Asia Pacific Gateway (APG) – Tseung Kwan O

First Weekly Impact Water Quality Monitoring Report

26 May 2016

Submitted by
Environmental Resources Management
16/F Berkshire House
25 Westlands Road
Quarry Bay, Hong Kong
Telephone 2271 3000
Facsimile 2723 5660
www.erm.com

Asia Pacific Gateway (APG) – Tseung Kwan O

First Weekly Impact Water Quality Monitoring Report

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

Environmental Resources Management

16/F Berkshire House
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
http://www.erm.com

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 16 to 22 May 2016.	Date: 26 May 2016 Approved by:  *Terence Fong* *Partner*

Revision	Description	By	Checked	Approved	Date
v0	First Weekly Impact Water Quality Monitoring Report_v0	YL	FZ	TF	26/5/16

Distribution

☐ Internal

☒ Public

☐ Confidential

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

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified:	First Weekly Impact Water Quality Monitoring Report
Date of Report:	26 May 2016
Date prepared by ET:	26 May 2016
Date received by IEC:	26 May 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: 26 May 2016

中国移动通信
CHINA MOBILE

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: 26 May 2016

CONTENTS

LIST OF TABLES

ANNEXES

This is the *First Weekly Impact Water Quality Monitoring Report* presenting the impact water quality monitoring conducted for the monitoring week from 16 to 22 May 2016 in accordance with the *Environmental Monitoring and Audit Manual (EM&A Manual)*.

Summary of Construction Works undertaken during the Reporting Week

During the reporting week, route clearance works commenced in Zone A on 18 May 2016 and continued along the proposed cable alignment route. The working barge exited Zone C on 20 May 2016, but continued the route clearance works in Hong Kong waters although outside water quality monitoring Zones A - C. The works barge entered China waters at 17:05 on 21 May 2016.

Water Quality

Route clearance works were initially scheduled to commence on 17 May 2016; however a last minute delay in issuance of final permits (i.e. Marine Department Notice) allowing works to proceed postponed commencement to 18 May 2016. Therefore Project works did not take place on 17 May 2016 although water quality monitoring was conducted in Zone A.

Impact monitoring was carried out within Zones A and B on 18 May 2016, Zones B on 19 May 2016, and Zones B and C on 20 May 2016. Route clearance works moved outside water quality monitoring zones (i.e. Zones A - C) at 14:45 on 20 May 2016, and continued within Hong Kong waters. 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 18, 19 and 20 May 2016 accordingly. Generally, it is considered that the exceedances are not caused by the Project's route clearance works but a reflection of natural background fluctuation of marine water quality.

Repeat water quality measurements were obtained in Zones A and B on 21 May 2016, according to the *Event Action Plan for Water Quality* in the *EM&A Manual* following issued NOEs when Project route clearance works were conducted in Zones A, B and C.

The water quality (e.g. DO, turbidity and SS) in Zones A to C were similar among the stations in impact monitoring period from 16 to 22 May 2016. Water quality in Zones A and B were also recorded similar throughout the monitoring period. Neither sudden drop in dissolved oxygen concentrations nor sharp increase in turbidity levels and suspended solids levels were observed on each monitoring day.

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

Environmental Non-conformance

Exceedances of depth-averaged turbidity and SS Action Levels and DO (all depths) Action and Limit Levels were recorded during the monitoring period from 16 to 22 May 2016; however the exceedances were not considered to be caused by the route clearance works but a reflection of the natural background fluctuation on each impact monitoring day (i.e. 17, 18, 19, 20, and 21 May 2016).

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 submarine cable installation works will commence on 26 May 2016. A dive team will work to link the cable to land, install articulated pipe and conduct shallow burial on 26 May 2016. Meanwhile, a cable vessel will commence the cable installation 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 *First 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 16 to 22 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

File: T:\GIS\CONTRACT\0324228\Mxd\0324228_Proposed_APG_Submarine_Cable_System_Bi.mxd
Date: 26/5/2016

中国移动通信 CHINA MOBILE

Environmental Resources Management

ERM

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.

This report, therefore, presents the impact monitoring results from monitoring stations within Zone A, B and C during the monitoring week from 16 to 22 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 ***Error! Reference source not found.***.

Table 2.1 Summary of Marine Works Undertaken During the Reporting Week

Date	Works Area	Activity
16 May 2016	n/a	No activity.
17 May 2016	n/a	Works were supposed to start but was delayed to 18 May 2016. Therefore no works were undertaken.
18 May 2016	Zone A and B	Route Clearance works were commenced in Zone A, and finished in Zone B.
19 May 2016	Zone B	Route Clearance works were commenced in Zone B and finished in Zone B.
20 May 2016	Zones B and C, and outside water quality monitoring zones	Route Clearance works were commenced in Zone B then entered Zone C. Route clearance works moved outside water quality monitoring zones (i.e. Zones A - C) at 14:45 on 20 May 2016 and continued within Hong Kong waters until the end of the day.
21 May 2016	Outside water quality monitoring Zones A-C.	The route clearance works commenced outside water quality monitoring zones (i.e. outside Zones A - C) but within Hong Kong waters and continued. At 17:05, the working barge exited Hong Kong waters and entered China waters. The route clearance works then continued within China waters until end of the working day on 21 May 2016.

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

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);

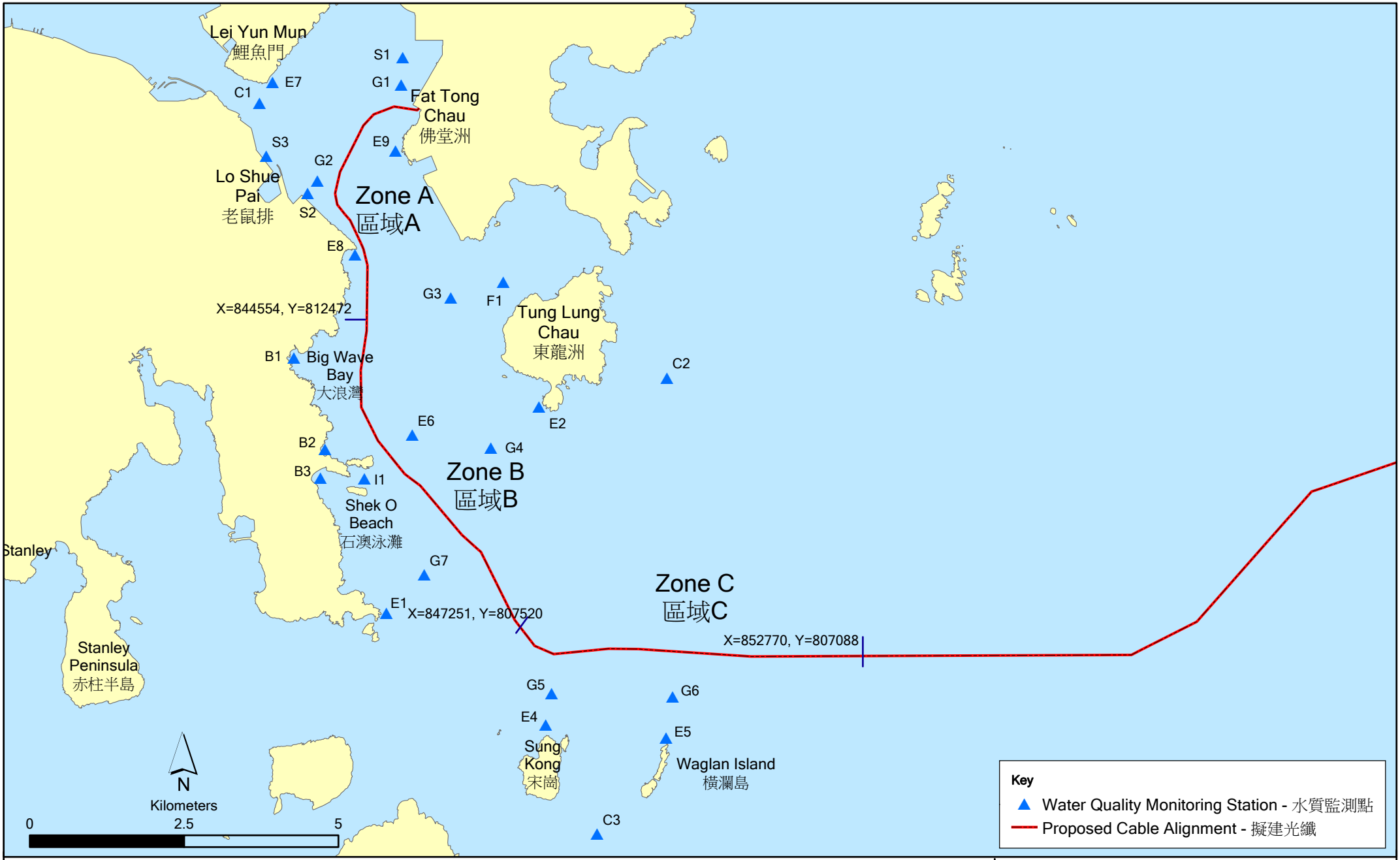


Figure 3.1
圖 3.1

Water Quality Monitoring Station
水 質 監 測 點

File: T:\GIS\CONTRACT\0324228\Mxd\0324228_Proposed_WQMS_All_Zones.mxd
Date: 26-May-2016

中国移动通信 CHINA MOBILE

Environmental Resources Management

ERM

- 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*.

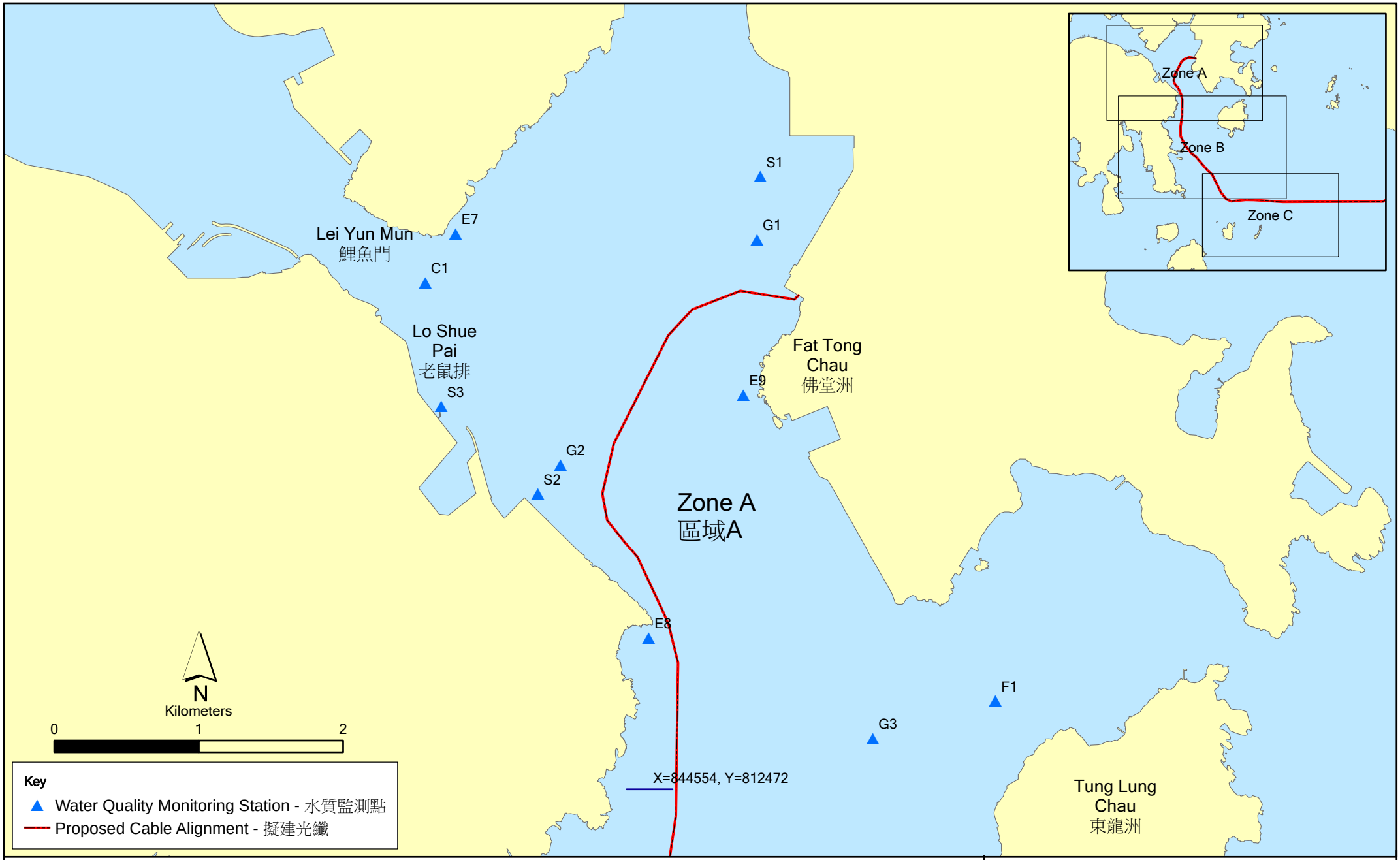


Figure 3.2
圖 3.2

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

File: T:\GIS\CONTRACT\0324228\Mxd\0324228_Proposed_WQMS_ZoneA.mxd
Date: 26-May-2016

中国移动通信 CHINA MOBILE

Environmental Resources Management

ERM

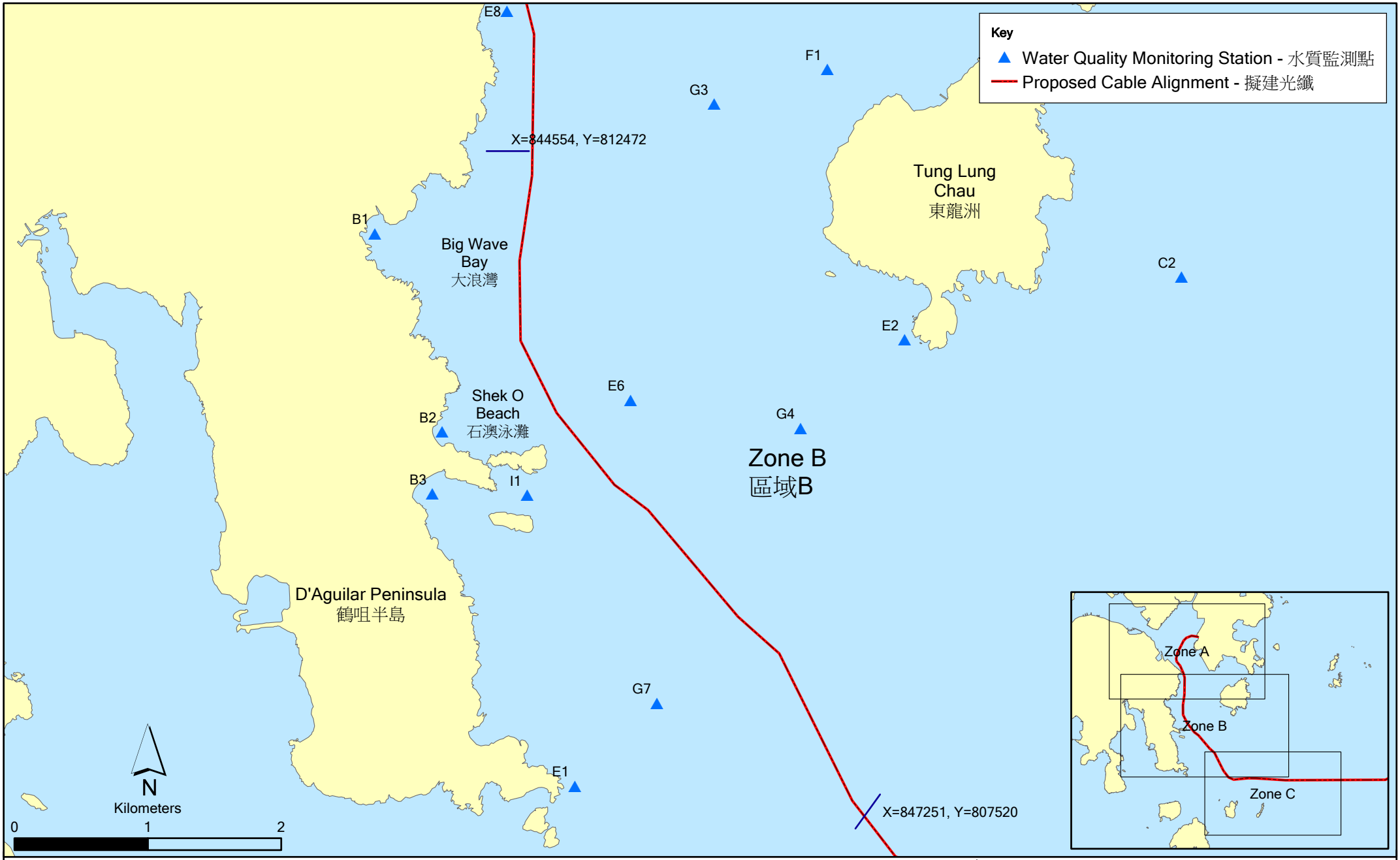


Figure 3.3
圖 3.3

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

File: T:\GIS\CONTRACT\0324228\Mxd\0324228_Proposed_WQMS_ZoneB.mxd
Date: 26-May-2016

中国移动通信 CHINA MOBILE

Environmental Resources Management

ERM

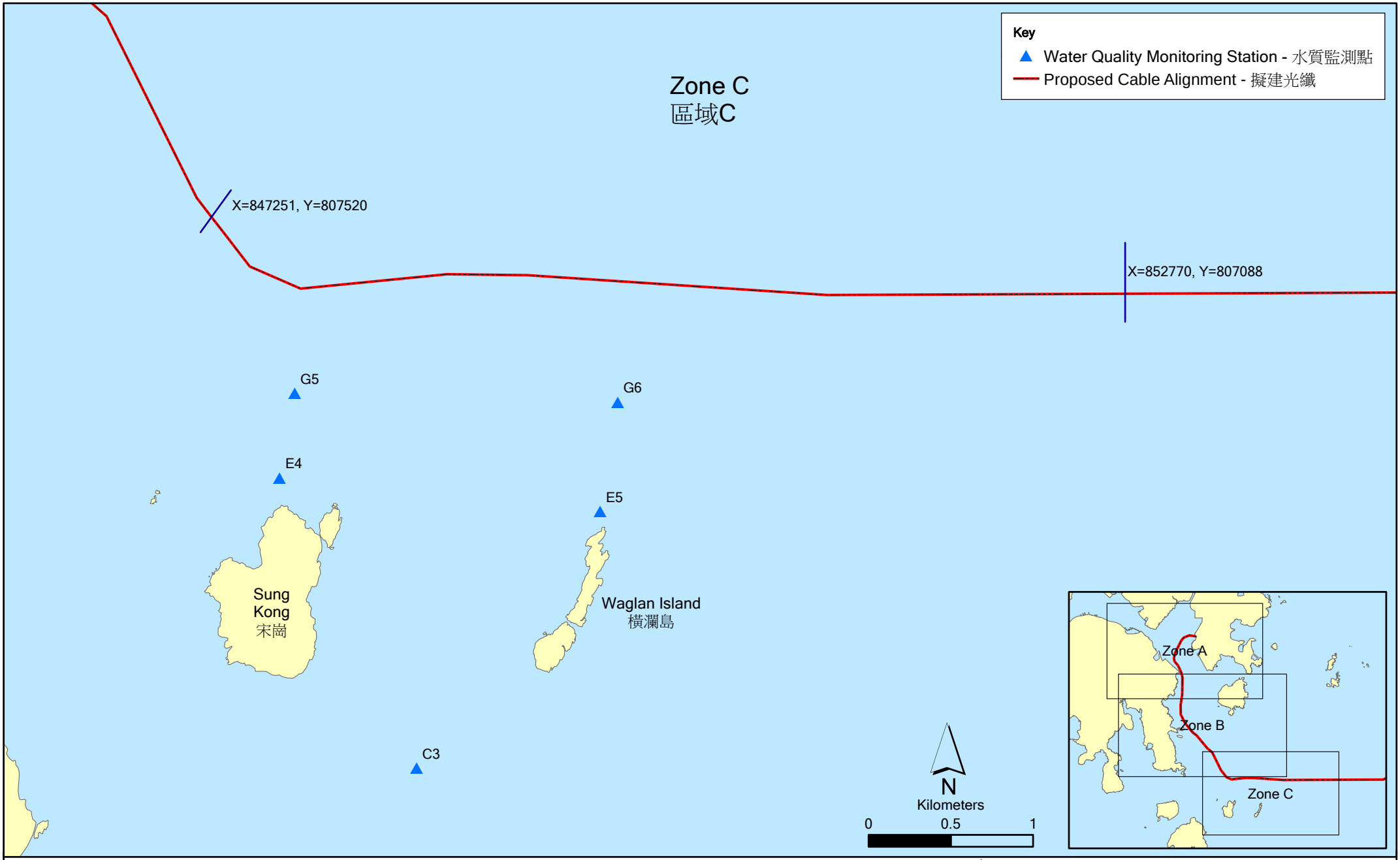


Figure 3.4
圖 3.4

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

File: T:\GIS\CONTRACT\0324228\Mxd\0324228_Proposed_WQMS_ZoneC.mxd
Date: 26-May-2016

中国移动通信 CHINA MOBILE

Environmental Resources Management

ERM

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 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-

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

depth station was omitted. For stations where the water is less than 3 m deep, only the mid-depth sample was taken.

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 5%-ile of baseline data for surface and middle layer (7.00 mg/L)	Surface and Middle 5 mg/L [d] [e] or 1%-ile of baseline for surface and middle layer (6.71 mg/L)
	Bottom 5%-ile of baseline data for bottom layers (6.99 mg/L)	Bottom 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.

Four (4) rounds of water quality monitoring in Zone A was conducted on 17 May 2016. Route clearance works were initially scheduled to commence on 17 May 2016; however a last minute delay in issuance of final permits (i.e. Marine Department Notice) allowing works to proceed postponed commencement of route clearance works to 18 May 2016. Therefore Project works did not take place on 17 May 2016.

Impact monitoring was carried out within Zones A (3 rounds) and Zone B (1 round) on 18 May 2016, Zones B (4 rounds) on 19 May 2016 and Zones B (1 round) and C (1 round) on 20 May 2016.

Water quality monitoring were repeated two rounds respectively in Zones A and B on 21 May 2016, according to the *Event Action Plan for Water Quality* in the *EM&A Manual* following issued NOEs for 18, 19 and 20 May 2016 when Project route clearance works were conducted in Zones A, B and C. It is noted that no Project works were conducted within Zones A and B on 21 May 2016. Water quality monitoring was also repeated in Zone C on 24 May 2016 and the result will be reported in the next weekly report.

The results from the monitoring for water quality impacts between 16 and 22 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 16 to 22 May 2016. Water quality in Zones A and B were also recorded similar throughout the monitoring events in this week. Neither sudden drop in dissolved oxygen concentrations nor sharp increase in turbidity levels and SS levels were observed on each monitoring day (i.e. 17, 18, 19, 20 and 21 May 2016). Despite the stable water quality in Zones A-C during the impact monitoring period from 16 to 22 May 2016, exceedances of the Action and Limit Levels were recorded on each monitoring day (i.e. 17, 18, 19, 20 and 21 May 2016). It is important to note that although exceedances of Action and Limit Levels were recorded on 17 (Zone A) and 21 (Zones A and B) May 2016, no Project works were undertaken in water quality monitoring zones.

A summary of stations where exceedances were recorded is presented in *Table* 4.1. Details for the exceedances, e.g. location and parameters with exceedances, are presented in *Annex E*.

In summary, the exceedances of Action and Limit Levels are considered not to be caused by route clearance works but a reflection of natural background fluctuation. The detailed reasoning for such conclusion is also provided for each monitoring day (i.e. 17, 18, 19, 20 and 21 May 2016) in *Annex E*.

Table 4.1 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
17 May 2016							Zone A: E8, E9, F1, and S1		Zone A: E7, E8, E9, F1, S1, and S3	
18 May 2016	Zone B: B1, B2, B3, E1, and E8		Zone B: B2, E1, E2, and I1		Zone B: B3		Zone A: E7, E9, F1, S1, E8, S2, and S3; Zone B: B1, B2, B3, E1, E2, E6, E8, F1, and I1		Zone A: E8, E9, F1, S1, S2, and S3 Zone B: B1, B2, B3, E1, E2, E6, E8, and F1	
19 May 2016	Zone B:B1, B3, E8, I1, and E2	Zone B:B1, E1, E2, and E6	Zone B:B1, B2, E1, E2, E6, and E8	Zone B:B1, B2, B3, E1, E2, E6, E8, F1, and I1	Zone B:B1, B2, B3, E2, E8, F1 and I1	Zone B:B1, E1 and E6	Zone B: B3, B1, B2, E1, E2, E6, F1, and I1			
20 May 2016	Zone B: E2, and F1	Zone B: B1, B2, B3, E1, and E8	Zone B: B1, E6, and E8 Zone C: E4	Zone B: B2, B3, E1, E2, and I1	Zone B: B3 Zone C: E4		Zone B: B1, B2, B3, E1, E2, E6, E8, F1, and I1		Zone B: B1, B2, B3, E1, E2, and E6	
21 May 2016	Zone A: Zone B: E1, and F1	Zone A: Zone B: B1, B2, B3, E1, E2, E6, E8, F1, and I1	Zone A: S3 Zone B: B3	Zone A: Zone B: B1, B2, B3, E1, E2, E6, E8, F1, and I1	Zone A: S1 Zone B: B1, B3, E1, E2, E6, E8, F1, and I1	Zone A: S3 Zone B: B1, B2, B3, E2, and I1	Zone A: E7, E8, F1, S1, S2, and S3 Zone B: B1, B2, B3, E1, E2, E6, E8, F1, and I1		Zone A: E7, E8, F1, S1, S2, and S3 Zone B: B1, B2, B3, E1, E6, E8, F1, and I1	

5 ENVIRONMENTAL NON-CONFORMANCES

5.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

Exceedances of depth-averaged turbidity and SS Action Levels and DO (all depths) Action and Limit Levels were recorded during the monitoring period from 16 to 22 May 2016; however the exceedances were not considered to be caused by the route clearance works but a reflection of the natural background fluctuation on each impact monitoring day (i.e. 17, 18, 19, 20, and 21 May 2016).

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 installation works will commence on 26 May 2016. A dive team will work to link the cable to land, install articulated pipe and conduct shallow burial on 26 May 2016. Meanwhile, a cable vessel will commence the cable installation works.

7 CONCLUSIONS

This *First Weekly Impact Water Quality Monitoring Report* presents the results and findings of water quality impact monitoring undertaken during the week from 16 to 22 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 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 16 to 22 May 2016. Water quality in Zones A and B were 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.

Exceedances of depth-averaged turbidity and SS Action Levels and DO (all depths) Action and Limit Levels were recorded during the monitoring period from 16 to 22 May 2016; however these exceedances were not considered to be caused by the route clearance works but a reflection of the natural background fluctuation on each impact monitoring day (i.e. 17, 18, 19, 20, and 21 May 2016).

