Asia Pacific Gateway (APG) – Tseung Kwan O

Second Weekly Impact Water Quality Monitoring Report

3 June 2016

Submitted by
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Asia Pacific Gateway (APG) – Tseung Kwan O
Environmental Certification Sheet
EP-485/2014

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified:	Second Weekly Impact Water Quality Monitoring Report
Date of Report:	3 June 2016
Date prepared by ET:	3 June 2016
Date received by IEC:	3 June 2016

Reference EM&A Manual

EM&A Manual: Section 2

Content: *Reporting on Impact Water Quality Monitoring*

2.5 "An Impact Monitoring Report will be provided weekly within three days after the relevant monitoring data are collected or become available during Project marine installation work.... "

"A Weekly Impact Monitoring shall include, but not limited to, the following details: Basic Project Information – Project marine installation works programme with fine tuning of activities showing the inter-relationship with environmental protection/mitigation measures for the week and works undertaken during the week; Operating practices of any Project marine installation works machinery (e.g. cable burial machine) during sampling (including: position, speed, cable burial depth) and an interpretation of monitoring results; and The monitoring data should be provided graphically to show the relationship between the Control and the Impact monitoring stations and compliance or non-compliance with respect to the Action/Limit Levels. "

EP Condition: Condition 2

Content: *Impact Monitoring Report on Water Quality*

2.5 "(ii)(b): To monitor the environmental impacts and timely implementation of the recommended mitigation measures, the Permit Holder shall submit to the director four hard copies and one electronic copy of weekly impact monitoring and site audit report within three days after the relevant monitoring data are collected or become available, as defined in the approved EM&A Manual."

"All environmental monitoring and audit results submitted under this Permit shall be true, valid and correct. Before submission to the Director, the reports as required in Condition 2.4 and 2.5 (ii) shall be certified by the independent checker that all mitigation measures recommended in the Project Profile (Register No.:PP-496/2013) have been fully implemented."

ET Certification

I hereby certify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-485/2014.

Terence Fong, Environmental Team Leader: Date: 3 June 2016

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IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-485/2014.

Vincent Lai, Independent Environmental Checker:

Date: 3 June 2016

Asia Pacific Gateway (APG) – Tseung Kwan O

Second Weekly Impact Water Quality Monitoring Report

Document Code: 0324228_Second Weekly Impact Water Quality Monitoring Report.doc

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Client:	Project No:
China Mobile International Limited (CMI Ltd)	0324228
Summary: This document presents the monitoring requirements, methodologies and results of the impact marine water quality measurements at the monitoring locations near the proposed submarine cable installation works in the monitoring period from 23 to 29 May 2016.	Date: 3 June 2016 Approved by: *Terence Fong* *Partner*

v0	Second Weekly Impact Water Quality Monitoring Report_v0	YL	ME	TF	3/6/16
Revision	Description	By	Checked	Approved	Date

Distribution

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ANNEXES

This is the *Second Weekly Impact Water Quality Monitoring Report* presenting the impact water quality monitoring conducted for the monitoring week from 23 to 29 May 2016 in accordance with the *Environmental Monitoring and Audit Manual (EM&A Manual)*.

Summary of Construction Works undertaken during the Reporting Week

Cable installation works commenced in Zone A on 26 May 2016 and continued along the proposed cable alignment route. The working barge entered Zone B on 28 May 2016.

On 27 May 2016, Typhoon Signal No. 3 was issued at 05:40 in the morning. Therefore cable laying works were suspended until Typhoon Signal No. 3 was cancelled at 13:40 in the afternoon on 27 May 2016.

Water Quality

Repeated (*ad hoc*) water quality measurements were carried out in Zone C on 24 May 2016 according to the *Event Action Plan for Water Quality* in the *EM&A Manual* following the issued NOE for 20 May 2016.

Impact monitoring was initiated in Zone A on 26 May 2016 following the commencement of cable installation works. According to the cable installation work progress, impact monitoring continued in Zone A on 27 and 28 May 2016. As cable installation works moved to Zone B on 28 May 2016, impact monitoring was also conducted in Zone B on the same day. It is noted that no monitoring works were conducted before 13:40 on 27 May 2016 given that Typhoon Signal No. 3 was effective. Therefore only two rounds of impact monitoring were conducted in Zone A, from 15:00-19:00 and 19:00-23:00 on 27 May 2016.

NOE occurred in Zone A on 27 May 2016, given cable installation works continued in Zone A on 28 May 2016, impact monitoring works was continued, addressing the *EM&A Manual* requirements for repeat *(ad hoc)* measurements. NOE also occurred in Zone A and B on 28 May 2016, repeated (*ad hoc*) water quality monitoring was conducted in Zone A on 29 May 2016, and impact monitoring was carried out in Zone B on 30 May 2016 addressing the *EM&A Manual* requirements for repeat *(ad hoc)* measurements.

The impact monitoring results of water quality (e.g. DO, turbidity and SS) in Zones A to C were similar among the stations in the impact monitoring period from 23 to 29 May 2016. Water quality in Zones A to C was also similar throughout the monitoring period. Neither a sudden drop in dissolved oxygen concentrations nor a sharp increase in turbidity levels and suspended solids levels were observed on each monitoring day.

Results of the impact monitoring data were compared against the results of the *Baseline Environmental Monitoring* for Zones A, B and C respectively and

exceedances of Action and Limit Levels in all zones were observed. Notifications of Exceedances (NOEs) were therefore issued for 24, 27 and 28 May 2016 accordingly. Generally, it is considered that these exceedances were not caused by the Project's cable installation works but reflected the natural background fluctuation of marine water quality.

It is concluded that there was no deterioration of water quality during the reporting week and hence the effect of the Project cable laying works on water quality is considered to be negligible over this reporting week.

Environmental Non-conformance

Exceedances of DO (all depths), depth-averaged turbidity and SS in Action Level, and DO (all depths) and depth-averaged turbidity in Limit Level were recorded during the monitoring period from 23 to 29 May 2016 (i.e. 24, 27 and 28 May 2016); however the exceedances were not considered to be caused by the cable laying works but reflected the natural background fluctuation.

No non-compliance event was recorded during the reporting week.

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

Future Key Issues

The cable laying works will continue on 30 May 2016. Post laying inspection will be carried out after completion of cable laying works.

1 INTRODUCTION

ERM-Hong Kong, Limited (ERM) has been appointed by China Mobile International Limited (CMI Ltd) as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the 'Asia Pacific Gateway (APG) – Tseung Kwan O' (hereafter referred to as the 'Project').

1.1 PURPOSE OF THE REPORT

This is the *Second Weekly Impact Water Quality Monitoring Report*, which summarises the results of impact water quality monitoring as part of the Environmental Monitoring & Audit (EM&A) programme during the reporting week from 23 to 29 May 2016.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : ***Introduction***
Details the background, purpose and structure of the report.

Section 2 : ***Project Information***
Summarises background and scope of the Project, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3 : ***Water Quality Monitoring Requirements***
Summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, and Event / Action Plans.

Section 4 : ***Monitoring Results***
Summarises the monitoring results obtained in the reporting period.

Section 5 : ***Environmental Non-conformance***
Summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

Section 6 : ***Future Key Issues***
Summarises the monitoring schedule for the next week.

Section 7 : ***Conclusions***
Presents the key findings of the impact monitoring results.

2 PROJECT INFORMATION

2.1 BACKGROUND

In order to help meet the tremendous telecommunication services requirements for intra-Asia connectivity between South East Asia and North Asia, the APG Consortium has decided to build a submarine telecommunication cable system, which will be approximately 10,400 km in length, connecting the major business hubs across the region – the Asia Pacific Gateway (APG). The cable will link up with several countries, including Malaysia, Singapore, Vietnam, Taiwan, Mainland China, Japan, Korea and the Hong Kong Special Administrative Region (HKSAR). Since the cable that branches to HKSAR will ultimately connect to land at Tseung Kwan O (TKO), the HKSAR section of the submarine cable will be referred to at the APG-TKO cable.

As one of the members of the APG Consortium, China Mobile International Limited (CMI) proposes to install the APG–TKO section of the cable. The proposed cable will land via an existing Beach Manhole (BMH) within the TKO Industrial Estate on the reclaimed land and ultimately connect with a Cable Landing Station in the TKO Industrial Estate. It should be noted that Tseung Kwan O is currently the landing site for a number of submarine cables. The proposed submarine cable will travel west and southward from TKO as it approaches the Tathong Channel. After crossing the Tathong Channel and near to Cape Collinson, the cable then runs approximately parallel to the Tathong Channel until north of Sung Kong Island where it then turns eastward to the boundary of HKSAR waters where it enters the South China Sea. At the southeast offshore waters, it will be necessary to install a grout mattress to protect the cable where it crosses Hong Kong Electric Co., Ltd's (HKE) gas pipeline. A map of the proposed cable route is presented in *Figure 2.1*.

The Project Profile (PP-496/2013) (which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system within HKSAR, including the connection to land at TKO), 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)*. EPD subsequently issued an approval letter on *Application for Permission to Apply Directly for Environmental Permit* on 15th November 2013 (DIR-233/2013) and issued an EP on 18 February 2014 (EP-485/2014).

Although no unacceptable environmental impacts have been identified, it is recommended that during APG-TKO installation works an Environmental Monitoring and Audit (EM&A) programme shall be conducted. The key aspects of the EM&A programme include Water Quality Monitoring and Coral Monitoring as well as the implementation a Marine Mammal (mainly

WLCP	Easting	Northing	WLCP	Easting	Northing	WLCP	Easting	Northing	WLCP	Easting	Northing
1	845588.70	815897.93	17	844646.40	813703.38	33	845447.61	809899.21	49	849680.77	807095.91
2	845556.09	815866.54	18	844669.62	813648.58	34	845604.56	809780.81	50	850966.87	807010.88
3	845305.98	815905.89	19	844685.62	813611.68	35	846278.13	808981.74	51	857127.50	807037.45
4	845181.61	815925.38	20	844750.18	813348.72	36	846541.71	808745.68	52	857294.09	807122.57
5	845110.68	815898.08	21	844747.87	813179.67	37	846587.45	808705.84	53	858187.64	807575.78
6	844850.18	815797.85	22	844735.29	812289.73	38	846688.11	808502.90	54	859209.68	808734.05
7	844836.11	815782.70	23	844720.57	812188.95	39	847135.01	807602.02	55	859922.46	809541.99
8	844683.67	815618.73	24	844708.59	812107.37	40	847200.72	807516.98	56	860046.48	809682.63
9	844534.05	815321.70	25	844641.15	811648.90	41	847336.27	807341.75	57	860205.34	809737.32
10	844305.49	814867.76	26	844649.37	811049.83	42	847375.49	807290.84	58	861589.52	810214.74
11	844264.01	814687.79	27	844919.25	810509.60	43	847399.22	807260.22	59	866499.41	810855.95
12	844225.62	814520.38	28	845018.29	810386.56	44	847457.54	807184.60	60	866961.11	810673.40
13	844232.34	814484.58	29	845037.20	810363.13	45	847766.64	807050.09	61	867438.99	810476.69
14	844260.07	814335.84	30	845222.90	810132.35	46	847855.31	807058.83	62	869831.85	810619.15
15	844378.68	814186.41	31	845243.02	810107.27	47	848656.46	807137.33			
16	844469.78	814081.26	32	845352.72	809970.94	48	849142.30	807131.45			

KOWLOON CITY DISTRICT
九龍城區

KWUN TONG DISTRICT
觀塘區

WAN CHAI DISTRICT
灣仔區

EASTERN DISTRICT
東區

SOUTHERN DISTRICT
南區

ISLANDS DISTRICT
離島區

SAI KUNG DISTRICT
西貢區

Hong Kong SAR Boundary
香港特別行政區界線

N
北

Kilometers 公里
0 2.5 5

Legend 圖例

- Work Limit Control Point (WLCP) 座標點
- Proposed APG Submarine Cable System 擬建之APG海底光纖系統
- District Boundary 分區邊界

Figure 2.1
圖 2.1

Proposed APG Submarine Cable System
擬建之APG海底光纖系統

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Finless Porpoise) Exclusion Zone, conducted according to the location of works.

EP-485/2014 *Special Condition 2.5* states that an EM&A programme should be implemented in accordance with the procedures and requirements set out in the *EM&A Manual*. In accordance with the *EM&A Manual*, water quality monitoring is required for the Project, including baseline monitoring, impact monitoring and site audit and post Project monitoring.

Baseline water quality Monitoring was conducted in in Zones A, B and C between 27 April 2016 and 5 May 2016 and the results were presented in the *Baseline Water Quality Monitoring Report*.

According to *EM&A Manual*, impact water quality monitoring will commence in Zone A when the cable installation barge works are within Zone A. The sampling works will cease once the cable barge is outside Zone A or no cable laying works are being undertaken. Similarly, impact Monitoring will commence in Zone B when cable installation barge works move to within Zone B. The monitoring works will start in Zone C when the vessel goes into Zone C. The water quality sampling works will cease once the cable laying works are outside Zones A, B and C or when no cable laying works are being undertaken.

Impact Monitoring started on 17 May 2016. The impact water quality monitoring is used to reflect the water quality conditions and to identify potential water quality impacts during the cable installation works. With reference to the *EM&A Manual*, an Impact Monitoring Report will be provided weekly within three days after the relevant monitoring data are collected or become available during Project marine installation work. Repeated (*ad hoc*) monitoring will be carried out accordingly if exceedance of Action and Limit Level are observed.

This report, therefore, presents the impact monitoring results from monitoring stations within Zones A, B and C during the monitoring week from 23 to 29 May 2016.

2.2 *MARINE CONSTRUCTION WORKS UNDERTAKEN DURING REPORTING WEEK*

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

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

Date	Works Area	Activity
23 May 2016	n/a	No activity.
24 May 2016	n/a	No activity.
25 May 2016	n/a	No activity.
26 May 2016	Zone A	Cable laying works in Zone A.
27 May 2016	Zone A	Cable laying works in Zone A. Note: only after 13:40 due to Typhoon Signal No. 3.
28 May 2016	Zones A & B	Cable laying works commenced in Zone A and entered Zone B at 14:00 on the same day.
29 May 2016	n/a	No activity.

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
Project Profile	PP-496/2013	Throughout the construction and operation stages	Submitted on 9 October 2013
EM&A Manual	-	Throughout the construction and operation stages	Approved by EPD on 17 January 2014
Environmental Permit	EP-485/2014	Throughout the construction and operation stages	Granted by EPD on 18 February 2014
Baseline Water Quality Monitoring Report	-	Throughout the construction period for Zones A to C	Submitted on 9 May 2016
First Weekly Impact Water Quality Monitoring Report	-	Throughout the construction period for Zones A to C	Submitted on 26 May 2016

3 WATER QUALITY MONITORING REQUIREMENTS

3.1 MONITORING LOCATIONS

In accordance with the *EM&A Manual*, impact water quality monitoring were carried out at twenty-six (26) stations the same stations as in baseline water quality monitoring following commencement of Project route clearance works. These stations are situated around the cable laying works in Junk Bay and near to Tung Lung Chau and Tai Long Pai and listed below. The locations are also shown in *Figure 3.1*.

- B1 is an Impact Station to monitor the impacts of cable installation works on the Big Wave Bay Beach;
- B2 is an Impact Station to monitor the impacts of cable installation works on the Rocky Bay Beach;
- B3 is an Impact Station to monitor the impacts of cable installation works on the Shek O Beach;
- E1 is an Impact Station to monitor impacts of cable installation works on Cape d'Aguilar Marine Reserve;
- E2 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Tung Lung Chau;

  (There is no Impact Station E3 as E3 represents coral communities along the coast of Ninepins, over 5 km from the cable installation works, and will not be affected by the Project due to the distance)
- E4 is the Impact Station to monitor the impacts of cable installation works on the coral communities at the coast of Sung Kong;
- E5 is the Impact Station to monitor the impacts of cable installation works on the coral communities at the coast of Waglan Island;
- E6 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Tai Long Pai (the Gradient Station is not set due to the insufficient distance between this Impact Station and the nearby proposed cable works which may affect the cable laying works);
- E7 is an Impact Station to monitor the impacts of cable installation works on the coral communities along Junk Bay – South West;
- E8 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Cape Collinson (the Gradient Station is not set due to the insufficient distance between this Impact Station to nearby proposed cable works which may affect the cable laying works);
- E9 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Fat Tong Chau (the Gradient Station is not set due to the insufficient distance between this Impact Station to nearby proposed cable works which may affect the cable laying works);

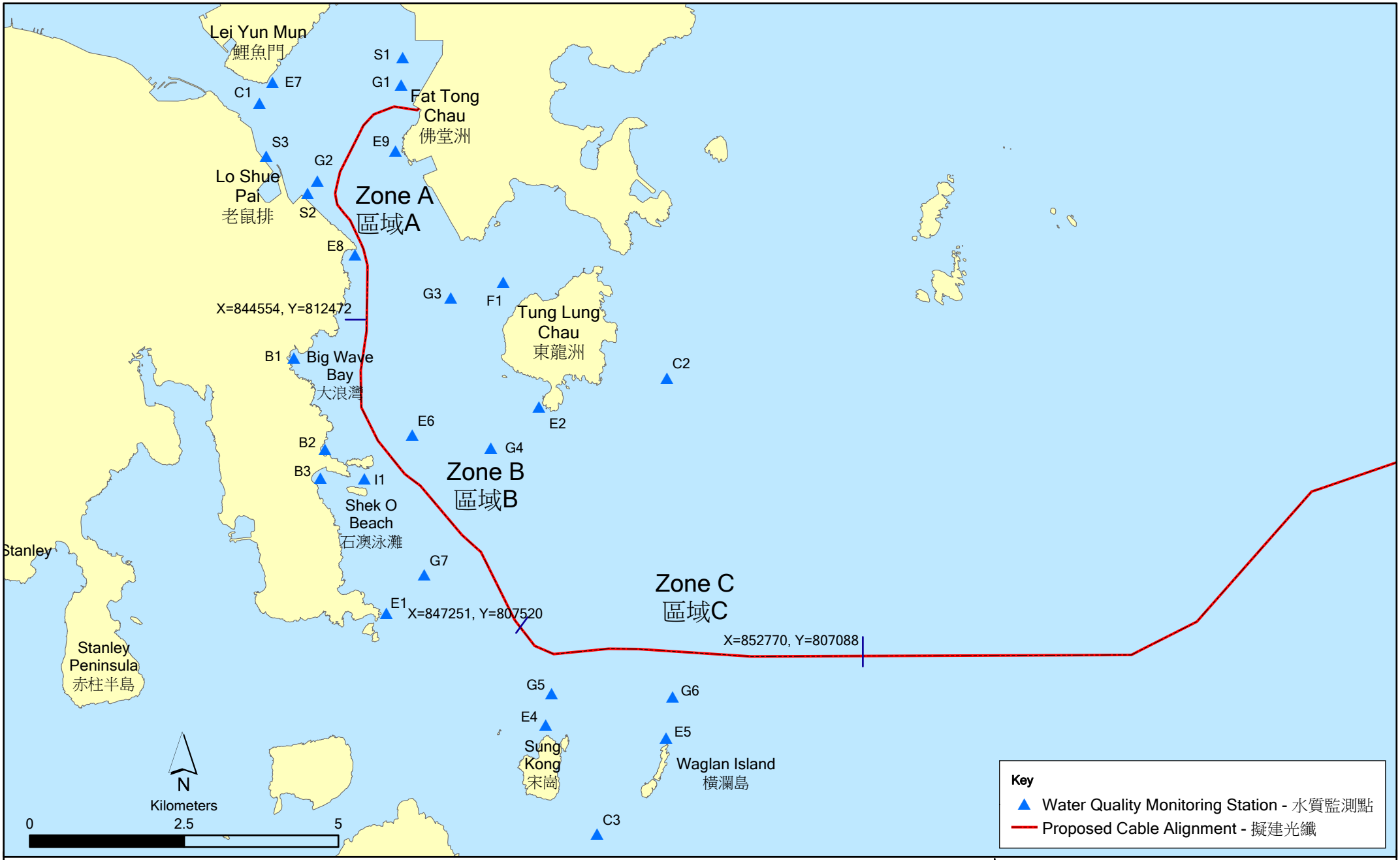

Figure 3.1
圖 3.1

Water Quality Monitoring Station
水 質 監 測 點

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Date: 26-May-2016

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- F1 is an Impact Station to monitor the impacts of cable installation works on the Tung Lung Chau Fish Culture Zone;
- I1 is an Impact Station to monitor the impacts of cable installation works on the Shek O Headland SSSI;
- S1 is an Impact Station situated at the WSD Seawater Intake Point in Junk Bay. It is located within 500 m north of the cable alignment at Junk Bay and set up to monitor the effect of cable laying works in the area;
- S2 is an Impact Station to monitor the impacts of cable installation works on the WSD Seawater Intake at Siu Sai Wan;
- S3 is an Impact Station to monitor the impacts of cable installation works on the Pamela Youde Nethersole Eastern Hospital Cooling Water Intake at Heng Fa Chuen;
- G1 is a Gradient Station between S1 and the cable alignment;
- G2 is a Gradient Station between S2 and the cable alignment;
- G3 is a Gradient Station between F1 and the cable alignment;
- G4 is a Gradient Station between E2 and the cable alignment;
- G5 is the Gradient Station between E4 and the alignment;
- G6 is the Gradient Station between E5 and the alignment;
- G7 is a Gradient Station between E1 and the cable alignment;
- C1 is a Control Station (approximately 3 km from the proposed cable alignment) for Zone A. It is not supposed to be influenced by the cable laying works due to its remoteness to the construction works;
- C2 is a Control Station (approximately 4 km from the proposed cable alignment) for Zone B. It is not supposed to be influenced by the cable laying works due to its remoteness to the construction works; and
- C3 is a Control Station (approximately 3 km from the proposed cable alignment) for Zone C. It is not supposed to be influenced by the cable laying works due to its remoteness to the construction works.

Stations of C1, E7, E8, E9, F1, G1, G2, G3, S1, S2, and S3 (i.e. elven (11) stations) are located in Zone A (*Figure 3.2*). Thirteen (13) stations (i.e. B1, B2, B3, C2, E1, E2, E6, E8, F1, G3, G4, G7 and I1) are located in Zone B (*Figure 3.3*) and five (5) stations (i.e. C3, E4, E5, G5 and G6) are located in Zone C (*Figure 3.4*). The above monitoring stations shall be sampled as well during Post Project Monitoring.

The co-ordinates of these monitoring stations are listed in *Table 3.1*.

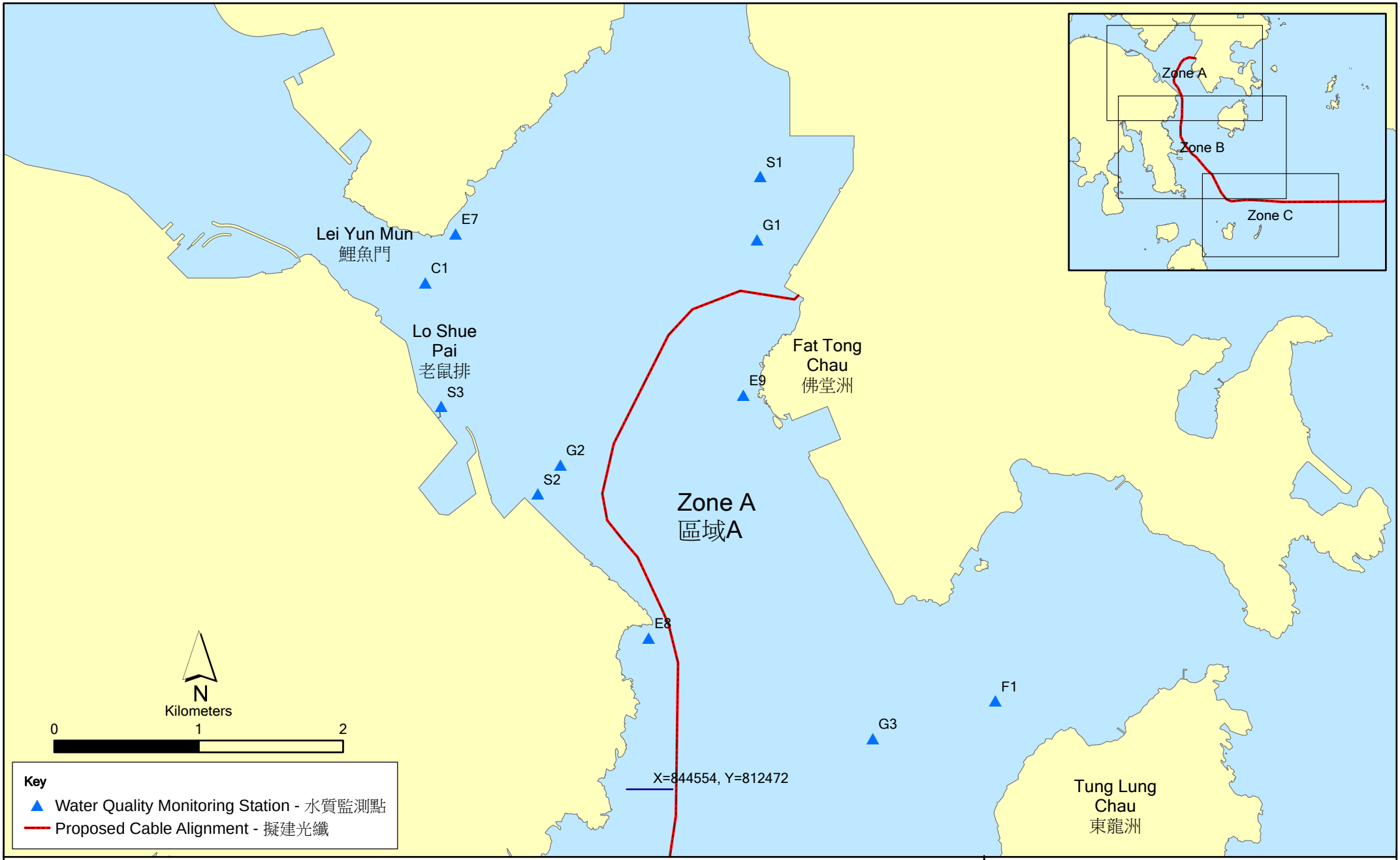

Figure 3.2
圖 3.2

Water Quality Monitoring Station (Zone A)
區域A內的水質監測點

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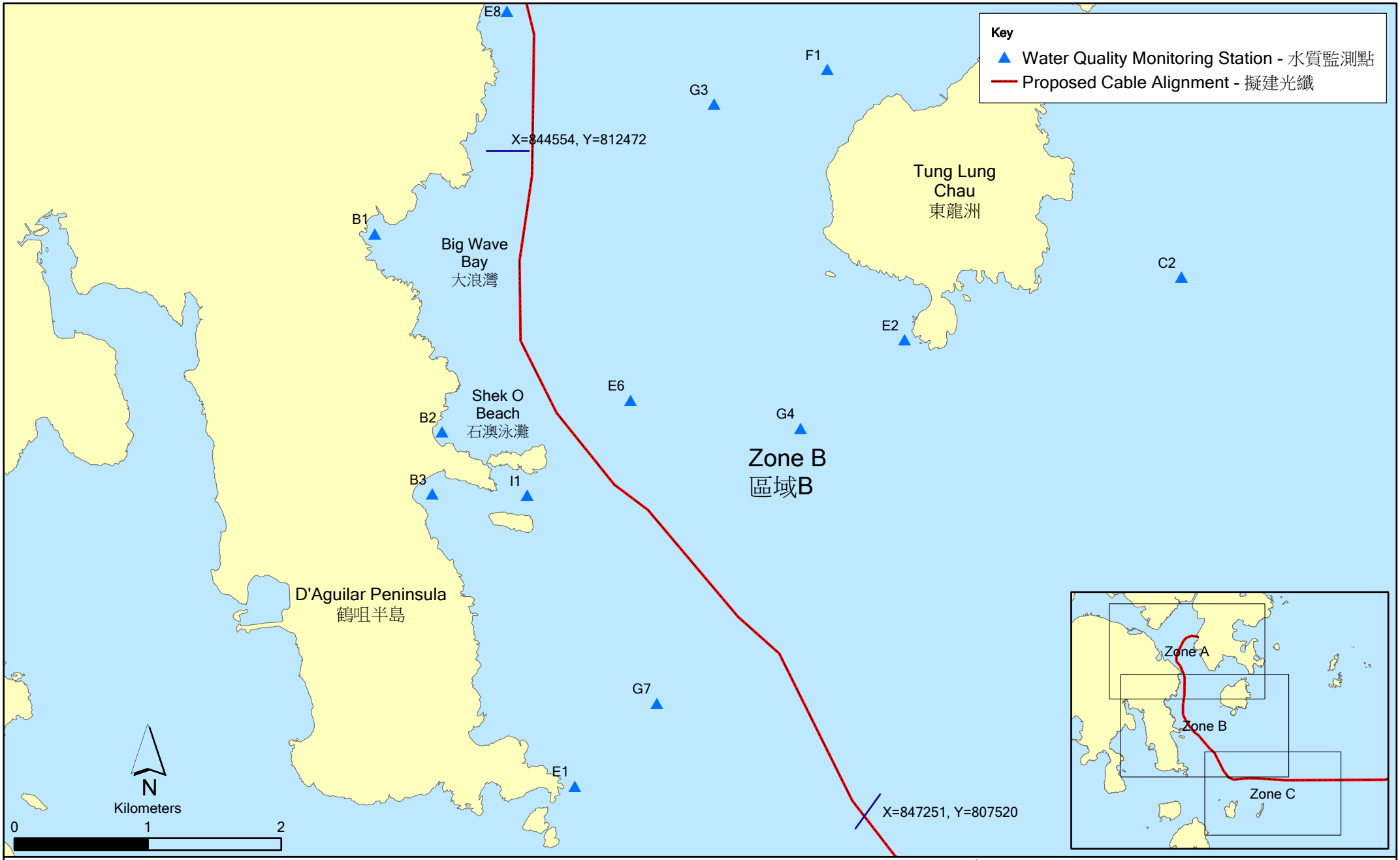

