.1 18.1 18 18	7.76 7.77 7.80 7.80 7.80 7.80 7.80 7.80 7.80	100.1 101.1 101.6 101.1 101.0 100.7 100.7	0.89 0.97 0.94 1.05 1.04 1.12 1.13	33.36 33.25 33.25 33.21 33.21 33.21 33.25 33.25	8.11 8.09 8.22 8.22 8.22 8.22 8.22 8.22	7 3.1 2.5 2.2 2.5

 Remarks:
 MF - Middle Flood tide

 ME - Middle Ebb tide
 ME - Middle Ebb tide

 For SS, if the monitoring result is less than Limit of Report Img/L, the result value will be assumed as 1 for the calculation.

 *SS result of duplicate samples from CC1 Bottom and CC3 Bottom at Ebb tide were discarded due to abnormal high result obtained.

ampning Date	: 28-Jan-19)	1		W/-4	Correct!		1	DO				
Date / Time	Location	Tide*	Co-or	dinates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidity	Salinity	pН	ss
			East	North	m	m	°C 17.7	mg/L 9.35	% 119.9	NTU 1.17	ppt	unit 8.48	mg/L
						1.00	17.7	9.67	123.9	1.22	33.33 33.33	8.48	3 3.4
17:00	CC1	ME	843201	816416	9.58	4.79	17.6 17.5	8.92 8.86	114.1 113.2	1.19 1.14	33.34 33.35	8.47 8.47	5
						8.58	17.3 17.3	8.38 8.36	106.8 106.5	1.24	33.38 33.38	8.42 8.41	6.3 4.1
						1.00	17.5 17.5	8.94 9.08	114.2 116.0	1.65	33.33 33.35	8.44 8.45	6 4.5
17:07	CC2	ME	844076	817091	12.23	6.12	17.5	9.11	116.3	1.27	33.35	8.44	2.8
17.07	002		011070	017071	12.20		17.5 17.4	9.12 8.58	116.5 109.5	1.23 1.54	33.35 33.37	8.44 8.41	3.8 5.8
						11.23	17.4 17.8	8.57 9.80	109.4 125.9	1.55 1.42	33.37 33.29	8.41	5.1 4.2
						1.00	17.8	9.87	126.8	1.08	33.29	8.52	5.8
17:24	CC3	ME	844606	817941	9.77	4.89	17.6 17.6	9.39 9.39	120.3 120.3	1.27 1.29	33.36 33.35	8.48 8.47	6 4.4
						8.77	17.5	8.30 8.29	106.0 105.9	1.66 1.63	33.37 33.37	8.40 8.40	3.2
								0.25				0110	
16:37	CC4	ME	845444	815595	2.52	1.26	17.5	9.61	122.9	1.42	33.34	8.47	2.9
10.07			0.5111	010070	2.02	1.20	17.3	8.62	109.7	1.12	33.37	8.44	2.6
							17.6	9.22	118.0	1.43	33.33	8.47	6.1
						1.00	17.6	9.44	120.9	1.39	33.33	8.47	7.6
17:14	CC13	ME	844200	817495	8.91	4.46	17.6	9.45 9.45	120.9 120.9	1.54 1.54	33.34 33.34	8.47 8.47	6.7 6.7
						7.91	17.4 17.5	8.62 8.65	110.0 110.5	1.57	33.36	8.42	6 7.3
						1.00	17.5	9.68	123.6	1.39	33.35	8.58	5.6
16:35	SWI1	ME	845512	817442	2.37		17.5	9.67	123.5	1.42	33.35	8.52 8.52 8.47 8.40 8.40 8.40 8.41 8.42 8.47 8.42	4.5
10.55	5w11	NIE	843312	81/442	2.57		17.5	9.49	121.3	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6		
						1.37	17.5	9.57	122.3	1.48	33.35	$\begin{array}{c} 8.47\\ 8.47\\ 8.47\\ 8.47\\ 8.42\\ 8.58\\ 8.42\\ 8.58\\ 8.58\\ 8.47\\ 8.47\\ 8.47\\ 8.47\\ 8.47\\ 8.47\\ 8.47\\ 8.47\\ 8.48\\ 8.44\\ 8.44\\ 8.44\\ 8.44\\ 8.44\\ 8.44\\ 8.44\\ 8.44\\ 8.44\\ 8.42\\ 8.42\\ 8.42\\ 8.42\\ 8.42\\ 8.42\\ 8.40\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.46\\ 8.40\\ 8.41\\ 8.42\\$	6.4
						1.00	17.6 17.6	9.21 9.27	117.8 118.5				6 5
16:56	C3	ME	843821	816211	16.07	8.04	17.5 17.4	9.02 9.00	115.2 114.9	1.85			4.4 5.8
						15.07	17.3	8.35	106.2	1.94	33.38	8.41	5.2
							17.3	8.35 8.76	106.2				6 3.6
						1.00	17.3	8.81	112.2	1.30	33.39	8.44	4.7
16:46	C4	ME	844621	815770	16.22	8.11	17.2	8.43 8.42	107.1 107.0	1.14	33.41	8.42	6.1 5
						15.22	17.2	8.36 8.35	106.1				2.6
						1.00	17.7	9.31	119.4	0.94	33.26	8.50	4.6
17:20	11	ME	844602	817675	10.12	5.06	17.7	9.84 9.84	126.2 126.3				4.2
17.20	11	ME	844002	81/0/3	10.12		17.7 17.6	9.77 9.03	125.2 115.5				3.7
						9.12	17.6	8.96	114.6		33.34		1.6
							17.5	8.68	110.9	1 35	33.26	8.42	7.2
						1.00	17.5	8.71	111.3	1.15	33.28	8.42	6.3
13:24	CC1	MF	843201	816416	8.82	4.41	17.5	8.81 8.78	112.6				7.9
						7.82	17.4	8.68 8.67	110.8 110.6				6.8 5.5
						1.00	17.6	8.93	114.1	1.61	33.28	8.41	5.7
13:31	CC2	MF	844076	817091	12.03	6.02	17.6 17.5	8.99 8.61	114.9 109.9	1.53	33.34	8.41	5.6 5
15.51	002		044070	017071	12.05		17.4	8.59 8.38	109.6 106.9	1.51 1.66	33.35 33.36		6.7 5.3
						11.03	17.4 17.7	8.38 8.82	106.9 113.1	1.61 1.18	33.36 33.25	8.38	6.7 3.7
						1.00	17.7	8.94	114.6	1.20	33.25	8.43	2.9
13:48	CC3	MF	844606	817941	9.6	4.80	17.7	9.28 9.33	119.0 119.7	1.18	33.32 33.34		4.3
						8.60	17.5 17.5	8.32 8.29	106.4 106.0	1.84 1.64	33.38 33.38		5.5 5.8
							17.5	0.29	100.0	1.04	55.58	8.58	5.8
13:07	CC4	ME	845444	815595	2.62	1.21	17.4	9.02	115.0	0.91	33.35	8.41	2.4
13:07	CC4	MF	845444	815595	2.62	1.31	17.4	8.97	114.4	0.96	33.36		3.2
						1.00	17.5	8.52 8.59	108.8 109.7	2.03	33.33 33.33		5.4 5.7
13:38	CC13	MF	844200	817495	8.8	4.40	17.5 17.5	8.61 8.60	110.0 109.8	1.97 1.94	33.33 33.34	8.39	6.2 6.4
						7.80	17.5	8.57	109.4	1.74	33.35	8.39	6.4
							17.4	8.60 9.64	109.7 123.2	1.68	33.35 33.33		5.7 5.2
						1.00	17.5	9.64	123.1	1.17	33.32		5.6
12:56	SWI1	MF	845512	817442	4.83			1					
						3.83	17.5	9.52 9.51	121.6	1.24 1.28	33.33 33.33	8.41 8.41	4.7
						1.00	17.6	9.21 9.22	118.0 118.1	0.88	33.36 33.36	8.42	3.5
13:19	C3	MF	843821	816211	15.03	7.52	17.5	9.07	115.9	0.78	33.36	8.42	4.9
10.17			0.0021	010211	. 5.05		17.4 17.3	8.94 8.50	114.2 108.3	0.79 1.19	33.36 33.37	8.41 8.40	3.9 4.8
						14.03	17.3	8.49	108.1	1.21	33.37	8.39	3.6
						1.00	17.4 17.4	8.66 8.69	110.5 110.9	1.97 1.82	33.38 33.38	8.39	2.4 2.3
13:13	C4	MF	844621	815770	15.95	7.98	17.3 17.3	8.84 8.70	112.6 110.7	0.96	33.38 33.38	8.39 8.39	4.3
						14.95	17.2	8.46	107.5	1.15	33.40	8.38	2.8
						1.00	17.2 17.7	8.44 9.32	107.2 119.6	1.22 1.08	33.40 33.30	8.42	2.7
				or			17.7 17.5	9.39 8.74	120.4 111.8	1.13 1.47	33.30 33.36	8.47 8.41 8.42 8.42 8.42 8.42 8.42 8.41 8.41 8.41 8.41 8.41 8.43 8.43 8.43 8.43 8.43 8.43 8.43 8.43 8.43	8 6.7
13:43	11	MF	844602	817675	10.2	5.10	17.5	8.73	111.6	1.49	33.36	8.40	7.8
						9.20	17.4	8.31 8.29	106.1 105.8	1.96 2.00	33.37 33.37	8.38 8.38	6.5

