

PCCW Global[®]

Pacific Light Cable Network (PLCN) - Deep Water Bay (EP-539/2017)

Phase 2 – 3rd Weekly Water Quality Impact Monitoring Report

Aug 2018

Environmental Resources Management

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Phase 2 – 3rd Weekly Water Quality Impact Monitoring Report

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Client: PCCW Global (HK) Limited		GMS No: 0448409			
Summary: This report presents the monitoring requirements, methodologies and results of the impact water quality monitoring in accordance with the Project Profile (PP-550/2017).		Date: 7 Aug 2018			
		Approved by : 			
		Terence Fong Partner			
0	Phase 2 – 3 rd Weekly Water Quality Impact Monitoring Report	NN	FZino	TFONG	7 Aug 18
Revision	Description	By	Checked	Approved	Date
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Pacific Light Cable Network (PLCN) – Deep Water Bay Environmental Certification Sheet EP-539/2017

Reference Document/Plan

Document/ Plan to be Certified/ Verified:	Phase 2 – 3 rd Weekly Water Quality Impact Monitoring Report
Date of Report:	7 Aug 2018
Date prepared by ET:	ERM-Hong Kong Ltd
Date received by IEC:	Ecosystem Ltd

Reference EM&A Manual/ EP Requirement

EM&A Manual Requirement:	Section 2
Content:	Water Quality Monitoring
<p>G.2.3.1 "The impact monitoring works shall cover all monitoring stations within the same area (Area A or Area B as shown in Figure G1, G2a and G2b) as the works being undertaken for the cable installation/ repair operation. ..."</p> <p>G2.5 The reports to be provided shall include:</p> <ul style="list-style-type: none"> • Baseline Monitoring Report; • Weekly Impact Monitoring Reports; and • Post Project Monitoring Report. <p>...The Impact Monitoring Report will be provided weekly within three days after the relevant monitoring data are collected or become available during the cable installation/ repair operation work.</p>	
EP Condition:	Conditions No. 3.2 – 3.3
Content:	Water Quality Monitoring
3.2	<p>Samples, measurements and necessary remedial actions shall be taken in accordance with the EM&A requirements described in the Project Profile (Register No. PP-550/2017) by:</p> <ul style="list-style-type: none"> (a) conducting baseline environmental monitoring; (b) conducting impact monitoring; and (c) carrying out remedial actions in accordance to the EM&A requirements as described in the Project Profile (Register No. PP-550/2017), or as agreed by the Director, in case where specified criteria in the EM&A requirements are exceeded.
3.3	<p>Submit to the Director three hard copies and one electronic copy of the following, as defined in the EM&A requirements described in the Project Profile (Register No. PP-550/2017):</p> <ul style="list-style-type: none"> (a) Baseline Monitoring Report on water quality no later than 2 week before the commencement of cable installation works; (b) Weekly EM&A Report no later than 3 days after the relevant monitoring data are collected or become available during the cable installation works; and (c) Final EM&A Report within one month after completion of the construction works.

ET Certification

I hereby certify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-539/2017.



Terence Fong, Environmental
Team Leader:

Date: 7 Aug 2018

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-539/2017.



Dr Vincent Lai, Independent
Environmental Checker:

Date:

7/8/2018

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EXECUTIVE SUMMARY

The cable installation works for the **Pacific Light Cable Network – Deep Water Bay** (the ‘Project’) are scheduled to be carried out in phases:

- **Phase 1** Land Cable Installation and Shore-End Cable Installation (**Zone A only**) – completed on 4 April.
- **Phase 2** Submarine Cable Installation (**Zones A and B**) – currently ongoing.

Phase 2 of the Project commenced within Zone A on 10 July 2018, proceeded beyond Zone A on 11 July 2018 and after down time for adverse weather between 13-19 July, re-started works and proceeded into Zone B on 20 July. Installation work then stopped on 21 July due to equipment problems and resumed on 24 July. Jetting works proceeded beyond Zone B on 25 July and remaining works within the area east of Zone B completed on 27 July.

This is the *Phase 2 – 3rd Weekly Water Quality Impact Monitoring Report* presenting the water quality impact monitoring conducted during the period from 24 to 30 July 2018, in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Period

Phase 2 of the Project resumed in Zone B on 24 July and proceeded to the area east of Zone B on 25 July 2018. Installation for the remaining works to the east of Zone B was completed on 27 August. All works were either within Zone B or the area east of Zone B during the reporting period.

Water Quality

Daily monitoring events were conducted for all work days within Zone B between 24 to 30 July 2018, ie on 24 to 25 July 2018. Monitoring at all designated monitoring stations was performed on schedule.

Recorded levels of dissolved oxygen (DO) were frequently recorded as being below the corresponding Action and Limit Levels, but upon review this was deemed to be due to the presence of naturally occurring marine water stratification and natural fluctuations. Fluctuation in suspended solids (SS) levels were observed during some monitoring days, which upon careful review were also considered to be due to natural seasonal variations. The findings for DO are supported by the frequently recorded low DO levels at control stations. Recorded levels of SS at monitoring stations further away, were higher than those closer to the cable laying work front (e.g. gradient stations). Both of these results suggest the recorded exceedances were a result of natural variation of baseline conditions and not contributed to by project works.

Environmental Non-conformance

No non-conformance was recorded; results of detailed investigations indicated none of the exceedances recorded were attributed to the Project construction works:

- Two Notification of Exceedances (NOEs) reports, with detailed investigation, were issued to EPD and AFCD during the reporting period, concerning daily exceedances of Action and Limit Levels for both bottom dissolved oxygen, surface and middle dissolved oxygen and suspended solids.

The Contractors have been notified by the Environmental Team (ET) about the recent exceedances and asked to ensure all necessary procedures are followed to avoid any potential adverse Project impacts on the water environment.

No complaints and summons/prosecution was received during the reporting week.

Future Key Issues

No future key issues are identified.

As the cable installation works within Zone B has been completed, there will be no more water quality impact monitoring for cable installation. Post-project monitoring will be conducted and the report provided within one month after completion of the Project marine works.

ERM-Hong Kong, Limited (ERM) was appointed by PCCWG as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the Pacific Light Cable Networks (PLCN) – Deep Water Bay Project (thereinafter called the ‘Project’).

1.1 PURPOSE OF THE REPORT

This is the 3rd Weekly Water Quality Impact Monitoring Report for Phase 2 of the Project (Submarine Cable Installation), and summarises the water quality (WQ) impact monitoring results during the reporting period from 24 to 30 July 2018.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : Introduction

Details the background, purpose and structure of the report.

Section 2 : Project Information

Summarises background and scope of the project, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3 : Water Quality Monitoring Requirements

Summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, and Event / Action Plans.

Section 4 : Monitoring Results

Summarises the monitoring results obtained in the reporting period.

Section 5 : Environmental Non-conformance

Summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

Section 6 : Future Key Issues

Summarises the monitoring schedule for the next week.

Section 7 : Conclusions

Presents the key findings of the impact monitoring results.

2.1

BACKGROUND

In order to help meet the tremendous telecommunication services requirements between Asia and North America, the **PLCN Consortium** has decided to build a submarine telecommunication cable system, which will be approximately 12,800 km in length, connecting Hong Kong and the United States. The cable will connect to Deep Water Bay (DWB) within the HKSAR. **PCCW Global (HK) Limited (PCCWG)** is providing the cable landing point and the associated cable landing service in Hong Kong for the PLCN Consortium.

The proposed cable will land at an existing Beach Man Hole location at Deep Water Bay (DWB) in Hong Kong and the full route of the proposed PLCN submarine cable system is depicted in *Figure 1.1*. It should be noted that DWB is currently the landing site for a number of submarine cables.

The Project Profile (PP-550/2017) which includes an assessment of the potential environmental impacts associated with the installation and operation of the submarine telecommunications cable system within HKSAR (including connection to land at DWB) was prepared and submitted to the Environmental Protection Department (EPD) under section 5.(1) (b) and 5.(11) of the *Environmental Impact Assessment Ordinance* (EIAO) for the application for Permission to apply directly for Environmental Permit (EP). On 1 June 2017, EPD issued a letter to PCCWG permitting direct application for an environmental permit and following an application, EPD subsequently issued an Environmental Permit (EP-539/2017) on 10 July 2017.

Pursuant to *Condition 3.1* of the EP, an environmental monitoring and audit (EM&A) programme, as set out in the Project Profile is required for this Project. As per *Condition 3.2* of the EP regarding Water Quality Monitoring, there is a requirement to conduct water quality baseline monitoring and impact monitoring. The corresponding Action and Limit Levels will be derived from the baseline data.

Cable installation for this Project has been scheduled to be carried out in two phases, with Phase 1 situated in part of Zone A only and Phase 2 covering Zones A and B (as well as the alignment outside both Zone A or Zone B). The phasing of the cable installation works is indicated in the key in *Figures 2.1 to 2.3* and the current schedule and works carried out to date for each Phase is as follows:

- **Phase 1 Land Cable Installation and Shore-End Cable Installation (Zone A only):** Mini shore-end cable installation to Beach Manhole at Deep Water Bay (DWB), involving land trench excavation and shore-end cable installation of the PLCN cable (ie from Beach Manhole out to approximately 650 m from Beach Man Hole) using diver jetting;

- Baseline data were collected prior to the start of Phase 1 cable installation works (between 5th and 9th February 2018) and Action and Limit Levels derived from these data, as presented in the final *Baseline Water Quality Monitoring Report (Zone A)*.
 - Land trenching commenced 6 March 2018. Following issue of Marine Department Notice on 23 March 2018, land trenching completed with LCSD inspection of restored beach area, on 24 March 2018.
 - Near shore marine diver jetting works within silt curtain commenced 24 Mar 2018 and was completed on 4 April.
- **Phase 2 Submarine Cable Installation (Zones A and B):** Installation of PLCN cable from shore-end (ie approximately 650m from Beach Manhole) to HK SAR marine eastern boundary, involving jetting technique and potential diver jetting in specific areas (eg HK Electric Pipeline crossing).
 - Baseline data were collected prior to the start of Phase 2 cable installation works (between 28 May and 2 June 2018) and Action and Limit Levels derived from these data, as presented in the final *Baseline Water Quality Monitoring Report (Zone A and Zone B for Phase 2 Installation)*.
 - Marine installation works using jetting commenced on 10 July 2018 and were suspended on 12 July due to adverse weather, remaining on standby until restart on 20 July. Marine installation works were then suspended again due to equipment problems at the end of the day on 21 July 2018. Marine installation works resumed on 24 July and works within Zone B were completed on 25 July. Marine installation continued outside Zone B and the installation to the east of Zone B was completed on 27 July. The burial machine as well as other equipment were retrieved and demobilized in the remainder of the reporting period.

This report covers the third week of the Project's *Phase 2 Submarine Cable Installation* and refers to the *Baseline Water Quality Monitoring Report (Zone A and Zone B for Phase 2 Installation)* for Action and Limit Levels.

2.2

MARINE CONSTRUCTION WORKS UNDERTAKEN DURING REPORTING WEEK

A summary of the key works undertaken during the reporting week is shown in *Table 2.1*.

Table 2.1 *Summary of Marine Works Undertaken During the Reporting Week*

Date	Works Area	Activity	Cable Barge Approximate Position	Burial Depth
Tue 24 July 2018	Zone B	Jetting and burial of cable, in Zone B.	Start: KP 15.5 End: KP 20.0	Burial depth of 5m
Wed 25 July 2018	Zone B and east of Zone B	Jetting and burial of cable, in Zone B, moving out of Zone B around 1000.	Start: KP 20.0 End: KP 30.0	Burial depth of 5m
Thu 26 July 2018	East of Zone B	Jetting and burial of cable, in at area east of Zone B	Start: KP 30.0 End: KP 36.9	Burial depth of 5m (shallower where crossing pipeline)
Fri 27 July 2018	East of Zone B	Diver inspection, retrieval of burial machine	Start: KP 36.9 End: KP 40.1 Cable installation completed at Eastern HK boundary	Not applicable
Sat 28 July 2018	East of Zone B	Retrieval and demobilization of burial machine continued	Cable installation completed at Eastern HK boundary	Not applicable
Sun 29 July 2018	Not applicable	Demobilization.	As above	Not applicable
Mon 30 July 2018	Not applicable	Not applicable	As above	Not applicable

2.3

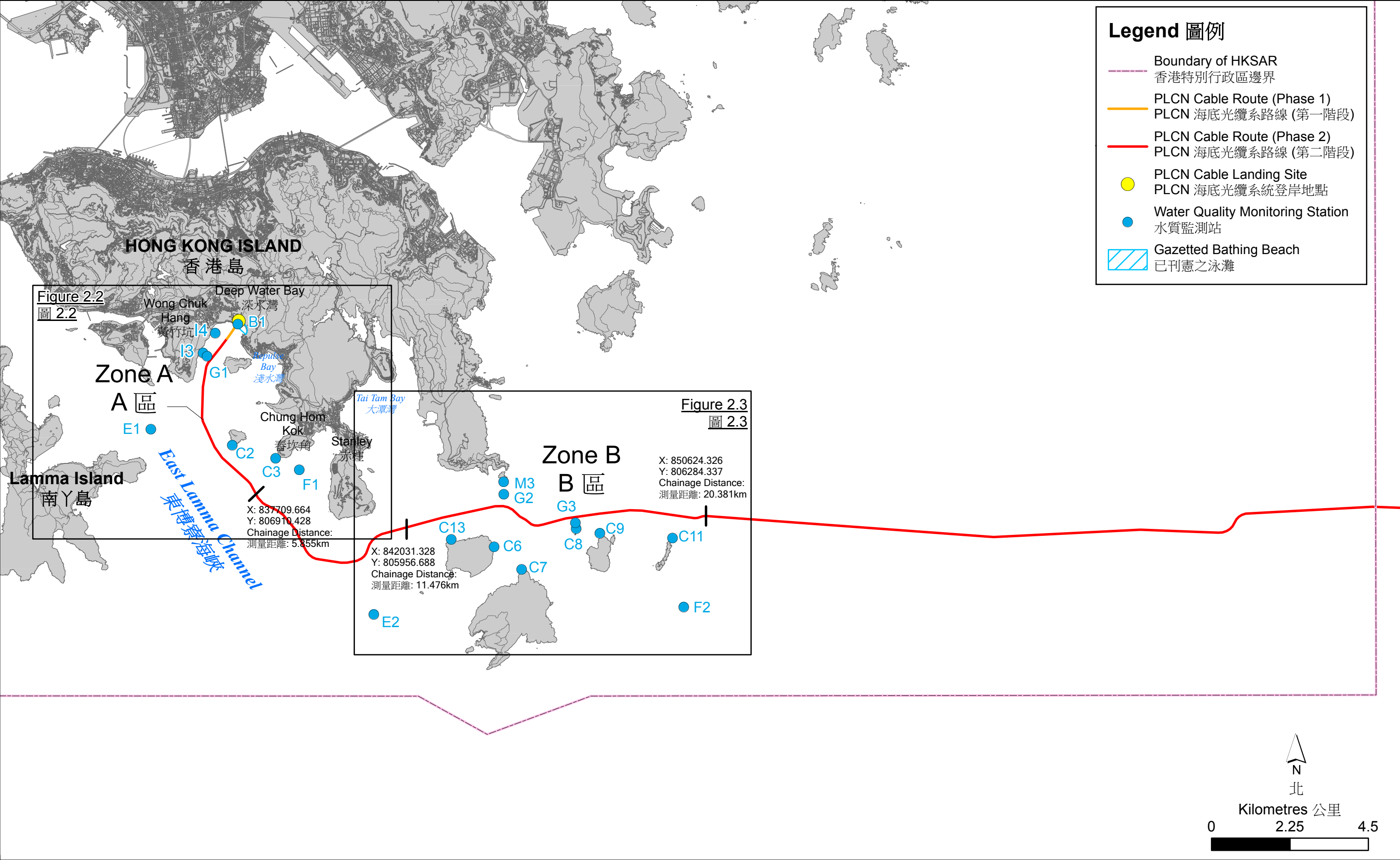
STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the relevant permits, licences, notifications and/or reports on environmental protection for this Project is presented in *Table 2.2*.

