

# Asia Submarine-cable Express (ASE) – Tseung Kwan O

## First Weekly Impact Water Quality Monitoring Report

19 October 2012

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## 1<sup>st</sup> Weekly Impact Water Quality Monitoring Report

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Client:  NTT Com Asia Ltd		GMS No:  0171870			
Summary:  This report presents the monitoring requirements, methodologies and results of the impact marine water quality measurements at the monitoring locations near Tseung Kwan O in accordance with the EM&A Manual.		Date: 19 October 2012			
		Approved by:    Terence Fong Project Director			
0	1 <sup>st</sup> Weekly Impact Water Quality Monitoring Report	YL	GYANG	TFONG	19 Oct 12
Revision	Description	By	Checked	Approved	Date
<p>This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.</p> <p>This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.</p> <p>We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.</p> <p>This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.</p>		Distribution		 <input checked="" type="checkbox"/> Internal <input checked="" type="checkbox"/> Public <input type="checkbox"/> Confidential  	



**Asia Submarine-cable Express (ASE) - Tseung Kwan O**  
**Environmental Certification Sheet**  
**EP-433/2011**

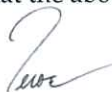
**Reference Document/Plan**

Document/ <del>Plan</del> -to be-Certified/ Verified:	First Weekly Impact Water Quality Monitoring Report
Date of Report:	19 October 2012
Date prepared by ET:	ERM-Hong Kong Ltd
Date received by IEC:	Ecosystem Ltd

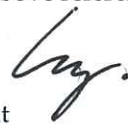
**Reference EM&A Manual/ EP Requirement**

EM&A Manual Requirement:	Section 2
Content:	<i>Water Quality Monitoring</i>
2.5 "The Impact Monitoring Report will be provided weekly within three days after the relevant monitoring data are collected or become available during the cable laying work....."	
"The Weekly Impact Monitoring shall include, but not limited to, the following details: Basic Project Information..., Operating practices of the cable burial machine during sampling 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 No. 2.4
Content:	<i>Baseline Monitoring Report on Water Quality</i>
(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 the weekly impact monitoring and site audit reports within three days after the relevant monitoring data are collected or become available.	

**ET Certification**

I hereby certify that the above referenced document/ <del>plan</del> complies with the above referenced condition of EP-433/2011.	
 Terence Fong, Environmental Team Leader:	Date: 19 October 2012

**IEC Verification**

I hereby verify that the above referenced document/ <del>plan</del> complies with the above referenced condition of EP-433/2011.	
 Vincent Lai, Independent Environmental Checker:	Date: 19 October 2012

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## ***EXECUTIVE SUMMARY***

The submarine cable installation works for the Asia Submarine-cable Express (ASE) cable system were commenced on 8 October 2012. This is the **First Weekly Impact Water Quality Monitoring Report** presenting the impact water quality monitoring conducted during the period from **8 October 2012 to 14 October 2012** in accordance with the Monitoring and Audit Manual (EM&A Manual).

### Summary of Construction Works Undertaken during the Reporting Period

During the reporting period, submarine cable laying works in Zone A and B were undertaken and had been largely completed by the end of the week.

### Water Quality Monitoring

Seven monitoring events were scheduled in the reporting period in Zone A and Zone B. Monitoring events at Zone A and Zone B designated monitoring stations were generally performed on schedule.

### Environmental Non-conformance

Exceedances of Action and Limit Levels were recorded during the reporting week. However, the exceedances were considered to reflect natural background fluctuation rather than to be caused by the Project.

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

### Future Key Issues

The submarine cable installation works will be conducted in Zone C and from Zone C eastward to the boundary Hong Kong marine waters in the coming week. Impact water quality monitoring will then be carried out in Zone C and cease once the cable installation barge moves out Zone C or no cable laying works are undertaken within Zone C.

ERM-Hong Kong, Limited (ERM) was appointed by NTT Com Asia (NTTCA) as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the installation of a telecommunication cable (Asia-Submarine-cable Express (ASE)) of approximately 7,200 km in length, connecting Japan and Singapore with branches to the Philippines, Hong Kong SAR (HKSAR) and Malaysia (thereinafter called 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 EM&A programme during the reporting period from **8 October to 14 October 2012**.

### **1.2 STRUCTURE OF THE REPORT**

The structure of the Report is as follows:

*Section 1 : Introduction*

Provides details of the background, purpose and report structure.

*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 Plan.

*Section 4 : Monitoring Results*

Summarises the water quality 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 reporting period.

*Section 7 : Conclusions*

Presents the key findings of the impact monitoring results.

## 2.1 BACKGROUND

NTT Com Asia (NTTCA) proposes to install a telecommunication cable (Asia Submarine-cable Express (ASE) cable) of approximately 7,200 km in length, connecting Japan and Singapore with branches to the Philippines, Hong Kong SAR (HKSAR) and Malaysia. NTTCA is responsible for securing the approval to land the ASE cable in Tseung Kwan O, Hong Kong SAR (HKSAR). The proposed landing site will be at a new Beach Manhole (BMH) and ultimately connect with a Data Centre in Tseung Kwan O (TKO) Industrial Estate which is scheduled for completion in 2012. From Tseung Kwan O, the cable will extend eastward approaching the Tathong Channel. Near to Cape Collinson, the cable is approximately parallel to the Tathong Channel until north of Waglan Island where the cable travels eastward to the boundary of HKSAR waters where it enters the South China Sea. The total length of cable in Hong Kong SAR waters is approximately 33.5 km. A map of the proposed cable route is presented in *Figure 2.1*.

A Project Profile (PP-452/2011) which includes an assessment of the potential environmental impacts associated with the installation of the submarine telecommunications cable system 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). The Environmental Protection Department, subsequently issued an Environmental Permit (EP- 433/2011).

Pursuant to Condition 2.4 of the EP, an environmental monitoring and audit programme as set out in the Environmental Monitoring and Audit Manual (EM&A Manual) is required to be implemented. In accordance with Section 2 of the EM&A Manual, impact monitoring of marine water quality should be undertaken when the cable installation barge works in Zone A, Zone B and Zone C.

Impact monitoring started on 8 October 2012, when the cable laying works commenced in Zone A. During the reporting period, the impact monitoring was conducted on a daily basis as the cable laying works proceeded in Zone A and Zone B. This Report therefore presents the monitoring results from the monitoring stations in Zone A and Zone B.

## 2.2 MARINE CONSTRUCTION WORKS UNDERTAKEN DURING REPORTING WEEK

Cable laying works in Zone A and Zone B were undertaken during the reporting week from **8 October 2012** to **14 October 2012**, and had been largely completed by the end of the week.



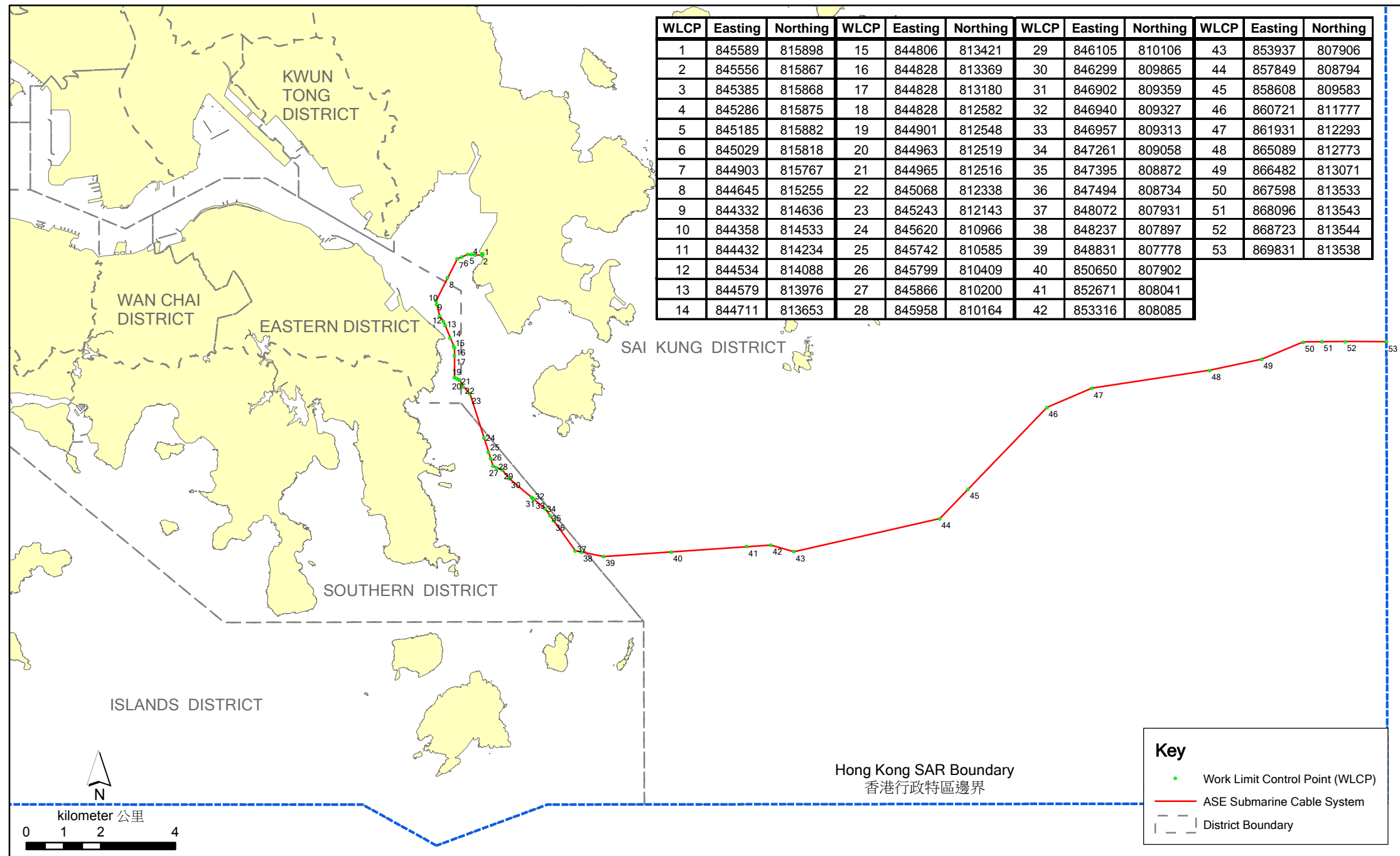


Figure 2.1

ASE Submarine Cable System (Layout Plan)

## 2.3

## STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the relevant permits, licences and reports on environmental protection for this Project is presented in *Table 2.1*.

**Table 2.1** *Summary of Environmental Licensing, Notification, Permit and Reporting Status*

Permit / Licence / Notification / Report	Reference	Validity Period	Remarks
Environmental Permit	EP 433/2011	Throughout the construction and operation stages	Granted on 20 December 2011
EM&A Manual	-	Throughout the construction stage	Revised EM&A Manual submitted on 18 September 2012
Baseline Water Quality Monitoring Report (Zone A)	-	Throughout the construction period for Zone A	Submitted on 19 September 2012
Baseline Water Quality Monitoring Report (Zone B)	-	Throughout the construction period for Zone B	Submitted on 25 September 2012
Baseline Water Quality Monitoring Report (Zone C)	-	Throughout the construction period for Zone C	Submitted on 1 October 2012

### 3.1 MONITORING LOCATIONS

In accordance with the *EM&A Manual*, during the installation of the cable in Zone A, water quality sampling was undertaken at the stations situated around the cable laying works in Zone A. The locations of the sampling stations within Zone A are shown in *Figure 3.1*.

- E7 is the Impact Station located at Fat Tong Chau to monitor the impacts of cable installation works on the coral communities in the proximity;
- E8 is an Impact Station to monitor the impacts of cable installation works on the coral communities along Junk Bay – South West;
- E9 is an Impact Station to monitor the impacts of cable installation works on the coral communities at Cape Collison (the Gradient Station is not set due to the short distance of this Impact Station to nearby proposed cable works which may affect the cable laying works);
- F1 is an Impact Station to monitor the impacts of cable installation works on the Tung Lung Chau Fish Culture Zone;
- 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; and
- 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.

The co-ordinates of the above monitoring stations in Zone A are listed in *Table 3.1*.

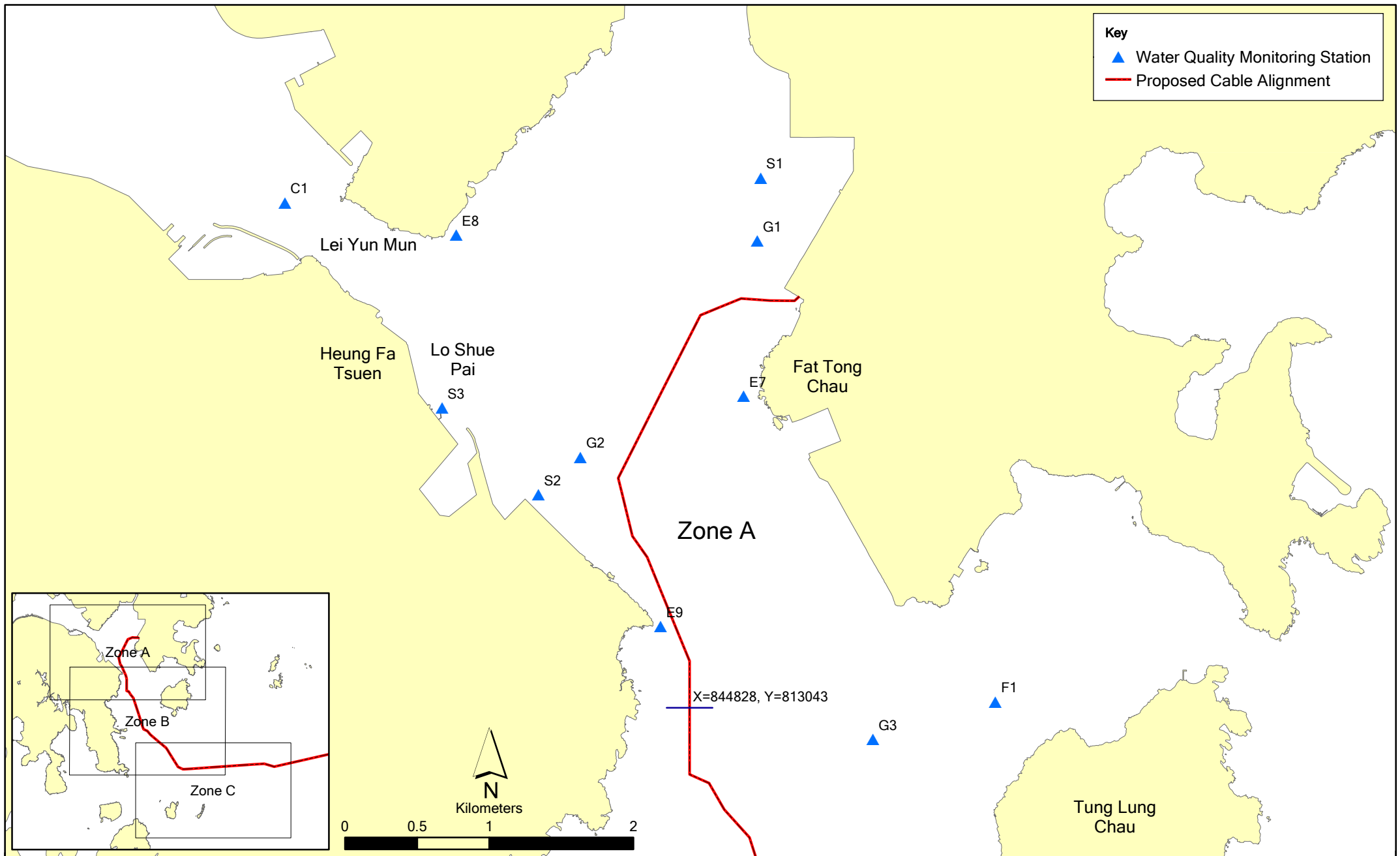


Figure 3.1

Water Quality Monitoring Station (Zone A)

**Table 3.1** *Co-ordinates of Water Quality Impact Monitoring Stations in Zone A*

Monitoring Station	Nature	Easting	Northing
E7	Impact Station (Coral Community)	843779	814520
E8	Impact Station (Coral Community)	843111	815126
E9	Impact Station (Coral Community)	843557	811853
F1	Impact Station (Fish Culture Zone)	847196	811056
S1	Impact Station (Seawater Intakes)	847639	805900
S2	Impact Station (Seawater Intakes)	849587	805696
S3	Impact Station (Seawater Intakes)	845474	810605
G1	Gradient Station	845297	816282
G2	Gradient Station	844071	814784
G3	Gradient Station	846099	812826
C1	Control Station	842022	816547

In accordance with the *EM&A Manual*, during the installation of the cable in Zone B, water quality sampling was undertaken at the stations situated around the cable laying works in Zone B. The locations of the sampling stations within Zone B are shown in *Figure 3.2*.

- 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;
- 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 short distance of 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 Cape Collison (the Gradient Station is not set due to the short distance of this Impact Station to nearby proposed cable works which may affect the cable laying works);
- F1 is an Impact Station to monitor the impacts of cable installation works on the Tung Lung Chau Fish Culture Zone;
- G3 is a Gradient Station between F1 and the cable alignment;
- G4 is a Gradient Station between E2 and the cable alignment;
- G7 is a Gradient Station between E1 and the cable alignment; and

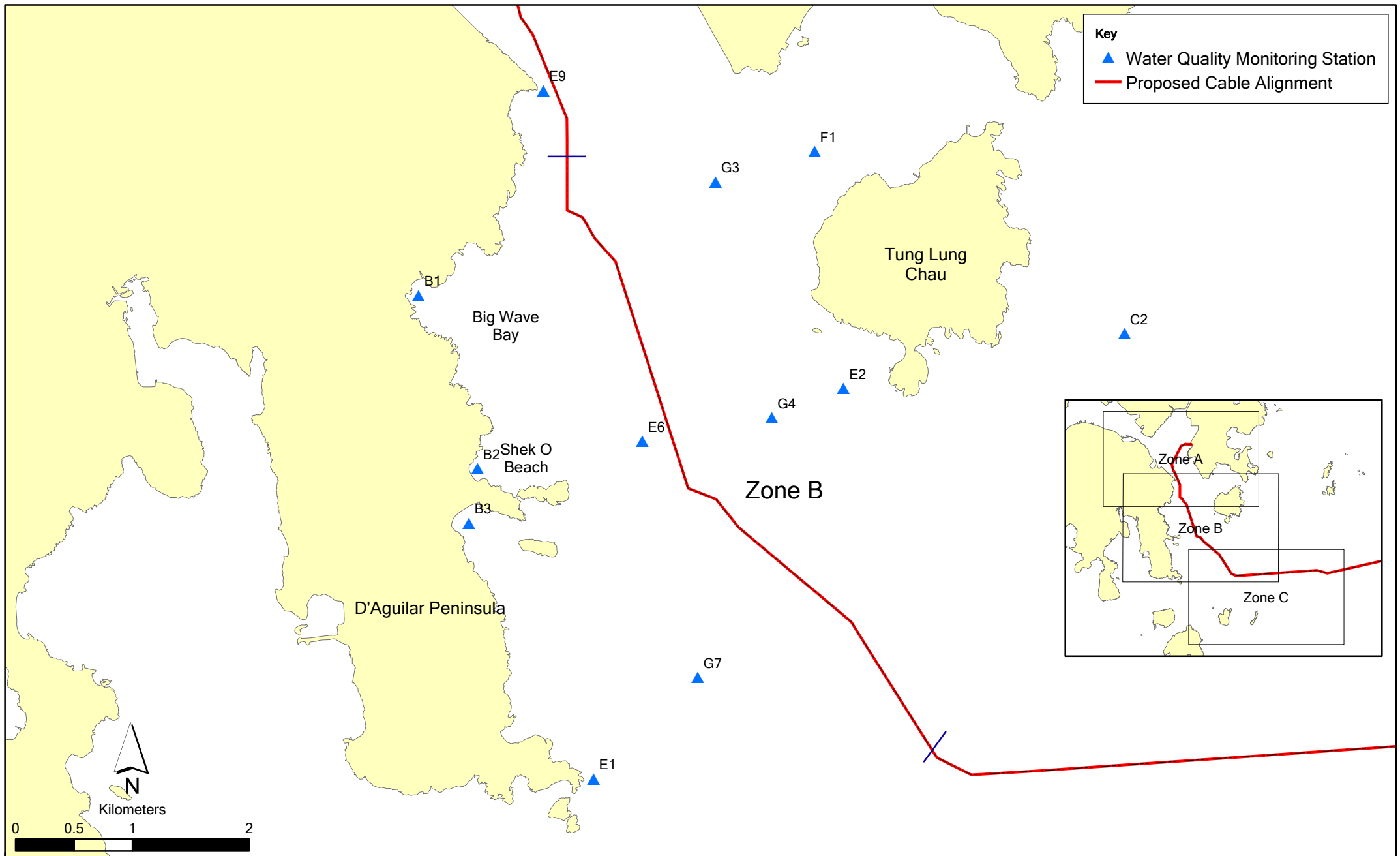


Figure 3.2

Water Quality Monitoring Station (Zone B)

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Date: 20/09/2012

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- C2 is a Control Station (approximately 3.4 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.