> Remarks: MF - Middle Flood tide ME - Middle Ebb tide

	: 30-Jan-19	,				r							
Date / Time	Location	Tide*	Co-or	dinates	Water Depth	Sampling Depth	Temp	DO Conc	DO Saturation	Turbidit v	Salinity	рН	SS
			East	North	m	m	°C 17.4	mg/L 8.73	% 111.4	NTU 0.96	ppt 33.34	unit	mg/L 4
						1.00	17.4	8.81	112.3	1.20	33.34	8.46	3.9
9:26	CC1	ME	843201	816416	7.43	3.72	17.4 17.4	9.20 9.22	117.3 117.6	1.07 1.08	33.36 33.36	8.46	3.9 3.4
						6.43	17.4 17.4	9.24 9.27	117.8 118.3	1.12	33.36 33.36	8.46 8.47	3 2.3
						1.00	17.4 17.4	9.34 9.39	119.1 119.7	1.05	33.33 33.33	8.47 8.47	5.6 5
9:33	CC2	ME	844076	817091	11.37	5.69	17.4	9.43 9.43	120.3	0.95	33.37 33.37	unit	4.5 4.1
						10.37	17.4	8.77	111.8	2.06	33.40		3.7
						1.00	17.4 17.5	8.68 8.68	110.7 111.0	2.23	33.40 33.35		3.2 2.4
							17.6 17.4	8.71 8.82	111.4 112.6	1.15 1.58	33.35 33.36		2.5
9:50	CC3	ME	844606	817941	9.07	4.54	17.4	8.82	112.5	1.46	33.37	8.45	2.4
						8.07	17.3 17.3	8.39 8.33	106.8 106.2	1.85 1.82	33.39 33.40		1.9 2
9:09	CC4	ME	845444	815595	2.09	1.05	17.3 17.3	8.48 8.68	107.8	1.68 1.65	33.36 33.39		2.8 2.3
						1.00	17.5	9.27	118.4	1.24	33.34		3.8
9:39	CC13	ME	844200	817495	7.6	3.80	17.5 17.4	9.32 9.39	118.9 119.8	1.22 1.21	33.34 33.35	8.47	3.5 3.1
7.37	cens	ML	044200	017475	7.0	-	17.4 17.4	9.39 9.33	119.8 119.0	1.25	33.35 33.36		2.6
						6.60	17.4 17.3	9.32 8.72	118.9 110.9	1.34 1.30	33.36 33.32	8.47	2.9
						1.00	17.3	8.73	111.2	1.57	33.32	8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.44 8.44 8.45 8.45 8.45 8.45 8.44 8.45 8.45 8.45 8.45 8.44 8.45 8.45 8.45 8.47 8.47 8.47 8.47 8.47 8.46 8.46 8.46 8.46 8.46 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.46 8.47 8.47 8.47 8.46	3.6
9:03	SWI1	ME	845512	817442	3.21				-				
						2.21	17.3	8.87 8.89	112.8 113.0	1.09	33.37 33.37		3.5 3.7
						1.00	17.3 17.3	8.64 8.73	110.0	1.46 1.82	33.30 33.30	8.46 8.46 8.46 8.46 8.46 8.47 8.47 8.47 8.47 8.47 8.47 8.44 8.45 8.44 8.45 8.44 8.45 8.44 8.45 8.45 8.46 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.46 8.46 8.46 8.46 8.45 8.45 8.45 8.45 8.46 8.47 8.47 8.47	5.2 5.6
9:20	C3	ME	843821	816211	15.38	7.69	17.4	8.86	112.9	0.79	33.36	8.44	4.4
						14.38	17.4 17.3	8.84 8.64	112.7 110.0	0.80	33.36	3.36 8.47 3.36 8.47 3.32 8.45 3.33 8.45 3.33 8.45 3.37 8.46 3.37 8.46 3.37 8.46 3.30 8.46 3.30 8.46 3.30 8.46 3.30 8.46 3.30 8.46 3.30 8.46 3.30 8.46 3.30 8.44 3.36 8.44 3.37 8.45 3.37 8.45 3.37 8.45 3.37 8.45 3.37 8.45 3.37 8.45 3.34 8.44 3.35 8.47 3.36 8.45 3.37 8.45 3.33 8.45 3.34 8.47 3.35 8.47 3.35 8.47 3.35 8.47 3.35 <td>3.6</td>	3.6
							17.3 17.3	8.64 8.98	109.9 114.4	0.93 0.78	33.40 33.37	33.40 8.44 33.37 8.45 33.37 8.45 33.37 8.45 33.37 8.45 33.37 8.45 33.41 8.45 33.23 8.45 33.23 8.45 33.24 8.45 33.25 8.46 33.36 8.45 33.36 8.45	2.2 3.3
						1.00	17.3 17.3	9.02 8.99	114.9 114.5	0.77 0.72	33.37	8.45	3.7 2.5
9:13	C4	ME	844621	815770	16.75	8.38	17.3	8.99	114.5	0.72	33.37	8.45	1.9
	11					15.75	17.2 17.2	8.83 8.83	112.3 112.2	1.20			3.7 3.9
						1.00	17.5 17.5	9.06 9.12	115.8 116.6	2.00 2.03			4.2
9:45	11	ME	844602	817675	9.67	4.84	17.4 17.4	9.01 9.04	114.9 115.2	1.26 1.25			3.7 4.4
						8.67	17.3	8.86	112.9	1.37	33.38	8.44	3.2
							17.3	8.85	112.8	1.37	33.38	8.45	3.6
						1.00	17.5 17.5	8.86	113.1 115.0	0.94	33.34		2.6
12:46	CC1	MF	843201	816416	10.13	5.07	17.5	9.31	118.9	1.29	33.34	8.48	4.8
						9.13	17.5 17.5	9.41 9.36	120.2 119.5	1.24 1.26	33.35 33.35		5.5 5.2
							17.5 17.4	9.35 8.77	119.3 111.8	1.24	33.35 33.34		4.5 4.3
						1.00	17.4 17.4	8.9 9.36	113.6 119.4	1.30 1.40	33.35	8.47	3.8 3.7
12:55	CC2	MF	844076	817091	12.03	6.02	17.4	9.34	119.2	1.41	33.37	8.47 8.47 8.44 8.44 8.44 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.46 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.46 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.47 8.48 8.47 8.48 8.47 8.48 8.47	3.8
						11.03	17.3 17.3	8.59 8.57	109.4 109.1	1.53	33.39		5.3 4.7
						1.00	17.7 17.7	9.52 9.56	122.0	1.64	33.23 33.25		4.4 3.7
13:12	CC3	MF	844606	817941	9.16	4.58	17.5 17.4	9.18 9.18	117.2 117.1	1.42	33.35 33.35		5 4.5
						8.16	17.4	9.10	116.1	1.40	33.36	8.45	4.1
							17.4	8.96	114.2	1.48	33.37	8.45	4
12:30	CC4	MF	845444	815595	3.5	1.75	17.4	9.46	120.7	1.02	33.38	8.49	4.6
12.30	CC4	1411,	04,0444	013393	2.2	1.13	17.4	9.41	119.9	1.20	33.37		4
							17.5	9.15	116.8	1.80	33.33	8.45	3.7
						1.00	17.5	9.17	117.1	1.79	33.33	8.45	3.8
13:01	CC13	MF	844200	817495	8.08	4.04	17.5 17.5	9.20 9.19	117.4 117.4	1.83 1.88	33.35 33.35		3.7
						7.08	17.4 17.4	9.11 9.10	116.2 116.1	2.17 2.22	33.36 33.36	8.47 8.44 8.44 8.45 8.44 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.44 8.45 8.45 8.47 8.47 8.47 8.47 8.47 8.47 8.47 8.45 8.45 8.46 8.46 8.44 8.44 8.44 8.44 8.45 8.45 8.46 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.45 8.46 8.45 8.47 8.47 8.48 8.47 8.46 8.45 8.47 8.46 8.48 8.47 8.46 8.45 8.46 <td>5.5 5.2</td>	5.5 5.2
						1.00	17.5	9.95	127.1	0.92	33.33	8.61	4.4
12:23	SWI1	MF	845512	817442	4.23		17.5	10.01	127.8	0.91	33.33	0.01	4.2
	5		- 10012			3.23	17.3	10.09	128.5	0.96	33.33		5.4
						-	17.3 17.6	10.10 9.85	128.6 125.9	0.94	33.33 33.31	8.52	5.5 6.3
						1.00	17.6	9.87 9.32	126.2	1.99	33.30 33.32	8.42	6.4 2.4
12:41	C3	MF	843821	816211	15.67	7.84	17.4	9.31	118.8	1.25	33.32	8.41	2.4
						14.67	17.3 17.3	8.58 8.56	109.2 108.9	1.45 1.42	33.40 33.40		2.9 2.5
						1.00	17.3 17.6	9.70 9.74	123.6 124.6	0.92 0.93	33.56 33.35	8.49	4.9
12:34	C4	MF	844621	815770	16.53	8.27	17.4	9.15	116.6	0.79	33.35	8.47	5.4
						15.53	17.4 17.2	9.09 8.76	115.9 111.3	0.75 1.69	33.35 33.39	8.43	5.5 7.5
							17.2 17.7	8.74 8.73	111.0 111.9	1.95 1.67	33.40 33.21	8.44 8.46	7.4
						1.00	17.7 17.6	8.88 9.44	113.8 120.8	1.67 1.61	33.21 33.27	8.46 8.47	4
13:07	11	MF	844602	817675	10.08	5.04	17.6	9.44	120.8	1.61	33.29	8.47	4.5
	1					9.08	17.4 17.4	9.00 8.98	114.8 114.5	1.37	33.36 33.36	8.46 8.46	2.8