Table 2.2 *Summary of Environmental Licensing, Notification, Permit and Reporting Status*

Permit / Licence / Notification / Report	Reference	Validity Period	Remarks
Environmental Permit	(EP-539/2017) Available at http://www.epd.gov.hk/eia/english/alpha/asp_d_717.html	Throughout construction & operation period	Granted on 10 July 2017
EM&A Manual	(PP-550/2017) (as part of the Project Profile – see above)	Throughout construction & operation period	Approved by EPD on 1 June 2017
Baseline Water Quality Monitoring Report (Zone A)	Available at http://www.epd.gov.hk/eia/english/register/ae_p/ep5392017_content.html	Throughout construction period for Phase 1 works in Zone A	Approved by EPD on 15 March 2018

Permit / Licence / Notification / Report	Reference	Validity Period	Remarks
<i>1st Weekly WQ Impact Monitoring Report</i>	Available at http://www.epd.gov.hk/eia/english/register/ae/p/ep5392017_content.html	Throughout first week for Phase 1 works in Zone A	Final Submission to EPD on 18 Apr 2018
<i>2nd Weekly WQ Impact Monitoring Report</i>	Available at http://www.epd.gov.hk/eia/english/register/ae/p/ep5392017_content.html	Throughout second week for Phase 1 works in Zone A	Final Submission to EPD on 20 Apr 2018
<i>Phase 1- Post Project Monitoring Report</i>	Available at http://www.epd.gov.hk/eia/english/register/ae/p/ep5392017_content.html	Following construction period for Phase 1 works in Zone A	Final Submission to EPD on 15 May 2018
<i>Baseline Water Quality Monitoring Report (Zone A and Zone B for Phase 2 Installation)</i>	Available at http://www.epd.gov.hk/eia/english/register/ae/p/ep5392017_content.html	Throughout construction period for Phase 2 works in Zone A and Zone B	Final Submission to EPD on 29 June 2018
<i>1st Weekly WQ Impact Monitoring Report</i>	Available at http://www.epd.gov.hk/eia/english/register/ae/p/ep5392017_content.html	Throughout first week of construction period for Phase 2	Submission to EPD on 25 July 2018
<i>2nd Weekly WQ Impact Monitoring Report</i>	Available at http://www.epd.gov.hk/eia/english/register/ae/p/ep5392017_content.html	Throughout second week of construction period for Phase 2	Submission to EPD on 3 August 2018



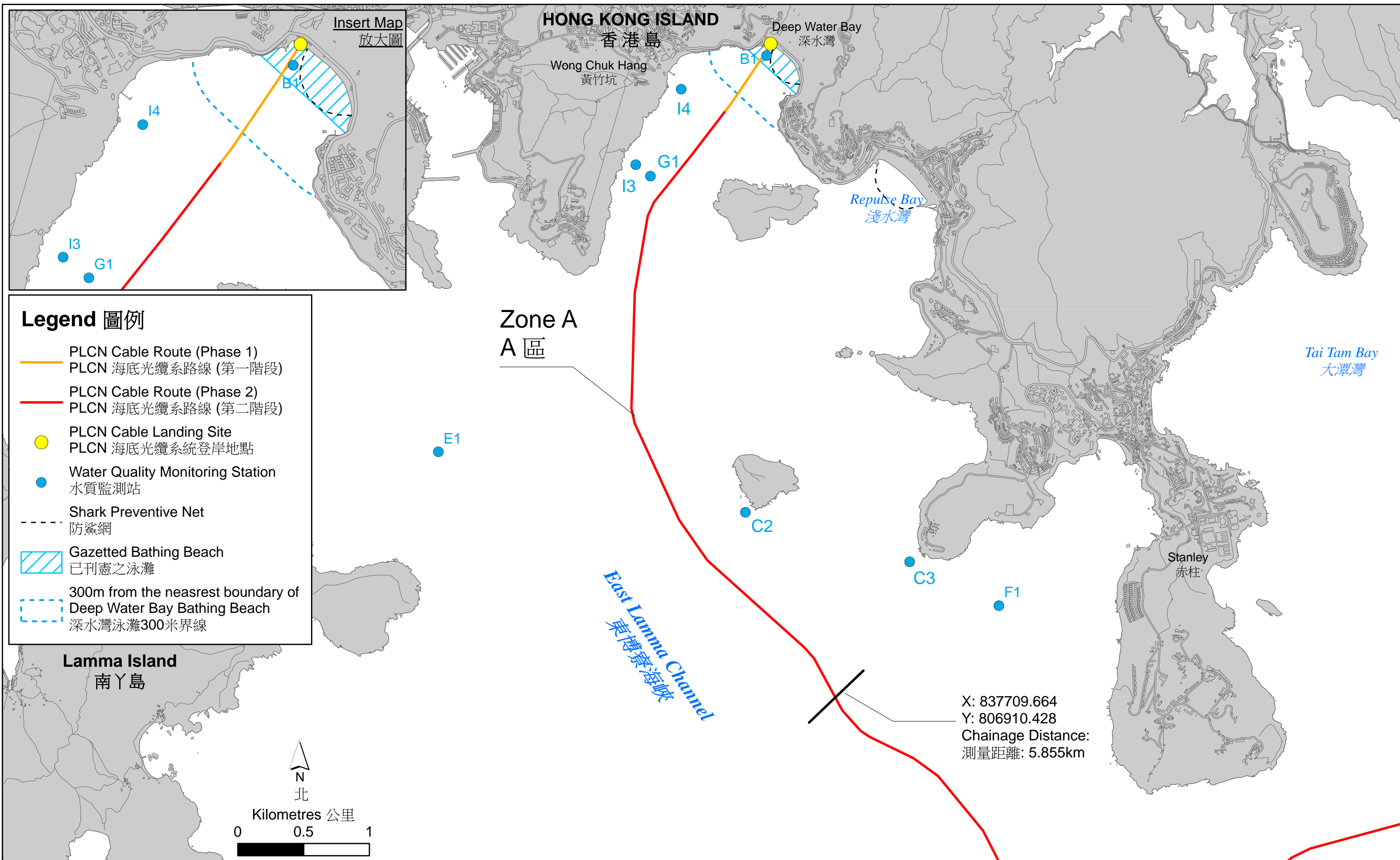


Figure 2.2
圖 2.2

Water Quality Monitoring Stations - Zone A
水質監測站 - A 區

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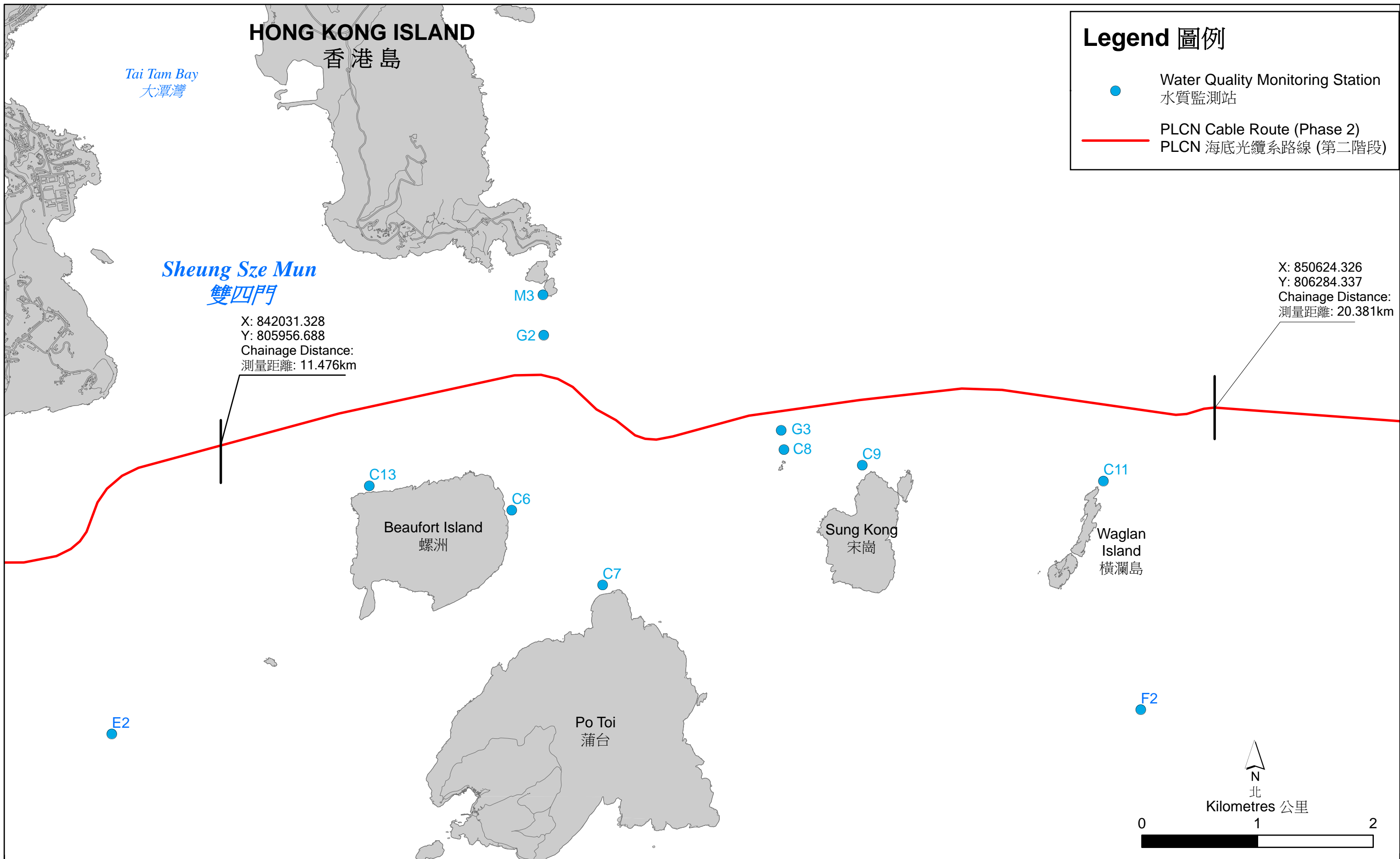


Figure 2.3
圖 2.3

Water Quality Monitoring Stations - Zone B
水質監測站 - B 區

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Date: 14/3/2018

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3.1 MONITORING LOCATIONS

Cable installation works were only carried out in Zone B and east of Zone B to HK SAR eastern boundary during the reporting period. In accordance with the *Annex G of the Project Profile*, during the installation of the cable in Zone B, water quality sampling was undertaken at stations for Zone B. The locations of the sampling stations within Zone B are shown in *Figures 2.1 to 2.3*. The start and end co-ordinates of Zone B and the co-ordinates of the monitoring stations in Zone B are listed in *Table 3.1* and *Table 3.2*, respectively.

Table 3.1 Co-ordinates of Starting Points and Ending Points for Zone B (HK Grid)

Zone	Starting Point		Ending Point	
	Easting	Northing	Easting	Northing
B	842031.328	805956.688	850624.326	806284.337

Table 3.2 Co-ordinates of Baseline Monitoring Stations in Zone B (HK Grid)

Station	Nature	Corresponding Control Station	Easting	Northing
Zone B: The waters from Beaufort Island to Waglan Island where a number of sensitive receivers are located close to the cable alignment.				
Covers the cable alignment between Chainage 11.117 km and 20.014 km.				
C6	Impact Station (Coral sites along the coast of south & east Beaufort Island)	E2, F2	844548	805397
C7	Impact Station (Coral sites along the coast of Po Toi Island)	E2, F2	845334	804749
C8	Impact Station (Coral sites along the coast of Sung Kong Islet)	E2, F2	846901	805922
C9	Impact Station (Coral sites along the coast of Sung Kong)	E2, F2	837028	808316
C11	Impact Station (Coral sites along the coast of Waglan Island)	E2, F2	849664	805649
C13	Impact Station (Coral site along the coast of north Beaufort Island)	E2, F2	843316	805606
M3	Impact Station (Cape d'Aguilar Marine Reserve)	E2, F2	844817	807259
G2	Gradient Station (Between M3 Cape d'Aguilar Marine Reserve and cable alignment)	E2, F2	844824	806909
G3	Gradient Station (Between C8 Coral sites along the coast of Sung Kong Islet and cable alignment)	E2, F2	846878	806086
E2	Control Station for Area B in Ebb Tide	-	841090	803463
F2	Control Station for Area B in Flood Tide	-	849986	803673

3.2 *MONITORING PARAMETERS AND FREQUENCY*

The impact water quality monitoring was conducted in accordance with the requirements stated in the *Annex G of the Project Profile*. These are presented below.

3.2.1 *Monitoring Parameters*

Parameters measured *in situ* were:

- dissolved oxygen (DO) (% saturation and mg L⁻¹);
- temperature (°C);
- turbidity (NTU); and
- salinity (‰).

The only parameter measured in the laboratory was:

- suspended solids (SS) (mg L⁻¹).

In addition to the water quality parameters, other relevant data were measured and recorded in field logs, including the location of the sampling stations, water depth, time, weather conditions, sea conditions, tidal state, current direction and speed, special phenomena and work activities undertaken around the monitoring and works area that may influence the monitoring results.

3.2.2 *Monitoring Frequency*

Impact Monitoring at all monitoring stations within Zone B (C6, C7, C8, C9, C11, C13, M3, G2, G3, E2 and F2) took place when the cable installation works were undertaken within Zone B as shown in *Figure 2.3*. There were no cable installation works carried out within Zone A during the reporting period.

Phase 2 construction works were undertaken during normal working hours (07:00 - 19:00), and impact monitoring (including the collection of *In-situ* and SS data) was conducted at 2 to 3-hour intervals during the cable installation works, depending on the vessel travel time between stations. The monitoring frequency and parameters for Impact Monitoring are summarised in *Table 3.3*.

Table 3.3 *Monitoring Frequency and Parameters for Impact Monitoring at Zone B*

Zone	Station Type	Monitoring Station	Monitoring Frequency	Monitoring Parameter
B	Control	E2 and F2	At two- to three-hour interval (subject to the sampling vessel travelling time among stations) from 07:00 to 19:00 daily when cable installation works undertaken in Zone B	Temperature, Turbidity, Salinity, DO, SS
	Impact	C6, C7, C8, C9, C11, C13, M3, G2 and G3		

3.3 *MONITORING EQUIPMENT AND METHODOLOGY*

3.3.1 *Monitoring Equipment*

Table 3.4 summaries the equipment used for the water quality impact monitoring.

Table 3.4 *Equipment used during Baseline Water Quality Monitoring*

Equipment	Model
Global Positioning Device	Garmin etrex 20x & Furuno GP-170E (dGPS)
Water Depth Gauge	Sontek Hydrosurveyor / Sontek Riversurveyor
Water Sampling Equipment	Wildlife 1120 - 2.2L alpha vertical sampler
Salinity, DO, Temperature Measuring Meter	YSI ProDSS (Multi-Parameter)
Current Velocity and Direction	Sontek Hydrosurveyor / Sontek Riversurveyor
Turbidity Meter	YSI ProDSS (Multi-Parameter)

3.3.2 *Monitoring Methodology*

Timing & Frequency

The water quality monitoring was conducted on all work days within Zone B at 2 to 3-hour intervals during the cable installation works, depending on the vessel travel time between stations. Monitoring started on 24 July and ended on 25 July as cable installation work in Zone B completed. The jetting works proceeded beyond Zone B, ending on 27 July and equipment were demobilized 27 - 28 July. A total of 2 monitoring rounds were conducted on 24 July when works re-started and a total of 3 monitoring rounds were conducted for the full day on 25 July 2018.

Depths

Each station was sampled and measurements were taken at three depths, 1 m below the sea surface, mid depth and 1m above the sea bed. (All stations were at least 3 m in depth)

Protocols

All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use (see calibration reports in *Annex A*), and will subsequently

be re-calibrated at-monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes were checked with certified standard solutions before each use.

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. Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was made available.

Water samples for SS measurements were collected in high density polythene bottles, packed in ice (cooled to 4° C without being frozen), and delivered to a HOKLAS laboratory (ALS Technichem [HK] Pty Ltd) as soon as possible after collection.

Laboratory Analysis

All laboratory work was carried out in a HOKLAS accredited laboratory (ALS Technichem [HK] Pty Ltd). Water samples of about 1,000 mL were collected at the monitoring and control stations for carrying out the laboratory determinations. The determination work started within the next working day after collection of the water samples. The SS laboratory measurements were provided within 2 days of the sampling event (48 hours). The analyses followed the standard methods as described in APHA Standard Methods for the *Examination of Water and Wastewater*, 19th Edition, unless otherwise specified (APHA 2540D for SS).

The QA/QC details were in accordance with requirements of HOKLAS or another internationally accredited scheme (for details refer to *Annex B*).

3.3.3 *Action and Limit Levels*

The Action and Limit levels for Zone B, which were established based on the results of *Baseline Water Quality Monitoring (Zone A and Zone B for Phase 2)*, are presented in *Table 3.5*.

Table 3.5 *Action and Limit Levels for Water Quality – Phase 2*

Parameter	Action Level	Limit Level
Zone B: The waters from Beaufort Island to Waglan Island where a number of sensitive receivers are located close to the cable alignment. Covers the cable alignment between Chainage 11.117 km and 20.014 km.		
SS in mg L ⁻¹ (Depth-averaged)	95%-ile of baseline data (5.69 mg L ⁻¹), or 20% exceedance of value at any impact station compared with corresponding data from control station	99%-ile of baseline data (6.23 mg L ⁻¹) , and 30% exceedance of value at any impact station compared with corresponding data from control station
DO in mg L ⁻¹	<u>Surface and Middle</u> 5%-ile of baseline data for surface and middle layer (5.76 mg L ⁻¹)	<u>Surface and Middle</u> 4 mg L ⁻¹ or 1%-ile of baseline for surface and middle layer (5.56 mg L ⁻¹)

Parameter	Action Level	Limit Level
	<u>Bottom</u>	<u>Bottom</u>
	5%-ile of baseline data for bottom layer (5.84 mg L ⁻¹)	2 mg L ⁻¹ or 1%-ile of baseline data for bottom layer (5.64 mg L ⁻¹)
Turbidity in NTU (Depth-averaged)	95%-ile of baseline data (9.28 NTU), or 20% exceedance of value at any impact station compared with corresponding data from control station	99%-ile of baseline data (10.77 NTU), and 30% exceedance of value at any impact station compared with corresponding data from control station
Notes:		
a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.		
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits.		
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.		
d. The Action and Limit Level for DO for surface and middle layer were calculated from the combined pool of baseline surface layer data and baseline middle layer data.		

3.3.4 Event and Action Plan

The Event and Action Plan for water quality monitoring which was stipulated in the *Annex G* of the *Project Profile* is presented in *Table 3.6*.

Table 3.6 *Event Action Plan for Water Quality*

Event	Contractor
Action Level	Step 1 - repeat sampling event. Where applicable, review results of gradient station(s) to confirm the source of impact.
Exceedance	Step 2 - Inform EPD and AFCD and confirm notification of the non-compliance in writing; Step 3 - discuss with cable installation/ repair operation contractor the most appropriate method of reducing suspended solids during cable installation/ repair operation (e.g. reduce cable laying speed/pressure in jetting water) and agree with EPD. Step 4 - repeat measurements after implementation of mitigation for confirmation of compliance. Step 5 - if non-compliance continues - increase measures in Step 3 and repeat measurements in Step 3. If non-compliance occurs a third time, suspend cable installation/ repair operations.