Figure 3.3
圖 3.3

Water Quality Monitoring Station (Zone B)
區域B內的水質監測點

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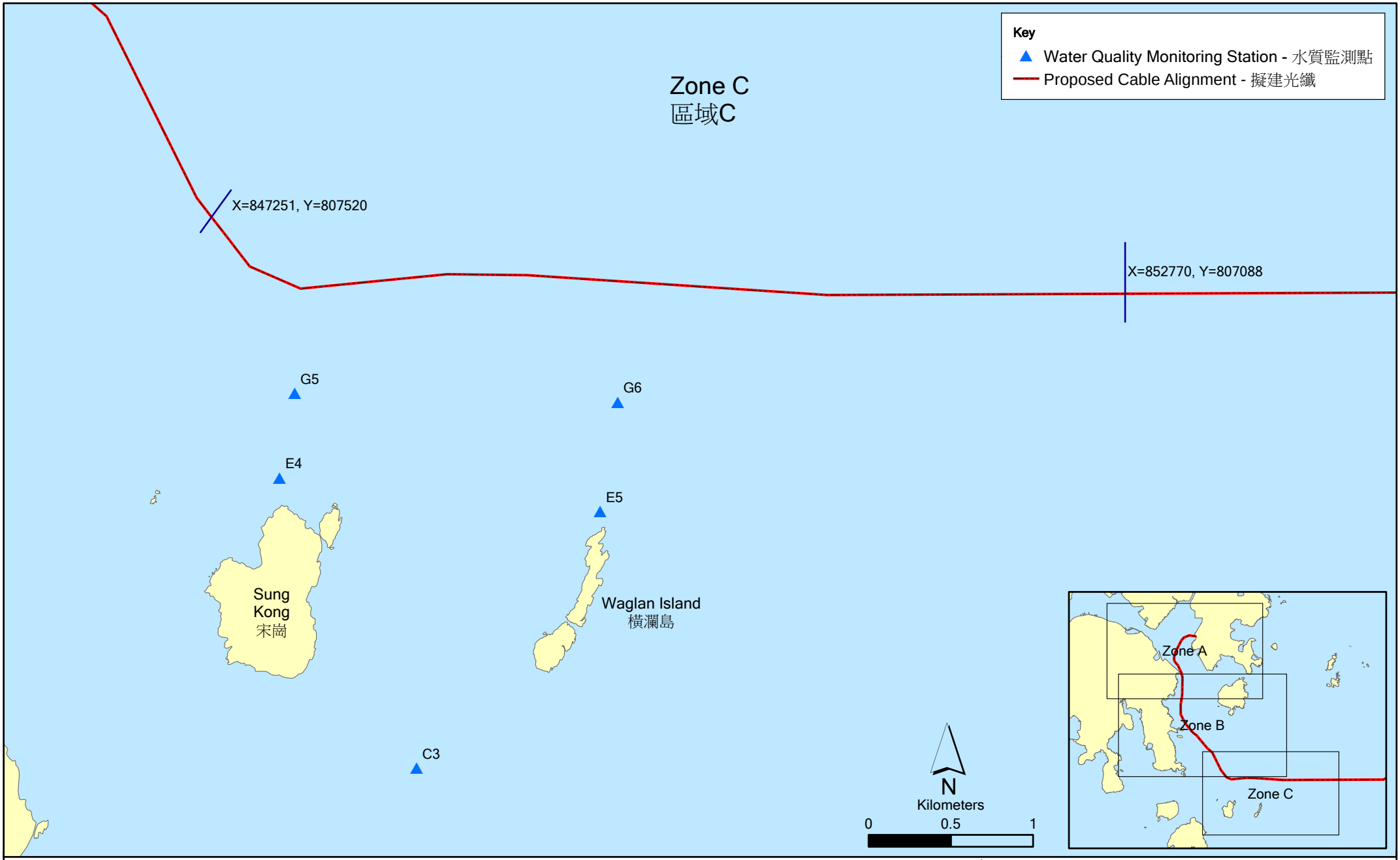

Figure 3.4
圖 3.4

Water Quality Monitoring Station (Zone C)
區域C內的水質監測點

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Table 3.1 Co-ordinates of Sampling Stations (HK Grid)

Station	Nature	Easting	Northing
B1	Impact Station (Beach)	843556.84	811853.46
B2	Impact Station (Beach)	844062.02	810369.19
B3	Impact Station (Beach)	843988.33	809902.13
E1	Impact Station (Marine Reserve)	842021.64	816547.02
E2	Impact Station (Coral Communities)	847527.33	811059.83
E4	Impact Station (Coral Communities)	848471.60	804135.73
E5	Impact Station (Coral Communities)	845056.10	807712.89
E6	Impact Station (Coral Communities)	848503.03	811247.01
E7	Impact Station (Coral Communities)	849586.94	805696.09
E8	Impact Station (Coral Communities)	844547.04	813522.78
E9	Impact Station (Coral Communities)	845202.76	815205.38
F1	Impact Station (Fish Culture Zone)	846948.57	813085.03
I1	Impact Station (Site of Special Scientific Interest)	844698.75	809894.80
S1	Impact Station (Seawater Intakes)	845297.24	816281.54
S2	Impact Station (Seawater Intakes)	844070.53	814783.54
S3	Impact Station (Seawater Intakes)	846099.31	812825.53
G1	Gradient Station	847365.06	810245.78
G2	Gradient Station	843936.91	814720.04
G3	Gradient Station	849692.91	806360.59
G4	Gradient Station	846748.01	810394.92
G5	Gradient Station	845320.83	816717.97
G6	Gradient Station	843779.38	814520.41
G7	Gradient Station	843110.53	815125.70
C1	Control Station	842999.91	815984.25
C2	Control Station	845297.24	816281.54
C3	Control Station	844070.53	814783.54

3.2 MONITORING PARAMETERS

The parameters measured *in situ* were:

- Dissolved Oxygen (DO) (% saturation and mg/L)
- Water temperature (°C)
- Turbidity (Nephelometric Turbidity Units [NTU])
- Salinity (parts per thousand [ppt])

The only parameter to be measured in the laboratory was:

- Suspended solids (SS) (mg/L)

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

These parameters were monitored at all designated marine water quality monitoring stations during the whole impact monitoring phase.

3.3 MONITORING EQUIPMENT AND METHODOLOGY

3.3.1 Monitoring Equipment

Table 3.2 summaries the equipment used for the impact water quality monitoring.

Table 3.2 Equipment used during Impact Water Quality Monitoring

Equipment	Model
Global Positioning Device	GARMIN eTrex 10
Water Depth Gauge	Speedtech Instruments SM-5
Water Sampling Equipment	Wildlife Supply Co Kemmerer 1520
Salinity, DO, Temperature Measuring Meter	DO and Salinity Meter (Pro 2030)
Current Velocity and Direction	Global Water FP111
Turbidity Meter	HACH 2100Q

3.3.2 Monitoring Frequency and Timing

Impact Monitoring at C1, E7, E8, E9, F1, G1, G2, G3, S1, S2, and S3 (i.e. eleven (11) stations) will commence when the cable installation barge works are within Zone A. The sampling works will cease once the cable barge is outside Zone A or no cable laying works are being undertaken.

Similarly, Impact Monitoring at B1, B2, B3, C2, E1, E2, E6, E8, F1, G3, G4, G7, and I1 (i.e. thirteen (13) stations) will commence when cable installation barge works move to within Zone B.

The monitoring works will start at E4, E5, G5, G6 and C3 (i.e. five (5) stations) when the vessel goes into Zone C.

The water quality sampling works will cease once the cable laying works are outside Zones A, B and C or when no cable laying works are being undertaken for the Project.

In-situ data and SS data will be collected at monitoring stations (actual time interval subject to the sampling vessel travelling time among stations) during the cable installation works for each zone.

In-situ data and SS data of each station will be collected at least 4 times (estimated 4-hour sampling intervals to be required for each zone, actual time interval subject to the sampling vessel travelling time among stations) during the cable installation works for each zone within a day. Impact monitoring will be conducted as soon as marine works commence and will be undertaken throughout the Project works, including for route clearance and cable laying operations.

Reference was made to the predicted tides at Tai Miu Wan, 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 Tai Miu Wan tidal station, the impact water quality monitoring was conducted between 16 and 22 May 2016, following the schedule presented in *Annex A*.

3.3.3 Sampling/Testing Protocol

All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or any other international accreditation scheme before use (see calibration reports in *Annex B*), and subsequently will 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 as soon as possible after collection.

At each measurement/ sampling depth, two (2) consecutive *in-situ* measurements (DO concentration and saturation, temperature, turbidity, and salinity) and two water samples for SS were taken for lab analysis.

3.3.4 Laboratory Analysis

All laboratory work was carried out in a HOKLAS accredited laboratory. 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 two (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 (*Annex C*)

3.3.5 Sampling Depths & Replication

Each station was sampled and measurements/ water samples were taken at three depths, namely, 1 m below water surface, mid-depth and 1 m above sea bed, except where the water depth was less than 6 m, in which case the mid-depth station was omitted. For stations where the water is less than 3 m deep, only the mid-depth sample was taken.

[1] Hong Kong Observatory (2016) http://www.hko.gov.hk/tide/predtide.htm?s=TMW [Accessed in May 2016]

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.

3.4 ACTION AND LIMIT LEVELS

The Action and Limit levels which were established based on the results of baseline water quality monitoring are presented in *Table 3.3 to Table 3.5.*

Table 3.3 Action and Limit Levels for Water Quality in Zone A

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.37 mg/L), or	99%-ile of baseline data (3.49 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle	Surface and Middle
	5%-ile of baseline data for surface and middle layer (7.00 mg/L)	5 mg/L [d] [e] or 1%-ile of baseline for surface and middle layer (6.71 mg/L)
	Bottom	Bottom
	5%-ile of baseline data for bottom layers (6.99 mg/L)	2 mg/L [d] [e] or 1%-ile of baseline data for bottom layer (6.91 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.86 NTU), or	99%-ile of baseline data (3.06 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
d. Set Limit Level for DO was derived from the Water Quality Objectives (WQO) for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones under the Water Pollution Control Ordinance (WPCO) Chapters 358L, 358Y, and 358I respectively.
e. Higher value is selected in assessing the exceedances of Limit Levels.

Table 3.4 Action and Limit Levels for Water Quality in Zone B

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.33 mg/L), or	99%-ile of baseline data (3.39 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle 5%-ile of baseline data for surface and middle layer (7.49 mg/L)	Surface and Middle 5 mg/L [d] [e] or 1%-ile of baseline for surface and middle layer (7.41 mg/L)
	Bottom 5%-ile of baseline data for bottom layers (7.26 mg/L)	Bottom 2 mg/L [d] [e] or 1%-ile of baseline data for bottom layer (7.01 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.67 NTU), or	99%-ile of baseline data (2.79 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
d. Set Limit Level for DO was derived from the *Water Quality Objectives* (WQO) *for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones* under the *Water Pollution Control Ordinance* (WPCO) Chapters 358L, 358Y, and 358I respectively.
e. Higher value is selected in assessing the exceedances of Limit Levels.

Table 3.5 Action and Limit Levels for Water Quality in Zone C

Parameter	Action Level	Limit Level
SS in mg/L (Depth-averaged) [a] [c]	95%-ile of baseline data (3.37 mg/L), or	99%-ile of baseline data (3.87 mg/L), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day
DO in mg/L [b]	Surface and Middle 5%-ile of baseline data for surface and middle layer (8.33 mg/L)	Surface and Middle 5 mg/L [d] [e] or 1%-ile of baseline for surface and middle layer (8.22 mg/L)
	Bottom 5%-ile of baseline data for bottom layers (8.23 mg/L)	Bottom 2 mg/L [d] [e] or 1%-ile of baseline data for bottom layer (8.15 mg/L)
Turbidity in NTU (Depth-averaged) [c]	95%-ile of baseline data (2.75 NTU), or	99%-ile of baseline data (3.20 NTU), and
	120% of the corresponding data from respective control station at the same tide of the same day	130% of the corresponding data from respective control station at the same tide of the same day

Notes:

a. "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
b. For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits. These levels are for both FCZ and non-FCZ.
c. For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
d. Set Limit Level for DO was derived from the *Water Quality Objectives* (WQO) *for Junk Bay, Eastern Buffer, and Mirs Bay Water Control Zones* under the *Water Pollution Control Ordinance* (WPCO) Chapters 358L, 358Y, and 358I respectively.
e. Higher value is selected in assessing the exceedances of Limit Levels.

3.5 EVENT AND ACTION PLAN

The Event and Action Plan for water quality monitoring which was stipulated in the *EM&A Manual* is presented in *Table 3.6*.

Table 3.6 Event Action Plan for Water Quality

Event	Contractor
Action Level Exceedance	**Step 1** - repeat sampling event. **Step 2** - Inform EPD and AFCD and confirm notification of the noncompliance in writing; **Step 3** - discuss with cable installation contractor the most appropriate method of reducing suspended solids during cable installation (e.g. reduce cable laying speed/volume of water used during installation. **Step 4** - repeat measurements after implementation of mitigation for confirmation of compliance. **Step 5** - if non-compliance continues, increase measures in Step 3 and repeat measurements in Step 3. If non-compliance occurs a third time, suspend cable laying operations.
Limit Level Exceedance	Undertake **Steps 1-4** immediately, if further non-compliance continues at the Limit Level, suspend cable laying operations until an effective solution is identified.

Two (2) rounds of repeated (*ad hoc*) water quality measurements were carried out in Zone C on 24 May 2016 according to the *Event Action Plan for Water Quality* in the *EM&A Manual* following the issued NOE for 20 May 2016.

Impact monitoring was initiated in Zone A on 26 May 2016 following the commencement of cable installation works. According to the work progress, impact monitoring continued in Zone A on 27 and 28 May 2016. On 26 and 28 May 2016, four (4) rounds of monitoring in Zone A was carried out respectively. Given that Typhoon Signal No. 3 was effective between 05:40 and 13:40 on 27 May 2016, no monitoring works were conducted during this period. Therefore only two (2) rounds of impact monitoring were conducted in Zone A, between 15:00-19:00 and 19:00-23:00 on 27 May 2016.

As cable installation works moved to Zone B on 28 May 2016, four (4) rounds of impact monitoring was also conducted in Zone B on the same day.

NOE occurred in Zone A on 27 May 2016, given cable installation works continued in Zone A on 28 May 2016, impact monitoring works was continued, addressing the *EM&A Manual* requirements for repeat *(ad hoc)* measurements. NOE also occurred in Zone A and B on 28 May 2016, repeated (*ad hoc*) water quality monitoring was conducted in Zone A on 29 May 2016, and impact monitoring was carried out in Zone B on 30 May 2016 addressing the *EM&A Manual* requirements for repeated *(ad hoc)* measurements.

Ad hoc monitoring was arranged according to the issued NOEs. The relationship between the NOEs and corresponding *ad hoc* monitoring are described in *Table 4.1*.

Table 4.1 Relationship between NOEs and Ad hoc Monitoring

Zones with NOEs	Date with NOEs	Ad hoc monitoring following NOEs	Remark
Zone A	17 and 18 May 2016	**Zone A on 21 May 2016**	The results for 17 May 2016 monitoring were completely received on 19 May 2016; the results for 18 May 2016 monitoring were received on 20 May 2016. Therefore exceedances were detected on 20 May 2016 due to such time lag. *Ad hoc* monitoring for Zone A was accordingly arranged on 21 May 2016 following 17 and 18 May 2016 NOEs.
Zone B	18, 19 and 20 May 2016	Zone B on 21 May 2016	The results for 18 May 2016 monitoring were completely received on 20 May 2016 and exceedances were detected on the same day. Exceedances of Action and Limit Levels were expected for 19 and 20 May 2016 monitoring given recent water quality characteristics. Therefore *ad hoc* monitoring was arranged on 21 May 2016, serving the NOE on 18 May 2016 and the potential NOEs on 19 and 20 May 2016.
Zone C	20 May 2016	Zone C on 24 May 2016	The results for 20 May 2016 monitoring were completely received and exceedances were detected on 23 May 2016. Therefore *ad hoc* monitoring was arranged on 24 May 2016.
Zone A	27 and 28 May 2016	Zone A on 29 May 2016	The results for 27 May 2016 monitoring were completely received and exceedances were detected on 28 May 2016. Exceedances were expected for 28 May 2016 monitoring given recent water quality characteristics. Therefore *ad hoc* monitoring for Zone A was arranged on 29 May 2016, serving the NOE on 27 May 2016 and the potential NOE on 28 May 2016.

The results from the monitoring for water quality impacts between 23 and 29 May 2016, and their graphical presentations are included in *Annex D*. As shown by *Figure D1* to *D9* of *Annex D*, the impact monitoring results of water quality (e.g. DO, turbidity and SS) in Zones A to C were similar to the control and gradient stations in the monitoring week from 23 to 29 May 2016. Water quality in Zones A to C were also recorded similar throughout the monitoring events in this week. Neither a sudden drop in dissolved oxygen concentrations nor a sharp increase in turbidity levels and SS levels were observed on each monitoring day (i.e. 24, 26, 27, 28, and 29 May 2016). Despite the stable water quality in Zones A-C during the *ad hoc* and impact monitoring periods from 23 to 29 May 2016, exceedances of the Action and Limit Levels were recorded on three (3) monitoring days (24, 27, and 28 May 2016). It is important to note that although exceedances were recorded on 24

May in Zone C, no Project works were undertaken in water quality monitoring zones.

A summary of stations where exceedances were recorded is presented in *Table* 4.2. Details for the exceedances, e.g. location and parameters with exceedances, are presented in *Annex E*.

It is also confirmed that silt curtains have been installed and employed, following the requirement of EP *Condition 2.3*, during the cable laying works as shown in *Figure 4.1*

Figure 4.1 Photos of the Installed Silt Curtains for the Project (See Yellow Lines)

In summary, the exceedances of Action and Limit Levels are considered not to be caused by cable laying works but a reflection of natural background fluctuation. The detailed reasoning for such conclusion is also provided for monitoring day with exceedance (i.e. 24, 27, and 28 May 2016) in *Annex E*.

Table 4.2 Summary of Exceedances Occurred during the Reporting Week

Date	Surface DO		Middle DO		Bottom DO		Depth-averaged Turbidity		Depth-averaged SS	
	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
24 May 2016		Zone C: E4 and E5		Zone C: E4 and E5		Zone C: E4 and E5	Zone C: E5			
27 May 2016					Zone A: S1 and S3	Zone A: E8, and S2			Zone A: E7, E8, S1, and S2	
28 May 2016	Zone B: B3, E1, E8 and F1	Zone B: B1, B2, B3, E1, E2, E6, E8, F1 and I1	Zone B: B1	Zone B: B1, B2, B3, E1, E2, E6, E8, F1 and I1	Zone B: B1, B2, E1, E6, E8, F1 and I1	Zone B: B1, B2, B3, E1, E2, E6, F1 and I1	Zone B: B1, B2, B3, E1, E2, E6, E8, F1 and I1		Zone A: S2, S3 and E7 Zone B: B1, B2, B3, E1, E2, E6, E8, F1 and I1	

5 ENVIRONMENTAL NON-CONFORMANCES

5.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

Exceedances of DO (all depths), depth-averaged turbidity and SS in Action Level, and DO (all depths) and depth-averaged turbidity in Limit Level were recorded during the monitoring period from 23 to 29 May 2016 (i.e. 24, 27 and 28 May 2016); however the exceedances were not considered to be caused by the cable laying works but reflected reflection of the natural background fluctuation during this week.

5.2 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

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

5.3 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaints were received during the reporting period.

5.4 SUMMARY OF ENVIRONMENTAL SUMMONS AND PROSECUTION

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

6 FUTURE KEY ISSUES

6.1 KEY ISSUES FOR THE COMING WEEK

The submarine cable laying works will continue on 30 May 2016. Post laying inspection will be carried out after completion of cable laying works.

7 CONCLUSIONS

This *Second Weekly Impact Water Quality Monitoring Report* presents the results and findings of water quality impact monitoring undertaken during the week from 23 to 29 May 2016 in accordance with the *EM&A Manual* and the requirements under Environmental Permit (*EP - 485/2014*) for the Project.

The impact monitoring results for water quality (e.g. DO, turbidity and SS) in Zones A to C were similar among the stations in the monitoring week from 23 to 29 May 2016. Water quality in Zones A to C was also similar throughout the monitoring events in this week. Neither a sudden drop in dissolved oxygen concentrations nor a sharp increase in turbidity levels and suspended solids levels were observed on each monitoring day. In general, the overall water quality at the impact stations was found to be similar to that at the control stations.

No exceedances of Action or Limit Levels were recorded on 26 and 29 May 2016. Exceedances of DO (all depth), depth-averaged turbidity and SS in Action Level, and DO (all depths) and depth-averaged turbidity in Limit Level were recorded on 24, 27 and 28 May 2016; however these exceedances were not considered to be caused by the cable laying works but reflected reflection of the natural background fluctuation during this monitoring week.

It is concluded that there was no deterioration of water quality during the reporting week and hence the effect of the Project cable laying works on water quality is considered to be negligible over this reporting week.

Annex A

Impact Water Quality Monitoring Schedule

Asia Pacific Gateway (APG) - Tseung Kwan O
Impact Marine Water Quality Monitoring (WQM) Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
15-May	16-May	17-May	18-May	19-May	20-May	21-May
		Impact WQM 11:00 to 15:00 (A) 15:00 to 19:00 (A) 19:00 to 23:00 (A)	**Impact WQM** 07:00 to 11:00 (A) 11:00 to 15:00 (A) 15:00 to 19:00 (A) 19:00 to 23:00 (B)	**Impact WQM** 07:00 to 11:00 (B) 11:00 to 15:00 (B) 15:00 to 19:00 (B) 19:00 to 23:00 (B)	**Impact WQM** 07:00 to 11:00 (B) 11:00 to 15:00 (C)	***Ad Hoc* WQM** 07:00 to 11:00 (A) 11:00 to 15:00 (B) 15:00 to 19:00 (A) 19:00 to 23:00 (B)
22-May	23-May	24-May	25-May	26-May	27-May	28-May
		***Ad Hoc* WQM** 11:00 to 15:00 (C) 15:00 to 19:00 (C)		**Impact WQM** 07:00 to 11:00 (A) 11:00 to 15:00 (A) 15:00 to 19:00 (A) 19:00 to 23:00 (A)	**Impact WQM** 15:00 to 19:00 (A) 19:00 to 23:00 (A)	**Impact WQM** 07:00 to 11:00 (A,B) 11:00 to 15:00 (A,B) 15:00 to 19:00 (A,B) 19:00 to 23:00 (A,B)
29-May	30-May	31-May	1-Jun	2-Jun	3-Jun	4-Jun
***Ad Hoc* WQM** 11:00 to 15:00 (A) 15:00 to 19:00 (A)	**Impact WQM** 07:00 to 11:00 (B,C) 11:00 to 15:00 (B,C) 15:00 to 19:00 (B,C) 19:00 to 23:00 (B,C)	***Ad Hoc* WQM** 07:00 to 11:00 (A) 11:00 to 15:00 (B) 15:00 to 19:00 (A) 19:00 to 23:00 (B)	***Ad Hoc* WQM** 07:00 to 11:00 (C) 11:00 to 15:00 (C)	**Impact WQM** 07:00 to 11:00 (B) 11:00 to 15:00 (B) 15:00 to 19:00 (B)		

Note:
1. A represents moitoring in Zone A;
2. B represents moitoring in Zone B;
3. C represents moitoring in Zone C;
4. Grey cells indicates monitoring is not conducted yet.

Annex B

Calibration Reports of Multi-parameter Sensor

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ETS-TESTCONSULT LIMITED

Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/014 Manufacturer : HACH

Model No. : 2100Q Serial No. : 13110C029448

Date of Calibration : 26/04/~~2015~~2016 Due Date : 25/05/2016

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.4	2.00
100	98.5	-1.50
800	780	-2.50

(*) Difference = (Measured Value – Theoretical Value) / Theoretical Value x 100

Acceptance Criteria

Difference : -5 % to 5 %

The turbidity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Prepared by : _____ Checked by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/014 Manufacturer : HACH

Model No. : 2100Q Serial No. : 13110C029448

Date of Calibration : 26/05/2016 Due Date : 25/06/2016

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.2	1.00
100	97.6	-2.40
800	778	-2.75

(*) Difference = (Measured Value – Theoretical Value) / Theoretical Value x 100

Acceptance Criteria

Difference : -5 % to 5 %

The turbidity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Prepared by : _____ Checked by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/004	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	10F 101978
Date of Calibration	:	26/04/2016	Calibration Due Date	:	25/05/2016

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/017

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	19.9	Corrected	19.8
DO Meter reading	Measured	20.0	Difference	-0.2

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/13	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/09

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.20
Final Vol. of $Na_2S_2O_3$ (ml)	10.20	20.40
Vol. of $Na_2S_2O_3$ used (ml)	10.20	10.20
Normality of $Na_2S_2O_3$ solution (N)	0.02451	0.02451
Average Normality (N) of $Na_2S_2O_3$ solution (N)	0.02451	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, N = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.90	21.90	0.00	6.80	10.50
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.90	28.50	6.80	10.50	14.10
Vol. (V) of $Na_2S_2O_3$ used (ml)	10.90	11.00	6.60	6.80	3.70	3.60
Dissolved Oxygen (DO), mg/L	7.17	7.24	4.34	4.47	2.43	2.37
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = V x N x 8000/298

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.42	7.34	7.38	7.17	7.24	7.21	2.33
5	4.56	4.59	4.58	4.34	4.47	4.41	3.78
10	2.35	2.22	2.29	2.43	2.37	2.40	4.69
Linear regression coefficient				0.9986			

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ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/003/14	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/14

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.30	22.70	32.30
Final Vol. of $Na_2S_2O_3$ (ml)	11.30	22.70	32.30	41.90
Vol. (V) of $Na_2S_2O_3$ used (ml)	11.30	11.40	9.60	9.60
Dissolved Oxygen (**DO**), mg/L	7.44	7.50	6.32	6.32
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = V x N x 8000/298

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.18	7.25	7.22	7.44	7.50	7.47	3.40
30	6.58	6.54	6.56	6.32	6.32	6.32	3.73

Acceptance Criteria

(1) Differenc between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
(2) Linear regression coefficient : >0.99
(3) Zero checking: 0.0mg/L
(4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies # / ~~does not comply~~ # with the specified requirements and is deemed acceptable # / ~~unacceptable~~ # for use.

