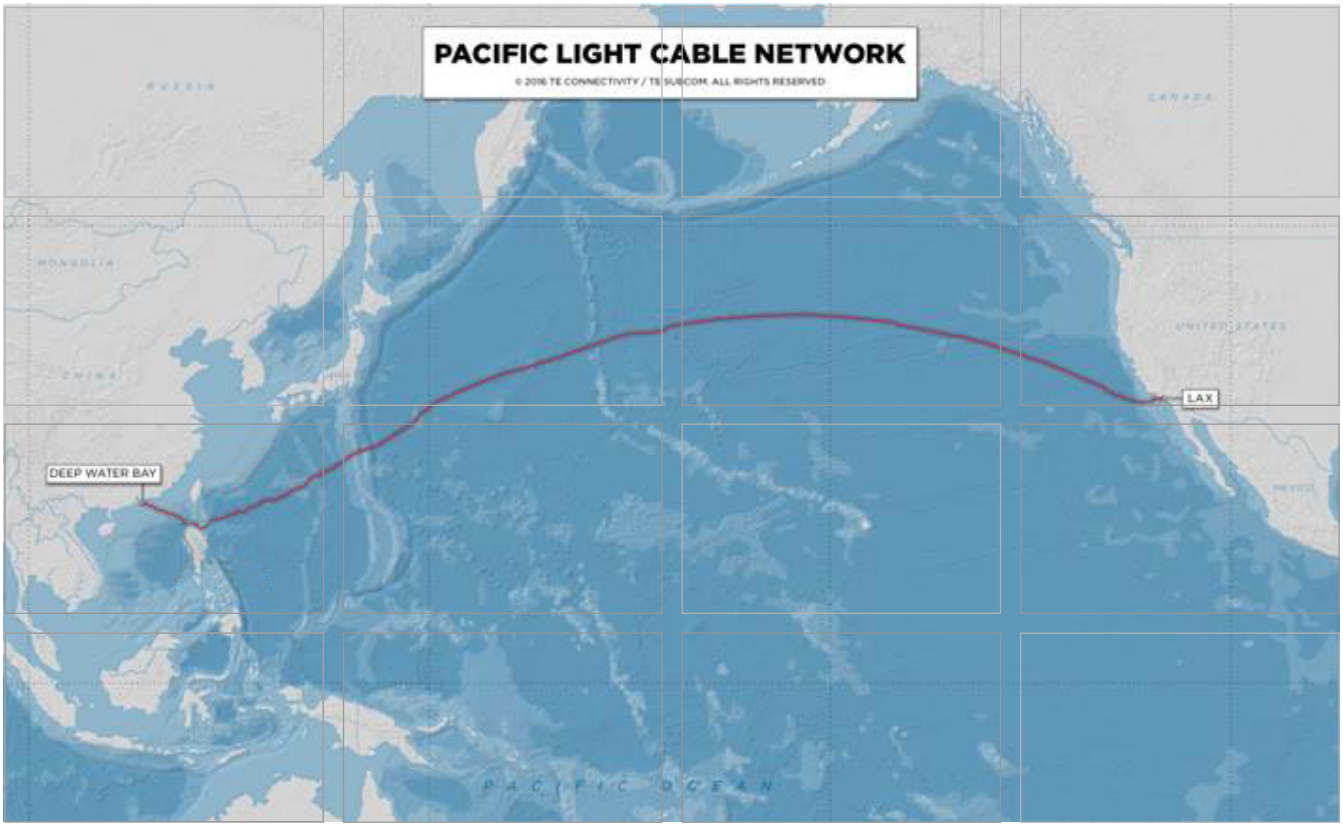

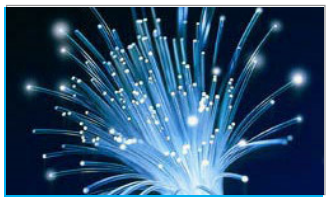

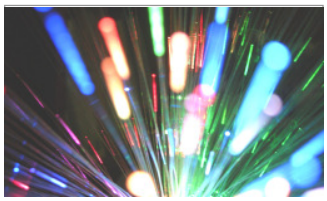

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Pacific Light Cable Network (PLCN) - Deep Water Bay (EP-539/2017)

Phase 1 – Post-Project Water Quality Impact Monitoring Report

May 2018

Environmental Resources Management
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ERM

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

Phase 1 – Post-Project Water Quality Impact Monitoring Report

ERM Document Code: 0448409.doc

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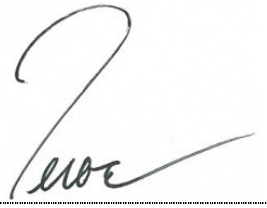
Client: PCCW Global (HK) Limited	GMS No: 0448409
Summary: This report presents the monitoring requirements, methodologies and results of the post-project water quality monitoring in accordance with the Project Profile (PP-550/2017).	Date: 08 May 2018 Approved by :  *Terence Fong* *Partner*

Revision	Description	By	Checked	Approved	Date
0	Phase 1 – Post-Project Water Quality Impact Monitoring Report	NN	FZino	TFONG	08 May 18

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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 1 – Post-Project Water Quality Monitoring Report (Zone A)
Date of Report:	11 May 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*

G.2.3.1 "Post Project Monitoring will comprise sampling on three occasions (days) within three weeks after completion of the cable installation/ repair operation works at the same stations as Baseline Monitoring, during mid-flood and mid-ebb tides. The interval between two sets of monitoring shall not be less than 36 hours."

G2.5 The reports to be provided shall include:
- Baseline Monitoring Report;
- Weekly Impact Monitoring Reports; and
- Post Project Monitoring Report.

The Baseline Monitoring Report shall be provided no later than two weeks before the cable installation/ repair operation work and the report should be submitted to EPD for agreement on the Action/Limit Levels.

EP Condition: Conditions No. 3.2 – 3.3

Content: *Water Quality Monitoring*

3.2 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:

(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 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):

(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.

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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: 11 May 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: 14 May 2018

CONTENTS

LIST OF TABLES

LIST OF ANNEXES

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)** – tentatively scheduled to commence Jun/Jul 2018.

Phase 1 of the Project commenced with land works at Deep Water on 6 March 2018 (no water jetting work and no WQ impact monitoring requirement). Land works completed on 24 March 2018. Near shore marine diver jetting works within silt curtain (requiring WQ impact monitoring) then started on 24 March 2018 and was completed on 4 April.

This *Phase 1 - Post Project Water Quality Monitoring Report (Zone A)* presents the EM&A post project monitoring conducted from 19 to 24 April 2018 in accordance with the *Annex G* of *the Project Profile* and the requirements under EP-539/2017.

Water Quality

Post-Project Water Quality Monitoring was carried out on three occasions (days) at all monitoring stations within Zone A and took place within 3 weeks after the completion of the Phase 1 cable installation works within Zone A and the intervals between two sets of monitoring were not less than 36 hours. The water quality sampling was undertaken within 2 hours before and 2 hours after mid-flood and mid-ebb tidal state on each sampling occasion.

Post project data showed larger DO range (and on average lower values), lower turbidity and higher SS records compared to the baseline data. The overall water quality at the impact stations in Zone A was found to be similar to that at the control stations and given the control stations are far away (about 4 km) from the Phase 1 work area and water quality at these stations could not have been affected by the Project, it is concluded that the overall changes in DO, turbidity and SS levels during the post-project monitoring period at all designated stations, including the control stations, are likely to represent natural variation and were not due to the Project.

Conclusion

Phase 1 of this Project had negligible impact on water quality.

1 INTRODUCTION

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 Post-Project Water Quality Monitoring Report for Phase 1 (Land Cable Installation and Shore-End Cable Installation) of the Project and summarises the post-project water quality (WQ) monitoring results for the post-project water quality monitoring from 19 to 24 April 2018. The post-project water quality monitoring results are used to compare with the Baseline and Impact monitoring results in order to investigate any potential impact of the Project works on the WQ in the vicinity of the Project at Deep Water Bay.

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 post-project water quality monitoring for Phase 1 of the Project.

Section 5 : ***Conclusions***
Presents the key findings of the post-project water quality monitoring results for Phase 1 of the Project.

2 PROJECT INFORMATION

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.

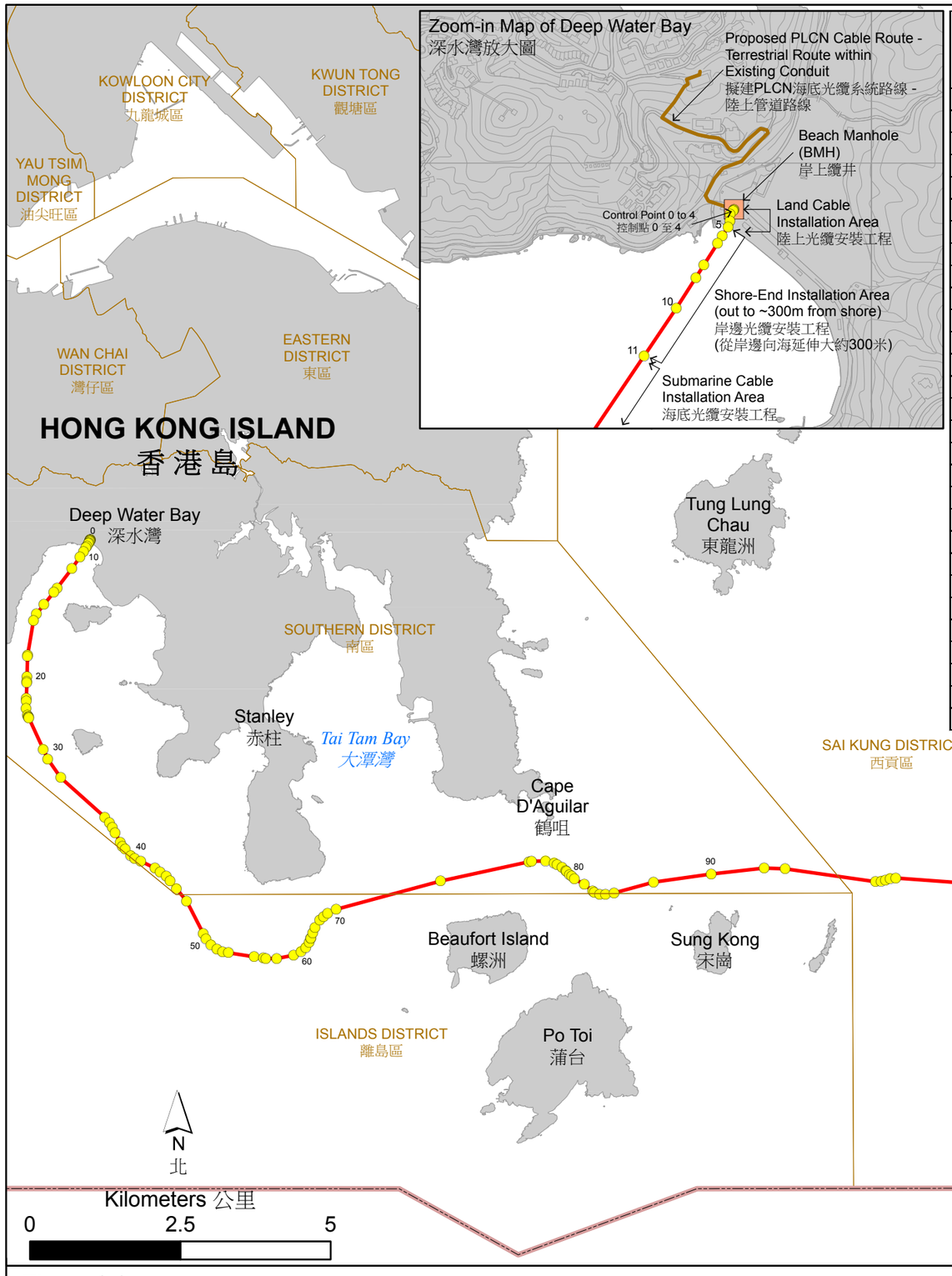
The proposed cable will land at an existing Beach Man Hole location at Deep Water Bay (DWB) in Hong Kong and the full route of the proposed PLCN submarine cable system is depicted in *Figure 1.1*. It should be noted that DWB is currently the landing site for a number of submarine cables.

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, impact monitoring as well as post-project monitoring. Action and Limit Levels are derived from the baseline data.

Cable installation for this Project is 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 shown 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;



Working Limit Control Point 工作工程控制點	Coordinate System (HK Grid 1980) 香港1980方格網坐標		Chainage Distance 測量距離	Working Limit Control Point 工作工程控制點	Coordinate System (HK Grid 1980) 香港1980方格網坐標		Chainage Distance 測量距離	Working Limit Control Point 工作工程控制點	Coordinate System (HK Grid 1980) 香港1980方格網坐標		Chainage Distance 測量距離	Working Limit Control Point 工作工程控制點	Coordinate System (HK Grid 1980) 香港1980方格網坐標		Chainage Distance 測量距離
	X	Y	(km)		X	Y	(km)		X	Y	(km)		X	Y	(km)
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1	837230.01	811907	0.002	30	836447.47	808423	3.870	59	840610.31	805001	9.677	88	845939.37	806035	15.674
2	837229.32	811906	0.003	31	836522.74	808260	4.051	60	840735.25	805062	9.816	89	846597.69	806215	16.358
3	837223.82	811899	0.012	32	836738.08	807951	4.428	61	840812.92	805128	9.919	90	847556.1	806350	17.328
4	837223.31	811887	0.025	33	837470.89	807294	5.415	62	840870.82	805211	10.020	91	848437.53	806449	18.217
5	837219.53	811875	0.037	34	837548.41	807207	5.531	63	840896.58	805280	10.094	92	848785.74	806437	18.566
6	837208.19	811857	0.058	35	837595.16	807121	5.629	64	840897.78	805283	10.097	93	850288.9	806222	20.089
7	837198.74	811842	0.076	36	837641.74	807036	5.727	65	840931.1	805373	10.193	94	850382.39	806229	20.183
8	837172.11	811801	0.126	37	837729.57	806874	5.912	66	840965.45	805465	10.291	95	850454.55	806251	20.258
9	837156.48	811776	0.155	38	837763.44	806812	5.983	67	841046.88	805583	10.435	96	850531.36	806275	20.339
10	837118.34	811716	0.226	39	837809.33	806760	6.052	68	841110.98	805638	10.520	97	850624.33	806284	20.433
11	837055.12	811622	0.339	40	837900.6	806658	6.189	69	841177.64	805695	10.608	98	858725.33	805691	28.576
12	836923.7	811428	0.575	41	837970.38	806612	6.273	70	841319.93	805764	10.767	99	858880.21	805680	28.731
13	836678.36	811108	0.979	42	838071.27	806562	6.386	71	843055.3	806234	12.569	100	863088.39	805889	32.955
14	836622.35	811035	1.071	43	838305.54	806448	6.647	72	844523.23	806553	14.075	101	865032.94	805816	34.906
15	836459.3	810831	1.333	44	838393.37	806384	6.756	73	844570.83	806563	14.124	102	865321.36	805805	35.195
16	836331.99	810671	1.538	45	838490.83	806313	6.877	74	844800.96	806568	14.355	103	865441.32	805812	35.316
17	836284.22	810566	1.654	46	838557.18	806233	6.981	75	844945	806533	14.503	104	865562.24	805851	35.443
18	836186.45	809988	2.242	47	838659.97	806108	7.143	76	844991.07	806508	14.556	105	865660.44	805911	35.559
19	836186.11	809974	2.255	48	838831.53	805900	7.414	77	845074.62	806463	14.651	106	865735.92	805991	35.668
20	836176.14	809626	2.604	49	839107.83	805363	8.020	78	845137.9	806403	14.739	107	865786.28	806083	35.773
21	836174.08	809556	2.675	50	839152.88	805275	8.118	79	845149.6	806392	14.755	108	865843.48	806187	35.893
22	836173.56	809535	2.696	51	839234.71	805173	8.249	80	845200.84	806343	14.826	109	865913.47	806261	35.995
23	836165.83	809267	2.964	52	839335.1	805096	8.376	81	845234.72	806311	14.873	110	866000.33	806315	36.098
24	836164.62	809227	3.005	53	839429.13	805055	8.479	82	845279.43	806269	14.934	111	866111.29	806350	36.214
25	836161.02	809105	3.127	54	839527.45	805040	8.579	83	845447.74	806176	15.127	112	867081.39	806403	37.188
26	836185.59	808992	3.242	55	839955.45	804974	9.013	84	845585.99	806066	15.304	113	869751.57	806549	39.869
27	836198.13	808965	3.273	56	840106.71	804951	9.166	85	845613.5	806045	15.339	114	869840.61	806545	39.958
28	836202.77	808955	3.284	57	840148.99	804945	9.209	86	845700.31	806015	15.431				

Legend 圖例

- Working Limit Control Point 工作限制工程點
- Proposed PLCN Cable Route 擬建PLCN海底光纜系統路線
- Boundary of HKSAR 香港特別行政區邊界

Figure 1.1
圖 1.1

Proposed PLCN Cable Route
擬建PLCN海底光纜系統路線

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Date: 29/3/2017

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- 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.