Event	Contractor
Limit Level Exceedance	<p data-bbox="635 174 1370 266">Step 1 - Suspend cable installation/repair operations immediately (until the cause of the non-compliance is detected and the situation is rectified).</p> <p data-bbox="635 291 1366 353">Step 2 - repeat sampling event. Where applicable, review results of gradient station(s) to confirm the source of impact.</p> <p data-bbox="635 376 1361 439">Step 3 - Inform EPD and AFCD and confirm notification of the non-compliance in writing</p> <p data-bbox="635 461 1374 589">Step 4 - discuss immediately with cable installation/ repair operation contractor the most appropriate method of reducing suspended solids during cable installation/ repair operation (e.g. reduce cable laying speed/pressure in jetting water) and agree with EPD.</p> <p data-bbox="635 611 1355 703">Step 5 - repeat measurements after implementation of mitigation or suitable time has elapsed since suspension of cable installation/ repair operations, for confirmation of compliance.</p> <p data-bbox="635 725 1281 752">Step 6 -. Repeat Step5 until measurements show compliance.</p>

Monitoring surveys were carried out on three days in the reporting period at Zone B, covering all work days when cable burial within Zone B was conducted in the period. All monitoring at all designated monitoring stations within Zone B was performed on schedule, ie on 24 to 25 July 2018, as detailed in *Table 2.1*.

No Project activities that influenced the water quality within Zone B were identified in the reporting period.

4.1

DATA COLLECTED

The monitoring data within Zone B are presented in *Annex C* and compared against the baseline monitoring results in *Figures C1 -C4*.

A wide range of spatial and temporal variation was recorded at monitoring stations within Zone B for all water quality parameters throughout each sampling day (i.e. 24 and 25 July 2018), except for turbidity. Recorded levels of dissolved oxygen (DO) were frequently recorded as being below the corresponding Action and Limit Levels, but upon review, this was deemed to be due to the presence of naturally occurring marine water stratification and natural fluctuations. Fluctuation in suspended solids (SS) levels were observed during some monitoring days, which upon careful review were considered to be due to natural seasonal variations. The findings for DO are supported by the frequently recorded low DO levels at control stations. Recorded levels of SS at monitoring stations further away were higher than those closer to the cable laying work front (e.g. gradient stations). Both of these results suggest the recorded exceedances were a result of natural variation of baseline conditions and not contributed to by project works.

5.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

Exceedances were recorded during the monitoring period (i.e. 24 and 25 July 2018) for dissolved oxygen and suspended solids at the monitoring stations. None of the exceedances recorded were attributed to the Project construction works as detailed below.

There were daily exceedances of dissolved oxygen as well as suspended solids throughout the reporting period. Two Notification of Exceedances (NOEs) reports with detailed investigation were issued to EPD and AFCD during the reporting period concerning daily exceedances of Action and Limit Levels for both bottom dissolved oxygen, surface and middle dissolved oxygen (for 25 July 2018 only) and suspended solids.

The exceedances were examined against the Project works in the NOEs. Results of detailed investigations for NOEs dated 24 and 25 July 2018 indicated:

- Exceedance of dissolved oxygen were recorded throughout the day, regardless of the distance from the work front. Exceedance of dissolved oxygen levels were recorded at one or both control stations in every round of monitoring survey events on all survey dates. The recorded exceedances were therefore deemed to be due to natural fluctuations;
- Recorded levels of suspended solids at monitoring stations further away were higher than those closer to the cable laying work front. The recorded exceedances were therefore considered not to be contributed by the project works.

The Contractors have been made aware by the ET of the exceedances that have occurred recently and have been asked to take care to ensure all necessary procedures are followed to avoid the Project adversely impacting the water environment.

5.2 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance events were recorded during the reporting period due to the Project.

5.3 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaints were received during the reporting period.

No summons or prosecution on environmental matters were received during the reporting period.

6.1 *KEY ISSUES FOR THE COMING WEEK*

There are no key issue identified.

As the cable installation works within Zone B has been completed, there will be no more water quality impact monitoring for cable installation. Post-project monitoring will be conducted and the report provided within one month after completion of the Project marine works.

6.2 *MONITORING SCHEDULE FOR THE COMING WEEKS*

No further water quality impact monitoring for cable installation is scheduled.

This Weekly Impact Monitoring Report presents the EM&A water quality work undertaken during the period from 24 to 30 July 2018 in accordance with the *Annex G of the Project Profile* and the requirements under EP-539/2017.

No non-compliance events were recorded during the reporting week due to the Project.

There were daily exceedances of dissolved oxygen as well as suspended solids throughout the reporting period.. Results of detailed investigations indicate none of the exceedances recorded were attributed to the Project construction works as detailed below:

- Exceedance of dissolved oxygen were recorded throughout the day, regardless of the distance from the work front. Exceedance of dissolved oxygen levels were recorded at one or both control stations in every round of monitoring survey events on all survey dates. The recorded exceedances were therefore deemed to be due to natural fluctuations;
- Recorded levels of suspended solids at monitoring stations further away were higher than those closer to the cable laying work front. The recorded exceedances were therefore considered not to be contributed by the project works.

The Contractors have been informed by the ET of the exceedances that have recently occurred and requested to take care to ensure all necessary procedures are followed to avoid the Project impacting the water environment.

No complaints and summons/prosecution were received during the reporting week.

The ET will keep track of the WQ impact monitoring programme to verify compliance of environmental requirements and the proper implementation of necessary mitigation measures.

Annex A

Calibration Reports of Multi-parameter Sensor



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong

Email: info@qualityprotest.com; Website: www.qualityprotest.com

Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH060169
Date of Issue : 28 June 2018
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 16H104233
Date of Received : Jun 27, 2018
Date of Calibration : Jun 27, 2018 to Jun 27, 2018
Date of Next Calibration^(a) : Sep 27, 2018

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	3.96	-0.04	Satisfactory
7.42	7.44	0.02	Satisfactory
10.01	10.11	0.10	Satisfactory

Tolerance of pH should be less than ± 0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
12.6	12.5	-0.1	Satisfactory
37.4	37.5	0.1	Satisfactory
62.7	61.5	-1.2	Satisfactory


Tolerance limit of temperature should be less than ± 2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

- ^(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
^(b) The results relate only to the calibrated equipment as received
^(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
^(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
^(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY:


LAM Ho-yee, Emma
Assistant Laboratory Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH060169
Date of Issue : 28 June 2018
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.03	0.03	Satisfactory
4.37	4.46	0.09	Satisfactory
5.96	6.10	0.14	Satisfactory
7.34	7.36	0.02	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S/cm}$)	Displayed Reading ($\mu\text{S/cm}$)	Tolerance (%)	Results
0.001	146.9	150.0	2.1	Satisfactory
0.01	1412	1398	-1.0	Satisfactory
0.1	12890	12724	-1.3	Satisfactory
0.5	58670	58012	-1.1	Satisfactory
1.0	111900	110847	-0.9	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.97	-0.3	Satisfactory
20	20.14	0.7	Satisfactory
30	30.28	0.9	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.1	--	--
10	10.16	1.6	Satisfactory
20	20.19	1.0	Satisfactory
100	98.84	-1.2	Satisfactory
800	793.16	-0.9	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

^(f) "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

^(g) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH060170
Date of Issue : 28 June 2018
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 17E100747
Date of Received : Jun 27, 2018
Date of Calibration : Jun 27, 2018 to Jun 27, 2018
Date of Next Calibration^(a) : Sep 27, 2018

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	3.97	-0.03	Satisfactory
7.42	7.40	-0.02	Satisfactory
10.01	10.00	-0.01	Satisfactory

Tolerance of pH should be less than ± 0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
12.6	12.3	-0.3	Satisfactory
37.4	37.5	0.1	Satisfactory
62.7	61.4	-1.3	Satisfactory


Tolerance limit of temperature should be less than ± 2.0 (°C)

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Remark(s): -

- ^(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
^(b) The results relate only to the calibrated equipment as received
^(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
^(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
^(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY:


LAM Ho-ye, Emma
Assistant Laboratory Manager



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH060170
Date of Issue : 28 June 2018
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.02	0.02	Satisfactory
4.37	4.41	0.04	Satisfactory
5.96	6.12	0.16	Satisfactory
7.34	7.41	0.07	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S/cm}$)	Displayed Reading ($\mu\text{S/cm}$)	Tolerance (%)	Results
0.001	146.9	148.0	0.7	Satisfactory
0.01	1412	1438	1.8	Satisfactory
0.1	12890	12696	-1.5	Satisfactory
0.5	58670	57876	-1.4	Satisfactory
1.0	111900	111059	-0.8	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.99	-0.1	Satisfactory
20	20.09	0.4	Satisfactory
30	30.22	0.7	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
0	0.00	--	--
10	10.14	1.4	Satisfactory
20	20.30	1.5	Satisfactory
100	101.67	1.7	Satisfactory
800	818.83	2.4	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

^(f) "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

^(g) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

Annex B

QA/QC Results of Laboratory Testing for Suspended Solids



CERTIFICATE OF ANALYSIS

<i>Client</i>	: ENOVATIVE ENVIRONMENTAL SERVICE LTD	<i>Laboratory</i>	: ALS Technichem (HK) Pty Ltd	<i>Page</i>	: 1 of 9
<i>Contact</i>	: MR THOMAS WONG	<i>Contact</i>	: Richard Fung	<i>Work Order</i>	: HK1838433
<i>Address</i>	: FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	<i>Address</i>	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
<i>E-mail</i>	: Thomas.Wong@eno.com.hk	<i>E-mail</i>	: richard.fung@alsglobal.com		
<i>Telephone</i>	: ----	<i>Telephone</i>	: +852 2610 1044		
<i>Facsimile</i>	: ----	<i>Facsimile</i>	: +852 2610 2021		
<i>Project</i>	: PACIFIC LIGHT CABLE NETWORK (PLCN) - DEEP WATER BAY	<i>Quote number</i>	: HKE/1254/2018	<i>Date received</i>	: 24-Jul-2018
<i>Order number</i>	: —			<i>Date of issue</i>	: 27-Jul-2018
<i>C-O-C number</i>	: —			<i>No. of samples</i>	- Received : 132
<i>Site</i>	: —				- Analysed : 132

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

Signatory

Fung Lim Chee, Richard

Position

General Manager

Authorised results for:

Inorganics



Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1838433 supersedes any previous reports with this reference. Testing period is from 24-Jul-2018 to 26-Jul-2018. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific Comments for Work Order HK1838433 :

Sample(s) were received in chilled condition.

Water sample(s) analysed and reported on as received basis.

The accredited LOR of Total Suspended Solids is 0.5mg/L when 2 Litres sample was used. Due to insufficient sample, the results below 2mg/L and the decimal value of the results reported are for reference only.



Analytical Results

Sub-Matrix: MARINE WATER

Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
E2/R1/ S	24-Jul-2018	HK1838433-001	5.3	----	----	----	----	----
E2/R1/ S Duplicate	24-Jul-2018	HK1838433-002	5.9	----	----	----	----	----
E2/R1/ M	24-Jul-2018	HK1838433-003	7.7	----	----	----	----	----
E2/R1/ M Duplicate	24-Jul-2018	HK1838433-004	7.6	----	----	----	----	----
E2/R1/ B	24-Jul-2018	HK1838433-005	7.5	----	----	----	----	----
E2/R1/ B Duplicate	24-Jul-2018	HK1838433-006	8.0	----	----	----	----	----
F2/R1/ S	24-Jul-2018	HK1838433-007	6.5	----	----	----	----	----
F2/R1/ S Duplicate	24-Jul-2018	HK1838433-008	6.0	----	----	----	----	----
F2/R1/ M	24-Jul-2018	HK1838433-009	7.3	----	----	----	----	----
F2/R1/ M Duplicate	24-Jul-2018	HK1838433-010	7.4	----	----	----	----	----
F2/R1/ B	24-Jul-2018	HK1838433-011	8.1	----	----	----	----	----
F2/R1/ B Duplicate	24-Jul-2018	HK1838433-012	7.4	----	----	----	----	----
C6/R1/ S	24-Jul-2018	HK1838433-013	6.4	----	----	----	----	----
C6/R1/ S Duplicate	24-Jul-2018	HK1838433-014	6.2	----	----	----	----	----
C6/R1/ M	24-Jul-2018	HK1838433-015	6.7	----	----	----	----	----
C6/R1/ M Duplicate	24-Jul-2018	HK1838433-016	7.2	----	----	----	----	----
C6/R1/ B	24-Jul-2018	HK1838433-017	8.8	----	----	----	----	----
C6/R1/ B Duplicate	24-Jul-2018	HK1838433-018	8.2	----	----	----	----	----
C7/R1/ S	24-Jul-2018	HK1838433-019	2.9	----	----	----	----	----
C7/R1/ S Duplicate	24-Jul-2018	HK1838433-020	3.7	----	----	----	----	----
C7/R1/ M	24-Jul-2018	HK1838433-021	3.4	----	----	----	----	----
C7/R1/ M Duplicate	24-Jul-2018	HK1838433-022	4.0	----	----	----	----	----
C7/R1/ B	24-Jul-2018	HK1838433-023	5.3	----	----	----	----	----
C7/R1/ B Duplicate	24-Jul-2018	HK1838433-024	4.9	----	----	----	----	----
C8/R1/ S	24-Jul-2018	HK1838433-025	5.1	----	----	----	----	----
C8/R1/ S Duplicate	24-Jul-2018	HK1838433-026	5.7	----	----	----	----	----
C8/R1/ M	24-Jul-2018	HK1838433-027	7.6	----	----	----	----	----
C8/R1/ M Duplicate	24-Jul-2018	HK1838433-028	8.9	----	----	----	----	----
C8/R1/ B	24-Jul-2018	HK1838433-029	10.2	----	----	----	----	----
C8/R1/ B Duplicate	24-Jul-2018	HK1838433-030	10.7	----	----	----	----	----
C9/R1/ S	24-Jul-2018	HK1838433-031	5.5	----	----	----	----	----



Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
C9/R1/ S Duplicate	24-Jul-2018	HK1838433-032	4.9	----	----	----	----	----
C9/R1/ M	24-Jul-2018	HK1838433-033	5.2	----	----	----	----	----
C9/R1/ M Duplicate	24-Jul-2018	HK1838433-034	5.6	----	----	----	----	----
C9/R1/ B	24-Jul-2018	HK1838433-035	6.9	----	----	----	----	----
C9/R1/ B Duplicate	24-Jul-2018	HK1838433-036	5.9	----	----	----	----	----
C11/R1/ S	24-Jul-2018	HK1838433-037	5.4	----	----	----	----	----
C11/R1/ S Duplicate	24-Jul-2018	HK1838433-038	6.1	----	----	----	----	----
C11/R1/ M	24-Jul-2018	HK1838433-039	5.9	----	----	----	----	----
C11/R1/ M Duplicate	24-Jul-2018	HK1838433-040	6.4	----	----	----	----	----
C11/R1/ B	24-Jul-2018	HK1838433-041	7.6	----	----	----	----	----
C11/R1/ B Duplicate	24-Jul-2018	HK1838433-042	7.7	----	----	----	----	----
C13/R1/ S	24-Jul-2018	HK1838433-043	5.3	----	----	----	----	----
C13/R1/ S Duplicate	24-Jul-2018	HK1838433-044	4.2	----	----	----	----	----
C13/R1/ M	24-Jul-2018	HK1838433-045	5.9	----	----	----	----	----
C13/R1/ M Duplicate	24-Jul-2018	HK1838433-046	6.0	----	----	----	----	----
C13/R1/ B	24-Jul-2018	HK1838433-047	7.3	----	----	----	----	----
C13/R1/ B Duplicate	24-Jul-2018	HK1838433-048	6.5	----	----	----	----	----
G2/R1/ S	24-Jul-2018	HK1838433-049	3.0	----	----	----	----	----
G2/R1/ S Duplicate	24-Jul-2018	HK1838433-050	3.3	----	----	----	----	----
G2/R1/ M	24-Jul-2018	HK1838433-051	4.2	----	----	----	----	----
G2/R1/ M Duplicate	24-Jul-2018	HK1838433-052	4.6	----	----	----	----	----
G2/R1/ B	24-Jul-2018	HK1838433-053	4.5	----	----	----	----	----
G2/R1/ B Duplicate	24-Jul-2018	HK1838433-054	5.1	----	----	----	----	----
G3/R1/ S	24-Jul-2018	HK1838433-055	6.5	----	----	----	----	----
G3/R1/ S Duplicate	24-Jul-2018	HK1838433-056	7.2	----	----	----	----	----
G3/R1/ M	24-Jul-2018	HK1838433-057	7.4	----	----	----	----	----
G3/R1/ M Duplicate	24-Jul-2018	HK1838433-058	6.5	----	----	----	----	----
G3/R1/ B	24-Jul-2018	HK1838433-059	7.4	----	----	----	----	----
G3/R1/ B Duplicate	24-Jul-2018	HK1838433-060	7.1	----	----	----	----	----
M3/R1/ S	24-Jul-2018	HK1838433-061	5.9	----	----	----	----	----
M3/R1/ S Duplicate	24-Jul-2018	HK1838433-062	4.6	----	----	----	----	----
M3/R1/ M	24-Jul-2018	HK1838433-063	6.4	----	----	----	----	----
M3/R1/ M Duplicate	24-Jul-2018	HK1838433-064	5.8	----	----	----	----	----



Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
M3/R1/ B	24-Jul-2018	HK1838433-065	6.5	----	----	----	----	----
M3/R1/ B Duplicate	24-Jul-2018	HK1838433-066	6.9	----	----	----	----	----
E2/R2/ S	24-Jul-2018	HK1838433-067	6.3	----	----	----	----	----
E2/R2/ S Duplicate	24-Jul-2018	HK1838433-068	6.6	----	----	----	----	----
E2/R2/ M	24-Jul-2018	HK1838433-069	7.4	----	----	----	----	----
E2/R2/ M Duplicate	24-Jul-2018	HK1838433-070	6.7	----	----	----	----	----
E2/R2/ B	24-Jul-2018	HK1838433-071	7.6	----	----	----	----	----
E2/R2/ B Duplicate	24-Jul-2018	HK1838433-072	7.1	----	----	----	----	----
F2/R2/ S	24-Jul-2018	HK1838433-073	5.0	----	----	----	----	----
F2/R2/ S Duplicate	24-Jul-2018	HK1838433-074	4.4	----	----	----	----	----
F2/R2/ M	24-Jul-2018	HK1838433-075	5.7	----	----	----	----	----
F2/R2/ M Duplicate	24-Jul-2018	HK1838433-076	6.1	----	----	----	----	----
F2/R2/ B	24-Jul-2018	HK1838433-077	5.8	----	----	----	----	----
F2/R2/ B Duplicate	24-Jul-2018	HK1838433-078	6.9	----	----	----	----	----
C6/R2/ S	24-Jul-2018	HK1838433-079	3.9	----	----	----	----	----
C6/R2/ S Duplicate	24-Jul-2018	HK1838433-080	4.8	----	----	----	----	----
C6/R2/ M	24-Jul-2018	HK1838433-081	5.7	----	----	----	----	----
C6/R2/ M Duplicate	24-Jul-2018	HK1838433-082	6.2	----	----	----	----	----
C6/R2/ B	24-Jul-2018	HK1838433-083	8.0	----	----	----	----	----
C6/R2/ B Duplicate	24-Jul-2018	HK1838433-084	7.1	----	----	----	----	----
C7/R2/ S	24-Jul-2018	HK1838433-085	4.4	----	----	----	----	----
C7/R2/ S Duplicate	24-Jul-2018	HK1838433-086	4.3	----	----	----	----	----
C7/R2/ M	24-Jul-2018	HK1838433-087	4.8	----	----	----	----	----
C7/R2/ M Duplicate	24-Jul-2018	HK1838433-088	4.1	----	----	----	----	----
C7/R2/ B	24-Jul-2018	HK1838433-089	6.5	----	----	----	----	----
C7/R2/ B Duplicate	24-Jul-2018	HK1838433-090	6.7	----	----	----	----	----
C8/R2/ S	24-Jul-2018	HK1838433-091	3.0	----	----	----	----	----
C8/R2/ S Duplicate	24-Jul-2018	HK1838433-092	3.0	----	----	----	----	----
C8/R2/ M	24-Jul-2018	HK1838433-093	4.1	----	----	----	----	----
C8/R2/ M Duplicate	24-Jul-2018	HK1838433-094	4.7	----	----	----	----	----
C8/R2/ B	24-Jul-2018	HK1838433-095	5.8	----	----	----	----	----
C8/R2/ B Duplicate	24-Jul-2018	HK1838433-096	5.2	----	----	----	----	----
C9/R2/ S	24-Jul-2018	HK1838433-097	3.5	----	----	----	----	----



Sub-Matrix: MARINE WATER

Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
C9/R2/ S Duplicate	24-Jul-2018	HK1838433-098	2.5	----	----	----	----	----
C9/R2/ M	24-Jul-2018	HK1838433-099	3.6	----	----	----	----	----
C9/R2/ M Duplicate	24-Jul-2018	HK1838433-100	4.0	----	----	----	----	----
C9/R2/ B	24-Jul-2018	HK1838433-101	4.7	----	----	----	----	----
C9/R2/ B Duplicate	24-Jul-2018	HK1838433-102	5.4	----	----	----	----	----
C11/R2/ S	24-Jul-2018	HK1838433-103	4.9	----	----	----	----	----
C11/R2/ S Duplicate	24-Jul-2018	HK1838433-104	5.0	----	----	----	----	----
C11/R2/ M	24-Jul-2018	HK1838433-105	5.0	----	----	----	----	----
C11/R2/ M Duplicate	24-Jul-2018	HK1838433-106	5.3	----	----	----	----	----
C11/R2/ B	24-Jul-2018	HK1838433-107	6.6	----	----	----	----	----
C11/R2/ B Duplicate	24-Jul-2018	HK1838433-108	6.3	----	----	----	----	----
C13/R2/ S	24-Jul-2018	HK1838433-109	3.7	----	----	----	----	----
C13/R2/ S Duplicate	24-Jul-2018	HK1838433-110	3.5	----	----	----	----	----
C13/R2/ M	24-Jul-2018	HK1838433-111	3.9	----	----	----	----	----
C13/R2/ M Duplicate	24-Jul-2018	HK1838433-112	4.6	----	----	----	----	----
C13/R2/ B	24-Jul-2018	HK1838433-113	6.0	----	----	----	----	----
C13/R2/ B Duplicate	24-Jul-2018	HK1838433-114	7.2	----	----	----	----	----
G2/R2/ S	24-Jul-2018	HK1838433-115	5.3	----	----	----	----	----
G2/R2/ S Duplicate	24-Jul-2018	HK1838433-116	5.3	----	----	----	----	----
G2/R2/ M	24-Jul-2018	HK1838433-117	6.0	----	----	----	----	----
G2/R2/ M Duplicate	24-Jul-2018	HK1838433-118	5.0	----	----	----	----	----
G2/R2/ B	24-Jul-2018	HK1838433-119	5.8	----	----	----	----	----
G2/R2/ B Duplicate	24-Jul-2018	HK1838433-120	6.9	----	----	----	----	----
G3/R2/ S	24-Jul-2018	HK1838433-121	3.2	----	----	----	----	----
G3/R2/ S Duplicate	24-Jul-2018	HK1838433-122	4.0	----	----	----	----	----
G3/R2/ M	24-Jul-2018	HK1838433-123	5.9	----	----	----	----	----
G3/R2/ M Duplicate	24-Jul-2018	HK1838433-124	6.6	----	----	----	----	----
G3/R2/ B	24-Jul-2018	HK1838433-125	7.4	----	----	----	----	----
G3/R2/ B Duplicate	24-Jul-2018	HK1838433-126	6.4	----	----	----	----	----
M3/R2/ S	24-Jul-2018	HK1838433-127	5.9	----	----	----	----	----
M3/R2/ S Duplicate	24-Jul-2018	HK1838433-128	6.0	----	----	----	----	----
M3/R2/ M	24-Jul-2018	HK1838433-129	7.2	----	----	----	----	----
M3/R2/ M Duplicate	24-Jul-2018	HK1838433-130	5.9	----	----	----	----	----



Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
M3/R2/ B	24-Jul-2018	HK1838433-131	7.2	----	----	----	----	----
M3/R2/ B Duplicate	24-Jul-2018	HK1838433-132	7.8	----	----	----	----	----

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)		
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High	Value
EA/ED: Physical and Aggregate Properties (QCLOT: 1827443)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	114	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLOT: 1827444)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	109	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLOT: 1827445)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	92.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLOT: 1827446)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	111	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLOT: 1827447)												



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)		
Method: Compound	CAS Number	LOR	Unit	Result			LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1827447) - continued												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	112	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1827448)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	103	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1827449)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	20 mg/L	112	----	85	115	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



CERTIFICATE OF ANALYSIS

<i>Client</i>	: ENOVATIVE ENVIRONMENTAL SERVICE LTD	<i>Laboratory</i>	: ALS Technichem (HK) Pty Ltd	<i>Page</i>	: 1 of 11
<i>Contact</i>	: MR THOMAS WONG	<i>Contact</i>	: Richard Fung	<i>Work Order</i>	: HK1840084
<i>Address</i>	: FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	<i>Address</i>	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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<i>Facsimile</i>	: ----	<i>Facsimile</i>	: +852 2610 2021		
<i>Project</i>	: PACIFIC LIGHT CABLE NETWORK (PLCN) - DEEP WATER BAY	<i>Quote number</i>	: HKE/1254/2018	<i>Date received</i>	: 25-Jul-2018
<i>Order number</i>	: —			<i>Date of issue</i>	: 30-Jul-2018
<i>C-O-C number</i>	: —			<i>No. of samples</i>	- <i>Received</i> : 198
<i>Site</i>	: —				- <i>Analysed</i> : 198

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

<i>Signatory</i>	<i>Position</i>	<i>Authorised results for:</i>
Fung Lim Chee, Richard	General Manager	Inorganics



Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1840084 supersedes any previous reports with this reference. Testing period is from 25-Jul-2018 to 30-Jul-2018. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific Comments for Work Order HK1840084 :

Sample(s) were received in chilled condition.

Water sample(s) analysed and reported on as received basis.

The accredited LOR of Total Suspended Solids is 0.5mg/L when 2 Litres sample was used. Due to insufficient sample, the results below 2mg/L and the decimal value of the results reported are for reference only.



Analytical Results

Sub-Matrix: MARINE WATER

Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
E2/R1/ S	25-Jul-2018	HK1840084-001	2.7	----	----	----	----	----
E2/R1/ S Duplicate	25-Jul-2018	HK1840084-002	3.3	----	----	----	----	----
E2/R1/ M	25-Jul-2018	HK1840084-003	3.6	----	----	----	----	----
E2/R1/ M Duplicate	25-Jul-2018	HK1840084-004	2.8	----	----	----	----	----
E2/R1/ B	25-Jul-2018	HK1840084-005	3.1	----	----	----	----	----
E2/R1/ B Duplicate	25-Jul-2018	HK1840084-006	3.7	----	----	----	----	----
F2/R1/ S	25-Jul-2018	HK1840084-007	2.3	----	----	----	----	----
F2/R1/ S Duplicate	25-Jul-2018	HK1840084-008	1.9	----	----	----	----	----
F2/R1/ M	25-Jul-2018	HK1840084-009	2.9	----	----	----	----	----
F2/R1/ M Duplicate	25-Jul-2018	HK1840084-010	3.2	----	----	----	----	----
F2/R1/ B	25-Jul-2018	HK1840084-011	3.9	----	----	----	----	----
F2/R1/ B Duplicate	25-Jul-2018	HK1840084-012	4.7	----	----	----	----	----
C6/R1/ S	25-Jul-2018	HK1840084-013	2.6	----	----	----	----	----
C6/R1/ S Duplicate	25-Jul-2018	HK1840084-014	1.5	----	----	----	----	----
C6/R1/ M	25-Jul-2018	HK1840084-015	2.8	----	----	----	----	----
C6/R1/ M Duplicate	25-Jul-2018	HK1840084-016	4.0	----	----	----	----	----
C6/R1/ B	25-Jul-2018	HK1840084-017	3.5	----	----	----	----	----
C6/R1/ B Duplicate	25-Jul-2018	HK1840084-018	4.4	----	----	----	----	----
C7/R1/ S	25-Jul-2018	HK1840084-019	3.9	----	----	----	----	----
C7/R1/ S Duplicate	25-Jul-2018	HK1840084-020	3.7	----	----	----	----	----
C7/R1/ M	25-Jul-2018	HK1840084-021	3.8	----	----	----	----	----
C7/R1/ M Duplicate	25-Jul-2018	HK1840084-022	4.3	----	----	----	----	----
C7/R1/ B	25-Jul-2018	HK1840084-023	3.9	----	----	----	----	----
C7/R1/ B Duplicate	25-Jul-2018	HK1840084-024	4.6	----	----	----	----	----
C8/R1/ S	25-Jul-2018	HK1840084-025	2.6	----	----	----	----	----
C8/R1/ S Duplicate	25-Jul-2018	HK1840084-026	2.1	----	----	----	----	----
C8/R1/ M	25-Jul-2018	HK1840084-027	2.3	----	----	----	----	----
C8/R1/ M Duplicate	25-Jul-2018	HK1840084-028	3.0	----	----	----	----	----
C8/R1/ B	25-Jul-2018	HK1840084-029	2.9	----	----	----	----	----
C8/R1/ B Duplicate	25-Jul-2018	HK1840084-030	2.6	----	----	----	----	----
C9/R1/ S	25-Jul-2018	HK1840084-031	1.9	----	----	----	----	----



Sub-Matrix: MARINE WATER

Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
C9/R1/ S Duplicate	25-Jul-2018	HK1840084-032	1.2	----	----	----	----	----
C9/R1/ M	25-Jul-2018	HK1840084-033	1.9	----	----	----	----	----
C9/R1/ M Duplicate	25-Jul-2018	HK1840084-034	2.1	----	----	----	----	----
C9/R1/ B	25-Jul-2018	HK1840084-035	2.1	----	----	----	----	----
C9/R1/ B Duplicate	25-Jul-2018	HK1840084-036	2.3	----	----	----	----	----
C11/R1/ S	25-Jul-2018	HK1840084-037	2.0	----	----	----	----	----
C11/R1/ S Duplicate	25-Jul-2018	HK1840084-038	2.2	----	----	----	----	----
C11/R1/ M	25-Jul-2018	HK1840084-039	2.5	----	----	----	----	----
C11/R1/ M Duplicate	25-Jul-2018	HK1840084-040	2.8	----	----	----	----	----
C11/R1/ B	25-Jul-2018	HK1840084-041	4.0	----	----	----	----	----
C11/R1/ B Duplicate	25-Jul-2018	HK1840084-042	3.2	----	----	----	----	----
C13/R1/ S	25-Jul-2018	HK1840084-043	2.0	----	----	----	----	----
C13/R1/ S Duplicate	25-Jul-2018	HK1840084-044	2.0	----	----	----	----	----
C13/R1/ M	25-Jul-2018	HK1840084-045	2.0	----	----	----	----	----
C13/R1/ M Duplicate	25-Jul-2018	HK1840084-046	2.1	----	----	----	----	----
C13/R1/ B	25-Jul-2018	HK1840084-047	2.2	----	----	----	----	----
C13/R1/ B Duplicate	25-Jul-2018	HK1840084-048	2.3	----	----	----	----	----
G2/R1/ S	25-Jul-2018	HK1840084-049	2.1	----	----	----	----	----
G2/R1/ S Duplicate	25-Jul-2018	HK1840084-050	2.2	----	----	----	----	----
G2/R1/ M	25-Jul-2018	HK1840084-051	3.0	----	----	----	----	----
G2/R1/ M Duplicate	25-Jul-2018	HK1840084-052	3.6	----	----	----	----	----
G2/R1/ B	25-Jul-2018	HK1840084-053	4.7	----	----	----	----	----
G2/R1/ B Duplicate	25-Jul-2018	HK1840084-054	3.6	----	----	----	----	----
G3/R1/ S	25-Jul-2018	HK1840084-055	2.3	----	----	----	----	----
G3/R1/ S Duplicate	25-Jul-2018	HK1840084-056	3.0	----	----	----	----	----
G3/R1/ M	25-Jul-2018	HK1840084-057	3.2	----	----	----	----	----
G3/R1/ M Duplicate	25-Jul-2018	HK1840084-058	3.8	----	----	----	----	----
G3/R1/ B	25-Jul-2018	HK1840084-059	3.8	----	----	----	----	----
G3/R1/ B Duplicate	25-Jul-2018	HK1840084-060	4.0	----	----	----	----	----
M3/R1/ S	25-Jul-2018	HK1840084-061	2.6	----	----	----	----	----
M3/R1/ S Duplicate	25-Jul-2018	HK1840084-062	3.2	----	----	----	----	----
M3/R1/ M	25-Jul-2018	HK1840084-063	3.6	----	----	----	----	----
M3/R1/ M Duplicate	25-Jul-2018	HK1840084-064	3.3	----	----	----	----	----



Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
M3/R1/ B	25-Jul-2018	HK1840084-065	3.8	----	----	----	----	----
M3/R1/ B Duplicate	25-Jul-2018	HK1840084-066	4.0	----	----	----	----	----
E2/R2/ S	25-Jul-2018	HK1840084-067	2.8	----	----	----	----	----
E2/R2/ S Duplicate	25-Jul-2018	HK1840084-068	3.6	----	----	----	----	----
E2/R2/ M	25-Jul-2018	HK1840084-069	4.2	----	----	----	----	----
E2/R2/ M Duplicate	25-Jul-2018	HK1840084-070	2.5	----	----	----	----	----
E2/R2/ B	25-Jul-2018	HK1840084-071	4.1	----	----	----	----	----
E2/R2/ B Duplicate	25-Jul-2018	HK1840084-072	4.3	----	----	----	----	----
F2/R2/ S	25-Jul-2018	HK1840084-073	2.4	----	----	----	----	----
F2/R2/ S Duplicate	25-Jul-2018	HK1840084-074	1.5	----	----	----	----	----
F2/R2/ M	25-Jul-2018	HK1840084-075	1.8	----	----	----	----	----
F2/R2/ M Duplicate	25-Jul-2018	HK1840084-076	2.7	----	----	----	----	----
F2/R2/ B	25-Jul-2018	HK1840084-077	2.6	----	----	----	----	----
F2/R2/ B Duplicate	25-Jul-2018	HK1840084-078	2.5	----	----	----	----	----
C6/R2/ S	25-Jul-2018	HK1840084-079	2.1	----	----	----	----	----
C6/R2/ S Duplicate	25-Jul-2018	HK1840084-080	2.0	----	----	----	----	----
C6/R2/ M	25-Jul-2018	HK1840084-081	2.6	----	----	----	----	----
C6/R2/ M Duplicate	25-Jul-2018	HK1840084-082	3.4	----	----	----	----	----
C6/R2/ B	25-Jul-2018	HK1840084-083	3.9	----	----	----	----	----
C6/R2/ B Duplicate	25-Jul-2018	HK1840084-084	5.0	----	----	----	----	----
C7/R2/ S	25-Jul-2018	HK1840084-085	2.2	----	----	----	----	----
C7/R2/ S Duplicate	25-Jul-2018	HK1840084-086	2.2	----	----	----	----	----
C7/R2/ M	25-Jul-2018	HK1840084-087	2.3	----	----	----	----	----
C7/R2/ M Duplicate	25-Jul-2018	HK1840084-088	2.6	----	----	----	----	----
C7/R2/ B	25-Jul-2018	HK1840084-089	3.2	----	----	----	----	----
C7/R2/ B Duplicate	25-Jul-2018	HK1840084-090	2.7	----	----	----	----	----
C8/R2/ S	25-Jul-2018	HK1840084-091	2.8	----	----	----	----	----
C8/R2/ S Duplicate	25-Jul-2018	HK1840084-092	3.1	----	----	----	----	----
C8/R2/ M	25-Jul-2018	HK1840084-093	5.2	----	----	----	----	----
C8/R2/ M Duplicate	25-Jul-2018	HK1840084-094	4.7	----	----	----	----	----
C8/R2/ B	25-Jul-2018	HK1840084-095	4.6	----	----	----	----	----
C8/R2/ B Duplicate	25-Jul-2018	HK1840084-096	5.8	----	----	----	----	----
C9/R2/ S	25-Jul-2018	HK1840084-097	2.8	----	----	----	----	----