Delete as appropriate

Calibrated by : _____ Approved by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/004 Manufacturer : YSI

Model No. : Pro 2030 Serial No. : 10F 101978

Date of Calibration : 26/04/2016 Due Date : 25/05/2016

Ref. No. of Salinity Standard used (30ppt)	S/001/5

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	29.4	-2.00

(*) Difference (%) = (Measured Salinity – Salinity Standard value) / Salinity Standard value x 100

Acceptance Criteria

Difference : -10 % to 10 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by : _____ Approved by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/004	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	10F 101978
Date of Calibration	:	26/05/2016	Calibration Due Date	:	25/06/2016

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/017

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	19.9	Corrected	19.8
DO Meter reading	Measured	20.0	Difference	-0.2

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/13	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/10

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.20
Final Vol. of $Na_2S_2O_3$ (ml)	10.20	20.50
Vol. of $Na_2S_2O_3$ used (ml)	10.20	10.30
Normality of $Na_2S_2O_3$ solution (N)	0.02451	0.02427
Average Normality (N) of $Na_2S_2O_3$ solution (N)	0.02439	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, N = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.90	21.90	0.00	6.80	10.50
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.90	28.50	6.80	10.50	14.10
Vol. (V) of $Na_2S_2O_3$ used (ml)	10.90	11.00	6.60	6.80	3.70	3.60
Dissolved Oxygen (**DO**), mg/L	7.14	7.20	4.32	4.45	2.42	2.36
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = V x N x 8000/298

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.42	7.34	7.38	7.14	7.20	7.17	2.89
5	4.56	4.59	4.58	4.32	4.45	4.39	4.24
10	2.35	2.22	2.29	2.42	2.36	2.39	4.27
Linear regression coefficient				0.9987			

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Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/003/23	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/23

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.40	22.90	32.40
Final Vol. of $Na_2S_2O_3$ (ml)	11.40	22.90	32.40	42.00
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.40	11.50	9.50	9.60
Dissolved Oxygen (**DO**), mg/L	7.46	7.53	6.22	6.29
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.31	7.25	7.28	7.46	7.53	7.50	2.98
30	6.45	6.46	6.46	6.22	6.29	6.26	3.14

Acceptance Criteria

(1) Differenc between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
(2) Linear regression coefficient : >0.99
(3) Zero checking: 0.0mg/L
(4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies # / ~~does not comply~~ # with the specified requirements and is deemed acceptable # / ~~unacceptable~~ # for use.

Delete as appropriate

Calibrated by : _____ Approved by : _____

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Performance Check of Salinity Meter

Equipment Ref. No. :	ET/EW/008/004	Manufacturer :	YSI
Model No. :	Pro 2030	Serial No. :	10F 101978
Date of Calibration :	26/05/2016	Due Date :	25/06/2016

Ref. No. of Salinity Standard used (30ppt)	S/001/5

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	30.3	1.00

(*) Difference (%) = (Measured Salinity – Salinity Standard value) / Salinity Standard value x 100

Acceptance Criteria

Difference : -10 % to 10 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by : _____ Approved by : _____

Annex C

QA/QC Results for Suspended Solids Testing

QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/24/2016 (Zone C)	94.9	G5-S1	5.71	E5-S2	94.8
	100.5	E5-M1	3.39	G6-B2	94.2

Note: (*) % Recovery of QC sample should be between 80% to 120%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/26/2016 (Zone A)	106.7	C1-S 1 (0700)	3.51	E9-S 2 (0700)	98
	98.9	E9-M 1 (0700)	4.65	G2-M 2 (0700)	106.9
	92.1	G2-B 1 (0700)	6.9	S2-B 2 (0700)	104
	98	S3-S 1 (0700)	6.45	S3-B 2 (0700)	95.5
	99.8	C1-S 1 (1100)	0.00	E9-S 2 (1100)	102.5
	106.9	E9-M 1 (1100)	0.00	G2-M 2 (1100)	103.8
	102.4	G2-B 1 (1100)	5.88	S2-B 2 (1100)	99.5
	103.9	S3-S 1 (1100)	6.67	S3-B 2 (1100)	107.4
	100.5	C1-S 1 (1500)	3.39	E9-S 2 (1500)	96.5
	94.2	E9-M 1 (1500)	3.64	G2-M 2 (1500)	107.9
	92.4	G2-B 1 (1500)	3.17	S2-B 2 (1500)	99.0
	104.3	S3-S 1 (1500)	6.45	S3-B 2 (1500)	104.5
	98.4	C1-S 1 (1900)	3.17	E9-S 2 (1900)	97.5
	105.3	E9-M 1 (1900)	6.45	G2-M 2 (1900)	99.7
	101.2	G2-B 1 (1900)	7.41	S2-B 2 (1900)	93.0
	93.5	S3-S 1 (1900)	7.14	S3-B 2 (1900)	94.7

Note: (*) % Recovery of QC sample should be between 80% to 120%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
27/05/2016 (Zone A; 1500-1900)	93.8	C1-S1	3.39	G1-S2	101.0
	95	G1-M1	3.77	G3-M2	98.4
	92.8	G3-B1	3.64	G2-B2	105.9
	104.2	S3-S1	6.25	S3-B2	99.0
27/05/2016 (Zone A; 1900-1100)	101.2	C1-S1	6.06	G1-S2	101.0
	103	G1-M1	5.71	G3-M2	96.7
	96.3	G3-B1	3.17	G2-B2	94.6
	97.7	S3-S1	0.00	S3-B2	102.5

Note: (*) % Recovery of QC sample should be between 80% to 120%.

(#) % Error of Sample Duplicate should be between 0% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
28/05/2016 (Zone A)	94.7	C1-S1	5.56	G1-S2	101.5
	92.2	G1-M1	2.99	G3-M2	97.3
	106.2	G3-B1	0.00	G2-B2	102
	97	S3-S1	6.25	S3-B2	107.5
	105.8	C1-S1	3.17	G1-S2	103.0
	98.4	G1-M1	6.45	G3-M2	100.4
	101.4	G3-B1	5.71	G2-B2	94.6
	93.9	S3-S1	0.00	S3-B2	100.5
	92.6	C1-S1	0.00	G1-S2	93.5
	102.0	G1-M1	6.67	G3-M2	95.8
	94.9	G3-B1	3.08	G2-B2	106.4
	104.4	S3-S1	5.41	S3-B2	94.0
	92.5	C1-S1	3.64	G1-S2	92.5
	103.4	G1-M1	3.39	G3-M2	103.3
	95.3	G3-B1	0.00	G2-B2	106.4
	100.3	S3-S1	0.00	S3-B2	103.0

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/28/2016 (Zone B)	95.3	E8 S1(0700)	3.08	C2 S2 (0700)	96.0
	104.7	C2 M1(0700)	2.99	E6 M2 (0700)	106
	106.9	E6 B1(0700)	2.74	B3 B2 (0700)	105.4
	93.8	I1 S1(0700)	0.00	B1 B2 (0700)	96.5
	101.9	E8 S1(1100)	3.51	C2 S2 (1100)	97.0
	96.3	C2 M1(1100)	0.00	E6 M2 (1100)	101.9
	98	E6 B1(1100)	2.74	B3 B2 (1100)	105.4
	104.4	I1 S1(1100)	0.00	B1 B2 (1100)	96.5
	94.5	E8 S1(1500)	6.06	C2 S2 (1500)	103.5
	94.1	C2 M1(1500)	5.88	E6 M2 (1500)	104.9
	103.6	E6 B1(1500)	4.55	B3 B2 (1500)	93.6
	103.1	I1 S1(1500)	3.28	B1 B2 (1500)	106.0
	100.3	E8 S1(1900)	7.41	C2 S2 (1900)	98.0
	99.4	C2 M1(1900)	3.08	E6 M2 (1900)	94.7
	99.6	E6 B1(1900)	0.00	B3 B2 (1900)	99.5
	107	I1 S1(1900)	3.92	B1 B2 (1900)	96.0

Note:
(*) % Recovery of QC sample should be between 80% to 120%.
(#) % Error of Sample Duplicate should be between 0% to 10%.
(@) % Recovery of Sample Spike should be between 80% to 120%.
(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

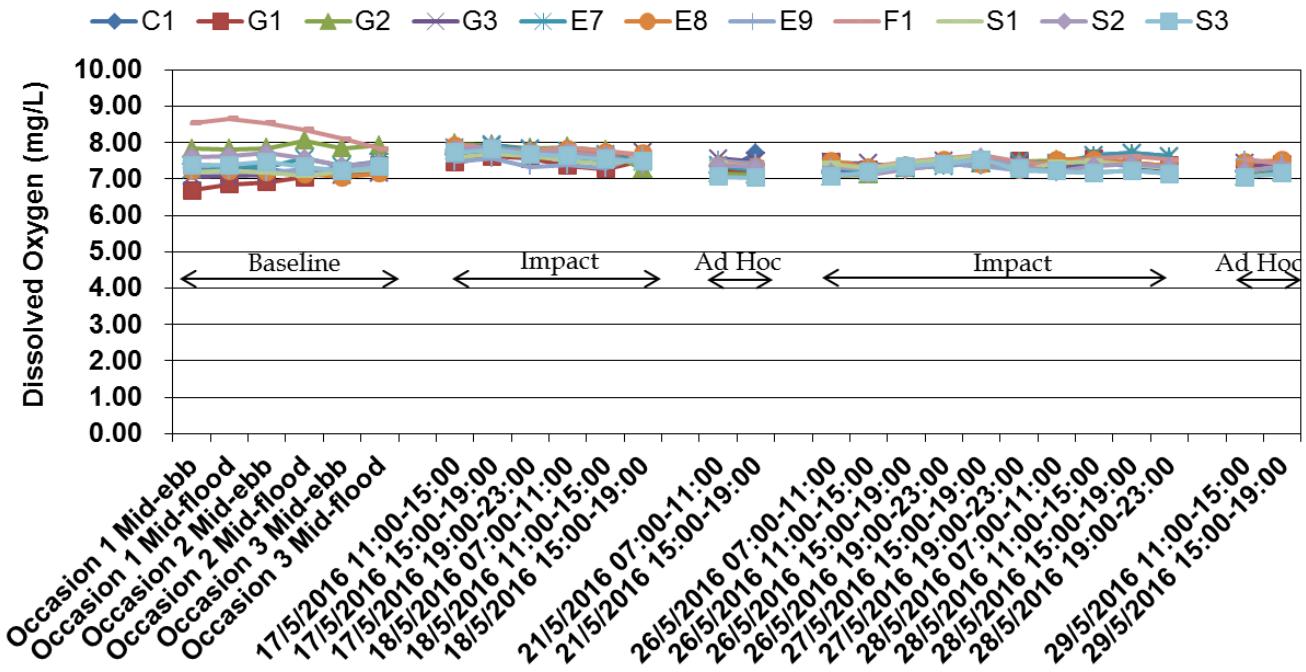
QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/29/2016 (Zone A)	96.8	C1-S 1 (1100)	0.00	G1-S 2 (1100)	92.9
	101.6	G1-M 1 (1100)	3.92	G3-M 2 (1100)	92.3
	97.7	G3-B 1 (1100)	8.00	G2-B 2 (1100)	101.2
	102.4	S3-S 1 (1100)	3.64	S3-B 2 (1100)	96.4
	96.7	C1-S 1 (1500)	7.41	G1-S 2 (1500)	107.3
	98.3	G1-M 1 (1500)	0.00	G3-M 2 (1500)	107.0
	96.4	G3-B 1 (1500)	0.00	G2-B 2 (1500)	107.1
	104.1	S3-S 1 (1500)	3.51	S3-B 2 (1500)	95.8

Note:
(*) % Recovery of QC sample should be between 80% to 120%.
(#) % Error of Sample Duplicate should be between 0% to 10%.
(@) % Recovery of Sample Spike should be between 80% to 120%.
(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Annex D

Water Quality Monitoring Results



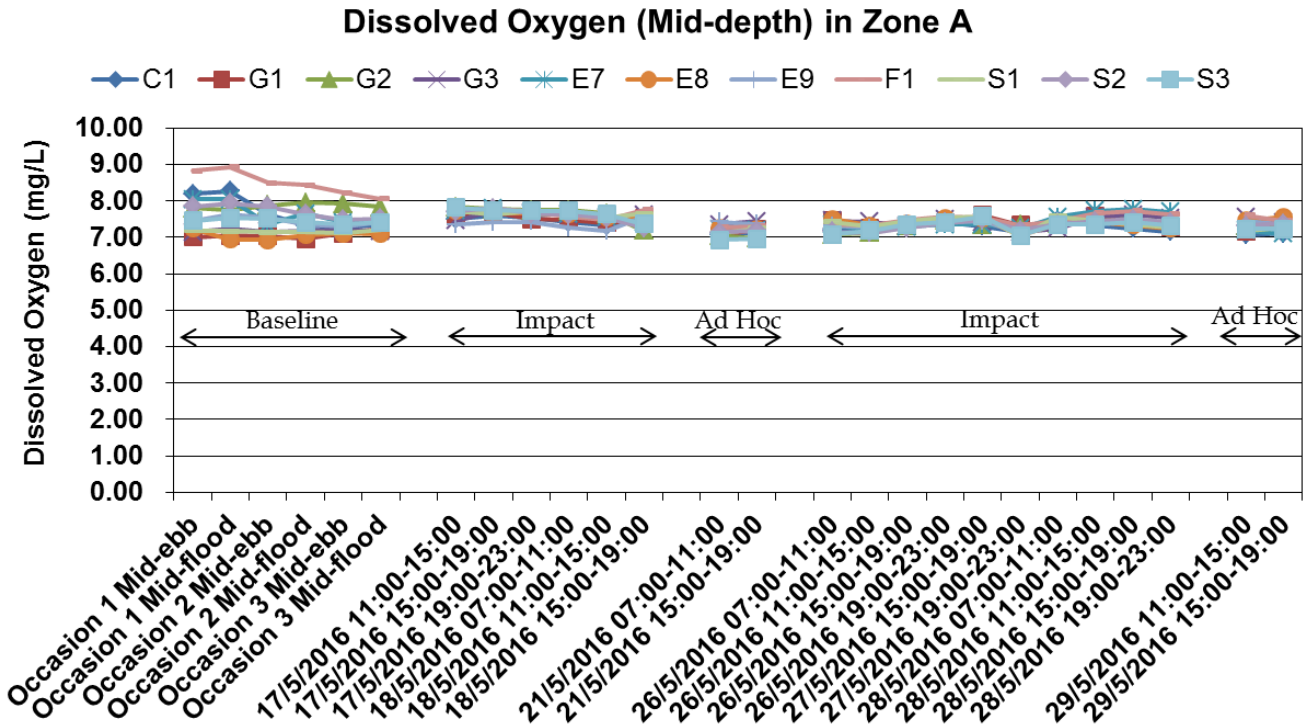
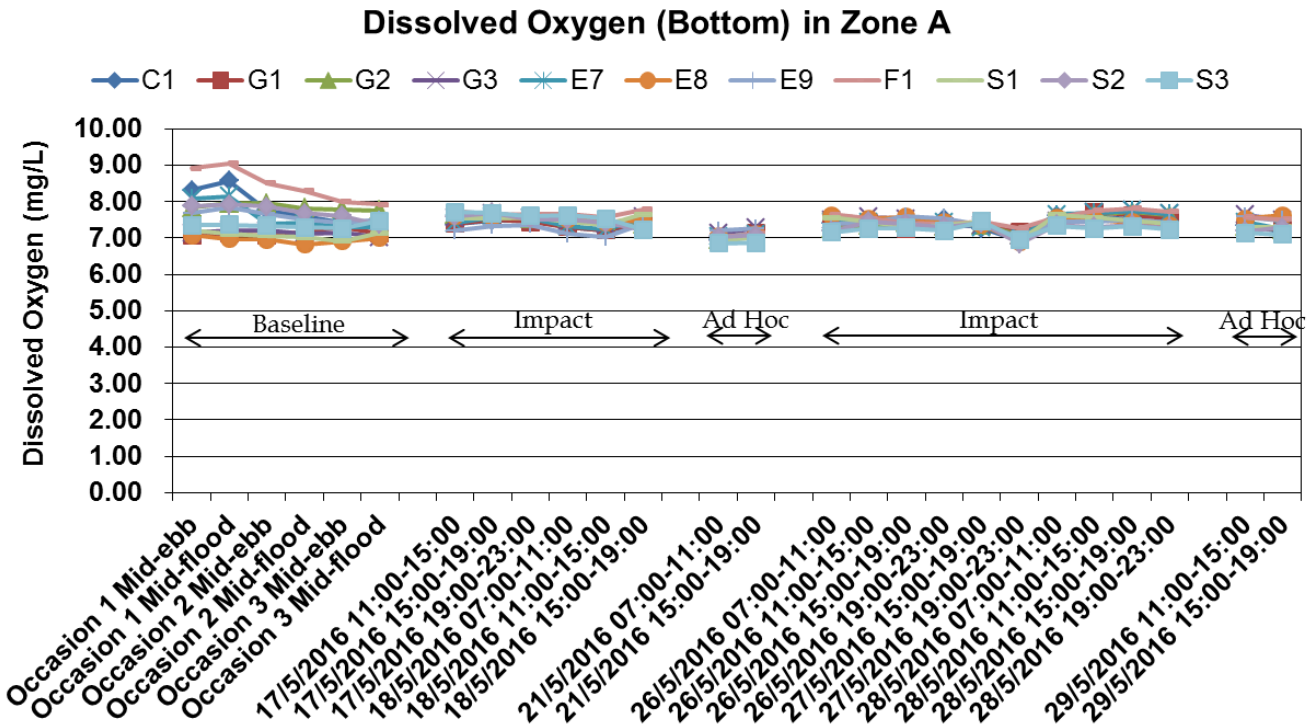


Figure D1 Dissolved oxygen (mg/L) at surface and mid-depth of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone A)
(Baseline monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)

ERM



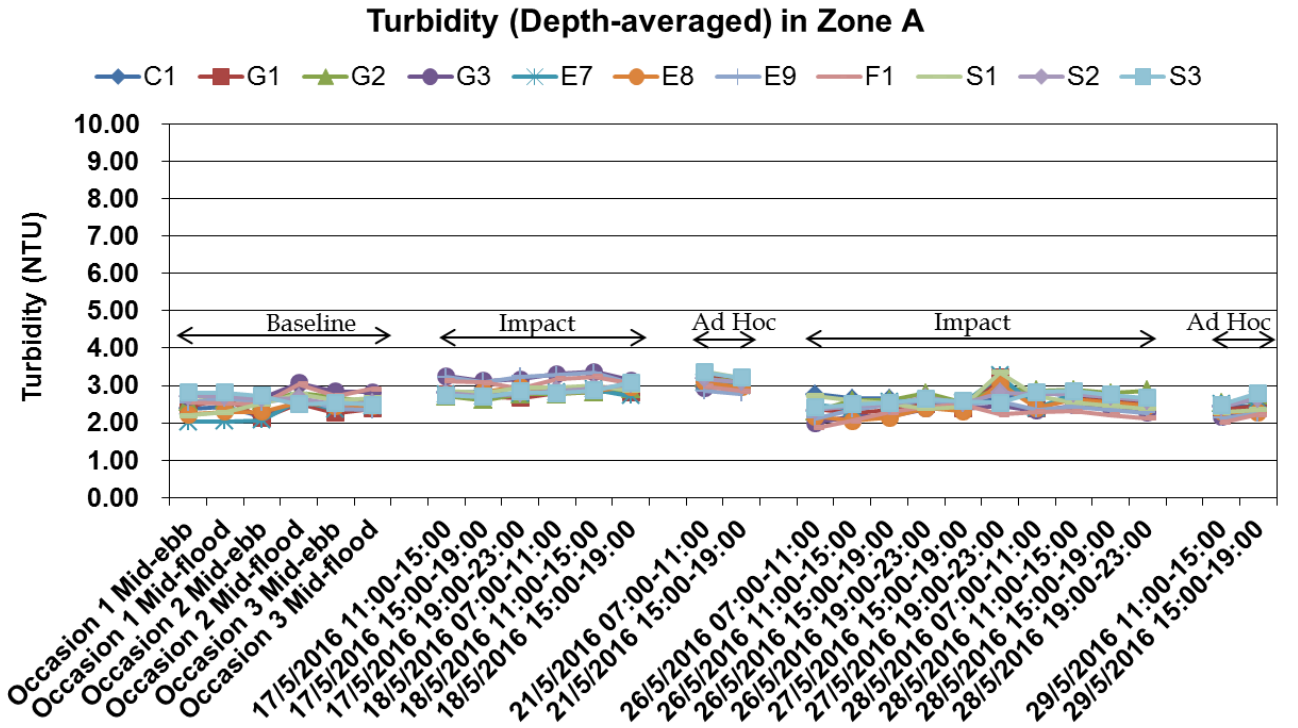


Figure D2 Dissolved oxygen (mg/L) at bottom and depth-averaged turbidity (NTU) of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone A)
(Baseline monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)

ERM

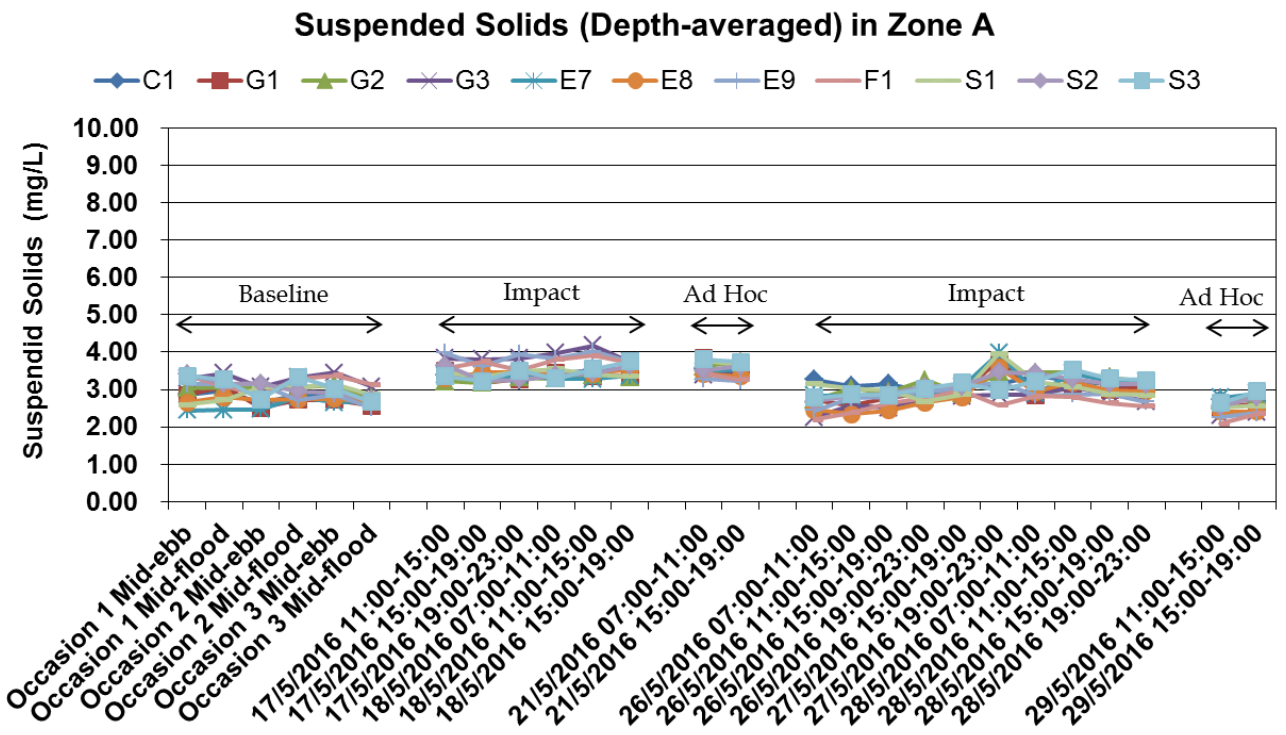


Figure D3 Depth-averaged suspended solids (mg/L) of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone A)
(Baseline monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)

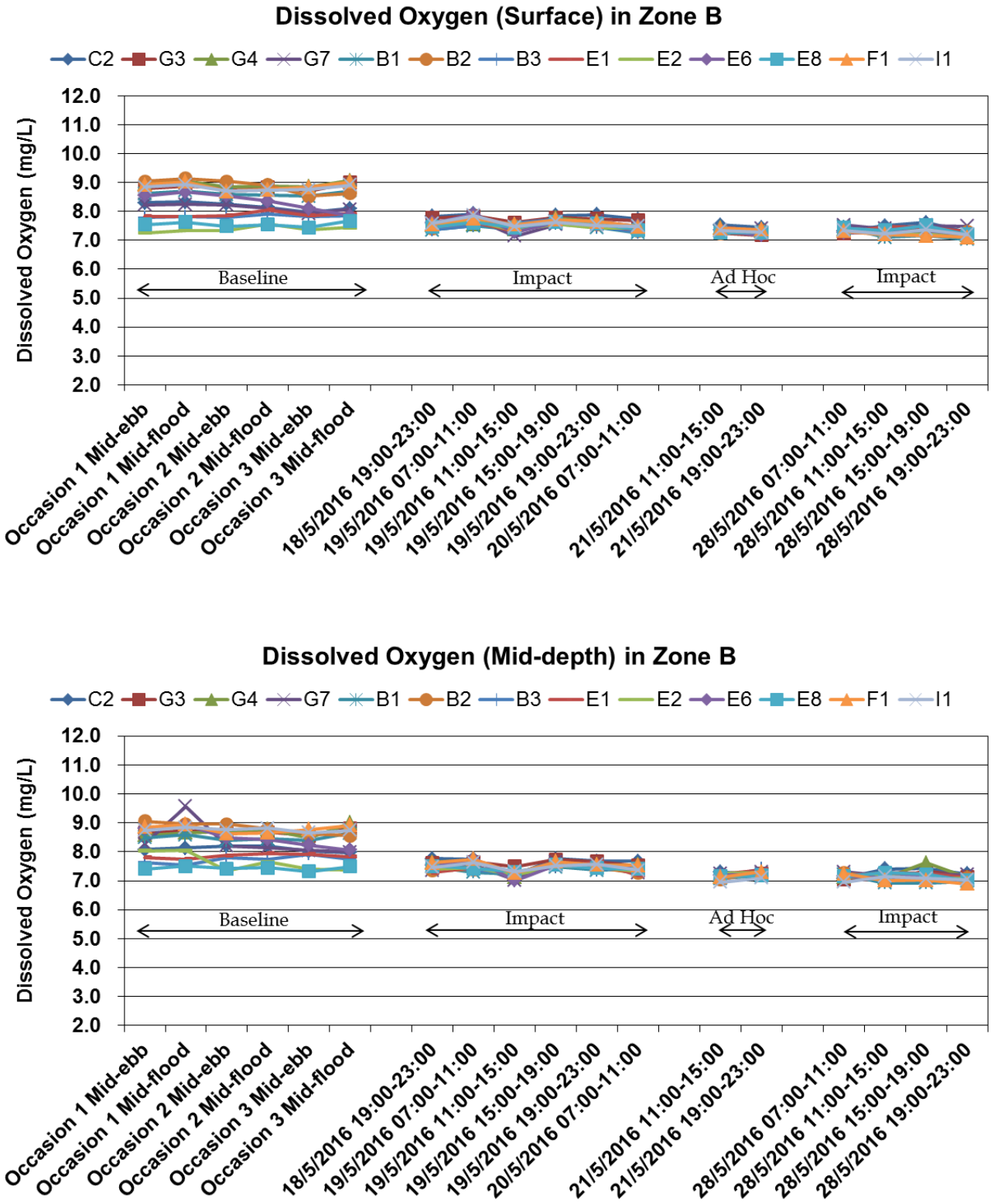


Figure D4 Dissolved oxygen (mg/L) at surface and mid-depth of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)

