

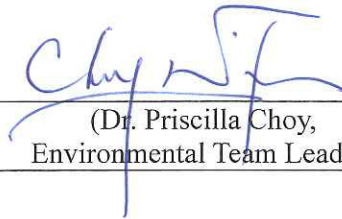
Civil Engineering and Development Department

**Agreement No. CE 59/2015 (EP)
Environmental Team for
Tseung Kwan O – Lam Tin Tunnel
Design and Construction**

**Monthly Environmental Monitoring and
Audit Report for February 2017**

(version 1.0)

Approved By



(Dr. Priscilla Choy,
Environmental Team Leader)

REMARKS:

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

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EXECUTIVE SUMMARY

Introduction

1. This is the 4th Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel – Design and Construction” (hereinafter called “the Project”). This report documents the findings of EM&A Works conducted in February 2017.
2. During the reporting month, the following works contracts were undertaken:
 - Contract No. NE/2015/01 – Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works; and
 - Contract No. NE/2015/02 – Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works.

Environmental Monitoring Works

3. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
4. Summary of the non-compliance in the reporting month for the Project is tabulated in **Table I**.

Table I Non-compliance Record for the Project in the Reporting Month

| Environmental Monitoring | No. of Exceedance | | No. of Exceedance due to Construction Activities of this Project | | Action Taken |
|--|-------------------|-------------|--|-------------|--|
| | Action Level | Limit Level | Action Level | Limit Level | |
| Air Quality | 0 | 0 | 0 | 0 | N/A |
| Noise | 2 | 0 | 2 | 0 | Refer to the Appendix O |
| Groundwater Quality | 1 | 6 | 0 | 0 | N/A (Refer to Part 8, Executive Summary) |
| Marine Water Quality | 0 | 0 | 0 | 0 | N/A |
| Groundwater Level Monitoring (Piezometer Monitoring) | N/A | N/A | N/A | N/A | N/A |
| Ecological | N/A | N/A | N/A | N/A | N/A |
| Cultural Heritage | N/A | N/A | N/A | N/A | N/A |
| Landfill Gas | 0 | 0 | 0 | 0 | N/A |

Air Quality Monitoring

5. All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
6. All 24-hour TSP monitoring was conducted as scheduled in the reporting month, except that

monitoring at Station AM4(A) – Cha Kwo Ling Public Cargo Working Area Administrative Office on 27 January and 1 February 2017 were cancelled due to power supply failure. The monitoring were re-scheduled to 2 and 3 February 2017. No Action/Limit Level exceedance was recorded.

Construction Noise Monitoring

7. All noise monitoring was conducted as scheduled in the reporting month. Two Action Level exceedance for each of January and February 2017 was recorded due to the documented complaints received in the reporting month. No Limit Level exceedance was recorded.

Water Quality Monitoring

8. Groundwater monitoring was conducted as scheduled in the reporting month. One Action Level Exceedance and Six Limit Level exceedance were recorded. The exceedances are considered to be non-Project related.
9. All marine water monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
10. Construction phase daily piezometer monitoring was not carried out in this reporting period as there is no tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan.

Ecological Monitoring

11. Post-translocation coral monitoring survey shall be conducted once every 3 months for a period of 12 months after completion of coral translocation. The survey is scheduled in February 2017 tentatively.
12. The 1st post-translocation coral monitoring survey is postponed to early March 2017 due to adverse weather and windy conditions in February 2017. The tentative schedule is shown in **Appendix D**.

Monitoring on Cultural Heritage

13. Monitoring of vibration impacts at Cha Kwo Ling Tin Hau Temple has not commenced in the reporting period as there is no construction works less than 100m from the temple.

Landscape and Visual Monitoring and Audit

14. The implementation of landscape and visual mitigation measures was checked during the environmental site inspections. Recommended follow-up actions have been discharged by the Contractor. Details of the audit findings and implementation status are presented in Section 10.

Landfill Gas Monitoring

15. Monitoring of landfill gases commenced in the reporting month and were carried out by the Contractor at excavation location, Portion III. No Limit Level exceedance was recorded.

Environmental Site Inspection

16. Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Environmental Team. The representative of the IEC joined the site inspection on 22 and 23 February 2017. Details of the audit findings and implementation status are presented in Section 10.

Waste Management

17. Wastes generated from this Project include inert construction and demolition (C&D) materials, non-inert C&D materials and marine sediments. Details of waste management data is presented in Section 11 and **Appendix P**.

Key Information in the Reporting Month

18. Summary of key information in the reporting month is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Month

| Event | Event Details | | Action Taken | Status | Remark |
|--|---------------|--|---|----------|--------|
| | Number | Nature | | | |
| Complaint received / Complaint referred by EPD | 2 | Construction noise nuisance due to works near Lam Tin Interchange | Investigation completed and presented in Appendix O | Closed | --- |
| | 1 | Excavated materials fell from the dump trucks on the BMCPD footpath which affected the safety of pedestrian and hikers | Under Investigation | On-going | --- |
| | 2 | Construction noise nuisance in January 2017 due to works near the Eastern Harbour Crossing | Under Investigation | On-going | --- |
| Reporting Changes | 0 | --- | N/A | N/A | --- |
| Notifications of any summons & prosecutions received | 0 | --- | N/A | N/A | --- |

Future Key Issues

19. The future key environmental issues in the coming month include:

- Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Noisy construction activity such as rock-breaking activities and piling works;
- Runoff from exposed slope or site area;
- Wastewater and runoff discharge from site;
- Accumulation of silt, mud and sand along U-channels and sedimentation tanks;
- Set up and implementation of temporary drainage system for the surface runoff;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation and storage of general and construction waste on site; and
- Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation.

1. INTRODUCTION

- 1.1 Cinotech Consultants Limited (Cinotech) was commissioned by Civil Engineering and Development Department (CEDD) as the Environmental Team (ET) to undertake environmental monitoring and auditing services for the Works Contracts involved in the implementation of Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) project to ensure that the environmental performance of the Works Contracts comply with the requirements specified in the Environmental Permit (EP), Environmental Monitoring & Audit (EM&A) Manual, Environmental Impact Assessment (EIA) Report of the TKO-LTT project and other relevant statutory requirements. This is the 4th Monthly EM&A report summarizing the EM&A works for the Project in February 2017.

Purpose of the Report

- 1.2 This is the 4th Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period in February 2017. The commencement date of construction of this Project is 7 November 2016.

Structure of the Report

- 1.3 The structure of the report is as follows:

Section 1: **Introduction** – purpose and structure of the report.

Section 2: **Contract Information** – summarises background and scope of the Contract, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting month.

Section 3: **Air Quality Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 4: **Noise Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 5: **Water Quality Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 6: **Ecological Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and Action and Limit Levels, monitoring results and Event / Action Plans.

Section 7: **Monitoring on Cultural Heritage** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and monitoring results.

Section 8: **Landscape and Visual Monitoring Requirements** – summarises the requirements of landscape and visual monitoring

Section 9: **Landfill Gas Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, monitoring results and Limit Levels and Action Plan

Section 10: **Environmental Site Inspection** – summarises the audit findings of the weekly site inspections undertaken within the reporting month.

Section 11: **Waste Management** – summarises the waste management data in the reporting month.

Section 12: **Environmental Non-conformance** – summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 13: **Future Key Issues** – summarises the impact forecast and monitoring schedule for the next three months.

Section 14: **Conclusions and Recommendation**

2. PROJECT INFORMATION

Background

- 2.1 In 2002, Civil Engineering and Development Department (CEDD) commissioned an integrated planning and engineering study under Agreement No. CE 87/2001 (CE) “Further Development of Tseung Kwan O – Feasibility Study” (the “TKO Study”) to formulate a comprehensive plan for further development of TKO New Town. It recommended to further develop TKO to house a total population of 450,000 besides the district’s continuous commercial and industrial developments.
- 2.2 At present, the Tseung Kwan O Tunnel is the main connection between Tseung Kwan O (TKO) and other areas in the territory. To cope with the anticipated transport need, the TKO Study recommended the provision of Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) (hereinafter referred to as “the Project”) and Cross Bay Link (CBL) to meet the long-term traffic demand between TKO and the external areas. The site layout plan for the Project is shown in **Figure 1**.
- 2.3 The Environmental Impact Assessment (EIA) Report for the TKO-LTT project was approved under the Environmental Impact Assessment Ordinance (EIAO) in July 2013. The corresponding Environmental Permit (EP) was issued in August 2013 (EP no.: EP-458/2013). Variations to the EP was applied and the latest EP (EP no.: EP-458/2013/C) was issued by the Director of Environmental Protection (DEP) in January 2017.

Project Organizations

- 2.4 Different parties with different levels of involvement in the project organization include:
- Project Proponent – Civil Engineering and Development Department (CEDD)
 - The Engineer and the Engineer’s Representative (ER) – AECOM
 - Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
 - Independent Environmental Checker (IEC) – AnewR Consulting Limited (AnewR)
- 2.5 The key contacts of the Project are shown in **Table 2.1**.

Table 2.1 Key Project Contacts

| Party | Role | Contact Person | Phone No. | Fax No. |
|----------|-----------------------------------|--------------------------|-----------|-----------|
| CEDD | Project Proponent | Mr. Chiang Nin Tat, Eric | 2301 1384 | 2739 0076 |
| AECOM | Engineer’s Representative | Mr. KY Chan | 3922 9000 | 2759 1698 |
| Cinotech | Environmental Team | Dr. Priscilla Choy | 2151 2089 | 3107 1388 |
| | | Ms. Ivy Tam | 2151 2090 | |
| AnewR | Independent Environmental Checker | Mr. Adi Lee | 2618 2836 | 3007 8648 |

Construction Activities undertaken during the Reporting Month

2.6 The major site activities undertaken in the reporting month included:

Table 2.2 Summary Table for Major Site Activities in the Reporting Month

| Contract No. | Project Title | Site Activities (February 2017) | |
|---------------------|---|---|--|
| NE/2015/01 | Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works | Lam Tin Interchange | 1) Excavation for Tunnel Adit 2) Slope Feature no. 11NE-D/C119 (along Lei Yue Mun Road) 3) EHC2 U-Trough 4) Site Formation – Area 1G1 5) Site Formation – Area 2 6) Site Formation – Area 4 7) Temp Steel Bridge across Cha Kwo Ling Road & Barging Facility 8) Pipe Pile wall – Area 2A 9) Ground Investigation |
| | | TKO Interchange | 1) Haul Road Construction & Site Formation 2) Temporary Barging Facilities 3) BMCPC Bridge Temporary Diversion |
| NE/2015/02 | Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works | 1) Installation of Temporary Cofferdam 2) Fabrication of Sheet Pile at Portion VII 3) Installation of silt curtain 4) Construction of Retaining Wall 5) Construction of DSD transformation room 6) Utilities detection and trial pit 7) Assembly of General Site Office 8) Removal of Screen Barrier at access of BMCPC 9) Piling and Sheet Piling Works 10) Pre-boring work 11) Temporary road for diversion of existing traffic at Tong Yin Street 12) Removal of existing concrete blocks at Portion IV 13) Construction of Temporary Transformer Room 14) Site Establishment 15) Tree Transplantation Works | |

2.7 The construction programme showing the inter-relationship with environmental protection/mitigation measures are presented in **Table 2.3**.

Table 2.3 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures

| Construction Works | Major Environmental Impact | Control Measures |
|---------------------------|--|--|
| As mentioned in Table 2.2 | Noise, dust impact, water quality and waste generation | <ul style="list-style-type: none"> • Sufficient watering of the works site with active dust emitting activities • Properly cover the stockpiles • On-site waste sorting and implementation of trip ticket system • Appropriate desilting/sedimentation devices provided on site for treatment before discharge • Use of quiet plant and well-maintained construction plant • Provide movable noise barrier |

Status of Environmental Licences, Notification and Permits

2.8 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 2.4**.

Table 2.4 Summary of the Status of Environmental Licences, Notification and Permits

| Contract No. | Permit / License No. | Valid Period | | Status |
|--|--------------------------------------|--------------|------------|--------|
| | | From | To | |
| Environmental Permit (EP) | | | | |
| N/A | EP-458/2013/C | 20/1/2017 | N/A | Valid |
| Notification pursuant to Air Pollution Control (Construction Dust) Regulation | | | | |
| NE/2015/01 | EPD Ref no.: 405305 | 21/07/2016 | N/A | Valid |
| | EPD Ref no.: 405582 | 28/07/2016 | N/A | Valid |
| NE/2015/02 | EPD Ref no.: 406100 | 12/08/2016 | N/A | Valid |
| Billing Account for Construction Waste Disposal | | | | |
| NE/2015/01 | Account No. 7025431 | 11/07/2016 | N/A | Valid |
| NE/2015/02 | Account No. 7025654 | 16/08/2016 | N/A | Valid |
| Registration of Chemical Waste Producer | | | | |
| NE/2015/01 | Waste Producer No. 5218-290-L2881-02 | 22/08/2016 | N/A | Valid |
| | Waste Producer No. 5213-833-L2532-03 | 22/08/2016 | N/A | Valid |
| NE/2015/02 | Waste Producer No. 5213-838-C4094-01 | 19/08/2016 | N/A | Valid |
| Effluent Discharge License under Water Pollution Control Ordinance | | | | |
| NE/2015/01 | WT00025806-2016 | 22/11/2016 | 30/11/2021 | Valid |
| | WT00026212-2016 | 25/11/2016 | 30/11/2021 | Valid |
| NE/2015/02 | WT00026386-2016 | 15/12/2016 | 31/12/2021 | Valid |
| Construction Noise Permit (CNP) | | | | |

| Contract No. | Permit / License No. | Valid Period | | Status |
|------------------------------|----------------------|--------------|------------|--|
| | | From | To | |
| NE/2015/01 | GW-RE0976-16 | 08/10/2016 | 20/03/2017 | Valid |
| | GW-RE1183-16 | 16/12/2016 | 15/06/2017 | Superseded by CNP No. GW-RE0082-17 on 8 Feb 2017 |
| | GW-RE1211-16 | 24/12/2016 | 22/06/2017 | Valid |
| | GW-RE0010-17 | 13/01/2017 | 11/02/2017 | Expired on 11 Feb 2017 |
| | GW-RE0047-17 | 27/01/2017 | 26/03/2017 | Valid |
| | GW-RE0082-17 | 08/02/2017 | 07/03/2017 | Valid |
| NE/2015/02 | GW-RE1141-16 | 06/12/2016 | 17/05/2017 | Valid |
| | GW-RE1208-16 | 23/12/2016 | 22/06/2017 | Valid |
| | GW-RE0049-17 | 01/02/2017 | 31/07/2017 | Valid |
| | GW-RE0097-17 | 15/02/2017 | 14/08/2017 | Valid |
| Marine Dumping Permit | | | | |
| NE/2015/02 | EP/MD/17-118 | 1/12/2016 | 31/05/2017 | Valid |

Summary of EM&A Requirements

- 2.9 The EM&A programme requires construction noise monitoring, air quality monitoring, water quality monitoring, environmental site audit, etc. The EM&A requirements for each parameter are described in the following sections, including:
- All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event Action Plans;
 - Environmental mitigation measures, as recommended in the Project EIA Report.
- 2.10 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 10 of this report.
- 2.11 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely air quality and noise levels and audit works for the Project in February 2017.

3. AIR QUALITY

Monitoring Requirements

- 3.1 According to EM&A Manual of the Project, 1-hour and 24-hour TSP monitoring are required to monitor the air quality. For regular impact monitoring, a sampling frequency of at least once in every six days shall be undertaken at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

- 3.2 Six designated monitoring stations were selected for air quality monitoring programme. **Table 3.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

Table 3.1 Locations for Air Quality Monitoring

| Monitoring Stations | Location | Location of Measurement |
|---------------------------|--|-------------------------|
| AM1 | Tin Hau Temple | Ground Level |
| AM2 | Sai Tso Wan Recreation Ground | Ground Level |
| AM3 | Yau Lai Estate Bik Lai House | Rooftop (41/F) |
| AM4 ⁽¹⁾ | Sitting-out Area at Cha Kwo Ling Village | Ground Level |
| AM4(A) ^{(2) (*)} | Cha Kwo Ling Public Cargo Working Area Administrative Office | Rooftop (3/F) |
| AM5(A) ^(*) | Tseung Kwan O DSD Desilting Compound | Ground Level |
| AM6(A) ^(*) | Park Central, L1/F Open Space Area | 1/F |

Remarks: (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

(*) Air quality monitoring at designated station AM4(24-hr TSP), AM5 and AM6 was rejected by the premise owners. Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4(A) (24-hr TSP only), AM5(A) and AM6(A) respectively.

Monitoring Equipment

- 3.3 High Volume Samplers (HVS) were used to carry out 24-hour TSP monitoring. Direct reading dust meter were also used to measure 1-hour average TSP levels. The 1-hour sampling was determined periodically by HVS to check the validity and accuracy of the results measured by direct reading method.
- 3.4 Wind data monitoring equipment was set at rooftop (about 41/F) of Yau Lai Estate Bik Lai House for logging wind speed and wind direction such that the wind sensors are clear of obstructions or turbulence caused by building. The wind data monitoring equipment is re-calibrated at least once every six months and the wind directions are divided into 16 sectors of 22.5 degrees each. The location is shown in **Figure 2**.
- 3.5 **Table 3.2** summarizes the equipment to be used in the air quality monitoring. Copies of calibration certificates are attached in **Appendix B**.

Table 3.2 Air Quality Monitoring Equipment

| Equipment | Model and Make | Quantity |
|-----------------------|--|----------|
| Calibrator | TISCH Model: TE-5025A | 1 |
| 1-hour TSP Dust Meter | Sibata Model No.: LD-3 / LD-3B | 4 |
| | Met One Instruments Model No.: AEROCET-531 | 1 |
| | Handheld Particle Counter Hal-HPC300 | 4 |
| HVS Sampler | TISCH Model: TE-5170 | 1 |
| | GMW Model: GS2310 | 5 |
| Wind Anemometer | Davis Weather Monitor II, Model no. 7440 | 1 |

Monitoring Parameters and Frequency

- 3.6 **Table 3.3** summarizes the monitoring parameters, monitoring period and frequencies of air quality monitoring.

Table 3.3 Frequency and Parameters of Air Quality Monitoring

| Monitoring Stations | Parameter | Frequency |
|--|-------------|-------------------|
| AM1, AM2, AM3, AM4, AM5(A) and AM6(A) | 1-hour TSP | 3 times per 6 day |
| AM1, AM2, AM3, AM4(A), AM5(A) and AM6(A) | 24-hour TSP | Once per 6 days |

Monitoring Methodology

1-hour TSP Monitoring

Measuring Procedures

- 3.7 The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(Model LD3 / LD3B)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

(AEROCET-531)

- The 1-hour dust meter is placed at least 1.3 meters above ground.

- Remove the red rubber cap from the AEROCET-531 inlet nozzle.
- Turn on the power switch that is located on the right side of the AEROCET-531.
- On power up the product intro screen is displayed for 3 seconds. The intro screen displays the product name and firmware version.
- Then the main counter screen will be displayed.
- Press the START button. Internal vacuum pump start running. After 1 minute the pump will stop and the 0.5 μ m and 5 μ m channels will show the cumulative counts of particles larger than 0.5 μ m and 5 μ m per cubic foot.
- The AEROCET-531 is now checked out and ready for use.
- To switch off the AEROCET-531 power to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, and display value and site condition were recorded during the monitoring period.

(Equipment: Hal Technology; Model no. Hal-HPC300)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to “ON” and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

Maintenance/Calibration

3.8 The following maintenance/calibration is required for the direct dust meters:

- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP Monitoring

Instrumentation

3.9 High volume samplers (HVS) (TISCH Model: TE-5170) complete with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

3.10 The positioning of the HVS samplers are as follows:

- a horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;
- no two samplers shall be placed less than 2 meter apart
- the distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;

- a minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;
- a minimum of 2 metres of separation from any supporting structure, measured horizontally is required;
- no furnace or incinerator flue is nearby;
- airflow around the sampler is unrestricted;
- the sampler is more than 20 metres from the dripline;
- any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;
- permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
- a secured supply of electricity is needed to operate the samplers.

Operating/analytical procedures for the operation of HVS

- 3.11 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- 3.12 For TSP sampling, fiberglass filters with a collection efficiency of > 99% for particles of 0.3µm diameter were used.
- 3.13 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 3.14 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 3.15 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- 3.16 The shelter lid was closed and secured with the aluminum strip.
- 3.17 The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 3.18 After sampling, the filter was removed and sent to the HOKLAS laboratory (Wellab Ltd.) for weighing. The elapsed time will be also recorded.
- 3.19 Before weighing, all filters was equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%.

Maintenance/Calibration

- 3.20 The following maintenance/calibration is required for the HVS:
- The high volume motors and their accessories will be properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking will be made to ensure that the equipment and necessary power supply are in good working condition.
 - High volume samplers will be calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the air quality monitoring.

Results and Observations

- 3.21 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 3.22 All 24-hour TSP monitoring was conducted as scheduled in the reporting month, except that monitoring at Station AM4(A) – Cha Kwo Ling Public Cargo Working Area Administrative Office on 27 January and 1 February 2017 were cancelled due to power supply failure. The monitoring were re-scheduled to 2 and 3 February 2017. No Action/Limit Level exceedance was recorded.
- 3.23 The air temperature, precipitation and the relative humidity data was obtained from Hong Kong Observatory where the wind speed and wind direction were recorded by the installed Wind Anemometer at rooftop of Yau Lai Estate Bik Lai House (41/F). The location is shown in **Figure 2**. This weather information for the reporting month is summarized in **Appendix C**.
- 3.24 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendices E** and **Appendix F** respectively.
- 3.25 The summary of exceedance record in reporting month is shown in **Appendix K**. No exceedance was recorded for the air quality monitoring.
- 3.26 According to our field observations, the major dust source identified at the designated air quality monitoring stations are as follows:

Table 3.4 Major Dust Source during Air Quality Monitoring

| Station | Major Dust Source |
|---|---|
| AM1 – Tin Hau Temple | Road Traffic at Cha Kwo Ling Road |
| AM2 – Sai Tso Wan Recreation Ground | N/A |
| AM3 – Yau Lai Estate Bik Lai House | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| AM4 - Sitting-out Area at Cha Kwo Ling Village | Road Traffic at Cha Kwo Ling Road |
| AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office | Road Traffic at Cha Kwo Ling Road |
| AM5(A) - Tseung Kwan O DSD Desilting Compound | Vehicle Movement within the Desilting Compound |
| AM6(A) - Park Central, L1/F Open Space Area | Road Traffic at Po Yap Road |

4. NOISE

Monitoring Requirements

- 4.1 According to EM&A Manual of the Project, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Locations

- 4.2 Noise monitoring was conducted at 8 designated monitoring stations (CM1, CM2, CM3, CM4, CM5, CM6(A), CM7(A), CM8(A)) in the reporting period. **Table 4.1** and **Figure 3** show the locations of these stations.

Table 4.1 Noise Monitoring Stations

| Monitoring Stations | Locations | Location of Measurement |
|---------------------|---|-------------------------|
| CM1 | Nga Lai House, Yau Lai Estate Phase 1, Yau Tong | Rooftop (41/F) |
| CM2 | Bik Lai House, Yau Lai Estate Phase 1, Yau Tong | Rooftop (41/F) |
| CM3 | Block S, Yau Lai Estate Phase 5, Yau Tong | Rooftop (40/F) |
| CM4 | Tin Hau Temple, Cha Kwo Ling | Ground Level |
| CM5 | CCC Kei Faat Primary School, Yau Tong | Rooftop (6/F) |
| CM6(A)* | Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores | Ground Level |
| CM7(A)* | Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores | Ground Level |
| CM8(A)* | Park Central, L1/F Open Space Area | 1/F |

Remarks: * Noise monitoring at designated station CM6, CM7 & CM8 was rejected by the premise owners. Therefore, baseline and impact noise monitoring works were carried out at alternative noise monitoring stations CM6(A), CM7(A) and CM8(A) respectively.

Monitoring Equipments

- 4.3 Integrating Sound Level Meter was used for impact noise monitoring. The meters are Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 4.2** summarizes the noise monitoring equipment being used. Copies of calibration certificates are attached in **Appendix B**.

Table 4.2 Noise Monitoring Equipment

| Equipment | Model and Make | Quantity |
|-------------------------------|-------------------|----------|
| Integrating Sound Level Meter | SVAN 955 / 957 | 6 |
| Calibrator | SV30A | 3 |
| | Brüel & Kjær 4231 | 2 |

4.4 **Table 4.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

Table 4.3 Frequency and Parameters of Noise Monitoring

| Monitoring Stations | Parameter | Period | Frequency | Measurement |
|---------------------|-----------------------------------|-------------------------------------|------------------|-------------|
| M1 | L ₁₀ (30 min) dB(A) | 0700-1900 hrs on normal weekdays | Once per week | Façade |
| M2 | | | | Façade |
| M3 | | | | Façade |
| M4 | L ₉₀ (30 min) dB(A) | | | Façade |
| M5 | Façade | | | |
| M6(A) | L _{eq} (30 min) dB(A) | | | Free Field |
| M7(A) | Façade | | | |
| M8(A) | Façade | | | |

Monitoring Methodology and QA/QC Procedure

4.5 The monitoring procedures are as follows:

- The monitoring station was normally be at a point 1m from the exterior of the sensitive receivers building façade and be at a position 1.2m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels was adjusted with a correction of +3 dB(A).
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time was set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - measurement time : 30 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement will be more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- At the end of the monitoring period, the L_{eq}, L₉₀ and L₁₀ was recorded. In addition, noise sources was recorded on a standard record sheet.
- Noise monitoring will be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Supplementary monitoring was provided to ensure sufficient data would be obtained.

Maintenance and Calibration

4.6 The microphone head of the sound level meter and calibrator was cleaned with a soft cloth at quarterly intervals.

4.7 The sound level meter and calibrator was checked and calibrated at yearly intervals.

4.8 Immediately prior to and following each noise measurement the accuracy of the sound level meter was 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.

Results and Observations

- 4.9 All noise monitoring was conducted as scheduled in the reporting month. Two Action Level exceedance was recorded due to the documented complaints received in the reporting month. No Limit Level exceedance was recorded.
- 4.10 Noise monitoring results and graphical presentations are shown in **Appendix G**.
- 4.11 The summary of exceedance record in the reporting month is shown in **Appendix K**.
- 4.12 The major noise source identified at the designated noise monitoring stations are shown in **Table 4.4**.

Table 4.4 Major Noise Source during Noise Monitoring

| Monitoring Stations | Locations | Major Noise Source |
|---------------------|---|---|
| CM1 | Nga Lai House, Yau Lai Estate Phase 1, Yau Tong | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| CM2 | Bik Lai House, Yau Lai Estate Phase 1, Yau Tong | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| CM3 | Block S, Yau Lai Estate Phase 5, Yau Tong | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| CM4 | Tin Hau Temple, Cha Kwo Ling | Road Traffic at Cha Kwo Ling Road |
| CM5 | CCC Kei Faat Primary School, Yau Tong | Road Traffic at Yau Tong Road |
| CM6(A) | Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores | Road Traffic at O King Road near Ocean Shores |
| CM7(A) | Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores | Road Traffic at Tong Yin Street |
| CM8(A) | Park Central, L1/F Open Space Area | Road Traffic at Po Yap Road |

- 4.13 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured L_{eq} – Baseline L_{eq} = CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in **Table 4.5**.

Table 4.5 Baseline Noise Level and Noise Limit Level for Monitoring Stations

| Station | Baseline Noise Level, dB (A) (at 0700 – 1900 hrs on normal weekdays) | Noise Limit Level, dB (A) (at 0700 – 1900 hrs on normal weekdays) |
|---------|---|--|
| CM1 | 65.5 | 75 |
| CM2 | 63.6 | |
| CM3 | 65.6 | |
| CM4 | 62.0 | |
| CM5 | 68.2 | 70* |
| CM6(A) | 61.9 | 75 |
| CM7(A) | 58.3 | |
| CM8(A) | 69.1 | |

(*) Noise Limit Level is 65 dB(A) during school examination periods.

5. WATER QUALITY

Monitoring Requirements

Groundwater Quality

- 5.1 Groundwater quality monitoring shall be conducted as identified in the EIA report (locations refer to Figure 4, Stream 1 to 3). Groundwater quality monitoring was not conducted at the other identified monitoring station in the EIA Report, Stream 4, as it was found to be not accessible due to safety reason. According to the EM&A Manual, dissolved oxygen (DO), pH, temperature, turbidity, suspended solids (SS), 5-day biochemical oxygen demand (BOD₅), Total organic carbon (TOC), Total Nitrogen, Ammonia-N and Total Phosphate are the parameters for the monitoring. **Appendix A** shows the established Action and Limit Levels.

Marine Water Quality

- 5.2 Marine water quality monitoring was conducted three times per week at the designated monitoring stations. Monitoring took place two times per monitoring day during mid ebb and mid flood tides at three depths (1 meter from surface, mid depth and 1 meter from the bottom). For Tseung Kwan O Salt Water Intake (i.e. Station M6), water sampling and in situ measurements was taken at the vertical level where the water abstraction point of the intake is located (i.e. approximately mid-depth level). If the water depth is less than 6m, the mid-depth measurement may be omitted. If the depth is less than 3m, only the mid-depth measurements need to be taken.
- 5.3 Duplicate in-situ measurements (Dissolved oxygen (DO) concentration, DO saturation, turbidity, pH, temperature and salinity) and water samples (suspended solids (SS)) at each depth were monitored in accordance with the requirements in the EM&A Manual. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides were not less than 0.5m.

Groundwater Level Monitoring (Piezometer Monitoring)

- 5.4 Daily piezometer monitoring at any time of the day shall be carried throughout the whole period when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan. The monitoring has not commenced in this reporting period.

Monitoring Locations

Groundwater Quality

- 5.5 Stream 1 – Stream 3 is designated for the groundwater quality monitoring according to EM&A Manual. The locations are also summarized in **Table 5.1** and shown on **Figure 4**.

Table 5.1 Groundwater Quality Monitoring Stations

| Monitoring Streams | Descriptions | Sampling Location |
|--------------------|--|-------------------------------------|
| Stream 1 | Stream running between the Kwong Tin Estate and Lei Yue Mun Road | 1 sampling location for each stream |
| Stream 2 | Stream on western coast of Chiu Keng Wan | |
| Stream 3 | Stream on western coast of Chiu Keng Wan | |

Marine Water Quality

- 5.6 A total of twelve monitoring stations are designated for the water quality monitoring program according to EM&A Manual. The locations are also summarized in **Table 5.2** and shown on **Figure 5**.

Table 5.2 Marine Water Quality Monitoring Stations

| Monitoring Stations | Descriptions | Coordinates | |
|---------------------|---|-------------|----------|
| | | Easting | Northing |
| M1 | Junk Bay Coral Site – Junk Bay near Chiu Keng Wan | 844255 | 817565 |
| M2 | Junk Bay Coral Site – Junk Bay | 844076 | 817087 |
| M3 | Junk Bay Coral Site – Junk Island | 844491 | 817890 |
| M4 | Junk Bay Coral Site – Chiu Keng Wan | 843209 | 816416 |
| M5 | Junk Bay Coral Site – Fat Tong Chau | 845463 | 815769 |
| M6 | Tseung Kwan O Salt Water Intake | 845512 | 817442 |
| C1 | Control Station – Southeast | 844696 | 814773 |
| C2 | Control Station – Northwest | 842873 | 816014 |
| G1 | Gradient Station | 844418 | 817560 |
| G2 | Gradient Station | 844290 | 817384 |
| G3 | Gradient Station | 844488 | 817735 |
| G4 | Gradient Station | 844967 | 817551 |

Monitoring Equipments

- 5.7 For in-situ monitoring, a multi-parameter meter (Aquaread AP-2000-D) was used to measure Dissolved oxygen (DO) concentration, DO saturation (DO %), pH, temperature and turbidity. A sampler was used to collect water samples for laboratory analysis of SS, BOD₅, TOC, Total Nitrogen, Ammonia-N and Total Phosphate.

Dissolved Oxygen (DO) and Temperature Measuring Equipment

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

Turbidity

- 5.12 Turbidity was measured in situ by the nephelometric method. The instrument was portable and weatherproof using a DC power source complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0-1000 NTU. The probe cable was not be less than 25m in length.

pH

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

Water Depth Detector

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

Water Sampler

- 5.15 Water samples collected for laboratory analysis were stored in high density polythene bottles sample containers, with appropriate preservatives added. All sampling bottles were labeled (waterproof) with the sampling date and time, sample lot number and sampling location reference number to avoid mishandling.

Sample Container and Storage

- 5.16 Following collection, water samples for laboratory analysis were stored in high density polythene bottles, with preservative appropriately added where necessary. They will be packed in ice (cooled to 4°C without being frozen), delivered to the laboratory and analysed as soon as possible.

Calibration of In Situ Instruments

- 5.17 All in situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring.
- 5.18 For the on-site calibration of field equipment, the BS 1427:1993, "Guide to Field and on-site test methods for the analysis of waters" was observed.
- 5.19 Before each round of monitoring, a zero check in distilled water was performed with the turbidity probe of Aquaread AP-2000-D. The probe was then be calibrated with a solution of known NTU.
- 5.20 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also being made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 5.21 **Table 5.3** summarizes the equipment used in the water quality monitoring program. Copies of the calibration certificates of the equipment are shown in **Appendix B**.

Table 5.3 Water Quality Monitoring Equipment

| Equipment | Model and Make | Qty. |
|--------------------------------------|---------------------------------------|------|
| Water Sampler | Kahlsico Water-Bottle Model 135DW 150 | 1 |
| Multi-parameter Water Quality System | YSI 6820-C-M | 1 |
| | Aquaread AP-2000-D | 2 |
| Monitoring Position Equipment | "Magellan" Handheld GPS Model GPS-320 | 1 |
| Water Depth Detector | Fishfinder 140 | 1 |

Monitoring Parameters and Frequency

5.22 **Table 5.4** summarizes the monitoring parameters, monitoring period and frequencies of the water quality monitoring in the reporting period.

Table 5.4 Water Quality Monitoring Parameters and Frequency

| Monitoring Stations | Parameters, unit | Depth | Frequency |
|--|---|---|--|
| Groundwater Quality | | | |
| Stream 1- Stream 3 | <ul style="list-style-type: none"> • DO, mg/L • DO Saturation, % • pH • Water Temperature (°C) • Turbidity, NTU • SS, mg/L • BOD₅, mg O₂/L • TOC, mg-TOC/L • Total Nitrogen, mg/L • Ammonia-N, mg NH₃-N/L • Total Phosphate, mg-P/L | Mid-depth | Biweekly (When the tunnel construction works are found within 50m of the location, weekly.) |
| Marine Water Quality | | | |
| M1 M2 M3 M4 M5 M6 C1 C2 G1 G2 G3 G4 | <p><u>In-situ:</u> Dissolved oxygen (DO) concentration, DO saturation, turbidity, pH, temperature and salinity</p> <p><u>Laboratory Testing:</u> Suspended Solids (SS)</p> | <p><u>M1-M5, C1-C2, G1-G4</u></p> <ul style="list-style-type: none"> • 3 water depths: 1m below water surface, mid-depth and 1m above sea bed. • If the water depth is less than 3m, mid-depth sampling only. • If the water depth is less than 6m, omit mid-depth sampling. <p><u>M6</u></p> <ul style="list-style-type: none"> • at the vertical level where the water abstraction point of the intake is located(i.e. approximately mid-depth level) | 3 days per week / 2 per monitoring day (1 for mid-ebb and 1 for mid-flood) |

Monitoring MethodologyGroundwater Quality

5.23 At each monitoring location, two consecutive in-situ measurements for DO concentration, DO saturation, pH, temperature and turbidity were taken for water samples on site. The probes were 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 was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.

5.24 For SS, BOD₅, TOC, Total Nitrogen, Ammonia-N and Total Phosphate, measurement and grab samples of surface water was collected. Water samples of about adequate volume was collected and stored in high density polythene bottles. Following collection, water samples

was stored in high density polythene bottles. Preservation H_2SO_4 was appropriately added for water samples for TOC, Total Nitrogen, Ammonia-N and Total Phosphate testing. Water samples was packed in ice and cooled to $4^\circ C$ (without being frozen), delivered to the HOKLAS accredited laboratory, Wellab Limited and analyzed.

Marine Water Quality

- 5.25 The monitoring stations were accessed using survey boat by the guide of a hand-held Global Positioning System (GPS). The depth of the monitoring location was measured using depth meter in order to determine the sampling depths. Afterwards, the probes of the in-situ measurement equipment was lowered to the predetermined depths (1 m below water surface, mid-depth and 1 m above seabed) and the measurements was carried out accordingly. The in-situ measurements at predetermined depths was carried out in duplicate. In case the difference in the duplicate in-situ measurement results was larger than 25%, the third set of in-situ measurement would be carried out for result confirmation purpose.
- 5.26 Water sampler was lowered into the water to the required depths of sampling. Upon reaching the pre-determined depth, a messenger to activate the sampler was then released to travel down the wire. The water sample was sealed within the sampler before retrieving. At each station, water samples for SS at three depths (1 m below water surface, mid-depth and 1 m above seabed) were collected accordingly. Water samples were stored in a cool box and kept at less than $4^\circ C$ but without frozen and sent to the laboratory as soon as possible.

Laboratory Analytical Methods

- 5.27 The testing of all parameters were conducted by Wellab Ltd. (HOKLAS Registration No.083) and comprehensive quality assurance and control procedures in place in order to ensure quality and consistency in results. The testing method and limit of reporting are provided in **Table 5.5**.

Table 5.5 Methods for Laboratory Analysis for Water Samples

| Parameters (Unit) | Proposed Method | Reporting Limit | Detection Limit |
|--|---|----------------------------------|-----------------|
| SS (mg/L) | APHA 2540 D | 0.5 mg/L ⁽¹⁾ | 0.5 mg/L |
| BOD ₅ (mg O ₂ /L) | APHA 19ed 5210B | 2 mg O ₂ /L | -- |
| TOC (mg-TOC/L) | In-house method SOP020 (Wet Oxidation) | 1 mg-TOC/L | -- |
| Total Nitrogen (mg/L) | In-house method SOP063 (FIA) | 0.6 mg/L | -- |
| Ammonia-N (mg NH ₃ -N/L) | In-house method SOP057 (FIA) | 0.05 mg NH ₃ - N/L | -- |
| Total Phosphorus (mg-P/L) ⁽²⁾ | In-house method SOP055 (FIA) | 0.05 mg-P/L | -- |

Note:

1) Limit of Reporting is reported as Detection Limit for non-HOKLAS report.

2) Parameter Total Phosphorus represents the laboratory testing for total phosphate content in water which is the sum of all three forms of phosphates in water.

QA/QC Requirements

Decontamination Procedures

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

Sampling Management and Supervision

- 5.29 Water samples were dispatched to the testing laboratory for analysis as soon as possible after the sampling. All samples were stored in a cool box and kept at less than 4°C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.
- 5.30 QA/QC procedures as attached in **Appendix J** are available for the parameters analyzed in the HOKLAS-accredited laboratory, WELLAB Ltd.

Results and Observations

Groundwater Quality Monitoring

- 5.31 All groundwater quality monitoring was conducted as scheduled in the reporting month. Summary of groundwater quality monitoring results and Action/Limit Level exceedance are shown in **Table 5.6**. Groundwater monitoring results, graphical presentations and laboratory testing reports are shown in **Appendix H**.

Table 5.6 Summary of Groundwater Quality Monitoring Results

| Date | Location | Parameters (unit) | | | | | | | | |
|-------------------|--------------|-------------------|-------------------------|-----------------|-------------------|---|-----------------|-----------------------|--|---------------------------|
| | | pH | Dissolved Oxygen (mg/L) | Turbidity (NTU) | SS (mg/L) | BOD ₅ (mg O ₂ /L) | TOC (mg-TOC/L) | Total Nitrogen (mg/L) | NH ₃ -N (mg NH ₃ -N/L) | Total Phosphorus (mg-P/L) |
| 3 Feb 2017 | Stream 1 | 7.2 | 7.9 | 1.6 | 5 | <2 | 3 | <0.6 | <0.05 | <0.05 |
| | Stream 2 | 7.1 | 8.1 | 1.8 | 3 | <2 | 4 | 1.0 | <u>0.08</u> | <0.05 |
| | Stream 3 | 7.1 | 8.0 | 1.6 | <u>11</u> | <2 | 3 | 1.2 | <u>0.06</u> | <0.05 |
| 15 Feb 2017 | Stream 1 | 7.2 | 8.3 | 1.1 | 1.5 | <2 | <u>5</u> | 0.7 | 0.05 | <0.05 |
| | Stream 2 | 7.0 | 8.9 | 1.5 | 3.0 | <2 | 4 | 1.1 | <0.05 | <0.05 |
| | Stream 3 | 7.2 | 8.6 | 0.8 | 1.0 | <2 | 4 | 1.0 | <0.05 | <u>0.08</u> |
| 27 Feb 2017 | Stream 1 | 7.3 | 7.8 | 1.2 | <u>7.1</u> | <2 | 3 | 0.6 | <0.05 | <0.05 |
| | Stream 2 | 7.3 | 7.8 | 1.2 | 4.9 | <2 | 4 | 1.1 | <0.05 | <u>0.07</u> |
| | Stream 3 | 7.2 | 7.7 | 1.0 | 2.4 | <2 | 2 | 1.2 | <0.05 | <0.05 |
| No. of Exceedance | Action Level | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | Limit Level | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 2 |

Note: ***Bold Italic*** means Action Level exceedance
Bold Italic with underline means Limit Level exceedance

- 5.32 According to the information provided by the Contractor, no tunnel boring or tunnel construction works were carried out in both Lam Tin side and Tseung Kwan O side in February 2017. Therefore, it is considered that the exceedance is not project-related. The

summary of exceedance record in the reporting month is shown in **Appendix K**.

- 5.33 Other relevant data was also recorded, such as monitoring location / position, time, sampling depth, weather conditions and any special phenomena or work underway nearby.

Marine Water Quality Monitoring

- 5.34 All marine water quality monitoring was conducted as scheduled in the reporting month. Marine water monitoring results and graphical presentations are shown in **Appendix I**. Other relevant data was also recorded, such as monitoring location / position, time, sampling depth, weather conditions and any special phenomena or work underway nearby.
- 5.35 Calculated Action and Limit Levels for Marine Water Quality is presented in **Appendix I**. No exceedance of Action and Limit Levels of marine water quality was recorded during the reporting period.

Groundwater Level Monitoring (Piezometer Monitoring)

- 5.36 Daily piezometer monitoring at any time of the day shall be carried throughout the whole period when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan.
- 5.37 Construction Phase Piezometer Monitoring has not commenced in this reporting period.

6. ECOLOGY

Post-Translocation Coral Monitoring

- 6.1 Post-translocation monitoring survey is recommended in the EM&A Manual to audit the success of translocation. Information gathered during each post-translocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey.
- 6.2 The post-translocation coral monitoring shall be conducted once every 3 months after completion for a period of 12 months.
- 6.3 The first post-translocation coral monitoring is scheduled to be carried out in February 2017 tentatively.
- 6.4 The 1st post-translocation coral monitoring survey is postponed to early March 2017 due to adverse weather and windy conditions in February 2017. The tentative schedule is shown in **Appendix D**.

7. MONITORING ON CULTURAL HERITAGE

- 7.1 According to the EM&A Manual, monitoring of vibration impacts should be conducted when the construction works are less than 100m from the Built Heritage in close proximity of the worksite, namely the Cha Kwo Ling Tin Hau temple.
- 7.2 Based on the information provided by the Contractor, no construction works are within 100m of the Cha Kwo Ling Tin Hau temple in the reporting period. Therefore, monitoring of vibration impacts has not commenced in the reporting period.

8. LANDSCAPE AND VISUAL IMPACT REQUIREMENTS

- 8.1 Landscape and visual mitigation measures during the construction phase shall be checked to ensure that they are fully realized and implemented on site.
- 8.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures. The summaries of site audits are attached in **Appendix L**.
- 8.3 No non-compliance of the landscape and visual impact was recorded in the reporting month.

9. LANDFILL GAS MONITORING

Monitoring Requirement

- 9.1 In accordance with the EM&A Manual, monitoring of landfill gas is required for construction works within the Sai Tso Wan Landfill Consultation Zone during the construction phase. This section presents the results of landfill gas measurements performed by the Contractor. **Appendix A** shows the Limit Levels for the monitoring works.
- 9.2 The “Landfill Gas Monitoring Proposal”, including the monitoring programme and detailed actions, is submitted to the EPD for approval. Details of monitoring in this Proposal is in line with the monitoring requirements stipulated in the EM&A Manual.

Monitoring Parameters, Locations and Frequency

- 9.3 The proposed parameters for Landfill gas monitoring include Methane, Carbon dioxide and Oxygen.
- 9.4 The monitoring was carried out at least daily before starting the work of the day.

Monitoring Locations

- 9.5 Monitoring of oxygen, methane and carbon dioxide was performed for excavations at 1m depth or more within the Consultation Zone. In this reporting month, the area required to be monitored for landfill gas are shown below and **Figure 6** shows the landfill gas monitoring locations.
- Excavation Locations: Portion III
 - Manholes and Chambers: N/A
 - Relocation of monitoring wells: N/A
 - Any other Confined Spaces: N/A

Monitoring Equipment

- 9.6 **Table 9.1** summarizes the equipment employed by the Contractor for the landfill gas monitoring.

Table 9.1 Landfill Gas Monitoring Equipment

| Equipment | Model and Make | Quantity |
|---|---|----------|
| Intrinsically safe, portable gas detector | Crowcon Tetra Portable Gas Detector (Serial No. 100378267/01-007) | 1 |

Results and Observations

- 9.7 In the reporting month, landfill gas monitoring was carried out by the Contractor at the aforesaid locations on 25 occasions. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix R**. Copies of calibration certificates are attached in **Appendix B**.

10. ENVIRONMENTAL AUDIT**Site Audits**

- 10.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix L**.
- 10.2 Joint weekly site audits by the representatives of the Engineer, Contractor and the ET were conducted in the reporting month as shown in below:
- Contract No. NE/2015/01: 1, 8, 15 and 22 February 2017
 - Contract No. NE/2015/02: 2, 9, 14 and 23 February 2017
- Monthly joint site inspection with the representative of IEC was conducted on 22 February 2017 (Contract No. NE/2015/01) and 23 February 2017 (Contract No. NE/2015/02).

Implementation Status of Environmental Mitigation Measures

- 10.3 According to the EIA Study Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Implementation Schedule and Recommended Mitigation Measures is provided in **Appendix N**.
- 10.4 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarized in **Table 10.1**.

Table 10.1 Observations and Recommendations of Site Audit

| Parameters | Date | Observations and Recommendations | Follow-up |
|--------------------------------|----------------------------|--|--|
| Contract No. NE/2015/01 | | | |
| <i>Water Quality</i> | 21 Dec 2016 | <u>Reminder</u> : To remove general refuse in u-channel near the discharge point of CKL. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 11 January 2017. |
| | 04, 11, 18 and 25 Jan 2017 | <u>Reminder</u> : To remove the sand accumulated in catchpit in TKO. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 1 February 2017. |
| | 8 Feb 2017 | <u>Reminder</u> : To properly cover the exposed slope by impervious material at slope at TKO. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 15 February 2017. |
| | 22 Feb 2017 | <u>Observation</u> : Gaps observed between silt curtain and site boundary in TKO. The Contractor is reminded to provide and repair the silt curtain to fully enclose the site. | Follow up action will be reported in next reporting month. |
| | 22 Feb 2017 | <u>Observation</u> : Silty water observed in the catchpits in TKO. The Contractor is reminded to remove the silt and sediment in catchpits regularly. | Follow up action will be reported in next reporting month. |
| | 22 Feb 2017 | <u>Reminder</u> : To remove the sand material deposited near the seafront at Portion WAI. | Follow up action will be reported in next reporting month. |

| Parameters | Date | Observations and Recommendations | Follow-up |
|------------------------------------|---|---|--|
| <i>Noise</i> | 18, 25 Jan, 1, 8, 15, 22 Feb 2017 | <u>Reminder:</u> The contractor is reminded to provide noise mitigation measures (e.g. Temporary noise barrier or Full enclosure) to PME as proposed in the approved NMP in Cha Kwo Ling. | Follow up action will be reported in next reporting month. |
| <i>Landscape and Visual</i> | -- | -- | -- |
| <i>Air Quality</i> | 25 Jan 2017 | <u>Observation:</u> Part of open slope at TKO observed dry. The contractor is reminded to provide water spray to prevent dust generation. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 1 February 2017. |
| | 8 Feb 2017 | <u>Reminder:</u> To properly cover the exposed slope by impervious material at slope at TKO. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 15 February 2017. |
| | 15 Feb 2017 | <u>Reminder:</u> To remove the dusty cement bags after use in TKO. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 22 February 2017. |
| | 15 Feb 2017 | <u>Reminder:</u> To provide enough water spray to slope of excavation area in CKL | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 22 February 2017. |
| <i>Waste / Chemical Management</i> | 1 Feb 2017 | <u>Reminder:</u> To provide drip tray to chemical containers in Portion WAI. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 8 February 2017. |
| | 8 Feb 2017 | <u>Reminder:</u> To removed oil stain on paved ground at site Portion WAI. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 15 February 2017. |
| <i>Permits/ Licenses</i> | -- | -- | -- |
| Contract No. NE/2015/02 | | | |
| <i>Water Quality</i> | 26 Jan 2017 | <u>Reminder:</u> To provide sand bag bunds near access gate of Area A. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 2 February 2017. |
| | 2 Feb 2017 | <u>Reminder:</u> To prevent silty water flow out of site during wheel washing at Area A. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 9 February 2017. |
| | 9 Feb 2017 | <u>Reminder:</u> To repair the site curtain for cofferdam works and prevent any gap between the silt curtain and crane barge. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 14 February 2017. |
| | 14 Feb 2017 | <u>Reminder:</u> To provide sand bag bunds to gullies at site access near the site office in Area A. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 23 February 2017. |
| | 23 Feb 2017 | <u>Reminder:</u> Accumulated sand in U-channel should be removed more frequently. | Follow up action will be reported in next reporting month. |
| | 23 Feb 2017 | <u>Reminder:</u> Concrete bund should be provided to the footing of hoarding to prevent silt runoff out of the site at Portion 8. | Follow up action will be reported in next reporting month. |
| | 23 Feb 2017 | <u>Reminder:</u> Muddy water on the ground | Follow up action will be reported |

| Parameters | Date | Observations and Recommendations | Follow-up |
|------------------------------------|-------------|--|--|
| | | surface should be directed to the wastewater treatment facilities before discharge. | in next reporting month. |
| <i>Noise</i> | -- | -- | -- |
| <i>Landscape and Visual</i> | -- | -- | -- |
| <i>Air Quality</i> | 26 Jan 2017 | <u>Reminder:</u> To cover stockpile of dusty material by impervious sheets before CNY holidays at Portion 5. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 2 February 2017. |
| | 14 Feb 2017 | <u>Reminder:</u> Provide water spray to dry unpaved area in Area A to avoid dust generation. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 23 February 2017. |
| | 14 Feb 2017 | <u>Reminder:</u> To provide NRMM label to crane in Area A. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 23 February 2017. |
| | 23 Feb 2017 | <u>Reminder:</u> Stockpile of dusty material should be covered by impervious sheet to prevent dust generation at Portion 8. | Follow up action will be reported in next reporting month. |
| <i>Waste / Chemical Management</i> | 9 Feb 2017 | <u>Reminder:</u> To remove the construction material from drip tray and provide a plug for drip tray on derrick lighter for marine GI works. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 14 February 2017. |
| | 23 Feb 2017 | <u>Reminder:</u> Accumulated waste should be removed at Portion 8. | Follow up action will be reported in next reporting month. |
| <i>Permits/ Licenses</i> | 9 Feb 2017 | <u>Reminder:</u> To update the Environmental Permit display on crane barge. | The deficiency was observed to be improved/rectified by the Contractor during the audit session on 14 February 2017. |

11. WASTE MANAGEMENT

- 11.1 Waste generated from this Project includes inert construction and demolition (C&D) materials, non-inert C&D materials and marine sediments. Inert C&D waste includes soil, broken rock, broken concrete and building debris, while non-inert C&D materials are made up of C&D waste which cannot be reused or recycled and has to be disposed of at the designated landfill sites. Marine sediment shall be expected from excavation and dredging works of this Project.
- 11.2 With reference to relevant handling records of this Project, the quantities of different types of waste generated in the reporting month are summarised and presented in **Appendix P**.
- 11.3 The Contractors are advised to minimize the wastes generated through the recycling or reusing. All mitigation measures stipulated in the approved EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summited in **Appendix N**.

12. ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 12.1 No exceedance of Action and Limit Levels of air quality monitoring in the reporting period.
- 12.2 Two Action Level exceedance for each of January and February 2017 was recorded due to the documented complaints received in the reporting month. No Limit Level exceedance was recorded.
- 12.3 One Action Level exceedance and Six Limit Level exceedances in ground water quality monitoring was recorded during the reporting period. The exceedance is considered to be non-Project related. The summary of exceedance is provided in **Appendix K**.
- 12.4 Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that the Action / Limit Levels are exceeded, the actions in accordance with the Event and Action Plans in **Appendix M** be carried out.

Summary of Environmental Non-Compliance

- 12.5 No environmental non-compliance was recorded in the reporting month.

Summary of Environmental Complaint

- 12.6 Three environmental complaints were received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix O**. The investigation status and result is also reported in **Appendix O**.

Summary of Environmental Summon and Successful Prosecution

- 12.7 There was no successful environmental prosecution or notification of summons received since the Project commencement. The Cumulative Log for environmental summon and successful prosecution since the commencement of the Project is presented in **Appendix O**.

13. FUTURE KEY ISSUES

13.1 Tentative construction programmes for the next three months are provided in **Appendix Q**.

13.2 Major site activities to be undertaken for the next reporting period are summarized in **Table 13.1**:

Table 13.1 Summary Table for Site Activities in the next Reporting Period

| Contract No. | Project Title | Site Activities (March 2017) | |
|---------------------|---|---|---|
| NE/2015/01 | Tseung Kwan O - Lam Tin Tunnel - Main Tunnel and Associated Works | Lam Tin Interchange | 1) Excavation for Tunnel Adit 2) Haul Road Construction 3) Slope Feature no. 11NE-D/C119 (along Lei Yue Mun Road) 4) EHC2 U-Trough 5) Site Formation – Area 1G1 6) Site Formation – Area 2 – 4 7) Temp Steel Bridge across CKL Road 8) Pipe Pile Wall – Area 2A 9) Ground Investigation |
| | | TKO Interchange | 1) Haul Road Construction and Site Formation 2) Temporary Barging Facilities 3) BMCPC Bridge Temporary Diversion |
| NE/2015/02 | Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works | 1) Construction of Retaining wall 2) Backfilling Retaining wall 3) Installation of silt curtain 4) Bedding Preparation and Installation of Temporary Cofferdam 5) Extension of Sheet Piles 6) Installation of Double Water Gate 7) Temporary road for Tong Yin Street 8) Transformer room construction works 9) Ground investigation 10) Construction of Temporary Transformer Room 11) Site establishment - Site Haul Road; 12) Installation of 2100mm dia. Drainage at Portion IV 13) Pre-bored and ELS works for pipes 14) Construction of U-trough 15) Preboring work for Road P2 & SR2 U-trough 16) Pre-stage temporary road construction works at Tong Yin Street 17) Tree Transplantation works 18) Assembly of General Site Office; 19) Piling Work | |

Key Issues for the Coming Month

13.3 Key environmental issues in the coming month include:

- Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- Noisy construction activity such as rock-breaking activities and piling works;
- Runoff from exposed slope or site area;
- Wastewater and runoff discharge from site;
- Accumulation of silt, mud and sand along U-channels and sedimentation tanks;
- Set up and implementation of temporary drainage system for the surface runoff;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation and storage of general and construction waste on site; and
- Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation.

Monitoring Schedule for the Next Month

13.4 The tentative environmental monitoring schedules for the next month are shown in **Appendix D**.

14. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 14.1 This is the 4th Environmental Monitoring and Audit (EM&A) Report which presents the EM&A works undertaken during the period in February 2017 in accordance with EM&A Manual and the requirement under EP.

Air Quality Monitoring

- 14.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.
- 14.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting month, except that monitoring at Station AM4(A) – Cha Kwo Ling Public Cargo Working Area Administrative Office on 27 January and 1 February 2017 were cancelled due to power supply failure. The monitoring were re-scheduled to 2 and 3 February 2017. No Action/Limit Level exceedance was recorded.

Construction Noise Monitoring

- 14.4 All noise monitoring was conducted as scheduled in the reporting month. Two Action Level exceedance for each of January and February 2017 was recorded due to the documented complaints received in the reporting month. No Limit Level exceedance was recorded.

Water Quality Monitoring

- 14.5 All groundwater Quality monitoring was conducted as scheduled in the reporting month. One Action Level Exceedance and Six Limit Level exceedance were recorded. The exceedance is considered to be non-Project related.
- 14.6 All marine water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Ecological Monitoring

- 14.7 The 1st post-translocation coral monitoring survey is postponed to early March 2017 due to adverse weather and windy conditions in February 2017.

Monitoring on Cultural Heritage

- 14.8 Monitoring of vibration impacts at Cha Kwo Ling Tin Hau Temple has not commenced in the reporting period as there is no construction works less than 100m from the temple.

Landscape and Visual Monitoring and Audit

- 14.9 No non-compliance of the landscape and visual impact was recorded in the reporting month.

Landfill Gas Monitoring

- 14.10 Monitoring of landfill gases commenced in the reporting month and were carried out by the Contractor at excavation location, Portion III. No Limit Level exceedance was recorded.

Environmental Site Inspection

- 14.11 Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Environmental Team. During site inspections in the reporting month, no non-conformance was identified

Complaint, Prosecution and Notification of Summons

- 14.12 3 environmental complaints, no successful prosecution or notification of summons were received during the reporting period. 2 environmental complaints in January 2017 were received during the reporting period.

Recommendations

- 14.13 Joint weekly site audits by the representatives of the Engineer, Contractor and the ET were conducted in the reporting month. According to environmental audits performed, the following recommendations were made:

Air Quality Impact

- To implement dust suppression measures such as water spray on all haul roads, stockpiles, dry surfaces, excavation, rock breaking works and open slopes.
- To cover stockpile of dusty material by impervious material.
- To remove the dusty cement bags after use.
- To properly display NRMM Label to Powered Mechanical Equipment on site

Construction Noise

- To provide noise mitigation measures (e.g. Temporary noise barrier or Full enclosure) to PME as proposed in the approved Noise Mitigation Plan.

Water Quality Impact

- To properly cover the exposed slope by impervious material at slope
- To prevent any surface runoff discharge into any stream course or the waters in vicinity.
- To provide and repair the silt curtain to fully enclose the site and prevent any gap between the silt curtains.
- To review and implement temporary drainage system.
- To clear the silt and sediment in the sedimentation tanks or those accumulated in drainage or catchpits.
- To remove the sand material deposited near the seafront.
- To provide bund to gullies and stockpile storage area on site to avoid leakage of surface runoff.
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge.
- To prevent silty water flow out of site during wheel washing.

Waste/Chemical Management

- To provide drip tray to chemical containers and provide plus to drip tray.
- To check for any accumulation of waste materials or rubbish on site.
- To removed oil stain on paved ground

Landscape and Visual

- N/A

Permits/Licenses

- To update the Environmental Permit display on marine works area.

FIGURES



LEGEND:

PROJECT BOUNDARY

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Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction

Site Layout Plan

| | | | |
|---------|--------------|------------|----------|
| SCALE | 1:15000 @ A4 | DATE | NOV 2016 |
| CHECK | JF | DRAWN | JW |
| JOB No. | MA16034 | FIGURE NO. | 1 |
| | | REV | - |



LEGEND:

-  PROJECT BOUNDARY
-  AIR QUALITY MONITORING STATION





Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction

Air Quality Monitoring Stations

| | | | | |
|---------|--------------|------------|----------|-----|
| SCALE | 1:15000 @ A4 | DATE | DEC 2016 | |
| CHECK | JF | DRAWN | JW | |
| JOB No. | MA16034 | FIGURE NO. | 2 | REV |
| | | | | - |



LEGEND:

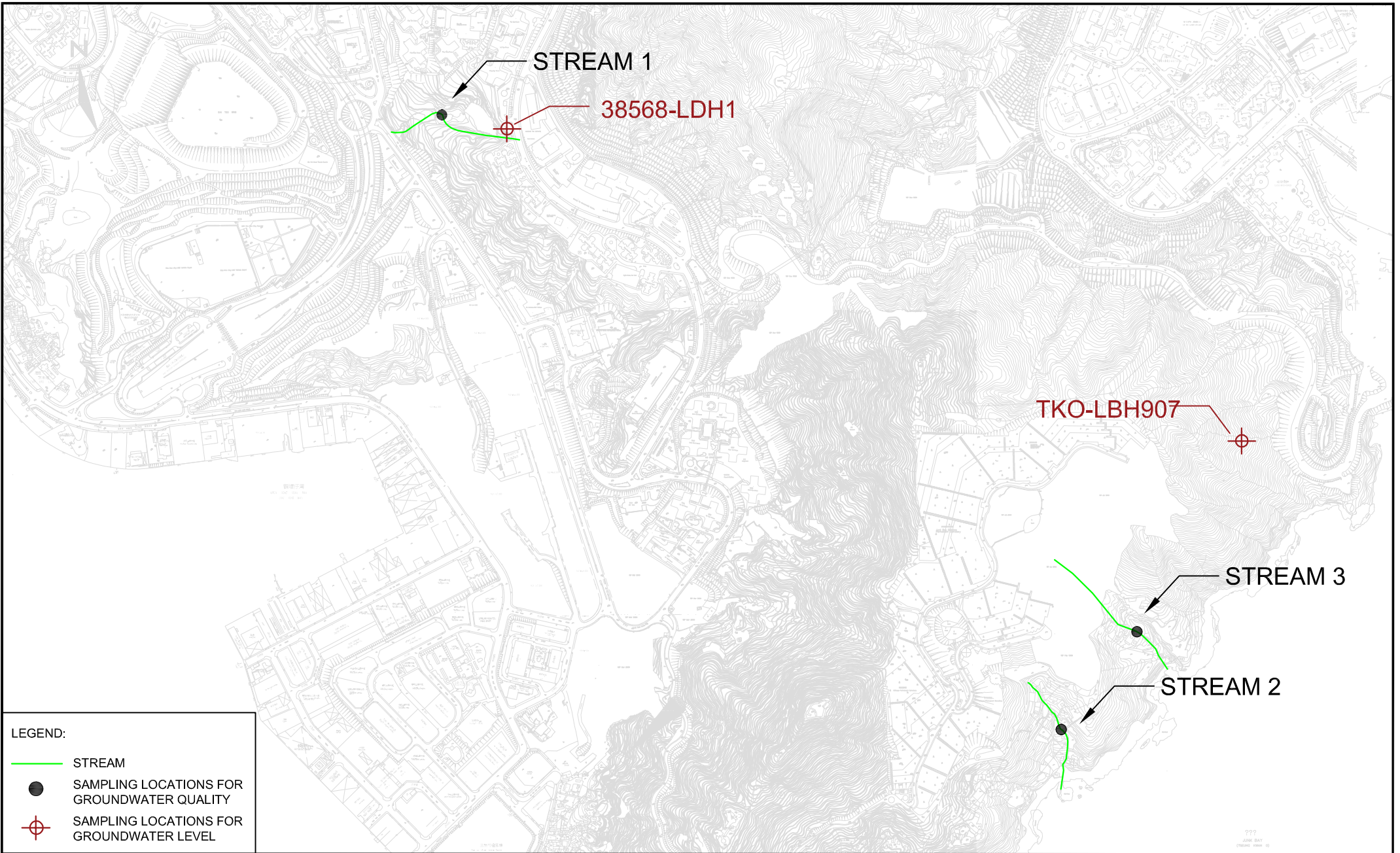
-  PROJECT BOUNDARY
-  NOISE MONITORING STATION

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Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction

Noise Monitoring Stations

| | | | | |
|---------|--------------|------------|----------|----------|
| SCALE | 1:15000 @ A4 | DATE | DEC 2016 | |
| CHECK | JF | DRAWN | JW | |
| JOB No. | MA16034 | FIGURE NO. | 3 | REV - |



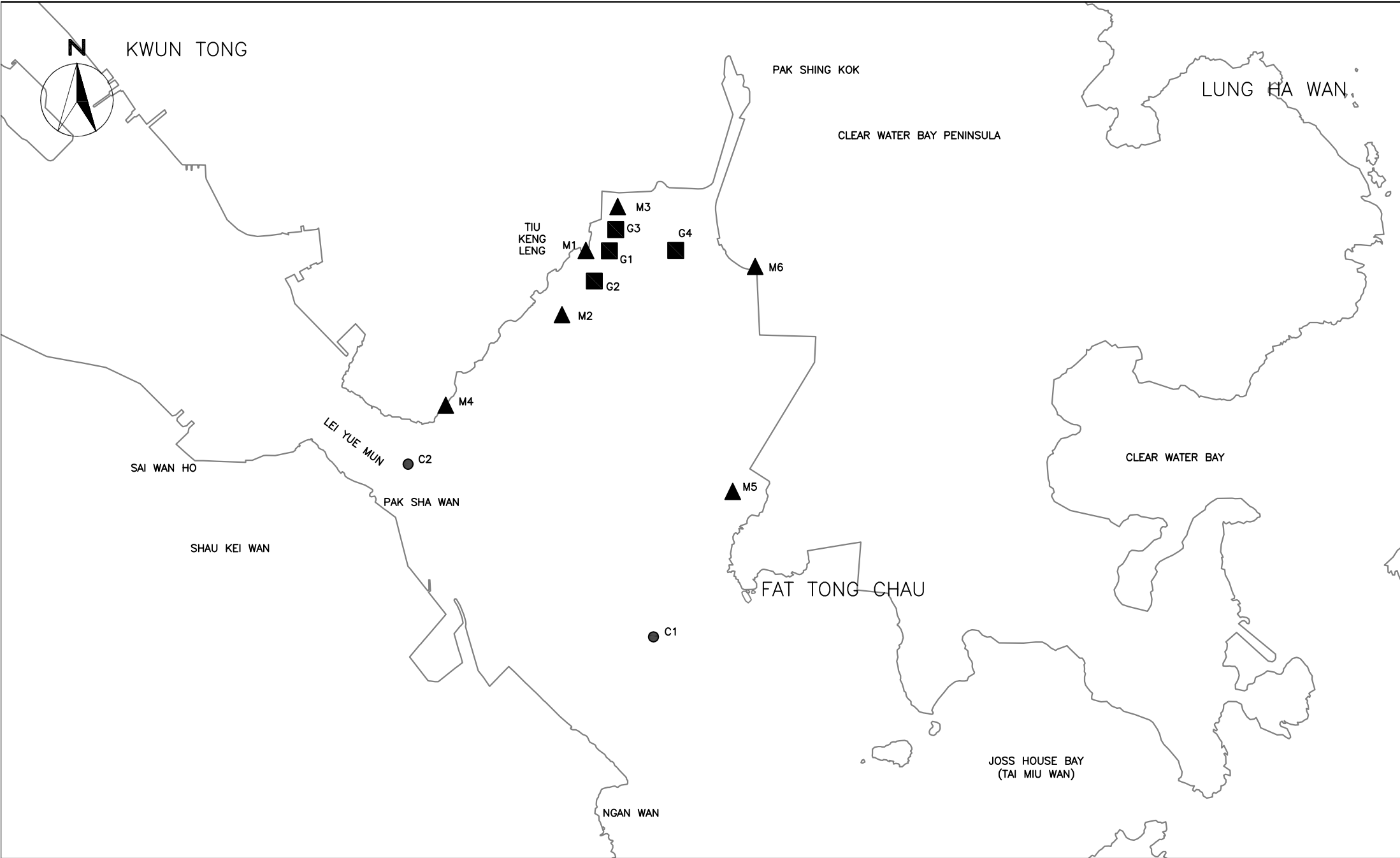
LEGEND:

- STREAM
- SAMPLING LOCATIONS FOR GROUNDWATER QUALITY
- ⊕ SAMPLING LOCATIONS FOR GROUNDWATER LEVEL

CINOTECH
Cinotech Consultants Limited

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
**Location of Streams for Groundwater Quality and
Groundwater Level Monitoring**

| | | | | |
|---------|--------------|------------|----------|----------|
| SCALE | 1:10000 @ A4 | DATE | OCT 2016 | |
| CHECK | JF | DRAWN | JW | |
| JOB No. | MA16034 | FIGURE NO. | 4 | REV - |



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Agreement No. CE/59/2015 (EP)
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel –
 Design and Construction

Locations of Water Quality Monitoring Stations

| | | | | |
|-------------|---------|------------|----------|----------|
| SCALE | N.T.S | DATE | AUG 2016 | |
| CHECK | JF | DRAWN | JW | |
| PROJECT NO. | MA16034 | FIGURE NO. | 5 | REV — |



Title Agreement No. CE/59/2015 (EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
 Locations of Landfill Gas Monitoring

Scale N.T.S
 Date Dec-16

Project No. MA16034
 Figure 6



**APPENDIX A
ACTION AND LIMIT LEVELS**

APPENDIX A – Action and Limit Levels**Air Quality*****1-hr TSP***

| Monitoring Stations | Location | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|---------------------|--|--|---------------------------------------|
| AM1 | Tin Hau Temple | 275 | 500 |
| AM2 | Sai Tso Wan Recreation Ground | 273 | |
| AM3 | Yau Lai Estate Bik Lai House | 271 | |
| AM4 | Sitting-out Area at Cha Kwo Ling Village | 278 | |
| AM5(A) | Tseung Kwan O DSD Desilting Compound | 273 | |
| AM6(A) | Park Central, L1/F Open Space Area | 285 | |

24-hr TSP

| Monitoring Stations | Location | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|---------------------|---|--|---------------------------------------|
| AM1 | Tin Hau Temple | 173 | 500 |
| AM2 | Sai Tso Wan Recreation Ground | 192 | |
| AM3 | Yau Lai Estate Bik Lai House | 167 | |
| AM4(A) | Cha Kwo Ling Public Cargo Working Area Administrative Office | 210 | |
| AM5(A) | Tseung Kwan O DSD Desilting Compound | 175 | |
| AM6(A) | Park Central, L1/F Open Space Area | 165 | |

Noise

| Time Period | Action Level | Limit Level |
|---|---|----------------------------------|
| 0700-1900 hrs on normal weekdays | When one documented complaint is received | 75 dB(A) ⁽¹⁾ |
| 1900-2300 on all days and 0700-2300 on general holidays (including Sundays) | | 60/65/70 dB(A) ⁽²⁾⁽³⁾ |
| 2300-0700 on all days | | 45/50/55 dB(A) ⁽²⁾⁽³⁾ |

¹ 70 dB(A) for schools and 65 dB(A) for schools during examination period.² Acceptable Noise Levels for Area Sensitivity Rating of A/B/C³ If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

Water Quality***Groundwater***

| Parameters | Action | Limit |
|--|---------------|--------------|
| DO in mg L ⁻¹ | 7.6 | 7.5 |
| pH | 6.0 – 8.9 | 6.0 – 9.0 |
| BOD ₅ in mg L ⁻¹ | 2.0 | 2.0 |
| TOC in mg L ⁻¹ | 4.3 | 4.9 |
| Total Nitrogen in mg L ⁻¹ | 1.7 | 1.7 |
| Ammonia-N in mg L ⁻¹ | 0.05 | 0.06 |
| Total Phosphate in mg L ⁻¹ | 0.05 | 0.05 |
| SS in mg L ⁻¹ | 5.5 | 6.2 |
| Turbidity in NTU | 2.2 | 2.4 |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, 5-day biochemical oxygen demand (BOD₅), Total organic carbon (TOC), Total Nitrogen, Ammonia-N and Total Phosphate, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.

Groundwater Level Monitoring

| Drill Hole No. | 38568-LDH1 | TKO-LBH907 |
|-----------------------|-------------------|-------------------|
| Action Level (mPD) | +74.65 | +17.59 |

Marine Water Quality

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | | |
| | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day | <u>6.9mg/L</u> or 130% of upstream control station's SS at the same tide of the same day |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day |
| | <u>Station M6</u> | | |
| Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> | |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Ecology***Post-translocation Coral Monitoring***

| Parameter | Action Level Definition | Limit Level Definition |
|------------------|---|---|
| Mortality | If during Impact Monitoring a 15% increase in the percentage of partial mortality on hard corals occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Action Level is exceeded. | If during the Impact Monitoring a 25% increase in the percentage of partial mortality occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Limit Level is exceeded. |

Landfill Gas Monitoring

| Parameter | Limit Level |
|------------------|----------------------------------|
| Oxygen | <19% |
| | <18% |
| Methane | >10% LEL (i.e. > 0.5% by volume) |
| | >20% LEL (i.e. > 1% by volume) |
| Carbon Dioxide | >0.5% |
| | >1.5% |

**APPENDIX B
COPIES OF CALIBRATION
CERTIFICATES**

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA16034/08/0003

Station: AM1 - Tin Hau Temple Operator: WK
 Date: 19-Jan-17 Next Due Date: 18-Mar-17
 Equipment No.: A-01-05 Serial No. 10599

| Ambient Condition | | | |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 292.6 | Pressure, Pa (mmHg) | 769.3 |

| Orifice Transfer Standard Information | | | | | |
|---------------------------------------|----------|--|--------|---------------|----------|
| Serial No.: | 2896 | Slope, mc (CFM) | 0.0598 | Intercept, bc | -0.05079 |
| Last Calibration Date: | 4-Mar-16 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | |
| Next Calibration Date: | 3-Mar-17 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ | | | |

| Calibration of TSP Sampler | | | | | |
|----------------------------|------------------------------------|--|-------------------|--------------------------------|---|
| Calibration Point | Orifice | | | HVS | |
| | ΔH (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X-axis | ΔW (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1 | 13.4 | 3.72 | 63.01 | 7.3 | 2.74 |
| 2 | 10.1 | 3.23 | 54.82 | 5.5 | 2.38 |
| 3 | 8.8 | 3.01 | 51.23 | 4.9 | 2.25 |
| 4 | 5.4 | 2.36 | 40.31 | 3.2 | 1.82 |
| 5 | 3.3 | 1.84 | 31.70 | 2.0 | 1.44 |

By Linear Regression of Y on X

Slope, mw = 0.0412 Intercept, bw = 0.1363
 Correlation coefficient* = 0.9997

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 3.54

Remarks: _____

Conducted by: wk Tang Signature: [Signature] Date: 19/1/17
 Checked by: [Signature] Signature: [Signature] Date: 19 January 2017

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA16034/08/0003

Station: AM2 - Sai Tso Wan Recreation Ground Operator: WK
 Date: 13-Jan-17 Next Due Date: 12-Mar-17
 Equipment No.: A-01-08 Serial No. 1287

| Ambient Condition | | | |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 285.6 | Pressure, Pa (mmHg) | 765.3 |

| Orifice Transfer Standard Information | | | | | |
|---------------------------------------|----------|--|--------|---------------|----------|
| Serial No.: | 2896 | Slope, mc (CFM) | 0.0598 | Intercept, bc | -0.05079 |
| Last Calibration Date: | 4-Mar-16 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | |
| Next Calibration Date: | 3-Mar-17 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ | | | |

| Calibration of TSP Sampler | | | | | |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point | Orifice | | | HVS | |
| | ΔH (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | ΔW (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1 | 13.2 | 3.72 | 63.14 | 7.4 | 2.79 |
| 2 | 10.8 | 3.37 | 57.19 | 5.8 | 2.47 |
| 3 | 8.7 | 3.02 | 51.42 | 4.9 | 2.27 |
| 4 | 5.2 | 2.34 | 39.94 | 3.0 | 1.78 |
| 5 | 3.2 | 1.83 | 31.52 | 1.8 | 1.38 |

By Linear Regression of Y on X

Slope, mw = 0.0437 Intercept, bw = 0.0097
 Correlation coefficient* = 0.9989

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 3.40

Remarks: _____

Conducted by: Wk Tang Signature: Kwan
 Checked by: HW Signature: _____

Date: 13/1/17
 Date: 13 January 2017

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA16034/03/0003

Station: AM3 - Yau Lai Estate, Bik Lai House Operator: WK
 Date: 9-Jan-17 Next Due Date: 8-Mar-17
 Equipment No.: A-01-03 Serial No. 10379

| Ambient Condition | | | |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 292.6 | Pressure, Pa (mmHg) | 766.5 |

| Orifice Transfer Standard Information | | | | | |
|---------------------------------------|----------|--|--------|---------------|----------|
| Serial No.: | 2896 | Slope, mc (CFM) | 0.0598 | Intercept, bc | -0.05079 |
| Last Calibration Date: | 4-Mar-16 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | |
| Next Calibration Date: | 3-Mar-17 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ | | | |

| Calibration of TSP Sampler | | | | | |
|----------------------------|------------------------------------|--|------------------------|--------------------------------|--|
| Calibration Point | Orifice | | | HVS | |
| | ΔH (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | ΔW (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1 | 12.6 | 3.60 | 61.02 | 6.9 | 2.66 |
| 2 | 10.7 | 3.32 | 56.30 | 5.7 | 2.42 |
| 3 | 7.9 | 2.85 | 48.49 | 4.2 | 2.08 |
| 4 | 5.2 | 2.31 | 39.50 | 2.7 | 1.67 |
| 5 | 3.3 | 1.84 | 31.64 | 1.8 | 1.36 |

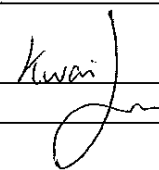
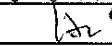
By Linear Regression of Y on X

Slope, mw = 0.0444 Intercept, bw = -0.0652
 Correlation coefficient* = 0.9993

*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation | |
|---|-------------|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM | |
| From the Regression Equation, the "Y" value according to | |
| $mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ | |
| Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ | <u>3.30</u> |

Remarks: _____

Conducted by: Wk Tang Signature:  Date: 9/1/17
 Checked by:  Signature: _____ Date: 9 January 2017

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA16034/54/0003

Station: AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office Operator: WK

Date: 23-Jan-17 Next Due Date: 22-Mar-17

Equipment No.: A-01-54 Serial No. 1536

| Ambient Condition | | | |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 290.6 | Pressure, Pa (mmHg) | 772.2 |

| Orifice Transfer Standard Information | | | | | |
|---------------------------------------|----------|--|--------|---------------|----------|
| Serial No.: | 2896 | Slope, mc (CFM) | 0.0598 | Intercept, bc | -0.05079 |
| Last Calibration Date: | 4-Mar-16 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | |
| Next Calibration Date: | 3-Mar-17 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ | | | |

| Calibration of TSP Sampler | | | | | |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point | Orifice | | | HVS | |
| | ΔH (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | ΔW (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1 | 17.7 | 4.29 | 72.68 | 10.2 | 3.26 |
| 2 | 13.2 | 3.71 | 62.88 | 7.8 | 2.85 |
| 3 | 10.6 | 3.32 | 56.43 | 6.4 | 2.58 |
| 4 | 6.7 | 2.64 | 45.04 | 3.9 | 2.02 |
| 5 | 4.3 | 2.12 | 36.25 | 2.7 | 1.68 |

By Linear Regression of Y on X

Slope, mw = 0.0442 Intercept, bw : 0.0624

Correlation coefficient* = 0.9992

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 3.70

Remarks: _____

Conducted by: Wk Tang Signature: [Signature]

Date: 23/1/17
 Date: 23 January 2017

Checked by: [Signature] Signature: _____

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA16034/37/0003

Station: AM5(A) - DSD Desilting Compound Operator: WK
 Date: 13-Jan-17 Next Due Date: 12-Mar-17
 Equipment No.: A-01-37 Serial No. 1704

| Ambient Condition | | | |
|---------------------|-------|---------------------|-----|
| Temperature, Ta (K) | 285.4 | Pressure, Pa (mmHg) | 765 |

| Orifice Transfer Standard Information | | | | | |
|---------------------------------------|----------|--|--------|---------------|----------|
| Serial No.: | 2896 | Slope, mc (CFM) | 0.0598 | Intercept, bc | -0.05079 |
| Last Calibration Date: | 4-Mar-16 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | |
| Next Calibration Date: | 3-Mar-17 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ | | | |

| Calibration of TSP Sampler | | | | | |
|----------------------------|------------------------------------|--|---------------------|--------------------------------|---|
| Calibration Point | Orifice | | | HVS | |
| | ΔH (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | ΔW (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1 | 17.2 | 4.25 | 71.96 | 8.9 | 3.06 |
| 2 | 13.8 | 3.81 | 64.55 | 7.6 | 2.83 |
| 3 | 10.5 | 3.32 | 56.41 | 5.8 | 2.47 |
| 4 | 6.3 | 2.57 | 43.89 | 3.5 | 1.92 |
| 5 | 4.2 | 2.10 | 35.99 | 2.4 | 1.59 |

By Linear Regression of Y on X

Slope, mw = 0.0417 Intercept, bw : 0.0967
 Correlation coefficient* = 0.9988

*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation | |
|---|-------------|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM | |
| From the Regression Equation, the "Y" value according to | |
| $mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ | |
| Therefore, Set Point; W = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ | <u>3.40</u> |

Remarks: _____

Conducted by: Wk. Tang Signature: [Signature] Date: 13/1/17
 Checked by: [Signature] Signature: [Signature] Date: 13 January 2017

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA16034/07/0002

Station AM6 - Park Central Operator: WK
 Date: 5-Dec-16 Next Due Date: 4-Feb-17
 Equipment No.: A-01-07 Serial No. 10592

| Ambient Condition | | | |
|---------------------|-------|---------------------|-------|
| Temperature, Ta (K) | 294.6 | Pressure, Pa (mmHg) | 766.2 |

| Orifice Transfer Standard Information | | | | | |
|---------------------------------------|----------|--|--------|---------------|----------|
| Serial No.: | 2896 | Slope, mc (CFM) | 0.0598 | Intercept, bc | -0.05079 |
| Last Calibration Date: | 4-Mar-16 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | |
| Next Calibration Date: | 3-Mar-17 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ | | | |

| Calibration of TSP Sampler | | | | | |
|----------------------------|------------------------------------|--|------------------------|--------------------------------|--|
| Calibration Point | Orifice | | | HVS | |
| | ΔH (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X - axis | ΔW (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1 | 11.8 | 3.47 | 58.87 | 7.5 | 2.77 |
| 2 | 9.7 | 3.15 | 53.45 | 5.7 | 2.41 |
| 3 | 7.2 | 2.71 | 46.17 | 4.5 | 2.14 |
| 4 | 5.0 | 2.26 | 38.62 | 3.1 | 1.78 |
| 5 | 3.4 | 1.86 | 31.99 | 2.0 | 1.43 |

By Linear Regression of Y on X
 Slope, mw = 0.0481 Intercept, bw : -0.0983
 Correlation coefficient* = 0.9974

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 3.80

Remarks: _____

Conducted by: Wk Tang Signature: Kwan Date: 5/12/16
 Checked by: [Signature] Signature: _____ Date: 5 December 2016



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE
 VILLAGE OF CLEVELAND, OH
 45002
 513.467.9000
 877.263.7610 TOLL FREE
 513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 04, 2016 Rootmeter S/N 0438320 Ta (K) - 295
 Operator Tisch Orifice I.D. - 2896 Pa (mm) - 755.65

| PLATE OR Run # | VOLUME START (m3) | VOLUME STOP (m3) | DIFF VOLUME (m3) | DIFF TIME (min) | METER DIFF Hg (mm) | ORFICE DIFF H2O (in.) |
|----------------|-------------------|------------------|------------------|-----------------|--------------------|-----------------------|
| 1 | NA | NA | 1.00 | 1.4340 | 3.2 | 2.00 |
| 2 | NA | NA | 1.00 | 1.0250 | 6.4 | 4.00 |
| 3 | NA | NA | 1.00 | 0.9150 | 7.9 | 5.00 |
| 4 | NA | NA | 1.00 | 0.8770 | 8.7 | 5.50 |
| 5 | NA | NA | 1.00 | 0.7210 | 12.7 | 8.00 |

DATA TABULATION

| Vstd | (x axis) Qstd | (y axis) | Va | (x axis) Qa | (y axis) |
|-------------------------------------|---------------|----------|---------------------------|-------------|----------|
| 1.0001 | 0.6974 | 1.4173 | 0.9957 | 0.6944 | 0.8836 |
| 0.9959 | 0.9716 | 2.0044 | 0.9915 | 0.9674 | 1.2496 |
| 0.9938 | 1.0861 | 2.2410 | 0.9894 | 1.0814 | 1.3971 |
| 0.9928 | 1.1320 | 2.3503 | 0.9885 | 1.1271 | 1.4653 |
| 0.9875 | 1.3696 | 2.8346 | 0.9831 | 1.3636 | 1.7672 |
| Qstd slope (m) = 2.11176 | | | Qa slope (m) = 1.32235 | | |
| intercept (b) = -0.05079 | | | intercept (b) = -0.03166 | | |
| coefficient (r) = 0.99982 | | | coefficient (r) = 0.99982 | | |
| y axis = SQRT[H2O(Pa/760) (298/Ta)] | | | y axis = SQRT[H2O(Ta/Pa)] | | |

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
 Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{ [SQRT(H2O(Pa/760) (298/Ta))] - b }
 Qa = 1/m{ [SQRT H2O(Ta/Pa)] - b }

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/160820 |
| Date of Issue: | 2016-08-20 |
| Date Received: | 2016-08-20 |
| Date Tested: | 2016-08-20 |
| Date Completed: | 2016-08-20 |
| Next Due Date: | 2017-02-19 |

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

| | |
|--------------|----------------------|
| Description | : Weather Monitor II |
| Manufacturer | : Davis Instruments |
| Model No. | : 7440 |
| Serial No. | : MC01010A44 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 24 degree Celsius |
| Relative Humidity | : 56 % |

Test Specifications:

1. Performance check of anemometer
2. Performance check of wind direction sensor

Methodology:

In-house method with reference anemometer (RS232 Integral Vane Digital Anemometer)

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

| | |
|------------------|------------|
| Test Report No.: | C/160820 |
| Date of Issue: | 2016-08-20 |
| Date Received: | 2016-08-20 |
| Date Tested: | 2016-08-20 |
| Date Completed: | 2016-08-20 |
| Next Due Date: | 2017-02-19 |
| Page: | 2 of 2 |

Results:

1. Performance check of anemometer

| Air Velocity, m/s | | Difference D (m/s) |
|-------------------------|----------------------|--------------------|
| Instrument Reading (V1) | Reference Value (V1) | D = V1 - V2 |
| 2.00 | 2.00 | 0.00 |

2. Performance check of wind direction sensor

| Wind Direction (°) | | Difference D (°) |
|-------------------------|----------------------|------------------|
| Instrument Reading (W1) | Reference Value (W2) | D = W1 - W2 |
| 0 | 0 | 0 |
| 45.2 | 45 | 0.2 |
| 90.1 | 90 | 0.1 |
| 134.8 | 135 | -0.2 |
| 180.3 | 180 | 0.3 |
| 225.1 | 225 | 0.1 |
| 270.2 | 270 | 0.2 |
| 315.1 | 315 | 0.1 |
| 360 | 360 | 0 |

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

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/W/160408 |
| Date of Issue: | 2016-04-09 |
| Date Received: | 2016-04-08 |
| Date Tested: | 2016-04-08 |
| Date Completed: | 2016-04-09 |
| Next Due Date: | 2016-10-08 |

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

| | |
|--------------|----------------------|
| Description | : Weather Monitor II |
| Manufacturer | : Davis Instruments |
| Model No. | : 7440 |
| Serial No. | : MC20813A11 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 23 degree Celsius |
| Relative Humidity | : 55 % |

Test Specifications:

1. Performance check of anemometer
2. Performance check of wind direction sensor

Methodology:

In-house method with reference anemometer (RS232 Integral Vane Digital Anemometer)

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



PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|------------------|------------|
| Test Report No.: | C/W/160408 |
| Date of Issue: | 2016-04-09 |
| Date Received: | 2016-04-08 |
| Date Tested: | 2016-04-08 |
| Date Completed: | 2016-04-09 |
| Next Due Date: | 2016-10-08 |

Page: 2 of 2

Results:

1. Performance check of anemometer

| Air Velocity, m/s | | Difference D (m/s) |
|-------------------------|----------------------|--------------------|
| Instrument Reading (V1) | Reference Value (V1) | D = V1 - V2 |
| 2.00 | 2.00 | 0.00 |

2. Performance check of wind direction sensor

| Wind Direction (°) | | Difference D (°) |
|-------------------------|----------------------|------------------|
| Instrument Reading (W1) | Reference Value (W2) | D = W1 - W2 |
| 0 | 0 | 0 |
| 45.2 | 45 | 0.2 |
| 90.1 | 90 | 0.1 |
| 135.2 | 135 | 0.2 |
| 180.3 | 180 | 0.3 |
| 225 | 225 | 0 |
| 270.1 | 270 | 0.1 |
| 315.2 | 315 | 0.2 |
| 360 | 360 | 0 |

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

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/A/170106B |
| Date of Issue: | 2017-01-09 |
| Date Received: | 2017-01-06 |
| Date Tested: | 2017-01-06 |
| Date Completed: | 2017-01-09 |
| Next Due Date: | 2017-03-08 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

Description : Laser Dust Monitor
 Manufacturer : Sibata
 Model No. : LD-3B
 Serial No. : 853944
 Sensitivity (K) 1 CPM : 0.001 mg/m³
 Sen. Adjustment Scale Setting : 685 CPM
 Equipment No. : A-02-04

Test Conditions:

Room Temperature : 22 degree Celsius
 Relative Humidity : 63 %

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0038 |
|-------------------------|--------|

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/A/170106C |
| Date of Issue: | 2017-01-09 |
| Date Received: | 2017-01-06 |
| Date Tested: | 2017-01-06 |
| Date Completed: | 2017-01-09 |
| Next Due Date: | 2017-03-08 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

Description : Laser Dust Monitor
 Manufacturer : Sibata
 Model No. : LD-3B
 Serial No. : 014750
 Sensitivity (K) 1 CPM : 0.001 mg/m³
 Sen. Adjustment Scale Setting : 790 CPM
 Equipment No. : A-02-06

Test Conditions:

Room Temperature : 22 degree Celsius
 Relative Humidity : 63 %

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0035 |
|-------------------------|--------|

PREPARED AND CHECKED BY:

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



PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/A/170106 |
| Date of Issue: | 2017-01-09 |
| Date Received: | 2017-01-06 |
| Date Tested: | 2017-01-06 |
| Date Completed: | 2017-01-09 |
| Next Due Date: | 2017-03-08 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-------------------------------|---------------------------|
| Description | : Laser Dust Monitor |
| Manufacturer | : Sibata |
| Model No. | : LD-3B |
| Serial No. | : 541146 |
| Sensitivity (K) 1 CPM | : 0.001 mg/m ³ |
| Sen. Adjustment Scale Setting | : 625 CPM |
| Equipment No. | : A-02-07 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 63 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0033 |
|-------------------------|--------|

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/161230 |
| Date of Issue: | 2017-01-03 |
| Date Received: | 2016-12-30 |
| Date Tested: | 2016-12-30 |
| Date Completed: | 2017-01-03 |
| Next Due Date: | 2017-03-02 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-------------------------------|---------------------------|
| Description | : Laser Dust Monitor |
| Manufacturer | : Sibata |
| Model No. | : LD-3B |
| Serial No. | : 095029 |
| Sensitivity (K) 1 CPM | : 0.001 mg/m ³ |
| Sen. Adjustment Scale Setting | : 551 CPM |
| Equipment No. | : A-02-10 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 66 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|--------|
| Correlation Factor (CF) | 0.0038 |
|-------------------------|--------|

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/161230D |
| Date of Issue: | 2017-01-03 |
| Date Received: | 2016-12-30 |
| Date Tested: | 2016-12-30 |
| Date Completed: | 2017-01-03 |
| Next Due Date: | 2017-03-02 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-----------------|--|
| Description | : Dust Monitor |
| Manufacturer | : Met One Instruments |
| Model No. | : AEROCET-531 |
| Serial No. | : N6734 |
| Flow rate | : 0.1 cfm |
| Zero Count Test | : 0 mg (The result of the 2-minute sample) |
| Equipment No. | : A-02-13 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 66 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.183 |
|-------------------------|-------|

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



PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/170217 |
| Date of Issue: | 2017-02-20 |
| Date Received: | 2017-02-17 |
| Date Tested: | 2017-02-17 |
| Date Completed: | 2017-02-20 |
| Next Due Date: | 2017-04-19 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-----------------|-----------------------------|
| Description | : Handheld Particle Counter |
| Manufacturer | : Hal Technology |
| Model No. | : Hal-HPC300 |
| Serial No. | : 3020408 |
| Flow rate | : 0.1 cfm |
| Zero Count Test | : 0 count per 5 minutes |
| Equipment No. | : A-26-01 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 61 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.081 |
|-------------------------|-------|

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/161216B |
| Date of Issue: | 2016-12-19 |
| Date Received: | 2016-12-16 |
| Date Tested: | 2016-12-16 |
| Date Completed: | 2016-12-19 |
| Next Due Date: | 2017-02-18 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-----------------|-----------------------------|
| Description | : Handheld Particle Counter |
| Manufacturer | : Hal Technology |
| Model No. | : Hal-HPC300 |
| Serial No. | : 3020409 |
| Flow rate | : 0.1 cfm |
| Zero Count Test | : 0 count per 5 minutes |
| Equipment No. | : A-26-02 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 23 degree Celsius |
| Relative Humidity | : 64 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.103 |
|-------------------------|-------|

PREPARED AND CHECKED BY:

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



PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/170217A |
| Date of Issue: | 2017-02-20 |
| Date Received: | 2017-02-17 |
| Date Tested: | 2017-02-17 |
| Date Completed: | 2017-02-20 |
| Next Due Date: | 2017-04-19 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

Description : Handheld Particle Counter
 Manufacturer : Hal Technology
 Model No. : Hal-HPC300
 Serial No. : 3020409
 Flow rate : 0.1 cfm
 Zero Count Test : 0 count per 5 minutes
 Equipment No. : A-26-02

Test Conditions:

Room Temperature : 22 degree Celsius
 Relative Humidity : 61 %

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.098 |
|-------------------------|-------|

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


PATRICK TSE
 Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/161216C |
| Date of Issue: | 2016-12-19 |
| Date Received: | 2016-12-16 |
| Date Tested: | 2016-12-16 |
| Date Completed: | 2016-12-19 |
| Next Due Date: | 2017-02-18 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

Description : Handheld Particle Counter
 Manufacturer : Hal Technology
 Model No. : Hal-HPC300
 Serial No. : 3020410
 Flow rate : 0.1 cfm
 Zero Count Test : 0 count per 5 minutes
 Equipment No. : A-26-03

Test Conditions:

Room Temperature : 23 degree Celsius
 Relative Humidity : 64 %

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.122 |
|-------------------------|-------|

PREPARED AND CHECKED BY:

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


PATRICK TSE
 Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/170217B |
| Date of Issue: | 2017-02-20 |
| Date Received: | 2017-02-17 |
| Date Tested: | 2017-02-17 |
| Date Completed: | 2017-02-20 |
| Next Due Date: | 2017-04-19 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-----------------|-----------------------------|
| Description | : Handheld Particle Counter |
| Manufacturer | : Hal Technology |
| Model No. | : Hal-HPC300 |
| Serial No. | : 3020410 |
| Flow rate | : 0.1 cfm |
| Zero Count Test | : 0 count per 5 minutes |
| Equipment No. | : A-26-03 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 61 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.156 |
|-------------------------|-------|

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/161209 |
| Date of Issue: | 2016-12-12 |
| Date Received: | 2016-12-09 |
| Date Tested: | 2016-12-09 |
| Date Completed: | 2016-12-12 |
| Next Due Date: | 2017-02-11 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-----------------|-----------------------------|
| Description | : Handheld Particle Counter |
| Manufacturer | : Hal Technology |
| Model No. | : Hal-HPC300 |
| Serial No. | : 3020411 |
| Flow rate | : 0.1 cfm |
| Zero Count Test | : 0 count per 5 minutes |
| Equipment No. | : A-26-04 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 24 degree Celsius |
| Relative Humidity | : 69 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.117 |
|-------------------------|-------|

PREPARED AND CHECKED BY:

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



PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/170210 |
| Date of Issue: | 2017-02-13 |
| Date Received: | 2017-02-10 |
| Date Tested: | 2017-02-10 |
| Date Completed: | 2017-02-13 |
| Next Due Date: | 2017-04-12 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for Calibration:

| | |
|-----------------|-----------------------------|
| Description | : Handheld Particle Counter |
| Manufacturer | : Hal Technology |
| Model No. | : Hal-HPC300 |
| Serial No. | : 3020411 |
| Flow rate | : 0.1 cfm |
| Zero Count Test | : 0 count per 5 minutes |
| Equipment No. | : A-26-04 |

Test Conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 23 degree Celsius |
| Relative Humidity | : 65 % |

Test Specifications & Methodology:

1. Instruction and Operation Manual High Volume Sampler, Andersen Samplers, Inc.
2. In-house method in according to the instruction manual: The Laser Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Laser Dust Monitor and High Volume Sampler.

Results:

| | |
|-------------------------|-------|
| Correlation Factor (CF) | 1.159 |
|-------------------------|-------|

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160917B |
| Date of Issue: | 2016-09-19 |
| Date Received: | 2016-09-17 |
| Date Tested: | 2016-09-17 |
| Date Completed: | 2016-09-19 |
| Next Due Date: | 2017-09-18 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

Description : 'SVANTEK' Integrating Sound Level Meter
Manufacturer : SVANTEK
Model No. : SVAN 955
Serial No. : 12553
Microphone No. : 35222
Equipment No. : N-08-02

Test conditions:

Room Temperature : 24 degree Celsius
Relative Humidity : 57%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

| Reference Set Point, dB | Instrument Readings, dB |
|-------------------------|-------------------------|
| 94 | 94.0 |
| 114 | 114.0 |

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/N/161230 |
| Date of Issue: | 2017-01-03 |
| Date Received: | 2016-12-30 |
| Date Tested: | 2016-12-30 |
| Date Completed: | 2017-01-03 |
| Next Due Date: | 2018-01-02 |

ATTN: Mr. W. K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

| | |
|----------------|---|
| Description | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer | : SVANTEK |
| Model No. | : SVAN 955 |
| Serial No. | : 14303 |
| Microphone No. | : 35222 |
| Equipment No. | : N-08-05 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 21 degree Celsius |
| Relative Humidity | : 62 % |

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

| Reference Set Point, dB | Instrument Readings, dB |
|-------------------------|-------------------------|
| 94 | 94.0 |
| 114 | 114.0 |

Remark: 1) This report supersedes the one dated 2012/01/21 with certificate number C/N/120120/1.

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160826A |
| Date of Issue: | 2016-08-29 |
| Date Received: | 2016-08-26 |
| Date Tested: | 2016-08-26 |
| Date Completed: | 2016-08-29 |
| Next Due Date: | 2017-08-28 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

| | |
|----------------|---|
| Description | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer | : SVANTEK |
| Model No. | : SVAN 957 |
| Serial No. | : 21455 |
| Microphone No. | : 43730 |
| Equipment No. | : N-08-07 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 25 degree Celsius |
| Relative Humidity | : 57% |

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

| Reference Set Point, dB | Instrument Readings, dB |
|-------------------------|-------------------------|
| 94 | 94.0 |
| 114 | 114.0 |

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160819B |
| Date of Issue: | 2016-08-22 |
| Date Received: | 2016-08-19 |
| Date Tested: | 2016-08-19 |
| Date Completed: | 2016-08-22 |
| Next Due Date: | 2017-08-21 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

| | |
|----------------|---|
| Description | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer | : SVANTEK |
| Model No. | : SVAN 957 |
| Serial No. | : 21459 |
| Microphone No. | : 43676 |
| Equipment No. | : N-08-08 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 24 degree Celsius |
| Relative Humidity | : 58% |

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

| Reference Set Point, dB | Instrument Readings, dB |
|-------------------------|-------------------------|
| 94 | 94.0 |
| 114 | 114.0 |

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | CN/161128 |
| Date of Issue: | 2016-11-30 |
| Date Received: | 2016-11-28 |
| Date Tested: | 2016-11-28 |
| Date Completed: | 2016-11-30 |
| Next Due Date: | 2017-11-29 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

| | |
|----------------|---|
| Description | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer | : SVANTEK |
| Model No. | : SVAN 957 |
| Serial No. | : 23853 |
| Microphone No. | : 48530 |
| Equipment No. | : N-08-10 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 21 degree Celsius |
| Relative Humidity | : 66% |

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

| Reference Set Point, dB | Instrument Readings, dB |
|-------------------------|-------------------------|
| 94 | 94.0 |
| 114 | 114.0 |

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/N/160919 |
| Date of Issue: | 2016-09-21 |
| Date Received: | 2016-09-19 |
| Date Tested: | 2016-09-19 |
| Date Completed: | 2016-09-21 |
| Next Due Date: | 2017-09-20 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

| | |
|----------------|---|
| Description | : 'SVANTEK' Integrating Sound Level Meter |
| Manufacturer | : SVANTEK |
| Model No. | : SVAN 977 |
| Serial No. | : 45482 |
| Microphone No. | : 63626 |
| Equipment No. | : N-08-14 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 56% |

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

| Reference Set Point, dB | Instrument Readings, dB |
|-------------------------|-------------------------|
| 94 | 94.0 |
| 114 | 114.0 |

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160930A |
| Date of Issue: | 2016-10-03 |
| Date Received: | 2016-09-30 |
| Date Tested: | 2016-09-30 |
| Date Completed: | 2016-10-03 |
| Next Due Date: | 2017-10-02 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

Description : Acoustical Calibrator
Manufacturer : SVANTEK
Model No. : SV30A
Serial No. : 24803
Equipment No. : N-09-03

Test conditions:

Room Temperature : 25 degree Celsius
Relative Humidity : 60%

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

| Sound Pressure Level (1kHz) | Measured SPL | Tolerance |
|-----------------------------|--------------|----------------|
| At 94 dB SPL | 94.0 | 94.0 ± 0.1 dB |
| At 114 dB SPL | 114.0 | 114.0 ± 0.1 dB |

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



PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160930B |
| Date of Issue: | 2016-10-03 |
| Date Received: | 2016-09-30 |
| Date Tested: | 2016-09-30 |
| Date Completed: | 2016-10-03 |
| Next Due Date: | 2017-10-02 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

| | |
|---------------|-------------------------|
| Description | : Acoustical Calibrator |
| Manufacturer | : SVANTEK |
| Model No. | : SV30A |
| Serial No. | : 24791 |
| Equipment No. | : N-09-04 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 25 degree Celsius |
| Relative Humidity | : 60% |

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

| Sound Pressure Level (1kHz) | Measured SPL | Tolerance |
|-----------------------------|--------------|----------------|
| At 94 dB SPL | 94.0 | 94.0 ± 0.1 dB |
| At 114 dB SPL | 114.0 | 114.0 ± 0.1 dB |

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160930C |
| Date of Issue: | 2016-10-03 |
| Date Received: | 2016-09-30 |
| Date Tested: | 2016-09-30 |
| Date Completed: | 2016-10-03 |
| Next Due Date: | 2017-10-02 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

Description : Acoustical Calibrator
Manufacturer : SVANTEK
Model No. : SV30A
Serial No. : 24780
Equipment No. : N-09-05

Test conditions:

Room Temperature : 25 degree Celsius
Relative Humidity : 60%

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

| Sound Pressure Level (1kHz) | Measured SPL | Tolerance |
|-----------------------------|--------------|----------------|
| At 94 dB SPL | 94.0 | 94.0 ± 0.1 dB |
| At 114 dB SPL | 114.0 | 114.0 ± 0.1 dB |

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|--------------|
| Test Report No.: | C/N/161104/1 |
| Date of Issue: | 2016-11-07 |
| Date Received: | 2016-11-04 |
| Date Tested: | 2016-11-04 |
| Date Completed: | 2016-11-07 |
| Next Due Date: | 2017-11-06 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Item for calibration:

| | |
|---------------|-------------------------|
| Description | : Acoustical Calibrator |
| Manufacturer | : Brüel & Kjær |
| Model No. | : 4231 |
| Serial No. | : 2326353 |
| Equipment No. | : N-02-01 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 21 degree Celsius |
| Relative Humidity | : 62 % |

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

| Sound Pressure Level (1kHz) | Measured SPL | Tolerance |
|-----------------------------|--------------|----------------|
| At 94 dB SPL | 94.0 | 94.0 ± 0.1 dB |
| At 114 dB SPL | 114.0 | 114.0 ± 0.1 dB |

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/N/160819D |
| Date of Issue: | 2016-08-22 |
| Date Received: | 2016-08-19 |
| Date Tested: | 2016-08-19 |
| Date Completed: | 2016-08-22 |
| Next Due Date: | 2017-08-21 |

ATTN: Mr. W.K. Tang

Page: 1 of 1

Certificate of Calibration

Item for calibration:

| | |
|---------------|-------------------------|
| Description | : Acoustical Calibrator |
| Manufacturer | : Brüel & Kjær |
| Model No. | : 4231 |
| Serial No. | : 2412367 |
| Equipment No. | : N-02-03 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 24 degree Celsius |
| Relative Humidity | : 58% |

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

| Sound Pressure Level (1kHz) | Measured SPL | Tolerance |
|-----------------------------|--------------|----------------|
| At 94 dB SPL | 94.0 | 94.0 ± 0.1 dB |
| At 114 dB SPL | 114.0 | 114.0 ± 0.1 dB |

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/W/161116 |
| Date of Issue: | 2016-11-16 |
| Date Received: | 2016-11-16 |
| Date Tested: | 2016-11-16 |
| Date Completed: | 2016-11-16 |
| Next Due Date: | 2017-02-15 |

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

| | |
|---------------|--------------------------------------|
| Description | : Multiparameter Water Quality Probe |
| Manufacturer | : Aquaread Ltd |
| Model No. | : AP-2000-D |
| Serial No. | : 122252120 |
| Equipment No. | : W.18.02 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 23 degree Celsius |
| Relative Humidity | : 58% |

Test Specifications:

Performance checking for pH, Oxidation Reduction Potential (ORP), Dissolved oxygen (D.O.), Turbidity, Salinity, Conductivity and Temperature

Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|------------------|------------|
| Test Report No.: | C/W/161116 |
| Date of Issue: | 2016-11-16 |
| Date Received: | 2016-11-16 |
| Date Tested: | 2016-11-16 |
| Date Completed: | 2016-11-16 |
| Next Due Date: | 2017-02-15 |

Page: 2 of 2

Certificate of Calibration

Results:

pH performance checking

| | Instrument Readings (pH unit) | Acceptance Criteria | Comment |
|-------------------|----------------------------------|---------------------|---------|
| pH QC buffer 4.01 | 4.02 | 4.01 ± 0.10 | Pass |
| pH QC buffer 6.86 | 6.82 | 6.86 ± 0.10 | Pass |
| pH QC buffer 9.18 | 9.17 | 9.18 ± 0.10 | Pass |

ORP performance checking

| | Instrument Readings (mV) | Acceptance Criteria | Comment |
|-----------------|--------------------------|---------------------|---------|
| Zobell Solution | 227.4 | 229 ± 10 | Pass |

D.O. performance checking

| Winkler Titration value (mg/L) | Instrument Readings (mg/L) | Acceptance Criteria | Comment |
|-----------------------------------|----------------------------|--|---------|
| 8.40 | 8.43 | Difference between Titration value and instrument reading <0.2mg/L | Pass |

Turbidity check

| Turbidity solution (NTU) | Instrument Readings (NTU) | Acceptance Criteria | Comment |
|--------------------------|---------------------------|---------------------|---------|
| 0.00 | 0.00 | 0.00 ± 0.05 | Pass |
| 100 | 100 | 100 ± 5 | Pass |
| 1000 | 1000 | 1000 ± 100 | Pass |

Salinity Performance check

| Salinity, ppt | | Acceptable range | Comment |
|--------------------|-------------------|------------------|---------|
| Instrument Reading | Theoretical Value | 30.0 ± 3 | Pass |
| 30.6 | 30.0 | | |

Conductivity performance checking

| | Instrument Readings (mV) | Acceptance Criteria | Comment |
|---|--------------------------|---------------------|---------|
| KCl stock solution (2570 μ s/cm) | 2590 | 2442-2698 | Pass |

Temperature performance checking

| Reference thermometer- E431 Readings (°C) | Instrument Readings (°C) | Correction (°C) | Comment |
|--|--------------------------|-----------------|---------|
| 24.1 | 24.0 | +0.1 | N/A |

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

TEST REPORT

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

| | |
|------------------|------------|
| Test Report No.: | C/W/170214 |
| Date of Issue: | 2017-02-14 |
| Date Received: | 2017-02-14 |
| Date Tested: | 2017-02-14 |
| Date Completed: | 2017-02-14 |
| Next Due Date: | 2017-05-13 |

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

| | |
|---------------|--------------------------------------|
| Description | : Multiparameter Water Quality Probe |
| Manufacturer | : Aquaread Ltd |
| Model No. | : AP-2000-D |
| Serial No. | : 122252120 |
| Equipment No. | : W.18.02 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 22 degree Celsius |
| Relative Humidity | : 55% |

Test Specifications:

Performance checking for pH, Oxidation Reduction Potential (ORP), Dissolved oxygen (D.O.), Turbidity, Salinity, Conductivity and Temperature

Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|------------------|------------|
| Test Report No.: | C/W/170214 |
| Date of Issue: | 2017-02-14 |
| Date Received: | 2017-02-14 |
| Date Tested: | 2017-02-14 |
| Date Completed: | 2017-02-14 |
| Next Due Date: | 2017-05-13 |

Page: 2 of 2

Certificate of Calibration

Results:

pH performance checking

| | Instrument Readings (pH unit) | Acceptance Criteria | Comment |
|-------------------|----------------------------------|---------------------|---------|
| pH QC buffer 4.01 | 4.06 | 4.01 ± 0.10 | Pass |
| pH QC buffer 6.86 | 6.87 | 6.86 ± 0.10 | Pass |
| pH QC buffer 9.18 | 9.18 | 9.18 ± 0.10 | Pass |

ORP performance checking

| | Instrument Readings (mV) | Acceptance Criteria | Comment |
|-----------------|--------------------------|---------------------|---------|
| Zobell Solution | 228.8 | 229 ± 10 | Pass |

D.O. performance checking

| Winkler Titration value (mg/L) | Instrument Readings (mg/L) | Acceptance Criteria | Comment |
|-----------------------------------|----------------------------|--|---------|
| 8.40 | 8.45 | Difference between Titration value and instrument reading <0.2mg/L | Pass |

Turbidity check

| Turbidity solution (NTU) | Instrument Readings (NTU) | Acceptance Criteria | Comment |
|--------------------------|---------------------------|---------------------|---------|
| 0.00 | 0.00 | 0.00 ± 0.05 | Pass |
| 100 | 100 | 100 ± 5 | Pass |
| 1000 | 1000 | 1000 ± 100 | Pass |

Salinity Performance check

| Salinity, ppt | | Acceptable range | Comment |
|--------------------|-------------------|------------------|---------|
| Instrument Reading | Theoretical Value | 30.0 ± 3 | Pass |
| 30.1 | 30.0 | | |

Conductivity performance checking

| | Instrument Readings (mV) | Acceptance Criteria | Comment |
|---|--------------------------|---------------------|---------|
| KCl stock solution (2570 μ s/cm) | 2586 | 2442-2698 | Pass |

Temperature performance checking

| Reference thermometer- E431 Readings (°C) | Instrument Readings (°C) | Correction (°C) | Comment |
|--|--------------------------|-----------------|---------|
| 24.1 | 24.0 | +0.1 | N/A |

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

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/W/170111C |
| Date of Issue: | 2017-01-11 |
| Date Received: | 2017-01-11 |
| Date Tested: | 2017-01-11 |
| Date Completed: | 2017-01-11 |
| Next Due Date: | 2017-04-10 |

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

| | |
|---------------|--------------------------------------|
| Description | : Multiparameter Water Quality Probe |
| Manufacturer | : Aquaread Ltd |
| Model No. | : AP-2000-D |
| Serial No. | : 122251720 |
| Equipment No. | : W.18.13 |

Test conditions:

| | |
|-------------------|---------------------|
| Room Temperature | : 21 degree Celsius |
| Relative Humidity | : 57% |

Test Specifications:

Performance checking for pH, Oxidation Reduction Potential (ORP), Dissolved oxygen (D.O.), Turbidity, Salinity, Conductivity and Temperature

Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

PREPARED AND CHECKED BY:

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



PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|------------------|-------------|
| Test Report No.: | C/W/170111C |
| Date of Issue: | 2017-01-11 |
| Date Received: | 2017-01-11 |
| Date Tested: | 2017-01-11 |
| Date Completed: | 2017-01-11 |
| Next Due Date: | 2017-04-10 |

Page: 2 of 2

Certificate of Calibration

Results:

pH performance checking

| | Instrument Readings (pH unit) | Acceptance Criteria | Comment |
|-------------------|----------------------------------|---------------------|---------|
| pH QC buffer 4.01 | 4.06 | 4.01 ± 0.10 | Pass |
| pH QC buffer 6.86 | 6.82 | 6.86 ± 0.10 | Pass |
| pH QC buffer 9.18 | 9.22 | 9.18 ± 0.10 | Pass |

ORP performance checking

| | Instrument Readings (mV) | Acceptance Criteria | Comment |
|-----------------|--------------------------|---------------------|---------|
| Zobell Solution | 229.4 | 229 ± 10 | Pass |

D.O. performance checking

| Winkler Titration value (mg/L) | Instrument Readings (mg/L) | Acceptance Criteria | Comment |
|-----------------------------------|----------------------------|--|---------|
| 8.40 | 8.42 | Difference between Titration value and instrument reading <0.2mg/L | Pass |

Turbidity check

| Turbidity solution (NTU) | Instrument Readings (NTU) | Acceptance Criteria | Comment |
|--------------------------|---------------------------|---------------------|---------|
| 0.00 | 0.00 | 0.00 ± 0.05 | Pass |
| 100 | 100 | 100 ± 5 | Pass |
| 1000 | 1000 | 1000 ± 100 | Pass |

Salinity Performance check

| Salinity, ppt | | Acceptable range | Comment |
|--------------------|-------------------|------------------|---------|
| Instrument Reading | Theoretical Value | 30.0 ± 3 | Pass |
| 30.2 | 30.0 | | |

Conductivity performance checking

| | Instrument Readings (mV) | Acceptance Criteria | Comment |
|------------------------------------|--------------------------|---------------------|---------|
| KCl stock solution (2570 µs/cm) | 2688 | 2442-2698 | Pass |

Temperature performance checking

| Reference thermometer- E431 Readings (°C) | Instrument Readings (°C) | Correction (°C) | Comment |
|--|--------------------------|-----------------|---------|
| 24.1 | 24.2 | -0.1 | N/A |

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

TEST REPORT

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

| | |
|------------------|-------------|
| Test Report No.: | C/W/170105A |
| Date of Issue: | 2017-01-05 |
| Date Received: | 2017-01-05 |
| Date Tested: | 2017-01-05 |
| Date Completed: | 2017-01-05 |
| Next Due Date: | 2017-04-04 |

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description : Sonde Environmental Monitoring System
Manufacturer : YSI
Model No. : 6820-C-M
Serial No. : 12B100804
Equipment No. : W.03.13

Test conditions:

Room Temperature : 20 degree Celsius
Relative Humidity : 64%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 12B100055
1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution
Dissolved Oxygen Sensor, Model: 6562, L/N: 12A100930
1. Performance check against Winkler titration
Turbidity Sensor, Model: 6136, S/N: 12B100645
1. Calibration check with Formazin standard solution
pH Meter, Model: 6561, L/N: 11H
1. Calibration check with standard pH buffer
Depth Meter
1. Calibration check at 1m water level depth

Methodologies:

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

PREPARED AND CHECKED BY:

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



PATRICK TSE

Laboratory Manager

TEST REPORT

| | |
|------------------|-------------|
| Test Report No.: | C/W/170105A |
| Date of Issue: | 2017-01-05 |
| Date Received: | 2017-01-05 |
| Date Tested: | 2017-01-05 |
| Date Completed: | 2017-01-05 |
| Next Due Date: | 2017-04-04 |

Page: 2 of 2

Results:

1. Conductivity performance check

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

2. Salinity Performance check

| Salinity, ppt | | Correction, ppt | Acceptable range |
|--------------------|-------------------|-----------------|------------------|
| Instrument Reading | Theoretical Value | | |
| 30.0 | 30.0 | 0 | 30.0 ± 3 |

3. Dissolved Oxygen check

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

4. Turbidity check

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

5. pH Meter check

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

6. Depth Meter check

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

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

APPENDIX C
WEATHER INFORMATION

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

I. General Information

| Date | Mean Air Temperature (°C) | Mean Relative Humidity (%) | Precipitation (mm) |
|------------------|----------------------------------|-----------------------------------|---------------------------|
| 1 February 2017 | 16.6 – 22.0 | 80 | Trace |
| 2 February 2017 | 16.2 – 17.7 | 83 | Trace |
| 3 February 2017 | 15.4 – 19.6 | 76 | 0.0 |
| 4 February 2017 | 16.3 – 20.9 | 79 | 1.6 |
| 5 February 2017 | 16.7 – 22.0 | 83 | 3.3 |
| 6 February 2017 | 16.9 – 19.7 | 80 | Trace |
| 7 February 2017 | 15.9 – 18.7 | 74 | 0.0 |
| 8 February 2017 | 15.5 – 20.6 | 78 | Trace |
| 9 February 2017 | 11.1 – 16.8 | 56 | Trace |
| 10 February 2017 | 10.8 – 15.6 | 56 | 0.0 |
| 11 February 2017 | 11.5 – 17.9 | 57 | 0.0 |
| 12 February 2017 | 12.5 – 19.1 | 66 | 0.0 |
| 13 February 2017 | 13.1 – 20.1 | 65 | 0.0 |
| 14 February 2017 | 15.6 – 21.1 | 62 | 0.0 |
| 15 February 2017 | 15.3 – 20.9 | 62 | 0.0 |
| 16 February 2017 | 15.4 – 24.0 | 69 | 0.0 |
| 17 February 2017 | 17.1 – 25.4 | 74 | 0.0 |
| 18 February 2017 | 18.0 – 24.1 | 76 | 0.0 |
| 19 February 2017 | 16.4 – 19.1 | 82 | 0.3 |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

I. General Information

| Date | Mean Air Temperature (°C) | Mean Relative Humidity (%) | Precipitation (mm) |
|------------------|----------------------------------|-----------------------------------|---------------------------|
| 20 February 2017 | 18.3 – 25.5 | 84 | Trace |
| 21 February 2017 | 16.6 – 21.1 | 90 | 4.6 |
| 22 February 2017 | 16.4 – 21.3 | 91 | 8.0 |
| 23 February 2017 | 15.0 – 20.2 | 88 | Trace |
| 24 February 2017 | 12.0 – 15.1 | 81 | Trace |
| 25 February 2017 | 10.7 – 13.8 | 85 | 0.7 |
| 26 February 2017 | 10.6 – 17.0 | 79 | 1.4 |
| 27 February 2017 | 15.4 – 19.8 | 66 | 0.0 |
| 28 February 2017 | 15.1 – 20.8 | 64 | 0.0 |

* The above information was extracted from the daily weather summary by Hong Kong Observatory.