Sub-Matrix: MARINE WATER

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
			EA/ED: Physical and Aggregate Properties	----	----	----	----	----
C9/R2/ S Duplicate	25-Jul-2018	HK1840084-098	2.7	----	----	----	----	----
C9/R2/ M	25-Jul-2018	HK1840084-099	2.6	----	----	----	----	----
C9/R2/ M Duplicate	25-Jul-2018	HK1840084-100	3.0	----	----	----	----	----
C9/R2/ B	25-Jul-2018	HK1840084-101	5.2	----	----	----	----	----
C9/R2/ B Duplicate	25-Jul-2018	HK1840084-102	5.2	----	----	----	----	----
C11/R2/ S	25-Jul-2018	HK1840084-103	2.6	----	----	----	----	----
C11/R2/ S Duplicate	25-Jul-2018	HK1840084-104	1.9	----	----	----	----	----
C11/R2/ M	25-Jul-2018	HK1840084-105	2.8	----	----	----	----	----
C11/R2/ M Duplicate	25-Jul-2018	HK1840084-106	3.4	----	----	----	----	----
C11/R2/ B	25-Jul-2018	HK1840084-107	3.9	----	----	----	----	----
C11/R2/ B Duplicate	25-Jul-2018	HK1840084-108	4.7	----	----	----	----	----
C13/R2/ S	25-Jul-2018	HK1840084-109	2.8	----	----	----	----	----
C13/R2/ S Duplicate	25-Jul-2018	HK1840084-110	1.7	----	----	----	----	----
C13/R2/ M	25-Jul-2018	HK1840084-111	2.5	----	----	----	----	----
C13/R2/ M Duplicate	25-Jul-2018	HK1840084-112	2.5	----	----	----	----	----
C13/R2/ B	25-Jul-2018	HK1840084-113	4.1	----	----	----	----	----
C13/R2/ B Duplicate	25-Jul-2018	HK1840084-114	2.8	----	----	----	----	----
G2/R2/ S	25-Jul-2018	HK1840084-115	5.3	----	----	----	----	----
G2/R2/ S Duplicate	25-Jul-2018	HK1840084-116	6.4	----	----	----	----	----
G2/R2/ M	25-Jul-2018	HK1840084-117	5.9	----	----	----	----	----
G2/R2/ M Duplicate	25-Jul-2018	HK1840084-118	7.0	----	----	----	----	----
G2/R2/ B	25-Jul-2018	HK1840084-119	6.6	----	----	----	----	----
G2/R2/ B Duplicate	25-Jul-2018	HK1840084-120	7.9	----	----	----	----	----
G3/R2/ S	25-Jul-2018	HK1840084-121	5.8	----	----	----	----	----
G3/R2/ S Duplicate	25-Jul-2018	HK1840084-122	5.6	----	----	----	----	----
G3/R2/ M	25-Jul-2018	HK1840084-123	6.2	----	----	----	----	----
G3/R2/ M Duplicate	25-Jul-2018	HK1840084-124	5.9	----	----	----	----	----
G3/R2/ B	25-Jul-2018	HK1840084-125	5.8	----	----	----	----	----
G3/R2/ B Duplicate	25-Jul-2018	HK1840084-126	6.4	----	----	----	----	----
M3/R2/ S	25-Jul-2018	HK1840084-127	3.8	----	----	----	----	----
M3/R2/ S Duplicate	25-Jul-2018	HK1840084-128	3.5	----	----	----	----	----
M3/R2/ M	25-Jul-2018	HK1840084-129	4.9	----	----	----	----	----
M3/R2/ M Duplicate	25-Jul-2018	HK1840084-130	3.7	----	----	----	----	----



Sub-Matrix: MARINE WATER

Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
M3/R2/ B	25-Jul-2018	HK1840084-131	5.8	----	----	----	----	----
M3/R2/ B Duplicate	25-Jul-2018	HK1840084-132	5.1	----	----	----	----	----
E2/R3/ S	25-Jul-2018	HK1840084-133	2.1	----	----	----	----	----
E2/R3/ S Duplicate	25-Jul-2018	HK1840084-134	1.4	----	----	----	----	----
E2/R3/ M	25-Jul-2018	HK1840084-135	2.4	----	----	----	----	----
E2/R3/ M Duplicate	25-Jul-2018	HK1840084-136	3.3	----	----	----	----	----
E2/R3/ B	25-Jul-2018	HK1840084-137	3.5	----	----	----	----	----
E2/R3/ B Duplicate	25-Jul-2018	HK1840084-138	2.9	----	----	----	----	----
F2/R3/ S	25-Jul-2018	HK1840084-139	1.9	----	----	----	----	----
F2/R3/ S Duplicate	25-Jul-2018	HK1840084-140	2.2	----	----	----	----	----
F2/R3/ M	25-Jul-2018	HK1840084-141	2.7	----	----	----	----	----
F2/R3/ M Duplicate	25-Jul-2018	HK1840084-142	2.0	----	----	----	----	----
F2/R3/ B	25-Jul-2018	HK1840084-143	3.3	----	----	----	----	----
F2/R3/ B Duplicate	25-Jul-2018	HK1840084-144	4.1	----	----	----	----	----
C6/R3/ S	25-Jul-2018	HK1840084-145	2.1	----	----	----	----	----
C6/R3/ S Duplicate	25-Jul-2018	HK1840084-146	2.0	----	----	----	----	----
C6/R3/ M	25-Jul-2018	HK1840084-147	3.2	----	----	----	----	----
C6/R3/ M Duplicate	25-Jul-2018	HK1840084-148	3.2	----	----	----	----	----
C6/R3/ B	25-Jul-2018	HK1840084-149	3.5	----	----	----	----	----
C6/R3/ B Duplicate	25-Jul-2018	HK1840084-150	3.2	----	----	----	----	----
C7/R3/ S	25-Jul-2018	HK1840084-151	3.3	----	----	----	----	----
C7/R3/ S Duplicate	25-Jul-2018	HK1840084-152	4.2	----	----	----	----	----
C7/R3/ M	25-Jul-2018	HK1840084-153	4.3	----	----	----	----	----
C7/R3/ M Duplicate	25-Jul-2018	HK1840084-154	3.7	----	----	----	----	----
C7/R3/ B	25-Jul-2018	HK1840084-155	5.7	----	----	----	----	----
C7/R3/ B Duplicate	25-Jul-2018	HK1840084-156	4.5	----	----	----	----	----
C8/R3/ S	25-Jul-2018	HK1840084-157	4.4	----	----	----	----	----
C8/R3/ S Duplicate	25-Jul-2018	HK1840084-158	3.9	----	----	----	----	----
C8/R3/ M	25-Jul-2018	HK1840084-159	5.2	----	----	----	----	----
C8/R3/ M Duplicate	25-Jul-2018	HK1840084-160	5.9	----	----	----	----	----
C8/R3/ B	25-Jul-2018	HK1840084-161	6.1	----	----	----	----	----
C8/R3/ B Duplicate	25-Jul-2018	HK1840084-162	4.6	----	----	----	----	----
C9/R3/ S	25-Jul-2018	HK1840084-163	3.5	----	----	----	----	----



Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
C9/R3/ S Duplicate	25-Jul-2018	HK1840084-164	4.1	----	----	----	----	----
C9/R3/ M	25-Jul-2018	HK1840084-165	3.7	----	----	----	----	----
C9/R3/ M Duplicate	25-Jul-2018	HK1840084-166	4.2	----	----	----	----	----
C9/R3/ B	25-Jul-2018	HK1840084-167	5.5	----	----	----	----	----
C9/R3/ B Duplicate	25-Jul-2018	HK1840084-168	6.1	----	----	----	----	----
C11/R3/ S	25-Jul-2018	HK1840084-169	4.4	----	----	----	----	----
C11/R3/ S Duplicate	25-Jul-2018	HK1840084-170	3.6	----	----	----	----	----
C11/R3/ M	25-Jul-2018	HK1840084-171	4.9	----	----	----	----	----
C11/R3/ M Duplicate	25-Jul-2018	HK1840084-172	5.1	----	----	----	----	----
C11/R3/ B	25-Jul-2018	HK1840084-173	4.5	----	----	----	----	----
C11/R3/ B Duplicate	25-Jul-2018	HK1840084-174	5.5	----	----	----	----	----
C13/R3/ S	25-Jul-2018	HK1840084-175	3.8	----	----	----	----	----
C13/R3/ S Duplicate	25-Jul-2018	HK1840084-176	3.4	----	----	----	----	----
C13/R3/ M	25-Jul-2018	HK1840084-177	4.5	----	----	----	----	----
C13/R3/ M Duplicate	25-Jul-2018	HK1840084-178	5.0	----	----	----	----	----
C13/R3/ B	25-Jul-2018	HK1840084-179	4.9	----	----	----	----	----
C13/R3/ B Duplicate	25-Jul-2018	HK1840084-180	5.0	----	----	----	----	----
G2/R3/ S	25-Jul-2018	HK1840084-181	2.2	----	----	----	----	----
G2/R3/ S Duplicate	25-Jul-2018	HK1840084-182	2.8	----	----	----	----	----
G2/R3/ M	25-Jul-2018	HK1840084-183	3.5	----	----	----	----	----
G2/R3/ M Duplicate	25-Jul-2018	HK1840084-184	2.4	----	----	----	----	----
G2/R3/ B	25-Jul-2018	HK1840084-185	2.7	----	----	----	----	----
G2/R3/ B Duplicate	25-Jul-2018	HK1840084-186	3.1	----	----	----	----	----
G3/R3/ S	25-Jul-2018	HK1840084-187	2.8	----	----	----	----	----
G3/R3/ S Duplicate	25-Jul-2018	HK1840084-188	2.3	----	----	----	----	----
G3/R3/ M	25-Jul-2018	HK1840084-189	3.5	----	----	----	----	----
G3/R3/ M Duplicate	25-Jul-2018	HK1840084-190	4.2	----	----	----	----	----
G3/R3/ B	25-Jul-2018	HK1840084-191	3.8	----	----	----	----	----
G3/R3/ B Duplicate	25-Jul-2018	HK1840084-192	3.7	----	----	----	----	----
M3/R3/ S	25-Jul-2018	HK1840084-193	1.3	----	----	----	----	----
M3/R3/ S Duplicate	25-Jul-2018	HK1840084-194	1.9	----	----	----	----	----
M3/R3/ M	25-Jul-2018	HK1840084-195	1.7	----	----	----	----	----
M3/R3/ M Duplicate	25-Jul-2018	HK1840084-196	2.0	----	----	----	----	----



Sub-Matrix: MARINE WATER			Compound	EA025: Suspended Solids (SS)	----	----	----	----
			LOR Unit	0.5 mg/L	----	----	----	----
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties	----	----	----	----	----
M3/R3/ B	25-Jul-2018	HK1840084-197	3.4	----	----	----	----	----
M3/R3/ B Duplicate	25-Jul-2018	HK1840084-198	2.3	----	----	----	----	----



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1830616)								
HK1840084-001	E2/R1/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	2.6	4.78
HK1840084-011	F2/R1/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	3.7	4.59
EA/ED: Physical and Aggregate Properties (QC Lot: 1830617)								
HK1840084-021	C7/R1/ M	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	3.6	4.03
HK1840084-031	C9/R1/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.9	1.7	9.79
EA/ED: Physical and Aggregate Properties (QC Lot: 1830618)								
HK1840084-041	C11/R1/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	3.8	6.45
HK1840084-051	G2/R1/ M	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.0	3.2	7.17
EA/ED: Physical and Aggregate Properties (QC Lot: 1830619)								
HK1840084-061	M3/R1/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	2.4	6.90
HK1840084-071	E2/R2/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.1	3.8	8.86
EA/ED: Physical and Aggregate Properties (QC Lot: 1830620)								
HK1840084-081	C6/R2/ M	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	2.7	0.00
HK1840084-091	C8/R2/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.8	3.0	6.84
EA/ED: Physical and Aggregate Properties (QC Lot: 1830621)								
HK1840084-101	C9/R2/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	5.3	2.87
HK1840084-111	C13/R2/ M	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.5	2.8	11.3
EA/ED: Physical and Aggregate Properties (QC Lot: 1830622)								
HK1840084-121	G3/R2/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	5.8	0.00
HK1840084-131	M3/R2/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.8	5.8	0.00
EA/ED: Physical and Aggregate Properties (QC Lot: 1830623)								
HK1840084-141	F2/R3/ M	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.7	2.6	3.77
HK1840084-151	C7/R3/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.3	3.4	0.00
EA/ED: Physical and Aggregate Properties (QC Lot: 1830624)								
HK1840084-161	C8/R3/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	6.2	0.00
HK1840084-171	C11/R3/ M	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.9	4.6	5.26
EA/ED: Physical and Aggregate Properties (QC Lot: 1830625)								
HK1840084-181	G2/R3/ S	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.2	2.5	12.9
HK1840084-191	G3/R3/ B	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	4.0	7.69

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

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit



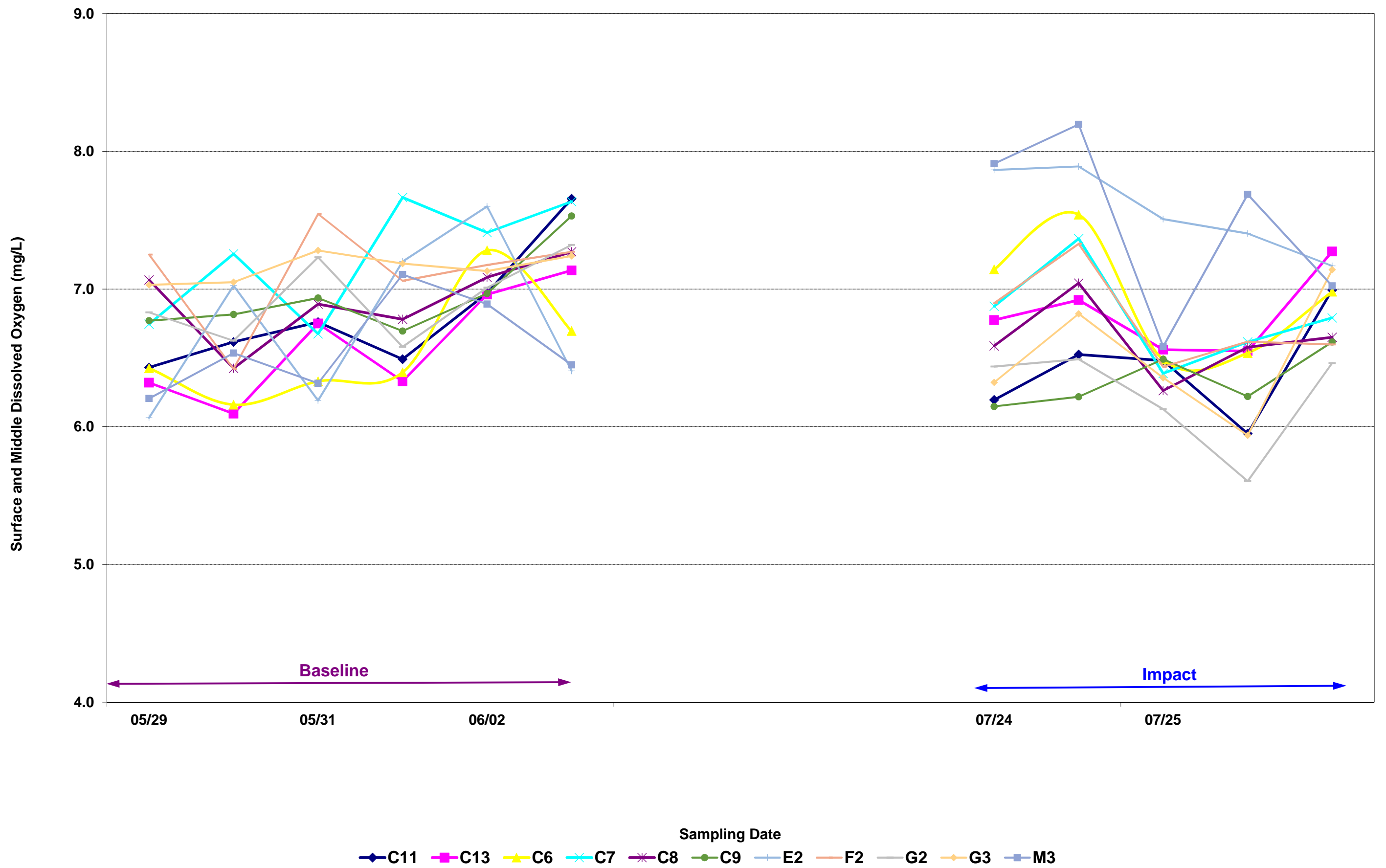
Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1830616)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830617)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830618)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830619)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	113	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830620)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830621)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	114	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830622)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830623)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	103	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830624)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	115	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1830625)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	114	----	85	115	----	----