- Note that all works in April were done outside 300 m from the seaward boundary of the beach, as required in the Environmental Permit [EP-539/2017] conditions.

- **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).
  - Marine installation works using jetting technique is tentatively scheduled to commence Jun/Jul 2018.

Given the commencement dates for Phase 1 and Phase 2 cable installation and jetting works are currently scheduled to start at least two months apart, the baseline data (and corresponding Action and Limit Levels) are being presented in separate reports for each Phase.

This report presents the Project's post project monitoring data for *Phase 1 Land Cable Installation and Shore-End Cable Installation* (Only Zone A as show in *Figure 2.2*).

2.2 SITE DESCRIPTION

The cable installation runs from Deep Water Bay out through southeast Hong Kong offshore waters. The alignment of the cable is illustrated in *Figure 2.1*.

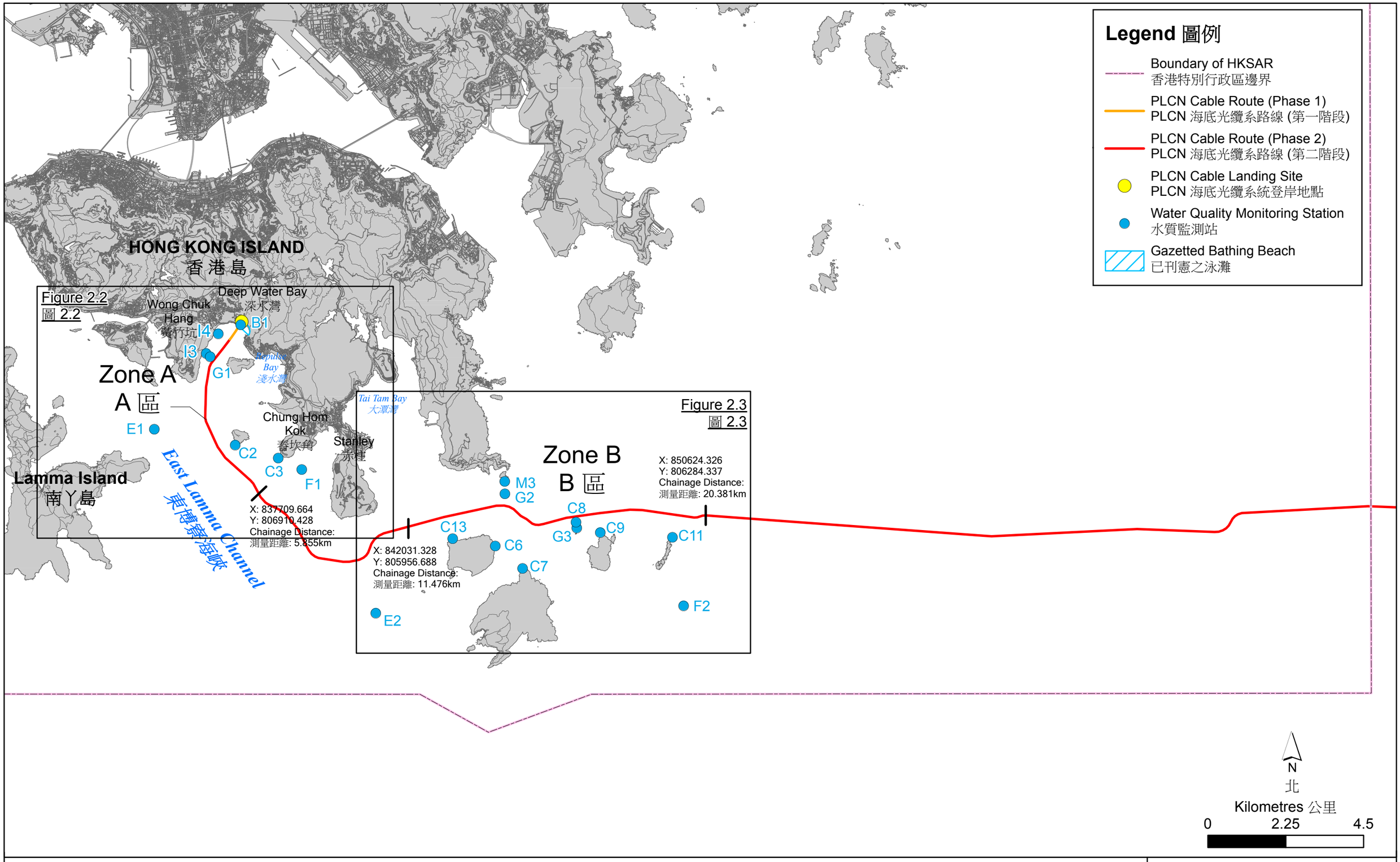

Figure 2.1
圖 2.1

Water Quality Monitoring Stations - Overview
水質監測圖 - 概覽

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Date: 14/3/2018

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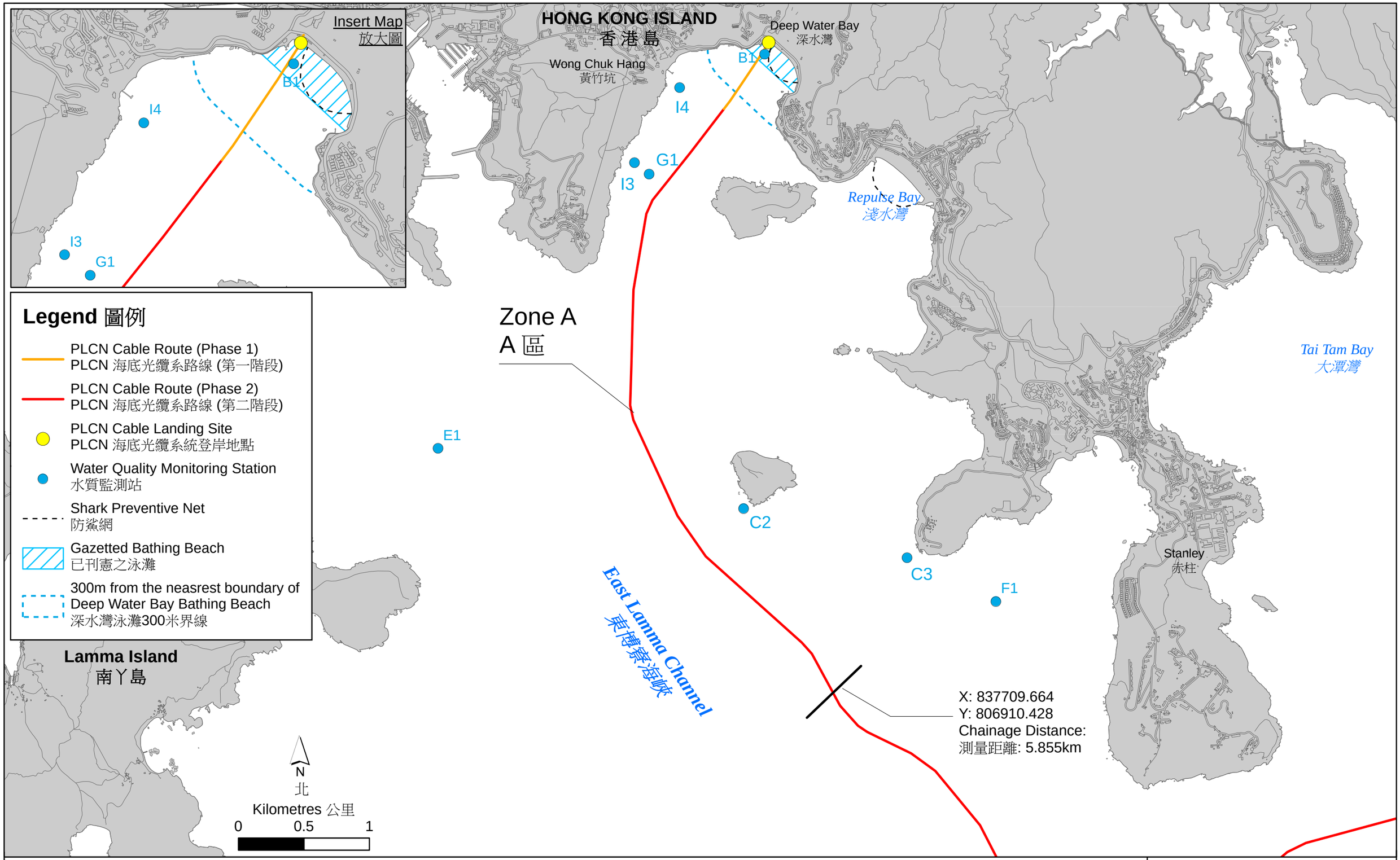

Figure 2.2
圖 2.2

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

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Date: 14/3/2018

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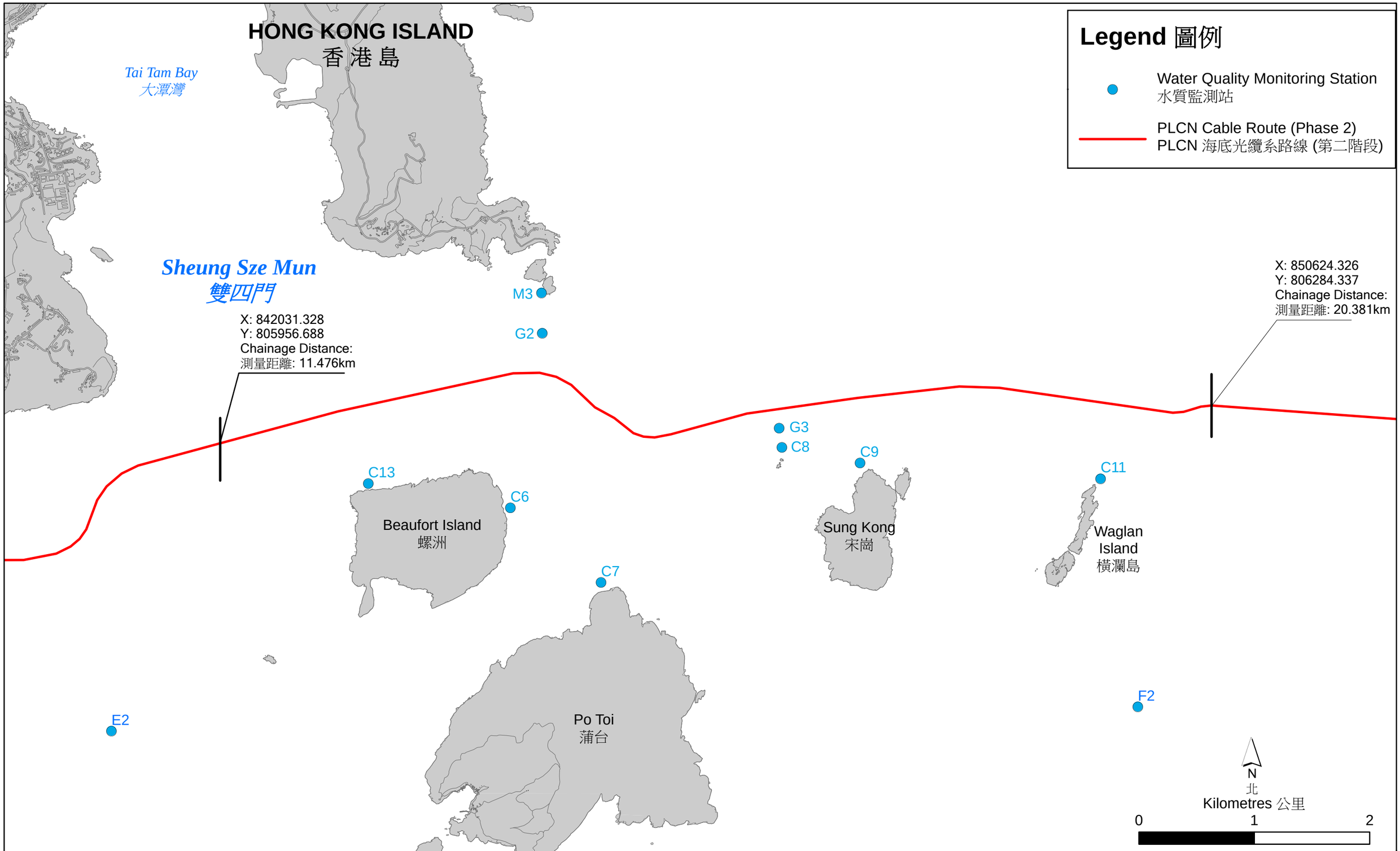

Figure 2.3
圖 2.3

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

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Date: 14/3/2018

Environmental Resources Management

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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/aspd_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/aep/ep5392017_content.html	Throughout construction period for Phase 1 works in Zone A	Approved by EPD on 15 March 2018
Phase 1 – 1st Weekly WQ Impact Monitoring Report	Available at http://www.epd.gov.hk/eia/english/register/aep/ep5392017_content.html	n/a	Submitted to EPD 18 April 2018
Phase 1 – 2nd Weekly WQ Impact Monitoring Report	Available at http://www.epd.gov.hk/eia/english/register/aep/ep5392017_content.html	n/a	Submitted to EPD 20 April 2018

3.1 MONITORING LOCATIONS

In accordance with the *Annex G* of *the Project Profile,* since Phase 1 cable installation works were only conducted within Zone A , post project water quality sampling was undertaken at Zone A stations only (situated around the cable laying works at Deep Water Bay). The locations of the sampling stations within Zone A are shown in *Figures 2.1* and *2.2*. The co-ordinates of Zone A and the monitoring stations are listed in *Table 3.1* and *Table 3.2*, respectively.