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| Date | Time | Wind Speed m/s | Direction |
|-------------|-------------|-----------------------|------------------|
| 1-Feb-2017 | 0:00 | 1.9 | SSE |
| 1-Feb-2017 | 1:00 | 1.8 | ESE |
| 1-Feb-2017 | 2:00 | 2 | ESE |
| 1-Feb-2017 | 3:00 | 2 | ESE |
| 1-Feb-2017 | 4:00 | 1.8 | ESE |
| 1-Feb-2017 | 5:00 | 1.8 | ESE |
| 1-Feb-2017 | 6:00 | 1.7 | ESE |
| 1-Feb-2017 | 7:00 | 1.9 | SSE |
| 1-Feb-2017 | 8:00 | 2 | SSE |
| 1-Feb-2017 | 9:00 | 2.1 | ESE |
| 1-Feb-2017 | 10:00 | 2.3 | ESE |
| 1-Feb-2017 | 11:00 | 2.4 | ESE |
| 1-Feb-2017 | 12:00 | 2.8 | SSE |
| 1-Feb-2017 | 13:00 | 2.7 | SSE |
| 1-Feb-2017 | 14:00 | 2.6 | ESE |
| 1-Feb-2017 | 15:00 | 2.5 | ESE |
| 1-Feb-2017 | 16:00 | 2.5 | NE |
| 1-Feb-2017 | 17:00 | 2.4 | ENE |
| 1-Feb-2017 | 18:00 | 2 | WSW |
| 1-Feb-2017 | 19:00 | 1.6 | N |
| 1-Feb-2017 | 20:00 | 1.7 | WNW |
| 1-Feb-2017 | 21:00 | 1.9 | WNW |
| 1-Feb-2017 | 22:00 | 2.1 | SSW |
| 1-Feb-2017 | 23:00 | 1.9 | ESE |
| 2-Feb-2017 | 0:00 | 1.9 | ENE |
| 2-Feb-2017 | 1:00 | 1.8 | ENE |
| 2-Feb-2017 | 2:00 | 1.8 | ESE |
| 2-Feb-2017 | 3:00 | 1.6 | NE |
| 2-Feb-2017 | 4:00 | 1.6 | ESE |
| 2-Feb-2017 | 5:00 | 1.6 | SSE |
| 2-Feb-2017 | 6:00 | 1.6 | E |
| 2-Feb-2017 | 7:00 | 1.7 | E |
| 2-Feb-2017 | 8:00 | 1.8 | SSE |
| 2-Feb-2017 | 9:00 | 1.8 | SSE |
| 2-Feb-2017 | 10:00 | 2 | S |
| 2-Feb-2017 | 11:00 | 2.2 | SSE |
| 2-Feb-2017 | 12:00 | 2.5 | ENE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|------------|-------|-----|-----|
| 2-Feb-2017 | 13:00 | 2.4 | S |
| 2-Feb-2017 | 14:00 | 2.3 | ENE |
| 2-Feb-2017 | 15:00 | 2.4 | ENE |
| 2-Feb-2017 | 16:00 | 2.1 | S |
| 2-Feb-2017 | 17:00 | 2.3 | SE |
| 2-Feb-2017 | 18:00 | 2.4 | E |
| 2-Feb-2017 | 19:00 | 2.4 | SE |
| 2-Feb-2017 | 20:00 | 2.5 | ENE |
| 2-Feb-2017 | 21:00 | 2.7 | ESE |
| 2-Feb-2017 | 22:00 | 2.4 | SW |
| 2-Feb-2017 | 23:00 | 2 | WNW |
| 3-Feb-2017 | 0:00 | 2.1 | NE |
| 3-Feb-2017 | 1:00 | 2.3 | N |
| 3-Feb-2017 | 2:00 | 2.2 | ESE |
| 3-Feb-2017 | 3:00 | 2 | N |
| 3-Feb-2017 | 4:00 | 1.8 | ENE |
| 3-Feb-2017 | 5:00 | 1.8 | SE |
| 3-Feb-2017 | 6:00 | 1.6 | WSW |
| 3-Feb-2017 | 7:00 | 1.9 | W |
| 3-Feb-2017 | 8:00 | 2.2 | S |
| 3-Feb-2017 | 9:00 | 2.3 | SW |
| 3-Feb-2017 | 10:00 | 2.3 | W |
| 3-Feb-2017 | 11:00 | 2.5 | W |
| 3-Feb-2017 | 12:00 | 2.6 | ENE |
| 3-Feb-2017 | 13:00 | 2.8 | SSW |
| 3-Feb-2017 | 14:00 | 2.5 | SSW |
| 3-Feb-2017 | 15:00 | 2.5 | SSW |
| 3-Feb-2017 | 16:00 | 2.5 | WSW |
| 3-Feb-2017 | 17:00 | 2.5 | WSW |
| 3-Feb-2017 | 18:00 | 2.3 | SSW |
| 3-Feb-2017 | 19:00 | 2.3 | WSW |
| 3-Feb-2017 | 20:00 | 2 | W |
| 3-Feb-2017 | 21:00 | 2 | W |
| 3-Feb-2017 | 22:00 | 2.2 | W |
| 3-Feb-2017 | 23:00 | 2.3 | W |
| 4-Feb-2017 | 0:00 | 2.1 | ENE |
| 4-Feb-2017 | 1:00 | 2.1 | SW |
| 4-Feb-2017 | 2:00 | 2.3 | W |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|------------|-------|-----|-----|
| 4-Feb-2017 | 3:00 | 2.3 | NE |
| 4-Feb-2017 | 4:00 | 2 | WSW |
| 4-Feb-2017 | 5:00 | 2.3 | SW |
| 4-Feb-2017 | 6:00 | 2.2 | SW |
| 4-Feb-2017 | 7:00 | 2.2 | SW |
| 4-Feb-2017 | 8:00 | 2.4 | SW |
| 4-Feb-2017 | 9:00 | 2.5 | SW |
| 4-Feb-2017 | 10:00 | 2.4 | NE |
| 4-Feb-2017 | 11:00 | 2.5 | N |
| 4-Feb-2017 | 12:00 | 2.7 | NNW |
| 4-Feb-2017 | 13:00 | 2.4 | SW |
| 4-Feb-2017 | 14:00 | 2.6 | ENE |
| 4-Feb-2017 | 15:00 | 2.9 | ENE |
| 4-Feb-2017 | 16:00 | 2.7 | SW |
| 4-Feb-2017 | 17:00 | 2.4 | N |
| 4-Feb-2017 | 18:00 | 2.2 | N |
| 4-Feb-2017 | 19:00 | 2.2 | SW |
| 4-Feb-2017 | 20:00 | 2.2 | WSW |
| 4-Feb-2017 | 21:00 | 2.2 | WSW |
| 4-Feb-2017 | 22:00 | 2.1 | N |
| 4-Feb-2017 | 23:00 | 2.1 | ENE |
| 5-Feb-2017 | 0:00 | 2 | ENE |
| 5-Feb-2017 | 1:00 | 1.8 | ENE |
| 5-Feb-2017 | 2:00 | 2.2 | SW |
| 5-Feb-2017 | 3:00 | 2.2 | N |
| 5-Feb-2017 | 4:00 | 2.3 | N |
| 5-Feb-2017 | 5:00 | 2.3 | NNW |
| 5-Feb-2017 | 6:00 | 2.5 | ENE |
| 5-Feb-2017 | 7:00 | 2.3 | NE |
| 5-Feb-2017 | 8:00 | 2.7 | N |
| 5-Feb-2017 | 9:00 | 2.8 | WNW |
| 5-Feb-2017 | 10:00 | 3 | W |
| 5-Feb-2017 | 11:00 | 2.6 | W |
| 5-Feb-2017 | 12:00 | 3.1 | W |
| 5-Feb-2017 | 13:00 | 3 | W |
| 5-Feb-2017 | 14:00 | 3 | W |
| 5-Feb-2017 | 15:00 | 3.3 | WNW |
| 5-Feb-2017 | 16:00 | 3 | S |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|------------|-------|-----|-----|
| 5-Feb-2017 | 17:00 | 3 | WNW |
| 5-Feb-2017 | 18:00 | 2.7 | W |
| 5-Feb-2017 | 19:00 | 2.3 | WNW |
| 5-Feb-2017 | 20:00 | 2.4 | SW |
| 5-Feb-2017 | 21:00 | 2.6 | W |
| 5-Feb-2017 | 22:00 | 2.6 | W |
| 5-Feb-2017 | 23:00 | 2.4 | W |
| 6-Feb-2017 | 0:00 | 2.3 | W |
| 6-Feb-2017 | 1:00 | 2.3 | SSW |
| 6-Feb-2017 | 2:00 | 1.9 | W |
| 6-Feb-2017 | 3:00 | 2.3 | W |
| 6-Feb-2017 | 4:00 | 2.3 | W |
| 6-Feb-2017 | 5:00 | 2.1 | SSW |
| 6-Feb-2017 | 6:00 | 1.9 | SSW |
| 6-Feb-2017 | 7:00 | 1.9 | SW |
| 6-Feb-2017 | 8:00 | 2.2 | W |
| 6-Feb-2017 | 9:00 | 2.5 | W |
| 6-Feb-2017 | 10:00 | 2.7 | NNE |
| 6-Feb-2017 | 11:00 | 3.1 | WSW |
| 6-Feb-2017 | 12:00 | 2.9 | SW |
| 6-Feb-2017 | 13:00 | 3.3 | W |
| 6-Feb-2017 | 14:00 | 3.2 | W |
| 6-Feb-2017 | 15:00 | 3.1 | W |
| 6-Feb-2017 | 16:00 | 3 | WNW |
| 6-Feb-2017 | 17:00 | 2.8 | W |
| 6-Feb-2017 | 18:00 | 2.7 | W |
| 6-Feb-2017 | 19:00 | 2.4 | W |
| 6-Feb-2017 | 20:00 | 2.4 | SW |
| 6-Feb-2017 | 21:00 | 2 | W |
| 6-Feb-2017 | 22:00 | 2 | WNW |
| 6-Feb-2017 | 23:00 | 1.8 | SSW |
| 7-Feb-2017 | 0:00 | 1.9 | WSW |
| 7-Feb-2017 | 1:00 | 1.8 | SSW |
| 7-Feb-2017 | 2:00 | 1.9 | SSW |
| 7-Feb-2017 | 3:00 | 1.7 | W |
| 7-Feb-2017 | 4:00 | 1.5 | NE |
| 7-Feb-2017 | 5:00 | 1.8 | ENE |
| 7-Feb-2017 | 6:00 | 1.8 | ENE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|------------|-------|-----|-----|
| 7-Feb-2017 | 7:00 | 1.7 | SE |
| 7-Feb-2017 | 8:00 | 1.9 | N |
| 7-Feb-2017 | 9:00 | 2.1 | SW |
| 7-Feb-2017 | 10:00 | 2.3 | SSE |
| 7-Feb-2017 | 11:00 | 2.6 | SSW |
| 7-Feb-2017 | 12:00 | 3 | WSW |
| 7-Feb-2017 | 13:00 | 2.9 | W |
| 7-Feb-2017 | 14:00 | 2.9 | WSW |
| 7-Feb-2017 | 15:00 | 2.8 | W |
| 7-Feb-2017 | 16:00 | 2.7 | WSW |
| 7-Feb-2017 | 17:00 | 2.5 | SSW |
| 7-Feb-2017 | 18:00 | 2 | W |
| 7-Feb-2017 | 19:00 | 1.5 | W |
| 7-Feb-2017 | 20:00 | 1.3 | W |
| 7-Feb-2017 | 21:00 | 1.5 | SW |
| 7-Feb-2017 | 22:00 | 1.6 | W |
| 7-Feb-2017 | 23:00 | 1.5 | W |
| 8-Feb-2017 | 0:00 | 1.6 | WNW |
| 8-Feb-2017 | 1:00 | 1.7 | SSW |
| 8-Feb-2017 | 2:00 | 1.6 | SSW |
| 8-Feb-2017 | 3:00 | 1.6 | ENE |
| 8-Feb-2017 | 4:00 | 1.5 | SSW |
| 8-Feb-2017 | 5:00 | 1.7 | W |
| 8-Feb-2017 | 6:00 | 1.5 | W |
| 8-Feb-2017 | 7:00 | 1.7 | SSE |
| 8-Feb-2017 | 8:00 | 2.2 | WSW |
| 8-Feb-2017 | 9:00 | 2.3 | SW |
| 8-Feb-2017 | 10:00 | 2.6 | E |
| 8-Feb-2017 | 11:00 | 2.7 | WSW |
| 8-Feb-2017 | 12:00 | 2.8 | SW |
| 8-Feb-2017 | 13:00 | 2.8 | SW |
| 8-Feb-2017 | 14:00 | 2.9 | SW |
| 8-Feb-2017 | 15:00 | 3 | NE |
| 8-Feb-2017 | 16:00 | 2.6 | SW |
| 8-Feb-2017 | 17:00 | 2.6 | WSW |
| 8-Feb-2017 | 18:00 | 2.5 | W |
| 8-Feb-2017 | 19:00 | 2.4 | WSW |
| 8-Feb-2017 | 20:00 | 2 | WSW |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 8-Feb-2017 | 21:00 | 2 | W |
| 8-Feb-2017 | 22:00 | 1.9 | WSW |
| 8-Feb-2017 | 23:00 | 1.9 | SW |
| 9-Feb-2017 | 0:00 | 2.1 | SSW |
| 9-Feb-2017 | 1:00 | 1.8 | WSW |
| 9-Feb-2017 | 2:00 | 1.7 | WNW |
| 9-Feb-2017 | 3:00 | 1.7 | WNW |
| 9-Feb-2017 | 4:00 | 1.8 | WNW |
| 9-Feb-2017 | 5:00 | 1.7 | SW |
| 9-Feb-2017 | 6:00 | 1.5 | E |
| 9-Feb-2017 | 7:00 | 1.6 | E |
| 9-Feb-2017 | 8:00 | 1.9 | E |
| 9-Feb-2017 | 9:00 | 2.5 | SSE |
| 9-Feb-2017 | 10:00 | 2.7 | W |
| 9-Feb-2017 | 11:00 | 2.8 | W |
| 9-Feb-2017 | 12:00 | 2.9 | ENE |
| 9-Feb-2017 | 13:00 | 2.7 | SE |
| 9-Feb-2017 | 14:00 | 2.4 | ENE |
| 9-Feb-2017 | 15:00 | 2.6 | E |
| 9-Feb-2017 | 16:00 | 2.7 | SSE |
| 9-Feb-2017 | 17:00 | 2.4 | SSE |
| 9-Feb-2017 | 18:00 | 2.1 | ESE |
| 9-Feb-2017 | 19:00 | 1.8 | SE |
| 9-Feb-2017 | 20:00 | 1.6 | SSE |
| 9-Feb-2017 | 21:00 | 1.7 | ESE |
| 9-Feb-2017 | 22:00 | 1.6 | ESE |
| 9-Feb-2017 | 23:00 | 1.7 | S |
| 10-Feb-2017 | 0:00 | 1.6 | SE |
| 10-Feb-2017 | 1:00 | 1.9 | WNW |
| 10-Feb-2017 | 2:00 | 1.8 | E |
| 10-Feb-2017 | 3:00 | 1.8 | NE |
| 10-Feb-2017 | 4:00 | 1.8 | NNE |
| 10-Feb-2017 | 5:00 | 1.9 | WNW |
| 10-Feb-2017 | 6:00 | 1.4 | N |
| 10-Feb-2017 | 7:00 | 1.6 | SSE |
| 10-Feb-2017 | 8:00 | 1.9 | ESE |
| 10-Feb-2017 | 9:00 | 2.2 | SSE |
| 10-Feb-2017 | 10:00 | 2.7 | WNW |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 10-Feb-2017 | 11:00 | 2.9 | SSW |
| 10-Feb-2017 | 12:00 | 3.1 | SW |
| 10-Feb-2017 | 13:00 | 3 | SSW |
| 10-Feb-2017 | 14:00 | 2.9 | SSW |
| 10-Feb-2017 | 15:00 | 2.7 | SE |
| 10-Feb-2017 | 16:00 | 2.6 | SSW |
| 10-Feb-2017 | 17:00 | 2.4 | E |
| 10-Feb-2017 | 18:00 | 2.1 | SE |
| 10-Feb-2017 | 19:00 | 1.8 | SE |
| 10-Feb-2017 | 20:00 | 1.8 | SSW |
| 10-Feb-2017 | 21:00 | 1.7 | SE |
| 10-Feb-2017 | 22:00 | 1.6 | SE |
| 10-Feb-2017 | 23:00 | 1.8 | SW |
| 11-Feb-2017 | 0:00 | 1.9 | SE |
| 11-Feb-2017 | 1:00 | 1.9 | ESE |
| 11-Feb-2017 | 2:00 | 1.9 | SE |
| 11-Feb-2017 | 3:00 | 1.7 | SE |
| 11-Feb-2017 | 4:00 | 1.6 | S |
| 11-Feb-2017 | 5:00 | 1.8 | W |
| 11-Feb-2017 | 6:00 | 1.8 | NNE |
| 11-Feb-2017 | 7:00 | 1.8 | ENE |
| 11-Feb-2017 | 8:00 | 2.1 | ENE |
| 11-Feb-2017 | 9:00 | 2.6 | ENE |
| 11-Feb-2017 | 10:00 | 2.6 | WSW |
| 11-Feb-2017 | 11:00 | 2.7 | SSW |
| 11-Feb-2017 | 12:00 | 2.9 | W |
| 11-Feb-2017 | 13:00 | 2.9 | SE |
| 11-Feb-2017 | 14:00 | 2.8 | NE |
| 11-Feb-2017 | 15:00 | 2.8 | W |
| 11-Feb-2017 | 16:00 | 2.7 | SSE |
| 11-Feb-2017 | 17:00 | 2.7 | W |
| 11-Feb-2017 | 18:00 | 2.2 | WSW |
| 11-Feb-2017 | 19:00 | 2.1 | W |
| 11-Feb-2017 | 20:00 | 2 | N |
| 11-Feb-2017 | 21:00 | 2.1 | SE |
| 11-Feb-2017 | 22:00 | 1.9 | WNW |
| 11-Feb-2017 | 23:00 | 2 | WNW |
| 12-Feb-2017 | 0:00 | 2 | NNE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 12-Feb-2017 | 1:00 | 1.8 | W |
| 12-Feb-2017 | 2:00 | 1.8 | NNE |
| 12-Feb-2017 | 3:00 | 1.8 | NE |
| 12-Feb-2017 | 4:00 | 1.7 | NE |
| 12-Feb-2017 | 5:00 | 1.6 | ENE |
| 12-Feb-2017 | 6:00 | 1.5 | ESE |
| 12-Feb-2017 | 7:00 | 1.7 | ESE |
| 12-Feb-2017 | 8:00 | 2 | NNE |
| 12-Feb-2017 | 9:00 | 2.2 | SW |
| 12-Feb-2017 | 10:00 | 2.5 | ESE |
| 12-Feb-2017 | 11:00 | 2.6 | WNW |
| 12-Feb-2017 | 12:00 | 2.8 | E |
| 12-Feb-2017 | 13:00 | 2.8 | SW |
| 12-Feb-2017 | 14:00 | 2.7 | SE |
| 12-Feb-2017 | 15:00 | 2.6 | SE |
| 12-Feb-2017 | 16:00 | 2.5 | ESE |
| 12-Feb-2017 | 17:00 | 2.5 | SE |
| 12-Feb-2017 | 18:00 | 2.3 | NE |
| 12-Feb-2017 | 19:00 | 2.2 | N |
| 12-Feb-2017 | 20:00 | 2.1 | NE |
| 12-Feb-2017 | 21:00 | 1.7 | ESE |
| 12-Feb-2017 | 22:00 | 1.7 | ENE |
| 12-Feb-2017 | 23:00 | 1.8 | NE |
| 13-Feb-2017 | 0:00 | 1.6 | NE |
| 13-Feb-2017 | 1:00 | 1.7 | NW |
| 13-Feb-2017 | 2:00 | 1.6 | W |
| 13-Feb-2017 | 3:00 | 1.6 | ENE |
| 13-Feb-2017 | 4:00 | 1.5 | NNE |
| 13-Feb-2017 | 5:00 | 1.6 | NE |
| 13-Feb-2017 | 6:00 | 1.6 | ENE |
| 13-Feb-2017 | 7:00 | 1.6 | NE |
| 13-Feb-2017 | 8:00 | 1.8 | ESE |
| 13-Feb-2017 | 9:00 | 2.3 | W |
| 13-Feb-2017 | 10:00 | 2.6 | NNE |
| 13-Feb-2017 | 11:00 | 2.4 | NE |
| 13-Feb-2017 | 12:00 | 2.7 | ESE |
| 13-Feb-2017 | 13:00 | 2.4 | ESE |
| 13-Feb-2017 | 14:00 | 2.5 | SSE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 13-Feb-2017 | 15:00 | 2.4 | N |
| 13-Feb-2017 | 16:00 | 2.3 | ESE |
| 13-Feb-2017 | 17:00 | 2.1 | ESE |
| 13-Feb-2017 | 18:00 | 1.8 | NE |
| 13-Feb-2017 | 19:00 | 1.5 | E |
| 13-Feb-2017 | 20:00 | 1.1 | SSE |
| 13-Feb-2017 | 21:00 | 1.3 | NNE |
| 13-Feb-2017 | 22:00 | 1.3 | E |
| 13-Feb-2017 | 23:00 | 1.2 | NE |
| 14-Feb-2017 | 0:00 | 1.3 | NE |
| 14-Feb-2017 | 1:00 | 1.2 | ESE |
| 14-Feb-2017 | 2:00 | 1.3 | ENE |
| 14-Feb-2017 | 3:00 | 1.3 | NNE |
| 14-Feb-2017 | 4:00 | 1.1 | ENE |
| 14-Feb-2017 | 5:00 | 1.2 | E |
| 14-Feb-2017 | 6:00 | 0.9 | E |
| 14-Feb-2017 | 7:00 | 1.1 | E |
| 14-Feb-2017 | 8:00 | 1.7 | E |
| 14-Feb-2017 | 9:00 | 2.3 | E |
| 14-Feb-2017 | 10:00 | 2.4 | ENE |
| 14-Feb-2017 | 11:00 | 3 | ESE |
| 14-Feb-2017 | 12:00 | 2.9 | ENE |
| 14-Feb-2017 | 13:00 | 2.8 | N |
| 14-Feb-2017 | 14:00 | 2.6 | ENE |
| 14-Feb-2017 | 15:00 | 2.6 | ESE |
| 14-Feb-2017 | 16:00 | 2.6 | SE |
| 14-Feb-2017 | 17:00 | 2.6 | SSE |
| 14-Feb-2017 | 18:00 | 2 | SSE |
| 14-Feb-2017 | 19:00 | 2 | SSE |
| 14-Feb-2017 | 20:00 | 1.9 | SE |
| 14-Feb-2017 | 21:00 | 1.9 | ESE |
| 14-Feb-2017 | 22:00 | 1.8 | ESE |
| 14-Feb-2017 | 23:00 | 1.7 | NE |
| 15-Feb-2017 | 0:00 | 1.7 | ENE |
| 15-Feb-2017 | 1:00 | 1.6 | ENE |
| 15-Feb-2017 | 2:00 | 1.6 | NE |
| 15-Feb-2017 | 3:00 | 1.7 | NE |
| 15-Feb-2017 | 4:00 | 1.7 | SE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 15-Feb-2017 | 5:00 | 1.8 | ENE |
| 15-Feb-2017 | 6:00 | 1.8 | NE |
| 15-Feb-2017 | 7:00 | 2 | NE |
| 15-Feb-2017 | 8:00 | 2 | E |
| 15-Feb-2017 | 9:00 | 2 | NE |
| 15-Feb-2017 | 10:00 | 2.4 | ESE |
| 15-Feb-2017 | 11:00 | 2.4 | ESE |
| 15-Feb-2017 | 12:00 | 2.4 | ESE |
| 15-Feb-2017 | 13:00 | 2.4 | E |
| 15-Feb-2017 | 14:00 | 2.3 | E |
| 15-Feb-2017 | 15:00 | 2.4 | ENE |
| 15-Feb-2017 | 16:00 | 2.4 | N |
| 15-Feb-2017 | 17:00 | 2.2 | ENE |
| 15-Feb-2017 | 18:00 | 2 | ENE |
| 15-Feb-2017 | 19:00 | 1.7 | E |
| 15-Feb-2017 | 20:00 | 1.5 | ENE |
| 15-Feb-2017 | 21:00 | 1.7 | ENE |
| 15-Feb-2017 | 22:00 | 1.6 | SSE |
| 15-Feb-2017 | 23:00 | 1.5 | ESE |
| 16-Feb-2017 | 0:00 | 1.7 | ESE |
| 16-Feb-2017 | 1:00 | 1.7 | ESE |
| 16-Feb-2017 | 2:00 | 1.7 | NE |
| 16-Feb-2017 | 3:00 | 1.8 | NE |
| 16-Feb-2017 | 4:00 | 1.9 | E |
| 16-Feb-2017 | 5:00 | 2 | ESE |
| 16-Feb-2017 | 6:00 | 1.7 | WNW |
| 16-Feb-2017 | 7:00 | 1.9 | W |
| 16-Feb-2017 | 8:00 | 1.7 | WNW |
| 16-Feb-2017 | 9:00 | 2.1 | WNW |
| 16-Feb-2017 | 10:00 | 2.2 | WSW |
| 16-Feb-2017 | 11:00 | 2.2 | W |
| 16-Feb-2017 | 12:00 | 2.4 | WNW |
| 16-Feb-2017 | 13:00 | 2.4 | WNW |
| 16-Feb-2017 | 14:00 | 2.4 | W |
| 16-Feb-2017 | 15:00 | 2.5 | WNW |
| 16-Feb-2017 | 16:00 | 2.5 | W |
| 16-Feb-2017 | 17:00 | 2.4 | W |
| 16-Feb-2017 | 18:00 | 1.9 | WNW |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 16-Feb-2017 | 19:00 | 1.8 | WNW |
| 16-Feb-2017 | 20:00 | 1.8 | W |
| 16-Feb-2017 | 21:00 | 1.9 | WNW |
| 16-Feb-2017 | 22:00 | 1.6 | WNW |
| 16-Feb-2017 | 23:00 | 1.7 | W |
| 17-Feb-2017 | 0:00 | 1.6 | WNW |
| 17-Feb-2017 | 1:00 | 1.6 | WNW |
| 17-Feb-2017 | 2:00 | 1.5 | WNW |
| 17-Feb-2017 | 3:00 | 1.4 | SW |
| 17-Feb-2017 | 4:00 | 1.4 | WSW |
| 17-Feb-2017 | 5:00 | 1.4 | WSW |
| 17-Feb-2017 | 6:00 | 1.5 | WNW |
| 17-Feb-2017 | 7:00 | 1.4 | WNW |
| 17-Feb-2017 | 8:00 | 1.8 | WNW |
| 17-Feb-2017 | 9:00 | 1.9 | NW |
| 17-Feb-2017 | 10:00 | 2.3 | W |
| 17-Feb-2017 | 11:00 | 2.5 | WNW |
| 17-Feb-2017 | 12:00 | 1.9 | WNW |
| 17-Feb-2017 | 13:00 | 1.9 | NNE |
| 17-Feb-2017 | 14:00 | 1.9 | W |
| 17-Feb-2017 | 15:00 | 2 | WNW |
| 17-Feb-2017 | 16:00 | 2.6 | WNW |
| 17-Feb-2017 | 17:00 | 1.4 | SSW |
| 17-Feb-2017 | 18:00 | 1.1 | SW |
| 17-Feb-2017 | 19:00 | 0.9 | WSW |
| 17-Feb-2017 | 20:00 | 1.8 | WSW |
| 17-Feb-2017 | 21:00 | 1.9 | WSW |
| 17-Feb-2017 | 22:00 | 1.8 | WSW |
| 17-Feb-2017 | 23:00 | 1.6 | SW |
| 18-Feb-2017 | 0:00 | 1.4 | WSW |
| 18-Feb-2017 | 1:00 | 1.4 | WNW |
| 18-Feb-2017 | 2:00 | 1.3 | WNW |
| 18-Feb-2017 | 3:00 | 1.4 | WSW |
| 18-Feb-2017 | 4:00 | 1.5 | SW |
| 18-Feb-2017 | 5:00 | 1.6 | SW |
| 18-Feb-2017 | 6:00 | 1.4 | SW |
| 18-Feb-2017 | 7:00 | 1.6 | SW |
| 18-Feb-2017 | 8:00 | 2.1 | WSW |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 18-Feb-2017 | 9:00 | 2.6 | WSW |
| 18-Feb-2017 | 10:00 | 3.1 | SW |
| 18-Feb-2017 | 11:00 | 2.9 | WSW |
| 18-Feb-2017 | 12:00 | 3.1 | WSW |
| 18-Feb-2017 | 13:00 | 2.7 | WSW |
| 18-Feb-2017 | 14:00 | 2.7 | SSW |
| 18-Feb-2017 | 15:00 | 2.9 | WNW |
| 18-Feb-2017 | 16:00 | 3 | WNW |
| 18-Feb-2017 | 17:00 | 3.2 | WNW |
| 18-Feb-2017 | 18:00 | 3.1 | WNW |
| 18-Feb-2017 | 19:00 | 2.9 | SSW |
| 18-Feb-2017 | 20:00 | 2.7 | W |
| 18-Feb-2017 | 21:00 | 2.8 | ESE |
| 18-Feb-2017 | 22:00 | 2 | SSE |
| 18-Feb-2017 | 23:00 | 2.9 | W |
| 19-Feb-2017 | 0:00 | 3 | W |
| 19-Feb-2017 | 1:00 | 3 | WNW |
| 19-Feb-2017 | 2:00 | 2.1 | WNW |
| 19-Feb-2017 | 3:00 | 2.9 | W |
| 19-Feb-2017 | 4:00 | 2.9 | ESE |
| 19-Feb-2017 | 5:00 | 2.8 | ESE |
| 19-Feb-2017 | 6:00 | 2.1 | WNW |
| 19-Feb-2017 | 7:00 | 2.2 | W |
| 19-Feb-2017 | 8:00 | 2.5 | W |
| 19-Feb-2017 | 9:00 | 2.8 | WNW |
| 19-Feb-2017 | 10:00 | 3.1 | WNW |
| 19-Feb-2017 | 11:00 | 3 | WNW |
| 19-Feb-2017 | 12:00 | 2 | NE |
| 19-Feb-2017 | 13:00 | 1.8 | E |
| 19-Feb-2017 | 14:00 | 1.7 | ESE |
| 19-Feb-2017 | 15:00 | 1.8 | NE |
| 19-Feb-2017 | 16:00 | 1.7 | NE |
| 19-Feb-2017 | 17:00 | 1.7 | E |
| 19-Feb-2017 | 18:00 | 1.4 | ENE |
| 19-Feb-2017 | 19:00 | 1.1 | NE |
| 19-Feb-2017 | 20:00 | 1 | NE |
| 19-Feb-2017 | 21:00 | 1.8 | NE |
| 19-Feb-2017 | 22:00 | 1.7 | NNE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 19-Feb-2017 | 23:00 | 1.8 | NE |
| 20-Feb-2017 | 0:00 | 1.7 | NE |
| 20-Feb-2017 | 1:00 | 1.9 | NE |
| 20-Feb-2017 | 2:00 | 1.9 | ENE |
| 20-Feb-2017 | 3:00 | 1.8 | NE |
| 20-Feb-2017 | 4:00 | 1.7 | NE |
| 20-Feb-2017 | 5:00 | 1.7 | NNE |
| 20-Feb-2017 | 6:00 | 1.7 | NNE |
| 20-Feb-2017 | 7:00 | 1.7 | NE |
| 20-Feb-2017 | 8:00 | 1.7 | NE |
| 20-Feb-2017 | 9:00 | 1.6 | NE |
| 20-Feb-2017 | 10:00 | 1.9 | E |
| 20-Feb-2017 | 11:00 | 3 | E |
| 20-Feb-2017 | 12:00 | 2.1 | WNW |
| 20-Feb-2017 | 13:00 | 2.1 | SSW |
| 20-Feb-2017 | 14:00 | 2.7 | W |
| 20-Feb-2017 | 15:00 | 1.7 | WNW |
| 20-Feb-2017 | 16:00 | 1.6 | SSW |
| 20-Feb-2017 | 17:00 | 1.4 | NNE |
| 20-Feb-2017 | 18:00 | 2.1 | ENE |
| 20-Feb-2017 | 19:00 | 1.9 | NE |
| 20-Feb-2017 | 20:00 | 1.7 | W |
| 20-Feb-2017 | 21:00 | 1.6 | W |
| 20-Feb-2017 | 22:00 | 1.5 | WNW |
| 20-Feb-2017 | 23:00 | 1.7 | WSW |
| 21-Feb-2017 | 0:00 | 1.7 | W |
| 21-Feb-2017 | 1:00 | 1.7 | WSW |
| 21-Feb-2017 | 2:00 | 1.7 | WSW |
| 21-Feb-2017 | 3:00 | 1.7 | WSW |
| 21-Feb-2017 | 4:00 | 1.7 | WSW |
| 21-Feb-2017 | 5:00 | 1.6 | WSW |
| 21-Feb-2017 | 6:00 | 1.8 | WSW |
| 21-Feb-2017 | 7:00 | 1.9 | WNW |
| 21-Feb-2017 | 8:00 | 2 | WSW |
| 21-Feb-2017 | 9:00 | 2.5 | WSW |
| 21-Feb-2017 | 10:00 | 2.8 | W |
| 21-Feb-2017 | 11:00 | 1.8 | WNW |
| 21-Feb-2017 | 12:00 | 2 | WSW |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 21-Feb-2017 | 13:00 | 3.3 | WSW |
| 21-Feb-2017 | 14:00 | 2.1 | WSW |
| 21-Feb-2017 | 15:00 | 2.2 | WSW |
| 21-Feb-2017 | 16:00 | 2.1 | WSW |
| 21-Feb-2017 | 17:00 | 2 | WSW |
| 21-Feb-2017 | 18:00 | 2.8 | W |
| 21-Feb-2017 | 19:00 | 2.5 | WSW |
| 21-Feb-2017 | 20:00 | 2.3 | WSW |
| 21-Feb-2017 | 21:00 | 2.5 | W |
| 21-Feb-2017 | 22:00 | 2.3 | ENE |
| 21-Feb-2017 | 23:00 | 2.2 | W |
| 22-Feb-2017 | 0:00 | 2.1 | W |
| 22-Feb-2017 | 1:00 | 1.9 | WNW |
| 22-Feb-2017 | 2:00 | 2.2 | WSW |
| 22-Feb-2017 | 3:00 | 2.1 | W |
| 22-Feb-2017 | 4:00 | 2.1 | WNW |
| 22-Feb-2017 | 5:00 | 2 | SSW |
| 22-Feb-2017 | 6:00 | 1.8 | W |
| 22-Feb-2017 | 7:00 | 2.1 | W |
| 22-Feb-2017 | 8:00 | 2.4 | W |
| 22-Feb-2017 | 9:00 | 2.6 | N |
| 22-Feb-2017 | 10:00 | 2.9 | N |
| 22-Feb-2017 | 11:00 | 3 | N |
| 22-Feb-2017 | 12:00 | 2.6 | NE |
| 22-Feb-2017 | 13:00 | 2.8 | NE |
| 22-Feb-2017 | 14:00 | 2.7 | N |
| 22-Feb-2017 | 15:00 | 2.6 | WSW |
| 22-Feb-2017 | 16:00 | 2.7 | WSW |
| 22-Feb-2017 | 17:00 | 2.6 | WSW |
| 22-Feb-2017 | 18:00 | 1.2 | W |
| 22-Feb-2017 | 19:00 | 1.7 | SW |
| 22-Feb-2017 | 20:00 | 1.2 | W |
| 22-Feb-2017 | 21:00 | 2.1 | SW |
| 22-Feb-2017 | 22:00 | 2.2 | SW |
| 22-Feb-2017 | 23:00 | 2.4 | SW |
| 23-Feb-2017 | 0:00 | 2.4 | W |
| 23-Feb-2017 | 1:00 | 2.4 | WSW |
| 23-Feb-2017 | 2:00 | 2.3 | W |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 23-Feb-2017 | 3:00 | 2.2 | SW |
| 23-Feb-2017 | 4:00 | 2.2 | NNE |
| 23-Feb-2017 | 5:00 | 2.2 | NE |
| 23-Feb-2017 | 6:00 | 2.2 | ENE |
| 23-Feb-2017 | 7:00 | 2 | NE |
| 23-Feb-2017 | 8:00 | 2.2 | ENE |
| 23-Feb-2017 | 9:00 | 2.5 | ENE |
| 23-Feb-2017 | 10:00 | 2.9 | ENE |
| 23-Feb-2017 | 11:00 | 3.3 | WNW |
| 23-Feb-2017 | 12:00 | 3.4 | WNW |
| 23-Feb-2017 | 13:00 | 3.4 | WNW |
| 23-Feb-2017 | 14:00 | 3.2 | WNW |
| 23-Feb-2017 | 15:00 | 2.8 | WNW |
| 23-Feb-2017 | 16:00 | 2.6 | WNW |
| 23-Feb-2017 | 17:00 | 2.6 | WNW |
| 23-Feb-2017 | 18:00 | 2.5 | W |
| 23-Feb-2017 | 19:00 | 2.2 | W |
| 23-Feb-2017 | 20:00 | 2.2 | WSW |
| 23-Feb-2017 | 21:00 | 2.1 | WSW |
| 23-Feb-2017 | 22:00 | 2.1 | WNW |
| 23-Feb-2017 | 23:00 | 2 | WNW |
| 24-Feb-2017 | 0:00 | 2.1 | WNW |
| 24-Feb-2017 | 1:00 | 2.1 | WNW |
| 24-Feb-2017 | 2:00 | 2 | WNW |
| 24-Feb-2017 | 3:00 | 1.9 | WNW |
| 24-Feb-2017 | 4:00 | 2 | SW |
| 24-Feb-2017 | 5:00 | 2.2 | SSW |
| 24-Feb-2017 | 6:00 | 1.9 | SSW |
| 24-Feb-2017 | 7:00 | 2.1 | SSW |
| 24-Feb-2017 | 8:00 | 2.5 | SW |
| 24-Feb-2017 | 9:00 | 2.7 | WSW |
| 24-Feb-2017 | 10:00 | 3.2 | WSW |
| 24-Feb-2017 | 11:00 | 3.4 | WSW |
| 24-Feb-2017 | 12:00 | 3.1 | WNW |
| 24-Feb-2017 | 13:00 | 3.2 | SW |
| 24-Feb-2017 | 14:00 | 2.9 | SW |
| 24-Feb-2017 | 15:00 | 3.1 | SW |
| 24-Feb-2017 | 16:00 | 2.7 | ENE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 24-Feb-2017 | 17:00 | 2.6 | WNW |
| 24-Feb-2017 | 18:00 | 2.5 | WNW |
| 24-Feb-2017 | 19:00 | 2.4 | N |
| 24-Feb-2017 | 20:00 | 2.2 | SE |
| 24-Feb-2017 | 21:00 | 2 | SE |
| 24-Feb-2017 | 22:00 | 2.1 | SE |
| 24-Feb-2017 | 23:00 | 2.1 | ESE |
| 25-Feb-2017 | 0:00 | 2.2 | ESE |
| 25-Feb-2017 | 1:00 | 2 | ESE |
| 25-Feb-2017 | 2:00 | 2.2 | ESE |
| 25-Feb-2017 | 3:00 | 1.9 | NE |
| 25-Feb-2017 | 4:00 | 2 | NNE |
| 25-Feb-2017 | 5:00 | 1.9 | NE |
| 25-Feb-2017 | 6:00 | 1.6 | ENE |
| 25-Feb-2017 | 7:00 | 1.8 | NE |
| 25-Feb-2017 | 8:00 | 1.9 | NE |
| 25-Feb-2017 | 9:00 | 2.6 | NE |
| 25-Feb-2017 | 10:00 | 2.8 | ENE |
| 25-Feb-2017 | 11:00 | 2.9 | ENE |
| 25-Feb-2017 | 12:00 | 2.7 | ENE |
| 25-Feb-2017 | 13:00 | 2.8 | ENE |
| 25-Feb-2017 | 14:00 | 2.6 | ENE |
| 25-Feb-2017 | 15:00 | 2.9 | ESE |
| 25-Feb-2017 | 16:00 | 2.5 | NE |
| 25-Feb-2017 | 17:00 | 2.3 | E |
| 25-Feb-2017 | 18:00 | 1.8 | ENE |
| 25-Feb-2017 | 19:00 | 1.7 | ENE |
| 25-Feb-2017 | 20:00 | 0.7 | NNE |
| 25-Feb-2017 | 21:00 | 1.6 | ENE |
| 25-Feb-2017 | 22:00 | 1.5 | ENE |
| 25-Feb-2017 | 23:00 | 1.8 | ENE |
| 26-Feb-2017 | 0:00 | 1.8 | ENE |
| 26-Feb-2017 | 1:00 | 1.6 | ENE |
| 26-Feb-2017 | 2:00 | 0.6 | ENE |
| 26-Feb-2017 | 3:00 | 0.6 | NE |
| 26-Feb-2017 | 4:00 | 1.5 | NE |
| 26-Feb-2017 | 5:00 | 0.4 | NE |
| 26-Feb-2017 | 6:00 | 0.4 | NE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 26-Feb-2017 | 7:00 | 1.4 | NE |
| 26-Feb-2017 | 8:00 | 2 | N |
| 26-Feb-2017 | 9:00 | 2.3 | NNE |
| 26-Feb-2017 | 10:00 | 2.6 | NNE |
| 26-Feb-2017 | 11:00 | 2.8 | NE |
| 26-Feb-2017 | 12:00 | 3.1 | NE |
| 26-Feb-2017 | 13:00 | 3.3 | NE |
| 26-Feb-2017 | 14:00 | 2.9 | ENE |
| 26-Feb-2017 | 15:00 | 2.8 | ENE |
| 26-Feb-2017 | 16:00 | 2.7 | ENE |
| 26-Feb-2017 | 17:00 | 2.3 | NNE |
| 26-Feb-2017 | 18:00 | 1.7 | E |
| 26-Feb-2017 | 19:00 | 1.5 | ENE |
| 26-Feb-2017 | 20:00 | 1.4 | ENE |
| 26-Feb-2017 | 21:00 | 1.4 | ENE |
| 26-Feb-2017 | 22:00 | 1.3 | ENE |
| 26-Feb-2017 | 23:00 | 1.4 | NW |
| 27-Feb-2017 | 0:00 | 1.3 | N |
| 27-Feb-2017 | 1:00 | 1.3 | NNE |
| 27-Feb-2017 | 2:00 | 1.3 | NE |
| 27-Feb-2017 | 3:00 | 1.4 | NE |
| 27-Feb-2017 | 4:00 | 1.4 | N |
| 27-Feb-2017 | 5:00 | 1.3 | NE |
| 27-Feb-2017 | 6:00 | 1.1 | ENE |
| 27-Feb-2017 | 7:00 | 1.1 | E |
| 27-Feb-2017 | 8:00 | 1.5 | E |
| 27-Feb-2017 | 9:00 | 2.1 | E |
| 27-Feb-2017 | 10:00 | 2.3 | NE |
| 27-Feb-2017 | 11:00 | 2.7 | ENE |
| 27-Feb-2017 | 12:00 | 2.8 | ENE |
| 27-Feb-2017 | 13:00 | 2.9 | ENE |
| 27-Feb-2017 | 14:00 | 2.9 | NE |
| 27-Feb-2017 | 15:00 | 2.6 | NE |
| 27-Feb-2017 | 16:00 | 2.6 | NE |
| 27-Feb-2017 | 17:00 | 2.7 | NNE |
| 27-Feb-2017 | 18:00 | 2.2 | NNE |
| 27-Feb-2017 | 19:00 | 2.1 | N |
| 27-Feb-2017 | 20:00 | 2 | NE |

**APPENDIX C –
WEATHER CONDITIONS DURING THE MONITORING PERIOD**

II. Mean Wind Speed and Wind Direction

| | | | |
|-------------|-------|-----|-----|
| 27-Feb-2017 | 21:00 | 2.3 | ENE |
| 27-Feb-2017 | 22:00 | 1.4 | N |
| 27-Feb-2017 | 23:00 | 1.6 | SE |
| 28-Feb-2017 | 0:00 | 1.6 | ESE |
| 28-Feb-2017 | 1:00 | 1.5 | SSE |
| 28-Feb-2017 | 2:00 | 1.6 | SSE |
| 28-Feb-2017 | 3:00 | 2.3 | SE |
| 28-Feb-2017 | 4:00 | 2.2 | SSE |
| 28-Feb-2017 | 5:00 | 2.1 | SSE |
| 28-Feb-2017 | 6:00 | 2 | ESE |
| 28-Feb-2017 | 7:00 | 2.2 | SSE |
| 28-Feb-2017 | 8:00 | 2.4 | SE |
| 28-Feb-2017 | 9:00 | 2.8 | SE |
| 28-Feb-2017 | 10:00 | 3.4 | SE |
| 28-Feb-2017 | 11:00 | 3.5 | ENE |
| 28-Feb-2017 | 12:00 | 2.9 | ENE |
| 28-Feb-2017 | 13:00 | 2.8 | ENE |
| 28-Feb-2017 | 14:00 | 2.9 | N |
| 28-Feb-2017 | 15:00 | 3.2 | NNE |
| 28-Feb-2017 | 16:00 | 3.1 | ENE |
| 28-Feb-2017 | 17:00 | 3.2 | NE |
| 28-Feb-2017 | 18:00 | 2.9 | ENE |
| 28-Feb-2017 | 19:00 | 2.7 | ENE |
| 28-Feb-2017 | 20:00 | 2.7 | ENE |
| 28-Feb-2017 | 21:00 | 2.6 | ENE |
| 28-Feb-2017 | 22:00 | 2.6 | ENE |
| 28-Feb-2017 | 23:00 | 2.7 | ENE |

**APPENDIX D
ENVIRONMENTAL MONITORING
SCHEDULES**

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Impact Air Quality and Noise Monitoring Schedule (February 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--|---|---|---|---|----------|
| | | | 1-Feb | 2-Feb | 3-Feb | 4-Feb |
| | | | 24 hr TSP [AM1, AM2, AM3, AM5(A) & AM6(A)] | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] 24 hr TSP [AM4(A)] Noise [CM2, CM4, CM6(A), CM7(A), CM8(A)] | Noise [CM1, CM3, CM5] 24 hr TSP [AM4(A)] | |
| 5-Feb | 6-Feb | 7-Feb | 8-Feb | 9-Feb | 10-Feb | 11-Feb |
| | 24 hr TSP | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] Noise [CM2, CM4, CM6(A), CM7(A), CM8(A)] | | Noise [CM1, CM3, CM5] | 24 hr TSP | |
| 12-Feb | 13-Feb | 14-Feb | 15-Feb | 16-Feb | 17-Feb | 18-Feb |
| | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] | | Noise [CM1, CM3, CM5] | 24 hr TSP | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] Noise [CM2, CM4, CM6(A), CM7(A), CM8(A)] | |
| 19-Feb | 20-Feb | 21-Feb | 22-Feb | 23-Feb | 24-Feb | 25-Feb |
| | | | Noise [CM1, CM3, CM5] 24 hr TSP | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] Noise [CM2, CM4, CM6(A), CM7(A), CM8(A)] | | |
| 26-Feb | 27-Feb | 28-Feb | | | | |
| | | 24 hr TSP | | | | |

Air Quality Monitoring Station

AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4⁽¹⁾ - Sitting-out Area at Cha Kwo Ling Village
AM4(A)⁽²⁾ - Cha Kwo Ling Public Cargo Working Area Administrative Office
AM5(A) - Tseung Kwan O DSD Desilting Compound
AM6(A) - Park Central, L1/F Open Space Area

Noise Monitoring Station

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong
CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong
CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong
CM4 - Tin Hau Temple, Cha Kwo Ling
CM5 - CCC Kei Faat Primary School, Yau Tong
CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores
CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores
CM8(A) - Park Central, L1/F Open Space Area

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Impact Groundwater Quality Monitoring Schedule (February 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------------------------------|---------|--------------------------------|----------|--------------------------------|----------|
| 1-Jan | 2-Jan | 3-Jan | 1-Feb | 2-Feb | 3-Feb | 4-Feb |
| | | | | | Groundwater Quality Monitoring | |
| 5-Feb | 6-Feb | 7-Feb | 8-Feb | 9-Feb | 10-Feb | 11-Feb |
| | | | | | | |
| 12-Feb | 13-Feb | 14-Feb | 15-Feb | 16-Feb | 17-Feb | 18-Feb |
| | | | Groundwater Quality Monitoring | | | |
| 19-Feb | 20-Feb | 21-Feb | 22-Feb | 23-Feb | 24-Feb | 25-Feb |
| | | | | | | |
| 26-Feb | 27-Feb | 28-Feb | | | | |
| | Groundwater Quality Monitoring | | | | | |

Monitoring Location:
Stream 1, Stream 2, Stream 3

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Impact Water Quality Monitoring Schedule (February 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------|----------------------------------|---------|----------------------------------|----------|----------------------------------|----------|
| | | | 1-Feb | 2-Feb | 3-Feb | 4-Feb |
| | | | Mid-Flood 9:42 Mid-Ebb 15:37 | | Mid-Flood 11:11 Mid-Ebb 17:29 | |
| 5-Feb | 6-Feb | 7-Feb | 8-Feb | 9-Feb | 10-Feb | 11-Feb |
| | Mid-Ebb 7:49 Mid-Flood 13:46 | | Mid-Ebb 10:31 Mid-Flood 15:53 | | Mid-Ebb 12:11 Mid-Flood 17:38 | |
| 12-Feb | 13-Feb | 14-Feb | 15-Feb | 16-Feb | 17-Feb | 18-Feb |
| | Mid-Flood 8:20 Mid-Ebb 14:03 | | Mid-Flood 9:17 Mid-Ebb 15:11 | | Mid-Flood 10:23 Mid-Ebb 16:36 | |
| 19-Feb | 20-Feb | 21-Feb | 22-Feb | 23-Feb | 24-Feb | 25-Feb |
| | Mid-Ebb 7:25 Mid-Flood 12:26 | | Mid-Ebb 10:43 Mid-Flood 15:34 | | Mid-Ebb 12:00 Mid-Flood 17:17 | |
| 26-Feb | 27-Feb | 28-Feb | | | | |
| | Mid-Ebb 13:06 Mid-Flood 18:51 | | | | | |

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Tentative Impact Air Quality and Noise Monitoring Schedule (March 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|---|--|--|---|--|-----------|
| | | | 1-Mar | 2-Mar | 3-Mar | 4-Mar |
| | | | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] Noise [CM2, CM3, CM4, CM6(A), CM7(A), CM8(A)] | Noise [CM1, CM3, CM5] | | |
| 5-Mar | 6-Mar | 7-Mar | 8-Mar | 9-Mar | 10-Mar | 11-Mar |
| | 24 hr TSP | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] Noise [CM2, CM3, CM4, CM6(A), CM7(A), CM8(A)] | | | Noise [CM1, CM3, CM5] | 24 hr TSP |
| 12-Mar | 13-Mar | 14-Mar | 15-Mar | 16-Mar | 17-Mar | 18-Mar |
| | 1 hr TSP X3 [AM1, AM2, AM3, AM4, AM5(A) & AM6(A)] Noise [CM2, CM4, CM6(A), CM7(A), CM8(A)] | | | 1 hr TSP X3 [AM1, AM2, AM3, AM4] Noise [CM1, CM3, CM5] | 1 hr TSP X3 [AM5(A) & AM6(A)] Noise [CM3] | |
| 19-Mar | 20-Mar | 21-Mar | 22-Mar | 23-Mar | 24-Mar | 25-Mar |
| | | Noise [CM1, CM3, CM5] | 1 hr TSP X3 [AM1, AM2, AM3, AM4] Noise [CM2, CM3 & CM4] | 1 hr TSP X3 [AM5(A) & AM6(A)] Noise [CM6, CM7 & CM8] | | |
| 26-Mar | 27-Mar | 28-Mar | 29-Mar | 30-Mar | 31-Mar | |
| | | 1 hr TSP X3 [AM1, AM2, AM3, AM4] Noise [CM2, CM3 & CM4] | 1 hr TSP X3 [AM5(A) & AM6(A)] Noise [CM6, CM7 & CM8] | Noise [CM1, CM3, CM5] | | |
| | | 24 hr TSP | | | | |

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Air Quality Monitoring Station

AM1 - Tin Hau Temple
AM2 - Sai Tso Wan Recreation Ground
AM3 - Yau Lai Estate Bik Lai House
AM4⁽¹⁾ - Sitting-out Area at Cha Kwo Ling Village
AM4(A)⁽²⁾ - Cha Kwo Ling Public Cargo Working Area Administrative Office
AM5(A) - Tseung Kwan O DSD Desilting Compound
AM6(A) - Park Central, L1/F Open Space Area

Note (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

Noise Monitoring Station

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong
CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong
CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong
CM4 - Tin Hau Temple, Cha Kwo Ling
CM5 - CCC Kei Faat Primary School, Yau Tong
CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores
CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores
CM8(A) - Park Central, L1/F Open Space Area

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Tentative Impact Groundwater Quality Monitoring Schedule (March 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|---------|-----------------------------------|-----------------------------------|--------|----------|
| | | | 1-Mar | 2-Mar | 3-Mar | 4-Mar |
| | | | | | | |
| 5-Mar | 6-Mar | 7-Mar | 8-Mar | 9-Mar | 10-Mar | 11-Mar |
| | | | | | | |
| 12-Mar | 13-Mar | 14-Mar | 15-Mar | 16-Mar | 17-Mar | 18-Mar |
| | | | Groundwater Quality Monitoring | | | |
| 19-Mar | 20-Mar | 21-Mar | 22-Mar | 23-Mar | 24-Mar | 25-Mar |
| | | | | | | |
| 26-Mar | 27-Mar | 28-Mar | 29-Mar | 30-Mar | 31-Mar | |
| | | | | Groundwater Quality Monitoring | | |

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Monitoring Location:
Stream 1, Stream 2, Stream 3

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Tentative Impact Water Quality Monitoring Schedule (March 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------|----------------------------------|---------|----------------------------------|----------|----------------------------------|----------|
| | | | 1-Mar | 2-Mar | 3-Mar | 4-Mar |
| | | | Mid-Flood 8:22 Mid-Ebb 14:23 | | Mid-Flood 9:36 Mid-Ebb 15:55 | |
| 5-Mar | 6-Mar | 7-Mar | 8-Mar | 9-Mar | 10-Mar | 11-Mar |
| | Mid-Flood 12:09 Mid-Ebb 19:37 | | Mid-Ebb 12:09 Mid-Flood 14:37 | | Mid-Ebb 11:15 Mid-Flood 16:45 | |
| 12-Mar | 13-Mar | 14-Mar | 15-Mar | 16-Mar | 17-Mar | 18-Mar |
| | Mid-Flood 7:07 Mid-Ebb 12:59 | | Mid-Flood 8:00 Mid-Ebb 14:01 | | Mid-Flood 8:57 Mid-Ebb 15:11 | |
| 19-Mar | 20-Mar | 21-Mar | 22-Mar | 23-Mar | 24-Mar | 25-Mar |
| | Mid-Flood 10:22 Mid-Ebb 17:45 | | Mid-Flood 8:15 Mid-Ebb 20:38 | | Mid-Ebb 10:21 Mid-Flood 15:12 | |
| 26-Mar | 27-Mar | 28-Mar | 29-Mar | 30-Mar | 31-Mar | |
| | Mid-Ebb 12:04 Mid-Flood 17:55 | | Mid-Flood 7:11 Mid-Ebb 13:19 | | Mid-Flood 8:22 Mid-Ebb 14:44 | |

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Agreement No. CE/59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction
Tentative Post-Translocation Coral Monitoring Schedule (March 2017)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------|------------------|---------|-----------|----------|--------|----------|
| | | | 1-Mar | 2-Mar | 3-Mar | 4-Mar |
| | | | | | | |
| 5-Mar | 6-Mar | 7-Mar | 8-Mar | 9-Mar | 10-Mar | 11-Mar |
| | Coral Monitoring | | | | | |
| 12-Mar | 13-Mar | 14-Mar | 15-Mar | 16-Mar | 17-Mar | 18-Mar |
| | | | | | | |
| 19-Mar | 20-Mar | 21-Mar | 22-Mar | 23-Mar | 24-Mar | 25-Mar |
| | | | | | | |
| 26-Mar | 27-Mar | 28-Mar | 29-Mar | 30-Mar | 31-Mar | |
| | | | | | | |

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

**APPENDIX E
1-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATIONS**

Appendix E - 1-hour TSP Monitoring Results

| Location AM1 - Tin Hau Temple | | | |
|-------------------------------|-------|---------|--|
| Date | Time | Weather | Particulate Concentration ($\mu\text{g}/\text{m}^3$) |
| 2-Feb-17 | 13:00 | Cloudy | 40.2 |
| 2-Feb-17 | 14:00 | Cloudy | 41.3 |
| 2-Feb-17 | 15:00 | Cloudy | 43.6 |
| 7-Feb-17 | 9:00 | Windy | 97.8 |
| 7-Feb-17 | 10:00 | Windy | 103.8 |
| 7-Feb-17 | 11:00 | Windy | 112.1 |
| 13-Feb-17 | 9:00 | Sunny | 26.9 |
| 13-Feb-17 | 10:00 | Sunny | 25.8 |
| 13-Feb-17 | 11:00 | Sunny | 25.8 |
| 17-Feb-17 | 9:00 | Sunny | 78.8 |
| 17-Feb-17 | 9:00 | Sunny | 73.0 |
| 17-Feb-17 | 9:00 | Sunny | 75.2 |
| 23-Feb-17 | 8:30 | Cloudy | 17.3 |
| 23-Feb-17 | 9:30 | Cloudy | 19.5 |
| 23-Feb-17 | 10:30 | Cloudy | 17.3 |
| Average | | | 53.2 |
| Maximum | | | 112.1 |
| Minimum | | | 17.3 |

| Location AM2 - Sai Tso Wan Recreation Ground | | | |
|--|-------|---------|--|
| Date | Time | Weather | Particulate Concentration ($\mu\text{g}/\text{m}^3$) |
| 2-Feb-17 | 13:00 | Sunny | 29.6 |
| 2-Feb-17 | 14:00 | Sunny | 27.2 |
| 2-Feb-17 | 15:00 | Sunny | 33.1 |
| 7-Feb-17 | 9:00 | Windy | 95.3 |
| 7-Feb-17 | 10:00 | Windy | 100.8 |
| 7-Feb-17 | 11:00 | Windy | 85.5 |
| 13-Feb-17 | 13:00 | Sunny | 17.4 |
| 13-Feb-17 | 14:00 | Sunny | 18.5 |
| 13-Feb-17 | 15:00 | Sunny | 18.5 |
| 17-Feb-17 | 13:00 | Sunny | 67.2 |
| 17-Feb-17 | 14:00 | Sunny | 66.7 |
| 17-Feb-17 | 15:00 | Sunny | 65.2 |
| 23-Feb-17 | 13:00 | Cloudy | 16.2 |
| 23-Feb-17 | 14:00 | Cloudy | 18.4 |
| 23-Feb-17 | 15:00 | Cloudy | 15.1 |
| Average | | | 45.0 |
| Maximum | | | 100.8 |
| Minimum | | | 15.1 |

| Location AM3 - Yau Lai Estate Bik Lai House | | | |
|---|-------|---------|--|
| Date | Time | Weather | Particulate Concentration ($\mu\text{g}/\text{m}^3$) |
| 2-Feb-17 | 9:00 | Cloudy | 35.7 |
| 2-Feb-17 | 10:00 | Cloudy | 38.0 |
| 2-Feb-17 | 11:00 | Cloudy | 33.5 |
| 7-Feb-17 | 13:00 | Windy | 89.9 |
| 7-Feb-17 | 14:00 | Windy | 104.4 |
| 7-Feb-17 | 15:00 | Windy | 87.5 |
| 13-Feb-17 | 13:00 | Sunny | 31.4 |
| 13-Feb-17 | 14:00 | Sunny | 29.2 |
| 13-Feb-17 | 15:00 | Sunny | 30.3 |
| 17-Feb-17 | 13:00 | Sunny | 84.7 |
| 17-Feb-17 | 14:00 | Sunny | 79.9 |
| 17-Feb-17 | 15:00 | Sunny | 87.1 |
| 23-Feb-17 | 13:00 | Cloudy | 74.0 |
| 23-Feb-17 | 14:00 | Cloudy | 74.0 |
| 23-Feb-17 | 15:00 | Cloudy | 72.8 |
| Average | | | 63.5 |
| Maximum | | | 104.4 |
| Minimum | | | 29.2 |

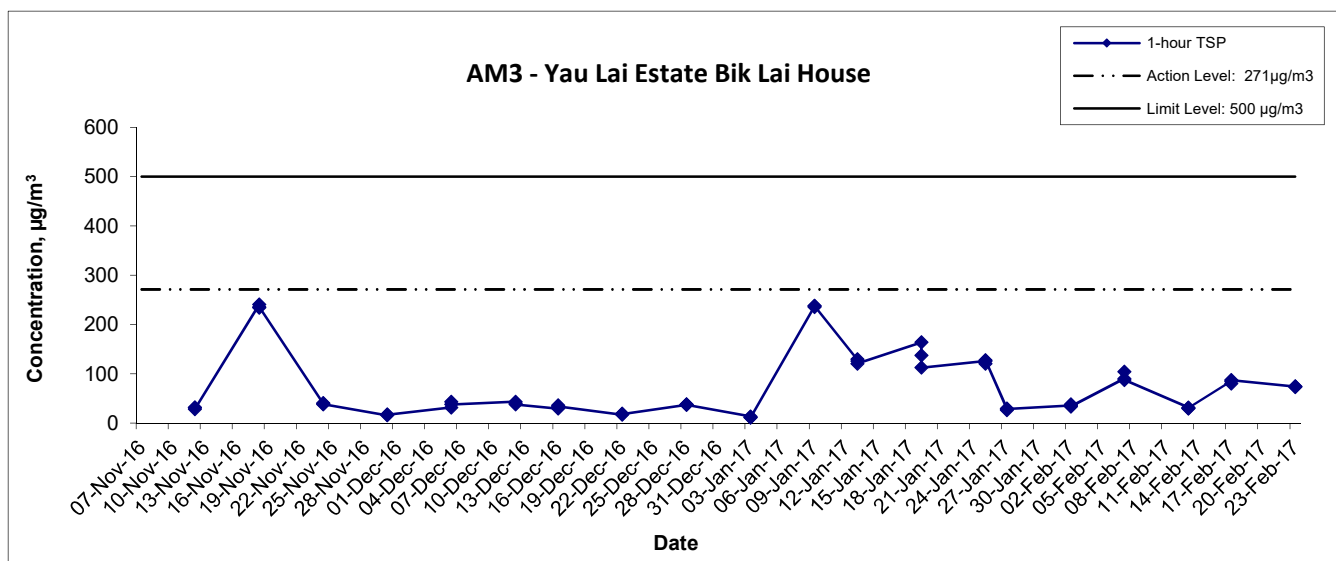
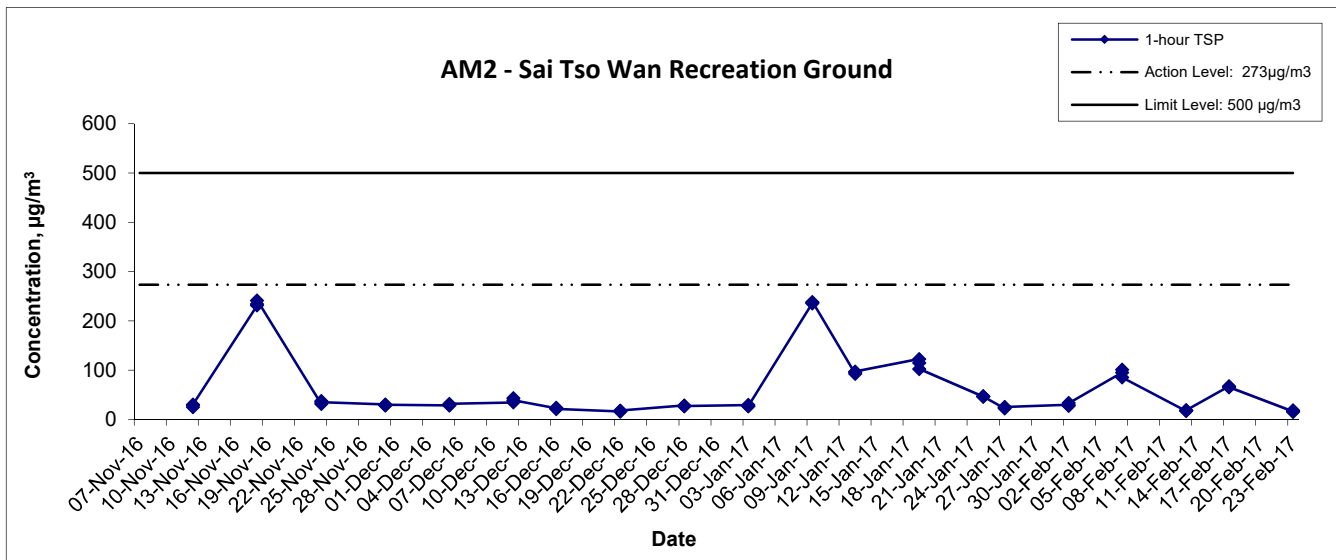
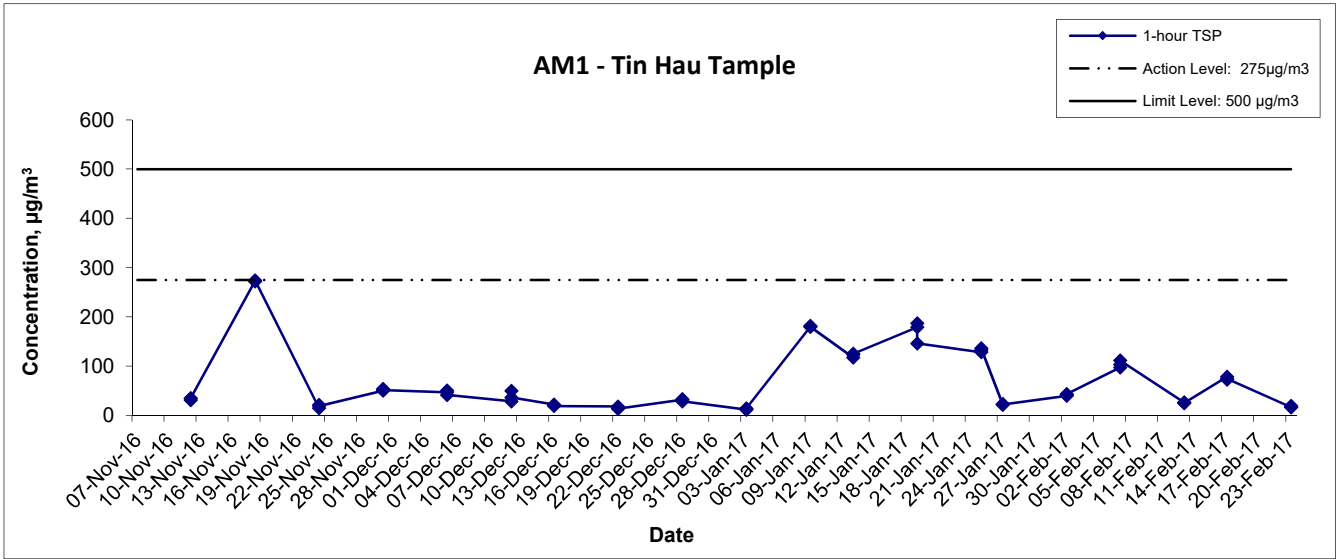
Appendix E - 1-hour TSP Monitoring Results

| Location AM4 - Sitting-out Area at Cha Kwo Ling Village | | | |
|---|-------|---------|--|
| Date | Time | Weather | Particulate Concentration ($\mu\text{g}/\text{m}^3$) |
| 2-Feb-17 | 9:00 | Sunny | 37.9 |
| 2-Feb-17 | 10:00 | Sunny | 41.4 |
| 2-Feb-17 | 11:00 | Sunny | 43.8 |
| 7-Feb-17 | 13:00 | Windy | 114.0 |
| 7-Feb-17 | 14:00 | Windy | 108.2 |
| 7-Feb-17 | 15:00 | Windy | 110.9 |
| 13-Feb-17 | 9:05 | Sunny | 29.0 |
| 13-Feb-17 | 10:05 | Sunny | 31.3 |
| 13-Feb-17 | 11:05 | Sunny | 30.1 |
| 17-Feb-17 | 9:00 | Sunny | 110.1 |
| 17-Feb-17 | 10:00 | Sunny | 129.0 |
| 17-Feb-17 | 11:00 | Sunny | 121.2 |
| 23-Feb-17 | 8:45 | Cloudy | 22.0 |
| 23-Feb-17 | 9:45 | Cloudy | 20.8 |
| 23-Feb-17 | 10:45 | Cloudy | 20.8 |
| | | Average | 64.7 |
| | | Maximum | 129.0 |
| | | Minimum | 20.8 |

| Location AM5(A) - Tseung Kwan O DSD Desilting Compound | | | |
|--|-------|---------|--|
| Date | Time | Weather | Particulate Concentration ($\mu\text{g}/\text{m}^3$) |
| 2-Feb-17 | 13:00 | Cloudy | 13.5 |
| 2-Feb-17 | 14:00 | Cloudy | 14.6 |
| 2-Feb-17 | 15:00 | Cloudy | 14.6 |
| 7-Feb-17 | 13:30 | Sunny | 198.7 |
| 7-Feb-17 | 14:30 | Sunny | 199.4 |
| 7-Feb-17 | 15:30 | Sunny | 197.2 |
| 13-Feb-17 | 13:00 | Sunny | 99.5 |
| 13-Feb-17 | 14:00 | Sunny | 105.1 |
| 13-Feb-17 | 15:00 | Sunny | 102.0 |
| 17-Feb-17 | 13:00 | Sunny | 182.3 |
| 17-Feb-17 | 14:00 | Sunny | 180.2 |
| 17-Feb-17 | 15:00 | Sunny | 181.3 |
| 23-Feb-17 | 8:40 | Cloudy | 34.0 |
| 23-Feb-17 | 9:40 | Cloudy | 32.9 |
| 23-Feb-17 | 10:40 | Cloudy | 36.2 |
| | | Average | 106.1 |
| | | Maximum | 199.4 |
| | | Minimum | 13.5 |

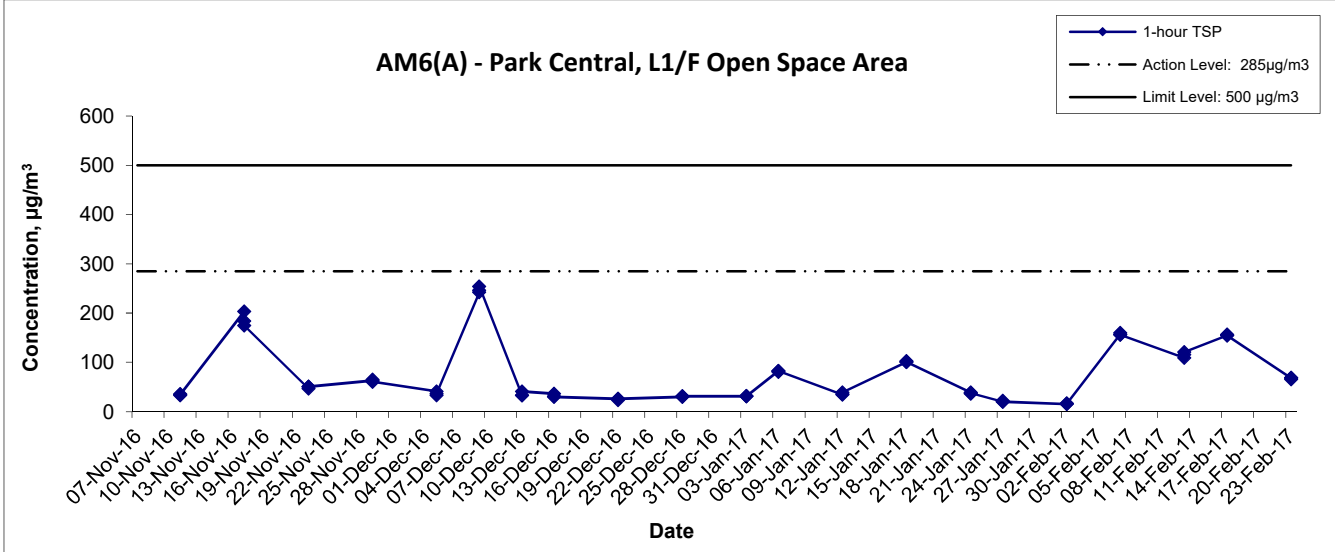
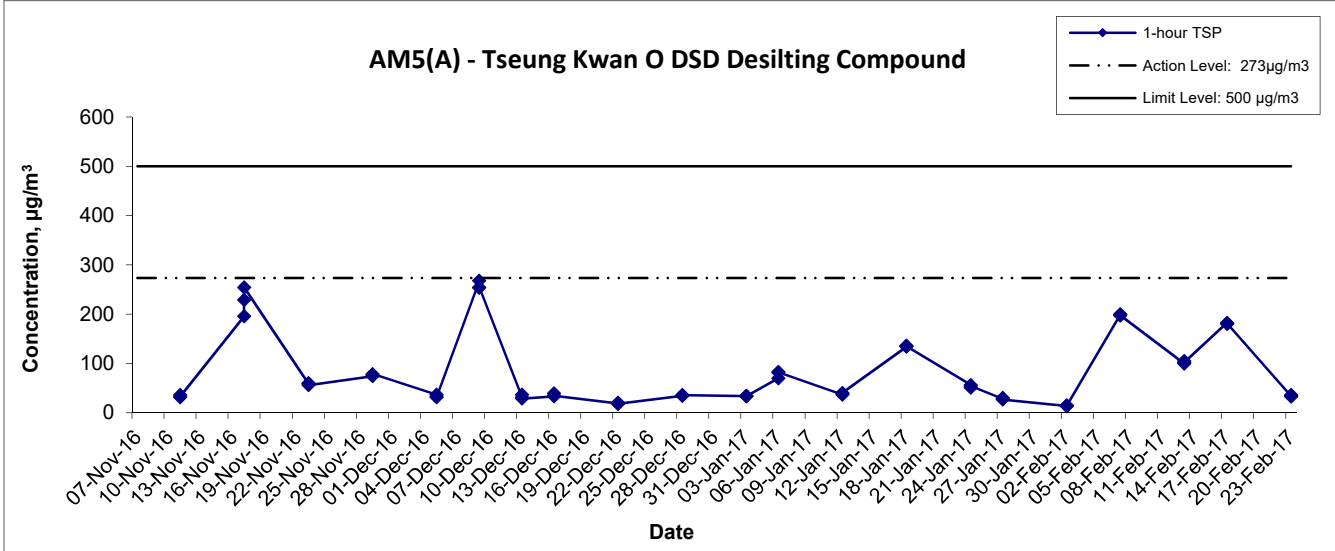
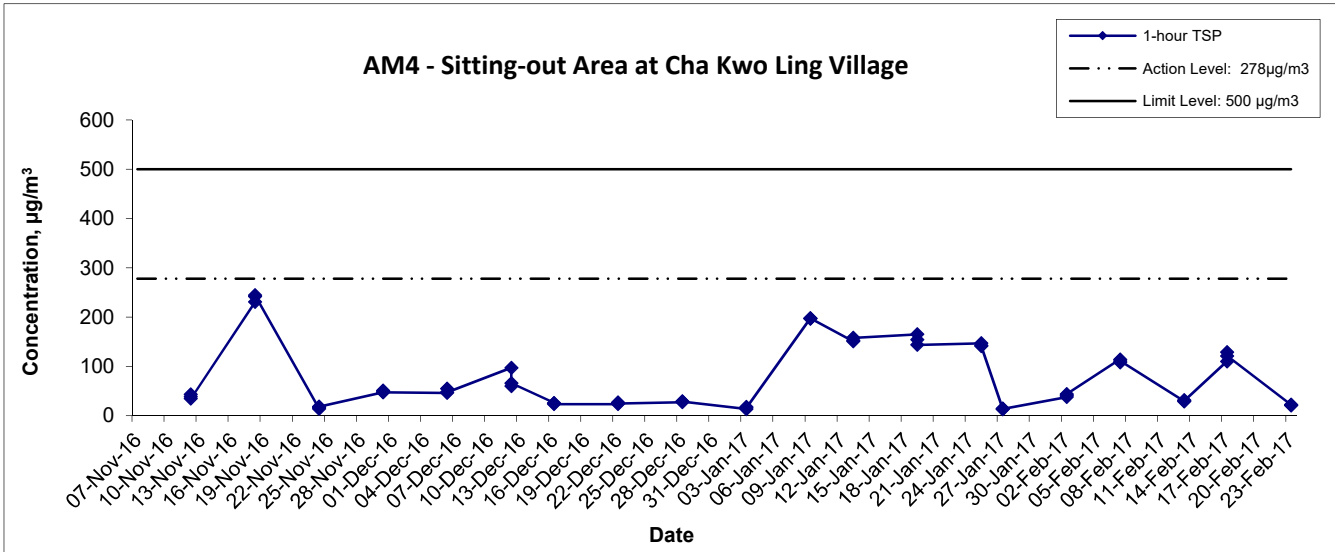
| Location AM6(A) - Park Central, L1/F Open Space Area | | | |
|--|-------|---------|--|
| Date | Time | Weather | Particulate Concentration ($\mu\text{g}/\text{m}^3$) |
| 2-Feb-17 | 8:45 | Cloudy | 15.7 |
| 2-Feb-17 | 9:45 | Cloudy | 16.8 |
| 2-Feb-17 | 10:45 | Cloudy | 15.7 |
| 7-Feb-17 | 14:00 | Sunny | 157.0 |
| 7-Feb-17 | 15:00 | Sunny | 159.7 |
| 7-Feb-17 | 16:00 | Sunny | 155.8 |
| 13-Feb-17 | 9:00 | Sunny | 109.1 |
| 13-Feb-17 | 10:00 | Sunny | 116.0 |
| 13-Feb-17 | 11:00 | Sunny | 120.7 |
| 17-Feb-17 | 13:00 | Sunny | 154.5 |
| 17-Feb-17 | 14:00 | Sunny | 156.9 |
| 17-Feb-17 | 15:00 | Sunny | 154.7 |
| 23-Feb-17 | 13:00 | Cloudy | 68.1 |
| 23-Feb-17 | 14:00 | Cloudy | 69.2 |
| 23-Feb-17 | 15:00 | Cloudy | 65.9 |
| | | Average | 102.4 |
| | | Maximum | 159.7 |
| | | Minimum | 15.7 |

1-hr TSP Concentration Levels



| | | | |
|---|----------------|------------------------|-----------------|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of 1-hour TSP Monitoring Results | Scale N.T.S | Project No. MA16034 | CINOTECH |
| | Date Feb 17 | Appendix E | |

1-hr TSP Concentration Levels



| | | | |
|---|----------------|------------------------|--|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of 1-hour TSP Monitoring Results | Scale N.T.S | Project No. MA16034 | |
| | Date Feb 17 | Appendix E | |

**APPENDIX F
24-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATIONS**

Appendix F - 24-hour TSP Monitoring Results

Location AM1 - Tin Hau Temple

| Start Date | Weather Condition | Air Temp. (K) | Atmospheric Pressure, Pa (mmHg) | Filter Weight (g) | | Particulate Weight (g) | Elapse Time | | Sampling Time(hrs.) | Flow Rate (m ³ /min.) | | Av. flow (m ³ /min) | Total vol. (m ³) | Conc. (µg/m ³) |
|------------|-------------------|---------------|---------------------------------|-------------------|--------|------------------------|-------------|--------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
| | | | | Initial | Final | | Initial | Final | | Initial | Final | | | |
| 1-Feb-17 | Cloudy | 290.4 | 769.3 | 3.5886 | 3.6826 | 0.0940 | 1451.0 | 1475.0 | 24.0 | 1.22 | 1.22 | 1.22 | 1751.2 | 53.7 |
| 6-Feb-17 | Windy | 291.6 | 764.4 | 3.6127 | 3.8533 | 0.2406 | 1475.0 | 1499.0 | 24.0 | 1.21 | 1.21 | 1.21 | 1741.3 | 138.2 |
| 10-Feb-17 | Sunny | 283.5 | 771.4 | 3.6507 | 3.8640 | 0.2133 | 1499.0 | 1523.0 | 24.0 | 1.23 | 1.23 | 1.23 | 1776.6 | 120.1 |
| 16-Feb-17 | Sunny | 290.7 | 769.8 | 3.5943 | 3.7360 | 0.1417 | 1523.0 | 1547.0 | 24.0 | 1.22 | 1.22 | 1.22 | 1750.8 | 80.9 |
| 22-Feb-17 | Cloudy | 291.2 | 765.6 | 3.5387 | 3.7410 | 0.2023 | 1547.0 | 1571.0 | 24.0 | 1.21 | 1.21 | 1.21 | 1744.2 | 116.0 |
| 28-Feb-17 | Cloudy | 289.5 | 770.5 | 3.6629 | 3.9402 | 0.2773 | 1571.0 | 1595.0 | 24.0 | 1.22 | 1.22 | 1.22 | 1755.6 | 158.0 |
| | | | | | | | | | | | | | Min | 53.7 |
| | | | | | | | | | | | | | Max | 158.0 |
| | | | | | | | | | | | | | Average | 111.1 |

Location AM2 - Sai Tso Wan Recreation Ground

| Start Date | Weather Condition | Air Temp. (K) | Atmospheric Pressure, Pa (mmHg) | Filter Weight (g) | | Particulate Weight (g) | Elapse Time | | Sampling Time(hrs.) | Flow Rate (m ³ /min.) | | Av. flow (m ³ /min) | Total vol. (m ³) | Conc. (µg/m ³) |
|------------|-------------------|---------------|---------------------------------|-------------------|--------|------------------------|-------------|---------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
| | | | | Initial | Final | | Initial | Final | | Initial | Final | | | |
| 1-Feb-17 | Cloudy | 291.3 | 768.1 | 3.5657 | 3.6447 | 0.0790 | 22415.3 | 22439.3 | 24.0 | 1.21 | 1.21 | 1.21 | 1739.4 | 45.4 |
| 6-Feb-17 | Windy | 292.3 | 763.2 | 3.6095 | 3.7269 | 0.1174 | 22439.3 | 22463.3 | 24.0 | 1.20 | 1.20 | 1.20 | 1730.8 | 67.8 |
| 10-Feb-17 | Sunny | 283.2 | 771.6 | 3.6159 | 3.7069 | 0.0910 | 22463.3 | 22487.3 | 24.0 | 1.23 | 1.23 | 1.23 | 1768.2 | 51.5 |
| 16-Feb-17 | Sunny | 290.9 | 769.4 | 3.6006 | 3.6823 | 0.0817 | 22487.3 | 22511.3 | 24.0 | 1.21 | 1.21 | 1.21 | 1742.1 | 46.9 |
| 22-Feb-17 | Ccloudy | 291.7 | 765.5 | 3.5645 | 3.6176 | 0.0531 | 22511.3 | 22535.3 | 24.0 | 1.21 | 1.20 | 1.21 | 1735.2 | 30.6 |
| 28-Feb-17 | Cloudy | 289.5 | 770.2 | 3.5897 | 3.7716 | 0.1819 | 22535.3 | 22559.3 | 24.0 | 1.21 | 1.21 | 1.21 | 1747.2 | 104.1 |
| | | | | | | | | | | | | | Min | 30.6 |
| | | | | | | | | | | | | | Max | 104.1 |
| | | | | | | | | | | | | | Average | 57.7 |

Location AM3 - Yau Lai Estate, Bik Lai House

| Start Date | Weather Condition | Air Temp. (K) | Atmospheric Pressure, Pa (mmHg) | Filter Weight (g) | | Particulate Weight (g) | Elapse Time | | Sampling Time(hrs.) | Flow Rate (m ³ /min.) | | Av. flow (m ³ /min) | Total vol. (m ³) | Conc. (µg/m ³) |
|------------|-------------------|---------------|---------------------------------|-------------------|--------|------------------------|-------------|---------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
| | | | | Initial | Final | | Initial | Final | | Initial | Final | | | |
| 1-Feb-17 | Cloudy | 290.5 | 769.1 | 3.6196 | 3.7210 | 0.1014 | 10982.7 | 11006.7 | 24.0 | 1.22 | 1.22 | 1.22 | 1758.6 | 57.7 |
| 6-Feb-17 | Windy | 291.7 | 764.6 | 3.6357 | 3.7984 | 0.1627 | 11006.7 | 11030.7 | 24.0 | 1.22 | 1.22 | 1.22 | 1750.2 | 93.0 |
| 10-Feb-17 | Sunny | 283.0 | 770.7 | 3.6488 | 3.7518 | 0.1030 | 11030.7 | 11054.7 | 24.0 | 1.24 | 1.24 | 1.24 | 1782.8 | 57.8 |
| 16-Feb-17 | Sunny | 291.4 | 768.3 | 3.5732 | 3.6850 | 0.1118 | 11054.7 | 11078.7 | 24.0 | 1.22 | 1.22 | 1.22 | 1755.1 | 63.7 |
| 22-Feb-17 | Ccloudy | 292.3 | 765.0 | 3.6172 | 3.7028 | 0.0856 | 11078.7 | 11102.7 | 24.0 | 1.21 | 1.21 | 1.21 | 1748.9 | 48.9 |
| 28-Feb-17 | Cloudy | 289.7 | 770.2 | 3.6051 | 3.7186 | 0.1135 | 11102.7 | 11126.7 | 24.0 | 1.22 | 1.22 | 1.22 | 1762.2 | 64.4 |
| | | | | | | | | | | | | | Min | 48.9 |
| | | | | | | | | | | | | | Max | 93.0 |
| | | | | | | | | | | | | | Average | 64.2 |

Appendix F - 24-hour TSP Monitoring Results

Location AM4(A) - Cha Kwo Ling Public Cargo Working Area Administrative Office

| Start Date | Weather Condition | Air Temp. (K) | Atmospheric Pressure, Pa (mmHg) | Filter Weight (g) | | Particulate Weight (g) | Elapse Time | | Sampling Time(hrs.) | Flow Rate (m ³ /min.) | | Av. flow (m ³ /min) | Total vol. (m ³) | Conc. (µg/m ³) |
|------------|-------------------|---------------|---------------------------------|-------------------|--------|------------------------|-------------|--------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
| | | | | Initial | Final | | Initial | Final | | Initial | Final | | | |
| 2-Feb-17 | Cloudy | 291.2 | 769.6 | 3.6386 | 3.8849 | 0.2463 | 7945.2 | 7969.2 | 24.0 | 1.21 | 1.21 | 1.21 | 1747.8 | 140.9 |
| 3-Feb-17 | Cloduy | 290.0 | 769.1 | 3.6129 | 3.8348 | 0.2219 | 7969.2 | 7993.2 | 24.0 | 1.22 | 1.22 | 1.22 | 1751.0 | 126.7 |
| 6-Feb-17 | Windy | 292.3 | 765.1 | 3.6365 | 3.9054 | 0.2689 | 7993.2 | 8017.2 | 24.0 | 1.21 | 1.21 | 1.21 | 1739.2 | 154.6 |
| 10-Feb-17 | Sunny | 283.8 | 770.4 | 3.5782 | 3.8960 | 0.3178 | 8017.2 | 8041.2 | 24.0 | 1.23 | 1.23 | 1.23 | 1772.2 | 179.3 |
| 16-Feb-17 | Sunny | 290.7 | 768.9 | 3.5738 | 3.8568 | 0.2830 | 8041.2 | 8065.2 | 24.0 | 1.21 | 1.21 | 1.21 | 1748.6 | 161.8 |
| 22-Feb-17 | Ccloudy | 291.4 | 766.2 | 3.5417 | 3.5909 | 0.0492 | 8065.2 | 8089.2 | 24.0 | 1.21 | 1.21 | 1.21 | 1743.2 | 28.2 |
| 28-Feb-17 | Cloudy | 288.8 | 770.3 | 3.5787 | 3.8397 | 0.2610 | 8089.2 | 8113.2 | 24.0 | 1.22 | 1.22 | 1.22 | 1756.1 | 148.6 |
| | | | | | | | | | | | | | Min | 28.2 |
| | | | | | | | | | | | | | Max | 179.3 |
| | | | | | | | | | | | | | Average | 134.3 |

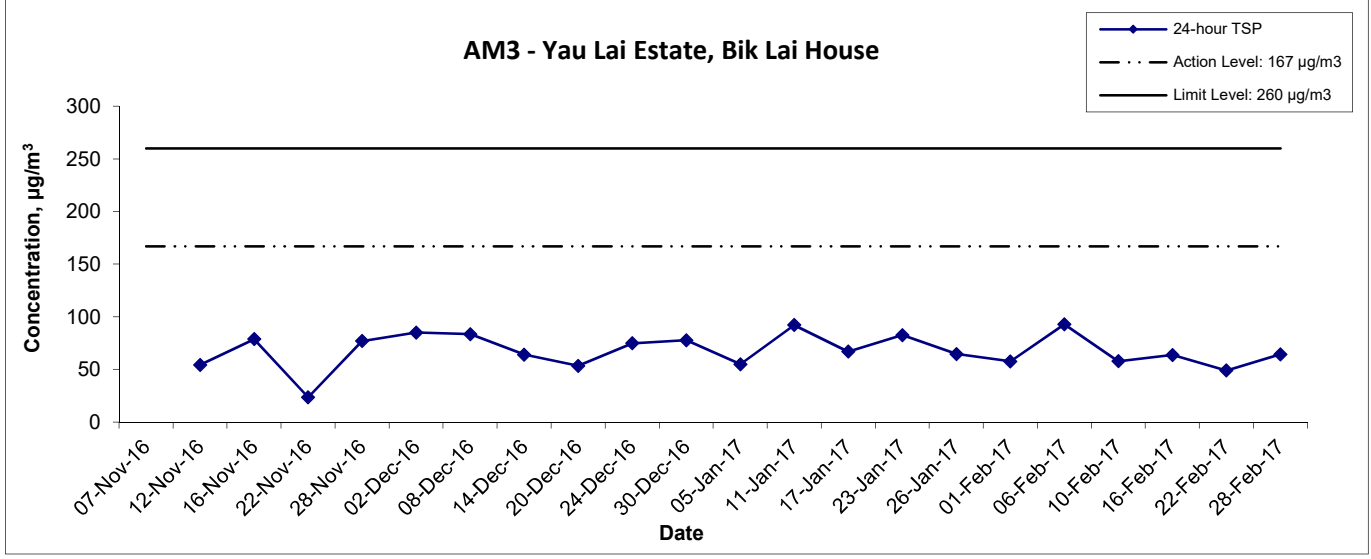
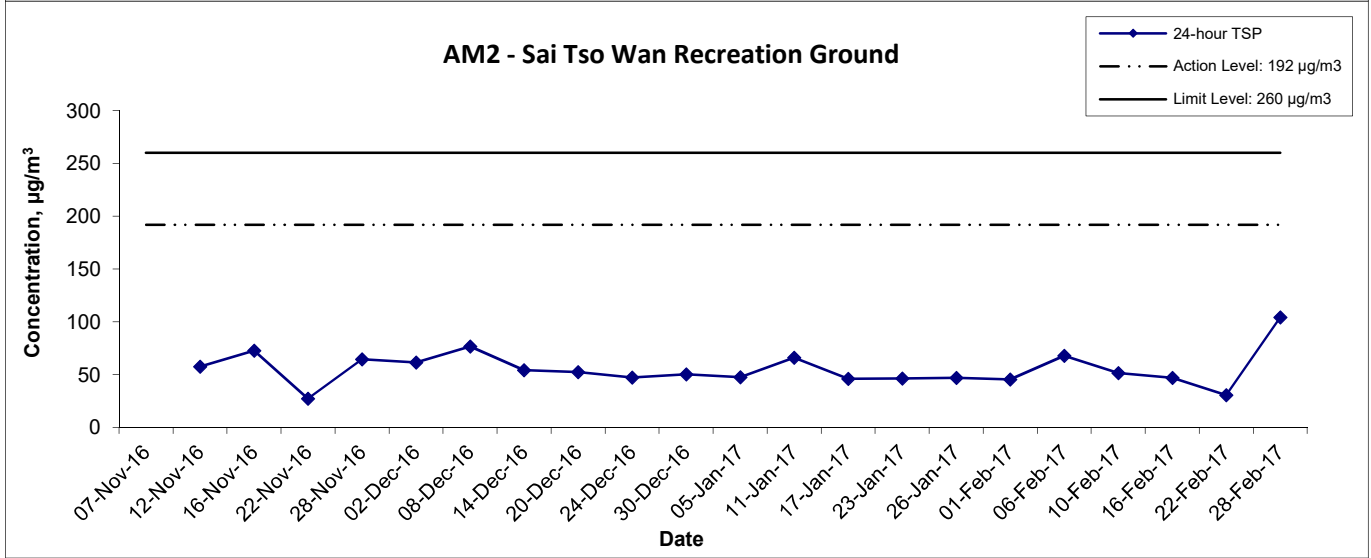
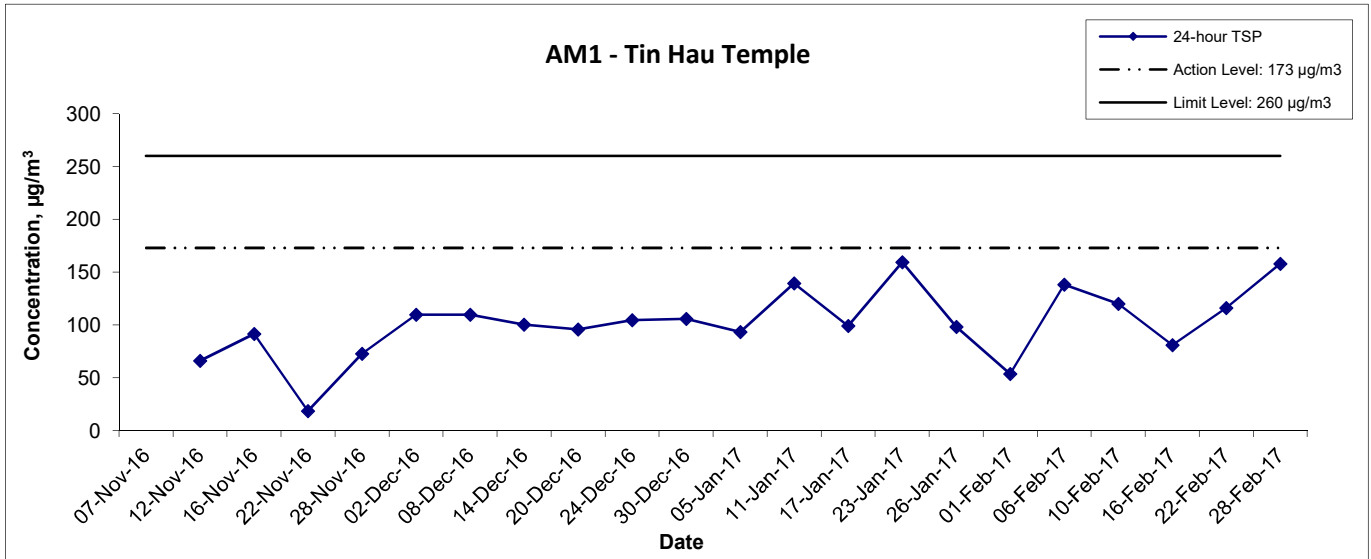
Location AM5(A) - Tseung Kwan O DSD Desilting Compound


| Start Date | Weather Condition | Air Temp. (K) | Atmospheric Pressure, Pa (mmHg) | Filter Weight (g) | | Particulate Weight (g) | Elapse Time | | Sampling Time(hrs.) | Flow Rate (m ³ /min.) | | Av. flow (m ³ /min) | Total vol. (m ³) | Conc. (µg/m ³) |
|------------|-------------------|---------------|---------------------------------|-------------------|--------|------------------------|-------------|---------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
| | | | | Initial | Final | | Initial | Final | | Initial | Final | | | |
| 1-Feb-17 | Cloudy | 290.4 | 768.7 | 3.6015 | 3.7053 | 0.1038 | 21711.5 | 21735.5 | 24.0 | 1.21 | 1.21 | 1.21 | 1741.3 | 59.6 |
| 6-Feb-17 | Sunny | 292.7 | 764.6 | 3.6361 | 3.8510 | 0.2149 | 21735.5 | 21759.5 | 24.0 | 1.20 | 1.20 | 1.20 | 1729.2 | 124.3 |
| 10-Feb-17 | Sunny | 283.5 | 771.1 | 3.6329 | 3.7896 | 0.1567 | 21759.5 | 21783.5 | 24.0 | 1.23 | 1.23 | 1.23 | 1766.4 | 88.7 |
| 16-Feb-17 | Sunny | 290.4 | 769.3 | 3.6506 | 3.8118 | 0.1612 | 21783.5 | 21807.5 | 24.0 | 1.21 | 1.21 | 1.21 | 1742.1 | 92.5 |
| 22-Feb-17 | Ccloudy | 291.8 | 765.7 | 3.5881 | 3.7344 | 0.1463 | 21807.5 | 21831.5 | 24.0 | 1.20 | 1.20 | 1.20 | 1733.3 | 84.4 |
| 28-Feb-17 | Cloudy | 288.5 | 770.4 | 3.5775 | 3.7789 | 0.2014 | 21831.5 | 21855.5 | 24.0 | 1.22 | 1.21 | 1.21 | 1749.4 | 115.1 |
| | | | | | | | | | | | | | Min | 59.6 |
| | | | | | | | | | | | | | Max | 124.3 |
| | | | | | | | | | | | | | Average | 94.1 |

Location AM6(A) - Park Central, L1/F Open Space Area

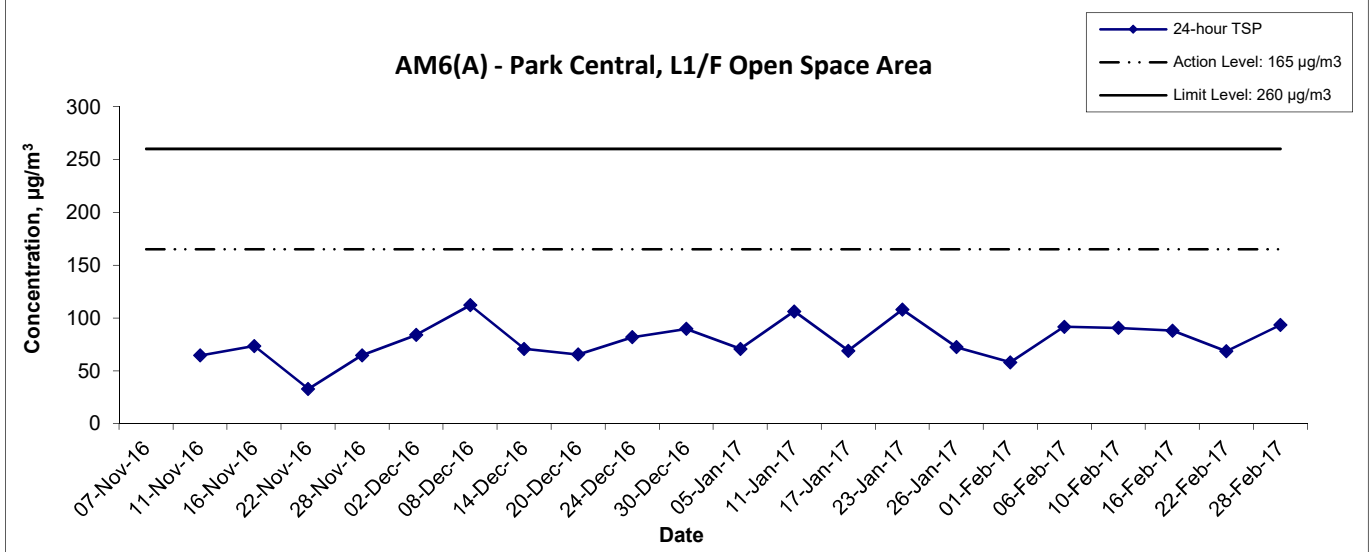
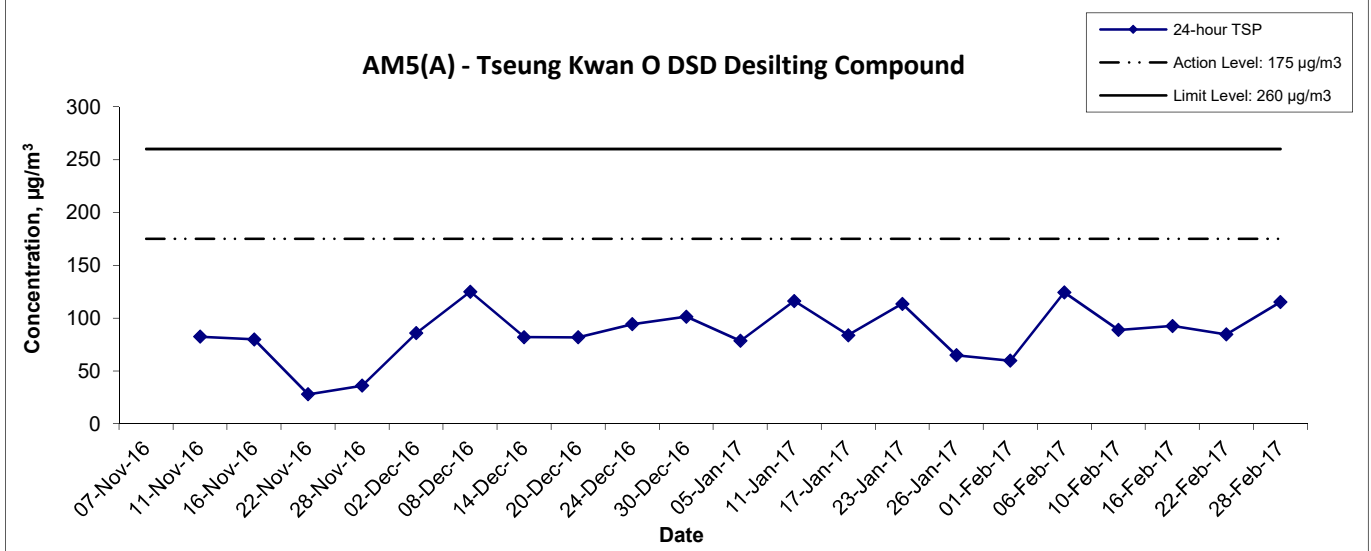
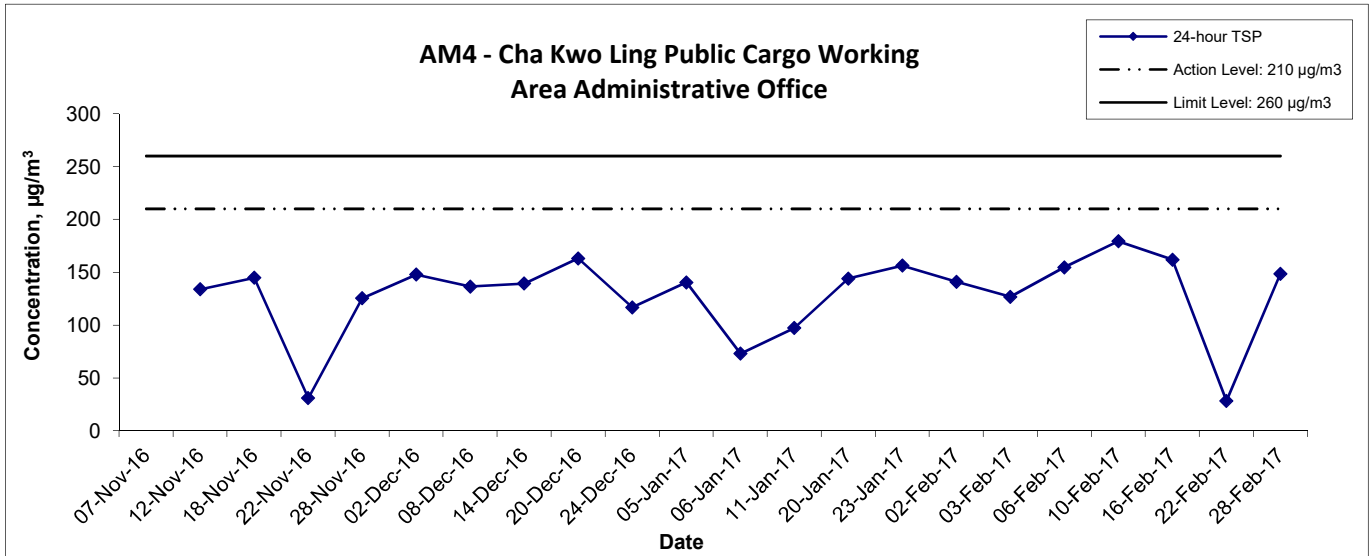
| Start Date | Weather Condition | Air Temp. (K) | Atmospheric Pressure, Pa (mmHg) | Filter Weight (g) | | Particulate Weight (g) | Elapse Time | | Sampling Time(hrs.) | Flow Rate (m ³ /min.) | | Av. flow (m ³ /min) | Total vol. (m ³) | Conc. (µg/m ³) |
|------------|-------------------|---------------|---------------------------------|-------------------|--------|------------------------|-------------|---------|---------------------|----------------------------------|-------|--------------------------------|------------------------------|----------------------------|
| | | | | Initial | Final | | Initial | Final | | Initial | Final | | | |
| 1-Feb-17 | Cloudy | 291.8 | 768.3 | 3.6075 | 3.7096 | 0.1021 | 14771.8 | 14795.8 | 24.0 | 1.22 | 1.22 | 1.22 | 1761.4 | 58.0 |
| 6-Feb-17 | Sunny | 291.6 | 764.1 | 3.5589 | 3.7194 | 0.1605 | 14795.8 | 14819.8 | 24.0 | 1.22 | 1.22 | 1.22 | 1751.6 | 91.6 |
| 10-Feb-17 | Sunny | 282.9 | 770.4 | 3.5679 | 3.7294 | 0.1615 | 14819.8 | 14843.8 | 24.0 | 1.24 | 1.24 | 1.24 | 1784.8 | 90.5 |
| 16-Feb-17 | Sunny | 291.3 | 769.6 | 3.5622 | 3.7170 | 0.1548 | 14843.8 | 14867.8 | 24.0 | 1.22 | 1.22 | 1.22 | 1758.6 | 88.0 |
| 22-Feb-17 | Ccloudy | 292.7 | 765.2 | 3.5826 | 3.7025 | 0.1199 | 14867.8 | 14891.8 | 24.0 | 1.22 | 1.21 | 1.22 | 1749.6 | 68.5 |
| 28-Feb-17 | Cloudy | 289.5 | 770.6 | 3.5816 | 3.7461 | 0.1645 | 14891.8 | 14915.8 | 24.0 | 1.23 | 1.23 | 1.23 | 1765.0 | 93.2 |
| | | | | | | | | | | | | | Min | 58.0 |
| | | | | | | | | | | | | | Max | 93.2 |
| | | | | | | | | | | | | | Average | 81.6 |

24-hr TSP Concentration Levels



| | | | |
|--|----------------|------------------------|---|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of 24-hour TSP Monitoring Results | Scale N.T.S | Project No. MA16034 |  |
| | Date Feb 17 | Appendix F | |

24-hr TSP Concentration Levels



| | | | |
|--|----------------|------------------------|--|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of 24-hour TSP Monitoring Results | Scale N.T.S | Project No. MA16034 | |
| | Date Feb 17 | Appendix F | |

**APPENDIX G
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

Appendix G - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

| Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong | | | | | | | |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 3-Feb-17 | 13:45 | Cloudy | 72.4 | 74.0 | 69.6 | 65.5 | 71.4 |
| 9-Feb-17 | 9:15 | Sunny | 73.8 | 75.2 | 72.3 | | 73.1 |
| 15-Feb-17 | 15:10 | Sunny | 68.2 | 69.6 | 66.5 | | 64.9 |
| 22-Feb-17 | 15:00 | Cloudy | 71.2 | 73.5 | 68.0 | | 69.8 |

| Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong | | | | | | | |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 2-Feb-17 | 9:15 | Cloudy | 72.4 | 75.6 | 67.3 | 63.6 | 71.8 |
| 7-Feb-17 | 13:15 | Cloudy | 70.5 | 73.7 | 66.2 | | 69.5 |
| 17-Feb-17 | 13:05 | Sunny | 70.3 | 73.5 | 67.2 | | 69.3 |
| 23-Feb-17 | 13:10 | Cloudy | 73.9 | 75.5 | 71.3 | | 73.5 |

| Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong | | | | | | | |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 3-Feb-17 | 13:00 | Cloudy | 70.9 | 73.2 | 67.0 | 65.6 | 69.4 |
| 9-Feb-17 | 10:20 | Sunny | 74.3 | 76.0 | 73.5 | | 73.7 |
| 15-Feb-17 | 13:00 | Sunny | 71.3 | 73.2 | 68.8 | | 69.9 |
| 22-Feb-17 | 14:15 | Cloudy | 70.5 | 73.9 | 64.7 | | 68.8 |

| Location CM4 - Tin Hau Temple, Cha Kwo Ling | | | | | | | |
|---|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 2-Feb-17 | 13:10 | Cloudy | 55.8 | 59.3 | 47.3 | 62.0 | 55.8 Measured ≤ Baseline |
| 7-Feb-17 | 9:10 | Cloudy | 56.3 | 59.5 | 47.7 | | 56.3 Measured ≤ Baseline |
| 17-Feb-17 | 11:00 | Sunny | 68.2 | 70.7 | 61.0 | | 67.0 |
| 23-Feb-17 | 9:00 | Cloudy | 61.6 | 62.5 | 51.4 | | 61.6 Measured ≤ Baseline |

| Location CM5 - CCC Kei Faat Primary School, Yau Tong | | | | | | | |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 3-Feb-17 | 14:30 | Cloudy | 67.8 | 70.7 | 62.4 | 68.2 | 67.8 Measured ≤ Baseline |
| 9-Feb-17 | 11:10 | Sunny | 69.3 | 72.5 | 63.8 | | 62.8 |
| 15-Feb-17 | 14:05 | Sunny | 68.8 | 71.8 | 62.5 | | 59.9 |
| 22-Feb-17 | 13:30 | Cloudy | 68.0 | 69.8 | 64.6 | | 64.4 Measured ≤ Baseline |

Appendix G - Noise Monitoring Results

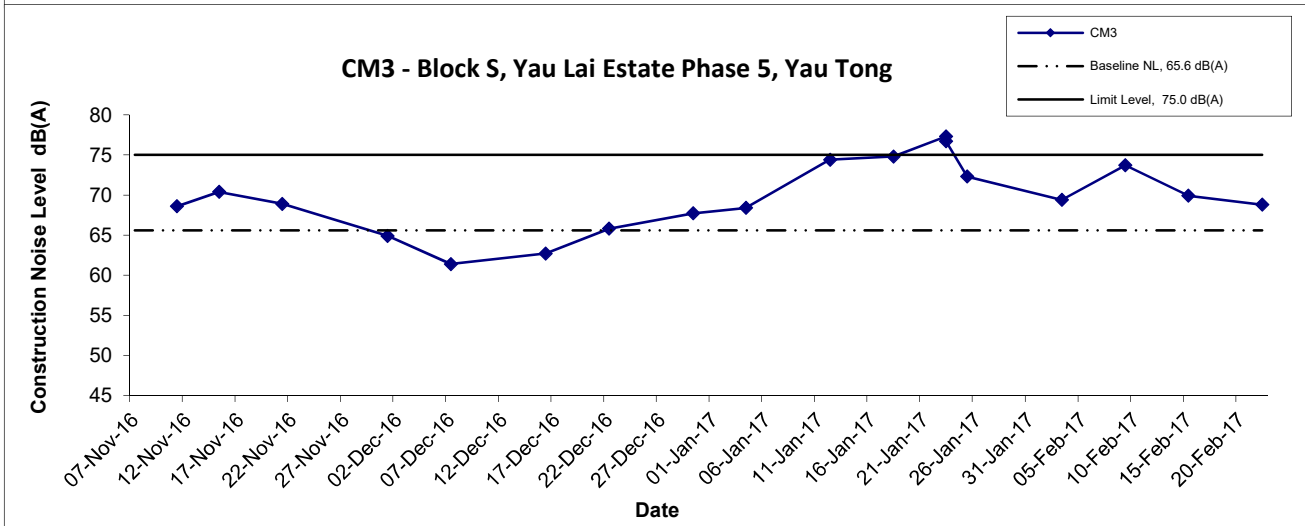
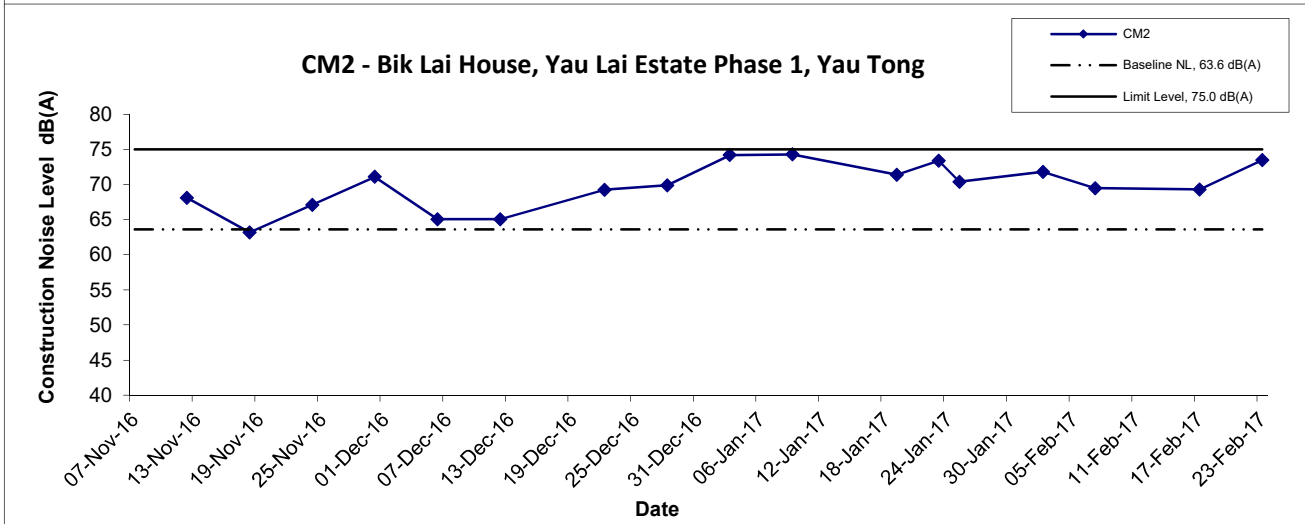
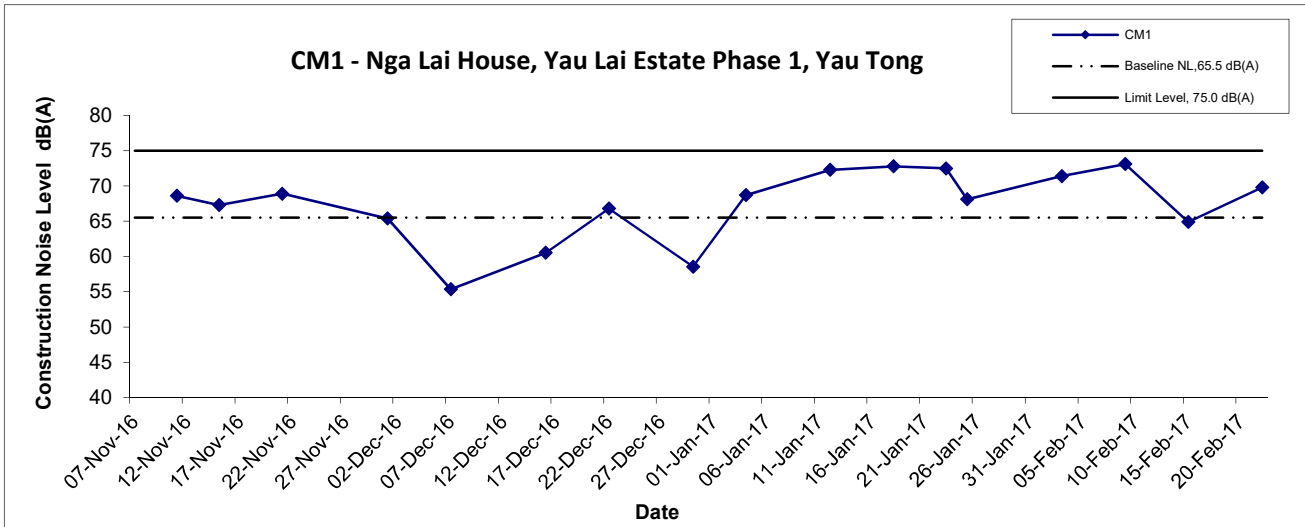
(0700-1900 hrs on Normal Weekdays)

| Location CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores | | | | | | | |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 2-Feb-17 | 15:30 | Cloudy | 58.6 | 59.9 | 54.2 | 61.9 | 58.6 Measured ≤ Baseline |
| 7-Feb-17 | 14:45 | Sunny | 68.5 | 72.1 | 64.8 | | 67.4 |
| 17-Feb-17 | 9:00 | Sunny | 58.9 | 60.8 | 54.6 | | 58.9 Measured ≤ Baseline |
| 23-Feb-17 | 11:00 | Cloudy | 68.0 | 70.3 | 63.9 | | 66.8 |

| Location CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores | | | | | | | |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 2-Feb-17 | 13:15 | Cloudy | 55.5 | 56.1 | 52.6 | 58.3 | 55.5 Measured ≤ Baseline |
| 7-Feb-17 | 15:30 | Sunny | 59.5 | 62.1 | 55.5 | | 53.3 |
| 17-Feb-17 | 9:35 | Sunny | 61.5 | 64.6 | 57.3 | | 58.7 |
| 23-Feb-17 | 9:30 | Cloudy | 64.4 | 66.6 | 59.9 | | 63.2 |