It is concluded that there was no deterioration of water quality during the reporting week and hence the effect of the Project route clearance 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)				

Note:
1. A represents moitoring in Zone A;
2. B represents moitoring in Zone B;
3. C represents moitoring in Zone C;

Annex B

Calibration Reports of Multi-parameter Sensor

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 : 26/04/~~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

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			

東業德勤測試顧問有限公司
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 : _____

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 @
5/17/2016 (Zone A)	96.1	C1-S 1 (1100)	2.74	E9-S 2 (1100)	96.0
	100.5	E9-M 1 (1100)	2.41	G2-M 2 (1100)	94.5
	106.2	G2-B 1 (1100)	3.17	S2-B 2 (1100)	106.3
	94.5	S3-S 1 (1100)	0.00	S3-B 2 (1100)	103.0
	97.4	C1-S 1 (1500)	0.00	E9-S 2 (1500)	104.4
	93.9	E9-M 1 (1500)	0.00	G2-M 2 (1500)	105.4
	95.2	G2-B 1 (1500)	2.99	S2-B 2 (1500)	92.6
	92.8	S3-S 1 (1500)	6.90	S3-B 2 (1500)	104.0
	93.2	C1-S 1 (1900)	3.08	E9-S 2 (1900)	100.0
	101.7	E9-M 1 (1900)	2.47	G2-M 2 (1900)	101.4
	101.5	G2-B 1 (1900)	5.13	S2-B 2 (1900)	95.0
	105.9	S3-S 1 (1900)	5.26	S3-B 2 (1900)	104.4

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 @
18/05/2016 (0700-1100) (Zone A)	99.4	C1-S1	5.26	G1-S2	99.4
	100.8	G1-M1	3.08	G3-M2	100.8
	101.4	G3-B1	2.41	G2-B2	101.4
	101	S3-S1	5.41	S3-B2	101.0
18/05/2016 (1100-1500) (Zone A)	93.0	C1-S1	5.26	G1-S2	103.0
	104.2	G1-M1	2.99	G3-M2	100.5
	95.7	G3-B1	2.41	G2-B2	91.7
	101.9	S3-S1	6.06	S3-B2	99.5
18/05/2016 (1500-1900) (Zone A)	107.9	C1-S1	0.00	G1-S2	100.5
	102.3	G1-M1	2.90	G3-M2	106.9
	98.9	G3-B1	2.60	G2-B2	97.1
	101.7	S3-S1	5.71	S3-B2	93.0
18/05/2016 (1900-2300) (Zone B)	107.6	E8 S1	2.99	C2 S2	92.5
	96.2	C2 M1	3.64	E6 M2	96.5
	96.4	E6 B1	0.00	B3 B2	102.5
	97.3	I1	5.88	B1 B1	92.5

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.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/19/2016 (Zone B)	105.1	B1 S1(0700)	3.64	C2 S2 (0700)	99.3
	102.7	C2 M1(0700)	7.41	E6 M2 (0700)	106.6
	101.9	E6 B1(0700)	0.00	G3 B2 (0700)	100.4
	95.7	G4 S1(0700)	3.92	I1 B2 (0700)	96.3
	106.9	B1 S1(1100)	7.69	C2 S2 (1100)	97.9
	95.4	C2 M1(1100)	3.08	E6 M2 (1100)	105.6
	93.6	E6 B1(1100)	5.71	G3 B2 (1100)	94.3
	94.6	G4 S1(1100)	3.77	I1 B2 (1100)	106.2
	103.7	B1 S1(1500)	3.08	C2 S2 (1500)	100.1
	92.2	C2 M1(1500)	6.45	E6 M2 (1500)	100.2
	98.9	E6 B1(1500)	5.71	G3 B2 (1500)	104.9
	107.2	G4 S1(1500)	7.41	I1 B2 (1500)	107.8
	101.5	B1 S1(1900)	3.08	C2 S2 (1900)	96.3
	107.5	C2 M1(1900)	7.41	E6 M2 (1900)	94.3
	95.2	E6 B1(1900)	3.17	G3 B2 (1900)	101.8
	106.3	G4 S1(1900)	3.51	I1 B2 (1900)	97.4

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 @
20/05/2016 (0700-1100) (Zone B)	92.2	E8 S1	6.67	C2 S2	107.5
	104	C2 M1	7.14	E6 M2	98.8
	103.4	E6 B1	5.41	B3 B2	94.6
	98.3	I1	6.25	B1 B1	106.0
5/20/2016 (Zone C)	106.6	G5-S1	3.77	G6-S2	105.5
	94.7	G6-M1	3.17	E5-B2	104.7

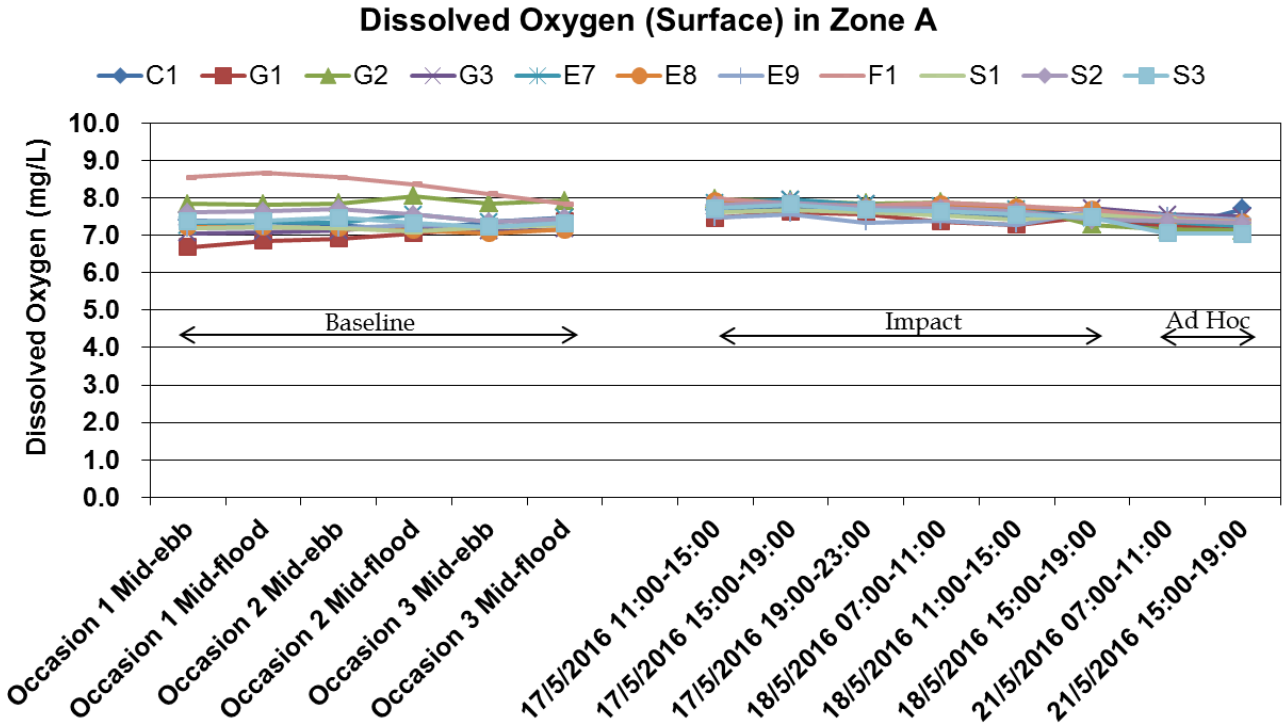
Note:
(*) % Recovery of QC sample should be between 80% to 120%.
(#) % Error of Sample Duplicate should be between 0% to 10%.
(@) % Recovery of Sample Spike should be between 80% to 120%.
(**) % Error of Sample Duplicate >10% but invalid due to sample results less than MDL.

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
5/21/2016 (Zone A)	102.1	C1-S 1 (0700)	5.26	E9-S 2 (0700)	94.0
	97.6	E9-M 1 (0700)	3.28	G2-M 2 (0700)	101.2
	96.8	G2-B 1 (0700)	2.53	S2-B 2 (0700)	96.5
	103.6	S3-S 1 (0700)	5.71	S3-B 2 (0700)	92.2
	107.7	C1-S 1 (1500)	0.00	E9-S 2 (1500)	99.5
	100.1	E9-M 1 (1500)	0.00	G2-M 2 (1500)	98.3
	93.8	G2-B 1 (1500)	2.53	S2-B 2 (1500)	104.4
	107.6	S3-S 1 (1500)	2.67	S3-B 2 (1500)	104.0
5/21/2016 (Zone B)	106.7	B1 S1(1100)	2.82	C2 S2 (1100)	106.4
	106.5	C2 M1(1100)	2.67	E6 M2 (1100)	99.3
	100.7	E6 B1(1100)	2.67	G3 B2 (1100)	102
	94.1	G4 S1(1100)	3.08	I1 B2 (1100)	102.4
	106.2	B1 S1(1900)	2.90	C2 S2 (1900)	104.4
	93.2	C2 M1(1900)	2.90	E6 M2 (1900)	92.5
	100.9	E6 B1(1900)	5.88	G3 B2 (1900)	92.6
	97.8	G4 S1(1900)	2.82	I1 B2 (1900)	102.2

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.

Annex D

Water Quality Monitoring Results



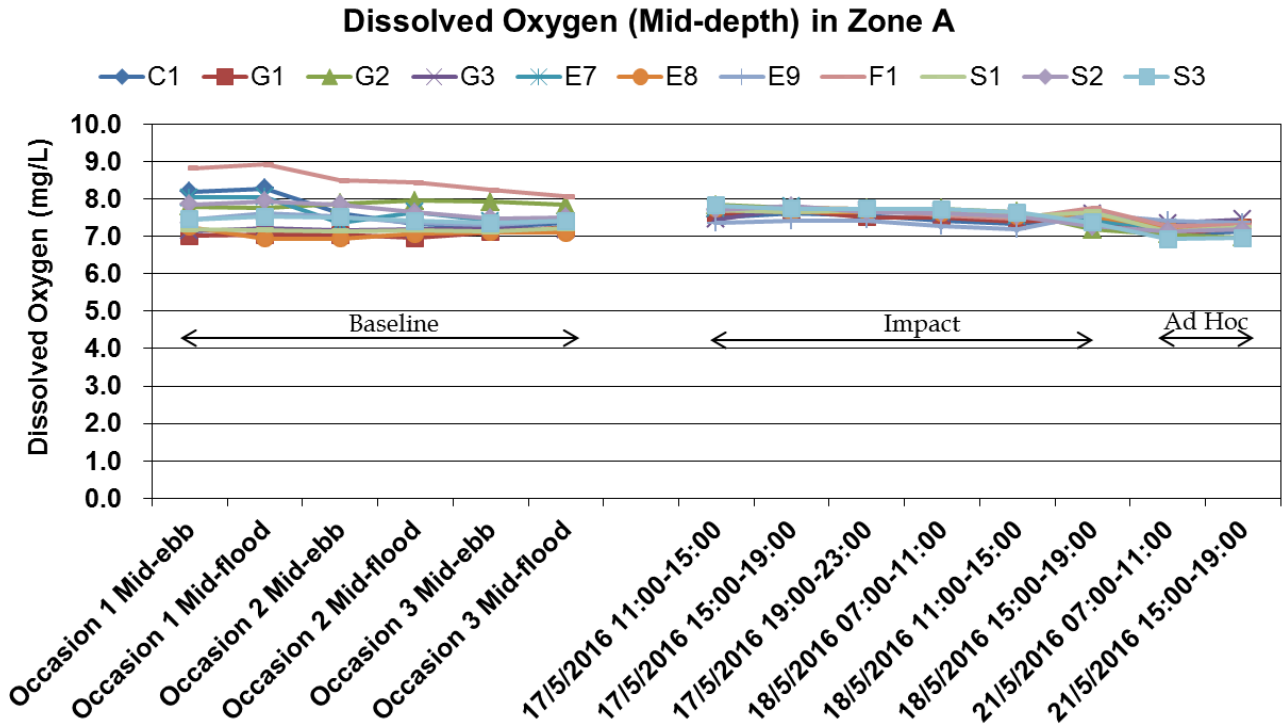


Figure D1 Dissolved oxygen (mg/L) at surface and mid-depth of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone A)
(Baseline monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)

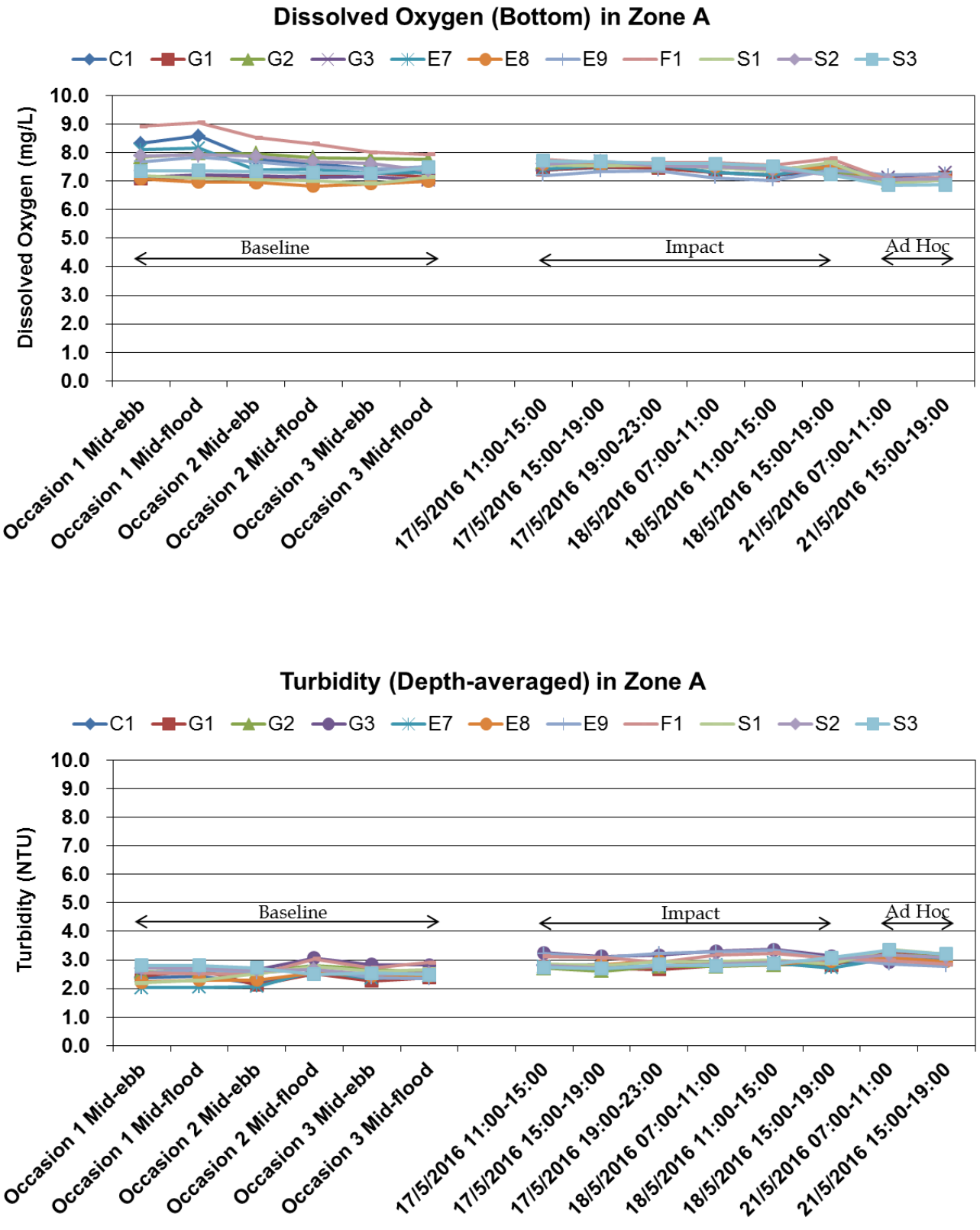


Figure D2 Dissolved oxygen (mg/L) at bottom and depth-averaged turbidity (NTU) of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone A)
(Baseline monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)

ERM

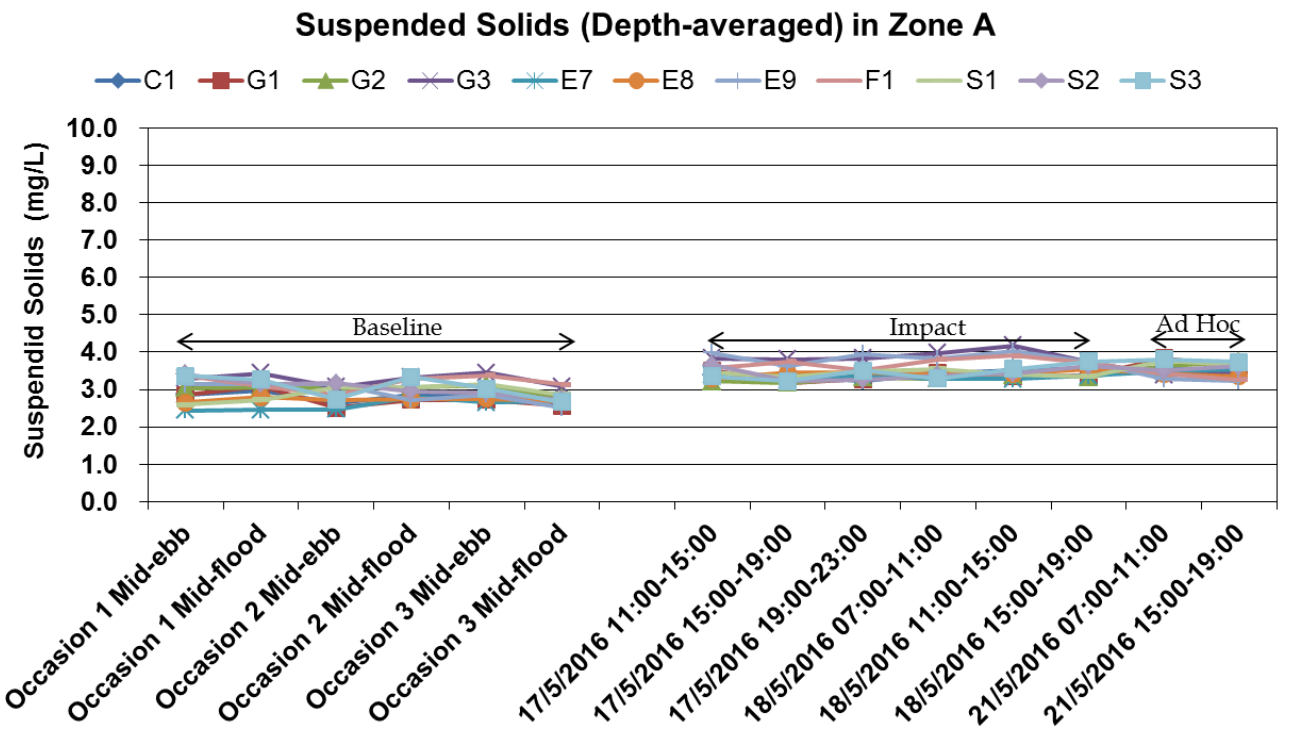
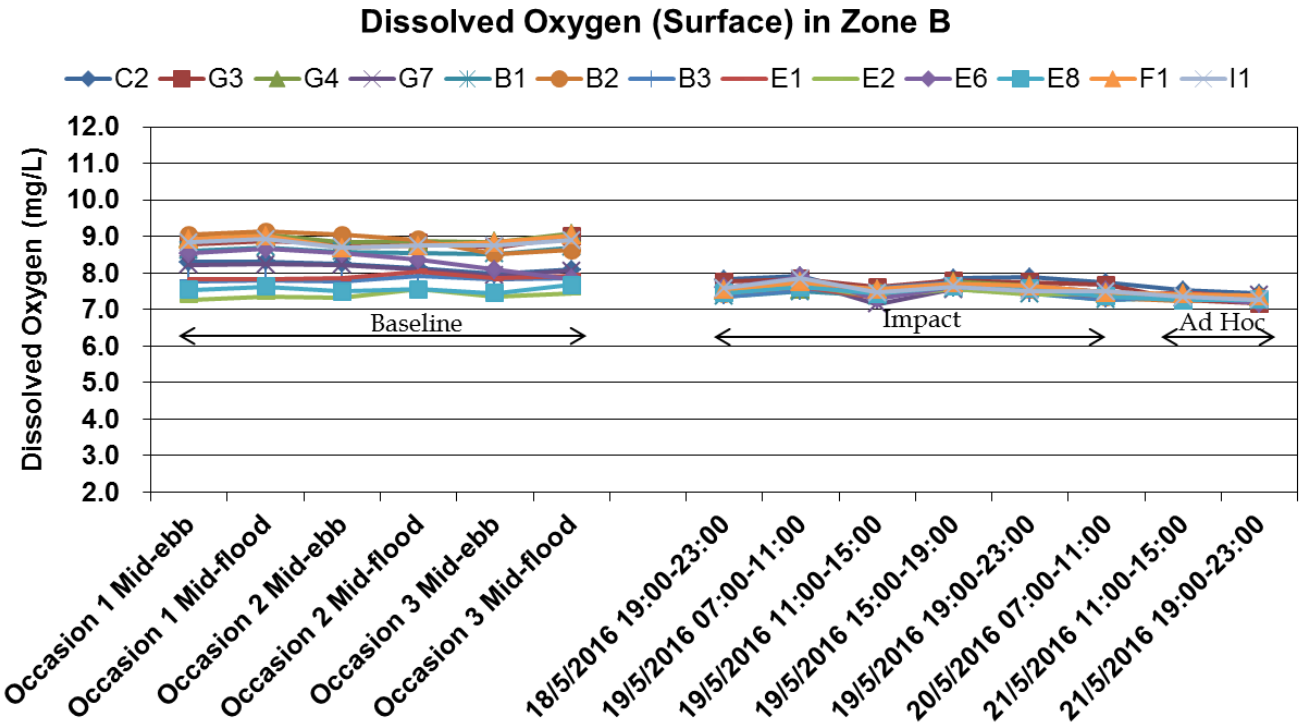


Figure D3 Depth-averaged suspended solids (mg/L) of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone A)
(Baseline monitoring in Zone A was conducted on 28 April, 3 May and 5 May 2016 respectively)



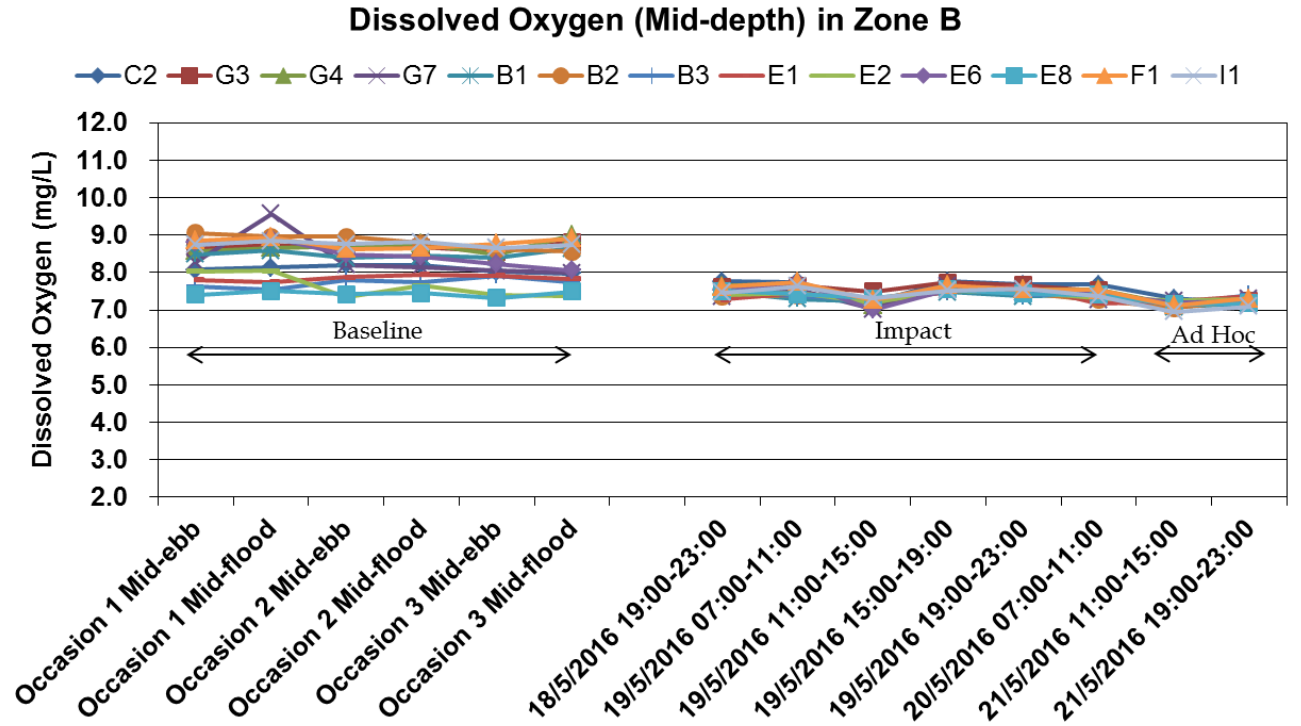
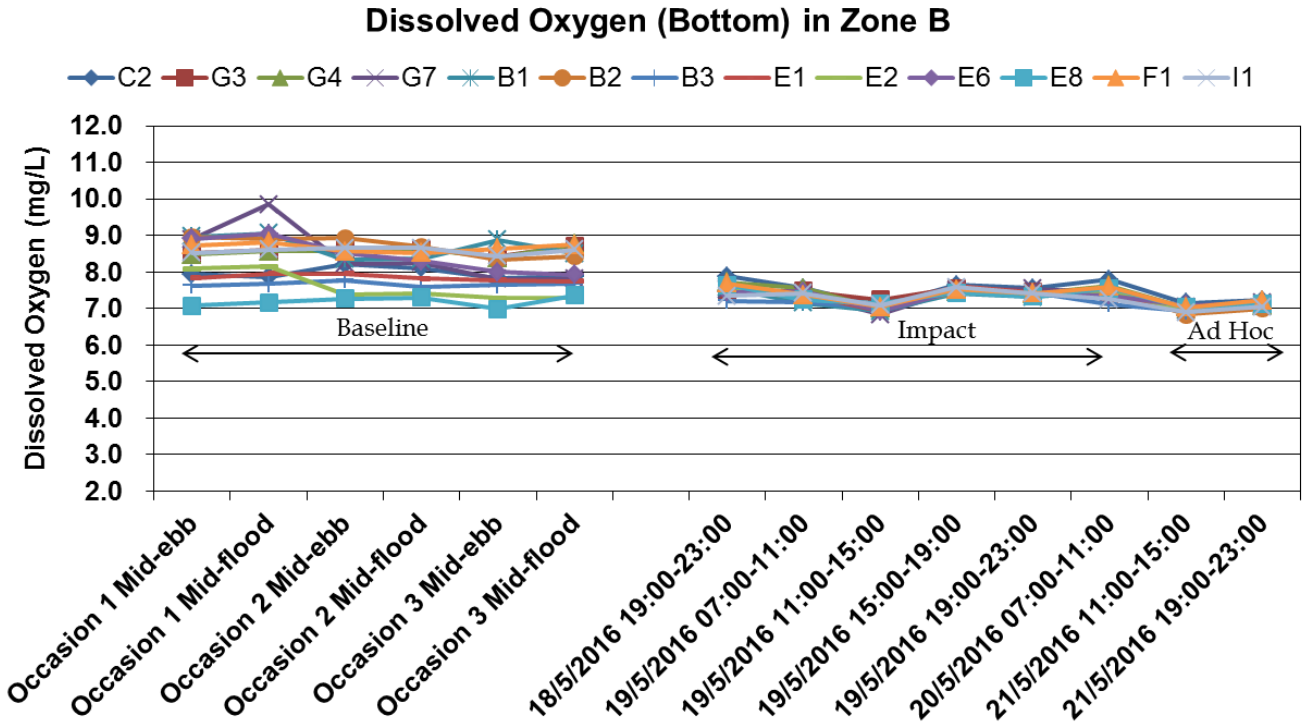