The co-ordinates of the above monitoring stations in Zone B are listed in *Table 3.2*.

**Table 3.2** *Co-ordinates of Water Quality Impact Monitoring Stations in Zone B*

Monitoring Station	Nature	Easting	Northing
B1	Impact Station (Beach)	843557	811853
B2	Impact Station (Beach)	844062	810369
B3	Impact Station (Beach)	843988	809902
E1	Impact Station (Marine Reserve)	845474	810605
E2	Impact Station (Coral Communities)	845203	815205
E6	Impact Station (Coral Communities)	845321	816718
E9	Impact Station (Coral Communities)	843557	811853
F1	Impact Station (Fish Culture Zone)	847196	811056
G3	Gradient Station	846099	812826
G4	Gradient Station	846583	810809
G7	Gradient Station	845946	808583
C2	Control Station	849603	811528

### 3.2 MONITORING PARAMETERS

The impact water quality monitoring was conducted in accordance with the requirements stated in the *EM&A Manual*. Monitoring parameters are presented as below.

Parameters measured *in situ* were:

- dissolved oxygen (DO) (% saturation and mg L<sup>-1</sup>),
- temperature (°C),
- turbidity (NTU), and
- salinity (‰).

The only parameter measured in the laboratory was:

- suspended solids (SS) (mgL<sup>-1</sup>).

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

### 3.3 MONITORING EQUIPMENT AND METHODOLOGY

#### 3.3.1 Monitoring Equipment

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

**Table 3.3 Equipment Used during the Impact Water Quality Monitoring**

Equipment	Model
Global Positioning Device	Garmin etrex 10
Water Depth Gauge	Speedtech Instrument SM-5A
Water Sampling Equipment	1510 Kemmerer Water Sampler
Salinity, DO, Temperature Measuring Meter	YSI Pro 2030
Current Velocity and Direction	Flow Probe FP11
Turbidity Meter	HACH Model 2100Q Turbid Meter

#### 3.3.2 Monitoring Methodology

##### *Timing & Frequency*

In-situ data and SS data were collected during the cable installation works from 07:00 to 23:00 on a daily basis. The impact monitoring schedule for the reporting period is presented in *Annex A*.

Impact monitoring at E7, E8, E9, F1, S1, S2, S3, G1, G2, G3 and C1 commenced when the cable installation barge works were within Zone A. The sampling works ceased once the cable barge was outside Zone A or no cable laying works were being undertaken within Zone A.

Similarly, impact monitoring at C2, G3, G4, G7, B1, B2, B3, E1, E2, E6, E9 and F1 commenced when the cable installation barge works were within Zone B. The sampling works ceased once the cable barge was outside Zone B or no cable laying works were being undertaken within Zone B.

Due to the weather conditions and travelling time between stations, *in-situ* and SS measurements were taken at the impact monitoring stations with approximately four-hour interval in Zone A and Zone B. The monitoring frequency and parameters for Impact Monitoring are summarised in *Table 3.4*.



**Table 3.4** *Monitoring Frequency and Parameters for Impact Monitoring in Zone A and Zone B*

Zone	Station Type	Monitoring Station	Monitoring Frequency	Monitoring Parameter
A	Control	C1	Daily at ~4-hour interval while cable installation works were being undertaken in Zone A	Temperature, Turbidity, Salinity, DO and SS
	Gradient	G1, G2, G3		
	Impact	E7, E8, E9, F1, S1, S2, S3,		
B	Control	C2	Daily at ~4-hour interval while cable installation works were being undertaken in Zone B	Temperature, Turbidity, Salinity, DO and SS
	Gradient	G3, G4, G7		
	Impact	B1, B2, B3, E1, E2, E6, E9, F1		

Duplicate samples were collected from each of the monitoring events for *in situ* measurements and laboratory analysis.

#### *Depths*

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 less than 6 m, the mid-depth station may be omitted. For stations that are less than 3 m in depth, 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.

#### *Sampling/ Testing Protocols*

All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently 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.

Two replicate samples were collected from each of the monitoring events for *in situ* measurement and lab analysis.

## 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 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 B*)

### 3.3.3 Action and Limit Levels

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

**Table 3.5** *Action and Limit Levels of Water Quality for Zones A*

Parameter	Action Level	Limit Level
SS in mgL <sup>-1</sup> (Depth-averaged) <sup>(a) (c)</sup>	95%-ile of baseline data (6.27 mg L <sup>-1</sup> ), or	99%-ile of baseline data (6.40 mg L <sup>-1</sup> ), and
	20% exceedance of value at any impact station compared with corresponding data from control station	30% exceedance of value at any impact station compared with corresponding data from control station
DO in mgL <sup>-1</sup> <sup>(b)</sup>	<u>Surface and Middle</u> <sup>(d)</sup>	<u>Surface and Middle</u> <sup>(d)</sup>
	5%-ile of baseline data for surface and middle layer (4.36 mg L <sup>-1</sup> )	5mg/L or 1%-ile of baseline for surface and middle layer (4.25 mg L <sup>-1</sup> )
	<u>Bottom</u>	<u>Bottom</u>
	5%-ile of baseline data for bottom layers (4.39 mg L <sup>-1</sup> )	2mg/L or 1%-ile of baseline data for bottom layer (4.33 mg L <sup>-1</sup> )
Turbidity in NTU (Depth-averaged) <sup>(a) (c)</sup>	95%-ile of baseline data (4.38 NTU), or	99%-ile of baseline data (4.43 NTU), and
	20% exceedance of value at any impact station compared with corresponding data from control station	30% exceedance of value at any impact station compared with corresponding data from control station

**Notes:**

- "Depth-averaged" is calculated by taking the arithmetic means of reading of all sampled depths.
- For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits.
- For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
- The Action and Limit Level for DO for surface and middle layer were calculated from the combined pool of baseline surface layer data and baseline middle layer data.

The Action and Limit levels for Zones B, which were established based on the results of *Baseline Environmental Monitoring (Zone B)*, are presented in *Table 3.6*.

**Table 3.6** *Action and Limit Levels for Water Quality for Zone B*

<b>Parameter</b>	<b>Action Level</b>	<b>Limit Level</b>
SS in mgL <sup>-1</sup> (Depth-averaged) <sup>(a) (c)</sup>	95%-ile of baseline data (4.09 mg L <sup>-1</sup> ), or	99%-ile of baseline data (4.60 mg L <sup>-1</sup> ), and
	20% exceedance of value at any impact station compared with corresponding data from control station	30% exceedance of value at any impact station compared with corresponding data from control station
DO in mgL <sup>-1</sup> <sup>(b)</sup>	<u>Surface and Middle</u> <sup>(d)</sup>	<u>Surface and Middle</u> <sup>(d)</sup>
	5%-ile of baseline data for surface and middle layer (4.72 mg L <sup>-1</sup> )	5mg/L or 1%-ile of baseline for surface and middle layer (4.57 mg L <sup>-1</sup> )
	<u>Bottom</u>	<u>Bottom</u>
	5%-ile of baseline data for bottom layers (4.52 mg L <sup>-1</sup> )	2mg/L or 1%-ile of baseline data for bottom layer (4.44 mg L <sup>-1</sup> )
Turbidity in NTU (Depth-averaged) <sup>(a) (c)</sup>	95%-ile of baseline data (3.01 NTU), or	99%-ile of baseline data (3.13 NTU), and
	20% exceedance of value at any impact station compared with corresponding data from control station	30% exceedance of value at any impact station compared with corresponding data from control station
<b>Notes:</b>		
e.	“Depth-averaged” is calculated by taking the arithmetic means of reading of all sampled depths.	
f.	For DO, non-compliance of the water quality limits occurs when the monitoring result is lower than the limits.	
g.	For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.	
h.	The Action and Limit Level for DO for surface and middle layer were calculated from the combined pool of baseline surface layer data and baseline middle layer data.	

### 3.3.4 *Event and Action Plan*

The Event and Action Plan for water quality monitoring which was stipulated in the *EM&A Manual* is presented in *Table 3.7*.

**Table 3.7** *Event Action Plan for Water Quality*

<b>Event</b>	<b>Contractor</b>
Action Level Exceedance	<p><b>Step 1</b> - repeat sampling event.</p> <p><b>Step 2</b> - identify source(s) of impact and confirm whether exceedance was due to the construction works;</p> <p><b>Step 3</b> - inform EPD, AFCD and LCSD and confirm notification of the non-compliance in writing;</p> <p><b>Step 4</b> - 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).</p> <p><b>Step 5</b> - repeat measurements after implementation of mitigation for confirmation of compliance.</p> <p><b>Step 6</b> - if non compliance continues - increase measures in Step 4 and repeat measurements in Step 5. If non compliance occurs a third time, suspend cable laying operations.</p>
Limit Level Exceedance	<p>Undertake <b>Steps 1-5</b> immediately, if further non compliance continues at the Limit Level, suspend cable laying operations until an effective solution is identified.</p>

A total of seven monitoring events were scheduled between **8 October** and **14 October 2012**. Monitoring events at all designated monitoring stations within Zone A and Zone B were generally performed on schedule. No major activities influencing the water quality were identified during the reporting period.

#### 4.1 DATA COLLECTED DURING REPORTING PERIOD

Continuous water sampling was taken at the impact monitoring stations in Zone A and Zone B at approximately 4-hour intervals (subject to the weather conditions and travelling time between stations) on a daily basis. In general, the water quality of Zone A and Zone B was stable throughout each sampling day though natural fluctuation existed. Neither sudden drop in dissolved oxygen concentrations nor sharp increase in turbidity levels and suspended solid levels were observed on each monitoring day. The results of the impact monitoring and their graphical presentations were included in *Annex C*.

Despite relatively stable water quality, exceedances of the Action and Limit Levels were recorded during the reporting week except 12 Oct 2012. A summary of stations where exceedances were recorded is presented in *Table 4.1*. Exceedances with detailed information of location and time were presented in *Annex C*.

**Table 4.1** Summary of Exceedances Occurring during the Reporting Week

Date	Surface DO		Middle DO		Bottom DO		Depth-averaged Turbidity		Depth-averaged SS	
	Exceedance of									
	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
08/10					E9, S3	E9, S3				
09/10					S1, S2, S3	S1				
10/10					E9, S3	E9, S3				
11/10					E9, S3					
12/10										
13/10			F1				E9, F1, B3	E9	E9, F1	E9
14/10			F1				E9, F1	E9	E9	E9

## 4.2 EXCEEDANCES DURING REPORTING PERIOD

### 4.2.1 Exceedances on 8 October 2012

Exceedances of the Action and Limit Levels in bottom DO were recorded at Stations E9 and S3 in the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> sampling rounds on 8 October 2012 (Table 4.2).

According to the daily barge operation report, there were some maintenance and repair works carried out by the Contractor and the burial operation (ie jetting works) did not start until 17:00 of 08 October 2012. Jetting works were undertaken between 17:00 – 23:00 on the day.

As stated above, jetting works for the Project were not being undertaken when the exceedances were recorded in the 1<sup>st</sup> and 2<sup>nd</sup> rounds of marine water quality monitoring (ie 09:00 – 15:04). Therefore, the exceedances of the Action/Limit levels at E9 and S3 in the first two rounds are considered as representing natural background fluctuations.

The exceedances of the Action Level at S3 in the 3<sup>rd</sup> round of marine water quality monitoring is marginal in nature, with merely 0.02 mg/L lower than the corresponding Action Level value (ie 4.39 mg/L). When the sampling was carried out, the current direction was westward. Given the fact that the bottom DO value at Gradient Station G2 (4.78 mg/L), which is situated between the barge and S3, was within the Action Level, the exceedance measured at the S3 was unlikely to be caused by the jetting works but should be considered as an occasional case and representing natural background levels during the time of monitoring.

**Table 4.2 Exceedances of Action and Limit Levels on 8 October 2012**

<b>Exceedance Log No.</b>	0171870_08 October 12_Bottom DO_E9_1stR 0171870_08 October 12_Bottom DO_S3_1stR 0171870_08 October 12_Bottom DO_S3_2ndR 0171870_08 October 12_Bottom DO_S3_3rdR		
<b>Sampling date</b>	8 October 2012		
<b>Monitoring station</b>	E8, S1, E7, F1, E9, S2 and S3		
<b>Parameter</b>	Bottom Dissolved Oxygen (DO) (mg/L)		
<b>Action Level</b>	4.39 mg/L		
<b>Limit Level</b>	4.33 mg/L		
<b>Measured Levels at Station E9</b>	Round 1	Bottom DO = 4.26	(exceeded Limit Level)
<b>Measured Levels at Station S3</b>	Round 1	Bottom DO = 4.25	(exceeded Limit Level)
	Round 2	Bottom DO = 4.35	(exceeded Action Level)
	Round 3	Bottom DO = 4.37	(exceeded Action Level)

### 4.2.2 Exceedances on 9 October 2012

Exceedances of the Action and Limit Levels in bottom DO were recorded at Stations S1, S2 and S3 in all four sampling rounds on 9 October 2012 (Table 4.3).

According to the daily barge operation report, there were preparation and equipment maintenance works carried out by the Contractor before the burial operation (ie jetting works) resumed at 11:30. All marine works stopped at approximately 20:00 in the evening. The actual time of jetting works on 09 Oct 2012 was between 11:30 to 20:00.

As stated above, jetting works were not being undertaken when the exceedances were recorded in the 1<sup>st</sup> round and late stage of the 4<sup>th</sup> round of marine water quality monitoring (ie in the periods of 07:00 – 10:55 and 20:00 – 23:05). Therefore, the exceedances of the Action/Limit levels at S1 in the 1<sup>st</sup> sampling round and S3 in the 4<sup>th</sup> round are considered as representing natural background fluctuations rather than a result of the cable installation works.

Despite the Action Level exceedance at S1 in the 2<sup>nd</sup> sampling round, the bottom DO value (4.34 mg/L) was higher than that measured at the same station in the 1<sup>st</sup> round (4.28 mg/L) when jetting works had yet to start and was not expected to impose any impact. The bottom DO at S1 continued to increase and was found to be compliant with the water quality limit in the 3<sup>rd</sup> sampling round when jetting works resumed after 11:30 and were taking place at the time of sampling (11:40 - 11:55). Therefore the exceedance measured at the S1 in the 2<sup>nd</sup> round was unlikely to be caused by the jetting works but should be considered as representing natural background levels during the time of monitoring.

The exceedance of the Action Level at S2 in the 3<sup>rd</sup> round of marine water quality monitoring is an occasional case that occurred only once among all four sampling rounds. The exceedance of the Action Level at S3 in the 3<sup>rd</sup> round is marginal in nature, with merely 0.03 mg/L lower than the corresponding Action Level value (ie 4.39 mg/L). When the sampling at S2 and S3 was carried out in the 3<sup>rd</sup> round, the current direction was westward. Given the fact that the bottom DO value at Gradient Station G2 (4.71 mg/L), which is situated between the barge and S2/S3, was within the Action Level, the exceedances measured at S2 and S3 were unlikely to be caused by the jetting works but should be considered as representing natural background levels during the time of monitoring.

**Table 4.3** *Exceedances of Action and Limit Levels on 9 October 2012*

<b>Exceedance Log No.</b>	0171870_09 October 12_Bottom DO_S1_1stR 0171870_09 October 12_Bottom DO_S1_2ndR 0171870_09 October 12_Bottom DO_S2_3rdR 0171870_09 October 12_Bottom DO_S3_3rdR 0171870_09 October 12_Bottom DO_S3_4thR		
<b>Sampling date</b>	9 October 2012		
<b>Monitoring station</b>	E8, S1, E7, F1, E9, S2 and S3		
<b>Parameter</b>	Bottom Dissolved Oxygen (DO) (mg/L)		
<b>Action Level</b>	4.39 mg/L		
<b>Limit Level</b>	4.33 mg/L		
<b>Measured Levels at Station S1</b>	Round 1	Bottom DO = 4.28	(exceeded Limit Level)
	Round 2	Bottom DO = 4.34	(exceeded Action Level)
<b>Measured Levels at Station S2</b>	Round 3	Bottom DO = 4.34	(exceeded Action Level)
<b>Measured Levels at Station S3</b>	Round 3	Bottom DO = 4.37	(exceeded Action Level)
	Round 4	Bottom DO = 4.36	(exceeded Action Level)

### 4.2.3

#### *Exceedances on 10 October 2012*

Exceedances of the Action and Limit Levels in bottom DO were recorded at Stations E9 and S3 in the 1<sup>st</sup> and 2<sup>nd</sup> sampling rounds on 10 October 2012 (Table 4.4).

According to the daily barge operation report, the Contractor did not conduct any jetting works until 15:00 due to unfavourable weather conditions on that day. Between 13:00 – 15:00, there were preparation and equipment maintenance works carried out before the burial operation (ie jetting works) resumed. Cable laying works stopped at approximately 16:00 in the afternoon due to restriction to cross the Tathong Channel until 17:00 as per recommendation from the Marine Department. The actual time of jetting works on 10 Oct 2012 was between 15:00 - 16:00.