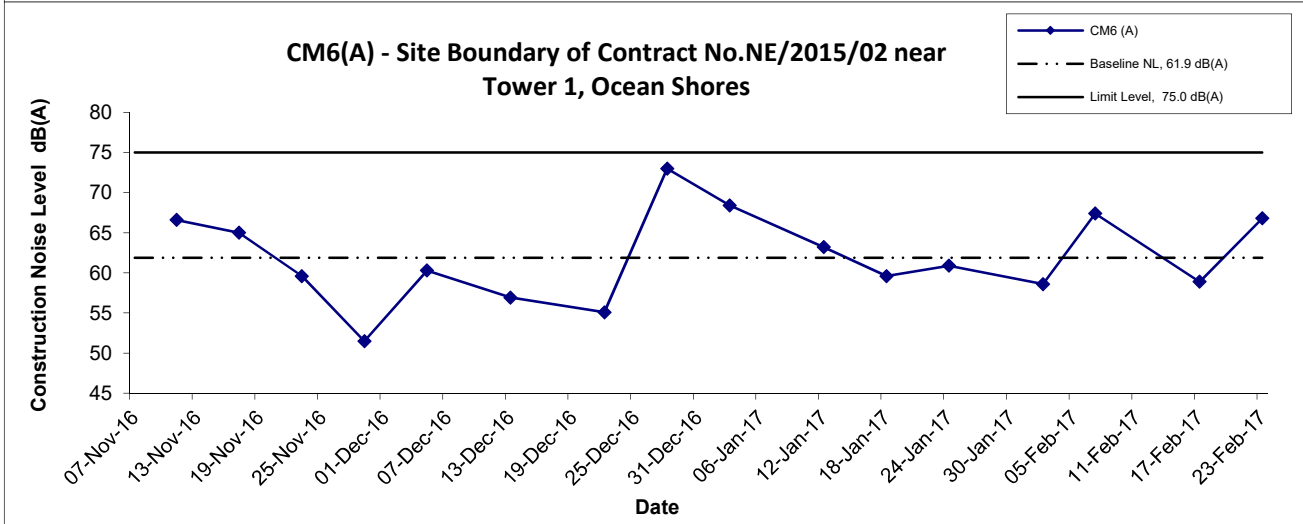
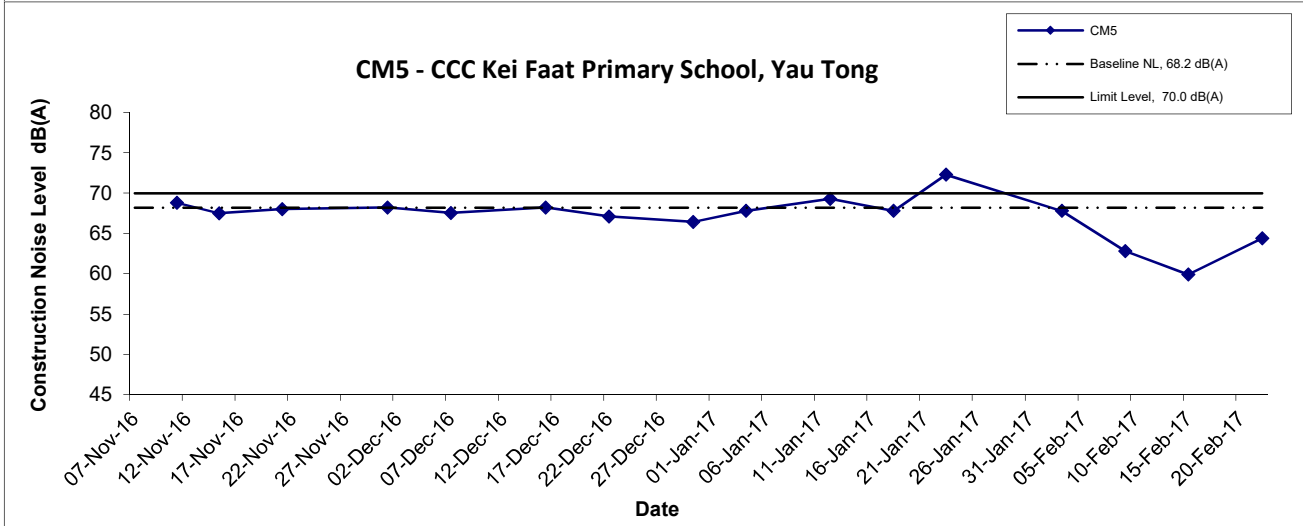
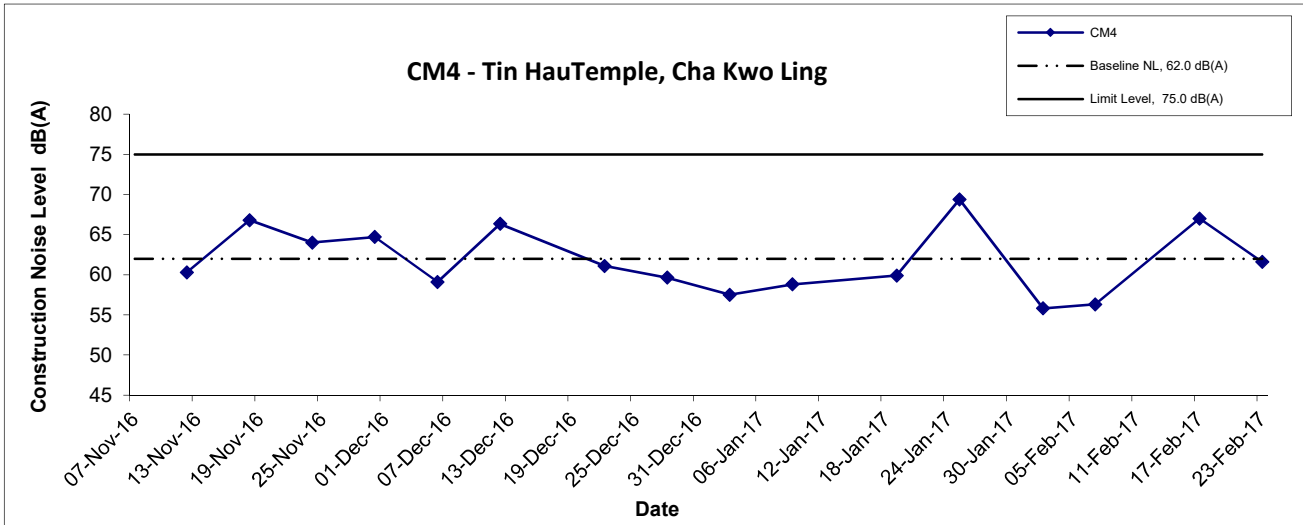
| Location CM8(A) - Park Central, L1/F Open Space Area | | | | | | | |
|---|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date | Time | Weather | Unit: dB (A) (30-min) | | | | |
| | | | Measured Noise Level | | | Baseline Level | Construction Noise Level |
| | | | L _{eq} | L ₁₀ | L ₉₀ | L _{eq} | L _{eq} |
| 2-Feb-17 | 9:15 | Cloudy | 60.9 | 63.6 | 56.5 | 69.1 | 60.9 Measured ≤ Baseline |
| 7-Feb-17 | 14:00 | Sunny | 66.6 | 68.7 | 63.7 | | 66.6 Measured ≤ Baseline |
| 17-Feb-17 | 13:00 | Sunny | 64.2 | 66.7 | 60.5 | | 64.2 Measured ≤ Baseline |
| 23-Feb-17 | 13:10 | Cloudy | 62.6 | 65.0 | 59.1 | | 62.6 Measured ≤ Baseline |

Noise Levels



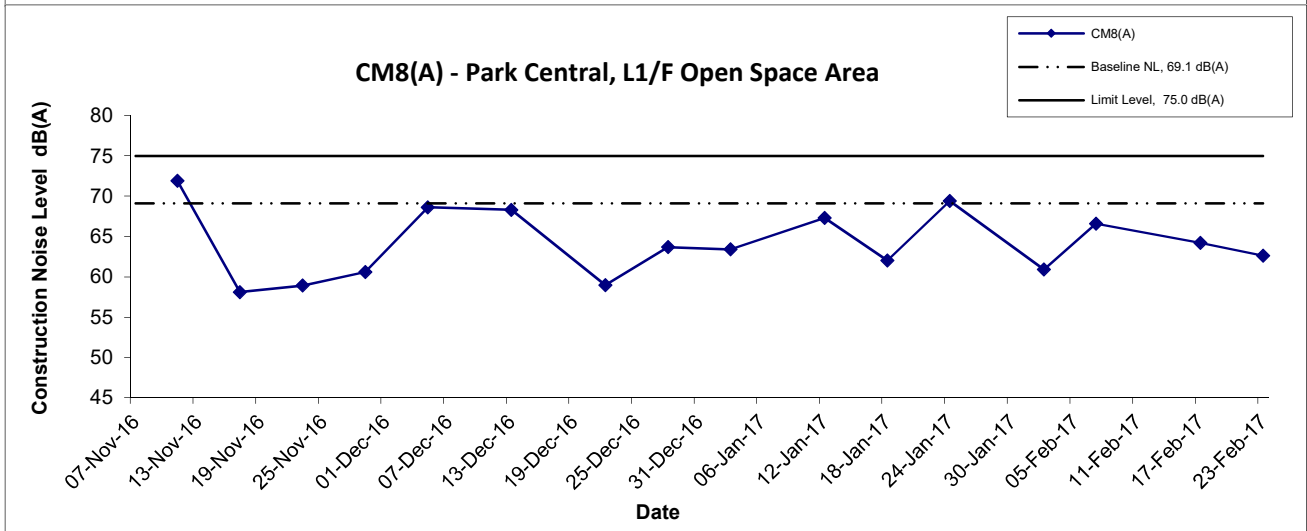
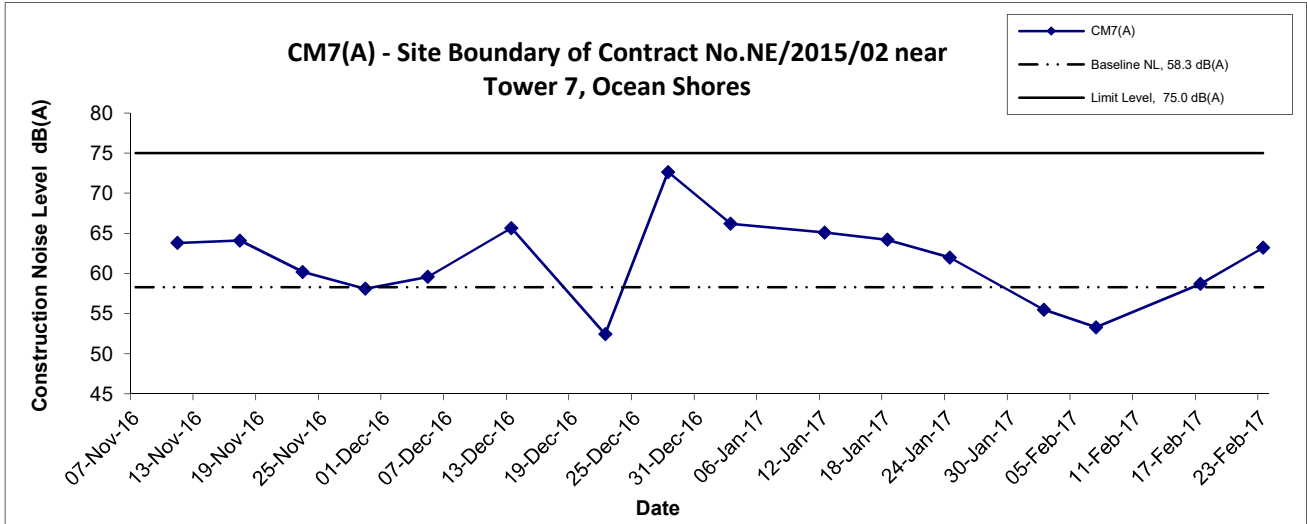
| | | | |
|--|----------------|------------------------|--|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Construction Noise Monitoring Results | Scale N.T.S | Project No. MA16034 | |
| | Date Feb 17 | Appendix G | |
| | | | |

Noise Levels



| | | | |
|--|--------|-------------|----------|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Construction Noise Monitoring Results | Scale | Project | CINOTECH |
| | N.T.S | No. MA16034 | |
| | Date | Appendix | |
| | Feb 17 | G | |

Noise Levels



| | | | |
|--|----------------|------------------------|--|
| Title Agreement No. CE/59/2015 (EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction Graphical Presentation of Construction Noise Monitoring Results | Scale N.T.S | Project No. MA16034 | |
| | Date Feb 17 | Appendix G | |

**APPENDIX H
GROUNDWATER QUALITY
MONITORING RESULTS, GRAPHICAL
PRESENTATIONS AND LABORATORY
TESTING REPORTS**

Agreement No. CE/59/2015 (EP)

Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction

Groundwater Quality Monitoring Results at Stream 1

| Date | Weather Condition | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | Turbidity(NTU) | |
|-----------|-------------------|---------------|-----------|------------------|---------|-------|---------|--------------|---------|-------------------|---------|-------------------------|---------|----------------|---------|
| | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average |
| 3-Feb-17 | Cloudy | 15:27 | Middle | 18.1 | 18.1 | 7.2 | 7.2 | 0.3 | 0.3 | 83.8 | 83.7 | 7.9 | 7.9 | 1.6 | 1.6 |
| | | | | 18.0 | | 7.2 | | 0.3 | | 83.6 | | 7.9 | | | |
| 15-Feb-17 | Fine | 16:02 | Middle | 18.8 | 18.8 | 7.2 | 7.2 | 2.3 | 2.3 | 90.6 | 90.5 | 8.3 | 8.3 | 1.1 | 1.1 |
| | | | | 18.8 | | 7.2 | | 2.3 | | 90.3 | | 8.3 | | | |
| 27-Feb-17 | Sunny | 10:03 | Middle | 20.0 | 20.0 | 7.3 | 7.3 | 0.3 | 0.3 | 85.2 | 85.3 | 7.7 | 7.8 | 1.2 | 1.2 |
| | | | | 19.9 | | 7.3 | | 0.3 | | 85.3 | | 7.8 | | | |

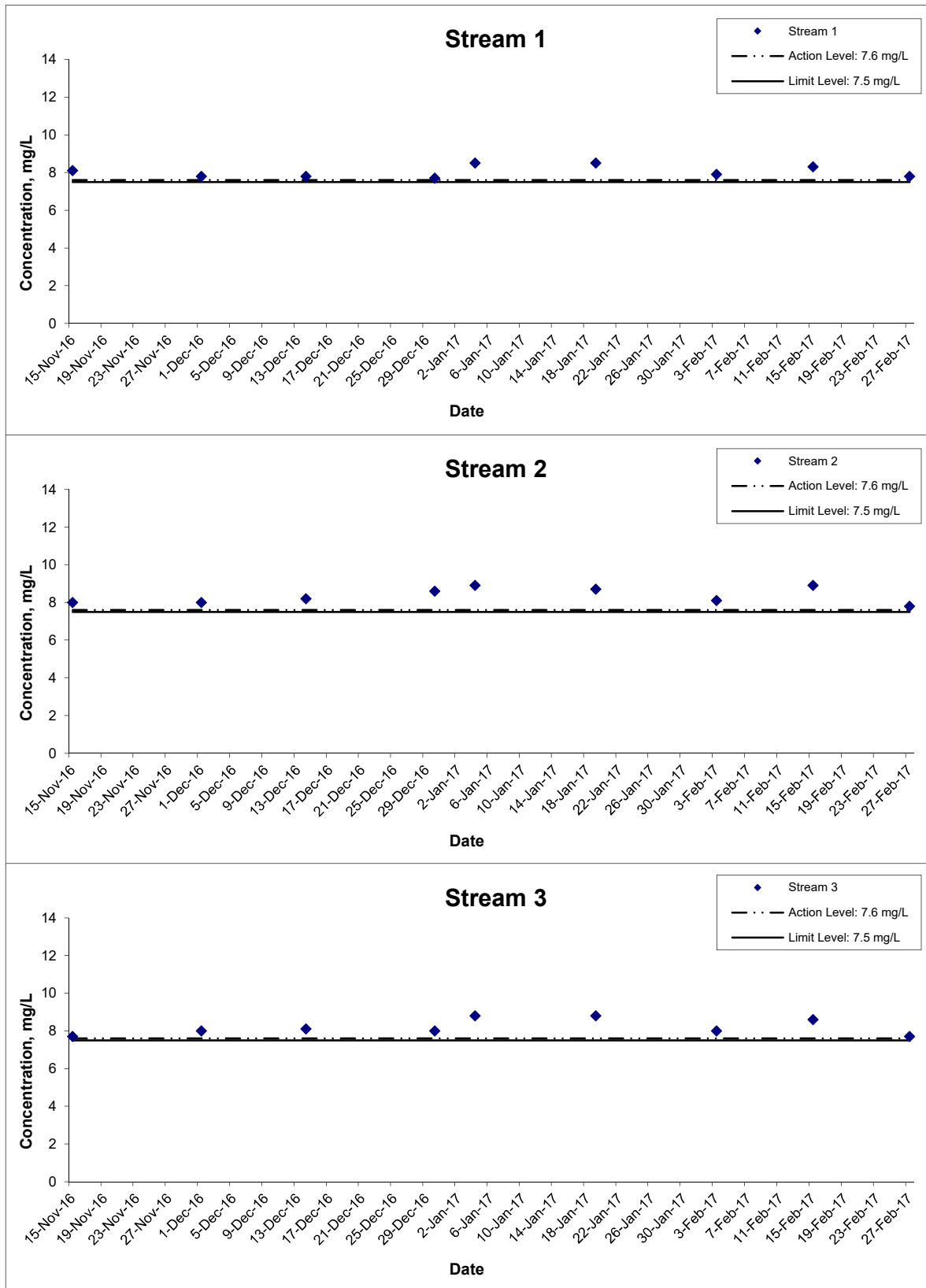
Groundwater Quality Monitoring Results at Stream 2

| Date | Weather Condition | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | Turbidity(NTU) | |
|-----------|-------------------|---------------|-----------|------------------|---------|-------|---------|--------------|---------|-------------------|---------|-------------------------|---------|----------------|---------|
| | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average |
| 3-Feb-17 | Cloudy | 14:56 | Middle | 18.4 | 18.4 | 7.0 | 7.1 | 0.1 | 0.1 | 85.8 | 85.8 | 8.1 | 8.1 | 1.8 | 1.8 |
| | | | | 18.4 | | 7.1 | | 0.1 | | 85.7 | | 8.0 | | | |
| 15-Feb-17 | Fine | 13:45 | Middle | 17.6 | 17.6 | 7.0 | 7.0 | 0.1 | 0.1 | 93.4 | 93.1 | 8.9 | 8.9 | 1.5 | 1.5 |
| | | | | 17.6 | | 6.9 | | 0.1 | | 92.8 | | 8.9 | | | |
| 27-Feb-17 | Sunny | 09:22 | Middle | 19.4 | 19.4 | 7.3 | 7.3 | 0.1 | 0.1 | 84.3 | 84.3 | 7.8 | 7.8 | 1.1 | 1.2 |
| | | | | 19.4 | | 7.3 | | 0.1 | | 84.3 | | 7.8 | | | |

Groundwater Quality Monitoring Results at Stream 3

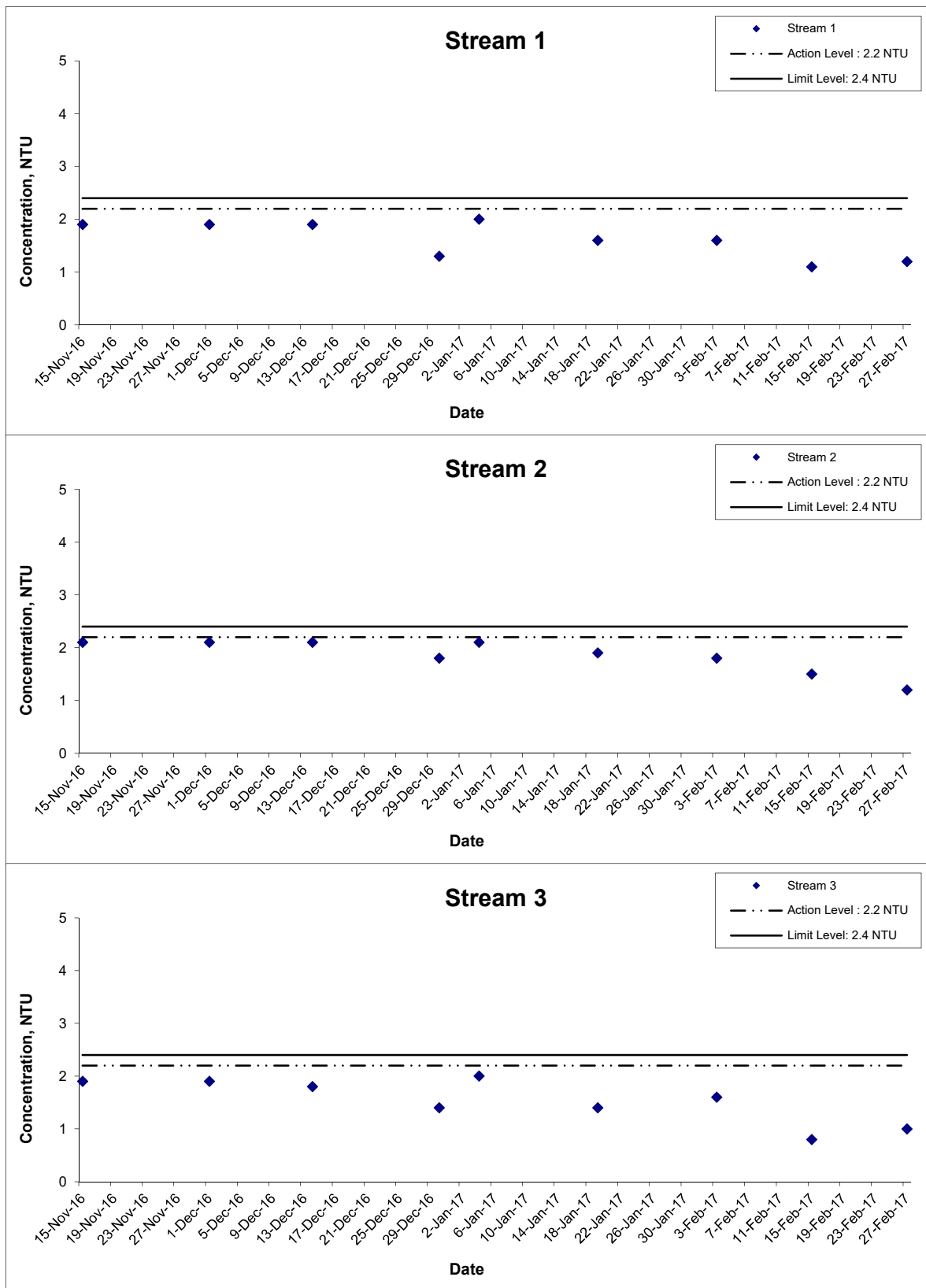
| Date | Weather Condition | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | Turbidity(NTU) | |
|-----------|-------------------|---------------|-----------|------------------|---------|-------|---------|--------------|---------|-------------------|---------|-------------------------|---------|----------------|---------|
| | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average |
| 3-Feb-17 | Cloudy | 14:33 | Middle | 18.4 | 18.4 | 7.1 | 7.1 | 0.2 | 0.2 | 85.2 | 85.0 | 8.0 | 8.0 | 1.5 | 1.6 |
| | | | | 18.4 | | 7.1 | | 0.2 | | 84.7 | | 7.9 | | | |
| 15-Feb-17 | Fine | 13:37 | Middle | 18.6 | 18.7 | 7.2 | 7.2 | 0.1 | 0.1 | 92.1 | 91.9 | 8.6 | 8.6 | 0.8 | 0.8 |
| | | | | 18.7 | | 7.2 | | 0.1 | | 91.6 | | 8.6 | | | |
| 27-Feb-17 | Sunny | 09:12 | Middle | 19.6 | 19.6 | 7.2 | 7.2 | 0.1 | 0.1 | 84.1 | 84.1 | 7.7 | 7.7 | 1.0 | 1.0 |
| | | | | 19.6 | | 7.2 | | 0.1 | | 84.0 | | 7.7 | | | |

Dissolved Oxygen



| | | | | |
|---|-------|--------|------------------------|--|
| Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction Graphical Presentation of Groundwater Quality Monitoring Result | Scale | N.T.S | Project No. MA16034 | |
| | Date | Feb 17 | Appendix | |

Turbidity



Title
 Agreement No. CE 59/2015(EP)
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel
 Design and Construction
 Graphical Presentation of Groundwater Quality
 Monitoring Result

Scale
 N.T.S
 Date
 Feb 17

Project
 No. MA16034
 Appendix
 H



TEST REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26467 |
| Date of Issue: | 2017-02-14 |
| Date Received: | 2017-02-03 |
| Date Tested: | 2017-02-03 |
| Date Completed: | 2017-02-14 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Sample Description : 3 liquid samples as received from client said to be groundwater
Laboratory No. : 26467
Project No. : MA16034 (Groundwater)
Project Name : Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O –
Lam Tin Tunnel – Design and Construction
Custody No. : MA16034(Groundwater)/170203
Sampling Date : 2017-02-03

Tests Requested & Methodology:

| Item | Parameters | Ref. Method | Limit of reporting |
|------|---|---|------------------------------|
| 1 | Total Suspended Solids | APHA 17ed 2540 D | *0.5 mg/L |
| 2 | Biochemical Oxygen Demand | APHA 19ed 5210B | 2 mg O ₂ /L |
| 3 | Total Organic Carbon | In-house method SOP020 (Wet Oxidation) | 1 mg-TOC/L |
| 4 | Nitrogen (Total Kjeldahl + nitrate + nitrite) | In-house method SOP063 (FIA) | 0.6 mg N/L |
| 5 | Ammonia | In-house method SOP057 (FIA) | 0.05 mg NH ₃ -N/L |
| 6 | Total Phosphorus | In-house method SOP055 (FIA) | 0.05 mg-P/L |

Results:

| Sample ID | Stream 1 | Stream 2 | Stream 3 |
|--|----------|----------|----------|
| Sampling Depth | S | S | S |
| Sample No. | 26467-1 | 26467-2 | 26467-3 |
| Total Suspended Solids (mg/L) | 5 | 3 | 11 |
| Biochemical Oxygen Demand (mg O ₂ /L) | <2 | <2 | <2 |
| Total Organic Carbon (mg-TOC/L) | 3 | 4 | 3 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) (mg N/L) | <0.6 | 1.0 | 1.2 |
| Ammonia (mg NH ₃ -N/L) | <0.05 | 0.08 | 0.06 |
| Total Phosphorus (mg-P/L) | <0.05 | <0.05 | <0.05 |

Remarks: 1) < = less than
2) S = Surface, M = Middle, B = Bottom
3) * Limit of Reporting is reported as Detection Limit

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26528 |
| Date of Issue: | 2017-02-27 |
| Date Received: | 2017-02-15 |
| Date Tested: | 2017-02-15 |
| Date Completed: | 2017-02-27 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Sample Description : 3 liquid samples as received from client said to be groundwater
Laboratory No. : 26528
Project No. : MA16034 (Groundwater)
Project Name : Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O –
 Lam Tin Tunnel – Design and Construction
Custody No. : MA16034(Groundwater)/170215
Sampling Date : 2017-02-15

Tests Requested & Methodology:

| Item | Parameters | Ref. Method | Limit of reporting |
|------|---|---|------------------------------|
| 1 | Total Suspended Solids | APHA 17ed 2540 D | *0.5 mg/L |
| 2 | Biochemical Oxygen Demand | APHA 19ed 5210B | 2 mg O ₂ /L |
| 3 | Total Organic Carbon | In-house method SOP020 (Wet Oxidation) | 1 mg-TOC/L |
| 4 | Nitrogen (Total Kjeldahl + nitrate + nitrite) | In-house method SOP063 (FIA) | 0.6 mg N/L |
| 5 | Ammonia | In-house method SOP057 (FIA) | 0.05 mg NH ₃ -N/L |
| 6 | Total Phosphorus | In-house method SOP055 (FIA) | 0.05 mg-P/L |

Results:

| Sample ID | Stream 1 | Stream 2 | Stream 3 |
|--|----------|----------|----------|
| Sampling Depth | S | S | S |
| Sample No. | 26528-1 | 26528-2 | 26528-3 |
| Total Suspended Solids (mg/L) | 1.5 | 3.0 | 1.0 |
| Biochemical Oxygen Demand (mg O ₂ /L) | <2 | <2 | <2 |
| Total Organic Carbon (mg-TOC/L) | 5 | 4 | 4 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) (mg N/L) | 0.7 | 1.1 | 1.0 |
| Ammonia (mg NH ₃ -N/L) | 0.05 | <0.05 | <0.05 |
| Total Phosphorus (mg-P/L) | <0.05 | <0.05 | 0.08 |

Remarks: 1) < = less than
 2) S = Surface, M = Middle, B = Bottom
 3) * Limit of Reporting is reported as Detection Limit

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 Laboratory Manager

TEST REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26593 |
| Date of Issue: | 2017-03-07 |
| Date Received: | 2017-02-27 |
| Date Tested: | 2017-02-27 |
| Date Completed: | 2017-03-07 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Sample Description : 3 liquid samples as received from client said to be groundwater
Laboratory No. : 26593
Project No. : MA16034 (Groundwater)
Project Name : Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O –
 Lam Tin Tunnel – Design and Construction
Custody No. : MA16034(Groundwater)/170227
Sampling Date : 2017-02-27

Tests Requested & Methodology:

| Item | Parameters | Ref. Method | Limit of reporting |
|------|---|---|------------------------------|
| 1 | Total Suspended Solids | APHA 17ed 2540 D | *0.5 mg/L |
| 2 | Biochemical Oxygen Demand | APHA 19ed 5210B | 2 mg O ₂ /L |
| 3 | Total Organic Carbon | In-house method SOP020 (Wet Oxidation) | 1 mg-TOC/L |
| 4 | Nitrogen (Total Kjeldahl + nitrate + nitrite) | In-house method SOP063 (FIA) | 0.6 mg N/L |
| 5 | Ammonia | In-house method SOP057 (FIA) | 0.05 mg NH ₃ -N/L |
| 6 | Total Phosphorus | In-house method SOP055 (FIA) | 0.05 mg-P/L |

Results:

| Sample ID | Stream 1 | Stream 2 | Stream 3 |
|--|----------|----------|----------|
| Sampling Depth | S | S | S |
| Sample No. | 26593-1 | 26593-2 | 26593-3 |
| Total Suspended Solids (mg/L) | 7.1 | 4.9 | 2.4 |
| Biochemical Oxygen Demand (mg O ₂ /L) | <2 | <2 | <2 |
| Total Organic Carbon (mg-TOC/L) | 3 | 4 | 2 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) (mg N/L) | 0.6 | 1.1 | 1.2 |
| Ammonia (mg NH ₃ -N/L) | <0.05 | <0.05 | <0.05 |
| Total Phosphorus (mg-P/L) | <0.05 | 0.07 | <0.05 |

Remarks: 1) < = less than
 2) S = Surface, M = Middle, B = Bottom
 3) * Limit of Reporting is reported as Detection Limit

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 Laboratory Manager

**APPENDIX I
MARINE WATER QUALITY
MONITORING RESULTS AND
GRAPHICAL PRESENTATIONS**

Appendix I - Action and Limit Levels for Marine Water Quality on 1 February 2017 (Mid-Ebb Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 7.3 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 7.9 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 6.0 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.5 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 6.0 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.5 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 7.1 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 7.7 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 01 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|------------------|--------------|-------|------------|--------------|--------------|-------------------|----------------|-------------------------|------------|-----|----------------|------------|-----|-------------------------|------------|-----|-----|
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Cloudy | Moderate | 16:03 | Surface | 1 | 23.4 23.2 | 23.3 | 8.1 8.1 | 8.1 | 31.5 31.6 | 31.6 | 104.3 101.9 | 103.1 | 7.4 7.3 | 7.4 | 6.9 | 3.3 3.4 | 3.4 | 5.2 | 3.1 3.2 | 3.2 | 3.3 |
| | | | | Middle | 10.5 | 23.4 23.1 | 23.3 | 8.1 8.1 | 8.1 | 32.6 32.6 | 32.6 | 89.5 90.6 | 90.1 | 6.3 6.4 | 6.4 | 6.9 | 4.9 5.5 | 5.2 | | 2.7 2.8 | 2.8 | |
| | | | | Bottom | 20 | 23.2 23.1 | 23.2 | 8.1 8.1 | 8.1 | 33.3 33.2 | 33.3 | 87.0 88.9 | 88.0 | 6.1 6.3 | 6.2 | 6.2 | 6.8 6.9 | 6.9 | | 3.9 3.9 | 3.9 | |
| C2 | Cloudy | Moderate | 14:25 | Surface | 1 | 23.0 23.0 | 23.0 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 98.0 102.7 | 100.4 | 7.0 7.3 | 7.2 | 6.9 | 2.8 3.3 | 3.1 | 4.6 | 5.1 4.9 | 5.0 | 4.6 |
| | | | | Middle | 18 | 23.0 23.0 | 23.0 | 8.1 8.1 | 8.1 | 33.0 33.0 | 33.0 | 89.3 93.4 | 91.4 | 6.3 6.6 | 6.5 | 6.0 | 4.5 4.5 | 4.5 | | 2.8 2.8 | 2.8 | |
| | | | | Bottom | 35 | 23.0 23.0 | 23.0 | 8.1 8.1 | 8.1 | 33.1 33.2 | 33.2 | 83.8 84.6 | 84.2 | 5.9 6.0 | 6.0 | 6.0 | 6.0 6.2 | 6.1 | | 5.8 5.9 | 5.9 | |
| G1 | Cloudy | Moderate | 15:07 | Surface | 1 | 23.0 22.9 | 23.0 | 8.1 8.1 | 8.1 | 33.1 33.1 | 33.1 | 95.1 92.2 | 93.7 | 6.8 6.6 | 6.7 | 6.6 | 4.5 3.9 | 4.2 | 3.8 | 3.1 3.1 | 3.1 | 3.3 |
| | | | | Middle | 4 | 22.9 22.6 | 22.8 | 8.1 8.1 | 8.1 | 33.4 33.4 | 33.4 | 87.9 95.6 | 91.8 | 6.2 6.8 | 6.5 | 6.0 | 3.8 3.7 | 3.8 | | 3.5 3.5 | 3.5 | |
| | | | | Bottom | 7 | 22.9 22.6 | 22.8 | 8.1 8.1 | 8.1 | 33.6 33.6 | 33.6 | 88.0 88.9 | 88.5 | 6.2 6.3 | 6.3 | 6.3 | 3.4 3.1 | 3.3 | | 3.3 3.3 | 3.3 | |
| G2 | Cloudy | Moderate | 14:49 | Surface | 1 | 23.0 23.0 | 23.0 | 8.1 8.1 | 8.1 | 33.1 33.1 | 33.1 | 98.8 103.5 | 101.2 | 7.0 7.3 | 7.2 | 6.9 | 3.7 3.8 | 3.8 | 3.4 | 4.0 4.0 | 4.0 | 3.7 |
| | | | | Middle | 5 | 23.0 22.9 | 23.0 | 8.1 8.1 | 8.1 | 33.4 33.4 | 33.4 | 89.4 93.3 | 91.4 | 6.3 6.6 | 6.5 | 6.0 | 3.5 3.7 | 3.6 | | 3.1 3.1 | 3.1 | |
| | | | | Bottom | 9 | 22.9 22.9 | 22.9 | 8.2 8.2 | 8.2 | 33.2 34.0 | 33.6 | 83.8 84.8 | 84.3 | 5.9 6.0 | 6.0 | 6.0 | 2.8 2.9 | 2.9 | | 4.1 4.1 | 4.1 | |
| G3 | Cloudy | Moderate | 15:17 | Surface | 1 | 23.0 23.0 | 23.0 | 8.1 8.1 | 8.1 | 33.5 33.5 | 33.5 | 96.2 96.3 | 96.3 | 6.8 6.8 | 6.8 | 6.8 | 3.1 2.8 | 3.0 | 3.1 | 2.4 2.5 | 2.5 | 2.9 |
| | | | | Middle | 4 | 22.9 22.7 | 22.8 | 8.1 8.1 | 8.1 | 33.5 33.5 | 33.5 | 96.3 95.9 | 96.1 | 6.8 6.8 | 6.8 | 6.0 | 3.3 3.1 | 3.2 | | 3.1 3.2 | 3.2 | |
| | | | | Bottom | 7 | 23.0 22.7 | 22.9 | 8.1 8.1 | 8.1 | 33.5 33.5 | 33.5 | 97.5 98.6 | 98.1 | 6.9 7.0 | 7.0 | 7.0 | 3.3 2.9 | 3.1 | | 2.9 2.9 | 2.9 | |
| G4 | Cloudy | Moderate | 15:36 | Surface | 1 | 23.4 23.2 | 23.3 | 8.0 8.0 | 8.0 | 31.5 31.5 | 31.5 | 83.2 78.9 | 81.1 | 5.9 5.6 | 5.8 | 5.8 | 3.5 3.0 | 3.3 | 3.9 | 3.1 3.0 | 3.1 | 4.3 |
| | | | | Middle | 4 | 23.4 23.2 | 23.3 | 8.1 8.1 | 8.1 | 32.5 32.5 | 32.5 | 80.1 80.9 | 80.5 | 5.7 5.7 | 5.7 | 5.0 | 3.9 4.3 | 4.1 | | 6.9 6.6 | 7.0 | |
| | | | | Bottom | 7 | 23.2 23.2 | 23.2 | 8.1 8.1 | 8.1 | 33.2 33.0 | 33.1 | 81.2 76.4 | 78.8 | 5.7 5.4 | 5.6 | 5.6 | 4.2 4.3 | 4.3 | | 2.6 2.7 | 2.7 | |
| M1 | Cloudy | Moderate | 14:58 | Surface | 1 | 23.0 23.0 | 23.0 | 8.1 8.0 | 8.1 | 33.5 33.5 | 33.5 | 93.1 93.5 | 93.3 | 6.6 6.6 | 6.6 | 6.6 | 3.0 3.1 | 3.1 | 3.4 | 3.3 3.2 | 3.3 | 3.8 |
| | | | | Middle | 3 | 23.0 22.8 | 22.9 | 8.1 8.1 | 8.1 | 33.7 33.7 | 33.7 | 92.2 91.7 | 92.0 | 6.5 6.5 | 6.5 | 6.0 | 3.5 4.0 | 3.8 | | 3.0 3.0 | 3.0 | |
| | | | | Bottom | 5 | 22.8 22.9 | 22.9 | 8.1 8.1 | 8.1 | 33.1 33.0 | 33.1 | 90.8 91.2 | 91.0 | 6.5 6.5 | 6.5 | 6.5 | 3.2 3.3 | 3.3 | | 4.9 5.1 | 5.0 | |
| M2 | Cloudy | Moderate | 14:42 | Surface | 1 | 23.0 22.9 | 23.0 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 91.5 91.9 | 91.7 | 6.5 6.6 | 6.6 | 6.6 | 2.8 3.3 | 3.1 | 4.6 | 5.1 5.0 | 5.1 | 3.6 |
| | | | | Middle | 5.5 | 23.0 22.9 | 23.0 | 8.1 8.1 | 8.1 | 33.0 33.0 | 33.0 | 91.2 91.5 | 91.4 | 6.5 6.5 | 6.5 | 6.0 | 4.5 4.5 | 4.5 | | 2.4 2.4 | 2.4 | |
| | | | | Bottom | 10 | 22.9 22.9 | 22.9 | 8.1 8.1 | 8.1 | 33.1 33.2 | 33.2 | 83.7 83.2 | 83.5 | 5.9 5.9 | 5.9 | 5.9 | 6.0 6.2 | 6.1 | | 3.2 3.3 | 3.3 | |
| M3 | Cloudy | Moderate | 15:29 | Surface | 1 | 23.3 23.1 | 23.2 | 8.1 8.1 | 8.1 | 31.3 31.3 | 31.3 | 89.1 91.2 | 90.2 | 6.4 6.5 | 6.5 | 6.2 | 2.7 2.8 | 2.8 | 3.2 | 2.7 2.8 | 2.8 | 2.9 |
| | | | | Middle | 4.5 | 23.3 23.1 | 23.2 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 80.0 83.9 | 82.0 | 5.7 6.0 | 5.9 | 6.0 | 3.1 3.3 | 3.2 | | 2.7 2.8 | 2.8 | |
| | | | | Bottom | 8 | 23.1 23.1 | 23.1 | 8.1 8.1 | 8.1 | 32.3 32.3 | 32.3 | 80.8 79.7 | 80.3 | 5.7 5.7 | 5.7 | 5.7 | 3.5 3.4 | 3.5 | | 3.1 3.1 | 3.1 | |
| M4 | Cloudy | Moderate | 14:34 | Surface | 1 | 23.0 23.0 | 23.0 | 8.1 8.1 | 8.1 | 33.5 33.5 | 33.5 | 100.9 99.6 | 100.3 | 7.1 7.1 | 7.1 | 6.9 | 3.0 3.1 | 3.1 | 3.7 | 3.3 3.2 | 3.3 | 3.1 |
| | | | | Middle | 4 | 23.0 22.3 | 22.7 | 8.1 8.1 | 8.1 | 33.6 33.6 | 33.6 | 93.6 92.7 | 93.2 | 6.6 6.6 | 6.6 | 6.0 | 3.5 3.4 | 3.5 | | 2.6 2.6 | 2.6 | |
| | | | | Bottom | 7 | 23.0 22.3 | 22.7 | 8.1 8.1 | 8.1 | 33.5 33.5 | 33.5 | 91.4 90.1 | 90.8 | 6.5 6.5 | 6.5 | 6.5 | 4.5 4.5 | 4.5 | | 3.4 3.4 | 3.4 | |
| M5 | Cloudy | Moderate | 15:56 | Surface | 1 | 23.3 23.1 | 23.2 | 8.1 8.1 | 8.1 | 31.5 31.5 | 31.5 | 86.3 91.8 | 89.1 | 6.1 6.6 | 6.4 | 6.4 | 3.5 3.1 | 3.3 | 5.0 | 2.8 2.7 | 2.8 | 3.0 |
| | | | | Middle | 5.5 | 23.3 23.2 | 23.3 | 8.1 8.1 | 8.1 | 32.5 32.6 | 32.6 | 87.7 92.9 | 90.3 | 6.2 6.6 | 6.4 | 6.0 | 5.7 5.0 | 5.4 | | 3.3 3.3 | 3.3 | |
| | | | | Bottom | 10 | 23.2 23.2 | 23.2 | 8.1 8.1 | 8.1 | 33.2 33.3 | 33.3 | 89.9 85.0 | 87.5 | 6.4 6.0 | 6.2 | 6.2 | 6.3 6.5 | 6.4 | | 3.0 2.9 | 3.0 | |
| M6 | Cloudy | Moderate | 15:43 | Surface | - | - | - | - | - | - | - | - | - | - | - | 6.9 | - | - | 4.1 | - | - | 3.2 |
| | | | | Middle | 2 | 23.4 23.2 | 23.3 | 8.1 8.1 | 8.1 | 31.3 31.4 | 31.4 | 97.4 96.7 | 97.1 | 6.9 6.9 | 6.9 | 6.0 | 4.1 4.0 | 4.1 | | 3.2 3.1 | 3.2 | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 1 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|--|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 6.96 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 7.5 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>CI: 5.3 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>CI: 5.7 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>CI: 5.3 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>CI: 5.7 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>CI: 7.1 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>CI: 7.7 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 01 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity (NTU) | | | Suspended Solids (mg/L) | | | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|-----------------|---------|-----|-------------------------|---------|-----|-----|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | | |
| C1 | Cloudy | Moderate | 10:34 | Surface | 1 | 23.5 23.1 | 23.3 | 8.2 8.2 | 8.2 | 32.1 32.1 | 32.1 | 101.2 103.2 | 102.2 | 7.2 7.3 | 7.3 | 6.9 | 3.5 3.7 | 3.6 | 4.4 | 4.4 4.4 | 4.4 | 4.4 | 4.4 | |
| | | | | Middle | 10 | 23.5 22.9 | 23.2 | 8.2 8.2 | 8.2 | 32.3 32.3 | 32.3 | 90.1 89.9 | 90.0 | 6.4 6.4 | 6.4 | | 3.6 3.7 | 3.7 | | 2.4 2.3 | | | | 2.4 |
| | | | | Bottom | 19 | 23.1 23.0 | 23.1 | 8.3 8.2 | 8.3 | 32.4 32.4 | 32.4 | 88.9 88.7 | 88.8 | 6.3 6.3 | 6.3 | | 5.8 5.8 | 5.8 | | 5.8 5.9 | | | | 5.9 |
| C2 | Cloudy | Moderate | 08:34 | Surface | 1 | 23.3 22.7 | 23.0 | 8.1 8.1 | 8.1 | 32.4 32.4 | 32.4 | 97.6 97.8 | 97.7 | 6.9 7.0 | 7.0 | 6.7 | 4.6 4.3 | 4.5 | 4.7 | 5.1 5.2 | 4.0 | 4.0 | 5.2 | |
| | | | | Middle | 18 | 23.2 22.5 | 22.9 | 8.1 8.1 | 8.1 | 32.5 32.5 | 32.5 | 90.8 89.6 | 90.2 | 6.4 6.4 | 6.4 | | 4.8 4.6 | 4.7 | | 4.0 4.0 | | | | 4.0 |
| | | | | Bottom | 35 | 22.7 22.5 | 22.6 | 8.2 8.2 | 8.2 | 32.5 32.5 | 32.5 | 89.6 89.3 | 89.5 | 6.4 6.4 | 6.4 | | 4.9 5.0 | 5.0 | | 3.1 3.2 | | | | 3.2 |
| G1 | Cloudy | Moderate | 09:17 | Surface | 1 | 23.1 22.9 | 23.0 | 8.2 8.2 | 8.2 | 32.2 32.2 | 32.2 | 97.1 97.6 | 97.4 | 6.9 7.0 | 7.0 | 6.7 | 3.6 3.4 | 3.5 | 4.8 | 2.8 2.8 | 2.6 | 2.6 | 2.8 | |
| | | | | Middle | 4 | 23.1 22.9 | 23.0 | 8.2 8.2 | 8.2 | 32.3 32.3 | 32.3 | 88.1 89.2 | 88.7 | 6.3 6.4 | 6.4 | | 4.1 4.6 | 4.4 | | 2.5 2.6 | | | | 2.6 |
| | | | | Bottom | 7 | 22.9 22.9 | 22.9 | 8.2 8.2 | 8.2 | 32.5 32.4 | 32.5 | 88.3 89.5 | 88.9 | 6.3 6.4 | 6.4 | | 6.3 6.4 | 6.4 | | 2.8 2.8 | | | | 2.8 |
| G2 | Cloudy | Moderate | 09:01 | Surface | 1 | 23.0 22.9 | 23.0 | 8.2 8.2 | 8.2 | 32.7 32.7 | 32.7 | 95.8 96.4 | 96.1 | 6.8 6.9 | 6.9 | 6.7 | 3.3 2.9 | 3.1 | 3.5 | 2.9 2.9 | 2.3 | 2.3 | 2.8 | |
| | | | | Middle | 5 | 23.0 22.9 | 23.0 | 8.2 8.2 | 8.2 | 32.8 32.8 | 32.8 | 89.8 88.7 | 89.3 | 6.4 6.3 | 6.4 | | 3.2 3.3 | 3.3 | | 3.1 3.0 | | | | 3.1 |
| | | | | Bottom | 9 | 22.9 22.9 | 22.9 | 8.2 8.2 | 8.2 | 33.2 33.2 | 33.2 | 86.0 84.8 | 85.4 | 6.1 6.0 | 6.1 | | 3.9 4.0 | 4.0 | | 3.0 3.0 | | | | 3.1 |
| G3 | Cloudy | Moderate | 09:31 | Surface | 1 | 22.6 22.6 | 22.6 | 8.2 8.2 | 8.2 | 32.2 32.2 | 32.2 | 97.0 97.5 | 97.3 | 7.0 7.0 | 7.0 | 6.7 | 3.3 3.1 | 3.2 | 4.0 | 2.7 2.7 | 2.5 | 2.5 | 2.7 | |
| | | | | Middle | 4 | 22.6 22.6 | 22.6 | 8.2 8.2 | 8.2 | 32.5 32.5 | 32.5 | 88.6 88.5 | 88.6 | 6.3 6.3 | 6.3 | | 3.5 3.8 | 3.7 | | 3.0 2.5 | | | | 2.5 |
| | | | | Bottom | 7 | 22.6 22.6 | 22.6 | 8.2 8.2 | 8.2 | 32.8 32.8 | 32.8 | 87.0 86.5 | 86.8 | 6.2 6.2 | 6.2 | | 4.9 5.0 | 5.0 | | 3.0 3.0 | | | | 3.0 |
| G4 | Cloudy | Moderate | 10:03 | Surface | 1 | 23.6 23.0 | 23.3 | 8.2 8.2 | 8.2 | 32.2 32.2 | 32.2 | 97.6 96.9 | 97.3 | 6.9 6.9 | 6.9 | 6.6 | 3.6 3.6 | 3.7 | 4.7 | 3.1 3.1 | 2.9 | 2.9 | 3.6 | |
| | | | | Middle | 4 | 23.6 22.9 | 23.3 | 8.2 8.2 | 8.2 | 32.5 32.5 | 32.5 | 89.6 88.5 | 89.3 | 6.3 6.3 | 6.3 | | 4.6 4.4 | 4.5 | | 2.9 4.4 | | | | 2.9 |
| | | | | Bottom | 7 | 23.0 23.0 | 23.0 | 8.3 8.3 | 8.3 | 33.0 33.0 | 33.0 | 92.7 92.7 | 92.7 | 6.6 6.6 | 6.6 | | 5.9 6.1 | 6.0 | | 4.8 4.8 | | | | 4.8 |
| M1 | Cloudy | Moderate | 09:09 | Surface | 1 | 22.7 22.6 | 22.7 | 8.2 8.2 | 8.2 | 32.5 32.5 | 32.5 | 95.6 95.8 | 95.7 | 6.8 6.9 | 6.9 | 6.7 | 3.2 3.4 | 3.3 | 3.8 | 3.8 3.8 | 3.0 | 3.0 | 3.3 | |
| | | | | Middle | 3 | 22.6 22.5 | 22.6 | 8.2 8.2 | 8.2 | 32.5 32.5 | 32.5 | 88.8 88.4 | 88.6 | 6.4 6.3 | 6.4 | | 3.4 3.6 | 3.5 | | 3.0 3.0 | | | | 3.0 |
| | | | | Bottom | 5 | 22.6 22.1 | 22.4 | 8.2 8.2 | 8.2 | 32.4 32.4 | 32.4 | 88.0 87.6 | 87.8 | 6.3 6.3 | 6.3 | | 4.4 4.8 | 4.6 | | 3.2 3.2 | | | | 3.2 |
| M2 | Cloudy | Moderate | 08:54 | Surface | 1 | 23.3 22.7 | 23.0 | 8.2 8.2 | 8.2 | 32.7 32.6 | 32.7 | 92.2 91.6 | 91.9 | 6.5 6.6 | 6.6 | 6.4 | 3.5 3.4 | 3.5 | 3.5 | 3.3 3.4 | 3.7 | 3.7 | 3.6 | |
| | | | | Middle | 5.5 | 23.2 22.5 | 22.9 | 8.2 8.2 | 8.2 | 32.7 32.8 | 32.8 | 85.8 84.5 | 85.2 | 6.1 6.1 | 6.1 | | 3.5 3.5 | 3.5 | | 3.7 3.7 | | | | 3.7 |
| | | | | Bottom | 10 | 22.7 22.5 | 22.6 | 8.2 8.2 | 8.2 | 32.9 32.9 | 32.9 | 83.3 83.1 | 83.2 | 6.0 6.0 | 6.0 | | 3.5 3.5 | 3.5 | | 3.5 3.6 | | | | 3.6 |
| M3 | Cloudy | Moderate | 09:51 | Surface | 1 | 23.5 23.2 | 23.4 | 8.2 8.2 | 8.2 | 32.7 32.7 | 32.7 | 109.4 105.0 | 107.2 | 7.7 7.4 | 7.6 | 7.1 | 4.1 4.1 | 4.1 | 4.3 | 3.6 3.5 | 6.7 | 6.7 | 4.6 | |
| | | | | Middle | 4.5 | 23.6 23.0 | 23.3 | 8.2 8.2 | 8.2 | 32.9 33.0 | 33.0 | 91.5 91.0 | 91.3 | 6.4 6.5 | 6.5 | | 4.3 4.2 | 4.3 | | 6.6 6.6 | | | | 6.6 |
| | | | | Bottom | 8 | 23.2 23.0 | 23.1 | 8.2 8.2 | 8.2 | 33.3 33.3 | 33.3 | 84.0 83.3 | 83.7 | 5.9 5.9 | 5.9 | | 4.5 4.7 | 4.6 | | 3.5 3.5 | | | | 3.5 |
| M4 | Cloudy | Moderate | 08:47 | Surface | 1 | 22.7 22.6 | 22.7 | 8.2 8.2 | 8.2 | 32.4 32.4 | 32.4 | 96.8 96.7 | 96.8 | 6.9 6.9 | 6.9 | 6.7 | 2.8 2.7 | 2.8 | 3.8 | 4.4 4.5 | 2.7 | 2.8 | 3.5 | |
| | | | | Middle | 4 | 22.7 22.0 | 22.4 | 8.2 8.2 | 8.2 | 32.4 32.4 | 32.4 | 89.5 88.1 | 88.8 | 6.4 6.4 | 6.4 | | 3.0 3.3 | 3.2 | | 3.1 2.8 | | | | 2.8 |
| | | | | Bottom | 7 | 22.6 22.0 | 22.3 | 8.2 8.2 | 8.2 | 32.6 32.6 | 32.6 | 86.2 84.0 | 85.1 | 6.2 6.1 | 6.2 | | 5.5 5.3 | 5.4 | | 3.1 3.1 | | | | 3.1 |
| M5 | Cloudy | Moderate | 10:27 | Surface | 1 | 23.4 23.2 | 23.3 | 8.2 8.2 | 8.2 | 32.4 32.4 | 32.4 | 97.1 96.7 | 96.9 | 6.9 6.9 | 6.9 | 6.6 | 4.4 4.4 | 4.4 | 4.6 | 3.9 3.8 | 3.1 | 3.1 | 3.4 | |
| | | | | Middle | 5.5 | 23.4 22.9 | 23.2 | 8.2 8.3 | 8.3 | 32.5 32.5 | 32.5 | 88.7 88.6 | 88.7 | 6.3 6.3 | 6.3 | | 3.6 3.5 | 3.6 | | 3.1 3.0 | | | | 3.1 |
| | | | | Bottom | 10 | 23.1 22.9 | 23.0 | 8.3 8.3 | 8.3 | 32.6 32.6 | 32.6 | 85.6 85.0 | 85.3 | 6.1 6.1 | 6.1 | | 5.5 5.8 | 5.7 | | 3.2 3.1 | | | | 3.2 |
| M6 | Cloudy | Moderate | 10:13 | Surface | - | - | - | - | - | - | - | - | - | - | - | 7.2 | - | - | 4.2 | - | 2.5 | 2.5 | 2.5 | |
| | | | | Middle | 2.1 | 23.6 23.1 | 23.4 | 8.2 8.2 | 8.2 | 32.1 32.1 | 32.1 | 100.0 100.8 | 100.4 | 7.1 7.2 | 7.2 | | 4.1 4.3 | 4.2 | | 2.5 2.4 | | | | 2.5 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | | | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 3 February 2017 (Mid-Ebb Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 4.3 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 4.7 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.6 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.1 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.6 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.1 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 4.4 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 4.8 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 03 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity (NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|-----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Cloudy | Moderate | 17:12 | Surface | 1 | 19.9 20.0 | 20.0 | 7.0 7.0 | 7.0 | 30.8 30.8 | 30.8 | 90.8 91.2 | 91.0 | 6.9 6.9 | 6.9 | 6.9 | 4.4 4.5 | 4.5 | 3.8 | 4.3 4.1 | 4.2 | 3.8 |
| | | | | Middle | 10 | 20.0 19.7 | 19.9 | 6.9 6.8 | 6.9 | 31.0 31.1 | 31.1 | 89.9 89.2 | 89.6 | 6.8 6.8 | 6.8 | | 3.2 3.0 | 3.1 | | 4.2 4.2 | 4.2 | |
| | | | | Bottom | 19 | 20.0 20.1 | 20.1 | 6.8 6.9 | 6.9 | 31.2 31.2 | 31.2 | 90.3 89.9 | 90.1 | 6.8 6.8 | 6.8 | | 3.9 3.5 | 3.7 | | 3.0 3.0 | 3.0 | |
| C2 | Cloudy | Moderate | 16:00 | Surface | 1 | 19.7 19.7 | 19.7 | 6.9 7.0 | 7.0 | 30.9 30.9 | 30.9 | 87.3 87.0 | 87.2 | 6.7 6.6 | 6.7 | 6.7 | 2.6 2.8 | 2.7 | 3.1 | 4.8 4.6 | 4.7 | 3.6 |
| | | | | Middle | 18 | 19.9 20.1 | 20.0 | 6.6 6.6 | 6.6 | 31.0 31.0 | 31.0 | 87.0 87.6 | 87.3 | 6.6 6.6 | 6.6 | | 3.0 2.8 | 2.9 | | 2.4 2.4 | 2.4 | |
| | | | | Bottom | 35 | 20.0 19.9 | 20.0 | 6.8 6.8 | 6.8 | 31.0 31.1 | 31.1 | 88.1 87.5 | 88.1 | 6.7 6.6 | 6.7 | | 3.5 3.6 | 3.6 | | 3.6 3.7 | 3.7 | |
| G1 | Cloudy | Moderate | 16:34 | Surface | 1 | 19.7 20.0 | 19.9 | 6.9 7.0 | 7.0 | 31.2 31.1 | 31.2 | 89.1 89.0 | 89.1 | 6.8 6.7 | 6.8 | 6.8 | 3.3 3.1 | 3.2 | 3.5 | 2.9 2.8 | 2.9 | 3.0 |
| | | | | Middle | 4 | 20.1 19.8 | 20.0 | 7.0 7.0 | 7.0 | 31.1 31.1 | 31.1 | 89.4 88.9 | 89.2 | 6.8 6.8 | 6.8 | | 3.8 3.4 | 3.6 | | 3.2 3.2 | 3.2 | |
| | | | | Bottom | 7 | 20.0 19.9 | 20.0 | 7.0 7.0 | 7.0 | 31.2 31.2 | 31.2 | 89.4 88.7 | 89.1 | 6.8 6.7 | 6.8 | | 3.6 3.6 | 3.6 | | 2.8 2.8 | 2.8 | |
| G2 | Cloudy | Moderate | 16:22 | Surface | 1 | 19.4 19.7 | 19.6 | 7.0 7.0 | 7.0 | 31.0 31.0 | 31.0 | 90.8 90.6 | 90.7 | 7.0 6.9 | 7.0 | 7.0 | 2.8 2.4 | 2.6 | 3.4 | 2.3 2.4 | 2.4 | 2.6 |
| | | | | Middle | 5 | 20.0 19.8 | 19.9 | 6.8 6.8 | 6.8 | 30.9 30.9 | 30.9 | 90.1 90.2 | 90.2 | 6.8 6.9 | 6.9 | | 3.4 3.8 | 3.6 | | 2.7 2.8 | 2.8 | |
| | | | | Bottom | 9 | 19.8 19.8 | 19.8 | 6.7 6.8 | 6.8 | 31.0 31.1 | 31.1 | 89.6 89.2 | 89.4 | 6.8 6.8 | 6.8 | | 4.1 4.1 | 4.1 | | 2.6 2.5 | 2.6 | |
| G3 | Cloudy | Moderate | 16:40 | Surface | 1 | 20.0 20.0 | 20.0 | 7.0 7.0 | 7.0 | 30.9 30.9 | 30.9 | 89.5 89.5 | 89.5 | 6.8 6.8 | 6.8 | 6.8 | 2.4 2.9 | 2.7 | 3.3 | 2.7 2.6 | 2.7 | 3.2 |
| | | | | Middle | 4 | 19.9 19.9 | 19.9 | 7.0 7.0 | 7.0 | 31.0 31.1 | 31.1 | 90.1 89.9 | 90.0 | 6.8 6.7 | 6.8 | | 3.5 3.2 | 3.4 | | 4.1 4.0 | 4.1 | |
| | | | | Bottom | 7 | 19.7 19.9 | 19.8 | 7.0 7.0 | 7.0 | 31.2 31.2 | 31.2 | 89.5 89.1 | 89.3 | 6.8 6.8 | 6.8 | | 3.8 3.8 | 3.8 | | 2.7 2.7 | 2.7 | |
| G4 | Cloudy | Moderate | 16:52 | Surface | 1 | 19.8 19.9 | 19.9 | 7.1 7.1 | 7.1 | 30.6 30.8 | 30.7 | 89.6 89.8 | 89.7 | 6.8 6.8 | 6.8 | 6.8 | 3.4 3.0 | 3.2 | 3.2 | 3.6 3.7 | 3.7 | 4.5 |
| | | | | Middle | 4 | 19.9 19.6 | 19.9 | 7.1 7.0 | 7.1 | 31.2 31.2 | 31.2 | 88.0 88.2 | 88.1 | 6.7 6.7 | 6.7 | | 3.2 3.3 | 3.3 | | 5.9 5.8 | 5.9 | |
| | | | | Bottom | 7 | 20.1 19.9 | 20.0 | 7.0 7.0 | 7.1 | 31.2 31.3 | 31.3 | 88.1 88.4 | 88.3 | 6.7 6.7 | 6.7 | | 3.1 3.2 | 3.2 | | 4.0 4.0 | 4.0 | |
| M1 | Cloudy | Moderate | 16:28 | Surface | 1 | 19.8 19.6 | 19.7 | 6.9 6.9 | 6.9 | 31.3 31.1 | 31.2 | 90.6 90.3 | 90.5 | 6.9 6.9 | 6.9 | 6.9 | 2.9 3.2 | 3.1 | 3.5 | 2.9 2.8 | 2.9 | 2.5 |
| | | | | Middle | 3 | 19.7 19.7 | 19.7 | 6.9 6.9 | 6.9 | 31.1 31.0 | 31.1 | 89.8 89.6 | 89.7 | 6.8 6.8 | 6.8 | | 3.0 3.5 | 3.3 | | 2.4 2.4 | 2.4 | |
| | | | | Bottom | 5 | 19.8 20.0 | 19.9 | 6.9 6.9 | 6.9 | 31.1 31.2 | 31.2 | 89.8 88.9 | 89.4 | 6.8 6.7 | 6.8 | | 4.0 4.1 | 4.1 | | 2.1 2.1 | 2.1 | |
| M2 | Cloudy | Moderate | 16:16 | Surface | 1 | 20.0 19.6 | 19.8 | 7.0 6.9 | 7.0 | 30.7 30.7 | 30.7 | 88.8 88.0 | 88.4 | 6.7 6.7 | 6.7 | 6.7 | 3.0 2.9 | 3.0 | 3.3 | 2.5 2.5 | 2.5 | 1.7 |
| | | | | Middle | 5 | 19.8 19.9 | 19.9 | 6.9 6.9 | 6.9 | 30.8 30.8 | 30.8 | 88.4 88.3 | 88.4 | 6.7 6.7 | 6.7 | | 3.5 3.6 | 3.6 | | 1.8 1.8 | 1.8 | |
| | | | | Bottom | 9 | 20.1 19.9 | 20.0 | 6.9 6.8 | 6.9 | 30.9 30.9 | 30.9 | 89.8 89.2 | 89.5 | 6.8 6.8 | 6.8 | | 3.2 3.3 | 3.3 | | 0.9 0.9 | 0.9 | |
| M3 | Cloudy | Moderate | 16:46 | Surface | 1 | 19.9 19.8 | 19.9 | 7.0 7.0 | 7.0 | 31.2 31.1 | 31.2 | 89.6 89.8 | 89.7 | 6.8 6.8 | 6.8 | 6.8 | 2.9 3.0 | 3.0 | 2.9 | 2.3 2.3 | 2.3 | 3.0 |
| | | | | Middle | 4 | 19.7 20.0 | 19.9 | 7.0 7.0 | 7.0 | 31.4 31.4 | 31.4 | 88.2 89.0 | 88.6 | 6.7 6.7 | 6.7 | | 3.1 2.8 | 3.0 | | 3.0 3.0 | 3.0 | |
| | | | | Bottom | 7 | 19.8 20.1 | 20.0 | 6.9 7.0 | 7.0 | 31.6 31.6 | 31.6 | 86.3 85.0 | 85.7 | 6.5 6.4 | 6.5 | | 2.5 2.7 | 2.6 | | 3.7 3.7 | 3.7 | |
| M4 | Cloudy | Moderate | 16:09 | Surface | 1 | 19.7 19.7 | 19.7 | 6.7 6.8 | 6.8 | 31.0 30.9 | 31.0 | 88.9 88.2 | 88.6 | 6.8 6.7 | 6.8 | 6.8 | 2.8 2.4 | 2.6 | 3.1 | 3.4 3.4 | 3.4 | 3.1 |
| | | | | Middle | 4 | 19.9 20.1 | 20.0 | 6.8 6.8 | 6.8 | 30.9 30.9 | 30.9 | 88.3 88.3 | 88.3 | 6.7 6.7 | 6.7 | | 3.0 3.2 | 3.1 | | 3.3 3.3 | 3.3 | |
| | | | | Bottom | 7 | 20.1 20.2 | 20.2 | 6.8 6.8 | 6.8 | 30.9 31.0 | 31.0 | 88.1 87.6 | 87.9 | 6.7 6.6 | 6.7 | | 3.3 3.8 | 3.6 | | 2.5 2.6 | 2.6 | |
| M5 | Cloudy | Moderate | 17:04 | Surface | 1 | 19.5 19.6 | 19.6 | 7.2 7.1 | 7.2 | 30.9 30.9 | 30.9 | 91.0 90.4 | 90.7 | 7.0 6.9 | 7.0 | 7.0 | 2.8 3.1 | 3.0 | 3.5 | 2.4 2.4 | 2.4 | 2.7 |
| | | | | Middle | 5.5 | 19.8 19.7 | 19.8 | 7.0 7.1 | 7.1 | 30.9 30.9 | 30.9 | 90.2 90.0 | 90.1 | 6.9 6.9 | 6.9 | | 3.5 3.4 | 3.5 | | 3.1 3.1 | 3.1 | |
| | | | | Bottom | 10 | 19.7 19.9 | 19.8 | 7.0 7.0 | 7.0 | 31.0 31.0 | 31.0 | 88.6 89.5 | 89.1 | 6.8 6.8 | 6.8 | | 4.1 4.1 | 4.1 | | 2.6 2.6 | 2.6 | |
| M6 | Cloudy | Moderate | 16:58 | Surface | - | - | - | - | - | - | - | - | - | - | 6.5 | - | - | 3.5 | - | - | 6.9 | |
| | | | | Middle | 2.1 | 19.8 19.6 | 19.7 | 7.0 7.0 | 7.0 | 31.1 31.2 | 31.2 | 86.1 85.8 | 86.0 | 6.5 6.5 | | 6.5 | 3.5 3.5 | | 3.5 | 6.8 6.9 | | 6.9 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 3 February 2017 (Mid-Flood Tide)

| <u>Parameter</u> <u>(unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 5.5 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 6.0 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.5 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 6.0 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.5 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 6.0 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 7.1 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 7.7 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 03 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity (NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|-----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Cloudy | Moderate | 12:25 | Surface | 1 | 19.7 19.4 | 19.6 | 6.9 6.9 | 6.9 | 30.9 30.9 | 30.9 | 95.5 95.3 | 95.4 | 7.3 7.3 | 7.3 | 7.3 | 4.2 4.4 | 4.3 | 4.7 | 4.7 4.5 | 4.6 | 4.5 |
| | | | | Middle | 10 | 19.6 19.9 | 19.8 | 6.7 6.7 | 6.7 | 30.9 30.9 | 30.9 | 93.6 93.5 | 93.6 | 7.2 7.1 | 7.2 | | 5.0 5.2 | 5.1 | | 3.0 3.0 | 3.0 | |
| | | | | Bottom | 19 | 19.9 19.6 | 19.8 | 6.6 6.6 | 6.6 | 30.9 31.0 | 31.0 | 92.9 91.9 | 92.4 | 7.1 7.0 | 7.1 | | 5.0 4.1 | 4.6 | | 5.9 5.8 | 5.9 | |
| C2 | Cloudy | Moderate | 11:08 | Surface | 1 | 20.2 19.9 | 20.1 | 6.7 6.7 | 6.7 | 30.3 30.3 | 30.3 | 87.2 87.0 | 87.1 | 6.6 6.6 | 6.6 | 6.6 | 2.2 2.4 | 2.3 | 2.6 | 3.3 3.3 | 3.3 | 3.3 |
| | | | | Middle | 18 | 19.7 20.1 | 19.9 | 6.5 6.6 | 6.6 | 30.6 30.5 | 30.6 | 87.0 87.1 | 87.1 | 6.6 6.6 | 6.6 | | 2.5 2.5 | 2.5 | | 2.8 2.9 | 2.9 | |
| | | | | Bottom | 35 | 20.0 19.6 | 19.8 | 6.5 6.6 | 6.6 | 30.7 30.6 | 30.7 | 87.1 86.3 | 86.7 | 6.6 6.6 | 6.6 | | 2.8 3.1 | 3.0 | | 3.7 3.5 | 3.6 | |
| G1 | Cloudy | Moderate | 11:43 | Surface | 1 | 20.4 20.1 | 20.3 | 7.1 7.0 | 7.1 | 30.6 30.7 | 30.7 | 91.3 91.2 | 91.3 | 6.9 6.9 | 6.9 | 7.0 | 2.4 2.5 | 2.5 | 3.3 | 2.6 2.8 | 2.6 | 2.6 |
| | | | | Middle | 4 | 19.7 20.1 | 19.9 | 6.9 7.0 | 7.0 | 30.8 30.8 | 30.8 | 91.2 92.1 | 91.7 | 7.0 7.0 | 7.0 | | 3.3 3.4 | 3.4 | | 2.9 2.9 | 2.9 | |
| | | | | Bottom | 7 | 19.7 19.7 | 19.7 | 6.8 6.9 | 6.9 | 31.0 31.1 | 31.1 | 91.5 91.3 | 91.4 | 7.0 7.0 | 7.0 | | 4.1 3.8 | 4.0 | | 2.2 2.2 | 2.2 | |
| G2 | Cloudy | Moderate | 11:29 | Surface | 1 | 19.7 19.8 | 19.8 | 7.0 7.1 | 7.1 | 31.2 31.1 | 31.2 | 90.7 91.1 | 90.9 | 6.9 6.9 | 6.9 | 6.9 | 1.9 2.2 | 2.1 | 2.8 | 3.5 3.5 | 3.5 | 2.9 |
| | | | | Middle | 5 | 19.7 19.9 | 19.8 | 7.0 6.9 | 7.0 | 31.1 31.1 | 31.1 | 90.4 90.5 | 90.5 | 6.9 6.9 | 6.9 | | 2.6 2.8 | 2.7 | | 2.1 2.1 | 2.1 | |
| | | | | Bottom | 9 | 19.7 19.7 | 19.7 | 6.8 6.9 | 6.9 | 31.4 31.4 | 31.4 | 89.5 90.5 | 90.0 | 6.8 6.9 | 6.9 | | 3.3 3.9 | 3.6 | | 3.0 2.9 | 3.0 | |
| G3 | Cloudy | Moderate | 11:50 | Surface | 1 | 19.4 19.8 | 19.6 | 7.1 7.1 | 7.1 | 30.9 30.8 | 30.9 | 90.8 90.9 | 90.9 | 7.0 6.9 | 7.0 | 7.0 | 3.0 3.6 | 3.3 | 3.4 | 4.3 4.1 | 4.2 | 3.3 |
| | | | | Middle | 4 | 19.8 19.6 | 19.7 | 7.0 7.0 | 7.0 | 30.8 30.8 | 30.8 | 90.1 89.1 | 89.6 | 6.9 6.8 | 6.9 | | 3.8 3.5 | 3.7 | | 3.0 3.0 | 3.0 | |
| | | | | Bottom | 7 | 19.8 19.8 | 19.8 | 7.0 6.9 | 7.0 | 30.9 31.0 | 31.0 | 90.3 89.6 | 90.0 | 6.9 6.8 | 6.9 | | 3.3 3.0 | 3.2 | | 2.7 2.7 | 2.7 | |
| G4 | Cloudy | Moderate | 12:04 | Surface | 1 | 19.7 19.6 | 19.8 | 7.0 7.0 | 7.0 | 30.5 30.4 | 30.5 | 91.5 91.3 | 91.4 | 7.0 7.0 | 7.0 | 7.0 | 2.4 2.3 | 2.4 | 3.5 | 2.6 2.6 | 2.6 | 4.8 |
| | | | | Middle | 4 | 19.9 20.0 | 20.0 | 6.8 6.8 | 6.8 | 30.5 30.5 | 30.5 | 92.1 91.5 | 91.8 | 7.0 7.0 | 7.0 | | 3.0 3.2 | 3.1 | | 5.8 5.7 | 5.8 | |
| | | | | Bottom | 7 | 19.9 19.7 | 19.8 | 6.8 6.7 | 6.8 | 30.9 30.9 | 30.9 | 90.0 89.4 | 89.7 | 7.0 6.8 | 6.8 | | 5.2 4.7 | 5.0 | | 6.1 6.1 | 6.1 | |
| M1 | Cloudy | Moderate | 11:37 | Surface | 1 | 20.3 19.8 | 20.1 | 7.0 7.0 | 7.0 | 31.0 30.8 | 30.9 | 90.7 90.0 | 90.4 | 6.8 6.9 | 6.9 | 6.9 | 2.3 2.3 | 2.3 | 3.3 | 3.3 3.3 | 3.3 | 2.4 |
| | | | | Middle | 3 | 19.9 19.9 | 19.9 | 7.0 6.9 | 7.0 | 31.0 31.1 | 31.1 | 90.0 90.0 | 90.0 | 6.8 6.8 | 6.8 | | 3.8 4.5 | 4.2 | | 2.7 2.7 | 2.7 | |
| | | | | Bottom | 5 | 19.6 20.0 | 19.8 | 6.9 6.9 | 6.9 | 31.2 31.3 | 31.3 | 88.5 89.1 | 88.8 | 6.7 6.7 | 6.7 | | 3.2 3.3 | 3.3 | | 1.2 1.2 | 1.2 | |
| M2 | Cloudy | Moderate | 11:22 | Surface | 1 | 19.7 20.0 | 19.9 | 7.0 7.0 | 7.0 | 30.4 30.3 | 30.4 | 90.1 90.5 | 90.3 | 6.9 6.9 | 6.9 | 6.9 | 2.1 2.0 | 2.1 | 2.2 | 2.1 2.1 | 2.1 | 3.8 |
| | | | | Middle | 5 | 19.7 19.7 | 19.7 | 7.0 6.9 | 7.0 | 30.5 30.5 | 30.5 | 89.6 90.0 | 89.8 | 6.8 6.9 | 6.9 | | 2.1 2.0 | 2.1 | | 2.8 2.8 | 2.8 | |
| | | | | Bottom | 9 | 19.5 19.7 | 19.6 | 6.9 6.9 | 6.9 | 30.7 30.7 | 30.7 | 87.6 88.2 | 87.9 | 6.7 6.7 | 6.7 | | 2.4 2.6 | 2.5 | | 6.4 6.3 | 6.4 | |
| M3 | Cloudy | Moderate | 11:57 | Surface | 1 | 20.0 20.0 | 20.0 | 6.8 6.8 | 6.8 | 30.6 30.6 | 30.6 | 91.4 91.8 | 91.6 | 6.9 7.0 | 7.0 | 6.9 | 2.5 2.6 | 2.6 | 2.9 | 4.5 4.4 | 4.5 | 5.9 |
| | | | | Middle | 4 | 19.8 19.9 | 19.9 | 6.7 6.7 | 6.7 | 30.7 30.7 | 30.7 | 89.8 89.6 | 89.7 | 6.8 6.8 | 6.8 | | 2.7 2.2 | 2.5 | | 7.1 7.2 | 7.2 | |
| | | | | Bottom | 7 | 19.7 19.8 | 19.8 | 6.6 6.6 | 6.6 | 31.0 30.9 | 31.0 | 86.0 85.9 | 86.0 | 6.6 6.5 | 6.6 | | 3.5 3.6 | 3.6 | | 6.0 6.0 | 6.0 | |
| M4 | Cloudy | Moderate | 11:16 | Surface | 1 | 20.0 20.1 | 20.1 | 6.9 7.0 | 7.0 | 30.5 30.5 | 30.5 | 91.4 90.6 | 91.0 | 6.9 6.9 | 6.9 | 6.9 | 2.0 2.5 | 2.3 | 2.8 | 4.7 4.7 | 4.7 | 3.6 |
| | | | | Middle | 4 | 19.6 19.5 | 19.6 | 6.8 6.8 | 6.8 | 30.6 30.7 | 30.7 | 89.6 89.5 | 89.6 | 6.9 6.9 | 6.9 | | 2.6 2.7 | 2.7 | | 3.6 3.6 | 3.6 | |
| | | | | Bottom | 7 | 19.8 19.8 | 19.8 | 6.8 6.8 | 6.8 | 30.9 30.9 | 30.9 | 87.7 87.3 | 87.5 | 6.7 6.6 | 6.7 | | 3.3 3.5 | 3.4 | | 2.3 2.4 | 2.4 | |
| M5 | Cloudy | Moderate | 12:15 | Surface | 1 | 19.5 19.5 | 19.5 | 6.8 6.8 | 6.8 | 31.6 31.0 | 31.3 | 93.1 92.4 | 92.8 | 7.1 7.1 | 7.1 | 7.1 | 3.4 3.4 | 3.4 | 3.9 | 2.0 2.0 | 2.0 | 2.4 |
| | | | | Middle | 5.5 | 19.6 19.8 | 19.7 | 6.7 6.7 | 6.7 | 30.9 30.9 | 30.9 | 91.4 91.9 | 91.7 | 7.0 7.0 | 7.0 | | 4.3 4.9 | 4.6 | | 2.6 2.5 | 2.6 | |
| | | | | Bottom | 10 | 19.6 19.7 | 19.7 | 6.6 6.6 | 6.6 | 30.9 31.0 | 31.0 | 90.8 91.1 | 91.0 | 6.9 6.9 | 6.9 | | 3.5 3.9 | 3.7 | | 2.7 2.6 | 2.7 | |
| M6 | Cloudy | Moderate | 12:11 | Surface | - | - | - | - | - | - | - | - | - | - | 7.0 | - | - | 3.7 | - | - | 2.9 | |
| | | | | Middle | 2.3 | 19.1 19.5 | 19.3 | 6.9 6.9 | 6.9 | 31.0 30.9 | 31.0 | 90.5 89.8 | 90.2 | 7.0 6.9 | | 7.0 | 3.9 3.5 | | 3.7 | 2.9 2.9 | | 2.9 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 6 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 7.7 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 8.3 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.4 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.6 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.4 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.6 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.3 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 2.5 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 06 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | | |
|----------|-------------------|-----------------|---------------|-----------|------------------|--------------|-------|------------|--------------|--------------|-------------------|----------------|-------------------------|------------|-----|----------------|------------|------------|-------------------------|------------|------------|-----|------------|
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | | |
| C1 | Sunny | Moderate | 09:01 | Surface | 1 | 25.1 24.7 | 24.9 | 8.1 8.1 | 8.1 | 31.2 31.3 | 31.3 | 114.7 112.0 | 113.4 | 7.9 7.8 | 7.9 | 7.4 | 4.2 4.3 | 4.3 | 5.7 | 1.3 1.3 | 1.3 | 1.6 | |
| | | | | Middle | 10.5 | 25.0 24.5 | 24.8 | 8.2 8.2 | 8.2 | 32.3 32.3 | 32.3 | 99.5 100.1 | 99.8 | 6.8 7.0 | 6.9 | | 6.8 6.9 | 5.6 | | 1.7 1.6 | 1.7 | | |
| | | | | Bottom | 20 | 24.7 24.6 | 24.7 | 8.2 8.1 | 8.2 | 33.0 32.8 | 32.9 | 96.7 98.6 | 97.7 | 6.7 6.8 | 6.8 | | 6.8 6.8 | 7.3 | | 7.2 7.4 | 7.3 | | 1.8 1.9 |
| C2 | Sunny | Moderate | 07:01 | Surface | 1 | 24.8 24.2 | 24.5 | 8.1 8.0 | 8.1 | 31.4 31.4 | 31.4 | 108.4 112.2 | 110.3 | 7.5 7.9 | 7.7 | 7.4 | 3.9 4.0 | 4.0 | 4.9 | 2.0 2.0 | 2.0 | 2.4 | |
| | | | | Middle | 18 | 24.8 24.0 | 24.4 | 8.0 8.0 | 8.0 | 32.6 32.6 | 32.6 | 99.4 102.3 | 100.9 | 6.9 7.1 | 7.0 | | 6.9 7.1 | 4.4 | | 4.4 | 3.2 3.1 | | 3.2 |
| | | | | Bottom | 35 | 24.2 24.0 | 24.1 | 8.1 8.1 | 8.1 | 32.8 32.9 | 32.9 | 92.9 93.4 | 93.2 | 6.5 6.5 | 6.5 | | 6.5 6.5 | 6.4 | | 6.5 6.5 | 6.4 | | 1.9 1.8 |
| G1 | Sunny | Moderate | 07:44 | Surface | 1 | 24.6 24.5 | 24.6 | 8.2 8.2 | 8.2 | 32.8 32.8 | 32.8 | 105.3 102.1 | 103.7 | 7.3 7.1 | 7.2 | 7.2 | 4.4 4.8 | 4.6 | 4.7 | 1.4 1.4 | 1.4 | 1.6 | |
| | | | | Middle | 4 | 24.7 24.5 | 24.6 | 8.2 8.1 | 8.2 | 33.1 33.1 | 33.1 | 98.0 106.0 | 102.0 | 6.8 7.3 | 7.1 | | 6.8 7.3 | 4.7 | | 4.7 | 2.2 2.2 | | 2.2 |
| | | | | Bottom | 7 | 24.5 24.5 | 24.5 | 8.1 8.2 | 8.2 | 33.3 33.3 | 33.3 | 97.8 99.1 | 98.5 | 6.8 6.8 | 6.8 | | 6.8 6.8 | 4.9 | | 4.8 5.0 | 4.9 | | 1.8 1.2 |
| G2 | Sunny | Moderate | 07:28 | Surface | 1 | 24.5 24.5 | 24.5 | 8.1 8.1 | 8.1 | 32.8 32.8 | 32.8 | 108.8 113.6 | 111.2 | 7.5 7.9 | 7.7 | 7.4 | 3.7 4.2 | 4.0 | 5.5 | 1.8 1.7 | 1.8 | 1.6 | |
| | | | | Middle | 5 | 24.5 24.5 | 24.5 | 8.1 8.1 | 8.1 | 33.1 33.0 | 33.1 | 99.2 103.3 | 101.3 | 6.9 7.1 | 7.0 | | 6.9 7.1 | 5.4 | | 5.4 | 1.1 1.1 | | 1.1 |
| | | | | Bottom | 9 | 24.5 24.5 | 24.5 | 8.1 8.1 | 8.1 | 33.9 33.6 | 33.8 | 93.9 94.5 | 94.2 | 6.5 6.5 | 6.5 | | 6.5 6.5 | 7.0 | | 7.1 | 7.0 | | 1.9 2.0 |
| G3 | Sunny | Moderate | 07:57 | Surface | 1 | 24.2 24.2 | 24.2 | 8.2 8.2 | 8.2 | 33.2 33.2 | 33.2 | 105.6 105.6 | 105.6 | 7.3 7.3 | 7.3 | 7.4 | 4.0 3.7 | 3.9 | 4.3 | 1.4 1.4 | 1.4 | 1.3 | |
| | | | | Middle | 4 | 24.2 24.1 | 24.2 | 8.1 8.2 | 8.2 | 33.2 33.2 | 33.2 | 105.9 105.5 | 105.7 | 7.4 7.3 | 7.4 | | 7.4 7.3 | 4.1 | | 4.1 | 1.8 1.9 | | 1.9 |
| | | | | Bottom | 7 | 24.2 24.1 | 24.2 | 8.2 8.2 | 8.2 | 33.2 33.2 | 33.2 | 106.9 108.3 | 107.6 | 7.4 7.5 | 7.5 | | 7.5 7.5 | 5.2 4.8 | | 5.0 | 0.6 0.6 | | 0.6 |
| G4 | Sunny | Moderate | 08:30 | Surface | 1 | 25.1 24.5 | 24.8 | 8.1 8.1 | 8.1 | 31.2 31.2 | 31.2 | 93.1 88.1 | 90.6 | 6.4 6.2 | 6.3 | 6.3 | 4.4 4.0 | 4.2 | 5.6 | 1.2 1.2 | 1.2 | 1.3 | |
| | | | | Middle | 4 | 25.1 24.4 | 24.8 | 8.2 8.2 | 8.2 | 32.2 32.2 | 32.2 | 90.0 90.0 | 90.0 | 6.2 6.3 | 6.3 | | 6.2 6.3 | 5.8 | | 5.8 | 1.2 1.1 | | 1.2 |
| | | | | Bottom | 7 | 24.5 24.5 | 24.5 | 8.2 8.2 | 8.2 | 32.9 32.7 | 32.8 | 90.5 85.5 | 88.0 | 6.3 5.9 | 6.1 | | 6.1 6.1 | 6.7 | | 6.6 6.8 | 6.7 | | 1.4 1.4 |
| M1 | Sunny | Moderate | 07:36 | Surface | 1 | 24.2 24.2 | 24.2 | 8.1 8.1 | 8.1 | 33.1 33.1 | 33.1 | 102.5 102.8 | 102.7 | 7.1 7.1 | 7.1 | 7.1 | 4.9 5.0 | 5.0 | 5.0 | 1.0 1.0 | 1.0 | 1.2 | |
| | | | | Middle | 3 | 24.2 24.1 | 24.2 | 8.1 8.1 | 8.1 | 33.4 33.4 | 33.4 | 101.5 101.1 | 101.3 | 7.0 7.0 | 7.0 | | 7.0 7.0 | 4.7 | | 4.7 | 1.4 1.3 | | 1.4 |
| | | | | Bottom | 5 | 25.1 24.7 | 24.9 | 8.2 8.1 | 8.2 | 31.8 31.7 | 31.8 | 107.2 106.3 | 106.8 | 7.4 7.4 | 7.4 | | 7.4 7.4 | 5.2 | | 5.2 | 1.1 1.2 | | 1.2 |
| M2 | Sunny | Moderate | 07:21 | Surface | 1 | 24.8 24.2 | 24.5 | 8.1 8.1 | 8.1 | 31.4 31.4 | 31.4 | 101.8 101.2 | 101.5 | 7.1 7.1 | 7.1 | 7.1 | 4.6 4.7 | 4.7 | 4.8 | 1.4 1.4 | 1.4 | 1.7 | |
| | | | | Middle | 5.5 | 24.8 24.0 | 24.4 | 8.1 8.1 | 8.1 | 32.6 32.6 | 32.6 | 101.4 100.6 | 101.0 | 7.0 7.0 | 7.0 | | 7.0 7.0 | 4.5 | | 4.5 | 2.4 2.3 | | 2.4 |
| | | | | Bottom | 10 | 24.2 24.0 | 24.1 | 8.1 8.1 | 8.1 | 32.8 32.9 | 32.9 | 92.9 92.1 | 92.5 | 6.5 6.4 | 6.5 | | 6.5 6.4 | 5.1 | | 5.1 | 1.4 1.4 | | 1.4 |
| M3 | Sunny | Moderate | 08:18 | Surface | 1 | 25.1 24.7 | 24.9 | 8.2 8.2 | 8.2 | 31.0 30.9 | 31.0 | 99.3 101.1 | 100.2 | 6.9 7.0 | 7.0 | 6.7 | 3.6 3.7 | 3.7 | 4.8 | 1.5 1.5 | 1.5 | 1.6 | |
| | | | | Middle | 4.5 | 25.1 24.5 | 24.8 | 8.1 8.1 | 8.1 | 31.6 31.6 | 31.6 | 89.9 93.2 | 91.6 | 6.2 6.5 | 6.4 | | 6.2 6.5 | 5.1 | | 5.1 | 1.3 1.2 | | 1.3 |
| | | | | Bottom | 8 | 24.7 24.5 | 24.6 | 8.1 8.2 | 8.2 | 32.0 32.0 | 32.0 | 90.4 88.9 | 89.7 | 6.3 6.2 | 6.3 | | 6.3 6.3 | 5.6 | | 5.6 | 2.1 2.0 | | 2.1 |
| M4 | Sunny | Moderate | 07:14 | Surface | 1 | 24.2 24.1 | 24.2 | 8.1 8.1 | 8.1 | 33.2 33.2 | 33.2 | 110.4 109.0 | 109.7 | 7.7 7.6 | 7.7 | 7.5 | 3.7 4.2 | 4.0 | 5.5 | 1.4 1.4 | 1.4 | 1.6 | |
| | | | | Middle | 4 | 24.2 23.6 | 23.9 | 8.1 8.1 | 8.1 | 33.3 33.3 | 33.3 | 102.9 102.1 | 102.5 | 7.1 7.2 | 7.2 | | 7.1 7.2 | 5.4 | | 5.4 | 1.6 1.6 | | 1.6 |
| | | | | Bottom | 7 | 24.1 23.6 | 23.9 | 8.2 8.2 | 8.2 | 34.2 34.2 | 34.2 | 101.2 99.9 | 100.6 | 7.0 7.0 | 7.0 | | 7.0 7.0 | 7.0 | | 6.9 7.1 | 7.0 | | 1.6 1.7 |
| M5 | Sunny | Moderate | 08:54 | Surface | 1 | 25.0 24.7 | 24.9 | 8.2 8.2 | 8.2 | 31.2 31.2 | 31.2 | 96.1 101.6 | 98.9 | 6.7 7.1 | 6.9 | 6.9 | 4.4 3.9 | 4.2 | 5.4 | 1.8 1.7 | 1.8 | 2.1 | |
| | | | | Middle | 5.5 | 25.0 24.5 | 24.8 | 8.2 8.2 | 8.2 | 32.2 32.3 | 32.3 | 97.6 102.3 | 100.0 | 6.7 7.1 | 6.9 | | 6.7 7.1 | 5.0 | | 5.0 | 2.6 2.5 | | 2.6 |
| | | | | Bottom | 10 | 24.7 24.5 | 24.6 | 8.2 8.2 | 8.2 | 32.9 32.9 | 32.9 | 99.7 94.3 | 97.0 | 6.9 6.5 | 6.7 | | 6.7 6.7 | 7.1 | | 7.1 | 1.8 1.8 | | 1.8 |
| M6 | Sunny | Moderate | 08:40 | Surface | - | - | - | - | - | - | - | - | - | - | - | 7.5 | - | - | 5.0 | - | - | 2.7 | |
| | | | | Middle | 2 | 25.2 24.7 | 25.0 | 8.1 8.2 | 8.2 | 30.9 31.0 | 31.0 | 107.8 106.5 | 107.2 | 7.5 7.4 | 7.5 | | 7.5 7.4 | 5.0 | | 5.0 | 2.7 2.6 | | 2.7 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 6 February 2017 (Mid-Flood Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 8.5 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 9.2 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.7 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 5.1 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.7 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 5.1 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.2 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 5.1 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 06 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Sunny | Moderate | 14:20 | Surface | 1 | 25.5 25.3 | 25.4 | 8.2 8.2 | 8.2 | 31.4 31.4 | 31.4 | 110.2 112.5 | 111.4 | 7.6 7.7 | 7.7 | 7.3 | 5.5 5.1 | 5.3 | 6.1 | 3.9 3.8 | 3.9 | 3.1 |
| | | | | Middle | 10 | 25.5 25.2 | 25.4 | 8.1 8.2 | 8.2 | 31.6 31.6 | 31.6 | 98.7 99.0 | 98.9 | 6.8 6.8 | 6.8 | | 6.4 5.6 | 6.0 | | 1.9 2.0 | 2.0 | |
| | | | | Bottom | 19 | 25.3 25.2 | 25.3 | 8.1 8.2 | 8.2 | 31.7 31.7 | 31.7 | 97.7 97.6 | 97.7 | 6.7 6.7 | 6.7 | | 7.5 6.6 | 7.1 | | 3.4 3.5 | 3.5 | |
| C2 | Sunny | Moderate | 12:42 | Surface | 1 | 25.2 25.1 | 25.2 | 8.2 8.1 | 8.2 | 31.7 31.7 | 31.7 | 106.2 107.5 | 106.9 | 7.3 7.4 | 7.4 | 7.1 | 3.7 3.6 | 3.7 | 4.7 | 1.5 1.5 | 1.5 | 1.2 |
| | | | | Middle | 18 | 25.2 25.2 | 25.2 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 99.3 99.3 | 99.3 | 6.8 6.8 | 6.8 | | 3.9 4.2 | 4.1 | | 1.1 1.1 | 1.1 | |
| | | | | Bottom | 35 | 25.1 25.2 | 25.2 | 8.1 8.2 | 8.2 | 31.7 31.8 | 31.8 | 98.9 99.0 | 99.0 | 6.8 6.8 | 6.8 | | 6.4 6.2 | 6.3 | | 1.1 1.0 | 1.1 | |
| G1 | Sunny | Moderate | 13:23 | Surface | 1 | 25.1 25.0 | 25.1 | 8.2 8.2 | 8.2 | 31.4 31.5 | 31.5 | 105.9 106.6 | 106.3 | 7.3 7.4 | 7.4 | 7.1 | 4.2 4.0 | 4.1 | 4.9 | 1.8 1.8 | 1.8 | 2.6 |
| | | | | Middle | 4 | 25.1 24.8 | 25.0 | 8.2 8.2 | 8.2 | 31.6 31.6 | 31.6 | 96.6 97.5 | 97.1 | 6.7 6.8 | 6.8 | | 4.4 4.7 | 4.6 | | 2.4 2.3 | 2.4 | |
| | | | | Bottom | 7 | 25.0 24.8 | 24.9 | 8.2 8.2 | 8.2 | 31.7 31.7 | 31.7 | 97.0 97.9 | 97.5 | 6.7 6.8 | 6.8 | | 5.8 5.9 | 5.9 | | 3.7 3.7 | 3.7 | |
| G2 | Sunny | Moderate | 13:06 | Surface | 1 | 25.1 25.1 | 25.1 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 104.9 105.5 | 105.2 | 7.2 7.3 | 7.3 | 7.1 | 4.4 4.3 | 4.4 | 4.9 | 2.3 2.3 | 2.3 | 2.3 |
| | | | | Middle | 5 | 25.1 25.0 | 25.1 | 8.1 8.2 | 8.2 | 32.1 32.1 | 32.1 | 98.7 97.5 | 98.1 | 6.8 6.7 | 6.8 | | 4.9 4.8 | 4.9 | | 2.0 2.1 | 2.1 | |
| | | | | Bottom | 9 | 25.1 25.0 | 25.1 | 8.2 8.2 | 8.2 | 32.5 32.4 | 32.5 | 94.7 93.4 | 94.1 | 6.5 6.4 | 6.5 | | 5.4 5.4 | 5.4 | | 2.5 2.5 | 2.5 | |
| G3 | Sunny | Moderate | 13:34 | Surface | 1 | 25.1 25.1 | 25.1 | 8.1 8.1 | 8.1 | 31.4 31.4 | 31.4 | 106.7 107.3 | 107.0 | 7.4 7.4 | 7.4 | 7.1 | 4.5 4.3 | 4.4 | 5.3 | 4.2 4.1 | 4.2 | 3.1 |
| | | | | Middle | 4 | 25.0 24.9 | 25.0 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 97.7 97.5 | 97.6 | 6.7 6.7 | 6.7 | | 5.0 5.5 | 5.3 | | 3.7 3.8 | 3.8 | |
| | | | | Bottom | 7 | 25.1 24.9 | 25.0 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 96.3 95.5 | 95.9 | 6.6 6.6 | 6.6 | | 6.2 6.2 | 6.2 | | 1.3 1.3 | 1.3 | |
| G4 | Sunny | Moderate | 13:53 | Surface | 1 | 25.5 25.3 | 25.4 | 8.1 8.1 | 8.1 | 31.5 31.5 | 31.5 | 106.3 106.3 | 106.3 | 7.3 7.3 | 7.3 | 7.0 | 4.5 3.9 | 4.2 | 5.5 | 1.4 1.3 | 1.4 | 1.5 |
| | | | | Middle | 4 | 25.5 25.3 | 25.4 | 8.1 8.1 | 8.1 | 31.8 31.8 | 31.8 | 98.2 98.2 | 98.2 | 6.7 6.7 | 6.7 | | 4.5 4.7 | 4.6 | | 1.8 1.9 | 1.9 | |
| | | | | Bottom | 7 | 25.3 25.3 | 25.3 | 8.1 8.1 | 8.1 | 32.2 32.2 | 32.2 | 102.0 102.0 | 102.0 | 7.0 7.0 | 7.0 | | 7.4 7.7 | 7.6 | | 1.3 1.2 | 1.3 | |
| M1 | Sunny | Moderate | 13:15 | Surface | 1 | 25.1 25.1 | 25.1 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 105.1 105.4 | 105.3 | 7.2 7.3 | 7.3 | 7.1 | 4.1 4.5 | 4.3 | 4.6 | 2.0 2.0 | 2.0 | 1.8 |
| | | | | Middle | 3 | 25.0 25.0 | 25.1 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 98.1 97.6 | 97.9 | 6.8 6.7 | 6.8 | | 4.3 4.3 | 4.3 | | 1.3 1.4 | 1.4 | |
| | | | | Bottom | 5 | 25.5 25.3 | 25.4 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 99.1 99.5 | 99.3 | 6.8 6.8 | 6.8 | | 5.3 5.0 | 5.2 | | 1.8 1.9 | 1.9 | |
| M2 | Sunny | Moderate | 12:59 | Surface | 1 | 25.1 25.1 | 25.1 | 8.2 8.2 | 8.2 | 31.9 31.9 | 31.9 | 100.6 101.0 | 100.8 | 6.9 7.0 | 7.0 | 6.8 | 4.2 4.4 | 4.3 | 4.8 | 1.2 1.1 | 1.2 | 1.1 |
| | | | | Middle | 5.5 | 25.1 25.1 | 25.1 | 8.1 8.1 | 8.1 | 32.0 32.1 | 32.1 | 94.1 93.8 | 94.0 | 6.5 6.5 | 6.5 | | 5.1 4.8 | 5.0 | | 1.1 1.2 | 1.2 | |
| | | | | Bottom | 10 | 25.1 25.1 | 25.1 | 8.1 8.1 | 8.1 | 32.2 32.2 | 32.2 | 92.4 92.4 | 92.4 | 6.4 6.4 | 6.4 | | 5.2 5.2 | 5.2 | | 1.0 1.0 | 1.0 | |
| M3 | Sunny | Moderate | 13:46 | Surface | 1 | 25.4 25.3 | 25.4 | 8.1 8.2 | 8.2 | 32.0 31.9 | 32.0 | 118.4 114.3 | 116.4 | 8.1 7.8 | 8.0 | 7.5 | 4.4 4.6 | 4.5 | 4.9 | 1.9 1.9 | 1.9 | 2.2 |
| | | | | Middle | 4.5 | 25.4 25.3 | 25.4 | 8.1 8.1 | 8.1 | 32.2 32.3 | 32.3 | 100.0 100.2 | 100.1 | 6.8 6.9 | 6.9 | | 5.2 5.0 | 5.1 | | 0.9 0.9 | 0.9 | |
| | | | | Bottom | 8 | 25.3 25.3 | 25.3 | 8.1 8.1 | 8.1 | 32.6 32.6 | 32.6 | 92.6 92.2 | 92.4 | 6.3 6.3 | 6.3 | | 5.0 5.1 | 5.1 | | 3.9 3.5 | 3.7 | |
| M4 | Sunny | Moderate | 12:50 | Surface | 1 | 25.1 25.1 | 25.1 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 106.4 106.4 | 106.4 | 7.3 7.3 | 7.3 | 7.1 | 5.5 5.2 | 5.4 | 5.6 | 2.0 2.0 | 2.0 | 2.3 |
| | | | | Middle | 4 | 25.1 24.4 | 24.8 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 98.9 97.3 | 98.1 | 6.8 6.8 | 6.8 | | 5.7 5.5 | 5.6 | | 2.0 2.1 | 2.1 | |
| | | | | Bottom | 7 | 25.1 24.4 | 24.8 | 8.1 8.2 | 8.2 | 31.9 31.9 | 31.9 | 95.5 93.0 | 94.3 | 6.6 6.5 | 6.6 | | 5.8 5.9 | 5.9 | | 2.8 2.7 | 2.8 | |
| M5 | Sunny | Moderate | 14:12 | Surface | 1 | 25.5 25.3 | 25.4 | 8.1 8.2 | 8.2 | 31.7 31.7 | 31.7 | 106.1 105.7 | 105.9 | 7.3 7.3 | 7.3 | 7.0 | 4.9 5.3 | 5.1 | 5.7 | 2.4 2.4 | 2.4 | 2.1 |
| | | | | Middle | 5.5 | 25.5 25.3 | 25.4 | 8.2 8.1 | 8.2 | 31.8 31.8 | 31.8 | 97.3 97.8 | 97.6 | 6.7 6.7 | 6.7 | | 5.5 5.4 | 5.5 | | 2.1 2.2 | 2.2 | |
| | | | | Bottom | 10 | 25.3 25.3 | 25.3 | 8.2 8.2 | 8.2 | 31.9 31.8 | 31.9 | 94.3 94.1 | 94.2 | 6.5 6.5 | 6.5 | | 6.4 6.7 | 6.6 | | 1.8 1.8 | 1.8 | |
| M6 | Sunny | Moderate | 14:00 | Surface | - | - | - | - | - | - | - | - | - | - | - | 7.6 | - | - | 4.9 | - | - | 1.8 |
| | | | | Middle | 2.1 | 25.5 25.3 | 25.4 | 8.2 8.2 | 8.2 | 31.4 31.4 | 31.4 | 108.7 110.1 | 109.4 | 7.5 7.6 | 7.6 | | 4.7 5.0 | 4.9 | | 1.8 1.7 | 1.8 | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 8 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 8.0 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 8.6 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.4 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.6 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.4 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.6 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.0 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 5.5 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 08 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|------------|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Sunny | Moderate | 10:35 | Surface | 1 | 21.7 21.5 | 21.6 | 8.1 8.1 | 8.1 | 31.3 31.0 | 31.2 | 99.4 98.2 | 98.8 | 7.3 7.2 | 7.3 | 7.1 | 3.2 3.6 | 3.4 | 4.7 | 2.7 2.8 | 2.8 | 2.7 | |
| | | | | Middle | 10 | 21.4 21.3 | 21.4 | 8.1 8.1 | 8.1 | 31.6 31.6 | 31.6 | 93.5 92.8 | 93.2 | 6.9 6.8 | 6.9 | | 5.1 5.2 | 5.2 | | 2.7 2.8 | 2.8 | | |
| | | | | Bottom | 19 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.3 31.2 | 31.3 | 91.1 92.2 | 91.7 | 6.7 6.8 | 6.8 | | 5.4 5.5 | 5.5 | | 2.4 2.3 | 2.4 | | |
| C2 | Sunny | Moderate | 09:19 | Surface | 1 | 21.4 21.4 | 21.4 | 8.0 8.0 | 8.0 | 30.6 30.5 | 30.6 | 96.1 97.3 | 96.7 | 7.1 7.2 | 7.2 | 7.1 | 3.5 3.4 | 3.5 | 5.0 | 2.8 2.8 | 2.8 | 2.8 | |
| | | | | Middle | 18 | 21.4 21.1 | 21.3 | 8.0 8.1 | 8.1 | 30.8 30.8 | 30.8 | 92.9 94.5 | 93.7 | 6.9 7.0 | 7.0 | | 4.9 4.9 | 4.9 | | 1.3 1.4 | 1.4 | | |
| | | | | Bottom | 35 | 21.3 21.0 | 21.2 | 8.1 8.1 | 8.1 | 31.0 31.0 | 31.0 | 90.2 90.0 | 90.1 | 6.7 6.7 | 6.7 | | 6.6 6.5 | 6.6 | | 4.2 4.2 | 4.2 | | |
| G1 | Sunny | Moderate | 09:54 | Surface | 1 | 21.4 21.4 | 21.4 | 8.1 8.1 | 8.1 | 31.4 32.0 | 31.7 | 94.9 93.5 | 94.2 | 7.0 6.9 | 7.0 | 7.0 | 4.0 3.9 | 4.0 | 4.3 | 1.6 1.6 | 1.6 | 1.4 | |
| | | | | Middle | 4 | 21.3 21.3 | 21.3 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 92.7 95.8 | 94.3 | 6.8 7.0 | 6.9 | | 4.1 4.1 | 4.1 | | 1.0 1.1 | 1.1 | | |
| | | | | Bottom | 7 | 21.3 21.3 | 21.3 | 8.1 8.1 | 8.1 | 32.0 32.1 | 32.1 | 89.8 89.2 | 89.5 | 6.6 6.6 | 6.6 | | 4.9 4.8 | 4.9 | | 1.6 1.5 | 1.6 | | |
| G2 | Sunny | Moderate | 09:41 | Surface | 1 | 21.5 21.5 | 21.5 | 8.1 8.1 | 8.1 | 31.5 31.7 | 31.6 | 98.0 98.5 | 98.3 | 7.2 7.2 | 7.2 | 7.0 | 3.3 3.4 | 3.4 | 3.8 | 1.8 1.7 | 1.8 | 2.4 | |
| | | | | Middle | 5 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.8 31.8 | 31.8 | 91.5 92.5 | 92.0 | 6.7 6.8 | 6.8 | | 3.6 3.8 | 3.7 | | 2.2 2.1 | 2.2 | | |
| | | | | Bottom | 9 | 21.3 21.4 | 21.4 | 8.1 8.1 | 8.1 | 32.1 32.1 | 32.1 | 90.4 90.6 | 90.5 | 6.6 6.7 | 6.7 | | 4.5 4.3 | 4.4 | | 3.2 3.1 | 3.2 | | |
| G3 | Sunny | Moderate | 10:01 | Surface | 1 | 21.4 21.4 | 21.4 | 8.1 8.1 | 8.1 | 32.2 31.8 | 32.0 | 96.4 97.2 | 96.8 | 7.1 7.1 | 7.1 | 7.1 | 3.6 3.7 | 3.7 | 4.4 | 1.9 2.0 | 2.0 | 2.0 | |
| | | | | Middle | 4 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.8 31.9 | 31.9 | 95.7 95.5 | 95.6 | 7.0 7.0 | 7.1 | | 4.7 4.7 | 4.7 | | 2.5 2.5 | 2.5 | | |
| | | | | Bottom | 7 | 21.2 21.3 | 21.3 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 95.6 96.3 | 96.0 | 7.1 7.1 | 7.1 | | 4.7 4.8 | 4.8 | | 1.5 1.5 | 1.5 | | |
| G4 | Sunny | Moderate | 10:14 | Surface | 1 | 21.5 21.3 | 21.4 | 8.1 8.0 | 8.1 | 30.8 30.8 | 30.8 | 92.4 90.8 | 91.6 | 6.8 6.7 | 6.8 | 6.8 | 3.7 3.2 | 3.5 | 4.5 | 2.2 2.1 | 2.2 | 3.0 | |
| | | | | Middle | 4 | 21.6 21.3 | 21.5 | 8.0 8.1 | 8.1 | 31.4 31.3 | 31.4 | 90.7 90.7 | 90.7 | 6.7 6.7 | 6.7 | | 4.7 5.0 | 4.9 | | 3.2 3.2 | 3.2 | | |
| | | | | Bottom | 7 | 21.3 21.4 | 21.4 | 8.1 8.1 | 8.1 | 31.6 31.6 | 31.6 | 90.7 85.7 | 88.2 | 6.7 6.3 | 6.5 | | 5.1 5.3 | 5.2 | | 3.6 3.7 | 3.7 | | |
| M1 | Sunny | Moderate | 09:47 | Surface | 1 | 21.4 21.4 | 21.4 | 8.1 8.0 | 8.1 | 32.0 31.9 | 32.0 | 94.2 95.0 | 94.6 | 6.9 7.0 | 7.0 | 7.0 | 3.6 3.8 | 3.7 | 3.8 | 2.2 2.1 | 2.2 | 2.8 | |
| | | | | Middle | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |
| | | | | Bottom | 3 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 93.4 92.6 | 93.0 | 6.9 6.8 | 6.9 | | 3.7 4.0 | 3.9 | | 3.2 3.3 | 3.3 | | 2.2 2.1 |
| M2 | Sunny | Moderate | 09:36 | Surface | 1 | 21.5 21.3 | 21.4 | 8.1 8.1 | 8.1 | 31.4 31.2 | 31.3 | 95.3 94.4 | 94.9 | 7.0 7.0 | 7.0 | 6.9 | 3.2 3.3 | 3.3 | 4.6 | 2.2 2.1 | 2.2 | 2.1 | |
| | | | | Middle | 5.5 | 21.4 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.6 31.6 | 31.6 | 91.8 91.8 | 91.8 | 6.8 6.8 | 6.8 | | 4.7 4.8 | 4.8 | | 2.5 2.5 | 2.5 | | |
| | | | | Bottom | 10 | 21.1 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.8 31.9 | 31.9 | 89.5 89.2 | 89.4 | 6.6 6.6 | 6.6 | | 5.7 5.8 | 5.8 | | 1.7 1.7 | 1.7 | | |
| M3 | Sunny | Moderate | 10:07 | Surface | 1 | 21.4 21.3 | 21.4 | 8.1 8.1 | 8.1 | 31.0 30.9 | 31.0 | 93.7 94.4 | 94.1 | 6.9 7.0 | 7.0 | 6.9 | 2.6 2.7 | 2.7 | 4.0 | 2.1 2.1 | 2.1 | 2.6 | |
| | | | | Middle | 4.5 | 21.6 21.2 | 21.4 | 8.0 8.1 | 8.1 | 31.3 31.3 | 31.3 | 90.1 90.9 | 90.5 | 6.6 6.7 | 6.7 | | 4.2 4.1 | 4.2 | | 4.7 4.8 | 4.8 | | |
| | | | | Bottom | 8 | 21.4 21.4 | 21.4 | 8.1 8.1 | 8.1 | 31.5 31.5 | 31.5 | 88.4 88.2 | 88.3 | 6.5 6.5 | 6.5 | | 5.1 5.2 | 5.2 | | 0.7 0.8 | 0.8 | | |
| M4 | Sunny | Moderate | 09:28 | Surface | 1 | 21.2 21.3 | 21.3 | 8.1 8.0 | 8.1 | 31.0 31.2 | 31.1 | 97.4 98.5 | 98.0 | 7.2 7.3 | 7.3 | 7.2 | 3.6 3.6 | 3.6 | 4.2 | 1.8 1.7 | 1.8 | 2.9 | |
| | | | | Middle | 4 | 21.2 20.8 | 21.0 | 8.0 8.1 | 8.1 | 31.5 31.5 | 31.5 | 94.7 94.1 | 94.4 | 7.0 7.0 | 7.0 | | 4.0 4.0 | 4.0 | | 2.4 2.4 | 2.4 | | |
| | | | | Bottom | 7 | 21.0 20.9 | 21.0 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 92.5 92.9 | 92.7 | 6.8 6.9 | 6.9 | | 5.2 5.0 | 5.1 | | 4.6 4.5 | 4.6 | | |
| M5 | Sunny | Moderate | 10:27 | Surface | 1 | 21.4 21.5 | 21.5 | 8.1 8.1 | 8.1 | 31.1 31.1 | 31.1 | 91.8 93.2 | 92.5 | 6.8 6.9 | 6.9 | 7.0 | 3.9 3.9 | 3.9 | 5.1 | 1.6 4.7 | 3.2 | 2.6 | |
| | | | | Middle | 5.5 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.4 31.5 | 31.5 | 92.9 94.8 | 93.9 | 6.9 7.0 | 7.0 | | 5.9 5.5 | 5.7 | | 1.9 1.8 | 1.9 | | |
| | | | | Bottom | 10 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.8 31.8 | 31.8 | 94.1 91.7 | 92.9 | 6.9 6.8 | 6.9 | | 5.8 5.6 | 5.7 | | 2.8 2.8 | 2.8 | | |
| M6 | Sunny | Moderate | 10:21 | Surface | - | - | - | - | - | - | - | - | - | - | - | 7.0 | - | - | 4.3 | - | - | 2.1 | |
| | | | | Middle | 2.1 | 21.5 21.5 | 21.5 | 8.1 8.1 | 8.1 | 31.2 31.2 | 31.2 | 94.8 94.0 | 94.4 | 7.0 6.9 | 7.0 | | 4.3 4.2 | 4.3 | | 2.0 2.1 | 2.1 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged
**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 8 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 6.8 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 7.4 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.0 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 5.5 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.0 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 5.5 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 7.0 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 7.5 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 08 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|------------|----------------|------------|-----|-------------------------|------------|-----|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Sunny | Moderate | 15:58 | Surface | 1 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.7 31.4 | 31.6 | 97.3 98.0 | 97.7 | 7.2 7.2 | 7.2 | 7.1 | 3.3 3.5 | 3.4 | 4.6 | 4.2 4.2 | 4.2 | 4.5 | |
| | | | | Middle | 10 | 20.9 20.9 | 20.9 | 8.1 8.2 | 8.2 | 31.4 31.4 | 31.4 | 91.3 92.2 | 91.8 | 6.8 6.9 | 6.9 | 6.8 6.9 | 6.9 | 4.5 4.7 | | 4.6 | 3.5 3.5 | | 3.5 |
| | | | | Bottom | 19 | 20.9 21.1 | 21.0 | 8.2 8.1 | 8.2 | 30.8 30.9 | 30.9 | 90.6 90.9 | 90.8 | 6.8 6.8 | 6.8 | 5.7 5.6 | 5.7 | 5.8 5.8 | | 5.8 | 5.8 5.8 | | 5.8 |
| C2 | Sunny | Moderate | 14:37 | Surface | 1 | 21.1 21.1 | 21.1 | 8.1 8.0 | 8.1 | 31.3 31.4 | 31.4 | 94.4 94.9 | 94.7 | 7.0 7.0 | 7.0 | 7.0 | 4.0 3.5 | 3.8 | 5.0 | 1.6 1.6 | 1.6 | 2.1 | |
| | | | | Middle | 18 | 20.9 21.0 | 21.0 | 8.0 8.0 | 8.0 | 31.2 31.3 | 31.3 | 91.8 92.3 | 92.1 | 6.8 6.9 | 6.9 | 6.8 6.9 | 6.9 | 5.1 4.8 | | 5.0 | 2.0 1.9 | | 2.0 |
| | | | | Bottom | 35 | 20.7 20.9 | 20.8 | 8.1 8.1 | 8.1 | 31.2 31.2 | 31.2 | 91.8 92.3 | 92.1 | 6.9 6.9 | 6.9 | 6.2 6.2 | 6.2 | 6.2 2.7 | | 6.2 | 2.8 2.8 | | 2.8 |
| G1 | Sunny | Moderate | 15:14 | Surface | 1 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 30.9 30.9 | 30.9 | 96.0 95.7 | 95.9 | 7.1 7.1 | 7.1 | 7.0 | 3.6 3.6 | 3.6 | 4.4 | 1.4 1.4 | 1.4 | 2.6 | |
| | | | | Middle | 4 | 21.0 20.7 | 20.9 | 8.1 8.1 | 8.1 | 30.9 31.0 | 31.0 | 91.2 91.3 | 91.3 | 6.8 6.8 | 6.8 | 4.1 4.2 | 4.2 | 1.8 1.8 | | 1.8 | | | |
| | | | | Bottom | 7 | 20.6 20.5 | 20.6 | 8.1 8.1 | 8.1 | 31.2 31.2 | 31.2 | 90.0 90.0 | 90.0 | 6.7 6.8 | 6.8 | 5.1 5.4 | 5.3 | 4.6 4.7 | | 4.7 | 4.7 4.7 | | 4.7 |
| G2 | Sunny | Moderate | 14:59 | Surface | 1 | 21.1 21.1 | 21.1 | 8.2 8.1 | 8.2 | 31.3 31.2 | 31.3 | 94.8 94.8 | 94.8 | 7.0 7.0 | 7.0 | 6.9 | 2.9 2.8 | 2.9 | 3.7 | 4.8 4.9 | 4.9 | 2.8 | |
| | | | | Middle | 5 | 21.0 21.0 | 21.0 | 8.1 8.1 | 8.1 | 31.3 31.4 | 31.4 | 92.0 91.6 | 91.8 | 6.8 6.8 | 6.8 | 3.3 3.7 | 3.5 | 2.4 2.3 | | 2.4 | | | |
| | | | | Bottom | 9 | 20.8 20.8 | 20.8 | 8.1 8.1 | 8.1 | 31.3 31.3 | 31.3 | 89.6 89.0 | 89.3 | 6.7 6.6 | 6.7 | 4.6 4.6 | 4.6 | 1.1 1.0 | | 1.1 | | | |
| G3 | Sunny | Moderate | 15:21 | Surface | 1 | 21.2 21.1 | 21.2 | 8.1 8.1 | 8.1 | 30.8 30.8 | 30.8 | 95.4 95.7 | 95.6 | 7.1 7.1 | 7.1 | 7.0 | 3.6 3.7 | 3.7 | 4.6 | 3.3 3.2 | 3.3 | 2.1 | |
| | | | | Middle | 4 | 21.0 20.8 | 20.9 | 8.1 8.2 | 8.2 | 31.1 31.1 | 31.1 | 91.4 90.9 | 91.2 | 6.8 6.8 | 6.8 | 4.7 4.7 | 4.7 | 1.5 1.5 | | 1.5 | | | |
| | | | | Bottom | 7 | 20.9 20.8 | 20.9 | 8.2 8.1 | 8.2 | 31.3 31.3 | 31.3 | 89.8 89.0 | 89.4 | 6.7 6.6 | 6.7 | 4.9 5.6 | 5.3 | 1.4 1.3 | | 1.4 | | | |
| G4 | Sunny | Moderate | 15:36 | Surface | 1 | 21.3 21.3 | 21.3 | 8.1 8.1 | 8.1 | 31.3 31.4 | 31.4 | 95.1 95.7 | 95.4 | 7.0 7.1 | 7.1 | 7.0 | 3.6 3.5 | 3.6 | 4.6 | 2.2 2.2 | 2.2 | 1.6 | |
| | | | | Middle | 4 | 21.1 21.0 | 21.1 | 8.2 8.1 | 8.2 | 31.4 31.4 | 31.4 | 92.0 92.1 | 92.1 | 6.8 6.8 | 6.8 | 4.6 5.0 | 4.8 | 1.4 1.4 | | 1.4 | | | |
| | | | | Bottom | 7 | 20.9 21.1 | 21.0 | 8.2 8.2 | 8.2 | 31.5 31.5 | 31.5 | 91.4 91.6 | 91.5 | 6.8 6.8 | 6.8 | 5.1 5.4 | 5.3 | 1.0 1.1 | | 1.1 | | | |
| M1 | Sunny | Moderate | 15:07 | Surface | 1 | 21.4 21.2 | 21.3 | 8.1 8.1 | 8.1 | 30.9 30.9 | 30.9 | 95.9 95.5 | 95.7 | 7.1 7.1 | 7.1 | 7.1 | 3.6 3.9 | 3.8 | 3.9 | 2.8 2.7 | 2.8 | 3.2 | |
| | | | | Middle | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - |
| | | | | Bottom | 3 | 20.9 20.9 | 20.9 | 8.1 8.1 | 8.1 | 31.5 31.6 | 31.6 | 89.6 89.5 | 89.6 | 6.7 6.7 | 6.7 | 3.7 4.0 | 3.9 | 3.6 3.6 | | 3.6 | | | |
| M2 | Sunny | Moderate | 14:51 | Surface | 1 | 20.9 20.9 | 20.9 | 8.1 8.1 | 8.1 | 31.6 31.5 | 31.6 | 92.9 93.1 | 93.0 | 6.9 6.9 | 6.9 | 6.8 | 3.1 3.0 | 3.1 | 4.1 | 2.9 2.9 | 2.9 | 1.8 | |
| | | | | Middle | 5.5 | 21.0 21.0 | 21.0 | 8.1 8.1 | 8.1 | 31.2 31.2 | 31.2 | 89.7 89.6 | 89.7 | 6.7 6.7 | 6.7 | 4.4 4.2 | 4.3 | 1.4 1.3 | | 1.4 | | | |
| | | | | Bottom | 10 | 20.9 20.9 | 20.9 | 8.1 8.1 | 8.1 | 31.4 31.4 | 31.4 | 88.5 88.5 | 88.5 | 6.6 6.6 | 6.6 | 4.7 5.0 | 4.9 | 1.1 1.1 | | 1.1 | | | |
| M3 | Sunny | Moderate | 15:29 | Surface | 1 | 21.4 21.2 | 21.3 | 8.2 8.1 | 8.2 | 31.8 31.8 | 31.8 | 100.2 98.9 | 99.6 | 7.4 7.3 | 7.4 | 7.2 | 3.1 3.0 | 3.1 | 4.4 | 1.4 1.5 | 1.5 | 1.8 | |
| | | | | Middle | 4.5 | 21.0 21.0 | 21.0 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 92.5 92.9 | 92.7 | 6.8 6.9 | 6.9 | 4.3 4.3 | 4.3 | 2.5 2.5 | | 2.5 | | | |
| | | | | Bottom | 8 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.9 32.1 | 32.0 | 88.1 90.4 | 89.3 | 6.5 6.7 | 6.6 | 5.5 5.8 | 5.7 | 1.4 1.5 | | 1.5 | | | |
| M4 | Sunny | Moderate | 14:45 | Surface | 1 | 20.9 21.1 | 21.0 | 8.1 8.1 | 8.1 | 31.0 31.0 | 31.0 | 96.4 96.8 | 96.6 | 7.2 7.2 | 7.2 | 7.1 | 3.5 3.4 | 3.5 | 4.3 | 2.2 2.3 | 2.3 | 2.6 | |
| | | | | Middle | 4 | 20.8 20.6 | 20.7 | 8.1 8.1 | 8.1 | 31.1 31.0 | 31.1 | 92.6 91.8 | 92.2 | 6.9 6.9 | 6.9 | 3.8 4.1 | 4.0 | 2.7 2.6 | | 2.7 | | | |
| | | | | Bottom | 7 | 20.6 20.5 | 20.6 | 8.1 8.2 | 8.2 | 31.0 31.0 | 31.0 | 90.2 88.7 | 89.5 | 6.8 6.7 | 6.8 | 5.4 5.2 | 5.3 | 2.8 2.7 | | 2.8 | | | |
| M5 | Sunny | Moderate | 15:48 | Surface | 1 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.7 31.9 | 31.8 | 95.9 95.7 | 95.8 | 7.1 7.1 | 7.1 | 7.0 | 4.2 4.3 | 4.3 | 4.8 | 1.3 1.4 | 1.4 | 1.4 | |
| | | | | Middle | 5.5 | 21.0 21.1 | 21.1 | 8.2 8.2 | 8.2 | 31.3 31.6 | 31.5 | 91.4 92.0 | 91.7 | 6.8 6.8 | 6.8 | 4.9 5.1 | 5.0 | 1.4 1.3 | | 1.4 | | | |
| | | | | Bottom | 10 | 21.1 21.1 | 21.1 | 8.2 8.2 | 8.2 | 31.2 31.2 | 31.2 | 89.6 89.6 | 89.6 | 6.7 6.6 | 6.7 | 5.3 5.1 | 5.2 | 1.5 1.5 | | 1.5 | | | |
| M6 | Sunny | Moderate | 15:43 | Surface | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4.2 | - | - | 1.4 | |
| | | | | Middle | 2.1 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.3 31.3 | 31.3 | 95.4 95.1 | 95.3 | 7.1 7.1 | 7.1 | 4.2 4.2 | 4.2 | 1.3 1.4 | | 1.4 | | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 10 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 7.2 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 7.8 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | | |
| | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.2 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.5 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.2 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.5 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.5 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.0 mg/L</u> |
| <u>Station M6</u> | | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 10 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|------------|----------------|--------------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Cloudy | Moderate | 13:00 | Surface | 1 | 21.6 21.5 | 21.6 | 8.1 8.2 | 8.2 | 32.1 31.9 | 32.0 | 97.3 97.1 | 97.2 | 7.1 7.1 | 7.1 | 7.2 | 3.1 3.7 | 3.4 | 4.2 | 1.5 1.5 | 1.5 | 1.6 |
| | | | | Middle | 10 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.8 31.8 | 31.8 | 97.7 98.3 | 98.0 | 7.2 7.3 | 7.3 | 4.0 3.8 | 3.9 | 1.8 1.7 | | 1.8 | | |
| | | | | Bottom | 19 | 21.0 21.0 | 21.0 | 8.2 8.2 | 8.2 | 31.8 31.9 | 31.9 | 98.8 99.6 | 99.2 | 7.3 7.4 | 7.4 | 5.0 5.3 | 5.2 | 1.5 1.4 | | 1.5 | | |
| C2 | Cloudy | Moderate | 10:51 | Surface | 1 | 21.2 21.3 | 21.3 | 8.1 8.1 | 8.1 | 31.7 31.9 | 31.8 | 96.2 96.2 | 96.2 | 7.1 7.1 | 7.1 | 7.2 | 2.8 2.5 | 2.7 | 4.1 | 2.6 2.7 | 2.7 | 2.8 |
| | | | | Middle | 18 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.8 31.7 | 31.8 | 96.9 97.0 | 97.0 | 7.2 7.2 | 7.2 | 3.8 3.4 | 3.6 | 1.1 1.2 | | 1.2 | | |
| | | | | Bottom | 35 | 21.1 21.0 | 21.1 | 8.2 8.2 | 8.2 | 31.8 31.7 | 31.8 | 96.4 96.1 | 96.3 | 7.1 7.1 | 7.1 | 6.1 5.8 | 6.0 | 4.5 4.6 | | 4.6 | | |
| G1 | Cloudy | Moderate | 11:39 | Surface | 1 | 21.7 21.7 | 21.7 | 8.1 8.1 | 8.1 | 32.1 32.2 | 32.2 | 96.0 95.9 | 96.0 | 7.0 7.0 | 7.0 | 7.0 | 3.7 4.0 | 3.9 | 4.1 | 2.6 2.5 | 2.6 | 2.8 |
| | | | | Middle | 4 | 21.3 21.3 | 21.3 | 8.1 8.1 | 8.1 | 31.9 31.8 | 31.9 | 93.9 93.9 | 93.9 | 6.9 6.9 | 6.9 | 4.0 4.2 | 4.1 | 1.1 1.1 | | 1.1 | | |
| | | | | Bottom | 7 | 21.1 21.1 | 21.1 | 8.2 8.1 | 8.2 | 31.8 31.9 | 31.9 | 92.3 92.2 | 92.3 | 6.8 6.8 | 6.8 | 4.4 4.2 | 4.3 | 4.7 4.8 | | 4.8 | | |
| G2 | Cloudy | Moderate | 11:23 | Surface | 1 | 21.6 21.5 | 21.6 | 8.2 8.1 | 8.2 | 31.8 31.9 | 31.9 | 96.6 96.1 | 96.4 | 7.1 7.0 | 7.1 | 7.1 | 3.3 3.2 | 3.3 | 3.3 | 2.4 2.4 | 2.4 | 2.1 |
| | | | | Middle | 5 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.7 31.9 | 31.8 | 95.8 96.2 | 96.0 | 7.1 7.1 | 7.1 | 2.1 2.4 | 2.3 | 1.1 1.0 | | 1.1 | | |
| | | | | Bottom | 9 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.8 31.9 | 31.9 | 96.3 96.0 | 96.2 | 7.1 7.1 | 7.1 | 4.3 4.5 | 4.4 | 2.9 2.9 | | 2.9 | | |
| G3 | Cloudy | Moderate | 11:53 | Surface | 1 | 21.4 21.4 | 21.4 | 8.2 8.1 | 8.2 | 32.0 32.0 | 32.0 | 96.8 97.3 | 97.1 | 7.1 7.1 | 7.1 | 7.1 | 3.3 3.2 | 3.3 | 5.1 | 0.8 0.8 | 0.8 | 1.6 |
| | | | | Middle | 4 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.7 31.9 | 31.8 | 97.0 97.5 | 97.3 | 7.2 7.2 | 7.2 | 5.9 5.8 | 5.9 | 2.5 2.5 | | 2.5 | | |
| | | | | Bottom | 7 | 21.1 21.0 | 21.1 | 8.1 8.1 | 8.1 | 31.7 31.8 | 31.8 | 95.7 95.1 | 95.4 | 7.1 7.0 | 7.1 | 3.6 6.4 | 6.0 | 1.5 1.4 | | 1.5 | | |
| G4 | Cloudy | Moderate | 12:26 | Surface | 1 | 21.5 21.4 | 21.5 | 8.2 8.1 | 8.2 | 32.0 32.0 | 32.0 | 96.0 95.8 | 95.9 | 7.0 7.0 | 7.0 | 7.0 | 4.3 3.7 | 4.0 | 5.0 | 1.0 1.0 | 1.0 | 1.5 |
| | | | | Middle | 4 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 94.8 95.0 | 94.9 | 7.0 7.0 | 7.0 | 5.3 5.2 | 5.3 | 1.0 1.0 | | 1.0 | | |
| | | | | Bottom | 7 | 21.2 21.1 | 21.2 | 8.2 8.1 | 8.2 | 31.8 31.8 | 31.8 | 95.3 94.9 | 95.1 | 7.0 7.0 | 7.0 | 5.4 5.7 | 5.6 | 2.4 2.3 | | 2.4 | | |
| M1 | Cloudy | Moderate | 11:32 | Surface | 1 | 21.4 21.4 | 21.4 | 8.2 8.1 | 8.2 | 32.0 31.9 | 32.0 | 97.1 97.0 | 97.1 | 7.1 7.1 | 7.1 | 7.1 | 2.9 2.8 | 2.9 | 3.5 | 1.3 1.4 | 1.4 | 2.0 |
| | | | | Middle | 3 | 21.2 21.1 | 21.2 | 8.1 8.1 | 8.1 | 31.9 31.8 | 31.9 | 95.8 95.4 | 95.6 | 7.1 7.1 | 7.1 | 4.1 4.2 | 4.2 | 1.8 1.8 | | 1.8 | | |
| | | | | Bottom | 5 | 21.1 21.2 | 21.2 | 8.1 8.2 | 8.2 | 31.8 31.9 | 31.9 | 93.7 93.6 | 93.7 | 6.9 6.9 | 6.9 | 3.2 3.5 | 3.4 | 2.9 2.8 | | 2.9 | | |
| M2 | Cloudy | Moderate | 11:14 | Surface | 1 | 21.3 21.3 | 21.3 | 8.1 8.1 | 8.1 | 31.8 32.0 | 31.9 | 95.5 96.1 | 95.8 | 7.0 7.1 | 7.1 | 7.1 | 3.2 3.2 | 3.2 | 4.4 | 3.1 3.2 | 3.2 | 1.9 |
| | | | | Middle | 5 | 21.2 21.2 | 21.2 | 8.1 8.2 | 8.2 | 31.8 31.7 | 31.8 | 95.3 95.7 | 95.5 | 7.0 7.1 | 7.1 | 5.0 5.5 | 5.3 | 1.9 1.9 | | 1.9 | | |
| | | | | Bottom | 9 | 21.1 21.1 | 21.1 | 8.1 8.2 | 8.2 | 31.8 31.8 | 31.8 | 94.4 93.7 | 94.1 | 7.0 6.9 | 7.0 | 4.9 4.6 | 4.8 | <0.5 <0.5 | | <0.5 | | |
| M3 | Cloudy | Moderate | 12:13 | Surface | 1 | 21.2 21.3 | 21.3 | 8.1 8.1 | 8.1 | 32.0 31.9 | 32.0 | 97.6 97.3 | 97.5 | 7.2 7.2 | 7.2 | 7.2 | 2.0 1.8 | 1.9 | 3.6 | 2.6 2.5 | 2.6 | 1.9 |
| | | | | Middle | 4 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.9 31.8 | 31.9 | 97.3 96.7 | 97.0 | 7.2 7.1 | 7.2 | 3.4 3.5 | 3.5 | 2.0 1.9 | | 2.0 | | |
| | | | | Bottom | 7 | 21.2 21.2 | 21.2 | 8.2 8.2 | 8.2 | 31.8 31.9 | 31.9 | 97.0 97.4 | 97.2 | 7.2 7.2 | 7.2 | 5.2 5.4 | 5.3 | 1.2 1.2 | | 1.2 | | |
| M4 | Cloudy | Moderate | 11:06 | Surface | 1 | 21.4 21.4 | 21.4 | 8.2 8.1 | 8.2 | 31.9 31.8 | 31.9 | 96.8 96.9 | 96.9 | 7.1 7.1 | 7.1 | 7.1 | 3.6 3.4 | 3.5 | 3.7 | 2.1 2.1 | 2.1 | 2.3 |
| | | | | Middle | 4 | 21.1 21.0 | 21.1 | 8.2 8.2 | 8.2 | 31.8 31.7 | 31.8 | 97.6 97.1 | 97.4 | 7.2 7.2 | 7.2 | 3.1 3.3 | 3.2 | 1.8 1.8 | | 1.8 | | |
| | | | | Bottom | 7 | 21.0 21.0 | 21.0 | 8.1 8.2 | 8.2 | 31.6 31.7 | 31.7 | 96.1 96.4 | 96.3 | 7.1 7.1 | 7.1 | 4.5 4.3 | 4.4 | 3.0 3.1 | | 3.1 | | |
| M5 | Cloudy | Moderate | 12:52 | Surface | 1 | 21.5 21.5 | 21.5 | 8.1 8.1 | 8.1 | 32.0 31.8 | 31.9 | 96.4 96.3 | 96.4 | 7.1 7.1 | 7.1 | 7.1 | 3.9 4.2 | 4.1 | 5.6 | 2.0 2.0 | 2.0 | 3.2 |
| | | | | Middle | 5.5 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.8 31.9 | 31.9 | 97.9 98.6 | 98.3 | 7.2 7.3 | 7.3 | 6.1 5.5 | 5.8 | 5.8 5.9 | | 5.9 | | |
| | | | | Bottom | 10 | 21.0 21.0 | 21.0 | 8.1 8.2 | 8.2 | 31.9 31.9 | 31.9 | 99.2 98.4 | 98.8 | 7.3 7.3 | 7.3 | 7.0 6.8 | 6.9 | 1.7 1.7 | | 1.7 | | |
| M6 | Cloudy | Moderate | 12:39 | Surface | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3.5 | - | - | 3.0 |
| | | | | Middle | 2.1 | 21.2 21.3 | 21.3 | 8.2 8.1 | 8.2 | 31.8 31.8 | 31.8 | 95.9 95.8 | 95.9 | 7.1 7.1 | 7.1 | 3.5 3.5 | 3.5 | 2.9 3.0 | | 3.0 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 10 February 2017 (Mid-Flood Tide)