Figure D4 Dissolved oxygen (mg/L) at surface and mid-depth of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



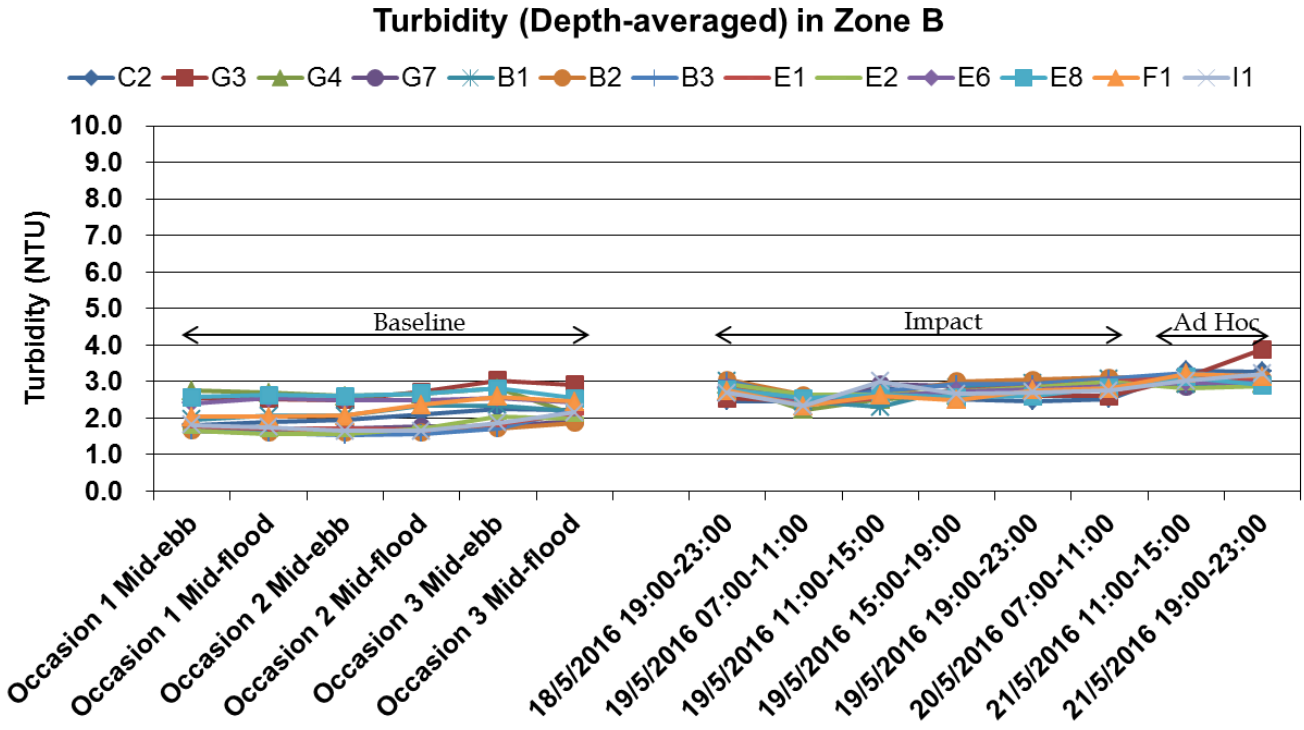


Figure D5 Dissolved oxygen (mg/L) at bottom and depth-averaged turbidity (NTU) of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 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)

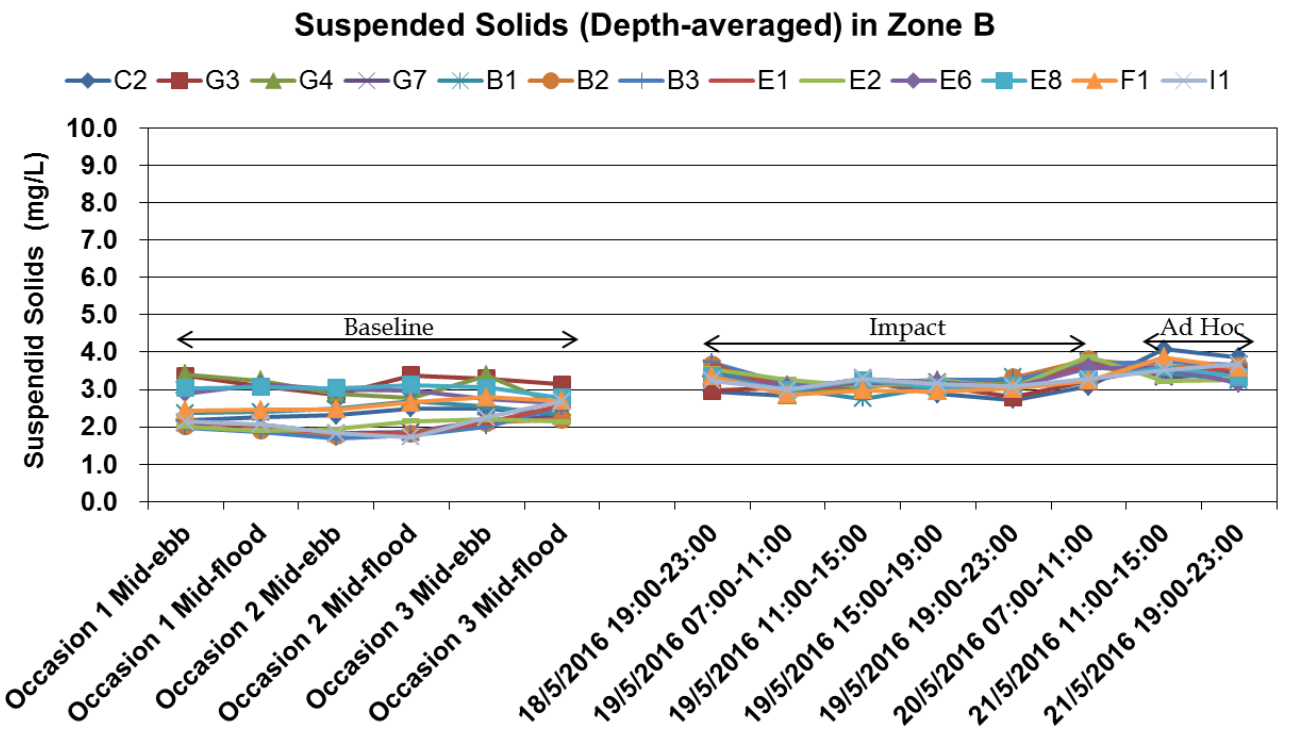
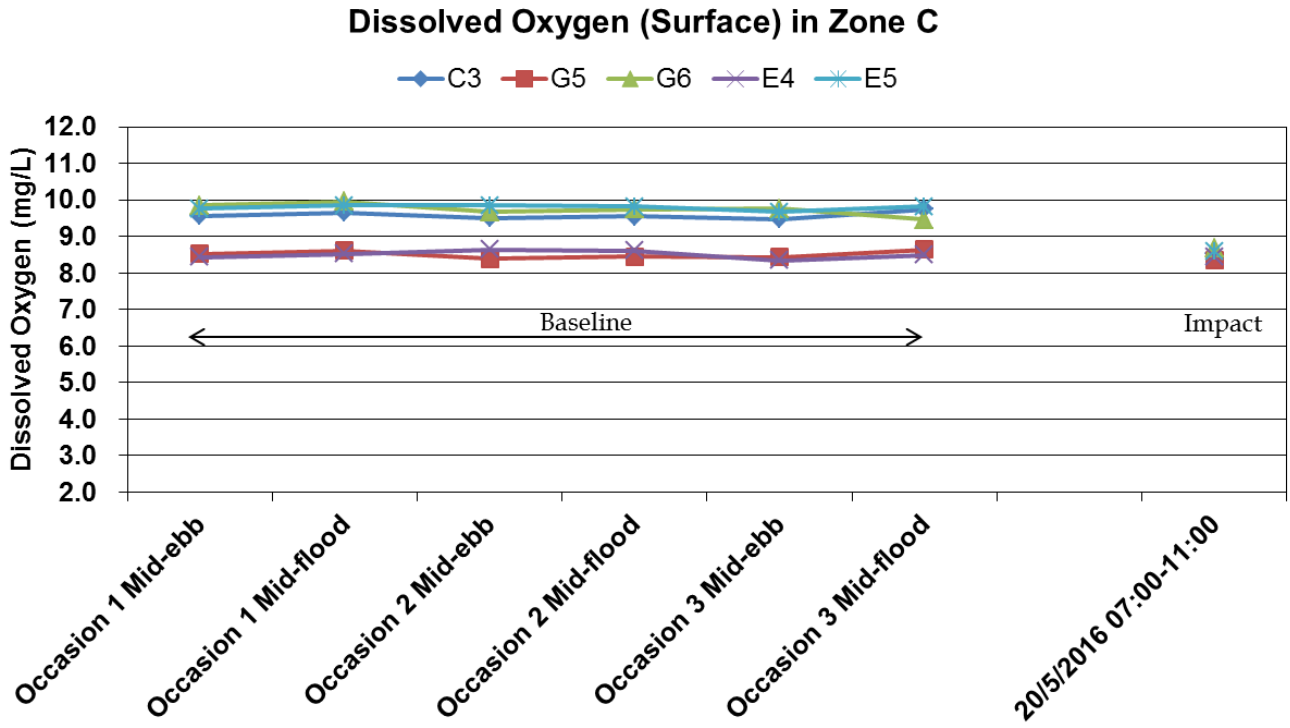


Figure D6 Depth-averaged suspended solids (mg/L) of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone B)
(In Zone B, baseline monitoring was conducted at stations B2, B3, E1, G4, G7 and I1 conducted on 27 April, 29 April and 4 May 2016 respectively, and at stations B1, C2, E2, E6, E8, F1 and G3 on 28 April, 3 May and 5 May 2016 respectively)



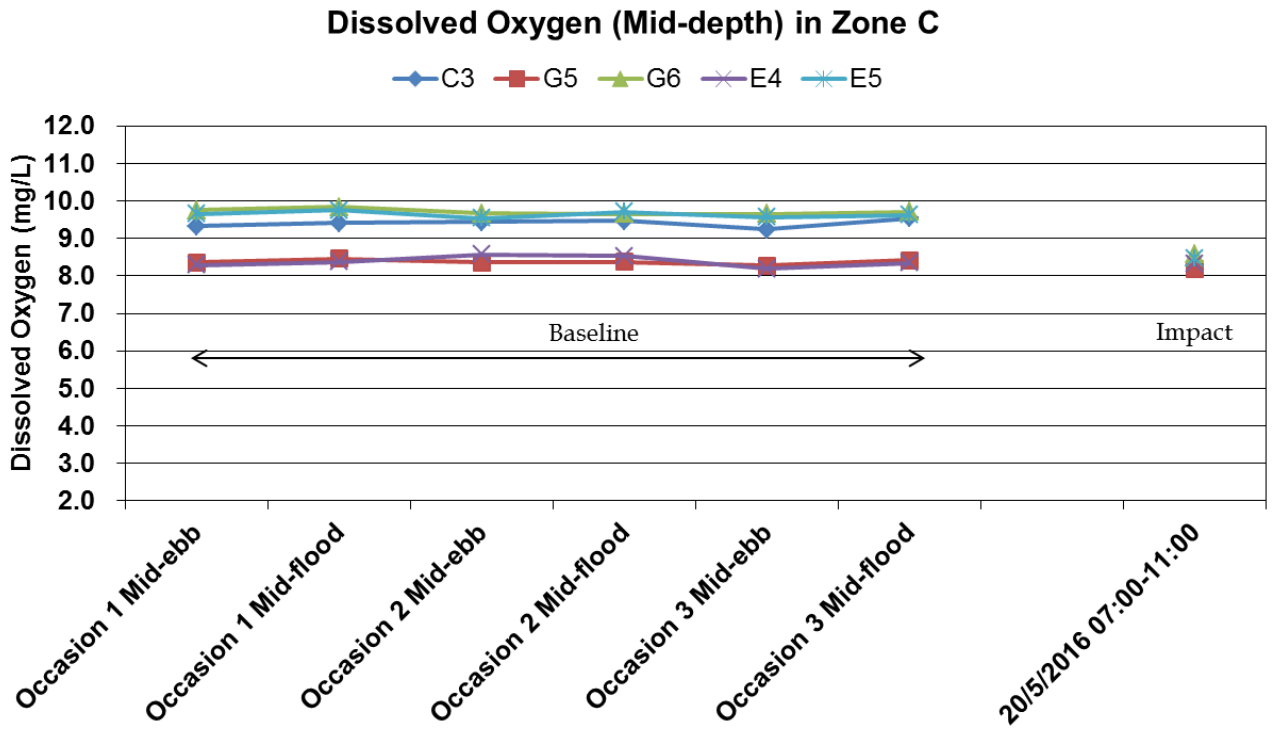
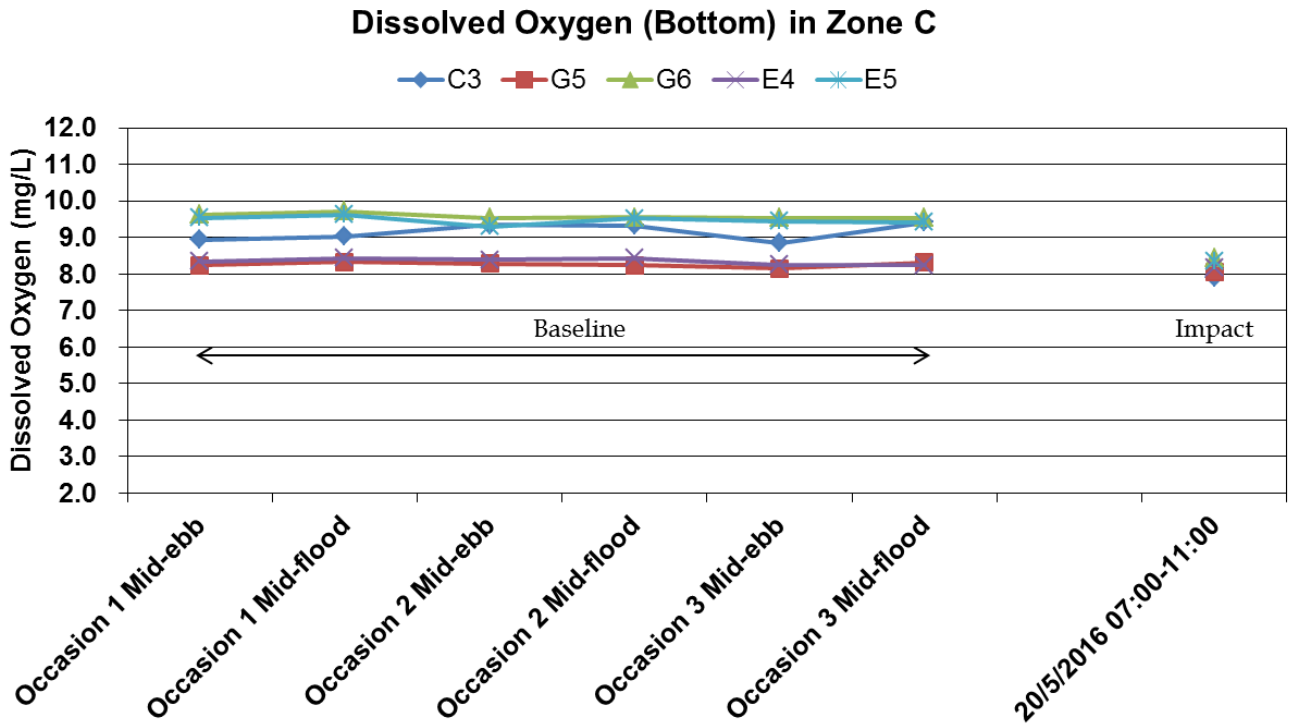


Figure D7 Dissolved oxygen (mg/L) at surface and mid-depth of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)



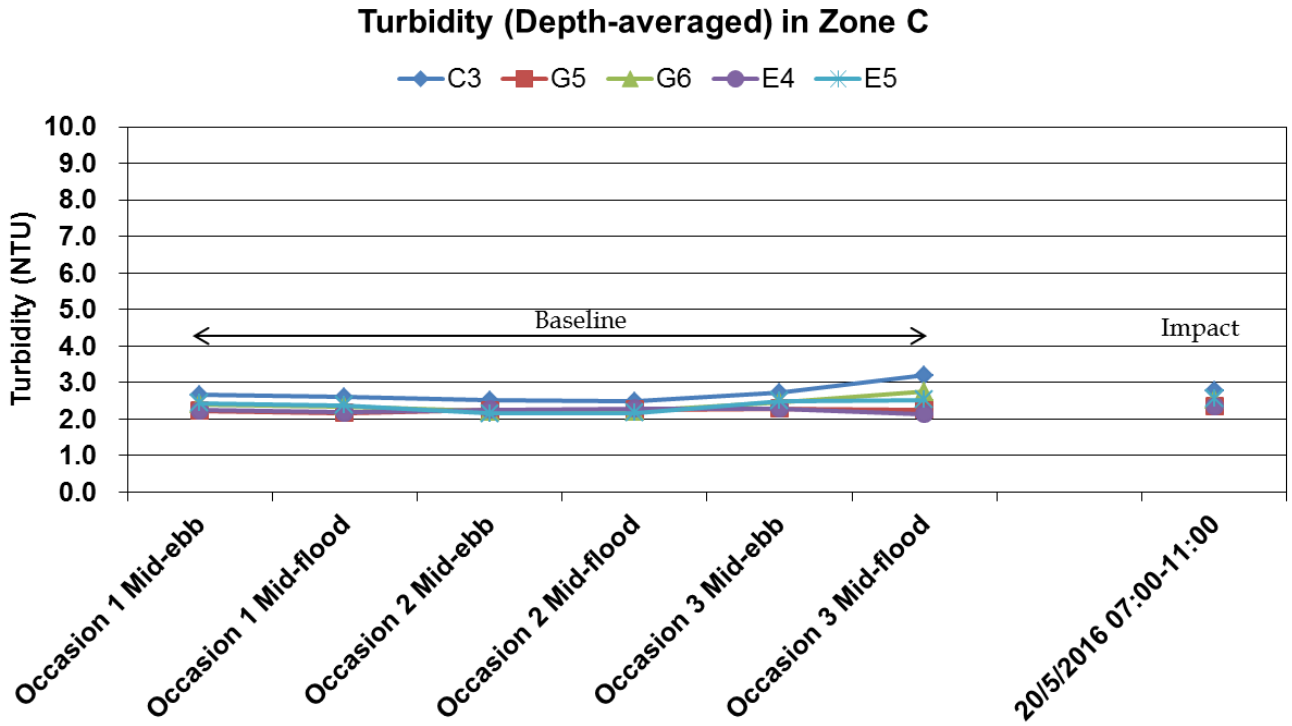


Figure D8 Dissolved oxygen (mg/L) at bottom and depth-averaged turbidity (NTU) of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)

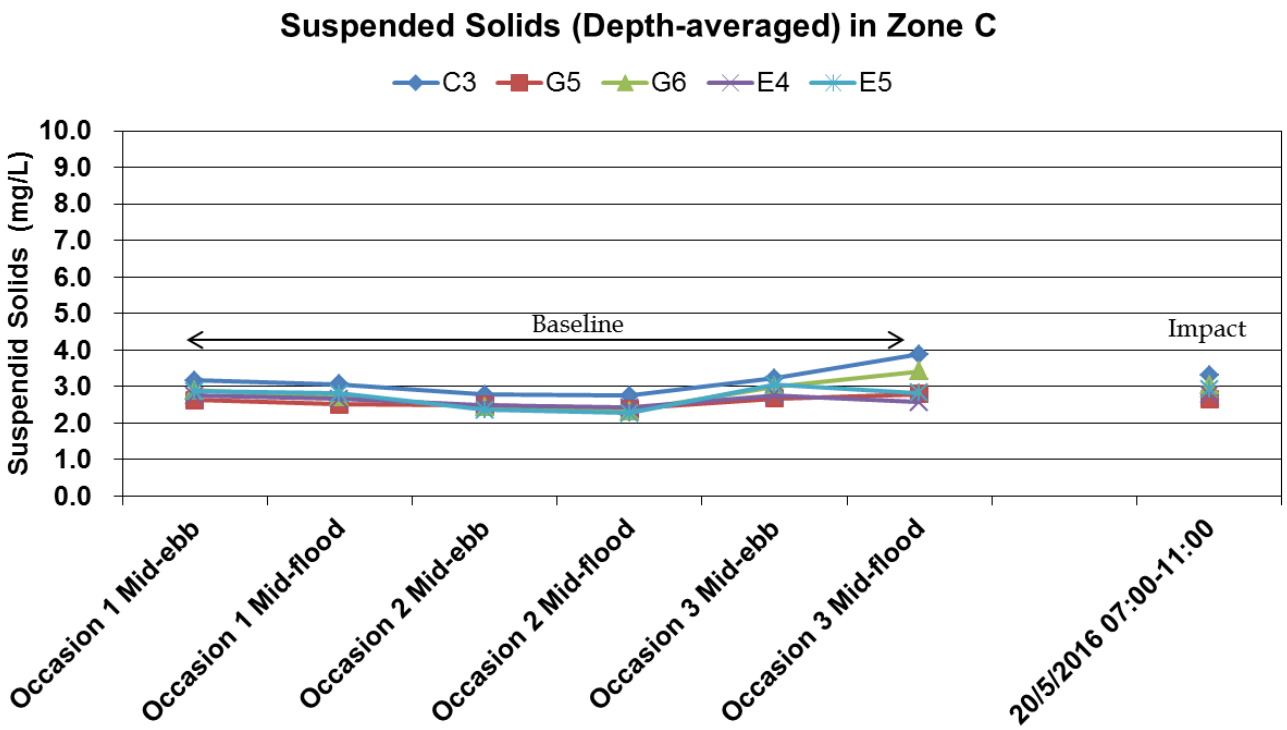


Figure D9 Depth-averaged suspended solids (mg/L) of water column measured during the baseline monitoring and the impact monitoring period from 16 to 22 May 2016 (Zone C)
(Baseline monitoring in Zone C was conducted on 27 April, 29 April and 4 May 2016 respectively)

Sampling Date : 17-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	1100-1116	22.1	E	0.1	*Surface*	24.9	24.8	29.2	29.1	7.66	7.70	109.3	109.8	2.98	2.91	3.6	3.5	7.68	2.81	N.A.	3.38	N.A.
						Middle	24.4	24.5	29.3	29.4	7.49	7.52	105.9	106.4	2.74	2.69	3.3	3.2	7.51				
						Bottom	24.3	24.2	29.5	29.5	7.40	7.36	104.6	103.9	2.80	2.73	3.4	3.3	7.38				
G1	Gradient Station	1202-1219	11.4	E	0.1	*Surface*	24.8	24.9	29.4	29.3	7.48	7.44	106.7	106.2	2.78	2.84	3.6	3.7	7.46	2.75	N.A.	3.50	N.A.
						Middle	24.8	24.8	29.4	29.4	7.56	7.60	106.9	107.7	2.63	2.58	3.2	3.1	7.58				
						Bottom	24.7	24.7	29.5	29.5	7.42	7.37	104.8	104.1	2.77	2.88	3.6	3.8	7.40				
G2	Gradient Station	1415-1431	15.1	W	0.2	*Surface*	24.8	24.9	29.2	29.2	7.99	7.94	114.0	113.3	2.53	2.44	3.0	3.1	7.97	2.71	N.A.	3.22	N.A.
						Middle	24.8	24.7	29.3	29.4	7.86	7.80	111.2	110.3	2.67	2.81	3.2	3.3	7.83				
						Bottom	24.6	24.5	29.6	29.6	7.64	7.67	107.9	108.3	2.93	2.87	3.2	3.5	7.66				
G3	Gradient Station	1310-1327	16.4	W	0.2	*Surface*	24.9	24.9	29.2	29.2	7.74	7.80	110.4	111.3	3.36	3.27	3.7	4.2	7.77	3.25	N.A.	3.83	N.A.
						Middle	24.9	24.8	29.3	29.4	7.69	7.22	108.8	109.2	3.06	3.14	3.6	3.5	7.46				
						Bottom	24.7	24.6	29.5	29.5	7.57	7.54	106.9	106.5	3.30	3.39	4.0	4.0	7.56				
E7	Impact Station	1100-1136	23.9	E	0.1	*Surface*	24.8	24.8	29.2	29.2	7.83	7.89	111.7	112.5	2.86	2.78	3.4	3.1	7.86	2.77	-1.3%	3.38	0.0%
						Middle	24.5	24.4	29.3	29.4	7.67	7.80	108.5	110.3	2.79	2.88	3.4	3.5	7.74				
						Bottom	24.2	24.3	29.6	29.5	7.43	7.38	104.9	104.2	2.63	2.69	3.4	3.5	7.41				
E8	Impact Station	1334-1350	18.2	W	0.1	*Surface*	24.8	24.9	29.1	29.1	7.88	7.94	112.4	113.3	2.76	2.83	3.3	3.7	7.91	2.75	-2.2%	3.30	-2.5%
						Middle	24.9	24.8	29.3	29.3	7.76	7.72	109.8	109.2	2.49	2.55	3.0	3.1	7.74				
						Bottom	24.6	24.6	29.5	29.6	7.60	7.63	107.3	107.8	2.89	2.96	3.2	3.5	7.62				
E9	Impact Station	1224-1240	15.9	E	0.1	*Surface*	24.8	24.7	29.2	29.3	7.43	7.50	106.0	107.0	3.18	3.25	4.1	3.9	7.47	3.22	14.5%	3.98	17.7%
						Middle	24.5	24.5	29.5	29.4	7.34	7.37	103.8	104.2	3.34	3.29	4.1	4.0	7.36				
						Bottom	24.5	24.3	29.4	29.5	7.21	7.19	101.8	101.5	3.08	3.16	3.7	4.1	7.20				
F1	Impact Station	1249-1305	13.8	W	0.2	*Surface*	24.8	24.9	29.3	29.3	7.95	8.00	113.4	114.1	3.04	2.97	3.3	3.3	7.98	3.12	11.0%	3.58	5.9%
						Middle	24.7	24.7	29.6	29.5	7.68	7.64	108.6	108.1	3.16	3.10	3.8	3.7	7.66				
						Bottom	24.5	24.5	29.6	29.7	7.77	7.72	109.7	109.0	3.27	3.16	3.6	3.8	7.75				
S1	Impact Station	1142-1159	9.4	E	0.1	*Surface*	24.8	24.8	29.3	29.3	7.59	7.63	108.3	108.8	2.98	3.03	3.3	4.0	7.61	2.87	2.1%	3.47	2.5%
						Middle	24.8	24.8	29.3	29.3	7.72	7.70	109.2	108.9	2.80	2.76	3.4	3.6	7.71				
						Bottom	24.6	24.7	29.5	29.4	7.58	7.52	107.1	106.2	2.79	2.84	3.4	3.1	7.55				
S2	Impact Station	1355-1411	12.4	W	0.1	*Surface*	24.8	24.8	29.3	29.2	7.83	7.79	111.7	111.1	2.78	2.85	3.6	3.7	7.81	2.80	-0.4%	3.65	7.9%
						Middle	24.8	24.7	29.3	29.4	7.73	7.70	109.3	108.9	2.53	2.60	3.3	3.4	7.72				
						Bottom	24.6	24.7	29.5	29.5	7.58	7.61	107.1	107.5	2.99	3.04	3.9	4.0	7.60				
S3	Impact Station	1437-1453	9.2	W	0.1	*Surface*	24.8	24.8	29.2	29.3	7.74	7.71	110.4	110.0	2.74	2.80	3.6	3.4	7.73	2.74	-2.3%	3.35	-1.0%
						Middle	24.8	24.8	29.3	29.3	7.82	7.81	110.6	110.5	2.55	2.62	3.1	3.1	7.82				
						Bottom	24.7	24.7	29.5	29.5	7.69	7.72	108.6	109.0	2.84	2.91	3.1	3.8	7.71				