As stated above, jetting works were not being undertaken when the exceedances were recorded in the 1<sup>st</sup> round of marine water quality monitoring (ie 07:00 – 11:01). Therefore, the exceedances of the Limit levels at E9 and S3 in the 1<sup>st</sup> sampling round are considered as representing natural background fluctuations rather than a result of the cable installation works

Despite the Action Level exceedance at S3 in the 2<sup>nd</sup> sampling round, the bottom DO value (4.35 mg/L) was higher than that measured at the same station in the 1<sup>st</sup> round (4.25 mg/L) when jetting works had yet to start and was not expected to impose any impact. The bottom DO at S3 continued to increase and was found to be compliant with the water quality limit in the 3<sup>rd</sup> sampling round when jetting works resumed after 15:00 and were taking place at the time of sampling (15:05 - 19:03). Therefore the exceedance measured at the S3 in the 2<sup>nd</sup> round was unlikely to be caused by the jetting works but should be considered as representing natural background levels during the time of monitoring.

**Table 4.4** *Exceedances of Action and Limit Levels on 10 October 2012*

<b>Exceedance Log No.</b>	0171870_10 October 12_Bottom DO_E9_1stR 0171870_10 October 12_Bottom DO_S3_1stR 0171870_10 October 12_Bottom DO_S3_2ndR	
<b>Sampling date</b>	10 October 2012	
<b>Monitoring station</b>	E8, S1, E7, F1, E9, S2 and S3	
<b>Parameter</b>	Bottom Dissolved Oxygen (DO) (mg/L)	
<b>Action Level</b>	4.39 mg/L	
<b>Limit Level</b>	4.33 mg/L	
<b>Measured Levels at Station E9</b>	Round 1	Bottom DO = 4.24 (exceeded Limit Level)
<b>Measured Levels at Station S3</b>	Round 1	Bottom DO = 4.25 (exceeded Limit Level)
	Round 2	Bottom DO = 4.35 (exceeded Action Level)



#### 4.2.4 Exceedances on 11 October 2012

Exceedances of the Action Level in bottom DO were recorded at Stations E9 and S3 only in the 3<sup>rd</sup> sampling round on 11 October 2012 (Table 4.5).

According to the daily barge operation report, there was preparation work carried out by the Contractor before the burial operation (ie jetting works) resumed at 10:45. All marine works stopped at approximately 23:00 in the evening. The actual time of jetting works on 11 Oct 2012 was between 10:45 to 19:30 and 21:00 to 23:00.

The exceedances of the Action Level at both E9 and S3 in the 3<sup>rd</sup> sampling round are occasional. The bottom DO values at these two stations increased and were found to be compliant with the water quality limit in the 4<sup>th</sup> sampling round when jetting works were still being conducted until 23:00. In addition, jetting-related oxygen depletion is expected to be caused by the release of suspended solids and its subsequent oxidative process. However in this case, depth-averaged suspended solids levels at all monitoring stations were low and in compliance with the Action and Limit Levels during all four water sampling rounds. Therefore the exceedances were unlikely to be caused by the jetting works but should be considered as reflecting natural background fluctuations during the time of monitoring.

**Table 4.5 Exceedances of Action and Limit Levels on 11 October 2012**

<b>Exceedance Log No.</b>	0171870_08 October 12_Bottom DO_E9_3rdR 0171870_08 October 12_Bottom DO_S3_3rdR	
<b>Sampling date</b>	11 October 2012	
<b>Monitoring station</b>	E8, S1, E7, F1, E9, S2 and S3	
<b>Parameter</b>	Bottom Dissolved Oxygen (DO) (mg/L)	
<b>Action Level</b>	4.39 mg/L	
<b>Limit Level</b>	4.33 mg/L	
<b>Measured Levels at Station E9</b>	Round 3	Bottom DO = 4.34 (exceeded Action Level)
<b>Measured Levels at Station S3</b>	Round 3	Bottom DO = 4.36 (exceeded Action Level)

#### 4.2.5 Exceedances on 13 October 2012

Due to technical problems, impact water quality monitoring in Zone B started around 11:00 on 13 Oct 2012. As such, a total of three rounds of water sampling were carried out for the day. Exceedances of the Action and Limit Levels in middle DO, depth-averaged Turbidity and depth-averaged SS were recorded at Stations B3, E9 and F1 in all three sampling rounds (Table 4.6).

According to the daily barge operation report, there were some preparations works carried out by the Contractor before burial operation on the day. The burial operation (ie jetting works) was conducted between 10:30 to 12:00 and 13:30 to 16:30 on 13 October 2012.

As stated above, jetting works were not being undertaken when the exceedance in Depth-averaged Turbidity was recorded at B3 (22:00 - 22:15) in the 3<sup>rd</sup> round of marine water quality monitoring. Therefore, the exceedance of the Action Level at B3 is considered as representing natural background fluctuations.

Impact Stations E9 and F1 are located in the north, far away from the cable installation barge. It should be noted that the average values of depth-averaged Turbidity and depth-averaged SS at E9 (Turbidity = 3.68 NTU; SS = 4.29 mg/L) and F1 (Turbidity = 3.03 NTU; SS = 3.78 mg/L) on 13 October 2012 are actually of the similar magnitudes of their corresponding values (averaged values of 8 - 11 October 2012 for E9: Turbidity = 4.00 NTU, SS =4.61 mg/L; averaged values of 8 - 11 October 2012 for F1: Turbidity = 3.66 NTU, SS = 4.13 mg/L) in the previous dates or even better. When the sampling was carried out in the first round, the current direction was eastward. Given the fact that values of all water quality parameters at the Gradient Station (ie G4) and Impact Station (ie E2) in the eastern vicinity of the barge were measured to be within the corresponding Action Levels, the exceedances in middle DO, depth-averaged Turbidity and depth-averaged SS at E9 and F1 in the 1<sup>st</sup> sampling round, as well as later in the 2<sup>nd</sup> (18:44 - 19:00 for E9 and 18:03 - 18:17 for F1) and 3<sup>rd</sup> (19:02 - 19:18 for E9 and 19:44 - 19:59 for F1) rounds when jetting works ceased, were unlikely to be caused by the jetting works but should be considered as representing natural background levels during the time of monitoring.

**Table 4.6** *Exceedances of Action and Limit Levels on 13 October 2012*

<b>Exceedance Log No.</b>	0171870_13 October 12_Middle DO_F1_1stR 0171870_13 October 12_Depth-averaged Turbidity_E9_1stR 0171870_13 October 12_Depth-averaged SS_E9_1stR 0171870_13 October 12_Depth-averaged Turbidity_F1_1stR 0171870_13 October 12_Depth-averaged SS_F1_1stR 0171870_13 October 12_Depth-averaged Turbidity_E9_2ndR 0171870_13 October 12_Depth-averaged SS_E9_2ndR 0171870_13 October 12_Depth-averaged Turbidity_F1_2ndR 0171870_13 October 12_Depth-averaged SS_F1_2ndR 0171870_13 October 12_Depth-averaged Turbidity_B3_3rdR 0171870_13 October 12_Depth-averaged Turbidity_E9_3rdR 0171870_13 October 12_Depth-averaged SS_E9_3rdR 0171870_13 October 12_Depth-averaged Turbidity_F1_3rdR		
<b>Sampling date</b>	13 October 2012		
<b>Monitoring station</b>	B1, B2, B3, E1, E2, E6, E9, and F1		
<b>Parameter</b>	Middle Dissolved Oxygen (DO) (mg/L)	Depth-averaged Turbidity (NTU)	Depth-averaged SS (mg/L)
<b>Action Level</b>	4.72 mg/L	3.01 NTU or 20% exceedance of data at control station	4.09 (mg/L) or 20% exceedance of data at control station
<b>Limit Level</b>	4.57 mg/L	3.13 NTU and 30% exceedance of data at control station	4.60 (mg/L) and 30% exceedance of data at control station
<b>Measured Levels at Station B3</b>	Round 3	Turbidity = 2.41	(exceeded Action Level)
<b>Measured Levels at Station E9</b>	Round 1	Turbidity = 3.18 SS =4.17	(exceeded Limit Level) (exceeded Action Level)
	Round 2	Turbidity = 3.93 SS =4.73	(exceeded Limit Level) (exceeded Limit Level)

	Round 3	Turbidity = 3.29 SS =3.97	(exceeded Limit Level) (exceeded Action Level)
<b>Measured Levels at Station F1</b>	Round 1	Middle DO = 4.68 Turbidity = 3.01 SS =3.92	(exceeded Action Level) (exceeded Action Level) (exceeded Action Level)
	Round 2	Turbidity = 3.11 SS =4.05	(exceeded Action Level) (exceeded Action Level)
	Round 3	Turbidity = 2.98	(exceeded Action Level)

#### 4.2.6

#### Exceedances on 14 October 2012

Exceedances of the Action and Limit Levels in middle DO, depth-averaged Turbidity and depth-averaged SS were recorded at Stations E9 and F1 in all four sampling rounds on 14 October 2012 (Table 4.7). According to the daily barge operation report, the burial operation (ie jetting works) was conducted between 10:00 and 16:00 on the day.

Impact Stations E9 and F1 are located in the north, far away from the cable installation barge. It should be noted that the average values of depth-averaged Turbidity and depth-averaged SS at E9 (Turbidity = 3.87 NTU; SS = 4.86 mg/L) and F1 (Turbidity = 2.98 NTU; SS =4.00 mg/L) on 13 October 2012 are actually of the similar magnitudes of their corresponding values (averaged values of 8 - 11 October 2012 for E9: Turbidity = 4.00 NTU, SS =4.61 mg/L; averaged values of 8 - 11 October 2012 for F1: Turbidity = 3.66 NTU, SS = 4.13 mg/L) in the previous dates or even better. Between these two stations and the cable installation barge, there are several Gradient Stations (ie G3 and G4) and Impact Stations (ie E2, E6 and B1), which are located in the middle and therefore more susceptible to the impact of the Project. But exceedances of Action and Limit Levels in all water quality parameters were recorded at none of these stations. The fact demonstrates the exceedances in middle DO, depth-averaged Turbidity and depth-averaged SS at the E9 and F1 in the 1<sup>st</sup> and 2<sup>nd</sup> sampling rounds, as well as later in the 3<sup>rd</sup> (15:05 - 19:02) and 4<sup>th</sup> (19:05 - 23:04) rounds of marine water quality monitoring when jetting works ceased, were unlikely to be caused by the jetting works but should be considered as representing natural background levels during the time of monitoring.

**Table 4.7** *Exceedances of Action and Limit Levels on 14 October 2012*

<b>Exceedance Log No.</b>	0171870_14 October 12_Depth-averaged Turbidity_E9_1stR 0171870_14 October 12_Depth-averaged SS_E9_1stR 0171870_14 October 12_Middle DO_F1_1stR 0171870_14 October 12_Depth-averaged Turbidity_F1_1stR 0171870_14 October 12_Depth-averaged Turbidity_E9_2ndR 0171870_14 October 12_Depth-averaged SS_E9_2ndR 0171870_14 October 12_Depth-averaged Turbidity_F1_2ndR 0171870_14 October 12_Depth-averaged Turbidity_E9_3rdR 0171870_14 October 12_Depth-averaged SS_E9_3rdR 0171870_14 October 12_Depth-averaged Turbidity_F1_3rdR 0171870_14 October 12_Depth-averaged Turbidity_E9_4thR 0171870_14 October 12_Depth-averaged SS_E9_4thR 0171870_13 October 12_Depth-averaged Turbidity_F1_4thR 0171870_14 October 12_Depth-averaged SS_F1_4thR		
<b>Sampling date</b>	14 October 2012		
<b>Monitoring station</b>	B1, B2, B3, E1, E2, E6, E9, and F1		
<b>Parameter</b>	Middle Dissolved Oxygen (DO) (mg/L)	Depth-averaged Turbidity (NTU)	Depth-averaged SS (mg/L)
<b>Action Level</b>	4.72 mg/L	3.01 NTU or 20% exceedance of data at control station	4.09 (mg/L) or 20% exceedance of data at control station
<b>Limit Level</b>	4.57 mg/L	3.13 NTU and 30% exceedance of data at control station	4.60 (mg/L) and 30% exceedance of data at control station
<b>Measured Levels at Station E9</b>	Round 1	Turbidity = 3.94 SS =5.00	(exceeded Limit Level) (exceeded Limit Level)

	Round 2	Turbidity = 3.91 SS =4.88	(exceeded Limit Level) (exceeded Limit Level)
	Round 3	Turbidity = 3.86 SS =4.78	(exceeded Limit Level) (exceeded Limit Level)
	Round 4	Turbidity = 3.80 SS = 4.78	(exceeded Limit Level) (exceeded Limit Level)
<b>Measured Levels at Station F1</b>	Round 1	Middle DO = 4.67 Turbidity = 3.03	(exceeded Action Level) (exceeded Action Level)
	Round 2	Turbidity = 3.00	(exceeded Action Level)
	Round 3	Turbidity = 2.98	(exceeded Action Level)
	Round 4	Turbidity = 2.90 SS = 3.95	(exceeded Action Level) (exceeded Action Level)

## 5 ENVIRONMENTAL NON-CONFORMANCES

### 5.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

Exceedances of the Action and Limit Levels were recorded during the reporting period. The Event and Action Plan for the identified exceedances were implemented and followed the procedures as stipulated in the *EM&A Manual* and *Table 3.7*. It was concluded that the exceedances were considered to reflect natural background fluctuation rather than to be caused by the Project (See *Section 4.2* for details).

### 5.2 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

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

### 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 period.

## 6 *FUTURE KEY ISSUES*

### 6.1 *KEY ISSUES FOR THE COMING REPORTING PERIOD*

The cable installation works will be conducted in Zone C and from Zone C eastward to the boundary Hong Kong marine waters.

### 6.2 *MONITORING SCHEDULE FOR THE COMING REPORTING PERIOD*

Impact water quality monitoring will be carried out in Zone C and will cease once the cable installation barge moves out Zone C or no cable laying works are undertaken within Zone C.

This Weekly Impact Monitoring Report presents the results of impact water quality monitoring undertaken in Zone A and Zone B during the period from **8 October** to **14 October 2012** in accordance with the *EM&A Manual* and the requirements under Environmental Permit (EP - 433/2011).

Water quality of Zone A and Zone B was generally stable throughout the sampling period. Neither sudden drop in dissolved oxygen concentrations nor sharp increase in turbidity levels and suspended solid levels were observed. Exceedances of Action and Limit Levels were recorded during the reporting week, but they were considered to reflect natural background fluctuation rather than to be caused by the Project.

It is concluded that no deterioration of water quality was observed and hence the effect of the Project on water quality is considered to be negligible.



Annex A

## Impact Water Quality Monitoring Schedule

**ASE Submarine Cable System - Tseung Kwan O  
Impact Water Quality Monitoring Schedule - First Week**

as of 14 October 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-Oct	2-Oct	3-Oct	4-Oct	5-Oct	6-Oct
7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	13-Oct
	07:00 -23:00 <b>(Zone A, 11 stations )</b> <i>Impact Monitoring</i>	07:00 -23:00 <b>(Zone A, 11 stations )</b> <i>Impact Monitoring</i>	07:00 -23:00 <b>(Zone A, 11 stations )</b> <i>Impact Monitoring</i>	07:00 -23:00 <b>(Zone A, 11 stations )</b> <i>Impact Monitoring</i>	07:00 -23:00 <b>(Zone A, 11 stations )</b> <i>Impact Monitoring</i>	07:00 -23:00 <b>(Zone B, 12 stations )</b> <i>Impact Monitoring</i>
14-Oct	15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct
07:00 -23:00 <b>(Zone B, 12 stations )</b> <i>Impact Monitoring</i>						
21-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct
28-Oct	29-Oct	30-Oct	31-Oct	1-Nov	2-Nov	3-Nov

Annex B

## QA/QC Results for Suspended Solids Testing

**Annex B1 QA/QC Results of Laboratory Analysis of Total Suspended Solids (Zone A)**

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/8/2012	96.5	C1-S1(0700)	4.08	G1-S2 (0700)	94.0
	103.8	G1-M1(0700)	0.0	G3-M2 (0700)	107.5
	103.6	G3-B1 (0700)	0.0	G2-B2(0700)	96.2
	95.1	S3-S1 (0700)	4.26	S3-B2 (0700)	94.3
	104.3	C1-S1(1100)	0.0	G1-S2 (1100)	95.8
	93.8	G1-M1(1100)	0.0	G3-M2 (1100)	92.2
	97.0	G3-B1 (1100)	4.44	G2-B2 (1100)	95.9
	99.0	S3-S1 (1100)	4.26	S3-B2 (1100)	95.8
	94.6	C1-S1(1500)	0.0	G1-S2 (1500)	102.0
	99.6	G1-M1(1500)	4.65	G3-M2 (1500)	103.8
	101.3	G3-B1 (1500)	0.0	G2-B2 (1500)	100.0
	103.5	S3-S1 (1500)	4.44	S3-B2 (1500)	93.9
	92.2	C1-S1(1900)	4.44	G1-S2 (1900)	104.1
	105.8	G1-M1(1900)	0.0	G3-M2 (1900)	106.3
	107.8	G3-B1 (1900)	4.44	G2-B2 (1900)	105.9
102.0	S3-S1 (1900)	0.0	S3-B2 (1900)	102.0	

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

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/9/2012	98.8	C1-S1(0700)	4.26	G1-S2 (0700)	96.2
	98.6	G1-M1(0700)	4.65	G3-M2 (0700)	94.0
	92.2	G3-B1 (0700)	0.00	G2-B2(0700)	93.9
	103.6	S3-S1 (0700)	4.26	S3-B2 (0700)	104.0
	106.3	C1-S1(1100)	0.00	G1-S2 (1100)	96.1
	93.2	G1-M1(1100)	4.65	G3-M2 (1100)	96.2
	99.4	G3-B1 (1100)	4.88	G2-B2 (1100)	105.9
	101.2	S3-S1 (1100)	4.44	S3-B2 (1100)	104.2
	104.0	C1-S1(1500)	4.26	G1-S2 (1500)	106.4
	99.8	G1-M1(1500)	4.65	G3-M2 (1500)	104.3
	98.6	G3-B1 (1500)	0.00	G2-B2 (1500)	98.0
	102.0	S3-S1 (1500)	0.00	S3-B2 (1500)	100.0
	105.8	C1-S1(1900)	4.44	G1-S2 (1900)	100.0
	101.2	G1-M1(1900)	4.65	G3-M2 (1900)	93.9
	104.0	G3-B1 (1900)	4.65	G2-B2 (1900)	102.0
104.2	S3-S1 (1900)	4.26	S3-B2 (1900)	101.9	

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 B2 QA/QC Results of Laboratory Analysis of Total Suspended Solids (Zone A)**