| <u>Parameter</u> <u>(unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 8.9 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 9.6 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.0 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.3 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.0 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.3 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.8 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 6.2 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 10 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | | | | |
|----------|-------------------|-----------------|---------------|-----------|------------------|--------------|-------|------------|--------------|--------------|-------------------|----------------|-------------------------|------------|-----|----------------|---------|-----|-------------------------|------------|------------|------------|------------|------------|------------|
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | | | | |
| C1 | Cloudy | Moderate | 18:02 | Surface | 1 | 21.3 21.4 | 21.4 | 8.2 8.2 | 8.2 | 31.9 31.8 | 31.9 | 96.9 97.2 | 97.1 | 7.1 7.1 | 7.1 | 7.1 | 7.1 | 3.0 | 5.5 | 2.5 2.5 | 2.5 1.7 | 2.5 1.7 | 3.0 | | |
| | | | | Middle | 10 | 21.1 21.1 | 21.1 | 8.1 8.2 | 8.2 | 31.8 31.8 | 31.8 | 96.0 96.7 | 96.4 | 7.1 7.1 | 7.1 | 7.1 | 7.1 | 6.2 | 6.2 | 6.2 | 6.2 | 6.2 | | 6.2 | 0.9 0.8 |
| | | | | Bottom | 19 | 21.0 21.1 | 21.1 | 8.2 8.1 | 8.2 | 31.8 31.9 | 31.9 | 96.2 96.7 | 96.5 | 7.1 7.1 | 7.1 | 7.1 | 7.1 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | | 7.4 | |
| C2 | Cloudy | Moderate | 16:14 | Surface | 1 | 21.3 21.3 | 21.3 | 8.0 8.0 | 8.0 | 31.7 31.8 | 31.8 | 94.5 94.1 | 94.3 | 7.0 6.9 | 7.0 | 7.0 | 7.0 | 4.0 | 6.0 | 2.8 2.8 | 2.8 2.8 | 2.8 2.8 | 1.7 | | |
| | | | | Middle | 18 | 21.1 21.1 | 21.1 | 8.0 8.1 | 8.1 | 31.7 31.8 | 31.8 | 95.1 95.3 | 95.2 | 7.0 7.0 | 7.0 | 7.0 | 7.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | 6.5 | 1.4 1.3 |
| | | | | Bottom | 35 | 21.0 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.8 31.8 | 31.8 | 96.7 97.0 | 96.9 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | | 7.2 | |
| G1 | Cloudy | Moderate | 17:02 | Surface | 1 | 22.1 22.1 | 22.1 | 8.1 8.1 | 8.1 | 32.2 32.3 | 32.3 | 99.9 100.5 | 100.2 | 7.2 7.3 | 7.3 | 7.3 | 3.4 | 4.8 | 3.3 3.5 | 3.3 3.5 | 3.3 3.5 | 3.3 3.5 | 1.7 | | |
| | | | | Middle | 4 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 97.3 97.4 | 97.4 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | | 3.8 | 1.5 1.5 |
| | | | | Bottom | 7 | 21.2 21.1 | 21.2 | 8.2 8.1 | 8.2 | 31.7 31.8 | 31.8 | 95.4 94.8 | 95.1 | 7.0 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | | 7.0 | |
| G2 | Cloudy | Moderate | 16:43 | Surface | 1 | 21.7 21.7 | 21.7 | 8.2 8.1 | 8.2 | 32.0 32.1 | 32.1 | 99.5 99.2 | 99.4 | 7.3 7.2 | 7.3 | 7.3 | 2.6 | 4.3 | 2.6 2.6 | 2.6 2.6 | 2.6 2.6 | 2.6 2.6 | 1.9 | | |
| | | | | Middle | 5 | 21.4 21.4 | 21.4 | 8.1 8.1 | 8.1 | 31.9 32.0 | 32.0 | 98.7 98.9 | 98.8 | 7.3 7.3 | 7.3 | 7.3 | 7.3 | 4.4 | 4.7 | 4.4 5.0 | 4.4 5.0 | 4.4 5.0 | | 4.4 5.0 | 1.8 1.8 |
| | | | | Bottom | 9 | 21.1 21.0 | 21.1 | 8.1 8.2 | 8.2 | 31.8 31.8 | 31.8 | 96.5 96.2 | 96.4 | 7.1 7.1 | 7.1 | 7.1 | 7.1 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | | 5.6 | |
| G3 | Cloudy | Moderate | 17:13 | Surface | 1 | 21.7 21.8 | 21.8 | 8.1 8.1 | 8.1 | 32.0 32.1 | 32.1 | 98.2 98.6 | 98.4 | 7.2 7.2 | 7.2 | 7.2 | 4.3 | 4.3 | 4.3 4.7 | 4.3 4.7 | 4.3 4.7 | 4.3 4.7 | 2.6 | | |
| | | | | Middle | 4 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 96.5 96.3 | 96.4 | 7.1 7.1 | 7.1 | 7.1 | 7.1 | 4.8 | 4.8 | 4.8 4.8 | 4.8 4.8 | 4.8 4.8 | | 4.8 4.8 | 3.5 3.5 |
| | | | | Bottom | 7 | 21.1 21.1 | 21.1 | 8.2 8.1 | 8.2 | 31.8 31.8 | 31.8 | 94.1 93.3 | 93.7 | 7.0 6.9 | 7.0 | 7.0 | 7.0 | 4.4 | 4.7 | 4.4 5.0 | 4.4 5.0 | 4.4 5.0 | | 4.4 5.0 | |
| G4 | Cloudy | Moderate | 17:32 | Surface | 1 | 21.3 21.3 | 21.3 | 8.1 8.2 | 8.2 | 31.8 32.0 | 31.9 | 97.7 98.2 | 98.0 | 7.2 7.2 | 7.2 | 7.2 | 2.7 | 2.8 | 2.7 2.8 | 2.7 2.8 | 2.7 2.8 | 2.7 2.8 | 1.2 | | |
| | | | | Middle | 4 | 21.1 21.2 | 21.2 | 8.2 8.1 | 8.2 | 31.8 31.9 | 31.9 | 97.7 98.1 | 97.9 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 4.2 | 4.6 | 4.2 5.0 | 4.2 5.0 | 4.2 5.0 | | 4.2 5.0 | 0.6 0.7 |
| | | | | Bottom | 7 | 21.0 21.1 | 21.1 | 8.1 8.2 | 8.2 | 31.9 31.7 | 31.8 | 96.5 95.7 | 96.1 | 7.1 7.1 | 7.1 | 7.1 | 7.1 | 5.7 | 5.9 | 5.7 6.1 | 5.7 6.1 | 5.7 6.1 | | 5.7 6.1 | |
| M1 | Cloudy | Moderate | 16:53 | Surface | 1 | 22.0 22.0 | 22.0 | 8.1 8.1 | 8.1 | 32.2 32.2 | 32.2 | 101.1 101.2 | 101.2 | 7.3 7.3 | 7.3 | 7.3 | 4.3 | 4.6 | 4.3 4.9 | 4.3 4.9 | 4.3 4.9 | 4.3 4.9 | 1.8 | | |
| | | | | Middle | 3 | 21.7 21.7 | 21.7 | 8.2 8.1 | 8.2 | 32.2 32.0 | 32.1 | 99.7 99.7 | 99.7 | 7.3 7.3 | 7.3 | 7.3 | 7.3 | 5.6 | 5.5 | 5.6 5.3 | 5.6 5.3 | 5.6 5.3 | | 5.6 5.3 | 2.7 2.7 |
| | | | | Bottom | 5 | 21.1 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 94.9 94.6 | 94.8 | 7.0 7.0 | 7.0 | 7.0 | 7.0 | 3.8 | 4.0 | 3.8 4.2 | 3.8 4.2 | 3.8 4.2 | | 3.8 4.2 | |
| M2 | Cloudy | Moderate | 16:35 | Surface | 1 | 21.4 21.4 | 21.4 | 8.1 8.2 | 8.2 | 31.9 32.1 | 32.0 | 98.6 98.4 | 98.5 | 7.2 7.2 | 7.2 | 7.2 | 2.9 | 3.0 | 2.9 3.0 | 2.9 3.0 | 2.9 3.0 | 2.9 3.0 | 2.5 | | |
| | | | | Middle | 5 | 21.3 21.2 | 21.3 | 8.1 8.2 | 8.2 | 31.9 31.9 | 31.9 | 98.0 97.8 | 97.9 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 4.2 | 4.2 | 4.2 4.2 | 4.2 4.2 | 4.2 4.2 | | 4.2 4.2 | 2.8 2.7 |
| | | | | Bottom | 9 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 31.7 31.9 | 31.8 | 96.9 96.8 | 96.9 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 5.9 | 6.1 | 5.9 6.3 | 5.9 6.3 | 5.9 6.3 | | 5.9 6.3 | |
| M3 | Cloudy | Moderate | 17:24 | Surface | 1 | 22.0 21.9 | 22.0 | 8.2 8.2 | 8.2 | 32.2 32.2 | 32.2 | 98.6 98.3 | 98.5 | 7.2 7.1 | 7.2 | 7.2 | 3.0 | 3.0 | 3.0 2.9 | 3.0 2.9 | 3.0 2.9 | 3.0 2.9 | 2.8 | | |
| | | | | Middle | 4 | 21.3 21.2 | 21.3 | 8.1 8.1 | 8.1 | 31.9 31.9 | 31.9 | 95.4 95.5 | 95.5 | 7.0 7.0 | 7.0 | 7.0 | 7.0 | 5.5 | 5.3 | 5.5 5.1 | 5.5 5.1 | 5.5 5.1 | | 5.5 5.1 | 3.2 3.3 |
| | | | | Bottom | 7 | 21.2 21.2 | 21.2 | 8.1 8.1 | 8.1 | 31.8 31.8 | 31.8 | 91.7 91.0 | 91.4 | 6.8 6.7 | 6.8 | 6.8 | 6.8 | 6.9 | 7.1 | 6.9 7.2 | 6.9 7.2 | 6.9 7.2 | | 6.9 7.2 | |
| M4 | Cloudy | Moderate | 16:25 | Surface | 1 | 21.6 21.6 | 21.6 | 8.1 8.1 | 8.1 | 32.1 32.1 | 32.1 | 101.5 101.3 | 101.4 | 7.4 7.4 | 7.4 | 7.4 | 3.9 | 4.0 | 3.9 4.0 | 3.9 4.0 | 3.9 4.0 | 3.9 4.0 | 2.3 | | |
| | | | | Middle | 4 | 21.1 21.0 | 21.1 | 8.2 8.2 | 8.2 | 32.0 31.9 | 32.0 | 98.2 97.7 | 98.0 | 7.3 7.2 | 7.3 | 7.3 | 7.3 | 4.6 | 4.9 | 4.6 5.2 | 4.6 5.2 | 4.6 5.2 | | 4.6 5.2 | 2.9 2.8 |
| | | | | Bottom | 7 | 21.1 21.1 | 21.1 | 8.2 8.2 | 8.2 | 32.0 31.9 | 32.0 | 97.7 97.3 | 97.5 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 6.4 | 6.3 | 6.4 6.1 | 6.4 6.1 | 6.4 6.1 | | 6.4 6.1 | |
| M5 | Cloudy | Moderate | 17:53 | Surface | 1 | 21.5 21.6 | 21.6 | 8.1 8.1 | 8.1 | 32.0 32.1 | 32.1 | 98.5 98.5 | 98.5 | 7.2 7.2 | 7.2 | 7.2 | 4.0 | 4.3 | 4.0 4.5 | 4.0 4.5 | 4.0 4.5 | 4.0 4.5 | 1.7 | | |
| | | | | Middle | 5.5 | 21.0 21.1 | 21.1 | 8.2 8.1 | 8.2 | 31.8 31.9 | 31.9 | 96.9 97.8 | 97.4 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 5.6 | 5.9 | 5.6 6.2 | 5.6 6.2 | 5.6 6.2 | | 5.6 6.2 | 2.2 2.3 |
| | | | | Bottom | 10 | 21.1 21.1 | 21.1 | 8.2 8.1 | 8.2 | 31.9 31.9 | 31.9 | 96.9 97.1 | 97.0 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 6.8 | 6.5 | 6.8 6.1 | 6.8 6.1 | 6.8 6.1 | | 6.8 6.1 | |
| M6 | Cloudy | Moderate | 17:41 | Surface | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.6 | | | |
| | | | | Middle | 2 | 21.3 21.3 | 21.3 | 8.2 8.2 | 8.2 | 31.9 31.8 | 31.9 | 98.9 98.5 | 98.7 | 7.3 7.3 | 7.3 | 7.3 | 7.3 | 4.8 | 4.8 | 4.8 4.8 | 4.8 4.8 | | 4.8 4.8 | 4.8 4.8 | 0.6 0.6 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 13 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|--|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 9.1 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 9.88 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.9 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.1 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.9 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.1 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.9 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.1 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 13 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|------------|-----|-------------------------|------------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Sunny | Moderate | 13:52 | Surface | 1 | 21.5 21.6 | 21.6 | 8.0 8.0 | 8.0 | 30.7 29.9 | 30.3 | 94.6 94.6 | 94.6 | 7.0 7.0 | 7.0 | 6.9 | 6.8 3.1 | 3.0 | 5.5 | 2.1 2.2 | 2.2 | 2.2 |
| | | | | Middle | 10 | 21.4 21.6 | 21.5 | 8.0 8.0 | 8.0 | 30.8 30.8 | 30.8 | 91.3 88.5 | 89.9 | 6.8 6.5 | 6.7 | | 6.3 6.3 | 2.1 2.1 | | 2.2 | | |
| | | | | Bottom | 19 | 21.2 21.3 | 21.3 | 8.0 8.0 | 8.0 | 29.2 29.1 | 29.2 | 85.9 86.9 | 86.4 | 6.4 6.5 | 6.5 | | 7.2 7.4 | 7.3 | | 2.1 2.1 | 2.1 | |
| C2 | Sunny | Moderate | 12:47 | Surface | 1 | 21.3 21.7 | 21.5 | 7.8 7.8 | 7.8 | 28.7 28.1 | 28.4 | 91.7 91.8 | 91.8 | 6.9 6.9 | 6.9 | 6.9 | 4.5 4.0 | 4.3 | 6.1 | 2.4 2.4 | 2.4 | 2.3 |
| | | | | Middle | 18 | 21.4 21.3 | 21.4 | 7.9 7.9 | 7.9 | 28.1 28.2 | 28.2 | 89.5 92.3 | 90.9 | 6.7 6.9 | 6.8 | | 6.2 6.5 | 6.4 | | 2.2 2.2 | 2.2 | |
| | | | | Bottom | 35 | 21.5 21.2 | 21.4 | 8.1 8.1 | 8.1 | 28.5 28.6 | 28.6 | 88.7 89.0 | 88.9 | 6.6 6.7 | 6.7 | | 7.7 7.5 | 7.6 | | 2.4 2.4 | 2.4 | |
| G1 | Sunny | Moderate | 13:17 | Surface | 1 | 21.3 21.2 | 21.3 | 8.1 8.0 | 8.1 | 29.4 31.1 | 30.3 | 92.0 90.9 | 91.5 | 6.9 6.7 | 6.8 | 6.9 | 3.5 3.4 | 3.5 | 4.8 | 1.6 1.6 | 1.6 | 1.8 |
| | | | | Middle | 4 | 21.2 21.6 | 21.4 | 8.1 8.0 | 8.1 | 30.9 31.0 | 31.0 | 93.9 95.7 | 94.8 | 7.0 7.0 | 7.0 | | 4.0 3.9 | 4.0 | | 1.5 1.6 | 1.6 | |
| | | | | Bottom | 7 | 21.5 21.6 | 21.6 | 8.1 8.0 | 8.1 | 31.1 31.1 | 31.1 | 87.4 84.3 | 85.9 | 6.4 6.2 | 6.3 | | 6.3 | 6.8 7.0 | | 6.9 | 2.1 2.1 | |
| G2 | Sunny | Moderate | 13:06 | Surface | 1 | 21.6 21.7 | 21.7 | 8.0 8.0 | 8.0 | 29.9 30.6 | 30.3 | 97.0 95.1 | 96.1 | 7.2 7.0 | 7.1 | 6.8 | 2.5 2.6 | 2.6 | 4.4 | 2.1 2.1 | 2.1 | 3.1 |
| | | | | Middle | 5 | 21.6 21.4 | 21.5 | 8.0 8.0 | 8.0 | 30.7 30.8 | 30.8 | 87.4 86.8 | 87.1 | 6.4 6.4 | 6.4 | | 4.6 4.8 | 4.7 | | 4.6 4.7 | 4.7 | |
| | | | | Bottom | 9 | 21.7 21.7 | 21.7 | 8.1 8.0 | 8.1 | 30.8 31.0 | 30.9 | 88.3 89.0 | 88.7 | 6.5 6.5 | 6.5 | | 6.0 5.5 | 5.8 | | 2.6 2.6 | 2.6 | |
| G3 | Sunny | Moderate | 13:23 | Surface | 1 | 21.8 21.8 | 21.8 | 8.0 8.0 | 8.0 | 29.9 30.5 | 31.0 | 97.0 96.6 | 96.0 | 7.2 7.1 | 7.1 | 7.0 | 2.5 4.6 | 4.3 | 4.7 | 2.1 2.5 | 2.5 | 2.9 |
| | | | | Middle | 4 | 21.6 21.5 | 21.6 | 8.0 8.1 | 8.1 | 30.6 30.8 | 30.7 | 92.2 91.5 | 91.9 | 6.8 6.8 | 6.8 | | 4.7 5.0 | 4.9 | | 4.3 4.7 | 4.3 | |
| | | | | Bottom | 7 | 21.7 21.6 | 21.7 | 8.1 8.0 | 8.1 | 30.9 30.9 | 30.9 | 92.9 93.5 | 93.2 | 6.8 6.9 | 6.9 | | 4.7 5.0 | 4.9 | | 1.7 1.8 | 1.8 | |
| G4 | Sunny | Moderate | 13:34 | Surface | 1 | 21.1 21.0 | 21.1 | 8.0 8.0 | 8.0 | 29.1 29.4 | 29.3 | 95.6 95.1 | 95.4 | 7.2 7.1 | 7.2 | 7.1 | 2.7 2.7 | 2.7 | 4.5 | 1.8 1.9 | 1.9 | 2.0 |
| | | | | Middle | 4 | 21.5 21.2 | 21.4 | 8.0 8.1 | 8.1 | 30.3 30.3 | 30.3 | 93.8 94.2 | 94.3 | 6.9 7.1 | 7.0 | | 4.5 5.0 | 4.8 | | 1.8 1.7 | 1.8 | |
| | | | | Bottom | 7 | 21.5 21.5 | 21.5 | 8.1 8.0 | 8.1 | 30.3 30.4 | 30.4 | 93.2 83.4 | 88.3 | 6.9 6.2 | 6.6 | | 5.8 5.9 | 5.9 | | 2.3 2.3 | 2.3 | |
| M1 | Sunny | Moderate | 13:11 | Surface | 1 | 21.8 21.8 | 21.8 | 8.1 8.0 | 8.1 | 31.0 30.8 | 30.9 | 91.6 92.8 | 92.2 | 6.7 6.8 | 6.8 | 6.8 | 4.6 4.9 | 4.8 | 4.8 | 1.2 1.3 | 1.3 | 1.6 |
| | | | | Middle | 3 | 21.7 21.7 | 21.7 | 8.1 8.1 | 8.1 | 30.8 30.8 | 30.8 | 91.8 92.2 | 92.0 | 6.8 6.8 | 6.8 | | 5.5 5.5 | 5.5 | | 1.8 1.8 | 1.8 | |
| | | | | Bottom | 5 | 21.7 21.6 | 21.8 | 8.0 8.0 | 8.0 | 30.9 31.0 | 31.0 | 93.1 91.0 | 92.1 | 6.8 6.7 | 6.8 | | 3.9 4.1 | 4.0 | | 1.8 1.7 | 1.8 | |
| M2 | Sunny | Moderate | 13:01 | Surface | 1 | 21.5 21.6 | 21.6 | 8.1 8.0 | 8.1 | 31.1 30.3 | 30.7 | 96.7 94.6 | 95.7 | 7.1 7.0 | 7.1 | 6.8 | 3.1 2.9 | 3.0 | 4.5 | 2.0 2.1 | 2.1 | 1.6 |
| | | | | Middle | 5.5 | 21.7 21.5 | 21.6 | 8.0 8.0 | 8.0 | 30.6 30.7 | 30.7 | 87.4 87.7 | 87.6 | 6.4 6.5 | 6.5 | | 4.2 4.3 | 4.3 | | 1.2 1.2 | 1.2 | |
| | | | | Bottom | 10 | 21.4 21.7 | 21.6 | 8.0 8.1 | 8.1 | 31.0 31.0 | 31.0 | 89.0 89.8 | 89.4 | 6.6 6.6 | 6.6 | | 6.1 6.4 | 6.3 | | 1.4 1.5 | 1.5 | |
| M3 | Sunny | Moderate | 13:28 | Surface | 1 | 21.2 21.2 | 21.2 | 8.1 8.0 | 8.1 | 30.2 30.1 | 30.2 | 91.7 93.3 | 92.5 | 6.8 7.0 | 6.9 | 6.8 | 2.9 2.9 | 2.9 | 5.0 | 2.0 2.2 | 2.1 | 2.5 |
| | | | | Middle | 4.5 | 21.6 21.4 | 21.5 | 8.0 8.1 | 8.1 | 30.7 30.7 | 30.7 | 90.4 90.2 | 90.3 | 6.7 6.7 | 6.7 | | 5.6 5.3 | 5.5 | | 3.3 1.9 | 2.6 | |
| | | | | Bottom | 8 | 21.3 21.6 | 21.5 | 8.1 8.1 | 8.1 | 30.8 30.8 | 30.8 | 85.2 85.7 | 85.5 | 6.3 6.3 | 6.3 | | 6.5 6.8 | 6.7 | | 2.2 3.2 | 2.7 | |
| M4 | Sunny | Moderate | 12:55 | Surface | 1 | 21.1 21.6 | 21.4 | 7.9 7.9 | 7.9 | 28.1 28.8 | 28.5 | 93.4 97.7 | 95.6 | 7.1 7.3 | 7.2 | 7.0 | 3.7 3.8 | 3.8 | 5.0 | 2.5 2.4 | 2.5 | 2.1 |
| | | | | Middle | 4 | 21.4 21.4 | 21.4 | 8.0 8.0 | 8.0 | 29.5 29.6 | 29.6 | 91.9 91.9 | 91.9 | 6.8 6.8 | 6.8 | | 4.9 5.0 | 5.0 | | 1.5 1.6 | 1.6 | |
| | | | | Bottom | 7 | 21.3 21.5 | 21.4 | 8.0 8.0 | 8.0 | 30.2 30.2 | 30.2 | 89.1 90.8 | 90.0 | 6.6 6.7 | 6.7 | | 6.3 6.3 | 6.3 | | 2.0 2.1 | 2.1 | |
| M5 | Sunny | Moderate | 13:45 | Surface | 1 | 21.0 21.2 | 21.1 | 8.0 8.1 | 8.1 | 30.4 30.4 | 30.4 | 90.6 89.6 | 90.1 | 6.8 6.7 | 6.8 | 6.8 | 4.0 4.3 | 4.2 | 5.5 | 2.5 2.5 | 2.5 | 2.2 |
| | | | | Middle | 5.5 | 21.2 21.2 | 21.2 | 8.1 8.0 | 8.1 | 30.4 30.5 | 30.5 | 90.9 91.0 | 91.0 | 6.8 6.8 | 6.8 | | 5.6 5.7 | 5.7 | | 2.2 2.2 | 2.2 | |
| | | | | Bottom | 10 | 21.4 21.3 | 21.4 | 8.0 8.0 | 8.0 | 30.7 30.7 | 30.7 | 90.9 90.3 | 90.6 | 6.7 6.7 | 6.7 | | 6.9 6.5 | 6.7 | | 2.0 2.0 | 2.0 | |
| M6 | Sunny | Moderate | 13:40 | Surface | - | - | - | - | - | - | - | - | - | - | - | 6.6 | - | - | 4.2 | - | - | 2.2 |
| | | | | Middle | 2.3 | 21.2 21.5 | 21.4 | 8.0 8.0 | 8.0 | 31.0 31.0 | 31.0 | 88.6 88.2 | 88.4 | 6.6 6.5 | 6.6 | | 4.2 4.2 | 4.2 | | 2.1 2.2 | 2.2 | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 13 February 2017 (Mid-Flood Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 6.4 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 6.9 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.7 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.0 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.7 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.0 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.8 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.1 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> | |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 13 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Sunny | Moderate | 09:45 | Surface | 1 | 21.4 21.3 | 21.4 | 8.1 8.1 | 8.1 | 32.0 31.1 | 31.6 | 100.0 100.2 | 100.1 | 7.3 7.4 | 7.4 | 7.3 | 3.2 3.6 | 3.4 | 4.2 | 3.0 3.1 | 3.1 | 3.5 |
| | | | | Middle | 10 | 20.7 21.1 | 20.9 | 8.0 8.1 | 8.1 | 31.1 30.9 | 31.0 | 94.1 95.4 | 94.8 | 7.0 7.1 | 7.1 | | 3.9 3.8 | 3.9 | | 4.3 4.2 | 4.3 | |
| | | | | Bottom | 19 | 21.1 21.4 | 21.3 | 8.1 8.1 | 8.1 | 29.2 29.4 | 29.3 | 92.1 92.6 | 92.4 | 6.9 6.9 | 6.9 | | 5.2 5.3 | 5.3 | | 3.2 3.1 | 3.2 | |
| C2 | Sunny | Moderate | 08:32 | Surface | 1 | 21.1 21.2 | 21.2 | 8.0 8.0 | 8.0 | 30.9 30.9 | 30.9 | 97.1 98.1 | 97.6 | 7.2 7.3 | 7.3 | 7.3 | 2.9 2.5 | 2.7 | 4.2 | 1.7 1.7 | 1.7 | 1.6 |
| | | | | Middle | 18 | 21.0 21.0 | 21.0 | 7.9 7.9 | 7.9 | 30.4 30.5 | 30.5 | 95.7 96.0 | 95.9 | 7.1 7.2 | 7.2 | | 4.0 3.4 | 3.7 | | 1.7 1.7 | 1.7 | |
| | | | | Bottom | 35 | 20.7 21.0 | 20.9 | 8.0 8.0 | 8.0 | 30.4 30.5 | 30.5 | 94.2 95.3 | 94.8 | 7.1 7.1 | 7.1 | | 6.3 6.1 | 6.2 | | 1.2 1.3 | 1.3 | |
| G1 | Sunny | Moderate | 09:05 | Surface | 1 | 21.2 20.7 | 21.0 | 8.1 8.0 | 8.1 | 29.2 29.2 | 29.2 | 97.5 95.0 | 96.3 | 7.3 7.2 | 7.3 | 7.2 | 3.8 4.0 | 3.9 | 4.0 | 3.2 3.3 | 3.3 | 2.3 |
| | | | | Middle | 4 | 21.1 20.3 | 20.7 | 8.0 8.0 | 8.0 | 29.5 29.6 | 29.6 | 93.5 92.6 | 93.1 | 7.0 7.0 | 7.0 | | 3.9 4.1 | 4.0 | | 1.9 1.9 | 1.9 | |
| | | | | Bottom | 7 | 20.1 20.2 | 20.2 | 8.1 8.0 | 8.1 | 30.3 30.2 | 30.3 | 91.3 91.3 | 91.3 | 6.9 6.9 | 6.9 | | 4.2 4.2 | 4.2 | | 1.8 1.8 | 1.8 | |
| G2 | Sunny | Moderate | 08:52 | Surface | 1 | 20.7 20.9 | 20.8 | 8.1 8.0 | 8.1 | 29.9 29.9 | 29.9 | 94.9 94.7 | 94.8 | 7.1 7.1 | 7.1 | 7.1 | 3.2 3.3 | 3.3 | 3.3 | 2.1 2.1 | 2.1 | 1.3 |
| | | | | Middle | 5 | 21.0 20.8 | 20.9 | 8.0 8.0 | 8.0 | 30.2 30.3 | 30.3 | 93.0 92.1 | 92.6 | 7.0 6.9 | 7.0 | | 2.1 2.4 | 2.3 | | 1.0 0.9 | 1.0 | |
| | | | | Bottom | 9 | 20.9 21.1 | 21.0 | 8.0 8.0 | 8.0 | 29.8 30.0 | 29.9 | 91.2 90.9 | 91.1 | 6.8 6.8 | 6.8 | | 4.3 4.5 | 4.4 | | 0.7 0.8 | 0.8 | |
| G3 | Sunny | Moderate | 09:12 | Surface | 1 | 21.2 20.7 | 21.0 | 8.1 8.1 | 8.1 | 29.0 29.2 | 29.1 | 96.4 96.2 | 96.3 | 7.2 7.3 | 7.3 | 7.2 | 3.2 3.2 | 3.3 | 5.0 | 1.2 1.3 | 1.3 | 1.3 |
| | | | | Middle | 4 | 21.0 20.8 | 20.9 | 7.9 8.1 | 8.0 | 29.9 29.9 | 29.9 | 94.1 92.9 | 93.5 | 7.0 7.0 | 7.0 | | 5.6 5.5 | 5.6 | | 1.2 1.1 | 1.2 | |
| | | | | Bottom | 7 | 20.7 20.7 | 20.7 | 8.0 8.0 | 8.0 | 30.3 30.4 | 30.4 | 93.0 92.0 | 92.5 | 7.0 6.9 | 7.0 | | 5.6 6.6 | 6.1 | | 1.3 1.4 | 1.4 | |
| G4 | Sunny | Moderate | 09:25 | Surface | 1 | 21.7 21.5 | 21.6 | 8.0 8.0 | 8.0 | 30.8 31.1 | 31.0 | 96.3 96.8 | 96.6 | 7.1 7.1 | 7.1 | 7.1 | 4.5 3.8 | 4.2 | 5.0 | 1.6 1.5 | 1.6 | 1.8 |
| | | | | Middle | 4 | 21.1 21.1 | 21.1 | 8.1 8.1 | 8.1 | 30.8 30.8 | 30.8 | 94.2 95.0 | 94.6 | 7.0 7.1 | 7.1 | | 5.0 5.5 | 5.3 | | 2.4 2.5 | 2.5 | |
| | | | | Bottom | 7 | 21.0 21.3 | 21.2 | 8.1 8.1 | 8.1 | 30.7 30.8 | 30.8 | 90.6 91.0 | 90.8 | 6.8 6.7 | 6.8 | | 5.3 5.6 | 5.5 | | 1.2 1.4 | 1.3 | |
| M1 | Sunny | Moderate | 08:59 | Surface | 1 | 21.2 21.1 | 21.2 | 8.0 8.1 | 8.1 | 29.0 29.0 | 29.0 | 95.4 94.6 | 95.0 | 7.2 7.1 | 7.2 | 7.1 | 3.1 3.2 | 3.2 | 3.7 | 2.4 2.5 | 2.5 | 2.2 |
| | | | | Middle | 3 | 20.6 20.6 | 20.7 | 8.1 8.0 | 8.1 | 29.5 29.4 | 29.5 | 92.7 91.5 | 92.1 | 7.0 6.9 | 7.0 | | 4.9 4.1 | 4.5 | | 1.9 2.0 | 2.0 | |
| | | | | Bottom | 5 | 20.9 20.9 | 20.9 | 8.0 8.0 | 8.0 | 31.1 31.2 | 31.2 | 90.1 90.4 | 90.3 | 6.7 6.7 | 6.7 | | 2.9 3.6 | 3.3 | | 2.2 2.2 | 2.2 | |
| M2 | Sunny | Moderate | 08:45 | Surface | 1 | 20.8 21.0 | 20.9 | 8.0 8.0 | 8.0 | 31.0 30.9 | 31.0 | 93.8 94.3 | 94.1 | 7.0 7.0 | 7.0 | 6.9 | 2.7 2.8 | 2.8 | 4.3 | 2.8 2.9 | 2.9 | 2.7 |
| | | | | Middle | 5.5 | 20.8 20.8 | 20.8 | 8.0 8.1 | 8.1 | 30.0 29.7 | 29.9 | 90.4 89.9 | 90.2 | 6.8 6.8 | 6.8 | | 5.2 5.1 | 5.2 | | 3.0 3.0 | 3.0 | |
| | | | | Bottom | 10 | 21.1 21.0 | 21.1 | 8.1 8.0 | 8.1 | 30.6 30.3 | 30.5 | 89.8 90.1 | 90.0 | 6.7 6.7 | 6.7 | | 4.7 4.9 | 4.8 | | 2.1 2.2 | 2.2 | |
| M3 | Sunny | Moderate | 09:18 | Surface | 1 | 20.9 21.0 | 21.0 | 8.1 8.0 | 8.1 | 31.4 31.6 | 31.5 | 98.5 100.1 | 99.3 | 7.3 7.4 | 7.4 | 7.3 | 2.1 1.8 | 2.0 | 3.6 | 1.3 1.3 | 1.3 | 2.1 |
| | | | | Middle | 4.5 | 20.9 21.2 | 21.1 | 8.1 8.0 | 8.1 | 31.8 31.8 | 31.8 | 96.5 97.8 | 97.2 | 7.2 7.2 | 7.2 | | 3.2 3.4 | 3.3 | | 2.6 2.6 | 2.6 | |
| | | | | Bottom | 8 | 21.2 21.3 | 21.3 | 8.0 8.0 | 8.0 | 31.7 32.1 | 31.9 | 94.2 102.4 | 98.3 | 7.0 7.5 | 7.3 | | 5.1 5.6 | 5.4 | | 2.5 2.5 | 2.5 | |
| M4 | Sunny | Moderate | 08:40 | Surface | 1 | 20.6 21.2 | 20.9 | 8.0 8.0 | 8.0 | 29.2 29.5 | 29.4 | 96.2 97.7 | 97.0 | 7.3 7.3 | 7.3 | 7.3 | 3.6 3.2 | 3.4 | 3.8 | 2.4 2.4 | 2.4 | 2.1 |
| | | | | Middle | 4 | 20.9 20.9 | 20.9 | 8.1 8.0 | 8.1 | 29.7 29.7 | 29.7 | 95.5 94.7 | 95.1 | 7.2 7.1 | 7.2 | | 3.3 3.4 | 3.4 | | 2.0 1.9 | 2.0 | |
| | | | | Bottom | 7 | 19.9 20.1 | 20.0 | 8.1 8.1 | 8.1 | 29.3 29.4 | 29.4 | 90.4 89.2 | 89.8 | 6.9 6.8 | 6.9 | | 4.8 4.5 | 4.7 | | 1.8 1.8 | 1.8 | |
| M5 | Sunny | Moderate | 09:36 | Surface | 1 | 21.1 21.3 | 21.2 | 8.0 8.1 | 8.1 | 31.6 32.3 | 32.0 | 98.3 98.4 | 98.4 | 7.3 7.2 | 7.3 | 7.2 | 3.9 4.0 | 4.0 | 4.5 | 1.7 1.8 | 1.8 | 1.8 |
| | | | | Middle | 5.5 | 21.0 21.1 | 21.1 | 8.1 8.1 | 8.1 | 30.7 31.3 | 31.0 | 93.7 94.6 | 94.2 | 7.0 7.0 | 7.0 | | 4.4 4.4 | 4.4 | | 1.1 1.1 | 1.1 | |
| | | | | Bottom | 10 | 21.3 21.2 | 21.3 | 8.2 8.1 | 8.2 | 30.2 30.3 | 30.3 | 91.6 91.0 | 91.3 | 6.8 6.8 | 6.8 | | 5.2 5.2 | 5.2 | | 2.5 2.5 | 2.5 | |
| M6 | Sunny | Moderate | 09:31 | Surface | - | - | - | - | - | - | - | - | - | - | - | 6.9 | - | - | 3.5 | - | - | 2.2 |
| | | | | Middle | 2.1 | 21.1 21.2 | 21.2 | 8.0 8.0 | 8.0 | 30.9 30.8 | 30.9 | 94.1 92.2 | 93.2 | 7.0 6.8 | 6.9 | | 3.8 3.2 | 3.5 | | 2.1 2.2 | 2.2 | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 15 February 2017 (Mid-Ebb Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 8.9 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 9.6 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 6.2 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.7 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 6.2 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.7 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.8 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.2 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 15 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity (NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|------------------|--------------|-------|------------|--------------|--------------|-------------------|---------------|-------------------------|------------|-----|-----------------|------------|------------|-------------------------|------------|------------|-----|
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Sunny | Moderate | 15:41 | Surface | 1 | 18.1 17.9 | 18.0 | 8.0 8.0 | 8.0 | 30.8 30.5 | 30.7 | 96.6 96.5 | 96.6 | 7.6 7.6 | 7.6 | 7.2 | 4.5 4.5 | 4.5 | 6.4 | 3.0 3.0 | 3.0 | 2.9 |
| | | | | Middle | 10.5 | 18.2 17.9 | 18.1 | 8.0 8.0 | 8.0 | 31.9 31.9 | 31.9 | 83.7 88.1 | 85.9 | 6.5 6.9 | 6.7 | | 6.4 | 2.5 2.4 | | 2.5 | | |
| | | | | Bottom | 20 | 17.9 17.9 | 17.9 | 8.0 8.0 | 8.0 | 32.3 32.2 | 32.3 | 82.1 84.0 | 83.1 | 6.4 6.6 | 6.5 | | 6.5 | 8.2 8.3 | | 8.3 | 3.2 3.1 | |
| C2 | Sunny | Moderate | 14:07 | Surface | 1 | 17.8 17.8 | 17.8 | 8.0 8.0 | 8.0 | 31.1 31.1 | 31.1 | 94.7 95.3 | 95.0 | 7.5 7.5 | 7.5 | 7.2 | 4.0 4.5 | 4.3 | 5.8 | 5.2 5.1 | 5.2 | 4.2 |
| | | | | Middle | 18 | 17.8 17.8 | 17.8 | 8.0 8.0 | 8.0 | 32.2 32.2 | 32.2 | 84.3 89.1 | 86.7 | 6.6 7.0 | 6.8 | | 5.7 5.7 | 5.7 | | 2.5 2.5 | 2.5 | |
| | | | | Bottom | 35 | 17.8 17.8 | 17.8 | 7.9 8.0 | 8.0 | 32.2 32.2 | 32.2 | 80.4 79.6 | 80.0 | 6.3 6.2 | 6.3 | | 6.3 | 7.2 7.6 | | 7.4 | 4.8 4.7 | |
| G1 | Sunny | Moderate | 14:44 | Surface | 1 | 17.7 17.7 | 17.7 | 8.0 8.0 | 8.0 | 32.3 32.3 | 32.3 | 92.8 87.0 | 89.9 | 7.3 6.8 | 7.1 | 7.0 | 5.7 5.0 | 5.4 | 5.0 | 5.1 5.2 | 5.2 | 4.3 |
| | | | | Middle | 4 | 17.7 17.4 | 17.6 | 8.0 8.0 | 8.0 | 32.4 32.5 | 32.5 | 84.3 90.0 | 87.2 | 6.6 7.1 | 6.9 | | 5.0 4.9 | 5.0 | | 4.8 4.9 | 4.9 | |
| | | | | Bottom | 7 | 17.6 17.3 | 17.5 | 8.0 8.0 | 8.0 | 33.1 33.0 | 33.1 | 85.8 83.0 | 84.4 | 6.7 6.5 | 6.6 | | 6.6 | 4.6 4.4 | | 4.5 | 2.7 2.8 | |
| G2 | Sunny | Moderate | 14:28 | Surface | 1 | 17.8 17.7 | 17.8 | 7.9 8.0 | 8.0 | 32.6 32.6 | 32.6 | 92.2 100.1 | 96.2 | 7.2 7.8 | 7.5 | 7.2 | 5.0 5.0 | 5.0 | 4.6 | 3.1 3.0 | 3.1 | 2.9 |
| | | | | Middle | 5 | 17.7 17.8 | 17.8 | 8.0 8.0 | 8.0 | 32.6 32.5 | 32.6 | 84.0 88.4 | 86.2 | 6.6 6.9 | 6.8 | | 4.8 4.8 | 4.8 | | 2.9 2.9 | 2.9 | |
| | | | | Bottom | 9 | 17.7 17.7 | 17.7 | 8.1 8.0 | 8.1 | 33.3 33.0 | 33.2 | 79.5 80.2 | 79.9 | 6.2 6.3 | 6.3 | | 6.3 | 4.1 4.1 | | 4.1 | 2.8 2.7 | |
| G3 | Sunny | Moderate | 14:53 | Surface | 1 | 17.7 17.8 | 17.8 | 7.9 8.0 | 8.0 | 32.7 32.8 | 32.8 | 92.2 89.4 | 90.8 | 7.2 7.0 | 7.1 | 7.2 | 4.3 4.1 | 4.2 | 4.3 | 3.6 3.5 | 3.6 | 2.5 |
| | | | | Middle | 4 | 17.6 17.5 | 17.6 | 7.9 7.9 | 7.9 | 32.6 32.7 | 32.7 | 93.7 91.6 | 92.7 | 7.4 7.2 | 7.3 | | 4.3 4.3 | 4.5 | | 2.8 2.8 | 2.8 | |
| | | | | Bottom | 7 | 17.8 17.5 | 17.7 | 7.9 7.9 | 7.9 | 33.0 32.8 | 32.9 | 90.3 93.8 | 92.1 | 7.1 7.4 | 7.3 | | 7.3 | 4.5 4.1 | | 4.3 | 1.2 1.2 | |
| G4 | Sunny | Moderate | 15:11 | Surface | 1 | 18.2 17.9 | 18.1 | 7.9 7.9 | 7.9 | 30.7 30.8 | 30.8 | 76.2 73.6 | 74.9 | 6.0 5.8 | 5.9 | 6.0 | 4.7 4.3 | 4.5 | 5.1 | 3.0 3.1 | 3.1 | 3.3 |
| | | | | Middle | 4 | 18.2 17.9 | 18.1 | 7.9 7.9 | 7.9 | 31.6 31.8 | 31.7 | 76.5 77.2 | 76.9 | 6.0 6.1 | 6.1 | | 5.1 5.6 | 5.4 | | 2.4 2.5 | 2.5 | |
| | | | | Bottom | 7 | 17.9 17.9 | 17.9 | 8.0 8.0 | 8.0 | 32.6 32.4 | 32.5 | 79.1 72.4 | 75.8 | 6.2 5.7 | 6.0 | | 6.0 | 5.3 5.3 | | 5.3 | 4.4 4.2 | |
| M1 | Sunny | Moderate | 14:36 | Surface | 1 | 17.7 17.7 | 17.7 | 7.9 7.9 | 7.9 | 32.9 32.6 | 32.8 | 88.9 90.9 | 89.9 | 7.0 7.1 | 7.1 | 7.0 | 4.2 4.3 | 4.3 | 4.7 | 2.6 2.7 | 2.7 | 2.6 |
| | | | | Middle | 3 | 17.7 17.6 | 17.7 | 8.0 7.9 | 8.0 | 32.9 33.1 | 33.0 | 87.8 87.3 | 87.6 | 6.9 6.8 | 6.9 | | 4.7 5.1 | 4.9 | | 2.8 2.9 | 2.9 | |
| | | | | Bottom | 5 | 17.7 17.8 | 17.8 | 8.0 8.0 | 8.0 | 32.6 32.5 | 32.6 | 84.0 88.4 | 86.2 | 6.6 6.9 | 6.8 | | 6.8 | 4.8 4.8 | | 4.8 | 2.2 2.2 | |
| M2 | Sunny | Moderate | 14:21 | Surface | 1 | 17.4 17.7 | 17.6 | 8.0 8.0 | 8.0 | 31.3 31.2 | 31.3 | 88.9 87.9 | 88.4 | 7.1 6.9 | 7.0 | 6.8 | 4.0 4.4 | 4.2 | 5.7 | 2.9 2.9 | 2.9 | 1.9 |
| | | | | Middle | 5.5 | 17.8 17.8 | 17.8 | 7.9 7.9 | 7.9 | 32.3 32.3 | 32.3 | 84.7 83.3 | 84.0 | 6.6 6.5 | 6.6 | | 5.6 5.7 | 5.7 | | 1.5 1.5 | 1.5 | |
| | | | | Bottom | 10 | 17.7 17.7 | 17.7 | 8.0 8.0 | 8.0 | 32.3 32.4 | 32.4 | 79.7 80.9 | 80.3 | 6.3 6.3 | 6.3 | | 6.3 | 7.2 7.3 | | 7.3 | 1.4 1.3 | |
| M3 | Sunny | Moderate | 15:02 | Surface | 1 | 18.1 17.9 | 18.0 | 8.0 8.0 | 8.0 | 30.6 30.5 | 30.6 | 88.3 86.2 | 87.3 | 7.0 6.8 | 6.9 | 6.6 | 3.9 4.1 | 4.0 | 4.4 | 1.9 1.9 | 1.9 | 2.0 |
| | | | | Middle | 4.5 | 18.1 17.9 | 18.0 | 7.9 8.0 | 8.0 | 31.0 31.0 | 31.0 | 77.8 79.0 | 78.4 | 6.1 6.2 | 6.2 | | 4.2 4.5 | 4.4 | | 1.6 1.5 | 1.6 | |
| | | | | Bottom | 8 | 17.8 17.9 | 17.9 | 7.9 8.0 | 8.0 | 31.6 31.6 | 31.6 | 77.5 74.9 | 76.2 | 6.1 5.9 | 6.0 | | 6.0 | 4.7 4.6 | | 4.7 | 2.5 2.4 | |
| M4 | Sunny | Moderate | 14:14 | Surface | 1 | 17.7 17.7 | 17.7 | 7.9 8.0 | 8.0 | 33.0 32.9 | 33.0 | 94.2 95.1 | 94.7 | 7.4 7.4 | 7.4 | 7.1 | 4.3 4.2 | 4.3 | 4.9 | 3.0 3.1 | 3.1 | 3.1 |
| | | | | Middle | 4.5 | 17.7 17.1 | 17.4 | 7.9 8.0 | 8.0 | 33.0 32.7 | 32.9 | 84.8 87.6 | 86.2 | 6.6 6.9 | 6.8 | | 4.8 4.7 | 4.8 | | 3.0 2.9 | 3.0 | |
| | | | | Bottom | 8 | 17.7 17.1 | 17.4 | 8.0 8.0 | 8.0 | 34.0 33.6 | 33.8 | 86.3 82.8 | 84.6 | 6.7 6.5 | 6.6 | | 6.6 | 5.7 5.7 | | 5.7 | 3.2 3.2 | |
| M5 | Sunny | Moderate | 15:28 | Surface | 1 | 18.1 17.9 | 18.0 | 8.0 8.0 | 8.0 | 30.7 30.8 | 30.8 | 81.2 86.0 | 83.6 | 6.4 6.8 | 6.6 | 6.7 | 4.8 4.4 | 4.6 | 6.7 | 3.8 3.7 | 3.8 | 3.5 |
| | | | | Middle | 6 | 18.1 18.0 | 18.1 | 8.0 8.0 | 8.0 | 31.9 32.0 | 32.0 | 82.8 87.8 | 85.3 | 6.5 6.9 | 6.7 | | 6.9 6.3 | 6.6 | | 5.4 5.2 | 5.3 | |
| | | | | Bottom | 11 | 17.9 18.0 | 18.0 | 8.0 8.0 | 8.0 | 32.5 32.6 | 32.6 | 85.9 83.2 | 84.6 | 6.7 6.5 | 6.6 | | 6.6 | 8.5 9.1 | | 8.8 | 1.4 1.5 | |
| M6 | Sunny | Moderate | 15:19 | Surface | - | - | - | - | - | - | - | - | - | - | 7.3 | - | - | 4.9 | - | - | 5.8 | |
| | | | | Middle | 2.2 | 18.3 18.2 | 18.3 | 8.0 8.0 | 8.0 | 30.6 31.4 | 31.0 | 90.8 94.8 | 92.8 | 7.1 7.4 | | 7.3 | 5.3 4.5 | | 4.9 | 5.8 5.7 | | 5.8 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged
**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 15 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 7.0 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 7.5 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 6.8 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 7.4 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 6.8 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 7.4 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.2 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 15 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Sunny | Moderate | 10:32 | Surface | 1 | 18.3 17.9 | 18.1 | 7.9 7.9 | 7.9 | 31.1 31.1 | 31.1 | 97.9 95.9 | 96.9 | 7.7 7.6 | 7.7 | 7.2 | 4.7 4.9 | 4.8 | 5.2 | 5.7 5.6 | 5.7 | 3.8 |
| | | | | Middle | 10 | 18.3 17.7 | 18.0 | 8.0 8.0 | 8.0 | 31.6 31.7 | 31.7 | 86.2 85.6 | 85.9 | 6.7 6.7 | 6.7 | | 4.8 4.9 | 4.9 | | 2.3 2.3 | | |
| | | | | Bottom | 19 | 17.9 17.8 | 17.9 | 8.0 8.0 | 8.0 | 31.6 31.6 | 31.6 | 85.7 83.5 | 84.6 | 6.7 6.6 | 6.7 | | 5.7 5.9 | 5.8 | | 3.5 3.5 | | |
| C2 | Sunny | Moderate | 08:32 | Surface | 1 | 18.0 17.5 | 17.8 | 7.9 7.8 | 7.9 | 31.9 31.8 | 31.9 | 91.4 92.1 | 91.8 | 7.1 7.3 | 7.2 | 7.0 | 5.8 5.6 | 5.7 | 5.9 | 3.1 3.0 | 3.1 | 3.2 |
| | | | | Middle | 18 | 18.0 17.3 | 17.7 | 7.8 7.8 | 7.8 | 31.6 31.6 | 31.6 | 85.6 83.0 | 84.3 | 6.7 6.6 | 6.7 | | 5.9 5.7 | 5.8 | | 2.4 2.4 | | |
| | | | | Bottom | 35 | 17.4 17.3 | 17.4 | 7.9 7.9 | 7.9 | 31.6 31.5 | 31.6 | 87.5 82.4 | 85.0 | 6.9 6.6 | 6.8 | | 6.0 6.1 | 6.1 | | 4.1 4.1 | | |
| G1 | Sunny | Moderate | 09:28 | Surface | 1 | 17.9 17.7 | 17.8 | 8.0 8.0 | 8.0 | 31.4 31.5 | 31.5 | 93.6 90.8 | 92.2 | 7.4 7.2 | 7.3 | 7.0 | 4.8 4.6 | 4.7 | 5.6 | 2.8 2.8 | 2.8 | 2.6 |
| | | | | Middle | 4 | 17.9 17.7 | 17.8 | 8.0 7.9 | 8.0 | 31.4 31.6 | 31.5 | 82.6 85.0 | 83.8 | 6.5 6.7 | 6.6 | | 5.4 5.8 | 5.6 | | 2.2 2.7 | | |
| | | | | Bottom | 7 | 17.7 17.7 | 17.7 | 7.9 8.0 | 8.0 | 31.9 31.8 | 31.9 | 82.0 86.0 | 84.0 | 6.5 6.8 | 6.7 | | 6.6 6.6 | 6.6 | | 2.2 2.3 | | |
| G2 | Sunny | Moderate | 09:03 | Surface | 1 | 17.8 17.7 | 17.8 | 8.0 8.0 | 8.0 | 32.2 31.9 | 32.1 | 90.0 88.5 | 89.3 | 7.1 7.0 | 7.1 | 6.9 | 4.6 4.1 | 4.4 | 4.7 | 4.3 4.2 | 4.3 | 3.4 |
| | | | | Middle | 5 | 17.8 17.7 | 17.8 | 7.9 7.9 | 7.9 | 32.0 32.1 | 32.1 | 85.2 85.5 | 85.4 | 6.7 6.7 | 6.7 | | 4.4 4.6 | 4.5 | | 3.0 3.0 | | |
| | | | | Bottom | 9 | 17.7 17.7 | 17.7 | 8.0 7.9 | 8.0 | 32.3 32.3 | 32.3 | 82.5 79.5 | 81.0 | 6.5 6.2 | 6.4 | | 5.1 5.1 | 5.1 | | 2.8 2.9 | | |
| G3 | Sunny | Moderate | 09:38 | Surface | 1 | 17.4 17.4 | 17.4 | 8.0 8.0 | 8.0 | 31.5 31.5 | 31.5 | 90.2 95.4 | 92.8 | 7.2 7.6 | 7.4 | 7.0 | 4.5 4.4 | 4.5 | 5.1 | 2.3 2.2 | 2.3 | 3.0 |
| | | | | Middle | 4 | 17.4 17.4 | 17.4 | 7.9 8.0 | 8.0 | 31.7 31.7 | 31.7 | 85.0 82.5 | 83.8 | 6.7 6.5 | 6.6 | | 4.6 5.0 | 4.8 | | 4.8 4.8 | | |
| | | | | Bottom | 7 | 17.4 17.4 | 17.4 | 8.0 8.0 | 8.0 | 32.0 32.1 | 32.1 | 82.4 83.0 | 82.7 | 6.5 6.6 | 6.6 | | 6.1 6.1 | 6.1 | | 1.8 1.8 | | |
| G4 | Sunny | Moderate | 10:00 | Surface | 1 | 18.4 17.7 | 18.1 | 7.9 7.9 | 7.9 | 31.5 31.5 | 31.5 | 88.1 91.3 | 89.7 | 6.9 7.2 | 7.1 | 6.9 | 4.8 5.0 | 4.9 | 5.7 | 2.5 2.6 | 2.6 | 3.4 |
| | | | | Middle | 4 | 18.4 17.7 | 18.1 | 8.0 8.0 | 8.0 | 31.6 31.7 | 31.7 | 84.3 84.0 | 84.2 | 6.6 6.6 | 6.6 | | 5.8 5.8 | 5.8 | | 3.8 3.8 | | |
| | | | | Bottom | 7 | 17.8 17.7 | 17.8 | 8.0 8.0 | 8.0 | 32.0 32.0 | 32.0 | 88.6 87.7 | 88.2 | 7.0 6.9 | 7.0 | | 6.3 6.4 | 6.4 | | 3.7 3.6 | | |
| M1 | Sunny | Moderate | 09:15 | Surface | 1 | 17.4 17.4 | 17.4 | 7.9 7.9 | 7.9 | 31.8 31.6 | 31.7 | 87.9 87.2 | 87.6 | 7.0 6.9 | 7.0 | 6.9 | 4.4 4.6 | 4.5 | 4.8 | 3.6 3.7 | 3.7 | 3.1 |
| | | | | Middle | 3 | 17.4 17.3 | 17.4 | 7.9 7.9 | 7.9 | 31.7 31.7 | 31.7 | 85.0 84.1 | 84.6 | 6.7 6.7 | 6.7 | | 4.8 4.8 | 4.7 | | 3.0 3.1 | | |
| | | | | Bottom | 5 | 18.4 17.3 | 17.9 | 8.0 7.9 | 8.0 | 31.6 31.9 | 31.8 | 84.3 82.9 | 83.6 | 6.6 6.6 | 6.6 | | 5.8 4.7 | 5.3 | | 2.5 2.6 | | |
| M2 | Sunny | Moderate | 08:52 | Surface | 1 | 18.0 17.5 | 17.8 | 8.0 7.9 | 8.0 | 32.1 32.0 | 32.1 | 89.7 85.6 | 87.7 | 7.0 6.8 | 6.9 | 6.7 | 4.7 4.6 | 4.7 | 4.8 | 2.5 2.6 | 2.6 | 3.7 |
| | | | | Middle | 6 | 18.0 17.3 | 17.7 | 7.9 7.9 | 7.9 | 32.0 31.9 | 32.0 | 81.8 79.1 | 80.5 | 6.4 6.3 | 6.4 | | 4.8 4.7 | 4.8 | | 5.1 5.1 | | |
| | | | | Bottom | 11 | 17.4 17.3 | 17.4 | 8.0 7.9 | 8.0 | 32.0 32.0 | 32.0 | 80.2 79.3 | 79.8 | 6.3 6.3 | 6.3 | | 4.8 4.8 | 4.8 | | 3.5 3.4 | | |
| M3 | Sunny | Moderate | 09:50 | Surface | 1 | 18.3 18.0 | 18.2 | 8.0 8.0 | 8.0 | 32.0 31.9 | 32.0 | 101.2 95.8 | 98.5 | 7.9 7.5 | 7.7 | 7.2 | 5.3 5.4 | 5.4 | 5.6 | 2.3 2.2 | 2.3 | 1.5 |
| | | | | Middle | 4.5 | 18.3 17.8 | 18.1 | 7.9 8.0 | 8.0 | 32.3 32.0 | 32.2 | 86.0 85.1 | 85.6 | 6.7 6.7 | 6.7 | | 5.7 5.5 | 5.6 | | 0.9 0.9 | | |
| | | | | Bottom | 8 | 18.0 17.7 | 17.9 | 7.9 7.9 | 7.9 | 32.6 32.3 | 32.5 | 83.0 77.4 | 80.2 | 6.5 6.1 | 6.3 | | 5.7 5.9 | 5.8 | | 1.3 1.4 | | |
| M4 | Sunny | Moderate | 08:41 | Surface | 1 | 17.4 17.4 | 17.4 | 7.9 7.9 | 7.9 | 31.9 31.8 | 31.9 | 90.2 90.5 | 90.4 | 7.1 7.2 | 7.2 | 7.0 | 4.0 4.0 | 4.0 | 5.0 | 1.4 1.4 | 1.4 | 1.5 |
| | | | | Middle | 4 | 17.4 16.8 | 17.1 | 7.9 7.9 | 7.9 | 31.6 31.6 | 31.6 | 84.2 83.2 | 83.7 | 6.7 6.7 | 6.7 | | 4.2 4.5 | 4.4 | | 1.3 1.3 | | |
| | | | | Bottom | 7 | 17.4 16.8 | 17.1 | 8.0 7.9 | 8.0 | 31.7 31.7 | 31.7 | 81.8 77.9 | 79.9 | 6.5 6.2 | 6.4 | | 6.7 6.6 | 6.7 | | 1.7 1.8 | | |
| M5 | Sunny | Moderate | 10:19 | Surface | 1 | 18.2 17.9 | 18.1 | 8.0 8.0 | 8.0 | 31.4 31.4 | 31.4 | 89.6 90.2 | 89.9 | 7.0 7.1 | 7.1 | 6.9 | 5.7 5.7 | 5.7 | 5.8 | 3.1 3.0 | 3.1 | 2.2 |
| | | | | Middle | 5.5 | 18.2 17.7 | 18.0 | 8.0 8.0 | 8.0 | 31.9 31.9 | 31.9 | 85.1 85.7 | 85.4 | 6.6 6.7 | 6.7 | | 4.8 4.7 | 4.8 | | <0.5 <0.5 | | |
| | | | | Bottom | 10 | 17.9 17.7 | 17.8 | 8.0 8.0 | 8.0 | 31.8 31.8 | 31.8 | 80.1 78.3 | 79.2 | 6.3 6.2 | 6.3 | | 6.7 7.0 | 6.9 | | 2.8 2.9 | | |
| M6 | Sunny | Moderate | 10:09 | Surface | - | - | - | - | - | - | - | - | - | - | - | 7.1 | - | - | 5.5 | - | - | 1.5 |
| | | | | Middle | 2.1 | 18.4 18.3 | 18.4 | 7.9 8.0 | 8.0 | 31.5 31.6 | 31.6 | 95.8 84.4 | 90.1 | 7.5 6.6 | 7.1 | | 5.3 5.6 | 5.5 | | 1.5 1.5 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 17 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 5.0 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 5.5 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 4.3 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 4.7 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 4.3 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 4.7 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.9 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.1 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 17 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Sunny | Moderate | 17:05 | Surface | 1 | 22.0 21.5 | 21.8 | 7.9 7.9 | 7.9 | 30.8 30.7 | 30.8 | 99.0 98.4 | 98.7 | 7.2 7.3 | 7.3 | 7.2 | 3.5 3.4 | 3.5 | 4.4 | 1.9 1.9 | 1.9 | 1.3 |
| | | | | Middle | 10 | 21.6 22.3 | 22.0 | 7.7 7.7 | 7.7 | 30.7 30.7 | 30.7 | 96.5 97.5 | 97.0 | 7.1 7.1 | 7.1 | | 5.4 5.4 | 5.4 | | 1.0 1.0 | 1.0 | |
| | | | | Bottom | 19 | 21.8 22.0 | 21.9 | 7.6 7.5 | 7.6 | 30.7 30.8 | 30.8 | 95.6 95.9 | 95.8 | 7.0 7.0 | 7.0 | | 4.2 4.2 | 4.2 | | 0.9 1.0 | 1.0 | |
| C2 | Sunny | Moderate | 15:53 | Surface | 1 | 22.4 21.8 | 22.1 | 7.6 7.7 | 7.7 | 30.2 30.2 | 30.2 | 91.1 90.3 | 90.7 | 6.6 6.7 | 6.7 | 6.7 | 2.5 2.6 | 2.6 | 3.2 | 3.6 3.6 | 3.6 | 2.4 |
| | | | | Middle | 18 | 21.7 22.1 | 21.9 | 7.5 7.6 | 7.6 | 30.5 30.4 | 30.5 | 89.6 90.5 | 90.1 | 6.6 6.6 | 6.6 | | 2.9 2.9 | 2.9 | | 1.1 1.0 | 1.1 | |
| | | | | Bottom | 35 | 22.0 21.6 | 21.8 | 7.5 7.6 | 7.6 | 30.6 30.5 | 30.6 | 90.8 89.3 | 90.1 | 6.7 6.6 | 6.7 | | 4.2 4.2 | 4.2 | | 2.4 2.3 | 2.4 | |
| G1 | Sunny | Moderate | 16:26 | Surface | 1 | 22.7 21.9 | 22.3 | 8.1 8.0 | 8.1 | 30.5 30.6 | 30.6 | 94.7 93.8 | 94.3 | 6.9 6.9 | 6.9 | 7.0 | 2.5 2.7 | 2.6 | 3.6 | 1.6 1.6 | 1.6 | 1.5 |
| | | | | Middle | 4 | 21.9 21.9 | 21.9 | 7.9 8.0 | 8.0 | 30.7 30.7 | 30.7 | 94.6 95.4 | 95.0 | 6.9 7.0 | 7.0 | | 3.5 3.8 | 3.7 | | 2.5 2.5 | 2.5 | |
| | | | | Bottom | 7 | 21.8 21.5 | 21.7 | 7.8 7.9 | 7.9 | 30.9 30.9 | 30.9 | 95.6 94.0 | 94.8 | 7.0 6.9 | 7.0 | | 4.4 4.3 | 4.4 | | <0.5 <0.5 | <0.5 | |
| G2 | Sunny | Moderate | 16:13 | Surface | 1 | 21.8 22.3 | 22.1 | 8.1 8.0 | 8.1 | 31.0 31.0 | 31.0 | 93.9 95.5 | 94.7 | 6.9 6.9 | 6.9 | 6.9 | 2.3 2.4 | 2.4 | 3.2 | <0.5 <0.5 | <0.5 | 1.3 |
| | | | | Middle | 5 | 21.7 22.1 | 21.9 | 7.9 7.9 | 7.9 | 31.0 30.9 | 31.0 | 93.8 93.9 | 93.9 | 6.9 6.9 | 6.9 | | 2.9 3.2 | 3.1 | | 3.0 2.9 | 3.0 | |
| | | | | Bottom | 9 | 21.7 22.2 | 22.0 | 7.9 7.9 | 7.9 | 31.3 31.2 | 31.3 | 93.2 94.8 | 94.0 | 6.8 6.9 | 6.9 | | 3.8 4.4 | 4.1 | | <0.5 <0.5 | <0.5 | |
| G3 | Sunny | Moderate | 16:32 | Surface | 1 | 21.3 22.1 | 21.7 | 8.1 8.1 | 8.1 | 30.8 30.6 | 30.7 | 94.4 94.2 | 94.3 | 7.0 6.9 | 7.0 | 6.9 | 3.4 3.8 | 3.6 | 3.7 | 2.0 2.0 | 2.0 | 2.4 |
| | | | | Middle | 4 | 22.3 21.7 | 22.0 | 8.0 8.0 | 8.0 | 30.6 30.7 | 30.7 | 94.0 93.0 | 93.5 | 6.8 6.8 | 6.8 | | 4.3 3.7 | 4.0 | | 3.9 3.9 | 3.9 | |
| | | | | Bottom | 7 | 22.0 21.8 | 21.9 | 8.0 7.9 | 8.0 | 30.8 30.9 | 30.9 | 94.4 92.7 | 93.6 | 6.9 6.8 | 6.9 | | 3.6 3.2 | 3.4 | | 1.2 1.1 | 1.2 | |
| G4 | Sunny | Moderate | 16:45 | Surface | 1 | 21.9 22.0 | 22.0 | 8.0 8.0 | 8.0 | 30.3 30.3 | 30.3 | 95.6 94.9 | 95.3 | 7.0 7.0 | 7.0 | 7.0 | 2.6 2.7 | 2.7 | 3.2 | 3.1 3.2 | 3.2 | 2.8 |
| | | | | Middle | 4 | 21.7 22.3 | 22.0 | 7.9 7.9 | 7.9 | 30.4 30.4 | 30.4 | 95.4 95.0 | 95.2 | 7.0 6.9 | 7.0 | | 3.1 3.5 | 3.3 | | 4.1 4.1 | 4.1 | |
| | | | | Bottom | 7 | 22.2 21.7 | 22.0 | 7.8 7.7 | 7.8 | 30.8 30.7 | 30.8 | 93.6 92.6 | 93.1 | 6.8 6.8 | 6.8 | | 3.6 3.7 | 3.7 | | 1.2 1.2 | 1.2 | |
| M1 | Sunny | Moderate | 16:20 | Surface | 1 | 22.7 22.1 | 22.4 | 8.0 8.0 | 8.0 | 30.8 30.7 | 30.8 | 94.1 93.1 | 93.6 | 6.8 6.8 | 6.8 | 6.9 | 2.6 2.8 | 2.7 | 3.6 | 1.2 1.3 | 1.3 | 1.8 |
| | | | | Middle | 3 | 22.1 22.0 | 22.1 | 8.0 7.9 | 8.0 | 30.8 31.0 | 30.9 | 92.9 93.9 | 93.4 | 6.8 6.9 | 6.9 | | 4.1 4.7 | 4.4 | | 2.2 2.3 | 2.3 | |
| | | | | Bottom | 5 | 21.7 22.2 | 22.0 | 7.8 7.9 | 7.9 | 31.1 31.2 | 31.2 | 91.3 93.0 | 92.2 | 6.7 6.8 | 6.8 | | 3.6 3.7 | 3.7 | | 1.9 1.8 | 1.9 | |
| M2 | Sunny | Moderate | 16:06 | Surface | 1 | 21.8 22.7 | 22.3 | 8.0 8.0 | 8.0 | 30.2 30.2 | 30.2 | 93.0 95.4 | 94.2 | 6.9 6.9 | 6.9 | 6.9 | 2.3 2.4 | 2.4 | 2.5 | 2.0 2.0 | 2.0 | 2.3 |
| | | | | Middle | 5 | 21.5 22.2 | 21.9 | 7.9 7.9 | 7.9 | 30.4 30.4 | 30.4 | 92.9 94.1 | 93.5 | 6.9 6.9 | 6.9 | | 2.4 2.3 | 2.4 | | 3.7 3.6 | 3.7 | |
| | | | | Bottom | 9 | 21.9 22.0 | 22.0 | 7.9 7.9 | 7.9 | 30.5 30.5 | 30.5 | 90.9 91.9 | 91.4 | 6.7 6.7 | 6.7 | | 2.5 2.7 | 2.6 | | 1.3 1.3 | 1.3 | |
| M3 | Sunny | Moderate | 16:39 | Surface | 1 | 21.9 22.2 | 22.1 | 7.8 7.7 | 7.8 | 30.4 30.5 | 30.5 | 95.0 95.1 | 95.1 | 7.0 6.9 | 7.0 | 6.9 | 2.5 2.6 | 2.6 | 3.1 | 1.7 1.7 | 1.7 | 1.2 |
| | | | | Middle | 4 | 22.2 22.1 | 22.2 | 7.7 7.7 | 7.7 | 30.6 30.6 | 30.6 | 93.5 93.5 | 93.5 | 6.8 6.8 | 6.8 | | 2.8 2.4 | 2.6 | | 0.7 0.7 | 0.7 | |
| | | | | Bottom | 7 | 21.5 22.1 | 21.8 | 7.6 7.6 | 7.6 | 30.9 30.8 | 30.9 | 88.8 89.7 | 89.3 | 6.6 6.6 | 6.6 | | 3.9 4.1 | 4.0 | | 1.1 1.0 | 1.1 | |
| M4 | Sunny | Moderate | 16:00 | Surface | 1 | 22.0 22.6 | 22.3 | 7.9 7.9 | 7.9 | 30.4 30.4 | 30.4 | 95.1 94.5 | 94.8 | 7.0 6.9 | 7.0 | 7.0 | 2.7 2.7 | 2.7 | 3.1 | 3.8 3.7 | 3.8 | 2.2 |
| | | | | Middle | 4 | 21.8 21.7 | 21.8 | 7.8 7.8 | 7.8 | 30.5 30.6 | 30.6 | 92.8 93.2 | 93.0 | 6.8 6.9 | 6.9 | | 2.6 3.2 | 2.9 | | 1.2 1.2 | 1.2 | |
| | | | | Bottom | 7 | 21.7 22.0 | 21.9 | 7.8 7.8 | 7.8 | 30.8 30.8 | 30.8 | 90.9 90.5 | 90.7 | 6.7 6.6 | 6.7 | | 3.4 4.0 | 3.7 | | 1.6 1.5 | 1.6 | |
| M5 | Sunny | Moderate | 16:56 | Surface | 1 | 21.5 21.9 | 21.7 | 7.8 7.8 | 7.8 | 31.4 30.9 | 31.2 | 96.7 96.0 | 96.4 | 7.1 7.0 | 7.1 | 7.1 | 3.9 3.8 | 3.9 | 4.2 | 1.1 1.1 | 1.1 | 1.0 |
| | | | | Middle | 5.5 | 21.7 22.0 | 21.9 | 7.7 7.6 | 7.7 | 30.7 30.7 | 30.7 | 94.9 95.4 | 95.2 | 7.0 7.0 | 7.0 | | 4.5 5.0 | 4.8 | | 1.0 1.0 | 1.0 | |
| | | | | Bottom | 10 | 21.7 21.9 | 21.8 | 7.7 7.6 | 7.7 | 30.8 30.9 | 30.9 | 93.7 94.9 | 94.3 | 6.9 7.0 | 7.0 | | 3.9 4.1 | 4.0 | | 1.0 0.9 | 1.0 | |
| M6 | Sunny | Moderate | 16:52 | Surface | - | - | - | - | - | - | - | - | - | - | - | 6.9 | - | - | 4.1 | - | - | 1.6 |
| | | | | Middle | 2.3 | 21.3 21.8 | 21.6 | 7.9 7.8 | 7.9 | 30.9 30.8 | 30.9 | 94.2 93.2 | 93.7 | 7.0 6.8 | 6.9 | | 4.3 3.8 | 4.1 | | 1.5 1.6 | 1.6 | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | |

Remarks: *DA: Depth-Averaged
**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 17 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 4.9 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 5.3 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 2.8 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.0 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 2.8 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.0 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.6 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.9 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 17 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|------|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Sunny | Moderate | 10:04 | Surface | 1 | 20.8 20.8 | 20.8 | 8.0 8.0 | 8.0 | 30.7 30.7 | 30.7 | 91.6 92.7 | 92.2 | 6.9 6.9 | 6.9 | 6.9 | 4.5 4.8 | 4.7 | 4.0 | 2.3 2.2 | 2.3 | 4.1 |
| | | | | Middle | 10 | 20.7 20.6 | 20.7 | 7.9 7.8 | 7.9 | 30.9 31.0 | 31.0 | 91.0 90.4 | 90.7 | 6.8 6.8 | 6.8 | | 3.3 3.2 | 3.3 | | 7.0 6.9 | 7.0 | |
| | | | | Bottom | 19 | 21.1 21.1 | 21.1 | 7.8 7.8 | 7.8 | 31.1 31.1 | 31.1 | 91.8 91.1 | 91.5 | 6.8 6.8 | 6.8 | | 4.3 3.9 | 4.1 | | 2.9 3.0 | 3.0 | |
| C2 | Sunny | Moderate | 09:00 | Surface | 1 | 20.6 20.4 | 20.5 | 7.9 8.0 | 8.0 | 30.8 30.8 | 30.8 | 88.9 87.5 | 88.2 | 6.7 6.6 | 6.7 | 6.7 | 2.8 2.9 | 2.9 | 3.0 | 1.2 1.2 | 1.2 | 1.3 |
| | | | | Middle | 18 | 21.0 21.2 | 21.1 | 7.6 7.6 | 7.6 | 30.8 30.9 | 30.9 | 88.4 89.1 | 88.8 | 6.6 6.6 | 6.6 | | 3.0 3.0 | 3.0 | | 0.8 0.8 | 0.8 | |
| | | | | Bottom | 35 | 21.1 21.0 | 21.1 | 7.8 7.7 | 7.8 | 30.9 30.9 | 30.9 | 89.7 89.1 | 89.4 | 6.7 6.6 | 6.7 | | 3.1 3.1 | 3.1 | | 1.9 1.9 | 1.9 | |
| G1 | Sunny | Moderate | 09:30 | Surface | 1 | 20.4 20.7 | 20.6 | 7.9 8.0 | 8.0 | 31.1 31.0 | 31.1 | 89.7 90.0 | 89.9 | 6.7 6.7 | 6.7 | 6.8 | 3.3 3.4 | 3.4 | 3.9 | 0.8 0.8 | 0.8 | 0.7 |
| | | | | Middle | 4 | 21.1 20.8 | 21.0 | 7.9 8.0 | 8.0 | 31.0 31.0 | 31.0 | 91.2 89.8 | 90.5 | 6.8 6.7 | 6.8 | | 3.8 3.6 | 3.7 | | <0.5 <0.5 | <0.5 | |
| | | | | Bottom | 7 | 20.8 20.6 | 20.7 | 8.0 8.1 | 8.1 | 31.1 31.1 | 31.1 | 90.8 89.8 | 90.3 | 6.8 6.7 | 6.8 | | 4.4 4.8 | 4.6 | | 0.8 0.8 | 0.8 | |
| G2 | Sunny | Moderate | 09:19 | Surface | 1 | 20.2 20.8 | 20.5 | 7.9 8.0 | 8.0 | 30.9 30.8 | 30.9 | 91.4 92.8 | 92.1 | 6.9 6.9 | 6.9 | 6.9 | 3.2 2.8 | 3.0 | 3.9 | 1.4 1.4 | 1.4 | 2.7 |
| | | | | Middle | 5 | 20.7 20.7 | 20.7 | 7.8 7.8 | 7.8 | 30.8 30.8 | 30.8 | 91.1 91.8 | 91.5 | 6.8 6.9 | 6.9 | | 3.7 4.0 | 3.9 | | 3.5 3.5 | 3.5 | |
| | | | | Bottom | 9 | 20.5 20.5 | 20.5 | 7.7 7.8 | 7.8 | 30.9 30.9 | 30.9 | 90.7 89.9 | 90.3 | 6.8 6.8 | 6.8 | | 4.6 4.9 | 4.8 | | 3.0 3.1 | 3.1 | |
| G3 | Sunny | Moderate | 09:35 | Surface | 1 | 21.0 21.1 | 21.1 | 8.0 8.0 | 8.0 | 30.7 30.7 | 30.7 | 91.3 90.8 | 91.1 | 6.8 6.8 | 6.8 | 6.9 | 2.8 2.9 | 2.9 | 3.6 | 1.1 1.1 | 1.1 | 1.1 |
| | | | | Middle | 4 | 20.6 20.7 | 20.7 | 8.0 8.0 | 8.0 | 30.9 30.9 | 30.9 | 91.4 91.4 | 91.4 | 6.8 6.8 | 6.9 | | 3.9 3.6 | 3.8 | | 1.5 1.6 | 1.6 | |
| | | | | Bottom | 7 | 20.4 20.7 | 20.6 | 8.1 8.0 | 8.1 | 31.1 31.1 | 31.1 | 90.2 89.8 | 90.0 | 6.8 6.7 | 6.8 | | 3.9 4.1 | 4.0 | | <0.5 <0.5 | <0.5 | |
| G4 | Sunny | Moderate | 09:46 | Surface | 1 | 20.7 20.6 | 20.7 | 8.0 8.1 | 8.1 | 30.5 30.6 | 30.6 | 91.1 90.8 | 91.0 | 6.8 6.8 | 6.8 | 6.8 | 3.7 3.3 | 3.5 | 3.5 | 0.6 0.7 | 0.7 | 1.1 |
| | | | | Middle | 4 | 21.0 20.7 | 20.9 | 8.1 8.0 | 8.1 | 31.0 31.1 | 31.1 | 89.2 89.9 | 89.5 | 6.6 6.7 | 6.7 | | 3.5 3.3 | 3.4 | | 1.5 1.5 | 1.5 | |
| | | | | Bottom | 7 | 21.0 20.9 | 21.0 | 8.1 8.1 | 8.1 | 31.1 31.2 | 31.2 | 88.9 89.5 | 89.2 | 6.6 6.7 | 6.7 | | 3.5 3.5 | 3.5 | | 1.0 1.1 | 1.1 | |
| M1 | Sunny | Moderate | 09:24 | Surface | 1 | 20.7 20.3 | 20.5 | 7.9 8.0 | 8.0 | 31.2 31.0 | 31.1 | 92.0 91.2 | 91.6 | 6.9 6.9 | 6.9 | 6.9 | 3.3 3.5 | 3.4 | 3.7 | 1.9 1.8 | 1.9 | 1.4 |
| | | | | Middle | 3 | 20.4 20.4 | 20.4 | 7.9 7.9 | 7.9 | 30.9 30.9 | 30.9 | 90.7 90.7 | 90.7 | 6.8 6.8 | 6.8 | | 3.2 3.9 | 3.6 | | 0.7 0.7 | 0.7 | |
| | | | | Bottom | 5 | 20.8 21.0 | 20.9 | 7.9 7.9 | 7.9 | 31.0 31.1 | 31.1 | 91.0 90.4 | 90.7 | 6.8 6.7 | 6.8 | | 4.0 4.2 | 4.1 | | 1.6 1.5 | 1.6 | |
| M2 | Sunny | Moderate | 09:14 | Surface | 1 | 21.0 20.6 | 20.8 | 7.9 7.9 | 7.9 | 30.6 30.5 | 30.6 | 90.7 89.2 | 90.0 | 6.8 6.7 | 6.8 | 6.8 | 3.3 3.0 | 3.2 | 4.0 | 0.8 0.8 | 0.8 | 0.8 |
| | | | | Middle | 5 | 20.6 21.0 | 20.8 | 7.9 7.9 | 7.9 | 30.7 30.7 | 30.7 | 89.3 89.8 | 89.6 | 6.7 6.7 | 6.7 | | 3.8 3.9 | 3.9 | | 0.8 0.8 | 0.8 | |
| | | | | Bottom | 9 | 21.0 21.0 | 21.0 | 7.8 7.8 | 7.8 | 30.8 30.7 | 30.8 | 90.7 91.3 | 91.0 | 6.8 6.8 | 6.8 | | 4.7 4.8 | 4.8 | | 0.7 0.6 | 0.7 | |
| M3 | Sunny | Moderate | 09:41 | Surface | 1 | 20.6 20.9 | 20.8 | 8.0 8.0 | 8.0 | 31.1 31.0 | 31.1 | 90.8 90.9 | 90.9 | 6.8 6.8 | 6.8 | 6.8 | 3.2 3.4 | 3.3 | 3.2 | <0.5 <0.5 | <0.5 | 0.6 |
| | | | | Middle | 4 | 20.4 20.8 | 20.6 | 7.9 7.9 | 7.9 | 31.3 31.3 | 31.3 | 89.0 90.0 | 89.5 | 6.7 6.7 | 6.7 | | 3.5 3.2 | 3.4 | | <0.5 0.5 | 0.5 | |
| | | | | Bottom | 7 | 20.7 21.1 | 20.9 | 7.9 8.0 | 8.0 | 31.4 31.5 | 31.5 | 87.2 86.3 | 86.8 | 6.5 6.4 | 6.5 | | 2.8 2.9 | 2.9 | | 0.7 0.7 | 0.7 | |
| M4 | Sunny | Moderate | 09:07 | Surface | 1 | 20.8 20.4 | 20.6 | 7.8 7.8 | 7.8 | 30.8 30.8 | 30.8 | 90.2 89.1 | 89.7 | 6.7 6.7 | 6.7 | 6.7 | 2.9 2.6 | 2.8 | 3.3 | 1.3 1.4 | 1.4 | 0.8 |
| | | | | Middle | 4 | 20.8 20.9 | 20.9 | 7.8 7.8 | 7.8 | 30.8 30.8 | 30.8 | 89.9 89.3 | 89.6 | 6.7 6.7 | 6.7 | | 3.5 3.2 | 3.4 | | <0.5 <0.5 | <0.5 | |
| | | | | Bottom | 7 | 21.2 20.9 | 21.1 | 7.8 7.8 | 7.8 | 30.8 30.9 | 30.9 | 89.5 88.6 | 89.1 | 6.6 6.6 | 6.6 | | 3.5 4.0 | 3.8 | | <0.5 <0.5 | <0.5 | |
| M5 | Sunny | Moderate | 09:57 | Surface | 1 | 20.5 20.6 | 20.6 | 8.2 8.1 | 8.2 | 30.8 30.8 | 30.8 | 92.6 92.1 | 92.4 | 7.0 6.9 | 7.0 | 6.9 | 2.9 3.5 | 3.2 | 3.8 | <0.5 <0.5 | <0.5 | 0.8 |
| | | | | Middle | 5.5 | 20.5 20.5 | 20.5 | 8.0 8.0 | 8.0 | 30.8 30.8 | 30.8 | 90.9 91.0 | 91.0 | 6.8 6.8 | 6.8 | | 3.5 3.8 | 3.7 | | 0.5 0.6 | 0.6 | |
| | | | | Bottom | 10 | 20.7 20.8 | 20.8 | 8.0 8.0 | 8.0 | 30.8 30.9 | 30.9 | 89.8 90.9 | 90.4 | 6.7 6.8 | 6.8 | | 4.7 4.2 | 4.5 | | 1.4 1.4 | 1.4 | |
| M6 | Sunny | Moderate | 09:52 | Surface | - | - | - | - | - | - | - | - | - | - | 6.5 | - | - | 5.3 | - | - | 0.5 | |
| | | | | Middle | 2.3 | 20.7 20.4 | 20.6 | 8.0 8.0 | 8.0 | 31.0 31.0 | 31.0 | 87.2 86.5 | 86.9 | 6.5 6.5 | | 6.5 | 5.2 5.3 | | 5.3 | <0.5 <0.5 | | <0.5 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 20 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 5.3 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 5.7 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | | |
| | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.4 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 5.9 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.4 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 5.9 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 2.9 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.1 mg/L</u> |
| <u>Station M6</u> | | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 20 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|------------------|--------------|-------|------------|--------------|--------------|-------------------|--------------|-------------------------|------------|-----|----------------|------------|-----|-------------------------|------------|-----|-----|
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Cloudy | Moderate | 08:43 | Surface | 1 | 19.5 19.2 | 19.4 | 6.8 6.8 | 6.8 | 25.9 25.9 | 25.9 | 96.7 97.3 | 97.0 | 6.8 6.9 | 6.9 | 6.8 | 4.2 3.5 | 3.9 | 4.9 | 2.0 2.0 | 2.0 | 1.5 |
| | | | | Middle | 10 | 19.4 19.7 | 19.6 | 6.6 6.5 | 6.6 | 25.9 25.8 | 25.9 | 93.4 93.1 | 93.3 | 6.7 6.7 | 6.7 | | 5.5 5.8 | 5.7 | | 1.0 1.0 | 1.0 | |
| | | | | Bottom | 19 | 19.7 19.4 | 19.6 | 6.5 6.5 | 6.5 | 25.9 26.0 | 26.0 | 93.2 92.6 | 92.9 | 6.6 6.6 | 6.6 | | 5.4 4.8 | 5.1 | | 1.6 1.5 | 1.6 | |
| C2 | Cloudy | Moderate | 07:31 | Surface | 1 | 20.0 19.7 | 19.9 | 6.6 6.6 | 6.6 | 25.3 25.2 | 25.3 | 86.0 86.2 | 86.1 | 6.2 6.2 | 6.2 | 6.2 | 2.5 3.0 | 2.8 | 3.3 | 4.5 4.5 | 4.5 | 3.2 |
| | | | | Middle | 18 | 19.5 19.9 | 19.7 | 6.5 6.5 | 6.5 | 25.5 25.5 | 25.5 | 86.5 86.3 | 86.4 | 6.2 6.1 | 6.2 | | 2.7 2.8 | 2.8 | | 2.6 2.5 | 2.6 | |
| | | | | Bottom | 35 | 19.8 19.4 | 19.6 | 6.4 6.5 | 6.5 | 25.6 25.6 | 25.6 | 87.5 87.4 | 87.5 | 6.2 6.2 | 6.2 | | 4.4 4.4 | 4.4 | | 2.4 2.3 | 2.4 | |
| G1 | Cloudy | Moderate | 08:04 | Surface | 1 | 20.2 19.9 | 20.1 | 7.0 6.9 | 7.0 | 25.6 25.7 | 25.7 | 90.5 90.9 | 90.7 | 6.4 6.4 | 6.4 | 6.5 | 3.0 3.1 | 3.1 | 3.8 | 3.4 3.3 | 3.4 | 2.4 |
| | | | | Middle | 4 | 19.5 19.9 | 19.7 | 6.8 6.9 | 6.9 | 25.8 25.8 | 25.8 | 92.4 92.4 | 92.4 | 6.5 6.5 | 6.5 | | 4.0 4.0 | 4.0 | | 2.1 2.2 | 2.2 | |
| | | | | Bottom | 7 | 19.6 19.5 | 19.6 | 6.8 6.8 | 6.8 | 26.0 26.0 | 26.0 | 92.2 91.7 | 92.0 | 6.5 6.5 | 6.5 | | 4.5 4.3 | 4.4 | | 1.6 1.5 | 1.6 | |
| G2 | Cloudy | Moderate | 07:51 | Surface | 1 | 19.5 19.6 | 19.6 | 7.0 6.9 | 7.0 | 26.1 26.1 | 26.1 | 91.5 92.0 | 91.8 | 6.4 6.5 | 6.5 | 6.5 | 2.2 2.4 | 2.3 | 3.1 | 1.5 1.5 | 1.5 | 2.0 |
| | | | | Middle | 5 | 19.5 19.7 | 19.6 | 6.8 6.9 | 6.9 | 26.1 26.1 | 26.1 | 90.9 89.7 | 90.3 | 6.4 6.4 | 6.4 | | 2.9 3.3 | 3.1 | | 2.0 2.1 | 2.1 | |
| | | | | Bottom | 9 | 19.5 19.5 | 19.5 | 6.7 6.8 | 6.8 | 26.3 26.4 | 26.4 | 90.0 91.2 | 90.6 | 6.4 6.4 | 6.4 | | 3.8 4.2 | 4.0 | | 2.4 2.4 | 2.4 | |
| G3 | Cloudy | Moderate | 08:10 | Surface | 1 | 19.2 19.6 | 19.4 | 7.0 7.0 | 7.0 | 25.9 25.8 | 25.9 | 91.6 91.5 | 91.6 | 6.5 6.5 | 6.5 | 6.5 | 3.3 4.0 | 3.7 | 3.8 | 1.4 1.4 | 1.4 | 1.5 |
| | | | | Middle | 4 | 19.6 19.4 | 19.5 | 6.9 6.9 | 6.9 | 25.8 25.8 | 25.8 | 90.5 90.0 | 90.3 | 6.4 6.4 | 6.4 | | 4.1 3.9 | 4.0 | | 1.4 1.4 | 1.4 | |
| | | | | Bottom | 7 | 19.5 19.6 | 19.6 | 6.9 6.8 | 6.9 | 25.9 26.0 | 26.0 | 90.4 89.9 | 88.2 | 6.4 6.3 | 6.4 | | 4.0 3.6 | 3.8 | | 1.7 1.6 | 1.7 | |
| G4 | Cloudy | Moderate | 08:24 | Surface | 1 | 19.5 19.6 | 19.6 | 6.9 6.9 | 6.9 | 25.4 25.4 | 25.4 | 91.7 88.4 | 90.1 | 6.5 6.5 | 6.5 | 6.5 | 2.8 2.9 | 2.9 | 3.7 | 1.4 1.4 | 1.4 | 1.4 |
| | | | | Middle | 4 | 19.7 19.8 | 19.8 | 6.7 6.8 | 6.8 | 25.5 25.5 | 25.5 | 91.4 89.1 | 90.3 | 6.5 6.5 | 6.5 | | 3.6 3.9 | 3.8 | | 1.2 1.2 | 1.2 | |
| | | | | Bottom | 7 | 19.7 19.6 | 19.7 | 6.7 6.6 | 6.7 | 25.9 25.8 | 25.9 | 89.1 88.4 | 88.8 | 6.3 6.3 | 6.3 | | 4.2 4.3 | 4.3 | | 1.5 1.5 | 1.5 | |
| M1 | Cloudy | Moderate | 07:58 | Surface | 1 | 20.1 19.6 | 19.9 | 6.9 6.9 | 6.9 | 26.0 25.8 | 25.9 | 89.9 90.4 | 90.2 | 6.3 6.4 | 6.4 | 6.4 | 2.7 2.7 | 2.7 | 3.8 | 1.6 1.6 | 1.6 | 1.6 |
| | | | | Middle | 3 | 19.7 19.7 | 19.7 | 6.8 6.8 | 6.8 | 26.0 26.1 | 26.1 | 88.7 90.7 | 89.7 | 6.3 6.4 | 6.4 | | 4.3 5.1 | 4.7 | | 1.2 1.1 | 1.2 | |
| | | | | Bottom | 5 | 19.4 19.8 | 19.6 | 6.8 6.8 | 6.8 | 26.2 26.2 | 26.2 | 89.3 89.3 | 89.3 | 6.3 6.3 | 6.3 | | 3.8 3.9 | 3.9 | | 1.8 1.9 | 1.9 | |
| M2 | Cloudy | Moderate | 07:44 | Surface | 1 | 19.5 19.7 | 19.6 | 7.0 6.9 | 7.0 | 25.3 25.3 | 25.3 | 91.2 91.7 | 91.5 | 6.4 6.5 | 6.5 | 6.5 | 2.4 2.5 | 2.5 | 2.6 | 2.0 2.0 | 2.0 | 1.6 |
| | | | | Middle | 5 | 19.5 19.5 | 19.5 | 6.9 6.8 | 6.9 | 25.5 25.5 | 25.5 | 89.1 90.4 | 89.8 | 6.3 6.4 | 6.4 | | 2.4 2.6 | 2.5 | | 1.6 1.7 | 1.7 | |
| | | | | Bottom | 9 | 19.3 19.5 | 19.4 | 6.8 6.7 | 6.8 | 25.6 25.7 | 25.7 | 87.9 89.0 | 88.5 | 6.2 6.3 | 6.3 | | 2.6 2.8 | 2.7 | | 1.1 1.1 | 1.1 | |
| M3 | Cloudy | Moderate | 08:17 | Surface | 1 | 19.8 19.8 | 19.8 | 6.7 6.7 | 6.7 | 25.5 25.6 | 25.6 | 89.1 89.0 | 89.1 | 6.5 6.5 | 6.5 | 6.5 | 2.7 2.7 | 2.7 | 3.4 | 1.5 1.5 | 1.5 | 2.3 |
| | | | | Middle | 4 | 19.6 19.7 | 19.7 | 6.6 6.6 | 6.6 | 25.7 25.7 | 25.7 | 88.9 88.0 | 88.5 | 6.4 6.3 | 6.4 | | 3.4 3.3 | 3.4 | | 2.8 2.9 | 2.9 | |
| | | | | Bottom | 7 | 19.5 19.5 | 19.5 | 6.4 6.5 | 6.5 | 26.0 25.9 | 26.0 | 82.5 85.0 | 83.8 | 6.1 6.1 | 6.1 | | 4.1 4.1 | 4.1 | | 2.6 2.6 | 2.6 | |
| M4 | Cloudy | Moderate | 07:39 | Surface | 1 | 19.8 19.9 | 19.9 | 6.8 6.9 | 6.9 | 25.5 25.4 | 25.5 | 90.1 90.3 | 90.2 | 6.5 6.4 | 6.5 | 6.5 | 2.6 2.7 | 2.7 | 3.2 | 2.5 2.6 | 2.6 | 2.3 |
| | | | | Middle | 4 | 19.5 19.3 | 19.4 | 6.6 6.7 | 6.7 | 25.6 25.7 | 25.7 | 90.6 89.4 | 90.0 | 6.4 6.4 | 6.4 | | 2.8 3.0 | 2.9 | | 2.3 2.2 | 2.3 | |
| | | | | Bottom | 7 | 19.6 19.6 | 19.6 | 6.7 6.7 | 6.7 | 25.9 25.9 | 25.9 | 85.9 87.4 | 86.7 | 6.2 6.2 | 6.2 | | 3.8 4.1 | 4.0 | | 1.9 1.8 | 1.9 | |
| M5 | Cloudy | Moderate | 08:34 | Surface | 1 | 19.3 19.3 | 19.3 | 6.6 6.7 | 6.7 | 26.5 26.0 | 26.3 | 92.6 93.6 | 93.1 | 6.6 6.6 | 6.6 | 6.6 | 3.8 3.8 | 3.8 | 4.5 | 3.6 3.5 | 3.6 | 2.4 |
| | | | | Middle | 5.5 | 19.4 19.6 | 19.5 | 6.6 6.6 | 6.6 | 25.8 25.9 | 25.9 | 87.3 87.9 | 87.6 | 6.5 6.5 | 6.5 | | 5.1 5.3 | 5.2 | | 2.0 2.0 | 2.0 | |
| | | | | Bottom | 10 | 19.4 19.5 | 19.5 | 6.5 6.6 | 6.6 | 25.8 26.0 | 25.9 | 88.2 88.5 | 88.4 | 6.4 6.4 | 6.4 | | 4.1 4.6 | 4.4 | | 1.7 1.7 | 1.7 | |
| M6 | Cloudy | Moderate | 08:30 | Surface | - | - | - | - | - | - | - | - | - | - | 6.5 | - | - | 4.1 | - | - | 1.9 | |
| | | | | Middle | 2.3 | 18.9 19.3 | 19.1 | 6.7 6.8 | 6.8 | 26.0 25.9 | 26.0 | 88.4 87.9 | 88.2 | 6.5 6.4 | | 6.5 | 4.2 4.0 | | 4.1 | 1.9 1.9 | | 1.9 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 20 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 5.5 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 6.0 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.8 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 6.2 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.8 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 6.2 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 5.0 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 5.5 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 20 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|------------------|--------------|-------|------------|--------------|--------------|-------------------|--------------|-------------------------|------------|-----|----------------|------------|-----|-------------------------|------------|-----|-----|
| | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Cloudy | Moderate | 12:12 | Surface | 1 | 20.6 20.7 | 20.7 | 6.9 6.9 | 6.9 | 25.7 25.8 | 25.8 | 90.5 89.8 | 90.2 | 6.4 6.4 | 6.4 | 6.4 | 5.0 5.1 | 5.1 | 4.4 | 4.8 4.7 | 4.8 | 3.4 |
| | | | | Middle | 10 | 20.7 20.4 | 20.6 | 6.8 6.7 | 6.8 | 25.9 26.0 | 26.0 | 86.3 86.1 | 86.2 | 6.4 6.4 | 6.4 | | 3.6 3.4 | 3.5 | | 4.2 4.2 | 4.2 | |
| | | | | Bottom | 19 | 20.7 20.8 | 20.8 | 6.7 6.7 | 6.7 | 26.1 26.1 | 26.1 | 87.2 86.9 | 87.1 | 6.3 6.3 | 6.3 | | 4.5 4.6 | 4.6 | | | | |
| C2 | Cloudy | Moderate | 11:01 | Surface | 1 | 20.4 20.4 | 20.4 | 6.8 6.8 | 6.8 | 25.9 25.8 | 25.9 | 87.0 86.2 | 86.6 | 6.2 6.1 | 6.2 | 6.2 | 3.1 3.1 | 3.1 | 3.2 | 1.2 1.3 | 1.3 | 1.4 |
| | | | | Middle | 18 | 20.6 20.8 | 20.7 | 6.5 6.5 | 6.5 | 25.9 25.9 | 25.9 | 86.6 87.4 | 87.0 | 6.1 6.2 | 6.2 | | 3.2 3.4 | 3.3 | | 1.7 1.6 | 1.7 | |
| | | | | Bottom | 35 | 20.7 20.5 | 20.6 | 6.7 6.6 | 6.7 | 26.0 26.0 | 26.0 | 87.8 87.7 | 87.8 | 6.2 6.2 | 6.2 | | 3.4 2.8 | 3.1 | | 1.3 1.3 | 1.3 | |
| G1 | Cloudy | Moderate | 11:35 | Surface | 1 | 20.4 20.7 | 20.6 | 6.8 6.8 | 6.8 | 26.1 26.0 | 26.1 | 90.1 89.8 | 90.0 | 6.3 6.3 | 6.3 | 6.3 | 3.9 3.7 | 3.8 | 4.3 | 1.2 1.7 | 1.2 | 1.3 |
| | | | | Middle | 4 | 20.8 20.5 | 20.7 | 6.8 6.9 | 6.9 | 26.1 26.1 | 26.1 | 88.2 88.2 | 88.2 | 6.3 6.3 | 6.3 | | 4.4 3.8 | 4.1 | | 1.7 1.7 | 1.7 | |
| | | | | Bottom | 7 | 20.7 20.6 | 20.7 | 6.8 6.9 | 6.9 | 26.2 26.2 | 26.2 | 88.6 88.0 | 88.3 | 6.3 6.2 | 6.3 | | 4.8 5.0 | 4.9 | | 0.9 0.9 | 0.9 | |
| G2 | Cloudy | Moderate | 11:23 | Surface | 1 | 20.1 20.4 | 20.3 | 6.8 6.8 | 6.8 | 25.9 26.0 | 26.0 | 89.8 90.2 | 90.0 | 6.4 6.4 | 6.4 | 6.4 | 3.0 2.6 | 2.8 | 3.9 | 1.5 1.5 | 1.5 | 1.3 |
| | | | | Middle | 5 | 20.6 20.6 | 20.6 | 6.7 6.7 | 6.7 | 25.9 25.9 | 25.9 | 89.4 89.8 | 89.6 | 6.3 6.4 | 6.4 | | 3.8 4.2 | 4.0 | | 1.5 1.4 | 1.5 | |
| | | | | Bottom | 9 | 20.5 20.5 | 20.5 | 6.6 6.7 | 6.7 | 25.9 26.0 | 26.0 | 87.6 88.8 | 88.2 | 6.3 6.3 | 6.3 | | 4.8 4.9 | 4.9 | | 1.0 1.0 | 1.0 | |
| G3 | Cloudy | Moderate | 11:41 | Surface | 1 | 20.7 20.7 | 20.7 | 6.9 6.9 | 6.9 | 25.8 25.9 | 25.9 | 89.4 88.9 | 89.2 | 6.3 6.3 | 6.3 | 6.4 | 2.8 3.2 | 3.0 | 3.7 | 1.5 1.4 | 1.5 | 1.5 |
| | | | | Middle | 4 | 20.7 20.6 | 20.7 | 6.9 7.0 | 7.0 | 25.9 26.1 | 26.0 | 89.0 90.3 | 89.7 | 6.3 6.4 | 6.4 | | 3.9 3.6 | 3.8 | | 1.7 1.6 | 1.7 | |
| | | | | Bottom | 7 | 20.4 20.5 | 20.5 | 6.9 6.9 | 6.9 | 26.1 26.2 | 26.2 | 89.7 89.4 | 89.6 | 6.3 6.3 | 6.3 | | 4.2 4.5 | 4.4 | | 1.3 1.2 | 1.3 | |
| G4 | Cloudy | Moderate | 11:52 | Surface | 1 | 20.5 20.6 | 20.6 | 6.9 7.0 | 7.0 | 25.6 25.7 | 25.7 | 89.6 90.0 | 89.8 | 6.3 6.3 | 6.3 | 6.3 | 3.8 3.2 | 3.5 | 3.5 | 1.1 1.2 | 1.2 | 1.2 |
| | | | | Middle | 4 | 20.6 20.5 | 20.6 | 6.9 6.9 | 6.9 | 26.1 26.1 | 26.1 | 87.3 87.8 | 87.6 | 6.2 6.2 | 6.2 | | 3.4 3.5 | 3.5 | | 0.7 0.7 | 0.7 | |
| | | | | Bottom | 7 | 20.7 20.6 | 20.7 | 7.0 7.0 | 7.0 | 26.2 26.2 | 26.2 | 87.0 84.1 | 85.6 | 6.1 6.2 | 6.2 | | 3.5 3.6 | 3.6 | | 1.8 1.8 | 1.8 | |
| M1 | Cloudy | Moderate | 11:29 | Surface | 1 | 20.5 20.3 | 20.4 | 6.8 6.8 | 6.8 | 26.2 26.1 | 26.2 | 90.9 91.5 | 91.2 | 6.4 6.4 | 6.4 | 6.4 | 3.4 3.7 | 3.6 | 4.0 | 0.9 0.8 | 0.9 | 1.6 |
| | | | | Middle | 3 | 20.3 20.3 | 20.3 | 6.8 6.8 | 6.8 | 26.0 26.0 | 26.0 | 89.3 89.1 | 89.2 | 6.4 6.3 | 6.4 | | 4.0 4.0 | 3.8 | | 2.0 2.0 | 2.0 | |
| | | | | Bottom | 5 | 20.5 20.7 | 20.6 | 6.8 6.8 | 6.8 | 26.1 26.1 | 26.1 | 89.4 88.4 | 88.9 | 6.3 6.2 | 6.3 | | 4.6 4.6 | 4.6 | | 1.8 1.8 | 1.8 | |
| M2 | Cloudy | Moderate | 11:16 | Surface | 1 | 20.8 20.3 | 20.6 | 6.9 6.8 | 6.9 | 25.7 25.6 | 25.7 | 87.5 87.1 | 87.3 | 6.3 6.2 | 6.3 | 6.3 | 3.4 3.5 | 3.5 | 4.2 | 1.0 1.0 | 1.0 | 1.7 |
| | | | | Middle | 5 | 20.5 20.6 | 20.6 | 6.8 6.8 | 6.8 | 25.7 25.8 | 25.8 | 88.3 87.2 | 87.8 | 6.3 6.2 | 6.3 | | 4.0 4.0 | 4.0 | | 2.1 2.0 | 2.1 | |
| | | | | Bottom | 9 | 20.8 20.5 | 20.7 | 6.7 6.7 | 6.7 | 25.8 25.8 | 25.8 | 89.4 89.4 | 89.4 | 6.3 6.3 | 6.3 | | 4.8 5.1 | 5.0 | | 2.1 2.0 | 2.1 | |
| M3 | Cloudy | Moderate | 11:47 | Surface | 1 | 20.6 20.5 | 20.6 | 6.9 7.0 | 7.0 | 26.2 26.1 | 26.2 | 89.7 90.3 | 90.0 | 6.3 6.4 | 6.4 | 6.3 | 3.3 3.4 | 3.4 | 3.3 | 1.5 1.6 | 1.6 | 1.6 |
| | | | | Middle | 4 | 20.3 20.7 | 20.5 | 6.9 6.9 | 6.9 | 26.3 26.4 | 26.4 | 87.9 87.9 | 87.9 | 6.2 6.2 | 6.2 | | 3.3 3.3 | 3.3 | | 1.5 1.5 | 1.5 | |
| | | | | Bottom | 7 | 20.5 20.8 | 20.7 | 6.8 6.9 | 6.9 | 26.6 26.5 | 26.6 | 86.3 84.4 | 85.4 | 6.1 6.0 | 6.1 | | 3.1 3.3 | 3.2 | | 1.7 1.8 | 1.8 | |
| M4 | Cloudy | Moderate | 11:09 | Surface | 1 | 20.4 20.5 | 20.5 | 6.6 6.7 | 6.7 | 25.9 25.9 | 25.9 | 88.9 87.8 | 88.4 | 6.3 6.3 | 6.3 | 6.3 | 3.2 2.8 | 3.0 | 3.5 | 1.4 1.4 | 1.4 | 1.8 |
| | | | | Middle | 4 | 20.6 20.8 | 20.7 | 6.7 6.7 | 6.7 | 25.9 25.9 | 25.9 | 88.8 88.4 | 88.6 | 6.3 6.2 | 6.3 | | 3.3 3.7 | 3.5 | | 1.1 1.1 | 1.1 | |
| | | | | Bottom | 7 | 20.8 20.9 | 20.9 | 6.7 6.7 | 6.7 | 25.9 26.0 | 26.0 | 88.4 87.8 | 88.1 | 6.2 6.2 | 6.2 | | 3.7 4.0 | 3.9 | | 2.9 2.9 | 2.9 | |
| M5 | Cloudy | Moderate | 12:04 | Surface | 1 | 20.1 20.3 | 20.2 | 7.1 7.1 | 7.1 | 25.8 25.9 | 25.9 | 88.1 89.6 | 88.9 | 6.5 6.4 | 6.5 | 6.5 | 3.3 3.4 | 3.4 | 4.1 | 1.6 1.6 | 1.6 | 1.4 |
| | | | | Middle | 5.5 | 20.4 20.4 | 20.4 | 6.9 6.9 | 6.9 | 25.9 25.9 | 25.9 | 87.3 89.5 | 88.4 | 6.4 6.4 | 6.4 | | 3.8 4.0 | 3.9 | | 1.9 1.9 | 1.9 | |
| | | | | Bottom | 10 | 20.4 20.6 | 20.5 | 6.9 7.0 | 7.0 | 26.0 26.0 | 26.0 | 86.9 88.9 | 87.9 | 6.3 6.4 | 6.4 | | 5.2 4.6 | 4.9 | | 0.8 0.8 | 0.8 | |
| M6 | Cloudy | Moderate | 11:59 | Surface | - | - | - | - | - | - | - | - | - | - | 6.1 | - | - | 5.1 | - | - | 0.6 | |
| | | | | Middle | 2.2 | 20.5 20.2 | 20.4 | 6.9 6.9 | 6.9 | 26.1 26.1 | 26.1 | 83.2 84.2 | 83.7 | 6.1 6.1 | | 6.1 | 5.1 5.1 | | 5.1 | 0.6 0.6 | | 0.6 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 23 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 5.0 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 5.5 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 4.1 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 4.4 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 4.1 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 4.4 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.8 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 4.2 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> | |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 23 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|------------|--------------|-------------------------|------------|-----|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Cloudy | Rough | 11:06 | Surface | 1 | 20.5 19.7 | 20.1 | 7.8 7.8 | 7.8 | 29.9 29.9 | 29.9 | 95.6 94.0 | 94.8 | 7.2 7.2 | 7.2 | 7.2 | 7.2 | 4.0 4.1 | 4.1 | 4.8 | 1.6 1.6 | 1.6 | 2.0 |
| | | | | Middle | 10 | 20.0 20.4 | 20.2 | 7.6 7.5 | 7.6 | 29.9 29.9 | 29.9 | 92.7 93.8 | 93.3 | 7.1 7.1 | 7.1 | 7.1 | 6.0 5.8 | 5.9 | 1.8 1.9 | | 1.9 | | |
| | | | | Bottom | 19 | 20.2 20.0 | 20.1 | 7.5 7.5 | 7.5 | 29.9 30.0 | 30.0 | 92.4 91.5 | 92.0 | 7.0 7.0 | 7.0 | 7.0 | 4.5 4.5 | 4.5 | 2.5 2.4 | | 2.5 | | |
| C2 | Cloudy | Rough | 10:02 | Surface | 1 | 20.6 20.2 | 20.4 | 7.5 7.5 | 7.5 | 29.3 29.3 | 29.3 | 87.5 87.5 | 87.5 | 6.6 6.7 | 6.7 | 6.7 | 6.7 | 2.8 2.8 | 2.8 | 3.5 | 2.8 3.3 | 3.4 | 2.9 |
| | | | | Middle | 18 | 19.7 20.4 | 20.1 | 7.4 7.5 | 7.5 | 29.6 29.6 | 29.6 | 85.6 87.6 | 86.6 | 6.6 6.6 | 6.6 | 6.6 | 3.4 3.4 | 3.4 | 2.1 2.1 | | 2.1 | | |
| | | | | Bottom | 35 | 20.4 20.1 | 20.3 | 7.4 7.5 | 7.5 | 29.7 29.7 | 29.7 | 87.9 86.0 | 87.0 | 6.7 6.6 | 6.7 | 6.7 | 4.2 4.2 | 4.2 | 3.2 3.2 | | 3.2 | | |
| G1 | Cloudy | Rough | 10:32 | Surface | 1 | 20.7 20.1 | 20.4 | 7.9 7.9 | 7.9 | 29.6 29.7 | 29.7 | 90.8 90.2 | 90.5 | 6.8 6.9 | 6.9 | 7.0 | 7.0 | 2.8 3.1 | 3.0 | 4.1 | 1.6 1.5 | 1.6 | 2.5 |
| | | | | Middle | 4 | 20.0 20.3 | 20.2 | 7.8 7.9 | 7.9 | 29.9 29.9 | 29.9 | 91.2 91.5 | 91.4 | 7.0 6.9 | 7.0 | 7.0 | 3.9 4.4 | 4.2 | 4.1 4.1 | | 4.1 | | |
| | | | | Bottom | 7 | 20.1 19.6 | 19.9 | 7.7 7.7 | 7.7 | 30.0 30.1 | 30.1 | 92.4 90.6 | 91.5 | 7.0 7.0 | 7.0 | 7.0 | 5.1 4.8 | 5.0 | 1.7 1.8 | | 1.8 | | |
| G2 | Cloudy | Rough | 10:21 | Surface | 1 | 20.1 20.4 | 20.3 | 8.0 7.9 | 8.0 | 30.2 30.2 | 30.2 | 89.9 91.2 | 90.6 | 6.8 6.9 | 6.9 | 6.9 | 6.9 | 2.9 3.0 | 3.0 | 3.7 | 2.3 2.4 | 2.4 | 2.2 |
| | | | | Middle | 5 | 20.0 20.2 | 20.1 | 7.8 7.8 | 7.8 | 30.1 30.0 | 30.1 | 90.5 89.9 | 90.2 | 6.9 6.8 | 6.9 | 6.9 | 3.3 3.6 | 3.5 | 1.4 1.4 | | 1.4 | | |
| | | | | Bottom | 9 | 19.9 20.6 | 20.3 | 7.8 7.7 | 7.8 | 30.4 30.3 | 30.4 | 89.3 91.6 | 90.5 | 6.8 6.9 | 6.9 | 6.9 | 4.2 4.9 | 4.6 | 2.8 2.8 | | 2.8 | | |
| G3 | Cloudy | Rough | 10:38 | Surface | 1 | 19.6 20.2 | 19.9 | 8.0 8.0 | 8.0 | 29.9 29.7 | 29.8 | 91.1 90.6 | 90.9 | 7.0 6.9 | 7.0 | 6.9 | 6.9 | 3.7 4.1 | 3.9 | 4.1 | 1.3 1.2 | 1.3 | 1.7 |
| | | | | Middle | 4 | 20.4 19.9 | 20.2 | 7.8 7.9 | 7.9 | 29.8 29.8 | 29.8 | 90.3 89.1 | 89.7 | 6.8 6.8 | 6.8 | 6.8 | 4.9 4.3 | 4.6 | 1.8 1.7 | | 1.8 | | |
| | | | | Bottom | 7 | 20.3 20.1 | 20.2 | 7.9 7.8 | 7.9 | 30.0 30.0 | 30.0 | 90.4 89.6 | 90.0 | 6.9 6.8 | 6.9 | 6.9 | 4.2 3.5 | 3.9 | 1.8 1.9 | | 1.9 | | |
| G4 | Cloudy | Rough | 10:48 | Surface | 1 | 20.0 20.0 | 20.0 | 7.9 7.8 | 7.9 | 29.5 29.4 | 29.5 | 91.7 91.3 | 91.5 | 7.0 7.0 | 7.0 | 7.0 | 7.0 | 2.9 3.3 | 3.1 | 3.9 | 1.6 1.5 | 1.6 | 1.6 |
| | | | | Middle | 4 | 20.2 20.3 | 20.3 | 7.7 7.7 | 7.7 | 29.6 29.6 | 29.6 | 92.4 91.1 | 91.8 | 7.0 6.9 | 7.0 | 7.0 | 3.3 4.0 | 3.7 | 1.7 1.6 | | 1.7 | | |
| | | | | Bottom | 7 | 20.4 20.0 | 20.2 | 7.7 7.6 | 7.7 | 29.9 29.9 | 29.9 | 89.5 88.8 | 89.2 | 6.8 6.8 | 6.8 | 6.8 | 4.8 4.8 | 4.8 | 1.4 1.3 | | 1.4 | | |
| M1 | Cloudy | Rough | 10:26 | Surface | 1 | 21.0 20.3 | 20.7 | 7.9 7.9 | 7.9 | 30.0 29.8 | 29.9 | 90.2 89.1 | 89.7 | 6.8 6.8 | 6.8 | 6.8 | 6.8 | 3.2 3.1 | 3.2 | 4.0 | 3.9 3.8 | 3.9 | 3.4 |
| | | | | Middle | 3 | 20.2 20.2 | 20.2 | 7.8 7.8 | 7.8 | 30.0 30.1 | 30.1 | 89.2 90.4 | 89.8 | 6.8 6.9 | 6.8 | 6.9 | 4.4 5.4 | 4.9 | 4.2 4.2 | | 4.2 | | |
| | | | | Bottom | 5 | 20.2 20.3 | 20.3 | 7.7 7.8 | 7.8 | 30.2 30.3 | 30.3 | 88.1 89.2 | 88.7 | 6.7 6.8 | 6.8 | 6.8 | 3.6 4.4 | 4.0 | 2.0 2.0 | | 2.0 | | |
| M2 | Cloudy | Rough | 10:16 | Surface | 1 | 20.2 21.0 | 20.6 | 7.9 7.9 | 7.9 | 29.4 29.4 | 29.4 | 89.7 91.8 | 90.8 | 6.8 6.9 | 6.9 | 6.9 | 6.9 | 2.5 2.6 | 2.6 | 2.8 | 3.8 3.7 | 3.8 | 2.0 |
| | | | | Middle | 5 | 19.5 20.3 | 19.9 | 7.8 7.8 | 7.8 | 29.6 29.6 | 29.6 | 89.4 90.8 | 90.1 | 6.9 6.9 | 6.9 | 6.9 | 2.8 2.9 | 2.9 | 1.7 1.6 | | 1.7 | | |
| | | | | Bottom | 9 | 20.3 20.0 | 20.2 | 7.8 7.8 | 7.8 | 29.6 29.7 | 29.7 | 87.3 88.6 | 88.0 | 6.6 6.8 | 6.7 | 6.7 | 2.8 2.9 | 2.9 | <0.5 <0.5 | | <0.5 | | |
| M3 | Cloudy | Rough | 10:43 | Surface | 1 | 19.9 20.5 | 20.2 | 7.7 7.6 | 7.7 | 29.6 29.6 | 29.6 | 91.4 91.1 | 91.3 | 7.0 6.9 | 7.0 | 7.0 | 7.0 | 2.7 2.7 | 2.7 | 3.5 | 1.6 1.7 | 1.7 | 1.9 |
| | | | | Middle | 4 | 20.7 20.3 | 20.5 | 7.5 7.6 | 7.6 | 29.8 29.7 | 29.8 | 90.0 90.1 | 90.1 | 6.8 6.8 | 6.8 | 6.8 | 3.4 2.8 | 3.1 | 1.8 1.7 | | 1.8 | | |
| | | | | Bottom | 7 | 19.9 20.5 | 20.2 | 7.5 7.4 | 7.5 | 30.0 29.9 | 30.0 | 85.2 86.1 | 85.7 | 6.5 6.5 | 6.5 | 6.5 | 4.5 4.7 | 4.6 | 2.0 2.1 | | 2.1 | | |
| M4 | Cloudy | Rough | 10:10 | Surface | 1 | 20.3 20.6 | 20.5 | 7.8 7.8 | 7.8 | 29.6 29.5 | 29.6 | 91.9 90.4 | 91.2 | 7.0 6.8 | 6.9 | 6.9 | 6.9 | 3.0 3.5 | 3.3 | 3.5 | 3.6 3.7 | 3.7 | 2.3 |
| | | | | Middle | 4 | 20.1 19.9 | 20.0 | 7.6 7.7 | 7.7 | 29.6 29.7 | 29.7 | 89.3 89.6 | 89.5 | 6.8 6.9 | 6.9 | 6.9 | 2.9 3.5 | 3.2 | 1.8 1.9 | | 1.9 | | |
| | | | | Bottom | 7 | 20.0 20.4 | 20.2 | 7.7 7.6 | 7.7 | 29.9 30.0 | 30.0 | 88.0 87.1 | 87.6 | 6.7 6.6 | 6.7 | 6.7 | 3.8 4.3 | 4.1 | 1.2 1.3 | | 1.3 | | |
| M5 | Cloudy | Rough | 10:59 | Surface | 1 | 19.6 20.2 | 19.9 | 7.6 7.7 | 7.7 | 30.6 30.0 | 30.3 | 92.3 92.6 | 92.5 | 7.1 7.0 | 7.1 | 7.1 | 7.1 | 4.3 4.4 | 4.4 | 4.7 | 1.2 1.2 | 1.2 | 1.9 |
| | | | | Middle | 5.5 | 19.7 20.2 | 20.0 | 7.5 7.5 | 7.5 | 29.8 29.9 | 29.9 | 91.3 91.5 | 91.4 | 7.0 7.0 | 7.0 | 7.0 | 5.1 5.7 | 5.4 | 2.2 2.1 | | 2.2 | | |
| | | | | Bottom | 10 | 19.7 20.3 | 20.0 | 7.5 7.5 | 7.5 | 29.9 30.0 | 30.0 | 89.5 91.1 | 90.3 | 6.9 6.9 | 6.9 | 6.9 | 4.2 4.6 | 4.4 | 2.2 2.1 | | 2.2 | | |
| M6 | Cloudy | Rough | 10:54 | Surface | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4.7 | - | - | 2.4 | |
| | | | | Middle | 2.1 | 19.8 19.8 | 19.8 | 7.8 7.7 | 7.8 | 30.1 29.9 | 30.0 | 91.3 89.7 | 90.5 | 7.0 6.9 | 7.0 | 7.0 | 4.9 4.4 | 4.7 | | 2.4 2.3 | 2.4 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 23 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 5.4 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 5.9 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.6 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.9 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.6 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.9 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 4.6 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 4.9 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> | |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 23 February 2017**