> Remarks: MF - Middle Flood tide ME - Middle Ebb tide



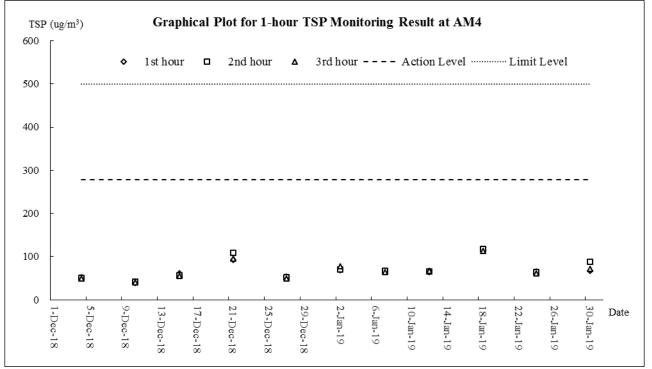
Appendix I

Graphical Plots of Monitoring Results

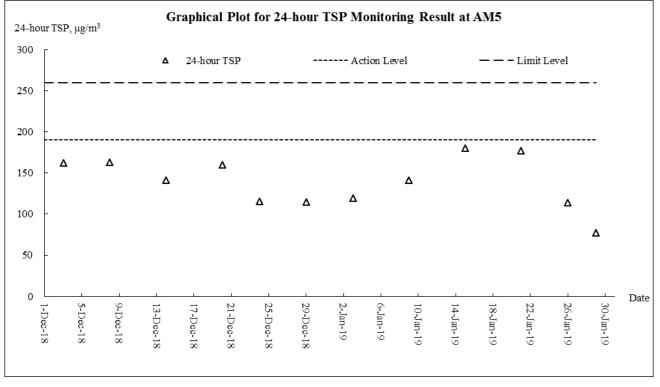
CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Monthly Environmental Monitoring & Audit Report – January 2019



Air Quality – 1 Hour TSP



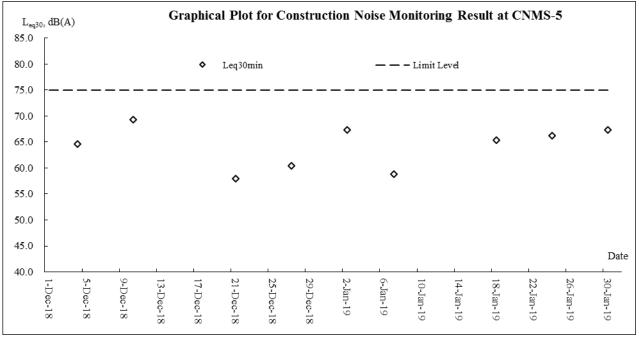
Air Quality - 24-Hour TSP



CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Monthly Environmental Monitoring & Audit Report – January 2019