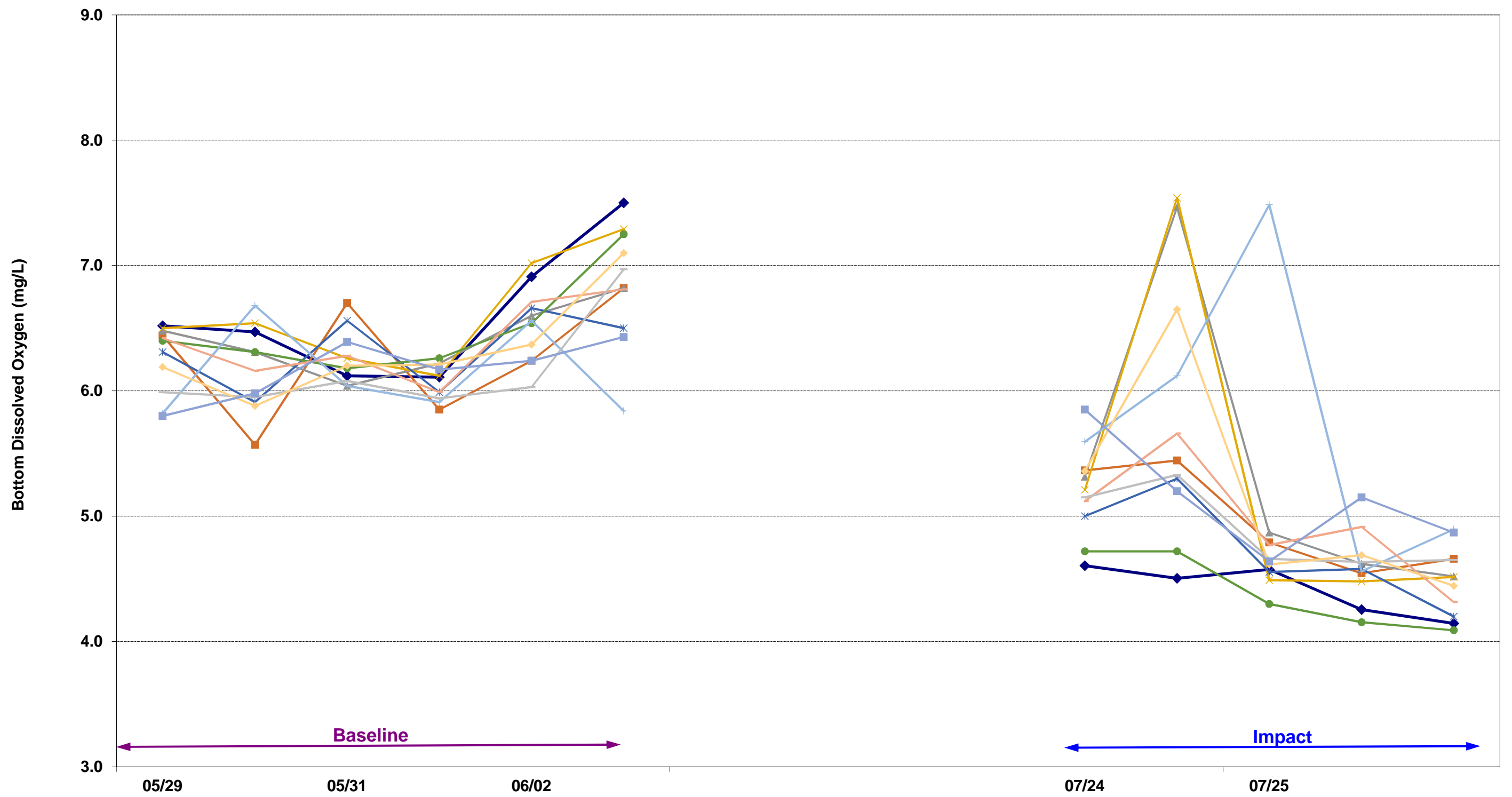
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

Annex C

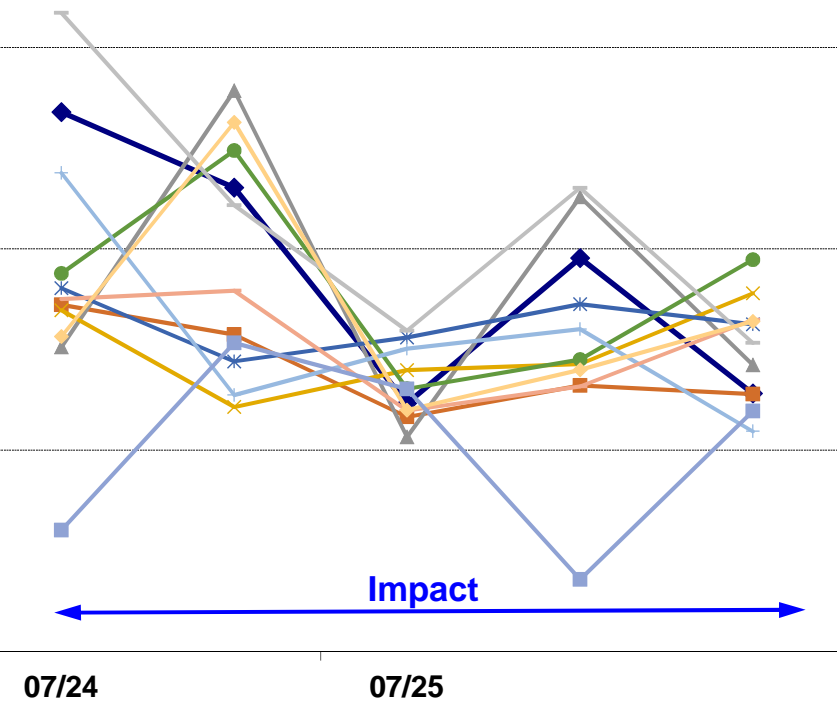
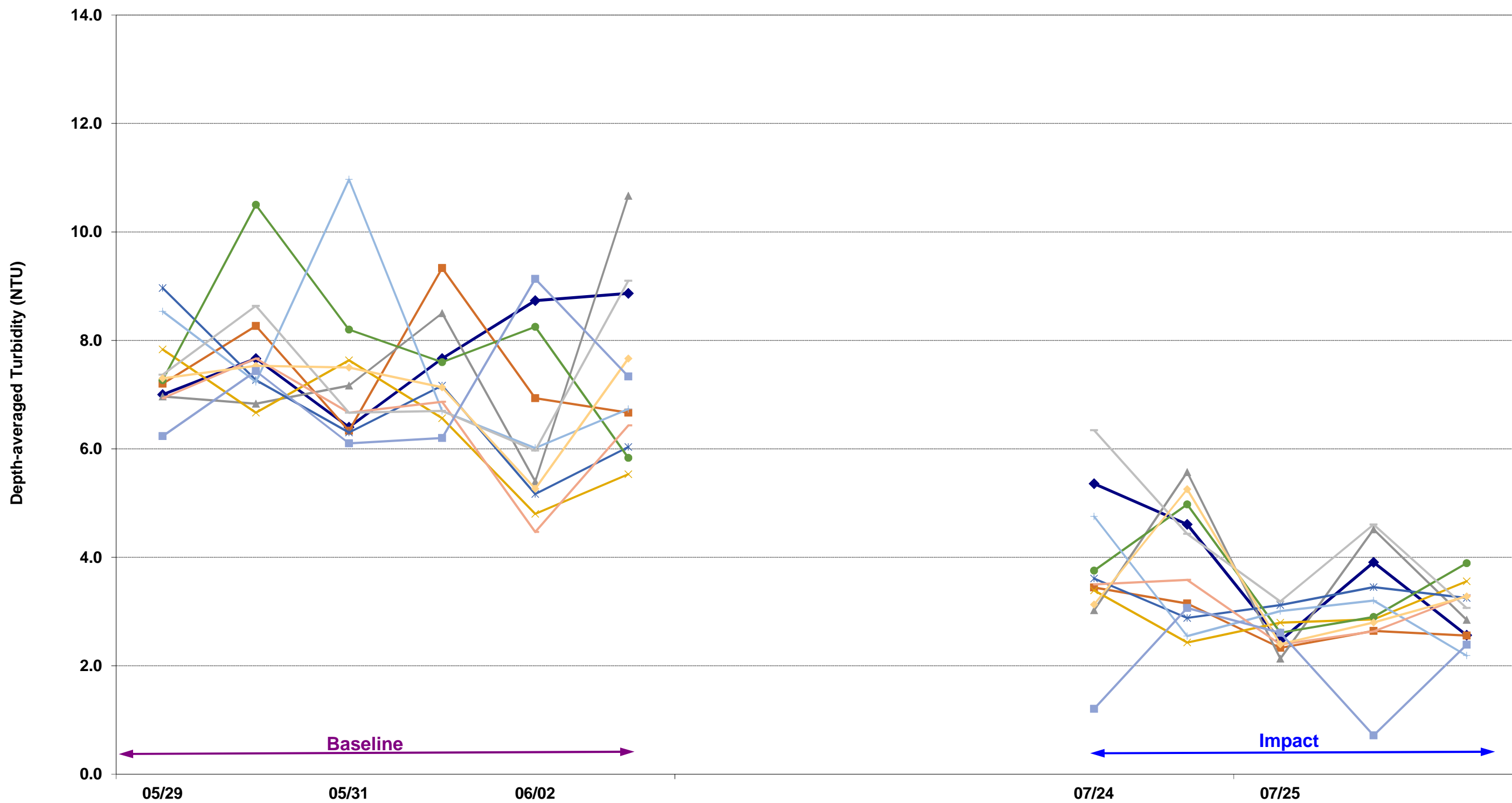
Impact Water Quality Monitoring Results