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Cloudy | Rough | 16:48 | Surface | 1 | 20.3 20.6 | 20.5 | 7.9 8.0 | 8.0 | 29.9 30.0 | 30.0 | 89.6 90.8 | 90.2 | 6.8 6.8 | 6.8 | 6.8 | 5.1 5.3 | 5.2 | 4.4 | 3.7 3.8 | 3.8 | 3.2 |
| | | | | Middle | 10 | 20.5 20.5 | 20.5 | 7.9 7.8 | 7.9 | 30.2 30.3 | 30.3 | 88.8 88.8 | 88.8 | 6.7 6.7 | 6.7 | | 3.6 3.4 | 3.5 | | 1.9 2.0 | 2.0 | |
| | | | | Bottom | 19 | 20.6 21.0 | 20.8 | 7.8 7.7 | 7.8 | 30.4 30.3 | 30.4 | 89.4 89.1 | 89.3 | 6.7 6.7 | 6.7 | | 4.8 4.2 | 4.5 | | 3.8 3.8 | 3.8 | |
| C2 | Cloudy | Rough | 15:37 | Surface | 1 | 20.1 20.2 | 20.2 | 7.9 7.9 | 7.9 | 30.0 30.1 | 30.1 | 86.4 85.8 | 86.1 | 6.6 6.5 | 6.6 | 6.6 | 3.1 3.3 | 3.2 | 3.3 | 0.8 0.9 | 0.9 | 1.1 |
| | | | | Middle | 18 | 20.5 21.0 | 20.8 | 7.6 7.5 | 7.6 | 30.1 30.2 | 30.2 | 85.7 87.8 | 86.8 | 6.5 6.6 | 6.6 | | 3.4 3.5 | 3.5 | | 0.9 0.9 | 0.9 | |
| | | | | Bottom | 35 | 20.8 20.6 | 20.7 | 7.7 7.7 | 7.7 | 30.1 30.2 | 30.2 | 87.6 87.1 | 87.4 | 6.6 6.6 | 6.6 | | 3.3 3.3 | 3.3 | | 1.6 1.6 | 1.6 | |
| G1 | Cloudy | Rough | 16:09 | Surface | 1 | 20.2 20.2 | 20.2 | 7.9 7.9 | 7.9 | 30.4 30.2 | 30.3 | 88.1 87.6 | 87.9 | 6.7 6.6 | 6.7 | 6.7 | 3.5 3.9 | 3.7 | 4.1 | 1.8 1.7 | 1.8 | 2.1 |
| | | | | Middle | 4 | 20.6 20.6 | 20.6 | 7.9 7.9 | 7.9 | 30.3 30.4 | 30.4 | 88.4 87.8 | 88.1 | 6.7 6.6 | 6.7 | | 3.9 3.8 | 3.9 | | 3.0 2.9 | 3.0 | |
| | | | | Bottom | 7 | 20.3 20.4 | 20.4 | 7.9 8.0 | 8.0 | 30.4 30.4 | 30.4 | 87.8 88.3 | 88.1 | 6.6 6.7 | 6.7 | | 4.6 5.0 | 4.8 | | 1.3 1.4 | 1.4 | |
| G2 | Cloudy | Rough | 15:57 | Surface | 1 | 20.1 20.6 | 20.4 | 7.9 7.9 | 7.9 | 30.1 30.1 | 30.1 | 89.5 91.0 | 90.3 | 6.8 6.9 | 6.9 | 6.9 | 3.4 2.9 | 3.2 | 4.2 | 2.4 2.5 | 2.4 | 2.9 |
| | | | | Middle | 5 | 20.5 20.5 | 20.5 | 7.8 7.8 | 7.8 | 30.0 30.2 | 30.1 | 88.9 89.6 | 89.3 | 6.7 6.8 | 6.8 | | 4.3 4.2 | 4.3 | | 3.5 3.6 | 3.6 | |
| | | | | Bottom | 9 | 20.2 20.1 | 20.2 | 7.7 7.8 | 7.8 | 30.1 30.2 | 30.2 | 88.7 87.5 | 88.1 | 6.8 6.7 | 6.7 | | 4.8 5.5 | 5.2 | | 2.7 2.7 | 2.7 | |
| G3 | Cloudy | Rough | 16:15 | Surface | 1 | 20.7 20.8 | 20.8 | 7.9 8.0 | 8.0 | 30.1 30.0 | 30.1 | 89.3 88.2 | 88.8 | 6.7 6.6 | 6.7 | 6.8 | 3.0 3.6 | 3.3 | 3.9 | 1.1 1.0 | 1.1 | 2.0 |
| | | | | Middle | 4 | 20.4 20.4 | 20.4 | 8.0 8.0 | 8.0 | 30.1 30.2 | 30.2 | 89.5 89.4 | 89.5 | 6.8 6.8 | 6.8 | | 4.3 3.8 | 4.1 | | 2.1 2.0 | 2.1 | |
| | | | | Bottom | 7 | 20.0 20.4 | 20.2 | 8.0 7.9 | 8.0 | 30.3 30.4 | 30.4 | 88.5 87.5 | 88.0 | 6.7 6.6 | 6.7 | | 4.1 4.3 | 4.2 | | 2.6 2.7 | 2.7 | |
| G4 | Cloudy | Rough | 16:29 | Surface | 1 | 20.5 20.3 | 20.4 | 8.0 8.0 | 8.0 | 29.8 29.9 | 29.9 | 89.6 89.0 | 89.3 | 6.8 6.8 | 6.8 | 6.7 | 4.2 3.6 | 4.0 | 3.8 | 3.8 3.7 | 3.8 | 3.8 |
| | | | | Middle | 4 | 20.8 20.2 | 20.5 | 8.0 7.9 | 8.0 | 30.3 30.4 | 30.4 | 87.5 87.1 | 87.3 | 6.6 6.6 | 6.6 | | 3.7 3.7 | 3.7 | | 4.1 4.2 | 4.2 | |
| | | | | Bottom | 7 | 20.9 20.7 | 20.8 | 8.0 8.0 | 8.0 | 30.4 30.5 | 30.5 | 86.8 87.9 | 87.4 | 6.5 6.6 | 6.6 | | 3.9 3.6 | 3.8 | | 3.3 3.2 | 3.3 | |
| M1 | Cloudy | Rough | 16:04 | Surface | 1 | 20.5 20.2 | 20.4 | 7.8 7.9 | 7.9 | 30.5 30.3 | 30.4 | 89.9 88.9 | 89.4 | 6.8 6.7 | 6.8 | 6.8 | 3.5 3.9 | 3.7 | 3.9 | 1.0 1.1 | 1.1 | 1.1 |
| | | | | Middle | 3 | 20.3 20.3 | 20.3 | 7.8 7.8 | 7.8 | 30.2 30.2 | 30.2 | 89.2 88.5 | 88.9 | 6.8 6.7 | 6.8 | | 3.4 4.2 | 3.8 | | 1.6 1.7 | 1.7 | |
| | | | | Bottom | 5 | 20.4 20.5 | 20.5 | 7.8 7.9 | 7.9 | 30.3 30.3 | 30.3 | 88.6 87.6 | 88.1 | 6.7 6.6 | 6.7 | | 4.3 4.3 | 4.3 | | 0.6 0.6 | 0.6 | |
| M2 | Cloudy | Rough | 15:50 | Surface | 1 | 20.7 20.1 | 20.4 | 7.9 7.9 | 7.9 | 29.9 29.8 | 29.9 | 88.3 87.2 | 87.8 | 6.6 6.6 | 6.6 | 6.6 | 3.6 3.4 | 3.5 | 4.3 | 2.5 2.5 | 2.5 | 2.4 |
| | | | | Middle | 5 | 20.4 20.9 | 20.7 | 7.8 7.8 | 7.8 | 30.0 30.0 | 30.0 | 87.3 88.5 | 87.9 | 6.6 6.6 | 6.6 | | 4.0 4.0 | 4.0 | | 2.1 2.2 | 2.2 | |
| | | | | Bottom | 9 | 20.6 20.8 | 20.7 | 7.7 7.8 | 7.8 | 30.1 30.1 | 30.1 | 88.5 89.3 | 88.9 | 6.7 6.7 | 6.7 | | 5.2 5.3 | 5.3 | | 2.4 2.3 | 2.4 | |
| M3 | Cloudy | Rough | 16:22 | Surface | 1 | 20.1 20.6 | 20.4 | 7.9 8.0 | 8.0 | 30.3 30.2 | 30.3 | 88.4 88.8 | 88.6 | 6.7 6.7 | 6.7 | 6.7 | 3.7 3.7 | 3.7 | 3.5 | 1.3 1.4 | 1.4 | 1.3 |
| | | | | Middle | 4 | 20.1 20.5 | 20.3 | 7.9 7.9 | 7.9 | 30.5 30.6 | 30.6 | 87.4 88.0 | 87.7 | 6.6 6.6 | 6.6 | | 3.9 3.5 | 3.7 | | 1.4 1.5 | 1.5 | |
| | | | | Bottom | 7 | 20.6 20.7 | 20.7 | 7.9 7.9 | 7.9 | 30.7 30.8 | 30.8 | 85.7 84.1 | 84.9 | 6.4 6.3 | 6.4 | | 3.3 3.0 | 3.2 | | 0.9 0.9 | 0.9 | |
| M4 | Cloudy | Rough | 15:44 | Surface | 1 | 20.4 20.0 | 20.2 | 7.7 7.7 | 7.7 | 30.1 30.1 | 30.1 | 88.1 86.8 | 87.5 | 6.7 6.6 | 6.7 | 6.7 | 3.1 2.8 | 3.0 | 3.6 | 2.4 2.4 | 2.4 | 1.9 |
| | | | | Middle | 4 | 20.7 20.7 | 20.7 | 7.7 7.8 | 7.8 | 30.1 30.1 | 30.1 | 88.6 87.3 | 88.0 | 6.7 6.6 | 6.7 | | 3.6 3.4 | 3.5 | | 1.4 1.4 | 1.4 | |
| | | | | Bottom | 7 | 21.0 20.7 | 20.9 | 7.7 7.7 | 7.7 | 30.1 30.2 | 30.2 | 88.2 86.7 | 87.5 | 6.6 6.5 | 6.6 | | 3.8 4.6 | 4.2 | | 1.8 1.8 | 1.8 | |
| M5 | Cloudy | Rough | 16:39 | Surface | 1 | 20.3 20.3 | 20.3 | 8.2 8.0 | 8.1 | 30.1 30.1 | 30.1 | 90.2 90.4 | 90.3 | 6.8 6.8 | 6.8 | 6.8 | 3.4 3.5 | 3.5 | 4.1 | 1.3 1.2 | 1.3 | 3.0 |
| | | | | Middle | 5.5 | 20.3 20.3 | 20.3 | 7.9 8.0 | 8.0 | 30.1 30.1 | 30.1 | 89.0 88.9 | 89.0 | 6.7 6.7 | 6.7 | | 3.7 4.0 | 3.9 | | 3.4 3.3 | 3.4 | |
| | | | | Bottom | 10 | 20.6 20.4 | 20.5 | 8.0 7.9 | 8.0 | 30.1 30.2 | 30.2 | 88.3 88.3 | 88.3 | 6.7 6.7 | 6.7 | | 5.1 4.8 | 5.0 | | 4.3 4.3 | 4.3 | |
| M6 | Cloudy | Rough | 16:35 | Surface | - | - | - | - | - | - | - | - | - | - | 6.5 | - | - | 5.6 | - | - | 2.2 | |
| | | | | Middle | 2.3 | 20.2 20.3 | 20.3 | 8.0 8.0 | 8.0 | 30.3 30.3 | 30.3 | 84.7 85.3 | 85.0 | 6.4 6.5 | | 6.5 | 5.5 5.6 | | 5.6 | 2.2 2.1 | | 2.2 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 25 February 2017 (Mid-Ebb Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 8.8 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 9.5 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | SS in mg/L (See Note 2 and 4) | <u>Stations G1-G4</u> | |
| Surface | | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 6.6 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 7.2 mg/L</u> |
| <u>Stations M1-M5</u> | | | |
| Surface | | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 6.6 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 7.2 mg/L</u> |
| <u>Stations G1-G4, M1-M5</u> | | | |
| Bottom | | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.9 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.4 mg/L</u> |
| <u>Station M6</u> | | | |
| Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> | |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 25 February 2017

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|------------|------------|-------------------------|---------|-----|--------------|------|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | | |
| C1 | Cloudy | Rough | 12:00 | Surface | 1 | 19.0 19.1 | 19.1 | 7.8 7.9 | 7.9 | 30.4 29.6 | 30.0 | 89.9 89.1 | 89.5 | 7.0 6.9 | 7.0 | 6.8 | 3.1 | 5.5 | 2.8 2.7 | 2.8 | 2.7 | 2.8 | | |
| | | | | Middle | 10 | 18.7 19.1 | 18.9 | 7.8 7.8 | 7.8 | 30.5 30.4 | 30.5 | 86.2 83.3 | 84.8 | 6.7 6.4 | 6.6 | | 6.1 6.1 | | 6.1 | | | | 3.0 2.9 | 3.0 |
| | | | | Bottom | 19 | 18.5 18.6 | 18.6 | 7.8 7.8 | 7.8 | 28.9 28.9 | 28.9 | 81.0 81.8 | 81.4 | 6.4 6.4 | 6.4 | | 7.2 7.4 | | 7.3 | | | | 2.2 2.2 | 2.2 |
| C2 | Cloudy | Rough | 10:57 | Surface | 1 | 18.9 19.2 | 19.1 | 7.7 7.6 | 7.7 | 28.5 27.9 | 28.2 | 87.3 87.4 | 87.4 | 6.9 6.8 | 6.9 | 6.9 | 4.5 3.9 | 5.9 | 5.4 5.5 | 5.5 | 5.6 | 5.6 | | |
| | | | | Middle | 18 | 19.1 18.8 | 19.0 | 7.7 7.8 | 7.8 | 27.8 28.0 | 27.9 | 85.4 87.5 | 86.5 | 6.7 6.9 | 6.8 | | 6.4 6.4 | | 6.3 | | | | 6.4 6.3 | 6.4 |
| | | | | Bottom | 35 | 19.2 18.5 | 18.9 | 7.9 7.9 | 7.9 | 28.2 28.3 | 28.3 | 84.1 83.5 | 83.8 | 6.6 6.6 | 6.6 | | 7.4 7.2 | | 7.3 | | | | 4.9 4.9 | 4.9 |
| G1 | Cloudy | Rough | 11:27 | Surface | 1 | 18.6 18.6 | 18.6 | 7.9 7.9 | 7.9 | 29.1 30.8 | 30.0 | 86.8 85.8 | 86.3 | 6.8 6.7 | 6.8 | 6.9 | 3.4 3.5 | 4.7 | 4.2 4.3 | 4.3 | 3.9 | 3.9 | | |
| | | | | Middle | 4 | 18.6 18.9 | 18.8 | 7.9 7.9 | 7.9 | 30.6 30.7 | 30.7 | 88.9 90.8 | 89.9 | 6.9 7.0 | 7.0 | | 4.0 4.0 | | 4.0 | | | | 4.7 4.7 | 4.7 |
| | | | | Bottom | 7 | 19.0 19.0 | 19.0 | 7.9 7.8 | 7.9 | 30.8 30.8 | 30.8 | 82.4 79.7 | 81.1 | 6.4 6.2 | 6.3 | | 6.5 6.8 | | 6.7 | | | | 2.7 2.8 | 2.8 |
| G2 | Cloudy | Rough | 11:16 | Surface | 1 | 19.0 19.2 | 19.1 | 7.8 7.8 | 7.8 | 29.6 30.3 | 30.0 | 92.0 89.9 | 91.0 | 7.2 6.9 | 7.1 | 6.8 | 2.8 | 4.4 | 5.6 5.5 | 5.6 | 6.0 | 6.0 | | |
| | | | | Middle | 5 | 18.9 18.7 | 18.8 | 7.9 7.8 | 7.9 | 30.5 30.4 | 30.5 | 82.4 81.9 | 82.2 | 6.4 6.4 | 6.4 | | 4.8 4.8 | | 4.8 | | | | 6.8 6.8 | 6.8 |
| | | | | Bottom | 9 | 19.0 19.1 | 19.1 | 7.9 7.8 | 7.9 | 30.5 30.7 | 30.6 | 83.9 84.0 | 84.0 | 6.5 6.5 | 6.5 | | 6.0 5.3 | | 5.7 | | | | 5.6 5.5 | 5.6 |
| G3 | Cloudy | Rough | 11:32 | Surface | 1 | 19.2 19.4 | 19.3 | 7.9 7.8 | 7.9 | 31.2 30.2 | 30.7 | 90.0 92.2 | 91.1 | 6.9 7.1 | 7.0 | 6.9 | 4.0 4.6 | 4.7 | 4.4 4.5 | 4.5 | 3.5 | 3.5 | | |
| | | | | Middle | 4 | 19.1 19.0 | 19.1 | 7.8 7.9 | 7.9 | 30.4 30.5 | 30.5 | 87.4 87.1 | 87.3 | 6.8 6.7 | 6.8 | | 5.0 5.0 | | 4.8 | | | | 2.9 3.0 | 3.0 |
| | | | | Bottom | 7 | 19.0 19.3 | 19.2 | 7.8 7.9 | 7.9 | 30.6 30.5 | 30.6 | 87.9 89.0 | 88.5 | 6.8 6.9 | 6.9 | | 4.9 4.8 | | 4.9 | | | | 3.1 3.1 | 3.1 |
| G4 | Cloudy | Rough | 11:42 | Surface | 1 | 18.5 18.7 | 18.6 | 7.8 7.8 | 7.8 | 28.9 29.2 | 29.1 | 90.6 90.8 | 90.7 | 7.2 7.1 | 7.2 | 7.1 | 3.0 2.5 | 4.5 | 2.7 2.7 | 2.7 | 3.3 | 3.3 | | |
| | | | | Middle | 4 | 19.0 18.8 | 18.9 | 7.8 7.8 | 7.8 | 30.0 30.0 | 30.0 | 89.3 89.5 | 89.4 | 6.9 7.0 | 7.0 | | 4.6 5.1 | | 4.9 | | | | 3.6 3.5 | 3.6 |
| | | | | Bottom | 7 | 18.9 19.1 | 19.0 | 7.9 7.8 | 7.9 | 30.0 30.1 | 30.1 | 88.3 79.3 | 83.8 | 6.9 6.1 | 6.5 | | 5.5 5.8 | | 5.7 | | | | 3.7 3.7 | 3.7 |
| M1 | Cloudy | Rough | 11:21 | Surface | 1 | 19.3 19.4 | 19.4 | 7.9 7.8 | 7.9 | 30.7 30.5 | 30.6 | 86.3 88.3 | 87.3 | 6.6 6.8 | 6.7 | 6.7 | 4.5 5.0 | 4.7 | 2.2 2.1 | 2.2 | 2.5 | 2.5 | | |
| | | | | Middle | 3 | 18.9 18.9 | 18.9 | 7.9 7.9 | 7.9 | 30.5 30.5 | 30.5 | 86.6 86.9 | 86.8 | 6.7 6.7 | 6.7 | | 5.5 5.4 | | 5.5 | | | | 3.0 3.0 | 3.0 |
| | | | | Bottom | 5 | 19.2 19.0 | 19.1 | 7.8 7.8 | 7.8 | 30.6 30.7 | 30.7 | 88.1 86.4 | 87.3 | 6.8 6.7 | 6.8 | | 3.7 4.0 | | 3.9 | | | | 2.1 2.2 | 2.2 |
| M2 | Cloudy | Rough | 11:11 | Surface | 1 | 19.0 18.9 | 19.0 | 7.9 7.8 | 7.9 | 30.9 30.0 | 30.5 | 91.6 89.1 | 90.4 | 7.1 6.9 | 7.0 | 6.7 | 3.1 3.1 | 4.5 | 2.4 2.3 | 2.4 | 1.8 | 1.8 | | |
| | | | | Middle | 5.5 | 19.0 18.9 | 19.0 | 7.8 7.8 | 7.8 | 30.3 30.4 | 30.4 | 82.2 82.6 | 82.4 | 6.4 6.4 | 6.4 | | 4.3 4.2 | | 4.3 | | | | 2.6 2.6 | 2.6 |
| | | | | Bottom | 10 | 18.6 19.1 | 18.9 | 7.8 7.8 | 7.8 | 30.7 30.7 | 30.7 | 84.0 84.5 | 84.3 | 6.5 6.5 | 6.5 | | 5.9 6.3 | | 6.1 | | | | <0.5 <0.5 | <0.5 |
| M3 | Cloudy | Rough | 11:37 | Surface | 1 | 18.7 18.5 | 18.6 | 7.9 7.9 | 7.9 | 29.9 29.8 | 29.9 | 87.1 88.1 | 87.6 | 6.8 6.9 | 6.9 | 6.8 | 2.8 3.2 | 4.9 | 3.2 3.1 | 3.2 | 3.3 | 3.3 | | |
| | | | | Middle | 4.5 | 19.2 18.6 | 18.9 | 7.8 7.9 | 7.9 | 30.4 30.4 | 30.4 | 85.3 85.5 | 85.4 | 6.6 6.7 | 6.7 | | 5.6 5.2 | | 5.4 | | | | 4.4 4.4 | 4.4 |
| | | | | Bottom | 8 | 18.8 19.2 | 19.0 | 7.9 7.9 | 7.9 | 30.5 30.5 | 30.5 | 80.3 80.9 | 80.6 | 6.2 6.2 | 6.2 | | 6.2 6.5 | | 6.4 | | | | 2.4 2.3 | 2.4 |
| M4 | Cloudy | Rough | 11:05 | Surface | 1 | 18.8 19.1 | 19.0 | 7.8 7.7 | 7.8 | 27.9 28.5 | 28.2 | 88.8 92.7 | 90.8 | 7.0 7.3 | 7.2 | 7.0 | 3.8 3.9 | 5.0 | 1.2 1.1 | 1.2 | 1.5 | 1.5 | | |
| | | | | Middle | 4 | 18.9 18.6 | 18.8 | 7.8 7.8 | 7.8 | 29.3 29.3 | 29.3 | 86.9 86.6 | 86.8 | 6.8 6.8 | 6.8 | | 5.0 5.0 | | 5.0 | | | | 0.8 0.7 | 0.8 |
| | | | | Bottom | 7 | 18.5 18.9 | 18.7 | 7.8 7.8 | 7.8 | 29.9 29.9 | 29.9 | 83.4 85.6 | 84.5 | 6.5 6.7 | 6.6 | | 6.4 5.9 | | 6.2 | | | | 2.4 2.5 | 2.5 |
| M5 | Cloudy | Rough | 11:53 | Surface | 1 | 18.5 18.8 | 18.7 | 7.8 7.9 | 7.9 | 30.1 30.1 | 30.1 | 85.9 84.9 | 85.4 | 6.7 6.6 | 6.7 | 6.8 | 3.9 4.1 | 5.4 | 4.2 4.1 | 4.2 | 3.2 | 3.2 | | |
| | | | | Middle | 5.5 | 18.5 18.7 | 18.6 | 7.8 7.8 | 7.8 | 30.1 30.1 | 30.1 | 85.9 86.5 | 86.2 | 6.7 6.8 | 6.8 | | 5.5 5.7 | | 5.6 | | | | 3.3 3.4 | 3.4 |
| | | | | Bottom | 10 | 18.9 18.7 | 18.8 | 7.8 7.9 | 7.9 | 30.4 30.4 | 30.4 | 86.5 85.4 | 86.0 | 6.7 6.7 | 6.7 | | 6.8 6.2 | | 6.5 | | | | 1.9 1.9 | 1.9 |
| M6 | Cloudy | Rough | 11:48 | Surface | - | - | - | - | - | - | - | - | - | - | 6.5 | - | 4.9 | - | 1.4 | 1.4 | 1.4 | | | |
| | | | | Middle | 2.3 | 18.9 19.1 | 19.0 | 7.8 7.8 | 7.8 | 30.7 30.7 | 30.7 | 84.2 83.2 | 83.7 | 6.5 6.4 | | 6.5 | | 4.9 4.8 | | | | 4.9 | 1.4 1.4 | 1.4 |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | | - | | - | | | | - | - | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 25 February 2017 (Mid-Flood Tide)

| <u>Parameter (unit)</u> | <u>Depth</u> | <u>Action Level</u> | <u>Limit Level</u> |
|--|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>CI: 6.2 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>CI: 6.8 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>CI: 4.3 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>CI: 4.7 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>CI: 4.3 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>CI: 4.7 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>CI: 3.2 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>CI: 3.5 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 25 February 2017

(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|------------|----------------|--------------|-----|-------------------------|---------|-----|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* |
| C1 | Cloudy | Rough | 17:02 | Surface | 1 | 19.1 19.1 | 19.1 | 7.9 7.9 | 7.9 | 31.7 30.8 | 31.3 | 90.7 90.6 | 90.7 | 7.0 7.0 | 7.0 | 6.9 | 3.4 3.6 | 3.5 | 4.2 | 3.5 3.6 | 3.6 | 3.0 |
| | | | | Middle | 10 | 18.3 18.5 | 18.4 | 7.9 8.0 | 8.0 | 30.8 30.6 | 30.7 | 84.8 86.3 | 85.6 | 6.6 6.7 | 6.7 | 3.9 4.0 | 4.0 | 2.8 2.7 | | 2.8 | | |
| | | | | Bottom | 19 | 18.5 19.1 | 18.8 | 7.9 7.9 | 7.9 | 28.9 29.1 | 29.0 | 83.6 83.7 | 83.7 | 6.6 6.5 | 6.6 | 5.1 5.3 | 5.2 | 2.7 2.6 | | 2.7 | | |
| C2 | Cloudy | Rough | 15:50 | Surface | 1 | 18.9 18.9 | 18.9 | 7.9 7.8 | 7.9 | 30.3 30.7 | 30.5 | 88.6 89.1 | 88.9 | 6.9 6.9 | 6.9 | 6.9 | 3.1 2.5 | 2.8 | 4.2 | 3.1 3.0 | 3.0 | 2.2 |
| | | | | Middle | 18 | 18.6 18.8 | 18.7 | 7.8 7.8 | 7.8 | 30.1 30.2 | 30.2 | 86.7 87.6 | 87.2 | 6.8 6.8 | 6.8 | 4.0 3.5 | 3.8 | 1.2 1.1 | | 1.2 | | |
| | | | | Bottom | 35 | 18.2 18.4 | 18.3 | 7.9 7.9 | 7.9 | 30.1 30.1 | 30.1 | 85.2 86.3 | 85.8 | 6.7 6.8 | 6.8 | 6.1 6.0 | 6.1 | 2.4 2.3 | | 2.4 | | |
| G1 | Cloudy | Rough | 16:22 | Surface | 1 | 18.7 18.6 | 18.7 | 8.0 7.9 | 8.0 | 29.0 28.9 | 29.0 | 88.1 86.2 | 87.2 | 6.9 6.8 | 6.9 | 6.8 | 3.9 3.8 | 3.9 | 4.1 | 3.9 3.8 | 3.9 | 1.7 |
| | | | | Middle | 4 | 18.9 18.2 | 18.6 | 7.9 7.9 | 7.9 | 29.2 29.3 | 29.3 | 85.1 84.4 | 84.8 | 6.7 6.7 | 6.7 | 4.2 4.0 | 4.1 | 1.3 1.2 | | 1.3 | | |
| | | | | Bottom | 7 | 17.8 17.7 | 17.8 | 8.0 7.9 | 8.0 | 30.0 30.0 | 30.0 | 82.9 82.8 | 82.9 | 6.6 6.6 | 6.6 | 4.4 4.4 | 4.4 | 2.2 2.3 | | 2.3 | | |
| G2 | Cloudy | Rough | 16:10 | Surface | 1 | 18.5 18.5 | 18.5 | 8.0 7.9 | 8.0 | 29.7 29.6 | 29.7 | 86.1 85.7 | 85.9 | 6.8 6.7 | 6.8 | 6.8 | 2.6 2.8 | 2.7 | 3.2 | 2.6 2.8 | 2.7 | 2.4 |
| | | | | Middle | 5 | 18.5 18.6 | 18.6 | 7.8 7.8 | 7.8 | 30.0 30.1 | 30.1 | 84.3 84.0 | 84.2 | 6.6 6.6 | 6.6 | 2.3 2.6 | 2.5 | 1.4 1.4 | | 1.4 | | |
| | | | | Bottom | 9 | 18.4 18.5 | 18.5 | 7.9 7.9 | 7.9 | 29.5 29.7 | 29.6 | 82.8 82.7 | 82.8 | 6.5 6.5 | 6.5 | 4.3 4.3 | 4.3 | 2.1 2.1 | | 2.1 | | |
| G3 | Cloudy | Rough | 16:29 | Surface | 1 | 18.9 18.5 | 18.7 | 7.9 8.0 | 8.0 | 28.7 28.9 | 28.8 | 87.5 87.2 | 87.4 | 6.9 6.9 | 6.9 | 6.8 | 3.4 3.1 | 3.3 | 5.0 | 3.4 3.1 | 3.1 | 3.8 |
| | | | | Middle | 4 | 18.7 18.4 | 18.6 | 7.8 8.0 | 7.9 | 29.6 29.6 | 29.6 | 85.7 84.5 | 85.1 | 6.7 6.7 | 6.7 | 5.7 5.4 | 5.6 | 5.6 5.4 | | 5.7 | | |
| | | | | Bottom | 7 | 18.6 18.5 | 18.6 | 7.9 7.8 | 7.9 | 30.0 30.1 | 30.1 | 84.5 83.6 | 84.1 | 6.6 6.6 | 6.6 | 5.4 6.7 | 6.1 | 2.4 2.5 | | 2.5 | | |
| G4 | Cloudy | Rough | 16:42 | Surface | 1 | 19.2 19.3 | 19.3 | 7.8 7.9 | 7.9 | 30.5 30.8 | 30.7 | 87.3 88.4 | 87.9 | 6.7 6.8 | 6.8 | 6.8 | 4.5 3.8 | 4.2 | 4.9 | 4.5 3.8 | 4.2 | 2.8 |
| | | | | Middle | 4 | 18.6 18.7 | 18.7 | 8.0 7.9 | 8.0 | 30.6 30.5 | 30.6 | 85.7 85.7 | 85.7 | 6.7 6.7 | 6.7 | 4.9 5.6 | 5.3 | 3.7 3.6 | | 3.7 | | |
| | | | | Bottom | 7 | 18.4 19.0 | 18.7 | 8.0 8.0 | 8.0 | 30.4 30.5 | 30.5 | 81.6 83.2 | 82.4 | 6.4 6.4 | 6.4 | 5.1 5.4 | 5.3 | 2.5 2.4 | | 2.5 | | |
| M1 | Cloudy | Rough | 16:17 | Surface | 1 | 19.1 18.6 | 18.9 | 7.8 7.9 | 7.9 | 28.7 28.8 | 28.8 | 87.5 86.0 | 86.8 | 6.8 6.8 | 6.8 | 6.8 | 3.3 3.3 | 3.3 | 3.8 | 3.3 3.3 | 3.3 | 1.6 |
| | | | | Middle | 3 | 18.4 18.3 | 18.4 | 7.9 7.9 | 7.9 | 29.2 29.1 | 29.2 | 84.8 82.7 | 83.8 | 6.7 6.5 | 6.6 | 4.7 4.3 | 4.5 | 2.6 2.5 | | 2.6 | | |
| | | | | Bottom | 5 | 18.5 18.5 | 18.5 | 7.8 7.9 | 7.9 | 30.8 30.8 | 30.8 | 81.3 81.7 | 81.5 | 6.3 6.4 | 6.4 | 3.4 3.5 | 3.5 | 0.8 0.8 | | 0.8 | | |
| M2 | Cloudy | Rough | 16:03 | Surface | 1 | 18.3 18.4 | 18.4 | 7.9 7.8 | 7.9 | 30.7 30.6 | 30.7 | 85.2 85.6 | 85.4 | 6.7 6.7 | 6.7 | 6.6 | 2.9 2.4 | 2.7 | 4.3 | 2.9 2.4 | 2.7 | 2.1 |
| | | | | Middle | 5.5 | 18.7 18.7 | 18.7 | 7.9 7.9 | 7.9 | 29.7 29.5 | 29.6 | 82.3 82.5 | 82.4 | 6.4 6.5 | 6.5 | 5.4 4.9 | 5.2 | 1.7 1.7 | | 1.7 | | |
| | | | | Bottom | 10 | 18.6 18.5 | 18.6 | 7.9 7.8 | 7.9 | 30.3 30.0 | 30.2 | 81.6 81.1 | 81.4 | 6.4 6.4 | 6.4 | 4.6 5.1 | 4.9 | 1.8 1.8 | | 1.8 | | |
| M3 | Cloudy | Rough | 16:35 | Surface | 1 | 18.8 18.5 | 18.7 | 8.0 7.9 | 8.0 | 31.1 31.3 | 31.2 | 90.3 90.6 | 90.5 | 7.0 7.0 | 7.0 | 6.9 | 2.2 1.8 | 2.0 | 3.6 | 2.2 1.8 | 2.0 | 4.3 |
| | | | | Middle | 4.5 | 18.4 18.6 | 18.5 | 7.9 7.8 | 7.9 | 31.5 31.6 | 31.6 | 87.7 88.3 | 88.0 | 6.8 6.8 | 6.8 | 3.1 3.4 | 3.3 | 5.5 5.6 | | 5.6 | | |
| | | | | Bottom | 8 | 18.8 18.9 | 18.9 | 7.8 7.8 | 7.8 | 31.4 31.8 | 31.6 | 85.0 92.5 | 88.8 | 6.6 7.1 | 6.9 | 5.1 5.6 | 5.4 | 3.2 3.1 | | 3.2 | | |
| M4 | Cloudy | Rough | 15:57 | Surface | 1 | 18.1 18.8 | 18.5 | 7.9 7.8 | 7.9 | 29.0 29.2 | 29.1 | 87.4 88.9 | 88.2 | 6.9 7.0 | 7.0 | 6.9 | 3.6 3.3 | 3.5 | 3.9 | 3.6 3.3 | 3.5 | 3.6 |
| | | | | Middle | 4 | 18.3 18.6 | 18.5 | 7.9 7.9 | 7.9 | 29.5 29.4 | 29.5 | 86.3 85.9 | 86.1 | 6.8 6.7 | 6.8 | 3.6 3.7 | 3.7 | 5.4 5.4 | | 5.4 | | |
| | | | | Bottom | 7 | 17.8 18.0 | 17.9 | 7.9 7.9 | 7.9 | 29.0 29.1 | 29.1 | 82.5 81.1 | 81.8 | 6.6 6.5 | 6.6 | 4.7 4.5 | 4.6 | 2.8 2.9 | | 2.9 | | |
| M5 | Cloudy | Rough | 16:53 | Surface | 1 | 18.7 18.7 | 18.7 | 7.9 7.9 | 7.9 | 31.3 32.0 | 31.7 | 89.2 89.0 | 89.1 | 6.9 6.9 | 6.9 | 6.8 | 4.1 3.3 | 4.0 | 4.7 | 4.1 3.3 | 4.0 | 2.1 |
| | | | | Middle | 5.5 | 18.5 18.8 | 18.7 | 8.0 8.0 | 8.0 | 30.4 31.1 | 30.8 | 85.3 85.6 | 85.5 | 6.7 6.6 | 6.7 | 5.6 5.5 | 5.6 | 2.2 2.1 | | 2.2 | | |
| | | | | Bottom | 10 | 18.9 18.9 | 18.9 | 8.0 8.0 | 8.0 | 29.8 30.0 | 29.9 | 83.0 82.5 | 82.8 | 6.5 6.4 | 6.5 | 4.5 4.5 | 4.5 | 0.8 0.8 | | 0.8 | | |
| M6 | Cloudy | Rough | 16:48 | Surface | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3.6 | - | - | 0.5 |
| | | | | Middle | 2.2 | 18.6 18.7 | 18.7 | 7.8 7.9 | 7.9 | 30.6 30.5 | 30.6 | 85.1 83.0 | 84.1 | 6.6 6.5 | 6.6 | 3.7 3.4 | 3.6 | <0.5 <0.5 | | <0.5 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 27 February 2017 (Mid-Ebb Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|---|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C2: 7.9 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C2: 8.6 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.2 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.5 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 3.2 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 3.5 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C2: 5.9 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C2: 6.4 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 27 February 2017**

(Mid-Ebb Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|------|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|---------|-----|-------------------------|---------|-----|---|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| C1 | Sunny | Moderate | 14:25 | Surface | 1 | 23.4 23.0 | 23.2 | 8.2 8.2 | 8.2 | 31.5 31.6 | 31.6 | 103.4 100.8 | 102.1 | 7.4 7.2 | 7.3 | 6.9 | 4.5 4.6 | 4.6 | 5.9 | 1.0 1.1 | 1.1 | 1.5 | |
| | | | | Middle | 10.5 | 23.3 22.8 | 23.1 | 8.2 8.2 | 8.2 | 32.6 32.6 | 32.6 | 88.6 89.2 | 88.9 | 6.3 6.4 | 6.4 | | 5.6 5.7 | 5.7 | | 1.5 1.5 | 1.5 | | |
| | | | | Bottom | 20 | 23.0 22.9 | 23.0 | 8.3 8.2 | 8.3 | 33.3 33.2 | 33.3 | 85.8 87.7 | 86.8 | 6.1 6.2 | 6.2 | | 7.2 7.3 | 7.3 | | 1.9 1.9 | 1.9 | | |
| C2 | Sunny | Moderate | 12:25 | Surface | 1 | 23.1 22.5 | 22.8 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 97.3 101.0 | 99.2 | 6.9 7.3 | 7.1 | 6.8 | 4.2 4.3 | 4.3 | 5.6 | 2.7 2.6 | 2.7 | 3.4 | |
| | | | | Middle | 18 | 23.1 22.3 | 22.7 | 8.1 8.1 | 8.1 | 32.9 32.9 | 32.9 | 88.5 91.4 | 90.0 | 6.3 6.6 | 6.5 | | 5.9 5.9 | 5.9 | | 2.7 2.6 | 2.7 | | |
| | | | | Bottom | 35 | 22.5 22.3 | 22.4 | 8.2 8.2 | 8.2 | 33.1 33.2 | 33.2 | 82.2 82.7 | 82.5 | 5.9 5.9 | 5.9 | | 6.4 6.7 | 6.6 | | 4.8 4.9 | 4.9 | | |
| G1 | Sunny | Moderate | 13:08 | Surface | 1 | 22.9 22.8 | 22.9 | 8.2 8.2 | 8.2 | 33.1 33.1 | 33.1 | 94.2 91.2 | 92.7 | 6.7 6.5 | 6.6 | 6.6 | 4.7 5.1 | 4.9 | 5.0 | 1.9 1.8 | 1.9 | 1.9 | |
| | | | | Middle | 4 | 23.0 22.8 | 22.9 | 8.2 8.2 | 8.2 | 33.4 33.4 | 33.4 | 87.1 95.0 | 91.1 | 6.2 6.8 | 6.5 | | 5.0 4.9 | 5.0 | | 3.2 3.1 | 3.2 | | |
| | | | | Bottom | 7 | 22.8 22.8 | 22.8 | 8.2 8.2 | 8.2 | 33.6 33.6 | 33.6 | 87.0 88.2 | 87.6 | 6.2 6.3 | 6.3 | | 5.1 5.3 | 5.2 | | 0.7 0.7 | 0.7 | | |
| G2 | Sunny | Moderate | 12:51 | Surface | 1 | 22.8 22.8 | 22.8 | 8.2 8.2 | 8.2 | 33.1 33.1 | 33.1 | 97.6 102.3 | 100.0 | 6.9 7.3 | 7.1 | 6.8 | 4.0 4.5 | 4.3 | 5.8 | 1.5 1.4 | 1.5 | 1.8 | |
| | | | | Middle | 5 | 22.8 22.8 | 22.8 | 8.2 8.2 | 8.2 | 33.4 33.4 | 33.4 | 88.3 92.3 | 90.3 | 6.3 6.6 | 6.5 | | 5.7 5.7 | 5.7 | | 2.1 2.1 | 2.1 | | |
| | | | | Bottom | 9 | 22.8 22.8 | 22.8 | 8.2 8.2 | 8.2 | 33.2 34.0 | 33.6 | 83.1 83.7 | 83.4 | 5.9 5.9 | 5.9 | | 7.2 7.4 | 7.3 | | 1.7 1.8 | 1.8 | | |
| G3 | Sunny | Moderate | 13:21 | Surface | 1 | 22.5 22.5 | 22.5 | 8.2 8.2 | 8.2 | 33.5 33.5 | 33.5 | 94.6 94.5 | 94.6 | 6.8 6.8 | 6.8 | 6.8 | 4.3 4.0 | 4.2 | 4.6 | 1.3 1.3 | 1.3 | 2.5 | |
| | | | | Middle | 4 | 22.5 22.4 | 22.5 | 8.2 8.2 | 8.2 | 33.5 33.5 | 33.5 | 94.9 94.5 | 94.7 | 6.8 6.8 | 6.8 | | 4.5 4.3 | 4.4 | | 2.8 2.7 | 2.8 | | |
| | | | | Bottom | 7 | 22.5 22.4 | 22.5 | 8.2 8.2 | 8.2 | 33.5 33.5 | 33.5 | 95.8 97.2 | 96.5 | 6.8 6.9 | 6.9 | | 5.5 5.1 | 5.3 | | 3.5 3.4 | 3.5 | | |
| G4 | Sunny | Moderate | 13:53 | Surface | 1 | 23.4 22.8 | 23.1 | 8.2 8.2 | 8.2 | 31.5 31.5 | 31.5 | 82.4 77.6 | 80.0 | 5.9 5.6 | 5.8 | 5.8 | 4.7 4.3 | 4.5 | 6.0 | 1.2 1.3 | 1.3 | 1.6 | |
| | | | | Middle | 4 | 23.4 22.7 | 23.1 | 8.2 8.2 | 8.2 | 32.5 32.5 | 32.5 | 79.3 79.4 | 79.4 | 5.6 5.7 | 5.7 | | 5.9 6.2 | 6.1 | | 1.4 1.3 | 1.4 | | |
| | | | | Bottom | 7 | 22.8 22.8 | 22.8 | 8.3 8.3 | 8.3 | 33.2 33.0 | 33.1 | 79.9 75.0 | 77.5 | 5.7 5.3 | 5.5 | | 7.2 7.3 | 7.3 | | 2.0 2.1 | 2.1 | | |
| M1 | Sunny | Moderate | 13:00 | Surface | 1 | 22.5 22.5 | 22.5 | 8.2 8.2 | 8.2 | 33.5 33.5 | 33.5 | 91.5 91.8 | 91.7 | 6.5 6.6 | 6.6 | 6.6 | 5.2 5.3 | 5.3 | 5.2 | 2.2 2.3 | 2.3 | 2.1 | |
| | | | | Middle | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |
| | | | | Bottom | 3 | 22.5 22.4 | 22.5 | 8.2 8.2 | 8.2 | 33.7 33.7 | 33.7 | 90.6 90.2 | 90.4 | 6.5 6.4 | 6.5 | | 4.7 5.2 | 5.0 | | 1.8 1.8 | 1.8 | | |
| M2 | Sunny | Moderate | 12:45 | Surface | 1 | 23.1 22.5 | 22.8 | 8.2 8.2 | 8.2 | 31.7 31.7 | 31.7 | 90.9 90.3 | 90.6 | 6.5 6.5 | 6.5 | 6.5 | 4.9 5.0 | 5.0 | 5.1 | 2.2 2.2 | 2.2 | 1.7 | |
| | | | | Middle | 5.5 | 23.1 22.3 | 22.7 | 8.2 8.2 | 8.2 | 32.9 32.9 | 32.9 | 90.5 89.7 | 90.1 | 6.4 6.4 | 6.4 | | 4.7 4.9 | 4.8 | | 1.3 1.3 | 1.3 | | |
| | | | | Bottom | 10 | 22.5 22.3 | 22.4 | 8.2 8.2 | 8.2 | 33.1 33.2 | 33.2 | 82.2 81.5 | 81.9 | 5.9 5.8 | 5.9 | | 5.4 5.3 | 5.4 | | 1.4 1.5 | 1.5 | | |
| M3 | Sunny | Moderate | 13:41 | Surface | 1 | 23.4 23.0 | 23.2 | 8.2 8.2 | 8.2 | 31.3 31.2 | 31.3 | 88.4 90.2 | 89.3 | 6.3 6.5 | 6.4 | 6.1 | 3.9 4.0 | 4.0 | 5.1 | 1.1 1.1 | 1.1 | 2.1 | |
| | | | | Middle | 4.5 | 23.4 22.8 | 23.1 | 8.2 8.2 | 8.2 | 31.9 31.9 | 31.9 | 79.3 82.5 | 80.9 | 5.6 5.9 | 5.8 | | 5.3 5.5 | 5.4 | | 2.2 2.3 | 2.3 | | |
| | | | | Bottom | 8 | 23.0 22.8 | 22.9 | 8.2 8.2 | 8.2 | 32.3 32.3 | 32.3 | 79.8 78.4 | 79.1 | 5.7 5.6 | 5.7 | | 5.7 6.1 | 5.9 | | 3.0 3.0 | 3.0 | | |
| M4 | Sunny | Moderate | 12:37 | Surface | 1 | 22.5 22.4 | 22.5 | 8.2 8.2 | 8.2 | 33.5 33.5 | 33.5 | 99.2 97.8 | 98.5 | 7.1 7.0 | 7.1 | 6.9 | 4.0 4.5 | 4.3 | 5.8 | 2.3 2.4 | 2.4 | 2.0 | |
| | | | | Middle | 4 | 22.5 21.9 | 22.2 | 8.2 8.2 | 8.2 | 33.6 33.6 | 33.6 | 92.0 91.2 | 91.6 | 6.6 6.6 | 6.6 | | 5.7 5.7 | 5.7 | | 1.5 1.6 | 1.6 | | |
| | | | | Bottom | 7 | 22.4 21.9 | 22.2 | 8.2 8.2 | 8.2 | 33.5 33.5 | 33.5 | 90.2 89.1 | 89.7 | 6.4 6.4 | 6.4 | | 7.2 7.4 | 7.3 | | 1.9 1.8 | 1.9 | | |
| M5 | Sunny | Moderate | 14:17 | Surface | 1 | 23.3 23.0 | 23.2 | 8.2 8.2 | 8.2 | 31.5 31.5 | 31.5 | 85.4 90.7 | 88.1 | 6.1 6.5 | 6.3 | 6.3 | 4.7 4.2 | 4.5 | 5.7 | 2.1 2.1 | 2.1 | 3.0 | |
| | | | | Middle | 5.5 | 23.3 22.8 | 23.1 | 8.2 8.3 | 8.3 | 32.5 32.6 | 32.6 | 86.7 91.3 | 89.0 | 6.1 6.5 | 6.3 | | 5.1 5.5 | 5.3 | | 3.8 3.9 | 3.9 | | |
| | | | | Bottom | 10 | 23.0 22.8 | 22.9 | 8.3 8.3 | 8.3 | 33.2 33.3 | 33.3 | 88.8 83.6 | 86.2 | 6.3 5.9 | 6.1 | | 7.3 7.5 | 7.4 | | 3.0 3.1 | 3.1 | | |
| M6 | Sunny | Moderate | 14:03 | Surface | - | - | - | - | - | - | - | - | - | - | - | 6.9 | - | - | 5.3 | - | - | 1.4 | |
| | | | | Middle | 1.4 | 23.5 23.0 | 23.3 | 8.2 8.2 | 8.2 | 31.3 31.3 | 31.3 | 96.7 95.5 | 96.1 | 6.9 6.8 | 6.9 | | 5.3 5.2 | 5.3 | | 1.4 1.4 | 1.4 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Appendix I - Action and Limit Levels for Marine Water Quality on 27 February 2017 (Mid-Flood Tide)

| Parameter (unit) | Depth | Action Level | Limit Level |
|---|-------------------------------------|---|--|
| DO in mg/L (See Note 1 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Depth Average | <u>4.9 mg/L</u> | <u>4.6 mg/L</u> |
| | Bottom | <u>4.2 mg/L</u> | <u>3.6 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>5.0 mg/L</u> | <u>4.7 mg/L</u> |
| Turbidity in NTU (See Note 2 and 4) | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>19.3 NTU</u> or 120% of upstream control station's Turbidity at the same tide of the same day <u>C1: 9.6 NTU</u> | <u>22.2 NTU</u> or 130% of upstream control station's Turbidity at the same tide of the same day <u>C1: 10.4 NTU</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>19.0 NTU</u> | <u>19.4 NTU</u> |
| | <u>Stations G1-G4</u> | | |
| SS in mg/L (See Note 2 and 4) | Surface | <u>6.0 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.2 mg/L</u> | <u>6.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.5 mg/L</u> |
| | <u>Stations M1-M5</u> | | |
| | Surface | <u>6.2 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.2 mg/L</u> | <u>7.4 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.5 mg/L</u> |
| | <u>Stations G1-G4, M1-M5</u> | | |
| | Bottom | <u>6.9 mg/L</u> or 120% of upstream control station's SS at the same tide of the same day <u>C1: 3.6 mg/L</u> | <u>7.9 mg/L</u> or 130% of upstream control station's SS at the same tide of the same day <u>C1: 3.9 mg/L</u> |
| | <u>Station M6</u> | | |
| | Intake Level | <u>8.3 mg/L</u> | <u>8.6 mg/L</u> |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition

**Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction
Water Quality Monitoring Results on 27 February 2017**

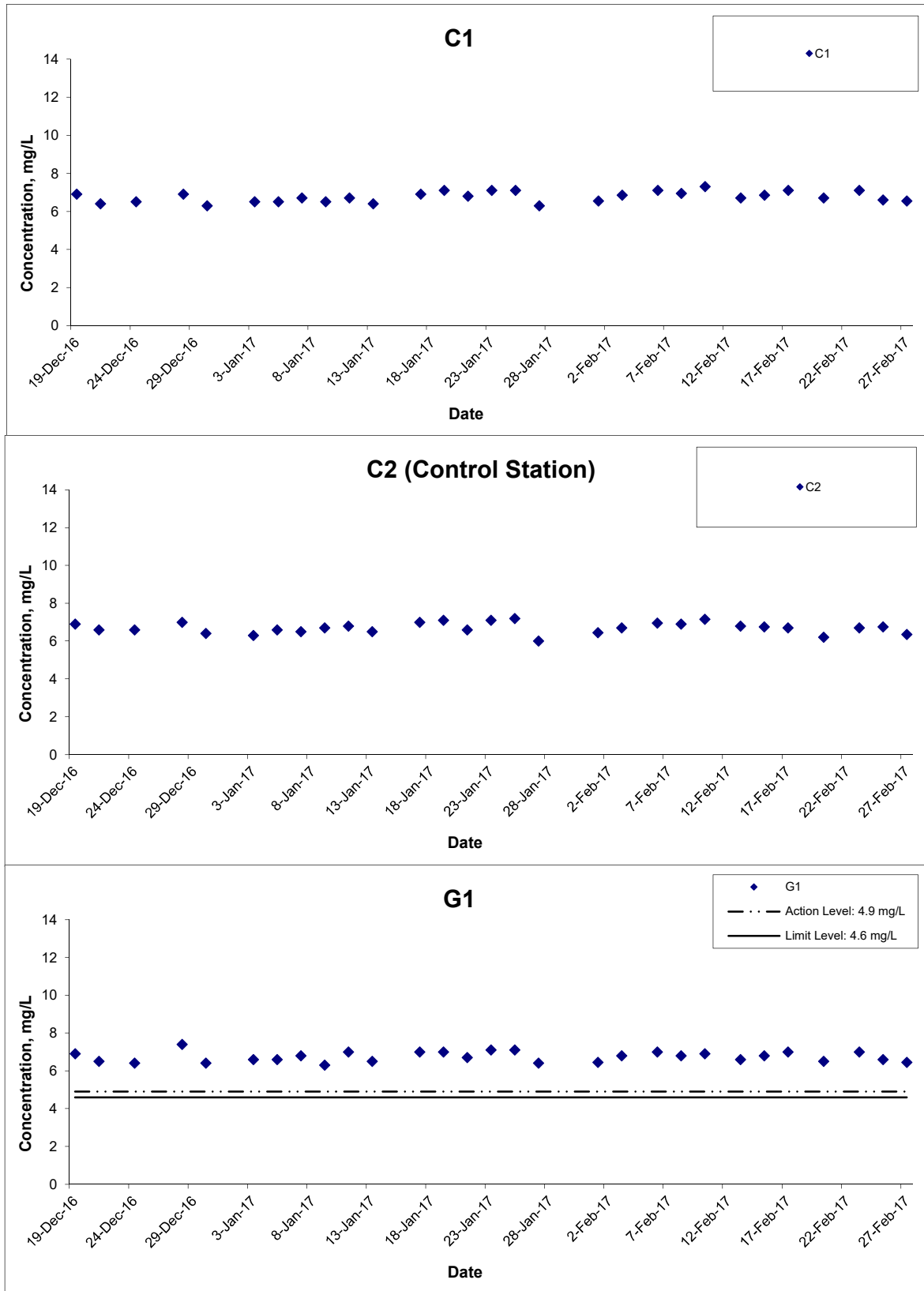
(Mid-Flood Tide)

| Location | Weather Condition | Sea Condition** | Sampling Time | Depth (m) | | Temperature (°C) | | pH | | Salinity ppt | | DO Saturation (%) | | Dissolved Oxygen (mg/L) | | | Turbidity(NTU) | | | Suspended Solids (mg/L) | | | |
|----------|-------------------|-----------------|---------------|-----------|-----|------------------|---------|------------|---------|--------------|---------|-------------------|---------|-------------------------|---------|-----|----------------|------------|-----|-------------------------|---------|-----|---|
| | | | | | | Value | Average | Value | Average | Value | Average | Value | Average | Value | Average | DA* | Value | Average | DA* | Value | Average | DA* | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| C1 | Sunny | Moderate | 19:05 | Surface | 1 | 23.8 23.6 | 23.7 | 8.2 8.1 | 8.2 | 31.7 31.7 | 31.7 | 98.9 101.3 | 100.1 | 7.0 7.2 | 7.1 | 6.7 | 6.4 6.0 | 6.2 | 7.0 | 2.6 2.7 | 2.7 | 2.9 | |
| | | | | Middle | 10 | 23.8 23.5 | 23.7 | 8.1 8.2 | 8.2 | 31.9 31.9 | 31.9 | 87.8 88.1 | 88.0 | 6.2 6.2 | 6.2 | | 6.9 | 2.9 3.0 | | 3.0 | | | |
| | | | | Bottom | 19 | 23.6 23.5 | 23.6 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 86.8 86.8 | 86.8 | 6.1 6.1 | 6.1 | | 8.4 8.0 | 8.0 | | 3.0 3.0 | 3.0 | | |
| C2 | Sunny | Moderate | 17:27 | Surface | 1 | 23.5 23.4 | 23.5 | 8.2 8.1 | 8.2 | 32.0 32.0 | 32.0 | 95.1 96.3 | 95.7 | 6.7 6.8 | 6.8 | 6.6 | 4.6 4.5 | 4.6 | 5.6 | 1.6 1.6 | 1.6 | 1.6 | |
| | | | | Middle | 18 | 23.5 23.5 | 23.5 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 88.4 88.4 | 88.4 | 6.3 6.3 | 6.3 | | 4.8 5.1 | 5.0 | | 1.6 1.5 | 1.6 | | |
| | | | | Bottom | 35 | 23.4 23.5 | 23.5 | 8.1 8.1 | 8.1 | 32.1 32.1 | 32.1 | 88.0 88.1 | 88.0 | 6.2 6.2 | 6.2 | | 7.3 7.2 | 7.2 | | 1.6 1.6 | 1.6 | | |
| G1 | Sunny | Moderate | 18:09 | Surface | 1 | 23.4 23.3 | 23.4 | 8.1 8.2 | 8.2 | 31.8 31.8 | 31.8 | 94.9 95.5 | 95.2 | 6.7 6.8 | 6.8 | 6.5 | 5.1 4.9 | 5.0 | 5.8 | <0.5 <0.5 | <0.5 | 1.2 | |
| | | | | Middle | 4 | 23.4 23.1 | 23.3 | 8.2 8.2 | 8.2 | 31.9 31.9 | 31.9 | 85.7 86.7 | 86.2 | 6.1 6.2 | 6.2 | | 5.3 5.6 | 5.5 | | 1.0 1.1 | 1.1 | | |
| | | | | Bottom | 7 | 23.3 23.1 | 23.2 | 8.2 8.2 | 8.2 | 32.0 32.0 | 32.0 | 86.1 87.1 | 86.6 | 6.1 6.2 | 6.2 | | 6.7 6.8 | 6.8 | | 2.1 2.1 | 2.1 | | |
| G2 | Sunny | Moderate | 17:51 | Surface | 1 | 23.4 23.4 | 23.4 | 8.1 8.1 | 8.1 | 32.3 32.3 | 32.3 | 93.8 94.4 | 94.1 | 6.6 6.7 | 6.7 | 6.5 | 5.3 5.2 | 5.3 | 5.8 | 2.5 2.6 | 2.6 | 3.0 | |
| | | | | Middle | 5 | 23.4 23.3 | 23.4 | 8.1 8.1 | 8.1 | 32.4 32.4 | 32.4 | 87.8 86.6 | 87.2 | 6.2 6.1 | 6.2 | | 5.8 5.7 | 5.8 | | 3.9 3.9 | 3.9 | | |
| | | | | Bottom | 9 | 23.4 23.3 | 23.4 | 8.2 8.2 | 8.2 | 32.8 32.7 | 32.8 | 83.9 82.7 | 83.3 | 5.9 5.8 | 5.9 | | 6.3 6.3 | 6.3 | | 2.6 2.6 | 2.6 | | |
| G3 | Sunny | Moderate | 18:19 | Surface | 1 | 23.4 23.4 | 23.4 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 95.6 96.2 | 95.9 | 6.8 6.8 | 6.8 | 6.5 | 5.4 5.2 | 5.3 | 6.2 | 1.6 1.5 | 1.6 | 1.8 | |
| | | | | Middle | 4 | 23.3 23.2 | 23.3 | 8.1 8.1 | 8.1 | 32.1 32.1 | 32.1 | 86.8 86.6 | 86.7 | 6.2 6.2 | 6.2 | | 5.9 6.4 | 6.2 | | 1.2 1.2 | 1.2 | | |
| | | | | Bottom | 7 | 23.4 23.2 | 23.3 | 8.1 8.1 | 8.1 | 32.4 32.3 | 32.4 | 85.5 84.7 | 85.1 | 6.0 6.0 | 6.0 | | 7.1 7.1 | 7.1 | | 2.4 2.5 | 2.5 | | |
| G4 | Sunny | Moderate | 18:38 | Surface | 1 | 23.6 23.6 | 23.7 | 8.0 8.1 | 8.1 | 31.8 31.8 | 31.8 | 95.2 95.2 | 95.2 | 6.7 6.7 | 6.7 | 6.5 | 5.4 4.8 | 5.1 | 6.4 | 1.5 1.4 | 1.5 | 1.8 | |
| | | | | Middle | 4 | 23.6 23.6 | 23.7 | 8.1 8.1 | 8.1 | 32.1 32.1 | 32.1 | 87.3 87.3 | 87.3 | 6.1 6.2 | 6.2 | | 5.4 5.6 | 5.5 | | 2.5 2.4 | 2.5 | | |
| | | | | Bottom | 7 | 23.6 23.6 | 23.6 | 8.1 8.1 | 8.1 | 32.5 32.6 | 32.6 | 91.0 91.0 | 91.0 | 6.4 6.4 | 6.4 | | 8.3 8.6 | 8.5 | | 1.3 1.2 | 1.3 | | |
| M1 | Sunny | Moderate | 18:00 | Surface | 1 | 23.4 23.4 | 23.4 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 94.0 94.3 | 94.2 | 6.7 6.7 | 6.7 | 6.7 | 5.0 5.4 | 5.2 | 5.2 | 2.5 2.5 | 2.5 | 2.2 | |
| | | | | Middle | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |
| | | | | Bottom | 3 | 23.4 23.3 | 23.4 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 87.3 86.8 | 87.1 | 6.2 6.2 | 6.2 | | 5.2 5.2 | 5.2 | | 1.9 1.9 | 1.9 | | |
| M2 | Sunny | Moderate | 17:44 | Surface | 1 | 23.4 23.4 | 23.4 | 8.2 8.2 | 8.2 | 32.2 32.2 | 32.2 | 89.6 90.0 | 89.8 | 6.3 6.4 | 6.4 | 6.2 | 5.1 5.3 | 5.2 | 5.7 | 1.7 1.7 | 1.7 | 1.8 | |
| | | | | Middle | 5.5 | 23.4 23.4 | 23.4 | 8.1 8.1 | 8.1 | 32.3 32.4 | 32.4 | 83.3 83.0 | 83.2 | 5.9 5.9 | 5.9 | | 6.0 5.7 | 5.9 | | 2.3 2.2 | 2.3 | | |
| | | | | Bottom | 10 | 23.4 23.4 | 23.4 | 8.1 8.1 | 8.1 | 32.5 32.5 | 32.5 | 81.7 81.6 | 81.7 | 5.8 5.8 | 5.8 | | 6.1 6.1 | 6.1 | | 1.2 1.3 | 1.3 | | |
| M3 | Sunny | Moderate | 18:31 | Surface | 1 | 23.7 23.6 | 23.7 | 8.1 8.1 | 8.1 | 32.3 32.3 | 32.3 | 106.9 103.0 | 105.0 | 7.5 7.3 | 7.4 | 6.9 | 5.3 5.5 | 5.4 | 5.8 | 2.2 2.2 | 2.2 | 1.4 | |
| | | | | Middle | 4.5 | 23.7 23.6 | 23.7 | 8.1 8.1 | 8.1 | 32.5 32.6 | 32.6 | 89.0 89.2 | 89.1 | 6.3 6.3 | 6.3 | | 6.1 5.9 | 6.0 | | 0.6 0.5 | 0.6 | | |
| | | | | Bottom | 8 | 23.6 23.6 | 23.6 | 8.1 8.1 | 8.1 | 32.9 32.9 | 32.9 | 81.8 81.4 | 81.6 | 5.8 5.7 | 5.8 | | 5.9 6.0 | 6.0 | | 1.4 1.4 | 1.4 | | |
| M4 | Sunny | Moderate | 17:35 | Surface | 1 | 23.4 23.4 | 23.4 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 95.3 95.3 | 95.3 | 6.8 6.8 | 6.8 | 6.5 | 6.4 6.1 | 6.3 | 6.5 | 1.6 1.5 | 1.6 | 2.0 | |
| | | | | Middle | 4 | 23.4 22.7 | 23.1 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 88.0 86.5 | 87.3 | 6.2 6.2 | 6.2 | | 6.6 6.4 | 6.5 | | 2.3 2.3 | 2.3 | | |
| | | | | Bottom | 7 | 23.4 22.7 | 23.1 | 8.1 8.1 | 8.1 | 32.2 32.2 | 32.2 | 84.7 82.3 | 83.5 | 6.0 5.9 | 6.0 | | 6.7 6.8 | 6.8 | | 2.0 1.9 | 2.0 | | |
| M5 | Sunny | Moderate | 18:57 | Surface | 1 | 23.8 23.6 | 23.7 | 8.1 8.1 | 8.1 | 32.0 32.0 | 32.0 | 94.9 94.6 | 94.8 | 6.7 6.7 | 6.7 | 6.4 | 5.8 6.2 | 6.0 | 6.6 | 1.4 1.5 | 1.5 | 1.5 | |
| | | | | Middle | 5.5 | 23.8 23.6 | 23.7 | 8.2 8.1 | 8.2 | 32.1 32.1 | 32.1 | 86.5 86.9 | 86.7 | 6.1 6.1 | 6.1 | | 6.4 6.3 | 6.4 | | 1.6 1.5 | 1.6 | | |
| | | | | Bottom | 10 | 23.6 23.6 | 23.6 | 8.2 8.1 | 8.2 | 32.2 32.2 | 32.2 | 83.5 83.3 | 83.4 | 5.9 5.9 | 5.9 | | 7.3 7.6 | 7.5 | | 1.4 1.5 | 1.5 | | |
| M6 | Sunny | Moderate | 18:45 | Surface | - | - | - | - | - | - | - | - | - | - | - | 7.0 | - | - | 5.8 | - | - | 3.5 | |
| | | | | Middle | 1.5 | 23.8 23.6 | 23.7 | 8.1 8.1 | 8.1 | 31.7 31.7 | 31.7 | 97.6 98.9 | 98.3 | 6.9 7.0 | 7.0 | | 5.6 5.9 | 5.8 | | 3.5 3.5 | 3.5 | | |
| | | | | Bottom | - | - | - | - | - | - | - | - | - | - | - | | - | - | | - | - | | - |

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Dissolved Oxygen (Depth-averaged) at Mid-Ebb Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

Graphical Presentation of Water Quality Monitoring Results

Scale N.T.S

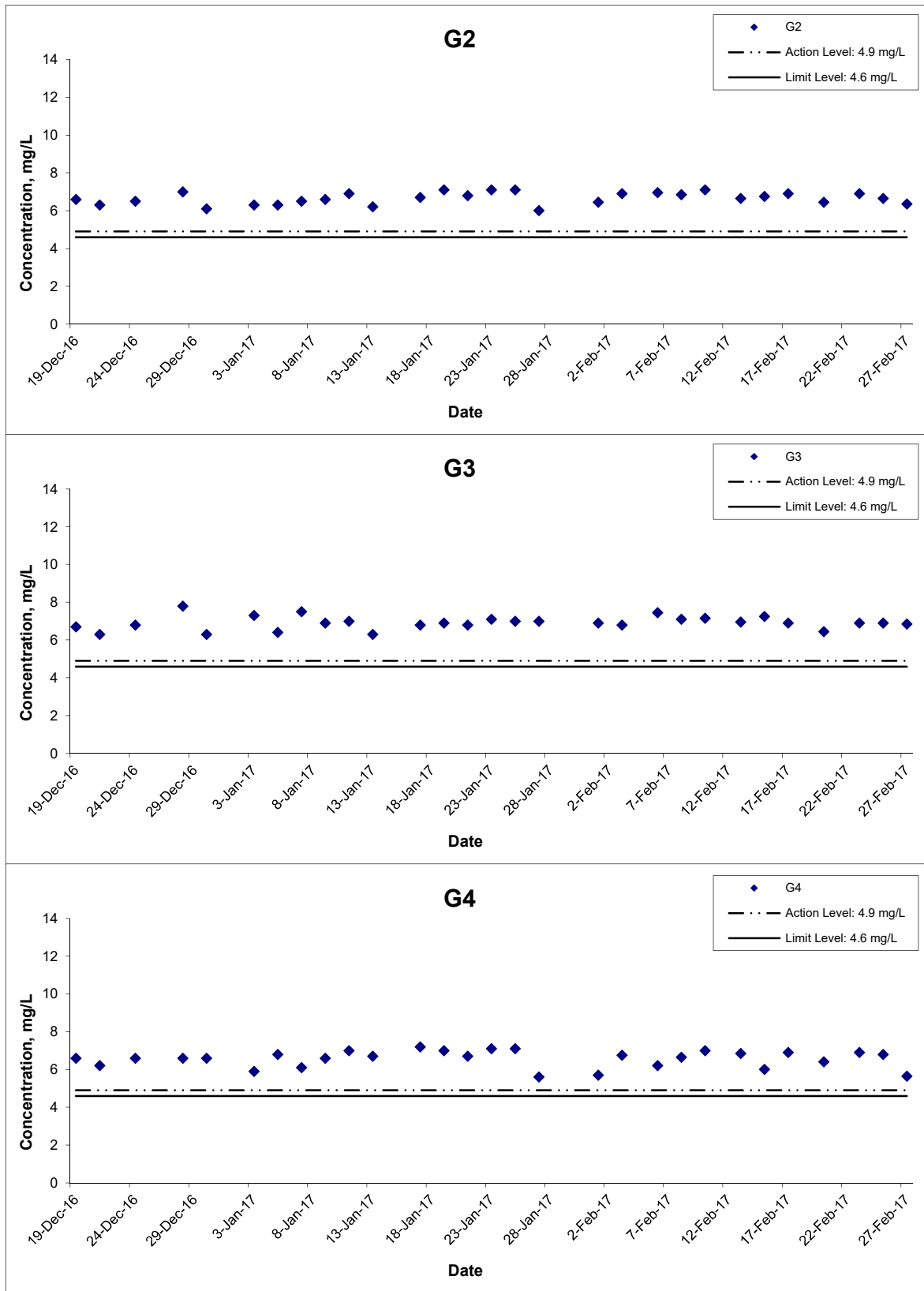
Date Feb 17

Project No. MA16034

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Dissolved Oxygen (Depth-averaged) at Mid-Ebb Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

Graphical Presentation of Water Quality Monitoring Results

Scale N.T.S

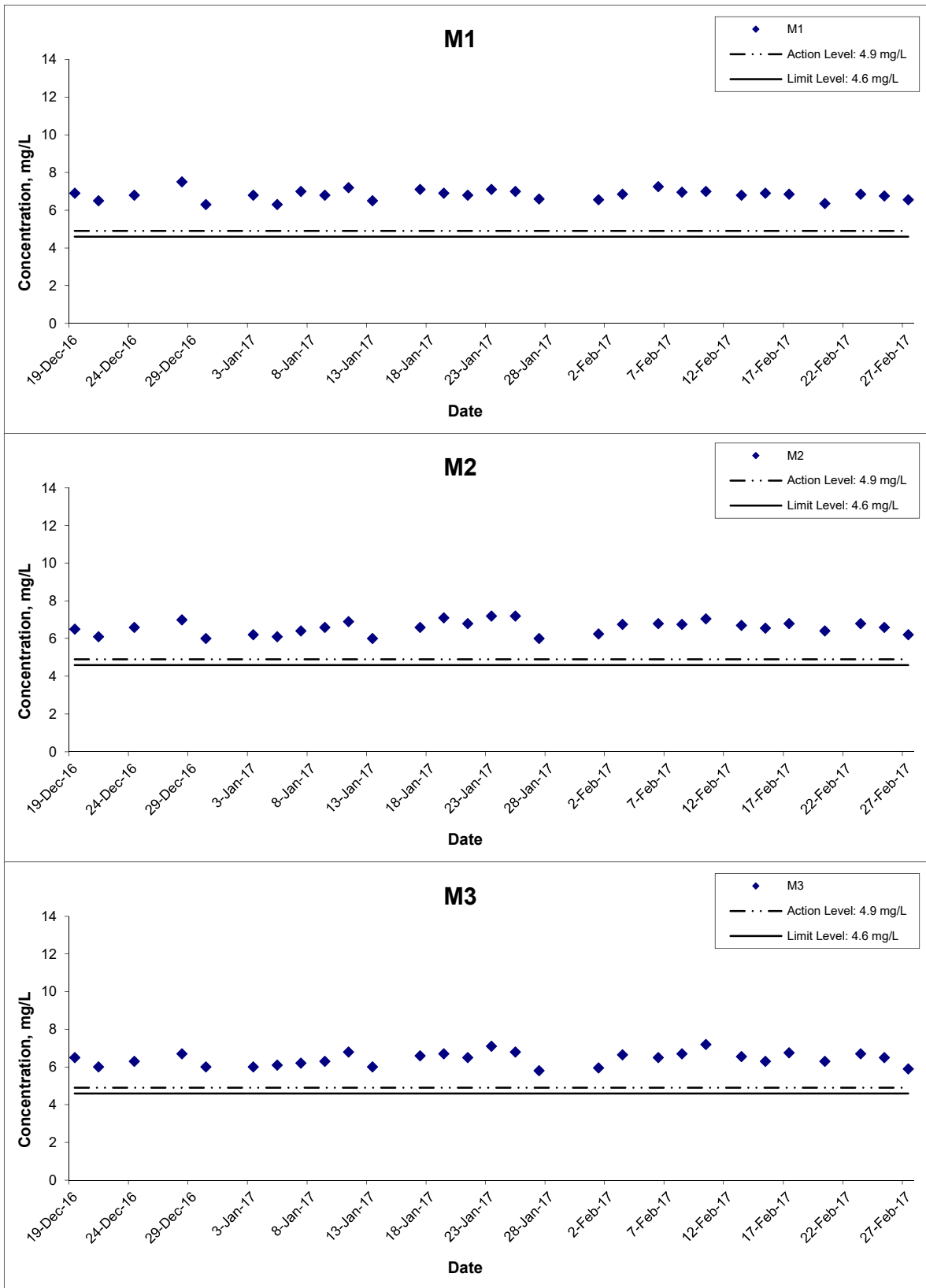
Date Feb 17

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Dissolved Oxygen (Depth-averaged) at Mid-Ebb Tide



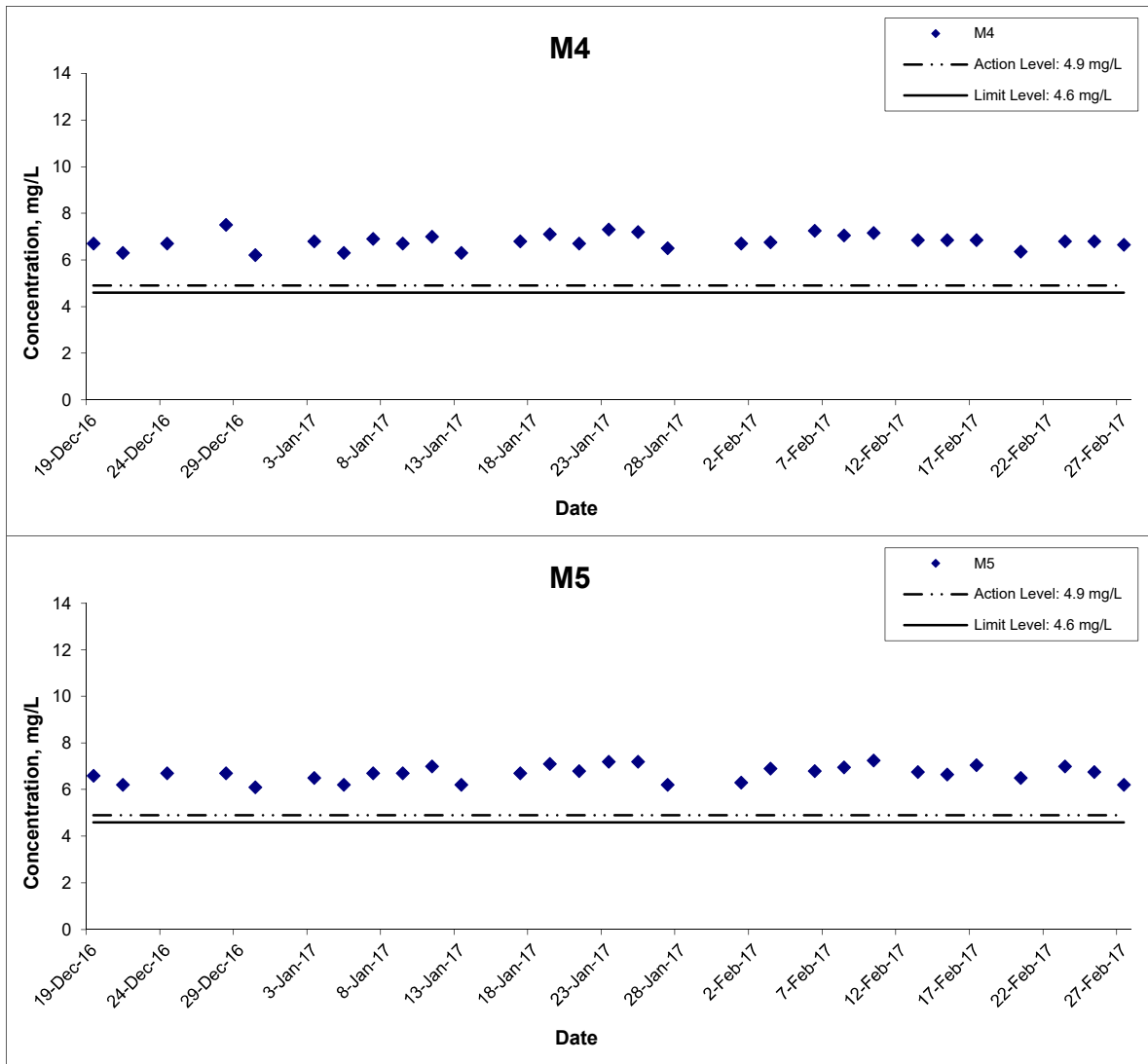
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 Graphical Presentation of Water Quality Monitoring
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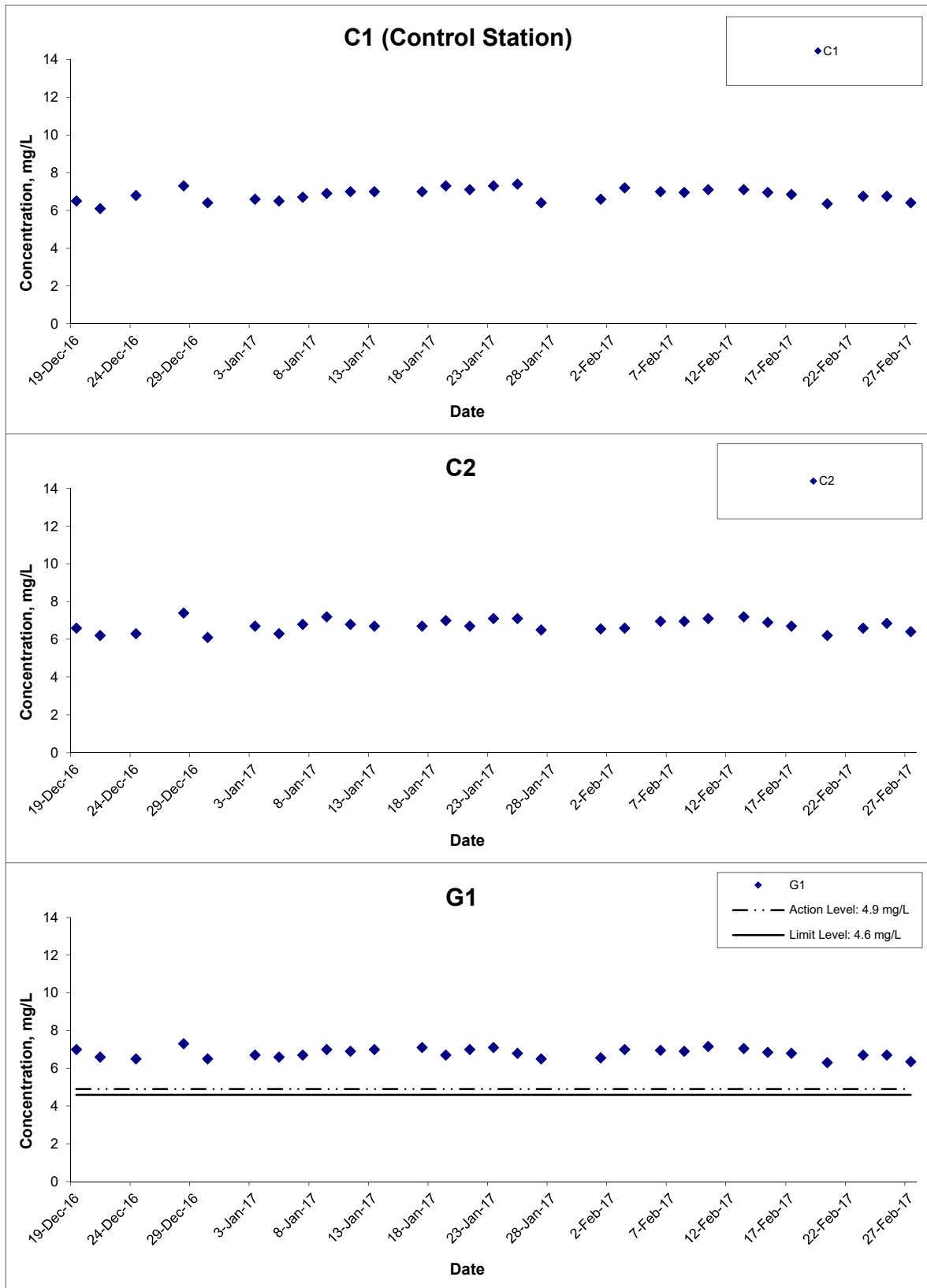


Dissolved Oxygen (Depth-averaged) at Mid-Ebb Tide



| | | | | | | |
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| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

Dissolved Oxygen (Depth-averaged) at Mid-Flood Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

Graphical Presentation of Water Quality Monitoring Results

Scale N.T.S

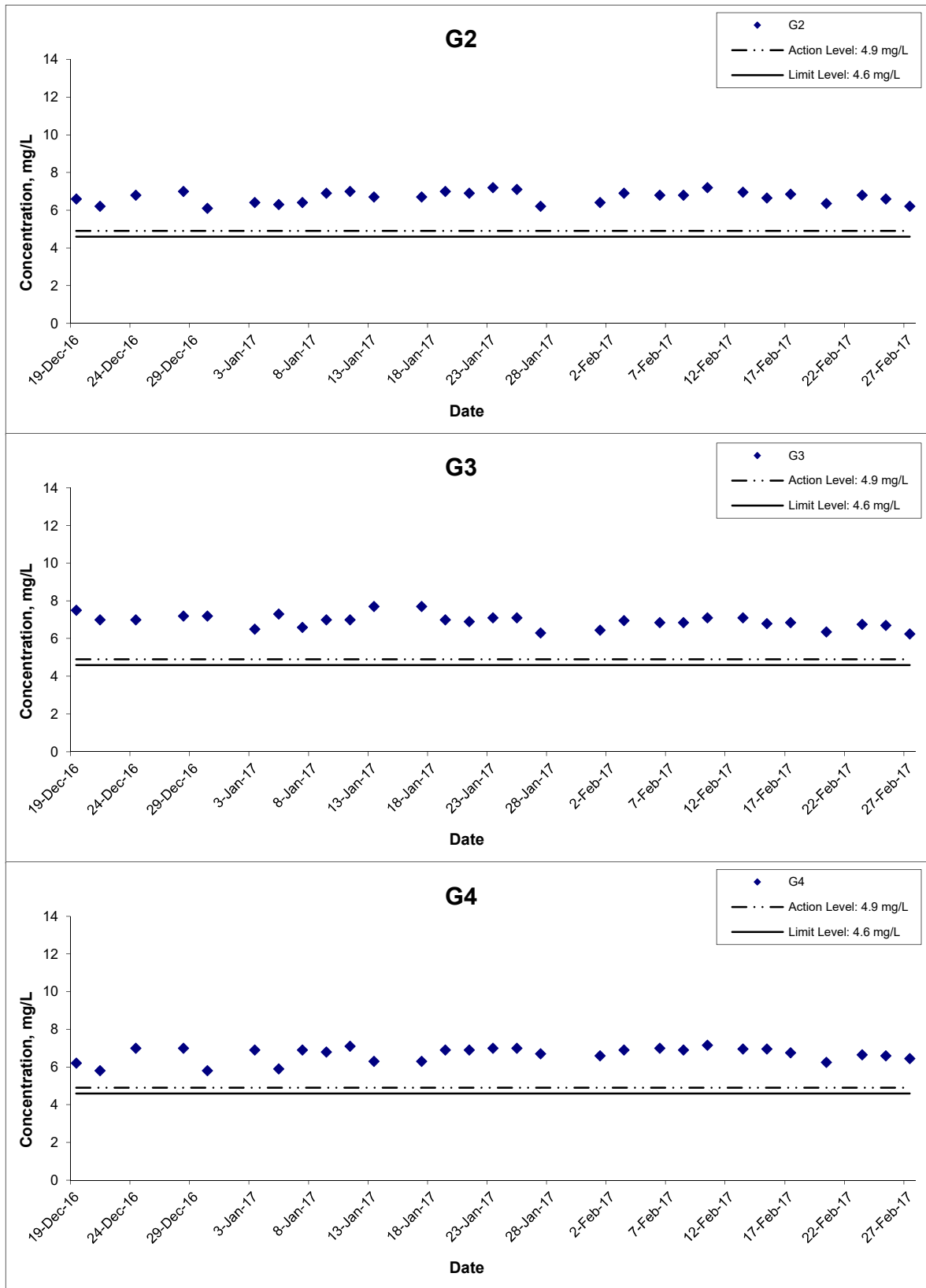
Date Feb 17

Project No. MA16034

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Dissolved Oxygen (Depth-averaged) at Mid-Flood Tide



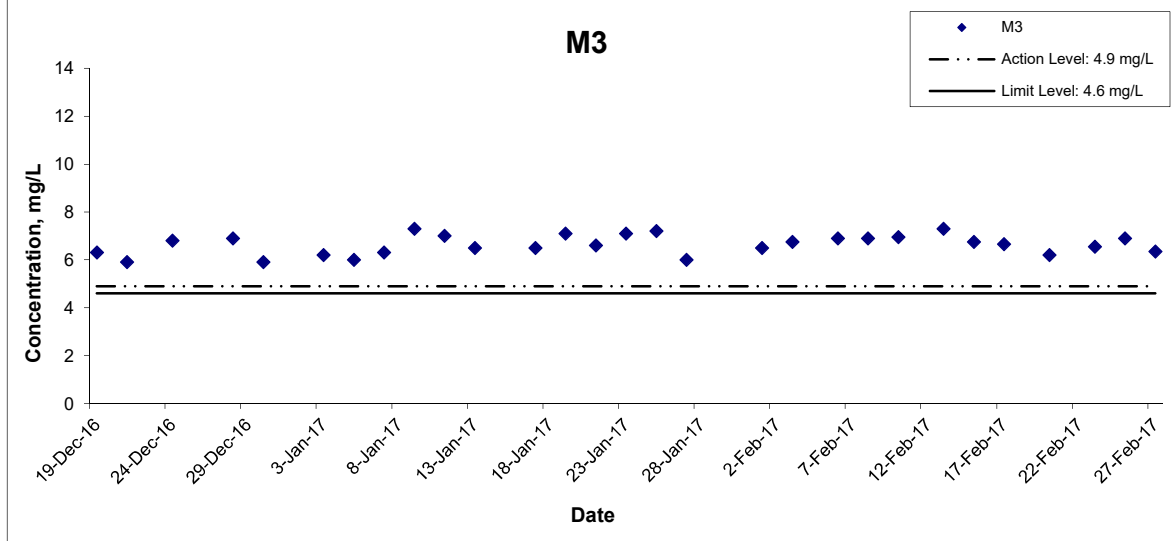
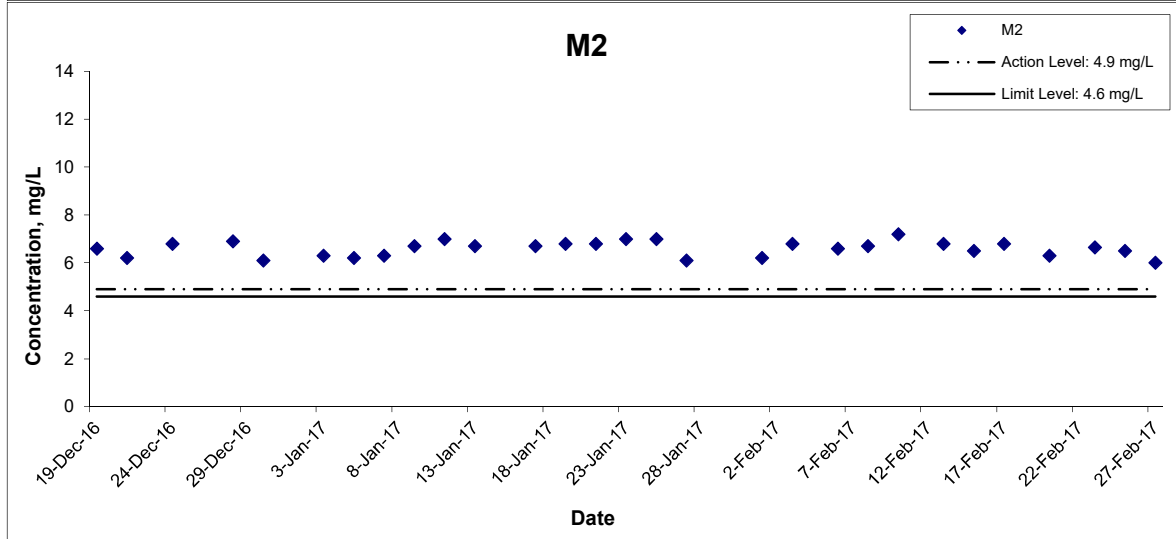
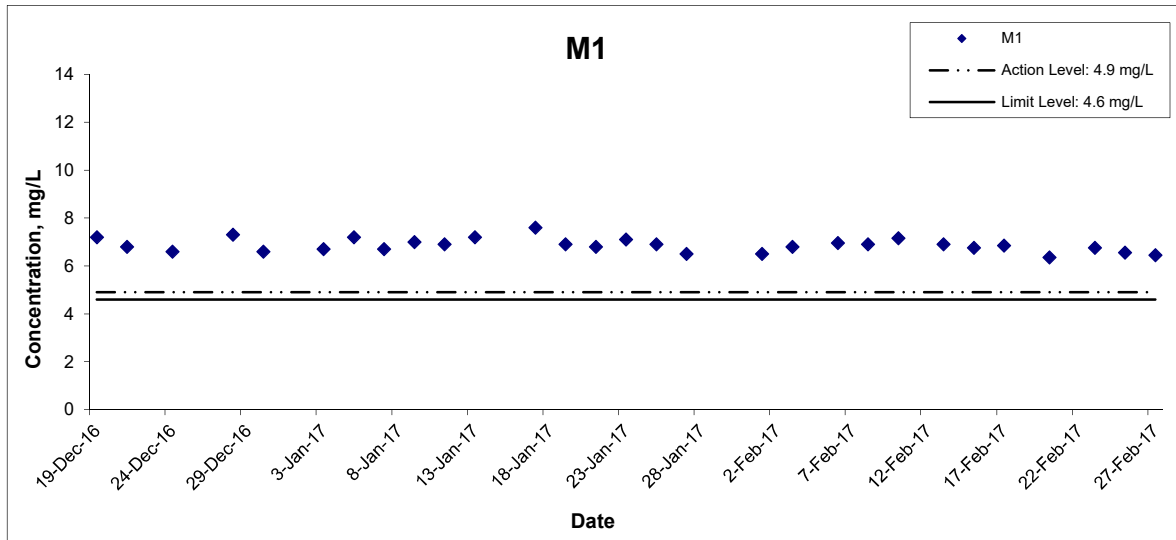
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Dissolved Oxygen (Depth-averaged) at Mid-Flood Tide



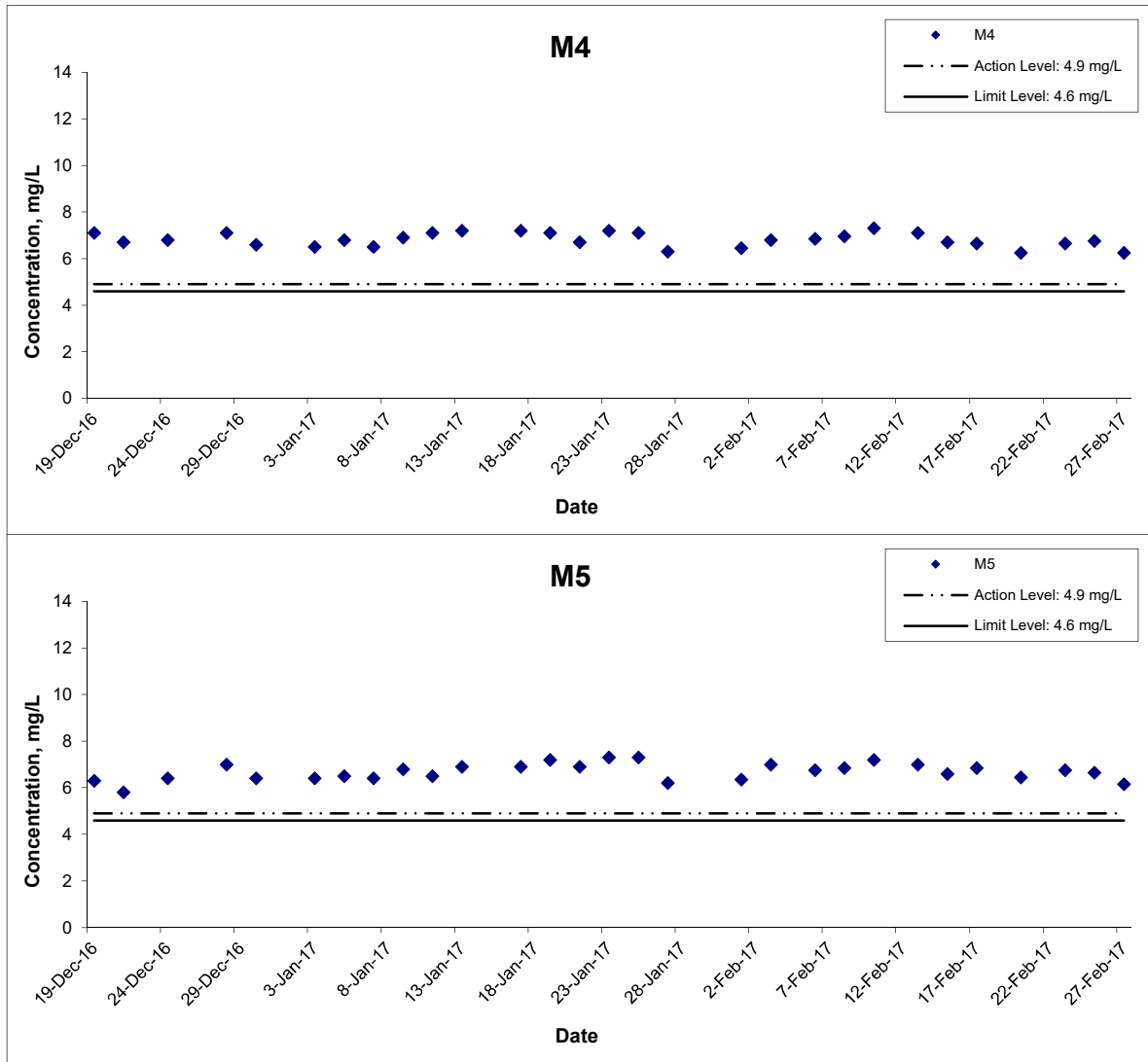
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Dissolved Oxygen (Depth-averaged) at Mid-Flood Tide