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

Sampling Date : 17-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	1500-1515	22.3	E	0.1	*Surface*	24.7	24.8	29.4	29.3	7.73	7.76	110.5	110.8	2.79	2.72	3.1	3.3	7.75	2.84	N.A.	3.37	N.A.
						Middle	24.4	24.3	29.6	29.5	7.62	7.59	108.1	107.7	2.86	2.92	3.4	3.5	7.61				
						Bottom	24.1	24.2	29.7	29.6	7.48	7.47	105.8	105.7	2.84	2.89	3.4	3.5	7.48				
G1	Gradient Station	1601-1618	11.5	E	0.2	*Surface*	24.6	24.7	29.3	29.4	7.61	7.64	108.7	109.0	2.74	2.82	3.3	3.4	7.63	2.73	N.A.	3.18	N.A.
						Middle	24.6	24.6	29.5	29.4	7.68	7.71	108.9	109.3	2.76	2.71	3.3	2.9	7.70				
						Bottom	24.5	24.4	29.5	29.6	7.52	7.50	106.4	106.1	2.64	2.69	3.2	3.0	7.51				
G2	Gradient Station	1813-1829	15.3	W	0.1	*Surface*	24.7	24.8	29.3	29.2	7.96	7.92	113.7	113.3	2.42	2.47	2.9	3.0	7.94	2.61	N.A.	3.18	N.A.
						Middle	24.7	24.6	29.4	29.4	7.78	7.76	110.2	110.0	2.54	2.62	3.0	3.1	7.77				
						Bottom	24.5	24.6	29.5	29.6	7.65	7.68	108.2	108.6	2.75	2.88	3.3	3.8	7.67				
G3	Gradient Station	1710-1726	16.5	W	0.1	*Surface*	24.8	24.7	29.3	29.4	7.95	7.91	113.6	113.1	3.12	3.18	3.7	3.8	7.93	3.12	N.A.	3.80	N.A.
						Middle	24.6	24.7	29.5	29.4	7.74	7.77	109.8	110.1	3.02	2.95	3.9	3.6	7.76				
						Bottom	24.6	24.5	29.6	29.7	7.69	7.66	108.8	108.4	3.28	3.19	3.6	4.2	7.68				
E7	Impact Station	1518-1534	24.0	E	0.1	*Surface*	24.6	24.7	29.3	29.2	7.96	7.93	113.7	113.4	2.69	2.76	3.2	3.3	7.95	2.69	-5.2%	3.25	-3.5%
						Middle	24.5	24.6	29.5	29.4	7.81	7.78	110.7	110.4	2.73	2.81	3.6	3.7	7.80				
						Bottom	24.1	24.1	29.6	29.7	7.56	7.58	106.9	107.2	2.60	2.54	2.9	2.8	7.57				
E8	Impact Station	1733-1750	18.3	W	0.2	*Surface*	24.6	24.7	29.2	29.3	7.84	7.81	112.0	111.7	2.68	2.76	3.0	3.3	7.83	2.84	-0.1%	3.45	2.5%
						Middle	24.7	24.7	29.4	29.3	7.67	7.64	108.8	108.4	2.83	2.78	3.4	3.6	7.66				
						Bottom	24.6	24.5	29.5	29.6	7.58	7.56	107.3	107.0	2.94	3.02	3.5	3.9	7.57				
E9	Impact Station	1624-1641	16.1	E	0.2	*Surface*	24.6	24.7	29.4	29.3	7.54	7.58	107.7	108.2	3.06	3.11	3.7	3.7	7.56	3.10	9.3%	3.62	7.4%
						Middle	24.6	24.5	29.6	29.5	7.43	7.40	105.4	105.1	2.96	3.02	3.3	3.3	7.42				
						Bottom	24.4	24.3	29.6	29.7	7.36	7.32	104.1	103.6	3.19	3.27	3.8	3.9	7.34				
F1	Impact Station	1650-1706	14.0	W	0.2	*Surface*	24.7	24.8	29.5	29.4	7.86	7.84	112.2	111.8	2.88	2.94	3.5	3.6	7.85	3.08	8.6%	3.75	11.4%
						Middle	24.0	24.7	29.5	29.6	7.78	7.75	110.4	110.1	3.03	3.10	3.9	3.7	7.77				
						Bottom	24.5	24.4	29.8	29.7	7.63	7.65	108.1	108.4	3.23	3.31	3.8	4.0	7.64				
S1	Impact Station	1541-1557	9.6	E	0.1	*Surface*	24.7	24.8	29.3	29.4	7.68	7.69	109.7	109.8	2.89	2.96	3.5	3.5	7.69	2.80	-1.4%	3.33	-1.0%
						Middle	24.6	24.7	29.4	29.4	7.62	7.64	107.9	108.1	2.81	2.74	3.3	3.5	7.63				
						Bottom	24.5	24.6	29.4	29.5	7.53	7.55	106.2	106.5	2.67	2.72	3.2	3.0	7.54				
S2	Impact Station	1754-1809	12.5	W	0.1	*Surface*	24.7	24.8	29.4	29.3	7.89	7.86	112.7	112.4	2.65	2.77	2.9	3.3	7.88	2.72	-4.2%	3.22	-4.5%
						Middle	24.7	24.7	29.4	29.4	7.82	7.79	110.8	110.4	2.62	2.57	2.9	3.1	7.81				
						Bottom	24.5	24.6	29.5	29.4	7.71	7.68	109.1	108.8	2.87	2.82	3.4	3.7	7.70				
S3	Impact Station	1836-1852	9.3	W	0.1	*Surface*	24.7	24.6	29.3	29.3	7.81	7.83	111.6	111.9	2.58	2.53	2.8	3.3	7.82	2.69	-5.1%	3.22	-4.5%
						Middle	24.6	24.7	29.3	29.4	7.75	7.72	109.7	109.4	2.64	2.70	3.4	3.2	7.74				
						Bottom	24.5	24.6	29.4	29.3	7.68	7.67	108.7	108.6	2.89	2.81	3.5	3.1	7.68				

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

Sampling Date : 17-May-16
Sampling Time : 19:00 - 23:00 (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	1900-1916	22.4	E	0.2	*Surface*	24.8	24.9	29.2	29.3	7.65	7.61	108.9	108.4	2.63	2.68	3.2	3.0	7.63	2.72	N.A.	3.23	N.A.
						Middle	24.6	24.5	29.5	29.4	7.56	7.54	106.9	106.7	2.81	2.73	3.4	3.0	7.55				
						Bottom	24.4	24.3	29.6	29.7	7.48	7.45	105.7	105.3	2.76	2.69	3.6	3.2	7.47				
G1	Gradient Station	2001-2017	11.3	E	0.1	*Surface*	24.6	24.7	29.5	29.4	7.58	7.55	107.8	107.4	2.51	2.62	3.3	3.2	7.57	2.67	N.A.	3.28	N.A.
						Middle	24.7	24.7	29.5	29.5	7.52	7.49	106.4	106.1	2.68	2.73	3.3	3.3	7.51				
						Bottom	24.5	24.6	29.6	29.5	7.43	7.46	104.9	105.3	2.78	2.71	3.3	3.3	7.45				
G2	Gradient Station	2216-2232	15.1	W	0.1	*Surface*	24.6	24.7	29.3	29.4	7.83	7.86	111.3	111.7	2.67	2.59	3.2	3.3	7.85	2.77	N.A.	3.32	N.A.
						Middle	24.5	24.6	29.5	29.6	7.73	7.75	109.3	109.6	2.73	2.79	3.0	3.1	7.74				
						Bottom	24.4	24.5	29.7	29.6	7.54	7.51	106.5	106.2	2.88	2.97	3.8	3.5	7.53				
G3	Gradient Station	2112-2128	16.2	W	0.2	*Surface*	24.6	24.7	29.2	29.1	7.82	7.81	111.1	111.0	3.15	3.19	3.8	3.9	7.82	3.17	N.A.	3.83	N.A.
						Middle	24.6	24.5	29.3	29.2	7.69	7.66	108.8	108.5	3.02	3.09	3.7	3.7	7.68				
						Bottom	24.4	24.3	29.5	29.6	7.58	7.54	107.3	106.9	3.23	3.34	3.9	4.0	7.56				
E7	Impact Station	1919-1935	24.1	E	0.2	*Surface*	24.7	24.8	29.4	29.3	7.83	7.81	111.4	111.1	2.82	2.88	3.4	3.5	7.82	2.80	3.1%	3.38	4.6%
						Middle	24.6	24.5	29.6	29.5	7.62	7.64	107.8	108.0	2.75	2.71	3.3	3.3	7.63				
						Bottom	24.3	24.2	29.7	29.6	7.53	7.57	106.4	106.8	2.78	2.86	3.1	3.7	7.55				
E8	Impact Station	2132-2149	17.9	W	0.1	*Surface*	24.5	24.6	29.3	29.2	7.74	7.77	110.1	110.4	2.81	2.87	3.4	3.2	7.76	2.97	9.1%	3.47	7.2%
						Middle	24.4	24.5	29.4	29.3	7.65	7.64	108.2	108.1	2.93	3.01	3.2	3.6	7.65				
						Bottom	24.3	24.4	29.5	29.6	7.53	7.55	106.5	106.8	3.11	3.06	4.0	3.4	7.54				
E9	Impact Station	2033-2040	15.9	E	0.2	*Surface*	24.7	24.8	29.3	29.2	7.32	7.36	104.2	104.5	3.13	3.19	3.8	3.8	7.34	3.23	18.9%	3.95	22.2%
						Middle	24.6	24.7	29.4	29.5	7.44	7.41	105.3	105.0	3.24	3.17	4.1	4.1	7.43				
						Bottom	24.6	24.5	29.6	29.6	7.34	7.38	103.7	104.1	3.37	3.28	4.0	3.9	7.36				
F1	Impact Station	2050-2107	13.7	W	0.2	*Surface*	24.6	24.7	29.4	29.5	7.81	7.77	111.1	110.6	2.76	2.83	3.3	3.7	7.79	2.92	7.4%	3.50	8.2%
						Middle	24.6	24.5	29.5	29.5	7.73	7.71	109.5	109.2	2.88	2.79	3.4	3.4	7.72				
						Bottom	24.3	24.4	29.6	29.5	7.64	7.65	107.9	108.0	3.08	3.16	3.7	3.5	7.65				
S1	Impact Station	1941-1957	9.5	E	0.1	*Surface*	24.8	24.7	29.3	29.4	7.64	7.61	108.6	108.2	2.76	2.81	3.0	3.6	7.63	2.95	8.5%	3.48	7.7%
						Middle	24.7	24.7	29.4	29.5	7.69	7.73	108.9	109.3	2.93	2.99	3.5	3.6	7.71				
						Bottom	24.6	24.7	29.5	29.6	7.58	7.56	107.3	107.1	3.08	3.11	3.4	3.8	7.57				
S2	Impact Station	2154-2212	12.2	W	0.2	*Surface*	24.6	24.7	29.3	29.4	7.72	7.74	109.8	110.0	2.68	2.63	2.9	3.4	7.73	2.78	2.1%	3.27	1.0%
						Middle	24.5	24.6	29.4	29.5	7.64	7.67	108.1	108.4	2.74	2.81	3.0	3.1	7.66				
						Bottom	24.4	24.5	29.5	29.5	7.53	7.51	106.4	106.2	2.86	2.93	3.4	3.8	7.52				
S3	Impact Station	2239-2256	9.0	W	0.1	*Surface*	24.7	24.8	29.4	29.3	7.67	7.69	109.1	109.4	2.85	2.89	3.7	3.5	7.68	2.84	4.4%	3.50	8.2%
						Middle	24.6	24.7	29.4	29.4	7.71	7.75	109.1	109.6	2.64	2.76	3.4	3.6	7.73				
						Bottom	24.5	24.6	29.5	29.4	7.62	7.59	107.7	107.3	2.98	2.90	3.6	3.2	7.61				

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

Sampling Date : 18-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	0715-0731	21.8	E	0.1	*Surface*	25.0	24.9	29.2	29.3	7.57	7.61	108.1	108.6	3.04	2.97	3.7	3.6	7.59	2.87	N.A.	3.43	N.A.
						Middle	24.6	24.5	29.5	29.4	7.40	7.43	104.7	105.2	2.80	2.75	3.6	3.0	7.42				
						Bottom	24.3	24.4	29.5	29.6	7.31	7.27	103.4	102.7	2.86	2.79	3.4	3.3	7.29				
G1	Gradient Station	0820-0836	11.8	E	0.1	*Surface*	25.0	25.0	29.4	29.5	7.39	7.35	105.5	105.2	2.84	2.90	3.7	3.8	7.37	2.80	N.A.	3.45	N.A.
						Middle	24.8	24.9	29.6	29.7	7.47	7.51	105.7	106.3	2.62	2.64	3.2	3.4	7.49				
						Bottom	24.7	24.6	29.7	29.8	7.33	7.28	103.6	102.9	2.83	2.94	3.4	3.2	7.31				
G2	Gradient Station	1027-1043	15.4	W	0.2	*Surface*	24.9	25.0	29.2	29.3	7.90	7.85	112.8	112.1	2.59	2.50	3.1	3.0	7.88	2.77	N.A.	3.30	N.A.
						Middle	24.9	24.8	29.5	29.4	7.77	7.71	110.0	109.1	2.73	2.87	3.0	3.5	7.74				
						Bottom	24.7	24.6	29.6	29.7	7.55	7.58	106.7	107.1	2.99	2.93	3.6	3.6	7.57				
G3	Gradient Station	0925-0941	16.8	E	0.2	*Surface*	25.0	25.0	29.2	29.3	7.65	7.71	109.2	110.1	3.42	3.33	4.1	4.3	7.68	3.31	N.A.	3.98	N.A.
						Middle	24.9	24.8	29.5	29.4	7.60	7.63	107.6	108.4	3.12	3.20	3.7	3.9	7.62				
						Bottom	24.7	24.8	29.5	29.6	7.48	7.45	105.7	105.3	3.36	3.45	4.1	3.8	7.47				
E7	Impact Station	0737-0753	23.6	E	0.2	*Surface*	24.9	24.8	29.3	29.2	7.74	7.80	110.5	111.3	2.92	2.84	3.8	3.4	7.77	2.83	-1.3%	3.30	-3.9%
						Middle	24.5	24.6	29.4	29.5	7.58	7.71	107.3	109.1	2.85	2.94	3.1	3.2	7.65				
						Bottom	24.3	24.3	29.6	29.7	7.34	7.29	103.7	103.0	2.69	2.75	3.0	3.3	7.32				
E8	Impact Station	0946-1001	18.6	E	0.2	*Surface*	25.0	24.9	29.1	29.2	7.79	7.85	111.2	112.1	2.82	2.89	3.4	3.7	7.82	2.81	-2.1%	3.40	-1.0%
						Middle	24.9	25.0	29.4	29.3	7.65	7.63	108.3	108.0	2.55	2.61	3.1	3.1	7.64				
						Bottom	24.7	24.6	29.6	29.7	7.51	7.54	106.1	106.6	2.95	3.02	3.5	3.6	7.53				
E9	Impact Station	0842-0858	16.4	E	0.1	*Surface*	24.8	24.9	29.3	29.4	7.34	7.41	104.8	105.6	3.24	3.31	3.6	3.9	7.38	3.28	14.2%	3.82	11.2%
						Middle	24.6	24.5	29.6	29.5	7.25	7.28	102.6	103.0	3.40	3.35	4.4	3.7	7.27				
						Bottom	24.5	24.4	29.5	29.6	7.12	7.10	100.6	100.3	3.14	3.22	3.4	3.9	7.11				
F1	Impact Station	0904-0920	14.2	E	0.1	*Surface*	25.0	24.9	29.3	29.4	7.86	7.91	112.2	112.9	3.10	3.03	3.4	3.3	7.89	3.18	10.7%	3.80	10.7%
						Middle	24.8	24.7	29.7	29.6	7.59	7.55	107.4	106.9	3.22	3.16	3.5	4.1	7.57				
						Bottom	24.6	24.5	29.7	29.8	7.68	7.63	108.5	107.8	3.33	3.22	4.3	4.2	7.66				
S1	Impact Station	0759-0815	8.6	E	0.2	*Surface*	24.9	24.8	29.3	29.4	7.50	7.54	107.1	107.6	3.04	3.09	3.6	3.7	7.52	2.93	2.0%	3.55	3.4%
						Middle	24.8	24.7	29.5	29.6	7.63	7.61	108.0	107.7	2.86	2.82	3.7	3.7	7.62				
						Bottom	24.6	24.7	29.6	29.5	7.49	7.43	105.9	105.4	2.85	2.90	3.1	3.5	7.46				
S2	Impact Station	1006-1022	12.8	W	0.1	*Surface*	24.9	24.8	29.3	29.4	7.74	7.70	110.4	109.9	2.84	2.91	3.4	3.5	7.72	2.86	-0.3%	3.38	-1.5%
						Middle	24.8	24.9	29.6	29.5	7.64	7.61	108.1	107.7	2.59	2.66	2.8	3.2	7.63				
						Bottom	24.8	24.7	29.6	29.7	7.49	7.52	105.9	106.4	3.05	3.10	4.0	3.4	7.51				
S3	Impact Station	1047-1100	9.6	W	0.2	*Surface*	24.9	24.8	29.3	29.4	7.65	7.62	109.2	108.8	2.80	2.86	3.6	3.4	7.64	2.80	-2.3%	3.30	-3.9%
						Middle	24.8	24.8	29.4	29.5	7.73	7.72	109.4	109.3	2.61	2.68	3.1	3.2	7.73				
						Bottom	24.6	24.7	29.6	29.5	7.60	7.63	107.4	107.8	2.90	2.97	3.2	3.3	7.62				

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

Sampling Date : 18-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	1100-1116	22.2	E	0.1	*Surface*	24.9	25.0	29.4	29.3	7.48	7.52	106.9	107.4	3.10	3.03	3.7	3.6	7.50	2.93	N.A.	3.52	N.A.
						Middle	24.6	24.7	29.5	29.6	7.31	7.34	103.5	104.0	2.86	2.81	3.2	3.1	7.33				
						Bottom	24.5	24.4	29.6	29.7	7.22	7.18	102.2	101.5	2.92	2.85	3.8	3.7	7.20				
G1	Gradient Station	1206-1222	12.2	E	0.1	*Surface*	25.1	25.0	29.5	29.6	7.30	7.26	104.3	104.0	2.90	2.86	3.2	3.6	7.28	2.84	N.A.	3.35	N.A.
						Middle	24.9	25.0	29.8	29.7	7.38	7.42	104.5	105.1	2.68	2.70	3.3	3.3	7.40				
						Bottom	24.8	24.7	29.8	29.9	7.24	7.19	102.4	101.7	2.89	3.00	3.1	3.6	7.22				
G2	Gradient Station	1418-1434	15.8	W	0.2	*Surface*	25.0	25.0	29.3	29.4	7.81	7.76	111.6	110.9	2.65	2.56	3.2	3.0	7.79	2.83	N.A.	3.38	N.A.
						Middle	25.0	24.9	29.6	29.5	7.68	7.62	108.8	107.9	2.79	2.93	3.4	3.3	7.65				
						Bottom	24.7	24.8	29.7	29.8	7.46	7.49	105.6	105.9	3.05	2.99	4.0	3.4	7.48				
G3	Gradient Station	1312-1328	17.2	E	0.2	*Surface*	25.1	25.0	29.3	29.4	7.56	7.62	108.0	108.9	3.48	3.39	4.2	4.4	7.59	3.37	N.A.	4.18	N.A.
						Middle	24.9	24.3	29.5	29.6	7.51	7.54	106.4	107.2	3.18	3.26	3.9	4.3	7.53				
						Bottom	24.8	24.8	29.7	29.6	7.39	7.36	104.5	104.1	3.42	3.51	4.1	4.2	7.38				
E7	Impact Station	1122-1138	23.8	E	0.2	*Surface*	25.0	24.9	29.3	29.4	7.65	7.71	112.8	113.8	2.98	2.90	3.3	3.2	7.68	2.89	-1.3%	3.28	-6.6%
						Middle	24.7	24.6	29.6	29.5	7.49	7.62	106.1	107.9	2.91	3.00	3.2	3.3	7.56				
						Bottom	24.4	24.4	29.7	29.8	7.25	7.20	102.5	101.9	2.75	2.81	3.3	3.4	7.23				
E8	Impact Station	1334-1350	18.8	E	0.2	*Surface*	25.1	25.1	29.2	29.3	7.70	7.76	110.0	110.9	2.88	2.95	3.5	3.5	7.73	2.87	-2.1%	3.42	-2.8%
						Middle	25.0	25.1	29.4	29.5	7.56	7.54	107.1	106.8	2.61	2.67	3.4	3.0	7.55				
						Bottom	24.8	24.7	29.8	29.7	7.42	7.45	104.9	105.4	3.01	3.08	3.7	3.4	7.44				
E9	Impact Station	1228-1244	E	0.1	16.8	*Surface*	25.0	24.9	29.4	29.5	7.25	7.32	103.6	104.4	3.30	3.37	4.0	3.7	7.29	3.34	13.9%	4.02	14.2%
						Middle	24.6	24.7	29.6	29.7	7.16	7.19	104.4	101.8	3.46	3.41	4.2	4.1	7.18				
						Bottom	24.6	24.5	29.7	29.6	7.03	7.01	99.4	99.1	3.20	3.28	3.8	4.3	7.02				
F1	Impact Station	1250-1306	E	0.1	14.4	*Surface*	25.1	25.0	29.4	29.5	7.77	7.82	111.0	111.7	3.16	3.09	4.1	3.4	7.80	3.24	10.5%	3.90	10.9%
						Middle	24.9	24.8	29.7	29.8	7.50	7.46	106.2	105.7	3.28	3.22	4.0	4.2	7.48				
						Bottom	24.6	24.7	29.8	29.9	7.59	7.54	107.3	106.6	3.39	3.28	4.1	3.6	7.57				
S1	Impact Station	1144-1200	8.8	E	0.2	*Surface*	25.0	25.0	29.4	29.5	7.41	7.45	105.9	106.4	3.10	3.15	3.4	3.5	7.43	2.99	2.0%	3.40	-3.3%
						Middle	24.8	24.9	29.6	29.5	7.54	7.52	106.8	106.5	2.92	2.88	3.5	3.2	7.53				
						Bottom	24.8	24.7	29.6	29.7	7.40	7.34	104.7	104.2	2.91	2.96	3.5	3.3	7.37				
S2	Impact Station	1356-1412	13.2	W	0.1	*Surface*	25.0	24.9	29.4	29.5	7.65	7.61	109.2	108.7	2.90	2.97	3.5	3.5	7.63	2.92	-0.3%	3.43	-2.4%
						Middle	24.9	24.8	29.6	29.7	7.55	7.52	106.9	106.5	2.65	2.72	3.1	3.2	7.54				
						Bottom	24.9	24.8	29.7	29.8	7.40	7.43	104.7	105.1	3.11	3.16	3.8	3.5	7.42				
S3	Impact Station	1442-1500	9.8	W	0.2	*Surface*	24.9	25.0	29.4	29.5	7.56	7.53	108.0	107.6	2.86	2.92	3.2	3.8	7.55	2.86	-2.2%	3.55	0.9%
						Middle	24.9	24.8	29.5	29.6	7.64	7.63	108.2	108.1	2.67	2.74	3.5	3.3	7.64				
						Bottom	24.7	24.7	29.6	29.7	7.51	7.54	106.2	106.6	2.96	3.03	3.9	3.6	7.53				