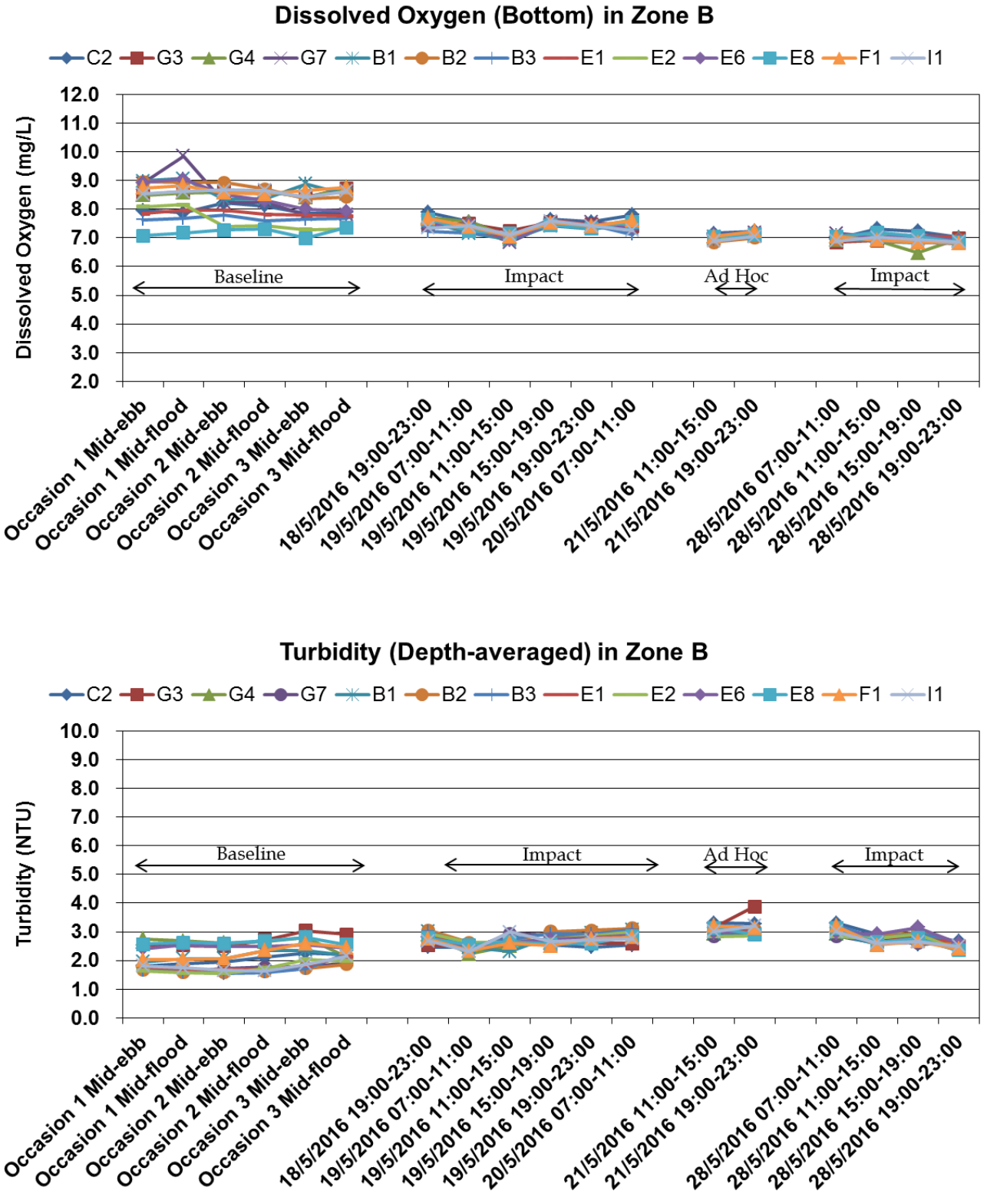


Figure D5 Dissolved oxygen (mg/L) at bottom and depth-averaged turbidity (NTU) of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)

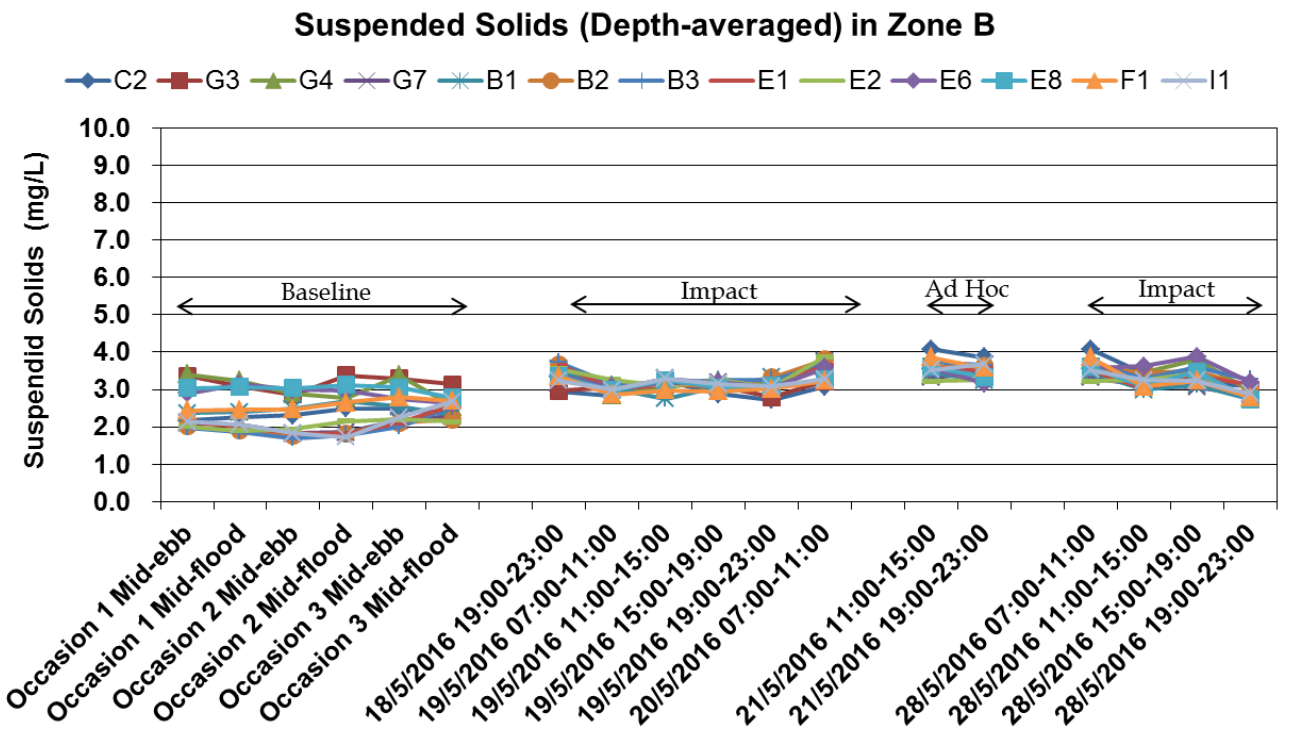
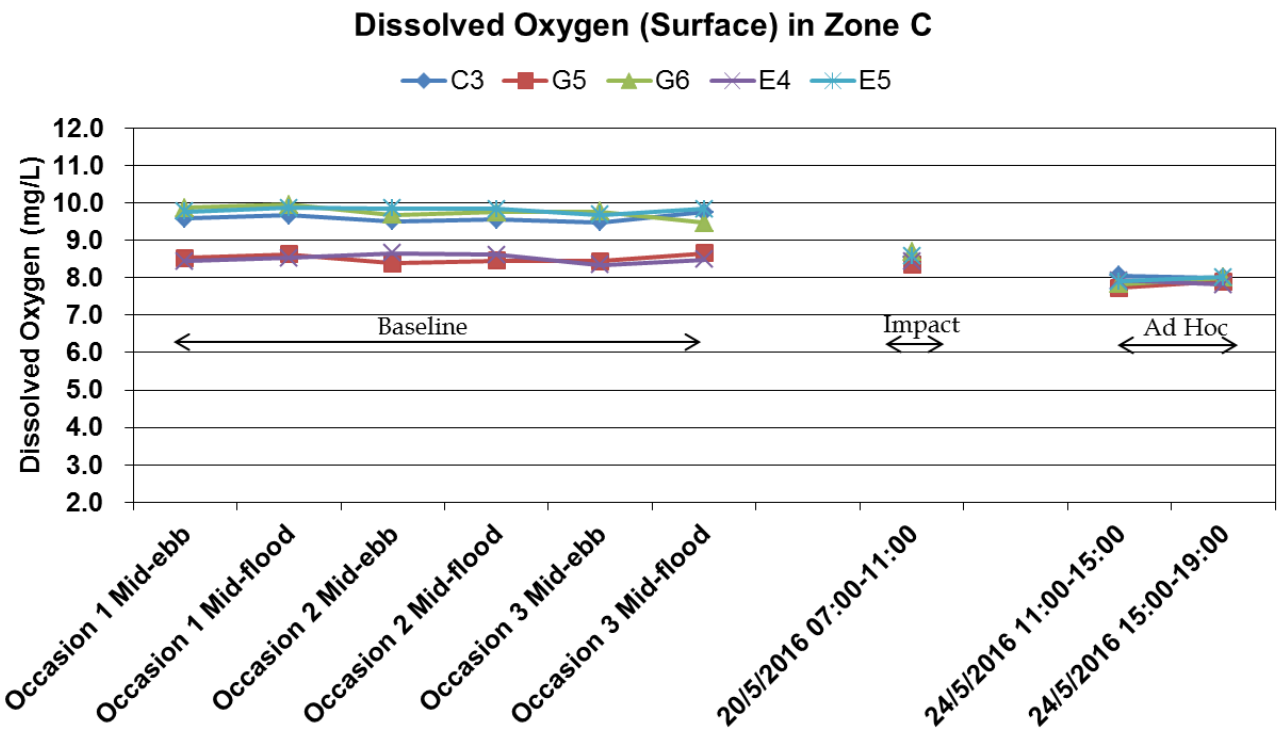


Figure D6 Depth-averaged suspended solids (mg/L) of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



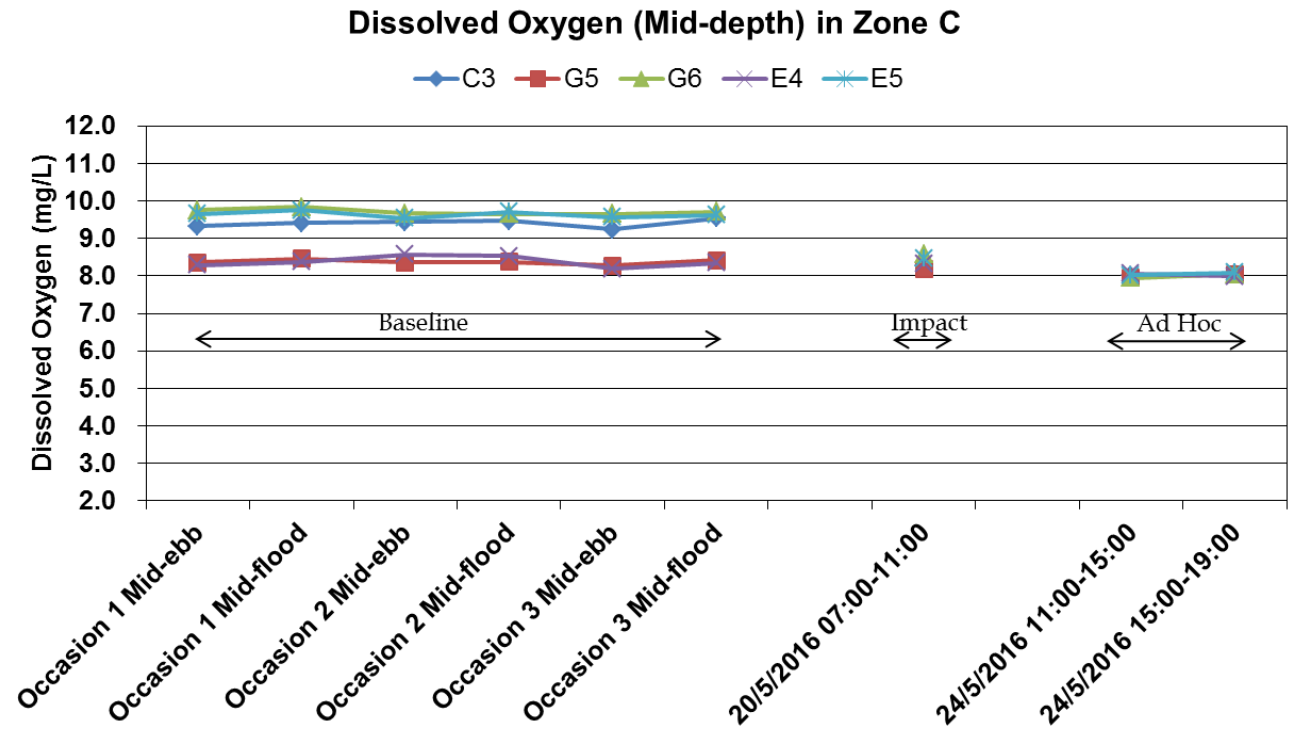
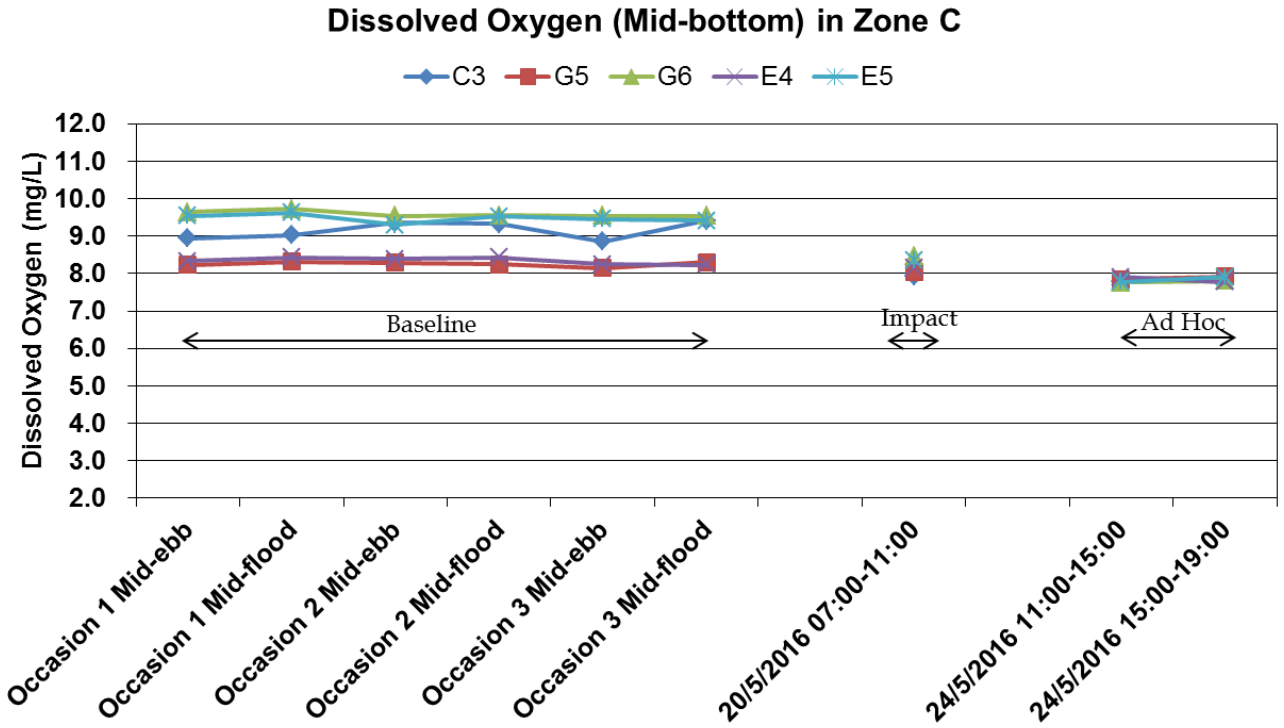


Figure D7 Dissolved oxygen (mg/L) at surface and mid-depth of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)



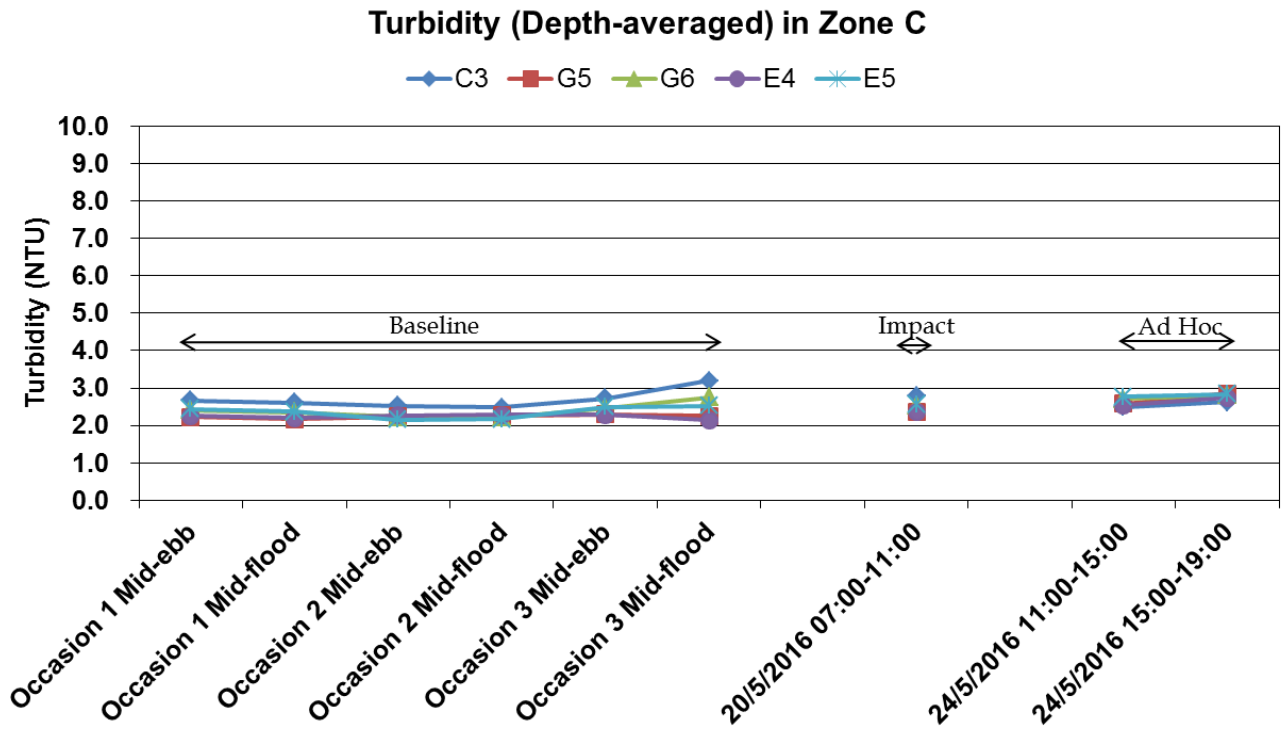


Figure D8 Dissolved oxygen (mg/L) at bottom and depth-averaged turbidity (NTU) of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)

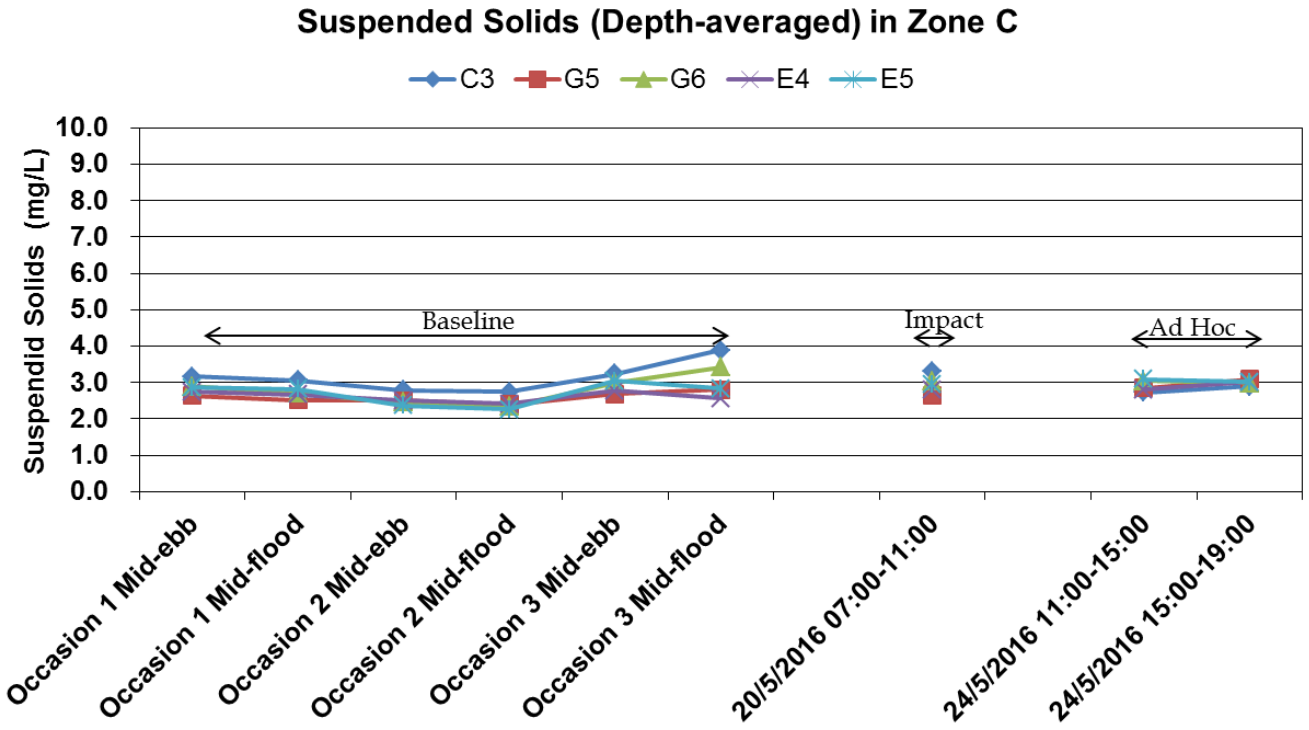


Figure D9 Depth-averaged suspended solids (mg/L) of water column measured during the baseline monitoring and the impact monitoring period from 23 to 29 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)

Sampling Date : 24-May-16
Sampling Time : 11:00 - 15:00 (1st Round)
Sampling Location : Zone C

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C3 (%)	Average (mg/L)	Impact Stations Exceed Control Station C3 (%)
C3	Control Station	1149-1209	28.6	W	0.3	*Surface*	25.3	25.2	28.2	28.3	8.07	8.03	115.40	114.80	2.58	2.70	2.80	3.00	8.05	2.50	N.A.	2.73	N.A.
						Middle	25.1	25.2	28.6	28.5	8.00	8.04	114.40	114.90	2.39	2.27	2.60	2.50	8.02				
						Bottom	25.0	25.0	28.7	28.8	7.80	7.76	111.70	111.10	2.48	2.55	2.70	2.80	7.78				
G5	Gradient Station	1100-1118	20.8	W	0.3	*Surface*	25.4	25.3	28.3	28.2	7.71	7.76	110.30	110.90	3.09	2.89	3.40	3.20	7.74	2.58	N.A.	2.85	N.A.
						Middle	25.3	25.3	28.4	28.5	7.94	8.00	113.50	114.40	2.63	2.44	2.90	2.70	7.97				
						Bottom	25.2	25.2	28.7	28.7	7.88	7.83	112.80	112.10	2.18	2.27	2.40	2.50	7.86				
G6	Gradient Station	1217-1235	18.2	W	0.3	*Surface*	25.2	25.3	28.4	28.5	7.85	7.81	112.30	111.70	3.08	3.00	3.40	3.30	7.83	2.71	N.A.	3.05	N.A.
						Middle	25.2	25.1	28.7	28.6	7.94	7.97	113.50	113.90	2.57	2.66	2.90	3.00	7.96				
						Bottom	25.0	25.0	28.8	28.7	7.79	7.75	111.60	110.90	2.43	2.51	2.80	2.90	7.77				
E4	Impact Station	1124-1142	21.2	W	0.2	*Surface*	25.3	25.3	28.2	28.1	7.96	7.89	113.80	112.80	2.74	2.63	3.00	2.90	7.93	2.54	1.8%	2.80	2.4%
						Middle	25.4	25.3	28.5	28.4	8.04	8.09	114.90	115.60	2.59	2.50	2.80	2.80	8.07				
						Bottom	25.2	25.2	28.7	28.8	7.93	7.87	113.50	112.60	2.34	2.44	2.60	2.70	7.90				
E5	Impact Station	1240-1300	17.8	W	0.3	*Surface*	25.2	25.3	28.4	28.4	7.93	7.88	113.40	112.60	3.17	3.10	3.20	3.30	7.91	2.76	10.6%	3.08	12.8%
						Middle	25.1	25.2	28.5	28.6	8.04	8.00	114.90	114.40	2.68	2.77	3.10	3.00	8.02				
						Bottom	25.0	25.1	28.8	28.8	7.81	7.74	111.80	110.80	2.39	2.45	2.90	3.00	7.78				

Note: (1) : Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 24-May-16
Sampling Time : 15:00 - 19:00 (2nd Round)
Sampling Location : Zone C

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C3 (%)	Average (mg/L)	Impact Stations Exceed Control Station C3 (%)
C3	Control Station	1553-1611	28.3	E	0.8	*Surface*	25.3	25.2	28.4	28.4	7.99	8.02	114.20	114.70	2.77	2.85	3.10	3.10	8.01	2.63	N.A.	2.90	N.A.
						Middle	25.1	25.1	28.6	28.6	8.08	8.04	115.50	115.00	2.40	2.47	2.60	2.70	8.06				
						Bottom	25.1	25.0	28.9	28.9	7.85	7.88	112.40	112.80	2.69	2.60	3.00	2.90	7.87				
G5	Gradient Station	1500-1518	21.1	E	0.9	*Surface*	25.2	25.3	28.3	28.3	7.93	7.86	113.40	112.40	3.24	3.31	3.40	3.50	7.90	2.85	N.A.	3.08	N.A.
						Middle	25.2	25.1	28.5	28.5	8.04	8.07	114.90	115.40	2.78	2.83	3.10	3.10	8.06				
						Bottom	25.1	25.0	28.7	28.8	7.94	7.90	113.70	113.10	2.40	2.51	2.60	2.80	7.92				
G6	Gradient Station	1649-1707	23.8	E	0.8	*Surface*	25.2	25.1	28.5	28.5	7.98	8.01	114.10	114.50	3.03	2.95	3.40	3.30	8.00	2.81	N.A.	2.98	N.A.
						Middle	25.0	25.1	28.7	28.7	8.04	8.07	115.00	115.40	2.69	2.74	2.80	2.90	8.06				
						Bottom	25.0	25.0	28.9	28.9	7.83	7.78	112.20	111.50	2.68	2.75	2.70	2.80	7.81				
E4	Impact Station	1526-1544	24.2	E	0.9	*Surface*	25.3	25.3	28.4	28.3	7.83	7.79	111.90	111.40	3.08	3.13	3.40	3.40	7.81	2.74	4.2%	3.02	4.0%
						Middle	25.2	25.2	28.6	28.7	7.98	8.01	114.10	114.50	2.69	2.74	3.00	3.00	8.00				
						Bottom	25.0	25.0	28.9	28.8	7.77	7.80	111.30	111.70	2.44	2.37	2.70	2.60	7.79				
E5	Impact Station	1620-1638	18.6	E	0.8	*Surface*	25.2	25.2	28.4	28.5	8.03	8.00	114.80	114.40	3.05	3.13	3.50	3.40	8.02	2.84	8.0%	3.02	4.0%
						Middle	25.2	25.1	28.6	28.7	8.08	8.11	115.50	115.90	2.89	2.77	2.90	3.00	8.10				
						Bottom	25.1	25.0	28.9	28.8	7.92	7.89	113.40	113.00	2.56	2.64	2.60	2.70	7.91				