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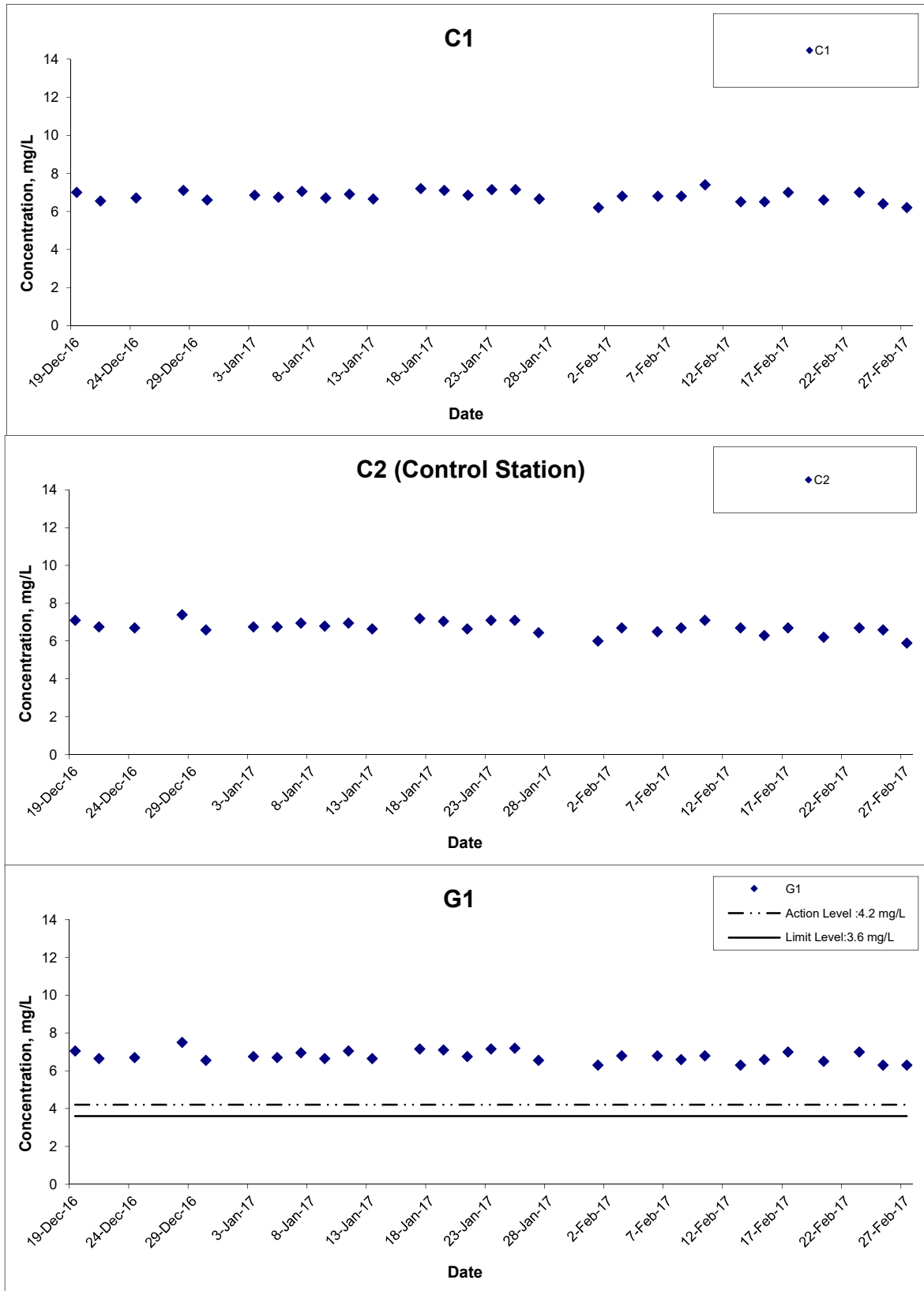
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Dissolved Oxygen (Bottom) at Mid-Ebb Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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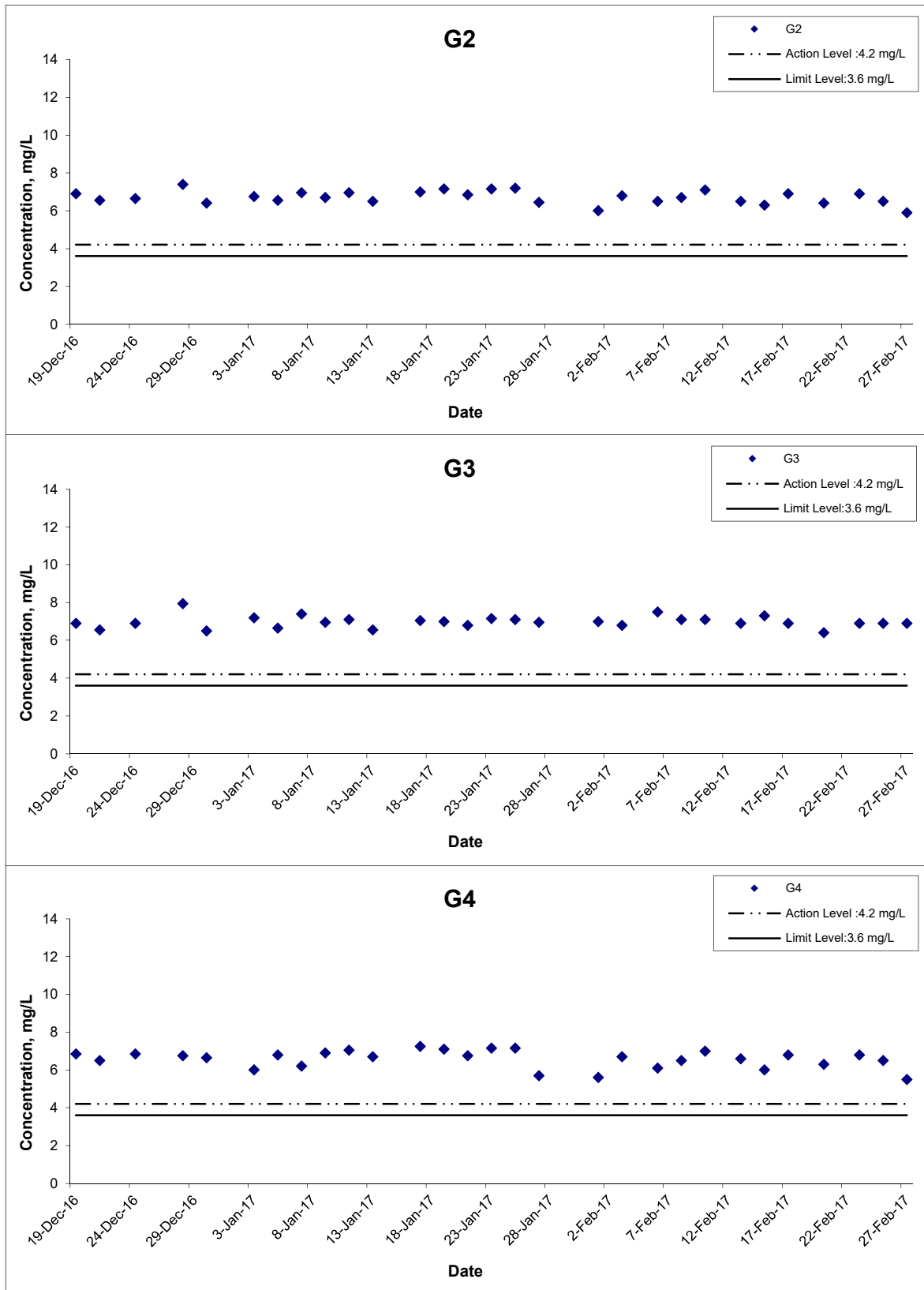
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Dissolved Oxygen (Bottom) at Mid-Ebb Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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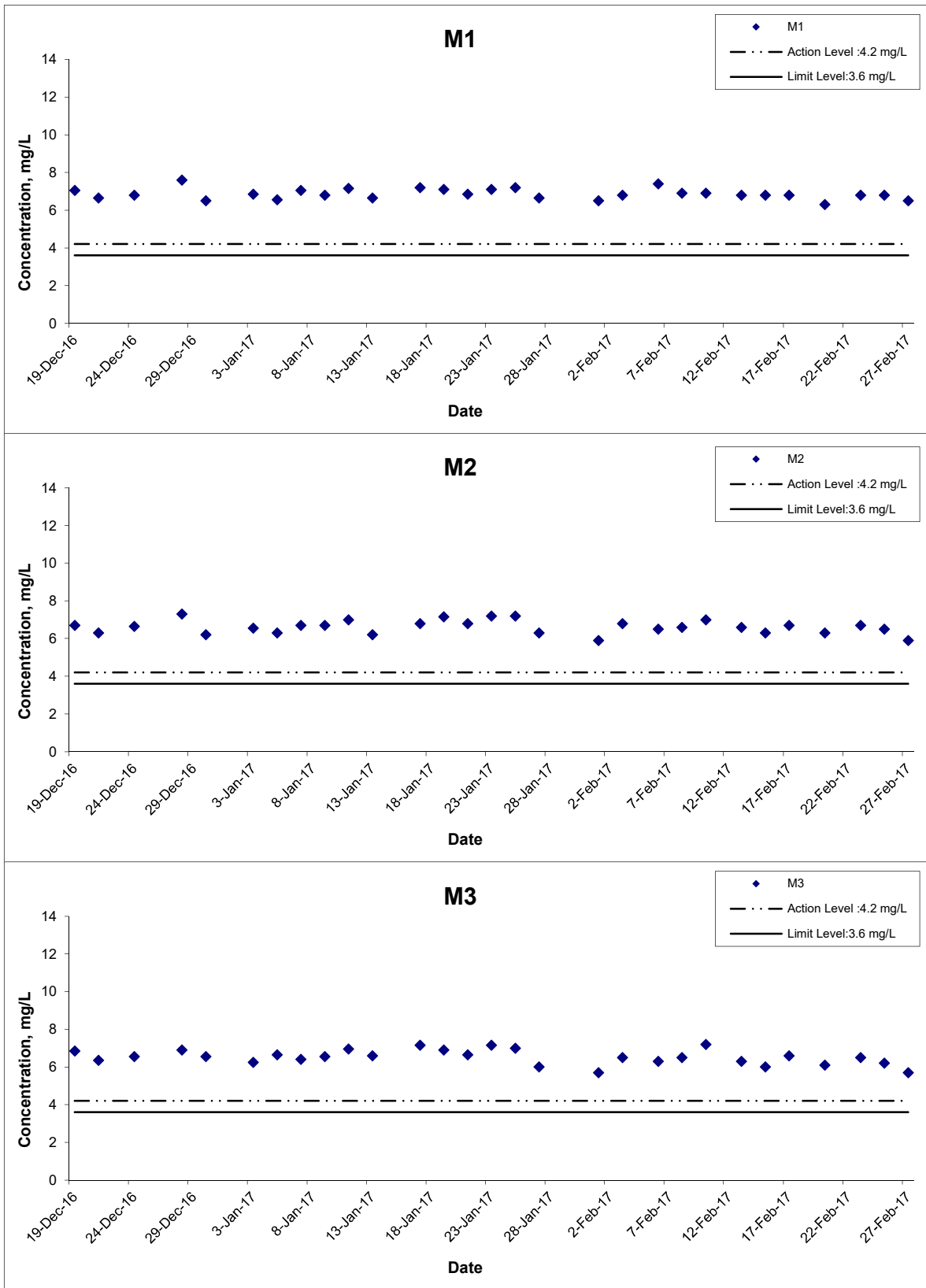
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Dissolved Oxygen (Bottom) at Mid-Ebb Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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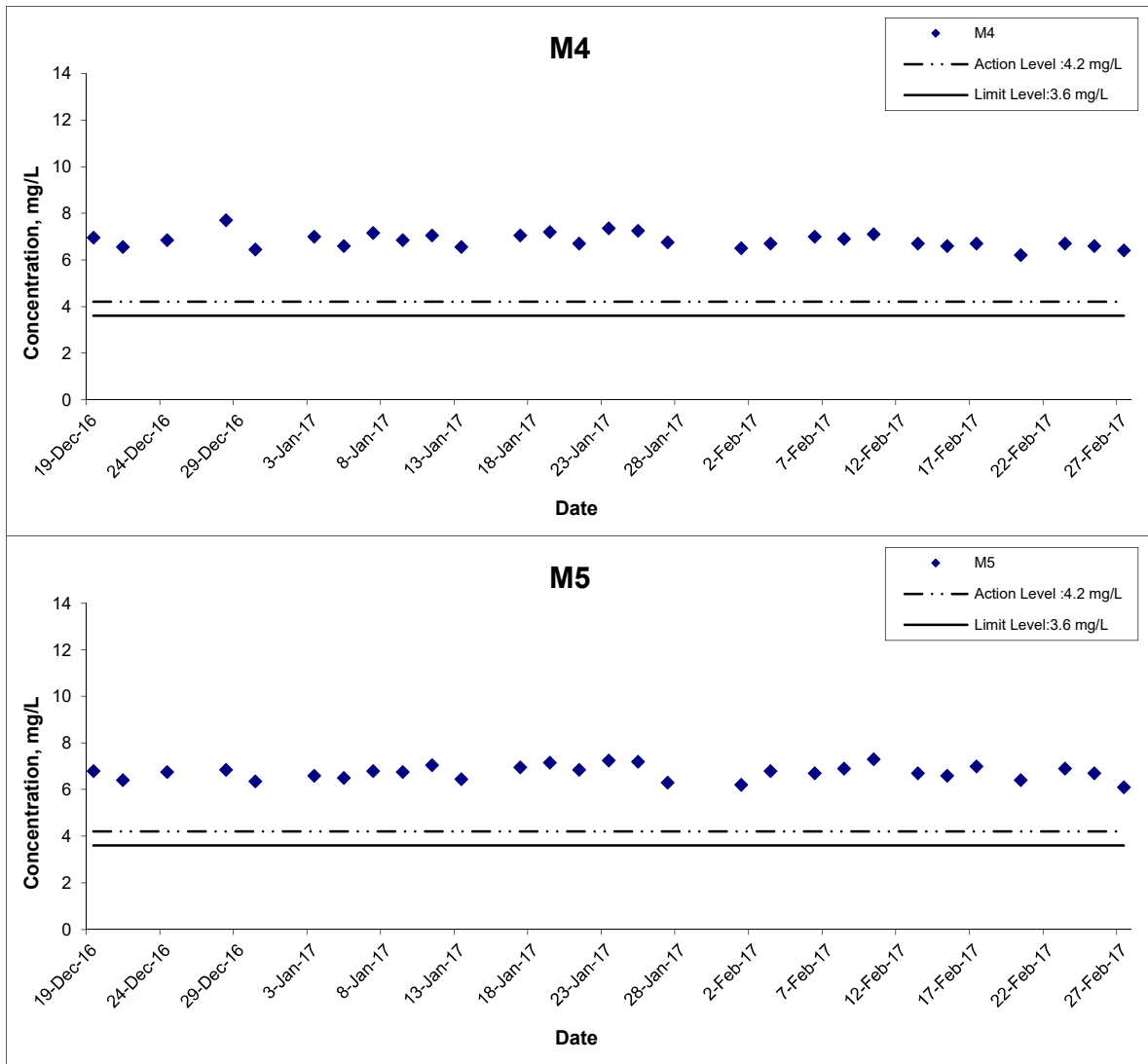
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Dissolved Oxygen (Bottom) at Mid-Ebb Tide



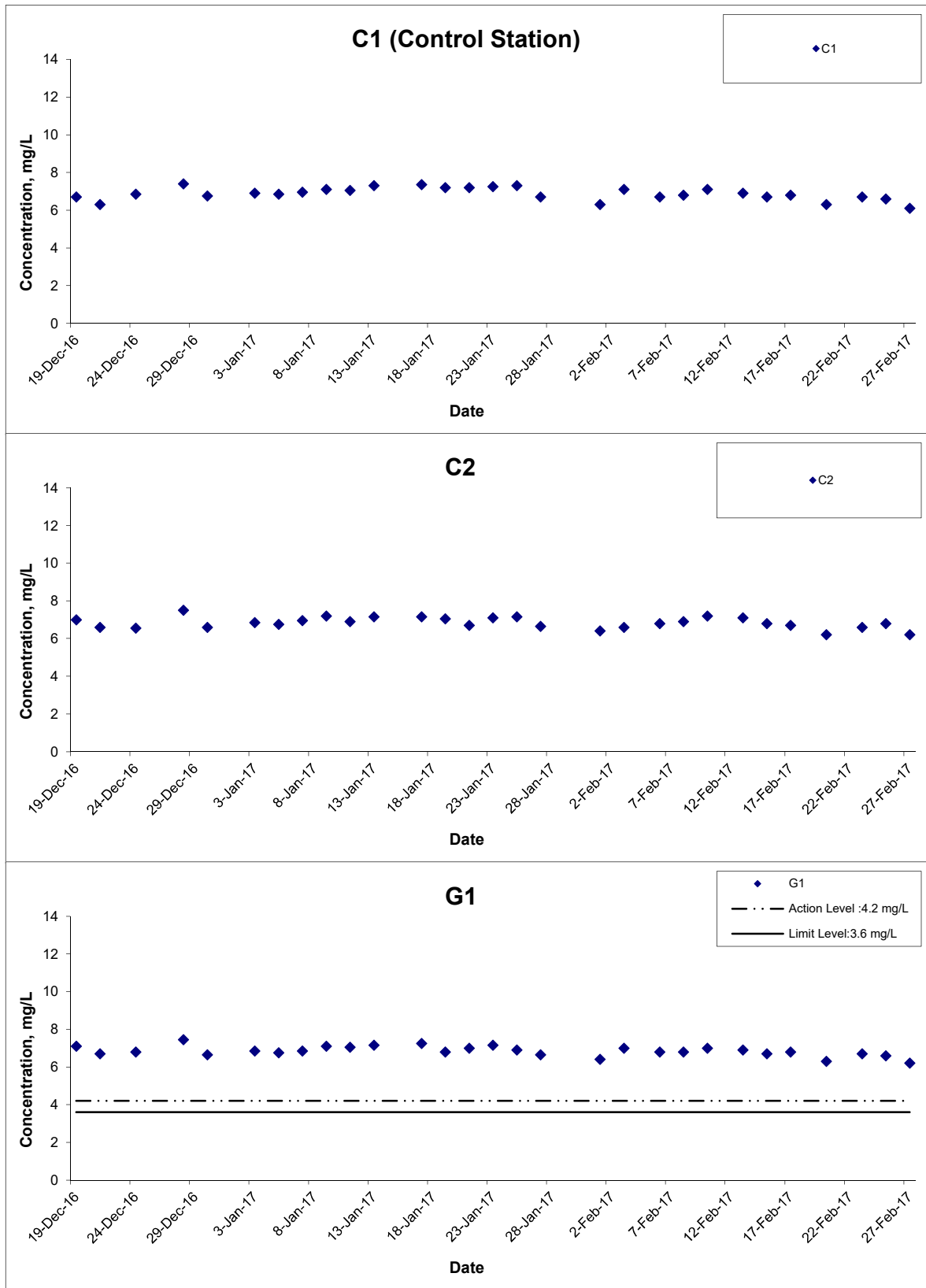
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Dissolved Oxygen (Bottom) at Mid-Flood Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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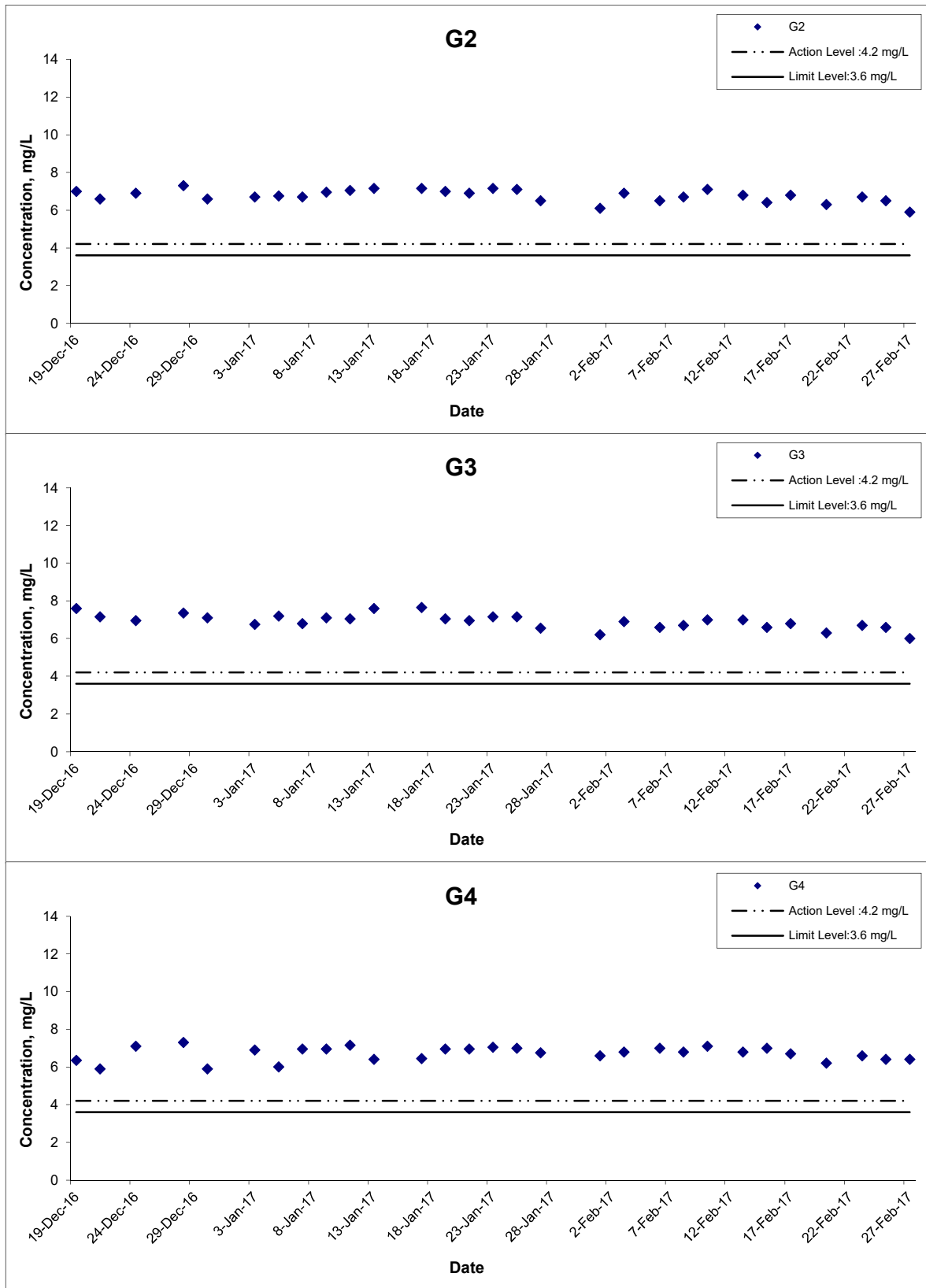
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Dissolved Oxygen (Bottom) at Mid-Flood Tide



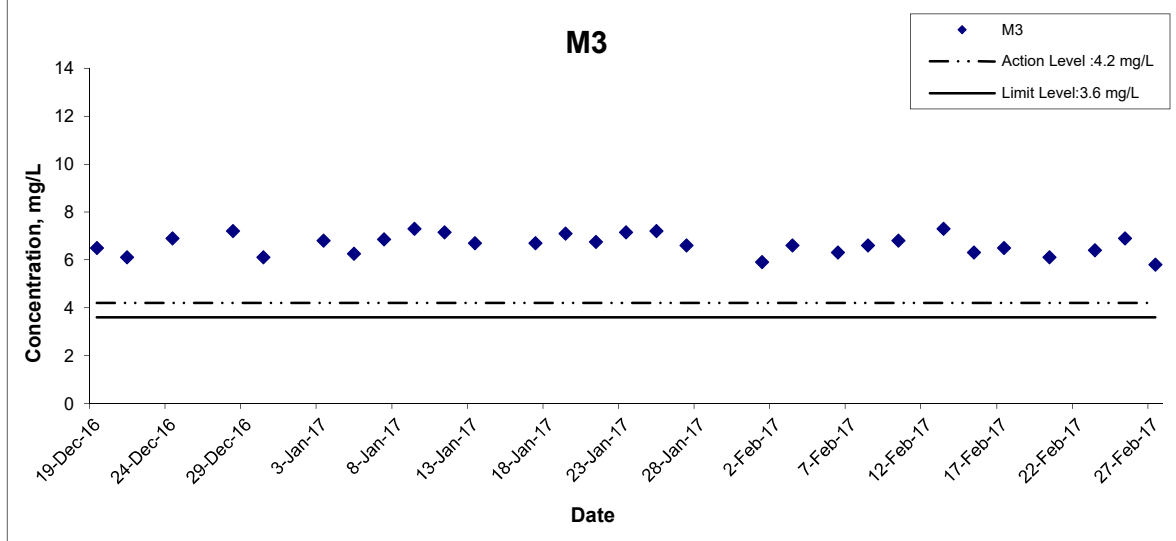
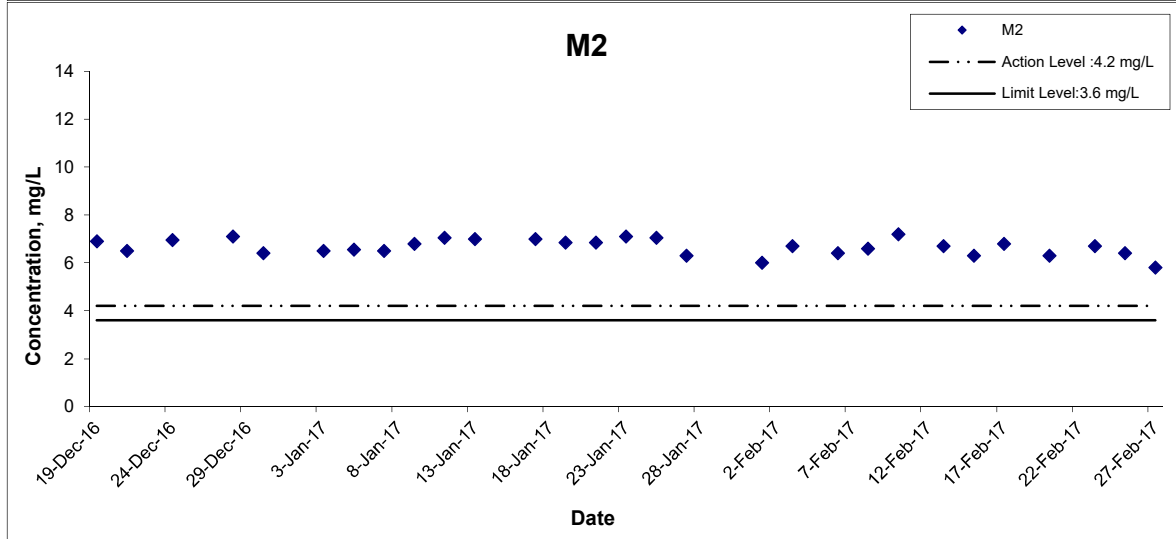
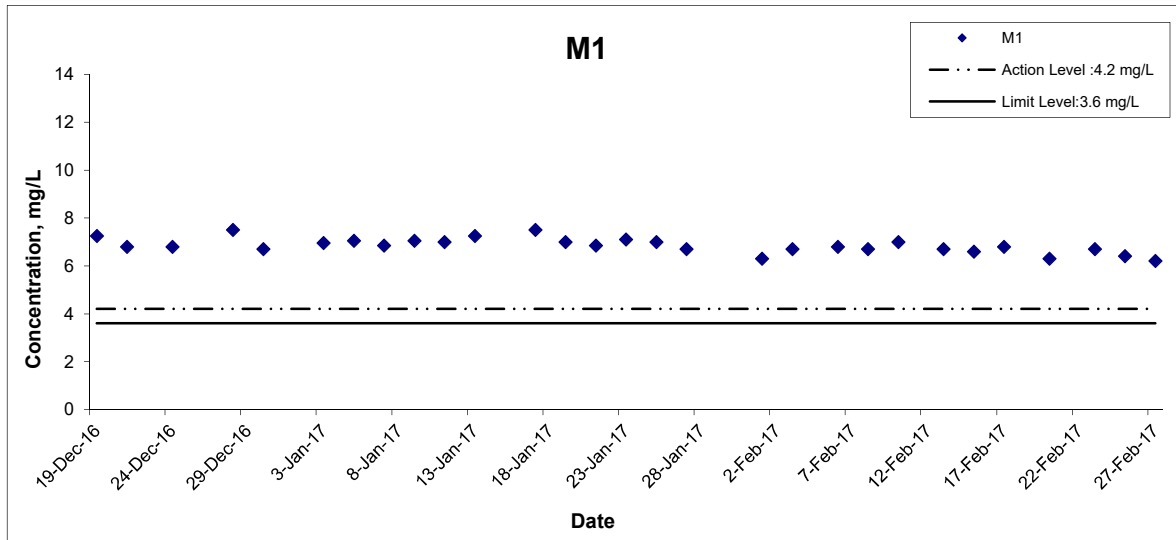
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Dissolved Oxygen (Bottom) at Mid-Flood Tide



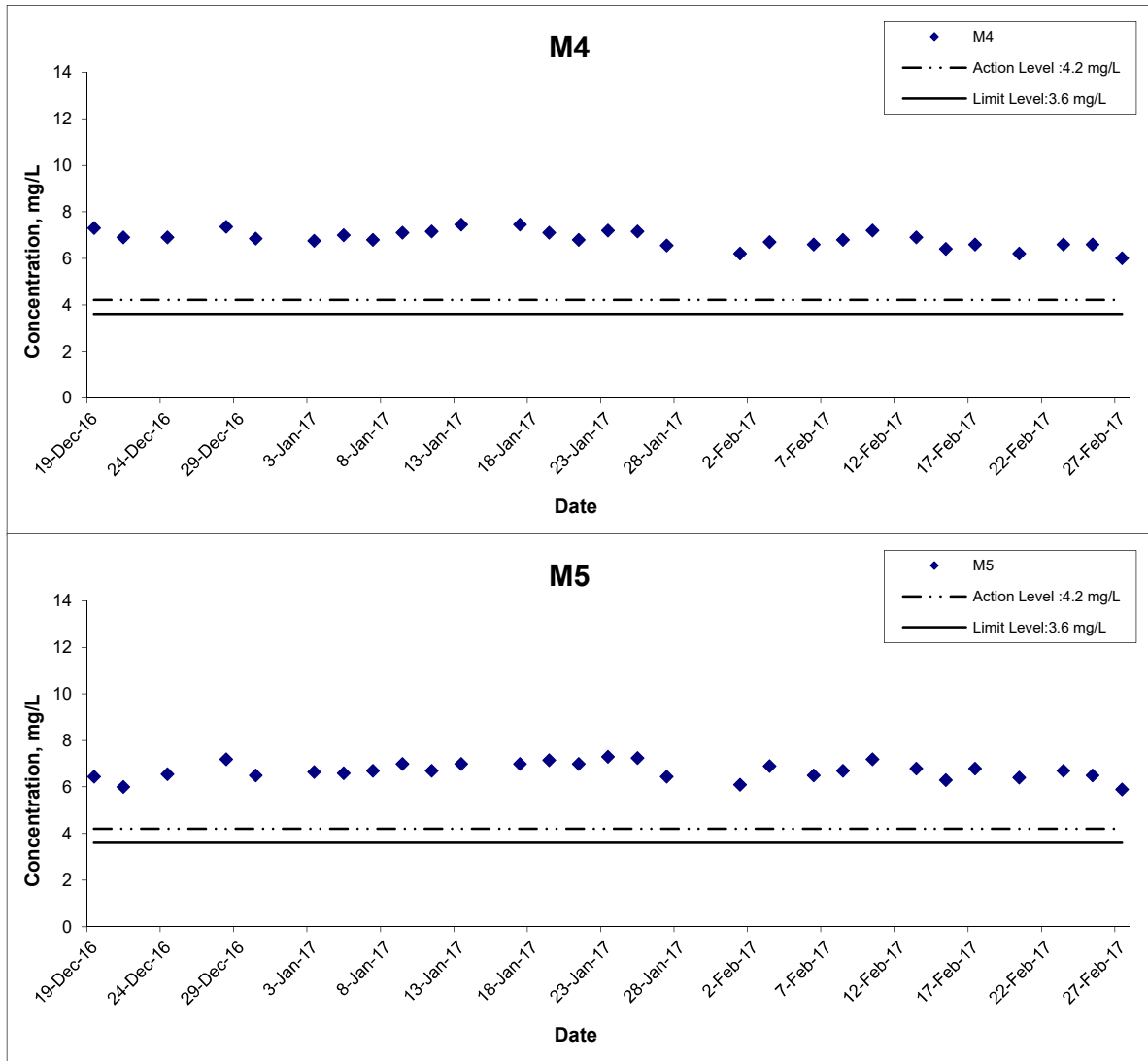
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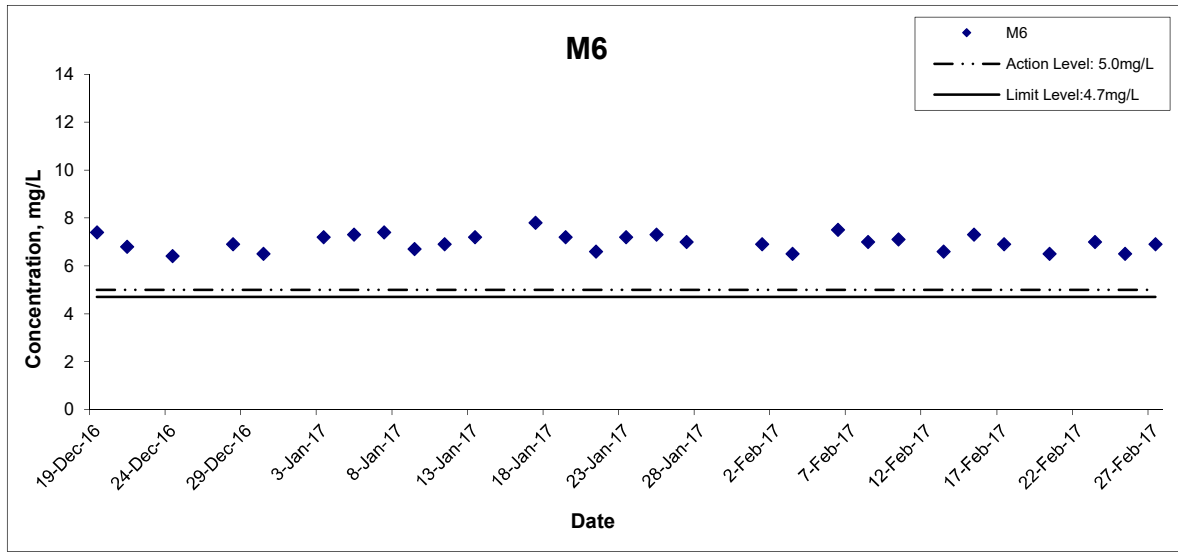


Dissolved Oxygen (Bottom) at Mid-Flood Tide



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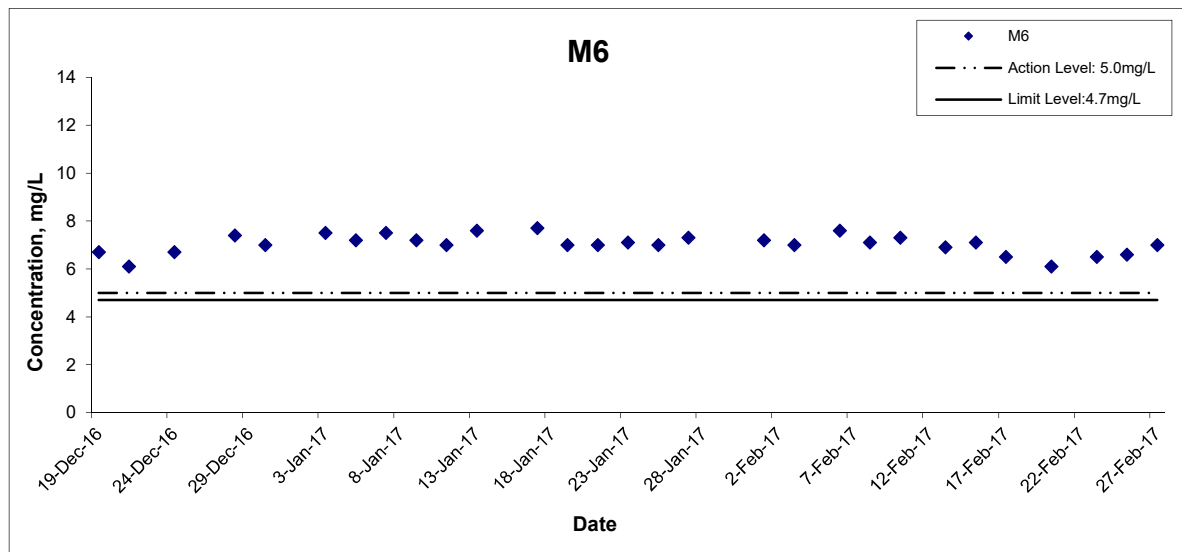
Dissolved Oxygen (Intake Level of WSD Salt Water Intake) at Mid-Ebb Tide



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| Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction Graphical Presentation of Water Quality Monitoring Results | Scale | N.T.S | Project No. | MA16034 |
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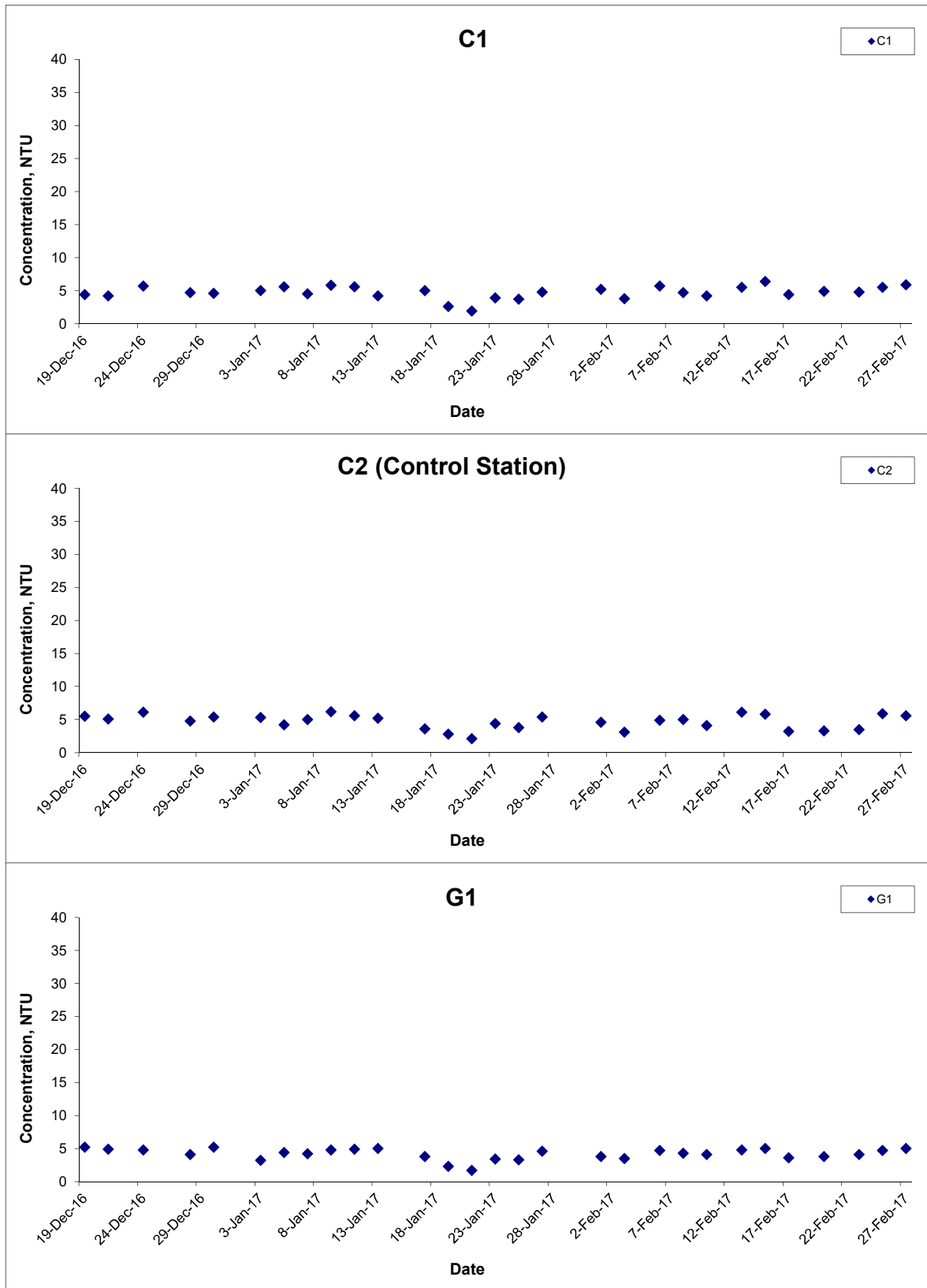
CINOTECH

Dissolved Oxygen (Intake Level of WSD Salt Water Intake) at Mid-Flood Tide



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Turbidity (Depth-averaged) at Mid-Ebb Tide



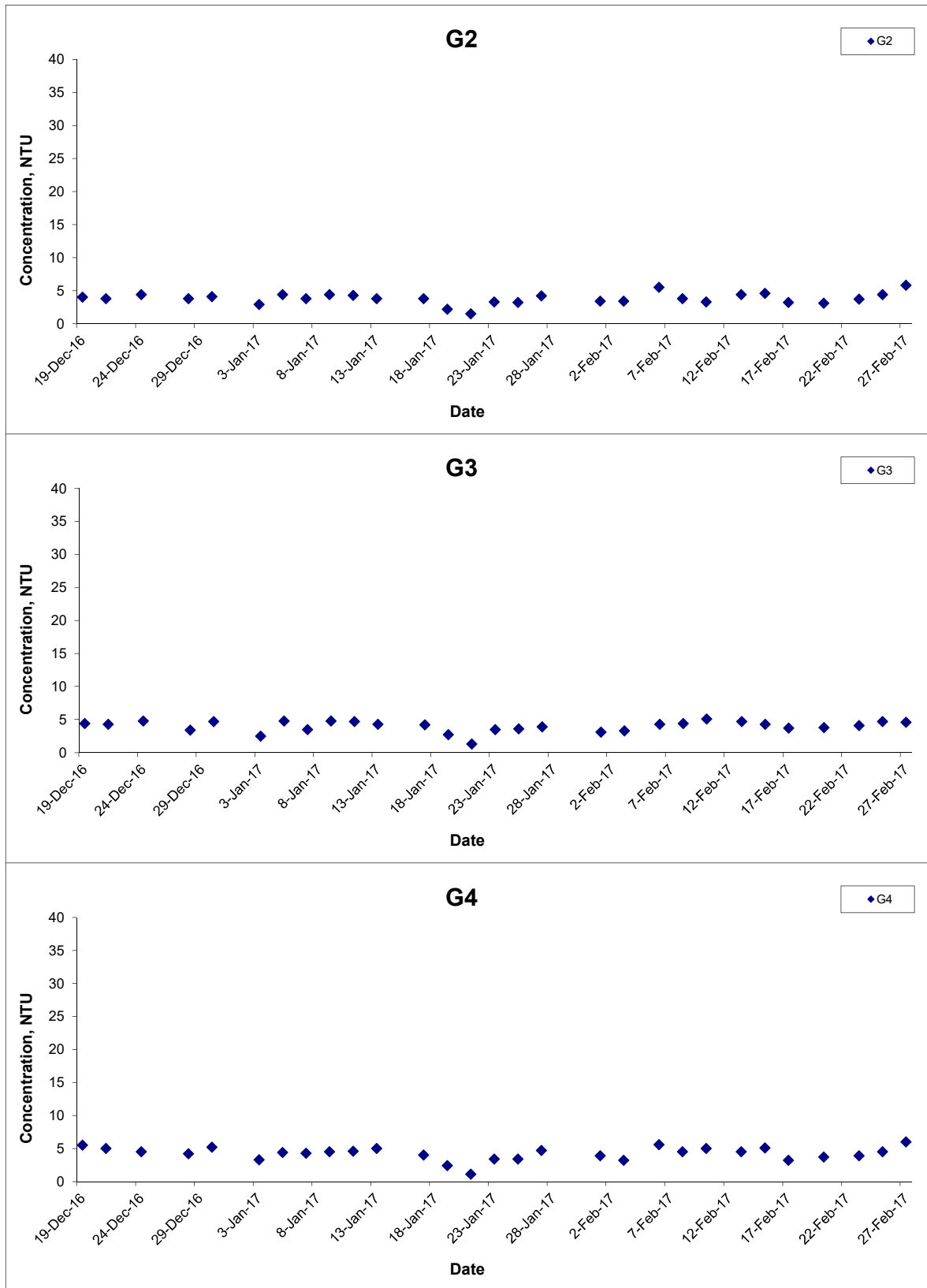
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Turbidity (Depth-averaged) at Mid-Ebb Tide



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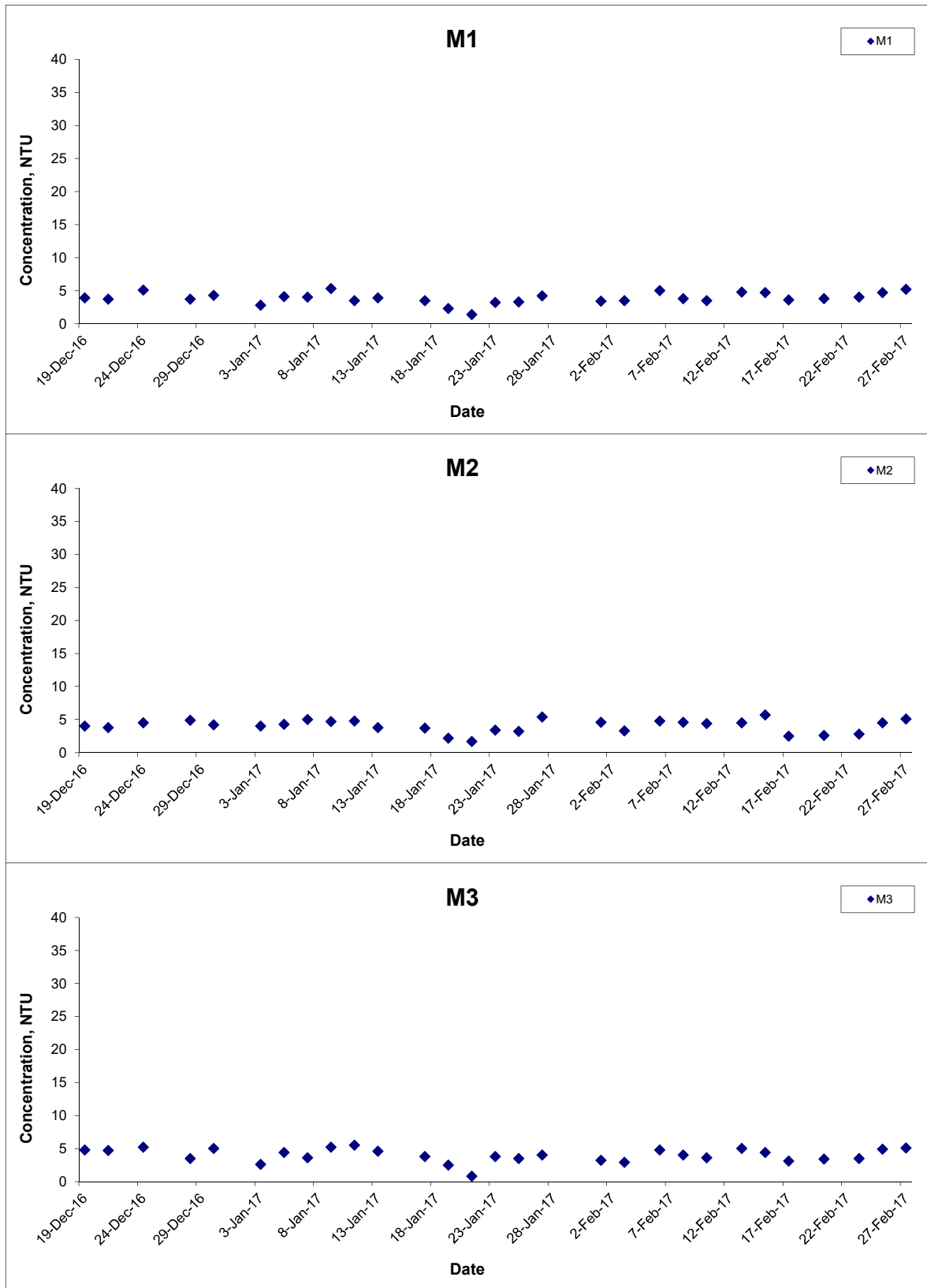
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Turbidity (Depth-averaged) at Mid-Ebb Tide



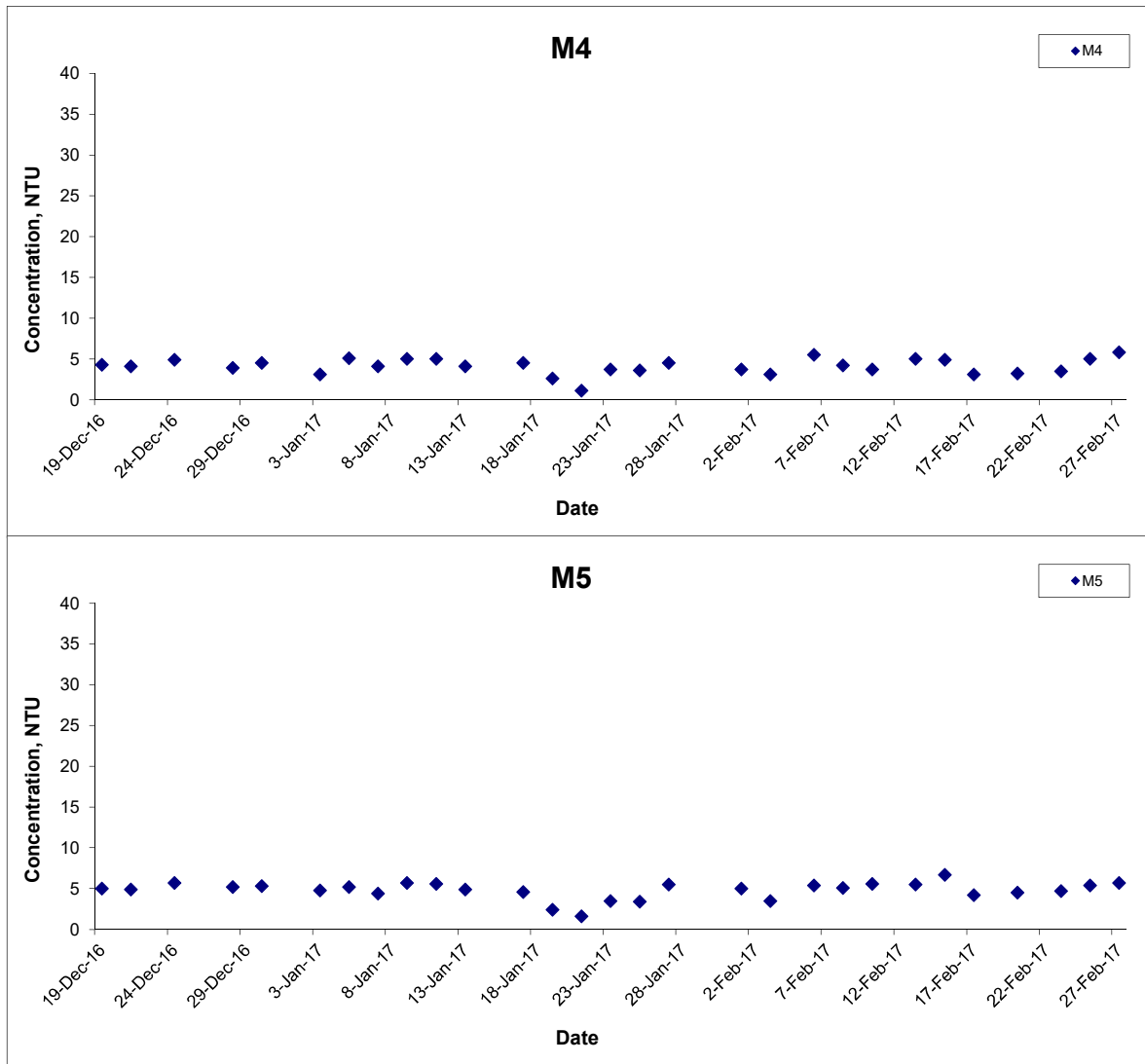
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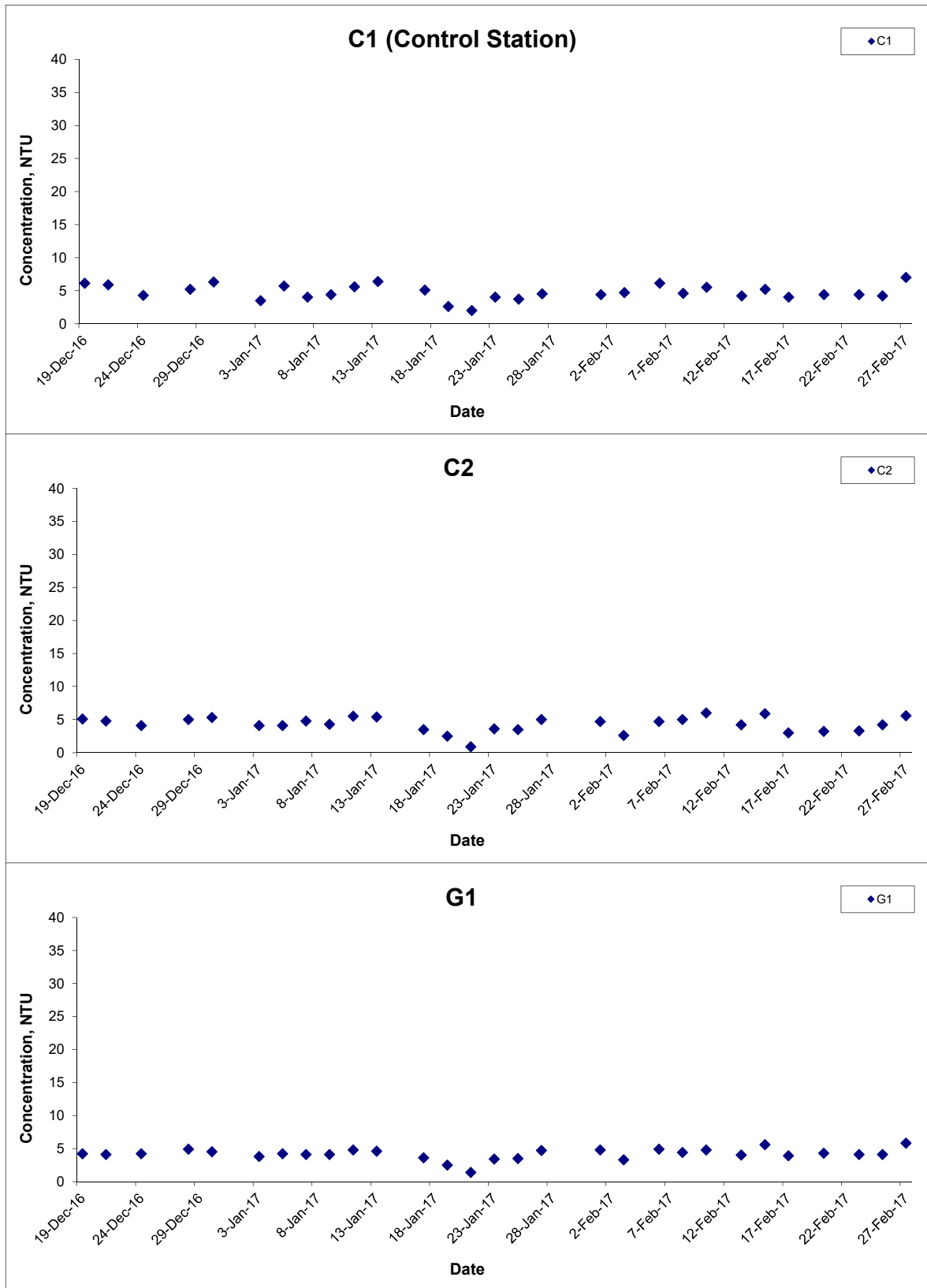


Turbidity (Depth-averaged) at Mid-Ebb Tide



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Turbidity (Depth-averaged) at Mid-Flood Tide



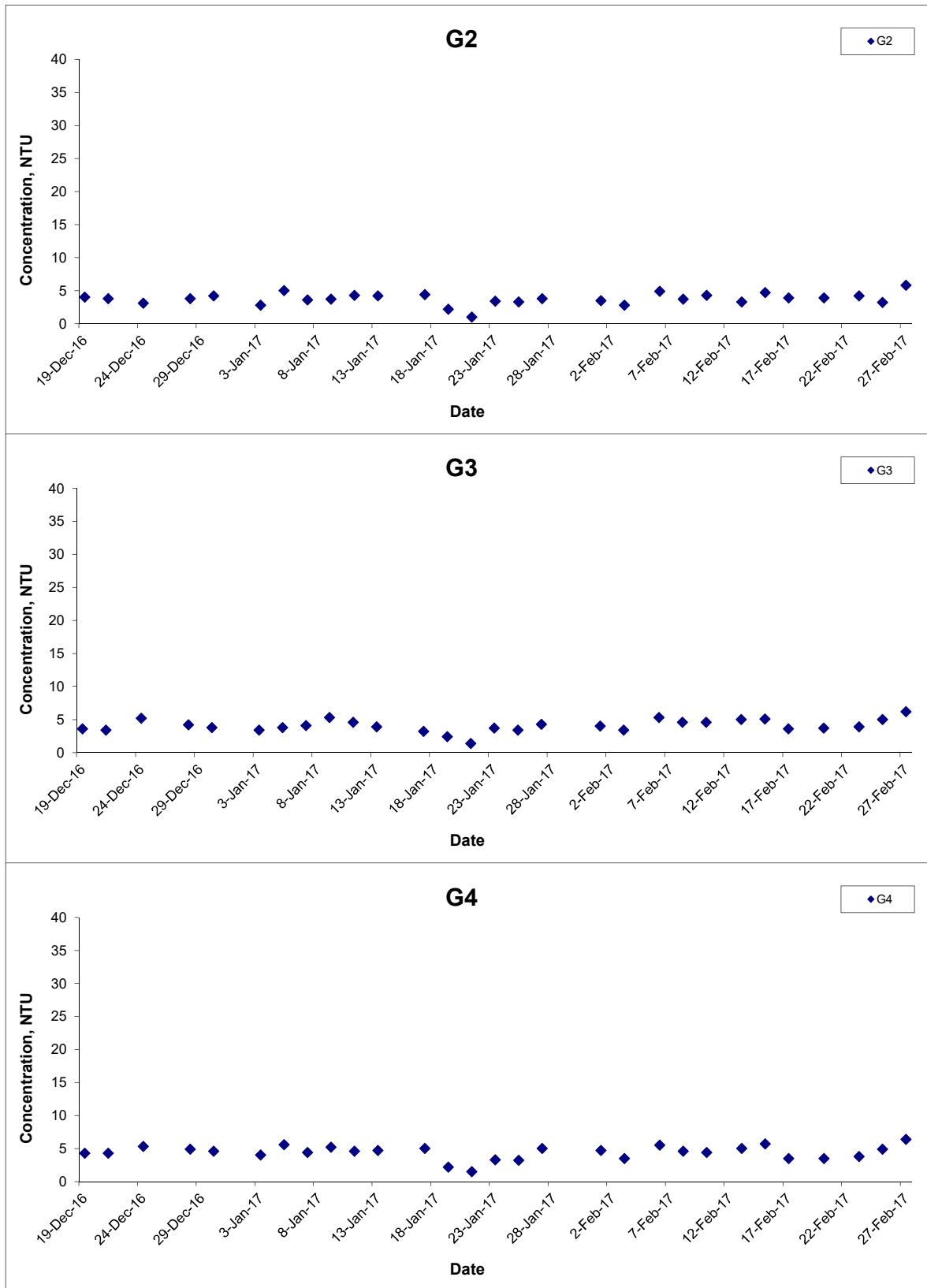
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Turbidity (Depth-averaged) at Mid-Flood Tide



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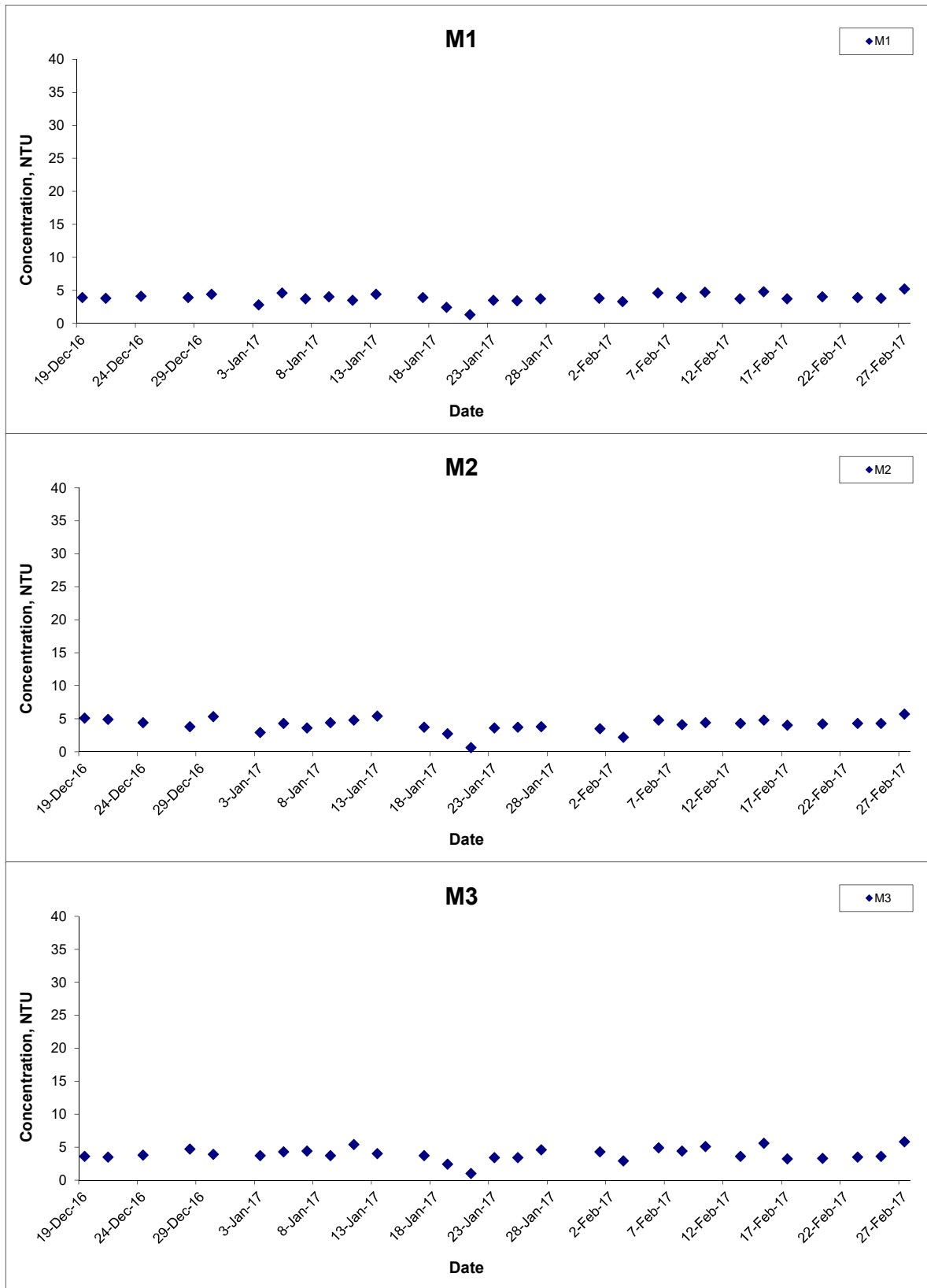
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Turbidity (Depth-averaged) at Mid-Flood Tide



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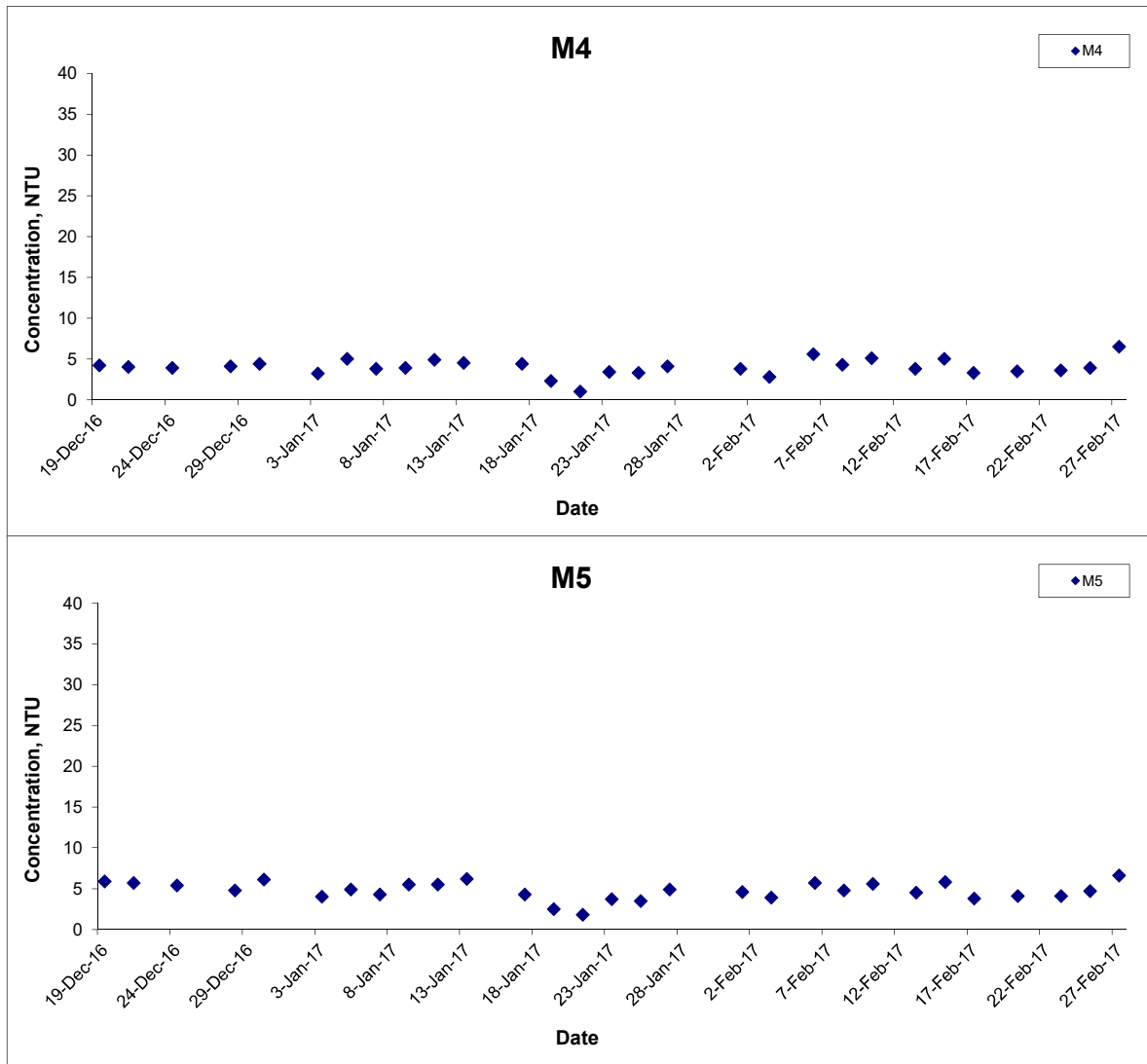
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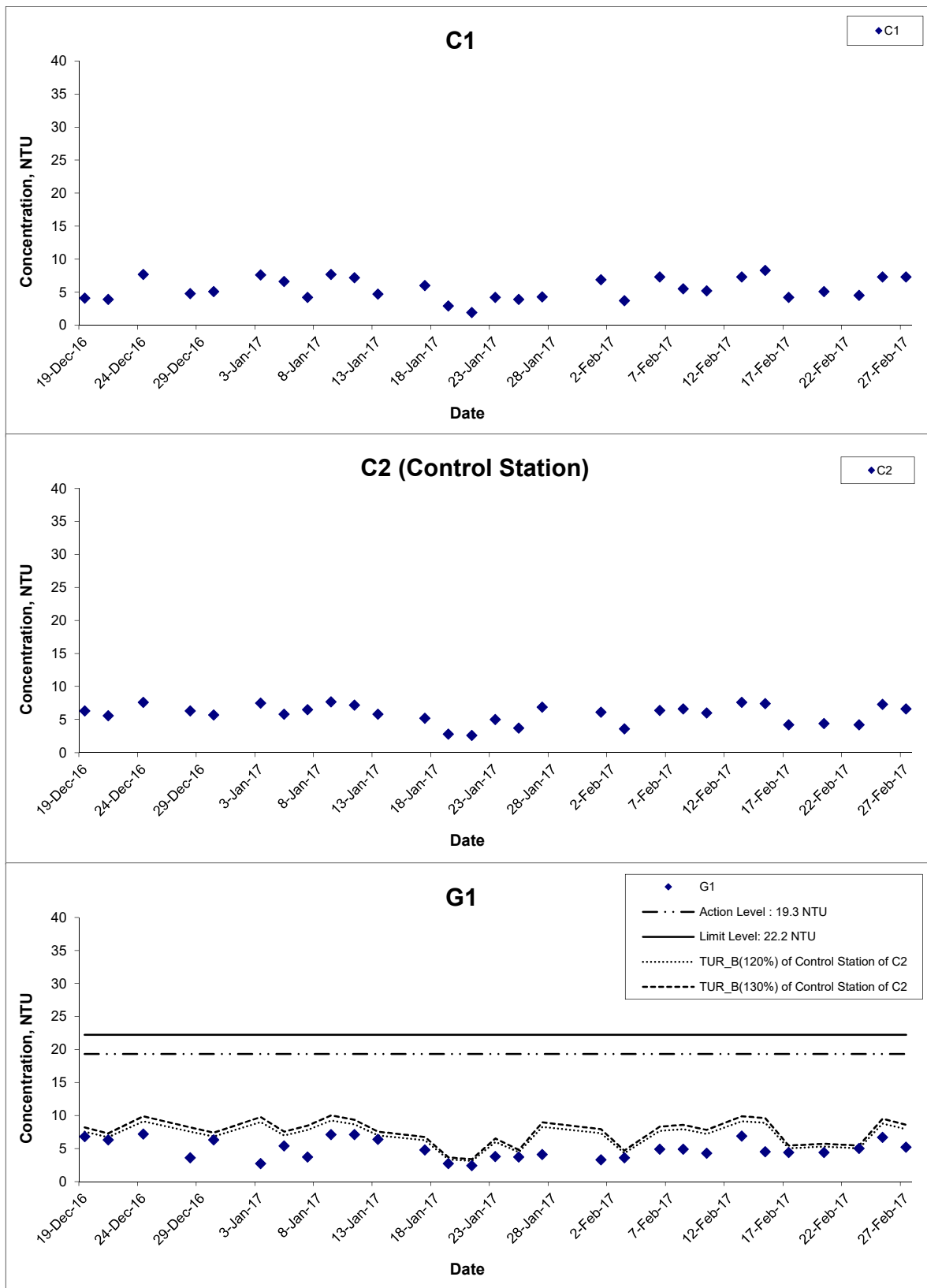


Turbidity (Depth-averaged) at Mid-Flood Tide



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Turbidity (Bottom) at Mid-Ebb Tide



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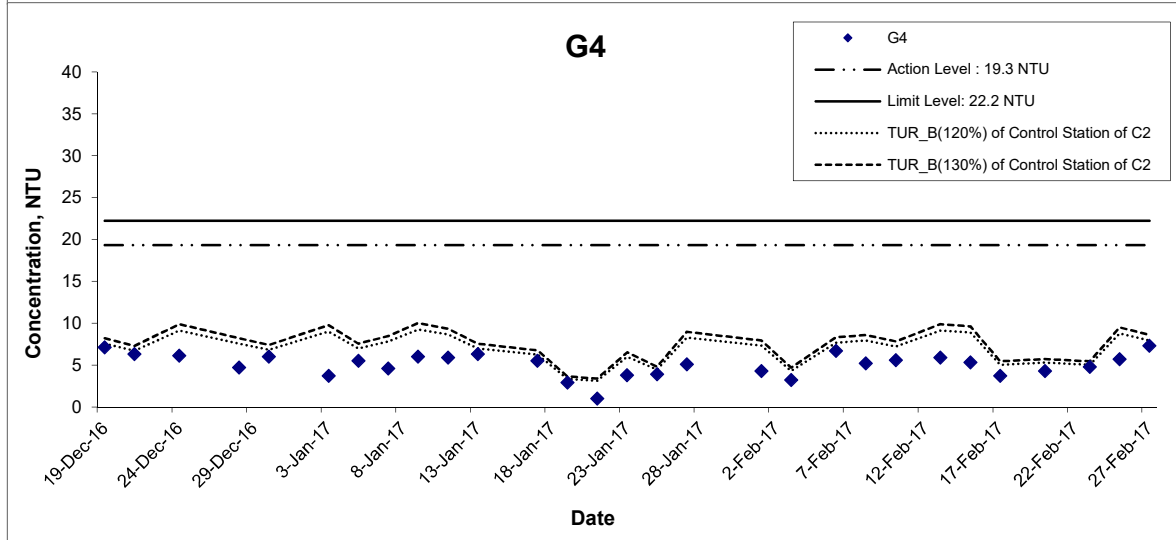
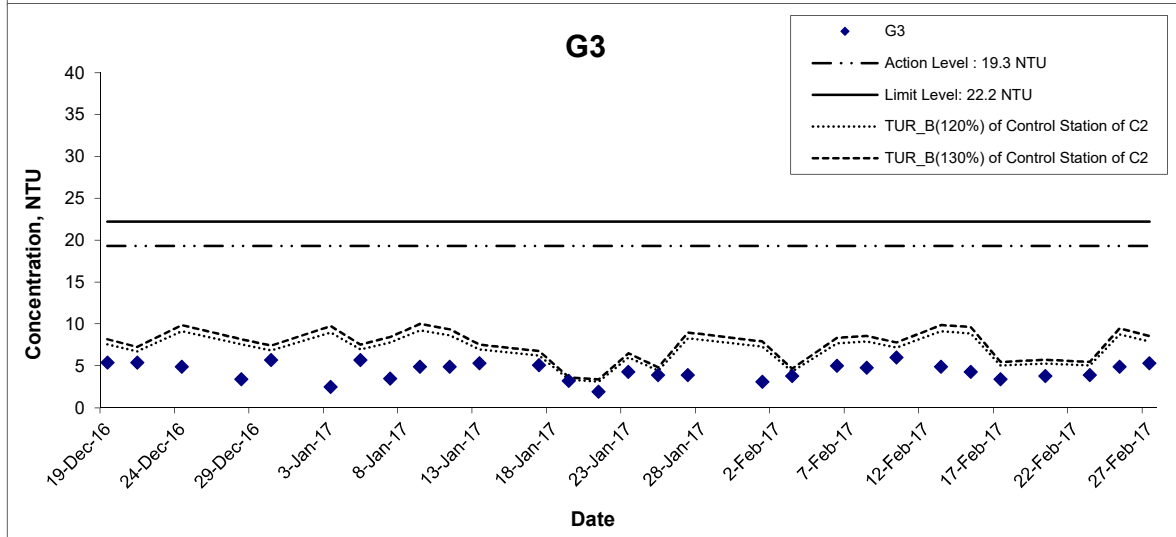
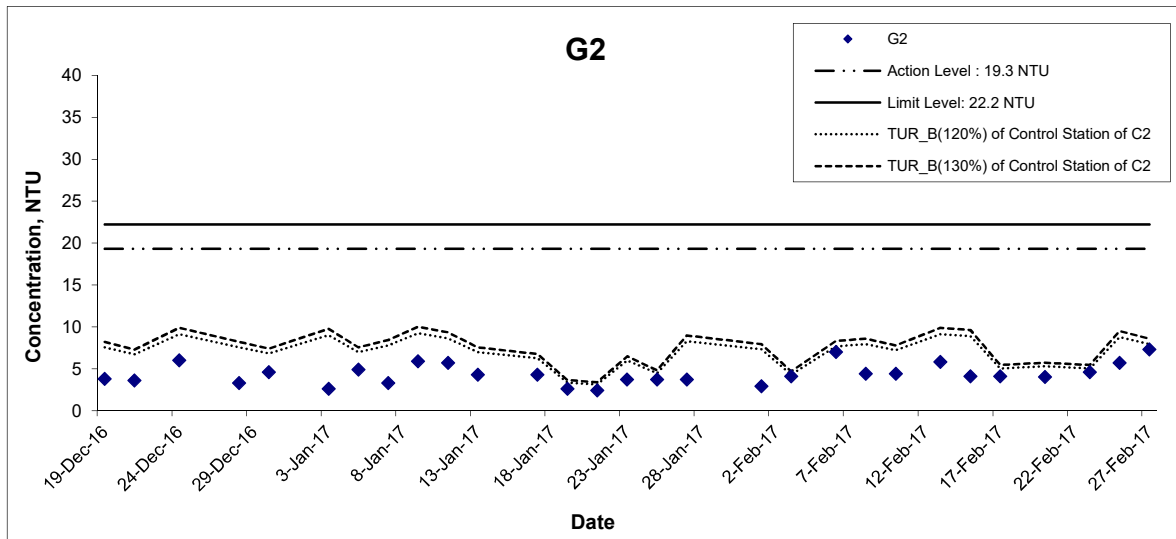
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Turbidity (Bottom) at Mid-Ebb Tide



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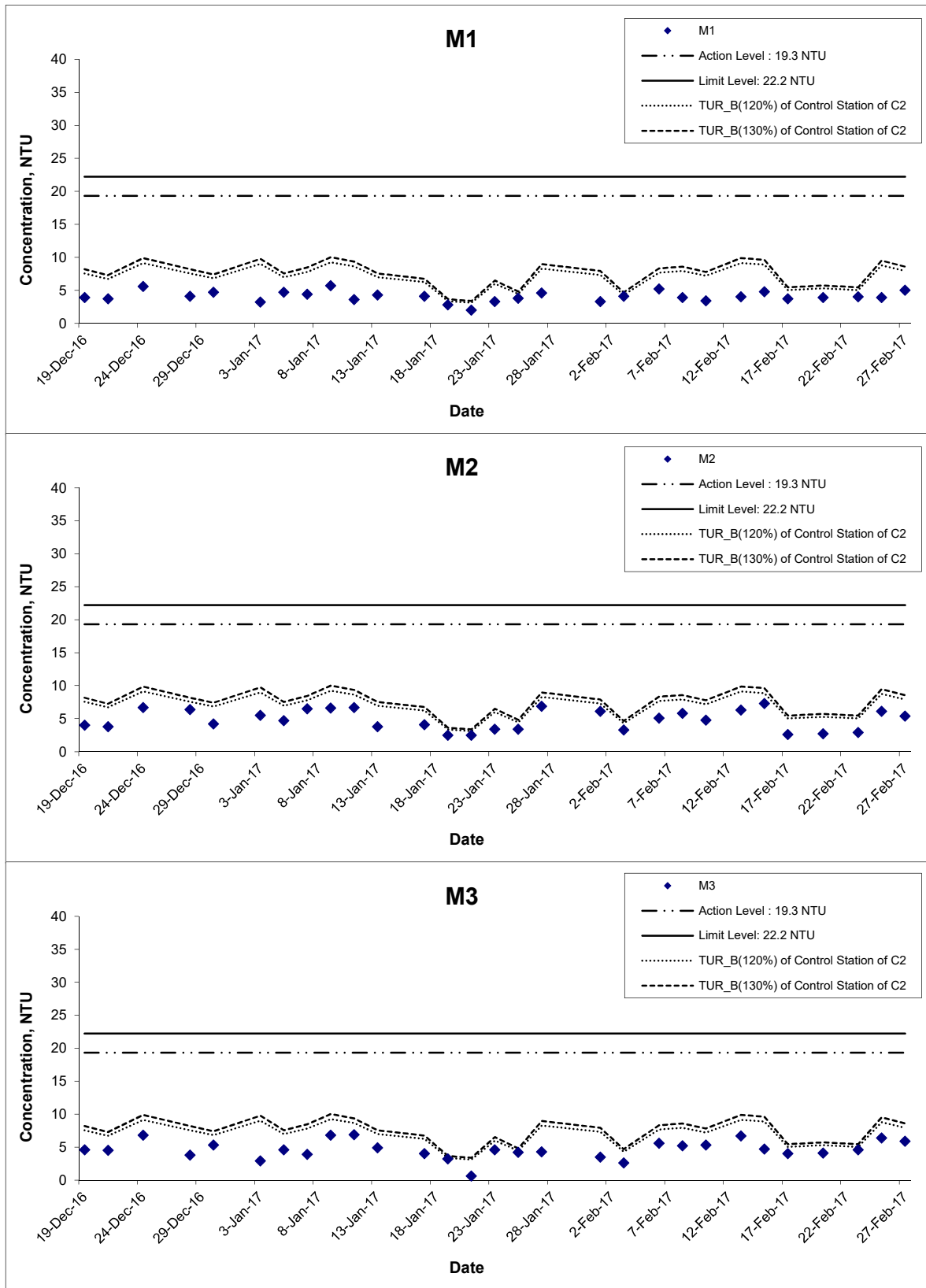
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Turbidity (Bottom) at Mid-Ebb Tide



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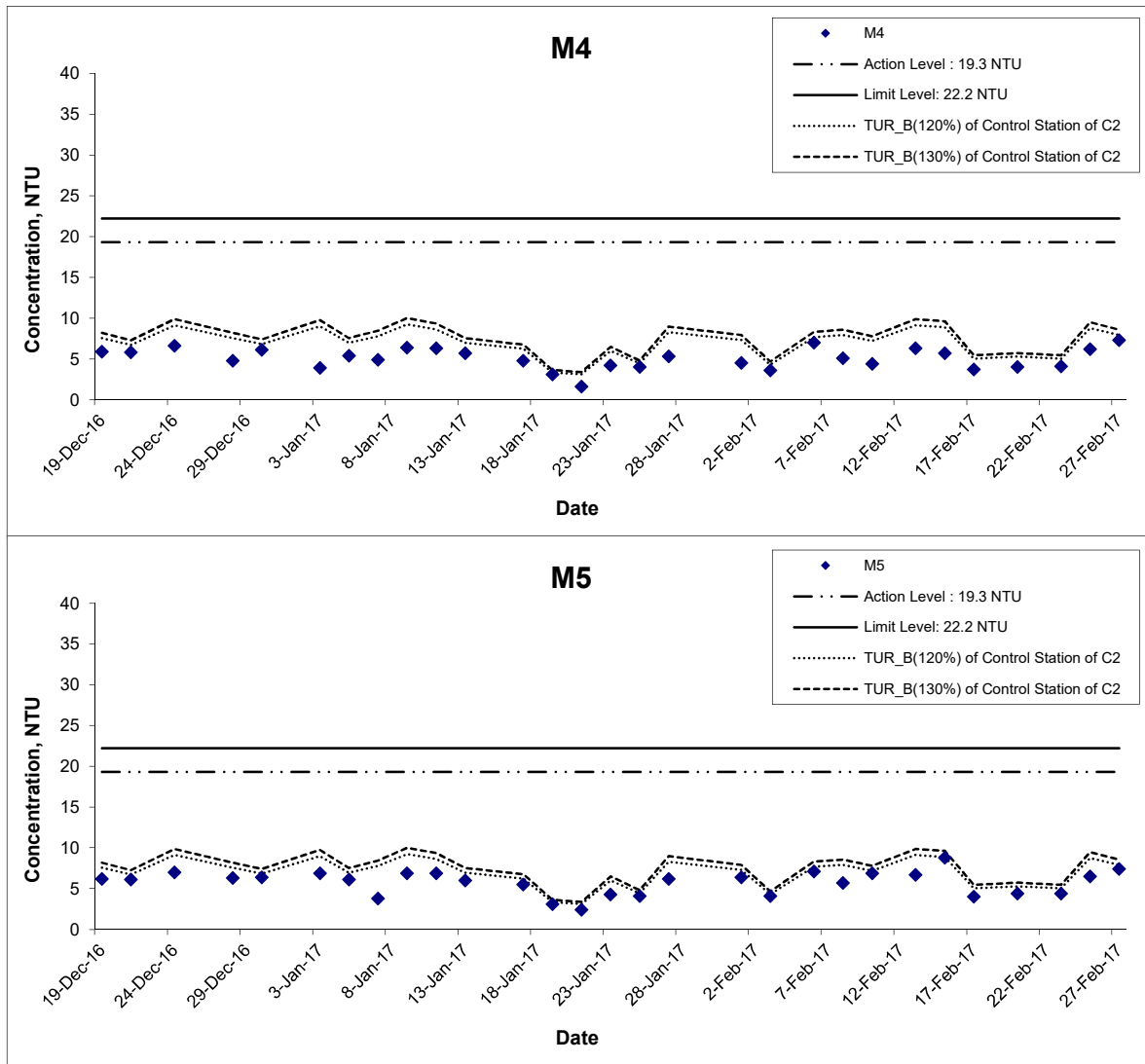
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Turbidity (Bottom) at Mid-Ebb Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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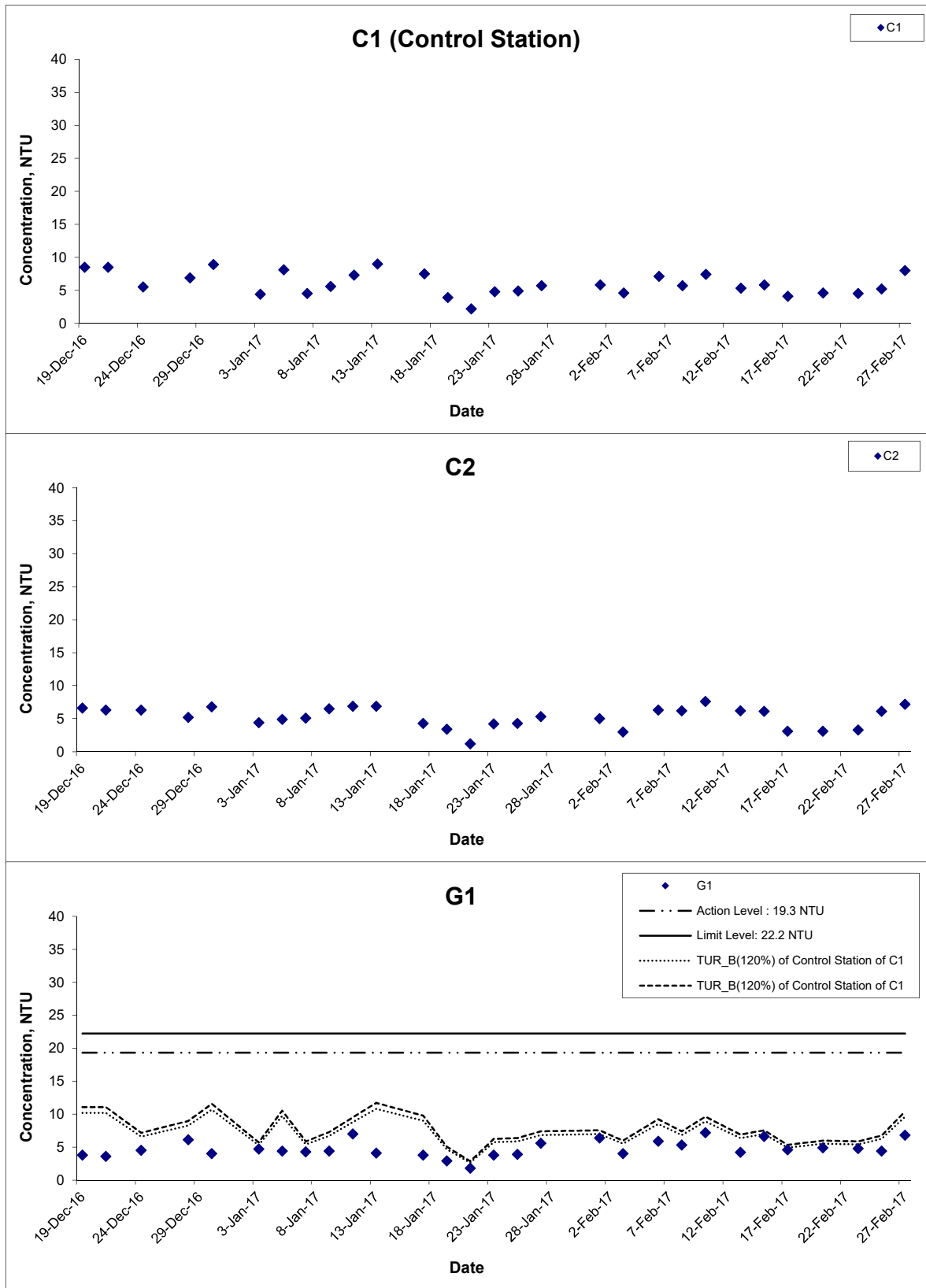
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Turbidity (Bottom) at Mid-Flood Tide



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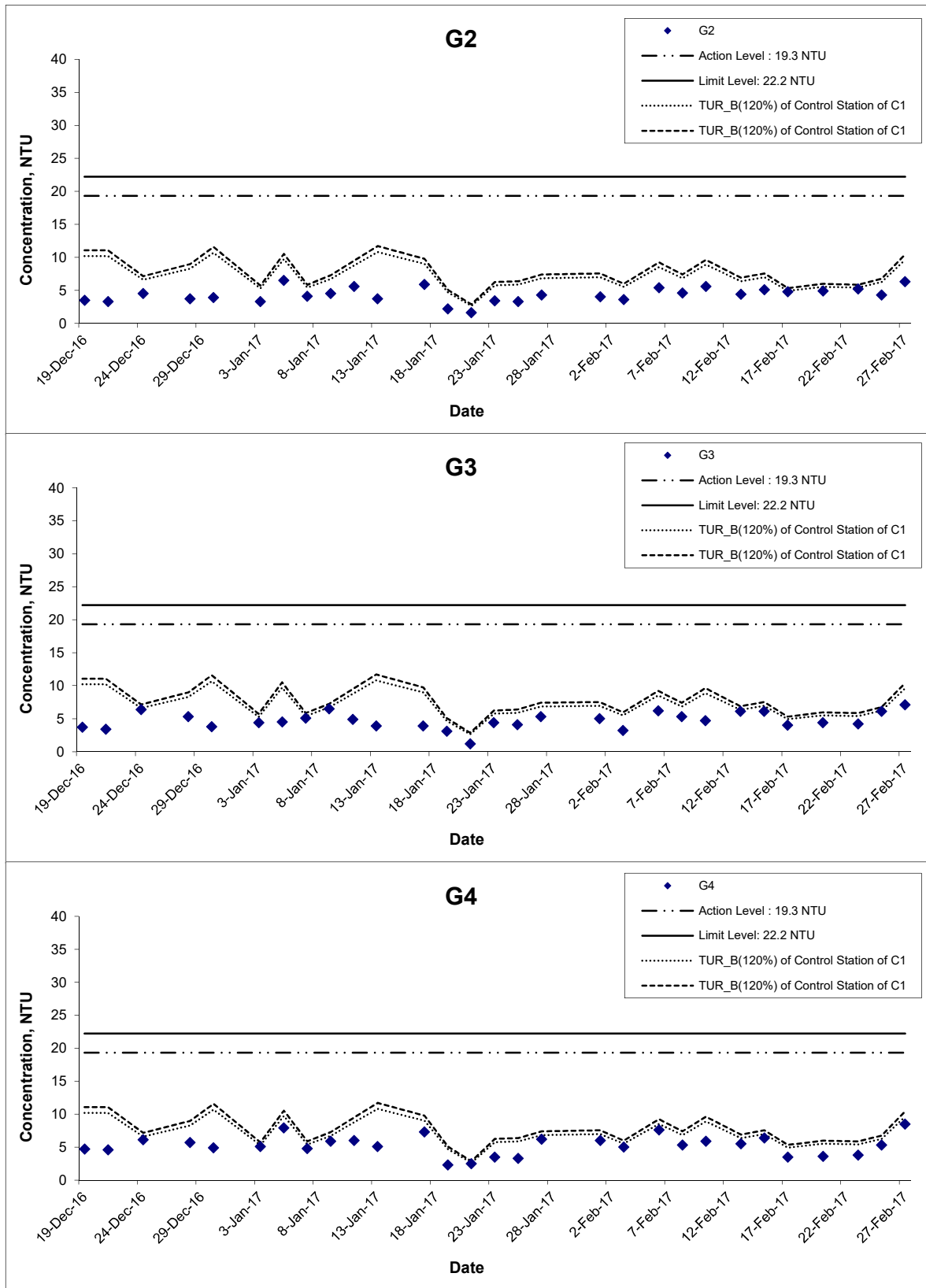
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Turbidity (Bottom) at Mid-Flood Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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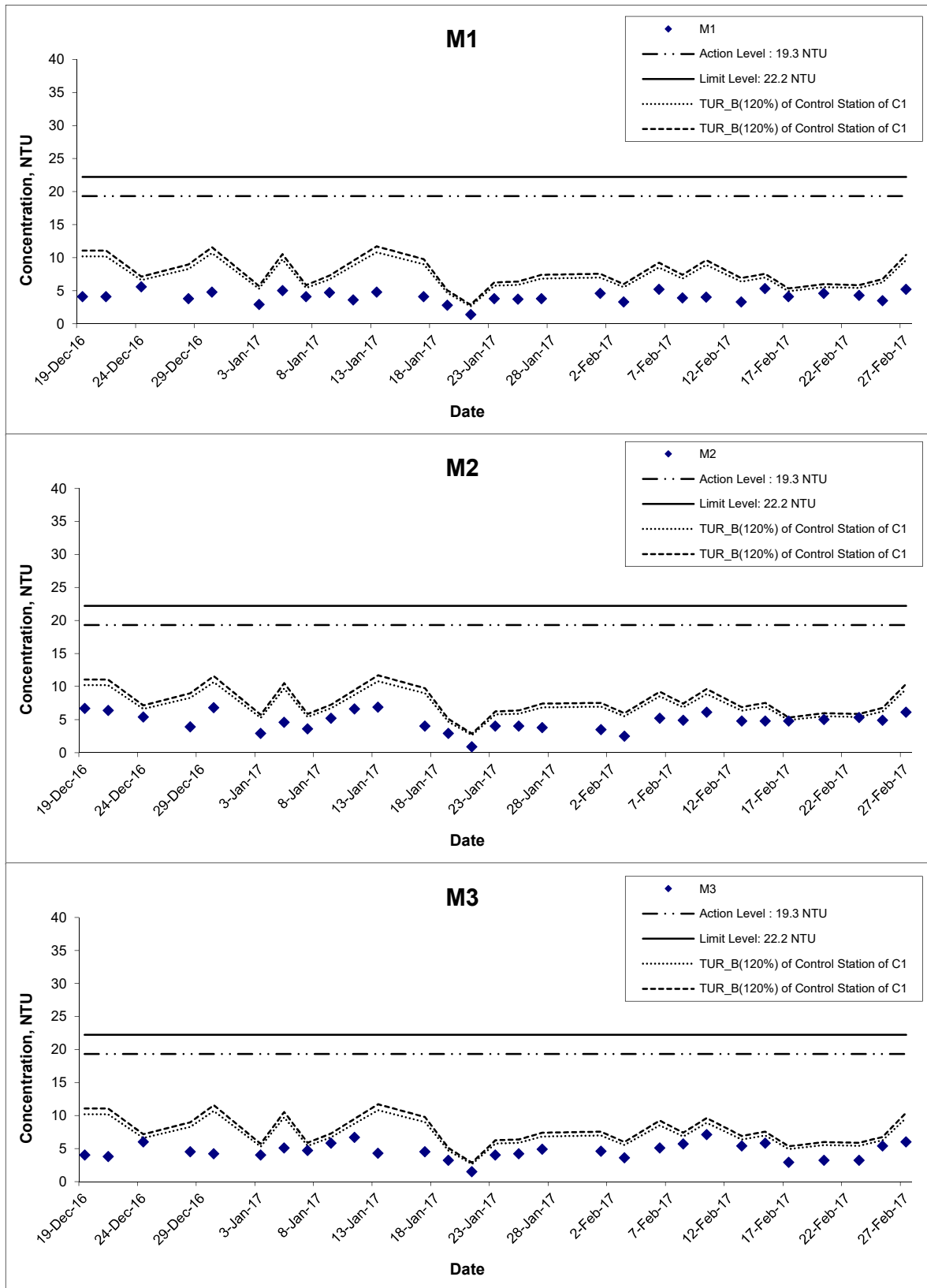
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Turbidity (Bottom) at Mid-Flood Tide



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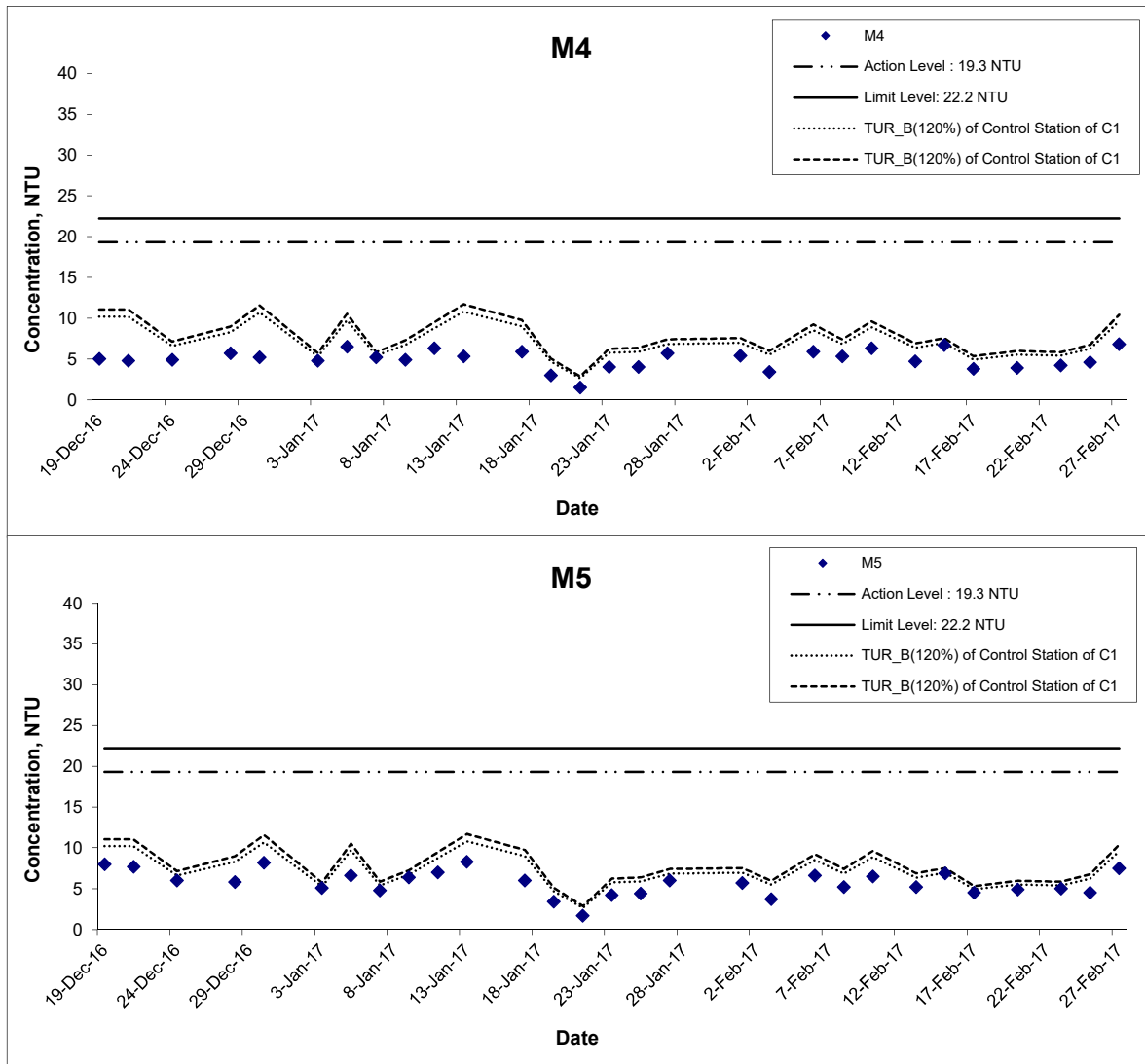
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Turbidity (Bottom) at Mid-Flood Tide



Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction

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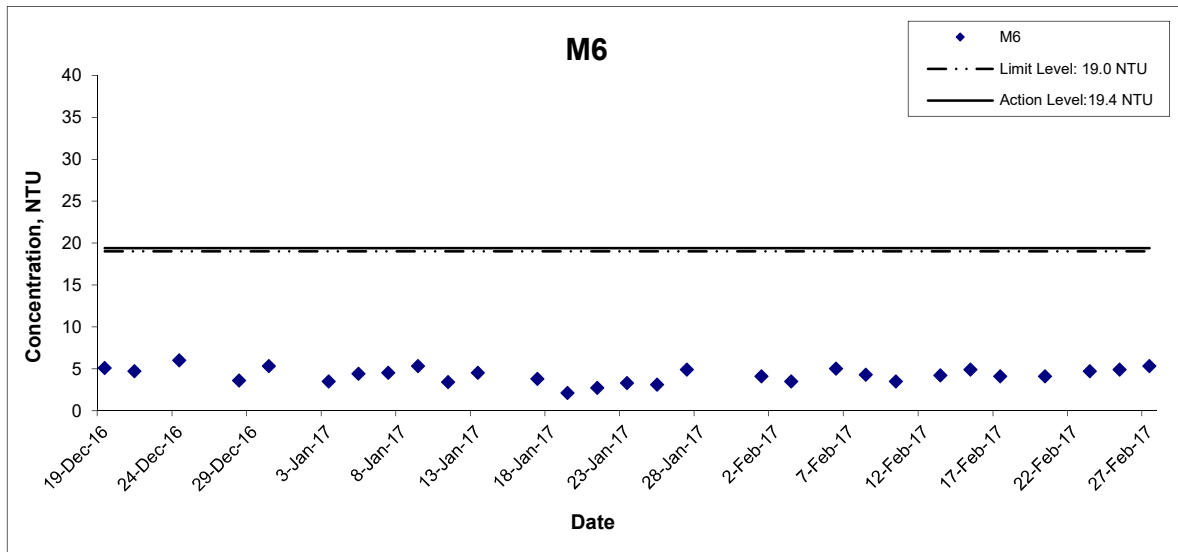
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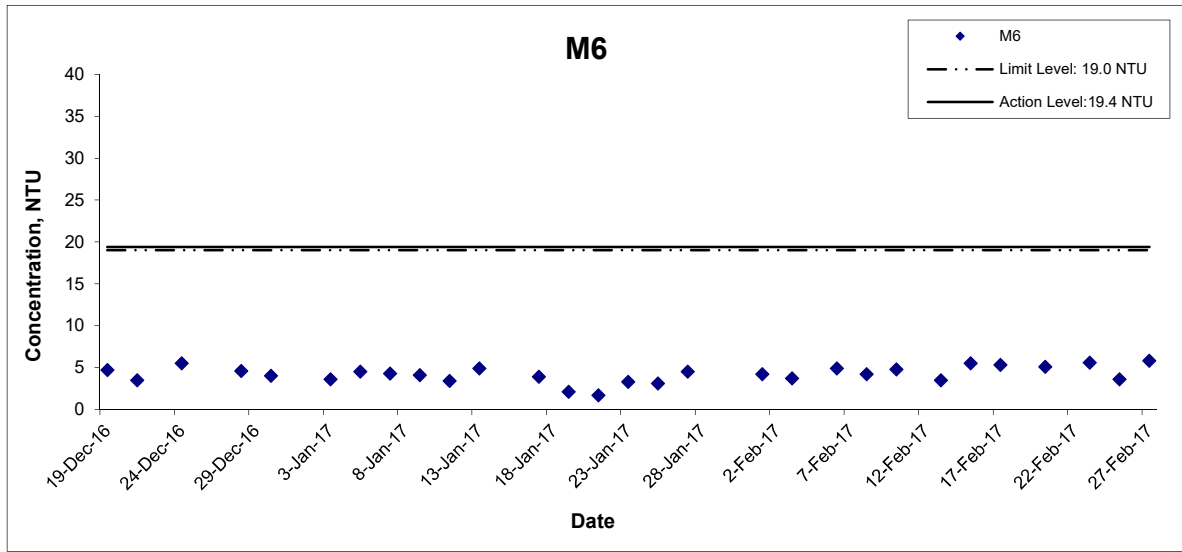


Turbidity (Intake Level of WSD Salt Water Intake) at Mid-Ebb Tide



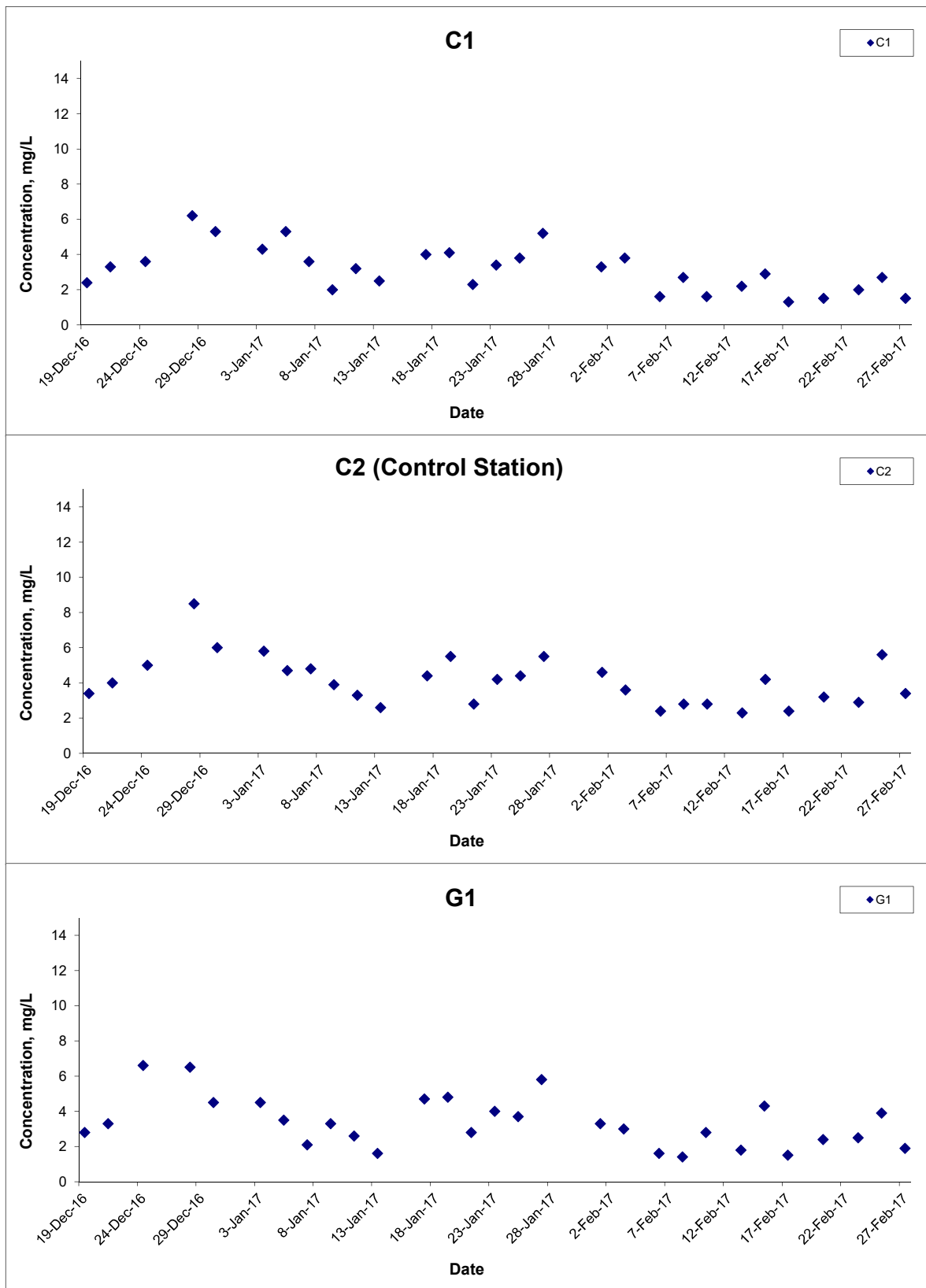
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| Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction Graphical Presentation of Water Quality Monitoring Results | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
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Turbidity (Intake Level of WSD Salt Water Intake) at Mid-Flood Tide



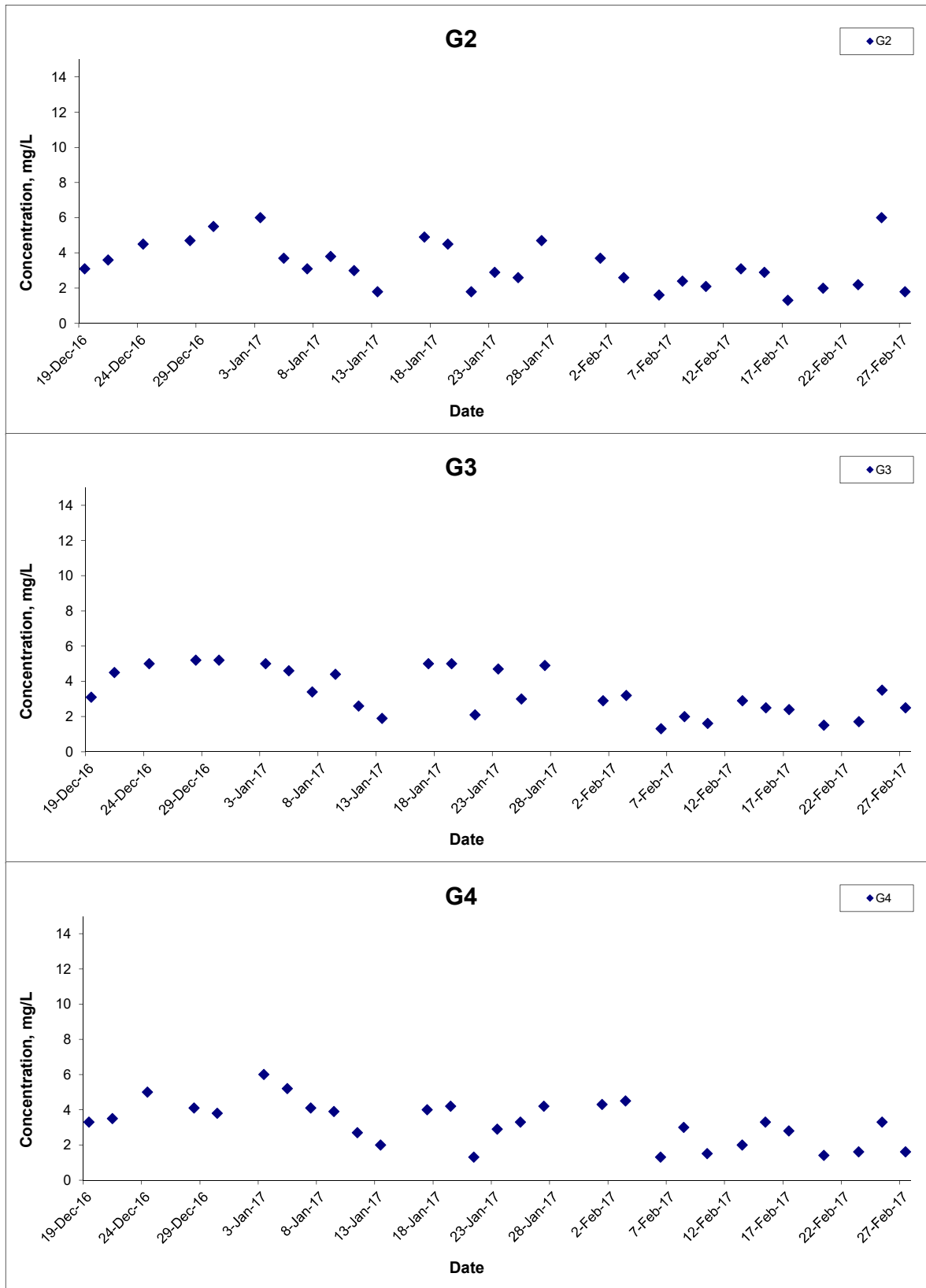
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Suspended Solids (Depth-averaged) at Mid-Ebb Tide



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



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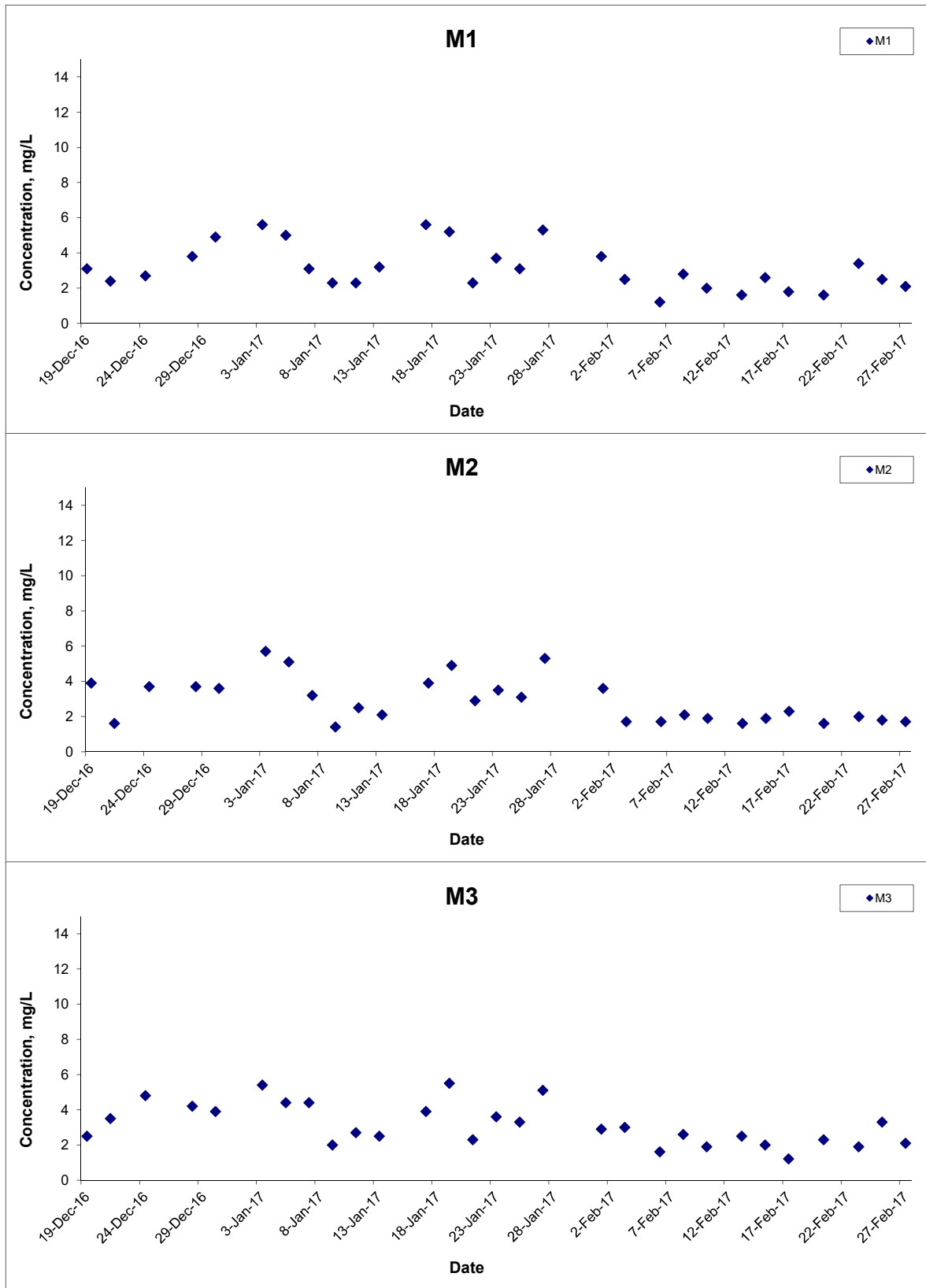
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Suspended Solids (Depth-averaged) at Mid-Ebb Tide



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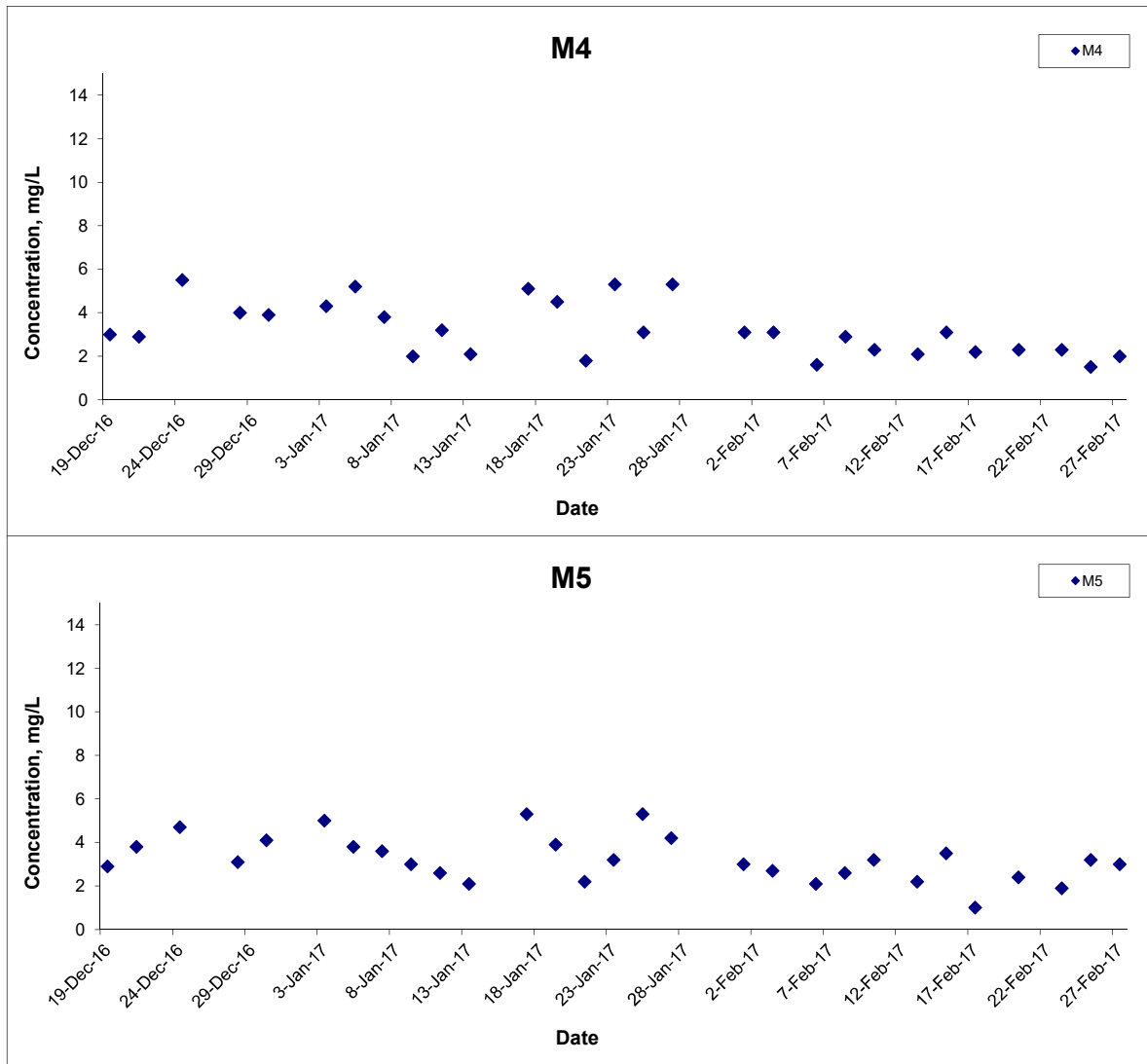
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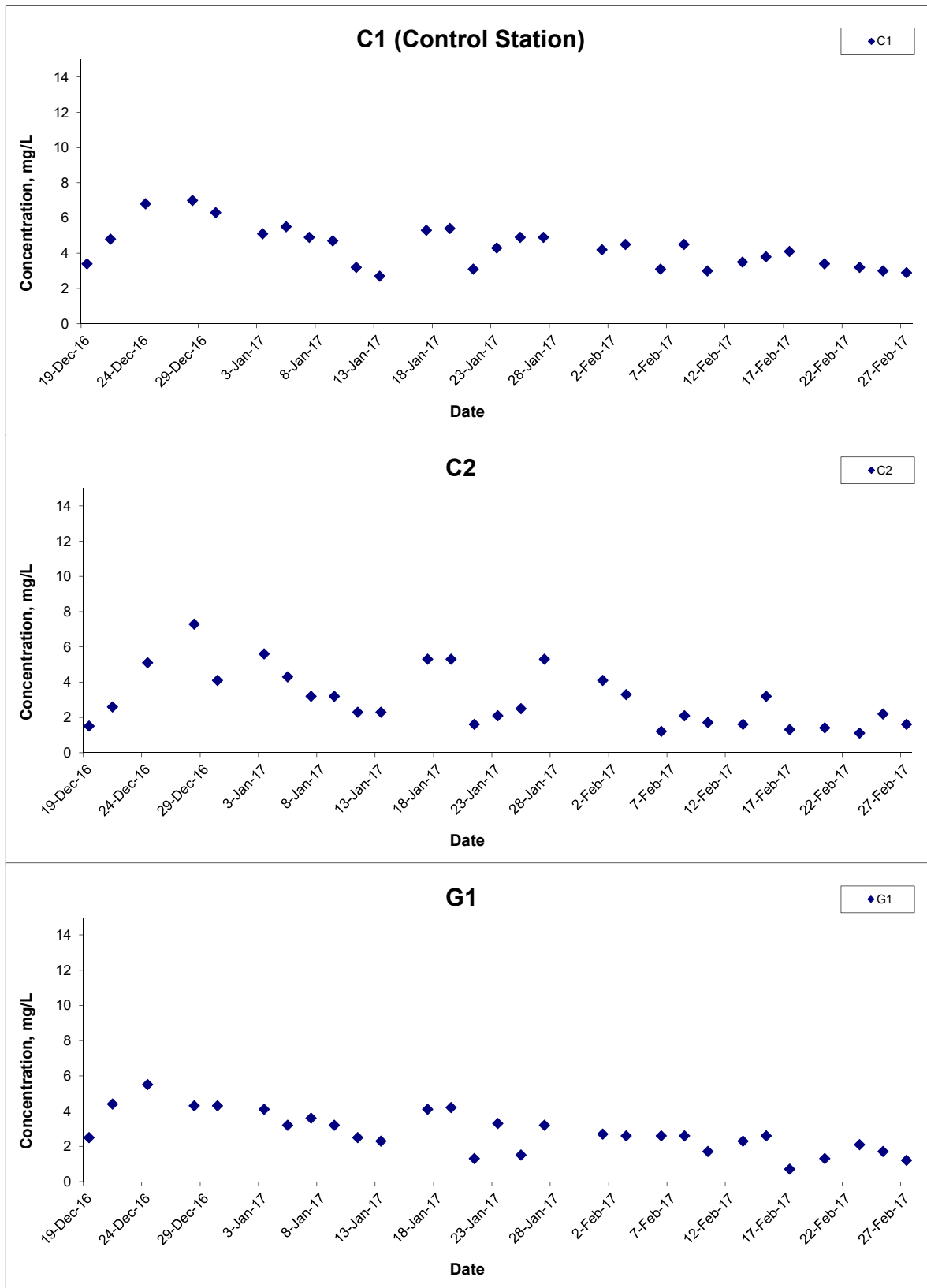