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

Sampling Date : 18-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	1505-1522	22.2	W	0.3	*Surface*	25.3	25.2	29.3	29.4	7.53	7.50	108.1	107.7	2.94	2.90	3.8	3.2	7.52	2.90	N.A.	3.57	N.A.
						Middle	25.1	25.0	29.5	29.6	7.41	7.46	106.1	106.8	2.87	2.82	3.4	3.7	7.44				
						Bottom	24.9	24.9	29.5	29.6	7.38	7.34	105.4	103.8	2.96	2.91	3.5	3.8	7.36				
G1	Gradient Station	1607-1620	11.8	W	0.2	*Surface*	25.2	25.2	29.4	29.3	7.52	7.48	107.8	107.3	2.93	2.96	3.8	3.6	7.50	2.82	N.A.	3.37	N.A.
						Middle	25.1	25.0	29.5	29.4	7.49	7.54	107.3	107.9	2.87	2.88	3.4	3.1	7.52				
						Bottom	25.0	24.9	29.5	29.6	7.43	7.47	106.2	106.7	2.68	2.62	3.2	3.1	7.45				
G2	Gradient Station	1822-1837	15.6	E	0.2	*Surface*	25.2	25.2	29.5	29.4	7.29	7.26	104.7	104.3	2.84	2.80	3.4	3.1	7.28	2.89	N.A.	3.33	N.A.
						Middle	24.9	24.8	29.6	29.7	7.17	7.20	102.4	102.8	2.97	2.91	3.6	3.5	7.19				
						Bottom	24.8	24.7	29.7	29.7	7.39	7.36	105.5	105.1	2.88	2.94	3.2	3.2	7.38				
G3	Gradient Station	1708-1724	16.8	E	0.2	*Surface*	25.2	25.1	29.3	29.4	7.70	7.74	110.4	110.9	3.02	3.06	3.4	4.0	7.72	3.13	N.A.	3.75	N.A.
						Middle	25.1	25.0	29.6	29.5	7.62	7.59	109.3	108.9	3.24	3.20	3.7	3.7	7.61				
						Bottom	24.9	24.9	29.7	29.7	7.57	7.59	108.3	108.6	3.11	3.16	3.7	4.0	7.58				
E7	Impact Station	1527-1542	24.3	W	0.3	*Surface*	25.3	25.3	29.4	29.3	7.47	7.44	107.3	106.9	2.86	2.82	3.4	3.4	7.46	2.73	-6.0%	3.37	-5.6%
						Middle	25.1	25.1	29.5	29.4	7.39	7.43	105.8	106.4	2.69	2.74	3.2	3.3	7.41				
						Bottom	25.0	24.4	29.6	29.5	7.51	7.55	107.5	108.0	2.60	2.65	3.4	3.5	7.53				
E8	Impact Station	1730-1748	18.6	E	0.2	*Surface*	25.2	25.2	29.5	29.4	7.72	7.68	110.9	110.4	3.02	3.06	3.6	3.4	7.70	2.97	2.4%	3.55	-0.5%
						Middle	24.9	24.8	29.5	29.6	7.54	7.50	107.7	107.2	2.97	2.91	3.6	3.6	7.52				
						Bottom	24.8	24.9	29.6	29.7	7.49	7.45	106.8	106.3	2.90	2.96	3.5	3.6	7.47				
E9	Impact Station	1625-1639	16.6	W	0.3	*Surface*	25.2	25.3	29.4	29.4	7.64	7.67	109.6	110.1	3.07	3.09	3.7	3.7	7.66	3.05	5.2%	3.73	4.7%
						Middle	24.8	24.9	29.6	29.5	7.59	7.56	108.2	108.6	3.18	3.15	4.1	3.8	7.58				
						Bottom	24.9	24.8	29.6	29.7	7.37	7.40	105.2	105.6	2.90	2.91	3.6	3.5	7.39				
F1	Impact Station	1645-1700	14.4	W	0.3	*Surface*	25.3	25.2	29.3	29.2	7.68	7.64	110.3	109.8	2.97	2.91	3.8	3.8	7.66	3.05	5.1%	3.70	3.7%
						Middle	25.0	24.9	29.6	29.6	7.74	7.77	110.8	111.3	3.09	3.07	3.4	3.7	7.76				
						Bottom	24.8	24.7	29.7	29.6	7.81	7.78	111.5	111.1	3.15	3.10	3.8	3.7	7.80				
S1	Impact Station	1547-1601	9.8	W	0.2	*Surface*	25.2	25.3	29.3	29.4	7.59	7.55	108.9	108.4	2.79	2.83	3.1	3.4	7.57	2.86	-1.4%	3.35	-6.1%
						Middle	25.0	25.0	29.5	29.5	7.67	7.63	109.7	109.1	2.88	2.81	3.5	3.1	7.65				
						Bottom	24.9	24.8	29.6	29.6	7.68	7.62	109.7	108.9	2.94	2.90	3.5	3.5	7.65				
S2	Impact Station	1805-1817	12.8	E	0.2	*Surface*	25.2	25.3	29.5	29.4	7.43	7.40	106.7	106.3	3.02	3.08	3.3	4.0	7.42	3.04	4.9%	3.63	1.9%
						Middle	25.0	24.9	29.5	29.5	7.28	7.24	104.1	103.6	3.17	3.15	4.1	3.4	7.26				
						Bottom	24.9	24.9	29.6	29.5	7.25	7.21	103.5	103.0	2.94	2.90	3.2	3.8	7.23				
S3	Impact Station	1845-1900	9.8	e	0.2	*Surface*	25.2	25.2	29.4	29.4	7.47	7.49	107.1	107.4	3.09	3.06	3.4	4.0	7.48	3.08	6.1%	3.75	5.1%
						Middle	24.9	24.9	29.5	29.6	7.34	7.38	104.8	105.4	3.12	3.07	3.7	3.7	7.36				
						Bottom	24.8	24.7	29.7	29.6	7.21	7.24	103.0	103.4	3.08	3.05	3.7	4.0	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 : 18-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	2010-2026	31.6	E	0.4	*Surface*	25.1	25.1	29.6	29.6	7.84	7.81	112.4	112.0	2.41	2.47	3.1	2.7	7.83	2.47	N.A.	2.95	N.A.
						Middle	24.9	24.9	29.7	29.7	7.79	7.75	111.4	110.9	2.39	2.44	2.7	3.0	7.77				
						Bottom	24.8	24.8	29.7	29.8	7.91	7.87	113.0	112.5	2.58	2.54	3.1	3.1	7.89				
G3	Gradient Station	1930-1946	17.4	E	0.3	*Surface*	25.1	25.2	29.4	29.3	7.79	7.75	111.6	111.1	2.71	2.76	3.0	3.3	7.77	2.54	N.A.	2.97	N.A.
						Middle	24.8	24.7	29.5	29.6	7.60	7.63	108.4	108.9	2.37	2.30	2.8	2.5	7.62				
						Bottom	24.7	24.7	29.6	29.7	7.51	7.48	106.9	106.5	2.50	2.58	2.8	3.4	7.50				
G4	Gradient Station	2043-2058	20.4	E	0.2	*Surface*	25.1	25.0	29.5	29.5	7.55	7.51	108.1	107.5	2.77	2.74	3.3	3.6	7.53	2.92	N.A.	3.55	N.A.
						Middle	24.8	24.9	29.5	29.6	7.66	7.63	109.2	108.8	3.01	3.06	3.6	3.7	7.65				
						Bottom	24.8	24.7	29.7	29.7	7.74	7.70	110.5	110.0	2.99	2.92	3.6	3.5	7.72				
G7	Gradient Station	2122-2137	17.8	E	0.3	*Surface*	25.1	25.1	29.6	29.6	7.57	7.55	108.6	108.3	2.98	2.92	3.9	3.3	7.56	2.98	N.A.	3.55	N.A.
						Middle	24.7	24.8	29.7	29.7	7.38	7.34	105.1	104.5	2.88	2.81	3.1	3.3	7.36				
						Bottom	24.7	24.6	29.8	29.7	7.55	7.50	107.7	107.1	3.12	3.19	3.5	4.2	7.53				
B1	Impact Station	2245-2300	8.4	W	0.3	*Surface*	25.0	25.1	29.4	29.4	7.37	7.34	105.4	105.0	2.95	2.90	3.3	3.5	7.36	3.01	21.7%	3.52	19.2%
						Middle	24.8	24.7	29.5	29.5	7.52	7.48	107.2	106.7	2.98	2.95	3.6	3.5	7.50				
						Bottom	24.8	24.8	29.6	29.6	7.55	7.59	107.7	108.3	3.17	3.10	3.5	3.7	7.57				
B2	Impact Station	2225-2235	11.8	W	0.3	*Surface*	25.0	25.1	29.3	29.4	7.40	7.44	105.7	106.3	3.07	3.01	3.7	3.6	7.42	3.06	23.7%	3.67	24.3%
						Middle	24.9	24.8	29.5	29.4	7.37	7.34	105.2	104.7	3.10	3.06	3.7	3.7	7.36				
						Bottom	24.9	24.9	29.6	29.5	7.60	7.57	108.5	108.1	3.02	3.08	3.3	4.0	7.59				
B3	Impact Station	2155-2205	11.8	W	0.3	*Surface*	25.1	25.0	29.4	29.4	7.34	7.38	105.1	105.6	2.98	2.91	3.9	3.5	7.36	3.02	22.0%	3.72	26.0%
						Middle	24.7	24.8	29.4	29.5	7.51	7.48	106.8	106.4	3.04	3.06	3.9	3.7	7.50				
						Bottom	24.7	24.6	29.7	29.7	7.19	7.23	102.4	103.0	3.08	3.02	3.7	3.6	7.21				
E1	Impact Station	2140-2151	12.4	W	0.2	*Surface*	25.0	25.1	29.4	29.4	7.47	7.43	106.8	106.3	2.86	2.82	3.8	3.4	7.45	2.94	18.9%	3.65	23.7%
						Middle	24.8	24.9	29.5	29.5	7.26	7.29	103.5	103.9	2.94	2.97	3.8	3.9	7.28				
						Bottom	24.7	24.7	29.6	29.6	7.44	7.47	105.9	106.3	2.99	3.05	3.6	3.4	7.46				
E2	Impact Station	2030-2040	9.2	E	0.3	*Surface*	25.2	25.1	29.5	29.4	7.50	7.54	107.7	108.2	2.81	2.86	3.6	3.5	7.52	2.95	19.2%	3.55	20.3%
						Middle	24.8	24.9	29.4	29.4	7.42	7.37	105.7	105.1	2.97	2.91	3.6	3.3	7.40				
						Bottom	24.7	24.7	29.5	29.6	7.58	7.54	107.9	107.4	3.04	3.09	3.6	3.7	7.56				
E6	Impact Station	2102-2117	22.6	E	0.3	*Surface*	25.1	25.1	29.6	29.5	7.61	7.58	109.1	108.7	2.63	2.67	3.4	3.2	7.60	2.83	14.4%	3.37	14.1%
						Middle	24.8	24.7	29.6	29.7	7.51	7.54	107.1	107.5	2.87	2.93	3.4	3.5	7.53				
						Bottom	24.8	24.8	29.6	29.7	7.47	7.43	106.5	106.0	2.95	2.91	3.2	3.5	7.45				
E8	Impact Station	1910-1925	19.2	E	0.2	*Surface*	25.2	25.1	29.4	29.3	7.44	7.47	106.7	107.1	2.57	2.63	3.3	3.4	7.46	2.79	12.7%	3.35	13.6%
						Middle	24.9	24.8	29.4	29.5	7.52	7.49	107.4	107.0	2.89	2.94	3.2	3.2	7.51				
						Bottom	24.8	24.8	29.5	29.6	7.66	7.63	109.2	108.8	2.81	2.87	3.6	3.4	7.65				
F1	Impact Station	1950-2004	14.8	E	0.3	*Surface*	25.2	25.2	29.6	29.7	7.57	7.54	108.7	108.3	2.63	2.57	3.2	3.3	7.56	2.76	11.5%	3.35	13.6%
						Middle	24.9	25.0	29.8	29.7	7.64	7.60	109.3	108.8	2.90	2.96	3.5	3.3	7.62				
						Bottom	24.8	24.7	29.7	29.8	7.70	7.67	110.0	109.6	2.77	2.70	3.6	3.2	7.69				
I1	Impact Station	2209-2222	17.2	W	0.3	*Surface*	25.1	25.1	29.5	29.5	7.59	7.57	108.7	108.4	2.77	2.83	3.3	3.4	7.58	2.69	8.6%	3.23	9.6%
						Middle	24.8	24.8	29.5	29.5	7.48	7.44	106.7	106.2	2.62	2.67	2.9	3.2	7.46				
						Bottom	24.7	24.7	29.7	29.7	7.33	7.37	104.4	104.9	2.58	2.64	3.4	3.2	7.35				

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

Sampling Date : 19-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	0800-0815	31.9	E	0.2	*Surface*	25.5	25.5	29.1	29.2	7.90	7.92	112.9	113.1	2.34	2.36	2.8	2.7	7.91	2.47	N.A.	2.83	N.A.
						Middle	25.4	25.3	29.3	29.3	7.74	7.76	110.3	110.5	2.45	2.47	2.8	2.7	7.75				
						Bottom	25.2	25.1	29.4	29.5	7.55	7.57	107.3	107.5	2.60	2.62	3.0	3.0	7.56				
G3	Gradient Station	0720-0735	17.6	E	0.2	*Surface*	25.4	25.4	29.1	29.2	7.85	7.83	112.2	112.0	2.32	2.34	2.8	2.9	7.84	2.47	N.A.	3.05	N.A.
						Middle	25.3	25.2	29.3	29.4	7.64	7.66	108.8	109.0	2.45	2.47	3.0	3.0	7.65				
						Bottom	25.0	25.1	29.5	29.6	7.47	7.49	106.2	106.4	2.60	2.62	3.3	3.3	7.48				
G4	Gradient Station	0840-0855	20.6	W	0.3	*Surface*	25.5	25.4	28.9	29.0	7.54	7.56	112.1	112.3	2.04	2.06	2.5	2.5	7.55	2.22	N.A.	2.85	N.A.
						Middle	25.3	25.3	29.1	29.2	7.69	7.71	109.5	109.7	2.17	2.19	2.8	2.9	7.70				
						Bottom	25.1	25.0	29.3	29.4	7.57	7.55	107.6	107.4	2.43	2.45	3.2	3.2	7.56				
G7	Gradient Station	0920-0935	18.0	E	0.3	*Surface*	25.4	25.5	28.9	29.0	7.76	7.78	110.9	111.1	2.17	2.19	2.8	2.7	7.77	2.38	N.A.	3.00	N.A.
						Middle	25.3	25.3	29.1	29.2	7.53	7.55	107.3	107.5	2.40	2.38	3.0	2.9	7.54				
						Bottom	25.2	25.1	29.3	29.4	7.36	7.38	104.6	104.8	2.55	2.57	3.3	3.3	7.37				
B1	Impact Station	1050-1100	8.6	E	0.3	*Surface*	25.1	25.0	29.1	29.2	7.51	7.49	107.3	107.1	2.30	2.32	2.8	2.8	7.50	2.46	-0.7%	3.03	7.1%
						Middle	24.9	24.8	29.3	29.3	7.30	7.28	104.0	103.8	2.47	2.49	3.0	3.1	7.29				
						Bottom	24.7	24.7	29.4	29.5	7.15	7.17	101.6	101.8	2.57	2.59	3.2	3.3	7.16				
B2	Impact Station	1035-1045	12.1	E	0.4	*Surface*	25.2	25.1	29.2	29.3	7.64	7.66	109.2	109.4	2.45	2.47	2.8	2.8	7.65	2.63	6.2%	3.07	8.2%
						Middle	25.0	24.9	29.4	29.5	7.39	7.41	105.3	105.5	2.66	2.68	3.0	3.1	7.40				
						Bottom	24.7	24.6	29.6	29.6	7.27	7.25	103.3	103.1	2.74	2.76	3.3	3.4	7.26				
B3	Impact Station	1005-1020	12.1	E	0.4	*Surface*	25.6	25.5	28.9	29.0	7.51	7.53	107.3	107.5	2.37	2.39	2.8	2.8	7.52	2.53	2.4%	3.13	10.6%
						Middle	25.4	25.3	29.1	29.2	7.37	7.35	105.0	104.8	2.49	2.51	3.2	3.1	7.36				
						Bottom	25.1	25.2	29.3	29.4	7.19	7.17	102.2	102.0	2.73	2.71	3.4	3.5	7.18				
E1	Impact Station	0940-1000	12.7	W	0.4	*Surface*	25.4	25.5	29.2	29.1	7.61	7.63	108.8	109.0	2.25	2.27	2.8	2.8	7.62	2.38	-3.9%	3.03	7.1%
						Middle	25.3	25.3	29.3	29.4	7.45	7.47	106.1	106.3	2.40	2.38	3.1	3.1	7.46				
						Bottom	25.1	25.0	29.5	29.6	7.36	7.38	104.6	104.8	2.51	2.45	3.2	3.2	7.37				
E2	Impact Station	0820-0833	9.5	E	0.4	*Surface*	25.6	25.5	29.1	29.2	7.68	7.70	109.8	110.0	2.49	2.51	3.0	3.1	7.69	2.63	6.5%	3.27	15.3%
						Middle	25.4	25.4	29.3	29.4	7.45	7.47	106.1	106.3	2.63	2.65	3.2	3.3	7.46				
						Bottom	25.2	25.1	29.5	29.6	7.33	7.35	104.2	104.4	2.77	2.75	3.5	3.5	7.34				
E6	Impact Station	0900-0915	22.8	E	0.2	*Surface*	25.6	25.5	29.1	29.2	7.91	7.89	113.1	112.9	2.24	2.26	2.8	2.8	7.90	2.37	-4.3%	3.07	8.2%
						Middle	25.4	25.3	29.3	29.4	7.75	7.73	110.4	110.2	2.34	2.36	3.0	3.1	7.74				
						Bottom	25.2	25.1	29.6	29.5	7.47	7.45	106.2	106.0	2.49	2.51	3.3	3.4	7.46				
E8	Impact Station	0700-0715	19.5	E	0.3	*Surface*	25.5	25.4	28.9	29.0	7.62	7.60	108.9	108.7	2.40	2.42	2.7	2.8	7.61	2.54	2.7%	2.98	5.3%
						Middle	25.3	25.3	29.1	29.2	7.41	7.43	105.6	105.7	2.55	2.57	3.0	3.0	7.42				
						Bottom	25.2	25.1	29.3	29.4	7.25	7.23	103.1	102.9	2.64	2.66	3.2	3.2	7.24				
F1	Impact Station	0740-0755	15.0	E	0.2	*Surface*	25.6	25.5	28.8	28.9	7.74	7.76	110.6	110.8	2.24	2.26	2.6	2.6	7.75	2.34	-5.5%	2.87	1.2%
						Middle	25.4	25.3	29.0	29.1	7.94	7.56	107.4	107.6	2.34	2.36	2.8	2.8	7.75				
						Bottom	25.2	25.1	29.3	29.4	7.37	7.39	104.8	105.0	2.40	2.42	3.2	3.2	7.38				
I1	Impact Station	1022-1032	17.5	W	0.3	*Surface*	25.4	25.3	29.1	29.2	7.85	7.87	112.2	112.4	2.19	2.17	2.7	2.6	7.86	2.33	-5.8%	3.00	5.9%
						Middle	25.2	25.2	29.3	29.2	7.65	7.63	109.0	108.8	2.34	2.36	3.0	3.1	7.64				
						Bottom	25.1	25.0	29.4	29.4	7.41	7.43	105.3	105.5	2.45	2.47	3.3	3.3	7.42				

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

Sampling Date : 19-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	1200-1215	31.7	E	0.4	*Surface*	25.6	25.5	29.2	29.3	7.37	7.35	109.3	109.1	2.99	2.61	2.9	3.0	7.36	2.85	N.A.	3.22	N.A.
						Middle	25.4	25.4	29.4	29.4	7.20	7.18	102.6	102.4	2.78	2.80	3.2	3.2	7.19				
						Bottom	25.2	25.1	29.5	29.6	7.04	7.08	100.0	100.2	2.94	2.96	3.4	3.6	7.06				
G3	Gradient Station	1120-1135	17.4	E	0.3	*Surface*	25.4	25.3	28.9	29.0	7.61	7.63	108.8	109.0	2.43	2.45	2.7	2.8	7.62	2.67	N.A.	3.13	N.A.
						Middle	25.2	25.2	29.1	29.2	7.50	7.48	106.8	106.6	2.70	2.72	3.2	3.2	7.49				
						Bottom	25.1	25.0	29.3	29.4	7.25	7.23	103.0	102.8	2.84	2.86	3.4	3.5	7.24				
G4	Gradient Station	1240-1255	20.3	W	0.2	*Surface*	25.4	25.5	29.2	29.3	7.40	7.38	105.8	105.6	2.37	2.39	2.7	2.7	7.39	2.51	N.A.	3.05	N.A.
						Middle	25.4	25.3	29.4	29.4	7.15	7.13	101.8	101.6	2.48	2.50	3.0	3.0	7.14				
						Bottom	25.2	25.1	29.5	29.5	7.00	7.02	99.5	99.7	2.64	2.68	3.4	3.5	7.01				
G7	Gradient Station	1320-1335	17.5	W	0.1	*Surface*	25.4	25.5	28.7	28.8	7.16	7.14	102.3	102.1	2.74	2.76	3.1	3.2	7.15	2.93	N.A.	3.30	N.A.
						Middle	25.3	25.3	28.9	29.0	7.03	7.01	100.2	100.0	2.93	2.95	3.2	3.3	7.02				
						Bottom	25.2	25.1	29.1	29.2	6.83	6.85	97.1	97.3	3.11	3.09	3.5	3.5	6.84				
B1	Impact Station	1450-1500	8.4	W	0.3	*Surface*	25.1	25.1	29.0	29.1	7.36	7.38	105.2	105.4	2.17	2.15	2.7	2.5	7.37	2.31	-18.9%	2.75	-14.5%
						Middle	25.0	24.7	29.2	29.3	7.25	7.23	103.3	103.1	2.30	2.32	2.6	2.7	7.24				
						Bottom	24.8	24.7	29.4	29.5	6.94	6.92	98.6	98.4	2.45	2.47	3.0	3.0	6.93				
B2	Impact Station	1437-1447	11.7	W	0.3	*Surface*	25.0	25.1	28.9	29.0	7.50	7.48	107.3	107.1	2.55	2.57	2.8	2.9	7.49	2.63	-7.6%	3.13	-2.6%
						Middle	24.9	24.8	29.1	29.2	7.29	7.31	103.8	104.0	2.64	2.60	3.1	3.1	7.30				
						Bottom	24.7	24.6	29.3	29.4	7.05	7.07	100.2	100.4	2.86	2.57	3.5	3.4	7.06				
B3	Impact Station	1400-1415	12.3	W	0.4	*Surface*	25.2	25.1	29.0	29.1	7.60	7.58	108.6	108.4	2.60	2.62	2.8	2.9	7.59	2.74	-3.7%	3.18	-1.0%
						Middle	25.0	24.9	29.2	29.3	7.25	7.27	103.3	103.5	2.74	2.76	3.1	3.1	7.26				
						Bottom	24.8	24.7	29.4	29.5	7.04	7.02	100.1	99.9	2.85	2.87	3.7	3.5	7.03				
E1	Impact Station	1340-1355	12.9	W	0.3	*Surface*	25.6	25.5	28.7	28.8	7.30	7.32	104.4	104.6	2.44	2.46	2.8	2.9	7.31	2.56	-10.0%	3.12	-3.1%
						Middle	25.4	25.3	28.9	29.0	7.24	7.22	103.1	102.9	2.53	2.55	2.9	3.1	7.23				
						Bottom	25.2	25.1	29.1	29.1	6.93	6.95	98.5	98.7	2.69	2.71	3.5	3.5	6.94				
E2	Impact Station	1220-1235	9.2	W	0.4	*Surface*	25.3	25.2	28.9	29.0	7.34	7.36	104.9	104.7	2.50	2.52	2.8	2.9	7.35	2.63	-7.7%	3.10	-3.6%
						Middle	25.1	25.0	29.1	29.2	7.20	7.18	102.6	102.4	2.61	2.63	3.1	3.1	7.19				
						Bottom	24.9	24.8	29.3	29.4	7.04	7.02	100.1	99.9	2.74	2.76	3.3	3.4	7.03				
E6	Impact Station	1300-1315	22.4	W	0.2	*Surface*	25.2	25.1	29.0	29.1	7.29	7.27	104.2	104.0	2.44	2.46	2.8	2.8	7.28	2.62	-7.8%	3.17	-1.6%
						Middle	25.0	24.9	29.2	29.3	7.00	7.02	99.7	99.7	2.63	2.65	3.0	3.1	7.01				
						Bottom	24.7	24.8	29.4	29.5	6.94	6.92	98.6	98.4	2.77	2.79	3.6	3.7	6.93				
E8	Impact Station	1100-1115	19.2	W	0.2	*Surface*	25.6	25.5	28.7	28.8	7.43	7.45	106.2	106.4	2.54	2.56	3.0	3.0	7.44	2.65	-6.9%	3.25	1.0%
						Middle	25.4	25.3	28.9	29.0	7.30	7.32	104.0	104.2	2.64	2.66	3.2	3.3	7.31				
						Bottom	25.3	25.2	29.1	29.2	7.15	7.13	101.6	101.4	2.74	2.76	3.6	3.4	7.14				
F1	Impact Station	1140-1155	14.5	E	0.3	*Surface*	25.5	25.5	29.0	29.1	7.54	7.56	107.8	108.0	2.34	2.36	2.6	2.6	7.55	2.61	-8.2%	2.98	-7.3%
						Middle	25.4	25.3	29.2	29.3	7.25	7.27	103.3	103.5	2.49	2.97	2.8	2.8	7.26				
						Bottom	25.2	25.1	29.4	29.5	7.04	7.06	100.1	99.9	2.77	2.75	3.6	3.5	7.05				
I1	Impact Station	1400-1415	17.8	W	0.2	*Surface*	25.3	25.4	29.1	29.2	7.46	7.48	106.7	106.9	2.84	2.86	3.0	3.0	7.47	3.00	5.4%	3.30	2.6%
						Middle	25.2	25.2	29.3	29.4	7.31	7.33	104.1	104.3	2.99	3.01	3.3	3.4	7.32				
						Bottom	25.1	25.0	29.5	29.6	7.09	7.11	100.8	101.0	3.14	3.16	3.5	3.6	7.10				

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

Sampling Date : 19-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	1557-1611	31.5	E	0.3	*Surface*	25.2	25.1	29.6	29.7	7.84	7.88	112.6	112.9	2.48	2.52	2.8	2.8	7.86	2.53	N.A.	2.88	N.A.
						Middle	25.0	25.0	29.8	29.7	7.79	7.75	111.3	110.9	2.63	2.68	3.0	3.2	7.77				
						Bottom	24.9	24.9	29.9	29.9	7.65	7.63	109.1	108.8	2.47	2.41	2.8	2.7	7.64				
G3	Gradient Station	1519-1533	17.5	E	0.2	*Surface*	25.2	25.3	29.8	29.7	7.81	7.77	112.2	112.0	2.51	2.55	2.8	2.9	7.79	2.61	N.A.	3.08	N.A.
						Middle	25.2	25.2	29.9	29.8	7.72	7.74	110.3	110.5	2.67	2.74	3.2	3.3	7.73				
						Bottom	25.1	25.0	29.9	29.9	7.54	7.56	107.5	107.8	2.63	2.54	3.2	3.1	7.55				
G4	Gradient Station	1630-1645	20.3	E	0.3	*Surface*	25.1	25.2	29.6	29.5	7.78	7.75	111.6	111.2	2.49	2.41	2.8	2.9	7.77	2.61	N.A.	3.25	N.A.
						Middle	25.1	25.0	29.7	29.6	7.64	7.63	109.2	109.1	2.65	2.57	3.4	3.3	7.64				
						Bottom	24.9	24.8	29.8	29.7	7.46	7.44	106.3	106.1	2.73	2.81	3.5	3.6	7.45				
G7	Gradient Station	1708-1722	17.7	E	0.2	*Surface*	25.1	25.0	29.6	29.5	7.54	7.56	108.3	108.5	2.86	2.78	3.2	3.1	7.55	2.87	N.A.	3.18	N.A.
						Middle	24.9	24.8	29.7	29.6	7.63	7.66	109.1	109.5	2.77	2.71	3.0	2.8	7.65				
						Bottom	24.7	24.8	29.8	29.7	7.48	7.51	106.7	107.1	3.10	3.02	3.6	3.4	7.50				
B1	Impact Station	1839-1852	18.2	W	0.3	*Surface*	25.1	25.0	29.6	29.7	7.57	7.56	108.7	108.6	2.92	2.97	3.2	3.3	7.57	2.83	11.8%	3.10	7.5%
						Middle	25.0	24.9	29.6	29.7	7.49	7.47	107.1	106.8	2.86	2.78	3.2	3.0	7.48				
						Bottom	24.9	24.8	29.8	29.9	7.41	7.43	105.6	105.6	2.74	2.71	3.0	2.9	7.42				
B2	Impact Station	1819-1834	11.8	W	0.2	*Surface*	25.2	25.3	29.6	29.5	7.68	7.64	110.3	109.8	2.86	2.91	2.9	3.0	7.66	3.00	18.6%	3.10	7.5%
						Middle	25.2	25.1	29.6	29.5	7.57	7.54	108.1	107.8	3.06	3.13	3.1	3.1	7.56				
						Bottom	25.0	24.9	29.7	29.6	7.48	7.47	106.7	106.6	3.07	2.98	3.3	3.2	7.48				
B3	Impact Station	1743-1758	11.7	W	0.3	*Surface*	25.3	25.2	28.6	29.5	7.73	7.75	111.0	111.3	2.88	2.81	3.1	3.0	7.74	2.94	16.0%	3.25	12.7%
						Middle	25.2	25.1	29.6	29.6	7.68	7.64	109.7	109.3	3.02	3.08	3.4	3.5	7.66				
						Bottom	25.2	25.1	29.7	29.6	7.52	7.54	107.2	107.4	2.96	2.87	3.3	3.2	7.53				
E1	Impact Station	1724-1738	12.5	W	0.3	*Surface*	25.2	25.3	29.5	29.4	7.69	7.67	110.4	110.2	2.65	2.54	3.0	2.9	7.68	2.77	9.4%	3.20	11.0%
						Middle	25.2	25.2	29.5	29.5	7.74	7.21	110.8	110.5	2.76	2.83	3.3	3.2	7.48				
						Bottom	25.1	25.0	29.6	29.7	7.63	7.62	108.9	108.8	2.95	2.89	3.3	3.5	7.63				
E2	Impact Station	1614-1628	9.3	E	0.4	*Surface*	25.2	25.1	29.7	29.6	7.56	7.58	108.6	108.8	2.65	2.57	3.0	2.9	7.57	2.74	8.2%	3.27	13.3%
						Middle	25.2	25.2	29.8	29.7	7.52	7.51	107.5	107.4	2.78	2.71	3.1	3.2	7.52				
						Bottom	29.8	29.8	29.8	29.8	7.46	7.42	106.4	106.1	2.89	2.83	3.8	3.6	7.44				
E6	Impact Station	1648-1703	22.5	E	0.2	*Surface*	25.2	25.1	29.5	29.5	7.64	7.61	109.7	109.4	2.57	2.53	2.9	2.8	7.63	2.74	8.2%	3.20	11.0%
						Middle	25.0	24.9	29.6	29.5	7.55	7.52	107.9	107.6	2.76	2.81	3.2	3.3	7.54				
						Bottom	24.9	24.8	29.7	29.6	7.46	7.48	106.4	106.7	2.92	2.84	3.6	3.4	7.47				
E8	Impact Station	1500-1515	19.1	E	0.2	*Surface*	25.1	25.2	29.7	29.6	7.64	7.61	109.7	109.4	2.47	2.41	2.7	2.5	7.63	2.57	1.5%	3.05	5.8%
						Middle	25.1	25.0	29.8	29.7	7.57	7.54	108.2	107.8	2.56	2.61	3.0	3.1	7.56				
						Bottom	24.9	24.8	29.9	29.8	7.46	7.42	106.8	106.5	2.63	2.74	3.4	3.6	7.44				
F1	Impact Station	1536-1551	14.7	E	0.3	*Surface*	25.1	25.0	29.6	29.7	7.73	7.71	110.9	110.5	2.33	2.40	2.6	2.7	7.72	2.50	-1.1%	2.95	2.3%
						Middle	25.0	24.9	29.8	29.7	7.65	7.68	109.3	109.6	2.67	2.61	3.0	2.9	7.67				
						Bottom	24.9	24.8	29.9	29.8	7.51	7.54	107.1	107.4	2.53	2.48	3.3	3.2	7.53				
I1	Impact Station	1801-1815	17.3	W	0.3	*Surface*	25.1	25.0	29.7	29.6	7.65	7.61	109.9	109.4	2.58	2.52	2.8	2.8	7.63	2.66	5.1%	3.15	9.2%
						Middle	24.9	25.0	29.8	29.7	7.54	7.51	107.4	107.1	2.63	2.71	3.0	3.1	7.53				
						Bottom	24.9	24.8	29.9	29.8	7.58	7.59	108.1	108.2	2.74	2.79	3.6	3.6	7.59				