Note: (1) : Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 26-May-16
Sampling Time : 07:00 - 11:00 (1st Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	0720-0735	23.2	E	0.2	*Surface*	26.4	26.4	29.2	29.3	7.2	7.2	104.9	105.3	2.3	2.4	2.8	3.1	7.19	2.77	N.A.	3.27	N.A.
						Middle	26.2	26.1	29.3	29.4	7.3	7.4	107.1	107.5	2.9	2.9	3.2	3.2	7.36				
						Bottom	26.1	26.1	29.4	29.5	7.4	7.4	107.7	108.4	3.1	3.0	3.7	3.6	7.42				
G1	Gradient Station	0813-0816	11.8	E	0.2	*Surface*	26.4	26.5	29.2	29.2	7.5	7.4	109.5	109.0	2.4	2.4	2.6	2.9	7.46	2.38	N.A.	2.72	N.A.
						Middle	26.2	26.2	29.4	29.4	7.3	7.4	107.1	107.5	2.4	2.4	2.6	2.8	7.35				
						Bottom	26.2	26.2	29.4	29.5	7.4	7.4	107.8	107.3	2.3	2.4	2.8	2.6	7.37				
G2	Gradient Station	1015-1033	15.6	E	0.1	*Surface*	26.5	26.5	29.1	29.1	7.1	7.1	103.5	103.8	2.4	2.4	2.9	2.9	7.08	2.31	N.A.	2.72	N.A.
						Middle	26.3	26.2	29.2	29.2	7.2	7.1	104.6	104.2	2.2	2.2	2.5	2.7	7.16				
						Bottom	26.2	26.1	29.3	29.3	7.2	7.3	105.6	106.0	2.3	2.3	2.8	2.5	7.26				
G3	Gradient Station	0905-0920	16.8	E	0.3	*Surface*	26.5	26.5	29.1	29.1	7.5	7.4	109.3	108.8	1.8	1.8	2.1	2.2	7.46	2.0	N.A.	2.25	N.A.
						Middle	26.4	26.4	29.3	29.4	7.3	7.3	106.8	107.3	2.0	2.1	2.2	2.3	7.32				
						Bottom	26.2	26.1	29.5	29.5	7.5	7.5	109.6	109.2	2.2	2.1	2.4	2.3	7.50				
E7	Impact Station	0738-0754	24.4	E	0.2	*Surface*	26.5	26.4	29.2	29.2	7.4	7.3	108.0	107.5	2.6	2.6	3.1	2.9	7.36	2.50	-9.7%	2.83	-13.3%
						Middle	26.3	26.3	29.3	29.4	7.3	7.3	106.5	106.9	2.4	2.3	2.6	2.5	7.31				
						Bottom	26.2	26.1	29.5	29.5	7.4	7.4	108.0	108.5	2.6	2.6	3.1	2.8	7.42				
E8	Impact Station	0925-0942	19.4	E	0.2	*Surface*	26.5	26.5	29.1	29.0	7.5	7.5	109.9	109.5	1.9	2.0	2.1	2.4	7.50	2.17	-21.6%	2.45	-25.0%
						Middle	26.3	26.2	29.2	29.3	7.6	7.5	110.6	110.1	2.3	2.2	2.8	2.4	7.56				
						Bottom	26.2	26.2	29.4	29.5	7.6	7.6	110.9	111.3	2.3	2.3	2.5	2.5	7.62				
E9	Impact Station	0830-0843	16.2	E	0.2	*Surface*	26.5	26.5	29.3	29.2	7.3	7.3	107.0	107.5	2.0	2.1	2.5	2.3	7.32	2.13	-23.3%	2.43	-25.5%
						Middle	26.3	26.2	29.4	29.4	7.4	7.5	108.7	109.1	2.0	1.9	2.2	2.1	7.46				
						Bottom	26.2	26.2	29.4	29.5	7.4	7.4	107.8	107.4	2.3	2.4	2.6	2.9	7.38				
F1	Impact Station	0846-0859	14.4	E	0.3	*Surface*	26.5	26.4	29.2	29.1	7.4	7.4	108.3	107.8	1.9	1.9	2.1	2.3	7.37	1.87	-32.6%	2.20	-32.7%
						Middle	26.4	26.3	29.4	29.5	7.5	7.4	109.5	109.0	1.7	1.8	2.0	2.2	7.46				
						Bottom	26.3	26.2	29.5	29.4	7.6	7.7	111.8	112.2	1.9	2.0	2.3	2.3	7.66				
S1	Impact Station	0757-0809	9.8	E	0.3	*Surface*	26.5	26.5	29.2	29.1	7.4	7.4	109.2	108.7	2.7	2.8	3.0	3.1	7.42	2.73	-1.6%	3.15	-3.6%
						Middle	26.4	26.3	29.4	29.3	7.5	7.6	109.9	110.4	2.8	2.8	3.1	3.3	7.53				
						Bottom	26.2	26.2	29.5	29.5	7.6	7.5	110.6	110.1	2.6	2.7	3.2	3.2	7.56				
S2	Impact Station	0950-1005	12.8	E	0.2	*Surface*	26.5	26.5	29.1	29.2	7.1	7.2	104.5	105.0	2.4	2.5	2.7	2.8	7.16	2.33	-15.8%	2.68	-17.9%
						Middle	26.4	26.4	29.1	29.2	7.2	7.2	105.8	105.4	2.3	2.4	2.8	2.6	7.23				
						Bottom	26.2	26.1	29.3	29.2	7.2	7.2	105.1	104.6	2.2	2.2	2.6	2.6	7.18				
S3	Impact Station	1043-1100	10.2	E	0.1	*Surface*	26.5	26.4	29.1	29.0	7.1	7.1	103.9	103.3	2.5	2.5	3.0	3.0	7.08	2.41	-12.9%	2.78	-14.8%
						Middle	26.3	26.2	29.1	29.2	7.2	7.2	104.3	104.8	2.2	2.2	2.6	2.4	7.17				
						Bottom	26.2	26.2	29.3	29.3	7.2	7.1	104.8	104.3	2.5	2.6	2.8	2.9	7.16				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 26-May-16
Sampling Time : 11:00 - 15:00 (2nd Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1110-1130	23.4	E	0.3	*Surface*	26.6	26.5	29.2	29.2	7.3	7.3	107.0	106.5	2.5	2.6	3.0	2.8	7.27	2.65	N.A.	3.10	N.A.
						Middle	26.5	26.4	29.3	29.4	7.2	7.1	104.9	104.5	2.7	2.6	3.2	2.9	7.15				
						Bottom	26.3	26.2	29.4	29.4	7.4	7.4	107.8	107.4	2.8	2.8	3.1	3.6	7.37				
G1	Gradient Station	1211-1223	11.2	E	0.3	*Surface*	26.6	26.6	29.3	29.3	7.3	7.2	106.7	106.3	2.3	2.2	2.5	2.6	7.26	2.27	N.A.	2.58	N.A.
						Middle	26.4	26.4	29.4	29.4	7.4	7.4	108.2	107.7	2.3	2.3	2.5	2.7	7.37				
						Bottom	26.2	26.2	29.4	29.3	7.4	7.4	108.1	107.6	2.3	2.3	2.5	2.7	7.39				
G2	Gradient Station	1414-1429	14.8	W	0.2	*Surface*	26.6	26.5	29.4	29.4	7.2	7.1	105.1	104.6	2.6	2.7	2.9	2.9	7.13	2.59	N.A.	3.02	N.A.
						Middle	26.2	26.3	29.4	29.5	7.3	7.2	105.8	105.2	2.5	2.5	2.7	3.1	7.23				
						Bottom	26.2	26.2	29.4	29.4	7.3	7.4	106.8	107.2	2.7	2.6	3.3	3.2	7.34				
G3	Gradient Station	1305-1521	16.4	W	0.3	*Surface*	26.6	26.6	29.3	29.3	7.4	7.4	109.2	108.7	2.1	2.2	2.6	2.6	7.42	2.16	N.A.	2.57	N.A.
						Middle	26.4	26.4	29.5	29.5	7.5	7.4	109.6	109.1	2.3	2.3	2.8	2.7	7.46				
						Bottom	26.3	26.3	29.5	29.5	7.6	7.6	111.2	110.7	2.0	2.1	2.4	2.3	7.58				
E7	Impact Station	1135-1153	24.2	E	0.3	*Surface*	26.5	26.6	29.3	29.2	7.2	7.2	105.5	105.1	2.3	2.3	2.8	2.7	7.19	2.38	-10.3%	2.82	-9.1%
						Middle	26.6	26.5	29.4	29.4	7.4	7.3	108.5	108.0	2.3	2.3	2.8	2.7	7.36				
						Bottom	26.4	26.4	29.5	29.5	7.5	7.4	109.2	108.7	2.6	2.6	3.1	2.8	7.43				
E8	Impact Station	1326-1346	19.6	W	0.3	*Surface*	26.6	26.5	29.4	29.4	7.3	7.3	107.7	107.3	2.0	2.1	2.4	2.3	7.32	2.06	-22.4%	2.33	-24.7%
						Middle	26.4	26.3	29.4	29.5	7.4	7.4	108.3	107.9	1.9	2.0	2.1	2.4	7.39				
						Bottom	26.2	26.1	29.5	29.5	7.5	7.6	109.7	110.1	2.2	2.2	2.4	2.4	7.54				
E9	Impact Station	1228-1242	15.8	E	0.2	*Surface*	26.6	26.5	29.4	29.3	7.3	7.2	106.9	106.5	2.3	2.4	2.5	2.8	7.26	2.35	-11.5%	2.77	-10.8%
						Middle	26.4	26.4	29.5	29.5	7.3	7.4	107.6	108.0	2.4	2.4	2.9	2.9	7.36				
						Bottom	26.2	26.1	29.5	29.6	7.4	7.4	108.1	108.5	2.3	2.3	2.7	2.8	7.43				
F1	Impact Station	1247-1300	14.2	W	0.2	*Surface*	26.5	26.6	29.3	29.3	7.3	7.3	107.1	107.5	2.1	2.0	2.5	2.4	7.33	2.06	-22.4%	2.38	-23.1%
						Middle	26.4	26.3	29.4	29.5	7.3	7.2	106.4	106.0	2.0	2.0	2.4	2.2	7.26				
						Bottom	26.3	26.2	29.6	29.6	7.6	7.5	110.5	110.0	2.2	2.1	2.4	2.4	7.53				
S1	Impact Station	1156-1207	10.2	E	0.2	*Surface*	26.6	26.5	29.3	29.3	7.3	7.3	107.3	106.9	2.4	2.5	2.7	3.0	7.30	2.60	-1.9%	3.03	-2.2%
						Middle	26.5	26.4	29.3	29.2	7.5	7.4	109.5	109.1	2.6	2.6	2.9	3.1	7.46				
						Bottom	26.3	26.2	29.5	29.4	7.4	7.5	108.6	109.1	2.7	2.8	3.2	3.3	7.44				
S2	Impact Station	1351-1404	12.2	W	0.2	*Surface*	26.6	26.7	29.5	29.5	7.1	7.2	104.5	105.0	2.5	2.6	2.8	2.8	7.13	2.46	-7.2%	2.82	-9.1%
						Middle	26.3	26.3	29.5	29.6	7.4	7.4	108.2	107.9	2.4	2.4	2.6	2.8	7.38				
						Bottom	26.3	26.2	29.5	29.4	7.5	7.4	109.3	108.7	2.5	2.5	2.9	3.0	7.45				
S3	Impact Station	1444-1500	9.8	W	0.2	*Surface*	26.6	26.6	29.4	29.4	7.2	7.2	105.8	105.4	2.4	2.4	2.9	2.6	7.19	2.50	-5.9%	2.87	-7.5%
						Middle	26.4	26.3	29.3	29.2	7.3	7.3	107.0	106.6	2.3	2.4	2.6	2.6	7.30				
						Bottom	26.2	26.1	29.4	29.4	7.3	7.2	106.2	105.7	2.7	2.8	3.2	3.3	7.26				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 26-May-16
Sampling Time : 15:00 - 19:00 (3rd Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1507-1521	23.2	E	0.5	*Surface*	26.4	26.5	29.1	29.1	7.4	7.3	107.8	107.3	2.4	2.4	2.9	2.9	7.36	2.66	N.A.	3.15	N.A.
						Middle	26.4	26.3	29.3	29.4	7.2	7.2	105.9	105.4	2.5	2.6	3.0	2.8	7.22				
						Bottom	26.3	26.2	29.6	29.5	7.4	7.4	108.7	109.1	3.0	3.1	3.3	4.0	7.43				
G1	Gradient Station	1604-1617	11.1	E	0.3	*Surface*	26.5	26.4	29.2	29.2	7.4	7.3	107.5	106.7	2.3	2.4	2.8	2.6	7.33	2.34	N.A.	2.78	N.A.
						Middle	26.4	26.4	29.3	29.3	7.4	7.4	108.2	107.8	2.5	2.4	3.0	2.9	7.38				
						Bottom	26.4	26.3	29.5	29.4	7.3	7.3	106.7	106.3	2.3	2.2	2.7	2.7	7.27				
G2	Gradient Station	1805-1822	14.5	W	0.3	*Surface*	26.5	26.4	29.6	29.5	7.3	7.3	107.2	106.7	2.5	2.4	2.7	2.8	7.32	2.60	N.A.	2.92	N.A.
						Middle	26.4	26.4	29.6	29.7	7.4	7.4	107.8	108.1	2.6	2.6	3.1	2.8	7.38				
						Bottom	26.3	26.2	29.7	29.7	7.5	7.4	109.3	107.0	2.8	2.7	3.1	3.0	7.45				
G3	Gradient Station	1705-1719	16.1	W	0.6	*Surface*	26.4	26.5	29.4	29.5	7.3	7.3	107.3	106.7	2.1	2.1	2.5	2.6	7.32	2.18	N.A.	2.52	N.A.
						Middle	26.4	26.4	29.6	29.7	7.4	7.4	108.3	108.7	2.2	2.3	2.5	2.6	7.42				
						Bottom	26.3	26.2	29.8	29.8	7.5	7.6	110.2	110.6	2.1	2.2	2.3	2.6	7.54				
E7	Impact Station	1525-1539	24.0	E	0.4	*Surface*	26.4	26.4	29.2	29.3	7.3	7.3	106.9	106.5	2.5	2.6	2.8	2.8	7.30	2.56	-3.6%	2.87	-9.0%
						Middle	26.4	26.3	29.4	29.5	7.2	7.2	105.7	105.2	2.4	2.3	2.7	2.8	7.20				
						Bottom	26.2	26.2	29.6	29.7	7.4	7.4	108.1	108.4	2.7	2.8	3.0	3.1	7.38				
E8	Impact Station	1726-1739	19.2	W	0.4	*Surface*	26.4	26.4	29.4	29.4	7.4	7.4	108.2	111.6	2.0	2.1	2.2	2.3	7.38	2.14	-19.6%	2.43	-22.8%
						Middle	26.4	26.3	29.6	29.7	7.5	7.4	109.2	108.9	2.1	2.1	2.5	2.3	7.45				
						Bottom	26.2	26.1	29.9	29.8	7.6	7.6	111.4	110.8	2.3	2.4	2.5	2.8	7.58				
E9	Impact Station	1622-1636	15.5	W	0.5	*Surface*	26.5	26.4	29.4	29.5	7.4	7.4	108.1	107.6	2.6	2.6	3.1	2.9	7.38	2.48	-6.8%	2.80	-11.1%
						Middle	26.4	26.3	29.6	29.5	7.4	7.5	108.6	109.0	2.4	2.5	2.7	2.7	7.44				
						Bottom	26.2	26.2	29.7	29.6	7.6	7.6	111.4	110.9	2.4	2.3	2.6	2.8	7.59				
F1	Impact Station	1645-1700	13.9	W	0.6	*Surface*	26.5	26.5	29.4	29.4	7.5	7.5	109.7	109.1	2.3	2.4	2.7	2.6	7.48	2.28	-14.2%	2.63	-16.4%
						Middle	26.4	26.3	29.5	29.5	7.3	7.4	107.0	107.6	2.1	2.2	2.5	2.6	7.33				
						Bottom	26.3	26.2	29.7	29.6	7.4	7.4	108.4	109.0	2.4	2.4	2.6	2.8	7.42				
S1	Impact Station	1544-1600	10.0	E	0.3	*Surface*	26.4	26.4	29.2	29.3	7.5	7.4	109.4	108.8	2.4	2.3	2.9	2.8	7.46	2.52	-5.3%	2.98	-5.3%
						Middle	26.4	26.4	29.3	29.2	7.4	7.4	108.4	107.9	2.6	2.5	2.9	3.0	7.39				
						Bottom	26.3	26.3	29.4	29.4	7.3	7.3	107.0	106.6	2.7	2.8	3.0	3.3	7.29				
S2	Impact Station	1743-1800	11.9	W	0.3	*Surface*	26.5	26.5	29.5	29.4	7.2	7.3	105.9	106.3	2.3	2.4	2.7	2.9	7.26	2.49	-6.5%	2.88	-8.5%
						Middle	26.5	26.4	29.5	29.5	7.3	7.3	106.8	106.5	2.5	2.4	2.7	2.9	7.29				
						Bottom	26.3	26.3	29.6	29.5	7.4	7.4	107.3	108.6	2.7	2.7	3.2	2.9	7.40				
S3	Impact Station	1830-1848	9.5	W	0.2	*Surface*	26.4	26.4	29.5	29.5	7.4	7.3	107.8	107.3	2.5	2.6	3.0	2.8	7.36	2.53	-4.7%	2.85	-9.5%
						Middle	26.4	26.4	29.5	29.6	7.4	7.4	108.3	108.7	2.4	2.5	2.6	2.7	7.42				
						Bottom	26.4	26.3	29.7	29.6	7.3	7.3	106.4	107.0	2.7	2.6	3.2	2.8	7.28				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 26-May-16
Sampling Time : 19:00 - 23:00 (4th Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1900-1916	23.1	W	0.2	*Surface*	26.3	26.3	29.1	29.2	7.4	7.4	108.5	108.0	2.2	2.3	2.6	2.7	7.41	2.46	N.A.	2.93	N.A.
						Middle	26.4	26.4	29.4	29.4	7.3	7.3	107.3	106.8	2.5	2.4	3.0	3.1	7.32				
						Bottom	26.2	26.1	29.6	29.7	7.5	7.5	110.3	109.8	2.8	2.7	3.0	3.2	7.51				
G1	Gradient Station	2005-2020	11.0	E	0.1	*Surface*	26.4	26.3	29.2	29.1	7.4	7.4	108.3	108.0	2.5	2.5	3.0	3.0	7.40	2.51	N.A.	2.92	N.A.
						Middle	26.3	26.3	29.2	29.3	7.4	7.4	108.9	108.3	2.4	2.4	2.7	2.9	7.42				
						Bottom	26.3	26.2	29.4	29.4	7.3	7.3	107.3	107.0	2.6	2.6	2.9	3.0	7.31				
G2	Gradient Station	2206-2224	14.7	E	0.2	*Surface*	26.3	26.3	29.4	29.4	7.5	7.5	109.4	108.9	2.6	2.5	2.8	2.8	7.47	2.79	N.A.	3.25	N.A.
						Middle	26.3	26.2	29.5	29.6	7.4	7.4	108.3	107.8	2.8	2.8	3.5	3.4	7.39				
						Bottom	26.2	26.2	29.7	29.7	7.3	7.3	106.9	107.2	3.0	3.0	3.4	3.6	7.32				
G3	Gradient Station	2100-2115	16.3	E	0.3	*Surface*	26.4	26.3	29.3	29.4	7.5	7.5	109.3	109.7	2.2	2.2	2.6	2.4	7.49	2.38	N.A.	2.77	N.A.
						Middle	26.3	26.2	29.5	29.6	7.4	7.4	108.7	108.4	2.5	2.6	3.0	3.1	7.41				
						Bottom	26.1	26.2	29.7	29.7	7.3	7.3	107.6	107.1	2.4	2.4	2.6	2.9	7.33				
E7	Impact Station	1921-1937	23.8	W	0.2	*Surface*	26.3	26.3	29.2	29.3	7.3	7.4	107.3	107.7	2.4	2.5	2.6	2.7	7.36	2.58	5.0%	2.87	-2.3%
						Middle	26.3	26.4	29.4	29.5	7.4	7.3	107.7	107.4	2.5	2.5	3.0	2.7	7.35				
						Bottom	26.3	26.2	29.7	29.8	7.4	7.5	108.7	109.2	2.8	2.8	3.1	3.1	7.44				
E8	Impact Station	2122-2138	19.5	E	0.2	*Surface*	26.3	26.3	29.3	29.4	7.5	7.5	110.3	109.8	2.2	2.3	2.4	2.5	7.53	2.39	-2.7%	2.65	-9.7%
						Middle	26.3	26.2	29.6	29.6	7.6	7.6	111.0	111.3	2.3	2.4	2.7	2.6	7.59				
						Bottom	26.1	26.1	29.7	29.8	7.4	7.5	108.3	109.2	2.6	2.6	2.8	2.9	7.42				
E9	Impact Station	2026-2030	15.7	E	0.1	*Surface*	26.3	26.3	29.2	29.3	7.4	7.4	108.8	108.2	2.4	2.4	2.6	2.7	7.42	2.60	6.0%	2.95	0.6%
						Middle	26.3	26.2	29.4	29.5	7.5	7.5	109.5	110.1	2.6	2.6	2.7	3.2	7.50				
						Bottom	26.2	26.1	29.7	29.7	7.6	7.5	110.4	110.0	2.8	2.8	3.4	3.1	7.53				
F1	Impact Station	2039-2055	14.0	E	0.4	*Surface*	26.3	26.4	29.3	29.3	7.6	7.5	110.7	110.3	2.4	2.5	2.7	3.0	7.56	2.43	-1.0%	2.77	-5.7%
						Middle	26.3	26.2	29.4	29.5	7.5	7.5	109.7	109.2	2.3	2.3	2.5	2.5	7.48				
						Bottom	26.2	26.1	29.6	29.7	7.4	7.4	108.4	108.0	2.5	2.6	3.0	2.9	7.39				
S1	Impact Station	1944-2000	10.1	E	0.1	*Surface*	26.3	26.2	29.2	29.2	7.6	7.5	110.5	109.9	2.4	2.3	2.7	2.8	7.54	2.38	-3.1%	2.68	-8.5%
						Middle	26.3	26.2	29.3	29.4	7.5	7.5	109.6	109.3	2.2	2.2	2.4	2.5	7.48				
						Bottom	26.2	26.2	29.5	29.4	7.4	7.4	108.1	107.7	2.5	2.6	2.8	2.9	7.37				
S2	Impact Station	2145-2200	12.1	E	0.2	*Surface*	26.3	26.3	29.3	29.4	7.4	7.4	107.9	108.4	2.4	2.6	3.0	3.0	7.40	2.68	9.1%	3.08	5.1%
						Middle	26.3	26.3	29.4	29.4	7.4	7.4	108.9	108.6	2.7	2.6	3.0	2.9	7.43				
						Bottom	26.2	26.2	29.5	29.6	7.3	7.3	107.3	106.7	2.8	2.9	3.1	3.5	7.31				
S3	Impact Station	2232-2250	9.8	E	0.1	*Surface*	26.3	26.3	29.4	29.4	7.4	7.4	108.7	108.3	2.6	2.7	2.9	3.0	7.42	2.65	7.7%	3.02	2.8%
						Middle	26.3	26.3	29.4	29.5	7.4	7.3	107.7	107.3	2.4	2.5	2.7	2.8	7.35				
						Bottom	26.2	26.2	29.6	29.7	7.2	7.2	105.6	105.1	2.8	2.8	3.4	3.3	7.21				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 27-May-16
Sampling Time : 15:000 - 19:00 (1st Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1500-1517	22.9	W	0.3	*Surface*	26.5	26.4	29.3	29.2	7.4	7.4	107.9	107.7	2.3	2.3	2.9	2.8	7.37	2.49	N.A.	3.07	N.A.
						Middle	26.3	26.2	29.4	29.5	7.3	7.3	106.7	106.4	2.5	2.4	3.2	2.7	7.30				
						Bottom	26.2	26.2	29.6	29.7	7.2	7.3	105.6	105.9	2.7	2.8	3.2	3.6	7.26				
G1	Gradient Station	1606-1622	10.9	W	0.1	*Surface*	26.2	26.3	29.3	29.2	7.5	7.5	110.2	109.8	2.5	2.4	3.2	3.1	7.53	2.39	N.A.	2.93	N.A.
						Middle	26.3	26.3	29.3	29.3	7.6	7.6	110.8	111.1	2.2	2.2	2.6	2.7	7.60				
						Bottom	26.2	26.1	29.4	29.4	7.5	7.4	109.1	108.7	2.6	2.5	2.8	3.2	7.46				
G2	Gradient Station	1823-1838	14.5	E	0.2	*Surface*	26.3	26.4	29.3	29.4	7.4	7.5	108.6	108.9	2.5	2.4	3.0	2.7	7.45	2.56	N.A.	2.90	N.A.
						Middle	26.4	26.3	29.5	29.5	7.3	7.3	107.2	107.0	2.6	2.5	2.9	2.7	7.33				
						Bottom	26.2	26.3	29.5	29.6	7.4	7.4	107.3	107.2	2.6	2.7	2.9	3.2	7.36				
G3	Gradient Station	1714-1731	16.1	E	0.2	*Surface*	26.4	26.3	29.2	29.2	7.5	7.5	109.2	109.5	2.2	2.3	2.4	3.0	7.48	2.4	N.A.	2.82	N.A.
						Middle	26.3	26.2	29.3	29.2	7.4	7.4	108.3	108.0	2.4	2.4	2.6	3.0	7.41				
						Bottom	26.2	26.2	29.4	29.5	7.3	7.3	107.0	106.9	2.6	2.5	2.7	3.2	7.34				
E7	Impact Station	1522-1538	23.6	W	0.2	*Surface*	26.4	26.3	29.2	29.3	7.5	7.4	108.9	108.5	2.2	2.2	2.4	2.9	7.44	2.52	1.2%	3.07	0.0%
						Middle	26.3	26.2	29.3	29.4	7.4	7.3	107.5	107.1	2.6	2.6	3.1	3.2	7.36				
						Bottom	26.2	26.1	29.7	29.6	7.3	7.3	106.2	106.1	2.7	2.8	3.5	3.3	7.29				
E8	Impact Station	1737-1754	19.4	E	0.3	*Surface*	26.4	26.5	29.3	29.2	7.4	7.4	107.8	108.2	2.1	2.2	2.5	2.8	7.40	2.32	-7.0%	2.80	-8.7%
						Middle	26.4	26.3	29.4	29.3	7.5	7.5	109.9	109.7	2.4	2.5	2.9	3.0	7.52				
						Bottom	26.2	26.1	29.6	29.5	7.4	7.4	107.7	107.2	2.4	2.3	2.6	3.0	7.37				
E9	Impact Station	1627-1642	15.6	E	0.2	*Surface*	26.4	26.5	29.4	29.3	7.3	7.4	107.2	107.6	2.3	2.4	2.6	2.6	7.35	2.50	0.5%	3.02	-1.6%
						Middle	26.3	26.2	29.5	29.4	7.4	7.5	108.3	108.6	2.6	2.5	3.1	2.9	7.44				
						Bottom	26.2	26.1	29.7	29.6	7.4	7.4	107.6	107.3	2.7	2.6	3.5	3.4	7.37				
F1	Impact Station	1652-1709	14.1	E	0.3	*Surface*	26.3	26.4	29.3	29.2	7.6	7.7	111.6	111.9	2.5	2.5	2.8	3.2	7.66	2.49	-0.1%	2.98	-2.7%
						Middle	26.2	26.3	29.4	29.3	7.5	7.5	110.1	109.8	2.4	2.3	2.8	2.8	7.53				
						Bottom	26.1	26.2	29.5	29.6	7.5	7.5	108.6	108.8	2.6	2.6	3.2	3.1	7.46				
S1	Impact Station	1544-1600	10.2	W	0.2	*Surface*	26.4	26.4	29.2	29.1	7.6	7.6	111.3	111.6	2.3	2.2	2.8	2.5	7.62	2.43	-2.3%	2.87	-6.5%
						Middle	26.4	26.3	29.3	29.2	7.6	7.6	110.4	110.1	2.6	2.6	3.1	2.9	7.56				
						Bottom	26.3	26.3	29.4	29.3	7.5	7.4	108.8	108.5	2.5	2.4	3.0	2.9	7.45				
S2	Impact Station	1801-1817	12.3	E	0.2	*Surface*	26.4	26.5	29.3	29.4	7.6	7.6	110.9	110.7	2.3	2.4	3.0	2.9	7.57	2.53	1.5%	3.08	0.5%
						Middle	26.3	26.4	29.5	29.4	7.5	7.5	109.5	109.2	2.7	2.6	3.5	3.2	7.49				
						Bottom	26.2	26.2	29.5	29.6	7.4	7.4	108.4	108.1	2.6	2.5	2.9	3.0	7.41				
S3	Impact Station	1843-1855	9.7	E	0.1	*Surface*	26.5	26.4	29.3	29.2	7.5	7.5	110.2	109.8	2.6	2.5	3.1	3.2	7.53	2.58	3.5%	3.18	3.8%
						Middle	26.3	26.4	29.5	29.4	7.6	7.6	110.4	110.8	2.5	2.4	3.0	2.9	7.58				
						Bottom	26.3	26.2	29.5	29.5	7.4	7.5	108.5	108.9	2.8	2.7	3.6	3.3	7.46				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 27-May-16
Sampling Time : 19:00 - 23:00 (2nd Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1900-1915	22.8	E	0.3	*Surface*	26.5	26.4	29.3	29.2	7.3	7.3	107.9	107.7	2.3	2.3	3.2	2.8	7.29	2.49	N.A.	3.13	N.A.
						Middle	26.3	26.2	29.4	29.5	7.2	7.2	106.7	106.4	2.5	2.4	2.9	2.9	7.16				
						Bottom	26.2	26.2	29.6	29.7	6.9	7.0	105.6	105.9	2.7	2.8	3.6	3.4	6.94				
G1	Gradient Station	2000-2015	11.2	E	0.3	*Surface*	26.2	26.3	29.3	29.2	7.5	7.5	110.2	109.8	2.5	2.4	3.7	3.4	7.49	2.39	N.A.	3.78	N.A.
						Middle	26.3	26.3	29.3	29.3	7.3	7.3	110.8	111.1	2.2	2.2	3.4	4.1	7.33				
						Bottom	26.2	26.1	29.4	29.4	7.2	7.1	109.1	108.7	2.6	2.5	4.1	4.0	7.15				
G2	Gradient Station	2210-2225	19.0	W	0.3	*Surface*	26.3	26.4	29.3	29.4	7.5	7.5	108.6	108.9	2.5	2.4	3.3	3.6	7.47	2.56	N.A.	3.47	N.A.
						Middle	26.4	26.3	29.5	29.5	7.4	7.3	107.2	107.0	2.6	2.5	3.5	3.2	7.34				
						Bottom	26.2	26.3	29.5	29.6	7.1	7.1	107.3	107.2	2.6	2.7	3.5	3.7	7.08				
G3	Gradient Station	2100-2115	16.6	W	0.3	*Surface*	26.4	26.3	29.2	29.2	7.4	7.4	109.2	109.5	2.2	2.3	2.9	2.5	7.37	2.39	N.A.	2.85	N.A.
						Middle	26.3	26.2	29.3	29.2	7.2	7.1	108.3	108.0	2.4	2.4	2.7	2.8	7.14				
						Bottom	26.2	26.2	29.4	29.5	7.0	7.0	107.0	106.9	2.6	2.5	3.1	3.1	7.03				
E7	Impact Station	1920-1935	23.5	E	0.3	*Surface*	26.4	26.3	29.2	29.3	7.5	7.5	108.9	108.5	2.2	2.2	3.8	3.5	7.46	2.52	1.2%	3.98	27.1%
						Middle	26.3	26.2	29.3	29.4	7.3	7.2	107.5	107.1	2.6	2.6	3.9	4.2	7.25				
						Bottom	26.2	26.1	29.7	29.6	7.0	7.1	106.2	106.1	2.7	2.8	4.4	4.1	7.04				
E8	Impact Station	2120-2135	19.1	W	0.4	*Surface*	26.4	26.5	29.3	29.2	7.3	7.3	107.8	108.2	2.1	2.2	3.3	3.3	7.26	2.32	-7.0%	3.58	14.4%
						Middle	26.4	26.3	29.4	29.3	7.1	7.1	109.9	109.7	2.4	2.5	4.0	3.9	7.07				
						Bottom	26.2	26.1	29.6	29.5	6.9	6.9	107.7	107.2	2.4	2.3	3.5	3.5	6.90				
E9	Impact Station	2020-2035	15.5	W	0.3	*Surface*	26.4	26.5	29.4	29.3	7.2	7.2	107.2	107.6	2.3	2.4	3.2	2.9	7.23	2.50	0.5%	3.20	2.1%
						Middle	26.3	26.2	29.5	29.4	7.1	7.1	108.3	108.6	2.6	2.5	3.3	3.4	7.12				
						Bottom	26.2	26.1	29.7	29.6	7.0	7.0	107.6	107.3	2.7	2.6	3.2	3.2	7.02				
F1	Impact Station	2040-2055	14.2	E	0.3	*Surface*	26.3	26.4	29.3	29.2	7.5	7.5	111.6	111.9	2.5	2.5	2.3	2.3	7.48	2.49	-0.1%	2.58	-17.6%
						Middle	26.2	26.3	29.4	29.3	7.3	7.4	110.1	109.8	2.4	2.3	2.6	2.4	7.34				
						Bottom	26.1	26.2	29.5	29.6	7.2	7.3	108.6	108.8	2.6	2.6	3.0	2.9	7.28				
S1	Impact Station	1940-1955	10.3	E	0.2	*Surface*	26.4	26.4	29.2	29.1	7.2	7.2	111.3	111.6	2.3	2.2	3.6	3.9	7.20	2.43	-2.3%	3.97	26.6%
						Middle	26.4	26.3	29.3	29.2	7.0	7.0	110.4	110.1	2.6	2.6	3.7	4.0	7.03				
						Bottom	26.3	26.3	29.4	29.3	6.9	7.0	108.8	108.5	2.5	2.4	4.1	4.5	6.94				
S2	Impact Station	2145-2205	12.4	W	0.4	*Surface*	26.4	26.5	29.3	29.4	7.4	7.4	110.9	110.7	2.3	2.4	3.4	3.2	7.36	2.53	1.5%	3.47	10.6%
						Middle	26.3	26.4	29.5	29.4	7.2	7.2	109.5	109.2	2.7	2.6	3.3	3.4	7.20				
						Bottom	26.2	26.2	29.5	29.6	6.8	6.9	108.4	108.1	2.6	2.5	3.6	3.9	6.84				
S3	Impact Station	2230-2250	9.6	W	0.3	*Surface*	26.5	26.4	29.3	29.2	7.3	7.3	110.2	109.8	2.6	2.5	2.7	2.9	7.28	2.58	3.5%	2.98	-4.8%
						Middle	26.3	26.4	29.5	29.4	7.0	7.1	110.4	110.8	2.5	2.4	3.1	3.3	7.05				
						Bottom	26.3	26.2	29.5	29.5	7.0	7.0	108.5	108.9	2.8	2.7	2.9	3.0	6.96				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 07:00 - 11:00 (1st Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	0730-0744	23.4	E	0.2	*Surface*	26.3	26.2	29.5	29.5	7.3	7.2	106.3	105.8	2.9	3.0	3.5	3.6	7.24	2.82	N.A.	3.38	N.A.
						Middle	26.2	26.3	29.6	29.5	7.4	7.5	108.7	108.3	2.8	2.7	3.6	3.2	7.46				
						Bottom	26.3	26.2	29.7	29.7	7.6	7.6	111.1	111.6	2.8	2.8	3.1	3.3	7.61				
G1	Gradient Station	0820-0831	11.4	E	0.3	*Surface*	26.4	26.4	29.5	29.4	7.5	7.5	110.1	110.6	2.1	2.2	2.3	2.4	7.53	2.40	N.A.	2.85	N.A.
						Middle	26.3	26.2	29.6	29.5	7.4	7.3	107.9	107.5	2.6	2.5	3.3	2.8	7.36				
						Bottom	26.2	26.2	29.7	29.6	7.6	7.5	110.8	110.3	2.5	2.6	3.2	3.1	7.56				
G2	Gradient Station	1015-1030	14.8	E	0.1	*Surface*	26.4	26.5	29.5	29.4	7.2	7.2	105.5	106.0	2.8	2.8	3.1	3.3	7.22	2.87	N.A.	3.45	N.A.
						Middle	26.3	26.4	29.6	29.7	7.4	7.4	108.3	108.8	2.8	2.9	3.7	3.7	7.42				
						Bottom	26.3	26.2	29.7	29.6	7.4	7.5	108.9	109.4	3.0	3.0	3.5	3.4	7.46				
G3	Gradient Station	0910-0925	16.4	E	0.2	*Surface*	26.4	26.4	29.5	29.5	7.4	7.4	108.0	108.3	2.3	2.3	2.9	2.8	7.38	2.33	N.A.	2.87	N.A.
						Middle	26.3	26.2	29.6	29.6	7.5	7.4	109.3	108.8	2.3	2.2	2.7	2.9	7.46				
						Bottom	26.2	26.2	29.7	29.7	7.6	7.6	110.5	110.9	2.5	2.4	3.0	2.9	7.58				
E7	Impact Station	0747-0802	23.2	E	0.2	*Surface*	26.3	26.4	29.5	29.4	7.3	7.4	107.4	107.8	2.4	2.5	3.2	3.2	7.36	2.39	-15.2%	2.90	-14.3%
						Middle	26.3	26.2	29.6	29.6	7.4	7.4	108.2	107.8	2.1	2.2	2.3	2.6	7.38				
						Bottom	26.3	26.2	29.7	29.6	7.5	7.5	109.2	109.6	2.6	2.5	3.1	3.0	7.48				
E8	Impact Station	0935-0952	17.8	E	0.2	*Surface*	26.4	26.3	29.4	29.4	7.5	7.5	109.6	110.1	2.2	2.3	2.8	3.0	7.51	2.37	-16.0%	2.93	-13.3%
						Middle	26.2	26.2	29.6	29.7	7.4	7.3	107.8	107.3	2.4	2.3	2.8	3.0	7.36				
						Bottom	26.2	26.1	29.7	29.7	7.4	7.5	108.4	108.8	2.6	2.5	3.0	3.0	7.44				
E9	Impact Station	0835-0847	15.8	E	0.3	*Surface*	26.4	26.4	29.5	29.5	7.4	7.3	108.2	107.6	2.1	2.1	2.5	2.6	7.36	2.36	-16.5%	2.83	-16.3%
						Middle	26.3	26.2	29.5	29.6	7.3	7.2	106.3	105.9	2.4	2.4	2.7	3.1	7.25				
						Bottom	26.2	26.2	29.7	29.7	7.5	7.4	109.3	108.8	2.5	2.6	3.0	3.1	7.46				
F1	Impact Station	0852-0904	14.0	E	0.3	*Surface*	26.5	26.4	29.4	29.5	7.4	7.4	109.2	108.7	2.2	2.1	2.7	2.7	7.42	2.30	-18.7%	2.82	-16.7%
						Middle	26.3	26.3	29.6	29.5	7.5	7.6	110.4	110.8	2.3	2.4	2.8	2.9	7.56				
						Bottom	26.2	26.1	29.7	29.6	7.7	7.6	112.1	111.7	2.4	2.4	2.7	3.1	7.66				
S1	Impact Station	0806-0817	8.0	E	0.1	*Surface*	26.3	26.4	29.4	29.5	7.5	7.4	109.2	108.8	2.4	2.4	2.8	3.1	7.46	2.72	-3.6%	3.20	-5.4%
						Middle	26.2	26.2	29.5	29.6	7.6	7.6	110.8	110.3	2.9	2.8	3.2	3.1	7.57				
						Bottom	26.1	26.2	29.7	29.7	7.6	7.7	111.2	111.6	2.9	3.0	3.5	3.5	7.64				
S2	Impact Station	0957-1010	12.8	E	0.2	*Surface*	26.3	26.0	29.4	29.4	7.2	7.2	105.1	105.5	2.7	2.7	3.2	3.5	7.21	2.78	-1.4%	3.43	1.5%
						Middle	26.2	26.2	29.5	29.6	7.3	7.4	107.1	107.5	3.0	2.9	3.8	3.5	7.36				
						Bottom	26.2	26.1	29.6	29.7	7.4	7.4	107.8	107.4	2.8	2.7	3.6	3.0	7.37				
S3	Impact Station	1040-1100	10.4	E	0.1	*Surface*	26.5	26.5	29.5	29.5	7.2	7.2	106.3	105.8	2.8	2.9	3.1	3.2	7.22	2.82	0.0%	3.22	-4.9%
						Middle	26.4	26.4	29.6	29.6	7.4	7.3	108.0	107.5	2.7	2.8	3.0	3.1	7.36				
						Bottom	26.3	26.3	29.6	29.5	7.3	7.4	107.1	107.5	2.9	2.8	3.5	3.4	7.34				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 11:00 - 15:00 (2nd Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1110-1126	23.2	E	0.1	*Surface*	26.5	26.5	29.3	29.4	7.5	7.4	109.5	109.1	2.4	2.4	3.1	2.9	7.46	2.71	N.A.	3.23	N.A.
						Middle	26.4	26.3	29.6	29.6	7.3	7.3	107.6	107.3	2.8	2.8	3.4	3.0	7.33				
						Bottom	26.3	26.3	29.7	29.7	7.6	7.6	111.5	111.1	2.9	3.0	3.2	3.8	7.61				
G1	Gradient Station	1207-1220	11.6	E	0.2	*Surface*	26.6	26.6	29.5	29.4	7.6	7.5	111.0	110.4	2.3	2.4	2.8	2.6	7.53	2.68	N.A.	3.12	N.A.
						Middle	26.4	26.3	29.6	29.7	7.4	7.4	108.6	109.1	2.8	2.7	3.0	3.5	7.43				
						Bottom	26.3	26.2	29.6	29.7	7.5	7.5	109.8	110.3	2.9	3.0	3.2	3.6	7.52				
G2	Gradient Station	1420-1435	15.2	W	0.2	*Surface*	26.7	26.6	29.5	29.6	7.2	7.2	106.1	105.5	2.9	3.0	3.2	3.6	7.19	2.88	N.A.	3.45	N.A.
						Middle	26.6	26.5	29.6	29.7	7.4	7.4	109.4	108.9	2.8	2.9	3.1	3.4	7.42				
						Bottom	26.5	26.5	29.7	29.7	7.5	7.4	109.7	109.2	2.9	2.8	3.7	3.7	7.44				
G3	Gradient Station	1310-1327	16.6	W	0.3	*Surface*	26.7	26.7	29.6	29.6	7.6	7.5	111.8	111.3	2.3	2.3	3.0	3.1	7.56	2.47	N.A.	3.05	N.A.
						Middle	26.4	26.4	29.6	29.7	7.7	7.6	112.6	112.1	2.3	2.4	2.6	3.0	7.66				
						Bottom	26.3	26.3	29.6	29.5	7.8	7.7	113.9	113.4	2.8	2.7	3.4	3.2	7.76				
E7	Impact Station	1130-1147	23.6	E	0.3	*Surface*	26.6	26.6	29.4	29.5	7.6	7.5	111.1	110.6	2.5	2.6	3.0	3.3	7.54	2.77	2.1%	3.43	6.2%
						Middle	26.4	26.4	29.6	29.6	7.6	7.6	111.2	110.8	3.0	2.9	3.9	3.5	7.58				
						Bottom	26.3	26.2	29.6	29.5	7.7	7.7	112.7	113.1	2.8	2.9	3.4	3.5	7.72				
E8	Impact Station	1333-1351	17.6	W	0.2	*Surface*	26.7	26.6	29.6	29.5	7.6	7.6	112.0	111.6	2.3	2.4	2.7	2.6	7.59	2.63	-3.0%	3.20	-1.0%
						Middle	26.5	26.4	29.7	29.7	7.6	7.6	111.6	111.1	2.7	2.7	3.2	3.5	7.57				
						Bottom	26.3	26.2	29.7	29.8	7.7	7.6	112.1	111.8	2.8	2.9	3.4	3.8	7.65				
E9	Impact Station	1225-1242	16.2	E	0.2	*Surface*	26.6	26.5	29.4	29.5	7.6	7.7	112.2	112.6	2.5	2.4	2.8	2.6	7.65	2.44	-10.0%	2.87	-11.3%
						Middle	26.5	26.5	29.5	29.6	7.6	7.5	111.1	110.7	2.3	2.4	2.9	2.8	7.56				
						Bottom	26.3	26.3	29.6	29.7	7.7	7.7	113.0	112.5	2.5	2.6	3.0	3.1	7.70				
F1	Impact Station	1247-1302	15.4	E	0.3	*Surface*	26.6	26.7	29.6	29.5	7.7	7.6	112.6	112.2	2.4	2.5	2.9	3.0	7.65	2.31	-15.0%	2.80	-13.4%
						Middle	26.5	26.4	29.7	29.7	7.7	7.7	113.8	113.3	2.2	2.3	2.7	2.7	7.72				
						Bottom	26.4	26.3	29.7	29.7	7.7	7.7	113.2	112.6	2.2	2.3	2.7	2.8	7.69				
S1	Impact Station	1150-1202	11.2	E	0.2	*Surface*	26.6	26.5	29.5	29.5	7.5	7.5	110.1	100.7	2.5	2.5	3.3	2.7	7.48	2.56	-5.7%	3.08	-4.6%
						Middle	26.5	26.4	29.6	29.5	7.4	7.5	109.2	109.7	2.6	2.6	3.4	3.1	7.46				
						Bottom	26.2	26.2	29.6	29.6	7.6	7.5	110.8	110.3	2.6	2.6	3.1	2.9	7.56				
S2	Impact Station	1355-1410	13.2	W	0.2	*Surface*	26.7	26.7	29.5	29.4	7.4	7.3	108.5	108.1	2.8	2.8	3.0	3.0	7.36	2.78	2.5%	3.28	1.5%
						Middle	26.4	26.5	29.6	29.5	7.4	7.5	108.8	109.3	2.6	2.7	3.4	3.2	7.44				
						Bottom	26.5	26.4	29.7	29.8	7.3	7.3	107.6	107.1	2.9	3.0	3.5	3.6	7.30				
S3	Impact Station	1445-1500	10.8	W	0.3	*Surface*	26.7	26.7	29.6	29.6	7.2	7.2	106.0	105.5	2.9	2.8	3.5	3.7	7.17	2.85	5.0%	3.53	9.3%
						Middle	26.6	26.6	29.7	29.7	7.3	7.4	108.1	108.5	2.9	2.9	3.5	3.5	7.36				
						Bottom	26.5	26.4	29.6	29.7	7.3	7.2	106.9	106.4	2.8	2.8	3.6	3.4	7.26				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 15:00 - 19:00 (3rd Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1510-1526	23.4	W	0.2	*Surface*	26.6	26.5	29.4	29.5	7.4	7.4	108.3	107.8	2.3	2.3	2.5	2.8	7.37	2.62	N.A.	3.15	N.A.
						Middle	26.2	26.3	29.6	29.5	7.3	7.2	106.4	106.1	2.7	2.7	3.5	3.2	7.24				
						Bottom	26.1	26.0	29.6	29.7	7.5	7.5	110.2	109.9	2.8	2.9	3.7	3.2	7.52				
G1	Gradient Station	1613-1629	11.2	W	0.2	*Surface*	26.7	26.7	29.6	29.7	7.5	7.4	109.7	109.1	2.2	2.3	2.9	2.5	7.44	2.59	N.A.	3.00	N.A.
						Middle	26.5	26.4	29.8	29.7	7.3	7.4	107.4	107.8	2.7	2.7	2.9	2.9	7.34				
						Bottom	26.4	26.3	29.8	29.9	7.4	7.4	108.6	109.1	2.9	2.9	3.4	3.4	7.43				
G2	Gradient Station	1821-1837	15.4	W	0.3	*Surface*	26.8	26.8	29.6	29.7	7.3	7.2	107.1	106.4	2.8	2.9	3.6	3.1	7.25	2.79	N.A.	3.32	N.A.
						Middle	26.7	26.6	29.8	29.7	7.5	7.5	110.3	109.9	2.7	2.8	3.2	3.3	7.48				
						Bottom	26.6	26.5	29.8	29.8	7.5	7.5	110.7	110.2	2.8	2.7	3.1	3.6	7.50				
G3	Gradient Station	1716-1732	16.8	W	0.3	*Surface*	26.7	26.8	29.7	29.6	7.6	7.6	112.8	112.3	2.2	2.2	2.8	2.9	7.62	2.38	N.A.	2.88	N.A.
						Middle	26.5	26.4	29.7	29.8	7.7	7.7	113.5	113.0	2.2	2.3	2.7	2.6	7.72				
						Bottom	26.3	26.4	29.8	29.9	7.8	7.8	114.9	114.3	2.7	2.6	3.2	3.1	7.82				
E7	Impact Station	1531-1547	23.2	W	0.2	*Surface*	26.6	26.7	29.6	29.5	7.5	7.4	109.9	109.4	2.4	2.5	3.1	3.0	7.45	2.68	2.2%	3.22	2.1%
						Middle	26.5	26.4	29.6	29.7	7.5	7.5	110.0	109.6	2.9	2.8	3.7	3.1	7.49				
						Bottom	26.3	26.2	29.7	29.8	7.6	7.6	111.5	111.8	2.7	2.8	3.3	3.1	7.63				
E8	Impact Station	1738-1754	17.4	W	0.3	*Surface*	26.8	26.8	29.6	29.7	7.7	7.6	113.0	112.5	2.2	2.3	2.6	2.5	7.65	2.54	-3.1%	2.98	-5.3%
						Middle	26.6	26.5	29.7	29.6	7.7	7.6	112.6	112.1	2.6	2.6	2.7	3.1	7.63				
						Bottom	26.4	26.3	29.8	29.9	7.7	7.7	113.0	112.7	2.7	2.8	3.3	3.7	7.71				
E9	Impact Station	1634-1650	16.4	W	0.2	*Surface*	26.7	26.7	29.5	29.6	7.7	7.7	113.2	113.6	2.4	2.3	2.9	3.0	7.71	2.35	-10.3%	2.88	-8.5%
						Middle	26.6	26.7	29.7	29.6	7.6	7.6	112.1	111.6	2.2	2.3	2.4	2.7	7.62				
						Bottom	26.4	26.3	29.7	29.8	7.8	7.7	114.0	113.5	2.4	2.5	3.0	3.3	7.76				
F1	Impact Station	1655-1711	15.8	W	0.3	*Surface*	26.8	26.7	29.6	29.7	7.7	7.7	113.6	113.2	2.3	2.4	2.8	2.8	7.71	2.22	-15.5%	2.63	-16.4%
						Middle	26.6	26.6	29.7	29.8	7.8	7.8	114.7	114.2	2.1	2.2	2.7	2.4	7.78				
						Bottom	26.4	26.5	29.9	29.8	7.8	7.7	114.1	113.6	2.2	2.2	2.5	2.6	7.75				
S1	Impact Station	1552-1608	11.4	W	0.3	*Surface*	26.7	26.6	29.5	29.6	7.4	7.4	108.9	109.1	2.4	2.4	2.9	2.8	7.39	2.47	-5.8%	2.88	-8.5%
						Middle	26.6	26.5	29.6	29.7	7.4	7.4	168.0	108.5	2.5	2.5	2.8	3.0	7.37				
						Bottom	26.3	26.4	29.7	29.7	7.5	7.5	109.6	109.1	2.5	2.5	3.0	2.8	7.47				
S2	Impact Station	1800-1816	13.6	W	0.2	*Surface*	26.8	26.7	29.5	29.6	7.4	7.4	109.4	109.1	2.7	2.7	2.9	3.2	7.42	2.69	2.6%	3.15	0.0%
						Middle	26.5	26.5	29.8	29.7	7.5	7.5	109.7	110.2	2.5	2.6	2.8	2.9	7.50				
						Bottom	26.3	26.4	29.8	29.9	7.4	7.3	108.6	108.0	2.8	2.9	3.4	3.7	7.36				
S3	Impact Station	1844-1900	11.2	W	0.3	*Surface*	26.8	26.9	29.7	29.6	7.3	7.2	106.9	106.5	2.8	2.7	3.6	3.3	7.23	2.76	5.2%	3.30	4.8%
						Middle	26.8	26.7	29.7	29.8	7.4	7.4	109.1	109.4	2.9	2.8	3.4	3.1	7.42				
						Bottom	26.5	26.5	29.8	29.9	7.3	7.3	107.8	107.4	2.7	2.7	3.2	3.2	7.32				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 19:00 - 23:00 (4th Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1910-1926	23.6	W	0.2	*Surface*	26.7	26.7	29.5	29.6	7.3	7.3	107.0	106.6	2.2	2.3	2.7	2.7	7.28	2.53	N.A.	3.05	N.A.
						Middle	26.4	26.3	29.6	29.7	7.2	7.1	105.2	104.8	2.6	2.6	3.2	3.1	7.15				
						Bottom	26.2	26.1	29.8	29.7	7.4	7.4	108.9	108.6	2.7	2.8	3.3	3.3	7.43				
G1	Gradient Station	2013-2029	11.0	W	0.3	*Surface*	26.6	26.5	29.7	29.8	7.4	7.3	108.5	107.8	2.1	2.2	2.8	2.6	7.35	2.50	N.A.	3.07	N.A.
						Middle	26.3	26.3	29.8	29.9	7.2	7.3	106.1	106.6	2.6	2.6	2.9	3.1	7.25				
						Bottom	26.2	26.1	29.9	29.8	7.3	7.4	107.4	107.8	2.8	2.8	3.4	3.6	7.34				
G2	Gradient Station	2221-2237	14.8	W	0.2	*Surface*	26.7	26.6	29.7	29.8	7.2	7.1	105.8	105.2	2.7	2.8	3.6	3.3	7.16	2.87	N.A.	3.20	N.A.
						Middle	26.5	26.4	29.8	29.9	7.4	7.4	109.1	108.6	2.6	3.7	2.9	3.2	7.39				
						Bottom	26.1	26.2	29.9	29.8	7.4	7.4	109.4	108.9	2.7	2.6	3.3	2.9	7.41				
G3	Gradient Station	2116-2132	16.6	W	0.3	*Surface*	26.6	26.5	26.7	26.8	7.6	7.5	111.5	111.1	2.1	2.1	2.7	2.6	7.53	2.29	N.A.	2.68	N.A.
						Middle	26.3	26.4	26.8	26.8	7.7	7.6	112.2	111.8	2.2	2.2	2.4	2.4	7.63				
						Bottom	26.2	26.1	26.9	26.8	7.8	7.7	113.7	113.0	2.6	2.5	2.9	3.1	7.73				
E7	Impact Station	1931-1947	22.8	W	0.2	*Surface*	26.7	26.6	29.6	29.7	7.4	7.3	108.6	108.1	2.3	2.4	2.8	2.8	7.36	2.59	2.2%	3.22	5.5%
						Middle	26.5	26.6	29.8	29.7	7.3	7.3	106.6	107.0	2.8	2.7	3.6	3.5	7.28				
						Bottom	26.4	26.3	29.8	29.9	7.5	7.6	110.2	110.5	2.6	2.7	3.4	3.2	7.54				
E8	Impact Station	2138-2154	17.0	W	0.2	*Surface*	26.6	26.7	29.7	29.8	7.6	7.5	111.7	111.2	2.1	2.2	2.3	2.6	7.56	2.45	-3.2%	2.95	-3.3%
						Middle	26.4	26.3	29.8	29.7	7.6	7.5	111.4	110.8	2.5	2.6	3.3	2.8	7.54				
						Bottom	26.2	26.1	29.8	29.8	7.6	7.6	111.8	111.5	2.6	2.7	3.2	3.5	7.62				
E9	Impact Station	2034-2050	16.0	W	0.3	*Surface*	26.7	26.6	29.6	29.7	7.6	7.6	111.9	112.4	2.3	2.2	2.5	2.7	7.62	2.26	-10.7%	2.67	-12.6%
						Middle	26.5	26.5	29.7	29.8	7.5	7.5	110.9	110.3	2.1	2.2	2.6	2.6	7.53				
						Bottom	26.3	26.2	29.8	29.7	7.7	7.7	112.7	112.2	2.3	2.4	2.9	2.7	7.67				
F1	Impact Station	2055-2111	15.4	W	0.3	*Surface*	26.6	26.7	29.8	29.7	7.6	7.6	112.4	111.9	2.2	2.3	2.8	2.7	7.62	2.13	-16.1%	2.55	-16.4%
						Middle	26.5	26.4	29.8	29.9	7.7	7.7	113.5	113.0	2.0	2.1	2.4	2.5	7.69				
						Bottom	26.2	26.2	29.9	29.9	7.7	7.6	112.8	112.4	2.1	2.1	2.6	2.3	7.66				
S1	Impact Station	1952-2008	11.6	W	0.3	*Surface*	26.5	26.6	29.6	29.5	7.3	7.3	107.7	107.9	2.3	2.3	2.8	2.7	7.30	2.38	-6.1%	2.85	-6.6%
						Middle	26.5	26.5	29.6	29.7	7.3	7.3	106.7	107.2	2.4	2.4	3.2	2.9	7.28				
						Bottom	26.2	26.3	29.8	29.7	7.4	7.4	108.3	107.8	2.4	2.4	2.6	2.9	7.38				
S2	Impact Station	2200-2216	13.2	W	0.3	*Surface*	26.6	26.5	29.6	29.7	7.3	7.3	108.1	107.8	2.6	2.6	3.2	3.4	7.33	2.60	2.7%	3.13	2.7%
						Middle	26.4	26.3	29.9	29.8	7.4	7.4	108.5	108.9	2.4	2.5	2.9	3.0	7.41				
						Bottom	26.1	26.1	29.9	29.9	7.3	7.3	107.4	106.7	2.8	2.8	3.3	3.0	7.27				
S3	Impact Station	2244-23	10.8	w	0.3	*Surface*	26.5	26.6	29.6	29.7	7.2	7.1	105.6	105.3	2.7	2.6	3.2	2.9	7.14	2.67	5.4%	3.25	6.6%
						Middle	26.4	26.4	29.7	29.8	7.3	7.3	107.8	108.1	2.8	2.7	3.6	3.0	7.33				
						Bottom	26.2	26.1	29.8	29.9	7.3	7.2	106.6	106.1	2.6	2.6	3.4	3.4	7.23				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 07:00 - 11:00 (1st Round)
Sampling Location : Zone B