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/10/2012	94.6	C1-S1(0700)	4.08	G1-S2 (0700)	93.6
	102.5	G1-M1(0700)	4.44	G3-M2 (0700)	98.1
	101.0	G3-B1 (0700)	3.92	G2-B2(0700)	98.0
	93.0	S3-S1 (0700)	8.00	S3-B2 (0700)	107.7
	92.6	C1-S1(1100)	3.92	G1-S2 (1100)	106.0
	96.2	G1-M1(1100)	4.44	G3-M2 (1100)	104.3
	93.2	G3-B1 (1100)	7.69	G2-B2 (1100)	101.9
	100.0	S3-S1 (1100)	0.00	S3-B2 (1100)	98.0
	107.1	C1-S1(1500)	7.69	G1-S2 (1500)	100.0
	95.7	G1-M1(1500)	4.88	G3-M2 (1500)	102.1
	101.9	G3-B1 (1500)	3.77	G2-B2 (1500)	100.0
	94.9	S3-S1 (1500)	4.26	S3-B2 (1500)	98.1
	104.1	C1-S1(1900)	4.08	G1-S2 (1900)	103.8
	105.7	G1-M1(1900)	0.00	G3-M2 (1900)	93.9
	103.2	G3-B1 (1900)	3.92	G2-B2 (1900)	91.8
106.4	S3-S1 (1900)	4.44	S3-B2 (1900)	100.0	

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

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/11/2012	102.4	C1-S1(0700)	4.44	G1-S2 (0700)	100.0
	103.1	G1-M1(0700)	4.65	G3-M2 (0700)	93.8
	105.8	G3-B1 (0700)	3.77	G2-B2(0700)	103.9
	106.4	S3-S1 (0700)	4.44	S3-B2 (0700)	92.5
	96.3	C1-S1(1100)	8.33	G1-S2 (1100)	107.5
	97.5	G1-M1(1100)	4.44	G3-M2 (1100)	94.2
	102.9	G3-B1 (1100)	3.92	G2-B2 (1100)	100.0
	102.5	S3-S1 (1100)	4.26	S3-B2 (1100)	105.9
	106.6	C1-S1(1500)	4.08	G1-S2 (1500)	96.1
	106.8	G1-M1(1500)	4.65	G3-M2 (1500)	98.1
	98.8	G3-B1 (1500)	8.00	G2-B2 (1500)	104.2
	101.0	S3-S1 (1500)	4.65	S3-B2 (1500)	92.2
	99.4	C1-S1(1900)	4.26	G1-S2 (1900)	103.8
	104.9	G1-M1(1900)	0.00	G3-M2 (1900)	102.1
	98.8	G3-B1 (1900)	3.92	G2-B2 (1900)	104.1
103.1	S3-S1 (1900)	4.88	S3-B2 (1900)	104.1	

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 B3 QA/QC Results of Laboratory Analysis of Total Suspended Solids (Zone A)**

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/12/2012	97.9	C1-S1(0700)	3.92	G1-S2 (0700)	107.7
	95.2	G1-M1(0700)	0.00	G3-M2 (0700)	102.0
	102.7	G3-B1 (0700)	7.69	G2-B2(0700)	102.0
	107.2	S3-S1 (0700)	4.44	S3-B2 (0700)	104.3
	103.6	C1-S1(1100)	8.00	G1-S2 (1100)	105.7
	105.1	G1-M1(1100)	4.88	G3-M2 (1100)	106.4
	93.9	G3-B1 (1100)	0.00	G2-B2 (1100)	100.0
	96.9	S3-S1 (1100)	4.44	S3-B2 (1100)	105.8
	104.3	C1-S1(1500)	3.92	G1-S2 (1500)	108.0
	96.0	G1-M1(1500)	4.65	G3-M2 (1500)	104.2
	103.3	G3-B1 (1500)	4.08	G2-B2 (1500)	93.8
	93.0	S3-S1 (1500)	4.88	S3-B2 (1500)	104.2
	95.1	C1-S1(1900)	4.26	G1-S2 (1900)	104.1
	94.2	G1-M1(1900)	3.92	G3-M2 (1900)	106.3
	97.6	G3-B1 (1900)	3.92	G2-B2 (1900)	95.7
96.0	S3-S1 (1900)	4.65	S3-B2 (1900)	95.7	

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.

**Annex B4 QA/QC Results of Laboratory Analysis of Total Suspended Solids (Zone B)**

Sampling Date (Hour)	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/13/2012	/	E1-S1 (0700)	/	B2-S2 (0700)	/
	/	B2-M1 (0700)	/	G4-M2 (0700)	/
	/	G4-B1 (0700)	/	G3-B2 (0700)	/
	/	G3-S1 (0700)	/	E9-B2 (0700)	/
	92.2	E1-S1 (1100)	0.00	B2-S2 (1100)	104.1
	104.9	B2-M1 (1100)	6.06	G4-M2 (1100)	92
	106.0	G4-B1 (1100)	5.41	G3-B2 (1100)	104.2
	99.2	G3-S1 (1100)	5.13	E9-B2 (1100)	97.9
	107.2	E1-S1 (1500)	6.90	B2-S2 (1500)	101.9
	107.5	B2-M1 (1500)	5.71	G4-M2 (1500)	105.9
	92.9	G4-B1 (1500)	5.41	G3-B2 (1500)	104.2
	91.8	G3-S1 (1500)	4.88	E9-B2 (1500)	91.8
	96.5	E1-S1 (1900)	6.45	B2-S2 (1900)	92.2
	98.9	B2-M1 (1900)	6.9	G4-M2 (1900)	100
95.8	G4-B1 (1900)	6.45	G3-B2 (1900)	100	
104.3	G3-S1 (1900)	4.88	E9-B2 (1900)	102	

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 (Hour)	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
10/14/2012	102.0	E1-S1 (0700)	8.70	B2-S2 (0700)	101.9
	103.1	B2-M1 (0700)	6.06	G4-M2 (0700)	92.3
	96.5	G4-B1 (0700)	0.00	G3-B2 (0700)	100.0
	103.4	G3-S1 (0700)	5.13	E9-B2 (0700)	100.0
	97.3	E1-S1 (1100)	8.00	B2-S2 (1100)	102.1
	93.2	B2-M1 (1100)	5.71	G4-M2 (1100)	100.0
	92.6	G4-B1 (1100)	5.13	G3-B2 (1100)	104.2
	97.3	G3-S1 (1100)	5.41	E9-B2 (1100)	97.9
	102.1	E1-S1 (1500)	8.00	B2-S2 (1500)	93.9
	93.0	B2-M1 (1500)	5.71	G4-M2 (1500)	98.0
	105.1	G4-B1 (1500)	4.88	G3-B2 (1500)	104.0
	94.7	G3-S1 (1500)	5.71	E9-B2 (1500)	94.1
	100.6	E1-S1 (1900)	0.00	B2-S2 (1900)	94.2
	98.8	B2-M1 (1900)	0.00	G4-M2 (1900)	105.9
95.0	G4-B1 (1900)	5.41	G3-B2 (1900)	106.2	
102.9	G3-S1 (1900)	0.00	E9-B2 (1900)	94.1	

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 C

## Impact Water Quality Monitoring Results



**Annex C1 Impact Water Quality Monitoring Results during First Round Monitoring on 8 October 2012**

Date: 8-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	0700-0717	35.6	E	0.6	Surface	27.5	27.4	27.5	26.2	26.3	26.3	5.0	5.1	5.1	73.5	74.4	74.0	4.1	4.2	4.1		4.8	5.2	5.0	
					Middle	27.5	27.5	27.5	26.4	26.5	26.5	4.8	4.7	4.8	70.0	69.4	69.7	3.3	3.4	3.3	3.7	4.0	3.8	3.9	4.3
					Bottom	27.5	27.6	27.6	26.6	26.7	26.7	4.8	4.9	4.9	70.7	71.5	71.1	3.7	3.7	3.7		3.9	4.0	4.0	
E8	0722-0739	19.6	E	0.4	Surface	27.5	27.5	27.5	26.5	26.5	26.5	5.2	5.1	5.1	75.5	75.1	75.3	3.9	4.0	3.9		4.4	4.6	4.5	
					Middle	27.4	27.4	27.4	26.7	26.6	26.7	5.0	4.9	4.9	72.9	72.0	72.5	4.1	4.1	4.1	4.1	4.6	4.8	4.7	4.8
					Bottom	27.3	27.4	27.4	27.0	26.9	27.0	4.6	4.6	4.6	67.9	67.0	67.5	4.4	4.4	4.4		5.3	5.1	5.2	
S1	0747-0804	9.0	E	0.4	Surface	27.5	27.5	27.5	26.4	26.5	26.5	5.2	5.2	5.2	76.6	76.0	76.3	3.9	3.8	3.8		4.3	4.6	4.5	
					Middle	27.5	27.4	27.5	26.7	26.7	26.7	4.9	4.8	4.9	71.4	70.9	71.2	3.2	3.3	3.3	3.6	3.8	3.9	3.9	4.1
					Bottom	27.3	27.4	27.4	27.1	27.2	27.2	4.4	4.4	4.4	65.0	64.3	64.7	3.6	3.6	3.6		4.0	4.1	4.1	
G1	0808-0825	11.2	E	0.2	Surface	27.4	27.4	27.4	26.4	26.3	26.4	5.3	5.3	5.3	77.3	76.9	77.1	3.4	3.5	3.4		3.8	3.8	3.8	
					Middle	27.4	27.5	27.5	26.6	26.6	26.6	4.8	4.7	4.7	69.7	68.9	69.3	3.8	3.9	3.9	3.8	3.6	4.0	3.8	4.0
					Bottom	27.4	27.3	27.4	26.9	26.8	26.9	4.3	4.3	4.3	63.3	62.6	63.0	4.1	4.1	4.1		4.5	4.5	4.5	
E7	0829-0846	12.2	E	0.2	Surface	27.5	27.4	27.5	26.4	26.4	26.4	5.2	5.3	5.2	76.4	77.2	76.8	3.6	3.6	3.6		3.9	4.1	4.0	
					Middle	27.4	27.4	27.4	26.5	26.6	26.6	5.0	5.0	5.0	73.6	72.9	73.3	3.9	4.0	4.0	3.9	4.5	4.4	4.5	4.5
					Bottom	27.3	27.3	27.3	27.1	27.0	27.1	4.5	4.6	4.5	64.7	66.8	65.8	4.2	4.3	4.3		5.0	5.0	5.0	
F1	0853-0909	11.0	E	0.4	Surface	27.5	27.5	27.5	26.3	26.3	26.3	5.0	5.0	5.0	72.8	73.6	73.2	3.4	3.5	3.5		4.0	4.1	4.1	
					Middle	27.5	27.4	27.5	26.5	26.5	26.5	4.8	4.7	4.8	69.9	69.5	69.7	3.2	3.2	3.2	3.5	3.9	3.9	3.9	4.1
					Bottom	27.4	27.3	27.4	27.1	27.1	27.1	4.4	4.4	4.4	64.7	63.9	64.3	3.8	3.8	3.8		4.3	4.5	4.4	
G3	0914-0931	14.7	E	0.3	Surface	27.5	27.6	27.6	26.4	26.5	26.5	5.1	5.2	5.1	74.9	75.5	75.2	4.0	4.0	4.0		4.9	4.7	4.8	
					Middle	27.4	27.5	27.5	26.8	26.7	26.8	4.9	4.9	4.9	71.7	71.1	71.4	3.7	3.6	3.6	3.9	4.3	4.4	4.4	4.6
					Bottom	27.3	27.3	27.3	26.9	27.0	27.0	4.4	4.3	4.4	64.2	63.5	63.9	4.0	4.1	4.0		4.6	4.5	4.6	
E9	0936-0954	18.4	E	0.3	Surface	27.5	27.6	27.6	26.7	26.8	26.8	5.3	5.3	5.3	77.6	77.0	77.3	4.0	4.1	4.0		4.5	4.8	4.7	
					Middle	27.5	27.5	27.5	27.1	27.2	27.2	4.9	4.9	4.9	72.0	71.4	71.7	3.9	3.9	3.9	4.1	4.3	4.4	4.4	4.7
					Bottom	27.3	27.3	27.3	27.4	27.5	27.5	4.3	4.2	4.3	62.7	62.2	62.5	4.3	4.4	4.4		5.1	5.2	5.2	
S2	1000-1017	10.1	E	0.3	Surface	27.6	27.5	27.6	26.7	26.7	26.7	5.1	5.0	5.0	74.2	73.3	73.8	3.9	3.9	3.9		4.3	4.3	4.3	
					Middle	27.5	27.4	27.5	26.8	26.9	26.9	4.8	4.8	4.8	71.0	70.6	70.8	4.2	4.2	4.2	4.1	4.7	4.7	4.7	4.6
					Bottom	27.3	27.4	27.4	27.2	27.2	27.2	4.6	4.5	4.5	66.7	66.0	66.4	4.3	4.3	4.3		4.8	4.7	4.8	
G2	1023-1040	13.1	E	0.2	Surface	27.6	27.6	27.6	26.6	26.6	26.6	5.0	5.0	5.0	72.8	73.5	73.2	4.0	4.0	4.0		4.4	4.7	4.6	
					Middle	27.5	27.5	27.5	26.8	26.8	26.8	4.8	4.8	4.8	70.1	70.6	70.4	4.1	4.2	4.1	4.1	4.9	5.0	5.0	4.9
					Bottom	27.4	27.3	27.4	27.0	27.1	27.1	4.5	4.5	4.5	65.7	66.3	66.0	4.3	4.3	4.3		5.2	5.2	5.2	
S3	1044-1101	10.5	E	0.2	Surface	27.7	27.6	27.7	26.5	26.4	26.5	4.7	4.6	4.7	68.5	67.8	68.2	4.1	4.1	4.1		4.8	4.8	4.8	
					Middle	27.6	27.5	27.6	26.7	26.7	26.7	4.5	4.5	4.5	65.6	66.2	65.9	4.3	4.3	4.3	4.3	4.9	5.2	5.1	5.0
					Bottom	27.4	27.4	27.4	26.9	27.0	27.0	4.2	4.3	4.3	62.2	62.5	62.4	4.4	4.4	4.4		5.5	5.0	5.3	

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C2 Impact Water Quality Monitoring Results during Second Round Monitoring on 8 October 2012**

Date: 8-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1105-1122	36.4	W	0.5	Surface	27.6	27.7	27.7	26.3	26.4	26.4	5.1	5.1	5.1	74.7	74.4	74.6	4.0	4.1	4.0		4.6	4.4	4.5	
					Middle	27.5	27.4	27.5	26.5	26.5	26.5	4.9	5.0	4.9	71.9	72.5	72.2	3.5	3.5	3.5	3.7	4.1	4.0	4.1	4.2
					Bottom	27.3	27.4	27.4	26.7	26.7	26.7	4.9	4.9	4.9	71.6	71.8	71.7	3.7	3.7	3.7		4.0	4.2	4.1	
E8	1127-1144	20.0	W	0.3	Surface	27.6	27.6	27.6	26.5	26.4	26.5	5.2	5.2	5.2	76.2	76.5	76.4	3.9	3.8	3.8		4.3	4.1	4.2	
					Middle	27.5	27.5	27.5	26.7	26.7	26.7	5.0	5.1	5.1	73.7	74.3	74.0	3.9	4.0	3.9	4.0	4.6	4.8	4.7	4.7
					Bottom	27.4	27.4	27.4	27.0	27.0	27.0	4.7	4.7	4.7	69.0	69.3	69.2	4.3	4.4	4.3		5.2	5.1	5.2	
S1	1152-1209	9.4	W	0.4	Surface	27.6	27.7	27.7	26.4	26.4	26.4	5.3	5.3	5.3	78.2	77.9	78.1	3.7	3.8	3.7		4.5	4.6	4.6	
					Middle	27.6	27.5	27.6	26.6	26.7	26.7	5.0	5.0	5.0	73.1	73.5	73.3	3.5	3.5	3.5	3.6	4.1	3.9	4.0	4.2
					Bottom	27.4	27.3	27.4	27.2	27.2	27.2	4.5	4.6	4.5	66.1	66.9	66.5	3.6	3.7	3.6		4.0	4.1	4.1	
G1	1213-1230	11.6	W	0.3	Surface	27.5	27.4	27.5	26.3	26.3	26.3	5.4	5.4	5.4	78.5	79.1	78.8	3.4	3.3	3.3		4.0	3.8	3.9	
					Middle	27.4	27.4	27.4	26.7	26.6	26.7	4.9	4.8	4.9	71.6	70.8	71.2	3.6	3.6	3.6	3.6	4.2	4.0	4.1	4.2
					Bottom	27.3	27.3	27.3	26.9	27.0	27.0	4.5	4.5	4.5	65.8	66.1	66.0	3.9	3.9	3.9		4.4	4.5	4.5	
E7	1234-1254	12.4	W	0.2	Surface	27.6	27.5	27.6	26.3	26.4	26.4	5.3	5.3	5.3	77.6	77.5	77.6	3.5	3.5	3.5		3.9	4.0	4.0	
					Middle	27.5	27.4	27.5	26.6	26.6	26.6	5.1	5.1	5.1	74.9	74.4	74.7	3.8	3.9	3.8	3.9	4.1	4.3	4.2	4.3
					Bottom	27.4	27.3	27.4	27.0	27.0	27.0	4.7	4.8	4.7	69.0	70.1	69.6	4.2	4.2	4.2		4.6	4.8	4.7	
F1	1258-1315	11.6	W	0.3	Surface	27.6	27.6	27.6	26.4	26.3	26.4	5.1	5.1	5.1	74.3	74.6	74.5	3.5	3.6	3.6		3.8	4.1	4.0	
					Middle	27.5	27.6	27.6	26.6	26.5	26.6	5.0	4.9	5.0	87.5	72.2	79.9	3.4	3.4	3.4	3.6	3.6	3.9	3.8	4.0
					Bottom	27.4	27.4	27.4	27.2	27.1	27.2	4.5	4.4	4.4	65.6	67.8	66.7	3.9	4.0	3.9		4.3	4.4	4.4	
G3	1320-1337	15.2	W	0.3	Surface	27.7	27.6	27.7	26.5	26.5	26.5	5.3	5.3	5.3	77.2	77.6	77.4	3.9	3.9	3.9		4.4	4.6	4.5	
					Middle	27.5	27.5	27.5	26.7	26.6	26.7	4.9	5.0	5.0	67.8	72.9	70.4	3.6	3.5	3.6	3.8	4.0	4.4	4.2	4.4
					Bottom	27.4	27.3	27.4	27.0	27.1	27.1	4.5	4.5	4.5	65.9	85.5	75.7	3.9	3.9	3.9		4.4	4.5	4.5	
E9	1342-1359	18.8	W	0.3	Surface	27.7	27.6	27.7	26.8	26.7	26.8	5.2	5.3	5.3	76.8	77.5	77.2	4.0	4.0	4.0		4.6	4.8	4.7	
					Middle	27.5	27.4	27.5	27.0	27.1	27.1	5.0	5.0	5.0	72.9	73.4	73.2	3.9	3.8	3.8	4.0	4.1	4.4	4.3	4.5
					Bottom	27.2	27.3	27.3	27.5	27.4	27.5	4.4	4.4	4.4	64.9	64.5	64.7	4.1	4.2	4.2		4.6	4.6	4.6	
S2	1405-1422	10.6	W	0.4	Surface	27.7	27.7	27.7	26.6	26.7	26.7	5.2	5.1	5.2	75.9	75.6	75.8	3.7	3.7	3.7		4.3	4.0	4.2	
					Middle	27.6	27.5	27.6	26.7	26.8	26.8	5.0	4.9	4.9	72.5	72.1	72.3	4.1	4.0	4.0	3.9	4.6	4.5	4.6	4.4
					Bottom	27.4	27.3	27.4	27.0	27.1	27.1	4.7	4.7	4.7	68.6	68.9	68.8	4.1	4.1	4.1		4.7	4.4	4.6	
G2	1428-1445	13.8	W	0.2	Surface	27.7	27.6	27.7	26.6	26.5	26.6	5.0	5.0	5.0	72.9	72.8	72.9	3.7	3.7	3.7		4.2	4.4	4.3	
					Middle	27.5	27.6	27.6	26.7	26.7	26.7	4.8	4.9	4.9	70.9	71.5	71.2	4.1	4.0	4.0	4.0	4.5	4.5	4.5	4.6
					Bottom	27.3	27.2	27.3	27.2	27.1	27.2	4.7	4.8	4.8	69.3	70.2	69.8	4.3	4.3	4.3		4.8	5.0	4.9	
S3	1449-1504	11.0	W	0.3	Surface	27.7	27.7	27.7	26.5	26.6	26.6	4.8	4.8	4.8	70.3	70.8	70.6	4.0	4.0	4.0		4.8	4.8	4.8	
					Middle	27.5	27.6	27.6	26.8	26.7	26.8	4.6	4.5	4.6	67.1	66.5	66.8	4.2	4.2	4.2	4.2	4.9	4.6	4.8	4.8
					Bottom	27.3	27.4	27.4	27.0	27.0	27.0	4.4	4.3	4.3	64.0	63.3	63.7	4.3	4.4	4.4		4.8	4.6	4.7	