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

Sampling Date : 19-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	1959-2015	31.3	E	0.3	*Surface*	25.1	25.0	29.7	29.8	7.91	7.87	113.6	113.1	2.53	2.61	2.7	2.8	7.89	2.47	N.A.	2.72	N.A.
						Middle	24.9	24.8	29.9	29.8	7.69	7.66	109.9	109.6	2.48	2.42	2.8	2.7	7.68				
						Bottom	24.7	24.6	29.9	30.0	7.54	7.57	107.5	107.7	2.34	2.41	2.6	2.7	7.56				
G3	Gradient Station	1920-1935	17.2	E	0.3	*Surface*	25.1	25.2	29.7	29.6	7.73	7.76	111.0	111.4	2.68	2.61	2.7	2.7	7.75	2.61	N.A.	2.80	N.A.
						Middle	24.9	24.8	29.8	29.7	7.64	7.68	109.2	109.6	2.44	2.36	2.8	2.7	7.66				
						Bottom	24.6	24.7	29.9	29.8	7.47	7.44	106.5	106.1	2.75	2.81	2.9	3.0	7.46				
G4	Gradient Station	2037-2052	20.1	E	0.4	*Surface*	25.1	25.0	29.5	29.4	7.67	7.64	110.1	109.8	2.58	2.65	2.8	2.9	7.66	2.76	N.A.	3.13	N.A.
						Middle	24.8	24.9	29.6	29.5	7.53	7.57	107.6	107.9	2.73	2.78	3.0	3.2	7.55				
						Bottom	24.6	24.7	29.7	29.6	7.42	7.39	105.8	105.5	2.95	2.87	3.4	3.5	7.41				
G7	Gradient Station	2113-2128	17.6	E	0.3	*Surface*	25.1	25.0	29.6	29.5	7.67	7.64	110.1	109.7	2.84	2.76	3.0	2.8	7.66	2.92	N.A.	3.08	N.A.
						Middle	24.9	24.8	29.7	29.6	7.49	7.47	107.1	106.8	3.07	3.02	3.3	3.2	7.48				
						Bottom	24.7	24.6	29.7	29.6	7.53	7.56	107.4	107.7	2.96	2.89	3.1	3.1	7.55				
B1	Impact Station	2240-2255	18.1	W	0.3	*Surface*	25.0	25.1	29.6	29.5	7.42	7.46	106.6	107.1	2.86	2.93	3.2	3.3	7.44	2.95	19.7%	3.32	22.1%
						Middle	24.9	24.8	29.7	29.6	7.38	7.35	105.5	105.2	2.88	2.82	3.2	3.3	7.37				
						Bottom	24.8	24.7	29.8	29.9	7.31	7.33	104.2	104.5	3.07	3.14	3.5	3.4	7.32				
B2	Impact Station	2223-2236	11.6	W	0.3	*Surface*	25.2	25.1	29.5	29.5	7.53	7.56	108.2	108.5	3.03	3.10	3.1	3.2	7.55	3.05	23.7%	3.32	22.1%
						Middle	25.0	25.1	29.5	29.4	7.47	7.45	106.8	106.6	2.89	2.97	3.2	3.3	7.46				
						Bottom	24.8	24.8	29.6	29.7	7.39	7.36	105.4	105.1	3.18	3.13	3.6	3.5	7.38				
B3	Impact Station	2149-2103	11.6	W	0.3	*Surface*	25.2	25.1	29.6	29.7	7.46	7.48	107.1	107.5	2.87	2.79	3.0	2.9	7.47	2.93	18.8%	3.27	20.2%
						Middle	25.0	25.1	29.8	29.7	7.41	7.38	105.9	105.6	2.96	2.88	3.3	3.3	7.40				
						Bottom	25.0	24.9	29.8	29.8	7.43	7.47	105.9	106.2	3.09	2.98	3.6	3.5	7.45				
E1	Impact Station	2130-2145	12.3	W	0.2	*Surface*	25.1	25.0	29.5	29.6	7.51	7.53	107.8	108.1	2.76	2.71	3.0	3.1	7.52	2.84	15.1%	3.08	13.5%
						Middle	25.0	25.1	29.7	29.6	7.68	7.65	109.7	109.3	2.98	2.91	3.3	3.2	7.67				
						Bottom	24.9	24.8	29.7	29.6	7.47	7.44	106.5	106.1	2.87	2.79	2.9	3.0	7.46				
E2	Impact Station	2018-2034	9.1	E	0.3	*Surface*	25.1	25.0	29.6	29.5	7.41	7.43	106.4	106.6	2.76	2.83	2.9	3.0	7.42	2.86	16.1%	3.05	12.3%
						Middle	25.1	25.1	29.6	29.5	7.48	7.51	106.9	107.3	2.69	2.73	2.8	2.9	7.50				
						Bottom	25.0	24.9	29.7	29.6	7.36	7.38	104.9	105.2	3.12	3.04	3.4	3.3	7.37				
E6	Impact Station	2055-2109	22.3	E	0.3	*Surface*	25.0	24.9	29.4	29.5	7.53	7.56	108.1	108.4	2.61	2.69	2.8	2.8	7.55	2.80	13.6%	3.05	12.3%
						Middle	24.9	24.8	29.6	29.5	7.48	7.44	106.9	107.3	2.93	2.98	3.3	3.3	7.46				
						Bottom	24.6	24.5	29.8	29.7	7.42	7.41	105.8	105.7	2.85	2.74	3.1	3.0	7.42				
E8	Impact Station	1900-1916	18.9	E	0.3	*Surface*	25.0	24.9	29.6	29.5	7.58	7.56	108.7	108.9	2.34	2.43	2.6	2.7	7.57	2.60	5.5%	3.10	14.1%
						Middle	24.8	24.7	29.7	29.6	7.43	7.45	106.2	106.4	2.65	2.69	3.3	3.2	7.44				
						Bottom	24.6	24.7	29.8	29.8	7.34	7.31	104.7	104.4	2.78	2.71	3.5	3.3	7.33				
F1	Impact Station	1938-1953	14.5	E	0.2	*Surface*	25.0	24.9	29.5	29.6	7.62	7.66	109.4	109.8	2.41	2.52	2.6	2.7	7.64	2.76	12.0%	3.02	11.0%
						Middle	24.8	24.7	29.7	29.6	7.54	7.57	107.7	107.9	2.86	2.91	3.0	3.2	7.56				
						Bottom	24.6	24.7	29.7	29.8	7.42	7.41	105.8	105.7	2.97	2.89	3.3	3.3	7.42				
I1	Impact Station	2206-2220	17.1	W	0.3	*Surface*	25.0	24.9	29.6	29.6	7.52	7.50	107.9	108.2	2.65	2.61	2.8	2.7	7.51	2.71	9.9%	3.08	13.5%
						Middle	24.9	24.9	29.7	29.6	7.58	7.54	108.3	107.9	2.73	2.81	3.0	3.2	7.56				
						Bottom	24.8	24.7	29.8	29.7	7.43	7.41	105.9	105.7	2.76	2.69	3.5	3.3	7.42				

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

Sampling Date : 20-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	0820-0833	30.8	W	0.3	*Surface*	24.7	24.6	29.5	29.4	7.75	7.72	110.40	109.70	2.47	2.53	3.00	3.00	7.74	2.53	N.A.	3.08	N.A.
						Middle	24.6	24.7	29.5	29.6	7.70	7.66	109.40	109.10	2.45	2.50	2.70	3.00	7.68				
						Bottom	24.3	24.2	29.7	29.8	7.82	7.78	110.80	110.00	2.64	2.60	3.40	3.40	7.80				
G3	Gradient Station	0747-0759	16.8	W	0.2	*Surface*	24.8	24.8	29.4	29.3	7.70	7.66	109.70	109.10	2.77	2.82	3.30	3.40	7.68	2.60	N.A.	3.22	N.A.
						Middle	24.6	24.5	29.4	29.5	7.51	7.54	106.70	107.00	2.43	2.36	3.20	3.10	7.53				
						Bottom	24.3	24.4	29.6	29.7	7.42	7.39	105.00	104.80	2.56	2.64	3.10	3.20	7.41				
G4	Gradient Station	0855-0907	20.2	W	0.3	*Surface*	24.7	24.7	29.5	29.6	7.46	7.42	106.30	105.70	2.83	2.80	3.40	3.40	7.44	2.98	N.A.	3.62	N.A.
						Middle	24.4	24.5	29.6	29.5	7.57	7.54	107.20	107.00	3.07	3.12	3.70	3.70	7.56				
						Bottom	24.3	24.2	29.7	29.8	7.65	7.61	108.40	107.60	3.05	2.98	3.90	3.60	7.63				
G7	Gradient Station	0928-0941	17.4	W	0.3	*Surface*	24.6	24.5	29.6	29.7	7.48	7.46	106.40	106.00	3.04	2.98	3.40	3.60	7.47	3.04	N.A.	3.75	N.A.
						Middle	24.5	24.6	29.8	29.7	7.29	7.25	103.60	103.10	2.94	2.87	3.50	3.80	7.27				
						Bottom	24.3	24.3	29.8	29.9	7.46	7.41	105.70	105.00	3.18	3.25	3.90	4.30	7.44				
B1	Impact Station	1047-1100	7.2	W	0.2	*Surface*	24.4	24.5	29.4	29.3	7.28	7.25	103.10	102.70	3.01	2.96	3.60	3.80	7.27	3.07	21.2%	3.73	21.1%
						Middle	24.3	24.3	29.4	29.5	7.43	7.39	104.90	104.50	3.04	3.01	3.70	3.30	7.41				
						Bottom	24.1	24.2	29.5	29.6	7.46	7.50	105.10	105.80	3.23	3.16	4.20	3.80	7.48				
B2	Impact Station	1032-1043	11.4	W	0.3	*Surface*	24.5	24.4	29.4	29.5	7.31	7.35	103.70	104.10	3.13	3.07	3.80	3.70	7.33	3.12	23.1%	3.80	23.2%
						Middle	24.2	24.3	29.5	29.6	7.28	7.25	102.80	102.60	3.16	3.12	3.80	3.70	7.27				
						Bottom	24.1	24.1	29.7	29.6	7.51	7.48	105.90	105.50	3.08	3.14	3.70	4.10	7.50				
B3	Impact Station	1003-1015	11.2	W	0.3	*Surface*	24.5	24.5	29.7	29.8	7.25	7.29	103.00	103.60	3.04	2.97	3.70	3.60	7.27	3.08	21.5%	3.68	19.5%
						Middle	24.5	24.6	29.8	29.9	7.42	7.39	105.40	105.10	3.10	3.12	3.80	3.40	7.41				
						Bottom	24.3	24.3	29.9	29.9	7.10	7.14	100.60	101.10	3.14	3.08	4.00	3.60	7.12				
E1	Impact Station	0946-0958	11.8	W	0.3	*Surface*	24.5	24.4	29.7	29.6	7.38	7.34	104.80	104.30	2.92	2.88	3.80	3.50	7.36	3.00	18.4%	3.65	18.4%
						Middle	24.4	24.3	29.7	29.8	7.17	7.20	101.70	102.00	3.00	3.03	3.30	3.60	7.19				
						Bottom	24.1	24.2	29.9	29.8	7.35	7.38	103.80	104.40	3.05	3.11	4.00	3.70	7.37				
E2	Impact Station	0836-0850	9.8	W	0.2	*Surface*	24.7	24.8	29.6	29.5	7.41	7.45	105.60	106.30	2.87	2.95	3.50	3.80	7.43	3.01	19.0%	3.88	25.9%
						Middle	24.5	24.5	29.6	29.7	7.33	7.28	104.10	103.40	3.03	2.97	4.00	3.80	7.31				
						Bottom	24.4	24.3	29.8	29.7	7.49	7.45	106.20	105.50	3.10	3.15	4.10	4.10	7.47				
E6	Impact Station	0912-0924	22.2	W	0.3	*Surface*	24.3	24.6	29.6	29.6	7.52	7.49	107.10	106.50	2.69	2.73	3.30	3.60	7.51	2.89	14.0%	3.58	16.2%
						Middle	24.6	24.5	29.7	29.8	7.42	7.45	105.60	105.80	2.93	2.99	3.60	3.60	7.44				
						Bottom	24.2	24.3	29.8	29.9	7.38	7.34	104.30	104.00	3.01	2.97	3.60	3.80	7.36				
E8	Impact Station	0730-0742	18.6	W	0.2	*Surface*	24.9	24.8	29.4	29.5	7.35	7.38	105.00	105.30	2.63	2.69	2.90	3.20	7.37	2.85	12.4%	3.27	5.9%
						Middle	24.6	24.7	29.7	29.6	7.43	7.40	105.70	105.40	2.95	3.00	3.30	3.30	7.42				
						Bottom	24.4	24.3	29.7	29.8	7.57	7.54	107.40	107.00	2.87	2.93	3.40	3.50	7.56				
F1	Impact Station	0804-0816	14.4	W	0.3	*Surface*	24.8	24.7	29.5	29.6	7.48	7.45	106.70	106.10	2.69	2.63	2.90	3.50	7.47	2.82	11.2%	3.23	4.9%
						Middle	24.6	24.6	29.6	29.7	7.55	7.51	107.40	106.80	2.96	3.02	3.60	3.40	7.53				
						Bottom	24.5	24.4	29.7	29.6	7.61	7.58	108.10	107.30	2.83	2.76	3.00	3.00	7.60				
I1	Impact Station	1018-1029	16.8	W	0.3	*Surface*	24.5	24.6	29.6	29.7	7.50	7.48	106.50	106.40	2.83	2.89	3.10	3.50	7.49	2.75	8.4%	3.28	6.5%
						Middle	24.5	24.4	29.8	29.7	7.39	7.35	105.00	104.30	2.68	2.73	3.20	3.50	7.37				
						Bottom	24.2	24.1	29.9	30.0	7.24	7.28	102.40	102.80	2.64	2.70	3.20	3.20	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 : 20-May-16
Sampling Time : 11:00 - 15:00 (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	1149-1209	28.6	W	0.3	*Surface*	24.1	24.2	29.2	29.3	8.56	8.53	120.40	120.30	3.10	3.04	3.70	3.70	8.55	2.78	N.A.	3.32	N.A.
						Middle	24.2	24.1	29.3	29.4	8.31	8.23	117.20	115.90	2.83	2.79	3.10	3.20	8.27				
						Bottom	24.0	23.9	29.5	29.4	7.91	7.93	111.30	111.20	2.50	2.44	3.30	2.90	7.92				
G5	Gradient Station	1100-1118	20.8	W	0.3	*Surface*	24.3	24.4	29.2	29.1	8.36	8.34	118.00	117.80	2.40	2.49	2.60	3.20	8.35	2.35	N.A.	2.65	N.A.
						Middle	24.1	24.0	29.3	29.4	8.20	8.17	115.30	114.90	2.37	2.32	2.60	2.50	8.19				
						Bottom	23.9	23.8	29.4	29.5	8.05	8.06	112.90	113.00	2.29	2.24	2.50	2.50	8.06				
G6	Gradient Station	1217-1235	18.2	W	0.3	*Surface*	24.1	24.0	29.3	29.4	8.69	8.67	122.20	121.90	2.76	2.70	3.30	3.20	8.68	2.53	N.A.	3.03	N.A.
						Middle	23.9	23.8	29.5	29.4	8.58	8.56	120.50	119.90	2.50	2.59	3.10	2.90	8.57				
						Bottom	23.6	23.6	29.5	29.6	8.47	8.44	118.30	117.90	2.35	2.27	3.00	2.70	8.46				
E4	Impact Station	1124-1142	21.2	W	0.2	*Surface*	24.2	24.1	29.1	29.2	8.42	8.45	118.60	118.90	2.32	2.37	2.80	2.60	8.44	2.35	-15.7%	2.78	-16.1%
						Middle	23.9	24.0	29.2	29.3	8.31	8.32	116.60	116.90	2.42	2.50	2.90	2.80	8.32				
						Bottom	23.8	23.8	29.4	29.3	8.15	8.17	114.20	114.40	2.26	2.21	2.90	2.70	8.16				
E5	Impact Station	1240-1300	17.8	W	0.3	*Surface*	24.2	24.1	28.9	29.0	8.61	8.57	121.10	120.30	2.55	2.47	2.80	2.70	8.59	2.55	-8.3%	2.93	-11.6%
						Middle	23.8	23.8	29.2	29.1	8.49	8.47	118.70	118.50	2.74	2.82	3.00	3.30	8.48				
						Bottom	23.5	23.4	29.4	29.5	8.35	8.37	116.30	116.60	2.41	2.32	3.20	2.60	8.36				

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

Sampling Date : 21-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 (^oC)		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	22.8	E	0.3	*Surface*	24.8	24.7	29.0	29.1	7.17	7.14	101.9	101.5	3.04	3.09	3.7	3.7	7.16	2.98	N.A.	3.57	N.A.
						Middle	24.6	24.5	29.2	29.3	7.08	7.04	100.4	99.9	2.97	2.92	3.3	3.5	7.06				
						Bottom	24.5	24.8	29.3	29.3	6.94	6.97	98.3	98.8	2.88	2.95	3.7	3.5	6.96				
G1	Gradient Station	0820-0832	11.8	E	0.2	*Surface*	24.7	24.8	29.0	29.0	7.27	7.24	103.2	102.8	3.44	3.40	3.7	3.6	7.26	3.30	N.A.	3.83	N.A.
						Middle	24.6	24.6	29.3	29.2	7.06	7.02	100.2	99.7	3.14	3.12	3.9	3.8	7.04				
						Bottom	24.5	24.6	29.3	29.3	6.90	6.86	97.7	97.2	3.30	3.37	4.0	4.0	6.88				
G2	Gradient Station	1010-1025	15.6	W	0.1	*Surface*	24.8	24.7	29.1	29.1	7.17	7.14	101.9	101.5	2.88	2.85	3.5	3.1	7.16	3.17	N.A.	3.62	N.A.
						Middle	24.6	24.6	29.3	29.3	7.04	7.06	100.0	100.3	3.37	3.32	4.0	3.6	7.05				
						Bottom	24.4	24.5	29.3	29.4	6.96	6.92	98.4	97.9	3.29	3.33	3.9	3.6	6.94				
G3	Gradient Station	0910-0925	16.8	E	0.3	*Surface*	24.8	24.8	29.2	29.1	7.57	7.54	107.8	107.4	2.88	2.93	3.4	3.6	7.56	2.94	N.A.	3.38	N.A.
						Middle	24.5	24.5	29.4	29.4	7.37	7.34	104.5	104.1	2.95	2.87	3.3	3.4	7.36				
						Bottom	24.4	24.4	29.5	29.4	7.15	7.11	101.2	100.5	2.99	3.04	3.3	3.3	7.13				
E7	Impact Station	0747-0801	24.2	E	0.3	*Surface*	24.7	24.7	28.9	29.0	7.34	7.38	104.1	104.6	2.94	2.97	3.2	3.3	7.36	3.07	3.2%	3.48	-2.3%
						Middle	24.6	24.5	29.2	29.1	7.21	7.25	102.2	102.7	3.20	3.16	3.5	3.5	7.23				
						Bottom	24.5	24.8	29.3	29.4	7.06	7.02	100.0	99.5	3.11	3.04	3.7	3.7	7.04				
E8	Impact Station	0928-0943	18.8	E	0.2	*Surface*	24.8	24.7	29.1	29.2	7.39	7.36	105.1	104.7	3.06	3.01	3.4	3.3	7.38	3.10	4.0%	3.42	-4.2%
						Middle	24.6	24.6	29.3	29.2	7.26	7.23	103.1	102.7	3.17	3.24	3.5	3.6	7.25				
						Bottom	24.5	24.5	29.4	29.4	7.06	7.02	100.1	99.6	3.01	3.08	3.3	3.4	7.04				
E9	Impact Station	0835-0848	16.4	E	0.2	*Surface*	24.7	24.6	29.1	29.0	7.54	7.50	107.1	106.6	2.87	2.92	3.4	3.2	7.52	2.85	-4.2%	3.28	-7.9%
						Middle	24.6	24.5	29.3	29.3	7.40	7.44	105.1	105.6	2.74	2.70	3.1	3.3	7.42				
						Bottom	24.5	24.5	29.3	29.4	7.18	7.23	101.7	102.3	2.96	2.91	3.5	3.2	7.21				
F1	Impact Station	0853-0905	14.4	E	0.2	*Surface*	24.7	24.8	29.1	29.1	7.48	7.45	106.2	105.8	2.78	2.71	3.1	2.9	7.47	2.97	-0.1%	3.43	-3.7%
						Middle	24.5	24.6	29.3	29.4	7.29	7.25	103.2	102.7	3.09	3.06	3.4	3.7	7.27				
						Bottom	24.5	24.4	29.4	29.4	7.06	7.02	100.1	99.6	3.12	3.08	3.8	3.7	7.04				
S1	Impact Station	0805-0818	10.2	E	0.2	*Surface*	24.8	24.8	29.0	29.0	7.44	7.40	105.8	105.3	3.37	3.31	3.7	3.7	7.42	3.38	13.7%	3.78	6.1%
						Middle	24.6	24.5	29.1	29.2	7.11	7.14	100.8	101.2	3.52	3.46	4.2	3.8	7.13				
						Bottom	24.5	24.6	29.2	29.3	6.89	6.93	97.5	98.0	3.34	3.29	3.6	3.7	6.91				
S2	Impact Station	0946-1001	12.8	E	0.2	*Surface*	24.8	24.8	29.2	29.2	7.40	7.37	105.4	105.0	2.96	2.91	3.3	3.2	7.39	3.17	6.7%	3.50	-1.9%
						Middle	24.6	24.5	29.3	29.4	7.15	7.12	101.5	101.1	3.37	3.42	3.7	3.8	7.14				
						Bottom	24.5	24.4	29.4	29.4	7.03	7.05	99.7	100.0	3.21	3.17	3.5	3.5	7.04				
S3	Impact Station	1040-1100	10.2	W	0.2	*Surface*	24.7	24.8	29.1	29.2	7.08	7.04	100.5	100.0	3.12	3.09	3.4	3.7	7.06	3.36	12.8%	3.80	6.5%
						Middle	24.5	24.6	29.2	29.2	6.95	6.91	98.4	97.9	3.46	3.41	3.8	4.1	6.93				
						Bottom	24.5	24.5	29.2	29.2	6.86	6.84	97.1	96.8	3.55	3.50	3.9	3.9	6.85				