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C2 (%)	Average (mg/L)	Impact Stations Exceed Control Station C2 (%)
C2	Control Station	0804-0815	31.5	W	0.4	*Surface*	24.8	24.9	29.2	29.2	7.55	7.51	107.5	107.0	3.21	3.17	4.2	4.1	7.53				
						Middle	24.7	24.6	29.3	29.3	7.29	7.32	103.7	104.2	3.37	3.30	3.7	4.3	7.31	3.30	N.A.	4.08	N.A.
						Bottom	24.5	24.5	29.3	29.4	7.17	7.14	101.5	101.1	3.40	3.36	4.1	4.1	7.16				
G3	Gradient Station	0743-0754	17.5	E	0.3	*Surface*	24.8	24.8	29.2	29.2	7.27	7.24	103.5	103.1	2.98	2.94	3.6	3.2	7.26				
						Middle	24.6	24.7	29.3	29.4	7.18	7.14	101.9	101.4	3.30	3.36	3.9	3.7	7.16	3.13	N.A.	3.60	N.A.
						Bottom	24.6	24.6	29.4	29.4	7.06	7.02	100.2	99.7	3.07	3.14	3.7	3.5	7.04				
G4	Gradient Station	0835-0855	20.9	W	0.3	*Surface*	25.0	25.0	29.2	29.3	7.41	7.44	105.8	106.2	2.94	2.90	3.2	3.2	7.43				
						Middle	24.9	24.8	29.4	29.3	7.17	7.14	102.4	101.9	2.84	2.88	3.4	3.5	7.16	2.94	N.A.	3.38	N.A.
						Bottom	24.8	24.7	29.4	29.4	7.02	7.05	100.0	100.4	3.06	3.01	3.4	3.6	7.04				
G7	Gradient Station	0920-0935	17.9	W	0.3	*Surface*	25.0	25.0	29.3	29.2	7.30	7.33	104.2	104.6	2.67	2.72	3.2	3.3	7.32				
						Middle	24.8	24.7	29.4	29.5	7.24	7.27	103.1	103.5	2.95	2.91	3.5	3.2	7.26	2.85	N.A.	3.32	N.A.
						Bottom	24.7	24.7	29.5	29.5	7.03	7.06	100.1	100.5	2.91	2.95	3.2	3.5	7.05				
B1	Impact Station	1045-1100	8.5	W	0.3	*Surface*	25.1	25.0	29.4	29.4	7.33	7.30	105.0	104.6	2.89	2.93	3.5	3.5	7.32				
						Middle	24.8	24.8	29.5	29.4	7.10	7.06	101.2	100.7	2.96	2.91	3.5	3.5	7.08	2.92	-11.7%	3.45	-15.5%
						Bottom	24.7	24.7	29.5	29.6	6.95	6.98	99.0	99.4	2.88	2.93	3.2	3.5	6.97				
B2	Impact Station	1025-1040	12.3	E	0.4	*Surface*	25.0	25.1	29.3	29.4	7.26	7.22	103.7	103.2	3.01	3.07	3.6	3.7	7.24				
						Middle	24.7	24.8	29.5	29.6	7.04	7.08	100.2	100.7	3.12	3.09	3.7	3.4	7.06	3.08	-6.7%	3.60	-11.8%
						Bottom	24.7	24.6	29.6	29.6	6.86	6.82	97.7	97.2	3.06	3.14	3.4	3.8	6.84				
B3	Impact Station	1000-1010	12.4	E	0.3	*Surface*	25.0	25.1	29.4	29.4	7.40	7.38	105.8	105.5	3.24	3.20	3.9	3.5	7.39				
						Middle	24.8	24.4	29.5	29.4	7.12	7.15	101.5	101.9	3.15	3.11	3.8	3.7	7.14	3.23	-2.3%	3.75	-8.2%
						Bottom	24.7	24.7	29.5	29.5	6.91	6.94	98.4	98.8	3.30	3.36	3.6	4.0	6.93				
E1	Impact Station	0940-0955	12.9	E	0.3	*Surface*	25.0	24.9	29.4	29.3	7.48	7.44	107.0	106.5	3.09	3.14	3.5	3.5	7.46				
						Middle	24.8	24.7	29.5	29.5	7.24	7.20	103.2	102.7	3.17	3.12	3.5	3.4	7.22	3.12	-5.6%	3.50	-14.3%
						Bottom	24.8	24.7	29.5	29.5	7.01	7.04	100.0	100.4	3.11	3.07	3.7	3.4	7.03				
E2	Impact Station	0818-0832	9.3	E	0.3	*Surface*	24.9	25.0	29.2	29.2	7.38	7.34	105.2	104.7	2.74	2.77	3.3	3.1	7.36				
						Middle	24.8	24.7	29.3	29.4	7.25	7.28	103.2	103.7	2.97	2.90	3.2	3.2	7.27	2.83	-14.2%	3.22	-21.2%
						Bottom	24.7	24.7	29.4	29.5	6.97	6.94	99.1	98.7	2.78	2.83	3.1	3.4	6.96				
E6	Impact Station	0900-0915	22.6	W	0.4	*Surface*	24.9	25.0	29.3	29.3	7.36	7.32	104.9	104.4	2.88	2.82	3.4	3.7	7.34				
						Middle	24.8	24.8	29.5	29.4	7.22	7.17	103.0	102.6	2.95	2.98	3.6	3.3	7.20	2.98	-9.8%	3.57	-12.7%
						Bottom	24.7	24.6	29.5	29.5	7.11	7.08	101.2	100.8	3.14	3.10	3.7	3.7	7.10				
E8	Impact Station	0730-0740	19.6	W	0.3	*Surface*	24.8	24.8	29.2	29.2	7.27	7.24	103.5	103.1	2.98	2.94	3.6	3.2	7.26				
						Middle	24.6	24.7	29.3	29.4	7.18	7.14	101.9	101.4	3.30	3.36	3.9	3.7	7.16	3.13	-5.1%	3.60	-11.8%
						Bottom	24.6	24.6	29.4	29.4	7.06	7.02	100.2	99.7	3.07	3.14	3.7	3.5	7.04				
F1	Impact Station	0757-0810	14.9	E	0.4	*Surface*	24.8	24.9	29.1	29.2	7.44	7.40	105.8	105.3	3.14	3.09	3.8	3.7	7.42				
						Middle	24.7	24.7	29.3	29.2	7.14	7.12	101.5	101.2	3.19	3.25	3.9	3.9	7.13	3.21	-2.7%	3.87	-5.3%
						Bottom	24.6	24.5	29.4	29.4	7.02	7.06	99.7	100.2	3.34	3.26	4.0	3.9	7.04				
I1	Impact Station	1012-1022	17.3	W	0.2	*Surface*	25.1	25.0	29.4	29.3	7.36	7.32	105.4	104.9	3.02	3.06	3.6	3.7	7.34				
						Middle	24.9	24.9	29.5	29.4	6.97	6.94	99.5	99.1	3.08	3.01	3.7	3.3	6.96	3.01	-8.7%	3.52	-13.9%
						Bottom	24.7	24.6	29.5	29.5	6.92	6.87	90.5	97.9	2.99	2.92	3.6	3.2	6.90				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 11:00 - 15:00 (2nd Round)
Sampling Location : Zone B