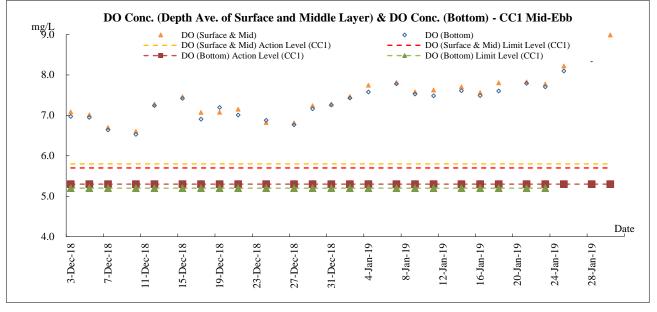


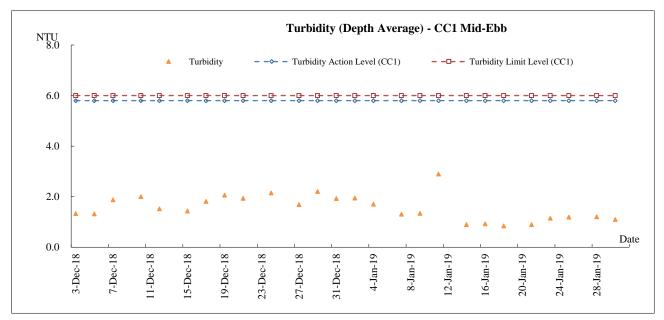
Construction Noise

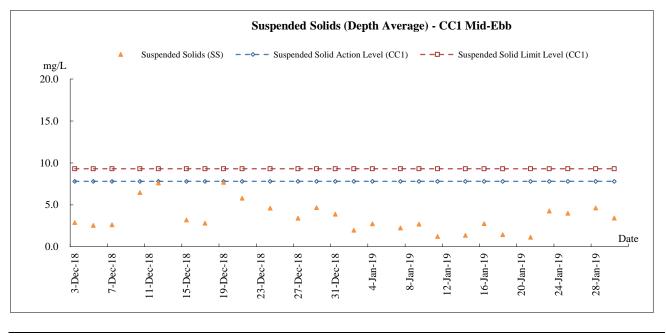




Marine Water Quality – CC1 Mid-ebb

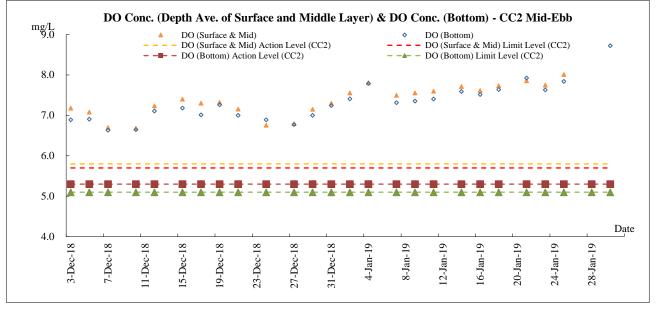


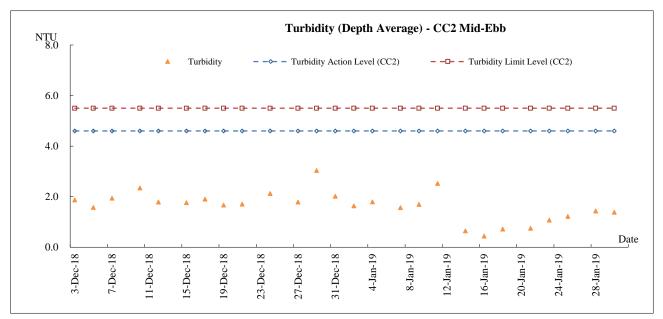


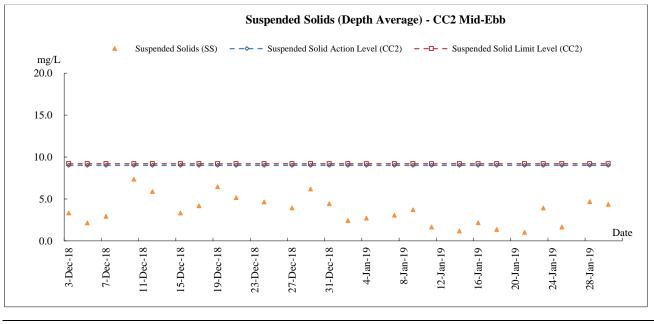




Marine Water Quality – CC2 Mid-ebb

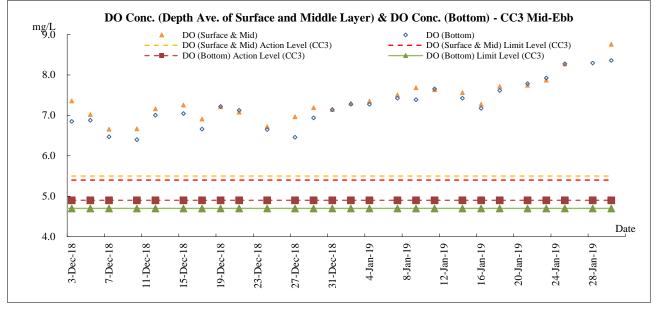


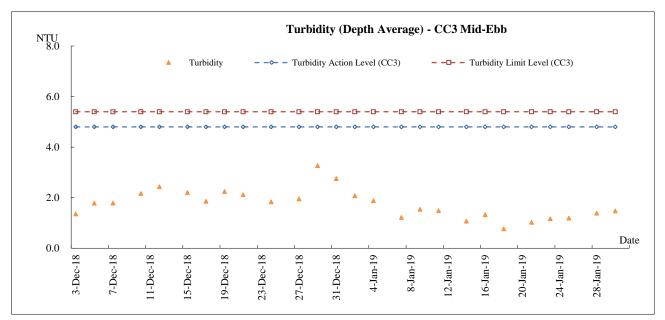


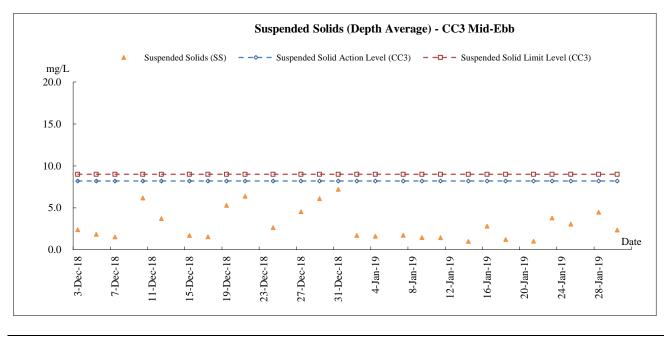




Marine Water Quality – CC3 Mid-ebb

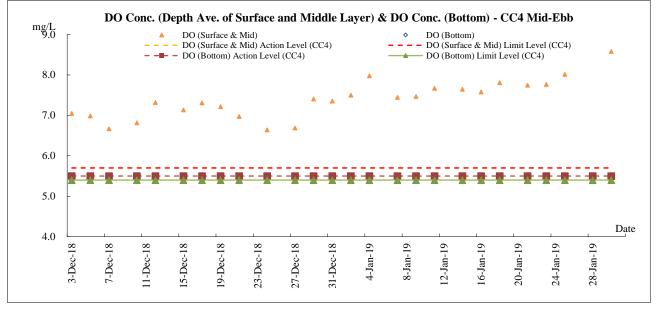


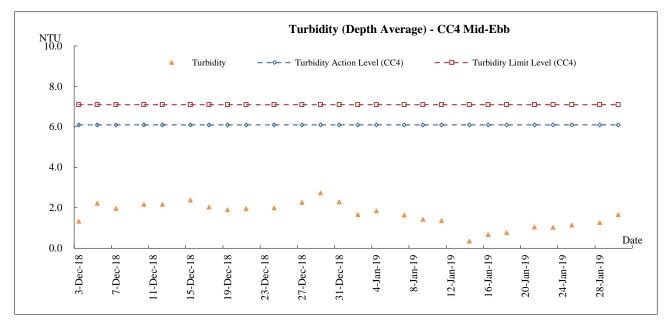


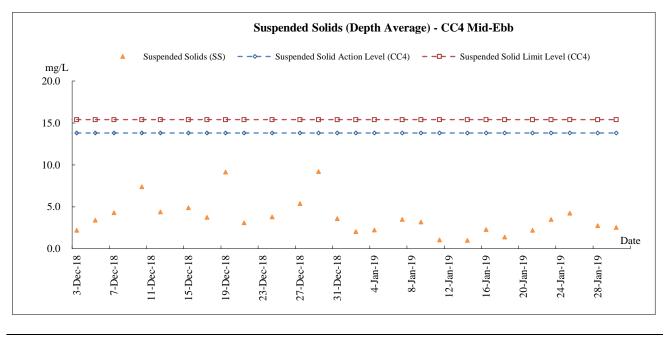




Marine Water Quality – CC4 Mid-ebb

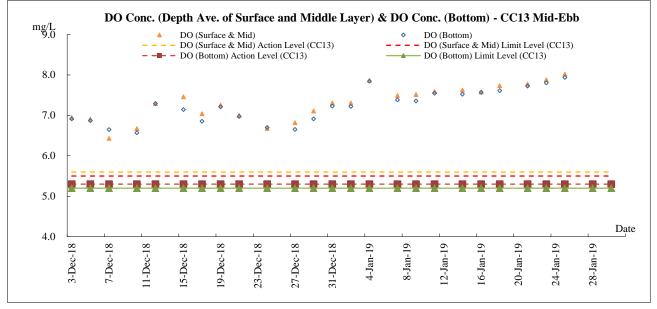


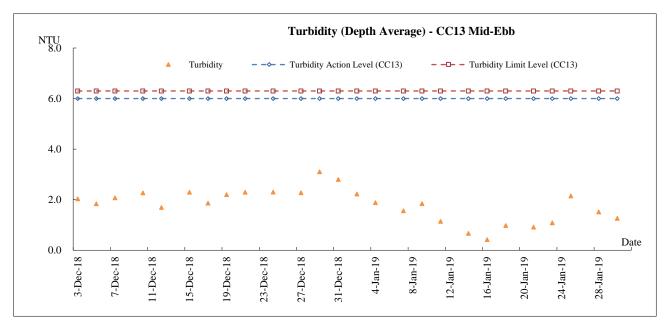


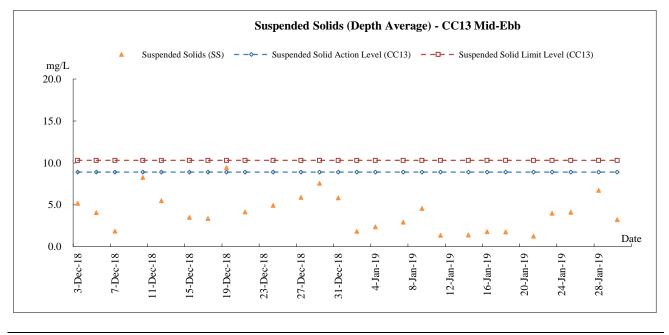




Marine Water Quality – CC13 Mid-ebb

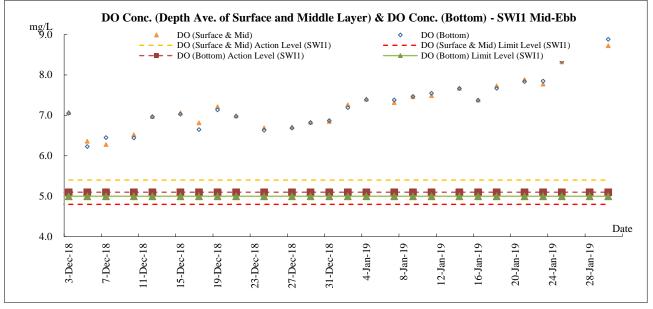


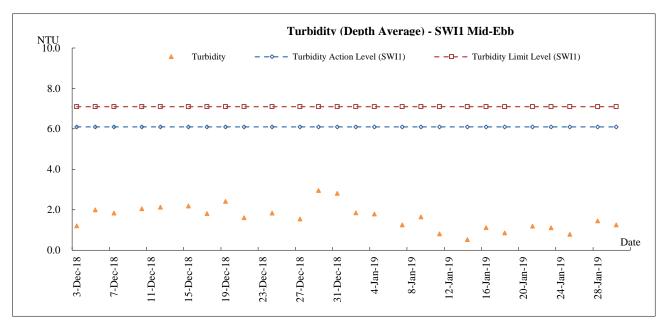


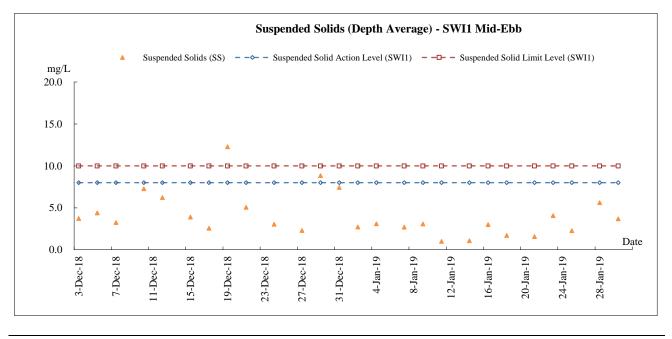




Marine Water Quality – SWI1 Mid-ebb

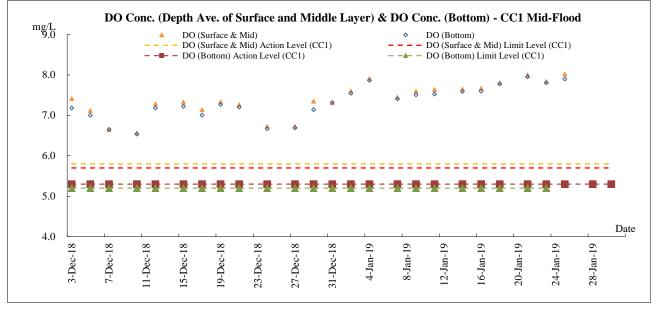


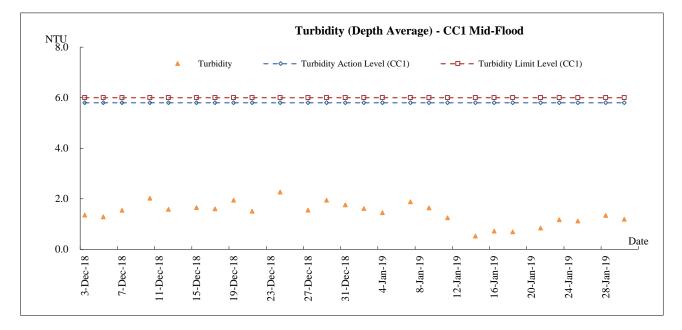