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

Sampling Date : 21-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	1158-1205	30.4	W	0.2	*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	3.30	N.A.	4.08	N.A.
						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				
						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	1122-1136	16.4	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	3.13	N.A.	3.60	N.A.
						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				
						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	1226-1240	19.8	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	2.94	N.A.	3.38	N.A.
						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				
						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	1300-1327	16.8	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	2.85	N.A.	3.32	N.A.
						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				
						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	1445-1500	6.8	E	0.1	*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	2.92	-11.7%	3.45	-15.5%
						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				
						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	1415-1430	10.8	E	0.2	*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	3.08	-6.7%	3.60	-11.8%
						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				
						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	1343-1353	10.6	E	0.2	*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	3.23	-2.3%	3.75	-8.2%
						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				
						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	1328-1340	11.4	W	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	3.12	-5.6%	3.50	-14.3%
						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				
						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	1209-1223	9.6	W	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	2.83	-14.2%	3.22	-21.2%
						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				
						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	1242-1256	21.6	W	0.2	*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	2.98	-9.8%	3.57	-12.7%
						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				
						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	1105-1119	16.4	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	3.13	-5.1%	3.60	-11.8%
						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				
						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	1138-1151	14.2	W	0.2	*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	3.21	-2.7%	3.87	-5.3%
						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				
						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	1355-1409	15.8	E	0.1	*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	3.01	-8.7%	3.52	-13.9%
						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				
						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 : 21-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	1505-1519	22.5	E	0.3	*Surface*	24.9	25.0	29.1	29.2	7.73	7.70	103.1	102.8	2.86	2.95	3.4	3.3	7.72	2.97	N.A.	3.47	N.A.
						Middle	24.8	24.7	29.3	29.4	7.12	7.16	101.4	101.8	3.09	3.03	3.4	3.9	7.14				
						Bottom	24.6	24.5	29.5	29.4	7.08	7.04	100.6	100.2	2.99	2.92	3.6	3.2	7.06				
G1	Gradient Station	1557-1608	11.6	E	0.3	*Surface*	24.9	24.9	29.1	29.0	7.20	7.18	102.7	102.5	3.27	3.19	3.6	3.8	7.19	3.20	N.A.	3.63	N.A.
						Middle	24.9	24.8	29.1	29.1	7.23	7.24	102.9	103.0	3.14	3.05	3.4	3.7	7.24				
						Bottom	24.8	24.7	29.2	29.1	7.10	7.14	100.9	110.3	3.28	3.24	3.7	3.6	7.12				
G2	Gradient Station	1742-1757	15.3	W	0.2	*Surface*	24.9	24.8	29.1	29.1	7.12	7.13	101.6	101.7	2.73	2.81	3.2	3.5	7.13	3.12	N.A.	3.73	N.A.
						Middle	24.7	24.6	29.2	29.3	6.96	6.98	99.1	98.9	3.41	3.35	3.8	4.0	6.97				
						Bottom	24.6	24.6	29.5	29.4	7.05	7.07	100.2	100.5	3.26	3.18	3.9	4.0	7.06				
G3	Gradient Station	1645-1659	16.5	E	0.3	*Surface*	25.1	25.0	29.1	29.2	7.51	7.47	107.1	106.7	2.74	2.81	3.2	3.5	7.49	3.00	N.A.	3.48	N.A.
						Middle	25.0	25.0	29.3	29.2	7.46	7.43	106.2	105.9	3.14	3.21	3.6	3.4	7.45				
						Bottom	24.9	24.8	29.4	29.5	7.28	7.27	103.4	103.3	3.10	3.01	3.6	3.6	7.28				
E7	Impact Station	1522-1537	23.9	E	0.2	*Surface*	24.9	25.0	29.2	29.1	7.26	7.22	110.2	109.7	2.76	2.71	3.3	3.3	7.24	2.99	0.6%	3.55	2.4%
						Middle	24.9	24.8	29.2	29.1	7.19	7.17	102.4	102.1	3.08	3.01	3.7	3.3	7.18				
						Bottom	24.7	24.6	29.5	29.4	7.11	7.12	101.1	101.2	3.16	3.22	3.8	3.9	7.12				
E8	Impact Station	1702-1716	18.4	E	0.3	*Surface*	24.9	25.0	29.2	29.2	7.33	7.36	104.5	104.8	2.83	2.91	3.1	3.2	7.35	2.96	-0.6%	3.35	-3.4%
						Middle	24.9	24.9	29.1	29.2	7.21	7.24	102.7	102.9	3.19	3.11	3.5	3.7	7.23				
						Bottom	24.6	24.7	29.4	29.3	7.10	7.08	100.9	100.7	2.87	2.82	3.2	3.4	7.09				
E9	Impact Station	1611-1624	16.1	E	0.3	*Surface*	24.8	24.9	29.2	29.3	7.41	7.43	105.7	105.9	2.59	2.66	2.8	3.2	7.42	2.79	-6.3%	3.22	-7.2%
						Middle	24.7	24.7	29.3	29.2	7.38	7.36	105.1	104.8	2.73	2.81	3.1	3.4	7.37				
						Bottom	24.6	24.5	29.4	29.3	7.24	7.27	102.9	103.3	2.94	2.99	3.5	3.3	7.26				
F1	Impact Station	1628-1641	14.2	E	0.2	*Surface*	25.0	24.9	29.2	29.1	7.38	7.34	105.2	104.8	2.59	2.52	3.2	3.0	7.36	2.85	-4.3%	3.27	-5.8%
						Middle	24.8	24.9	29.3	29.2	7.31	7.29	104.1	103.8	2.98	2.89	3.3	3.2	7.30				
						Bottom	24.7	24.6	29.3	29.4	7.14	7.11	101.5	101.0	3.07	3.02	3.3	3.6	7.13				
S1	Impact Station	1541-1555	9.9	E	0.3	*Surface*	24.9	24.9	29.1	29.2	7.31	7.33	104.3	104.6	3.09	3.01	3.7	3.6	7.32	3.19	7.2%	3.65	5.3%
						Middle	24.8	24.9	29.2	29.2	7.26	7.23	103.4	103.1	3.31	3.26	4.0	3.5	7.25				
						Bottom	24.8	24.7	29.2	29.3	7.02	7.06	99.8	100.1	3.25	3.21	3.6	3.5	7.04				
S2	Impact Station	1719-1734	12.6	E	0.3	*Surface*	24.9	24.9	29.2	29.1	7.32	7.34	104.4	104.6	3.18	3.11	3.8	3.7	7.33	3.10	4.1%	3.62	4.3%
						Middle	24.8	24.7	29.2	29.2	7.18	7.19	102.2	102.3	2.95	2.87	3.6	3.2	7.19				
						Bottom	24.6	24.7	29.3	29.2	7.09	7.07	100.7	100.5	3.28	3.19	3.6	3.8	7.08				
S3	Impact Station	1804-1821	10.3	W	0.2	*Surface*	24.8	24.7	29.2	29.1	7.03	7.04	100.2	100.3	3.09	3.13	3.7	3.4	7.04	3.21	7.8%	3.73	7.7%
						Middle	24.7	24.6	29.2	29.1	6.97	6.94	99.3	99.1	3.23	3.18	3.9	3.8	6.96				
						Bottom	24.6	24.5	29.3	29.2	6.88	6.86	97.8	97.6	3.34	3.27	4.0	3.6	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 : 21-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	1954-2008	30.1	W	0.3	*Surface*	24.7	24.8	29.1	29.2	7.42	7.46	105.8	106.2	3.16	3.12	4.1	3.7	7.44	3.28	N.A.	3.87	N.A.
						Middle	24.7	24.6	29.3	29.4	7.19	7.17	102.4	102.1	3.28	3.36	3.5	3.7	7.18				
						Bottom	24.5	24.4	29.6	29.5	7.25	7.21	103.0	102.4	3.34	3.42	4.1	4.1	7.23				
G3	Gradient Station	1918-1933	16.1	W	0.2	*Surface*	24.9	24.8	29.1	29.2	7.19	7.16	102.5	102.3	3.04	7.96	3.4	3.5	7.18	3.88	N.A.	3.43	N.A.
						Middle	24.7	24.6	29.3	29.2	7.24	7.26	103.1	103.3	2.91	2.87	3.4	3.2	7.25				
						Bottom	24.5	24.4	29.4	29.3	7.14	7.11	101.5	101.1	3.29	3.21	3.6	3.5	7.13				
G4	Gradient Station	2028-2042	19.4	W	0.2	*Surface*	24.8	24.8	29.2	29.3	7.32	7.33	104.4	104.5	2.79	2.86	3.4	3.2	7.33	2.96	N.A.	3.45	N.A.
						Middle	24.7	24.6	29.4	29.4	7.28	7.24	103.7	103.4	2.95	2.91	3.5	3.5	7.26				
						Bottom	24.5	24.6	29.5	29.6	7.09	7.06	100.7	100.4	3.09	3.14	3.7	3.4	7.08				
G7	Gradient Station	2104-2118	16.5	W	0.3	*Surface*	24.9	24.8	29.3	29.2	7.42	7.39	105.8	105.5	2.84	2.79	3.4	3.3	7.41	3.02	N.A.	3.47	N.A.
						Middle	24.9	29.3	29.4	29.3	7.31	7.28	104.1	103.7	3.06	3.14	3.4	3.5	7.30				
						Bottom	29.5	29.4	29.5	29.4	7.16	7.19	101.7	102.0	3.17	3.12	3.8	3.4	7.18				
B1	Impact Station	2223-2236	6.7	E	0.3	*Surface*	24.7	24.8	29.3	29.4	7.27	7.24	102.9	103.3	2.78	2.73	3.3	3.0	7.26	2.89	-11.8%	3.23	-16.4%
						Middle	24.7	24.7	29.4	29.3	7.17	7.16	102.1	102.0	2.96	3.03	3.3	3.3	7.17				
						Bottom	24.7	24.8	29.4	29.5	7.12	7.09	101.2	100.8	2.87	2.98	3.2	3.3	7.11				
B2	Impact Station	2204-2219	10.4	E	0.2	*Surface*	24.9	24.8	29.4	29.4	7.34	7.31	104.7	104.4	2.97	2.91	3.3	3.5	7.33	3.06	-6.7%	3.63	-6.0%
						Middle	24.8	24.8	29.5	29.4	7.24	7.26	103.1	103.3	3.08	3.02	3.7	3.6	7.25				
						Bottom	24.7	24.6	29.7	29.6	7.02	6.98	99.8	99.6	3.24	3.15	3.9	3.8	7.00				
B3	Impact Station	2138-2151	10.4	W	0.3	*Surface*	24.8	24.8	29.3	29.4	7.32	7.36	104.4	104.8	3.07	2.96	3.7	3.5	7.34	3.13	-4.5%	3.65	-5.6%
						Middle	24.7	24.8	29.5	29.4	7.41	7.42	105.6	105.9	3.28	3.21	3.9	3.9	7.42				
						Bottom	24.7	24.6	29.5	29.6	7.11	7.09	101.0	100.7	3.10	3.18	3.4	3.5	7.10				
E1	Impact Station	2121-2135	11.1	W	0.3	*Surface*	24.8	24.7	29.3	29.4	7.35	7.31	104.8	104.2	3.10	3.21	3.5	3.9	7.33	3.06	-6.8%	3.55	-8.2%
						Middle	24.7	24.7	29.4	29.4	7.39	7.37	105.2	104.9	3.09	3.03	3.4	3.7	7.38				
						Bottom	24.6	24.5	29.6	29.5	7.21	7.23	102.5	102.8	2.97	2.94	3.3	3.5	7.22				
E2	Impact Station	2012-2026	9.3	W	0.2	*Surface*	24.9	24.8	29.3	29.3	7.24	7.21	103.2	102.9	2.91	2.97	3.2	3.3	7.23	2.87	-12.4%	3.27	-15.5%
						Middle	24.8	24.8	29.4	29.3	7.27	7.29	103.5	103.7	2.84	2.79	3.1	3.4	7.28				
						Bottom	24.7	24.6	29.5	29.5	7.16	7.12	101.7	101.2	2.89	2.83	3.5	3.1	7.14				
E6	Impact Station	2045-2100	21.3	W	0.3	*Surface*	24.9	24.8	29.3	29.4	7.19	7.16	102.5	102.1	2.65	2.71	2.9	3.3	7.18	2.98	-9.1%	3.17	-18.1%
						Middle	24.8	24.7	29.5	29.4	7.21	7.23	102.7	102.9	2.97	3.91	3.2	3.2	7.22				
						Bottom	24.6	24.5	29.6	29.5	7.15	7.13	101.6	101.3	2.86	2.78	3.4	3.0	7.14				
E8	Impact Station	1900-1915	18.2	W	0.3	*Surface*	24.8	24.9	29.2	29.3	7.26	7.28	103.5	103.7	2.69	2.74	3.2	3.0	7.27	2.90	-11.5%	3.33	-13.8%
						Middle	24.7	24.6	29.4	29.3	7.19	7.17	102.4	102.1	2.89	2.82	3.2	3.4	7.18				
						Bottom	24.4	24.5	29.5	29.4	7.11	7.13	101.1	101.4	3.18	3.10	3.5	3.7	7.12				
F1	Impact Station	1935-1948	14.0	W	0.2	*Surface*	24.8	24.7	29.2	29.2	7.36	7.39	105.2	105.5	2.95	3.06	3.2	3.6	7.38	3.14	-4.2%	3.58	-7.3%
						Middle	24.7	24.8	29.3	29.2	7.32	7.29	104.2	104.0	3.31	3.28	3.6	3.9	7.31				
						Bottom	24.6	24.5	29.4	29.3	7.24	7.21	102.9	102.6	3.17	3.09	3.8	3.4	7.23				
I1	Impact Station	2154-2209	15.6	E	0.3	*Surface*	24.9	24.8	29.3	29.2	7.28	7.26	103.8	103.6	3.04	3.11	3.3	3.7	7.27	3.21	-2.1%	3.68	-4.7%
						Middle	24.7	24.6	29.4	29.3	7.08	7.11	100.8	101.1	3.17	3.24	3.8	3.6	7.10				
						Bottom	24.5	24.4	29.5	29.6	7.04	7.06	100.2	100.5	3.38	3.32	3.7	4.0	7.05				

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

ERM-Hong Kong, Limited

ENVIRONMENTAL PERMIT NO. EP-485/2014

ASIA PACIFIC GATEWAY (APG) – TSEUNG KWAN O

Marine Water Quality Impact Monitoring (Ad hoc)

Repeat Measurements following Notification of Exceedance (NOE)

Log No.	**0324228_21 May 2016_Depth-averaged Turbidity_E7_07:00-11:00-Zone A_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_E8_07:00-11:00-Zone A_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_F1_07:00-11:00-Zone A_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_S1_07:00-11:00-Zone A_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_S2_07:00-11:00-Zone A_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_S3_07:00-11:00-Zone A_Action Level** **0324228_21 May 2016_Depth-averaged SS_E7_07:00-11:00_Zone A_Action Level** **0324228_21 May 2016_Depth-averaged SS_E8_07:00-11:00_Zone A_Action Level** **0324228_21 May 2016_Depth-averaged SS_F1_07:00-11:00_Zone A_Action Level** **0324228_21 May 2016_Depth-averaged SS_S1_07:00-11:00_Zone A_Limit Level** **0324228_21 May 2016_Depth-averaged SS_S2_07:00-11:00_Zone A_Limit Level** **0324228_21 May 2016_Depth-averaged SS_S3_07:00-11:00_Zone A_Limit Level** **0324228_21 May 2016_Bottom DO_S1_07:00-11:00_Zone A_Action Level** **0324228_21 May 2016_Middle DO_S3_07:00-11:00_Zone A_Action Level** **0324228_21 May 2016_Bottom DO_S3_07:00-11:00_Zone A_Limit Level** **0324228_21 May 2016_Depth-averaged Turbidity_B1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_B2_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_B3_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_E1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_E2_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_E6_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_E8_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_F1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged Turbidity_I1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_B1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_B2_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_B3_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_E1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_E6_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_E8_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_F1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Depth-averaged SS_I1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Surface DO_B1_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Middle DO_B1_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Bottom DO_B1_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Surface DO_B2_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Middle DO_B2_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Bottom DO_B2_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Surface DO_B3_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Middle DO_B3_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Bottom DO_B3_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Surface DO_E1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Middle DO_E1_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Bottom DO_E1_11:00-15:00_Zone B_Action Level** **0324228_21 May 2016_Surface DO_E2_11:00-15:00_Zone B_Limit Level** **0324228_21 May 2016_Middle DO_E2_11:00-15:00_Zone B_Limit Level**

	0324228_21 May 2016_Bottom DO_E2_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Surface DO_E6_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_E6_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_E6_11:00-15:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_E8_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_E8_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_E8_11:00-15:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_F1_11:00-15:00_Zone B_Action Level
	0324228_21 May 2016_Middle DO_F1_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_F1_11:00-15:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_I1_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_I1_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_I1_11:00-15:00_Zone B_Limit Level
	0324228_21 May 2016_Depth-averaged Turbidity_E7_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_E8_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_S1_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_S2_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_S3_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged SS_E7_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged SS_S1_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged SS_S2_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Depth-averaged SS_S3_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Middle DO_S3_15:00-19:00_Zone A_Action Level
	0324228_21 May 2016_Bottom DO_S3_15:00-19:00_Zone A_Limit Level
	0324228_21 May 2016_Depth-averaged Turbidity_B1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_B2_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_B3_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_E1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_E2_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_E6_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_E8_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_F1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged Turbidity_I1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged SS_B2_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged SS_B3_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged SS_E1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged SS_E8_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged SS_F1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Depth-averaged SS_I1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_B1_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_B1_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_B1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_B2_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_B2_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_B2_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Surface DO_B3_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_B3_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Bottom DO_B3_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_E1_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_E1_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_E1_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_E2_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_E2_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_E2_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_E6_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Middle DO_E6_19:00-23:00_Zone B_Limit Level
	0324228_21 May 2016_Bottom DO_E6_19:00-23:00_Zone B_Action Level
	0324228_21 May 2016_Surface DO_E8_19:00-23:00_Zone B_Limit Level

	0324228_21 May 2016_Middle DO_E8_19:00-23:00_Zone B_Limit Level **0324228_21 May 2016_Bottom DO_E8_19:00-23:00_Zone B_Action Level** **0324228_21 May 2016_Surface DO_F1_19:00-23:00_Zone B_Limit Level** **0324228_21 May 2016_Middle DO_F1_19:00-23:00_Zone B_Limit Level** **0324228_21 May 2016_Bottom DO_F1_19:00-23:00_Zone B_Action Level** **0324228_21 May 2016_Surface DO_I1_19:00-23:00_Zone B_Limit Level** **0324228_21 May 2016_Middle DO_I1_19:00-23:00_Zone B_Limit Level** **0324228_21 May 2016_Bottom DO_I1_19:00-23:00_Zone B_Action Level** **[Total No. of Exceedance = 112]**
Date	21 May 2016 (Monitoring Day) 23 May 2016 (*In situ* records received by ERM) 23 May 2016 (Laboratory analysis results received by ERM)
Monitoring Station(s) with Exceedance(s)	Zone A: E7, E8, F1, S1, S2, and S2 Zone B: B1,B2,B3,E1,E2,E6,E8,F1 and I1
Parameter(s) with Exceedance(s)	**Zone A:** Action Levels for Middle and Bottom Dissolved Oxygen (DO) (mg/L), Depth-averaged Turbidity (NTU) and Depth-averaged Suspended Solids (SS) (mg/L). Limit Level of Bottom DO (mg/L) and Depth-averaged SS (mg/L). **Zone B:** Action Levels for Surface, Middle and Bottom DO (mg/L), and Depth-averaged Turbidity (NTU) and Depth-averaged SS (mg/L). Limit Levels for Surface, Middle and Bottom DO (mg/L).
Action Levels	**Zone A:** **DO:** 5%-ile of baseline data for surface and middle layer (7.00 mg/L) (Surface and Middle DO); 5%-ile of baseline data for bottom layers (6.99 mg/L) (Bottom DO). **Turbidity:** 95%-ile of baseline data (2.86 NTU), or 120% of the corresponding data from respective control station at the same tide of the same day. **SS:** 95%-ile of baseline data (3.37 mg/L), or 120% of the corresponding data from respective control station at the same tide of the same day **Zone B:** **DO:** 5%-ile of baseline data for surface and middle layer (7.49 mg/L) (Surface and Middle DO); 5%-ile of baseline data for bottom layers (7.26 mg/L) (Bottom DO). **Turbidity:** 95%-ile of baseline data (2.67 NTU), or 120% of the corresponding data from respective control station at the same tide of the same day. **SS:** 95%-ile of baseline data (3.33 mg/L), or 120% of the corresponding data from respective control station at the same tide of the same day.
Limit Levels	**Zone A:** **DO:** 5 mg/L or 1%-ile of baseline for surface and middle layer (6.71 mg/L) (Surface and Middle DO); 2 mg/L or 1%-ile of baseline for bottom layer (6.91 mg/L) (Bottom DO). **Turbidity:** 99%-ile of baseline data (3.06 NTU), and 130% of the corresponding data from respective control station at the same tide of the same day. **SS:** 99%-ile of baseline data (3.49 mg/L) and 130% of the corresponding data from respective

	control station at the same tide of the same day. **Zone B:** **DO:** 5 mg/L or 1%-ile of baseline for surface and middle layer (7.41 mg/L) (Surface and Middle DO); 2 mg/L or 1%-ile of baseline for bottom layer (7.01 mg/L) (Bottom DO). **Turbidity:** 99%-ile of baseline data (2.79 NTU), and 130% of the corresponding data from respective control station at the same tide of the same day. **SS:** 99%-ile of baseline data (3.39 mg/L) and 130% of the corresponding data from respective control station at the same tide of the same day.
Measured Levels	Please refer to the attached data sheet.
Reason for Repeat Measurements	Repeat WQ measurements were obtained in Zones A and B on 21 May, according to the *Event Action Plan for Water Quality* in the *EM&A Manual* following NOE(s) issued for 18, 19 and 20 May 2016 when Project route clearance works were conducted in Zones A and B. The repeated WQ measurement is not required for the NOE issued on 17 May 2016 since no Project works took place that day and therefore were not due to the Project. .
Works Undertaken (at the time of monitoring event)	Note that no Project route clearance works were conducted within the water quality monitoring zones (Zones A - C) on 21 May 2016. Repeat measurements were conducted in Zones A and B for reasons specified above. The route clearance works commenced at 07:00 outside water quality monitoring zones (i.e. outside Zones A - C) but within Hong Kong waters and continued towards the eastern boundary of Hong Kong waters along the proposed submarine cable route. At 17:05, the working barge exited Hong Kong waters and entered China waters. The route clearance works then continued within China waters until end of the working day on 21 May 2016.
Possible Reason for Action or Limit Level Non-compliance	Two rounds of *ad hoc* monitoring were conducted in Zone A, from 07:00-11:00 and 15:00-19:00 on 21 May 2016. Another two rounds of *ad hoc* monitoring were carried out in Zone B, from 11:00-15:00 and 19:00-23:00 on 21 May 2016. Monitoring results of Turbidity, SS and DO (all depths) in Zone A and Zone B during baseline monitoring, all impact monitoring and *ad hoc* monitoring (to date) are presented in *Figures 1 to 10.* No Project works, including route clearance works, were conducted within water quality monitoring zones (Zones A - C) on 21 May – the most recent Project works conducted in Zones A or B up to that point were at the very start of 19 May in Zone A and very start of 20 May 2016 in Zone B. 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 21 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 18, 19 and 20 May 2016 being due to natural water quality fluctuation.
Actions Taken / To Be Taken	No further action is required.
Remarks	It should be noted that the baseline water quality data show good water quality conditions (high DO and low Turbidity and SS) for Hong Kong marine waters. Natural water quality fluctuation is therefore more likely to cause exceedances of Action Levels. The monitoring results and the locations of water quality monitoring stations are attached.

Figure 1 Baseline, Impact and Ad Hoc Monitoring Results of Depth-averaged Turbidity in Zone A

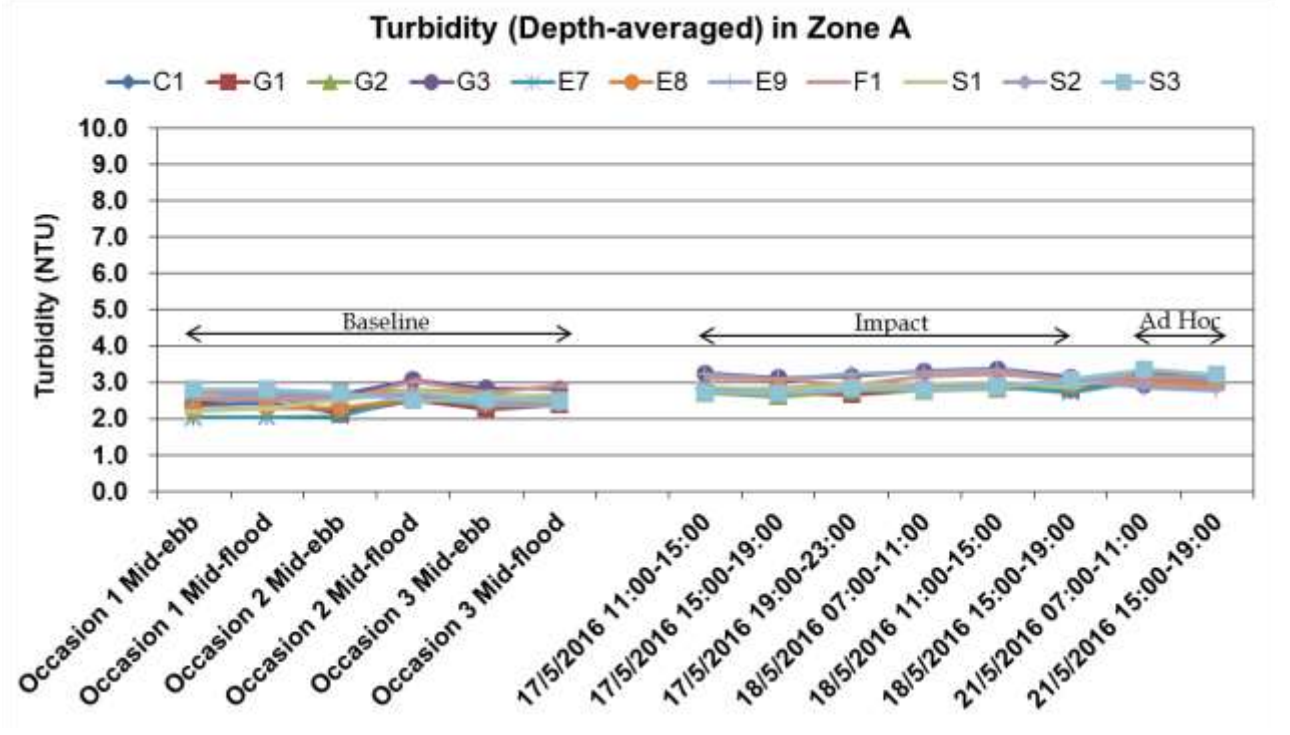


Figure 2 Baseline, Impact and Ad Hoc Monitoring Results of Depth-averaged SS in Zone A