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C3 Impact Water Quality Monitoring Results during Third Round Monitoring on 8 October 2012**

Date: 8-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1505-1522	36.8	W	0.5	Surface	27.6	27.5	27.6	26.3	26.4	26.4	5.1	5.1	5.1	75.0	74.7	74.9	4.0	4.0	4.0		4.6	4.4	4.5	
					Middle	27.5	27.4	27.5	26.5	26.6	26.6	4.9	5.0	4.9	72.5	72.9	72.7	3.5	3.5	3.5	3.7	3.8	3.9	3.9	4.2
					Bottom	27.4	27.3	27.4	26.7	26.8	26.8	4.9	4.9	4.9	72.4	72.5	72.5	3.7	3.7	3.7		4.1	4.2	4.2	
E8	1526-1543	20.4	W	0.3	Surface	27.5	27.6	27.6	26.4	26.5	26.5	5.2	5.2	5.2	76.4	76.8	76.6	3.8	3.8	3.8		4.4	4.3	4.4	
					Middle	27.5	27.5	27.5	26.6	26.7	26.7	5.1	5.1	5.1	74.7	75.1	74.9	3.9	3.9	3.9	4.0	4.6	4.6	4.6	4.6
					Bottom	27.5	27.4	27.5	26.9	27.0	27.0	4.7	4.8	4.8	69.9	70.2	70.1	4.3	4.3	4.3		4.8	4.9	4.9	
S1	1552-1609	9.6	W	0.4	Surface	27.5	27.6	27.6	26.3	26.4	26.4	5.4	5.3	5.4	78.5	78.2	78.4	3.7	3.7	3.7		4.1	4.3	4.2	
					Middle	27.5	27.4	27.5	26.5	26.6	26.6	5.0	5.1	5.0	73.9	74.2	74.1	3.5	3.5	3.5	3.6	4.2	4.1	4.2	4.2
					Bottom	27.3	27.3	27.3	27.1	27.2	27.2	4.5	4.6	4.6	66.8	67.7	67.3	3.6	3.6	3.6		4.3	4.2	4.3	
G1	1613-1629	12.0	W	0.3	Surface	27.5	27.5	27.5	26.3	26.4	26.4	5.4	5.4	5.4	78.7	79.0	78.9	3.4	3.3	3.3		3.8	3.8	3.8	
					Middle	27.4	27.3	27.4	26.6	26.7	26.7	4.9	4.9	4.9	72.2	71.4	71.8	3.6	3.6	3.6	3.6	4.2	4.2	4.2	4.2
					Bottom	27.3	27.2	27.3	26.8	26.9	26.9	4.5	4.6	4.5	66.6	67.1	66.9	3.9	3.9	3.9		4.4	4.5	4.5	
E7	1634-1650	12.6	W	0.2	Surface	27.6	27.5	27.6	26.3	26.4	26.4	5.3	5.3	5.3	77.9	77.8	77.9	3.5	3.5	3.5		3.9	4.1	4.0	
					Middle	27.4	27.4	27.4	26.7	26.6	26.7	5.1	5.1	5.1	75.3	75.0	75.2	3.8	3.8	3.8	3.8	4.3	4.5	4.4	4.4
					Bottom	27.3	27.2	27.3	26.9	27.0	27.0	4.7	4.8	4.8	69.7	70.5	70.1	4.2	4.2	4.2		4.6	4.8	4.7	
F1	1658-1715	11.8	W	0.3	Surface	27.6	27.6	27.6	26.4	26.3	26.4	5.1	5.1	5.1	74.4	74.9	74.7	3.5	3.6	3.5		4.1	4.2	4.2	
					Middle	27.5	27.4	27.5	26.6	26.5	26.6	5.0	4.9	5.0	73.4	72.6	73.0	3.4	3.4	3.4	3.6	3.7	3.6	3.7	4.1
					Bottom	27.3	27.3	27.3	27.0	27.1	27.1	4.5	4.4	4.4	65.7	65.3	65.5	3.9	3.9	3.9		4.5	4.5	4.5	
G3	1719-1737	15.4	W	0.4	Surface	27.6	27.5	27.6	26.5	26.5	26.5	5.3	5.3	5.3	77.2	77.8	77.5	3.9	3.9	3.9		4.3	4.6	4.5	
					Middle	27.5	27.4	27.5	26.7	26.8	26.8	4.9	5.0	5.0	72.3	73.4	72.9	3.6	3.5	3.5	3.8	4.1	4.4	4.3	4.4
					Bottom	27.4	27.3	27.4	26.9	27.0	27.0	4.5	4.5	4.5	66.8	66.3	66.6	3.9	3.9	3.9		4.4	4.5	4.5	
E9	1741-1758	19.2	W	0.3	Surface	27.6	27.6	27.6	26.7	26.8	26.8	5.3	5.3	5.3	77.1	77.5	77.3	4.0	4.0	4.0		4.8	4.9	4.9	
					Middle	27.5	27.4	27.5	26.9	27.0	27.0	5.0	5.0	5.0	73.2	73.8	73.5	3.9	3.8	3.8	4.0	4.5	4.4	4.5	4.7
					Bottom	27.3	27.2	27.3	27.4	27.4	27.4	4.5	4.4	4.4	65.6	65.2	65.4	4.1	4.2	4.1		4.6	4.8	4.7	
S2	1805-1821	10.8	W	0.4	Surface	27.6	27.5	27.6	26.7	26.8	26.8	5.2	5.2	5.2	75.7	75.6	75.7	3.7	3.7	3.7		4.1	1.3	2.7	
					Middle	27.5	27.5	27.5	26.8	26.9	26.9	5.0	4.9	4.9	72.8	72.2	72.5	4.1	4.0	4.0	3.9	4.5	4.5	4.5	3.9
					Bottom	27.3	27.3	27.3	26.9	26.9	26.9	4.7	4.7	4.7	69.4	69.6	69.5	4.1	4.1	4.1		4.7	4.5	4.6	
G2	1829-1845	14.2	W	0.2	Surface	27.6	27.6	27.6	26.6	26.5	26.6	5.0	5.0	5.0	73.1	72.7	72.9	3.7	3.7	3.7		4.3	4.0	4.2	
					Middle	27.5	27.4	27.5	26.7	26.8	26.8	4.9	4.9	4.9	71.3	71.6	71.5	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
					Bottom	27.3	27.2	27.3	27.0	27.1	27.1	4.8	4.8	4.8	70.0	70.8	70.4	4.3	4.2	4.3		4.8	5.0	4.9	
S3	1849-1903	11.4	W	0.3	Surface	27.6	27.5	27.6	26.4	26.5	26.5	4.8	4.9	4.8	70.6	71.1	70.9	4.0	4.0	4.0		4.4	4.8	4.6	
					Middle	27.4	27.4	27.4	26.7	26.8	26.8	4.6	4.5	4.6	67.5	66.7	67.1	4.2	4.2	4.2	4.2	4.9	4.6	4.8	4.8
					Bottom	27.2	27.3	27.3	26.9	27.0	27.0	4.4	4.4	4.4	64.7	64.1	64.4	4.3	4.4	4.3		5.1	5.0	5.1	

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C4 Impact Water Quality Monitoring Results during Forth Round Monitoring on 8 October 2012**

Date: 8-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1905-1922	37.2	W	0.6	Surface	27.5	27.5	27.5	26.3	26.4	26.4	5.2	5.1	5.1	75.4	75.3	75.4	4.0	4.0	4.0		4.6	4.6	4.6	
					Middle	27.4	27.3	27.4	26.5	26.5	26.5	5.0	5.0	5.0	72.8	73.4	73.1	3.4	3.4	3.4	3.7	3.8	3.7	3.8	4.2
					Bottom	27.3	27.2	27.3	26.7	26.8	26.8	4.9	5.0	5.0	72.7	73.3	73.0	3.6	3.6	3.6		4.2	4.1	4.2	
E8	1926-1944	20.6	W	0.4	Surface	27.5	27.4	27.5	26.3	26.4	26.4	5.3	5.3	5.3	77.1	77.5	77.3	3.8	3.8	3.8		4.3	4.5	4.4	
					Middle	27.5	27.5	27.5	26.6	26.7	26.7	5.1	5.2	5.2	75.4	76.0	75.7	3.9	3.9	3.9	4.0	4.6	4.8	4.7	4.8
					Bottom	27.3	27.3	27.3	26.8	26.9	26.9	4.8	4.8	4.8	70.6	70.9	70.8	4.2	4.3	4.3		5.2	5.3	5.3	
S1	1951-2008	9.8	W	0.3	Surface	27.4	27.5	27.5	26.3	26.4	26.4	5.4	5.4	5.4	79.1	79.5	79.3	3.7	3.7	3.7		4.2	4.3	4.3	
					Middle	27.4	27.3	27.4	26.5	26.6	26.6	5.1	5.1	5.1	74.4	75.0	74.7	3.5	3.4	3.4	3.6	3.8	3.8	3.8	4.1
					Bottom	27.3	27.2	27.3	27.0	27.1	27.1	4.6	4.6	4.6	67.7	68.4	68.1	3.6	3.6	3.6		4.1	4.3	4.2	
G1	2014-2028	12.4	W	0.2	Surface	27.4	27.4	27.4	26.2	26.3	26.3	5.4	5.4	5.4	79.0	79.4	79.2	3.3	3.3	3.3		3.9	4.0	4.0	
					Middle	27.3	27.2	27.3	26.5	26.6	26.6	5.0	4.9	5.0	73.2	72.5	72.9	3.6	3.5	3.5	3.5	4.2	4.0	4.1	4.1
					Bottom	27.2	27.1	27.2	26.7	26.8	26.8	4.6	4.6	4.6	67.4	68.1	67.8	3.8	3.8	3.8		4.3	4.3	4.3	
E7	2035-2051	12.8	W	0.1	Surface	27.5	27.4	27.5	26.2	26.3	26.3	5.4	5.4	5.4	78.4	78.8	78.6	3.4	3.5	3.5		3.8	3.9	3.9	
					Middle	27.3	27.3	27.3	26.6	26.7	26.7	5.2	5.2	5.2	75.9	76.3	76.1	3.8	3.8	3.8	3.8	4.5	4.8	4.7	4.5
					Bottom	27.2	27.1	27.2	26.8	26.9	26.9	4.8	4.8	4.8	70.2	70.9	70.6	4.1	4.1	4.1		4.9	5.0	5.0	
F1	2059-2114	12.0	W	0.6	Surface	27.5	27.5	27.5	26.3	26.4	26.4	5.1	5.2	5.2	75.3	75.6	75.5	3.5	3.5	3.5		3.8	4.1	4.0	
					Middle	27.4	27.3	27.4	26.7	26.6	26.7	5.1	5.0	5.0	74.2	73.8	74.0	3.3	3.4	3.3	3.6	3.9	4.2	4.1	4.2
					Bottom	27.1	27.2	27.2	27.1	27.1	27.1	4.5	4.5	4.5	66.3	66.2	66.3	3.8	3.9	3.8		4.5	4.8	4.7	
G3	2120-2136	15.6	W	0.3	Surface	27.5	27.4	27.5	26.4	26.5	26.5	5.3	5.4	5.3	77.9	78.7	78.3	3.8	3.8	3.8		4.5	4.5	4.5	
					Middle	27.4	27.3	27.4	26.6	26.7	26.7	5.0	5.0	5.0	73.1	73.8	73.5	3.5	3.5	3.5	3.7	4.2	4.4	4.3	4.4
					Bottom	27.3	27.2	27.3	26.9	27.0	27.0	4.6	4.6	4.6	67.5	67.1	67.3	3.8	3.9	3.8		4.4	4.5	4.5	
E9	2141-2159	19.6	W	0.2	Surface	27.5	27.5	27.5	26.7	26.8	26.8	5.3	5.3	5.3	77.8	78.1	78.0	4.0	3.9	3.9		4.6	4.8	4.7	
					Middle	27.4	27.3	27.4	26.9	27.0	27.0	5.0	5.1	5.1	74.1	74.5	74.3	3.8	3.8	3.8	3.9	4.3	4.3	4.3	4.6
					Bottom	27.2	27.1	27.2	27.3	27.4	27.4	4.5	4.5	4.5	66.2	65.9	66.1	4.1	4.1	4.1		4.6	4.7	4.7	
S2	2204-2221	11.2	W	0.3	Surface	27.5	27.4	27.5	26.7	26.8	26.8	5.2	5.2	5.2	76.2	76.6	76.4	3.7	3.6	3.6		4.0	4.1	4.1	
					Middle	27.4	27.4	27.4	26.9	27.0	27.0	5.0	4.9	5.0	73.2	72.6	72.9	4.0	4.0	4.0	3.9	4.4	4.5	4.5	4.4
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	4.8	4.8	4.8	70.2	70.5	70.4	4.0	4.0	4.0		4.7	4.9	4.8	
G2	2229-2245	14.4	W	0.3	Surface	27.5	27.5	27.5	26.6	26.7	26.7	5.0	5.0	5.0	73.7	73.4	73.6	3.7	3.7	3.7		4.4	4.4	4.4	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	4.9	4.9	4.9	71.9	72.3	72.1	4.0	4.0	4.0	4.0	4.8	4.9	4.9	4.8
					Bottom	27.1	27.2	27.2	27.0	27.1	27.1	4.8	4.8	4.8	70.6	71.0	70.8	4.2	4.2	4.2		5.0	5.2	5.1	
S3	2248-2304	11.8	W	0.3	Surface	27.5	27.4	27.5	26.5	26.6	26.6	4.9	4.9	4.9	71.5	71.3	71.4	4.0	4.0	4.0		4.4	4.3	4.4	
					Middle	27.3	27.3	27.3	26.7	26.8	26.8	4.6	4.6	4.6	68.2	67.9	68.1	4.1	4.1	4.1	4.1	4.6	4.6	4.6	4.6
					Bottom	27.2	27.1	27.2	26.9	27.0	27.0	4.4	4.4	4.4	65.3	65.0	65.2	4.3	4.3	4.3		4.8	4.8	4.8	

Remark or Observation:

Note: \* Average \*\* Depth Average

## Annex C5 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 1 (07:00), 8 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.46	5.14
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.83	5.57
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	Y	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	Y	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 2 (11:00), 8 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.48	5.06
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.86	5.48
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

## Annex C6 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 3 (15:00), 8 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
		Action Level (Baseline)	4.36	4.36	4.39	4.38
Or Action Level (C1*1.2)		N.A.	N.A.	N.A.	4.46	5.00
Limit Level (Baseline)		4.25	4.25	4.33	4.43	6.40
And Limit Level (C1*1.3)		N.A.	N.A.	N.A.	4.83	5.42
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 4 (19:00), 8 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
		Action Level (Baseline)	4.36	4.36	4.39	4.38
Or Action Level (C1*1.2)		N.A.	N.A.	N.A.	4.46	5.00
Limit Level (Baseline)		4.25	4.25	4.33	4.43	6.40
And Limit Level (C1*1.3)		N.A.	N.A.	N.A.	4.83	5.42
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