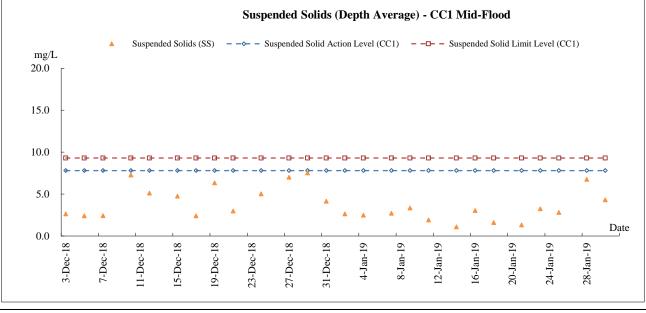




Marine Water Quality – CC1 Mid-Flood

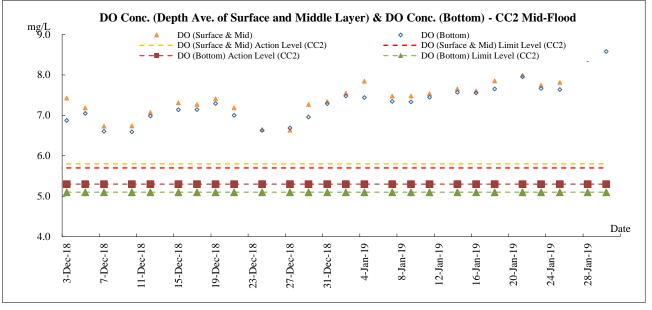


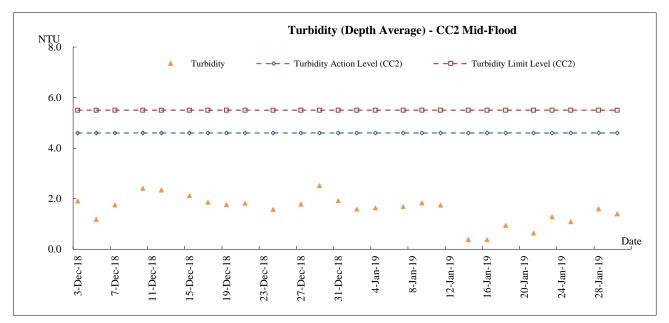


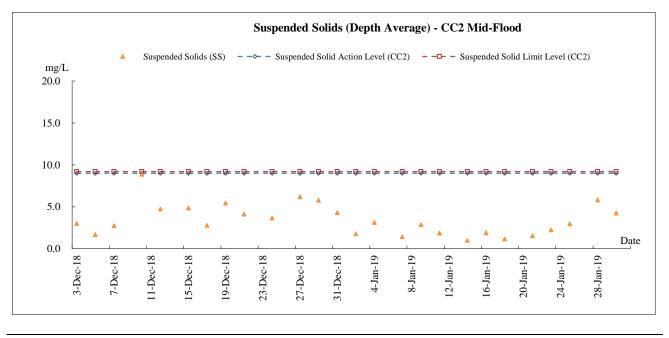




Marine Water Quality – CC2 Mid-Flood

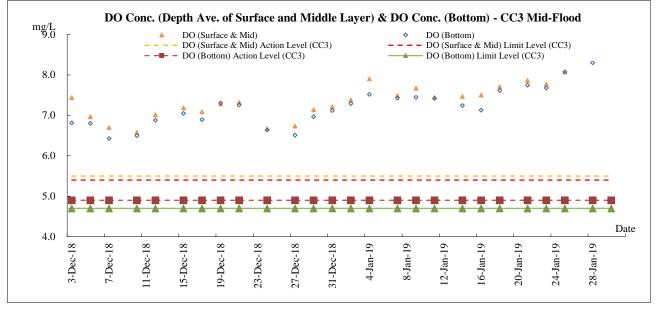


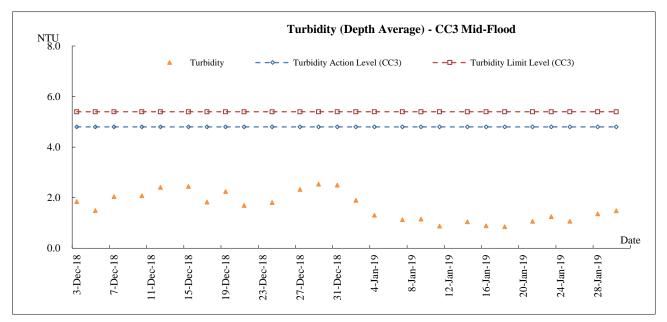


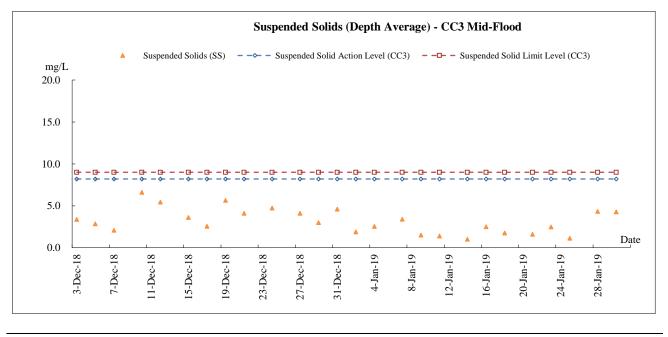




Marine Water Quality – CC3 Mid-Flood

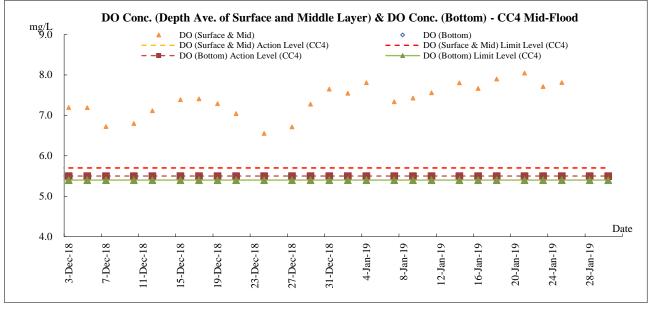


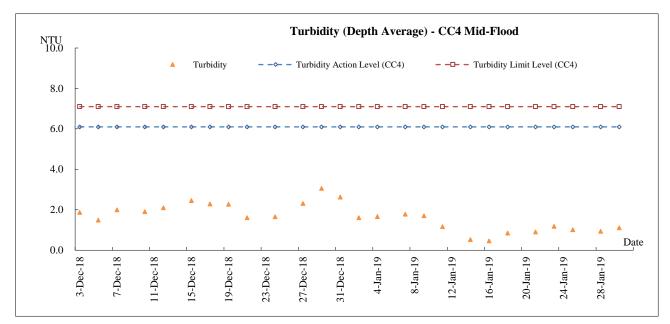


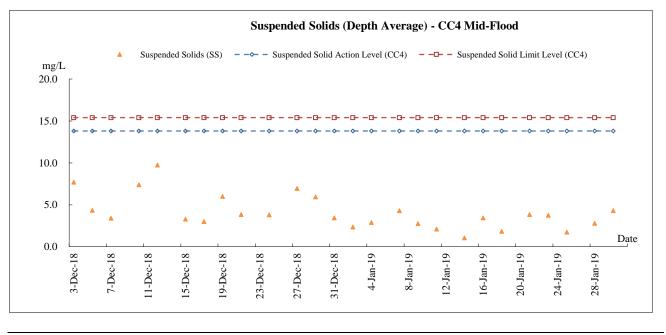




Marine Water Quality – CC4 Mid-Flood

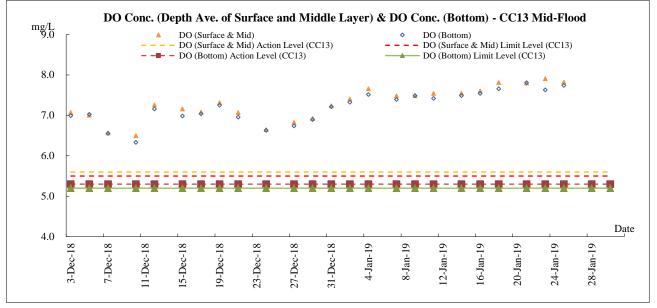


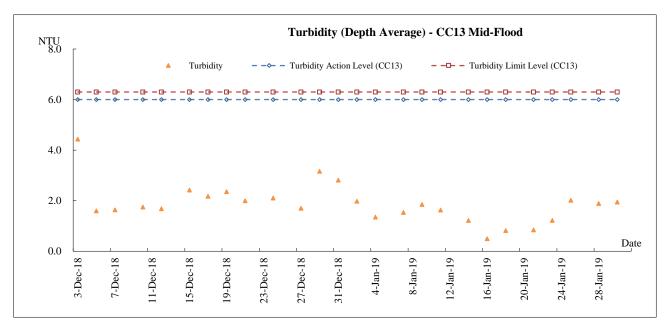


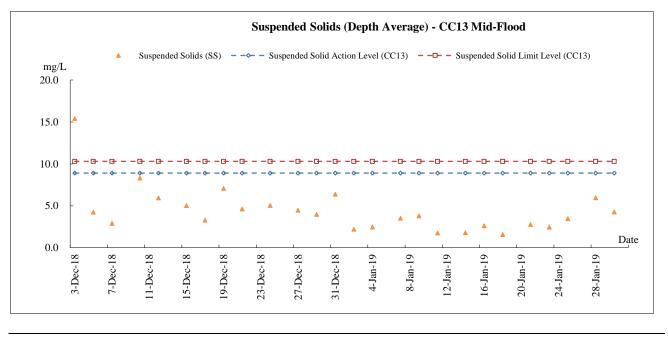




Marine Water Quality – CC13 Mid-Flood

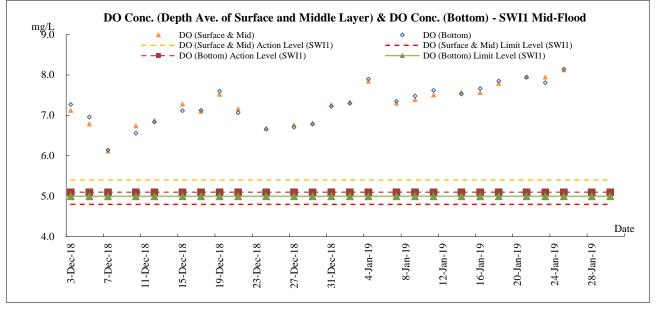


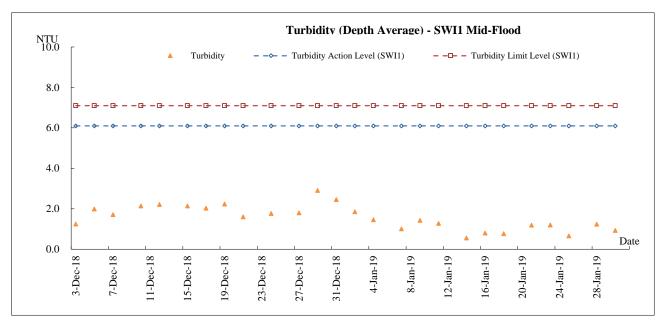


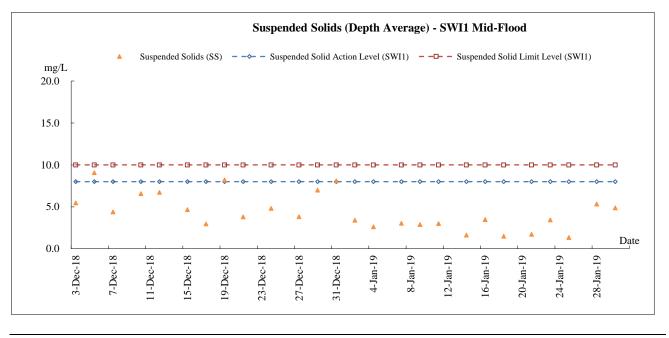




Marine Water Quality – SWI1 Mid-Flood









Appendix J

Meteorological Data

CEDD Contract Agreement No. EDO/04/2018 -Environmental Team for Cross Bay Link, Tseung Kwan O Monthly Environmental Monitoring & Audit Report – January 2019