Suspended Solids (Depth-averaged) at Mid-Ebb Tide



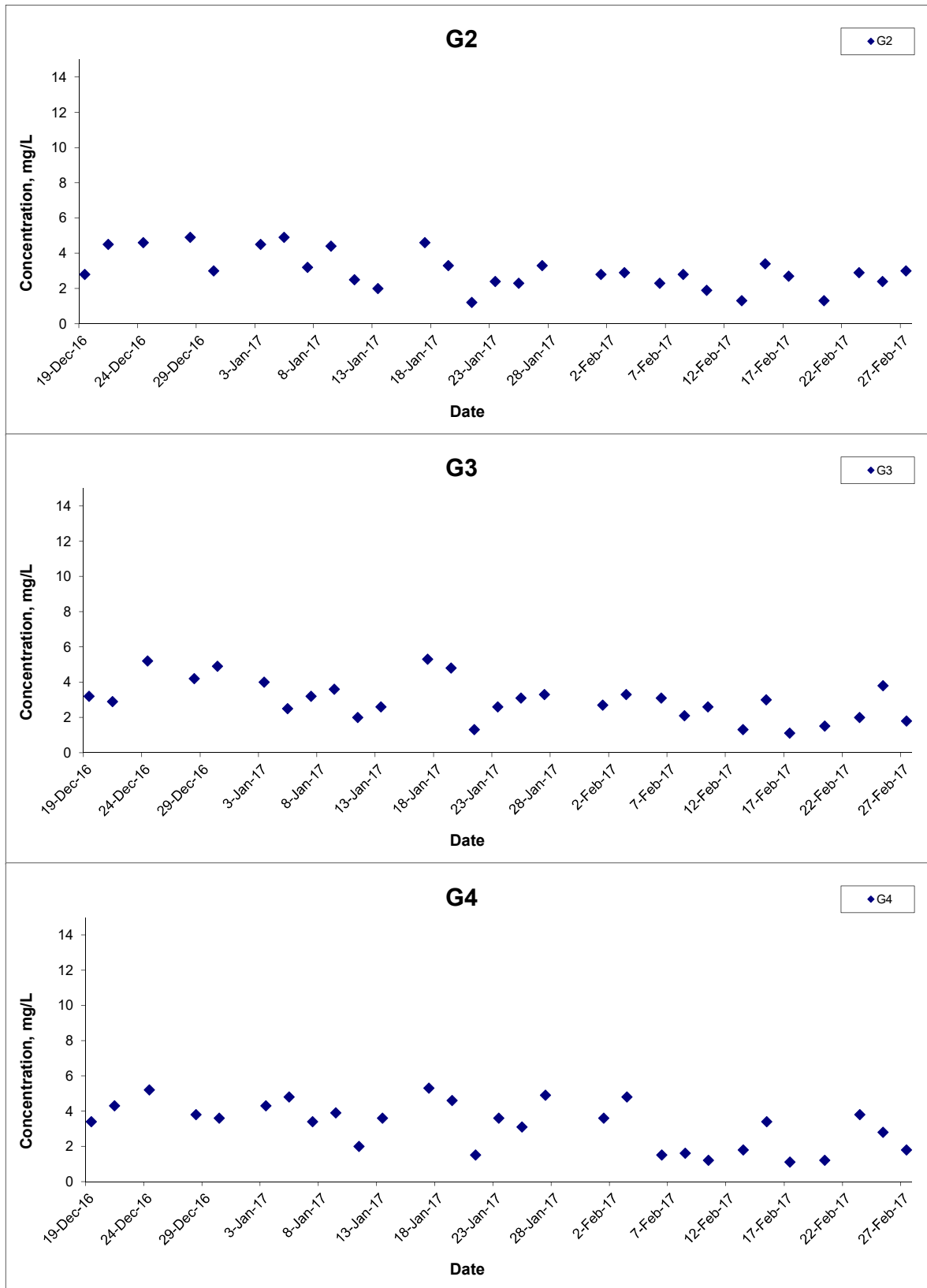
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Suspended Solids (Depth-averaged) at Mid-Flood Tide



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



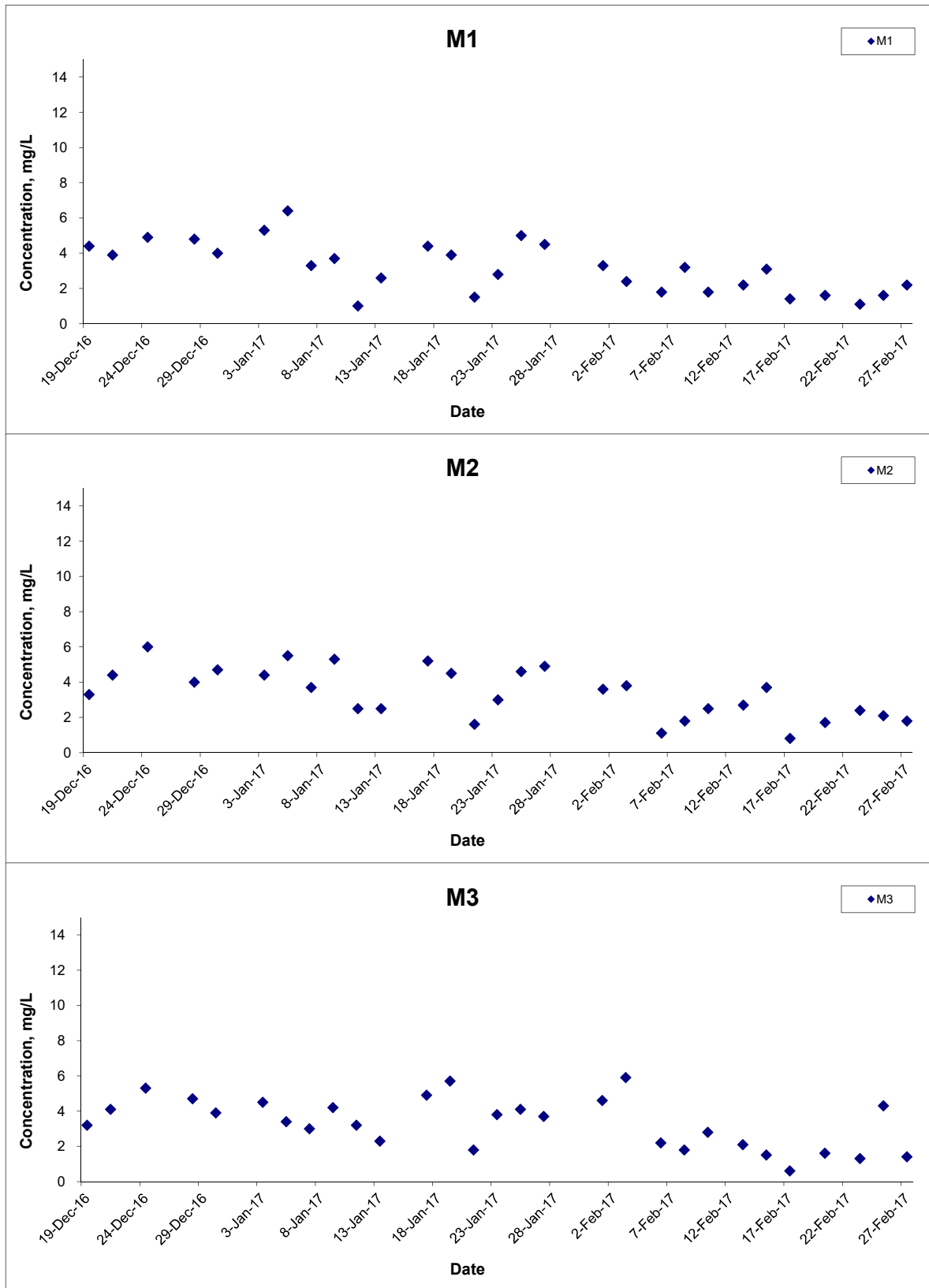
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Suspended Solids (Depth-averaged) at Mid-Flood Tide



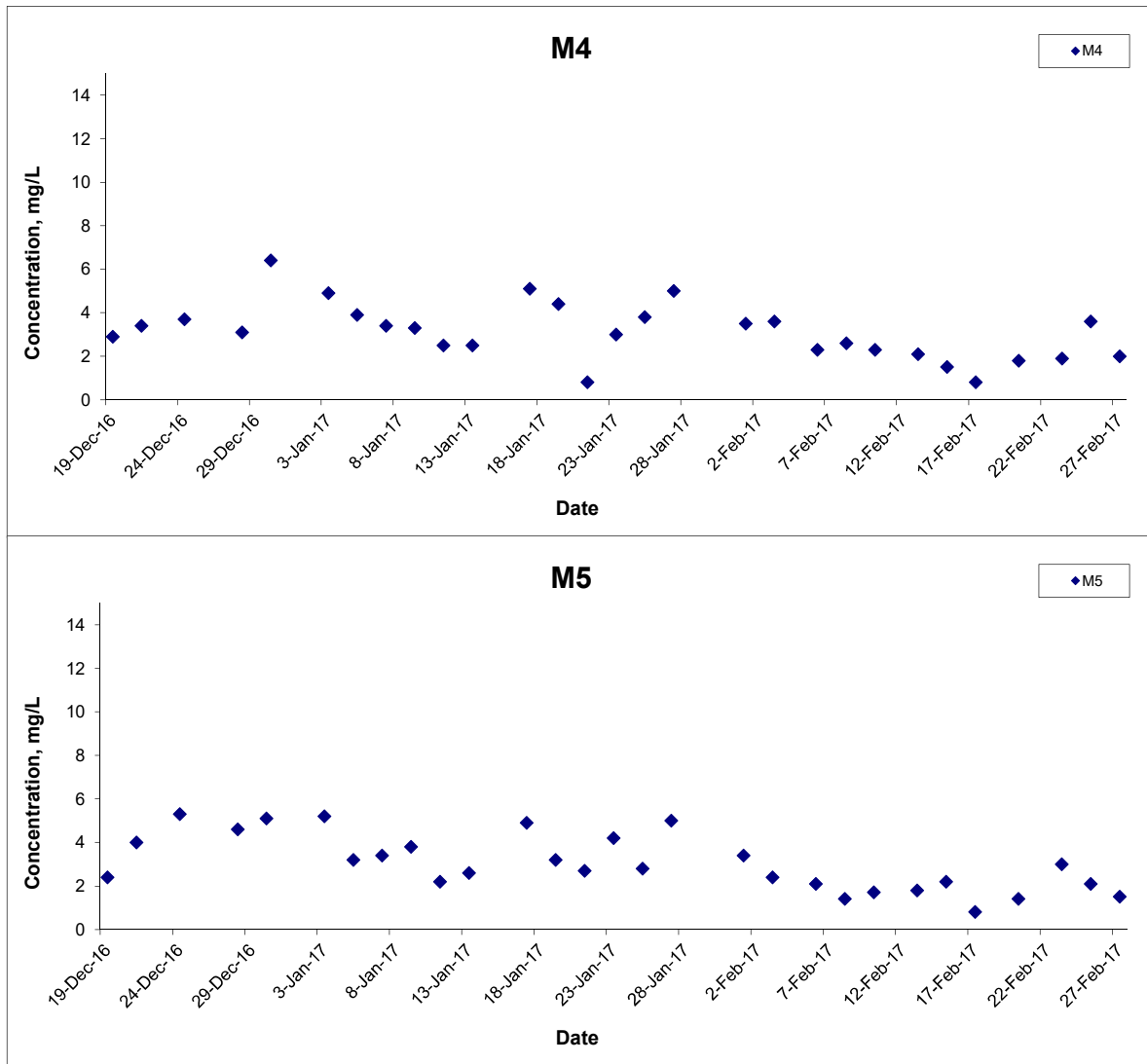
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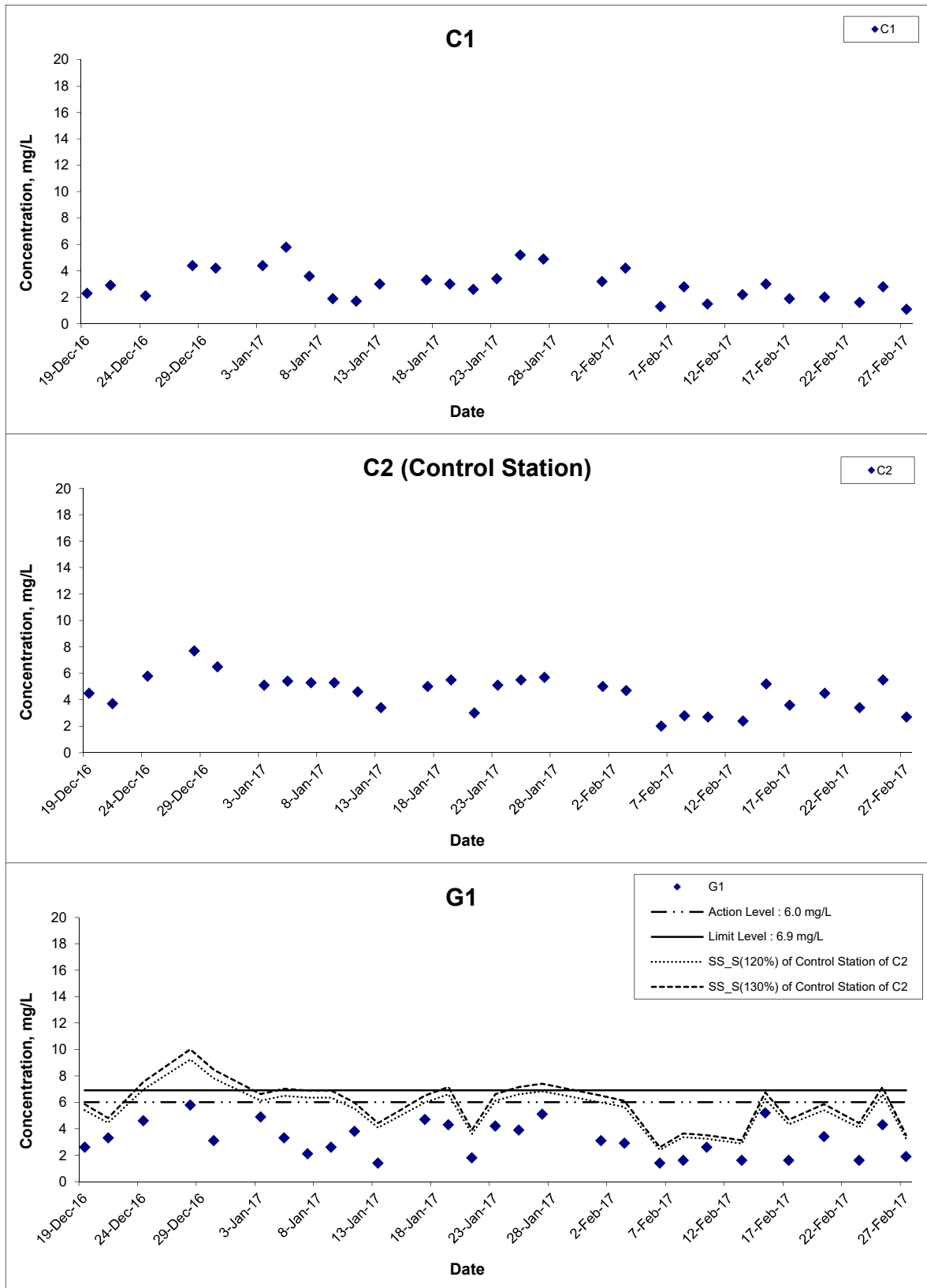


Suspended Solids (Depth-averaged) at Mid-Flood Tide



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Suspended Solids (Surface) at Mid-Ebb Tide



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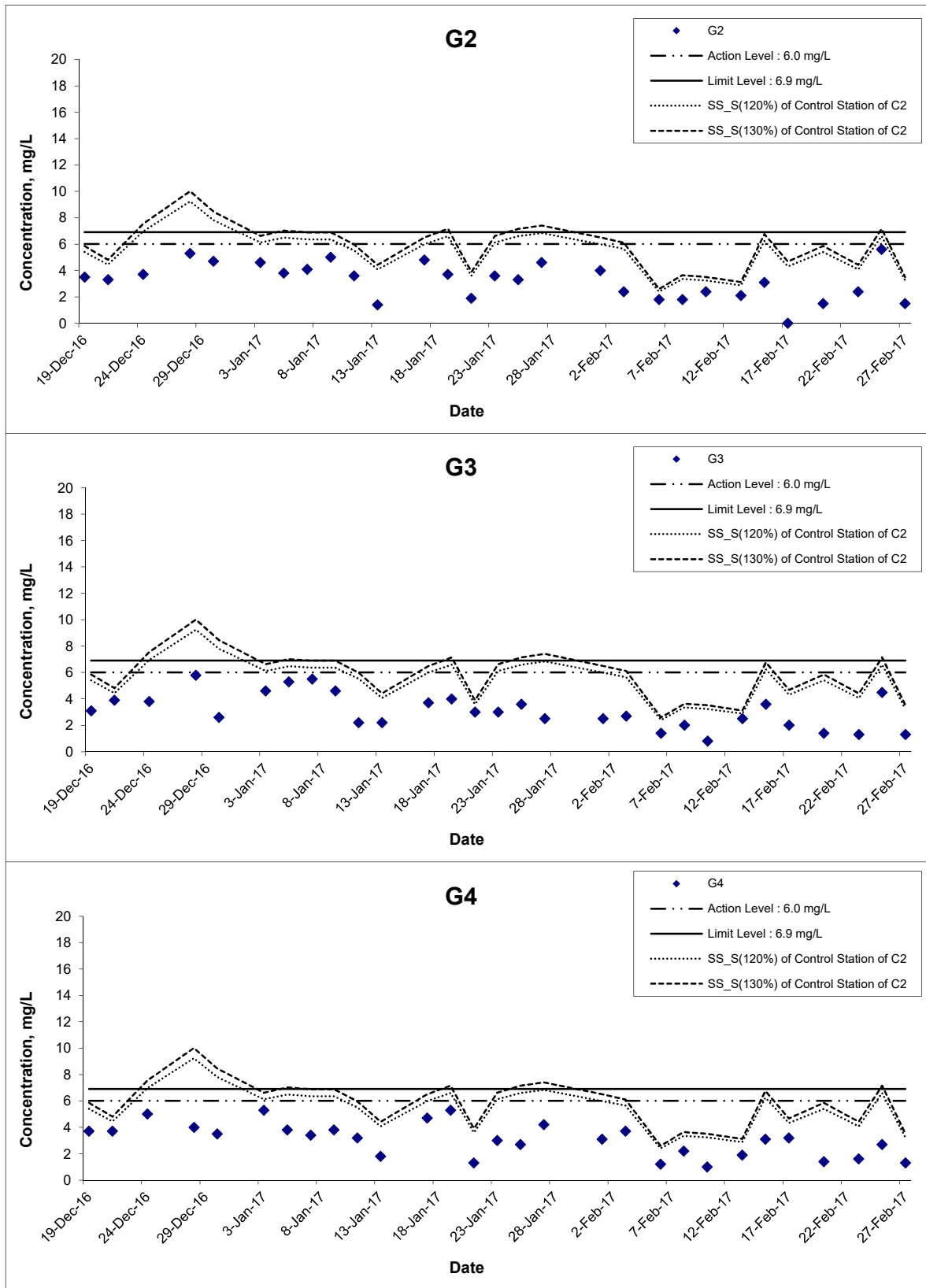
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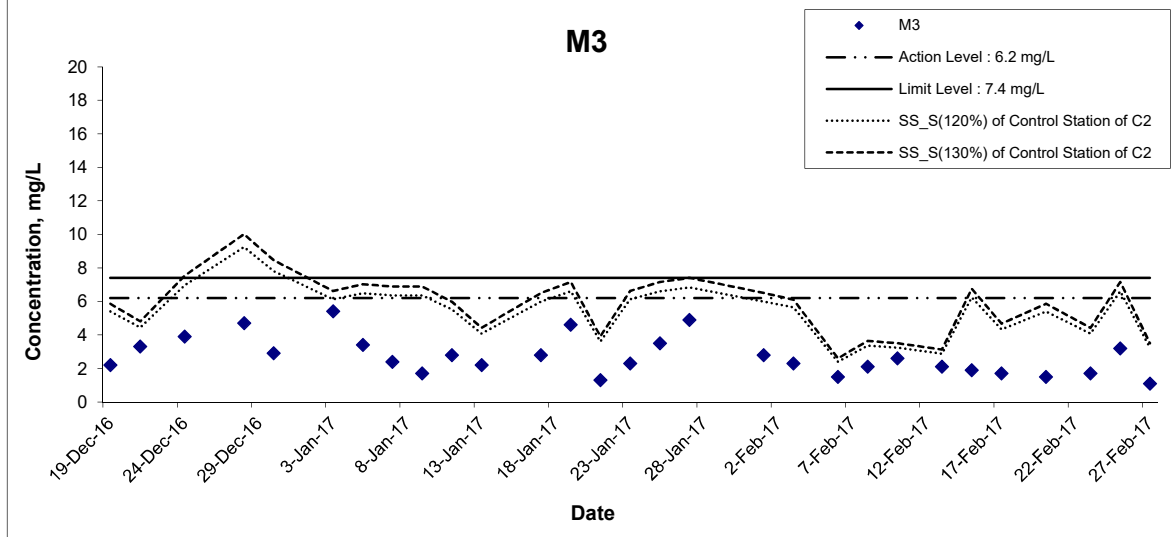
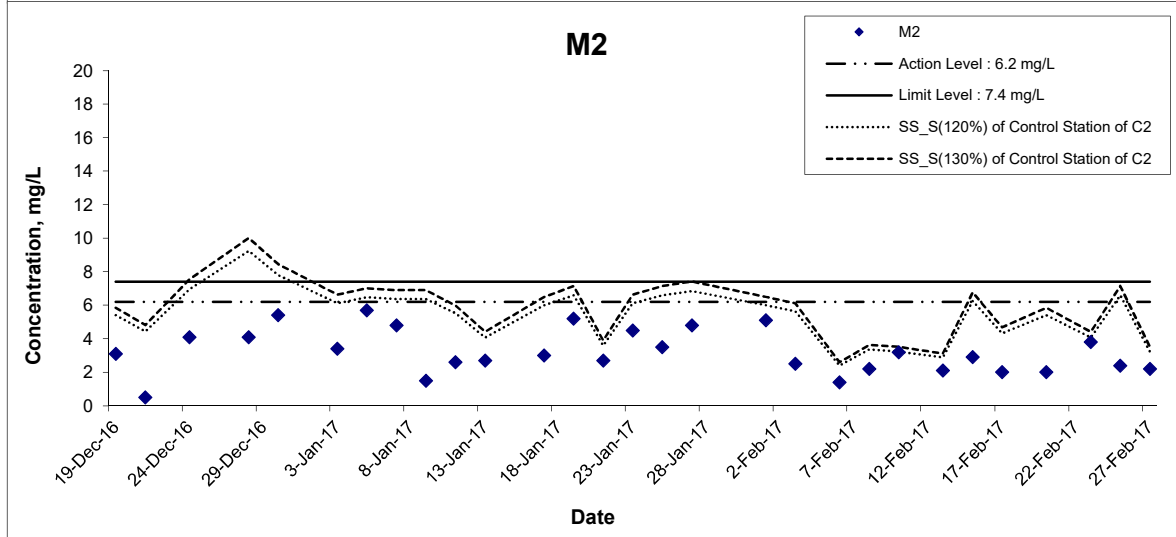
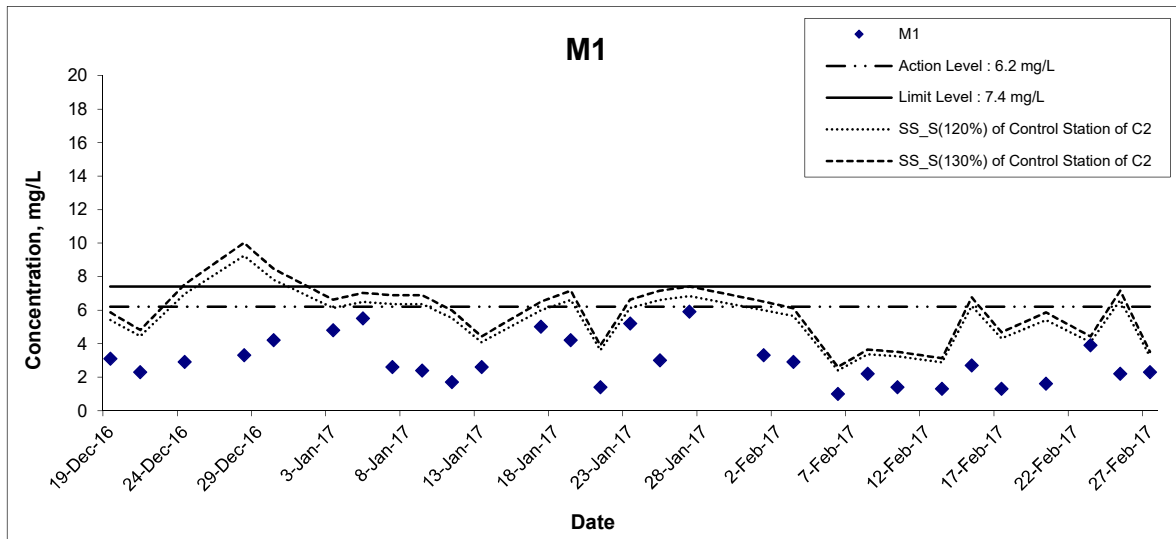
Suspended Solids (Surface) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

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|-------|--|-------|--------|-------------|---------|-----------------|
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Suspended Solids (Surface) at Mid-Ebb Tide



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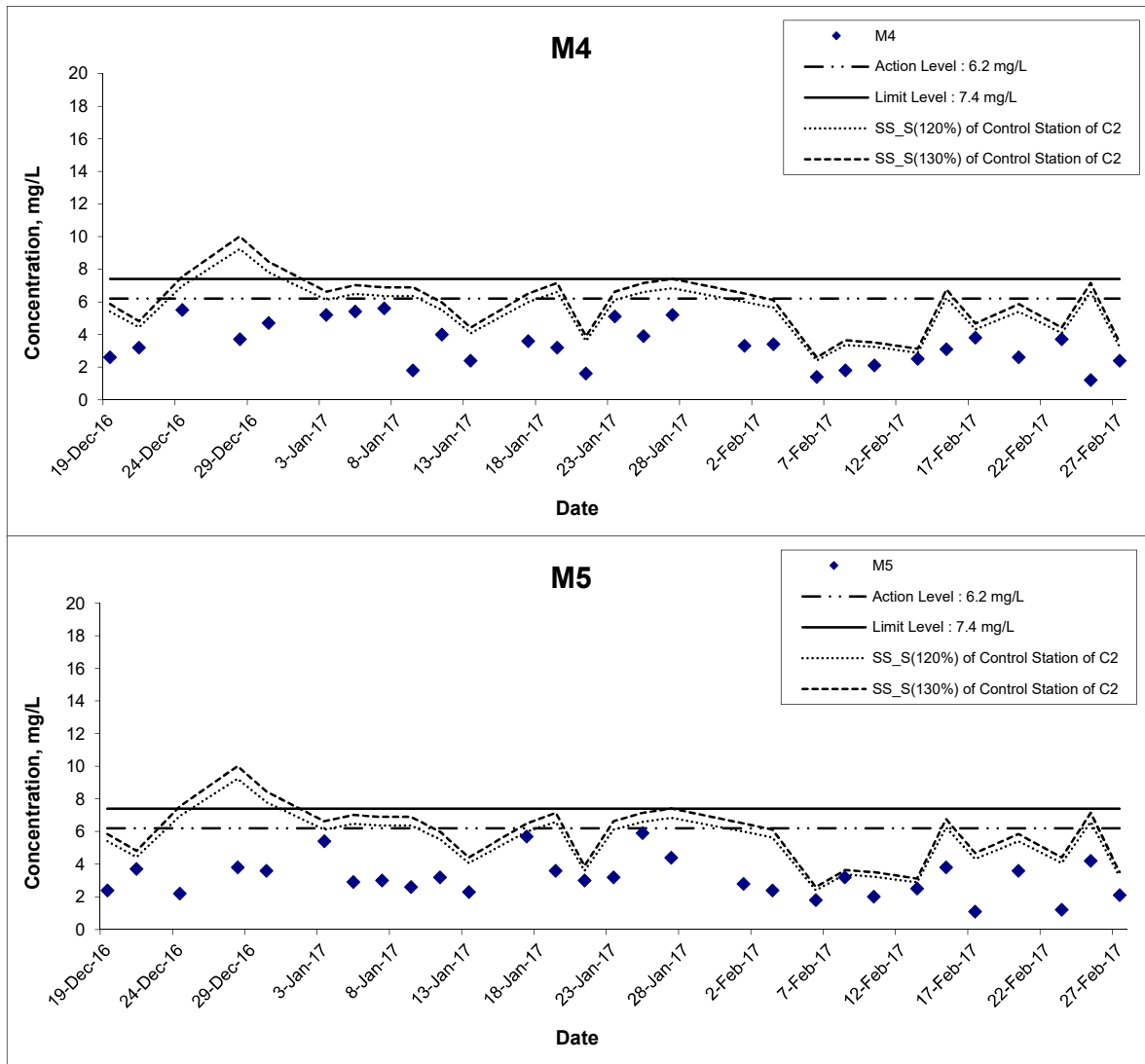
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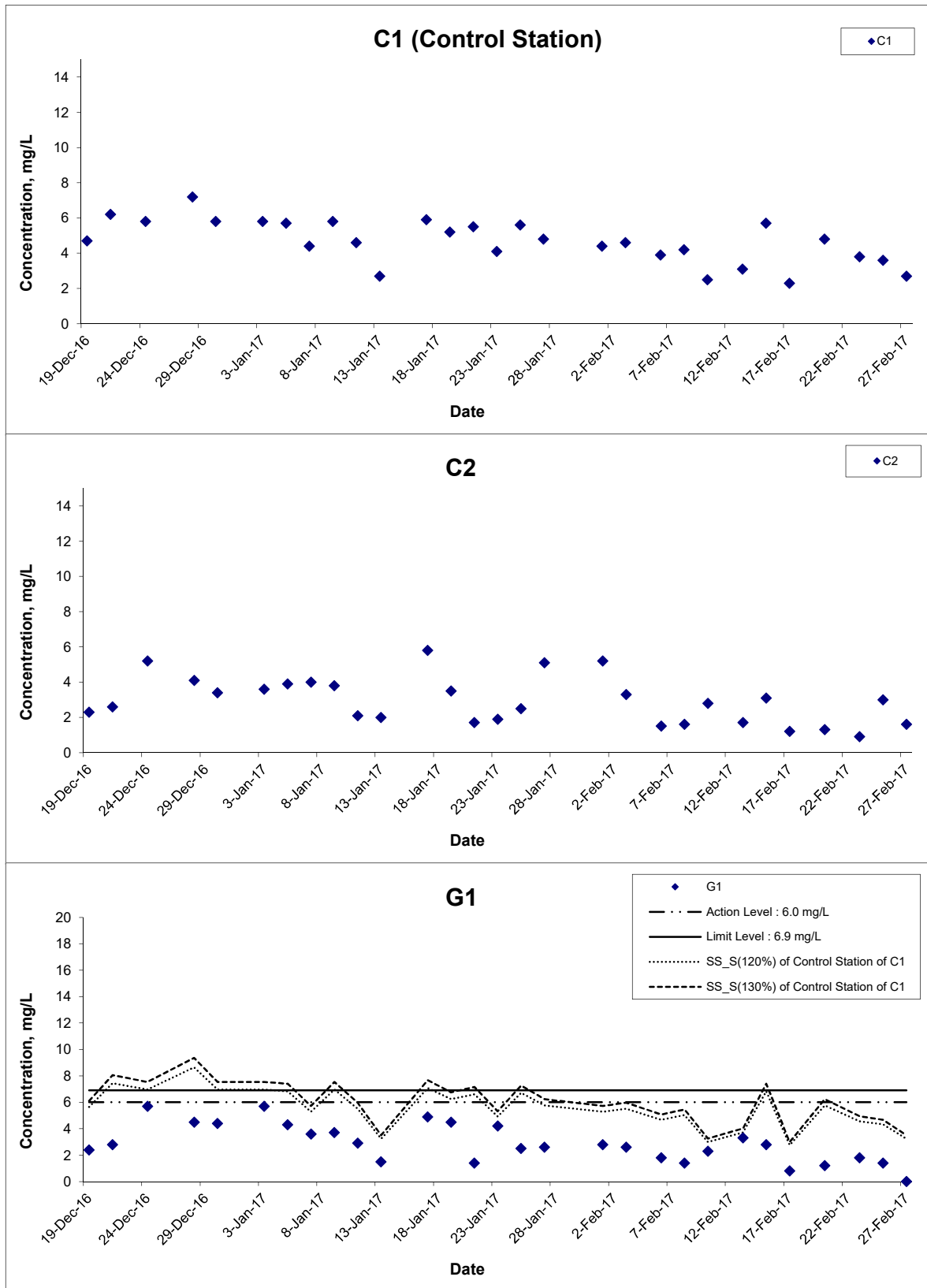


Suspended Solids (Surface) at Mid-Ebb Tide



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| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

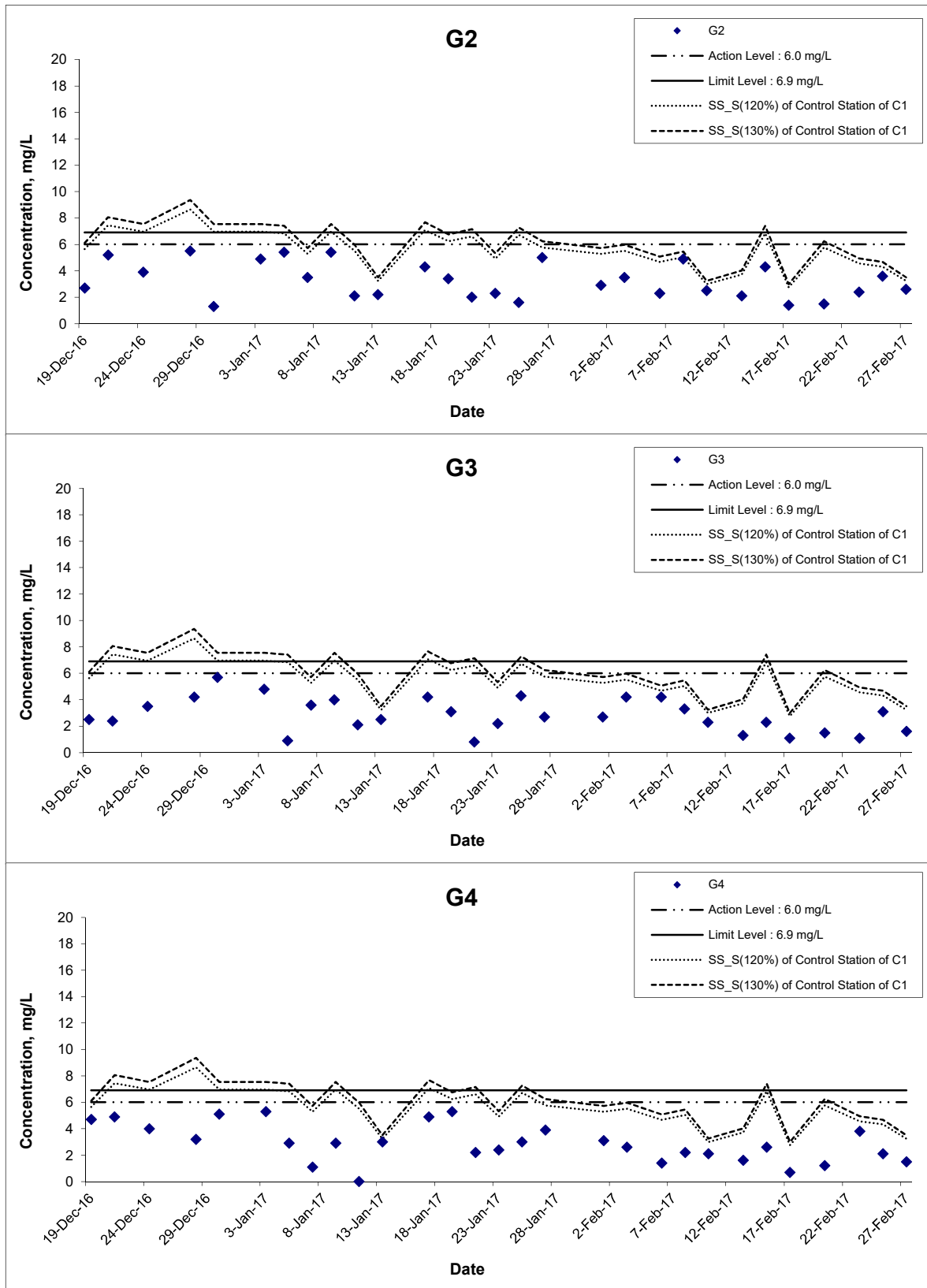
Suspended Solids (Surface) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|----------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

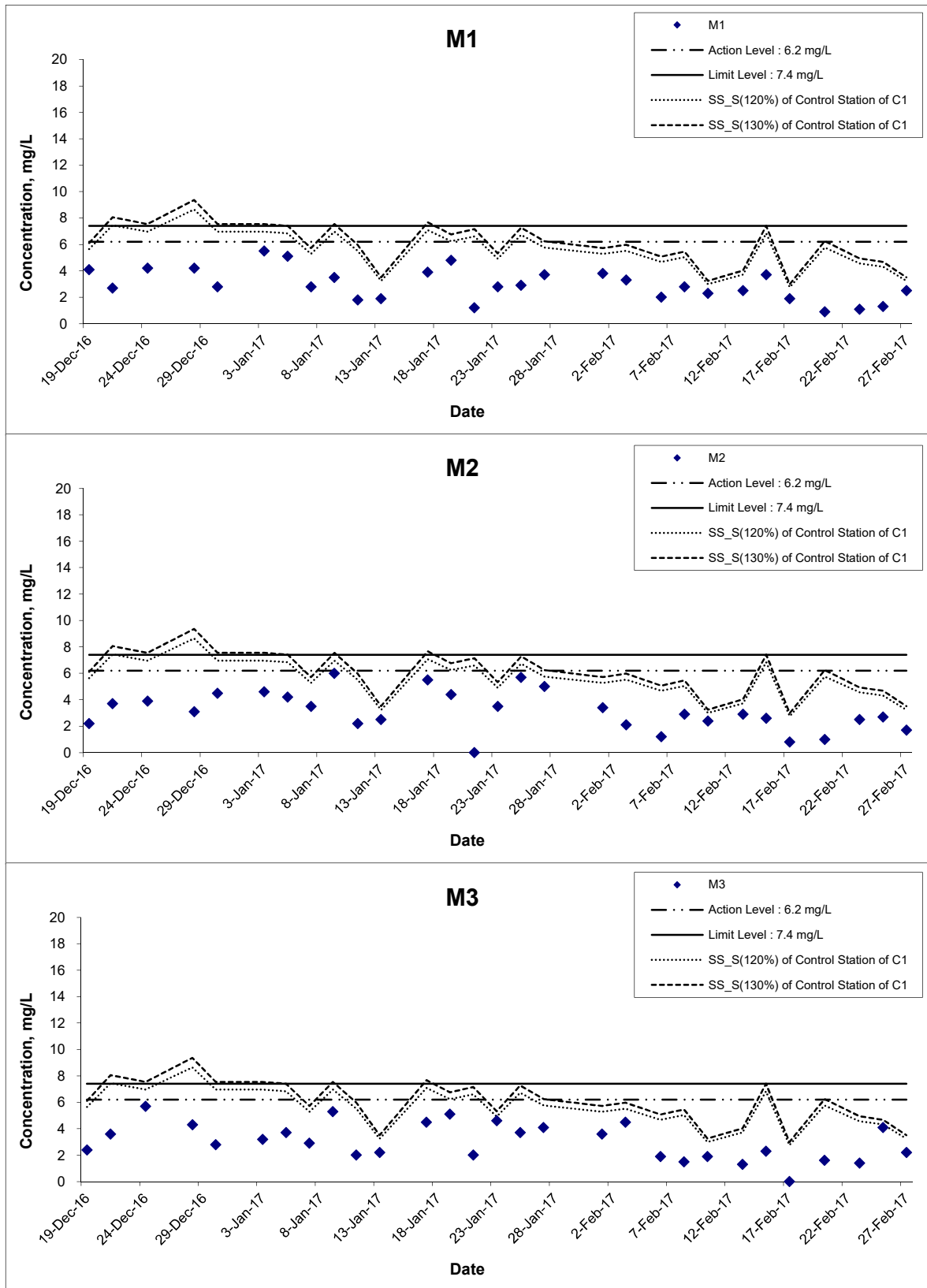
Suspended Solids (Surface) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

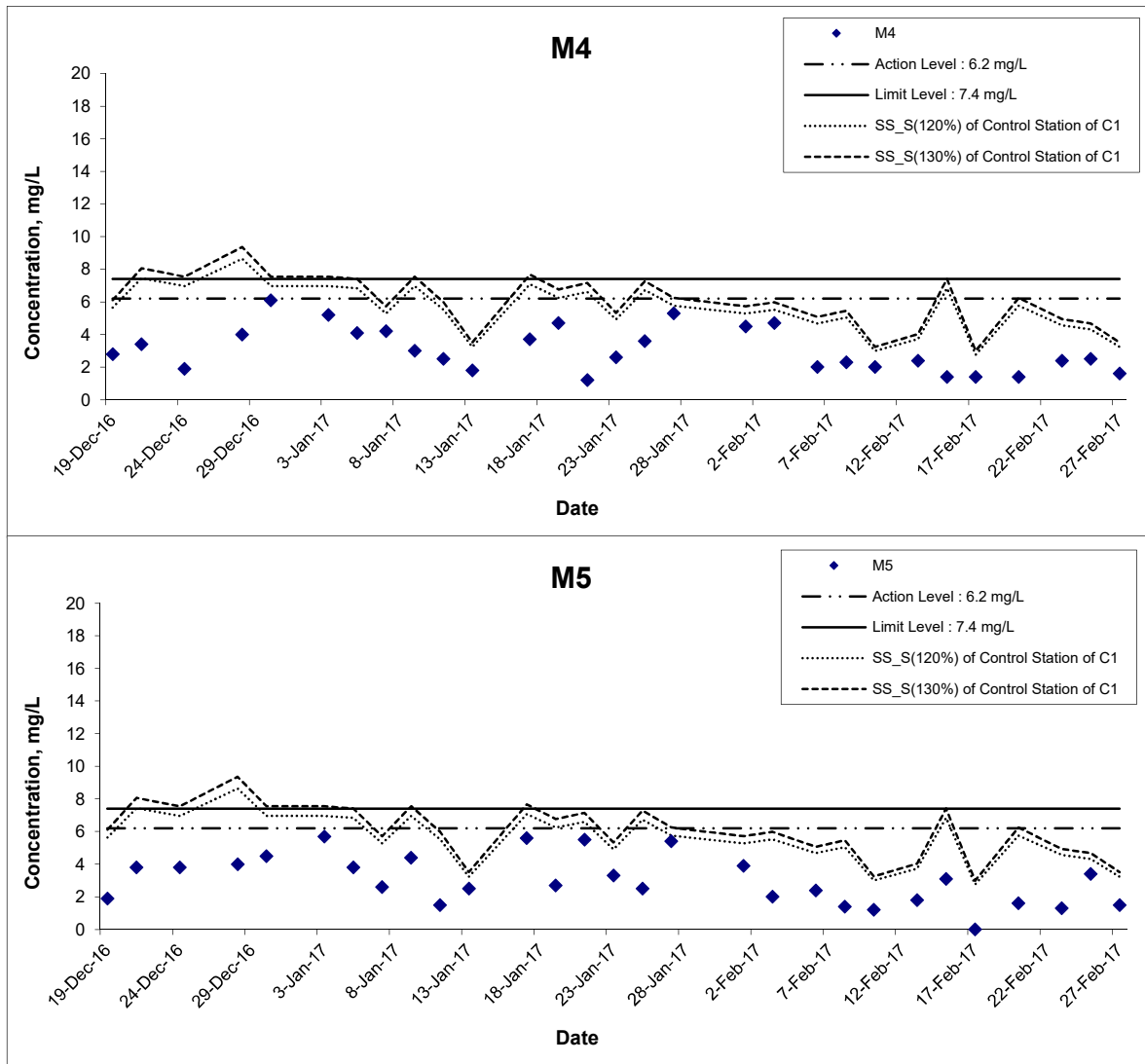
Suspended Solids (Surface) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

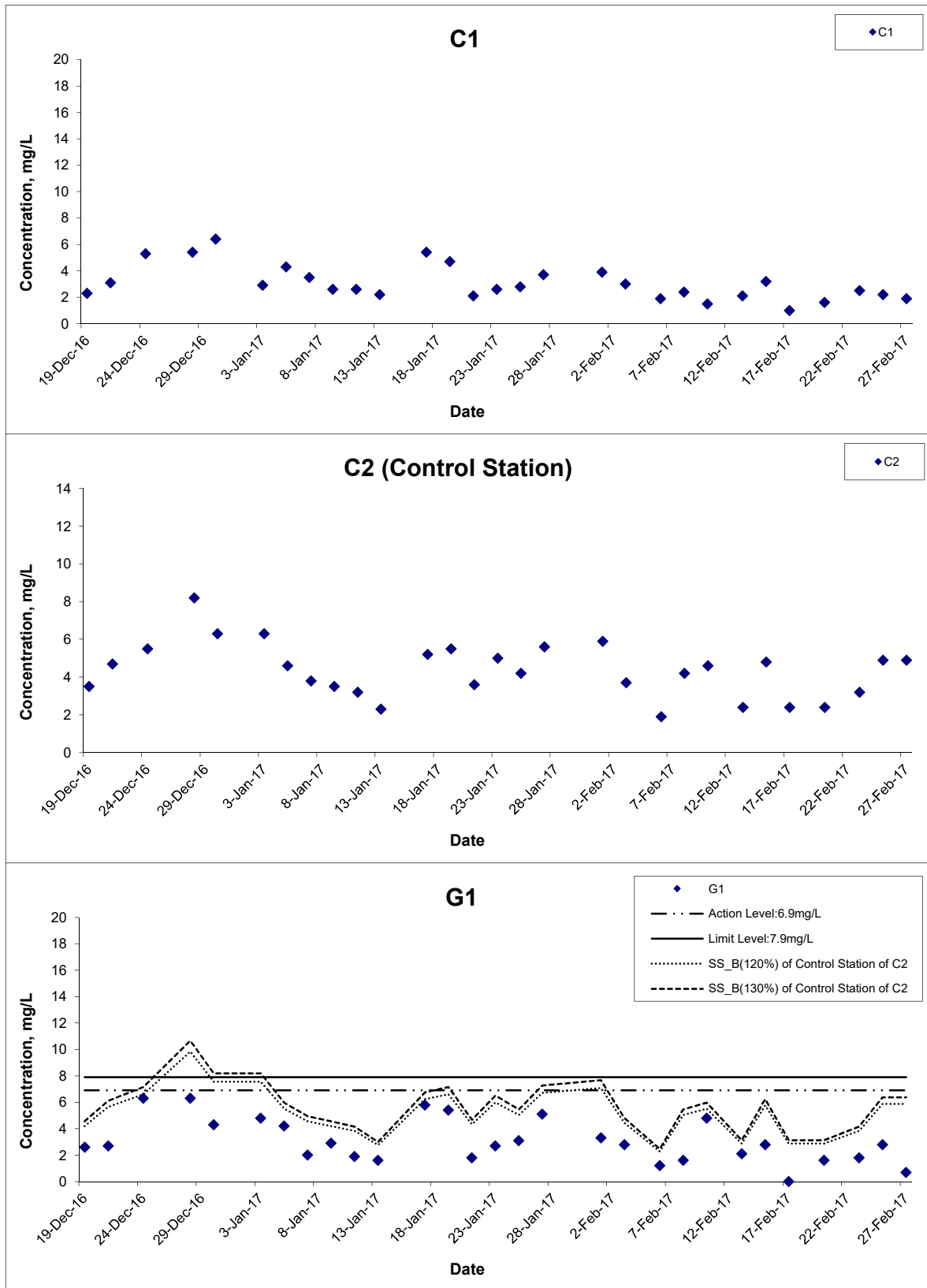
Suspended Solids (Surface) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

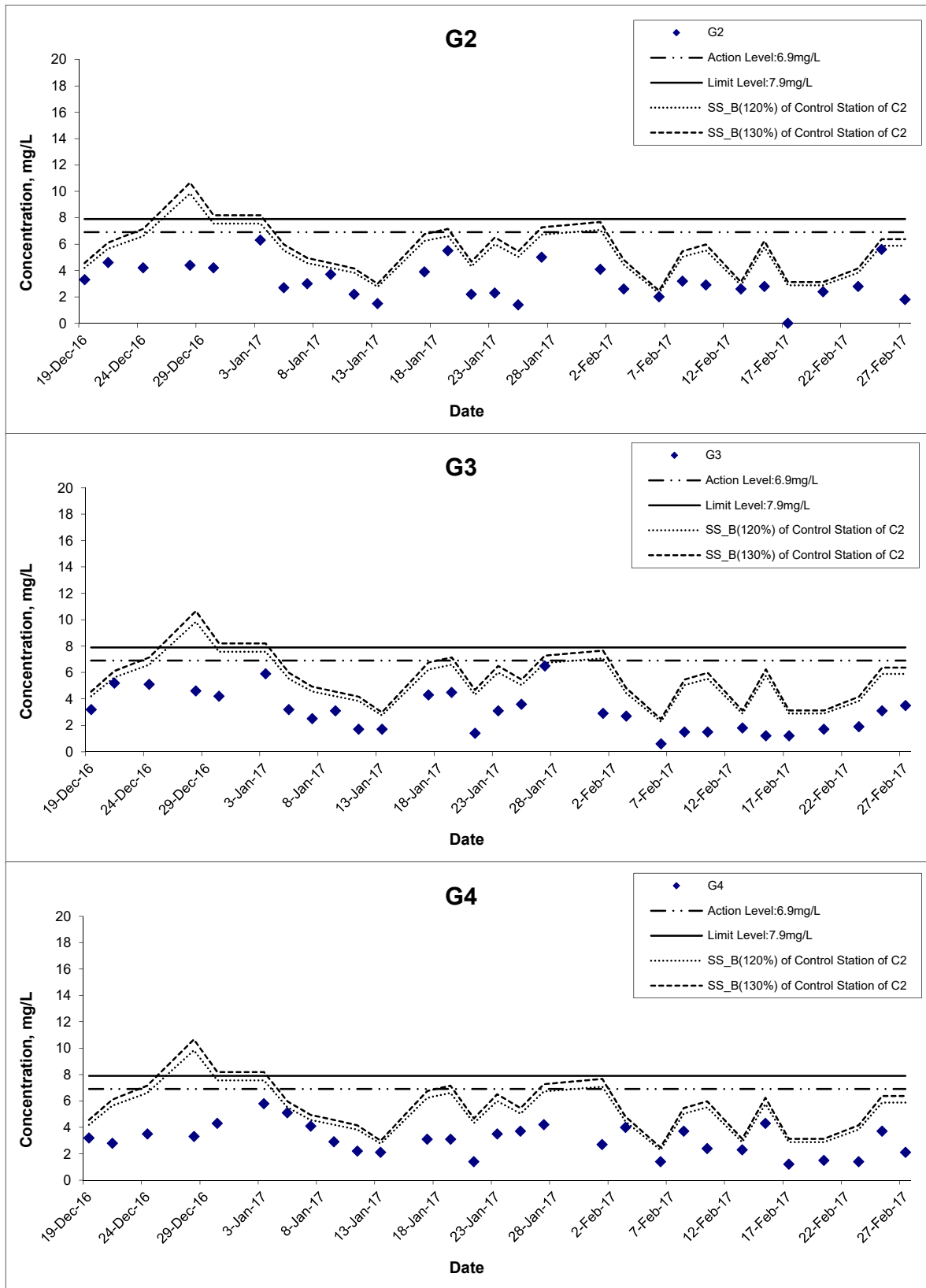
Suspended Solids (Bottom) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

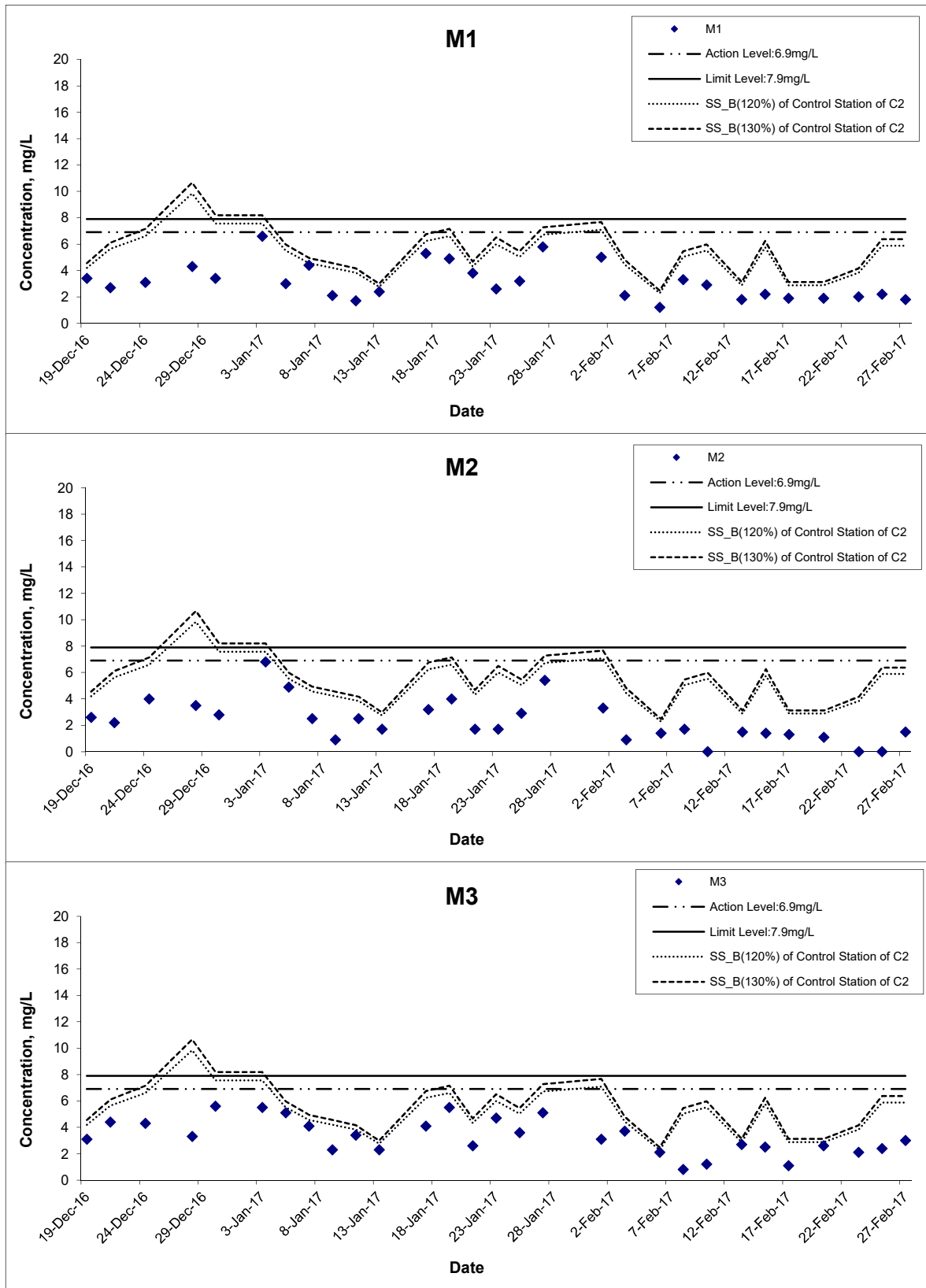
Suspended Solids (Bottom) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

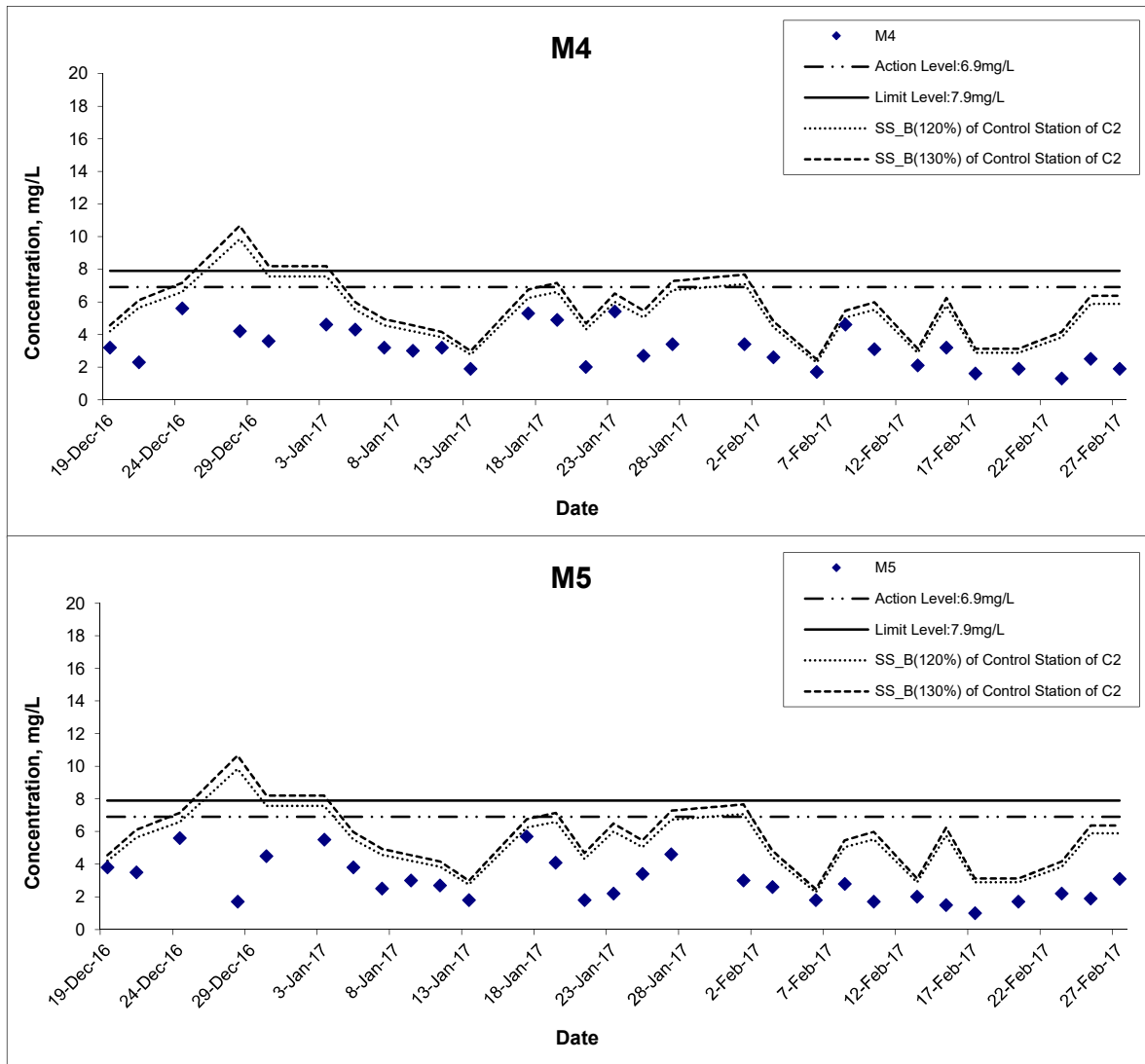
Suspended Solids (Bottom) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

Suspended Solids (Bottom) at Mid-Ebb Tide



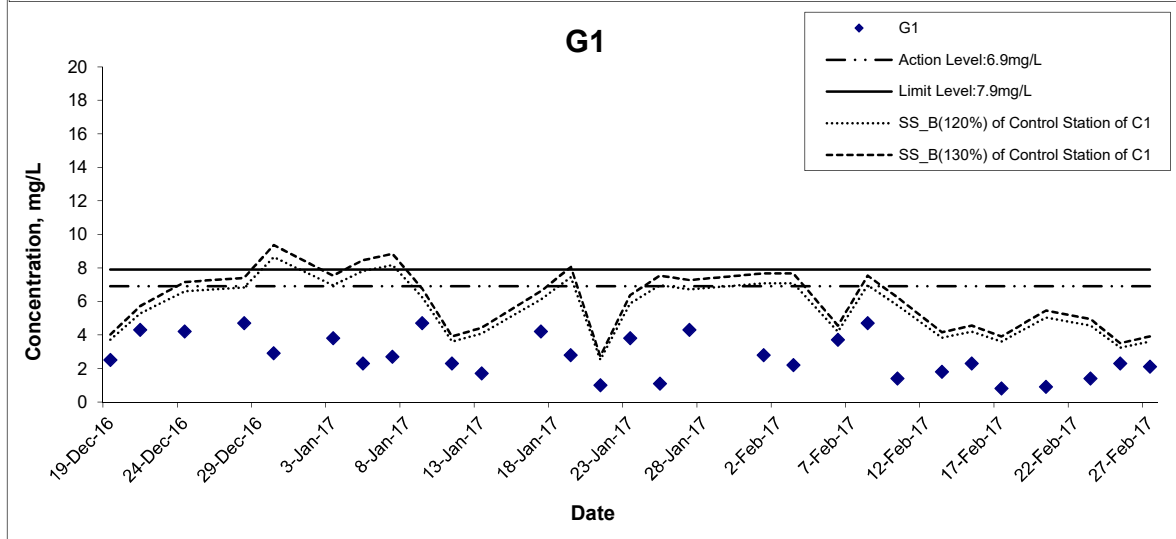
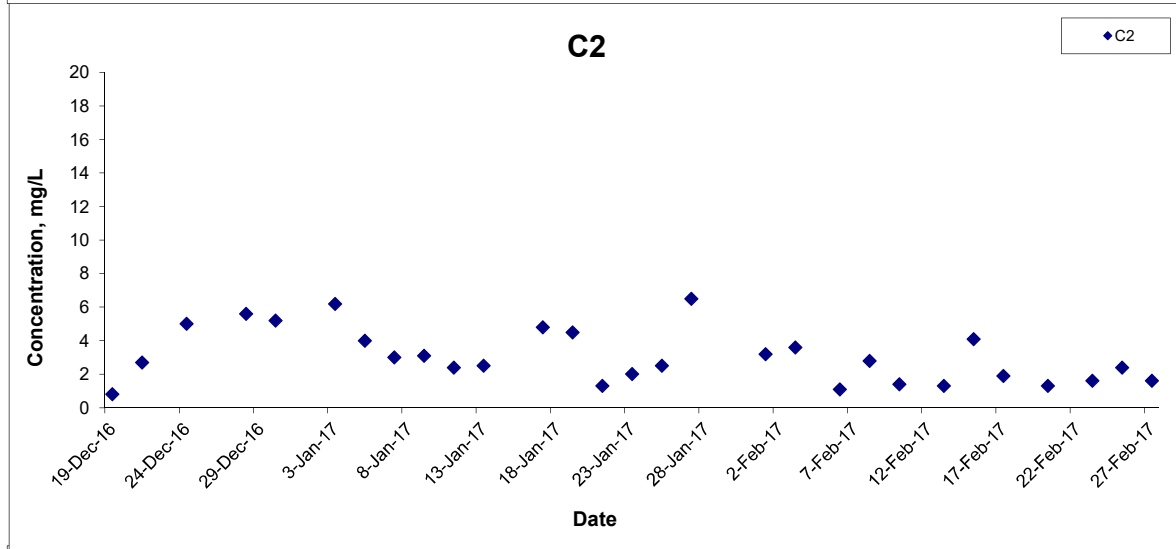
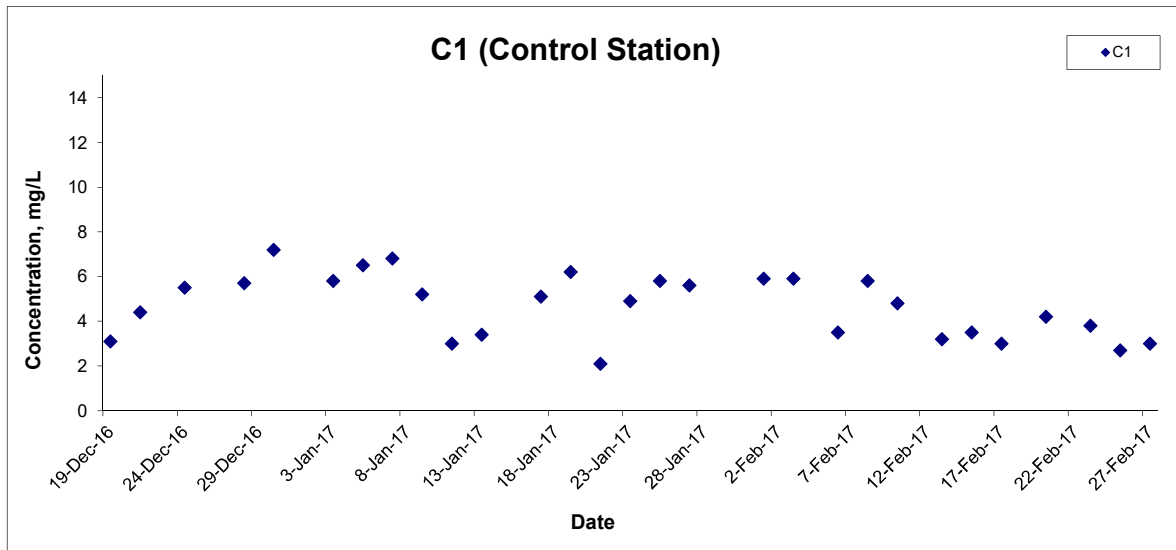
Title
 Agreement No. CE 59/2015(EP) Environmental Team for
 Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Graphical Presentation of Water Quality Monitoring
 Results

Scale
 N.T.S
Date
 Feb 17

Project No.
 MA16034
Appendix
 I



Suspended Solids (Bottom) at Mid-Flood Tide



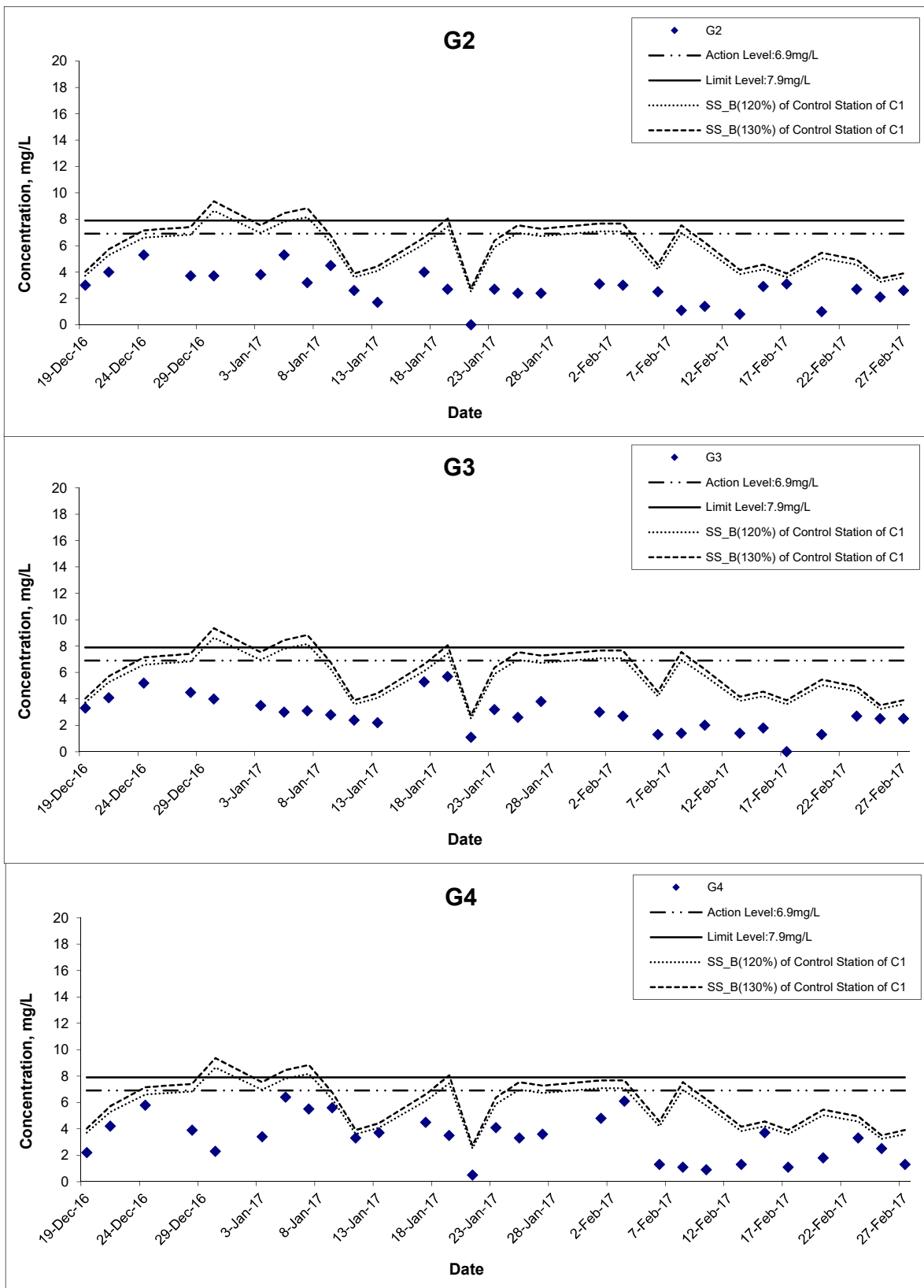
Title
 Agreement No. CE 59/2015(EP) Environmental Team for
 Tseung Kwan O - Lam Tin Tunnel Design and Construction
 Graphical Presentation of Water Quality Monitoring
 Results

Scale
 N.T.S
Date
 Feb 17

Project No.
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 I



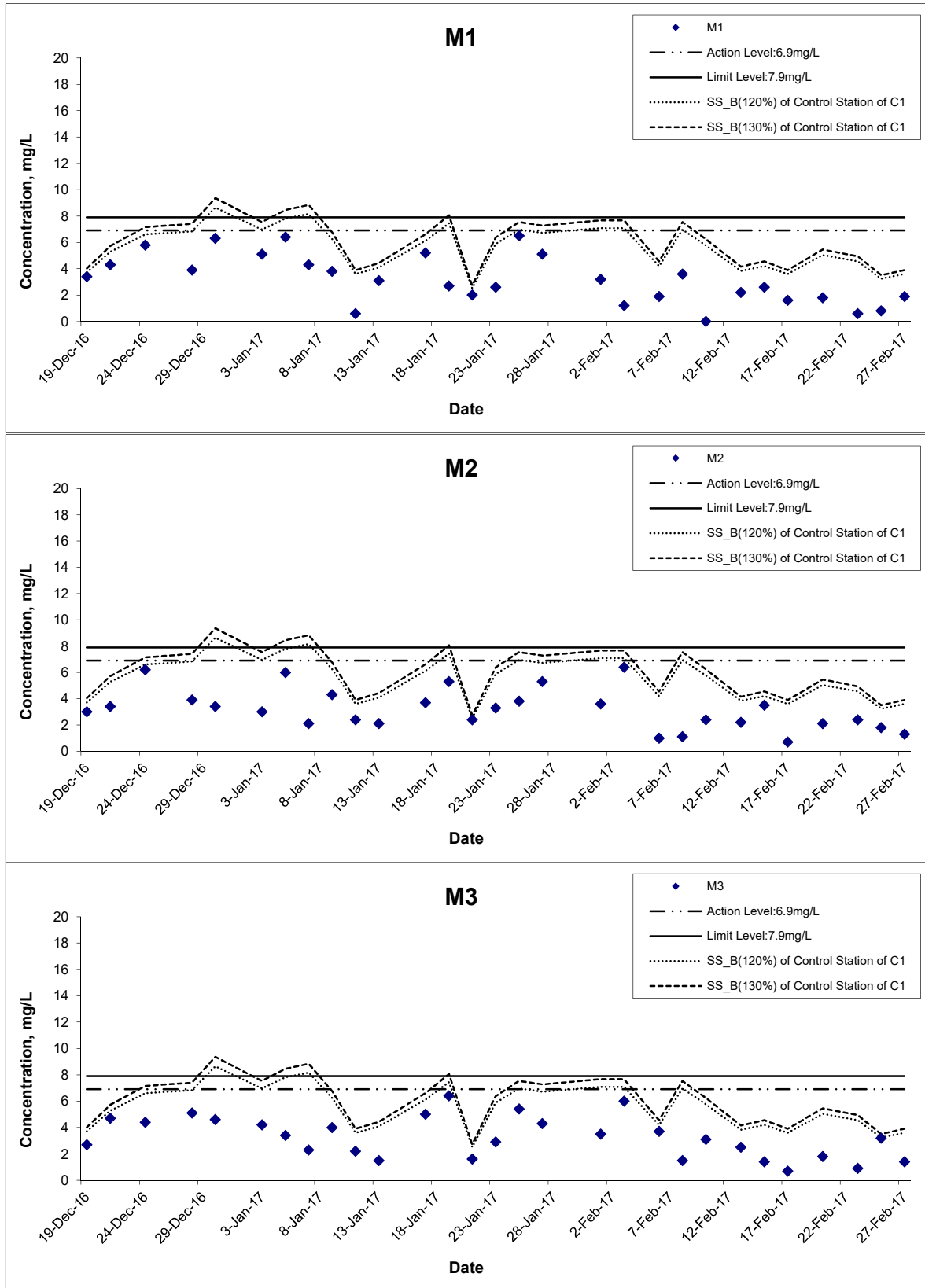
Suspended Solids (Bottom) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

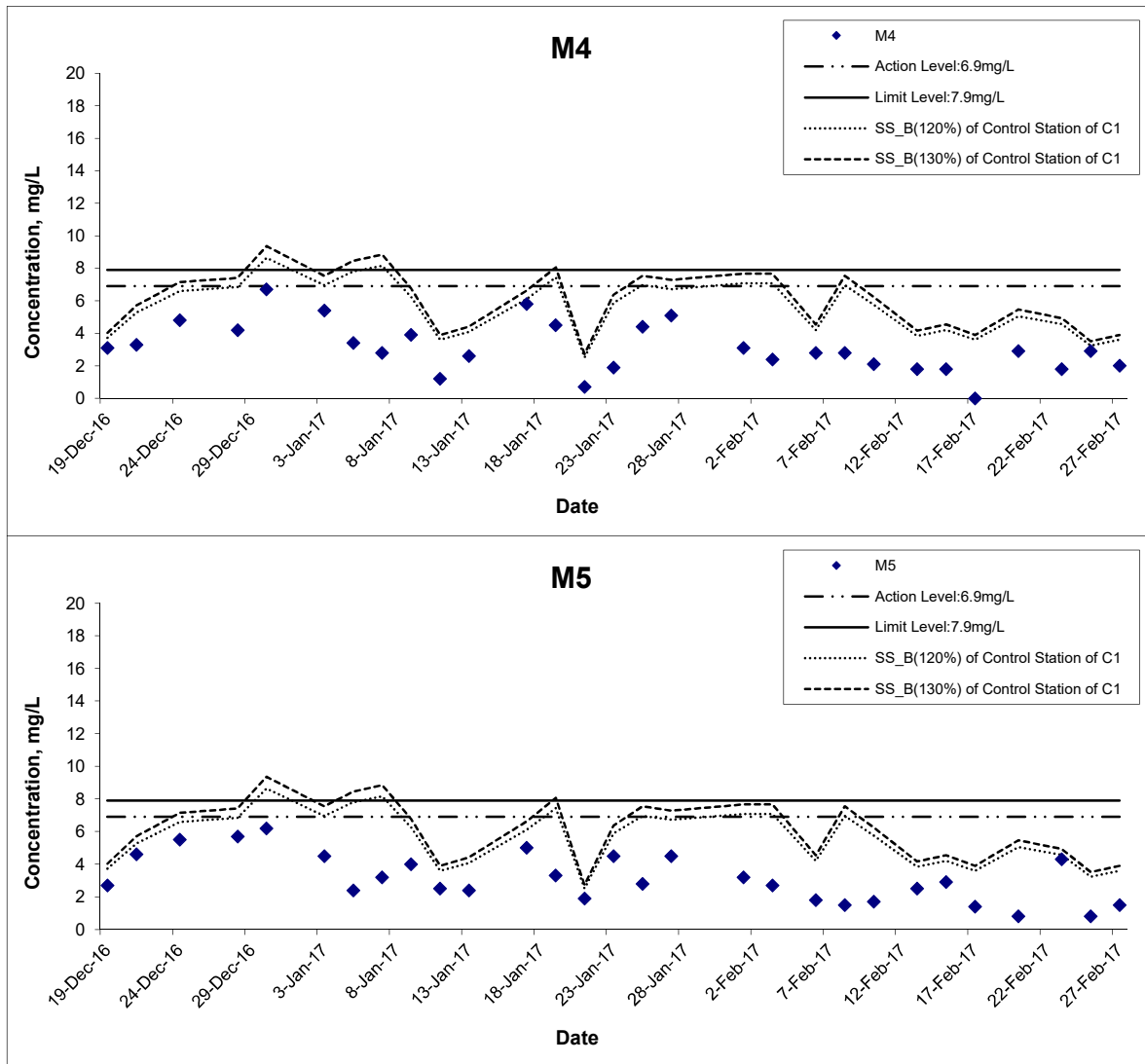
Suspended Solids (Bottom) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

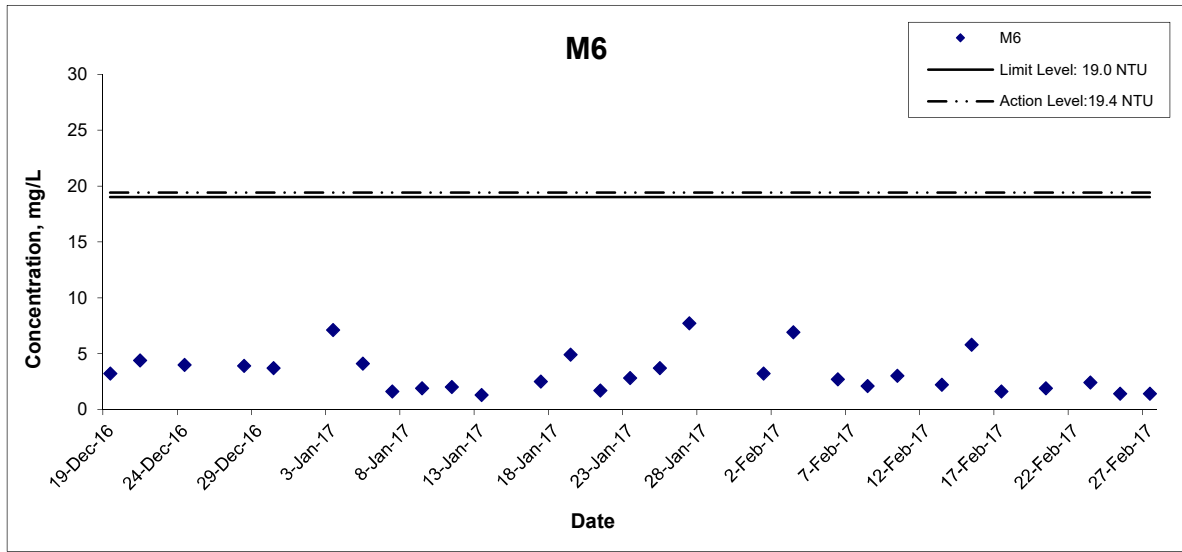
Suspended Solids (Bottom) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <2.5mg/L.

| | | | | | | |
|-------|--|-------|--------|-------------|---------|-----------------|
| Title | Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Graphical Presentation of Water Quality Monitoring Results | Date | Feb 17 | Appendix | I | |

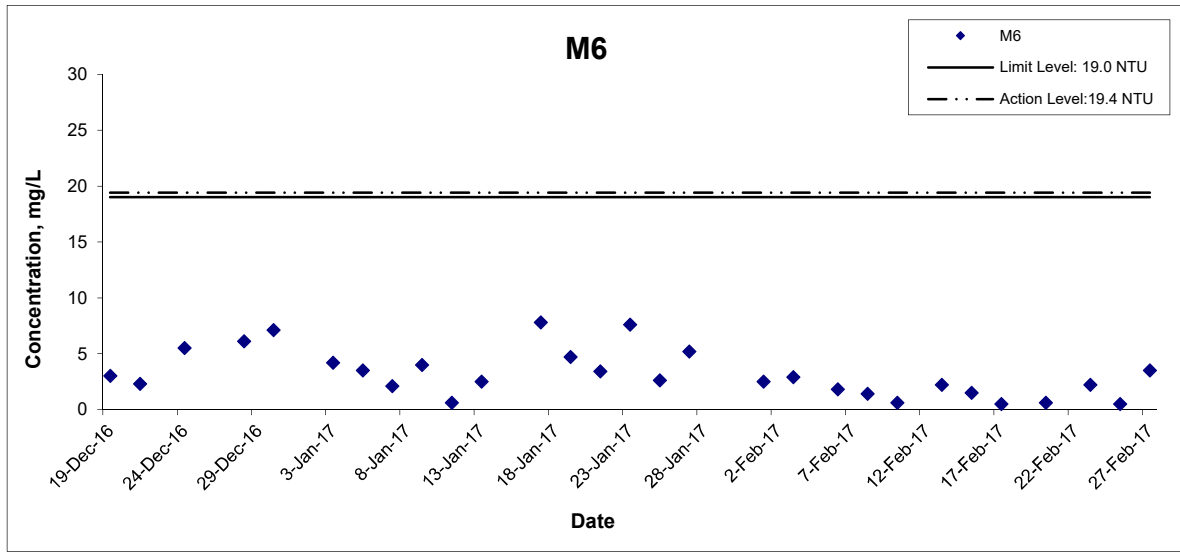
Suspended Solids (Intake Level of WSD Salt Water Intake) at Mid-Ebb Tide



| | | | | |
|---|-------|--------|-------------|---------|
| Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction Graphical Presentation of Water Quality Monitoring Results | Scale | N.T.S | Project No. | MA16034 |
| | Date | Feb 17 | Appendix | I |



Suspended Solids (Intake Level of WSD Salt Water Intake) at Mid-Flood Tide



| | | | | | |
|---|-------|--------|-------------|---------|----------|
| Title Agreement No. CE 59/2015(EP) Environmental Team for Tseung Kwan O - Lam Tin Tunnel Design and Construction Graphical Presentation of Water Quality Monitoring Results | Scale | N.T.S | Project No. | MA16034 | CINOTECH |
| | Date | Feb 17 | Appendix | I | |

**APPENDIX J
QUALITY CONTROL REPORTS FOR
LABORATORY ANALYSIS**

TEST REPORT

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

| | |
|-----------------|------------|
| Report No.: | QC26467 |
| Date of Issue: | 2017-02-14 |
| Date Received: | 2017-02-03 |
| Date Tested: | 2017-02-03 |
| Date Completed: | 2017-02-14 |

ATTN: Ms. Mei Ling Tang
QC report:

Page: 1 of 2

Method Blank

| Parameter | MB 1 | Acceptance |
|---|-------|------------|
| Suspended Solids (SS) (mg/L) | <0.5 | <0.5 |
| Biochemical Oxygen Demand | N/A | N/A |
| Total Organic Carbon (mg-TOC/L) | <0.2 | <0.2 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (mg NH ₃ -N/L) | <0.01 | <0.01 |
| Total Phosphorus (mg-P/L) | <0.01 | <0.01 |

Method QC

| Parameter | MQC1 | Acceptance |
|--|------|------------|
| Suspended Solids (SS) (%) | 100 | 80-120 |
| Biochemical Oxygen Demand (mg O ₂ /L) | 172 | 170-220 |
| Total Organic Carbon (%) | 92 | 80-120 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 100 | 80-120 |
| Total Phosphorus (%) | 99 | 80-120 |

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 26467.

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


PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|-----------------|------------|
| Report No.: | QC26467 |
| Date of Issue: | 2017-02-14 |
| Date Received: | 2017-02-03 |
| Date Tested: | 2017-02-03 |
| Date Completed: | 2017-02-14 |

Page: 2 of 2

QC report:

Sample Duplicate

| Parameter | 26467-3 chk | Acceptance |
|---|-------------|----------------|
| Suspended Solids (SS) (%) | 1 | RPD \leq 20% |
| Biochemical Oxygen Demand (%) | N/A | RPD \leq 20% |
| Total Organic Carbon (%) | 2 | RPD \leq 20% |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 0 | RPD \leq 20% |
| Total Phosphorus (%) | N/A | RPD \leq 20% |

Sample Spike

| Parameter | 26467-3 spk | Acceptance |
|---|-------------|------------|
| Suspended Solids (SS) (%) | N/A | N/A |
| Biochemical Oxygen Demand (%) | N/A | N/A |
| Total Organic Carbon (%) | 98 | 80-120 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 97 | 80-120 |
| Total Phosphorus (%) | 98 | 80-120 |

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 26467.

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

TEST REPORT

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

| | |
|-----------------|------------|
| Report No.: | QC26528 |
| Date of Issue: | 2017-02-27 |
| Date Received: | 2017-02-15 |
| Date Tested: | 2017-02-15 |
| Date Completed: | 2017-02-27 |

ATTN: Ms. Mei Ling Tang
QC report:

Page: 1 of 2

Method Blank

| Parameter | MB 1 | Acceptance |
|---|-------|------------|
| Suspended Solids (SS) (mg/L) | <0.5 | <0.5 |
| Biochemical Oxygen Demand | N/A | N/A |
| Total Organic Carbon (mg-TOC/L) | <0.2 | <0.2 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (mg NH ₃ -N/L) | <0.01 | <0.01 |
| Total Phosphorus (mg-P/L) | <0.01 | <0.01 |

Method QC

| Parameter | MQC1 | Acceptance |
|--|------|------------|
| Suspended Solids (SS) (%) | 104 | 80-120 |
| Biochemical Oxygen Demand (mg O ₂ /L) | 184 | 170-220 |
| Total Organic Carbon (%) | 102 | 80-120 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 105 | 80-120 |
| Total Phosphorus (%) | 99 | 80-120 |

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 26528.

PREPARED AND CHECKED BY:

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



PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|-----------------|------------|
| Report No.: | QC26528 |
| Date of Issue: | 2017-02-27 |
| Date Received: | 2017-02-15 |
| Date Tested: | 2017-02-15 |
| Date Completed: | 2017-02-27 |

Page: 2 of 2

QC report:

Sample Duplicate

| Parameter | 26528-3 chk | Acceptance |
|---|-------------|----------------|
| Suspended Solids (SS) (%) | 5 | RPD \leq 20% |
| Biochemical Oxygen Demand (%) | N/A | RPD \leq 20% |
| Total Organic Carbon (%) | 1 | RPD \leq 20% |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | N/A | RPD \leq 20% |
| Total Phosphorus (%) | 2 | RPD \leq 20% |

Sample Spike

| Parameter | 26528-3 spk | Acceptance |
|---|-------------|------------|
| Suspended Solids (SS) (%) | N/A | N/A |
| Biochemical Oxygen Demand (%) | N/A | N/A |
| Total Organic Carbon (%) | 94 | 80-120 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 104 | 80-120 |
| Total Phosphorus (%) | 96 | 80-120 |

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 26528.

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

TEST REPORT

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

| | |
|-----------------|------------|
| Report No.: | QC26593 |
| Date of Issue: | 2017-03-07 |
| Date Received: | 2017-02-27 |
| Date Tested: | 2017-02-27 |
| Date Completed: | 2017-03-07 |

ATTN: Ms. Mei Ling Tang
QC report:

Page: 1 of 2

Method Blank

| Parameter | MB 1 | Acceptance |
|---|-------|------------|
| Suspended Solids (SS) (mg/L) | <0.5 | <0.5 |
| Biochemical Oxygen Demand | N/A | N/A |
| Total Organic Carbon (mg-TOC/L) | <0.2 | <0.2 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (mg NH ₃ -N/L) | <0.01 | <0.01 |
| Total Phosphorus (mg-P/L) | <0.01 | <0.01 |

Method QC

| Parameter | MQC1 | Acceptance |
|--|------|------------|
| Suspended Solids (SS) (%) | 100 | 80-120 |
| Biochemical Oxygen Demand (mg O ₂ /L) | 209 | 170-220 |
| Total Organic Carbon (%) | 98 | 80-120 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 97 | 80-120 |
| Total Phosphorus (%) | 103 | 80-120 |

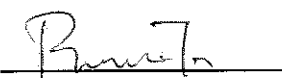
Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 26593.

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

| | |
|-----------------|------------|
| Report No.: | QC26593 |
| Date of Issue: | 2017-03-07 |
| Date Received: | 2017-02-27 |
| Date Tested: | 2017-02-27 |
| Date Completed: | 2017-03-07 |

Page: 2 of 2

QC report:

Sample Duplicate

| Parameter | 26593-3 chk | Acceptance |
|---|-------------|----------------|
| Suspended Solids (SS) (%) | 1 | RPD \leq 20% |
| Biochemical Oxygen Demand (%) | N/A | RPD \leq 20% |
| Total Organic Carbon (%) | 3 | RPD \leq 20% |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | N/A | RPD \leq 20% |
| Total Phosphorus (%) | N/A | RPD \leq 20% |

Sample Spike

| Parameter | 26593-3 spk | Acceptance |
|---|-------------|------------|
| Suspended Solids (SS) (%) | N/A | N/A |
| Biochemical Oxygen Demand (%) | N/A | N/A |
| Total Organic Carbon (%) | 109 | 80-120 |
| Nitrogen (Total Kjeldahl + nitrate + nitrite) | N/A | N/A |
| Ammonia (%) | 94 | 80-120 |
| Total Phosphorus (%) | 98 | 80-120 |

Remarks: 1) \leq = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 26593.

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

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26443 |
| Date of Issue: | 2017/02/02 |
| Date Received: | 2017/02/01 |
| Date Tested: | 2017/02/01 |
| Date Completed: | 2017/02/02 |
| Page: | 1 of 1 |

ATTN: Ms. Mei Ling Tang

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)
Project No.: MA16034
Sampling Date: 2017/02/01
Number of Sample: 136
Custody No.: MA16034-CE/59/2015(EP)/170201

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| M4se | 3 | 3 | 1 | 93 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26457 |
| Date of Issue: | 2017/02/06 |
| Date Received: | 2017/02/03 |
| Date Tested: | 2017/02/03 |
| Date Completed: | 2017/02/06 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/03

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170203

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| M4se | 3 | 4 | 4 | 98 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26461 |
| Date of Issue: | 2017/02/07 |
| Date Received: | 2017/02/06 |
| Date Tested: | 2017/02/06 |
| Date Completed: | 2017/02/07 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/06

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170206

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| M4se | 1 | 1 | 1 | 101 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26477 |
| Date of Issue: | 2017/02/09 |
| Date Received: | 2017/02/08 |
| Date Tested: | 2017/02/08 |
| Date Completed: | 2017/02/09 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/08

Number of Sample: 132

Custody No.: MA16034-CE/59/2015(EP)/170208

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| C2be | 4 | 4 | 1 | 101 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26494 |
| Date of Issue: | 2017/02/13 |
| Date Received: | 2017/02/10 |
| Date Tested: | 2017/02/10 |
| Date Completed: | 2017/02/13 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/10

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170210

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| C2se | 3 | 3 | 3 | 97 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26502 |
| Date of Issue: | 2017/02/14 |
| Date Received: | 2017/02/13 |
| Date Tested: | 2017/02/13 |
| Date Completed: | 2017/02/14 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/13

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170213

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| G3me | 4 | 5 | 4 | 99 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26518 |
| Date of Issue: | 2017/02/16 |
| Date Received: | 2017/02/15 |
| Date Tested: | 2017/02/15 |
| Date Completed: | 2017/02/16 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/15

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170215

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % | |
|------------------------|--------------------|------------------|------------------|----------------|------------------|
| | Sampling Point | Trial 1, mg/L | Trial 2, mg/L | | Difference, % |
| M4se | | 3 | 3 | 2 | 103 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26533 |
| Date of Issue: | 2017/02/20 |
| Date Received: | 2017/02/17 |
| Date Tested: | 2017/02/17 |
| Date Completed: | 2017/02/20 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/17

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170217

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % | |
|------------------------|--------------------|------------------|------------------|----------------|------------------|
| | Sampling Point | Trial 1, mg/L | Trial 2, mg/L | | Difference, % |
| M4se | | 4 | 4 | 4 | 88 |

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

PREPARED AND CHECKED BY:

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26543 |
| Date of Issue: | 2017/02/21 |
| Date Received: | 2017/02/20 |
| Date Tested: | 2017/02/20 |
| Date Completed: | 2017/02/21 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/20

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170220

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| | Sampling Point | Trial 1, mg/L | Trial 2, mg/L | |
| M4se | 3 | 3 | 0 | 100 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26565 |
| Date of Issue: | 2017/02/24 |
| Date Received: | 2017/02/23 |
| Date Tested: | 2017/02/23 |
| Date Completed: | 2017/02/24 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/23

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170223

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| M4se | 4 | 4 | 2 | 102 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26577 |
| Date of Issue: | 2017/02/27 |
| Date Received: | 2017/02/25 |
| Date Tested: | 2017/02/25 |
| Date Completed: | 2017/02/27 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/25

Number of Sample: 136

Custody No.: MA16034-CE/59/2015(EP)/170225

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| G3me | 3 | 3 | 1 | 91 |

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

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



PATRICK TSE
Laboratory Manager

TEST REPORT

QC REPORT

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

| | |
|-----------------|------------|
| Report No.: | 26580 |
| Date of Issue: | 2017/02/28 |
| Date Received: | 2017/02/27 |
| Date Tested: | 2017/02/27 |
| Date Completed: | 2017/02/28 |

ATTN: Ms. Mei Ling Tang

Page: 1 of 1

Project Name: Enviromental Team for Tseung Kwan O - Lam Tin Tunnel -
Design and Construction Agreement No. CE/59/2015 (EP)

Project No.: MA16034

Sampling Date: 2017/02/27

Number of Sample: 132

Custody No.: MA16034-CE/59/2015(EP)/170227

| Total Suspended Solids | Duplicate Analysis | | | QC Recovery, % |
|------------------------|--------------------|------------------|------------------|----------------|
| Sampling Point | Trial 1, mg/L | Trial 2, mg/L | Difference, % | |
| G3me | 3 | 3 | 1 | 102 |

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

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



PATRICK TSE
Laboratory Manager

**APPENDIX K
SUMMARY OF EXCEEDANCE**

**Agreement No. CE 59/2015 (EP)
Environmental Team for Tseung Kwan O - Lam Tin Tunnel –
Design and Construction**

Appendix K – Summary of Exceedance

Reporting Period: February 2017

**(A) Exceedance Report for Air Quality
(NIL in the reporting month)**

**(B) Exceedance Report for Construction Noise
(Two Action Level exceedance was recorded due to the documented complaints received)**

**(C) Exceedance Report for Water Quality
(One Action Level and Six Limit Level exceedance in groundwater quality monitoring as followed:**

| Date | Monitoring Location | Monitoring Parameter | Monitoring Results | Action Level | Limit Level |
|-------------|----------------------------|-----------------------------|------------------------------|---------------------|--------------------|
| 3 Feb 2017 | Stream 2 | Ammonia-N | 0.08 mg NH ₃ -N/L | 0.05 | 0.06 |
| | Stream 3 | Suspended Solids | 11 mg/L | 5.5 | 6.2 |
| | Stream 3 | Ammonia-N | 0.06 mg NH ₃ -N/L | 0.05 | 0.06 |
| 15 Feb 2017 | Stream 1 | Total Organic Carbon | 5 mg-TOC/L | 4.3 | 4.9 |
| | Stream 3 | Total Phosphorus | 0.08 mg-P/L | 0.05 | 0.05 |
| 27 Feb 2017 | Stream 1 | Suspended Solids | 7.1 mg/L | 5.5 | 6.2 |
| | Stream 2 | Total Phosphorus | 0.07 mg-P/L | 0.05 | 0.05 |

According to the information provided by the Contractor, no tunnel boring or tunnel construction works were carried out in both Lam Tin side and Tseung Kwan O side in February 2017. Therefore, it is considered that the exceedance is not project-related.)

**(D) Exceedance Report for Ecology
(NIL in the reporting month)**

**(E) Exceedance Report for Cultural Heritage
(NIL in the reporting month)**

**(F) Exceedance Report for Landfill Gas
(NIL in the reporting month)**

**APPENDIX L
SITE AUDIT SUMMARY**

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O–Lam Tin Tunnel - Design and Construction

Contract NE/2015/01

Tseung Kwan O–Lam Tin Tunnel–Main Tunnel and Associated Works

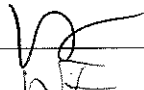

Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|------------------------------|
| Checklist Reference Number | 170201 |
| Date | 01 February 2017 (Wednesday) |
| Time | 9:00-10:45 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|------------|--|------------------|
| 170201-R01 | B. Water Quality <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | F11 |
| | C. Ecology <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | D. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | E. Air Quality <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| 170201-R02 | F. Construction Noise Impact <ul style="list-style-type: none">To provide mitigation measures to PME as proposed in the approved NMP in Cha Kwo Ling before work. | |
| | G. Waste / Chemical Management <ul style="list-style-type: none">To provide drip tray to chemical containers in Portion WAIL. | G10 |
| | H. Permits/Licences <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | I. Impact on Cultural Heritage <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | J. Others <ul style="list-style-type: none">Follow-up on previous audit section (Ref. No.: 170125), item 170125-R03 is remarked as 170201-R01 respectively. Follow up action is needed to reviewed during the next site inspection. | |

| | Name | Signature | Date |
|-------------|--------------------|--|------------------|
| Recorded by | Johnny Fung |  | 01 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 01 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O-Lam Tin Tunnel - Design and Construction

Contract NE/2015/01

Tseung Kwan O-Lam Tin Tunnel-Main Tunnel and Associated Works

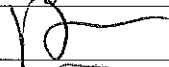
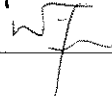
Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|------------------------------|
| Checklist Reference Number | 170208 |
| Date | 08 February 2017 (Wednesday) |
| Time | 9:00-10:45 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|------------|--|------------------|
| 170208-R01 | B. Water Quality <ul style="list-style-type: none">To properly cover the exposed slope by impervious material at slope at TKO. C. Ecology <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. D. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | B9 |
| 170208-R01 | E. Air Quality <ul style="list-style-type: none">To properly cover the exposed slope by impervious material at slope at TKO. | E6 |
| 170208-R03 | F. Construction Noise Impact <ul style="list-style-type: none">To provide mitigation measures (e.g. Temporary noise barrier / Full enclosure) to PME as proposed in the approved NMP in Cha Kwo Ling. | F11 |
| 170208-R02 | G. Waste / Chemical Management <ul style="list-style-type: none">To removed oil stain on paved ground at site Portion WAIL. H. Permits/Licences <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. I. Impact on Cultural Heritage <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. J. Others <ul style="list-style-type: none">Follow-up on previous audit section (Ref. No.: 170201), item 170201-R01 is remarked as 170208-R03 respectively. Follow up action is needed to reviewed during the next site inspection. | G9 |

| | Name | Signature | Date |
|-------------|--------------------|--|------------------|
| Recorded by | Johnny Fung |  | 08 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 08 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O-Lam Tin Tunnel - Design and Construction

Contract NE/2015/01

Tseung Kwan O-Lam Tin Tunnel—Main Tunnel and Associated Works

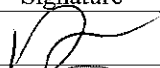

Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|------------------------------|
| Checklist Reference Number | 170215 |
| Date | 15 February 2017 (Wednesday) |
| Time | 9:00-10:45 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|--------------------------|--|------------------|
| 170215-R01 170215-R02 | <p>B. Water Quality</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>C. Ecology</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>D. Landscape & Visual</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>E. Air Quality</p> <ul style="list-style-type: none">To remove the dusty cement bags after use in TKO.To provide enough water spray to slope of excavation area in CKL. | E16 E5 |
| 170215-R03 | <p>F. Construction Noise Impact</p> <ul style="list-style-type: none">To provide mitigation measures (e.g. Temporary noise barrier or Full enclosure) to PME as proposed in the approved NMP in CKL. <p>G. Waste / Chemical Management</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>H. Permits/Licences</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>I. Impact on Cultural Heritage</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>J. Others</p> <ul style="list-style-type: none">Follow-up on previous audit section (Ref. No.: 170208), item 170208-R03 is remarked as 170215-R03 respectively. Follow up action is needed to reviewed during the next site inspection. | F11 |

| | Name | Signature | Date |
|-------------|--------------------|--|------------------|
| Recorded by | Johnny Fung |  | 15 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 15 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O–Lam Tin Tunnel - Design and Construction

Contract NE/2015/01

Tseung Kwan O–Lam Tin Tunnel–Main Tunnel and Associated Works

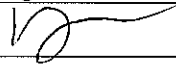
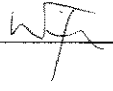
Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|------------------------------|
| Checklist Reference Number | 170222 |
| Date | 22 February 2017 (Wednesday) |
| Time | 9:00-10:30 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|------------|--|------------------|
| 170222-O01 | B. Water Quality <ul style="list-style-type: none">Gaps observed between silt curtain and site boundary in TKO. The Contractor is reminded to provide and repair the silt curtain to fully enclose the site. | B20 |
| 170222-O02 | <ul style="list-style-type: none">Silty water observed in the catchpits in TKO. The Contractor is reminded to remove the silt and sediment in catchpits regularly. | B 6iii |
| 170222-R03 | <ul style="list-style-type: none">To remove the sand material deposited near the seafront at Portion WAI. | B21 |
| | C. Ecology <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | D. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | E. Air Quality <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| 170222-R04 | F. Construction Noise Impact <ul style="list-style-type: none">To provide mitigation measures (e.g. Temporary noise barrier or Full enclosure) to PME as proposed in the approved NMP in CKL. | F11 |
| | G. Waste / Chemical Management <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | H. Permits/Licences <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | I. Impact on Cultural Heritage <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | |
| | J. Others <ul style="list-style-type: none">Follow-up on previous audit section (Ref. No.: 170215), item 170215-R03 is remarked as 170222-R04 respectively. Follow up action is needed to reviewed during the next site inspection. | |

| | Name | Signature | Date |
|-------------|--------------------|--|------------------|
| Recorded by | Johnny Fung |  | 22 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 22 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O-Lam Tin Tunnel - Design and Construction

Contract NE/2015/02

Tseung Kwan O-Lam Tin Tunnel-Road P2 and Associated Works

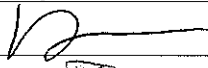
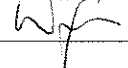
Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|----------------------------|
| Checklist Reference Number | 170202 |
| Date | 2 February 2017 (Thursday) |
| Time | 14:00-14:30 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|------------|--|------------------|
| 170202-R01 | <p>B. Water Quality</p> <ul style="list-style-type: none">To prevent silty water flow out of site during wheel washing at Area A. <p>C. Ecology</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>D. Landscape & Visual</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>E. Air Quality</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>F. Construction Noise Impact</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>G. Waste / Chemical Management</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>H. Permits/Licences</p> <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. <p>I. Others</p> <p>Follow-up on previous audit section (Ref. No.: 170126), all identified environmental deficiency was observed improved/rectified by the Contractor.</p> | B20 |

| | Name | Signature | Date |
|-------------|--------------------|--|-----------------|
| Recorded by | Johnny Fung |  | 2 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 2 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O-Lam Tin Tunnel - Design and Construction

Contract NE/2015/02

Tseung Kwan O-Lam Tin Tunnel-Road P2 and Associated Works

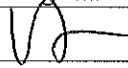
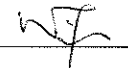
Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|----------------------------|
| Checklist Reference Number | 170209 |
| Date | 9 February 2017 (Thursday) |
| Time | 14:00-15:00 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|------------|---|------------------|
| 170209-R01 | B. Water Quality <ul style="list-style-type: none">To repair the site curtain for cofferdam works and prevent any gap between the silt curtain and crane barge. C. Ecology <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. D. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. E. Air Quality <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. F. Construction Noise Impact <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | B42 |
| 170209-R03 | G. Waste / Chemical Management <ul style="list-style-type: none">To remove the construction material from drip tray and provide a plug for drip tray on derrick lighter for marine GI works. | G10 |
| 170209-R02 | H. Permits/Licences <ul style="list-style-type: none">To update the Environmental Permit display on crane barge. I. Others <p>Follow-up on previous audit section (Ref. No.: 170202), all identified environmental deficiency was observed improved/rectified by the Contractor.</p> | H5 |

| | Name | Signature | Date |
|-------------|--------------------|--|-----------------|
| Recorded by | Johnny Fung |  | 9 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 9 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O–Lam Tin Tunnel - Design and Construction

Contract NE/2015/02

Tseung Kwan O–Lam Tin Tunnel–Road P2 and Associated Works

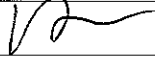
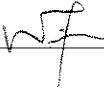
Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|----------------------------|
| Checklist Reference Number | 170214 |
| Date | 14 February 2017 (Tuesday) |
| Time | 9:00 – 10:00 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|--------------------------|--|------------------|
| 170214-R03 | B. Water Quality <ul style="list-style-type: none">To provide sand bag bunds to gullies at site access near the site office in Area A. C. Ecology <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. D. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. | B11 |
| 170214-R01 170214-R02 | E. Air Quality <ul style="list-style-type: none">Provide water spray to dry unpaved area in Area A to avoid dust generation.To provide NRMM label to crane in Area A. F. Construction Noise Impact <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. G. Waste / Chemical Management <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. H. Permits/Licences <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. I. Others <p>Follow-up on previous audit section (Ref. No.: 170209), all identified environmental deficiency was observed improved/rectified by the Contractor.</p> | E5 E22 |

| | Name | Signature | Date |
|-------------|--------------------|--|------------------|
| Recorded by | Johnny Fung |  | 14 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 14 February 2017 |

Agreement No. CE 59/2015 (EP)

Environmental Team for Tseung Kwan O–Lam Tin Tunnel - Design and Construction

Contract NE/2015/02

Tseung Kwan O–Lam Tin Tunnel–Road P2 and Associated Works

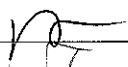
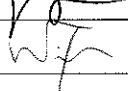
Weekly Site Inspection Record Summary

Inspection Information

| | |
|----------------------------|-----------------------------|
| Checklist Reference Number | 170223 |
| Date | 23 February 2017 (Thursday) |
| Time | 14:00 – 15:00 |

| Ref. No. | Non-Compliance | Related Item No. |
|----------|-----------------|------------------|
| - | None identified | - |

| Ref. No. | Remarks/Observations | Related Item No. |
|--|---|------------------|
| 170223-R03 170223-R04 170223-R05 | B. Water Quality <ul style="list-style-type: none">Accumulated sand in U-channel should be removed more frequently.Concrete bund should be provided to the footing of hoarding to prevent silt runoff out of the site at Portion 8.Muddy water on the ground surface should be directed to the wastewater treatment facilities before discharge. | B7 B20 B12 |
| 170223-R01 | C. Ecology <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. D. Landscape & Visual <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. E. Air Quality <ul style="list-style-type: none">Stockpile of dusty material should be covered by impervious sheet to prevent dust generation at Portion 8. | E6 |
| 170223-R02 | F. Construction Noise Impact <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. G. Waste / Chemical Management <ul style="list-style-type: none">Accumulated waste should be removed at Portion 8. H. Permits/Licences <ul style="list-style-type: none">No environmental deficiency was identified during site inspection. I. Others <p>Follow-up on previous audit section (Ref. No.: 170214), all identified environmental deficiency was observed improved/rectified by the Contractor.</p> | G1 i |

| | Name | Signature | Date |
|-------------|--------------------|--|------------------|
| Recorded by | Johnny Fung |  | 23 February 2017 |
| Checked by | Dr. Priscilla Choy |  | 23 February 2017 |

APPENDIX M
EVENT AND ACTION PLANS

Event and Action Plan for Air Quality (Dust)

| EVENT | ACTION | | | |
|---|---|---|--|---|
| | ET | IEC | ER | CONTRACTOR |
| Action level being exceeded by one sampling | <ol style="list-style-type: none"> 1. Identify source, investigate the causes of complaint and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. | <ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. | <ol style="list-style-type: none"> 1. Notify Contractor. | <ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate. |
| Action level being exceeded by two or more consecutive sampling | <ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; | <ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures. | <ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. | <ol style="list-style-type: none"> 1. Submit proposals for remedial actions to IEC within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate. |

| EVENT | ACTION | | | |
|--|---|---|--|--|
| | ET | IEC | ER | CONTRACTOR |
| | 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring. | | | |
| Limit level being exceeded by one sampling | 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor, IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. | 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. | 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. | 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate. |
| Limit level being exceeded by two or more | 1. Notify IEC, ER, Contractor and EPD; 2. Identify source; | 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; | 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; | 1. Take immediate action to avoid further exceedance; |

| EVENT | ACTION | | | |
|----------------------|---|--|---|--|
| | ET | IEC | ER | CONTRACTOR |
| consecutive sampling | 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. | 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures. | 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. | 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated. |

Event and Action Plan for Construction Noise

| EVENT | ACTION | | | |
|--------------|---|---|--|---|
| | ET | IEC | ER | CONTRACTOR |
| Action Level | <ol style="list-style-type: none"> 1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness. | <ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures. | <ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented. | <ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals. |
| Limit Level | <ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; | <ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures. | <ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the | <ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated. |

| | | | |
|--|--|--|--|
| <p>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</p> <p>7. Assess effectiveness of Contractor’s remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p> | | <p>Contractor to stop that portion of work until the exceedance is abated.</p> | |
|--|--|--|--|

Event and Action Plan for Marine Water Quality

| Event | Action | | | |
|--|---|---|---|---|
| | ET | IEC | ER | CONTRACTOR |
| Action level being exceeded by one sampling day at water sensitive receiver(s) | <ul style="list-style-type: none"> • Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; • If exceedance is found to be caused by the reclamation activities, 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. | <ul style="list-style-type: none"> • Discuss with ET and Contractor on the mitigation measures; • Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; • Assess the effectiveness of the implemented mitigation measures. | <ul style="list-style-type: none"> • Discuss with IEC on the proposed mitigation measures; • Make agreement on the mitigation proposal. | <ul style="list-style-type: none"> • Inform the ER 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 ER; • Implement the agree mitigation measures. |
| Action level being exceeded by two or | <ul style="list-style-type: none"> • Identify the source(s) of impact by comparing the results with those | <ul style="list-style-type: none"> • Discuss with ET and Contractor on the mitigation measures; | <ul style="list-style-type: none"> • Discuss with IEC on the proposed mitigation measures; | <ul style="list-style-type: none"> • Inform the Engineer and confirm notification of the non-compliance in writing; |

| Event | Action | | | |
|---|---|---|--|---|
| | ET | IEC | ER | CONTRACTOR |
| more consecutive sampling days at water sensitive receiver(s) | collected at the control stations as appropriate; <ul style="list-style-type: none"> • If exceedance is found to be caused by the reclamation activities, repeat in-situ 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 implemented; • Prepare to increase the monitoring frequency to daily; • If exceedance occurs at WSD salt water intake, inform WSD; • Repeat measurement on next day of exceedance. | <ul style="list-style-type: none"> • Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; • Assess the effectiveness of the implemented mitigation measures. | <ul style="list-style-type: none"> • Make agreement on the mitigation proposal; • Assess the effectiveness of the implemented mitigation measures. | <ul style="list-style-type: none"> • Rectify unacceptable practice; • Check all plant and equipment and consider changes of working methods; • Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; • Implement the agreed mitigation measures. |

| Event | Action | | | |
|---|---|---|--|--|
| | ET | IEC | ER | CONTRACTOR |
| Limit level being exceeded by one sampling day at water sensitive receiver(s) | <ul style="list-style-type: none"> Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; If exceedance is found to be caused by the reclamation activities, repeat <i>in-situ</i> measurement to confirm findings; Inform IEC, contractor, AFCD 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; Increase the monitoring frequency to daily until no exceedance of Limit level; If exceedance occurs at WSD salt water intake, inform WSD. | <ul style="list-style-type: none"> Discuss with ET and Contractor on the mitigation measures; Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; Assess the effectiveness of the implemented mitigation measures. | <ul style="list-style-type: none"> Discuss with IEC, ET and Contractor on the proposed mitigation measures; 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. | <ul style="list-style-type: none"> Inform the ER and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Discuss with ET, IEC and ER and submit proposal of mitigation measures to IEC and ER within 3 working days of notification; Implement the agreed mitigation measures. |

| Event | Action | | | |
|--|--|---|--|--|
| | ET | IEC | ER | CONTRACTOR |
| Limit level being exceeded by two or more consecutive sampling days at water sensitive receiver(s) | <ul style="list-style-type: none"> • Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate; • If exceedance is found to be caused by the reclamation activities, repeat in-situ measurement to confirm findings; • Inform IC(E), AFCD, contractor and EPD; • Check monitoring data, all plant, equipment and Contractor's working methods; • Discuss mitigation measures with IC(E), ER and Contractor; • Ensure mitigation measures are implemented; • Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days; • If exceedance occurs at WSD salt water intake, inform WSD. | <ul style="list-style-type: none"> • Discuss with ET and Contractor on the mitigation measures; • Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly; • Assess the effectiveness of the implemented mitigation measures. | <ul style="list-style-type: none"> • Discuss with IC(E), ET and Contractor on the proposed mitigation measures; • 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; • 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. | <ul style="list-style-type: none"> • Inform the ER and confirm notification of the non-compliance in writing; • Rectify unacceptable practice; • Check all plant and equipment and consider changes of working methods; • Discuss with ET, IC(E) and ER and submit proposal of mitigation measures to IC(E) and ER within 3 working days of notification; • Implement the agreed mitigation measures; • As directed by the Engineer, to slow down or to stop all or part of the construction activities. |

Limit Levels and Action Plan for Landfill Gas

| Parameter | Limit Level | Action |
|----------------|----------------------------------|--|
| Oxygen | <19% | <ul style="list-style-type: none"> Ventilate to restore oxygen to >19% |
| | <18% | <ul style="list-style-type: none"> Stop works Evacuate personnel/prohibit entry Increase ventilation to restore oxygen to >19% |
| Methane | >10% LEL (i.e. > 0.5% by volume) | <ul style="list-style-type: none"> Prohibit hot works Ventilate to restore methane to <10% LEL |
| | >20% LEL (i.e. > 1% by volume) | <ul style="list-style-type: none"> Stop works Evacuate personnel / prohibit entry Increase ventilation to restore methane to <10% LEL |
| Carbon Dioxide | >0.5% | <ul style="list-style-type: none"> Ventilate to restore carbon dioxide to < 0.5% |
| | >1.5% | <ul style="list-style-type: none"> Stop works Evacuate personnel / prohibit entry Increase ventilation to restore carbon dioxide to < 0.5% |