Table 3.1 Co-ordinates of Starting Points and Ending Points for Zones A (HK Grid)

Zone	Starting Point		Ending Point	
	Easting	Northing	Easting	Northing
A	Start from shore end.		837709.664	806910.428

Table 3.2 Co-ordinates of Post-Project Monitoring Stations (HK Grid)

Station	Nature	Corresponding Control Station	Easting	Northing
B1	Impact Station (Adjacent to Deep Water Bay Beach)	E1, F1	837188	811783
I3	Impact Station (Ocean Park's Main Seawater Intake)	E1, F1	836195	810956
I4	Impact Station (Ocean Park's Training Yard Seawater Intake)	E1, F1	836539	811529
C2	Impact Station (Coral sites along the coast of Round Island)	E1, F1	847579	805787
C3	Impact Station (Coral sites along the coast of Chung Hom Kok)	E1, F1	838275	807941
G1	Gradient Station (Between Ocean Park's Main Seawater Intake and cable alignment)	E1, F1	836306	810867
E1	Control Station for Zone A in Ebb Tide	-	834695	808775
F1	Control Station for Zone A in Flood Tide	-	838953	807607

3.2 SAMPLING AND TESTING METHODOLOGY

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 Equipment

Table 3.3 summaries the equipment used for the water quality impact monitoring.

Table 3.3 Equipment used during Post-Project 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)

3.2.3 Monitoring Frequency and Timing

Post-Project Water Quality Monitoring was carried out on three occasions (days) at all monitoring stations within Zone A (B1, I3, I4, C2, C3, G1, E1 and F1) took place within 3 weeks after the completion of the Phase 1 cable installation works within Zone A as shown in *Figure 2.1* and the intervals between two sets of monitoring were not less than 36 hours. The water quality sampling was undertaken within 2 hours before and 2 hours after mid-flood and mid-ebb tidal state on each sampling occasion.

Reference was made to the predicted tides at Waglan Island, which is the tidal station nearest to the Project Site, published on the website of the Hong Kong Observatory [(1)]. Based on the predicted tidal levels at Waglan Island, the post-project water quality monitoring was conducted between 19th and 24th April 2018, following the schedule presented in *Annex A*.

3.2.4 Sampling/ Testing Protocol

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 B*), and will subsequently

(1) Hong Kong Observatory (2017) http://www.hko.gov.hk/tide/predtide.htm?s=WAG [Accessed in April 2018]

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.

3.2.5 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 C*).

3.2.6 Sampling Depths & Replication

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)

For *in situ* measurements, duplicate readings were made at each water depth at each station. Duplicate water samples were collected at each water depth at each station.

4 *IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES*

Mitigation measures for water quality control were recommended in the Project Profile (PP-550/2017) and Environmental Permit (EP-539/2017). The Contractor implemented the following select and relevant mitigation measures during Phase 1 cable installation works:

- All diver hand jetting works were conducted within silt curtain works area to provide protection to surrounding water from sediment; and
- Water quality monitoring was carried out to verify that the project works were not resulting in any impacts to water quality, marine ecology and fisheries.

A total of three monitoring events were carried out between 19 and 24 April 2018 at Zone A, covering all work days in the period. All monitoring events at all designated monitoring stations within Zone A were performed on schedule, ie on 19, 21 and 24 April 2018, as detailed in *Section 3.2.3*, following completion of the Project Phase 1 works on 4 April 2018.

The monitoring data post-project water quality monitoring within Zone A are presented in *Annex D* and graphical presentations in *Figures D1 -D4* compare the data against baseline and impact monitoring data for Phase 1 in Zone A.

The levels of DO measured during the post project monitoring period had a larger range than that of the baseline and impact monitoring period, with higher maximum and lower minimum depth-averaged DO levels compared with that of the baseline and impact monitoring period. Accordingly, exceedances in DO action and limit levels were recorded, including at both control stations E1 and F1 in all three survey days (for both tides). Measured DO levels at controls stations E1 and F1 (both about 4 km from works area of Phase 1) were similar to that at impact monitoring stations, indicating water quality variations during post-project monitoring was due to widespread natural variation and not isolated incidents due to the previous Project works. Detailed analysis during impact monitoring also showed similar results at the control and impact assessment stations. Therefore, although there is some difference between the baseline monitoring period and post-project monitoring, it is considered widespread WQ variation due to natural causes. Overall, the DO levels recorded were high and always above 6.0 mg/L with minimum DO saturation of at least 88%, which is higher than the corresponding Water Quality Objectives of DO of 4 mg/L for surface and middle layer and 2 mg/L for bottom layer.

Levels of Turbidity measured during the post-project monitoring period were generally lower than that of the baseline monitoring period. Only one exceedance of turbidity limit level was recorded at control station E1 in the mid-flood tide survey on 24 April 2018.

For SS, the recorded levels were within the range of that of the impact monitoring period and higher than that of the baseline monitoring period. Accordingly, exceedances in SS level were recorded, including control stations E1 and F1 for 5 out of 6 survey events. For mid-flood survey on 21 April, where exceedance in SS level at relatively high number of survey stations (4 out of 8 stations) were recorded, the recorded SS elevation at the flood tide control station F1 was the highest among all monitoring stations in the same survey event. Exceedances of action and limit SS level were also recorded in other survey events, but the exceedances recorded were isolated (i.e. only at one impact station at a time) and accompanied with one control station.

In general, measured turbidity and SS levels at controls stations E1 and F1 (both about 4 km from work area of Phase 1) were similar to that of the rest of the monitoring stations during monitoring. Therefore, similar to that for DO levels, the differences between the baseline and post-project monitoring period are considered to be due to natural variation.

Given the above information, particularly with regard to the control stations as well as the absence of marine works or other activities in the vicinity during post-project monitoring, the overall changes in DO, Turbidity and SS levels during the post project monitoring period at all designated stations compared to baseline data are likely to represent a natural phenomenon.

6 CONCLUSIONS

This *Phase 1 Post Project Water Quality Monitoring Report (Zone A)* presents the post project WQ monitoring undertaken between 19 to 24 April 2018 in accordance with the *Annex G* of *the Project Profile* and the requirements under EP-539/2017.

Post-Project Water Quality Monitoring was carried out on three occasions (days) at all monitoring stations within Zone A and took place within 3 weeks after the completion of the Phase 1 cable installation works within Zone A on 4 April 2018. The intervals between two sets of monitoring were not less than 36 hours. The WQ sampling was undertaken within 2 hours before and 2 hours after mid-flood and mid-ebb tidal state on each sampling occasion.

Post project data showed larger DO range (and on average lower values), lower turbidity and higher SS records compared to the baseline data. The overall water quality at the impact stations in Zone A was found to be similar to that at the control stations and given the control stations are far away (about 4 km) from the Phase 1 work area and water quality at these stations could not have been affected by the Project, it is concluded that the overall changes in DO, turbidity and SS levels during the post-project monitoring period at all designated stations, including the control stations, are likely to represent natural variation and were not due to the Project.

Although some changes in WQ were observed between post project and baseline monitoring for marine works under Phase 1 of this Project, for the reasons explained above, none of these changes are considered to be as a result of the Phase 1 Project works. Phase 1 of this Project therefore had negligible impact on water quality.

Annex A

Phase 1 - Post-Project Water Quality Monitoring Schedule (Zone A)

Annex A

PLCN Post-Project Water Quality Impact Monitoring Schedule - Zone A

APRIL 2018

Sunday or Public Holiday

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19 ebb tide 12:40 - 16:40 flood tide 6:06 - 10:06	20	21 ebb tide 14:23 - 18:23 flood tide 7:18 - 11:18	22
23	24 ebb tide 18:13 - 22:13 flood tide 10:53 - 14:53	25	26	27	28	29

Annex B

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. : AH030201
Date of Issue : 03 April 2018

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
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	:	Mar 27, 2018
Date of Calibration	:	Mar 27, 2018 to Mar 27, 2018
Date of Next Calibration[a]	:	May 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	3.98	-0.02	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	9.96	-0.05	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
16.5	16.3	-0.2	Satisfactory
26.5	26.4	-0.1	Satisfactory
34.0	33.9	-0.1	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 form 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 form 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
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. : AH030201
Date of Issue : 03 April 2018

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.13	+0.13	Satisfactory
4.39	4.29	-0.10	Satisfactory
5.84	5.74	-0.10	Satisfactory
7.31	7.27	-0.04	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 (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	150.8	+2.7	Satisfactory
0.01	1412	1442	+2.1	Satisfactory
0.1	12890	12708	-1.4	Satisfactory
0.5	58670	58072	-1.0	Satisfactory
1.0	111900	107309	-4.1	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.15	+1.5	Satisfactory
20	20.19	+1.0	Satisfactory
30	30.09	+0.3	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	9.5	-5.0	Satisfactory
20	19.4	-3.0	Satisfactory
100	97.2	-2.8	Satisfactory
800	781	-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 form relevant international standards.

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
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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH030200
Date of Issue : 03 April 2018

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
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	:	Mar 27, 2018
Date of Calibration	:	Mar 27, 2018 to Mar 27, 2018
Date of Next Calibration[a]	:	May 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	4.04	+0.04	Satisfactory
7.42	7.44	+0.02	Satisfactory
10.01	10.09	+0.08	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
16.5	16.3	-0.2	Satisfactory
26.5	26.3	-0.2	Satisfactory
34.0	33.8	-0.2	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 form 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 form relevant international standards.

APPROVED SIGNATORY: _____
LAM Ho-yee, Emma
Assistant Laboratory Manager

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QUALITY PRO TEST-CONSULT LIMITED
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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AH030200
Date of Issue : 03 April 2018

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.00	0.16	+0.16	Satisfactory
4.39	4.31	-0.08	Satisfactory
5.84	5.76	-0.08	Satisfactory
7.31	7.25	-0.06	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 (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	151.8	+3.3	Satisfactory
0.01	1412	1398	-1.0	Satisfactory
0.1	12890	12690	-1.6	Satisfactory
0.5	58670	58110	-1.0	Satisfactory
1.0	111900	107658	-3.8	Satisfactory

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

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.13	+1.3	Satisfactory
20	20.11	+0.5	Satisfactory
30	30.12	+0.4	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	9.8	-2.0	Satisfactory
20	19.7	-1.5	Satisfactory
100	95.7	-4.3	Satisfactory
800	787	-1.6	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 form relevant international standards.

Annex C

QA/QC Results of Laboratory Testing for Suspended Solids

CERTIFICATE OF ANALYSIS

Client	:	ENOVATIVE ENVIRONMENTAL SERVICE LTD	Laboratory	:	ALS Technichem (HK) Pty Ltd	Page	: 1 of 6
Contact	:	MR THOMAS WONG	Contact	:	Richard Fung	Work Order	: HK1823071
Address	:	FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	Address	:	11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	:	Thomas.Wong@eno.com.hk	E-mail	:	richard.fung@alsglobal.com		
Telephone	:	----	Telephone	:	+852 2610 1044		
Facsimile	:	----	Facsimile	:	+852 2610 2021		
Project	:	PACIFIC LIGHT CABLE NETWORK (PLCN) - DEEP WATER BAY	Quote number	:	HKE/1254/2018	Date received	: 19-Apr-2018
Order number	:	---				Date of issue	: 23-Apr-2018
C-O-C number	:	---				No. of samples	- Received : 96
Site	:	---					- Analysed : 96

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

Signatory	Position	Authorised results for:
Fung Lim Chee, Richard	General Manager	Inorganics

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1823071 supersedes any previous reports with this reference. Testing period is from 19-Apr-2018 to 23-Apr-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 HK1823071 :

Sample(s) were received in chilled condition.

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

Analytical Results

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	----	----	----	----
E1/Surface/Mid-Ebb	19-Apr-2018	HK1823071-001		6.1	----	----	----	----
E1/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-002		4.8	----	----	----	----
E1/Middle/Mid-Ebb	19-Apr-2018	HK1823071-003		4.5	----	----	----	----
E1/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-004		5.8	----	----	----	----
E1/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-005		4.8	----	----	----	----
E1/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-006		4.7	----	----	----	----
G1/Surface/Mid-Ebb	19-Apr-2018	HK1823071-007		3.2	----	----	----	----
G1/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-008		2.3	----	----	----	----
G1/Middle/Mid-Ebb	19-Apr-2018	HK1823071-009		2.2	----	----	----	----
G1/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-010		3.8	----	----	----	----
G1/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-011		8.7	----	----	----	----
G1/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-012		7.1	----	----	----	----
I3/Surface/Mid-Ebb	19-Apr-2018	HK1823071-013		2.4	----	----	----	----
I3/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-014		3.8	----	----	----	----
I3/Middle/Mid-Ebb	19-Apr-2018	HK1823071-015		2.5	----	----	----	----
I3/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-016		2.7	----	----	----	----
I3/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-017		5.0	----	----	----	----
I3/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-018		5.7	----	----	----	----
I4/Surface/Mid-Ebb	19-Apr-2018	HK1823071-019		2.3	----	----	----	----
I4/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-020		3.6	----	----	----	----
I4/Middle/Mid-Ebb	19-Apr-2018	HK1823071-021		4.4	----	----	----	----
I4/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-022		5.2	----	----	----	----
I4/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-023		5.9	----	----	----	----
I4/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-024		4.5	----	----	----	----
B1/Surface/Mid-Ebb	19-Apr-2018	HK1823071-025		4.3	----	----	----	----
B1/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-026		4.6	----	----	----	----
B1/Middle/Mid-Ebb	19-Apr-2018	HK1823071-027		4.5	----	----	----	----
B1/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-028		5.9	----	----	----	----
B1/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-029		6.6	----	----	----	----
B1/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-030		6.3	----	----	----	----
F1/Surface/Mid-Ebb	19-Apr-2018	HK1823071-031		4.5	----	----	----	----

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	----	----	----	----
F1/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-032		4.3	----	----	----	----
F1/Middle/Mid-Ebb	19-Apr-2018	HK1823071-033		6.0	----	----	----	----
F1/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-034		6.3	----	----	----	----
F1/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-035		11.5	----	----	----	----
F1/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-036		11.7	----	----	----	----
C2/Surface/Mid-Ebb	19-Apr-2018	HK1823071-037		8.0	----	----	----	----
C2/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-038		8.0	----	----	----	----
C2/Middle/Mid-Ebb	19-Apr-2018	HK1823071-039		8.8	----	----	----	----
C2/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-040		7.5	----	----	----	----
C2/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-041		8.0	----	----	----	----
C2/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-042		8.9	----	----	----	----
C3/Surface/Mid-Ebb	19-Apr-2018	HK1823071-043		5.7	----	----	----	----
C3/Surface/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-044		6.1	----	----	----	----
C3/Middle/Mid-Ebb	19-Apr-2018	HK1823071-045		6.7	----	----	----	----
C3/Middle/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-046		7.1	----	----	----	----
C3/Bottom/Mid-Ebb	19-Apr-2018	HK1823071-047		6.6	----	----	----	----
C3/Bottom/Mid-Ebb Duplicate	19-Apr-2018	HK1823071-048		7.0	----	----	----	----
E1/Surface/Mid-Flood	19-Apr-2018	HK1823071-049		3.9	----	----	----	----
E1/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-050		3.5	----	----	----	----
E1/Middle/Mid-Flood	19-Apr-2018	HK1823071-051		7.8	----	----	----	----
E1/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-052		7.5	----	----	----	----
E1/Bottom/Mid-Flood	19-Apr-2018	HK1823071-053		8.2	----	----	----	----
E1/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-054		7.6	----	----	----	----
G1/Surface/Mid-Flood	19-Apr-2018	HK1823071-055		4.7	----	----	----	----
G1/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-056		3.6	----	----	----	----
G1/Middle/Mid-Flood	19-Apr-2018	HK1823071-057		3.7	----	----	----	----
G1/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-058		4.0	----	----	----	----
G1/Bottom/Mid-Flood	19-Apr-2018	HK1823071-059		3.9	----	----	----	----
G1/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-060		4.8	----	----	----	----
I3/Surface/Mid-Flood	19-Apr-2018	HK1823071-061		3.8	----	----	----	----
I3/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-062		2.8	----	----	----	----
I3/Middle/Mid-Flood	19-Apr-2018	HK1823071-063		3.9	----	----	----	----
I3/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-064		4.9	----	----	----	----