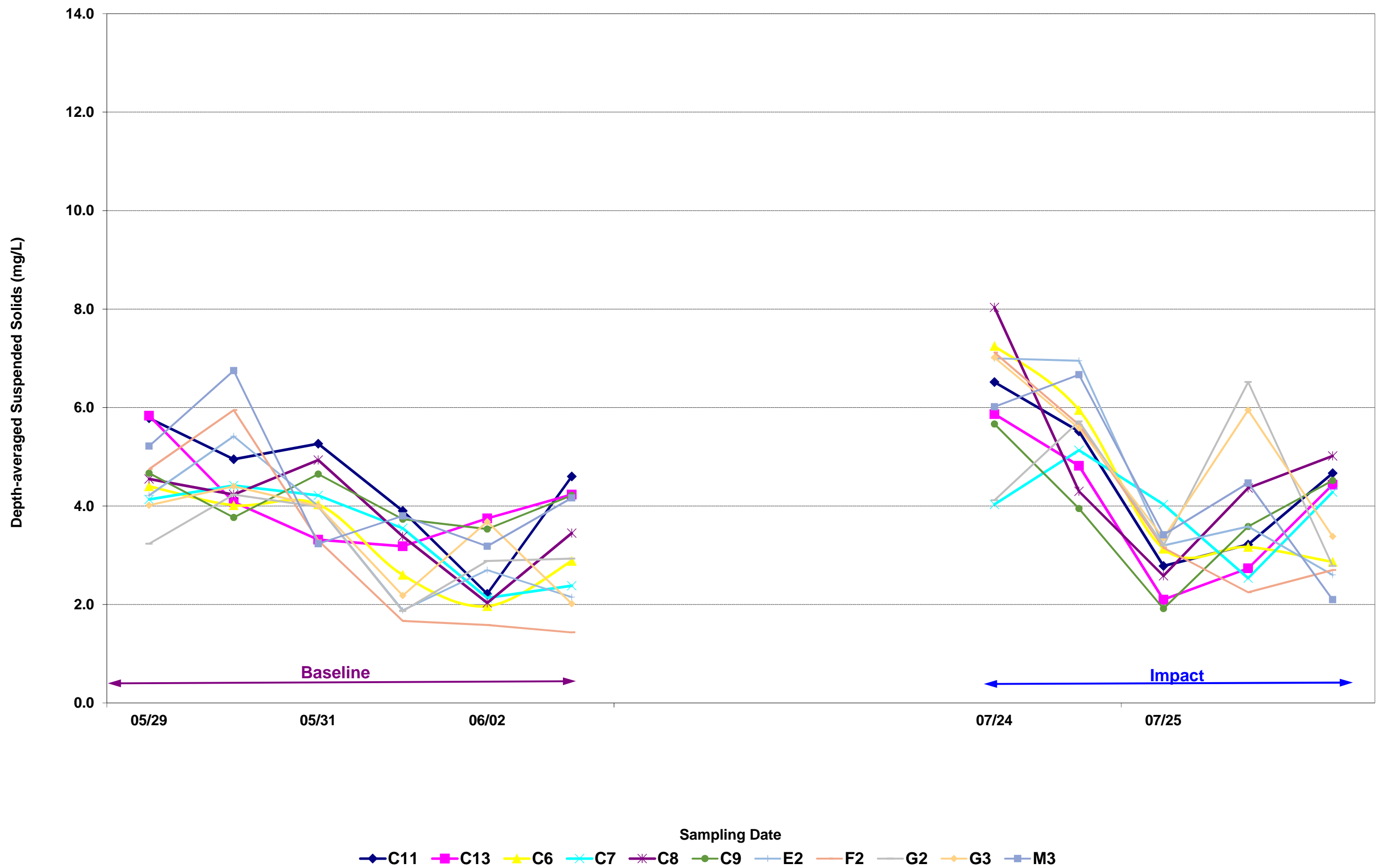
Sampling Date




























◆ C11 ■ C13 ▲ C6 ✕ C7 * C8 ● C9 + E2 — F2 — G2 ◆ G3 ■ M3





















































Sampling Date

C11 C13 C6 C7 C8 C9 E2 F2 G2 G3 M3






























					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
 Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold.  Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined.  Green dot to the left of data point indicates no exceedance.												
Date	Round	Station	Time	Level								
2018-Jul-24	Round 1	E2	10:10	Surface	5.3	128.8	8.33	0.8	 7.87	 5.60	 4.8	 7.00
2018-Jul-24	Round 1	E2	10:10	Surface	5.9	128.7	8.33	0.8				
2018-Jul-24	Round 1	E2	10:09	Middle	7.7	114.6	7.41	1.9				
2018-Jul-24	Round 1	E2	10:09	Middle	7.6	114.2	7.39	2.1				
2018-Jul-24	Round 1	E2	10:08	Bottom	7.5	86.4	5.59	11.4				
2018-Jul-24	Round 1	E2	10:08	Bottom	8.0	86.6	5.60	11.4				
2018-Jul-24	Round 1	F2	11:49	Surface	6.5	121.4	7.84	0.9	 6.90	 5.12	 3.5	 7.12
2018-Jul-24	Round 1	F2	11:49	Surface	6.0	121.3	7.84	0.9				
2018-Jul-24	Round 1	F2	11:48	Middle	7.3	92.1	5.96	3.7				
2018-Jul-24	Round 1	F2	11:48	Middle	7.4	91.8	5.95	3.8				
2018-Jul-24	Round 1	F2	11:47	Bottom	8.1	78.5	5.11	5.9				
2018-Jul-24	Round 1	F2	11:47	Bottom	7.4	78.8	5.13	5.8				
2018-Jul-24	Round 1	C6	11:02	Surface	6.4	122.0	7.89	0.8	 7.14	 5.32	 3.0	 7.25
2018-Jul-24	Round 1	C6	11:02	Surface	6.2	121.9	7.88	0.8				
2018-Jul-24	Round 1	C6	11:01	Middle	6.7	99.3	6.42	1.5				
2018-Jul-24	Round 1	C6	11:01	Middle	7.2	98.6	6.38	1.6				
2018-Jul-24	Round 1	C6	11:00	Bottom	8.8	82.1	5.31	6.8				
2018-Jul-24	Round 1	C6	11:00	Bottom	8.2	82.2	5.32	6.6				
2018-Jul-24	Round 1	C7	11:16	Surface	2.9	125.2	8.10	0.9	 6.88	 5.21	 3.4	 4.03
2018-Jul-24	Round 1	C7	11:16	Surface	3.7	125.1	8.09	0.9				
2018-Jul-24	Round 1	C7	11:15	Middle	3.4	87.4	5.66	2.3				
2018-Jul-24	Round 1	C7	11:15	Middle	4.0	87.4	5.65	2.5				
2018-Jul-24	Round 1	C7	11:14	Bottom	5.3	80.2	5.21	6.9				
2018-Jul-24	Round 1	C7	11:14	Bottom	4.9	80.3	5.21	6.9				
2018-Jul-24	Round 1	C8	12:58	Surface	5.1	120.9	7.83	0.8	 6.59	 5.00	 3.6	 8.03
2018-Jul-24	Round 1	C8	12:58	Surface	5.7	120.6	7.81	0.9				
2018-Jul-24	Round 1	C8	12:57	Middle	7.6	82.8	5.36	4.8				
2018-Jul-24	Round 1	C8	12:57	Middle	8.9	82.7	5.35	4.8				
2018-Jul-24	Round 1	C8	12:56	Bottom	10.2	77.1	5.01	5.2				
2018-Jul-24	Round 1	C8	12:56	Bottom	10.7	76.7	4.99	5.2				
2018-Jul-24	Round 1	C9	12:38	Surface	5.5	107.2	6.91	1.5	 6.15	 4.72	 3.8	 5.67
2018-Jul-24	Round 1	C9	12:38	Surface	4.9	105.8	6.82	1.5				
2018-Jul-24	Round 1	C9	12:37	Middle	5.2	84.1	5.43	4.0				
2018-Jul-24	Round 1	C9	12:37	Middle	5.6	84.1	5.43	4.0				
2018-Jul-24	Round 1	C9	12:36	Bottom	6.9	70.5	4.71	5.8				
2018-Jul-24	Round 1	C9	12:36	Bottom	5.9	71.0	4.73	5.8				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
 Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold.  Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined.  Green dot to the left of data point indicates no exceedance.												
Date	Round	Station	Time	Level								
2018-Jul-24	Round 1	C11	12:14	Surface	5.4	110.8	7.14	1.1	 6.20	 4.61	 5.4	 6.52
2018-Jul-24	Round 1	C11	12:14	Surface	6.1	110.5	7.12	1.1				
2018-Jul-24	Round 1	C11	12:13	Middle	5.9	81.4	5.27	3.0				
2018-Jul-24	Round 1	C11	12:13	Middle	6.4	81.1	5.25	3.0				
2018-Jul-24	Round 1	C11	12:12	Bottom	7.6	69.4	4.60	11.3				
2018-Jul-24	Round 1	C11	12:12	Bottom	7.7	69.5	4.61	12.8				
2018-Jul-24	Round 1	C13	10:44	Surface	5.3	127.5	8.25	1.1	 6.78	 5.37	 3.4	 <u>5.87</u>
2018-Jul-24	Round 1	C13	10:44	Surface	4.2	127.2	8.23	1.1				
2018-Jul-24	Round 1	C13	10:43	Middle	5.9	82.2	5.31	4.7				
2018-Jul-24	Round 1	C13	10:43	Middle	6.0	82.2	5.31	4.7				
2018-Jul-24	Round 1	C13	10:42	Bottom	7.3	82.8	5.36	4.6				
2018-Jul-24	Round 1	C13	10:42	Bottom	6.5	83.0	5.37	4.6				
2018-Jul-24	Round 1	G2	13:28	Surface	3.0	119.3	7.72	1.1	 6.44	 5.15	 6.3	 4.12
2018-Jul-24	Round 1	G2	13:28	Surface	3.3	119.0	7.71	1.2				
2018-Jul-24	Round 1	G2	13:26	Middle	4.2	79.9	5.16	8.0				
2018-Jul-24	Round 1	G2	13:26	Middle	4.6	79.9	5.16	8.1				
2018-Jul-24	Round 1	G2	13:24	Bottom	4.5	79.7	5.15	10.0				
2018-Jul-24	Round 1	G2	13:24	Bottom	5.1	79.8	5.15	9.9				
2018-Jul-24	Round 1	G3	13:07	Surface	6.5	109.4	7.05	1.6	 6.32	 5.36	 3.1	 7.02
2018-Jul-24	Round 1	G3	13:07	Surface	7.2	109.2	7.04	1.6				
2018-Jul-24	Round 1	G3	13:06	Middle	7.4	86.7	5.60	3.2				
2018-Jul-24	Round 1	G3	13:06	Middle	6.5	86.7	5.60	3.4				
2018-Jul-24	Round 1	G3	13:05	Bottom	7.4	82.9	5.36	4.6				
2018-Jul-24	Round 1	G3	13:05	Bottom	7.1	83.0	5.36	4.5				
2018-Jul-24	Round 1	M3	13:50	Surface	5.9	123.1	7.96	0.8	 7.91	 5.85	 1.2	 <u>6.02</u>
2018-Jul-24	Round 1	M3	13:50	Surface	4.6	123.2	7.97	0.8				
2018-Jul-24	Round 1	M3	13:49	Middle	6.4	124.1	8.05	1.0				
2018-Jul-24	Round 1	M3	13:49	Middle	5.8	118.0	7.66	1.1				
2018-Jul-24	Round 1	M3	13:48	Bottom	6.5	90.2	5.85	1.8				
2018-Jul-24	Round 1	M3	13:48	Bottom	6.9	90.2	5.85	1.8				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
 Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold.  Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined.  Green dot to the left of data point indicates no exceedance.												
Date	Round	Station	Time	Level								
2018-Jul-24	Round 2	E2	15:15	Surface	6.3	131.1	8.47	1.0	 7.89	 6.12	 2.5	 6.95
2018-Jul-24	Round 2	E2	15:15	Surface	6.6	130.9	8.46	1.1				
2018-Jul-24	Round 2	E2	15:14	Middle	7.4	113.0	7.32	1.8				
2018-Jul-24	Round 2	E2	15:14	Middle	6.7	112.9	7.31	1.9				
2018-Jul-24	Round 2	E2	15:13	Bottom	7.6	94.6	6.12	4.9				
2018-Jul-24	Round 2	E2	15:13	Bottom	7.1	94.6	6.12	4.6				
2018-Jul-24	Round 2	F2	17:01	Surface	5.0	119.8	7.73	5.2	 7.33	 <u>5.66</u>	 3.6	 5.65
2018-Jul-24	Round 2	F2	17:01	Surface	4.4	119.5	7.71	5.1				
2018-Jul-24	Round 2	F2	17:00	Middle	5.7	107.3	6.94	2.0				
2018-Jul-24	Round 2	F2	17:00	Middle	6.1	107.0	6.93	2.1				
2018-Jul-24	Round 2	F2	16:59	Bottom	5.8	87.4	5.66	3.5				
2018-Jul-24	Round 2	F2	16:59	Bottom	6.9	87.5	5.66	3.6				
2018-Jul-24	Round 2	C6	16:11	Surface	3.9	117.3	7.55	5.8	 7.54	 7.47	 5.6	 <u>5.95</u>
2018-Jul-24	Round 2	C6	16:11	Surface	4.8	117.3	7.55	6.0				
2018-Jul-24	Round 2	C6	16:10	Middle	5.7	117.1	7.53	5.5				
2018-Jul-24	Round 2	C6	16:10	Middle	6.2	117.1	7.53	5.4				
2018-Jul-24	Round 2	C6	16:09	Bottom	8.0	117.0	7.52	5.3				
2018-Jul-24	Round 2	C6	16:09	Bottom	7.1	115.4	7.41	5.4				
2018-Jul-24	Round 2	C7	16:26	Surface	4.4	114.2	7.33	1.1	 7.37	 7.54	 2.4	 5.13
2018-Jul-24	Round 2	C7	16:26	Surface	4.3	114.1	7.33	1.2				
2018-Jul-24	Round 2	C7	16:25	Middle	4.8	115.1	7.39	3.7				
2018-Jul-24	Round 2	C7	16:25	Middle	4.1	115.4	7.41	3.5				
2018-Jul-24	Round 2	C7	16:24	Bottom	6.5	117.4	7.54	2.5				
2018-Jul-24	Round 2	C7	16:24	Bottom	6.7	117.3	7.54	2.6				
2018-Jul-24	Round 2	C8	18:04	Surface	3.0	122.4	7.89	0.7	 7.04	 5.30	 2.9	 4.30
2018-Jul-24	Round 2	C8	18:04	Surface	3.0	122.2	7.88	0.7				
2018-Jul-24	Round 2	C8	18:03	Middle	4.1	95.9	6.20	2.2				
2018-Jul-24	Round 2	C8	18:03	Middle	4.7	95.8	6.20	2.2				
2018-Jul-24	Round 2	C8	18:02	Bottom	5.8	81.9	5.30	5.7				
2018-Jul-24	Round 2	C8	18:02	Bottom	5.2	82.0	5.30	5.8				
2018-Jul-24	Round 2	C9	17:48	Surface	3.5	111.5	7.18	1.4	 6.22	 4.72	 5.0	 3.95
2018-Jul-24	Round 2	C9	17:48	Surface	2.5	111.4	7.18	1.4				
2018-Jul-24	Round 2	C9	17:47	Middle	3.6	81.5	5.26	4.8				
2018-Jul-24	Round 2	C9	17:47	Middle	4.0	81.3	5.25	4.9				
2018-Jul-24	Round 2	C9	17:46	Bottom	4.7	70.0	4.70	8.7				
2018-Jul-24	Round 2	C9	17:46	Bottom	5.4	70.6	4.74	8.6				




























					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
<div> <div></div> Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold. <div></div> Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined. <div></div> Green dot to the left of data point indicates no exceedance. </div>												
Date	Round	Station	Time	Level								
2018-Jul-24	Round 2	C11	17:24	Surface	4.9	114.5	7.39	1.3	<div></div> 6.53	<div></div> 4.51	<div></div> 4.6	<div></div> 5.52
2018-Jul-24	Round 2	C11	17:24	Surface	5.0	114.2	7.37	1.3				
2018-Jul-24	Round 2	C11	17:23	Middle	5.0	87.6	5.66	2.1				
2018-Jul-24	Round 2	C11	17:23	Middle	5.3	87.9	5.68	2.0				
2018-Jul-24	Round 2	C11	17:22	Bottom	6.6	67.9	4.50	10.4				
2018-Jul-24	Round 2	C11	17:22	Bottom	6.3	68.0	4.51	10.5				
2018-Jul-24	Round 2	C13	15:52	Surface	3.7	131.8	8.51	1.0	<div></div> 6.92	<div></div> 5.45	<div></div> 3.1	<div></div> 4.82
2018-Jul-24	Round 2	C13	15:52	Surface	3.5	131.4	8.49	1.2				
2018-Jul-24	Round 2	C13	15:51	Middle	3.9	82.6	5.34	4.7				
2018-Jul-24	Round 2	C13	15:51	Middle	4.6	82.6	5.34	4.8				
2018-Jul-24	Round 2	C13	15:50	Bottom	6.0	84.2	5.44	3.6				
2018-Jul-24	Round 2	C13	15:50	Bottom	7.2	84.4	5.45	3.7				
2018-Jul-24	Round 2	G2	18:36	Surface	5.3	117.0	7.54	2.0	<div></div> 6.49	<div></div> 5.33	<div></div> 4.4	<div></div> <u>5.72</u>
2018-Jul-24	Round 2	G2	18:36	Surface	5.3	116.9	7.53	2.0				
2018-Jul-24	Round 2	G2	18:34	Middle	6.0	84.1	5.44	4.2				
2018-Jul-24	Round 2	G2	18:34	Middle	5.0	84.2	5.45	4.2				
2018-Jul-24	Round 2	G2	18:32	Bottom	5.8	82.4	5.32	7.1				
2018-Jul-24	Round 2	G2	18:32	Bottom	6.9	82.7	5.34	7.1				
2018-Jul-24	Round 2	G3	18:15	Surface	3.2	105.9	6.81	5.7	<div></div> 6.82	<div></div> 6.65	<div></div> 5.3	<div></div> 5.58
2018-Jul-24	Round 2	G3	18:15	Surface	4.0	105.9	6.80	5.8				
2018-Jul-24	Round 2	G3	18:14	Middle	5.9	106.5	6.84	6.4				
2018-Jul-24	Round 2	G3	18:14	Middle	6.6	106.3	6.83	6.5				
2018-Jul-24	Round 2	G3	18:13	Bottom	7.4	104.0	6.66	3.6				
2018-Jul-24	Round 2	G3	18:13	Bottom	6.4	103.7	6.64	3.6				
2018-Jul-24	Round 2	M3	18:49	Surface	5.9	143.8	9.35	1.5	<div></div> 8.20	<div></div> 5.20	<div></div> 3.1	<div></div> 6.67
2018-Jul-24	Round 2	M3	18:49	Surface	6.0	143.3	9.32	1.5				
2018-Jul-24	Round 2	M3	18:48	Middle	7.2	108.7	7.06	1.2				
2018-Jul-24	Round 2	M3	18:48	Middle	5.9	108.5	7.05	1.2				
2018-Jul-24	Round 2	M3	18:47	Bottom	7.2	80.3	5.19	6.9				
2018-Jul-24	Round 2	M3	18:47	Bottom	7.8	80.6	5.21	6.2				
