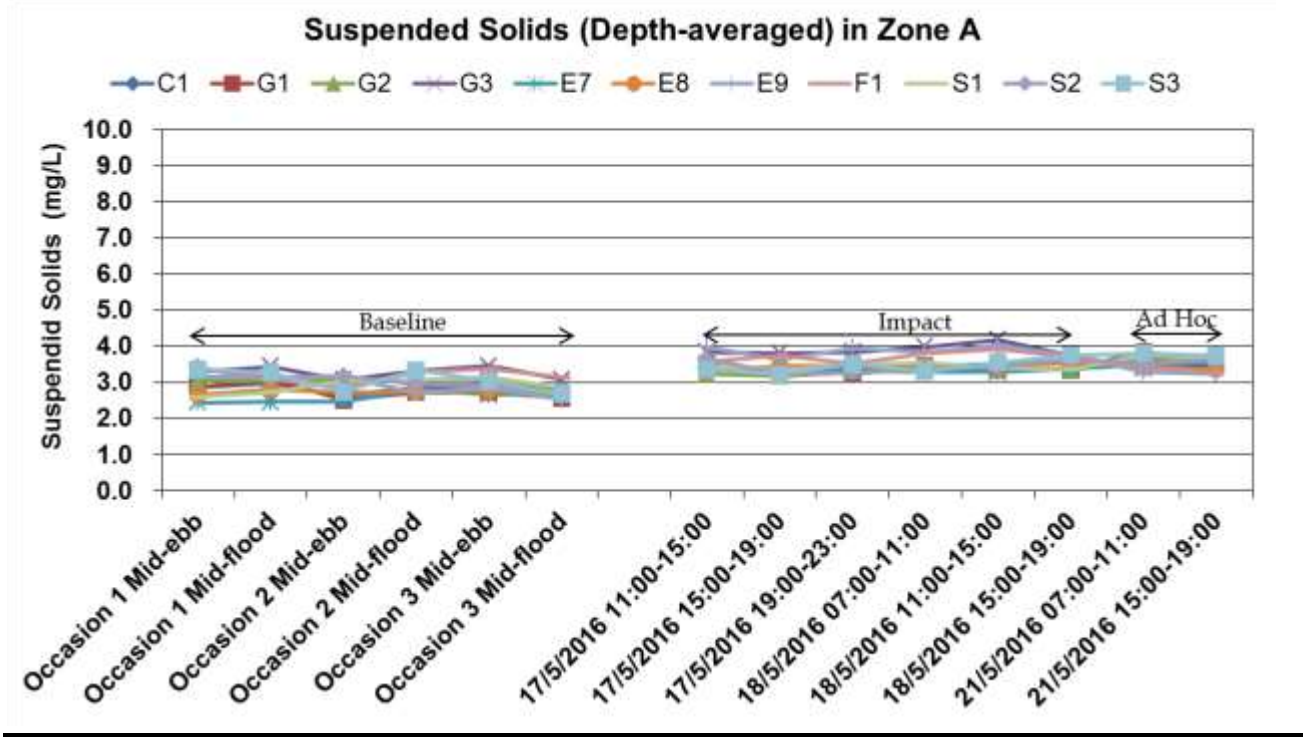


Figure 3 Baseline, Impact and Ad Hoc Monitoring Results of Surface DO in Zone A

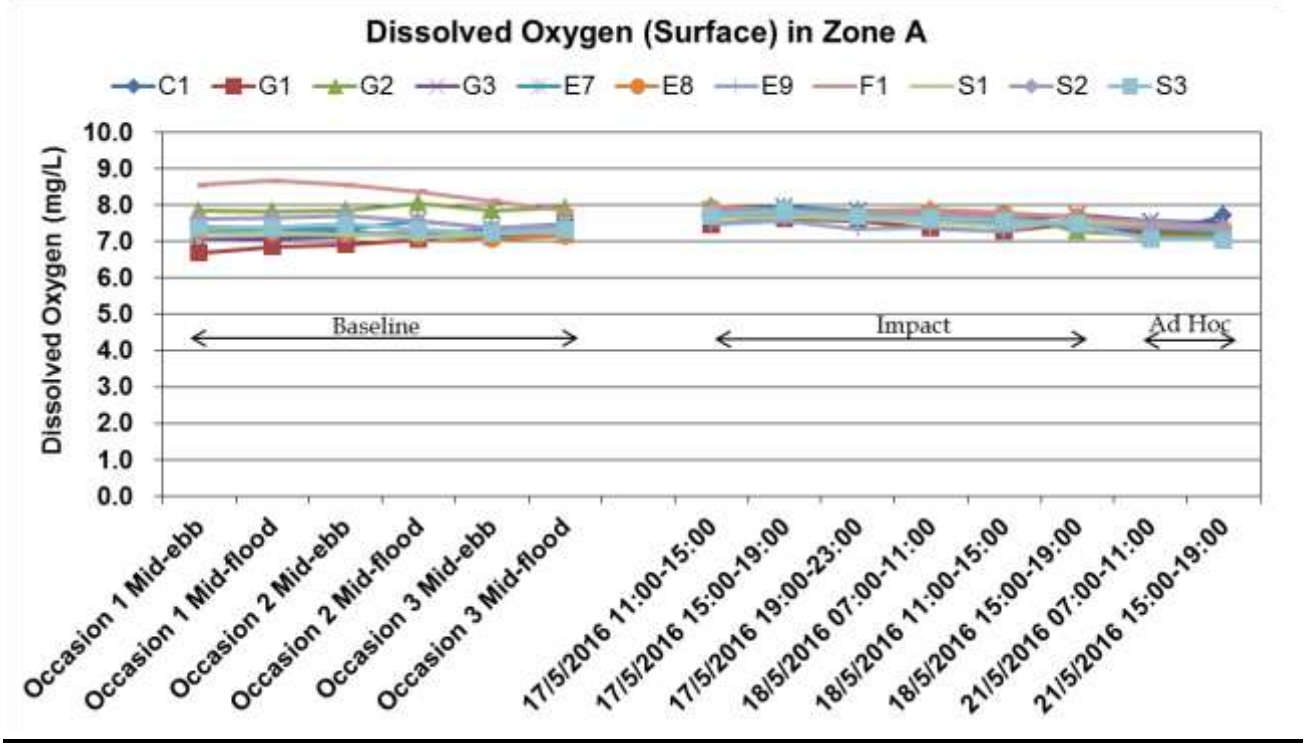


Figure 4 Baseline, Impact and Ad Hoc Monitoring Results of Middle DO in Zone A

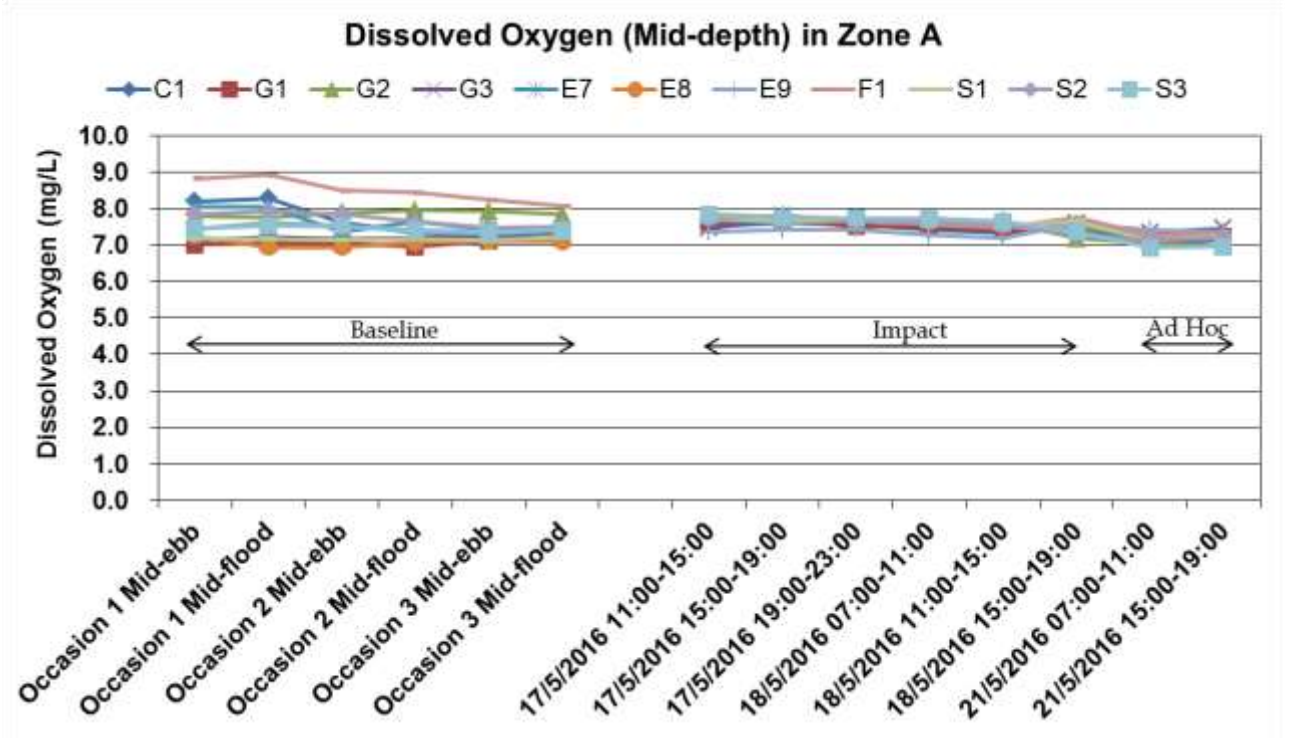


Figure 5 Baseline, Impact and Ad Hoc Monitoring Results of Bottom DO in Zone A

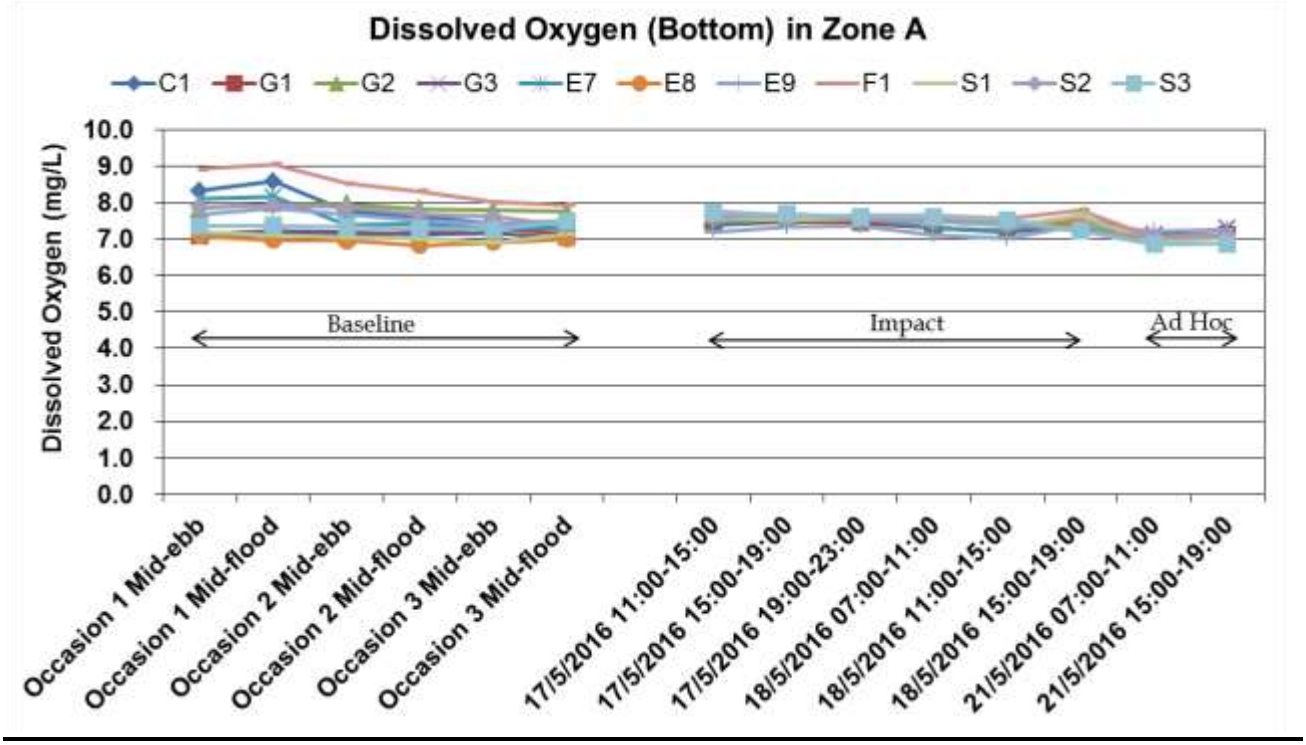


Figure 6 Baseline, Impact and Ad Hoc Monitoring Results of Depth-averaged Turbidity in Zone B

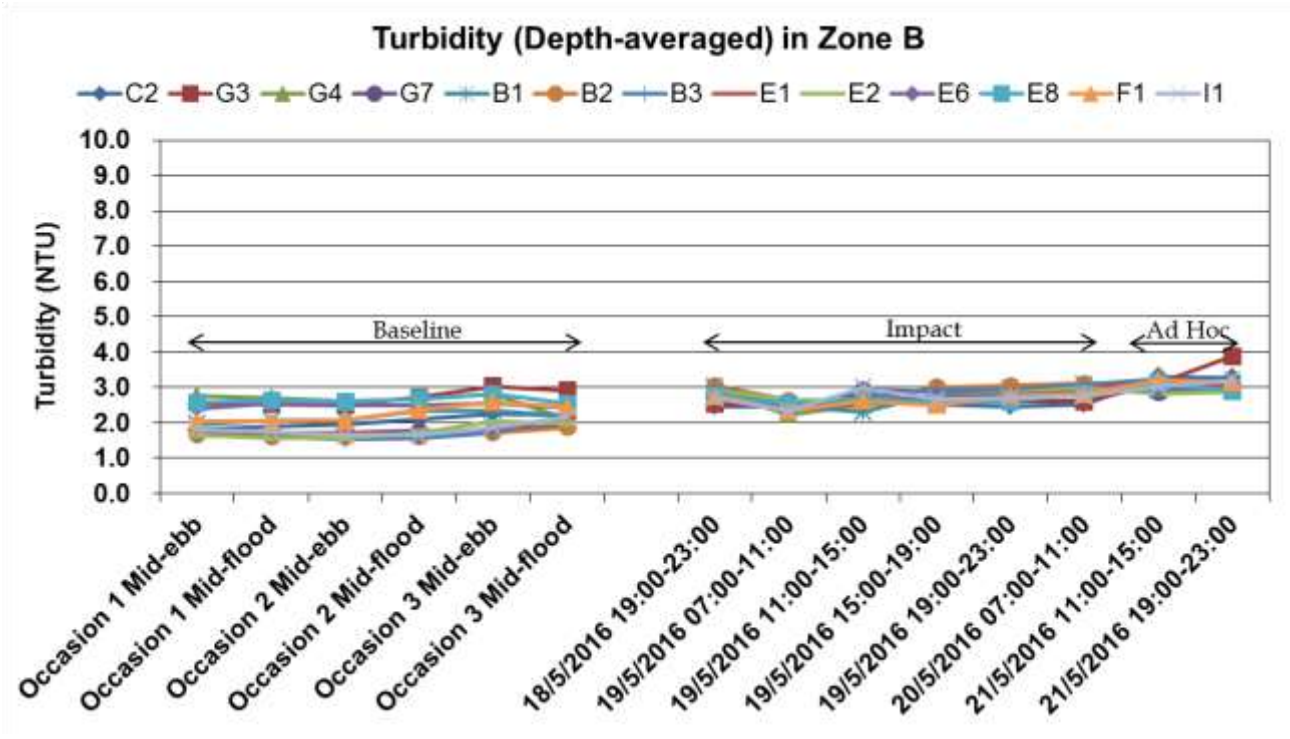


Figure 7 Baseline, Impact and Ad Hoc Monitoring Results of Depth-averaged SS in Zone B

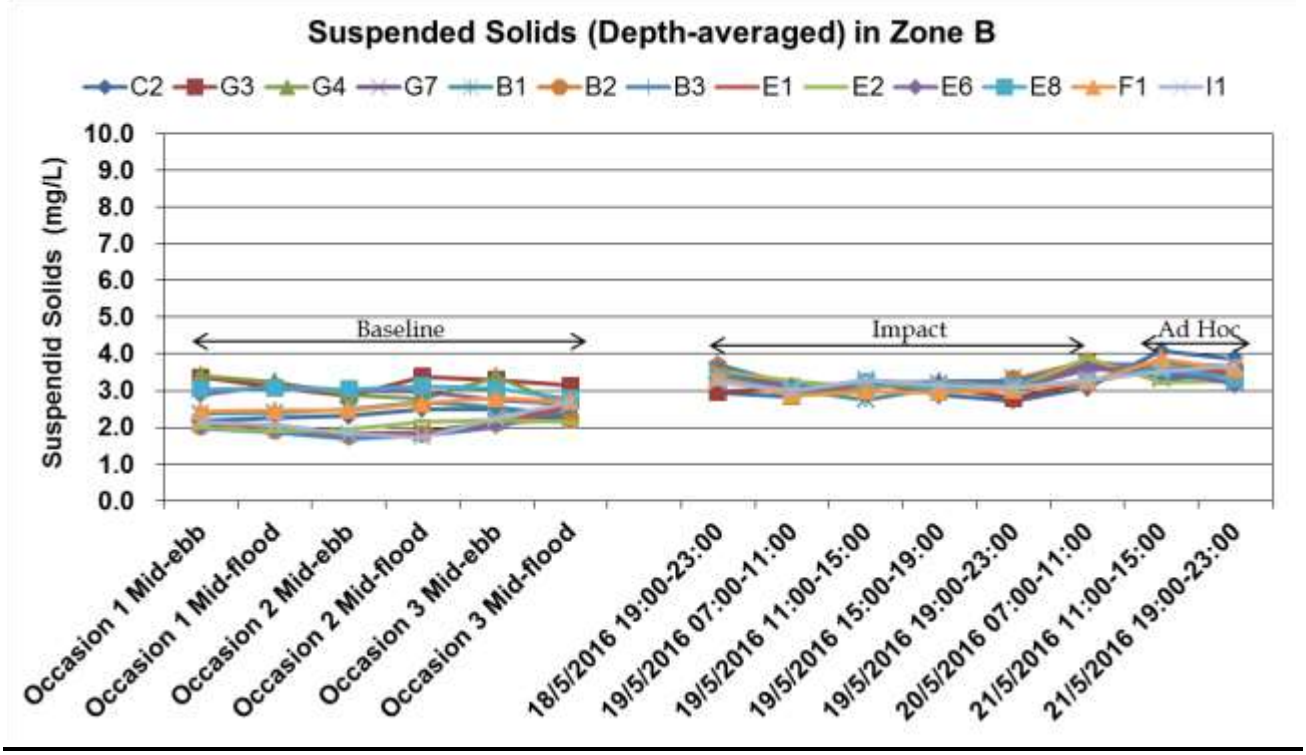


Figure 8 Baseline, Impact and Ad Hoc Monitoring Results of Surface DO in Zone B

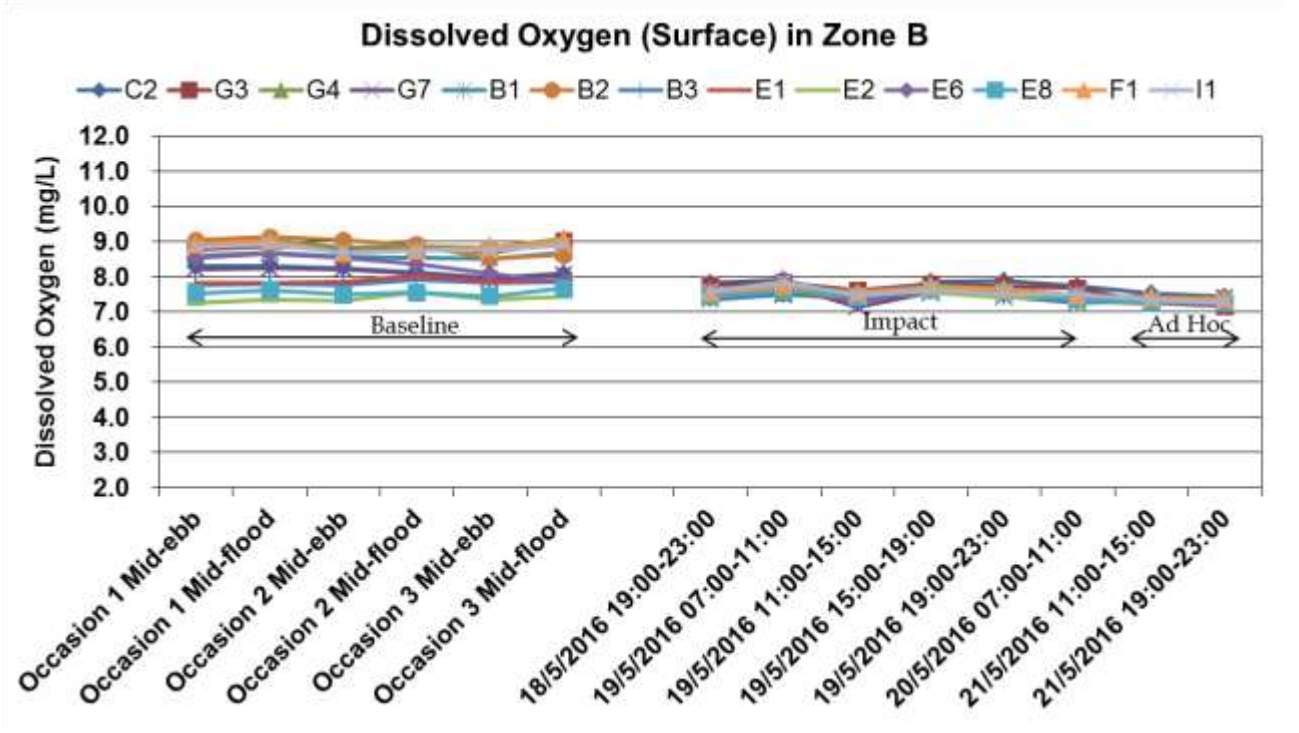


Figure 9 Baseline, Impact and Ad Hoc Monitoring Results of Middle DO in Zone B

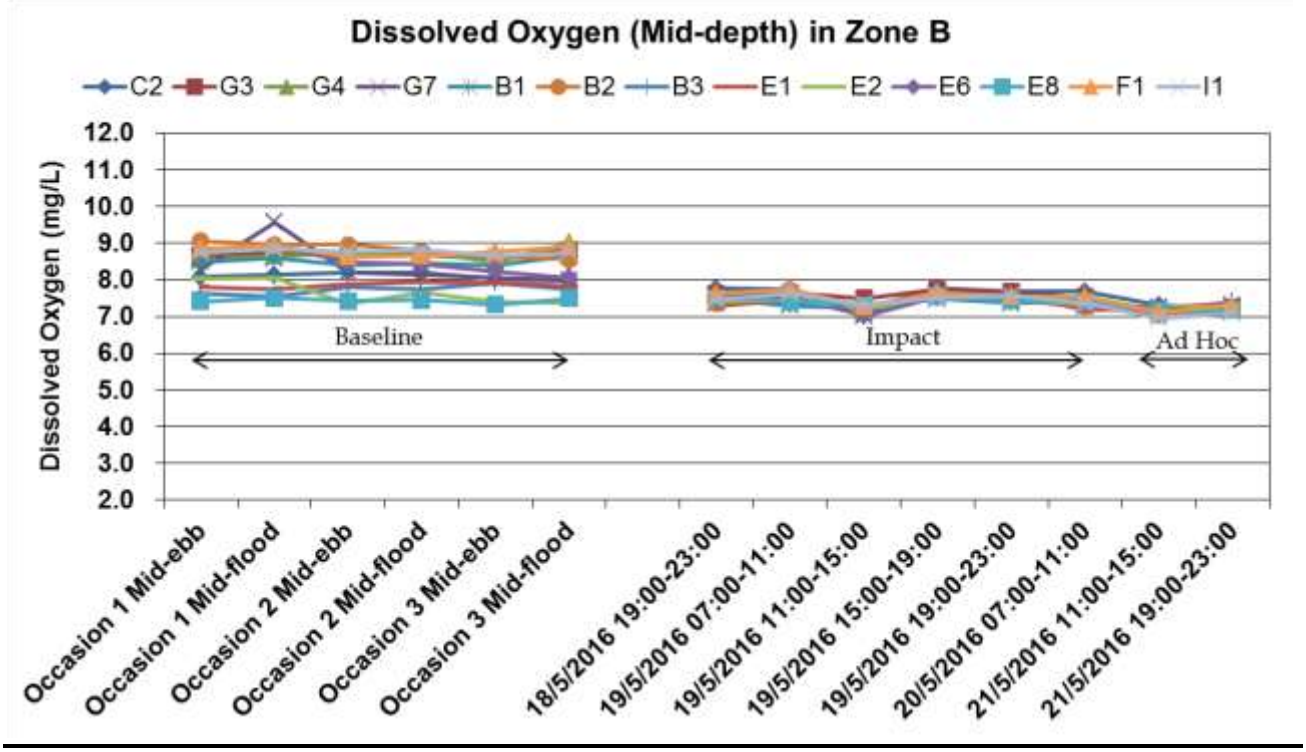
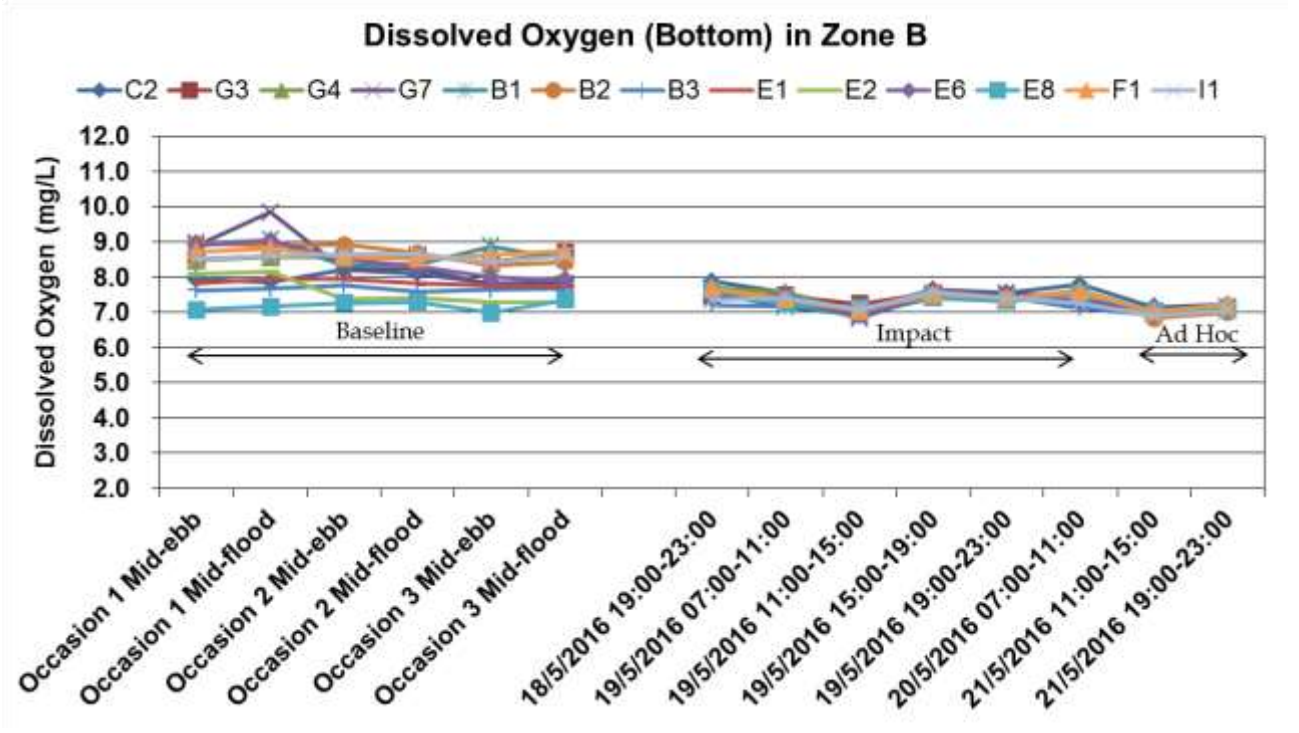


Figure 10 Baseline, Impact and Ad Hoc Monitoring Results of Bottom DO in Zone B



ERM has over 140 offices
Across the following
countries worldwide

Argentina	New Zealand
Australia	Panama
Belgium	Peru
Brazil	Poland
Canada	Portugal
China	Puerto Rico
Colombia	Romania
France	Russia
Germany	Singapore
Hong Kong	South Africa
Hungary	Spain
India	Sweden
Indonesia	Taiwan
Ireland	Thailand
Italy	The Netherlands
Japan	United Arab Emirates
Kazakhstan	United Kingdom
Korea	United States
Malaysia	Vietnam
Mexico	

Environmental Resources Management

16/F Berkshire House
25 Westlands Road
Quarry Bay, Hong Kong

T: 2271 3000
F: 2723 5660

www.erm.com