				T	seung Kv	wan O Sta	tion
Date		Weather	Total Rainfall (mm)	Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidit y (%)	Wind Direction (degree)
1-Jan-19	Tue	Mainly cloudy. Visibility relatively low in some areas.	Trace	14	6.6	66.7	E/NE
2-Jan-19	Wed	Sunny periods in the afternoon.	Trace	14.7	6.1	67.2	E/NE
3-Jan-19	Thu	Moderate to fresh east to northeasterly winds.	0.1	15	5.6	84	N/NE
4-Jan-19	Fri	Mainly cloudy. Moderate to fresh east to northeasterly winds.	0.1	18.7	6.5	82	N/NE
5-Jan-19	Sat	Moderate easterly winds, fresh offshore.	0	21.1	4.5	86	E/NE
6-Jan-19	Sun	Mainly cloudy. Sunny intervals and relatively low visibility in some areas	Trace	18	6.6	83	E/NE
7-Jan-19	Mon	Sunny intervals. Moderate easterly winds, fresh offshore.	0	18.1	5.6	82.5	E/NE
8-Jan-19	Tue	Mainly cloudy. Moderate to fresh easterly winds,	0.2	18.3	4.5	83.7	E/NE
9-Jan-19	Wed	Mainly cloudy. Moderate easterly winds.	0	16.9	6.6	88	E/NE
10-Jan-19	Thu	Mainly cloudy.Moderate to fresh easterly winds.	0	18.4	6.6	82.5	E/NE
11-Jan-19	Fri	Mist patches at first. Sunny intervals in the afternoon.	0	20.1	5.6	82.5	N/NE
12-Jan-19	Sat	One or two light rain patches in the morning and at night.	Trace	21.8	6.6	80	W/NW
13-Jan-19	Sun	Visibility rather low in some areas at first.	Trace	17.4	6.9	94	E/NE
14-Jan-19	Mon	Mainly cloudy with a few light rain patches.	Trace	17.7	5.4	89.7	E/NE
15-Jan-19	Tue	Becoming cool tonight. Moderate northerly winds.	4	19.3	5.6	85.5	E/NE
16-Jan-19	Wed	Mainly cloudy. One or two light rain patches later.	0	17.6	7.4	69.2	E/NE
17-Jan-19	Thu	Mainly cloudy with a few light rain patches.	0	17.2	7.5	66.5	E/NE
18-Jan-19	Fri	There will be sunny periods. Moderate to fresh easterly winds.	0	16.2	7.4	75.5	E/NE
19-Jan-19	Sat	Fine and dry. Rather cool tomorrow morning.	0.2	18.9	7.5	69	NE
20-Jan-19	Sun	Mainly cloudy with a few light rain patches.	0.1	20.3	6.5	67	N/NE
21-Jan-19	Mon	Moderate north to northeasterly winds.Mainly fine and dry	4.7	17.3	7.8	64.7	E/NE
22-Jan-19	Tue	Fine and dry. Rather cool tomorrow morning.	0	15.5	8.3	56.2	E/NE
23-Jan-19	Wed	Fine and dry. Moderate easterly winds	0	14.3	15	38.9	N/NE
24-Jan-19	Thu	Fine and dry. Moderate easterly winds, occasionally fresh offshore.	0	15.7	7.1	70	E/SE
25-Jan-19	Fri	Fine and dry. Light winds,	0	17.7	6.6	67.7	E/NE
26-Jan-19	Sat	Cloudy periods overnight. Mainly fine tomorrow.	0	17.4	6.5	65	E/NE
27-Jan-19	Sun	Fine and dry. Moderate easterly winds	4.7	16.7	7.1	68	E/NE
28-Jan-19	Mon	Sunny intervals in the afternoon. Moderate easterly winds.	0	16.8	9.4	62.2	N/NE
29-Jan-19	Tue	Moderate easterly winds, occasionally fresh offshore at first.	0	17	9	73.2	NE
30-Jan-19	Wed	Mainly cloudy with sunny intervals.	0	18.5	7.4	71	N/NE
31-Jan-19	Thu	Warm with sunny periods. Visibility relatively low. Light winds,	0	21.7	6.1	77.5	Ν



Appendix K

Waste Flow Table



Contract 1

Monthly Summary Waste Flow Table for 2018 (year)

Name of Person completing the record: Kanny Cho (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

~			es of Inert C&I		enerated Month	nly	Actua	al Quantities of	of C&D Waste	es Generated N	Ionthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	$(in '000 m^3)$
Jan											
Feb											
Mar											
Apr											
May											
Jun											
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.837
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.305
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.000	0.000	0.008
Nov	0.000	0.000	0.000	0.000	0.000	0.320	0.000	0.000	0.000	0.000	0.009
Dec	0.000	0.000	0.000	0.000	0.276	0.000	0.000	0.000	0.000	0.000	0.004
Total	0.000	0.000	0.000	0.000	0.276	0.320	0.000	0.065	0.000	0.000	1.163
Note:											

Contract No.: NE/2017/07

For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg. 1.

For inert portion of C&D material, assume 6 m³ per each full-filled dump truck. 2.

3. All values are round off to the third decimal places.

Monthly Summary Waste Flow Table for <u>2019</u> (year)

Name of Person completing the record: Calvin So (EO)

Project : Cross Bay Link, TKO, Main Bridge and Associated Works

Contract No.: NE/2017/07

5	<u> </u>	ctual Quantitie	0		enerated Month	nly	Actua	al Quantities of	of C&D Waste	s Generated N	Ionthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	$(in '000m^3)$	$(in '000m^3)$	$(in '000m^3)$	$(in '000m^3)$	(in '000m ³)	$(in '000m^3)$	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	$(in '000 m^3)$
Jan	0.945	0.000	0.000	0.000	0.845	0.000	0.000	0.023	0.000	0.000	0.077
Feb											
Mar											
Apr											
May											
Jun											
Sub-total	0.945	0.000	0.000	0.000	0.845	0.000	0.000	0.023	0.000	0.000	0.077
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.945	0.000	0.000	0.000	0.845	0.000	0.000	0.023	0.000	0.000	0.077
Note:							9				

For non-inert portion of C&D material, assume the density of 1 m³ general refuse is equal to 200 kg.
 For inert portion of C&D material, assume 6 m³ per each full-filled dump truck.



Contract 2

Monthly Summary Waste Flow Table for 2019 Year

		Actual Quan	tities of Inert C&I) Materials Genera	ted Monthly			Actual Quantities	of C&D Wastes G	enerated Monthly	
Month	Total Quantity Generated	Hard Rock and Large Borken Concrete	Reused in the Contract	Reused in other Projects	Disposal as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (See note 3)	Chemical Waste	Other, e.g. general refuse
	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000m ³]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000kg]	[in '000m ³]
Jan	0.358	0.000	0.358	0.000	0.000	0.000	0.000	0.000	0.000	0.000	356.700
Feb											
Mar											
Apr											
May											
June											
SUB- TOTAL	0.358	0.000	0.358	0.000	0.000	0.000	0.000	0.000	0.000	0.000	356.700
Jul											
Aug											
Sep											
Oct											
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.358	0.000	0.358	0.000	0.000	0.000	0.000	0.000	0.000	0.000	356.700

Note: Conversion to 1000m³ for general refuse is weight in 1000kg multiply by 0.002 Conversion to 1000m³ for Inert C&D is weight in 1000kg multiply by 0.0005 Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material

Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material

Assume the loaded volume of a dump truck for internal inert waste transfer is 17.9 m³



Appendix L

Implementation Schedule for Environmental Mitigation Measures

		Objectives of the		Impler	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
Dust Impa	ct (Contraction Phase)					
\$5.5.5.1	Regular watering under good site practice shall be adopted. In accordance with the "Control of Open Fugitive Dust Sources" (USEPA AP-42), watering once per hour on exposed worksites and haul road is recommended to achieve dust removal efficiency of 91.7%.	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	All construction sites	Contractor	Construction stage	 APCO (Cap. 311); and Air Pollution Control (Construction Dust) Regulation
S5.5.3	 The following dust suppression measures shall also be incorporated by the Contractor to control the dust nuisance throughout the construction phase: Any excavated or stockpiled dusty material shall be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads; A stockpile of dusty material shall not extend beyond the pedestrian barriers, fencing or traffic cones; The load of dusty materials on a vehicle leaving a construction site shall be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high pressure water jet shall be provided at every discernible or designated vehicle exit point. The area where vehicle washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcores; When there are open excavation and reinstatement works, hoarding of not less than 2.4m high shall be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction site that is within 30m of a vehicle entrance or exit shall be kept clear 	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	All construction sites	Contractor	Construction stage	 APCO (Cap. 311); and Air Pollution Control (Construction Dust) Regulation

		Objectives of the		Impler	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 of dusty materials; Surfaces where any pneumatic or power driven drilling, cutting, polishing or other mechanical breaking operation takes place shall be sprayed with water or a dust suppression chemical continuously; Any area that involves demolition activities shall be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting shall be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport shall be totally enclosed by impervious sheeting; Exposed earth shall be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. 					
\$5.5.5.4	 For the barging facilities at the site compound, the following good site practice is required: All road surfaces within the barging facilities shall be paved. Vehicles should pass through designated wheel wash facilities. Continuous water spray shall be installed at the loading point. 	Good construction site practices to control the dust impact on the nearby sensitive receivers to within the relevant criteria	Site compound	Contractor	Construction stage	 APCO (Cap. 311); and Air Pollution Control (Construction Dust) Regulation
S5.5.5.5	An audit and monitoring programme during the construction phase should be implemented by the Contractor to ensure that the construction dust impacts are controlled to within the HKAQO. Detailed requirements for the audit and monitoring programmes are given separately in the EM&A manual.	Monitor the 1-Hour and 24-Hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period	Selected representative dust monitoring station (Drawing no. 209506/EMA/ AIR/001)	Contractor	Construction stage	 APCO (Cap. 311); and Air Pollution Control (Construction Dust) Regulation