					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
 Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold.  Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined.  Green dot to the left of data point indicates no exceedance.												
Date	Round	Station	Time	Level								
2018-Jul-25	Round 1	E2	08:15	Surface	2.7	115.1	7.52	2.3	 7.51	 7.49	 3.0	 3.20
2018-Jul-25	Round 1	E2	08:15	Surface	3.3	115.1	7.51	2.3				
2018-Jul-25	Round 1	E2	08:14	Middle	3.6	114.6	7.50	2.7				
2018-Jul-25	Round 1	E2	08:14	Middle	2.8	114.6	7.50	2.9				
2018-Jul-25	Round 1	E2	08:13	Bottom	3.1	114.5	7.49	3.9				
2018-Jul-25	Round 1	E2	08:13	Bottom	3.7	114.5	7.48	3.9				
2018-Jul-25	Round 1	F2	09:49	Surface	2.3	117.4	7.64	1.3	 6.44	 4.77	 2.4	 3.15
2018-Jul-25	Round 1	F2	09:49	Surface	1.9	117.1	7.61	1.2				
2018-Jul-25	Round 1	F2	09:48	Middle	2.9	81.1	5.25	2.1				
2018-Jul-25	Round 1	F2	09:48	Middle	3.2	81.0	5.24	2.1				
2018-Jul-25	Round 1	F2	09:47	Bottom	3.9	72.7	4.77	3.8				
2018-Jul-25	Round 1	F2	09:47	Bottom	4.7	72.7	4.77	3.8				
2018-Jul-25	Round 1	C6	08:37	Surface	2.6	120.1	7.82	0.7	 6.49	 4.87	 2.1	 3.13
2018-Jul-25	Round 1	C6	08:37	Surface	1.5	120.1	7.82	0.7				
2018-Jul-25	Round 1	C6	08:36	Middle	2.8	79.7	5.16	2.1				
2018-Jul-25	Round 1	C6	08:36	Middle	4.0	79.6	5.15	2.1				
2018-Jul-25	Round 1	C6	08:35	Bottom	3.5	73.5	4.86	3.6				
2018-Jul-25	Round 1	C6	08:35	Bottom	4.4	73.8	4.88	3.6				
2018-Jul-25	Round 1	C7	08:42	Surface	3.9	117.3	7.64	0.6	 6.39	 4.49	 2.8	 4.03
2018-Jul-25	Round 1	C7	08:42	Surface	3.7	117.1	7.63	0.6				
2018-Jul-25	Round 1	C7	08:41	Middle	3.8	79.5	5.14	2.2				
2018-Jul-25	Round 1	C7	08:41	Middle	4.3	79.4	5.14	2.2				
2018-Jul-25	Round 1	C7	08:40	Bottom	3.9	66.9	4.49	5.7				
2018-Jul-25	Round 1	C7	08:40	Bottom	4.6	67.0	4.49	5.7				
2018-Jul-25	Round 1	C8	08:25	Surface	2.6	117.8	7.68	0.5	 6.26	 4.56	 3.1	 2.58
2018-Jul-25	Round 1	C8	08:25	Surface	2.1	117.6	7.67	0.5				
2018-Jul-25	Round 1	C8	08:24	Middle	2.3	74.8	4.85	3.9				
2018-Jul-25	Round 1	C8	08:24	Middle	3.0	74.7	4.85	4.0				
2018-Jul-25	Round 1	C8	08:23	Bottom	2.9	68.5	4.55	4.9				
2018-Jul-25	Round 1	C8	08:23	Bottom	2.6	68.6	4.56	4.9				
2018-Jul-25	Round 1	C9	09:03	Surface	1.9	122.8	7.97	0.8	 6.49	 4.30	 2.6	 1.92
2018-Jul-25	Round 1	C9	09:03	Surface	1.2	122.6	7.95	0.8				
2018-Jul-25	Round 1	C9	09:02	Middle	1.9	77.4	5.02	2.8				
2018-Jul-25	Round 1	C9	09:02	Middle	2.1	77.3	5.02	2.8				
2018-Jul-25	Round 1	C9	09:01	Bottom	2.1	63.1	4.29	4.3				
2018-Jul-25	Round 1	C9	09:01	Bottom	2.3	63.2	4.31	4.3				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
<div> <div></div> Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold. <div></div> Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined. <div></div> Green dot to the left of data point indicates no exceedance. </div>												
Date	Round	Station	Time	Level								
2018-Jul-25	Round 1	C11	09:20	Surface	2.0	119.4	7.75	0.8	<div></div> 6.48	<div></div> 4.58	<div></div> 2.5	<div></div> 2.78
2018-Jul-25	Round 1	C11	09:20	Surface	2.2	119.3	7.74	0.8				
2018-Jul-25	Round 1	C11	09:19	Middle	2.5	80.7	5.22	1.9				
2018-Jul-25	Round 1	C11	09:19	Middle	2.8	80.6	5.21	1.9				
2018-Jul-25	Round 1	C11	09:18	Bottom	4.0	67.7	4.57	4.7				
2018-Jul-25	Round 1	C11	09:18	Bottom	3.2	67.9	4.58	4.7				
2018-Jul-25	Round 1	C13	08:49	Surface	2.0	119.6	7.81	0.7	<div></div> 6.56	<div></div> 4.79	<div></div> 2.3	<div></div> 2.10
2018-Jul-25	Round 1	C13	08:49	Surface	2.0	119.6	7.81	0.7				
2018-Jul-25	Round 1	C13	08:48	Middle	2.0	82.2	5.31	1.8				
2018-Jul-25	Round 1	C13	08:48	Middle	2.1	82.1	5.31	2.0				
2018-Jul-25	Round 1	C13	08:47	Bottom	2.2	73.0	4.78	4.5				
2018-Jul-25	Round 1	C13	08:47	Bottom	2.3	73.2	4.80	4.4				
2018-Jul-25	Round 1	G2	09:58	Surface	2.1	115.5	7.53	0.7	<div></div> 6.13	<div></div> 4.66	<div></div> 3.2	<div></div> 3.20
2018-Jul-25	Round 1	G2	09:58	Surface	2.2	115.1	7.50	0.7				
2018-Jul-25	Round 1	G2	09:56	Middle	3.0	73.1	4.74	4.7				
2018-Jul-25	Round 1	G2	09:56	Middle	3.6	73.1	4.74	4.7				
2018-Jul-25	Round 1	G2	09:54	Bottom	4.7	70.8	4.66	4.2				
2018-Jul-25	Round 1	G2	09:54	Bottom	3.6	70.9	4.66	4.2				
2018-Jul-25	Round 1	G3	10:12	Surface	2.3	115.8	7.50	0.8	<div></div> 6.36	<div></div> 4.62	<div></div> 2.4	<div></div> 3.35
2018-Jul-25	Round 1	G3	10:12	Surface	3.0	115.7	7.49	0.7				
2018-Jul-25	Round 1	G3	10:11	Middle	3.2	80.5	5.22	2.2				
2018-Jul-25	Round 1	G3	10:11	Middle	3.8	80.4	5.21	2.2				
2018-Jul-25	Round 1	G3	10:10	Bottom	3.8	69.5	4.61	4.2				
2018-Jul-25	Round 1	G3	10:10	Bottom	4.0	69.6	4.62	4.2				
2018-Jul-25	Round 1	M3	10:31	Surface	2.6	123.3	8.04	0.6	<div></div> 6.58	<div></div> 4.64	<div></div> 2.6	<div></div> 3.42
2018-Jul-25	Round 1	M3	10:31	Surface	3.2	123.0	8.02	0.6				
2018-Jul-25	Round 1	M3	10:30	Middle	3.6	79.4	5.14	0.7				
2018-Jul-25	Round 1	M3	10:30	Middle	3.3	79.3	5.13	0.7				
2018-Jul-25	Round 1	M3	10:29	Bottom	3.8	71.2	4.64	6.5				
2018-Jul-25	Round 1	M3	10:29	Bottom	4.0	71.3	4.64	6.5				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
<div> <div></div> Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold. <div></div> Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined. <div></div> Green dot to the left of data point indicates no exceedance. </div>												
Date	Round	Station	Time	Level								
2018-Jul-25	Round 2	E2	10:56	Surface	2.8	123.6	8.04	0.8	<div></div> 7.40	<div></div> 4.56	<div></div> 3.2	<div></div> 3.58
2018-Jul-25	Round 2	E2	10:56	Surface	3.6	123.4	8.03	0.8				
2018-Jul-25	Round 2	E2	10:55	Middle	4.2	104.7	6.78	1.1				
2018-Jul-25	Round 2	E2	10:55	Middle	2.5	104.5	6.76	1.1				
2018-Jul-25	Round 2	E2	10:54	Bottom	4.1	69.3	4.56	7.7				
2018-Jul-25	Round 2	E2	10:54	Bottom	4.3	69.3	4.56	7.7				
2018-Jul-25	Round 2	F2	12:24	Surface	2.4	124.2	8.07	0.8	<div></div> 6.62	<div></div> 4.92	<div></div> 2.6	<div></div> 2.25
2018-Jul-25	Round 2	F2	12:24	Surface	1.5	124.0	8.06	0.7				
2018-Jul-25	Round 2	F2	12:23	Middle	1.8	79.4	5.17	3.2				
2018-Jul-25	Round 2	F2	12:23	Middle	2.7	79.3	5.17	3.2				
2018-Jul-25	Round 2	F2	12:22	Bottom	2.6	75.0	4.92	4.0				
2018-Jul-25	Round 2	F2	12:22	Bottom	2.5	74.9	4.91	4.0				
2018-Jul-25	Round 2	C6	11:14	Surface	2.1	124.6	8.07	0.6	<div></div> 6.54	<div></div> 4.62	<div></div> 4.5	<div></div> 3.17
2018-Jul-25	Round 2	C6	11:14	Surface	2.0	124.4	8.07	0.6				
2018-Jul-25	Round 2	C6	11:13	Middle	2.6	77.2	5.00	1.9				
2018-Jul-25	Round 2	C6	11:13	Middle	3.4	77.2	5.00	1.9				
2018-Jul-25	Round 2	C6	11:12	Bottom	3.9	69.7	4.62	11.1				
2018-Jul-25	Round 2	C6	11:12	Bottom	5.0	69.8	4.62	11.0				
2018-Jul-25	Round 2	C7	11:20	Surface	2.2	126.4	8.23	0.8	<div></div> 6.62	<div></div> 4.48	<div></div> 2.9	<div></div> 2.53
2018-Jul-25	Round 2	C7	11:20	Surface	2.2	126.1	8.21	0.8				
2018-Jul-25	Round 2	C7	11:19	Middle	2.3	77.4	5.01	2.0				
2018-Jul-25	Round 2	C7	11:19	Middle	2.6	77.3	5.01	2.0				
2018-Jul-25	Round 2	C7	11:18	Bottom	3.2	66.9	4.48	5.8				
2018-Jul-25	Round 2	C7	11:18	Bottom	2.7	67.0	4.48	5.8				
2018-Jul-25	Round 2	C8	11:22	Surface	2.8	128.3	8.34	0.7	<div></div> 6.58	<div></div> 4.58	<div></div> 3.5	<div></div> 4.37
2018-Jul-25	Round 2	C8	11:22	Surface	3.1	128.2	8.33	0.7				
2018-Jul-25	Round 2	C8	11:21	Middle	5.2	74.3	4.82	4.3				
2018-Jul-25	Round 2	C8	11:21	Middle	4.7	74.2	4.82	4.4				
2018-Jul-25	Round 2	C8	11:20	Bottom	4.6	69.5	4.58	5.2				
2018-Jul-25	Round 2	C8	11:20	Bottom	5.8	69.5	4.58	5.4				
2018-Jul-25	Round 2	C9	11:42	Surface	2.8	114.2	7.38	0.6	<div></div> 6.22	<div></div> 4.16	<div></div> 2.9	<div></div> 3.58
2018-Jul-25	Round 2	C9	11:42	Surface	2.7	113.9	7.36	0.6				
2018-Jul-25	Round 2	C9	11:41	Middle	2.6	78.5	5.07	3.2				
2018-Jul-25	Round 2	C9	11:41	Middle	3.0	78.5	5.07	3.2				
2018-Jul-25	Round 2	C9	11:40	Bottom	5.2	60.2	4.15	4.9				
2018-Jul-25	Round 2	C9	11:40	Bottom	5.2	60.3	4.16	4.9				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
<div> <div></div> Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold. <div></div> Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined. <div></div> Green dot to the left of data point indicates no exceedance. </div>												
Date	Round	Station	Time	Level								
2018-Jul-25	Round 2	C11	11:55	Surface	2.6	112.2	7.23	0.9	<div></div> 5.95	<div></div> 4.26	<div></div> 3.9	<div></div> 3.22
2018-Jul-25	Round 2	C11	11:55	Surface	1.9	111.7	7.21	0.9				
2018-Jul-25	Round 2	C11	11:54	Middle	2.8	71.6	4.69	3.2				
2018-Jul-25	Round 2	C11	11:54	Middle	3.4	71.2	4.67	3.2				
2018-Jul-25	Round 2	C11	11:53	Bottom	3.9	62.3	4.25	7.7				
2018-Jul-25	Round 2	C11	11:53	Bottom	4.7	62.5	4.26	7.6				
2018-Jul-25	Round 2	C13	11:27	Surface	2.8	123.4	8.03	0.7	<div></div> 6.55	<div></div> 4.55	<div></div> 2.6	<div></div> 2.73
2018-Jul-25	Round 2	C13	11:27	Surface	1.7	123.4	8.03	0.7				
2018-Jul-25	Round 2	C13	11:26	Middle	2.5	78.4	5.07	2.6				
2018-Jul-25	Round 2	C13	11:26	Middle	2.5	78.4	5.07	2.6				
2018-Jul-25	Round 2	C13	11:25	Bottom	4.1	68.7	4.54	4.6				
2018-Jul-25	Round 2	C13	11:25	Bottom	2.8	68.9	4.55	4.6				
2018-Jul-25	Round 2	G2	12:33	Surface	5.3	98.7	6.39	2.1	<div></div> <u>5.61</u>	<div></div> 4.64	<div></div> 4.6	<div></div> 6.52
2018-Jul-25	Round 2	G2	12:33	Surface	6.4	98.6	6.38	2.1				
2018-Jul-25	Round 2	G2	12:31	Middle	5.9	74.6	4.83	4.7				
2018-Jul-25	Round 2	G2	12:31	Middle	7.0	74.5	4.82	4.7				
2018-Jul-25	Round 2	G2	12:29	Bottom	6.6	70.9	4.63	7.0				
2018-Jul-25	Round 2	G2	12:29	Bottom	7.9	71.0	4.64	7.0				
2018-Jul-25	Round 2	G3	12:43	Surface	5.8	109.2	7.04	1.1	<div></div> 5.94	<div></div> 4.69	<div></div> 2.8	<div></div> <u>5.95</u>
2018-Jul-25	Round 2	G3	12:43	Surface	5.6	109.1	7.03	1.1				
2018-Jul-25	Round 2	G3	12:42	Middle	6.2	74.4	4.84	3.2				
2018-Jul-25	Round 2	G3	12:42	Middle	5.9	74.4	4.84	3.2				
2018-Jul-25	Round 2	G3	12:41	Bottom	5.8	71.6	4.69	4.1				
2018-Jul-25	Round 2	G3	12:41	Bottom	6.4	71.7	4.69	4.2				
2018-Jul-25	Round 2	M3	13:04	Surface	3.8	128.8	8.31	0.6	<div></div> 7.69	<div></div> 5.15	<div></div> 0.7	<div></div> 4.47
2018-Jul-25	Round 2	M3	13:04	Surface	3.5	128.8	8.31	0.6				
2018-Jul-25	Round 2	M3	13:03	Middle	4.9	108.9	7.07	0.9				
2018-Jul-25	Round 2	M3	13:03	Middle	3.7	108.7	7.06	0.8				
2018-Jul-25	Round 2	M3	13:02	Bottom	5.8	79.6	5.16	0.7				
2018-Jul-25	Round 2	M3	13:02	Bottom	5.1	79.3	5.14	0.7				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
 Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold.  Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined.  Green dot to the left of data point indicates no exceedance.												
Date	Round	Station	Time	Level								
2018-Jul-25	Round 3	E2	15:03	Surface	2.1	123.8	8.00	0.9	 7.17	 4.90	 2.2	 2.60
2018-Jul-25	Round 3	E2	15:03	Surface	1.4	123.6	7.99	0.9				
2018-Jul-25	Round 3	E2	15:02	Middle	2.4	98.1	6.35	1.2				
2018-Jul-25	Round 3	E2	15:02	Middle	3.3	97.8	6.33	1.2				
2018-Jul-25	Round 3	E2	15:01	Bottom	3.5	75.4	4.89	4.4				
2018-Jul-25	Round 3	E2	15:01	Bottom	2.9	75.6	4.90	4.4				
2018-Jul-25	Round 3	F2	16:22	Surface	1.9	118.6	7.64	0.8	 6.60	 4.32	 3.3	 2.70
2018-Jul-25	Round 3	F2	16:22	Surface	2.2	118.2	7.61	0.8				
2018-Jul-25	Round 3	F2	16:21	Middle	2.7	86.0	5.57	1.7				
2018-Jul-25	Round 3	F2	16:21	Middle	2.0	86.0	5.57	1.7				
2018-Jul-25	Round 3	F2	16:20	Bottom	3.3	64.4	4.31	7.3				
2018-Jul-25	Round 3	F2	16:20	Bottom	4.1	64.5	4.32	7.4				
2018-Jul-25	Round 3	C6	15:20	Surface	2.1	129.8	8.38	0.9	 6.98	 4.52	 2.8	 2.87
2018-Jul-25	Round 3	C6	15:20	Surface	2.0	129.6	8.37	0.8				
2018-Jul-25	Round 3	C6	15:19	Middle	3.2	86.3	5.59	1.6				
2018-Jul-25	Round 3	C6	15:19	Middle	3.2	86.1	5.58	1.7				
2018-Jul-25	Round 3	C6	15:18	Bottom	3.5	68.4	4.52	6.0				
2018-Jul-25	Round 3	C6	15:18	Bottom	3.2	68.3	4.52	6.1				
2018-Jul-25	Round 3	C7	15:24	Surface	3.3	129.7	8.38	0.8	 6.79	 4.52	 3.6	 4.28
2018-Jul-25	Round 3	C7	15:24	Surface	4.2	129.1	8.34	0.8				
2018-Jul-25	Round 3	C7	15:23	Middle	4.3	80.6	5.22	1.7				
2018-Jul-25	Round 3	C7	15:23	Middle	3.7	80.5	5.22	1.7				
2018-Jul-25	Round 3	C7	15:22	Bottom	5.7	68.2	4.51	8.2				
2018-Jul-25	Round 3	C7	15:22	Bottom	4.5	68.3	4.52	8.1				
2018-Jul-25	Round 3	C8	15:07	Surface	4.4	125.7	8.11	1.0	 6.65	 4.20	 3.3	 5.02
2018-Jul-25	Round 3	C8	15:07	Surface	3.9	125.4	8.09	1.0				
2018-Jul-25	Round 3	C8	15:06	Middle	5.2	80.3	5.20	1.8				
2018-Jul-25	Round 3	C8	15:06	Middle	5.9	80.3	5.20	1.8				
2018-Jul-25	Round 3	C8	15:05	Bottom	6.1	61.9	4.20	7.1				
2018-Jul-25	Round 3	C8	15:05	Bottom	4.6	62.0	4.20	7.0				
2018-Jul-25	Round 3	C9	15:42	Surface	3.5	128.7	8.27	0.7	 6.62	 4.09	 3.9	 4.52
2018-Jul-25	Round 3	C9	15:42	Surface	4.1	128.4	8.26	0.7				
2018-Jul-25	Round 3	C9	15:41	Middle	3.7	76.8	4.97	3.6				
2018-Jul-25	Round 3	C9	15:41	Middle	4.2	76.7	4.96	3.7				
2018-Jul-25	Round 3	C9	15:40	Bottom	5.5	59.1	4.09	7.3				
2018-Jul-25	Round 3	C9	15:40	Bottom	6.1	59.2	4.09	7.3				

					TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth- Averaged SS (mg/L)
Action Level									<u><5.76</u>	<u><5.84</u>	<u>>9.28</u>	<u>>5.69</u>
Limit Level									<5.56	<5.64	>10.77	>6.23
 Red dot to the left of data point indicates trigger of Limit Level. Values also shown in bold.  Yellow dot to the left of data point indicates trigger of Action Level. Values also underlined.  Green dot to the left of data point indicates no exceedance.												
Date	Round	Station	Time	Level								
2018-Jul-25	Round 3	C11	15:59	Surface	4.4	127.6	8.21	0.7	 6.99	 4.15	 2.6	 4.67
2018-Jul-25	Round 3	C11	15:59	Surface	3.6	127.3	8.19	0.7				
2018-Jul-25	Round 3	C11	15:58	Middle	4.9	89.4	5.79	1.2				
2018-Jul-25	Round 3	C11	15:58	Middle	5.1	89.2	5.78	1.2				
2018-Jul-25	Round 3	C11	15:57	Bottom	4.5	60.9	4.14	5.8				
2018-Jul-25	Round 3	C11	15:57	Bottom	5.5	61.1	4.15	5.7				
2018-Jul-25	Round 3	C13	15:30	Surface	3.8	138.7	8.91	1.1	 7.27	 4.66	 2.6	 4.43
2018-Jul-25	Round 3	C13	15:30	Surface	3.4	138.5	8.90	1.1				
2018-Jul-25	Round 3	C13	15:29	Middle	4.5	87.3	5.65	1.7				
2018-Jul-25	Round 3	C13	15:29	Middle	5.0	87.0	5.63	1.7				
2018-Jul-25	Round 3	C13	15:28	Bottom	4.9	71.1	4.66	4.8				
2018-Jul-25	Round 3	C13	15:28	Bottom	5.0	71.1	4.66	4.9				
2018-Jul-25	Round 3	G2	16:30	Surface	2.2	121.1	7.81	1.3	 6.46	 4.65	 3.1	 2.78
2018-Jul-25	Round 3	G2	16:30	Surface	2.8	120.9	7.79	1.2				
2018-Jul-25	Round 3	G2	16:28	Middle	3.5	79.1	5.13	3.0				
2018-Jul-25	Round 3	G2	16:28	Middle	2.4	79.0	5.12	3.0				
2018-Jul-25	Round 3	G2	16:26	Bottom	2.7	71.3	4.65	4.9				
2018-Jul-25	Round 3	G2	16:26	Bottom	3.1	71.4	4.65	5.0				
2018-Jul-25	Round 3	G3	16:40	Surface	2.8	142.3	9.16	1.1	 7.14	 4.45	 3.3	 3.38
2018-Jul-25	Round 3	G3	16:40	Surface	2.3	142.5	9.17	1.1				
2018-Jul-25	Round 3	G3	16:39	Middle	3.5	79.1	5.12	2.6				
2018-Jul-25	Round 3	G3	16:39	Middle	4.2	79.0	5.11	2.6				
2018-Jul-25	Round 3	G3	16:38	Bottom	3.8	66.4	4.44	6.2				
2018-Jul-25	Round 3	G3	16:38	Bottom	3.7	66.5	4.45	6.2				
2018-Jul-25	Round 3	M3	16:59	Surface	1.3	134.4	8.66	0.8	 7.02	 4.87	 2.4	 2.10
2018-Jul-25	Round 3	M3	16:59	Surface	1.9	133.9	8.63	0.8				
2018-Jul-25	Round 3	M3	16:58	Middle	1.7	83.2	5.40	1.0				
2018-Jul-25	Round 3	M3	16:58	Middle	2.0	83.1	5.40	1.4				
2018-Jul-25	Round 3	M3	16:57	Bottom	3.4	75.3	4.87	5.1				
2018-Jul-25	Round 3	M3	16:57	Bottom	2.3	75.3	4.87	5.2				

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