**Annex C7 Impact Water Quality Monitoring Results during First Round Monitoring on 9 October 2012**

Date: 9-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	0700-0718	36.2	0.4	E	Surface	27.3	27.3	27.3	25.9	25.9	25.9	4.9	5.0	4.9	71.5	72.2	71.9	4.3	4.2	4.2		4.8	4.7	4.8	
					Middle	27.5	27.4	27.5	26.4	26.5	26.5	4.7	4.8	4.8	69.3	69.8	69.6	3.7	3.8	3.8	3.8	4.5	4.2	4.4	4.3
					Bottom	27.5	27.6	27.6	26.5	26.5	26.5	4.9	4.9	4.9	71.8	71.2	71.5	3.5	3.5	3.5		4.0	3.8	3.9	
E8	0723-0738	19.6	0.3	E	Surface	27.4	27.4	27.4	26.4	26.4	26.4	5.4	5.3	5.4	78.7	78.3	78.5	3.7	3.7	3.7		4.3	4.3	4.3	
					Middle	27.5	27.6	27.6	26.6	26.7	26.7	5.3	5.3	5.3	76.2	76.6	76.4	3.7	3.7	3.7	3.8	4.1	4.0	4.1	4.2
					Bottom	27.5	27.6	27.6	26.7	26.7	26.7	5.5	5.6	5.5	80.9	81.3	81.1	4.0	4.1	4.0		4.4	4.2	4.3	
S1	0746-0803	9.4	0.2	E	Surface	27.4	27.4	27.4	26.6	26.5	26.6	5.6	5.5	5.5	81.5	81.1	81.3	3.6	3.5	3.5		4.2	4.0	4.1	
					Middle	27.5	27.6	27.6	26.7	26.7	26.7	5.7	5.7	5.7	83.9	83.5	83.7	3.9	3.9	3.9	3.8	4.6	4.9	4.8	4.5
					Bottom	27.4	27.4	27.4	26.8	26.8	26.8	4.3	4.3	4.3	62.1	61.5	61.8	3.9	3.8	3.9		4.8	4.7	4.8	
G1	0809-0825	11.2	0.3	E	Surface	27.4	27.4	27.4	26.7	26.7	26.7	5.7	5.8	5.7	83.6	84.1	83.9	3.5	3.6	3.6		4.0	3.8	3.9	
					Middle	27.5	27.5	27.5	26.9	27.0	27.0	5.6	5.5	5.6	81.3	80.8	81.1	3.9	3.8	3.9	3.8	4.4	4.5	4.5	4.2
					Bottom	27.5	27.5	27.5	26.9	26.9	26.9	5.5	5.5	5.5	80.1	79.5	79.8	3.9	3.9	3.9		4.1	4.3	4.2	
E7	0829-0845	12.4	0.2	E	Surface	27.4	27.4	27.4	26.8	26.8	26.8	5.8	5.8	5.8	84.8	85.4	85.1	3.7	3.7	3.7		3.9	4.1	4.0	
					Middle	27.5	27.4	27.5	26.8	26.9	26.9	5.6	5.7	5.7	82.4	82.8	82.6	3.8	3.8	3.8	3.8	4.3	4.3	4.3	4.3
					Bottom	27.5	27.6	27.6	26.9	26.9	26.9	5.7	5.8	5.7	83.6	84.0	83.8	4.1	4.0	4.0		4.6	4.7	4.7	
F1	0852-0908	11.4	0.2	E	Surface	27.4	27.4	27.4	26.8	26.7	26.8	5.9	5.9	5.9	86.4	86.9	86.7	3.5	3.4	3.5		3.8	4.1	4.0	
					Middle	27.5	27.5	27.5	26.8	26.8	26.8	6.0	6.0	6.0	88.1	87.6	87.9	3.9	3.9	3.9	3.7	4.4	4.7	4.6	4.3
					Bottom	27.5	27.5	27.5	26.8	26.8	26.8	5.9	5.9	5.9	87.3	86.8	87.1	3.8	3.7	3.7		4.5	4.4	4.5	
G3	0915-0930	14.8	0.2	E	Surface	27.4	27.4	27.4	26.7	26.7	26.7	5.9	5.9	5.9	86.6	87.2	86.9	3.5	3.6	3.6		4.0	4.1	4.1	
					Middle	27.1	27.2	27.2	27.0	27.0	27.0	5.9	5.9	5.9	86.0	85.5	85.8	4.0	4.1	4.1	3.9	4.4	4.4	4.4	4.4
					Bottom	27.1	27.1	27.1	27.0	27.0	27.0	5.9	5.9	5.9	87.6	87.1	87.4	4.1	4.0	4.1		4.8	4.5	4.7	
E9	0936-0955	18.8	0.3	E	Surface	27.4	27.5	27.5	26.7	26.7	26.7	5.7	5.7	5.7	83.6	83.0	83.3	3.8	3.8	3.8		4.4	4.2	4.3	
					Middle	27.5	27.4	27.5	26.9	27.0	27.0	5.1	5.1	5.1	74.1	73.7	73.9	3.8	3.9	3.8	3.9	4.2	4.3	4.3	4.3
					Bottom	27.5	27.4	27.5	27.0	27.1	27.1	4.8	4.9	4.8	70.3	70.7	70.5	4.0	3.9	3.9		4.4	4.5	4.5	
S2	1001-1018	13.4	0.2	E	Surface	27.4	27.4	27.4	26.7	26.7	26.7	5.3	5.3	5.3	77.2	76.6	76.9	3.6	3.7	3.6		3.8	4.0	3.9	
					Middle	27.5	27.5	27.5	27.0	27.1	27.1	5.1	5.1	5.1	74.4	73.8	74.1	3.8	3.8	3.8	3.8	4.2	4.2	4.2	4.2
					Bottom	27.5	27.5	27.5	27.1	27.1	27.1	4.8	4.7	4.7	69.5	68.8	69.2	3.9	4.0	3.9		4.5	4.3	4.4	
G2	1024-1038	13.2	0.3	E	Surface	27.5	27.5	27.5	26.7	26.7	26.7	5.3	5.3	5.3	77.7	77.1	77.4	4.1	4.2	4.1		4.5	4.4	4.5	
					Middle	27.5	27.6	27.6	26.9	26.9	26.9	4.9	4.9	4.9	71.5	72.1	71.8	4.2	4.1	4.1	4.1	4.6	4.6	4.6	4.6
					Bottom	27.6	27.6	27.6	27.0	27.1	27.1	4.7	4.7	4.7	68.5	67.8	68.2	4.0	4.1	4.1		4.8	4.8	4.8	
S3	1042-1055	10.8	0.2	E	Surface	27.5	27.5	27.5	26.7	26.7	26.7	5.2	5.2	5.2	75.8	75.2	75.5	3.9	4.0	3.9		4.8	4.5	4.7	
					Middle	27.5	27.6	27.6	27.0	27.0	27.0	5.0	5.0	5.0	72.2	72.8	72.5	3.9	3.9	3.9	4.1	4.2	4.4	4.3	4.6
					Bottom	27.5	27.6	27.6	27.0	27.1	27.1	4.8	4.8	4.8	70.1	70.6	70.4	4.1	4.1	4.1		4.8	4.8	4.8	

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C8 Impact Water Quality Monitoring Results during Second Round Monitoring on 9 October 2012**

Date: 9-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1100-1115	35.2	E	0.4	Surface	27.4	27.5	27.5	26.0	26.0	26.0	4.9	4.9	4.9	72.4	71.5	72.0	4.1	4.0	4.1		4.4	4.5	4.5	
					Middle	27.5	27.6	27.6	26.4	26.5	26.5	4.7	4.7	4.7	68.7	68.3	68.5	3.4	3.5	3.4	3.7	3.9	4.1	4.0	4.3
					Bottom	27.6	27.6	27.6	26.6	26.6	26.6	4.8	4.8	4.8	70.3	69.6	70.0	3.7	3.8	3.7		4.3	4.5	4.4	
E8	1119-1134	19.4	E	0.3	Surface	27.4	27.4	26.3	26.3	26.3	26.3	5.3	5.3	5.3	77.6	77.2	77.4	3.8	3.8	3.8		4.5	4.4	4.5	
					Middle	27.5	27.5	27.5	26.6	26.5	26.6	5.2	5.2	5.2	75.7	76.2	76.0	3.9	4.0	3.9	4.0	4.6	4.8	4.7	4.7
					Bottom	27.5	27.5	27.5	26.7	26.6	26.7	5.4	5.4	5.4	79.6	79.0	79.3	4.2	4.3	4.3		5.2	4.9	5.1	
S1	1140-1155	9.2	E	0.3	Surface	27.5	27.5	27.5	26.6	26.7	26.7	5.6	5.6	5.6	82.2	82.6	82.4	3.7	3.7	3.7		4.0	4.3	4.2	
					Middle	27.5	27.5	27.5	26.7	26.7	26.7	5.7	5.7	5.7	84.1	83.5	83.8	3.4	3.5	3.4	3.6	3.7	4.0	3.9	4.1
					Bottom	27.5	27.5	27.5	26.7	26.8	26.8	4.3	4.4	4.3	63.3	63.9	63.6	3.7	3.7	3.7		4.3	4.3	4.3	
G1	1159-1213	11.4	E	0.2	Surface	27.5	27.6	27.6	26.5	26.6	26.6	5.5	5.5	5.5	80.3	80.9	80.6	3.5	3.5	3.5		3.9	3.8	3.9	
					Middle	27.5	27.5	27.5	26.6	26.7	26.7	5.6	5.6	5.6	82.5	81.9	82.2	3.6	3.6	3.6	3.7	4.2	4.1	4.2	4.1
					Bottom	27.5	27.5	27.5	26.8	26.8	26.8	4.3	4.3	4.3	63.0	62.6	62.8	3.9	3.9	3.9		4.3	4.5	4.4	
E7	1217-1230	11.8	E	0.2	Surface	27.5	27.5	27.5	26.5	26.5	26.5	5.3	5.4	5.4	78.3	78.7	78.5	3.6	3.7	3.6		3.9	4.2	4.1	
					Middle	27.5	27.5	27.5	26.5	26.6	26.6	5.4	5.4	5.4	79.3	79.0	79.2	3.7	3.8	3.8	3.8	4.6	4.6	4.6	4.5
					Bottom	27.5	27.5	27.5	26.8	26.7	26.8	4.5	4.5	4.5	65.8	66.3	66.1	4.1	4.1	4.1		4.9	4.8	4.9	
F1	1237-1251	11.2	E	0.4	Surface	27.5	27.6	27.6	26.5	26.6	26.6	5.2	5.2	5.2	75.9	76.7	76.3	3.4	3.4	3.4		3.9	3.7	3.8	
					Middle	27.6	27.6	27.6	26.6	26.6	26.6	5.0	5.1	5.0	73.5	74.3	73.9	3.3	3.3	3.3	3.5	3.7	4.0	3.9	4.0
					Bottom	27.5	27.6	27.6	26.7	26.8	26.8	4.6	4.6	4.6	67.8	67.2	67.5	3.7	3.8	3.8		4.4	4.4	4.4	
G3	1255-1310	14.6	E	0.4	Surface	27.4	27.5	27.5	26.6	26.7	26.7	5.4	5.4	5.4	78.8	78.5	78.7	3.7	3.8	3.8		4.3	4.0	4.2	
					Middle	27.2	27.3	27.3	26.7	26.7	26.7	5.1	5.2	5.1	74.9	75.4	75.2	3.5	3.4	3.5	3.6	4.0	3.8	3.9	4.1
					Bottom	27.2	27.2	27.2	26.8	26.8	26.8	4.7	4.7	4.7	58.2	69.0	63.6	3.7	3.8	3.7		4.0	4.4	4.2	
E9	1316-1330	18.2	E	0.4	Surface	27.5	27.5	27.5	26.7	26.7	26.7	5.4	5.4	5.4	79.2	78.7	79.0	3.9	4.0	3.9		4.5	4.4	4.5	
					Middle	27.5	27.5	27.5	26.9	27.0	27.0	5.1	5.1	5.1	74.0	74.5	74.3	4.0	4.0	4.0	4.1	4.8	4.7	4.8	4.7
					Bottom	27.4	27.3	27.4	27.4	27.3	27.4	4.5	4.5	4.5	65.8	66.3	66.1	4.2	4.3	4.2		4.9	4.9	4.9	
S2	1336-1351	10.2	W	0.3	Surface	27.5	27.6	27.6	26.7	26.7	26.7	5.2	5.3	5.2	76.6	76.9	76.8	3.8	3.9	3.9		4.3	4.6	4.5	
					Middle	27.5	27.5	27.5	26.7	26.8	26.8	5.2	5.1	5.1	75.6	74.9	75.3	3.9	4.0	3.9	4.0	4.6	4.5	4.6	4.6
					Bottom	27.5	27.5	27.5	27.0	26.9	27.0	4.7	4.8	4.8	69.3	69.9	69.6	4.1	4.1	4.1		4.8	5.0	4.9	
G2	1355-1412	13.0	W	0.3	Surface	27.6	27.6	27.6	26.6	26.6	26.6	5.0	5.1	5.0	73.4	74.0	73.7	3.8	3.8	3.8		4.2	4.2	4.2	
					Middle	27.5	27.5	27.5	26.6	26.7	26.7	4.9	5.0	4.9	72.1	72.7	72.4	4.1	4.1	4.1	4.1	4.7	4.5	4.6	4.5
					Bottom	27.4	27.4	27.4	27.1	27.1	27.1	4.6	4.6	4.6	67.2	67.9	67.6	4.3	4.3	4.3		4.8	4.8	4.8	
S3	1418-1435	10.6	W	0.3	Surface	27.6	27.7	27.7	26.6	26.7	26.7	4.9	5.0	4.9	72.1	72.7	72.4	4.1	4.2	4.2		4.6	4.7	4.7	
					Middle	27.6	27.6	27.6	26.7	26.7	26.7	4.7	4.7	4.7	68.3	69.0	68.7	4.3	4.2	4.2	4.3	4.9	4.7	4.8	4.9
					Bottom	27.5	27.5	27.5	26.9	26.9	26.9	4.4	4.5	4.5	65.1	65.7	65.4	4.5	4.5	4.5		5.0	5.2	5.1	

Remark or Observation:

Note: \* Average \*\* Depth Average







## Annex C11 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 1 (07:00), 9 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.61	5.20
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	5.00	5.63
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	Y	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 2 (11:00), 9 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.50	5.14
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.87	5.57
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

## Annex C12 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 3 (15:00), 9 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.81	5.42
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	5.21	5.87
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 4 (19:00), 9 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.76	5.38
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	5.15	5.83
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged



### Annex C14 Impact Water Quality Monitoring Results during Second Round Monitoring on 10 October 2012

Date: 10-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1105-1122	36.2	W	0.7	Surface	27.6	27.5	27.6	26.2	26.2	26.2	5.1	5.2	5.1	75.5	75.9	75.7	4.1	4.1	4.1		5.2	4.8	5.0	
					Middle	27.4	27.4	27.4	26.4	26.5	26.5	4.8	4.8	4.8	71.1	70.5	70.8	3.4	3.4	3.4	3.7	3.9	4.0	4.0	4.4
					Bottom	27.3	27.2	27.3	26.7	26.7	26.7	4.9	4.9	4.9	71.8	72.2	72.0	3.6	3.6	3.6		4.2	4.4	4.3	
E8	1127-1144	19.8	W	0.3	Surface	27.6	27.6	27.6	26.4	26.3	26.4	5.2	5.2	5.2	76.8	76.1	76.5	4.0	3.9	4.0		4.5	4.8	4.7	
					Middle	27.5	27.4	27.5	26.5	26.6	26.6	5.0	5.0	5.0	74.2	73.1	73.7	4.0	4.1	4.1	4.1	5.0	4.8	4.9	4.9
					Bottom	27.3	27.3	27.3	26.9	27.0	27.0	4.7	4.7	4.7	69.1	68.4	68.8	4.4	4.4	4.4		5.1	5.2	5.2	
S1	1151-1208	9.6	W	0.3	Surface	27.6	27.5	27.6	26.5	26.5	26.5	5.2	5.2	5.2	76.3	76.9	76.6	3.8	3.8	3.8		4.5	4.2	4.4	
					Middle	27.5	27.4	27.5	26.7	26.6	26.7	5.0	4.9	5.0	73.2	72.7	73.0	3.3	3.4	3.3	3.6	3.7	3.8	3.8	4.1
					Bottom	27.3	27.4	27.4	27.0	27.0	27.0	4.6	4.5	4.5	67.1	66.4	66.8	3.6	3.6	3.6		4.2	4.2	4.2	
G1	1212-1229	11.3	W	0.2	Surface	27.7	27.6	27.7	26.4	26.4	26.4	5.3	5.2	5.2	77.2	76.7	77.0	3.5	3.4	3.4		3.9	3.8	3.9	
					Middle	27.5	27.6	27.6	26.7	26.7	26.7	4.8	4.8	4.8	70.6	70.2	70.4	3.7	3.8	3.7	3.7	4.4	4.7	4.6	4.4
					Bottom	27.4	27.4	27.4	27.0	26.9	27.0	4.4	4.4	4.4	64.9	64.4	64.7	4.0	4.0	4.0		5.0	4.8	4.9	
E7	1232-1249	12.5	W	0.1	Surface	27.6	27.6	27.6	26.3	26.4	26.4	5.2	5.3	5.3	76.9	77.7	77.3	3.5	3.6	3.5		4.5	4.1	4.3	
					Middle	27.5	27.5	27.5	26.6	26.5	26.6	5.1	5.1	5.1	75.1	74.5	74.8	3.8	3.9	3.9	3.8	4.4	4.6	4.5	4.7
					Bottom	27.3	27.4	27.4	26.9	26.9	26.9	4.7	4.6	4.6	68.6	68.0	68.3	4.1	4.2	4.1		5.1	5.2	5.2	
F1	1252-1308	11.7	W	0.3	Surface	27.6	27.7	27.7	26.3	26.4	26.4	5.1	5.0	5.1	74.6	74.2	74.4	3.4	3.5	3.4		3.9	3.8	3.9	
					Middle	27.5	27.6	27.6	26.6	26.5	26.6	4.8	4.8	4.8	71.1	70.3	70.7	3.5	3.5	3.5	3.6	3.7	3.8	3.8	4.1
					Bottom	27.4	27.4	27.4	27.0	27.0	27.0	4.5	4.5	4.5	66.2	65.5	65.9	3.8	3.8	3.8		4.4	4.8	4.6	
G3	1313-1330	14.9	W	0.3	Surface	27.7	27.6	27.7	26.4	26.4	26.4	5.2	5.2	5.2	76.5	75.9	76.2	4.0	4.1	4.1		5.0	5.1	5.1	
					Middle	27.5	27.5	27.5	26.7	26.8	26.8	4.9	4.9	4.9	72.4	71.8	72.1	3.9	3.8	3.9	4.0	4.6	4.6	4.6	4.9
					Bottom	27.3	27.4	27.4	27.0	27.0	27.0	4.4	4.4	4.4	65.3	64.7	65.0	4.0	4.1	4.0		5.0	5.2	5.1	
E9	1336-1353	18.6	W	0.4	Surface	27.7	27.6	27.7	26.8	26.8	26.8	5.3	5.3	5.3	78.3	77.5	77.9	4.0	4.1	4.0		5.0	4.8	4.9	
					Middle	27.5	27.4	27.5	27.1	27.1	27.1	5.0	4.9	5.0	73.4	72.7	73.1	3.9	3.9	3.9	4.1	4.4	4.7	4.6	4.9
					Bottom	27.3	27.3	27.3	27.3	27.4	27.4	4.5	4.5	4.5	66.3	65.8	66.1	4.2	4.3	4.3		5.3	5.1	5.2	
S2	1359-1417	10.5	W	0.4	Surface	27.6	27.6	27.6	26.6	26.7	26.7	5.1	5.1	5.1	74.9	75.3	75.1	3.8	3.8	3.8		4.5	4.6	4.6	
					Middle	27.5	27.5	27.5	26.9	26.8	26.9	5.0	5.0	5.0	73.6	73.0	73.3	4.1	4.1	4.1	4.1	4.9	5.1	5.0	4.9
					Bottom	27.4	27.3	27.4	27.2	27.2	27.2	4.6	4.6	4.6	68.1	67.7	67.9	4.2	4.3	4.2		5.3	5.2	5.3	
G2	1422-1440	13.3	W	0.2	Surface	27.6	27.7	27.7	26.6	26.7	26.7	5.1	5.0	5.0	74.3	73.9	74.1	3.9	3.9	3.9		4.4	4.8	4.6	
					Middle	27.5	27.6	27.6	26.9	26.9	26.9	4.9	4.8	4.8	71.4	70.8	71.1	4.1	4.1	4.1	4.1	5.3	4.9	5.1	5.0
					Bottom	27.4	27.4	27.4	27.1	27.2	27.2	4.6	4.6	4.6	67.4	67.7	67.6	4.3	4.3	4.3		5.3	5.2	5.3	
S3	1446-1502	10.6	W	0.2	Surface	27.7	27.7	27.7	26.5	26.5	26.5	4.8	4.8	4.8	70.9	70.3	70.6	4.1	4.1	4.1		5.0	4.8	4.9	
					Middle	27.6	27.6	27.6	26.7	26.6	26.7	4.6	4.5	4.6	67.3	66.7	67.0	4.2	4.3	4.3	4.2	5.3	5.1	5.2	5.1
					Bottom	27.5	27.4	27.5	26.9	26.9	26.9	4.4	4.3	4.4	64.4	63.6	64.0	4.3	4.4	4.3		5.2	5.4	5.3	