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	----	----	----	----
I3/Bottom/Mid-Flood	19-Apr-2018	HK1823071-065		4.4	----	----	----	----
I3/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-066		4.5	----	----	----	----
I4/Surface/Mid-Flood	19-Apr-2018	HK1823071-067		3.6	----	----	----	----
I4/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-068		4.8	----	----	----	----
I4/Middle/Mid-Flood	19-Apr-2018	HK1823071-069		3.6	----	----	----	----
I4/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-070		4.3	----	----	----	----
I4/Bottom/Mid-Flood	19-Apr-2018	HK1823071-071		5.2	----	----	----	----
I4/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-072		5.8	----	----	----	----
B1/Surface/Mid-Flood	19-Apr-2018	HK1823071-073		5.0	----	----	----	----
B1/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-074		3.8	----	----	----	----
B1/Middle/Mid-Flood	19-Apr-2018	HK1823071-075		3.6	----	----	----	----
B1/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-076		5.0	----	----	----	----
B1/Bottom/Mid-Flood	19-Apr-2018	HK1823071-077		5.5	----	----	----	----
B1/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-078		6.9	----	----	----	----
F1/Surface/Mid-Flood	19-Apr-2018	HK1823071-079		5.3	----	----	----	----
F1/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-080		3.9	----	----	----	----
F1/Middle/Mid-Flood	19-Apr-2018	HK1823071-081		5.4	----	----	----	----
F1/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-082		6.0	----	----	----	----
F1/Bottom/Mid-Flood	19-Apr-2018	HK1823071-083		11.6	----	----	----	----
F1/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-084		10.7	----	----	----	----
C2/Surface/Mid-Flood	19-Apr-2018	HK1823071-085		7.6	----	----	----	----
C2/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-086		8.1	----	----	----	----
C2/Middle/Mid-Flood	19-Apr-2018	HK1823071-087		8.0	----	----	----	----
C2/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-088		7.0	----	----	----	----
C2/Bottom/Mid-Flood	19-Apr-2018	HK1823071-089		7.6	----	----	----	----
C2/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-090		8.7	----	----	----	----
C3/Surface/Mid-Flood	19-Apr-2018	HK1823071-091		6.7	----	----	----	----
C3/Surface/Mid-Flood Duplicate	19-Apr-2018	HK1823071-092		6.5	----	----	----	----
C3/Middle/Mid-Flood	19-Apr-2018	HK1823071-093		6.5	----	----	----	----
C3/Middle/Mid-Flood Duplicate	19-Apr-2018	HK1823071-094		6.5	----	----	----	----
C3/Bottom/Mid-Flood	19-Apr-2018	HK1823071-095		6.3	----	----	----	----
C3/Bottom/Mid-Flood Duplicate	19-Apr-2018	HK1823071-096		6.2	----	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1582840)								
HK1823071-001	E1/Surface/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.1	5.7	7.22
HK1823071-011	G1/Bottom/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.7	8.0	8.72
EA/ED: Physical and Aggregate Properties (QC Lot: 1582841)								
HK1823071-021	I4/Middle/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.4	5.3	18.6
HK1823071-031	F1/Surface/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.5	3.5	24.3
EA/ED: Physical and Aggregate Properties (QC Lot: 1582842)								
HK1823071-041	C2/Bottom/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.0	9.0	11.7
HK1823071-051	E1/Middle/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.6	9.76
EA/ED: Physical and Aggregate Properties (QC Lot: 1582843)								
HK1823071-061	I3/Surface/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.8	3.8	0.00
HK1823071-071	I4/Bottom/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.2	6.5	21.6
EA/ED: Physical and Aggregate Properties (QC Lot: 1582844)								
HK1823071-081	F1/Middle/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	6.4	17.5
HK1823071-091	C3/Surface/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	7.3	8.20

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

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1582840)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1582841)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	97.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1582842)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1582843)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1582844)											
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.**

CERTIFICATE OF ANALYSIS

Client	:	ENOVATIVE ENVIRONMENTAL SERVICE LTD	*Laboratory*	:	ALS Technichem (HK) Pty Ltd	*Page*	: 1 of 6
Contact	:	MR THOMAS WONG	*Contact*	:	Richard Fung	*Work Order*	: **HK1823683**
Address	:	FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	*Address*	:	11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	:	Thomas.Wong@eno.com.hk	*E-mail*	:	richard.fung@alsglobal.com		
Telephone	:	----	*Telephone*	:	+852 2610 1044		
Facsimile	:	----	*Facsimile*	:	+852 2610 2021		
Project	:	PACIFIC LIGHT CABLE NETWORK (PLCN) - DEEP WATER BAY	*Quote number*	:	HKE/1254/2018	*Date received*	: 21-Apr-2018
Order number	:	---				*Date of issue*	: 25-Apr-2018
C-O-C number	:	---				*No. of samples*	- *Received* : 96
Site	:	---					- *Analysed* : 96

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

Signatory	*Position*	*Authorised results for:*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1823683 supersedes any previous reports with this reference. Testing period is from 21-Apr-2018 to 25-Apr-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 HK1823683 :

Sample(s) were received in chilled condition.

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

Analytical Results

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	----	----	----	----
E1/Surface/Mid-Ebb	21-Apr-2018	HK1823683-001		4.2	----	----	----	----
E1/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-002		3.1	----	----	----	----
E1/Middle/Mid-Ebb	21-Apr-2018	HK1823683-003		5.9	----	----	----	----
E1/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-004		5.1	----	----	----	----
E1/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-005		8.6	----	----	----	----
E1/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-006		7.5	----	----	----	----
G1/Surface/Mid-Ebb	21-Apr-2018	HK1823683-007		6.6	----	----	----	----
G1/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-008		5.0	----	----	----	----
G1/Middle/Mid-Ebb	21-Apr-2018	HK1823683-009		7.8	----	----	----	----
G1/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-010		6.7	----	----	----	----
G1/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-011		7.4	----	----	----	----
G1/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-012		6.9	----	----	----	----
I3/Surface/Mid-Ebb	21-Apr-2018	HK1823683-013		4.1	----	----	----	----
I3/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-014		3.4	----	----	----	----
I3/Middle/Mid-Ebb	21-Apr-2018	HK1823683-015		5.7	----	----	----	----
I3/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-016		5.3	----	----	----	----
I3/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-017		4.7	----	----	----	----
I3/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-018		5.7	----	----	----	----
I4/Surface/Mid-Ebb	21-Apr-2018	HK1823683-019		3.9	----	----	----	----
I4/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-020		4.5	----	----	----	----
I4/Middle/Mid-Ebb	21-Apr-2018	HK1823683-021		6.3	----	----	----	----
I4/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-022		5.6	----	----	----	----
I4/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-023		8.7	----	----	----	----
I4/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-024		7.8	----	----	----	----
B1/Surface/Mid-Ebb	21-Apr-2018	HK1823683-025		5.4	----	----	----	----
B1/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-026		6.7	----	----	----	----
B1/Middle/Mid-Ebb	21-Apr-2018	HK1823683-027		7.7	----	----	----	----
B1/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-028		7.3	----	----	----	----
B1/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-029		11.8	----	----	----	----
B1/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-030		10.1	----	----	----	----
F1/Surface/Mid-Ebb	21-Apr-2018	HK1823683-031		7.6	----	----	----	----

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	----	----	----	----
F1/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-032		7.8	----	----	----	----
F1/Middle/Mid-Ebb	21-Apr-2018	HK1823683-033		8.2	----	----	----	----
F1/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-034		9.1	----	----	----	----
F1/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-035		13.5	----	----	----	----
F1/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-036		14.7	----	----	----	----
C2/Surface/Mid-Ebb	21-Apr-2018	HK1823683-037		7.0	----	----	----	----
C2/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-038		8.1	----	----	----	----
C2/Middle/Mid-Ebb	21-Apr-2018	HK1823683-039		10.4	----	----	----	----
C2/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-040		11.7	----	----	----	----
C2/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-041		10.8	----	----	----	----
C2/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-042		11.1	----	----	----	----
C3/Surface/Mid-Ebb	21-Apr-2018	HK1823683-043		6.9	----	----	----	----
C3/Surface/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-044		5.6	----	----	----	----
C3/Middle/Mid-Ebb	21-Apr-2018	HK1823683-045		5.1	----	----	----	----
C3/Middle/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-046		6.4	----	----	----	----
C3/Bottom/Mid-Ebb	21-Apr-2018	HK1823683-047		11.9	----	----	----	----
C3/Bottom/Mid-Ebb Duplicate	21-Apr-2018	HK1823683-048		11.5	----	----	----	----
E1/Surface/Mid-Flood	21-Apr-2018	HK1823683-049		5.9	----	----	----	----
E1/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-050		6.1	----	----	----	----
E1/Middle/Mid-Flood	21-Apr-2018	HK1823683-051		6.3	----	----	----	----
E1/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-052		6.1	----	----	----	----
E1/Bottom/Mid-Flood	21-Apr-2018	HK1823683-053		7.1	----	----	----	----
E1/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-054		7.7	----	----	----	----
G1/Surface/Mid-Flood	21-Apr-2018	HK1823683-055		2.7	----	----	----	----
G1/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-056		2.8	----	----	----	----
G1/Middle/Mid-Flood	21-Apr-2018	HK1823683-057		4.3	----	----	----	----
G1/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-058		3.2	----	----	----	----
G1/Bottom/Mid-Flood	21-Apr-2018	HK1823683-059		3.6	----	----	----	----
G1/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-060		3.1	----	----	----	----
I3/Surface/Mid-Flood	21-Apr-2018	HK1823683-061		4.3	----	----	----	----
I3/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-062		3.0	----	----	----	----
I3/Middle/Mid-Flood	21-Apr-2018	HK1823683-063		3.7	----	----	----	----
I3/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-064		3.8	----	----	----	----

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	----	----	----	----
I3/Bottom/Mid-Flood	21-Apr-2018	HK1823683-065		3.4	----	----	----	----
I3/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-066		4.3	----	----	----	----
I4/Surface/Mid-Flood	21-Apr-2018	HK1823683-067		2.7	----	----	----	----
I4/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-068		2.7	----	----	----	----
I4/Middle/Mid-Flood	21-Apr-2018	HK1823683-069		2.1	----	----	----	----
I4/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-070		2.5	----	----	----	----
I4/Bottom/Mid-Flood	21-Apr-2018	HK1823683-071		4.0	----	----	----	----
I4/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-072		3.5	----	----	----	----
B1/Surface/Mid-Flood	21-Apr-2018	HK1823683-073		3.5	----	----	----	----
B1/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-074		4.6	----	----	----	----
B1/Middle/Mid-Flood	21-Apr-2018	HK1823683-075		5.2	----	----	----	----
B1/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-076		4.8	----	----	----	----
B1/Bottom/Mid-Flood	21-Apr-2018	HK1823683-077		5.1	----	----	----	----
B1/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-078		4.2	----	----	----	----
F1/Surface/Mid-Flood	21-Apr-2018	HK1823683-079		4.3	----	----	----	----
F1/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-080		4.6	----	----	----	----
F1/Middle/Mid-Flood	21-Apr-2018	HK1823683-081		3.1	----	----	----	----
F1/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-082		3.6	----	----	----	----
F1/Bottom/Mid-Flood	21-Apr-2018	HK1823683-083		6.2	----	----	----	----
F1/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-084		5.9	----	----	----	----
C2/Surface/Mid-Flood	21-Apr-2018	HK1823683-085		6.3	----	----	----	----
C2/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-086		5.0	----	----	----	----
C2/Middle/Mid-Flood	21-Apr-2018	HK1823683-087		5.6	----	----	----	----
C2/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-088		5.7	----	----	----	----
C2/Bottom/Mid-Flood	21-Apr-2018	HK1823683-089		7.2	----	----	----	----
C2/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-090		6.1	----	----	----	----
C3/Surface/Mid-Flood	21-Apr-2018	HK1823683-091		2.6	----	----	----	----
C3/Surface/Mid-Flood Duplicate	21-Apr-2018	HK1823683-092		2.9	----	----	----	----
C3/Middle/Mid-Flood	21-Apr-2018	HK1823683-093		4.7	----	----	----	----
C3/Middle/Mid-Flood Duplicate	21-Apr-2018	HK1823683-094		5.3	----	----	----	----
C3/Bottom/Mid-Flood	21-Apr-2018	HK1823683-095		4.8	----	----	----	----
C3/Bottom/Mid-Flood Duplicate	21-Apr-2018	HK1823683-096		5.5	----	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1588764)								
HK1823683-001	E1/Surface/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.2	4.1	0.00
HK1823683-011	G1/Bottom/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.4	7.8	5.23
EA/ED: Physical and Aggregate Properties (QC Lot: 1588765)								
HK1823683-021	I4/Middle/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	6.2	2.01
HK1823683-031	F1/Surface/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	6.0	23.8
EA/ED: Physical and Aggregate Properties (QC Lot: 1588766)								
HK1823683-041	C2/Bottom/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	10.8	10.7	0.00
HK1823683-051	E1/Middle/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	6.6	5.03
EA/ED: Physical and Aggregate Properties (QC Lot: 1588767)								
HK1823683-061	I3/Surface/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.0	7.18
HK1823683-071	I4/Bottom/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.0	4.2	7.32
EA/ED: Physical and Aggregate Properties (QC Lot: 1588768)								
HK1823683-081	F1/Middle/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.1	3.8	20.9
HK1823683-091	C3/Surface/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	3.3	22.8

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

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1588764)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1588765)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	108	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1588766)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1588767)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1588768)											
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

Client	:	ENOVATIVE ENVIRONMENTAL SERVICE LTD	*Laboratory*	:	ALS Technichem (HK) Pty Ltd	*Page*	: 1 of 6
Contact	:	MR THOMAS WONG	*Contact*	:	Richard Fung	*Work Order*	: **HK1826273**
Address	:	FLAT 2207, YU FUN HSE, YU CHUI COURT, SHATIN, N.T. HONG KONG	*Address*	:	11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	:	Thomas.Wong@eno.com.hk	*E-mail*	:	richard.fung@alsglobal.com		
Telephone	:	----	*Telephone*	:	+852 2610 1044		
Facsimile	:	----	*Facsimile*	:	+852 2610 2021		
Project	:	PACIFIC LIGHT CABLE NETWORK (PLCN) - DEEP WATER BAY	*Quote number*	:	HKE/1254/2018	*Date received*	: 24-Apr-2018
Order number	:	---				*Date of issue*	: 27-Apr-2018
C-O-C number	:	---				*No. of samples*	- *Received* : 96
Site	:	---					- *Analysed* : 96

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

Signatory	*Position*	*Authorised results for:*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1826273 supersedes any previous reports with this reference. Testing period is from 24-Apr-2018 to 27-Apr-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 HK1826273 :

Sample(s) were received in chilled condition.