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C2 (%)	Average (mg/L)	Impact Stations Exceed Control Station C2 (%)
C2	Control Station	1200-1210	31.6	W	0.4	*Surface*	26.5	26.5	29.5	29.5	7.41	7.39	108.6	108.2	2.74	2.70	3.3	3.2	7.40	2.91	N.A.	3.43	N.A.
						Middle	26.3	26.3	29.7	29.7	7.20	7.16	105.4	104.8	2.89	2.94	3.8	3.5	7.18				
						Bottom	26.0	26.0	29.9	29.9	7.01	7.04	102.3	102.7	3.07	3.11	3.4	3.4	7.03				
G3	Gradient Station	1120-1135	17.4	W	0.1	*Surface*	26.5	26.5	29.6	29.6	7.30	7.28	107.0	106.6	2.61	2.67	3.2	3.4	7.29	2.75	N.A.	3.35	N.A.
						Middle	26.4	26.4	29.6	29.7	7.09	7.12	103.8	104.2	2.71	2.79	3.6	3.0	7.11				
						Bottom	26.1	26.0	29.9	29.9	7.01	7.05	102.3	102.9	2.85	2.86	3.7	3.2	7.03				
G4	Gradient Station	1228-1240	20.8	W	0.2	*Surface*	26.5	26.5	29.4	29.4	7.34	7.36	107.7	107.9	2.60	2.62	3.2	2.9	7.35	2.86	N.A.	3.45	N.A.
						Middle	26.3	26.3	29.3	29.3	7.30	7.27	106.7	106.1	2.84	2.90	3.7	3.5	7.29				
						Bottom	26.0	26.0	29.6	29.6	7.17	7.20	104.4	104.9	3.06	3.12	3.6	3.8	7.19				
G7	Gradient Station	1258-1310	17.2	W	0.3	*Surface*	26.5	26.5	29.4	29.4	7.21	7.19	105.7	105.4	2.34	2.40	2.9	2.9	7.20	2.60	N.A.	3.12	N.A.
						Middle	26.4	26.4	29.5	29.5	7.02	7.00	102.9	102.6	2.51	2.60	3.0	3.3	7.01				
						Bottom	26.2	26.1	29.7	29.7	6.93	6.90	101.3	100.9	2.84	2.91	3.1	3.5	6.92				
B1	Impact Station	1418-1430	8.6	W	0.4	*Surface*	26.4	26.5	29.4	29.4	7.49	7.51	109.5	109.8	2.31	2.37	2.8	2.6	7.50	2.57	-11.6%	3.00	-12.6%
						Middle	26.4	26.4	29.4	29.4	7.43	7.40	108.7	108.1	2.61	2.58	3.4	3.1	7.42				
						Bottom	26.3	26.3	29.5	29.5	7.33	7.30	107.2	106.8	2.81	2.74	3.1	3.0	7.32				
B2	Impact Station	1403-1415	12.0	W	0.4	*Surface*	26.4	26.4	29.4	29.4	7.32	7.30	107.0	106.6	2.59	2.64	3.1	2.9	7.31	2.83	-2.9%	3.47	1.0%
						Middle	26.4	26.4	29.5	29.5	7.05	7.03	103.3	102.9	2.79	2.81	3.6	3.6	7.04				
						Bottom	26.2	26.2	29.7	29.8	6.89	6.92	100.7	101.1	3.11	3.01	3.7	3.9	6.91				
B3	Impact Station	1335-1347	12.2	W	0.3	*Surface*	26.6	26.6	29.4	29.4	7.31	7.29	107.4	107.0	2.61	2.65	3.2	3.2	7.30	2.78	-4.4%	3.30	-3.9%
						Middle	26.5	26.5	29.5	29.5	7.11	7.09	104.4	104.0	2.71	2.80	3.3	3.4	7.10				
						Bottom	26.4	26.4	29.7	29.7	6.94	6.90	101.9	101.2	2.94	2.97	3.5	3.2	6.92				
E1	Impact Station	1315-1330	12.8	W	0.2	*Surface*	26.6	26.5	29.5	29.5	7.11	7.09	104.5	104.1	2.47	2.40	2.7	3.1	7.10	2.60	-10.8%	3.02	-12.1%
						Middle	26.5	26.5	29.4	29.4	6.90	6.94	101.3	101.9	2.51	2.53	3.1	3.0	6.92				
						Bottom	26.3	26.3	29.7	29.6	6.88	6.91	100.6	100.9	2.86	2.80	3.1	3.1	6.90				
E2	Impact Station	1215-1225	9.4	W	0.3	*Surface*	26.4	26.4	29.4	29.4	7.22	7.20	105.7	105.3	2.63	2.59	2.9	2.8	7.21	2.78	-4.5%	3.25	-5.3%
						Middle	26.4	26.4	29.5	29.5	7.17	7.13	105.0	104.5	2.79	2.81	3.1	3.4	7.15				
						Bottom	26.3	26.3	29.7	29.6	6.95	6.96	101.6	101.8	2.94	2.90	3.6	3.7	6.96				
E6	Impact Station	1243-1255	22.0	W	0.3	*Surface*	26.4	26.5	29.5	29.5	7.27	7.25	106.6	106.2	2.74	2.82	3.6	3.4	7.26	2.92	0.5%	3.62	5.3%
						Middle	26.4	26.4	29.6	29.6	7.21	7.20	105.7	105.5	2.91	2.99	3.5	3.7	7.21				
						Bottom	26.0	26.0	29.9	29.9	7.03	7.00	102.6	102.1	3.07	3.00	3.6	3.9	7.02				
E8	Impact Station	1100-1115	19.6	W	0.1	*Surface*	26.4	26.4	29.6	29.6	7.49	7.47	109.8	109.4	2.54	2.50	2.8	3.0	7.48	2.63	-9.5%	3.10	-9.7%
						Middle	26.3	26.3	29.7	29.8	7.30	7.29	107.2	107.0	2.67	2.60	3.1	3.2	7.30				
						Bottom	26.1	26.1	29.9	29.9	7.13	7.10	104.1	103.6	2.71	2.77	3.0	3.5	7.12				
F1	Impact Station	1140-1155	15.0	W	0.2	*Surface*	26.4	26.5	29.5	29.5	7.34	7.30	107.5	106.9	2.43	2.37	3.2	3.1	7.32	2.53	-12.9%	3.08	-10.2%
						Middle	26.3	26.3	29.5	29.6	7.17	7.20	104.8	105.3	2.49	2.57	3.0	2.8	7.19				
						Bottom	26.2	26.2	29.7	29.8	7.13	7.10	104.1	103.6	2.64	2.70	3.2	3.2	7.12				
I1	Impact Station	1350-1400	16.8	W	0.2	*Surface*	26.5	26.5	29.5	29.5	7.21	7.24	105.8	106.6	2.41	2.37	2.9	3.1	7.23	2.61	-10.4%	3.25	-5.3%
						Middle	26.4	26.4	29.4	29.5	7.17	7.15	104.8	104.3	2.49	2.53	3.2	3.3	7.16				
						Bottom	26.0	26.1	29.7	29.7	7.04	7.00	102.6	102.0	2.94	2.90	3.5	3.5	7.02				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 15:00 - 19:00 (3rd Round)
Sampling Location : Zone B

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C2 (%)	Average (mg/L)	Impact Stations Exceed Control Station C2 (%)
C2	Control Station	1600-1615	31.8	W	0.3	*Surface*	26.6	26.5	29.5	29.5	7.53	7.50	110.5	110.2	2.36	2.40	3.1	3.1	7.52	2.56	N.A.	3.20	N.A.
						Middle	26.4	26.4	29.6	29.7	7.24	7.20	106.0	105.6	2.56	2.59	3.3	3.3	7.22				
						Bottom	26.3	26.2	29.8	29.9	7.04	7.09	102.9	103.4	2.73	2.70	3.2	3.2	7.07				
G3	Gradient Station	1520-1535	17.2	W	0.3	*Surface*	26.6	26.5	29.5	29.6	7.34	7.36	107.7	107.9	2.77	2.79	3.1	3.3	7.35	2.86	N.A.	3.30	N.A.
						Middle	26.4	2.6.3	29.7	29.7	7.17	7.19	105.0	105.3	2.85	2.87	3.4	3.2	7.18				
						Bottom	26.2	26.1	29.8	29.7	7.06	7.08	103.2	103.4	2.94	2.96	3.5	3.3	7.07				
G4	Gradient Station	1640-1655	20.6	W	0.4	*Surface*	26.5	26.5	29.5	29.6	7.50	7.52	110.7	110.4	2.68	2.70	3.3	3.3	7.51	3.15	N.A.	3.80	N.A.
						Middle	26.4	26.3	29.7	29.8	7.21	7.25	105.6	105.9	3.12	3.14	4.1	3.8	7.23				
						Bottom	26.2	26.1	29.9	29.9	7.04	7.07	102.9	103.4	3.61	3.63	4.3	4.0	7.06				
G7	Gradient Station	1720-1735	17.6	W	0.3	*Surface*	26.6	26.6	29.4	27.5	7.15	7.17	104.9	105.3	2.49	2.52	3.0	3.3	7.16	2.62	N.A.	3.07	N.A.
						Middle	26.5	26.4	29.6	29.7	7.04	7.00	103.1	102.5	2.60	2.62	2.9	3.2	7.02				
						Bottom	26.2	26.2	29.9	29.8	6.83	6.87	99.9	100.5	2.74	2.77	3.0	3.0	6.85				
B1	Impact Station	1845-1900	8.7	W	0.3	*Surface*	26.4	26.4	29.6	29.5	7.61	7.63	111.7	111.9	2.54	2.56	2.8	3.1	7.62	2.76	7.9%	3.12	-2.6%
						Middle	26.3	26.2	29.7	29.8	7.45	7.43	109.1	108.8	2.73	2.75	3.0	3.2	7.44				
						Bottom	26.1	26.0	29.9	30.0	7.25	7.21	106.0	105.5	2.97	3.00	3.3	3.3	7.23				
B2	Impact Station	1845-1900	12.1	W	0.4	*Surface*	26.5	26.4	29.4	29.6	7.48	7.51	109.8	110.1	2.77	2.75	3.1	3.3	7.50	2.97	16.1%	3.48	8.9%
						Middle	26.3	26.3	29.7	29.8	7.37	7.33	107.9	107.3	2.97	3.00	3.3	3.6	7.35				
						Bottom	26.2	26.1	29.7	30.0	7.04	7.06	102.9	103.2	3.15	3.17	3.5	4.1	7.05				
B3	Impact Station	1800-1810	12.1	W	0.4	*Surface*	26.5	26.4	29.4	29.5	7.47	7.43	109.6	109.2	2.71	2.74	3.3	3.3	7.45	2.93	14.7%	3.60	12.5%
						Middle	26.3	26.3	29.7	29.8	7.61	7.63	111.4	111.7	2.89	2.92	3.5	3.6	7.62				
						Bottom	26.1	26.2	29.9	30.0	6.45	6.49	94.3	94.7	3.15	3.18	4.1	3.8	6.47				
E1	Impact Station	1740-1755	12.7	W	0.4	*Surface*	26.5	26.6	29.5	29.6	7.15	7.17	104.9	105.1	2.54	2.57	3.0	3.3	7.16	2.70	5.7%	3.33	4.2%
						Middle	26.4	26.3	29.7	29.7	6.93	6.91	101.5	101.2	2.67	2.70	3.2	3.5	6.92				
						Bottom	26.2	26.0	29.8	29.9	6.84	6.82	100.0	99.7	2.84	2.90	3.5	3.5	6.83				
E2	Impact Station	1620-1635	9.0	W	0.3	*Surface*	26.6	26.5	29.4	29.5	7.24	7.20	106.3	106.1	2.71	2.73	3.0	3.3	7.22	2.92	14.0%	3.42	6.8%
						Middle	26.4	26.4	29.6	29.7	7.03	7.01	102.9	103.1	2.86	2.88	3.5	3.4	7.02				
						Bottom	26.3	26.2	29.8	29.9	6.85	6.81	100.2	99.6	3.14	3.17	3.5	3.8	6.83				
E6	Impact Station	1700-1715	22.4	W	0.4	*Surface*	26.4	26.4	29.6	29.6	7.35	7.39	107.8	108.0	2.93	2.96	3.6	3.6	7.37	3.15	23.1%	3.88	21.4%
						Middle	26.3	26.2	29.7	29.8	7.14	7.09	104.6	103.8	3.12	3.16	4.1	3.6	7.12				
						Bottom	25.9	26.0	29.9	30.0	6.83	6.85	99.9	100.3	3.35	3.37	4.3	4.1	6.84				
E8	Impact Station	1500-1515	19.4	W	0.7	*Surface*	26.4	26.3	29.6	29.7	7.45	7.43	109.3	109.1	2.67	2.69	3.1	3.5	7.44	2.77	8.5%	3.48	8.9%
						Middle	26.2	26.2	29.8	29.8	7.25	7.27	106.2	106.4	2.74	2.76	3.3	3.6	7.26				
						Bottom	26.1	26.0	29.9	30.0	7.07	7.09	103.4	103.7	2.88	2.90	3.6	3.8	7.08				
F1	Impact Station	1540-1555	15.1	W	0.4	*Surface*	26.5	26.6	29.4	29.5	7.24	7.26	106.3	106.6	2.56	2.58	2.8	3.0	7.25	2.67	4.6%	3.23	1.0%
						Middle	26.4	26.3	29.6	29.7	7.11	7.08	104.2	104.0	2.64	2.66	3.4	3.2	7.10				
						Bottom	26.2	26.1	29.8	29.9	6.93	6.91	101.4	101.2	2.79	2.81	3.3	3.7	6.92				
I1	Impact Station	1812-1822	16.9	W	0.4	*Surface*	26.5	26.5	29.5	29.6	7.35	7.39	107.8	108.1	2.47	2.49	3.0	3.0	7.37	2.65	3.8%	3.23	1.0%
						Middle	26.4	26.3	29.7	29.8	7.07	7.10	103.6	103.9	2.64	2.60	3.2	3.1	7.09				
						Bottom	26.2	26.1	30.0	29.9	6.92	6.95	101.2	101.4	2.85	2.87	3.7	3.4	6.94				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 28-May-16
Sampling Time : 19:00 - 23:00 (4th Round)
Sampling Location : Zone B