Remark or Observation:

Note: \* Average \*\* Depth Average







## Annex C17 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 1 (07:00), 10 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.47	5.24
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.84	5.68
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	Y	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	Y	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 2 (11:00), 10 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.44	5.30
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.81	5.74
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

## Annex C18 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 3 (15:00), 10 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.38	5.06
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.74	5.48
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 4 (19:00), 10 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.45	5.42
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.82	5.87
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged









## Annex C23 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 1 (07:00), 11 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.67	5.00
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	5.06	5.42
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 2 (11:00), 11 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.73	5.76
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	5.12	6.24
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

## Annex C24 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 3 (15:00), 11 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.52	5.14
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.89	5.57
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	Y	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 4 (19:00), 11 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.56	5.00
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.94	5.42
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged



Annex C25 Impact Water Quality Monitoring Results during First Round Monitoring on 12 October 2012

Date: 12-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	0700-0718	36.0	E	0.5	Surface	27.4	27.5	27.5	26.4	26.4	26.4	5.4	5.4	5.4	78.5	78.8	78.7	4.1	4.1	4.1		5.0	4.8	4.9	
					Middle	27.4	27.3	27.4	26.5	26.5	26.5	5.3	5.2	5.3	77.4	76.5	77.0	3.6	3.6	3.6	3.8	3.9	3.7	3.8	4.3
					Bottom	27.3	27.3	27.3	26.6	26.7	26.7	5.1	5.1	5.1	74.3	73.9	74.1	3.7	3.7	3.7		4.0	4.1	4.1	
E8	0723-0740	19.6	E	0.4	Surface	27.5	27.6	27.6	26.5	26.4	26.5	5.3	5.3	5.3	77.2	77.4	77.3	3.6	3.6	3.6		4.0	4.0	4.0	
					Middle	27.4	27.4	27.4	26.6	26.5	26.6	5.2	5.2	5.2	75.2	75.9	75.6	3.9	3.8	3.8	3.8	4.3	4.5	4.4	4.3
					Bottom	27.4	27.3	27.4	26.8	26.7	26.8	5.0	5.0	5.0	72.3	72.7	72.5	4.0	3.9	4.0		4.6	4.5	4.6	
S1	0748-0805	9.4	E	0.2	Surface	27.4	27.5	27.5	26.4	26.4	26.4	5.3	5.2	5.3	77.4	76.5	77.0	3.5	3.4	3.4		4.0	3.7	3.9	
					Middle	27.4	27.5	27.5	26.5	26.6	26.6	5.2	5.2	5.2	75.2	75.5	75.4	3.6	3.5	3.5	3.5	3.6	3.4	3.5	3.7
					Bottom	27.3	27.3	27.3	26.8	26.9	26.9	4.8	4.8	4.8	70.2	69.8	70.0	3.5	3.5	3.5		3.8	3.9	3.9	
G1	0809-0826	11.2	E	0.3	Surface	27.5	27.4	27.5	26.4	26.4	26.4	5.1	5.1	5.1	88.9	73.9	81.4	3.4	3.3	3.3		3.9	4.0	4.0	
					Middle	27.4	27.4	27.4	26.6	26.5	26.6	5.0	5.0	5.0	73.4	73.1	73.3	3.7	3.7	3.7	3.7	4.0	4.2	4.1	4.3
					Bottom	27.3	27.4	27.4	26.9	26.8	26.9	4.8	4.7	4.8	70.1	69.2	69.7	4.1	4.2	4.1		4.8	5.1	5.0	
E7	0830-0847	12.4	E	0.2	Surface	27.5	27.5	27.5	26.4	26.3	26.4	5.1	5.1	5.1	89.6	74.8	82.2	3.3	3.3	3.3		3.7	3.9	3.8	
					Middle	27.4	27.5	27.5	26.7	26.6	26.7	5.0	5.0	5.0	73.1	73.6	73.4	3.7	3.7	3.7	3.7	4.4	4.3	4.4	4.3
					Bottom	27.4	27.4	27.4	26.8	26.7	26.8	5.0	4.9	4.9	72.4	71.8	72.1	4.0	3.9	4.0		4.8	4.8	4.8	
F1	0854-0910	11.4	E	0.3	Surface	27.4	27.4	27.4	26.5	26.4	26.5	5.2	5.2	5.2	75.5	75.9	75.7	3.5	3.5	3.5		3.8	4.1	4.0	
					Middle	27.4	27.4	27.4	26.5	26.6	26.6	5.1	5.0	5.0	73.9	73.3	73.6	3.7	3.7	3.7	3.7	4.2	4.3	4.3	4.3
					Bottom	27.3	27.4	27.4	26.8	26.8	26.8	5.0	5.0	5.0	72.3	72.6	72.5	3.9	3.9	3.9		4.6	4.8	4.7	
G3	0915-0932	14.6	E	0.2	Surface	27.5	27.5	27.5	26.4	26.3	26.4	5.0	5.1	5.0	73.3	74.0	73.7	3.9	3.9	3.9		4.3	4.5	4.4	
					Middle	27.5	27.4	27.5	26.4	26.5	26.5	5.0	5.0	5.0	72.7	72.3	72.5	4.0	3.9	3.9	3.9	4.9	4.8	4.9	4.8
					Bottom	27.4	27.4	27.4	26.8	26.7	26.8	4.7	4.7	4.7	68.6	69.1	68.9	4.0	4.1	4.0		5.0	5.2	5.1	
E9	0937-0955	18.4	E	0.4	Surface	27.6	27.5	27.6	26.6	26.5	26.6	5.1	5.0	5.1	74.2	73.6	73.9	3.6	3.6	3.6		4.1	4.2	4.2	
					Middle	27.5	27.4	27.5	26.7	26.7	26.7	5.0	5.0	5.0	72.9	72.3	72.6	3.8	3.8	3.8	3.8	4.5	4.7	4.6	4.4
					Bottom	27.4	27.3	27.4	26.7	26.7	26.7	4.8	4.8	4.8	70.5	70.1	70.3	3.9	3.9	3.9		4.2	4.4	4.3	
S2	1001-1018	10.4	E	0.2	Surface	27.5	27.4	27.5	26.5	26.4	26.5	5.2	5.2	5.2	75.6	75.9	75.8	3.6	3.6	3.6		4.0	4.3	4.2	
					Middle	27.5	27.5	27.5	26.6	26.7	26.7	4.9	5.0	4.9	77.7	72.6	75.2	3.9	3.9	3.9	3.8	4.8	4.7	4.8	4.6
					Bottom	27.3	27.3	27.3	26.8	26.7	26.8	4.8	4.8	4.8	70.1	69.5	69.8	4.0	3.9	3.9		4.9	5.1	5.0	
G2	1024-1041	13.2	E	0.4	Surface	27.5	27.5	27.5	26.6	26.5	26.6	5.1	5.1	5.1	74.6	74.0	74.3	3.7	3.7	3.7		3.9	4.2	4.1	
					Middle	27.4	27.5	27.5	26.6	26.7	26.7	5.0	5.0	5.0	73.6	73.1	73.4	3.9	3.9	3.9	3.8	4.4	4.6	4.5	4.4
					Bottom	27.4	27.4	27.4	26.7	26.6	26.7	4.6	4.7	4.7	67.5	68.5	68.0	3.9	4.0	3.9		4.7	4.8	4.8	
S3	1045-1102	10.6	E	0.3	Surface	27.5	27.4	27.5	26.5	26.5	26.5	5.0	5.0	5.0	73.3	73.6	73.5	3.8	3.9	3.9		4.4	4.6	4.5	
					Middle	27.5	27.4	27.5	26.7	26.6	26.7	4.9	4.9	4.9	71.8	71.2	71.5	4.0	4.0	4.0	4.0	5.0	5.0	5.0	4.9
					Bottom	27.4	27.3	27.4	26.8	26.7	26.8	4.5	4.4	4.4	65.6	64.2	64.9	4.1	4.1	4.1		4.9	5.2	5.1	

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C26 Impact Water Quality Monitoring Results during Second Round Monitoring on 12 October 2012**

Date: 12-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1105-1122	36.4	W	0.6	Surface	27.5	27.5	27.5	26.4	26.5	26.5	5.4	5.4	5.4	79.6	79.9	79.8	4.0	4.1	4.1		4.8	4.9	4.9	
					Middle	27.4	27.3	27.4	26.5	26.6	26.6	5.3	5.3	5.3	78.2	77.8	78.0	3.6	3.6	3.6	3.8	4.0	3.7	3.9	4.3
					Bottom	27.3	27.2	27.3	26.7	26.8	26.8	5.1	5.1	5.1	75.0	75.3	75.2	3.7	3.7	3.7		4.2	4.3	4.3	
E8	1127-1144	19.8	W	0.4	Surface	27.6	27.5	27.6	26.4	26.4	26.4	5.3	5.3	5.3	78.1	78.2	78.2	3.6	3.6	3.6		3.9	4.1	4.0	
					Middle	27.5	27.4	27.5	26.5	26.6	26.6	5.2	5.2	5.2	75.9	76.6	76.3	3.8	3.8	3.8	3.8	4.4	4.4	4.4	4.4
					Bottom	27.4	27.3	27.4	26.7	26.8	26.8	5.0	5.0	5.0	73.1	73.5	73.3	4.0	3.9	3.9		4.8	4.9	4.9	
S1	1151-1208	9.6	W	0.3	Surface	27.5	27.4	27.5	26.4	26.4	26.4	5.3	5.3	5.3	78.4	77.5	78.0	3.5	3.4	3.4		4.1	3.7	3.9	
					Middle	27.4	27.3	27.4	26.5	26.6	26.6	5.2	5.2	5.2	76.0	76.5	76.3	3.5	3.5	3.5	3.5	3.8	3.6	3.7	3.8
					Bottom	27.3	27.2	27.3	26.7	26.8	26.8	4.8	4.8	4.8	71.1	70.8	71.0	3.5	3.5	3.5		3.9	3.9	3.9	
G1	1212-1229	11.4	W	0.2	Surface	27.6	27.5	27.6	26.3	26.4	26.4	5.1	5.1	5.1	75.5	75.0	75.3	3.3	3.3	3.3		4.0	3.8	3.9	
					Middle	27.4	27.4	27.4	26.5	26.6	26.6	5.1	5.0	5.1	74.3	74.0	74.2	5.7	5.7	5.7	4.4	4.2	4.3	4.3	4.4
					Bottom	27.3	27.2	27.3	26.7	26.8	26.8	4.8	4.8	4.8	71.1	70.2	70.7	4.1	4.1	4.1		4.9	5.0	5.0	
E7	1232-1249	12.6	W	0.1	Surface	27.6	27.6	27.6	26.4	26.4	26.4	5.1	5.1	5.1	75.3	74.7	75.0	3.3	3.3	3.3		3.6	3.5	3.6	
					Middle	27.5	27.4	27.5	26.6	26.7	26.7	5.0	5.0	5.0	73.4	73.7	73.6	3.8	3.8	3.8	3.7	4.0	3.8	3.9	4.1
					Bottom	27.3	27.2	27.3	26.8	26.9	26.9	5.0	4.9	4.9	72.7	71.6	72.2	4.0	4.0	4.0		4.7	5.0	4.9	
F1	1252-1308	11.6	W	0.3	Surface	27.5	27.4	27.5	26.5	26.4	26.5	5.2	5.2	5.2	76.2	76.6	76.4	3.4	3.5	3.5		3.9	3.6	3.8	
					Middle	27.4	27.3	27.4	26.5	26.6	26.6	5.1	5.1	5.1	74.6	74.1	74.4	3.6	3.7	3.7	3.7	4.2	4.3	4.3	4.3
					Bottom	27.3	27.2	27.3	26.7	26.8	26.8	5.0	5.0	5.0	73.1	73.8	73.5	3.9	3.9	3.9		4.9	4.7	4.8	
G3	1313-1330	14.8	W	0.4	Surface	27.6	27.5	27.6	26.4	26.4	26.4	5.0	5.1	5.1	74.0	74.7	74.4	3.9	3.8	3.9		4.3	4.4	4.4	
					Middle	27.4	27.4	27.4	26.5	26.6	26.6	5.0	5.0	5.0	73.3	73.0	73.2	3.9	3.9	3.9	3.9	4.8	5.2	5.0	4.8
					Bottom	27.4	27.3	27.4	26.7	26.8	26.8	4.7	4.8	4.8	69.6	70.0	69.8	4.0	4.0	4.0		5.0	4.9	5.0	
E9	1336-1353	18.7	W	0.4	Surface	27.6	27.6	27.6	26.6	26.5	26.6	5.1	5.1	5.1	75.0	74.4	74.7	3.6	3.6	3.6		3.9	3.8	3.9	
					Middle	27.5	27.4	27.5	26.7	26.8	26.8	5.0	5.0	5.0	73.8	73.5	73.7	3.8	3.8	3.8	3.7	4.5	4.8	4.7	4.4
					Bottom	27.4	27.3	27.4	26.8	26.8	26.8	4.9	4.9	4.9	71.6	71.2	71.4	3.8	3.9	3.9		4.7	4.9	4.8	
S2	1359-1417	10.7	W	0.3	Surface	27.5	27.4	27.5	26.5	26.6	26.6	5.2	5.2	5.2	76.3	76.8	76.6	3.5	3.6	3.6		4.5	4.3	4.4	
					Middle	27.4	27.3	27.4	26.7	26.8	26.8	5.0	5.0	5.0	72.7	73.1	72.9	3.9	3.9	3.9	3.8	4.9	4.9	4.9	4.7
					Bottom	27.3	27.2	27.3	26.8	26.9	26.9	4.8	4.8	4.8	70.8	70.2	70.5	4.0	3.9	3.9		5.0	4.7	4.9	
G2	1422-1440	13.4	W	0.2	Surface	27.6	27.5	27.6	26.6	26.7	26.7	5.1	5.1	5.1	75.5	74.9	75.2	3.7	3.6	3.6		4.0	4.3	4.2	
					Middle	27.5	27.4	27.5	26.8	26.7	26.8	5.1	5.0	5.0	74.3	73.8	74.1	3.9	3.9	3.9	3.8	4.6	4.4	4.5	4.5
					Bottom	27.3	27.3	27.3	26.8	26.8	26.8	4.7	4.7	4.7	68.3	69.3	68.8	3.9	3.9	3.9		4.7	4.8	4.8	
S3	1446-1502	10.8	W	0.2	Surface	27.6	27.6	27.6	26.5	26.6	26.6	5.0	5.1	5.1	74.0	74.4	74.2	3.8	3.8	3.8		4.4	4.6	4.5	
					Middle	27.5	27.4	27.5	26.7	26.7	26.7	4.9	4.9	4.9	72.5	72.1	72.3	4.0	4.0	4.0	4.0	4.5	4.9	4.7	4.8
					Bottom	27.2	27.3	27.3	26.7	26.8	26.8	4.5	4.6	4.6	66.6	67.2	66.9	4.1	4.1	4.1		5.2	5.4	5.3	

Remark or Observation:

Note: \* Average \*\* Depth Average

### Annex C27 Impact Water Quality Monitoring Results during Third Round Monitoring on 12 October 2012

Date:	12-Oct-12
Weather:	Fine
Sea Conditions:	Great Wave
Zone	A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1506-1523	36.6	W	0.5	Surface	27.5	27.4	27.5	26.5	26.5	26.5	5.3	5.3	5.3	78.4	78.0	78.2	4.1	4.1	4.1		5.2	4.8	5.0	
					Middle	27.3	27.3	27.3	26.6	26.5	26.6	5.3	5.2	5.2	77.2	76.8	77.0	3.6	3.6	3.6	3.8	4.1	3.8	4.0	4.4
					Bottom	27.2	27.2	27.2	26.8	26.8	26.8	5.1	5.1	5.1	74.1	74.7	74.4	3.6	3.6	3.6		4.0	4.3	4.2	
E8	1530-1547	20.0	W	0.4	Surface	27.5	27.5	27.5	26.4	26.4	26.4	5.3	5.3	5.3	77.4	77.8	77.6	3.7	3.7	3.7		4.2	3.8	4.0	
					Middle	27.4	27.3	27.4	26.5	26.6	26.6	5.2	5.2	5.2	76.3	75.8	76.1	3.9	3.9	3.9	3.9	4.4	4.5	4.5	4.4
					Bottom	27.2	27.2	27.2	26.7	26.8	26.8	5.0	4.9	5.0	73.0	72.4	72.7	4.0	4.1	4.0		4.8	4.8	4.8	
S1	1555-1612	10.1	W	0.3	Surface	27.4	27.5	27.5	26.3	26.4	26.4	5.2	5.3	5.2	76.8	77.2	77.0	3.5	3.5	3.5		4.0	3.7	3.9	
					Middle	27.3	27.3	27.3	26.5	26.5	26.5	5.1	5.1	5.1	75.5	74.9	75.2	3.6	3.6	3.6	3.6	3.9	4.1	4.0	4.0
					Bottom	27.2	27.2	27.2	26.7	26.7	26.7	4.9	5.8	5.4	71.5	70.9	71.2	3.7	3.7	3.7		4.1	4.2	4.2	
G1	1616-1633	11.6	W	0.2	Surface	27.5	27.4	27.5	26.3	26.3	26.3	5.0	5.1	5.0	73.8	74.3	74.1	3.3	3.4	3.4		4.1	3.8	4.0	
					Middle	27.3	27.3	27.3	26.5	26.6	26.6	5.0	4.9	4.9	72.7	72.2	72.5	5.1	5.1	5.1	4.3	4.4	4.3	4.4	4.5
					Bottom	27.2	27.2	27.2	26.7	26.8	26.8	4.8	4.7	4.7	69.7	69.4	69.6	4.4	4.3	4.4		5.2	5.4	5.3	
E7	1637-1654	12.9	W	0.2	Surface	27.4	27.4	27.4	26.4	26.4	26.4	5.1	5.1	5.1	74.3	74.9	74.6	3.3	3.3	3.3		4.0	4.3	4.2	
					Middle	27.3	27.4	27.4	26.6	26.6	26.6	5.0	4.9	5.0	73.0	72.5	72.8	3.8	3.8	3.8	3.7	4.6	4.8	4.7	4.7
					Bottom	27.2	27.3	27.3	26.8	26.9	26.9	4.8	4.9	4.8	70.8	71.4	71.1	4.0	4.1	4.0		5.2	5.1	5.2	
F1	1658-1715	11.8	W	0.3	Surface	27.5	27.4	27.5	26.4	26.4	26.4	5.1	5.1	5.1	75.0	75.5	75.3	3.4	3.5	3.4		3.9	3.6	3.8	
					Middle	27.3	27.3	27.3	26.5	26.6	26.6	5.0	5.0	5.0	73.3	72.7	73.0	3.6	3.7	3.6	3.7	3.9	4.3	4.1	4.3
					Bottom	27.2	27.2	27.2	26.8	26.8	26.8	4.9	4.8	4.9	71.5	71.1	71.3	3.9	3.9	3.9		4.9	4.9	4.9	
G3	1722-1739	15.0	W	0.3	Surface	27.4	27.4	27.4	26.4	26.4	26.4	5.0	5.0	5.0	73.4	73.9	73.7	3.8	3.8	3.8		4.2	4.0	4.1	
					Middle	27.3	27.3	27.3	26.5	26.6	26.6	4.9	4.9	4.9	72.5	72.1	72.3	3.9	4.0	3.9	3.9	4.7	5.0	4.9	4.6
					Bottom	27.2	27.1	27.2	26.7	26.8	26.8	4.8	4.8	4.8	70.8	70.2	70.5	4.0	4.0	4.0		4.8	4.9	4.9	
E9	1745-1802	18.6	W	0.3	Surface	27.5	27.5	27.5	26.5	26.5	26.5	5.0	5.1	5.0	73.7	74.3	74.0	3.5	3.5	3.5		4.1	4.3	4.2	
					Middle	27.4	27.4	27.4	26.7	26.7	26.7	4.9	4.9	4.9	72.5	72.1	72.3	3.7	3.7	3.7	3.7	4.5	4.7	4.6	4.5
					Bottom	27.3	27.3	27.3	26.8	26.9	26.9	4.8	4.8	4.8	70.8	70.3	70.6	3.8	3.8	3.8		4.8	4.8	4.8	
S2	1808-1825	10.4	W	0.4	Surface	27.4	27.5	27.5	26.6	26.6	26.6	5.2	5.2	5.2	75.7	76.2	76.0	3.6	3.6	3.6		4.3	4.2	4.3	
					Middle	27.3	27.2	27.3	26.7	26.7	26.7	5.0	5.0	5.0	73.3	72.7	73.0	3.8	3.9	3.8	3.8	4.4	4.5	4.5	4.5
					Bottom	27.2	27.1	27.2	26.8	26.9	26.9	4.9	4.9	4.9	71.6	71.2	71.4	4.0	4.1	4.0		4.8	4.9	4.9	
G2	1830-1847	13.3	W	0.3	Surface	27.5	27.4	27.5	26.6	26.7	26.7	5.1	5.1	5.1	74.1	74.7	74.4	3.5	3.6	3.6		4.1	4.3	4.2	
					Middle	27.3	27.4	27.4	26.7	26.7	26.7	5.0	4.9	4.9	72.8	72.2	72.5	3.8	3.8	3.8	3.8	4.3	4.4	4.4	4.5
					Bottom	27.2	27.3	27.3	26.8	26.7	26.8	4.8	4.8	4.8	69.7	70.3	70.0	3.9	4.0	4.0		4.9	4.8	4.9	
S3	1852-1909	10.6	W	0.2	Surface	27.5	27.4	27.5	26.5	26.6	26.6	5.1	5.1	5.1	74.9	74.3	74.6	3.7	3.7	3.7		4.2	4.3	4.3	
					Middle	27.3	27.3	27.3	26.7	26.7	26.7	5.0	4.9	5.0	73.0	72.4	72.7	4.0	4.0	4.0	4.0	4.7	4.9	4.8	4.7
					Bottom	27.2	27.2	27.2	26.8	26.8	26.8	4.6	4.6	4.6	68.1	67.7	67.9	4.1	4.1	4.1		4.8	5.0	4.9	