**APPENDIX N
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)**

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|----------------------------------|--|---|--------------------------------|-----------------------------|---------------------------------|---|--|
| <i>Air Quality Impact</i> | | | | | | | |
| S3.8.1 | Watering eight times a day on active works areas, exposed areas and paved haul roads | To minimize the dust impact | Contractor | All Active Work Sites | Construction phase | APCO | * |
| S3.8.1 | Enclosing the unloading process at barging point by a 3-sided screen with top tipping hall, provision of water spraying and flexible dust curtains | To minimize the dust impact | Contractor | Barging Points | Construction phase | APCO | N/A |
| S3.8.7 | <p>Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:</p> <ul style="list-style-type: none"> - Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. - Use of frequent watering for particularly dusty construction areas and areas close to ASRs. - Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines. - Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. - Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. - Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. - Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at | To minimize the dust impact | Contractor | All Construction Work Sites | Construction phase | APCO and Air Pollution Control (Construction Dust) Regulation | <p>*</p> <p>*</p> <p>#</p> <p>#</p> <p>^</p> <p>N/A</p> <p>N/A</p> |

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|----------|---|---|--------------------------------|--------------------------|---------------------------------|---|--|
| | <p>the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</p> <ul style="list-style-type: none"> - Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. - Imposition of speed controls for vehicles on site haul roads. - Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs - Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. - Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise. | | | | | | <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>^</p> |
| / | <p>Emission from Vehicles and Plants</p> <ul style="list-style-type: none"> • All vehicles shall be shut down in intermittent use. • Only well-maintained plant should be operated on-site and plant should be serviced regularly to avoid emission of black smoke. • All diesel fuelled construction plant within the works areas shall be powered by ultra low sulphur diesel fuel (ULSD) | Reduce air pollution emission from construction vehicles and plants | Contractor | All construction sites | Construction stage | • APCO | <p>^</p> <p>^</p> <p>^</p> |
| / | Valid No-road Mobile Machinery (NRMM) labels should be provided to regulated machines | Reduce air pollution emission from | Contractor | All construction | Construction stage | • APCO | * |

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|--|---|---|--------------------------------|--------------------------|---------------------------------|---|---------------------------------------|
| | | construction vehicles and plants | | sites | | | |
| Noise Impact (Construction Phase) | | | | | | | |
| S4.8 | <ul style="list-style-type: none"> - Use of quiet PME. Use of movable noise barriers for Excavator, Lorry, Dump Truck, Mobile Crane, Compactor, Concrete Mixer Truck, Concrete Lorry Mixer, Breaker, Mobile Crusher, Backhoe, Vibratory Poker, Saw, Asphalt Paver, Vibratory Roller, Vibrolance, Hydraulic Vibratory Lance and Piling (Vibration Hammer). Use of full enclosure for Air Compressor, Compressor, Bar Bender, Generator, Drilling Rig, Chisel, Large Diameter Bore Piling, Grout Mixer & Pump and Concrete Pump. | To minimize construction noise impact arising from the Project at the affected NSRs | Contractor | Work Sites | Construction phase | EIAO-TM, NCO | # |
| S4.9 | <p>Good Site Practice</p> <ul style="list-style-type: none"> - Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program - Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program. - Mobile plant, if any, should be sited as far away from NSRs as possible. - Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. - Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. - Material stockpiles and other structures should be effectively utilized, | To minimize construction noise impact arising from the Project at the affected NSRs | Project Proponent | Work sites | Construction Period | EIAO-TM, NCO | ^ ^ ^ ^ ^ |

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|--|--|---|--------------------------------|--------------------------|---------------------------------|---|--------|
| | wherever practicable, in screening noise from on-site construction activities. | | | | | | |
| S4.9 | Scheduling of Construction Works during School Examination Period | To minimize construction noise impact arising from the Project at the affected NSRs | Contractor | Work site near school | Construction phase | EIAO-TM, NCO | N/A |
| Water Quality Impact (Construction Phase) | | | | | | | |
| S5.6.24 | The dry density of filling material for the TKO-LT Tunnel reclamation should be 1,900kg/m ³ , with fine content of 25% or less | Control potential impacts from filling activities | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO | N/A |
| S5.8.1 | Non-dredged method by constructing steel cellular caisson structure with stone column shall be adopted for construction of seawall foundation. During the stone column installation (also including the installation of steel cellular caisson), silt curtain shall be employed around the active stone column installation points. | Control potential impacts from filling activities | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO | N/A |
| S5.8.2 | Formation of seawall enclosing the reclamation for Road P2 (notwithstanding an opening of about 50m for marine access) shall be completed prior to the filling activities. The seawall opening of about 50m wide for marine access shall be selected at a location as indicatively shown in Appendix 5.10. No more than 3 filling barge trips per day shall be made with a maximum daily rate of 3,000m ³ (i.e. 1,000 m ³ per trip) for the filling operation at the reclamation area for Road P2. All filling works shall be carried out behind the seawall with the use of single silt curtain at the marine access. | Control potential impacts from filling activities | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO | N/A |

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|----------|--|---|--------------------------------|--------------------------|---------------------------------|---|--|
| S5.8.3 | <p>Other good site practices should be undertaken during filling operations include:</p> <ul style="list-style-type: none"> - all marine works should adopt the environmental friendly construction methods as far as practically possible including the use of cofferdams to cover the construction area to separate the construction works from the sea; - floating single silt curtain shall be employed for all marine works; - all vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; - all hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; - 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; - loading of barges and hoppers should be controlled to prevent splashing of filling material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; - any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes; - construction activities should not cause foam, oil, grease, scum, litter or other | Control potential impacts from filling activities and marine-based construction | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO, Waste Disposal Ordinance (WDO) | <p>N/A</p> <p>*</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> |

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|----------|--|---|--------------------------------|--------------------------|-------------------------------------|---|--------|
| | <p>objectionable matter to be present on the water within the site or dumping grounds; and</p> <p>- before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.</p> | | | | | | ^ |
| S5.8.4 | Site specific mitigation plan for reclamation areas using public fill materials should be submitted for EPD agreement before commencement of construction phase with due consideration of good site practices. | Control potential impacts from filling activities and marine based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.5 | It is important that appropriate measures are implemented to control runoff and drainage and prevent high loading of SS from entering the marine environment. Proper site management is essential to minimise surface water runoff, soil erosion and sewage effluents. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | * |
| S5.8.6 | Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Design Stage and Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS | * |
| S5.8.7 | Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good | Control potential impacts from construction site runoff | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS | * |

App N - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

| EIA Ref. | Recommended Mitigation Measures | Objectives of the recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to Implement the measures? | What requirements or standards for the measures to achieve? | Status |
|----------|--|---|--------------------------------|--------------------------|---------------------------------|---|--------|
| | housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and no unacceptable impact on the WSRs arises due to construction of the TKO-LT Tunnel. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the corresponding WCZ under the TM-DSS. | and land-based construction | | | | | |
| S5.8.8 | Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: <ul style="list-style-type: none"> - use of sediment traps; and - adequate maintenance of drainage systems to prevent flooding and overflow. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A # |
| S5.8.9 | Construction site should be provided with adequately designed perimeter channel and pretreatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | * |
| S5.8.10 | Ideally, construction works should be programmed to minimise surface excavation | Control potential | CEDD's | Work site | Construction | ProPECC PN 1/94, | * |

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| | works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. | impacts from construction site runoff and land-based construction | Contractors | | Phase | EIAOTM, WPCO | |
| S5.8.11 | Sedimentation tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m ³ capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO S5 | ^ |
| S5.8.12 | Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO S5 | N/A |
| S5.8.13 | Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO S5 | ^ |
| S5.8.14 | Open stockpiles of construction materials (for examples, aggregates, sand and fill | Control potential | CEDD's | Work site | Construction | ProPECC PN 1/94, | * |

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| | material) of more than 50m ³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. | impacts from construction site runoff and land-based construction | Contractors | | Phase | EIAOTM, WPCO | |
| S5.8.15 | Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | * |
| S5.8.16 | Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.17 | Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.18 | All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An | Control potential impacts from | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | * |

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| | adequately designed and located wheel washing bay should be provided at every site exit, and washwater should 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 wheelwash bay to the public road should 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 site runoff and land-based construction | | | | | |
| S5.8.19 | Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | # |
| S5.8.20 | It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There shall be no direct discharge of effluent from the site into the sea. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.21 | All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |

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| | diversion is no longer required. | | | | | | |
| S5.8.22 | All fuel tanks and storage areas should be provided with locks and be located 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 the coastal waters. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.23 | Minimum distances of 100m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes during construction and operational phases | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO, TMDSS | ^ |
| S5.8.24 | Under normal circumstances, groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm drains after the removal of silt in silt removal facilities. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.25 - S5.8.27 & Table 5.18 | Grouting would be adopted as measure to reduce the groundwater inflow into the tunnel. During the tunnel excavation, the inflow rate of groundwater into the tunnel will be measured during the excavation. The groundwater levels above the tunnel will also be monitored by piezometers. If the inflow rate exceeds the pre-determined groundwater control criteria or the groundwater drawdown exceeds the required limit, pre-excavation grouting will be required to reduce the | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO, Buildings Ordinance | N/A |

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| | groundwater inflow. No significant change of groundwater levels would therefore be expected. Any chemicals/ foaming agents which would be entrained to the groundwater should be biodegradable and non-toxic throughout the tunnel construction. Potential groundwater quality impact would be minimal as the used material is non-toxic and biodegradable. No adverse groundwater quality would therefore be expected. Prescriptive measures in the form of an Action Plan with pre-emptive and re-active to preserve the groundwater levels at all times during the tunnel construction are set out in Table 5.18. | | | | | | |
| S5.8.28 | Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Design Stage and Construction Phas | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.29 - S5.8.31 | Wastewater generated from the washing down of mixing trucks and drum mixers and similar equipment should whenever practicable be recycled. The discharge of wastewater should be kept to a minimum. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an online standby pump of adequate capacity and with automatic alternating devices. Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |

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| S5.8.32 | All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | * |
| S5.8.33 | Bentonite slurries used in diaphragm wall and borepile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.34 | If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.35 | Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm drains. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |

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| S5.8.36 | Sterilization is commonly accomplished by chlorination. Specific advice from EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Design Stage and Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.37 | Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |
| S5.8.38 | Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.39 | Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tinkered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.40 | Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewer via grease traps capable of | Control potential impacts from | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | N/A |

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| | providing at least 20 minutes retention during peak flow. | construction site runoff and land-based construction | | | | | |
| S5.8.41 | Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor with peak storm bypass. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.42 | Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor. Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.43 | Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors | Work site | Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO | ^ |
| S5.8.44 | Contractor must register as a chemical waste producer if chemical wastes would | Control potential | CEDD's | Work site | Construction | EIAO-TM, WPCO, | * |

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| | be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. | impacts from accidental spillage of chemicals | Contractors | | Phase | WDO | |
| S5.8.45 | Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges. | Control potential impacts from accidental spillage of chemicals | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO | * |
| S5.8.46 | Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: - suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport; - chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; and - storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. | Control potential impacts from accidental spillage of chemicals | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO, WDO | ^ ^ ^ |
| S5.8.47 | Collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water | Control potential impacts from floating | CEDD's Contractors | Work site | Construction Phase | EIAO-TM, WPCO, | |

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| | within the site boundary and the neighbouring water free from rubbish. | refuse and debris | | | | | |
| Ecological Impact | | | | | | | |
| S6.8.4 | <p>Measures to Minimize Disturbance</p> <ul style="list-style-type: none"> - Use of Quiet Mechanical Plant during the construction phase should be adopted wherever possible. - Hoarding or fencing should be erected around the works area boundaries during the construction phase. The hoarding would screen adjacent habitats from construction phase activities, reduce noise disturbance to these habitats and also to restrict access to habitats adjacent to works areas by site workers; - Regular spraying of haul roads to minimize impacts of dust deposition on adjacent vegetation and habitats during the construction activities | Minimize noise, human and traffic disturbance to terrestrial habitat and wildlife; and reduce dust generation | Design Team / Contractor | Land-based works are | Construction Phase | N/A | ^ ^ ^ |
| S6.8.5 | <p>Standard Good Site Practice</p> <ul style="list-style-type: none"> - Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats. - Construction activities should be restricted to works areas that should be clearly demarcated. The works areas should be reinstated after completion of the works. - Waste skips should be provided to collect general refuse and construction wastes. The wastes should be properly disposed off-site in a timely manner. - General drainage arrangements should include sediment and oil traps to | Reduce disturbance to surrounding habitats | Contractor | Land-based works are | Construction Phase | N/A | ^ ^ ^ ^ |

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| | <p>collect and control construction site run-off.</p> <ul style="list-style-type: none"> - Open burning on works sites is illegal, and should be strictly prohibited. - Measures should also be put into place so that litter, fuel and solvents do not enter the nearby watercourses. | | | | | | <p>^</p> <p>^</p> |
| S6.8.6 | <p><i>Measure to Minimize Groundwater Inflow</i></p> <ul style="list-style-type: none"> - The drained tunnel construction method with groundwater inflow control measures would generally be adopted. - During the tunnel excavation, pre-excavation grouting could be adopted to reduce the groundwater inflow and ensure that the tunnel would meet the long term water tightness requirements. | Minimize groundwater inflow | Contractor | Tunnel | Construction Phase | N/A | <p>N/A</p> <p>N/A</p> |
| S6.8.8 | <p><i>Measure to Minimize Impact on Corals</i></p> <p><u>Coral translocation</u></p> <ul style="list-style-type: none"> - It is recommended to translocate the affected coral colonies, except the locally common <i>Oulastrea crispata</i>, within the reclamation area and bridge footprint to the other suitable locations as far as practicable. - The coral translocation should be conducted during the winter months (November-March) in order to avoid disturbance during their spawning period (i.e. July to October). - A detailed coral translocation plan with a description on the methodology for pretranslocation coral survey, translocation methodology, identification/proposal of coral recipient site, monitoring methodology for posttranslocation should be prepared during the detailed design stage. | Minimize loss of coral | Design team, contractor, project operator | Within reclamation areas and pier footprint | Prior construction | N/A | <p>^</p> <p>^</p> <p>^</p> |

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| | <ul style="list-style-type: none"> - The coral translocation plan should be subject to approval by relevant authorities (e.g. EPD and AFCD) before commencement of the coral translocation. All the translocation exercises should be conducted by experienced marine ecologist(s) who is/are approved by AFCD prior to commencement of coral translocation. <p><u>Post translocation Monitoring</u></p> <ul style="list-style-type: none"> - A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the translocated coral communities - Information gathered during each posttranslocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey. | | | | | | <p>^</p> <p>^</p> <p>^</p> |
| <p>S6.8.9</p> <p>S6.8.10</p> | <p>Measure to Control Water Quality Impact</p> <ul style="list-style-type: none"> - Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area. - Diverting of the site runoff to silt trap facilities before discharging into storm drain; - Proper waste and dumping management; and - Standard good-site practice for land-based construction. | <p>Control water quality impact, especially on suspended solid level; minimize the contamination of wastewater discharge, accidental chemical spillage and construction site runoff to the receiving water</p> | <p>Design Team, contractor</p> | <p>Marine and landbased works area</p> | <p>Construction phase</p> | <p>WQO</p> | <p>N/A</p> <p>^</p> <p>^</p> <p>^</p> |

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| | | bodies | | | | | |
| S6.8.11 | <p>Compensation for Vegetation Loss</p> <ul style="list-style-type: none"> Felling of mature trees should be compensated by planting of standard or heavy standard trees within or in vicinity of the affected area as far as practicable. Such compensatory planting for trees should be provided with at least a 1:1 ratio. In addition, vegetation at the temporarily affected area should be reinstated with species similar to the existing condition. | Compensate for the vegetation loss | Design Team, contractor | Land-based works area | Construction phase | N/A | ^ |
| Fishery Impact | | | | | | | |
| S7.7.3 | <p>Measure to Control Water Quality Impact</p> <ul style="list-style-type: none"> Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area. | Control water quality impact, especially on suspended solid level | Design Team / Contractor | Marine work area | Construction phase | WQO | N/A |
| Waste Management (Construction Phase) | | | | | | | |
| S8.6.3 | <p>Good Site Practices and Waste Reduction Measures</p> <ul style="list-style-type: none"> Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; Training of site personnel in site cleanliness, proper waste management and chemical handling procedures; | To reduce waste management impacts | Contractor | All work sites | Construction Phase | Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) | ^ ^ |

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|----------|---|---|--------------------------------|--------------------------|---------------------------------|--|------------------------------|
| | <ul style="list-style-type: none"> - Provision of sufficient waste disposal points and regular collection of waste; - Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and - Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. | | | | | Ordinance (Cap. 28) | # ^ * |
| S8.6.4 | <p>Good Site Practices and Waste Reduction Measures (con't)</p> <ul style="list-style-type: none"> - Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; - Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce; - Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and - Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste. | To achieve waste reduction | Contractor | All work sites | Construction Phase | Waste Disposal Ordinance (Cap. 354) Land (Miscellaneous Provisions) Ordinance (Cap. 28) | ^ ^ ^ ^ |
| S8.6.5 | <p>Good Site Practices and Waste Reduction Measures (con't)</p> <p>The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities.</p> | To achieve waste reduction | Contractor | All work sites | Construction Phase | ETWB TCW No. 19/2005 | ^ |

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| | <p>Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor.</p> | | | | | | |
| S8.6.6 | <p>Good Site Practices and Waste Reduction Measures (con't)</p> <ul style="list-style-type: none"> - C&D materials would be reused in the project and other local concurrent projects as far as possible. | To achieve waste reduction | Contractor | All work sites | Construction Phase | ETWB TCW No. 19/2005 | ^ |
| S8.6.7 | <p>Storage, Collection and Transportation of Waste</p> <p>Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include:</p> <ul style="list-style-type: none"> - Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution; - Maintain and clean storage areas routinely; - Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and - Different locations should be designated to stockpile each material to enhance reuse. | To minimize potential adverse environmental impacts arising from waste storage | Contractor | All work sites | Construction Phase | - | ^ ^ ^ ^ |
| S8.6.8 | <p>Storage, Collection and Transportation of Waste (con't)</p> <ul style="list-style-type: none"> - Remove waste in timely manner; - Waste collectors should only collect wastes prescribed by their permits; | To minimize potential adverse environmental impacts arising from | Contractor | All work sites | Construction Phase | | # ^ |

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| | <ul style="list-style-type: none"> - Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers; - Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); - Waste should be disposed of at licensed waste disposal facilities; and - Maintain records of quantities of waste generated, recycled and disposed. | waste collection and disposal | | | | | ^ ^ ^ ^ |
| S8.6.9 | <p>Storage, Collection and Transportation of Waste (con't)</p> <ul style="list-style-type: none"> - Implementation of trip ticket system with reference to DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials, to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) should be proposed. | To minimize potential adverse environmental impacts arising from waste collection and disposal | Contractor | All work sites | Construction Phase | DEVB TCW No. 6/2010 | ^ |
| S8.6.11 - S8.6.13 | <p>Sorting of C&D Materials</p> <ul style="list-style-type: none"> - Sorting to be performed to recover the inert materials, reusable and recyclable materials before disposal off-site. - Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials. - The C&D materials should at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled in the reclamation as far as practicable before delivery to PFRFs. While | To minimize potential adverse environmental | Contractor | All work sites | Construction Phase | DEVB TCW No. 6/2010 ETWB TCW No. 33/2002 ETWB TCW No. 19/2005 | ^ ^ ^ |

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| | <p>treated material do not comply with UTS or UCS, re-stabilization have to be undertaken to meet compliance of UTS and UCS before reusing the treated sediment as filling material. However, further agreement on final disposal/treatment on sediment under sample (TKO-EBH501 3-3.95m) has to be sought from DEP</p> | | | | | | |
| <p>S8.6.17 – S8.6.20</p> | <p>Sediments (con't)</p> <ul style="list-style-type: none"> - Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during boring, excavation, transportation and disposal of sediments or cement stabilization of sediment. - A treatment area should be confined for carrying out the cement stabilization mixing and temporary stockpile. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). - In order to minimise the potential odour / dust emissions during boring, excavation and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges/trucks. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. - In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning | <p>To determine the best handling and treatment of sediment</p> | <p>Contractor</p> | <p>All works areas with sediments concern</p> | <p>Construction Phase</p> | <p>N/A N/A N/A N/A</p> | <p>N/A N/A N/A N/A</p> |

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| | facilities should also be provided on site. | | | | | | |
| S8.6.21 | <p>Sediments (con't)</p> <ul style="list-style-type: none"> Alternatively, excavated sediment can be treated with marine disposal. The basic requirements and procedures for excavated sediment disposal specified under ETWB TC(W) No. 34/2002 shall be followed. MFC is responsible for the provision and management of disposal capacity and facilities for the excavated sediment, while the permit of marine dumping is required under the Dumping at Sea Ordinance and is the responsibility of the DEP. | To ensure the sediment to be disposed of in an authorized and least impacted way | contractor | All works areas with sediments concern | Construction Phase | ETWB TC(W) No. 34/2002 & Dumping at Sea Ordinance | N/A |
| S8.6.23 | <p>Sediments (con't)</p> <ul style="list-style-type: none"> For allocation of sediment disposal sites and application of marine dumping permit, separate SSTP has to be submitted to EPD for agreement under DASO. Additional site investigation, based on the SSTP, maybe carried out in order to confirm the disposal arrangements for the proposed sediments removal. A Sediment Quality Report (SQR) shall then be required for EPD agreement under DASO prior to the tendering of the construction contract, discussing in details the site investigation, testing results as well as the delineation of each of the categories of excavated materials and the corresponding types of disposal. | To determine the best handling and disposal option of sediment | Contractor | All works areas with sediments concern | Construction Phase | ETWB TC(W) No. 34/2002 & Dumping at Sea Ordinance | N/A |
| S8.6.24 - S8.6.28 | <p>Sediments (con't)</p> <ul style="list-style-type: none"> The excavated sediments is expected to be loaded onto the barge and transported to the designated disposal sites allocated by the MFC. The | To ensure handling of sediments are in accordance to | Contractor | All works areas with sediments | Construction Phase | ETWB TC(W) No. 34/2002 & Dumping at Sea Ordinance | N/A |

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| | <p>excavated sediment would be disposed of according to its determined disposal options and ETWB TC(W) No. 34/2002.</p> <ul style="list-style-type: none"> - Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiling areas should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). - In order to minimise the potential odour / dust emissions during boring and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. - The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be | <p>statutory requirements</p> | | <p>concern</p> | | | <p>N/A</p> <p>N/A</p> <p>N/A</p> |

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| | <p>conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.</p> <ul style="list-style-type: none"> - In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site. - Another possible arrangement for Type 3 disposal is by geosynthetic containment. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal. | | | | | | <p>N/A</p> <p>N/A</p> |
| S8.6.26 | <p>Chemical Wastes.</p> <ul style="list-style-type: none"> - If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the | To ensure proper management of chemical waste | Contractor | All works sites | Construction Phase | Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes Waste Disposal (Chemical Waste) | * |

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|---|--|---|--------------------------------|--------------------------|---------------------------------|---|---------------------------|
| | corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. | | | | | (General) Regulation | |
| S8.6.27 | <p>General Refuse</p> <ul style="list-style-type: none"> - General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material. | To ensure proper management of general refuse | Contractor | All works sites | Construction Phase | Public Health and Municipal Services Ordinance (Cap. 132) | ^ |
| Impact on Cultural Heritage (Construction Phase) | | | | | | | |
| S9.6.4 | <p>Dust and visual impacts</p> <ul style="list-style-type: none"> - Temporarily fenced off buffer zone with allowance for public access (minimum 1 m) should be provided; - The open yard in front of the temple should be kept as usual for annual Tin Hau festival; - Monitoring of vibration impacts should be conducted when the construction works are less than 100m from the temple. | To prevent dust and visual impacts | Contractors | Work areas | Construction Phase | EIAO; GCHIA; AMO | N/A N/A N/A |
| S9.6.4 | <p>Indirect vibration impact</p> <ul style="list-style-type: none"> - Vibration level is suggest to be controlled within a peak particle velocity (ppv) | To prevent indirect vibration impact | Contractors | Work areas | Construction Phase | Vibration Limits on Heritage Buildings by | N/A |

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| | <p>limit of 5mm/s measured inside the historical buildings;</p> <ul style="list-style-type: none"> - Monitoring of vibration should be carried out during construction phase. - Tilting and settlement monitoring should will be applied on the Cha Kwo Ling Tin Hau Temple as well. - A proposal with details for the mitigation measures and monitoring of impacts on built heritage shall be submitted to AMO for comments before commencement of work. | | | | | <p>CEDD; GCHIA; AMO.</p> | <p>N/A N/A N/A</p> |
| <i>Landscape and Visual Impact (Construction Phase)</i> | | | | | | | |
| Table 10.8.1 | CM1 - Construction area and contractor's temporary works areas to be minimised to avoid impacts on adjacent landscape. | Avoid impact on adjacent landscape areas | CEDD (via Contractor) | General | Construction planning and during construction period | N/A | ^ |
| Table 10.8.1 | CM2 - Reduction of construction period to practical minimum. | Minimise duration of impact | CEDD (via Contractor) | N/A | Construction planning | N/A | ^ |
| Table 10.8.1 | CM3 - Topsoil, where the soil material meets acceptable criteria and where practical, to be stripped and stored for re-use in the construction of the soft landscape works. The Contract Specification shall include storage and reuse of topsoil as appropriate. | To allow re-use of topsoil | CEDD (via Contractor) | General | Site clearance | As per the Particular Specification | ^ |
| Table 10.8.1 | CM4 - Existing trees at boundary of site and retained trees within site boundary to be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification, under which the Contractor shall | To minimize tree loss | CEDD (via Contractor) | As per approved Tree Removal | Site clearance and throughout construction | ETWB TC 3/2006 and as per tree protection measures | * |

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|--------------|--|---|--------------------------------|--|----------------------------------|--|--------|
| | 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 measures will be detailed at Tree Removal Application stage). | | | Application(s) | period | in Particular Specification | |
| Table 10.8.1 | CM5 - Trees unavoidably affected by the works shall be transplanted where practicable. Where possible, trees should be transplanted direct to permanent locations rather than temporary holding nurseries. A detailed tree transplanting specification shall be provided in the Contract Specification and sufficient time for preparation shall be allowed in the construction programme. | To maximize preservation of existing trees | CEDD (via Contractor) | As per approved Tree Removal Application(s) | Site clearance | ETWB TC 3/2006 and as per tree protection measures in Particular Specification | ^ |
| Table 10.8.1 | CM6 - Advance screen planting of fast growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years. | To maximize screening of the works | CEDD (via Contractor) | At Lam Tin Interchange and edge of Road P2 landscape deck, TKO | Beginning of construction period | N/A | ^ |
| Table 10.8.1 | CM7 - Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material | To reduce visual intrusion | CEDD (via Contractor) | General | Throughout construction period | As per Particular Specification | N/A |
| Table 10.8.1 | CM8 - Control of night-time lighting by hooding all lights and through minimisation of night working periods. | To reduce visual intrusion | CEDD (via Contractor) | General | Throughout construction period | N/A | ^ |
| Table | CM9 - Screening of works areas with hoardings with appropriate colours | Reduction of visual | CEDD (via | Project site | Excretion of site | N/A | ^ |

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| 10.8.1 | compatible with the surrounding area | intrusion | Contractor) | Boundary | hoarding | | |
| Table 10.8.1 | CM10 - Avoidance of excessive height and bulk of site buildings and structure | Reduction of visual intrusion and integration with environment | CEDD (via Contractor) | Built structures | Design and construction stage | N/A | ^ |
| Table 10.8.1 | CM11 - Limitation of run-off into freshwater streams, ponds and sea areas | Avoidance of contamination of water courses and water bodie | CEDD (via Contractor) | TKO reclamation, TKO tunnel portal, Cha Kwo Ling roadworks | Throughout construction period | N/A | ^ |
| Table 10.8.1 | CM12 - Minimise area of reclamation and design the edges sensitively to tie in with adjacent coastline characte | Minimise loss of Junk Bay and integration with existing coastlin | CEDD (via Contractor) | Temporary reclamation for barging points at TKO and Lam Tin and permanent reclamation for TKO Interchange slip roads and Road P2 | Construction planning and reclamation stages | N/A | N/A |

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| Landfill Gas Hazard (Design and Construction Phase) | | | | | | | |
| S11.5.9 | A Safety Officer, trained in the use of gas detection equipment and landfill gas-related hazards, should be present on site throughout the groundworks phase. The Safety Officer should be provided with an intrinsically safe portable instrument, which is appropriately calibrated and able to measure the following gases in the ranges indicated below: Methane 0-100% LEL and 0100% v/v Carbon dioxide 0-100% Oxygen 0-21% | Protect the workers from landfill gas hazards | Contractor | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase | EPD's Landfill Gas Hazard Assessment Guidance Note | ^ |
| S11.5.10 | Safety Measures | Protect the workers from landfill gas hazards | Contractor | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase | EPD's Landfill Gas Hazard Assessment Guidance Note | N/A |
| S11.5.25 | <ul style="list-style-type: none"> - For staff who work in, or have responsibility for “at risk” area, such as all excavation workers, supervisors and engineers working within the Consultation Zone, should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards. - An excavation procedure or code of practice to minimize landfill gas related risk should be devised and carried out. - No worker should be allowed to work alone at any time in or near to any excavation. At least one other worker should be available to assist with a rescue if needed. - Smoking, naked flames and all other sources of ignition should be prohibited within 15m of any excavation or ground-level confined space. “No | | | | | Labour Department's Code of Practice for Safety and Health at Work in Confined Space | N/A N/A |

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| | <p>smoking” and “No naked flame” notices should be posted prominently on the construction site and, if necessary, special areas should be designed for smoking.</p> <ul style="list-style-type: none"> - Welding, flame-cutting or other hot works should be confined to open areas at least 15m from any trench or excavation. - Welding, flame-cutting or other hot works may only be carried out in trenches or confined spaces when controlled by a “permit to work” procedure, properly authorized by the Safety Officer (or, in the case of small developments, other appropriately qualified person). - The permit to work procedure should set down clearly the requirements for continuous monitoring for methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person, in attendance outside the 'confined area', who should be responsible for reviewing the gas measurements as they are made, and who should have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. - Where there are any temporary site offices, or any other buildings located within the Sai Tso Wan Landfill Consultation Zone which have enclosed spaces with the capacity to accumulate landfill gas, then they should either | | | | | | <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> |

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|----------|---|---|--------------------------------|--------------------------|---------------------------------|---|---|
| | <p>be located in an area which has been proven to be free of landfill gas (by survey using portable gas detectors); or be raised clear of the ground by a minimum of 500mm. This aims to create a clear void under the structure which is ventilated by natural air movement such that emission of gas from the ground are mixed and diluted by air.</p> <ul style="list-style-type: none"> - Any electrical equipment, such as motors and extension cords, should be intrinsically safe. During piping assembly or conduiting construction, all valves/seals should be closed immediately after installation. As construction progresses, all valves/seals should be closed to prevent the migration of gases through the pipeline/conduit. All piping /conduiting should be capped at the end of each working day. - During construction, adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets should be made available on site. - Fire drills should be organized at not less than six monthly intervals. - The contractor should formulate a health and safety policy, standards and instructions for site personnel to follow. - All personnel who work on the site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of excavations. Safety notices (in Chinese and English) should be posted at prominent position around the site warning danger of the potential hazards. - Service runs within the Consultation Zone should be designated as "special routes"; utilities companies should be informed of this and precautionary | | | | | | <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> |

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| | <ul style="list-style-type: none"> - at the ground surface before excavation commences;- - immediately before any worker enters the excavation; - at the beginning of each working day for the entire period the excavation remains open; and - periodically throughout the working day whilst workers are in the excavation. ● For excavations between 300mm and 1m deep, measurements should be carried out: <ul style="list-style-type: none"> - directly after the excavation has been completed; and - periodically whilst the excavation remains open. ● For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person. ● Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or other appropriately qualified person. ● The exact frequency of monitoring should be determined prior to the commencement of works, but should be at least once per day, and be carried out by a suitably qualified or qualified person before starting the work of the day. Measurements shall be recorded and kept as a record of safe working conditions with copies of the site diary and submitted to the Engineer for approval. The Contractor may elect to carry out monitoring via an automated monitoring system. | | | | | | <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> |

**APPENDIX O
SUMMARIES OF ENVIRONMENTAL
COMPLAINT, WARNING, SUMMON
AND NOTIFICATION OF SUCCESSFUL
PROSECUTION**

Appendix O - Cumulative Log for Complaints, Notifications of Summons and Successful Prosecutions

Cumulative Complaint Log in the Reporting Period

| Received Date | Date/Location | Complainant | Details of Complaint | Investigation/ Mitigation Action | File Closed |
|--|---|--|--|--|-------------|
| Follow up for complaints received in the previous Reporting Period (January 2017) | | | | | |
| 7 th December 2016 | Not Specified / construction of Lam Tin Interchange | Resident of Yau Lai Estate Bik Lai House | The complainant complained about the construction noise and dust near Yau Lai Estate. (EPD Reference No.: K15/RE/00032001-16) | According to information provided by the Contractor, powered Mechanical Equipment being operated for construction of Lam Tin Interchange on 7 and 9 December 2016 include breaker, dump truck, backhoes, drilling rig and small bulldozer. They were operated on and off with some idling time. It is considered that noise nuisance during the time of complaint was mainly due to high noise level emission during the use of breaker for rock breaking. | Closed |
| 9 th December 2016 | Not Specified / construction of Lam Tin Interchange | Resident of Yau Lai Estate Block A Nga Lai House | The complainant complained about the construction noise near Yau Lai Estate. (EPD Reference No.: K15/RE/00032317-16) | No construction works were being carried out on 23 rd December 2016 at Portion WA1, which is the site portion near Cha Kwo Ling Tsuen. Despite, it was recorded that some muddy water was flowing from the Contractor's wheel washing facility to the gullies within the site boundary. | |
| 23 rd December 2016 | Not Specified / near Cha Kwo Ling Tsuen | Cha Kwo Ling Tsuen | The complainant complaint about the Soil/muddy water from construction site near Cha Kwo Ling Tsuen. (EPD Reference No.: K15/RE/00033951-16) | The Contractors had implemented the above environmental mitigation measures on site to reduce construction dust and noise nuisance to the vicinity. For complaint of muddy water on 23 rd December 2016, the Contractor has fixed the clear water hose for wheel washing on 24 th December 2016 early morning. During the recent weekly site inspections to Site Portion WA1, no | |

| Received Date | Date/Location | Complainant | Details of Complaint | Investigation/ Mitigation Action | File Closed |
|-------------------------------|---|--|--|--|-------------|
| | | | | muddy water was observed leaked out of the Site Boundary. | |
| 6 th January 2017 | Not Specified / Construction of Lam Tin Interchange | Resident of Yau Lai Estate Cheuk Lai House | The complainant complained the construction noise generated from this Project (EPD Reference No.: K15/RE/00000564-17) | After investigation, it was found out that necessary rock breaking works by hydraulic or pneumatic breakers was conducted during excavation for tunnel adit at Lam Tin Interchange. Noise nuisance from the works area is considered due to the high noise level emission during use of hydraulic or pneumatic breakers. | Closed |
| 10 th January 2017 | Not Specified | Unknown | The complainant complained the construction noise generated from this Project (EPD Reference No.: K15/RE/00000967-17) | The Contractor had implemented environmental mitigation measures in accordance with the “Implementation Schedule of Proposed Mitigation Measures” of EM&A Manual. | |
| 27 th January 2017 | Not Specified / Construction of Lam Tin Interchange | Resident of Yau Lai Estate Bik Lai House | The complainant complained the construction noise generated at Lam Tin Interchange at 7am in the morning. (EPD Ref No. K15/RE/00002945-17) | <p>The Contractor has taken the initiative to implement additional noise mitigation measures in order to further minimize noise nuisance to the nearby sensitive receivers, including the followings:</p> <ul style="list-style-type: none"> ● Provision and installation of additional temporary noise barrier during rock breaking works for construction of Lam Tin Interchange; ● Commencement time of daily construction works for construction of Lam Tin Interchange has been postponed from 7am to 8am each day. <p>According to the regular air quality and noise monitoring for this Project, no Action or Limit Level Exceedance was recorded from 16 December 2016 to 19 January 2017. With the implementation of environmental mitigation</p> | |

| Received Date | Date/Location | Complainant | Details of Complaint | Investigation/ Mitigation Action | File Closed |
|--|---|---|---|--|-------------|
| | | | | measures by Contractors on site, it is considered that no adverse air quality and noise impact was brought to the nearby sensitive receivers by the works of this Project. | |
| Received in this Reporting Period (February 2017) | | | | | |
| 9 th February 2017 | Not Specified / construction of Lam Tin Interchange | Resident of Yat Lai House, Yau Lai Estate | The complainant complained about the noise nuisance during the construction works of Lam Tin Interchange at 8:10am. (EPD Reference No.: K15/RE/00003855-17) | According to information provided by the Contractor, powered Mechanical Equipment being operated on site during the time of complaint include breaker, dump truck, backhoes, drilling rig, mobile crane and small bulldozer. They were operated on and off with some idling time. It is considered that noise nuisance during the time of complaint was mainly due to high noise level emission during the use of breaker for rock breaking. | Closed |
| 13 th February 2017 | Not Specified / construction of Lam Tin Interchange | Resident of Yat Lai House, Yau Lai Estate | The complainant complained about the noise nuisance during the construction works of Lam tin Interchange. | <p>In addition to the the “Implementation Schedule of Proposed Mitigation Measures” of EM&A Manual, the Contractor has implemented the following additional noise mitigation measures since late including:</p> <ul style="list-style-type: none"> ● Provision and installation of additional temporary noise barrier during rock breaking works for construction of Lam Tin Interchange; ● Sound absorptive materials with 50mm thickness were hanged on rock mountain wall as well as temporary noise barrier containers; and ● Adoption of alternative rock breaking method such as partial rock breaking by rock splitter. <p>In addition, the Contractor has taken the initiative to explore measures to further reduce construction noise</p> | |

| Received Date | Date/Location | Complainant | Details of Complaint | Investigation/ Mitigation Action | File Closed |
|---------------|--|-------------|---|--|-------------|
| | | | | <p>nuisance such as:</p> <ul style="list-style-type: none"> ● Installation of cantilever barrier on top of the containers; ● Installation of tuned mass dampers on breaker head; and ● Use of acoustic mat cover and a retractable noise barrier where feasible. <p>According to the regular noise monitoring no Limit Level Exceedance was recorded at Noise Monitoring Station CM1, Station CM2 and Station CM3 from 2 – 15 February 2017. With the implementation of environmental mitigation measures by Contractors on site, it is considered that no adverse air quality and noise impact was brought to the nearby sensitive receivers by the works of this Project.</p> | |
| 13-Jan-17 | Not Specified / Construction Works near Eastern Harbour Crossing tunnel portal | Anonymous | The complainant complained about the noise generated by the construction works near the toll plaza of the Eastern Harbour Crossing (EHC). | Under Investigation | On-going |
| 24-Jan-17 | Not Specified / Construction Works near Eastern Harbour Crossing tunnel portal | | The complainant mentioned the noise problem still affected the daily life of residents | Under Investigation | On-going |

| Received Date | Date/Location | Complainant | Details of Complaint | Investigation/ Mitigation Action | File Closed |
|---------------|---|-----------------|--|----------------------------------|-------------|
| 26-Jan-17 | Not Specified / Construction Works near Eastern Harbour Crossing tunnel portal | 黃國健議員及 何啟明議員 | LC members referred complaints about the noise generated by the construction works near the EHC tunnel portal. They mentioned that the noise generated by the construction works had greatly affected the daily life of nearby residents, especially occupants of Block 5 of Yau Lai Estate and those who lived at the upper floors. | Under Investigation | On-going |
| 23-Feb-17 | Not Specified / BMCP Footpath | 陳繼偉議員 | Mr. Chan complained that some of the excavated materials fell from the dump trucks on the BMCP footpath affecting the safety of pedestrian and hikers. | Under Investigation | On-going |

Cumulative Complaint Log since commencement of Project

| Reporting Month | Number of Complaints in Reporting Month | Number of Summons in Reporting Month | Number of Prosecutions in Reporting Month |
|-----------------|---|--------------------------------------|---|
| November 2016 | 0 | 0 | 0 |
| December 2016 | 11 | 0 | 0 |
| January 2017 | 15 | 0 | 0 |
| February 2017 | 3 | 0 | 0 |
| Total | 29 | 0 | 0 |

Cumulative Log for Notifications of Summons

Contract No. NE/2015/01

| Log Ref. | Date/Location | Subject | Status | Total no. Received in this reporting month | Total no. Received since project commencement |
|-----------------|----------------------|----------------|---------------|---|--|
| -- | -- | -- | -- | -- | -- |

Contract No. NE/2015/02

| Log Ref. | Date/Location | Subject | Status | Total no. Received in this reporting month | Total no. Received since project commencement |
|-----------------|----------------------|----------------|---------------|---|--|
| -- | -- | -- | -- | -- | -- |

Cumulative Log for Successful Prosecutions

Contract No. NE/2015/01

| Log Ref. | Date/Location | Subject | Status | Total no. Received in this reporting month | Total no. Received since the commencement of the project |
|-----------------|----------------------|----------------|---------------|---|---|
| -- | -- | -- | -- | -- | -- |

Contract No. NE/2015/02

| Log Ref. | Date/Location | Subject | Status | Total no. Received in this reporting month | Total no. Received since the commencement of the project |
|-----------------|----------------------|----------------|---------------|---|---|
| -- | -- | -- | -- | -- | -- |

**APPENDIX P
WASTE GENERATION IN THE
REPORTING MONTH**

Monthly Summary Waste Flow Table for 2017



| Month | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | Actual Quantities of C&D Wastes Generated Monthly | | | | |
|-----------|--|--|---------------------------|-----------------------------|---|--------------------------|---|--|---|-------------------|--------------------------------|
| | a.Total Quantity Generated (see Note 8) | b. Hard Rock and Large Broken Concrete (see Note 9) | c. Reused in the Contract | d. Reused in Other Projects | e. Disposed as Public Fill (see Note 10) | f. Imported Fill | g. Metals (see Note 5) | h. Paper / Cardboard Packaging (see Note 5) | i. Plastics (see Note 3) (see Note 5) | j. Chemical Waste | k. Others, 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) |
| January | 40.484 | 0.000 | 22.688 | 5.063 | 12.733 | 0.000 | 0.000 | 0.257 | 0.000 | 0.000 | 0.292 |
| February | 23.357 | 0.000 | 12.911 | 3.874 | 6.572 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.488 |
| March | | | | | | | | | | | |
| April | | | | | | | | | | | |
| May | | | | | | | | | | | |
| June | | | | | | | | | | | |
| Sub-total | 63.841 | 0.000 | 35.599 | 8.937 | 19.305 | 0.000 | 0.000 | 0.257 | 0.000 | 1.000 | 0.780 |
| July | | | | | | | | | | | |
| August | | | | | | | | | | | |
| September | | | | | | | | | | | |
| October | | | | | | | | | | | |
| November | | | | | | | | | | | |
| December | | | | | | | | | | | |
| Total | 63.841 | 0.000 | 35.599 | 8.937 | 19.305 | 0.000 | 0.000 | 0.257 | 0.000 | 1.000 | 0.780 |

Total C&D waste generated = a+b+f+g+h+i+j+k

Total C&D waste generated (excluded excavated material) = g+h+i+j+k

Total C&D waste recycled = c+d+g+h+i

% of recycled C&D waste = (Total C&D waste generated - Total C&D waste recycled) / Total C&D waste generated

Monthly Summary Waste Flow Table for 2017 Year

| Month | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | Actual Quantities of C&D Wastes Generated Monthly | | | | |
|--------------|--|---|---|---|---|---|---|------------------------|-------------------------|-------------------------------|---|
| | Total Quantity [in '000m ³] | Hard Rock and [in '000m ³] | Reused in the [in '000m ³] | Reused in other [in '000m ³] | Disposal as [in '000m ³] | Imported Fill [in '000m ³] | Metals [in '000kg] | Paper / [in '000kg] | Plastics [in '000kg] | Chemical Waste [in '000kg] | Other, e.g. [in '000m ³] |
| Jan | 1.02115 | 0.00000 | 0.00000 | 0.00000 | 1.02115 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.02306 |
| Feb | 1.04554 | 0.00000 | 0.00000 | 0.00000 | 1.04554 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.01994 |
| Mar | | | | | | | | | | | |
| Apr | | | | | | | | | | | |
| May | | | | | | | | | | | |
| June | | | | | | | | | | | |
| SUB-TOTAL | | | | | | | | | | | |
| Jul | | | | | | | | | | | |
| Aug | | | | | | | | | | | |
| Sep | | | | | | | | | | | |
| Oct | | | | | | | | | | | |
| Nov | | | | | | | | | | | |
| Dec | | | | | | | | | | | |
| TOTAL | 2.06668 | 0.00000 | 0.00000 | 0.00000 | 2.06668 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.04300 |

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

**APPENDIX Q
TENTATIVE CONSTRUCTION
PROGRAMME**

High Level 3 Months Look Ahead Programme

| Activities | Mar-17 | Apr-17 | May-17 |
|--|--------|--------|--------|
| Lam Tin Interchange | | | |
| Excavation for Tunnel Adit | | | |
| Haul Road Construction | | | |
| Slope Feature no. 11NE-D/C119 (along LYM Road) | | | |
| EHC2 U-Trough | | | |
| Site Formation - Area 1G1 | | | |
| Site Formation - Area 2 | | | |
| Site Formation - Area 3 | | | |
| Site Formation - Area 4 | | | |
| Temp Steel Bridge across CKL Road & Barging Facility | | | |
| Pipe Pile Wall - Area 2A | | | |
| Ground Investigation | | | |
| Main Tunnel | | | |
| Tunnel Team Mobilisation Works | | | |
| Construction Adit | | | |
| TKO Interchange | | | |
| Haul Road Construction & Site Formation | | | |
| BM CPC Bridge Temporary Diversion | | | |
| Temporary Barging Facilities | | | |
| | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 | TRA | 2017 | | | | |
|---|---|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------|-----|---|-----|-----|-----|-----|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun |
| NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works | | | | | | | | | | | | | | | |
| Sectional Completion of the Works | | | | | | | | | | | | | | | |
| K10300 | Section 1_All Works within Portion I and III | P2-Cal.A | 0 | 0 | 30-Apr-17 | 30-Apr-17 | -35 | 0% | -36 | 0 | ▼ Sectional Completion of the Works ◆ Section 1_All Works within Portion I and III | | | | |
| Preliminaries, Submission, Contractor's Design Submission and Approval | | | | | | | | | | | | | | | |
| General Submission | | | | | | | | | | | | | | | |
| S10040 | Prepare/Submit the Temporary Drainage Management Plan to DSD (DSD) | P2-Cal.A | 60 | 5 | 09-Jan-17 A | 24-Feb-17 | 108 | 91.67% | -90 | 0 | → General Submission Prepare/Submit the Temporary Drainage Management Plan to DSD (DSD) | | | | |
| S10060 | Prepare/Submit the PR Plan | P2-Cal.A | 21 | 21 | 20-Feb-17 | 12-Mar-17 | 0 | 0% | -206 | 0 | → Prepare/Submit the PR Plan | | | | |
| S10120 | Produce Webpage for the acceptance of PM | P2-Cal.A | 14 | 7 | 09-Sep-16 A | 26-Feb-17 | 14 | 50% | -153 | 0 | → Produce Webpage for the acceptance of PM | | | | |
| S10240 | Prepare/Submit the Weather Protection Scheme | P2-Cal.A | 30 | 5 | 17-Aug-16 A | 24-Feb-17 | 16 | 83.33% | -174 | 0 | → Prepare/Submit the Weather Protection Scheme | | | | |
| S10780 | Submit source of sand fill | P2-Cal.A | 30 | 30 | 20-Feb-17 | 21-Mar-17 | 65 | 0% | -6 | 0 | → Submit source of sand fill | | | | |
| Contractor's Design Submission and Approval | | | | | | | | | | | | | | | |
| Foundation Design | | | | | | | | | | | | | | | |
| AIP Submission for Foundation of Road P2 Structure (Reclaimed Section) | | | | | | | | | | | | | | | |
| S11240 | Resubmit AIP Submission for Foundation of Road P2 Structure (Reclaimed Section) | P2-Cal.A | 14 | 14 | 20-Jan-17 A | 05-Mar-17 | 333 | 0% | 76 | 0 | → Resubmit AIP Submission for Foundation of Road P2 Structure (Reclaimed Section) | | | | |
| S11250 | Review and comment by GEO | P2-Cal.A | 14 | 14 | 06-Mar-17 | 19-Mar-17 | 333 | 0% | 76 | 0 | → Review and comment by GEO | | | | |
| S11260 | Accept AIP Submission for Foundation of Road P2 Structure (Reclaimed Section) | P2-Cal.A | 21 | 21 | 20-Mar-17 | 09-Apr-17 | 333 | 0% | 76 | 0 | → Accept AIP Submission for Foundation of Road P2 Structure (Reclaimed Section) | | | | |
| DDA Submission for Foundation of Road P2 Structure (Reclaimed Section) | | | | | | | | | | | | | | | |
| S11360 | Prepare and Submit DDA Submission for Foundation of Road P2 Structure (Reclaimed Section) | P2-Cal.A | 21 | 21 | 10-Apr-17 | 30-Apr-17 | 333 | 0% | 76 | 0 | → DDA Submission for Foundation of Road P2 Structure (Reclaimed Section) | | | | |
| S11380 | Review and Discuss DDA Submission for Foundation of Road P2 Structure (Reclaimed Section) | P2-Cal.A | 21 | 21 | 01-May-17 | 21-May-17 | 333 | 0% | 76 | 0 | → Review and Discuss DDA Submission for Foundation of Road P2 Structure (Reclaimed Section) | | | | |
| E&M Design | | | | | | | | | | | | | | | |
| Detail Design for E&M Works (Tunnel and associated) | | | | | | | | | | | | | | | |
| S11580 | Prepare and Submit Detail Design for E&M Works (Tunnel and associated) | P2-Cal.A | 21 | 21 | 20-Feb-17 | 12-Mar-17 | 642 | 0% | -130 | 0 | → Detail Design for E&M Works (Tunnel and associated) | | | | |
| S11600 | Review and Discuss Detail Design for E&M Works (Tunnel and associated) | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 642 | 0% | -130 | 0 | → Review and Discuss Detail Design for E&M Works (Tunnel and associated) | | | | |
| S11620 | Resubmit Detail Design for E&M Works (Tunnel and associated) | P2-Cal.A | 21 | 21 | 03-Apr-17 | 23-Apr-17 | 642 | 0% | -130 | 0 | → Resubmit Detail Design for E&M Works (Tunnel and associated) | | | | |
| S11640 | Accept Detail Design for E&M Works (Tunnel and associated) | P2-Cal.A | 21 | 21 | 24-Apr-17 | 14-May-17 | 642 | 0% | -130 | 0 | → Accept Detail Design for E&M Works (Tunnel and associated) | | | | |
| Design of Architectural Finishes for Internal Walls of U-Trough Structures | | | | | | | | | | | | | | | |
| S11660 | Prepare and Submit Design of Architectural Finishes for Internal Walls of U-Trough Structures | P2-Cal.A | 21 | 21 | 20-Feb-17 | 12-Mar-17 | 991 | 0% | -20 | 0 | → Design of Architectural Finishes for Internal Walls of U-Trough Structures | | | | |
| S11680 | Review and Discuss Design of Architectural Finishes for Internal Walls of U-Trough Structures | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 991 | 0% | -20 | 0 | → Review and Discuss Design of Architectural Finishes for Internal Walls of U-Trough Structures | | | | |
| S11700 | Resubmit Design of Architectural Finishes for Internal Walls of U-Trough Structures | P2-Cal.A | 14 | 14 | 03-Apr-17 | 16-Apr-17 | 991 | 0% | -20 | 0 | → Resubmit Design of Architectural Finishes for Internal Walls of U-Trough Structures | | | | |
| S11720 | Accept Design of Architectural Finishes for Internal Walls of U-Trough Structures | P2-Cal.A | 21 | 21 | 17-Apr-17 | 07-May-17 | 991 | 0% | -20 | 0 | → Accept Design of Architectural Finishes for Internal Walls of U-Trough Structures | | | | |
| Contractor Cost Saving Design | | | | | | | | | | | | | | | |
| AIP Submission for CSD of Existing Land Section (P2 CH423 - CH500) | | | | | | | | | | | | | | | |
| S11860 | Resubmit AIP Submission for CSD of Existing Land Section (P2 CH423 - CH500) | P2-Cal.A | 14 | 3 | 19-Nov-16 A | 22-Feb-17 | 711 | 78.57% | -79 | 0 | → AIP Submission for CSD of Existing Land Section (P2 CH423 - CH500) | | | | |
| S11880 | Accept AIP Submission for CSD of Existing Land Section (P2 CH423 - CH500) | P2-Cal.A | 21 | 21 | 23-Feb-17 | 15-Mar-17 | 711 | 0% | -79 | 0 | → Resubmit AIP Submission for CSD of Existing Land Section (P2 CH423 - CH500) | | | | |
| AIP Submission for CSD of Reclaimed Section (S200 CH674 - CH755, S300 CH326-CH355) | | | | | | | | | | | | | | | |
| S11940 | Resubmit AIP Submission for CSD of Reclaimed Section (S200 CH674 - CH755, S300 CH326-CH355) | P2-Cal.A | 14 | 9 | 28-Jan-17 A | 28-Feb-17 | 699 | 35.71% | -74 | 0 | → AIP Submission for CSD of Reclaimed Section (S200 CH674 - CH755, S300 CH326-CH355) | | | | |
| S11960 | Accept AIP Submission for CSD of Reclaimed Section (S200 CH674 - CH755, S300 CH326-CH355) | P2-Cal.A | 21 | 21 | 01-Mar-17 | 21-Mar-17 | 699 | 0% | -74 | 0 | → Resubmit AIP Submission for CSD of Reclaimed Section (S200 CH674 - CH755, S300 CH326-CH355) | | | | |
| Major Temporary Works Design | | | | | | | | | | | | | | | |
| Double Water Gate System | | | | | | | | | | | | | | | |
| S12131 | Resubmit Design of Double Water Gate System | P2-Cal.A | 14 | 10 | 17-Feb-17 A | 01-Mar-17 | 0 | 28.57% | 0 | 0 | → Double Water Gate System | | | | |
| S12132 | Accept Design of Double Water Gate System | P2-Cal.A | 21 | 21 | 02-Mar-17 | 22-Mar-17 | 0 | 0% | 0 | 0 | → Resubmit Design of Double Water Gate System | | | | |
| ELS Design for U-Trough A & B (SR2 CH182 - CH250) | | | | | | | | | | | | | | | |
| S12380 | Prepare and Submit ELS Design for U-Trough A & B (SR2 CH182 - CH250) | P2-Cal.A | 18 | 6 | 06-Feb-17 A | 25-Feb-17 | 202 | 66.67% | -104 | 0 | → ELS Design for U-Trough A & B (SR2 CH182 - CH250) | | | | |
| S12400 | Review and Discuss ELS Design for U-Trough A & B (SR2 CH182 - CH250) | P2-Cal.A | 21 | 21 | 26-Feb-17 | 18-Mar-17 | 202 | 0% | -104 | 0 | → Prepare and Submit ELS Design for U-Trough A & B (SR2 CH182 - CH250) | | | | |
| S12420 | Resubmit ELS Design for U-Trough A & B (SR2 CH182 - CH250) | P2-Cal.A | 14 | 14 | 19-Mar-17 | 01-Apr-17 | 202 | 0% | -104 | 0 | → Review and Discuss ELS Design for U-Trough A & B (SR2 CH182 - CH250) | | | | |
| S12440 | Accept ELS Design for U-Trough A & B (SR2 CH182 - CH250) | P2-Cal.A | 21 | 21 | 02-Apr-17 | 22-Apr-17 | 202 | 0% | -104 | 0 | → Resubmit ELS Design for U-Trough A & B (SR2 CH182 - CH250) | | | | |
| ELS Design for U-Trough A & B (P2 CH318 - CH375) | | | | | | | | | | | | | | | |
| | | | | | | | | | | | → ELS Design for U-Trough A & B (P2 CH318 - CH375) | | | | |

█ Primary Baseline █ Critical Remaining Work
█ Actual Work ◆ Milestone
█ Remaining Work ▼ Summary

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works

3 Months Rolling Programme
 (20 Feb 2017)
 Page: 1 of 7

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 Finish Date | TRA | 2017 | | | | |
|---|--|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------------------|------|------|-----|-----|-----|-----|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun |
| S12460 | Prepare and Submit ELS Design for U-Trough A & B (P2 CH318 - CH375) | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 190 | 0% | -206 | 0 | | | | | |
| S12480 | Review and Discuss ELS Design for U-Trough A & B (P2 CH318 - CH375) | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 190 | 0% | -206 | 0 | | | | | |
| S12500 | Resubmit ELS Design for U-Trough A & B (P2 CH318 - CH375) | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | 190 | 0% | -169 | 0 | | | | | |
| S12520 | Accept ELS Design for U-Trough A & B (P2 CH318 - CH375) | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | 190 | 0% | -169 | 0 | | | | | |
| ELS Design for U-Trough A & B (P2 CH423 - CH500) | | P2-Cal.A | 60 | 60 | 06-Feb-17 A | 20-Apr-17 | 204 | | | -102 | | | | | |
| S12540 | Prepare and Submit ELS Design for U-Trough A & B (P2 CH423 - CH500) | P2-Cal.A | 18 | 4 | 06-Feb-17 A | 23-Feb-17 | 204 | 77.78% | -102 | 0 | | | | | |
| S12560 | Review and Discuss ELS Design for U-Trough A & B (P2 CH423 - CH500) | P2-Cal.A | 21 | 21 | 24-Feb-17 | 16-Mar-17 | 204 | 0% | -102 | 0 | | | | | |
| S12580 | Resubmit ELS Design for U-Trough A & B (P2 CH423 - CH500) | P2-Cal.A | 14 | 14 | 17-Mar-17 | 30-Mar-17 | 204 | 0% | -102 | 0 | | | | | |
| S12600 | Accept ELS Design for U-Trough A & B (P2 CH423 - CH500) | P2-Cal.A | 21 | 21 | 31-Mar-17 | 20-Apr-17 | 204 | 0% | -102 | 0 | | | | | |
| ELS Design for U-Trough A & B within the Reclaimed Section | | P2-Cal.A | 74 | 74 | 20-Feb-17 | 04-May-17 | 626 | | | -4 | | | | | |
| S12620 | Prepare and Submit ELS Design for U-Trough A & B within the Reclaimed Section | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 626 | 0% | -4 | 0 | | | | | |
| S12640 | Review and Discuss ELS Design for U-Trough A & B within the Reclaimed Section | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 626 | 0% | -4 | 0 | | | | | |
| S12660 | Resubmit ELS Design for U-Trough A & B within the Reclaimed Section | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | 626 | 0% | -4 | 0 | | | | | |
| S12680 | Accept ELS Design for U-Trough A & B within the Reclaimed Section | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | 626 | 0% | -4 | 0 | | | | | |
| ELS Design for Road P2 Underpass including Plant Rooms | | P2-Cal.A | 53 | 53 | 31-Mar-17 | 22-May-17 | 444 | | | 0 | | | | | |
| S12700 | Pre. and Sub. ELS Design for Road P2 Underpass (Incl.Stom.W Pt Rm, Sump Pit Rm & Fixed Foam Tk Rm) & U-T. A&B CH305-318 | P2-Cal.A | 18 | 18 | 31-Mar-17 | 17-Apr-17 | 444 | 0% | 0 | 0 | | | | | |
| S12720 | Rev. and Disc. ELS Design for Road P2 Underpass (Incl.Stom.W Pt Rm, Sump Pit Rm & Fixed Foam Tk Rm) & U-T. A&B CH305-318 | P2-Cal.A | 21 | 21 | 18-Apr-17 | 08-May-17 | 444 | 0% | 0 | 0 | | | | | |
| S12740 | Resubmit ELS Design for Road P2 Underpass (Incl.Stom.W Pt Rm, Sump Pit Rm & Fixed Foam Tk Rm) & U-T. A&B CH305-318 | P2-Cal.A | 14 | 14 | 09-May-17 | 22-May-17 | 444 | 0% | 0 | 0 | | | | | |
| Design of sediment/ marine treatment area | | P2-Cal.A | 74 | 74 | 20-Feb-17 | 04-May-17 | 7 | | | -36 | | | | | |
| S12860 | Prepare and Submit Design of sediment/ marine treatment area | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 7 | 0% | -36 | 0 | | | | | |
| S12880 | Review and Discuss Design of sediment/ marine treatment area | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 7 | 0% | -36 | 0 | | | | | |
| S12900 | Resubmit Design of sediment/ marine treatment area | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | 7 | 0% | -36 | 0 | | | | | |
| S12920 | Accept Design of sediment/ marine treatment area | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | 7 | 0% | -36 | 0 | | | | | |
| ELS Design for U-Trough A & B (P2 CH375 - CH423) | | P2-Cal.A | 74 | 74 | 20-Feb-17 | 04-May-17 | 190 | | | -169 | | | | | |
| S12940 | Prepare and Submit ELS Design for U-Trough A & B (P2 CH375 - CH423) | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 190 | 0% | -206 | 0 | | | | | |
| S12960 | Review and Discuss ELS Design for U-Trough A & B (P2 CH375 - CH423) | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 190 | 0% | -206 | 0 | | | | | |
| S12980 | Resubmit ELS Design for U-Trough A & B (P2 CH375 - CH423) | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | 190 | 0% | -169 | 0 | | | | | |
| S13000 | Accept ELS Design for U-Trough A & B (P2 CH375 - CH423) | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | 190 | 0% | -169 | 0 | | | | | |
| Temporary Jetty Design | | P2-Cal.A | 74 | 74 | 20-Feb-17 | 04-May-17 | 7 | | | -114 | | | | | |
| S13020 | Prepare and Submit Temporary Jetty Design | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 7 | 0% | -114 | 0 | | | | | |
| S13040 | Review and Discuss Temporary Jetty Design | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 7 | 0% | -114 | 0 | | | | | |
| S13060 | Resubmit Temporary Jetty Design | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | 7 | 0% | -114 | 0 | | | | | |
| S13080 | Accept Temporary Jetty Design | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | 7 | 0% | -114 | 0 | | | | | |
| Design of Marine Survey Tower | | P2-Cal.A | 74 | 74 | 20-Feb-17 | 04-May-17 | 161 | | | -114 | | | | | |
| S13100 | Prepare and Submit Marine Survey Tower | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 161 | 0% | -114 | 0 | | | | | |
| S13120 | Review and Discuss Marine Survey Tower | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 161 | 0% | -114 | 0 | | | | | |
| S13140 | Resubmit Temporary Marine Survey Tower | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | 161 | 0% | -114 | 0 | | | | | |
| S13160 | Accept Temporary Marine Survey Tower | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | 161 | 0% | -114 | 0 | | | | | |
| Major Construction Works Method Statement | | P2-Cal.A | 123 | 92 | 29-Dec-16 A | 22-May-17 | 602 | | | 154 | | | | | |
| Construction of Seawall Foundation for Road P2 | | P2-Cal.A | 67 | 67 | 06-Mar-17 | 11-May-17 | 47 | | | 0 | | | | | |
| S13260 | Prepare and Submit Method Statement for Construction of Seawall Foundation for Road P2 | P2-Cal.A | 18 | 18 | 06-Mar-17 | 23-Mar-17 | 47 | 0% | 0 | 0 | | | | | |
| S13280 | Review and Discuss Method Statement for Construction of Seawall Foundation for Road P2 | P2-Cal.A | 21 | 21 | 24-Mar-17 | 13-Apr-17 | 47 | 0% | 0 | 0 | | | | | |
| S13300 | Resubmit Method Statement for Construction of Seawall Foundation for Road P2 | P2-Cal.A | 7 | 7 | 14-Apr-17 | 20-Apr-17 | 47 | 0% | 0 | 0 | | | | | |
| S13320 | Accept Method Statement for Construction of Seawall Foundation for Road P2 | P2-Cal.A | 21 | 21 | 21-Apr-17 | 11-May-17 | 47 | 0% | 0 | 0 | | | | | |
| Reclamation Filing | | P2-Cal.A | 67 | 67 | 20-Feb-17 | 27-Apr-17 | 48 | | | -46 | | | | | |
| S13340 | Prepare and Submit Method Statement for Reclamation Filing | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 48 | 0% | -46 | 0 | | | | | |
| S13360 | Review and Discuss Method Statement for Reclamation Filing | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 48 | 0% | -46 | 0 | | | | | |

█ Primary Baseline █ Critical Remaining Work
█ Actual Work ◆ Milestone
█ Remaining Work ▬ Summary

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| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 | TRA | 2017 | | | | | |
|---|--|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------|------|------|-----|-----|-----|-----|--|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun | |
| S13380 | Resubmit Method Statement for Reclamation Filing | P2-Cal.A | 7 | 7 | 31-Mar-17 | 06-Apr-17 | 48 | 0% | -46 | 0 | | | | | | |
| S13400 | Accept Method Statement for Reclamation Filing | P2-Cal.A | 21 | 21 | 07-Apr-17 | 27-Apr-17 | 48 | 0% | -46 | 0 | | | | | | |
| Demolishing/ Removing Existing Seawall | | P2-Cal.A | 67 | 67 | 20-Feb-17 | 27-Apr-17 | 14 | | -36 | | | | | | | |
| S13580 | Prepare and Submit Method Statement for Demolishing/ Removing Existing Seawall | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | 14 | 0% | -36 | 0 | | | | | | |
| S13600 | Review and Discuss Method Statement for Demolishing/ Removing Existing Seawall | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | 14 | 0% | -36 | 0 | | | | | | |
| S13620 | Resubmit Method Statement for Demolishing/ Removing Existing Seawall | P2-Cal.A | 7 | 7 | 31-Mar-17 | 06-Apr-17 | 14 | 0% | -36 | 0 | | | | | | |
| S13640 | Accept Method Statement for Demolishing/ Removing Existing Seawall | P2-Cal.A | 21 | 21 | 07-Apr-17 | 27-Apr-17 | 14 | 0% | -36 | 0 | | | | | | |
| Installation, Operation and Removal of Water Gate | | P2-Cal.A | 88 | 57 | 29-Dec-16 A | 17-Apr-17 | -24 | | -106 | | | | | | | |
| S13820 | Prepare and Submit Method Statement for Installation, Operation and Removal of Water Gate | P2-Cal.A | 18 | 8 | 29-Dec-16 A | 27-Feb-17 | -24 | 55.56% | -106 | 0 | | | | | | |
| S13840 | Review and Discuss Method Statement for Installation, Operation and Removal of Water Gate | P2-Cal.A | 21 | 21 | 28-Feb-17 | 20-Mar-17 | -24 | 0% | -106 | 0 | | | | | | |
| S13860 | Resubmit Method Statement for Installation, Operation and Removal of Water Gate | P2-Cal.A | 7 | 7 | 21-Mar-17 | 27-Mar-17 | -24 | 0% | -106 | 0 | | | | | | |
| S13880 | Accept Method Statement for Installation, Operation and Removal of Water Gate | P2-Cal.A | 21 | 21 | 28-Mar-17 | 17-Apr-17 | -24 | 0% | -106 | 0 | | | | | | |
| Construction of Retaining Wall Structure RW P2-A | | P2-Cal.A | 28 | 28 | 20-Feb-17 | 19-Mar-17 | 666 | | | | | | | | | |
| S14043 | Resubmit Method Statement for Construction of Retaining Wall Structure | P2-Cal.A | 7 | 7 | 20-Feb-17 | 26-Feb-17 | 666 | 0% | | 0 | | | | | | |
| S14044 | Accept Method Statement for Construction of Retaining Wall Structure | P2-Cal.A | 21 | 21 | 27-Feb-17 | 19-Mar-17 | 666 | 0% | | 0 | | | | | | |
| Excavation and ELS of U-Troughs | | P2-Cal.A | 18 | 18 | 05-May-17 | 22-May-17 | 190 | | 154 | | | | | | | |
| S14060 | Prepare and Submit Method Statement for Excavation and ELS of U-Troughs | P2-Cal.A | 18 | 18 | 05-May-17 | 22-May-17 | 190 | 0% | 154 | 0 | | | | | | |
| Treatment of Dredged Marine Sediment of Type 1 | | P2-Cal.A | 57 | 31 | 07-Feb-17 A | 22-Mar-17 | 328 | | 57 | | | | | | | |
| S14340 | Resubmit Method Statement for Treatment of Dredging Marine Sediment of Type 1 | P2-Cal.A | 14 | 10 | 07-Feb-17 A | 01-Mar-17 | 328 | 28.57% | 57 | 0 | | | | | | |
| S14360 | Accept Method Statement for Treatment of Dredging Marine Sediment of Type 1 | P2-Cal.A | 21 | 21 | 02-Mar-17 | 22-Mar-17 | 328 | 0% | 57 | 0 | | | | | | |
| Temporary Support for Excavation of Existing Seawall | | P2-Cal.A | 74 | 74 | 20-Feb-17 | 04-May-17 | -13 | | -46 | | | | | | | |
| S14940 | Prepare and Submit Method Statement for Temporary Support for Excavation of Existing Seawall | P2-Cal.A | 18 | 18 | 20-Feb-17 | 09-Mar-17 | -13 | 0% | -46 | 0 | | | | | | |
| S14960 | Review and Discuss Method Statement for Temporary Support for Excavation of Existing Seawall | P2-Cal.A | 21 | 21 | 10-Mar-17 | 30-Mar-17 | -13 | 0% | -46 | 0 | | | | | | |
| S14980 | Resubmit Method Statement for Temporary Support for Excavation of Existing Seawall | P2-Cal.A | 14 | 14 | 31-Mar-17 | 13-Apr-17 | -13 | 0% | -46 | 0 | | | | | | |
| S15000 | Accept Method Statement for Temporary Support for Excavation of Existing Seawall | P2-Cal.A | 21 | 21 | 14-Apr-17 | 04-May-17 | -13 | 0% | -46 | 0 | | | | | | |
| Pre-Bored Works for Installation of Sheet Pile | | P2-Cal.A | 21 | 10 | 16-Feb-17 A | 01-Mar-17 | 461 | | | | | | | | | |
| S15008 | Accept Method Statement for Pre-Bored Works for Installation of Sheet Pile | P2-Cal.A | 21 | 10 | 16-Feb-17 A | 01-Mar-17 | 461 | 52.38% | | 0 | | | | | | |
| Procurement of Major Material | | | 1015 | 953 | 07-Oct-16 A | 30-Sep-19 | 331 | | | 0 | | | | | | |
| S15020 | Procurement and Delivery of Steel H-Pile | P2-Cal.A | 800 | 653 | 07-Oct-16 A | 04-Dec-18 | 201 | 18.38% | 38 | 0 | | | | | | |
| S15040 | Procurement and Delivery of ELS Walling & Struts Members | P2-Cal.A | 1015 | 953 | 07-Oct-16 A | 30-Sep-19 | 331 | 6.11% | | 0 | | | | | | |
| S15060 | Offsite Fabrication of Double Water Gate System | P2-Cal.A | 100 | 20 | 20-Dec-16 A | 11-Apr-17 | 0 | 80% | -27 | 0 | | | | | | |
| S15080 | Offsite Fabrication of Pre-cast Seawall blocks | P2-Cal.A | 90 | 90 | 12-May-17 | 09-Aug-17 | 47 | 0% | | 0 | | | | | | |
| S15100 | Cast-in gantry for Road Works | P2-Cal.A | 120 | 120 | 20-Feb-17 | 19-Jun-17 | 758 | 0% | -146 | 0 | | | | | | |
| S15180 | Fabrication of Marine Survey Tower | P2-Cal.B | 120 | 120 | 05-May-17 | 23-Sep-17 | 134 | 0% | -89 | 0 | | | | | | |
| Subletting Package | | P2-Cal.A | 83 | 42 | 04-Nov-16 A | 02-Apr-17 | 1131 | | | -8 | | | | | | |
| Marine Works | | P2-Cal.A | 51 | 10 | 04-Nov-16 A | 01-Mar-17 | 71 | | | -110 | | | | | | |
| S16920 | Tender Interview and Recommendation to PM for Marine Works | P2-Cal.A | 21 | 10 | 04-Nov-16 A | 01-Mar-17 | 71 | 52.38% | -110 | 0 | | | | | | |
| S16940 | Marine Works Award | P2-Cal.A | 0 | 0 | | 01-Mar-17 | 71 | 0% | -110 | 0 | | | | | | |
| Cement Stabilization and Solidification | | P2-Cal.A | 42 | 42 | 20-Feb-17 | 02-Apr-17 | 317 | | | -8 | | | | | | |
| S16960 | Prepare Cement Stabilization and Solidification Tender Document for PM Acceptance | P2-Cal.A | 7 | 7 | 20-Feb-17 | 26-Feb-17 | 317 | 0% | -8 | 0 | | | | | | |
| S16980 | Invitation, Submission and Opening of Tender for Cement Stabilization and Solidification | P2-Cal.A | 14 | 14 | 27-Feb-17 | 12-Mar-17 | 317 | 0% | -8 | 0 | | | | | | |
| S17000 | Tender Interview and Recommendation to PM for Cement Stabilization and Solidification | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 317 | 0% | -8 | 0 | | | | | | |
| S17020 | Cement Stabilization and Solidification Award | P2-Cal.A | 0 | 0 | | 02-Apr-17 | 317 | 0% | -8 | 0 | | | | | | |
| Drainage and Sewerage Works | | P2-Cal.A | 39 | 8 | 07-Jan-17 A | 27-Feb-17 | 105 | | | -84 | | | | | | |
| S17080 | Tender Interview and Recommendation to PM for Drainage and Sewerage Works | P2-Cal.A | 21 | 8 | 07-Jan-17 A | 27-Feb-17 | 105 | 61.9% | -84 | 0 | | | | | | |
| S17100 | Drainage and Sewerage Works Award | P2-Cal.A | 0 | 0 | | 27-Feb-17 | 105 | 0% | -84 | 0 | | | | | | |
| Water Works | | P2-Cal.A | 42 | 42 | 20-Feb-17 | 02-Apr-17 | 683 | | | -56 | | | | | | |

— Primary Baseline — Critical Remaining Work
— Actual Work ◆ Milestone
— Remaining Work ▼ Summary

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works

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| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 | TRA | 2017 | | | | | |
|--|---|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------|-----|------|-----|-----|-----|-----|--|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun | |
| S17120 | Prepare Water Works Tender Document for PM Acceptance | P2-Cal.A | 7 | 7 | 20-Feb-17 | 26-Feb-17 | 683 | 0% | -56 | 0 | | | | | | |
| S17140 | Submission and Opening of Tender for Water Works | P2-Cal.A | 14 | 14 | 27-Feb-17 | 12-Mar-17 | 683 | 0% | -56 | 0 | | | | | | |
| S17160 | Tender Interview and Recommendation to PM for Water Works | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 683 | 0% | -56 | 0 | | | | | | |
| S17180 | Water Works Award | P2-Cal.A | 0 | 0 | | 02-Apr-17 | 683 | 0% | -56 | 0 | | | | | | |
| Road Works | | P2-Cal.A | 73 | 42 | 16-Jan-17 A | 02-Apr-17 | 924 | | -131 | | | | | | | |
| S17200 | Prepare Road Works Tender Document for PM Acceptance | P2-Cal.A | 7 | 7 | 16-Jan-17 A | 26-Feb-17 | 924 | 0% | -131 | 0 | | | | | | |
| S17220 | Submission and Opening of Tender for Road Works | P2-Cal.A | 14 | 14 | 27-Feb-17 | 12-Mar-17 | 924 | 0% | -131 | 0 | | | | | | |
| S17240 | Tender Interview and Recommendation to PM for Road Works | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 924 | 0% | -131 | 0 | | | | | | |
| S17260 | Road Works Award | P2-Cal.A | 0 | 0 | | 02-Apr-17 | 924 | 0% | -131 | 0 | | | | | | |
| Irrigation Works | | P2-Cal.A | 42 | 42 | 20-Feb-17 | 02-Apr-17 | 1131 | | -26 | | | | | | | |
| S17280 | Prepare Irrigation Works Tender Document for PM Acceptance | P2-Cal.A | 7 | 7 | 20-Feb-17 | 26-Feb-17 | 1131 | 0% | -26 | 0 | | | | | | |
| S17300 | Submission and Opening of Tender for Irrigation Works | P2-Cal.A | 14 | 14 | 27-Feb-17 | 12-Mar-17 | 1131 | 0% | -26 | 0 | | | | | | |
| S17320 | Tender Interview and Recommendation to PM for Irrigation Works | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 1131 | 0% | -26 | 0 | | | | | | |
| S17340 | Irrigation Works Award | P2-Cal.A | 0 | 0 | | 02-Apr-17 | 1131 | 0% | -26 | 0 | | | | | | |
| Traffic and Directional Signs | | P2-Cal.A | 42 | 42 | 20-Feb-17 | 02-Apr-17 | 931 | | -26 | | | | | | | |
| S17440 | Prepare Traffic and Directional Signs Tender Document for PM Acceptance | P2-Cal.A | 7 | 7 | 20-Feb-17 | 26-Feb-17 | 931 | 0% | -26 | 0 | | | | | | |
| S17460 | Submission and Opening of Tender for Traffic and Directional Signs | P2-Cal.A | 14 | 14 | 27-Feb-17 | 12-Mar-17 | 931 | 0% | -26 | 0 | | | | | | |
| S17480 | Tender Interview and Recommendation to PM for Traffic and Directional Signs | P2-Cal.A | 21 | 21 | 13-Mar-17 | 02-Apr-17 | 931 | 0% | -26 | 0 | | | | | | |
| S17500 | Traffic and Directional Signs Award | P2-Cal.A | 0 | 0 | | 02-Apr-17 | 931 | 0% | -26 | 0 | | | | | | |
| Temporary Traffic Arrangement Schemes | | P2-Cal.A | 78 | 78 | 20-Feb-17 | 08-May-17 | 647 | | -71 | | | | | | | |
| S17840 | Distribute Drawings to TMLG members of the TTA Scheme-TTA Stage 3 (Reinstatement of Tong Yin St.) | P2-Cal.A | 12 | 12 | 20-Feb-17 | 03-Mar-17 | 647 | 0% | -71 | 0 | | | | | | |
| S17860 | TMLG Meeting & RMO | P2-Cal.A | 7 | 7 | 04-Mar-17 | 10-Mar-17 | 647 | 0% | -71 | 0 | | | | | | |
| S17880 | Submit and Approval of the TTA Scheme - TTA Stage 3 (Reinstatement of Tong Yin Street) | P2-Cal.A | 37 | 37 | 02-Apr-17 | 08-May-17 | 647 | 0% | -71 | 30 | | | | | | |
| Section 1 of the Works | | | 70 | 70 | 17-Feb-17 A | 30-Apr-17 | | | -35 | | | | | | | |
| Reprovisioning of DSD Transformer Room | | P2-Cal.B | 55 | 55 | 17-Feb-17 A | 28-Apr-17 | | | -25 | | | | | | | |
| Structure Construction | | P2-Cal.B | 55 | 55 | 17-Feb-17 A | 28-Apr-17 | | | -41 | | | | | | | |
| LC10770 | Construction of Concrete Plinth for Trench | P2-Cal.B | 5 | 4 | 17-Feb-17 A | 23-Feb-17 | | 20% | -26 | 0 | | | | | | |
| LC10780 | Construction of Wall for DSD Transformer Room | P2-Cal.B | 7 | 7 | 24-Feb-17 | 03-Mar-17 | | 0% | -26 | -68 | 0 | | | | | |
| LC10860 | Construction of Roof Slab for DSD Transformer Room | P2-Cal.B | 5 | 5 | 04-Mar-17 | 09-Mar-17 | | 0% | -26 | -53 | 0 | | | | | |
| LC10900 | Construction of wall and ceiling finishing works for DSD Transformer Room | P2-Cal.B | 5 | 5 | 10-Mar-17 | 15-Mar-17 | | 0% | -26 | -37 | 0 | | | | | |
| LC10905 | Construction of floor finishing works for DSD Transformer Room | P2-Cal.B | 5 | 5 | 16-Mar-17 | 21-Mar-17 | | 0% | -19 | 0 | | | | | | |
| LC10920 | Construction of E&M Works for DSD Transformer Room 1st and 2nd fixing | P2-Cal.B | 7 | 7 | 22-Mar-17 | 29-Mar-17 | | 0% | -26 | -39 | 0 | | | | | |
| LC10925 | Construction of E&M Works for DSD Transformer Room 3rd fixing | P2-Cal.B | 5 | 5 | 30-Mar-17 | 05-Apr-17 | | 0% | -26 | 0 | | | | | | |
| LC10940 | Backfilling | P2-Cal.B | 21 | 21 | 24-Feb-17 | 20-Mar-17 | | 0% | -15 | -43 | 10 | | | | | |
| LC10950 | Construction of Cable Ducts (PMI No.4) | P2-Cal.B | 7 | 7 | 24-Feb-17 | 03-Mar-17 | | 0% | -12 | 0 | | | | | | |
| LC10955 | Construction of Draw Pits (PMI No.4) | P2-Cal.B | 21 | 21 | 04-Mar-17 | 28-Mar-17 | | 0% | -12 | 0 | | | | | | |
| LC10980 | Connection of Equipment and Cable Laying by CLP | P2-Cal.B | 10 | 10 | 06-Apr-17 | 20-Apr-17 | | 0% | -26 | -34 | 5 | | | | | |
| LC10985 | Road Pavement Works | P2-Cal.B | 10 | 10 | 18-Apr-17 | 28-Apr-17 | | 0% | -25 | -63 | 0 | | | | | |
| Road Works | | P2-Cal.B | 30 | 30 | 21-Mar-17 | 28-Apr-17 | | | -25 | | | | | | | |
| LC11000 | Road Furniture Works | P2-Cal.B | 10 | 10 | 21-Mar-17 | 31-Mar-17 | | 0% | -15 | -64 | 0 | | | | | |
| LC11020 | Road Marking | P2-Cal.B | 10 | 10 | 18-Apr-17 | 28-Apr-17 | | 0% | -25 | -74 | 0 | | | | | |
| LC11040 | Installation of Vehicle Gate - 2 gates | P2-Cal.B | 10 | 10 | 18-Apr-17 | 28-Apr-17 | | 0% | -25 | -63 | 0 | | | | | |
| Demolition of Existing DSD Transformer Room | | | 10 | 10 | 21-Apr-17 | 30-Apr-17 | | | -35 | | | | | | | |
| LC11060 | Decommission of Existing Transformer from Existing DSD Transformer Room | P2-Cal.B | 5 | 5 | 21-Apr-17 | 26-Apr-17 | | 0% | -26 | -27 | 3 | | | | | |
| LC11080 | Demolition of Existing Transformer Room | P2-Cal.B | 3 | 3 | 27-Apr-17 | 29-Apr-17 | | 0% | -26 | -26 | 0 | | | | | |
| LC11090 | Handover to DSD | P2-Cal.A | 1 | 1 | 30-Apr-17 | 30-Apr-17 | | 0% | -35 | 0 | | | | | | |
| Section 2 of the Works | | P2-Cal.B | 76 | 21 | 23-Jan-17 A | 15-Mar-17 | | | 678 | | | | | | | |

█ Primary Baseline █ Critical Remaining Work
█ Actual Work ◆ Milestone
█ Remaining Work ▼ Summary

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works

3 Months Rolling Programme
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| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 | TRA | 2017 | | | | |
|---|--|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------|-----|--|-----|-----|-----|-----|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun |
| RW P2-B | | | | | | | | | | | RW P2-B | | | | |
| LC11300 | Construction of RW P2-B Wall Stem - Bay 12 (Team B) | P2-Cal.B | 10 | 3 | 23-Jan-17 A | 15-Mar-17 | 678 | 70% | 41 | 0 | Construction of RW P2-B Wall Stem - Bay 12 (Team B) | | | | |
| LC11380 | Construction of RW P2-B Wall Stem - Bay 10 (Team A) | P2-Cal.B | 10 | 7 | 18-Feb-17 A | 27-Feb-17 | 678 | 30% | 77 | 0 | Construction of RW P2-B Wall Stem - Bay 10 (Team A) | | | | |
| LC11460 | Construction of RW P2-B Wall Stem - Bay 8 (Team B) | P2-Cal.B | 10 | 9 | 20-Feb-17 A | 04-Mar-17 | 680 | 10% | 72 | 0 | Construction of RW P2-B Wall Stem - Bay 8 (Team B) | | | | |
| LC11540 | Construction of RW P2-B Wall Stem - Bay 6 (Team A) | P2-Cal.B | 10 | 7 | 18-Feb-17 A | 07-Mar-17 | 678 | 30% | 110 | 0 | Construction of RW P2-B Wall Stem - Bay 6 (Team A) | | | | |
| LC11620 | Construction of RW P2-B Wall Stem - Bay 4 (Team B) | P2-Cal.B | 10 | 7 | 17-Feb-17 A | 13-Mar-17 | 680 | 30% | 105 | 0 | Construction of RW P2-B Wall Stem - Bay 4 (Team B) | | | | |
| LC11700 | Construction of RW P2-B Wall Stem - Bay 2 (Team A) | P2-Cal.B | 10 | 7 | 18-Feb-17 A | 15-Mar-17 | 678 | 30% | 143 | 0 | Construction of RW P2-B Wall Stem - Bay 2 (Team A) | | | | |
| Section 3 of the Works | | | | | | | | | | | Section 3 of the Works | | | | |
| Existing Land Section | | | | | | | | | | | Existing Land Section | | | | |
| Retaining Wall P2-A CH 500- 650 | | | | | | | | | | | Retaining Wall P2-A CH 500- 650 | | | | |
| LC11940 | Excavation to formation level (Bay 4 - 15) (Total: 2054m3 - 200m3/day) | P2-Cal.B | 11 | 11 | 20-Mar-17 | 31-Mar-17 | 540 | 0% | -7 | 0 | Excavation to formation level (Bay 4 - 15) (Total: 2054m3 - 200m3/day) | | | | |
| LC11980 | Laying Blinding (Bay 4 - 7) | P2-Cal.B | 10 | 10 | 25-Mar-17 | 06-Apr-17 | 540 | 0% | 38 | 0 | Laying Blinding (Bay 4 - 7) | | | | |
| LC11985 | Laying Blinding (Bay 8 - 11) | P2-Cal.B | 10 | 10 | 07-Apr-17 | 21-Apr-17 | 570 | 0% | 0 | 0 | Laying Blinding (Bay 8 - 11) | | | | |
| LC11990 | Laying Blinding (Bay 12 - 15) | P2-Cal.B | 10 | 10 | 22-Apr-17 | 05-May-17 | 600 | 0% | 0 | 0 | Laying Blinding (Bay 12 - 15) | | | | |
| LC12000 | Construction of RW P2-A Base Slab - Bay 4 (Team C) | P2-Cal.B | 10 | 10 | 07-Apr-17 | 21-Apr-17 | 540 | 0% | 38 | 0 | Construction of RW P2-A Base Slab - Bay 4 (Team C) | | | | |
| LC12020 | Construction of RW P2-A Wall Stem - Bay 4 (Team C) | P2-Cal.B | 10 | 10 | 15-May-17 | 25-May-17 | 523 | 0% | 21 | 0 | Construction of RW P2-A Wall Stem - Bay 4 (Team C) | | | | |
| LC12080 | Construction of RW P2-A Base Slab - Bay 6 (Team D) | P2-Cal.B | 10 | 10 | 07-Apr-17 | 21-Apr-17 | 540 | 0% | 38 | 0 | Construction of RW P2-A Base Slab - Bay 6 (Team D) | | | | |
| LC12100 | Construction of RW P2-A Wall Stem - Bay 6 (Team D) | P2-Cal.B | 10 | 10 | 15-May-17 | 25-May-17 | 523 | 0% | 21 | 0 | Construction of RW P2-A Wall Stem - Bay 6 (Team D) | | | | |
| P2 Road | | | | | | | | | | | P2 Road | | | | |
| P2 CH 318 - 375 | | | | | | | | | | | P2 CH 318 - 375 | | | | |
| TTA Stage 2 - TTA for Temp Road Construction at P2 CH375 - 399 | | | | | | | | | | | TTA Stage 2 - TTA for Temp Road Construction at P2 CH375 - 399 | | | | |
| LC12680 | Construction of temporary road base | P2-Cal.B | 14 | 3 | 10-Feb-17 A | 28-Feb-17 | 86 | 78.57% | 96 | 0 | Construction of temporary road base | | | | |
| LC12682 | Construction of temporary road pavement | P2-Cal.B | 14 | 14 | 01-Mar-17 | 16-Mar-17 | 86 | 0% | 0 | 0 | Construction of temporary road pavement | | | | |
| LC12684 | Construction of temporary road furniture | P2-Cal.B | 7 | 7 | 17-Mar-17 | 24-Mar-17 | 86 | 0% | 0 | 0 | Construction of temporary road furniture | | | | |
| LC12700 | Erection of temporary road lighting | P2-Cal.B | 5 | 5 | 25-Mar-17 | 30-Mar-17 | 86 | 0% | 75 | 0 | Erection of temporary road lighting | | | | |
| LC12720 | Installation of temporary barrier and road marking | P2-Cal.B | 5 | 5 | 31-Mar-17 | 06-Apr-17 | 86 | 0% | 75 | 0 | Installation of temporary barrier and road marking | | | | |
| LC12740 | Implementation of TTA at Tong Yin Street for Temp Road Construction | P2-Cal.B | 10 | 10 | 07-Apr-17 | 21-Apr-17 | 86 | 0% | 75 | 0 | Implementation of TTA at Tong Yin Street for Temp Road Construction | | | | |
| LC12760 | Remove road lighting and street furnitures | P2-Cal.B | 5 | 5 | 22-Apr-17 | 27-Apr-17 | 86 | 0% | 75 | 0 | Remove road lighting and street furnitures | | | | |
| LC12780 | Road Pavement Demolition at Tong Yin Street | P2-Cal.B | 5 | 5 | 28-Apr-17 | 05-May-17 | 86 | 0% | 75 | 0 | Road Pavement Demolition at Tong Yin Street | | | | |
| Ground Investigation | | | | | | | | | | | Ground Investigation | | | | |
| LC12849 | UU Detection (After Road Diversion at TTA - Stage 2) | P2-Cal.B | 4 | 4 | 06-May-17 | 10-May-17 | 86 | 0% | 0 | 0 | UU Detection (After Road Diversion at TTA - Stage 2) | | | | |
| LC12850 | Trial Pit | P2-Cal.B | 4 | 4 | 11-May-17 | 15-May-17 | 86 | 0% | 0 | 0 | Trial Pit | | | | |
| LC12851 | Predrilling (LPDH-017) (Rig A) | P2-Cal.B | 4 | 4 | 16-May-17 | 19-May-17 | 90 | 0% | 0 | 0 | Predrilling (LPDH-017) (Rig A) | | | | |
| LC12852 | Predrilling (LPDH-021) (Rig B) | P2-Cal.B | 4 | 4 | 16-May-17 | 19-May-17 | 90 | 0% | 0 | 0 | Predrilling (LPDH-021) (Rig B) | | | | |
| LC12853 | Predrilling (LPDH-022) (Rig C) | P2-Cal.B | 4 | 4 | 16-May-17 | 19-May-17 | 90 | 0% | 0 | 0 | Predrilling (LPDH-022) (Rig C) | | | | |
| LC12854 | Predrilling (LPDH-023) (Rig D) | P2-Cal.B | 4 | 4 | 16-May-17 | 19-May-17 | 86 | 0% | 0 | 0 | Predrilling (LPDH-023) (Rig D) | | | | |
| Foundation | | | | | | | | | | | Foundation | | | | |
| LC12869 | Installation of socketed H-Pile (C11) (Rig B) | P2-Cal.B | 5 | 2 | 13-Feb-17 A | 21-Feb-17 | 231 | 60% | 0 | 0 | Installation of socketed H-Pile (C11) (Rig B) | | | | |
| LC12870 | Installation of socketed H-Pile (D21) (Rig B) | P2-Cal.B | 5 | 2 | 18-Feb-17 A | 23-Feb-17 | 231 | 60% | 0 | 0 | Installation of socketed H-Pile (D21) (Rig B) | | | | |
| P2 CH 399 - 500 | | | | | | | | | | | P2 CH 399 - 500 | | | | |
| ELS | | | | | | | | | | | ELS | | | | |
| LC14650 | Construction of Prebored ~ Rig 1 Stage 1 at CH 481.5 to 501.5 and end wall (54 hole for 3 hole/days) | P2-Cal.B | 16 | 9 | 10-Feb-17 A | 11-Mar-17 | 372 | 43.75% | 0 | 0 | Construction of Prebored ~ Rig 1 Stage 1 at CH 481.5 to 501.5 and end wall (54 hole for 3 hole/days) | | | | |
| LC14651 | Construction of Prebored ~ Rig 1 Stage 2 at CH 446.5 to 481.5 (54 hole for 3 hole/days) | P2-Cal.B | 16 | 16 | 13-Mar-17 | 30-Mar-17 | 372 | 0% | 0 | 0 | Construction of Prebored ~ Rig 1 Stage 2 at CH 446.5 to 481.5 (54 hole for 3 hole/days) | | | | |
| LC14652 | Construction of Prebored ~ Rig 1 Stage 3 at CH 411.5 to 446.5 (54 hole for 3 hole/days) | P2-Cal.B | 16 | 16 | 31-Mar-17 | 22-Apr-17 | 372 | 0% | 0 | 0 | Construction of Prebored ~ Rig 1 Stage 3 at CH 411.5 to 446.5 (54 hole for 3 hole/days) | | | | |
| LC14653 | Construction of Prebored ~ Rig 1 Stage 4 at CH 409.5 to 411.5 and end wall (54 hole for 3 hole/days) | P2-Cal.B | 16 | 16 | 24-Apr-17 | 13-May-17 | 372 | 0% | 0 | 0 | Construction of Prebored ~ Rig 1 Stage 4 at CH 409.5 to 411.5 and end wall (54 hole for 3 hole/days) | | | | |
| LC14655 | Construction of Prebored ~ Rig 2 Stage 1 at CH 481.5 to 501.5 and end wall (54 hole for 3 hole/days) | P2-Cal.B | 16 | 16 | 04-Mar-17 | 22-Mar-17 | 379 | 0% | 0 | 0 | Construction of Prebored ~ Rig 2 Stage 1 at CH 481.5 to 501.5 and end wall (54 hole for 3 hole/days) | | | | |
| LC14656 | Construction of Prebored ~ Rig 2 Stage 2 at CH 446.5 to 481.5 (54 hole for 3 hole/days) | P2-Cal.B | 16 | 16 | 23-Mar-17 | 11-Apr-17 | 379 | 0% | 0 | 0 | Construction of Prebored ~ Rig 2 Stage 2 at CH 446.5 to 481.5 (54 hole for 3 hole/days) | | | | |

— Primary Baseline — Critical Remaining Work
■ Actual Work ◆ Milestone
— Remaining Work ▶ Summary

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works

3 Months Rolling Programme
 (20 Feb 2017)
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| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 | TRA | 2017 | | | | | | | | | |
|--|---|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------|-----|------|-----|-----|-----|-----|--|--|--|--|--|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun | | | | | |
| LC14657 | Construction of Prebored ~ Rig 2 Stage 3 at CH 411.5 to 466.5 (54 hole for 3 hole/days) | P2-Cal.B | 16 | 16 | 12-Apr-17 | 05-May-17 | 379 | 0% | | 0 | | | | | | | | | | |
| LC14660 | Installation of sheetpile wall (48m) ~ Stage 1 at CH 491.5 to 501.5 and end wall | P2-Cal.B | 25 | 25 | 15-May-17 | 13-Jun-17 | 372 | 0% | 209 | 10 | | | | | | | | | | |
| SR2 | | P2-Cal.B | 167 | 75 | 16-Feb-17 A | 31-May-17 | 789 | | | 115 | | | | | | | | | | |
| Retaining Wall SR2-A & B CH250 - 310 | | P2-Cal.B | 167 | 75 | 16-Feb-17 A | 31-May-17 | 789 | | | 115 | | | | | | | | | | |
| LC16585 | Excavation to formation level (SR2-A Bay 1 - 6) (Total: 905m3 - 200m3/day) | P2-Cal.B | 10 | 10 | 25-Feb-17 | 08-Mar-17 | 729 | 0% | | 0 | | | | | | | | | | |
| LC16620 | Laying Blinding (SR2-A) | P2-Cal.B | 10 | 10 | 03-Mar-17 | 14-Mar-17 | 729 | 0% | 55 | 0 | | | | | | | | | | |
| LC16680 | Construction of Base Slab (SR2-A Bay 2) (Team E) | P2-Cal.B | 10 | 10 | 15-Mar-17 | 25-Mar-17 | 729 | 0% | 75 | 0 | | | | | | | | | | |
| LC16700 | Construction of Wall Stem (SR2-A Bay 2) (Team E) | P2-Cal.B | 10 | 10 | 27-Mar-17 | 07-Apr-17 | 729 | 0% | 75 | 0 | | | | | | | | | | |
| LC16720 | Construction of Base Slab (SR2-A Bay 3) (Team E) | P2-Cal.B | 10 | 10 | 08-Apr-17 | 22-Apr-17 | 729 | 0% | 75 | 0 | | | | | | | | | | |
| LC16740 | Construction of Wall Stem (SR2-A Bay 3) (Team E) | P2-Cal.B | 10 | 10 | 24-Apr-17 | 06-May-17 | 729 | 0% | 75 | 0 | | | | | | | | | | |
| LC16760 | Construction of Base Slab (SR2-A Bay 4) (Team E) | P2-Cal.B | 10 | 10 | 08-May-17 | 18-May-17 | 729 | 0% | 75 | 0 | | | | | | | | | | |
| LC16780 | Construction of Wall Stem (SR2-A Bay 4) (Team E) | P2-Cal.B | 10 | 10 | 19-May-17 | 31-May-17 | 729 | 0% | 75 | 0 | | | | | | | | | | |
| LC16880 | Construction of Base Slab (SR2-B Bay 1) (Team F) | P2-Cal.B | 10 | 10 | 09-Mar-17 | 20-Mar-17 | 834 | 0% | 60 | 0 | | | | | | | | | | |
| LC16900 | Construction of Wall Stem (SR2-B Bay 1) (Team F) | P2-Cal.B | 10 | 10 | 15-May-17 | 25-May-17 | 793 | 0% | 19 | 0 | | | | | | | | | | |
| LC16940 | Construction of Wall Stem (SR2-B Bay 2) (Team F) | P2-Cal.B | 10 | 2 | 16-Feb-17 A | 27-Feb-17 | 834 | 80% | 108 | 0 | | | | | | | | | | |
| LC16980 | Construction of Wall Stem (SR2-B Bay 3) (Team F) | P2-Cal.B | 10 | 2 | 16-Feb-17 A | 01-Mar-17 | 834 | 80% | 126 | 0 | | | | | | | | | | |
| LC17020 | Construction of Wall Stem (SR2-B Bay 4) (Team F) | P2-Cal.B | 10 | 2 | 16-Feb-17 A | 03-Mar-17 | 834 | 80% | 144 | 0 | | | | | | | | | | |
| LC17060 | Construction of Wall Stem (SR2-B Bay 5) (Team F) | P2-Cal.B | 10 | 2 | 16-Feb-17 A | 06-Mar-17 | 834 | 80% | 162 | 0 | | | | | | | | | | |
| LC17100 | Construction of Wall Stem (SR2-B Bay 6) (Team F) | P2-Cal.B | 10 | 2 | 16-Feb-17 A | 08-Mar-17 | 834 | 80% | 180 | 0 | | | | | | | | | | |
| SR2 CH 182 - 250 | | P2-Cal.B | 7 | 7 | 15-May-17 | 22-May-17 | 548 | | | | | | | | | | | | | |
| ELS | | P2-Cal.B | 7 | 7 | 15-May-17 | 22-May-17 | 548 | | | | | | | | | | | | | |
| LC17145 | Plant mobilization and set up for prebored works | P2-Cal.B | 7 | 7 | 15-May-17 | 22-May-17 | 548 | 0% | | 0 | | | | | | | | | | |
| Portion IV & VII | | P2-Cal.B | 60 | 60 | 16-Mar-17 | 01-Jun-17 | -11 | | | -38 | | | | | | | | | | |
| LC17660 | ELS along Existing EVA to BMCPC for Dia. 2100 Drain Pipe ~ Stage 1 | P2-Cal.B | 12 | 12 | 16-Mar-17 | 29-Mar-17 | -11 | 0% | 10 | 0 | | | | | | | | | | |
| LC17665 | ELS along Existing EVA to BMCPC for Dia. 2100 Drain Pipe ~ Stage 2 | P2-Cal.B | 12 | 12 | 30-Mar-17 | 13-Apr-17 | -11 | 0% | 0 | 0 | | | | | | | | | | |
| LC17666 | ELS along Existing EVA to BMCPC for Dia. 2100 Drain Pipe ~ Stage 3 | P2-Cal.B | 12 | 12 | 18-Apr-17 | 02-May-17 | -11 | 0% | 0 | 0 | | | | | | | | | | |
| LC17667 | ELS along Existing EVA to BMCPC for Dia. 2100 Drain Pipe ~ Stage 4 | P2-Cal.B | 12 | 12 | 04-May-17 | 17-May-17 | -11 | 0% | 0 | 0 | | | | | | | | | | |
| LC17668 | ELS along Existing EVA to BMCPC for Dia. 2100 Drain Pipe ~ Stage 5 | P2-Cal.B | 12 | 12 | 18-May-17 | 01-Jun-17 | -11 | 0% | 0 | 0 | | | | | | | | | | |
| New Reclaimed Section | | P2-Cal.B | 179 | 79 | 19-Dec-16 A | 29-May-17 | 282 | | | 12 | | | | | | | | | | |
| Marine Works | | P2-Cal.B | 92 | 79 | 19-Dec-16 A | 29-May-17 | 236 | | | 12 | | | | | | | | | | |
| Initial Works | | P2-Cal.B | 86 | 73 | 19-Dec-16 A | 22-May-17 | -16 | | | -16 | | | | | | | | | | |
| MC10260 | Installation of Silt Curtain (2nd stage Extension to around the Marine Portion) | P2-Cal.B | 14 | 7 | 19-Dec-16 A | 27-Feb-17 | -12 | 50% | -61 | 0 | | | | | | | | | | |
| Steel Cofferdam and Water Gate | | P2-Cal.B | 66 | 73 | 20-Dec-16 A | 22-May-17 | -16 | | | -16 | | | | | | | | | | |
| MC10280 | Installation of Temporary Steel Cofferdam (Phase 1 - 236m) | P2-Cal.B | 24 | 7 | 20-Dec-16 A | 28-Feb-17 | -12 | 70% | -12 | 0 | | | | | | | | | | |
| MC10300 | Installation of Temporary Steel Cofferdam (Phase 2 - 236m) | P2-Cal.B | 24 | 24 | 28-Feb-17 | 28-Mar-17 | -12 | 0% | -12 | 0 | | | | | | | | | | |
| MC10310 | Installation of Temporary Steel Cofferdam (Phase 3 - 24 nos type 2A Steel Box) | P2-Cal.B | 12 | 12 | 28-Mar-17 | 12-Apr-17 | -12 | 0% | 0 | 0 | | | | | | | | | | |
| MC10320 | Installation of Temporary Steel Cofferdam (Phase 4 - 20 nos type 2B, 2C and 2D Steel Box) | P2-Cal.B | 12 | 12 | 12-Apr-17 | 29-Apr-17 | -12 | 0% | -12 | 0 | | | | | | | | | | |
| MC10340 | Foundation Preparation of Water Gate System | P2-Cal.B | 14 | 14 | 18-Apr-17 | 05-May-17 | -16 | 0% | -16 | 0 | | | | | | | | | | |
| MC10360 | Installation of Water Gate System | P2-Cal.B | 7 | 7 | 06-May-17 | 13-May-17 | -16 | 0% | -16 | 0 | | | | | | | | | | |
| MC10380 | Installation of Pumping System (incl. pipeline) | P2-Cal.B | 7 | 7 | 15-May-17 | 22-May-17 | -16 | 0% | -16 | 0 | | | | | | | | | | |
| Dredging Work | | P2-Cal.B | 15 | 15 | 05-May-17 | 22-May-17 | -9 | | | -19 | | | | | | | | | | |
| MC10500 | Erection of temporary support | P2-Cal.B | 15 | 15 | 05-May-17 | 22-May-17 | -9 | 0% | -19 | 0 | | | | | | | | | | |
| Full-scale Treatment of Cement S/S of Marine Sediment | | P2-Cal.B | 21 | 21 | 05-May-17 | 29-May-17 | 236 | | | 12 | | | | | | | | | | |
| MC14100 | Set up Cement S/S Treatment Facility | P2-Cal.B | 21 | 21 | 05-May-17 | 29-May-17 | 236 | 0% | 12 | 0 | | | | | | | | | | |
| Land Works | | P2-Cal.B | 166 | 7 | 15-Feb-17 A | 03-Mar-17 | 350 | | | | | | | | | | | | | |
| Road P2 Underpass | | P2-Cal.B | 166 | 7 | 15-Feb-17 A | 03-Mar-17 | 350 | | | | | | | | | | | | | |
| Underpass | | P2-Cal.B | 166 | 7 | 15-Feb-17 A | 03-Mar-17 | 350 | | | | | | | | | | | | | |

█ Primary Baseline █ Critical Remaining Work
█ Actual Work ◆ Milestone
█ Remaining Work ▬ Summary

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works

3 Months Rolling Programme
 (20 Feb 2017)
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| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

| Activity ID | Activity Name | Calendar | Original Duration | Remaining Duration | Start | Finish | Total Float | Activity % Complete | Variance - BL1 | TRA | 2017 | | | | |
|---|---|----------|-------------------|--------------------|-------------|-----------|-------------|---------------------|----------------|-----|---|-----|-----|-----|-----|
| | | | | | | | | | | | Feb | Mar | Apr | May | Jun |
| Underpass P2 Ch 216 - 292 & P2 Ch 292 - 318 | | P2-Cal.B | 166 | 7 | 15-Feb-17 A | 03-Mar-17 | 350 | | | | Underpass P2 Ch 216 - 292 & P2 Ch 292 - 318 | | | | |
| Foundation | | P2-Cal.B | 166 | 7 | 15-Feb-17 A | 03-Mar-17 | 350 | | | | Foundation | | | | |
| LC17785 | Installation of socketed H-Pile (C12) (Rig B) | P2-Cal.B | 5 | 2 | 15-Feb-17 A | 25-Feb-17 | 350 | 60% | | 0 | ■ Installation of socketed H-Pile (C12) (Rig B) | | | | |
| LC17786 | Installation of socketed H-Pile (D22) (Rig B) | P2-Cal.B | 5 | 2 | 17-Feb-17 A | 25-Feb-17 | 350 | 60% | | 0 | ■ Installation of socketed H-Pile (D22) (Rig B) | | | | |
| LC17787 | Installation of socketed H-Pile (C13) (Rig B) | P2-Cal.B | 5 | 5 | 27-Feb-17 | 03-Mar-17 | 350 | 0% | | 0 | ■ Installation of socketed H-Pile (C13) (Rig B) | | | | |
| LC17788 | Installation of socketed H-Pile (D23) (Rig B) | P2-Cal.B | 5 | 5 | 27-Feb-17 | 03-Mar-17 | 350 | 0% | | 0 | ■ Installation of socketed H-Pile (D23) (Rig B) | | | | |
| Section 4 of the Works - Preservation and Protection of Existing Trees | | P2-Cal.A | 1424 | 1286 | 08-Oct-16 A | 28-Aug-20 | 30 | | | 23 | | | | | |
| LC25260 | Preservation and Protection of Existing Trees | P2-Cal.A | 1424 | 1286 | 08-Oct-16 A | 28-Aug-20 | 30 | 9.69% | | 23 | | | | | |
| Section 5 of the Works - Landscaping Works | | P2-Cal.B | 180 | 120 | 08-Dec-16 A | 18-Jul-17 | 9 | | | 3 | | | | | |
| LC25320 | Tree Transplanting Preparation Works | P2-Cal.B | 180 | 120 | 08-Dec-16 A | 18-Jul-17 | 9 | 33.33% | | 3 | | | | | |

- Primary Baseline
- Critical Remaining Work
- Actual Work
- Milestone
- Remaining Work
- Summary

NE/2015/02 Tseung Kwan O - Lam Tin Tunnel-Road P2 and Associated Works

3 Months Rolling Programme
(20 Feb 2017)
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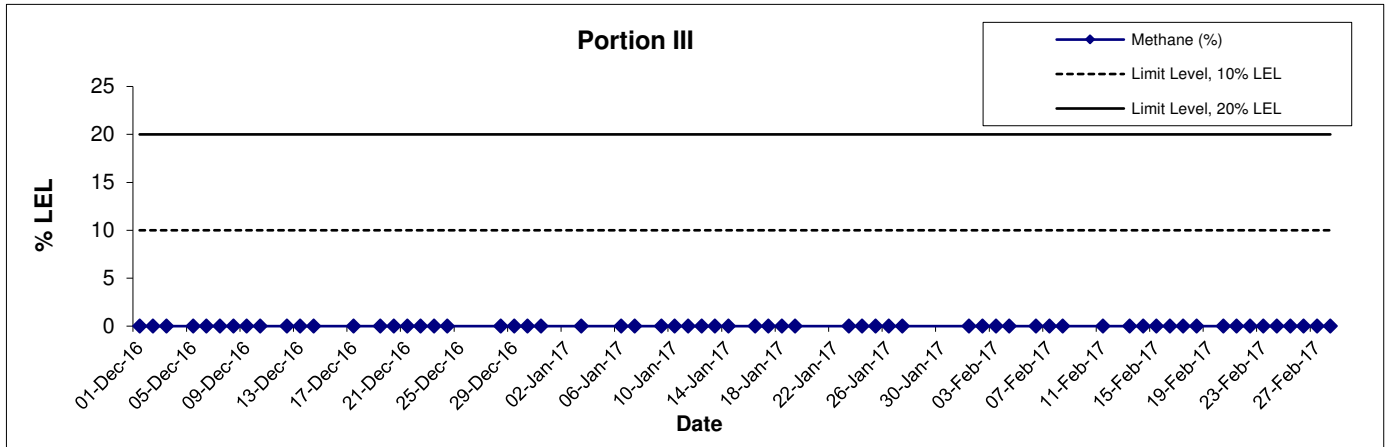
| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 20-Feb-17 | | | |

**APPENDIX R
RECORD OF LANDFILL GAS
MONITORING BY CONTRACTOR**

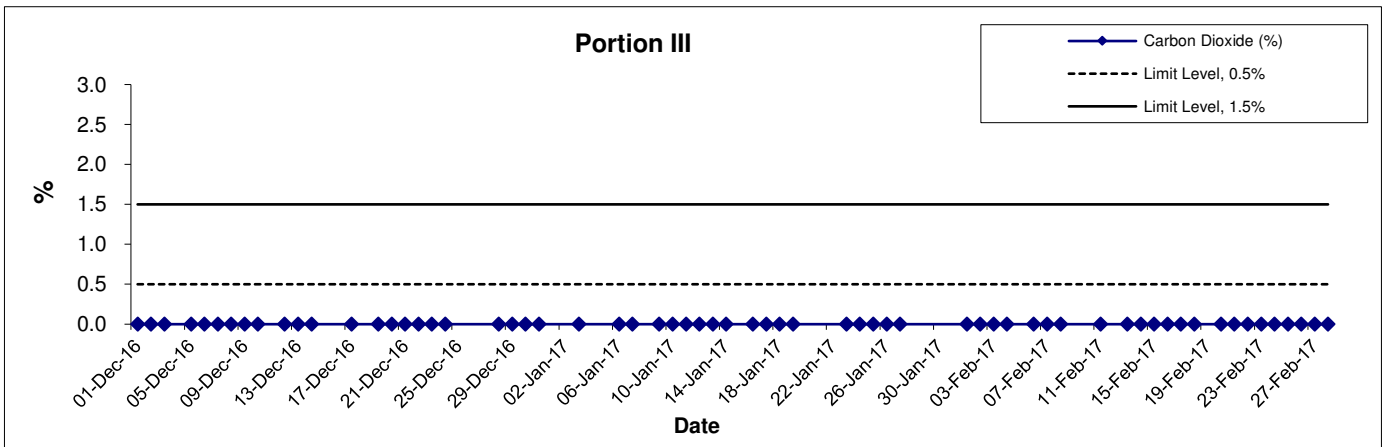
APPENDIX R - RECORD OF LANDFILL GAS MONITORING BY THE CONTRACTOR

| Location | Date of Measurement | Sampling time | Weather Condition | Temperature (°C) | Methane (%) | Carbon dioxide (%) | Oxygen (%) | |
|-----------------|----------------------------|----------------------|--------------------------|-------------------------|--------------------|---------------------------|-------------------|------|
| Portion III | 1-Feb-17 | 8:28 AM | Sunny | 21 | 0 | 0 | 20.9 | |
| | 2-Feb-17 | 8:27 AM | Cloudy | 20 | 0 | 0 | 20.9 | |
| | 3-Feb-17 | 8:31 AM | Sunny | 24 | 0 | 0 | 20.9 | |
| | 4-Feb-17 | 8:25 AM | Cloudy | 23 | 0 | 0 | 20.9 | |
| | 6-Feb-17 | 8:28 AM | Sunny | 22 | 0 | 0 | 20.9 | |
| | 7-Feb-17 | 8:30 AM | Cloudy | 23 | 0 | 0 | 20.9 | |
| | 8-Feb-17 | 8:29 AM | Cloudy | 25 | 0 | 0 | 20.9 | |
| | 9-Feb-17 | 8:31 AM | Sunny | 22 | 0 | 0 | 20.9 | |
| | 10-Feb-17 | 8:28 AM | Cloudy | 20 | 0 | 0 | 20.9 | |
| | 11-Feb-17 | 8:32 AM | Cloudy | 21 | 0 | 0 | 20.9 | |
| | 13-Feb-17 | 8:30 AM | Sunny | 19 | 0 | 0 | 20.9 | |
| | 14-Feb-17 | 8:30 AM | Cloudy | 20 | 0 | 0 | 20.9 | |
| | 15-Feb-17 | 8:28 AM | Sunny | 22 | 0 | 0 | 20.9 | |
| | 16-Feb-17 | 7:30 AM | Sunny | 22 | 0 | 0 | 20.9 | |
| | 17-Feb-17 | 7:28 AM | Cloudy | 21 | 0 | 0 | 20.9 | |
| | 18-Feb-17 | 7:30 AM | Sunny | 20 | 0 | 0 | 20.9 | |
| | 20-Feb-17 | 7:29 AM | Cloudy | 20 | 0 | 0 | 20.9 | |
| | 21-Feb-17 | 7:29 AM | Cloudy | 17 | 0 | 0 | 20.9 | |
| | 22-Feb-17 | 7:30 AM | Sunny | 20 | 0 | 0 | 20.9 | |
| | 23-Feb-17 | 7:28 AM | Sunny | 22 | 0 | 0 | 20.9 | |
| | 24-Feb-17 | 7:30 AM | Cloudy | 21 | 0 | 0 | 20.9 | |
| | 25-Feb-17 | 7:28 AM | Cloudy | 20 | 0 | 0 | 20.9 | |
| | | 26-Feb-17 | 7:30 AM | Sunny | 21 | 0 | 0 | 20.9 |
| | | 27-Feb-17 | 7:28 AM | Cloudy | 19 | 0 | 0 | 20.9 |
| | | 28-Feb-17 | 7:29 AM | Sunny | 18 | 0 | 0 | 20.9 |

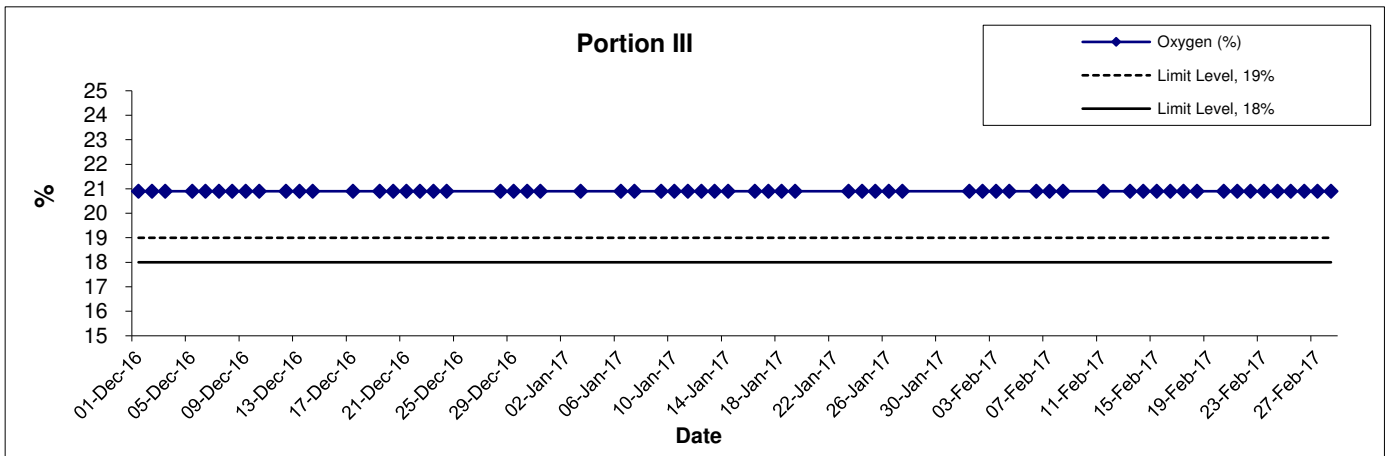
Methane



Carbon Dioxide



Oxygen



| | | | | |
|--|---|--------|-------------|-----------------|
| Title | Agreement No. CE 59/2015 (EP) | Scale | Project | CINOTECH |
| | Environmental Team for Tseung Kwan O - Lam Tin Tunnel – Design and Construction | N.T.S | No. MA16034 | |
| Graphical Presentation of Landfill Gas Measurement | Date | Feb 17 | Appendix | |