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C2 (%)	Average (mg/L)	Impact Stations Exceed Control Station C2 (%)
C2	Control Station	2000-2015	31.2	W	0.2	*Surface*	26.2	26.2	29.0	29.0	7.49	7.47	109.1	108.6	2.40	2.33	2.6	2.6	7.48				
						Middle	26.0	26.0	29.4	29.4	7.22	7.20	105.0	104.6	2.69	2.71	3.2	3.5	7.21	2.66	N.A.	3.10	N.A.
						Bottom	25.7	25.6	29.6	29.6	6.85	6.90	99.3	99.9	2.94	2.90	3.5	3.2	6.88				
G3	Gradient Station	1920-1935	17.0	W	0.2	*Surface*	26.1	26.1	29.1	29.1	7.20	7.17	104.8	104.3	2.01	2.07	2.2	2.2	7.19				
						Middle	26.0	26.0	29.3	29.3	6.98	7.00	101.2	101.7	2.33	2.45	3.0	2.9	6.99	2.39	N.A.	2.78	N.A.
						Bottom	25.8	25.8	29.6	29.6	6.93	6.90	100.5	100.1	2.71	2.79	3.3	3.1	6.92				
G4	Gradient Station	2040-2055	20.2	W	0.3	*Surface*	26.2	26.2	29.2	29.2	7.21	7.19	105.1	104.6	2.13	2.17	2.8	2.4	7.20				
						Middle	26.0	26.0	29.3	29.3	7.02	7.00	102.0	101.6	2.49	2.53	3.3	3.0	7.01	2.44	N.A.	2.98	N.A.
						Bottom	25.8	25.8	29.7	29.7	6.84	6.86	99.4	99.7	2.61	2.69	3.1	3.3	6.85				
G7	Gradient Station	2120-2135	17.0	W	0.2	*Surface*	26.1	26.1	29.2	29.2	7.11	7.09	103.4	103.0	2.37	2.30	2.8	2.7	7.10				
						Middle	26.0	26.0	29.3	29.3	6.89	6.91	100.1	100.5	2.41	2.37	2.8	2.8	6.90	2.49	N.A.	2.87	N.A.
						Bottom	25.7	25.7	29.5	29.5	6.80	6.82	98.6	98.9	2.78	2.70	3.1	3.0	6.81				
B1	Impact Station	2253-2300	8.8	W	0.3	*Surface*	26.1	26.1	29.1	29.1	7.27	7.30	105.8	106.1	2.10	2.08	2.5	2.7	7.29				
						Middle	26.1	26.1	29.0	29.0	7.25	7.23	105.3	104.8	2.31	2.37	2.6	2.5	7.24	2.36	-11.3%	2.73	-11.8%
						Bottom	26.0	26.0	29.4	29.4	7.01	7.03	102.0	102.3	2.61	2.69	3.1	3.0	7.02				
B2	Impact Station	2240-2250	12.2	W	0.2	*Surface*	26.0	26.0	29.2	29.2	7.17	7.20	104.2	104.9	2.21	2.25	2.9	2.7	7.19				
						Middle	25.9	25.9	29.2	29.2	7.15	7.13	103.8	103.5	2.41	2.45	2.9	3.2	7.14	2.50	-6.0%	3.08	-0.5%
						Bottom	25.8	25.8	29.3	29.3	6.98	7.00	101.1	101.5	2.81	2.88	3.7	3.1	6.99				
B3	Impact Station	2200-2215	12.0	W	0.2	*Surface*	26.1	26.1	29.2	29.2	7.17	7.20	104.3	104.6	2.49	2.51	3.2	3.0	7.19				
						Middle	26.0	26.0	29.2	29.2	7.13	7.10	103.6	102.9	2.69	2.61	3.5	3.4	7.12	2.65	-0.4%	3.27	5.4%
						Bottom	25.9	25.9	29.4	29.4	6.97	6.99	101.3	101.6	2.79	2.82	3.4	3.1	6.98				
E1	Impact Station	2140-2155	12.2	W	0.2	*Surface*	26.2	26.2	29.2	29.2	7.05	7.02	102.7	102.3	2.51	2.54	3.0	3.0	7.04				
						Middle	26.0	26.0	29.3	29.3	6.99	6.97	101.6	101.3	2.64	2.60	2.9	3.0	6.98	2.69	0.9%	3.15	1.6%
						Bottom	26.0	25.9	29.5	29.5	6.89	6.91	100.3	100.7	2.89	2.94	3.5	3.5	6.90				
E2	Impact Station	2020-2035	9.0	W	0.3	*Surface*	26.1	26.0	29.1	29.1	7.30	7.28	106.2	105.9	1.99	2.03	2.2	2.2	7.29				
						Middle	26.0	26.0	29.1	29.1	7.10	7.08	103.2	102.8	2.37	2.40	3.1	3.0	7.09	2.37	-10.9%	2.78	-10.2%
						Bottom	25.9	25.9	29.5	29.5	6.90	6.92	100.2	100.6	2.74	2.70	3.3	2.9	6.91				
E6	Impact Station	2100-2115	21.8	W	0.2	*Surface*	26.0	26.0	29.1	29.1	7.24	7.27	105.2	105.8	2.21	2.27	2.9	2.7	7.26				
						Middle	25.8	25.8	29.4	29.4	6.98	6.96	101.1	100.7	2.67	2.71	3.4	3.2	6.97	2.60	-2.3%	3.20	3.2%
						Bottom	25.6	25.6	29.6	29.6	6.79	6.81	98.3	98.8	2.91	2.84	3.5	3.5	6.80				
E8	Impact Station	1900-1915	19.0	W	0.2	*Surface*	26.0	26.0	29.2	29.2	7.31	7.33	106.2	106.5	1.96	2.04	2.6	2.5	7.32				
						Middle	25.9	25.9	29.4	29.4	7.11	7.13	103.3	103.6	2.21	2.13	2.5	2.6	7.12	2.35	-11.8%	2.73	-11.8%
						Bottom	25.7	25.7	29.6	29.6	7.05	7.01	102.1	101.4	2.84	2.90	3.1	3.1	7.03				
F1	Impact Station	1940-1955	14.8	W	0.1	*Surface*	26.2	26.1	29.2	29.2	7.17	7.15	104.5	104.2	2.13	2.07	2.3	2.3	7.16				
						Middle	26.0	26.0	29.3	29.3	7.09	7.08	103.1	102.8	2.44	2.40	2.9	3.1	7.09	2.41	-9.5%	2.80	-9.7%
						Bottom	25.8	25.8	29.5	29.5	6.87	6.90	99.7	99.1	2.68	2.74	3.2	3.0	6.89				
I1	Impact Station	2220-2235	16.2	W	0.3	*Surface*	26.0	26.0	29.0	29.0	7.21	7.19	104.6	104.3	2.31	2.39	2.5	2.6	7.20				
						Middle	25.9	25.9	29.1	29.1	7.05	7.04	102.1	101.9	2.51	2.47	3.0	3.0	7.05	2.49	-6.4%	2.90	-6.5%
						Bottom	25.7	25.7	29.5	29.5	6.85	6.88	99.3	99.9	2.67	2.60	2.9	3.4	6.87				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 29-May-16
Sampling Time : 11:00 - 15:00 (1st Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1100-1117	23.2	W	0.2	*Surface*	27.1	27.0	29.5	29.6	7.2	7.2	106.8	106.4	2.1	2.2	2.3	2.4	7.19	2.44	N.A.	2.73	N.A.
						Middle	26.8	26.9	29.7	29.6	7.1	7.1	104.4	104.2	2.6	2.5	2.9	2.8	7.06				
						Bottom	26.5	26.4	29.8	29.9	7.4	7.3	108.1	107.8	2.7	2.6	3.1	2.9	7.34				
G1	Gradient Station	1206-1223	10.6	W	0.1	*Surface*	27.2	27.1	29.7	29.8	7.3	7.2	108.3	107.8	2.0	2.1	2.2	2.3	7.26	2.35	N.A.	2.52	N.A.
						Middle	26.9	26.8	29.8	29.9	7.1	7.2	105.8	106.2	2.4	2.4	2.5	2.5	7.16				
						Bottom	26.5	26.5	30.0	30.1	7.2	7.3	106.5	106.9	2.6	2.6	2.8	2.8	7.25				
G2	Gradient Station	1420-1437	14.4	W	0.2	*Surface*	27.2	27.3	29.7	29.6	7.1	7.1	105.5	105.0	2.6	2.6	2.7	2.7	7.07	2.52	N.A.	2.70	N.A.
						Middle	26.9	27.0	29.7	29.8	7.3	7.3	108.3	107.9	2.5	2.5	2.7	2.5	7.30				
						Bottom	26.6	26.5	29.9	30.0	7.3	7.3	108.3	107.8	2.5	2.5	2.8	2.8	7.32				
G3	Gradient Station	1312-1329	16.2	W	0.1	*Surface*	27.0	27.0	29.6	29.7	7.5	7.4	110.5	110.1	2.0	2.1	2.1	2.2	7.44	2.2	N.A.	2.30	N.A.
						Middle	26.9	26.8	29.9	30.0	7.6	7.5	112.0	111.4	2.1	2.1	2.2	2.2	7.54				
						Bottom	26.6	26.5	30.1	30.0	7.7	7.6	113.0	112.2	2.4	2.4	2.6	2.5	7.64				
E7	Impact Station	1122-1139	22.2	W	0.2	*Surface*	27.1	27.2	29.7	29.6	7.3	7.3	108.3	107.8	2.2	2.3	2.4	2.6	7.27	2.50	2.3%	2.78	1.8%
						Middle	26.9	26.9	29.8	29.8	7.2	7.2	106.2	106.6	2.7	2.6	3.1	2.9	7.19				
						Bottom	26.6	26.5	29.9	30.0	7.4	7.5	109.6	110.0	2.6	2.6	2.8	2.9	7.45				
E8	Impact Station	1334-1351	16.6	W	0.1	*Surface*	27.1	27.0	29.7	29.8	7.5	7.5	111.1	110.7	2.0	2.1	2.1	2.1	7.47	2.30	-5.9%	2.42	-11.6%
						Middle	26.8	26.9	29.8	29.9	7.5	7.4	110.3	109.8	2.3	2.4	2.4	2.6	7.45				
						Bottom	26.5	26.5	30.0	29.9	7.5	7.5	111.1	110.8	2.5	2.5	2.6	2.7	7.53				
E9	Impact Station	1228-1245	15.6	W	0.2	*Surface*	27.0	26.9	29.7	29.8	7.5	7.5	111.3	111.6	2.2	2.1	2.3	2.2	7.53	2.13	-13.0%	2.25	-17.7%
						Middle	26.7	26.6	29.8	29.7	7.5	7.4	109.9	109.5	2.0	2.1	2.2	2.2	7.44				
						Bottom	26.4	26.3	29.8	29.9	7.6	7.6	111.6	111.1	2.2	2.2	2.3	2.3	7.58				
F1	Impact Station	1250-1307	14.8	W	0.2	*Surface*	26.9	27.0	29.7	29.6	7.5	7.5	111.5	111.2	2.0	2.1	2.1	2.2	7.53	2.01	-17.9%	2.08	-23.8%
						Middle	26.8	26.7	29.7	29.8	7.6	7.6	112.6	112.0	1.9	2.0	2.0	2.1	7.60				
						Bottom	26.5	26.4	29.9	29.8	7.6	7.6	111.6	111.1	2.0	2.0	2.0	2.1	7.57				
S1	Impact Station	1144-1201	11.4	W	0.2	*Surface*	27.2	27.2	29.8	29.7	7.2	7.2	107.4	107.2	2.2	2.2	2.5	2.4	7.21	2.29	-6.3%	2.52	-7.9%
						Middle	26.9	27.0	29.9	29.9	7.2	7.2	106.2	106.6	2.4	2.3	2.6	2.5	7.19				
						Bottom	26.7	26.6	30.0	29.9	7.3	7.3	108.0	107.5	2.3	2.3	2.5	2.6	7.29				
S2	Impact Station	1358-1415	12.8	W	0.2	*Surface*	27.2	27.1	29.8	29.7	7.3	7.2	107.9	107.5	2.4	2.4	2.5	2.5	7.24	2.42	-0.9%	2.53	-7.3%
						Middle	26.9	26.8	29.8	29.9	7.3	7.3	108.2	108.6	2.2	2.3	2.4	2.4	7.32				
						Bottom	26.4	26.5	29.9	29.9	7.2	7.2	105.7	105.2	2.6	2.6	2.7	2.7	7.18				
S3	Impact Station	1442-1500	10.6	W	0.3	*Surface*	27.2	27.2	29.7	29.8	7.1	7.0	105.2	104.7	2.5	2.5	2.7	2.6	7.05	2.49	1.9%	2.63	-3.7%
						Middle	27.0	26.9	29.8	29.9	7.2	7.3	107.1	107.4	2.6	2.5	2.7	2.7	7.24				
						Bottom	26.7	26.6	30.0	30.1	7.2	7.1	105.8	105.3	2.4	2.4	2.5	2.6	7.14				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Sampling Date : 29-May-16
Sampling Time : 15:00 - 19:00 (2nd Round)
Sampling Location : Zone A

Location	Nature	Sampling Time	Water Depth (m)	Current direction	Current speed (ms^{-1})	Monitoring Depth	Temp (°C)		Salinity (ppt)		DO (mg/L)		DO Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)		DO	Turbidity (Depth-average)		SS (Depth-average)	
							1	2	1	2	1	2	1	2	1	2	1	2	Average (mg/L)	Average (NTU)	Impact Stations Exceed Control Station C1 (%)	Average (mg/L)	Impact Stations Exceed Control Station C1 (%)
C1	Control Station	1508-1525	23.3	W	0.3	*Surface*	27.1	27.1	29.6	29.6	7.3	7.3	108.1	108.7	2.3	2.3	2.6	2.5	7.30	2.43	N.A.	2.72	N.A.
						Middle	26.9	27.0	29.8	29.7	7.1	7.1	105.8	105.4	2.4	2.3	2.7	2.6	7.12				
						Bottom	26.6	26.7	29.9	30.0	7.2	7.2	105.6	106.1	2.6	2.6	3.0	2.9	7.18				
G1	Gradient Station	1616-1632	10.8	W	0.1	*Surface*	27.2	27.2	29.8	29.7	7.4	7.4	109.6	109.9	2.2	2.2	2.5	2.4	7.39	2.45	N.A.	2.63	N.A.
						Middle	27.1	27.1	29.7	29.8	7.3	7.3	108.7	108.4	2.5	2.6	2.6	2.7	7.31				
						Bottom	27.1	27.0	29.9	29.9	7.3	7.3	106.9	107.3	2.7	2.6	2.8	2.8	7.26				
G2	Gradient Station	1830-1843	14.4	E	0.2	*Surface*	27.3	27.3	29.7	29.7	7.2	7.2	106.6	107.0	2.8	2.7	3.0	2.8	7.20	2.73	N.A.	2.88	N.A.
						Middle	27.1	27.1	29.8	29.8	7.3	7.3	108.2	108.8	2.6	2.7	2.8	2.8	7.31				
						Bottom	26.8	26.7	29.9	29.9	7.2	7.2	106.9	106.6	2.7	2.8	3.0	2.9	7.23				
G3	Gradient Station	1720-1737	16.0	E	0.3	*Surface*	27.1	27.2	29.7	29.7	7.3	7.4	108.9	109.4	2.3	2.4	2.5	2.5	7.36	2.34	N.A.	2.40	N.A.
						Middle	27.1	27.0	29.8	29.9	7.4	7.4	109.8	110.1	2.2	2.3	2.3	2.3	7.41				
						Bottom	26.8	26.7	29.9	30.0	7.5	7.5	110.9	110.4	2.4	2.5	2.4	2.4	7.50				
E7	Impact Station	1530-1546	21.4	W	0.2	*Surface*	27.1	27.0	29.6	29.5	7.2	7.2	107.5	107.0	2.4	2.5	2.7	2.8	7.23	2.62	7.6%	2.90	6.7%
						Middle	26.9	26.9	29.7	29.7	7.1	7.1	105.1	105.6	2.8	2.9	3.2	3.2	7.10				
						Bottom	26.7	26.7	29.8	29.9	7.2	7.3	106.6	107.2	2.5	2.6	2.7	2.8	7.25				
E8	Impact Station	1743-1800	16.4	E	0.2	*Surface*	27.1	27.1	29.6	29.6	7.5	7.5	111.8	111.3	2.2	2.2	2.3	2.3	7.52	2.28	-6.3%	2.42	-11.0%
						Middle	27.0	27.0	29.7	29.8	7.6	7.6	112.4	112.1	2.1	2.2	2.2	2.4	7.56				
						Bottom	26.9	26.8	29.9	30.1	7.6	7.6	112.7	112.3	2.5	2.5	2.7	2.6	7.62				
E9	Impact Station	1637-1653	15.8	W	0.3	*Surface*	27.2	27.3	29.8	29.8	7.4	7.4	110.4	110.0	2.2	2.2	2.3	2.3	7.43	2.26	-7.2%	2.37	-12.9%
						Middle	27.0	26.9	29.9	29.9	7.4	7.3	109.4	108.9	2.1	2.2	2.3	2.3	7.36				
						Bottom	26.6	26.7	29.9	30.0	7.5	7.5	110.3	110.7	2.4	2.4	2.5	2.5	7.49				
F1	Impact Station	1658-1715	14.9	E	0.3	*Surface*	27.2	27.2	29.8	29.8	7.4	7.4	109.7	110.1	2.3	2.3	2.3	2.5	7.41	2.23	-8.2%	2.35	-13.5%
						Middle	26.9	27.0	29.9	29.8	7.5	7.5	110.9	110.6	2.1	2.1	2.2	2.3	7.46				
						Bottom	26.6	26.6	29.9	29.9	7.5	7.5	111.2	110.7	2.2	2.3	2.4	2.4	7.52				
S1	Impact Station	1552-1609	11.6	W	0.1	*Surface*	27.2	27.1	29.7	29.8	7.4	7.3	109.4	109.0	2.2	2.3	2.4	2.5	7.36	2.35	-3.4%	2.57	-5.5%
						Middle	27.1	27.0	29.8	29.8	7.3	7.2	107.9	107.5	2.4	2.4	2.6	2.7	7.26				
						Bottom	26.8	26.8	29.9	29.9	7.3	7.3	107.8	107.5	2.4	2.3	2.6	2.6	7.30				
S2	Impact Station	1808-1824	12.6	E	0.2	*Surface*	27.3	27.2	29.6	29.7	7.3	7.3	108.9	108.4	2.6	2.7	2.7	2.9	7.32	2.65	9.1%	2.80	3.1%
						Middle	27.2	27.1	29.8	29.7	7.4	7.4	109.4	109.9	2.5	2.4	2.6	2.6	7.39				
						Bottom	26.7	26.6	29.9	30.0	7.3	7.3	107.9	107.5	2.8	2.9	2.9	3.1	7.30				
S3	Impact Station	1847-1900	10.4	E	0.2	*Surface*	27.3	27.2	29.7	29.8	7.1	7.2	106.0	106.4	2.7	2.8	2.8	2.9	7.16	2.80	15.2%	2.95	8.6%
						Middle	27.1	27.2	29.8	29.8	7.2	7.2	107.0	107.5	2.8	2.8	3.0	2.9	7.23				
						Bottom	27.0	26.9	30.1	30.0	7.1	7.1	105.0	104.6	2.8	2.9	3.0	3.1	7.10				

Note:
: Raw Data
: Indicates Exceedance of Action Level at Impact Stations
: Indicates Exceedance of Limit Level at Impact Stations
: Calculated Data

Annex E

Details of Exceedances Occurred during the Reporting Week

Table E.1 Exceedances of Action and Limit Levels on 24 May 2016

Exceedance Log No.	**0324228_24 May 2016_Depth-averaged Turbidity_E5_11:00-15:00_Zone C_Action Level** **0324228_24 May 2016_Surface DO_E4_11:00-15:00_Zone C_Limit Level** **0324228_24 May 2016_Middle DO_E4_11:00-15:00_Zone C_Limit Level** **0324228_24 May 2016_Bottom DO_E4_11:00-15:00_Zone C_Limit Level** **0324228_24 May 2016_Surface DO_E5_11:00-15:00_Zone C_Limit Level** **0324228_24 May 2016_Middle DO_E5_11:00-15:00_Zone C_Limit Level** **0324228_24 May 2016_Bottom DO_E5_11:00-15:00_Zone C_Limit Level** **0324228_24 May 2016_Depth-averaged Turbidity_E5_15:00-19:00_Zone C_Action Level** **0324228_24 May 2016_Surface DO_E4_15:00-19:00_Zone C_Limit Level** **0324228_24 May 2016_Middle DO_E4_15:00-19:00_Zone C_Limit Level** **0324228_24 May 2016_Bottom DO_E4_15:00-19:00_Zone C_Limit Level** **0324228_24 May 2016_Surface DO_E5_15:00-19:00_Zone C_Limit Level** **0324228_24 May 2016_Middle DO_E5_15:00-19:00_Zone C_Limit Level** **0324228_24 May 2016_Bottom DO_E5_15:00-19:00_Zone C_Limit Level**
Monitoring Station(s) with Exceedance(s)	**Zone C**: E4 and E5
Parameter(s) with Exceedance(s)	**Zone C:** Action Levels for Depth-averaged Turbidity (NTU) Limit Levels for Surface, Middle and Bottom Dissolved Oxygen (DO) (mg/L)
Action Levels	Refer to *Table 3.3*
Limit Levels	Refer to *Table 3.3*
Measured Levels	Please refer to *Annex D*.
Exceedances	Refer to Exceedance Log No. for stations, water quality monitoring zone, exceedance of Action or Limit Levels.
Possible Reason for Action or Limit Level Non-compliance	Two rounds of ad hoc monitoring were conducted in Zone C, from 11:00-15:00 and 15:00-19:00 on 24 May 2016. No Project works, including route clearance works, were conducted within water quality monitoring zones (Zone C) on 24 May – the most recent Project works conducted in Zone C up to that point were at the very start of 20 May in Zone C. DO and turbidity levels at control and gradient stations were also similar to impact monitoring stations. Therefore, these exceedances of Action and Limit Levels must be caused by natural background fluctuation. The observation of a number of exceedances of Action and Limit Levels on 24 May 2016 strengthens the conclusion that the baseline data show very good water quality for Hong Kong waters such that natural water quality fluctuation is more likely to cause exceedances of Action and Limit Levels, as well as the NOEs issued for 20 May 2016 being due to natural water quality fluctuation.

Table E.2 Exceedances of Action and Limit Levels on 27 May 2016

Exceedance Log No.	**0324228_27 May 2016_Depth-averaged SS_E7_19:00-23:00_Zone A_Action Level** **0324228_27 May 2016_Depth-averaged SS_E8_19:00-23:00_Zone A_Action Level** **0324228_27 May 2016_Depth-averaged SS_S1_19:00-23:00_Zone A_Action Level** **0324228_27 May 2016_Depth-averaged SS_S2_19:00-23:00_Zone A_Action Level** **0324228_27 May 2016_Bottom DO_E8_19:00-23:00_Zone A_Limit Level** **0324228_27 May 2016_Bottom DO_S1_19:00-23:00_Zone A_Action Level** **0324228_27 May 2016_Bottom DO_S2_19:00-23:00_Zone A_Limit Level** **0324228_27 May 2016_Bottom DO_S3_19:00-23:00_Zone A_Action Level**
Monitoring Station(s) with Exceedance(s)	Zone A: E7, E8,E9, F1, S1, S2 and S3;
Parameter(s) with Exceedance(s)	Action Level for Bottom Dissolved Oxygen (DO) (mg/L) and Depth-averaged Suspended Solid (SS) (mg/L). Limit Level for Bottom DO (mg/L)
Action Levels	Refer to *Table 3.3 and Table 3.4*
Limit Levels	Refer to *Table 3.3 and Table 3.4*
Measured Levels	Please refer to data sheets in *Annex D*.
Exceedances	Refer to Exceedance Log No. for stations, water quality monitoring zone, monitoring round, exceedance of Action or Limit Levels.
Possible Reason for Action or Limit Level Non-compliance	Due to Typhoon Signal No. 3 in the morning (05:40 to 13:40 hours), cable laying works and monitoring works were suspended until Typhoon Signal No. 3 was cancelled. Only two rounds of impact monitoring were conducted in Zone A, from 15:00-19:00 and 19:00-23:00 on 27 May 2016. Only cable laying works were conducted within water quality monitoring zone (Zone A) on 27 May 2016, after 13:40 hours. It is also important to note that there has been exceedances of DO at all depth levels, depth-averaged turbidity and depth-averaged SS before commencement of cable laying works, as recorded through the monitoring required by this project's EM&A Manual. The previous exceedances were considered as natural fluctuations of regional water quality rather than impacts from the works related to this Project. DO, depth-averaged turbidity and depth-averaged SS levels at control and gradient stations on the same day were also similar to impact monitoring stations. Therefore, these exceedances of Action Levels must be caused by natural background fluctuation. The observation of a number of exceedances of Action and Limit Levels on 27 May 2016 strengthens the conclusion that the baseline data show very good water quality for Hong Kong waters such that natural water quality fluctuation is more likely to cause exceedances of Action and Limit Levels, as well as the NOEs issued for 21 May 2016 being due to natural water quality fluctuation.

Table E.3 Exceedances of Action and Limit Levels on 28 May 2016

Exceedance Log No.	**0324228_28 May 2016_Depth-averaged SS_S2_07:00-11:00_Zone A_Action Level** **0324228_28 May 2016_Depth-averaged SS_E7_11:00-15:00_Zone A_Action Level** **0324228_28 May 2016_Depth-averaged SS_S3_11:00-15:00_Zone A_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_B1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_B2_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_B3_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_E1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_E2_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_E6_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_E8_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_F1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_I1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_B1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_B2_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_B3_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_E1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_E6_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_E8_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_F1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_I1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_B1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_B1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_B1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_B2_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_B2_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_B2_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_B3_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_B3_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_B3_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_E1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Middle DO_E1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_E2_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E2_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E2_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_E6_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E6_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E6_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_E8_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E8_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E8_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_F1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Middle DO_F1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_F1_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_I1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_I1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_I1_07:00-11:00_Zone B_Limit Level** **0324228_28 May 2016_Depth-averaged Turbidity_B2_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_B3_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_E2_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged Turbidity_E6_07:00-11:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_B2_11:00-15:00_Zone B_Action Level** **0324228_28 May 2016_Depth-averaged SS_E6_11:00-15:00_Zone B_Action Level** **0324228_28 May 2016_Middle DO_B1_11:00-15:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_B2_11:00-15:00_Zone B_Limit Level**

	0324228_28 May 2016_Middle DO_B2_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_B2_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_B3_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_B3_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_B3_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_E1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E2_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_E2_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E2_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E6_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_E6_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E6_11:00-15:00_Zone B_Action Level
	0324228_28 May 2016_Surface DO_E8_11:00-15:00_Zone B_Action Level
	0324228_28 May 2016_Middle DO_E8_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E8_11:00-15:00_Zone B_Action Level
	0324228_28 May 2016_Surface DO_F1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_F1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_F1_11:00-15:00_Zone B_Action Level
	0324228_28 May 2016_Surface DO_I1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_I1_11:00-15:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_I1_11:00-15:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_B1_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_B2_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_B3_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_E1_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_E2_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_E6_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_E8_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged Turbidity_F1_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged SS_B2_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged SS_B3_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged SS_E1_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged SS_E2_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Depth-averaged SS_E6_15:00-19:00_Zone B_Action Level
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	0324228_28 May 2016_Surface DO_B3_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Bottom DO_B3_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E1_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_E1_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E1_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E2_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_E2_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E2_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E6_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_E6_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E6_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Surface DO_E8_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Middle DO_E8_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Bottom DO_E8_15:00-19:00_Zone B_Action Level
	0324228_28 May 2016_Surface DO_F1_15:00-19:00_Zone B_Limit Level
	0324228_28 May 2016_Middle DO_F1_15:00-19:00_Zone B_Limit Level

	0324228_28 May 2016_Bottom DO_F1_15:00-19:00_Zone B_Limit Level **0324228_28 May 2016_Surface DO_I1_15:00-19:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_I1_15:00-19:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_I1_15:00-19:00_Zone B_Limit Level** **0324228_28 May 2016_Depth-averaged Turbidity_E1_19:00-23:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_B1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_B1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_B1_19:00-23:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_B2_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_B2_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_B2_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_B3_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_B3_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_B3_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_E1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_E2_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E2_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E2_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_E6_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E6_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E6_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_E8_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_E8_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_E8_19:00-23:00_Zone B_Action Level** **0324228_28 May 2016_Surface DO_F1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_F1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_F1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Surface DO_I1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Middle DO_I1_19:00-23:00_Zone B_Limit Level** **0324228_28 May 2016_Bottom DO_I1_19:00-23:00_Zone B_Limit Level**
Monitoring Station(s) with Exceedance(s)	**Zone A**: S2, E7 and S3. **Zone B**: B1, B2, B3, E1, E2, E6, E8, F1 and I1.
Parameter(s) with Exceedance(s)	**Zone A:** Action Levels for Depth-averaged Suspended Solid (SS) (mg/L). **Zone B:** Action Levels for Depth-averaged Turbidity (NTU), Depth-averaged SS (mg/L) and DO at all depths (mg/L) Limit Levels for Depth-averaged DO at all depths (mg/L)
Action Levels	Refer to *Table 3.4*
Limit Levels	Refer to *Table 3.4*
Measured Levels	Please refer to data sheets in *Annex D*.
Exceedances	Refer to Exceedance Log No. for stations, water quality monitoring zone, monitoring round, exceedance of Action or Limit Levels.
Possible Reason for Action or Limit Level Non-compliance	Four rounds of monitoring were conducted in both Zones A and B, from 07:00:00-11:00, 11:00-15:00, 15:00-19:00 and 19:00-23:00 on 28 May 2016. Only cable laying works were conducted within water quality monitoring zones (Zones A and B) on 28 May. Although exceedances of Limit Levels for DO at surface, middle and bottom levels were observed in Zone B, it is noted that only the value linked to the baseline data (*1%-ile of baseline for surface and middle layer (7.41 mg/L); 1%-ile of baseline for bottom layer (7.01 mg/L)*), were exceeded, whereas the absolute value of 5 mg/L for Surface and Middle DO and 2mg/L for Bottom DO (derived from the *Water Quality Objectives (WQO)* under the *Water Pollution Control Ordinance (WPCO)*) were not

	exceeded. It is also important to note that there has been exceedances of DO at all depth levels, depth-averaged turbidity and depth-averaged SS before commencement of cable laying works, as recorded through the monitoring required by this project's EM&A Manual. The previous exceedances were considered as natural fluctuations of regional water quality rather than impacts from the works related to this Project. DO, depth-averaged turbidity and depth-averaged SS levels at control and gradient stations on the same day were also similar to impact monitoring stations. Therefore, these exceedances of Action and Limit Levels must be caused by natural background fluctuation. The observation of a number of exceedances of Action and Limit Levels on 28 May 2016 strengthens the conclusion that the baseline data show very good water quality for Hong Kong waters such that natural water quality fluctuation is more likely to cause exceedances of Action and Limit Levels, as well as the NOEs issued for 21 and 27 May 2016 being due to natural water quality fluctuation.

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