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

Analytical Results

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	----	----	----	----
E1/Surface/Mid-Ebb	24-Apr-2018	HK1826273-001		5.4	----	----	----	----
E1/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-002		6.9	----	----	----	----
E1/Middle/Mid-Ebb	24-Apr-2018	HK1826273-003		6.5	----	----	----	----
E1/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-004		5.2	----	----	----	----
E1/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-005		9.7	----	----	----	----
E1/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-006		8.8	----	----	----	----
G1/Surface/Mid-Ebb	24-Apr-2018	HK1826273-007		4.2	----	----	----	----
G1/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-008		3.7	----	----	----	----
G1/Middle/Mid-Ebb	24-Apr-2018	HK1826273-009		3.9	----	----	----	----
G1/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-010		2.7	----	----	----	----
G1/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-011		8.2	----	----	----	----
G1/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-012		8.1	----	----	----	----
I3/Surface/Mid-Ebb	24-Apr-2018	HK1826273-013		5.8	----	----	----	----
I3/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-014		4.1	----	----	----	----
I3/Middle/Mid-Ebb	24-Apr-2018	HK1826273-015		8.3	----	----	----	----
I3/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-016		7.9	----	----	----	----
I3/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-017		7.2	----	----	----	----
I3/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-018		7.0	----	----	----	----
I4/Surface/Mid-Ebb	24-Apr-2018	HK1826273-019		3.0	----	----	----	----
I4/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-020		4.8	----	----	----	----
I4/Middle/Mid-Ebb	24-Apr-2018	HK1826273-021		7.2	----	----	----	----
I4/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-022		7.9	----	----	----	----
I4/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-023		9.7	----	----	----	----
I4/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-024		10.2	----	----	----	----
B1/Surface/Mid-Ebb	24-Apr-2018	HK1826273-025		6.8	----	----	----	----
B1/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-026		6.0	----	----	----	----
B1/Middle/Mid-Ebb	24-Apr-2018	HK1826273-027		5.0	----	----	----	----
B1/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-028		5.8	----	----	----	----
B1/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-029		8.6	----	----	----	----
B1/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-030		8.7	----	----	----	----
F1/Surface/Mid-Ebb	24-Apr-2018	HK1826273-031		4.3	----	----	----	----

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	----	----	----	----
F1/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-032		**4.1**	----	----	----	----
F1/Middle/Mid-Ebb	24-Apr-2018	HK1826273-033		**5.0**	----	----	----	----
F1/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-034		**5.2**	----	----	----	----
F1/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-035		**6.7**	----	----	----	----
F1/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-036		**5.0**	----	----	----	----
C2/Surface/Mid-Ebb	24-Apr-2018	HK1826273-037		**3.1**	----	----	----	----
C2/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-038		**3.6**	----	----	----	----
C2/Middle/Mid-Ebb	24-Apr-2018	HK1826273-039		**5.4**	----	----	----	----
C2/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-040		**3.8**	----	----	----	----
C2/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-041		**6.7**	----	----	----	----
C2/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-042		**5.7**	----	----	----	----
C3/Surface/Mid-Ebb	24-Apr-2018	HK1826273-043		**6.3**	----	----	----	----
C3/Surface/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-044		**6.2**	----	----	----	----
C3/Middle/Mid-Ebb	24-Apr-2018	HK1826273-045		**6.2**	----	----	----	----
C3/Middle/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-046		**7.2**	----	----	----	----
C3/Bottom/Mid-Ebb	24-Apr-2018	HK1826273-047		**6.7**	----	----	----	----
C3/Bottom/Mid-Ebb Duplicate	24-Apr-2018	HK1826273-048		**6.0**	----	----	----	----
E1/Surface/Mid-Flood	24-Apr-2018	HK1826273-049		**6.4**	----	----	----	----
E1/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-050		**6.7**	----	----	----	----
E1/Middle/Mid-Flood	24-Apr-2018	HK1826273-051		**7.1**	----	----	----	----
E1/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-052		**8.2**	----	----	----	----
E1/Bottom/Mid-Flood	24-Apr-2018	HK1826273-053		**7.6**	----	----	----	----
E1/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-054		**7.8**	----	----	----	----
G1/Surface/Mid-Flood	24-Apr-2018	HK1826273-055		**7.6**	----	----	----	----
G1/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-056		**6.2**	----	----	----	----
G1/Middle/Mid-Flood	24-Apr-2018	HK1826273-057		**9.0**	----	----	----	----
G1/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-058		**8.8**	----	----	----	----
G1/Bottom/Mid-Flood	24-Apr-2018	HK1826273-059		**13.9**	----	----	----	----
G1/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-060		**13.6**	----	----	----	----
I3/Surface/Mid-Flood	24-Apr-2018	HK1826273-061		**6.0**	----	----	----	----
I3/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-062		**5.6**	----	----	----	----
I3/Middle/Mid-Flood	24-Apr-2018	HK1826273-063		**5.3**	----	----	----	----
I3/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-064		**5.0**	----	----	----	----

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	----	----	----	----
I3/Bottom/Mid-Flood	24-Apr-2018	HK1826273-065		**8.4**	----	----	----	----
I3/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-066		**8.3**	----	----	----	----
I4/Surface/Mid-Flood	24-Apr-2018	HK1826273-067		**4.5**	----	----	----	----
I4/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-068		**4.3**	----	----	----	----
I4/Middle/Mid-Flood	24-Apr-2018	HK1826273-069		**3.7**	----	----	----	----
I4/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-070		**3.6**	----	----	----	----
I4/Bottom/Mid-Flood	24-Apr-2018	HK1826273-071		**6.0**	----	----	----	----
I4/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-072		**5.9**	----	----	----	----
B1/Surface/Mid-Flood	24-Apr-2018	HK1826273-073		**5.5**	----	----	----	----
B1/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-074		**5.4**	----	----	----	----
B1/Middle/Mid-Flood	24-Apr-2018	HK1826273-075		**7.2**	----	----	----	----
B1/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-076		**5.8**	----	----	----	----
B1/Bottom/Mid-Flood	24-Apr-2018	HK1826273-077		**7.8**	----	----	----	----
B1/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-078		**7.6**	----	----	----	----
F1/Surface/Mid-Flood	24-Apr-2018	HK1826273-079		**4.5**	----	----	----	----
F1/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-080		**5.0**	----	----	----	----
F1/Middle/Mid-Flood	24-Apr-2018	HK1826273-081		**4.9**	----	----	----	----
F1/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-082		**4.3**	----	----	----	----
F1/Bottom/Mid-Flood	24-Apr-2018	HK1826273-083		**6.3**	----	----	----	----
F1/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-084		**6.6**	----	----	----	----
C2/Surface/Mid-Flood	24-Apr-2018	HK1826273-085		**4.8**	----	----	----	----
C2/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-086		**3.9**	----	----	----	----
C2/Middle/Mid-Flood	24-Apr-2018	HK1826273-087		**7.9**	----	----	----	----
C2/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-088		**7.7**	----	----	----	----
C2/Bottom/Mid-Flood	24-Apr-2018	HK1826273-089		**7.2**	----	----	----	----
C2/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-090		**8.1**	----	----	----	----
C3/Surface/Mid-Flood	24-Apr-2018	HK1826273-091		**4.6**	----	----	----	----
C3/Surface/Mid-Flood Duplicate	24-Apr-2018	HK1826273-092		**3.7**	----	----	----	----
C3/Middle/Mid-Flood	24-Apr-2018	HK1826273-093		**8.0**	----	----	----	----
C3/Middle/Mid-Flood Duplicate	24-Apr-2018	HK1826273-094		**7.5**	----	----	----	----
C3/Bottom/Mid-Flood	24-Apr-2018	HK1826273-095		**7.0**	----	----	----	----
C3/Bottom/Mid-Flood Duplicate	24-Apr-2018	HK1826273-096		**7.2**	----	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1594286)								
HK1826273-001	E1/Surface/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.4	6.1	11.7
HK1826273-011	G1/Bottom/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.2	9.4	14.2
EA/ED: Physical and Aggregate Properties (QC Lot: 1594287)								
HK1826273-021	I4/Middle/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.2	8.4	15.5
HK1826273-031	F1/Surface/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.3	4.7	10.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1594288)								
HK1826273-041	C2/Bottom/Mid-Ebb	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.7	6.2	7.75
HK1826273-051	E1/Middle/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.1	7.1	0.00
EA/ED: Physical and Aggregate Properties (QC Lot: 1594289)								
HK1826273-061	I3/Surface/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	6.6	7.94
HK1826273-071	I4/Bottom/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.0	5.1	15.8
EA/ED: Physical and Aggregate Properties (QC Lot: 1594290)								
HK1826273-081	F1/Middle/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.9	3.9	22.2
HK1826273-091	C3/Surface/Mid-Flood	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.6	4.8	3.73

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

Matrix: **WATER**

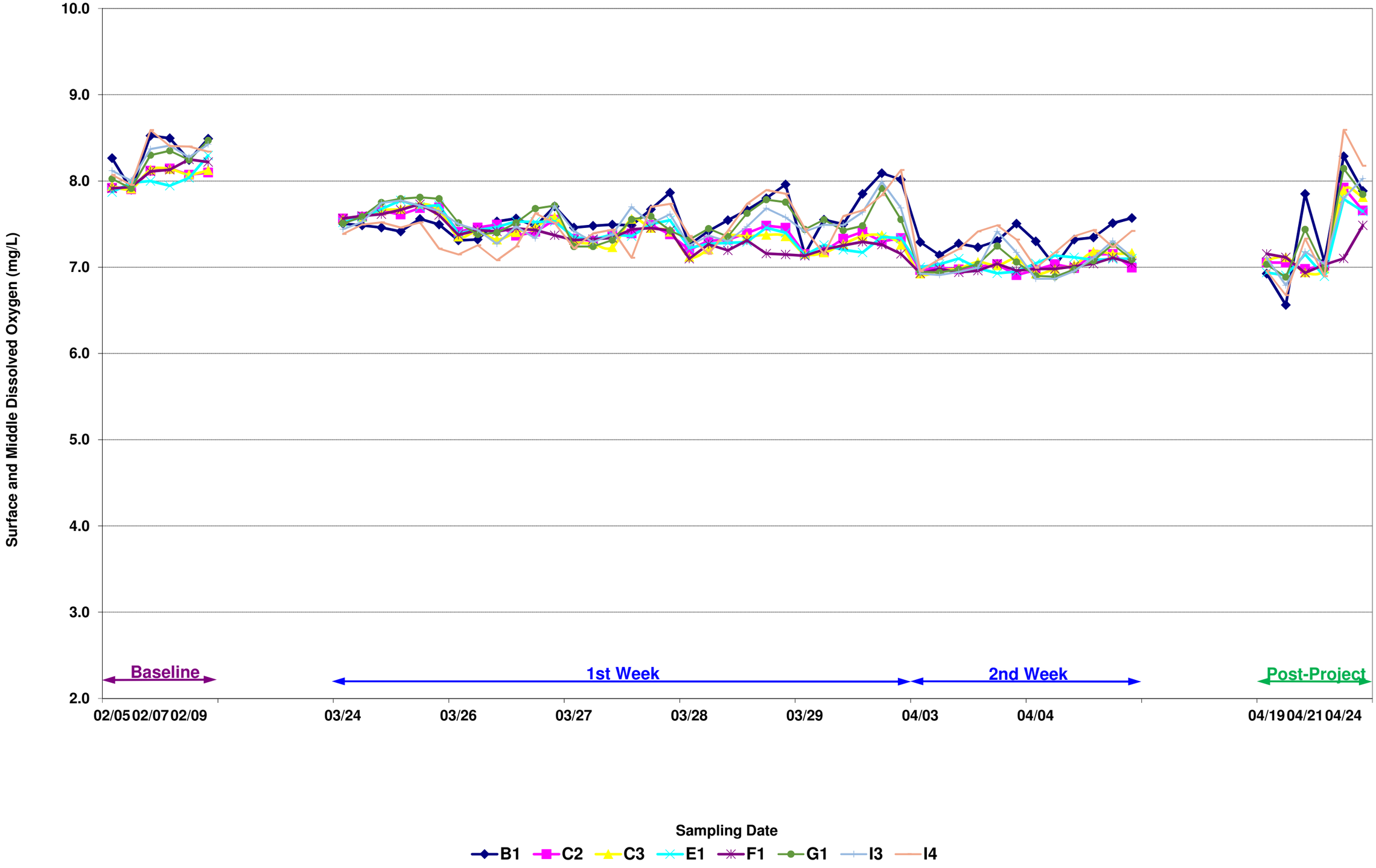
Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1594286)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1594287)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	112	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1594288)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	88.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1594289)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	110	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1594290)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	100	----	85	115	----	----

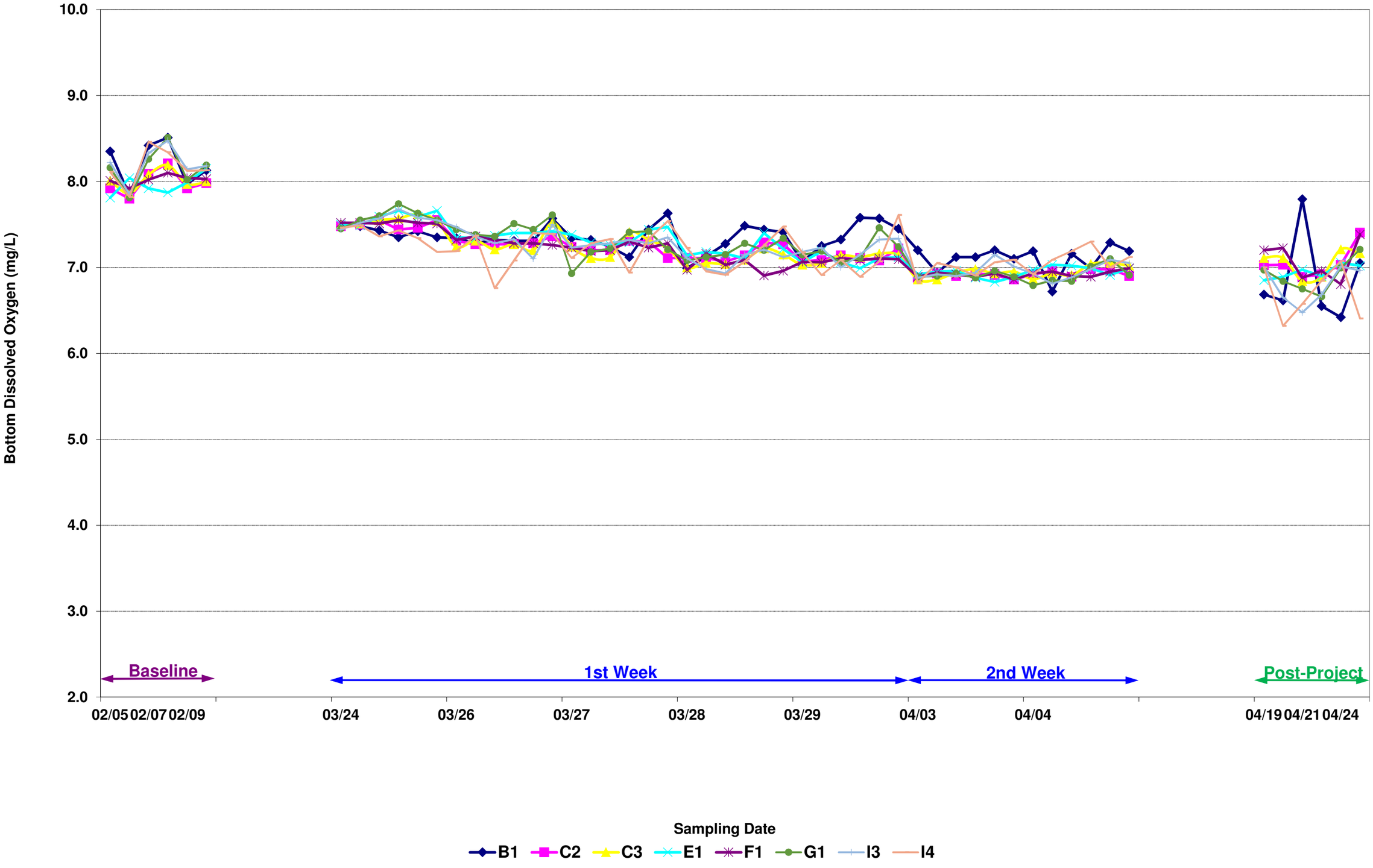
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