		Objectives of the		Impler	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
S6.6.4.3	 Good site practice and noise management techniques: Only well-maintained plant shall be operated on-site and the plant shall be serviced regularly during the construction programme; Machines and plant (such as trucks, cranes) that are in intermittent use shall be shut down between work periods or throttled down to a minimum; Plant known to emit noise strongly in one direction, where possible, shall be orientated so that the noise is directed away from nearby NSRs; Silencers or mufflers on construction equipment shall be properly fitted and maintained during the construction works; Mobile plant shall be sited as far away from NSRs as possible and practicable; and Material stockpiles, site office and other structures shall be effectively utilised, where practicable, to screen noise from on-site construction activities. 	To minimize construction noise impact arising from the Project on the affected NSRs	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.5-6	Use of quiet powered mechanical equipment and working methods	Reduce noise levels of plant items	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.7	Install site hoarding at the site boundaries between noisy construction activities and NSRs	Reduce the construction noise levels at low-level zone of NSRs through partial screening	All construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
S6.6.4.8-11	Use of temporary or movable noise barriers and full enclosure for relatively fixed plant source	Screen the noisy plant items to be used at all construction sites	For plant items listed in Table 6.7 and Appendix 6.1 of the EIA report at all construction sites	Contractor	Construction stage	• Annex 5, TM-EIAO
	Implement a noise monitoring programme under the EM&A manual	Monitor the construction noise levels at the selected representative locations	Selected representative noise monitoring stations (Drawing no. 209506/EMA/NS/001 & 209506/EMA/NS/002)	Contractor	Construction stage	• Annex 5, TM-EIAO
\$6.7.3.1	Partial enclosures along Road D9 and application of low noise surfacing material along CBL and Road D9	To minimize road traffic noise impact arising from the CBL and Road D9 on the affected NSRs	CBL and Road D9 (Drawing no. 209506/EMA/NS/003)	CEDD/ Contractor	During operational stage	• Annex 5, TM-EIAO



		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
Water Qua	ality Impact (Contraction Phase)	·	•			
\$8.6.4.3	 Marine Piling and Pile Excavation Works Marine piling and pile excavation works shall be undertaken in such a manner as to minimize re-suspension of sediments. Standard good practice measures shall be implemented, including the following requirements: All marine piling and pile excavation works shall be conducted within a floating single silt curtain. Mechanical closed grabs (with a size of5m3) shall be designed and maintained to avoid spillage and should seal tightly while being lifted. Barges shall have tight fitting seals to their bottom openings to prevent leakage of material. Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes. Loading of barges shall be controlled to prevent splashing of dredged material to the surrounding water. Barges shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation. Excess material shall be cleaned from the decks and exposed fittings of barges before the vessel is moved. Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action. All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash. The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site. 	To control potential impacts from marine piling and pile excavation works	During marine piling and pile excavation works	Contractor	Construction stage	TM-EIAO; and WPCO
\$8.6.4.4	 Construction Site Runoff In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures, where appropriate, shall include the following: The design of efficient silt removal facilities shall be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The 	Control potential water quality impacts from construction site run-off	All construction sites	Contractor	Construction stage	TM-EIAO; andWPCO

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 detailed design of the sand/silt traps shall be undertaken by the contractor prior to the commencement of construction; Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 shall be covered with tarpaulin or similar fabric during rainstorms. Measures shall be taken to prevent the washing away of construction materials, soil, silt or debris into any marine water bodies; All vehicles and plant shall be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities shall be provided at every construction site exit where practicable. Wash-water shall have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road shall be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains; Construction solid waste, debris and rubbish on site shall be collected, handled and disposed of properly to avoid water quality impacts; All fuel tanks and storage areas shall be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby; and Regular environmental audit on the construction site shall be carried out in order to prevent any malpractices. Notices shall be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds. 					
S8.6.4.6	 Sewage from workforce Portable chemical toilets and sewage holding tanks shall be provided for handling the construction sewage generated by the workforce; A licensed contractor shall be employed to provide 	Control potential water quality impacts from sewage	All construction sites	Contractor	Construction stage	TM-EIAO; andWPCO

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.					
	Monitoring Implement a marine water quality monitoring programme under the EM&A on level of suspended solids (SS) / turbidity and dissolved oxygen (DO) shall be carried out.	Control potential water quality impacts from marine piling and pile excavation works	Selected monitoring stations (Drawing no. 209506/EMA/WQ/001)	Contractor	Construction station	TM-EIAO; andWPCO
\$8.7.3.2	Operational phase – Runoff from road surface Proper drainage systems with silt traps and oil interceptors shall be installed, maintained and cleaned at regular intervals.	Control potential water quality impacts from road surface runoff	CBL and Road D9	Contractor	Construction and operational stage	TM-EIAO; andWPCO
Waste Mar	nagement (Contraction Phase)					
\$9.5.2	 <u>Good Site Practices</u> Recommendations for good site practices: Nomination of an approved personnel to be responsible for the implementation of good site practices, arrangements for collection and effective deposal to an appropriate facility of all wastes generated at the site; Training of site personnel in proper waste management and chemical handling procedures; Provision of sufficient waste disposal points and regular collection for disposal; Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre; Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and Implementation of a recording system for the amount of wastes generated/recycled and disposal sites. 	Good site practices which ensure waste generated during construction phase is properly managed	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
\$9.5.4	 Waste Reduction Measures Recommendations for achieving waste reduction include: On-site reuse of any material excavated as far as practicable; Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of material and their proper disposal; Collection of aluminum cans and waste paper by individual collectors during construction should be encouraged. Separately labelled recycling bins should also be provided to segregate these wastes from other general refuse by the workforce; Recycling of any unused chemicals and those with remaining functional capacity as far as possible; Prevention of the potential damage or contamination to the construction materials though proper storage and good site practices; Planning and stocking of construction materials should be made carefully to minimize amount of waste generated avoid unnecessary generation of waste; and Training on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling should be provided to workers. 	To reduce amount of waste generated during construction phase	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005
\$9.5.5-6	 Storage, Collection and Transportation of Waste Recommendations for proper storage include: Waste such as soil should be handled and stored well to ensure secure containment; Stockpiling area should be provided with covers and water spraying system to prevent materials from being washed away and to reduce wind-blown litter; and Different locations should be designated to stockpile each material to enhance reuse. With respect to the collection and transportation of waste from the construction works, the following is recommended: Remove waste in a timely manner; Employ trucks with cover or enclosed containers for waste transportations; Obtain relevant waste disposal permits from the appropriate 	To reduce the environmental implications of improper storage	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005

		Objectives of the		Implen	nentation	Requirements	
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved	
	authorities; andDisposal of waste should be done at licensed waste disposal facilities.					Je Hemeved	
89.5.8-11	 <u>C&D Materials</u> The following mitigation measures shall be implemented in handling the waste: Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; Carry out on-site sorting; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; Disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation; Standard formwork or pre-fabrication order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage; and The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites 	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	All construction sites	Contractor	Construction stage	 Waste Disposal Ordinance (Cap. 54); ETWB TCW No. 19/2005 ETWB TCW No. 06/2010 	
\$9.5.13	 should be considered for such segregation and storage. Excavated Marine Sediments During transportation and disposal of the excavated marine sediments, the following measures shall be taken to minimize potential environmental impacts: Bottom opening of barges should be fitted with tight fitting 	To minimize potential impacts on water quality	All construction sites where applicable	Contractor	Construction stage	• ETWBTC (Works) No. 34/2002	

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures &	Location/ Timing	Agent	Stage	and/or Standards to
		Main Concerns to Address		ingent	Stuge	be Achieved
	seals to prevent leakage of material. Excess material should be cleaned from the decks and exposed fittings of barges and					
	hopper dredgers before the vessel is moved;					
	• Monitoring of the barge loading should be conducted to ensure that loss of material does not take place during transportation;					
	• Transport barges or vessels should be equipped with automatic self-monitoring devices as specified by the DEP; and					
	• Barges should not be filled to a level that would cause the overflow of materials or sediment-laden water during loading or transportation.					
S9.5.14-17		To ensure proper	All construction sites	Contractor	Construction	• Waste Disposal
	Contractor shall identify any alternatives that generate reduced	management of chemical			stage	(Chemical Waste)
	quantities or even no chemical waste, or less dangerous types of chemical waste.	waste				(General) Regulation;
	If chemical waste is produced at the construction site, the Contractor is required to register with EPD as chemical waste producers. Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. Containers used for storage of chemical wastes shall:					• Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
	• Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;					
	• Have a capacity of less than 450 L unless the specification have been approved by EPD; and					
	• Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.					
	The storage area for chemical wastes shall:					
	• Be clearly labelled and used solely for the storage of chemical wastes;					
	• Be enclosed on at least 3 sides;					
	• Have an impermeable floor and bunding of capacity to					
	accommodate 110% of the volume of the largest container or					
	20% by volume of the chemical waste stored in the area,					
	whichever is greatest;					

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 Have adequate ventilation; Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste, if necessary); and Be arranged so that incompatible materials are adequately separated. Disposal of chemical waste shall: Be via a licensed waste collector; and Be to a facility licensed to receive chemical waste, such as the CWTC which also offers a chemical waste collection service and can supply the necessary storage containers; or Be to a re-user of the waste, under approval from EPD. 	Main Concerns to Address				
\$9.5.18	Sewage An adequate number of portable toilets shall be provided for the on-site construction workers. Any waste shall be transferred to a sewage treatment works by a licensed collector.	Proper handling of sewage from worker to avoid odour, pest and litter impacts	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54)
\$9.5.19	General Refuse General refuse generated on-site shall be stored in enclosed bins or compaction units separately from construction and chemical wastes. Recycling bins shall also be provided to encourage recycling. A reputable waste collector shall be employed by the Contractor to remove general refuse from the site on a daily basis separately from the construction and chemical wastes. Burning of refuse on construction sites is prohibited by law.	Minimize production of general refuse and avoid odour, pest and litter impacts	All construction sites	Contractor	Construction stage	• Waste Disposal Ordinance (Cap. 54)
S10.7.2.4	Good Site Practices – The integrity and effectiveness of all silt curtains shall be regularly inspected. Effluent monitoring should be incorporated to make sure that the discharged effluent from construction sites meets the relevant effluent discharge guidelines.	To minimize potential impacts on water quality and protect marine communities within Junk Bay	All construction sites	Contractor	Construction stage	TM-EIAO; andWPCO
\$10.7.2.5	Site runoff control – For works on land, standard site runoff control measures will be established and strictly enforced to ensure that discharge of contaminated or silt-laden runoff into marine waters is minimized.		All construction sites	Contractor	Construction stage	TM-EIAO; andWPCO
\$10.9.1.1	The marine water quality monitoring programme recommended in Chapter 8 of this EIA report and this EMIS would also serve to protect the marine communities inside Junk Bay.	To minimize potential impacts on water quality and protect marine	Selected monitoring stations (Drawing no. 209506/EMA/WQ/001)	Contractor	Construction stage	TM-EIAO; andWPCO