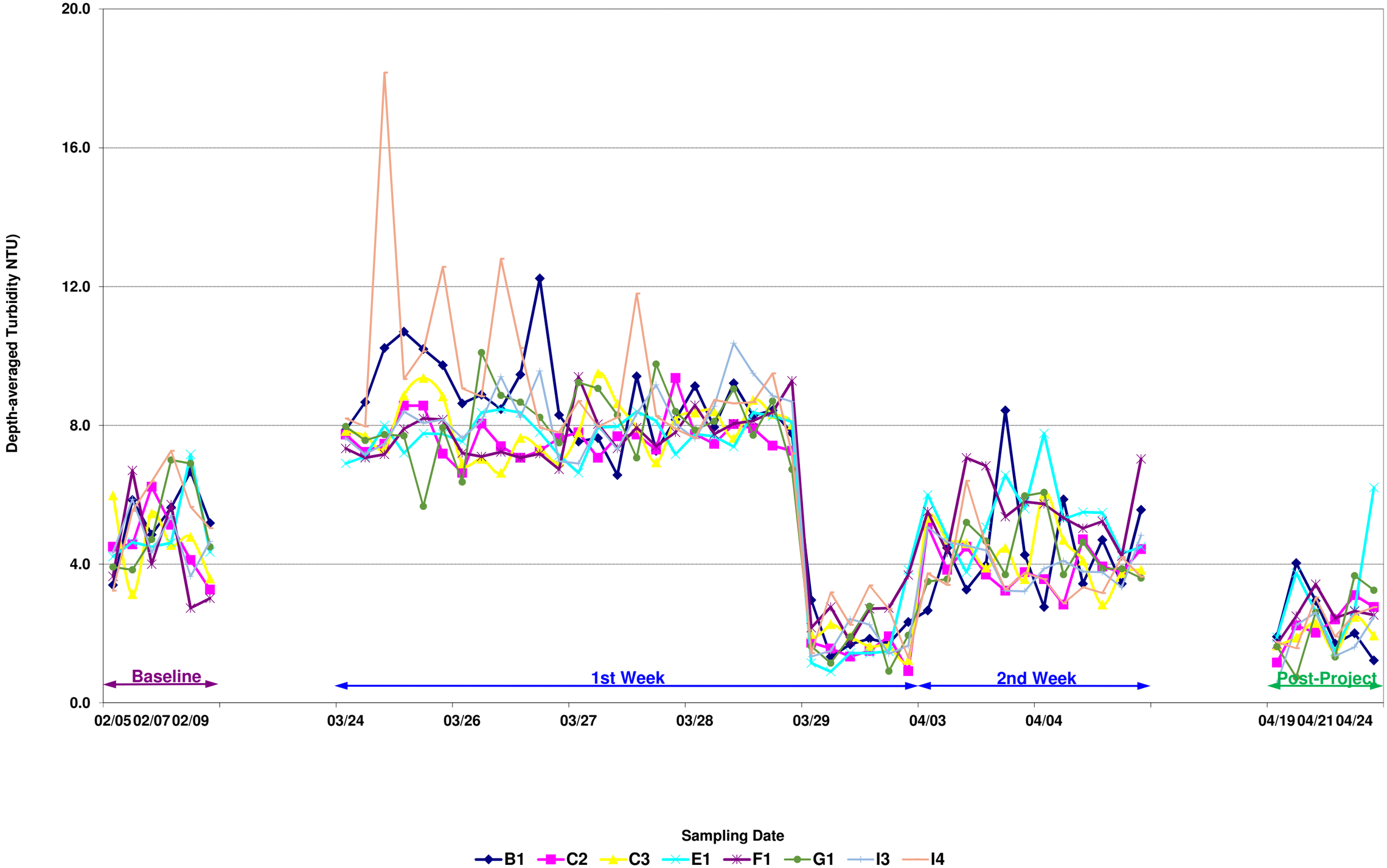
- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

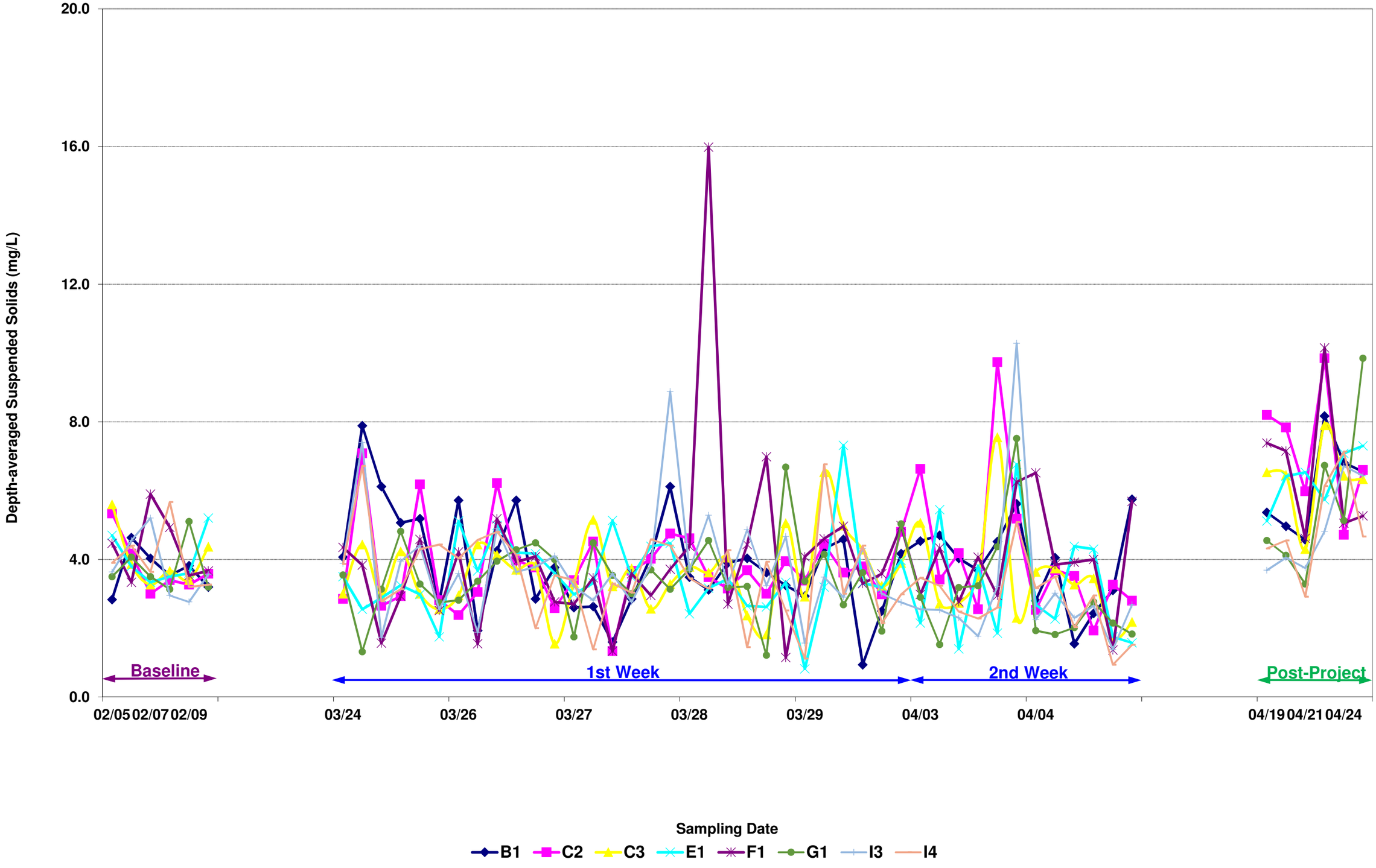
Annex D

Phase 1 - Post-Project Water Quality Monitoring Results


Surface and Middle Dissolved Oxygen (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
Baseline
1st Week
2nd Week
Post-Project
02/05
02/07
02/09
03/24
03/26
03/27
03/28
03/29
04/03
04/04
04/19
04/21
04/24
Sampling Date
B1
C2
C3
E1
F1
G1
I3
I4


Bottom Dissolved Oxygen (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
Baseline
1st Week
2nd Week
Post-Project
02/05
02/07
02/09
03/24
03/26
03/27
03/28
03/29
04/03
04/04
04/19
04/21
04/24
Sampling Date
B1
C2
C3
E1
F1
G1
I3
I4


Depth-averaged Turbidity NTU)
20.0
16.0
12.0
8.0
4.0
0.0
Baseline
1st Week
2nd Week
Post-Project
02/05
02/07
02/09
03/24
03/26
03/27
03/28
03/29
04/03
04/04
04/19
04/21
04/24
Sampling Date
B1
C2
C3
E1
F1
G1
I3
I4


Depth-averaged Suspended Solids (mg/L)
20.0
16.0
12.0
8.0
4.0
0.0
Baseline
1st Week
2nd Week
Post-Project
02/05
02/07
02/09
03/24
03/26
03/27
03/28
03/29
04/03
04/04
04/19
04/21
04/24
Sampling Date
B1
C2
C3
E1
F1
G1
I3
I4

					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									<7.88	<7.81	>5.5	>6.97
Limit Level									**<7.84**	**<7.80**	**>5.8**	**>7.22**
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	Tide	Station	Time	Level								
2018-Apr-19	Mid-Ebb	E1	14:15	Surface	6.1	99.4	7.00	0.2	**6.94**	**6.85**	1.9	5.12
2018-Apr-19	Mid-Ebb	E1	14:15	Surface	4.8	99.5	7.01	0.3				
2018-Apr-19	Mid-Ebb	E1	14:15	Middle	4.5	97.0	6.87	1.2				
2018-Apr-19	Mid-Ebb	E1	14:15	Middle	5.8	97.0	6.87	1.3				
2018-Apr-19	Mid-Ebb	E1	14:15	Bottom	4.8	96.7	6.85	4.2				
2018-Apr-19	Mid-Ebb	E1	14:15	Bottom	4.7	96.7	6.85	4.2				
2018-Apr-19	Mid-Ebb	F1	12:59	Surface	4.5	101.2	7.16	0.8	**7.16**	**7.20**	1.7	**7.38**
2018-Apr-19	Mid-Ebb	F1	12:59	Surface	4.3	101.2	7.16	0.8				
2018-Apr-19	Mid-Ebb	F1	12:59	Middle	6.0	101.0	7.15	0.7				
2018-Apr-19	Mid-Ebb	F1	12:59	Middle	6.3	101.0	7.15	0.7				
2018-Apr-19	Mid-Ebb	F1	12:59	Bottom	11.5	101.4	7.19	3.6				
2018-Apr-19	Mid-Ebb	F1	12:59	Bottom	11.7	101.7	7.21	3.6				
2018-Apr-19	Mid-Ebb	B1	13:42	Surface	4.3	98.7	6.94	0.6	**6.93**	**6.69**	1.9	5.37
2018-Apr-19	Mid-Ebb	B1	13:42	Surface	4.6	98.5	6.94	0.6				
2018-Apr-19	Mid-Ebb	B1	13:42	Middle	4.5	97.6	6.91	0.9				
2018-Apr-19	Mid-Ebb	B1	13:42	Middle	5.9	97.6	6.91	0.9				
2018-Apr-19	Mid-Ebb	B1	13:42	Bottom	6.6	94.3	6.68	4.2				
2018-Apr-19	Mid-Ebb	B1	13:42	Bottom	6.3	94.4	6.69	4.3				
2018-Apr-19	Mid-Ebb	C2	13:16	Surface	8.0	100.1	7.07	1.1	**7.06**	**7.03**	1.2	**8.20**
2018-Apr-19	Mid-Ebb	C2	13:16	Surface	8.0	100.1	7.07	1.2				
2018-Apr-19	Mid-Ebb	C2	13:16	Middle	8.8	99.4	7.04	0.8				
2018-Apr-19	Mid-Ebb	C2	13:16	Middle	7.5	99.4	7.04	0.9				
2018-Apr-19	Mid-Ebb	C2	13:16	Bottom	8.0	99.1	7.02	1.6				
2018-Apr-19	Mid-Ebb	C2	13:16	Bottom	8.9	99.2	7.03	1.4				
2018-Apr-19	Mid-Ebb	C3	13:05	Surface	5.7	100.2	7.09	1.5	**7.08**	**7.11**	1.7	6.53
2018-Apr-19	Mid-Ebb	C3	13:05	Surface	6.1	100.2	7.09	1.4				
2018-Apr-19	Mid-Ebb	C3	13:05	Middle	6.7	99.7	7.07	1.6				
2018-Apr-19	Mid-Ebb	C3	13:05	Middle	7.1	99.7	7.07	1.6				
2018-Apr-19	Mid-Ebb	C3	13:05	Bottom	6.6	100.2	7.11	1.9				
2018-Apr-19	Mid-Ebb	C3	13:05	Bottom	7.0	100.2	7.11	1.9				
2018-Apr-19	Mid-Ebb	I3	13:53	Surface	2.4	101.6	7.13	0.2	**7.11**	**7.01**	0.6	3.68
2018-Apr-19	Mid-Ebb	I3	13:53	Surface	3.8	101.6	7.13	0.2				
2018-Apr-19	Mid-Ebb	I3	13:53	Middle	2.5	100.4	7.09	0.1				
2018-Apr-19	Mid-Ebb	I3	13:53	Middle	2.7	100.3	7.08	0.1				
2018-Apr-19	Mid-Ebb	I3	13:53	Bottom	5.0	98.9	7.00	1.4				
2018-Apr-19	Mid-Ebb	I3	13:53	Bottom	5.7	99.0	7.01	1.4				
2018-Apr-19	Mid-Ebb	I4	13:48	Surface	2.3	98.7	6.93	0.6	**6.96**	**7.00**	1.7	4.32
2018-Apr-19	Mid-Ebb	I4	13:48	Surface	3.6	98.8	6.94	0.6				
2018-Apr-19	Mid-Ebb	I4	13:48	Middle	4.4	99.1	6.98	0.8				
2018-Apr-19	Mid-Ebb	I4	13:48	Middle	5.2	99.1	6.98	0.8				
2018-Apr-19	Mid-Ebb	I4	13:48	Bottom	5.9	99.4	7.00	3.9				
2018-Apr-19	Mid-Ebb	I4	13:48	Bottom	4.5	99.4	7.00	3.9				
2018-Apr-19	Mid-Ebb	G1	13:58	Surface	3.2	100.8	7.10	0.2	**7.03**	**6.97**	1.6	4.55
2018-Apr-19	Mid-Ebb	G1	13:58	Surface	2.3	100.6	7.09	0.3				
2018-Apr-19	Mid-Ebb	G1	13:58	Middle	2.2	98.5	6.97	1.5				
2018-Apr-19	Mid-Ebb	G1	13:58	Middle	3.8	98.4	6.97	1.5				
2018-Apr-19	Mid-Ebb	G1	13:58	Bottom	8.7	98.3	6.97	3.1				
2018-Apr-19	Mid-Ebb	G1	13:58	Bottom	7.1	98.4	6.97	3.1				

								Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth-Averaged SS (mg/L)
Action Level								<7.88	<7.81	>5.5	>6.97
Limit Level								**<7.84**	**<7.80**	**>5.8**	**>7.22**
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	Tide	Station	Time	Level	TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)				
2018-Apr-19	Mid-Flood	E1	08:06	Surface	3.9	97.2	6.90	0.4	**6.91**	**6.89**	3.7	6.42
2018-Apr-19	Mid-Flood	E1	08:06	Surface	3.5	97.3	6.90	0.4				
2018-Apr-19	Mid-Flood	E1	08:06	Middle	7.8	97.5	6.91	0.6				
2018-Apr-19	Mid-Flood	E1	08:06	Middle	7.5	97.6	6.91	0.6				
2018-Apr-19	Mid-Flood	E1	08:06	Bottom	8.2	97.2	6.89	10.3				
2018-Apr-19	Mid-Flood	E1	08:06	Bottom	7.6	97.2	6.89	10.3				
2018-Apr-19	Mid-Flood	F1	09:17	Surface	5.3	100.3	7.12	1.0	**7.12**	**7.23**	2.5	7.15
2018-Apr-19	Mid-Flood	F1	09:17	Surface	3.9	100.3	7.12	0.9				
2018-Apr-19	Mid-Flood	F1	09:17	Middle	5.4	100.2	7.11	2.5				
2018-Apr-19	Mid-Flood	F1	09:17	Middle	6.0	100.2	7.11	2.4				
2018-Apr-19	Mid-Flood	F1	09:17	Bottom	11.6	101.7	7.22	4.1				
2018-Apr-19	Mid-Flood	F1	09:17	Bottom	10.7	101.8	7.23	4.0				
2018-Apr-19	Mid-Flood	B1	08:41	Surface	5.0	92.9	6.59	0.7	**6.56**	**6.62**	4.0	4.97
2018-Apr-19	Mid-Flood	B1	08:41	Surface	3.8	92.9	6.59	0.7				
2018-Apr-19	Mid-Flood	B1	08:41	Middle	3.6	92.3	6.54	4.9				
2018-Apr-19	Mid-Flood	B1	08:41	Middle	5.0	92.2	6.53	4.9				
2018-Apr-19	Mid-Flood	B1	08:41	Bottom	5.5	93.1	6.60	6.5				
2018-Apr-19	Mid-Flood	B1	08:41	Bottom	6.9	93.5	6.63	6.5				
2018-Apr-19	Mid-Flood	C2	09:01	Surface	7.6	99.5	7.06	0.7	**7.05**	**7.03**	2.2	**7.83**
2018-Apr-19	Mid-Flood	C2	09:01	Surface	8.1	99.6	7.07	0.7				
2018-Apr-19	Mid-Flood	C2	09:01	Middle	8.0	99.2	7.04	2.7				
2018-Apr-19	Mid-Flood	C2	09:01	Middle	7.0	99.2	7.04	2.7				
2018-Apr-19	Mid-Flood	C2	09:01	Bottom	7.6	99.1	7.03	3.3				
2018-Apr-19	Mid-Flood	C2	09:01	Bottom	8.7	99.1	7.03	3.3				
2018-Apr-19	Mid-Flood	C3	09:11	Surface	6.7	100.4	7.13	1.2	**7.12**	**7.11**	1.9	6.45
2018-Apr-19	Mid-Flood	C3	09:11	Surface	6.5	100.4	7.13	1.3				
2018-Apr-19	Mid-Flood	C3	09:11	Middle	6.5	100.1	7.10	2.5				
2018-Apr-19	Mid-Flood	C3	09:11	Middle	6.5	100.1	7.10	2.5				
2018-Apr-19	Mid-Flood	C3	09:11	Bottom	6.3	100.2	7.11	1.9				
2018-Apr-19	Mid-Flood	C3	09:11	Bottom	6.2	100.2	7.11	1.9				
2018-Apr-19	Mid-Flood	I3	08:30	Surface	3.8	96.1	6.82	0.8	**6.79**	**6.65**	2.2	4.05
2018-Apr-19	Mid-Flood	I3	08:30	Surface	2.8	96.1	6.81	0.8				
2018-Apr-19	Mid-Flood	I3	08:30	Middle	3.9	95.5	6.77	0.7				
2018-Apr-19	Mid-Flood	I3	08:30	Middle	4.9	95.4	6.76	0.7				
2018-Apr-19	Mid-Flood	I3	08:30	Bottom	4.4	93.8	6.65	5.2				
2018-Apr-19	Mid-Flood	I3	08:30	Bottom	4.5	93.8	6.65	5.2				
2018-Apr-19	Mid-Flood	I4	08:36	Surface	3.6	94.9	6.72	0.5	**6.68**	**6.32**	1.6	4.55
2018-Apr-19	Mid-Flood	I4	08:36	Surface	4.8	94.8	6.72	0.5				
2018-Apr-19	Mid-Flood	I4	08:36	Middle	3.6	93.7	6.64	1.2				
2018-Apr-19	Mid-Flood	I4	08:36	Middle	4.3	93.4	6.62	1.2				
2018-Apr-19	Mid-Flood	I4	08:36	Bottom	5.2	88.9	6.30	3.0				
2018-Apr-19	Mid-Flood	I4	08:36	Bottom	5.8	89.4	6.34	3.1				
2018-Apr-19	Mid-Flood	G1	08:25	Surface	4.7	97.3	6.90	0.5	**6.89**	**6.84**	0.7	4.12
2018-Apr-19	Mid-Flood	G1	08:25	Surface	3.6	97.3	6.90	0.5				
2018-Apr-19	Mid-Flood	G1	08:25	Middle	3.7	97.0	6.87	0.6				
2018-Apr-19	Mid-Flood	G1	08:25	Middle	4.0	96.9	6.87	0.7				
2018-Apr-19	Mid-Flood	G1	08:25	Bottom	3.9	96.5	6.84	1.0				
2018-Apr-19	Mid-Flood	G1	08:25	Bottom	4.8	96.5	6.84	1.0				

					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									<7.88	<7.81	>5.5	>6.97
Limit Level									**<7.84**	**<7.80**	**>5.8**	**>7.22**
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	Tide	Station	Time	Level								
2018-Apr-21	Mid-Ebb	E1	15:44	Surface	5.9	103.5	7.31	2.0	**7.15**	**6.98**	2.6	6.53
2018-Apr-21	Mid-Ebb	E1	15:44	Surface	6.1	103.3	7.30	2.0				
2018-Apr-21	Mid-Ebb	E1	15:44	Middle	6.3	98.4	7.00	2.4				
2018-Apr-21	Mid-Ebb	E1	15:44	Middle	6.1	98.4	6.99	2.4				
2018-Apr-21	Mid-Ebb	E1	15:44	Bottom	7.1	98.1	6.97	3.5				
2018-Apr-21	Mid-Ebb	E1	15:44	Bottom	7.7	98.1	6.98	3.5				
2018-Apr-21	Mid-Ebb	F1	14:24	Surface	4.3	98.8	6.97	1.8	**6.94**	**6.88**	3.4	4.62
2018-Apr-21	Mid-Ebb	F1	14:24	Surface	4.6	98.8	6.97	1.9				
2018-Apr-21	Mid-Ebb	F1	14:24	Middle	3.1	97.7	6.90	4.3				
2018-Apr-21	Mid-Ebb	F1	14:24	Middle	3.6	97.7	6.90	4.3				
2018-Apr-21	Mid-Ebb	F1	14:24	Bottom	6.2	97.4	6.88	4.1				
2018-Apr-21	Mid-Ebb	F1	14:24	Bottom	5.9	97.4	6.88	4.2				
2018-Apr-21	Mid-Ebb	B1	15:09	Surface	3.5	113.3	7.83	2.9	7.85	**7.80**	2.9	4.57
2018-Apr-21	Mid-Ebb	B1	15:09	Surface	4.6	113.3	7.83	3.0				
2018-Apr-21	Mid-Ebb	B1	15:09	Middle	5.2	112.6	7.87	2.4				
2018-Apr-21	Mid-Ebb	B1	15:09	Middle	4.8	112.5	7.87	2.4				
2018-Apr-21	Mid-Ebb	B1	15:09	Bottom	5.1	111.1	7.80	3.5				
2018-Apr-21	Mid-Ebb	B1	15:09	Bottom	4.2	110.9	7.79	3.5				
2018-Apr-21	Mid-Ebb	C2	14:45	Surface	6.3	99.8	7.04	1.8	**6.98**	**6.89**	2.0	5.98
2018-Apr-21	Mid-Ebb	C2	14:45	Surface	5.0	99.8	7.04	1.8				
2018-Apr-21	Mid-Ebb	C2	14:45	Middle	5.6	97.7	6.92	1.9				
2018-Apr-21	Mid-Ebb	C2	14:45	Middle	5.7	97.7	6.92	1.9				
2018-Apr-21	Mid-Ebb	C2	14:45	Bottom	7.2	97.3	6.89	2.4				
2018-Apr-21	Mid-Ebb	C2	14:45	Bottom	6.1	97.4	6.89	2.4				
2018-Apr-21	Mid-Ebb	C3	14:32	Surface	2.6	99.9	7.03	1.1	**6.94**	**6.84**	2.3	4.30
2018-Apr-21	Mid-Ebb	C3	14:32	Surface	2.9	99.9	7.03	1.1				
2018-Apr-21	Mid-Ebb	C3	14:32	Middle	4.7	96.9	6.85	2.9				
2018-Apr-21	Mid-Ebb	C3	14:32	Middle	5.3	96.9	6.85	2.9				
2018-Apr-21	Mid-Ebb	C3	14:32	Bottom	4.8	96.8	6.84	3.0				
2018-Apr-21	Mid-Ebb	C3	14:32	Bottom	5.5	96.8	6.84	3.0				
2018-Apr-21	Mid-Ebb	I3	15:23	Surface	4.3	109.4	7.63	1.1	**7.18**	**6.48**	2.6	3.75
2018-Apr-21	Mid-Ebb	I3	15:23	Surface	3.0	109.2	7.62	1.1				
2018-Apr-21	Mid-Ebb	I3	15:23	Middle	3.7	94.7	6.74	2.7				
2018-Apr-21	Mid-Ebb	I3	15:23	Middle	3.8	94.5	6.73	2.7				
2018-Apr-21	Mid-Ebb	I3	15:23	Bottom	3.4	90.9	6.47	4.1				
2018-Apr-21	Mid-Ebb	I3	15:23	Bottom	4.3	91.1	6.48	4.1				
2018-Apr-21	Mid-Ebb	I4	15:16	Surface	2.7	108.4	7.48	1.1	**7.33**	**6.58**	3.0	2.92
2018-Apr-21	Mid-Ebb	I4	15:16	Surface	2.7	108.4	7.47	1.1				
2018-Apr-21	Mid-Ebb	I4	15:16	Middle	2.1	102.0	7.19	3.3				
2018-Apr-21	Mid-Ebb	I4	15:16	Middle	2.5	101.9	7.18	3.3				
2018-Apr-21	Mid-Ebb	I4	15:16	Bottom	4.0	93.1	6.57	4.8				
2018-Apr-21	Mid-Ebb	I4	15:16	Bottom	3.5	93.2	6.58	4.6				
2018-Apr-21	Mid-Ebb	G1	15:29	Surface	2.7	109.5	7.69	2.2	**7.44**	**6.75**	2.6	3.28
2018-Apr-21	Mid-Ebb	G1	15:29	Surface	2.8	109.4	7.69	2.2				
2018-Apr-21	Mid-Ebb	G1	15:29	Middle	4.3	101.2	7.19	2.4				
2018-Apr-21	Mid-Ebb	G1	15:29	Middle	3.2	101.1	7.18	2.5				
2018-Apr-21	Mid-Ebb	G1	15:29	Bottom	3.6	94.9	6.75	3.2				
2018-Apr-21	Mid-Ebb	G1	15:29	Bottom	3.1	94.8	6.75	3.3				

								Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth-Averaged SS (mg/L)
Action Level								<7.88	<7.81	>5.5	>6.97
Limit Level								**<7.84**	**<7.80**	**>5.8**	**>7.22**
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	Tide	Station	Time	Level	TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)				
2018-Apr-21	Mid-Flood	E1	09:21	Surface	4.2	97.5	6.89	1.4	**6.90**	**6.90**	1.5	5.73
2018-Apr-21	Mid-Flood	E1	09:21	Surface	3.1	97.4	6.89	1.4				
2018-Apr-21	Mid-Flood	E1	09:21	Middle	5.9	97.6	6.90	1.7				
2018-Apr-21	Mid-Flood	E1	09:21	Middle	5.1	97.6	6.90	1.7				
2018-Apr-21	Mid-Flood	E1	09:21	Bottom	8.6	97.6	6.90	1.4				
2018-Apr-21	Mid-Flood	E1	09:21	Bottom	7.5	97.6	6.90	1.4				
2018-Apr-21	Mid-Flood	F1	10:55	Surface	7.6	99.9	7.07	1.1	**7.03**	**6.96**	2.4	**10.15**
2018-Apr-21	Mid-Flood	F1	10:55	Surface	7.8	99.9	7.07	1.1				
2018-Apr-21	Mid-Flood	F1	10:55	Middle	8.2	98.7	6.99	2.9				
2018-Apr-21	Mid-Flood	F1	10:55	Middle	9.1	98.6	6.99	2.5				
2018-Apr-21	Mid-Flood	F1	10:55	Bottom	13.5	98.2	6.96	3.6				
2018-Apr-21	Mid-Flood	F1	10:55	Bottom	14.7	98.3	6.96	3.5				
2018-Apr-21	Mid-Flood	B1	10:13	Surface	5.4	101.0	7.11	1.7	**7.07**	**6.55**	1.7	**8.17**
2018-Apr-21	Mid-Flood	B1	10:13	Surface	6.7	100.9	7.11	1.7				
2018-Apr-21	Mid-Flood	B1	10:13	Middle	7.7	99.7	7.02	1.4				
2018-Apr-21	Mid-Flood	B1	10:13	Middle	7.3	99.6	7.02	1.4				
2018-Apr-21	Mid-Flood	B1	10:13	Bottom	11.8	92.8	6.55	2.1				
2018-Apr-21	Mid-Flood	B1	10:13	Bottom	10.1	92.8	6.55	2.0				
2018-Apr-21	Mid-Flood	C2	10:34	Surface	7.0	100.2	7.06	1.1	**7.02**	**6.92**	2.4	**9.85**
2018-Apr-21	Mid-Flood	C2	10:34	Surface	8.1	100.1	7.06	1.1				
2018-Apr-21	Mid-Flood	C2	10:34	Middle	10.4	98.4	6.97	3.0				
2018-Apr-21	Mid-Flood	C2	10:34	Middle	11.7	98.4	6.97	3.0				
2018-Apr-21	Mid-Flood	C2	10:34	Bottom	10.8	97.8	6.92	3.1				
2018-Apr-21	Mid-Flood	C2	10:34	Bottom	11.1	97.8	6.92	3.1				
2018-Apr-21	Mid-Flood	C3	10:45	Surface	6.9	99.7	7.05	1.3	**6.98**	**6.89**	1.5	**7.90**
2018-Apr-21	Mid-Flood	C3	10:45	Surface	5.6	99.7	7.05	1.3				
2018-Apr-21	Mid-Flood	C3	10:45	Middle	5.1	97.7	6.92	1.4				
2018-Apr-21	Mid-Flood	C3	10:45	Middle	6.4	97.6	6.91	1.4				
2018-Apr-21	Mid-Flood	C3	10:45	Bottom	11.9	97.4	6.89	1.8				
2018-Apr-21	Mid-Flood	C3	10:45	Bottom	11.5	97.4	6.89	1.8				
2018-Apr-21	Mid-Flood	I3	09:56	Surface	4.1	101.8	7.17	1.2	**7.04**	**6.69**	1.4	4.82
2018-Apr-21	Mid-Flood	I3	09:56	Surface	3.4	101.8	7.17	1.2				
2018-Apr-21	Mid-Flood	I3	09:56	Middle	5.7	97.9	6.91	1.5				
2018-Apr-21	Mid-Flood	I3	09:56	Middle	5.3	97.8	6.90	1.5				
2018-Apr-21	Mid-Flood	I3	09:56	Bottom	4.7	94.6	6.68	1.4				
2018-Apr-21	Mid-Flood	I3	09:56	Bottom	5.7	94.7	6.69	1.4				
2018-Apr-21	Mid-Flood	I4	10:04	Surface	3.9	100.0	7.03	2.1	**6.90**	**6.85**	1.9	6.13
2018-Apr-21	Mid-Flood	I4	10:04	Surface	4.5	99.8	7.02	2.1				
2018-Apr-21	Mid-Flood	I4	10:04	Middle	6.3	95.7	6.76	1.9				
2018-Apr-21	Mid-Flood	I4	10:04	Middle	5.6	95.8	6.77	1.9				
2018-Apr-21	Mid-Flood	I4	10:04	Bottom	8.7	96.9	6.84	1.8				
2018-Apr-21	Mid-Flood	I4	10:04	Bottom	7.8	97.0	6.85	1.7				
2018-Apr-21	Mid-Flood	G1	09:50	Surface	6.6	101.3	7.13	1.2	**6.98**	**6.66**	1.3	6.73
2018-Apr-21	Mid-Flood	G1	09:50	Surface	5.0	101.2	7.12	1.2				
2018-Apr-21	Mid-Flood	G1	09:50	Middle	7.8	96.8	6.84	1.6				
2018-Apr-21	Mid-Flood	G1	09:50	Middle	6.7	96.7	6.82	1.7				
2018-Apr-21	Mid-Flood	G1	09:50	Bottom	7.4	94.3	6.66	1.1				
2018-Apr-21	Mid-Flood	G1	09:50	Bottom	6.9	94.3	6.66	1.1				

					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									<7.88	<7.81	>5.5	>6.97
Limit Level									**<7.84**	**<7.80**	**>5.8**	**>7.22**
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	Tide	Station	Time	Level								
2018-Apr-24	Mid-Ebb	E1	19:23	Surface	5.4	115.9	8.14	2.4	**7.79**	**7.06**	2.7	7.08
2018-Apr-24	Mid-Ebb	E1	19:23	Surface	6.9	115.7	8.13	2.4				
2018-Apr-24	Mid-Ebb	E1	19:23	Middle	6.5	105.6	7.45	3.5				
2018-Apr-24	Mid-Ebb	E1	19:23	Middle	5.2	105.5	7.44	3.5				
2018-Apr-24	Mid-Ebb	E1	19:23	Bottom	9.7	99.4	7.05	2.1				
2018-Apr-24	Mid-Ebb	E1	19:23	Bottom	8.8	99.6	7.06	2.1				
2018-Apr-24	Mid-Ebb	F1	18:13	Surface	4.3	104.0	7.34	1.5	**7.10**	**6.81**	2.6	5.05
2018-Apr-24	Mid-Ebb	F1	18:13	Surface	4.1	104.0	7.34	1.5				
2018-Apr-24	Mid-Ebb	F1	18:13	Middle	5.0	97.2	6.88	2.1				
2018-Apr-24	Mid-Ebb	F1	18:13	Middle	5.2	96.8	6.85	2.1				
2018-Apr-24	Mid-Ebb	F1	18:13	Bottom	6.7	96.1	6.80	4.4				
2018-Apr-24	Mid-Ebb	F1	18:13	Bottom	5.0	96.1	6.81	4.4				
2018-Apr-24	Mid-Ebb	B1	18:50	Surface	6.8	125.1	8.67	1.6	8.29	**6.42**	2.0	6.82
2018-Apr-24	Mid-Ebb	B1	18:50	Surface	6.0	124.3	8.62	1.6				
2018-Apr-24	Mid-Ebb	B1	18:50	Middle	5.0	113.5	7.98	1.1				
2018-Apr-24	Mid-Ebb	B1	18:50	Middle	5.8	111.9	7.88	1.1				
2018-Apr-24	Mid-Ebb	B1	18:50	Bottom	8.6	91.0	6.42	3.3				
2018-Apr-24	Mid-Ebb	B1	18:50	Bottom	8.7	91.0	6.42	3.3				
2018-Apr-24	Mid-Ebb	C2	18:30	Surface	3.1	122.8	8.59	3.8	7.92	**7.03**	3.1	4.72
2018-Apr-24	Mid-Ebb	C2	18:30	Surface	3.6	122.1	8.55	3.7				
2018-Apr-24	Mid-Ebb	C2	18:30	Middle	5.4	103.1	7.28	3.5				
2018-Apr-24	Mid-Ebb	C2	18:30	Middle	3.8	103.0	7.27	3.5				
2018-Apr-24	Mid-Ebb	C2	18:30	Bottom	6.7	99.3	7.03	2.1				
2018-Apr-24	Mid-Ebb	C2	18:30	Bottom	5.7	99.3	7.03	2.1				
2018-Apr-24	Mid-Ebb	C3	18:22	Surface	6.3	122.8	8.62	3.3	7.89	**7.21**	2.5	6.43
2018-Apr-24	Mid-Ebb	C3	18:22	Surface	6.2	122.4	8.60	3.3				
2018-Apr-24	Mid-Ebb	C3	18:22	Middle	6.2	101.3	7.17	2.8				
2018-Apr-24	Mid-Ebb	C3	18:22	Middle	7.2	101.3	7.17	2.8				
2018-Apr-24	Mid-Ebb	C3	18:22	Bottom	6.7	101.8	7.20	1.4				
2018-Apr-24	Mid-Ebb	C3	18:22	Bottom	6.0	102.1	7.22	1.3				
2018-Apr-24	Mid-Ebb	I3	19:03	Surface	5.8	123.7	8.67	1.8	**7.80**	**7.01**	1.6	6.72
2018-Apr-24	Mid-Ebb	I3	19:03	Surface	4.1	122.1	8.57	1.8				
2018-Apr-24	Mid-Ebb	I3	19:03	Middle	8.3	99.1	7.00	1.0				
2018-Apr-24	Mid-Ebb	I3	19:03	Middle	7.9	98.6	6.97	1.0				
2018-Apr-24	Mid-Ebb	I3	19:03	Bottom	7.2	98.9	7.00	2.0				
2018-Apr-24	Mid-Ebb	I3	19:03	Bottom	7.0	99.2	7.02	2.0				
2018-Apr-24	Mid-Ebb	I4	18:54	Surface	3.0	130.6	9.10	2.5	8.59	**7.08**	2.6	7.13
2018-Apr-24	Mid-Ebb	I4	18:54	Surface	4.8	129.8	9.06	2.5				
2018-Apr-24	Mid-Ebb	I4	18:54	Middle	7.2	115.0	8.09	2.9				
2018-Apr-24	Mid-Ebb	I4	18:54	Middle	7.9	115.4	8.12	2.9				
2018-Apr-24	Mid-Ebb	I4	18:54	Bottom	9.7	99.0	7.00	2.3				
2018-Apr-24	Mid-Ebb	I4	18:54	Bottom	10.2	101.1	7.15	2.3				
2018-Apr-24	Mid-Ebb	G1	19:09	Surface	4.2	129.0	9.01	2.2	8.15	**7.00**	3.7	5.13
2018-Apr-24	Mid-Ebb	G1	19:09	Surface	3.7	128.4	8.97	2.2				
2018-Apr-24	Mid-Ebb	G1	19:09	Middle	3.9	103.4	7.30	2.9				
2018-Apr-24	Mid-Ebb	G1	19:09	Middle	2.7	103.3	7.30	2.9				
2018-Apr-24	Mid-Ebb	G1	19:09	Bottom	8.2	98.6	6.98	5.9				
2018-Apr-24	Mid-Ebb	G1	19:09	Bottom	8.1	99.1	7.01	5.9				

								Surface and Mid-depth Dissolved Oxygen (mg/L)	Bottom Dissolved Oxygen (mg/L)	Depth-Averaged Turbidity (NTU)	Depth-Averaged SS (mg/L)
Action Level								<7.88	<7.81	>5.5	>6.97
Limit Level								**<7.84**	**<7.80**	**>5.8**	**>7.22**
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	Tide	Station	Time	Level	TSS (mg/L)	DO Saturation (%)	Dissolved Oxygen (mg/L)	Turbidity (NTU)				
2018-Apr-24	Mid-Flood	E1	12:33	Surface	6.4	108.1	7.61	21.0	**7.65**	**7.02**	**6.2**	**7.30**
2018-Apr-24	Mid-Flood	E1	12:33	Surface	6.7	107.8	7.59	2.1				
2018-Apr-24	Mid-Flood	E1	12:33	Middle	7.1	109.4	7.70	3.1				
2018-Apr-24	Mid-Flood	E1	12:33	Middle	8.2	109.3	7.69	3.1				
2018-Apr-24	Mid-Flood	E1	12:33	Bottom	7.6	99.2	7.02	4.0				
2018-Apr-24	Mid-Flood	E1	12:33	Bottom	7.8	99.2	7.02	4.0				
2018-Apr-24	Mid-Flood	F1	13:55	Surface	4.5	109.3	7.70	2.5	**7.49**	**7.39**	2.5	5.27
2018-Apr-24	Mid-Flood	F1	13:55	Surface	5.0	109.1	7.69	2.5				
2018-Apr-24	Mid-Flood	F1	13:55	Middle	4.9	103.0	7.28	1.5				
2018-Apr-24	Mid-Flood	F1	13:55	Middle	4.3	102.8	7.27	1.5				
2018-Apr-24	Mid-Flood	F1	13:55	Bottom	6.3	104.2	7.37	3.6				
2018-Apr-24	Mid-Flood	F1	13:55	Bottom	6.6	104.5	7.40	3.6				
2018-Apr-24	Mid-Flood	B1	13:18	Surface	5.5	122.8	8.48	0.3	7.89	**7.05**	1.2	6.55
2018-Apr-24	Mid-Flood	B1	13:18	Surface	5.4	122.0	8.42	0.3				
2018-Apr-24	Mid-Flood	B1	13:18	Middle	7.2	103.7	7.32	1.2				
2018-Apr-24	Mid-Flood	B1	13:18	Middle	5.8	103.7	7.32	1.2				
2018-Apr-24	Mid-Flood	B1	13:18	Bottom	7.8	99.3	7.03	2.2				
2018-Apr-24	Mid-Flood	B1	13:18	Bottom	7.6	99.9	7.07	2.1				
2018-Apr-24	Mid-Flood	C2	13:38	Surface	4.8	112.2	7.89	2.3	**7.66**	**7.41**	2.8	6.60
2018-Apr-24	Mid-Flood	C2	13:38	Surface	3.9	112.1	7.88	2.3				
2018-Apr-24	Mid-Flood	C2	13:38	Middle	7.9	105.4	7.43	2.6				
2018-Apr-24	Mid-Flood	C2	13:38	Middle	7.7	105.4	7.43	2.6				
2018-Apr-24	Mid-Flood	C2	13:38	Bottom	7.2	104.9	7.40	3.4				
2018-Apr-24	Mid-Flood	C2	13:38	Bottom	8.1	105.0	7.41	3.4				
2018-Apr-24	Mid-Flood	C3	13:48	Surface	4.6	117.2	8.23	2.5	**7.81**	**7.17**	1.9	6.33
2018-Apr-24	Mid-Flood	C3	13:48	Surface	3.7	117.1	8.22	2.5				
2018-Apr-24	Mid-Flood	C3	13:48	Middle	8.0	104.9	7.42	1.8				
2018-Apr-24	Mid-Flood	C3	13:48	Middle	7.5	104.3	7.38	1.8				
2018-Apr-24	Mid-Flood	C3	13:48	Bottom	7.0	101.2	7.16	1.5				
2018-Apr-24	Mid-Flood	C3	13:48	Bottom	7.2	101.3	7.17	1.5				
2018-Apr-24	Mid-Flood	I3	13:03	Surface	6.0	121.9	8.53	2.2	8.03	**6.97**	2.5	6.43
2018-Apr-24	Mid-Flood	I3	13:03	Surface	5.6	121.6	8.51	2.2				
2018-Apr-24	Mid-Flood	I3	13:03	Middle	5.3	107.1	7.55	1.8				
2018-Apr-24	Mid-Flood	I3	13:03	Middle	5.0	106.7	7.52	1.8				
2018-Apr-24	Mid-Flood	I3	13:03	Bottom	8.4	98.3	6.96	3.3				
2018-Apr-24	Mid-Flood	I3	13:03	Bottom	8.3	98.3	6.97	3.6				
2018-Apr-24	Mid-Flood	I4	13:10	Surface	4.5	121.6	8.51	1.8	8.18	**6.41**	2.8	4.67
2018-Apr-24	Mid-Flood	I4	13:10	Surface	4.3	121.2	8.49	1.8				
2018-Apr-24	Mid-Flood	I4	13:10	Middle	3.7	112.0	7.88	1.6				
2018-Apr-24	Mid-Flood	I4	13:10	Middle	3.6	111.0	7.82	1.6				
2018-Apr-24	Mid-Flood	I4	13:10	Bottom	6.0	90.4	6.40	4.9				
2018-Apr-24	Mid-Flood	I4	13:10	Bottom	5.9	90.5	6.41	4.9				
2018-Apr-24	Mid-Flood	G1	13:00	Surface	7.6	120.4	8.42	1.9	7.85	**7.21**	3.3	**9.85**
2018-Apr-24	Mid-Flood	G1	13:00	Surface	6.2	119.7	8.38	2.0				
2018-Apr-24	Mid-Flood	G1	13:00	Middle	9.0	103.4	7.30	1.5				
2018-Apr-24	Mid-Flood	G1	13:00	Middle	8.8	103.1	7.28	1.5				
2018-Apr-24	Mid-Flood	G1	13:00	Bottom	13.9	101.6	7.20	6.3				
2018-Apr-24	Mid-Flood	G1	13:00	Bottom	13.6	101.9	7.22	6.3				

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