		Objectives of the		Implementation		Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
		communities within Junk Bay				
S11.6.2.2	Good Site Practices: – The integrity and effectiveness of all silt curtains should be regularly inspected. Effluent monitoring shall be incorporated to make sure that the discharged effluent from construction sites meets the relevant effluent discharge guidelines.	To minimize potential impacts on water quality and protect fishery resources	All construction sites	Contractor	Construction stage	TM-EIAO; andWPCO
\$11.6.2.3	Site runoff control - For works on land, standard site runoff control measures will be established and strictly enforced to ensure that discharge of contaminated or silt-laden runoff is minimized.	impacts on water quality and protect fishery resources	All construction sites	Contractor	Construction stage	TM-EIAO; andWPCO
\$11.8.1.1	The marine water quality monitoring programme recommended in Chapter 8 of this EIA report and this EMIS would also serve to protect the fishery resources.	To minimize potential impacts on water quality and protect fishery resources	Selected monitoring stations (Drawing no. 209506/EMA/WQ/001)	Contractor	Construction stage	TM-EIAO; andWPCO
Landscape	e and Visual					
\$13.8.1.2	 The following mitigation measures should be implemented in the construction stage CM1 – The construction area and contractor's temporary works areas should be minimized to avoid impacts on adjacent landscape. CM2 – Reduction of construction period to practical minimum. CM3 – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where the soil material meets acceptable criteria and where practical. The Contract Specification shall include storage and reuse of topsoil as appropriate. CM4 – Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contract or shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection stage). 	Minimize effects of landscape and visual impacts	Work site/during construction	Funded and implemented by CEDD		

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 CM5 – Trees unavoidably affected by the works shall be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, if applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. CM6 – Advance screen planting to proposed roads and associated structures. CM7 – hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone). CM8 – Screening of construction works by hoardings/noise barriers around works area in visually unobtrusive colours, to screen Works. CM9 – Control night-time lighting and glare by hooding all lights. CM10 – Ensure no run-off into water body adjacent to the Project Area. CM11 – Avoidance of excessive height and bulk of buildings and structures 					
\$13.8.1.2	OM1 – Compensatory tree planting for all felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006.	Minimize effects of landscape and visual impacts		Funded and implemented by CEDD. Maintained by CEDD and LCSD.	construction and operational	
\$13.8.1.2	 The following mitigation measures should be implemented in the operational stage: OM2 – A continuous belt of screen planting along the roads. Planting of the belt of trees shall be carried out as advance works ahead of other site formation and building works. OM3 – Maximise soft landscape of the site, where space permits, roadside berms /slope treatment works should be created. OM4 – During detailed design, refine structure layout to create a planting strips along the roads to enhance greenery. OM5 – Use appropriate (visually unobtrusive and 	Minimize effects of landscape and visual impacts	CBL and Road D9/during construction and operation	Funded and	construction and operational	

		Objectives of the		Impler	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 non-reflective) building materials and colours, and aesthetic design in built structures. OM6 – Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimizes potential negative landscape and visual impacts. Lighting units should be directional and minimize unnecessary light spill. OM7 – Avoidance of excessive height and bulk of buildings and structures 					
Landfill G						
\$14.7.5	 Precautionary measures The following guidance has been extracted from the EPD's Landfill Gas Hazard Assessment Guidance Note Guidance to ensure a robust and comprehensive set of measures to protect workers are provided. During all works, safety procedures shall be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater. Safety officers who are specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in adverse circumstances shall be present on all worksites throughout the works. All personnel who work on site and all visitors to the site shall be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it. Those staff who work in, or have responsibility for "at risk" areas, including all excavation workers, supervisors and engineers working within the consultation zone, shall receive appropriate training on working in areas susceptible to LFG hazards. Enhanced personal hygiene practices including washing thoroughly after working and eating only in "clean" areas shall be adopted where contact may have been made with any groundwater which is thought to be contaminated with 	Health and safety of the workers	Construction sites within 250m Consultation Zone (Drawing no. 209506/EMA/LFG/001)	Contractor	Construction stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)

		Objectives of the		Implem	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	leachate.					
	• Ground level construction plant shall be fitted with vertical exhausts at least 0.6m above ground level and with spark arrestors.					
	• During piping assembly or ducting construction, all valves/seals shall be closed immediately after installation. As construction progresses, all valves/seals should be closed as installed to prevent the migration of gases through the pipeline/conduit. All piping /ducting shall be capped at the end of each working day.					
	• Mobile offices, equipment stores, mess rooms etc. shall be located on an area which has been proven to be gas free (by survey with portable gas detectors) and ongoing monitoring shall be carried out to ensure that these areas remain gas free. Alternatively, such buildings shall be raised clear of the ground. If buildings are raised clear of the ground, the minimum, clear separation distance (as measured from the highest point on the ground surface to the underside of the lowest floor joist) shall be 500mm. However, in this case, it is highly recommended that all the site offices, equipment stores and mess rooms should be located outside the 250m Consultation Zone.					
	 Smoking and naked flames shall be prohibited within confined spaces. "No Smoking" and "No Naked Flame" notices in Chinese and English shall be posted prominently around the construction site. Safety notices shall be posted warning of the potential hazards. Welding, flame-cutting or other hot works may only be 					
	carried out in confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Office. The permit to work procedure shall set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during					
	which the hot works are in progress. The procedure shall also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive					
	responsibility for suspending the work in the event of					

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	 unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise shall be permitted to carry out hot works in confined areas. During the construction works, adequate fire extinguishers and breathing apparatus sets shall be made available on site and appropriate training given in their use. 					
S14.7.6	 Landfill gas monitoring The following monitoring shall be undertaken when construction works are carried out in confined space within the 250m Consultation Zone: The works area shall be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring requirements and procedures specified in Paragraphs 8.23 to 8.28 of EPD's Guidance Note shall be followed. The monitoring frequency and areas to be monitored shall be set down prior to commencement of the works. Depending on the results of the measurements, actions required will vary. As a minimum these shall encompass the actions specified in Table 14.6 of the EIA report. When portable monitoring equipment is used, the frequency and areas to be monitored should be set down prior to commencement of the works either by the Safety Officer or by an appropriately qualified person. All measurements shall be made with the monitoring tube located not more than 10mm from the surface. A standard form, detailing the location, time of monitoring and equipment used together with the gas concentrations measured, shall be used when undertaking manual monitoring to ensure that all relevant data are recorded. If methane (flammable gas) or carbon dioxide concentrations are in excess of the trigger levels or that of oxygen is below the level specified in the Emergency Management in the 	Health and safety of the workers	Confined space of construction sites within 250m Consultation Zone	Contractor	Construction stage	• Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)
S14.7.8-9	following section, then evacuation shall be initiated. Emergency management	Health and safety of the	Confined space of	Contractor	Construction	• Landfill Gas
517.7.0-7	In the event of the trigger levels specified in Table 14.6 of the EIA report being exceeded, a person, such as the Safety	workers	construction sites within 250m Consultation Zone	Contractor	stage	Hazard Assessment

		Objectives of the		Implen	nentation	Requirements
EIA Ref	Environmental Protection Measures/ Mitigation Measures	Recommended Measures & Main Concerns to Address	Location/ Timing	Agent	Stage	and/or Standards to be Achieved
	Officer, shall be nominated, with deputies, to be responsible for dealing with any emergency which may occur due to LFG.					Guidance Note (EPD/TR8/97)
	In an emergency situation the nominated person, or his deputies, shall have the necessary authority and shall ensure that the confined space is evacuated and the necessary works implemented for reducing the concentrations of gas.					
\$14.7.16	 Protection measures - Operational phase An assumed presence of landfill gas shall be adopted at all times by maintenance workers; all maintenance workers inspecting any manhole shall be fully trained in the issue of LFG hazard; any manhole which is large enough to permit to access to personnel shall be subject to entry safety procedure; Code of Practice on Safety and Health at Work in Confined Spaces shall be followed to ensures compliance with the Factories and Industrial Undertakings (Confined Spaces) Regulations of the Factories and Industrial Undertakings Ordinance; a strictly regulated "work permit procedure" shall be implemented and the relevant safety procedures must be rigidly followed; and Adequate communication with maintenance staff shall be maintained with respect to LFG. 	Health and safety of the workers	Utility maintenance areas within 250m Consultation Zone/during operational period	Utility companies	Operational stage	 Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97); and Code of Practice on Safety and Health at Work in Confined Space
S14.7.17	General recommended precautionary & protection measures – Operational phase LGF surveillance exercise shall be undertaken by the utility companies at the utility manholes/inspection chambers. The surveillance exercise shall be undertaken for the duration of the site occupancy, or until such time that EPD agree that surveillance is no longer required and this shall be based on all the available monitoring data for methane, carbon dioxide and oxygen.	Health and safety of the workers	Utility maintenance areas within 250m Consultation Zone/during operational period	Utility companies	Operational stage	 Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97); and Code of Practice on Safety and Health at Work in Confined Space