Remark or Observation:

Note: \* Average      \*\* Depth Average

**Annex C28 Impact Water Quality Monitoring Results during Forth Round Monitoring on 12 October 2012**

Date: 12-Oct-12  
 Weather: Fine  
 Sea Conditions: Great Wave  
 Zone: A

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
C1	1915-1932	36.9	W	0.6	Surface	27.5	27.4	27.5	26.5	26.5	26.5	5.3	5.4	5.4	78.2	78.7	78.5	4.0	4.0	4.0		4.6	4.8	4.7	
					Middle	27.3	27.2	27.3	26.6	26.6	26.6	5.2	5.2	5.2	76.3	75.9	76.1	3.5	3.6	3.6	3.8	4.1	4.2	4.2	4.4
					Bottom	27.2	27.1	27.2	26.8	26.8	26.8	5.1	5.0	5.1	74.4	73.9	74.2	3.7	3.8	3.7		4.3	4.5	4.4	
E8	1939-1956	20.2	W	0.3	Surface	27.4	27.4	27.4	26.4	26.5	26.5	5.2	5.3	5.2	76.6	77.2	76.9	3.6	3.6	3.6		3.9	3.7	3.8	
					Middle	27.3	27.3	27.3	26.6	26.6	26.6	5.1	5.1	5.1	75.5	74.9	75.2	3.8	3.8	3.8	3.8	3.9	4.2	4.1	4.2
					Bottom	27.2	27.1	27.2	26.7	26.8	26.8	5.0	5.0	5.0	73.3	72.7	73.0	4.0	4.0	4.0		4.9	4.8	4.9	
S1	2001-2018	10.3	W	0.4	Surface	27.4	27.4	27.4	26.4	26.4	26.4	5.2	5.2	5.2	76.9	76.5	76.7	3.5	3.6	3.5		4.1	4.2	4.2	
					Middle	27.2	27.3	27.3	26.5	26.6	26.6	5.1	5.1	5.1	75.0	74.4	74.7	3.7	3.7	3.7	3.6	4.3	4.6	4.5	4.3
					Bottom	27.2	27.1	27.2	26.7	26.7	26.7	4.9	4.9	4.9	72.2	71.8	72.0	3.6	3.6	3.6		4.2	4.3	4.3	
G1	2023-2040	11.6	W	0.1	Surface	27.4	27.4	27.4	26.3	26.3	26.3	5.0	5.0	5.0	73.1	73.7	73.4	3.4	3.4	3.4		3.9	4.2	4.1	
					Middle	27.3	27.2	27.3	26.5	26.5	26.5	4.9	4.8	4.9	71.8	71.7	71.8	4.8	4.9	4.9	4.2	5.2	4.9	5.1	4.8
					Bottom	27.1	27.1	27.1	26.7	26.7	26.7	4.7	4.7	4.7	69.0	68.9	69.0	4.5	4.4	4.5		5.3	5.5	5.4	
E7	2045-2102	13.2	W	0.2	Surface	27.4	27.5	27.5	26.4	26.5	26.5	5.0	5.1	5.0	73.5	74.4	74.0	3.3	3.3	3.3		4.3	3.9	4.1	
					Middle	27.3	27.3	27.3	26.6	26.6	26.6	4.9	4.9	4.9	71.6	72.1	71.9	3.7	3.8	3.7	3.7	4.6	4.6	4.6	4.6
					Bottom	27.2	27.1	27.2	26.9	26.8	26.9	4.8	4.8	4.8	70.5	70.9	70.7	4.0	4.0	4.0		5.1	5.3	5.2	
F1	2106-2123	12.2	W	0.3	Surface	27.4	27.4	27.4	26.5	26.4	26.5	5.1	5.1	5.1	74.3	75.2	74.8	3.4	3.4	3.4		4.5	4.2	4.4	
					Middle	27.3	27.2	27.3	26.5	26.6	26.6	4.9	4.9	4.9	72.4	71.8	72.1	3.6	3.6	3.6	3.7	3.7	3.6	3.7	4.0
					Bottom	27.2	27.2	27.2	26.8	26.7	26.8	4.8	4.8	4.8	70.5	70.0	70.3	4.0	3.9	4.0		3.9	4.1	4.0	
G3	2129-2146	15.2	W	0.4	Surface	27.3	27.4	27.4	26.4	26.4	26.4	5.1	5.1	5.1	74.4	75.0	74.7	3.8	3.9	3.8		4.4	4.5	4.5	
					Middle	27.2	27.2	27.2	26.5	26.6	26.6	4.9	4.8	4.9	71.5	70.9	71.2	4.0	4.1	4.0	4.0	4.8	4.8	4.8	4.8
					Bottom	27.1	27.2	27.2	26.7	26.8	26.8	4.9	5.0	4.9	72.1	72.8	72.5	4.1	4.1	4.1		5.2	5.1	5.2	
E9	2153-2210	18.9	W	0.4	Surface	27.3	27.4	27.4	26.5	26.6	26.6	5.0	5.0	5.0	73.4	72.8	73.1	3.6	3.6	3.6		4.1	4.4	4.3	
					Middle	27.2	27.3	27.3	26.7	26.7	26.7	4.9	4.8	4.9	71.5	70.9	71.2	3.7	3.7	3.7	3.7	4.2	4.5	4.4	4.5
					Bottom	27.1	27.1	27.1	26.9	26.9	26.9	4.8	4.8	4.8	70.3	69.7	70.0	3.8	3.9	3.9		4.8	5.0	4.9	
S2	2217-2234	10.4	W	0.4	Surface	27.4	27.4	27.4	26.5	26.5	26.5	5.1	5.2	5.1	75.2	75.6	75.4	3.6	3.7	3.6		4.0	4.3	4.2	
					Middle	27.3	27.3	27.3	26.7	26.6	26.7	5.0	4.9	5.0	73.0	72.5	72.8	3.8	3.8	3.8	3.8	4.5	4.5	4.5	4.5
					Bottom	27.1	27.2	27.2	26.8	26.8	26.8	4.9	4.9	4.9	71.8	71.4	71.6	3.9	4.0	4.0		4.7	4.9	4.8	
G2	2238-2255	13.7	W	0.2	Surface	27.3	27.3	27.3	26.6	26.7	26.7	5.0	5.0	5.0	73.1	73.7	73.4	3.5	3.5	3.5		4.0	4.3	4.2	
					Middle	27.3	27.2	27.3	26.8	26.7	26.8	4.9	4.9	4.9	71.6	71.2	71.4	3.7	3.8	3.8	3.7	4.6	4.8	4.7	4.6
					Bottom	27.1	27.1	27.1	26.9	26.8	26.9	4.7	4.7	4.7	69.2	69.6	69.4	4.0	4.0	4.0		5.0	4.8	4.9	
S3	2259-2316	10.8	W	0.3	Surface	27.3	27.3	27.3	26.6	26.5	26.6	5.1	5.0	5.0	74.1	73.7	73.9	3.8	3.8	3.8		4.4	4.3	4.4	
					Middle	27.2	27.2	27.2	26.7	26.7	26.7	4.9	4.9	4.9	71.9	71.5	71.7	4.1	4.1	4.1	4.0	5.0	4.9	5.0	4.9
					Bottom	27.1	27.1	27.1	26.9	26.9	26.9	4.6	4.7	4.6	67.8	68.4	68.1	4.2	4.2	4.2		5.3	5.6	5.5	

Remark or Observation:

Note: \* Average \*\* Depth Average

## Annex C29 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 1 (07:00), 12 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.55	5.10
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.93	5.53
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 2 (11:00), 12 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.51	5.18
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.89	5.61
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

## Annex C30 Summary of Compliance with Action and Limit Level for Zone A

Compliance with Action Level and Limit Level for Zone A - Round 3 (15:00), 12 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.51	5.24
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.88	5.68
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone A - Round 4 (19:00), 12 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.36	4.36	4.39	4.38	6.27
	Or Action Level (C1*1.2)	N.A.	N.A.	N.A.	4.51	5.30
	Limit Level (Baseline)	4.25	4.25	4.33	4.43	6.40
	And Limit Level (C1*1.3)	N.A.	N.A.	N.A.	4.88	5.74
E7	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E8	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
F1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
S3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

**Annex C31 Impact Water Quality Monitoring Results during First Round Monitoring on 13 October 2012**

Date: 13-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)				Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
E9	1102-1117	18.6	E	0.4	Surface	27.5	27.5	27.5	26.8	26.8	26.8	5.4	5.3	5.3	78.8	77.8	78.3	3.7	3.7	3.7		4.5	4.4	4.5		
					Middle	27.4	27.4	27.4	26.9	26.9	26.9	5.1	5.1	5.1	75.1	74.7	74.9	3.9	3.9	3.9	3.9	4.7	4.7	4.7	4.7	
					Bottom	27.3	27.3	27.3	27.0	27.0	27.0	4.9	4.9	4.9	72.3	72.6	72.5	4.2	4.2	4.2		4.9	5.2	5.1		
G3	1119-1135	12.7	E	0.6	Surface	27.5	27.5	27.5	26.6	26.6	26.6	5.3	5.2	5.2	77.3	76.1	76.7	3.2	3.2	3.2		4.0	4.2	4.1		
					Middle	27.4	27.4	27.4	26.7	26.7	26.7	5.4	5.3	5.4	79.1	78.2	78.7	3.1	3.0	3.0	3.2	3.8	3.9	3.9	4.1	
					Bottom	27.4	27.3	27.4	26.8	26.9	26.9	5.3	5.2	5.3	77.8	77.0	77.4	3.3	3.2	3.3		4.1	4.3	4.2		
F1	1137-1153	7.7	E	0.5	Surface	27.5	27.5	27.5	26.4	26.4	26.4	5.6	5.6	5.6	82.0	82.0	82.0	2.7	2.8	2.8		3.5	3.6	3.6		
					Middle	27.4	27.4	27.4	26.6	26.6	26.6	4.7	4.6	4.7	69.4	68.1	68.8	3.0	3.1	3.1	3.0	3.9	4.1	4.0	3.9	
					Bottom	27.3	27.3	27.3	26.7	26.7	26.7	4.7	4.6	4.6	68.5	67.8	68.2	3.2	3.2	3.2		4.0	4.4	4.2		
C2	1159-1215	30.8	E	0.4	Surface	27.6	27.6	27.6	26.6	26.6	26.6	6.4	6.4	6.4	94.2	93.8	94.0	2.1	2.0	2.1		2.9	3.1	3.0		
					Middle	27.5	27.4	27.5	26.8	26.8	26.8	6.2	6.1	6.1	90.6	90.0	90.3	2.3	2.2	2.2	2.3	3.1	3.3	3.2	3.2	
					Bottom	27.3	27.3	27.3	27.0	27.1	27.1	5.8	5.8	5.8	85.8	85.4	85.6	2.6	2.6	2.6		3.6	3.4	3.5		
E2	1221-1237	8.0	E	0.4	Surface	27.6	27.5	27.6	26.7	26.7	26.7	5.4	5.4	5.4	79.5	78.8	79.2	2.2	2.5	2.3		3.5	3.2	3.4		
					Middle	27.4	27.4	27.4	26.9	26.9	26.9	5.2	5.2	5.2	77.0	76.6	76.8	2.5	2.5	2.5	2.6	3.7	3.8	3.8	3.6	
					Bottom	27.3	27.3	27.3	27.0	27.0	27.0	5.0	5.0	5.0	73.9	73.6	73.8	2.9	3.0	2.9		3.7	3.9	3.8		
G4	1239-1255	24.7	E	0.6	Surface	27.6	27.6	27.6	26.8	26.8	26.8	5.8	5.8	5.8	85.8	85.8	85.8	2.5	2.4	2.4		3.5	3.3	3.4		
					Middle	27.5	27.5	27.5	26.9	26.9	26.9	5.7	5.7	5.7	83.9	83.2	83.6	2.6	2.6	2.6	2.6	3.6	3.6	3.6	3.6	
					Bottom	27.4	27.4	27.4	27.0	27.0	27.0	5.5	5.5	5.5	81.1	80.9	81.0	2.8	2.7	2.7		3.6	3.7	3.7		
E6	1258-1314	26.3	E	0.5	Surface	27.6	27.6	27.6	26.7	26.7	26.7	5.7	5.6	5.6	83.2	82.8	83.0	1.9	1.9	1.9		2.9	2.6	2.8		
					Middle	27.5	27.5	27.5	26.8	26.8	26.8	5.4	5.3	5.4	79.1	78.5	78.8	2.2	2.2	2.2	2.2	3.0	2.9	3.0	3.1	
					Bottom	27.4	27.4	27.4	26.9	27.0	27.0	5.4	5.4	5.4	79.5	79.1	79.3	2.4	2.4	2.4		3.4	3.5	3.5		
B1	1318-1334	10.6	E	0.5	Surface	27.6	27.5	27.6	26.8	26.8	26.8	5.4	5.4	5.4	79.6	79.1	79.4	1.8	1.9	1.8		2.6	2.8	2.7		
					Middle	27.5	27.5	27.5	26.9	26.9	26.9	5.0	5.0	5.0	73.1	72.8	73.0	2.4	2.3	2.3	2.3	3.4	3.3	3.4	3.2	
					Bottom	27.4	27.4	27.4	27.0	27.1	27.1	4.8	4.7	4.8	71.1	69.2	70.2	2.6	2.6	2.6		3.6	3.6	3.6		
B2	1339-1355	15.4	E	0.5	Surface	27.6	27.6	27.6	26.8	26.8	26.8	5.7	5.7	5.7	83.6	84.2	83.9	2.0	2.0	2.0		2.7	3.0	2.9		
					Middle	27.5	27.5	27.5	26.9	26.9	26.9	5.3	5.3	5.3	77.8	77.9	77.9	2.5	2.5	2.5	2.5	3.2	3.4	3.3	3.3	
					Bottom	27.4	27.4	27.4	27.1	27.1	27.1	5.4	5.4	5.4	79.4	78.9	79.2	2.9	3.0	3.0		3.8	3.9	3.9		
B3	1359-1416	12.6	E	0.6	Surface	27.6	27.5	27.6	26.4	26.5	26.5	5.4	5.4	5.4	79.8	78.9	79.4	1.3	1.3	1.3		2.0	2.0	2.0		
					Middle	27.5	27.4	27.5	26.7	26.7	26.7	5.2	5.2	5.2	76.6	76.6	76.6	1.8	1.8	1.8	1.8	2.6	2.7	2.7	2.6	
					Bottom	27.4	27.4	27.4	26.8	26.8	26.8	5.1	5.1	5.1	75.4	74.8	75.1	2.2	2.3	2.2		3.2	3.0	3.1		
G7	1421-1437	32.1	E	0.5	Surface	27.6	27.6	27.6	26.7	26.7	26.7	5.7	5.6	5.6	83.1	82.5	82.8	1.4	1.5	1.5		2.5	2.7	2.6		
					Middle	27.4	27.4	27.4	26.8	26.9	26.9	5.5	5.4	5.4	80.4	79.1	79.8	1.9	1.9	1.9	1.9	2.6	2.9	2.8	2.8	
					Bottom	27.3	27.3	27.3	27.0	27.0	27.0	5.2	5.2	5.2	77.0	76.4	76.7	2.4	2.3	2.3		3.0	3.2	3.1		
E1	1440-1458	46.2	E	0.6	Surface	27.6	27.6	27.6	26.7	26.7	26.7	5.7	5.7	5.7	83.9	83.6	83.8	1.8	1.3	1.5		2.4	2.5	2.5		
					Middle	27.4	27.4	27.4	26.9	26.9	26.9	5.8	5.8	5.8	85.5	84.7	85.1	2.1	2.0	2.0	2.1	2.9	2.6	2.8	2.9	
					Bottom	27.3	27.2	27.3	27.2	27.3	27.3	5.4	5.4	5.4	79.8	79.5	79.7	2.7	2.7	2.7		3.5	3.6	3.6		

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C32 Impact Water Quality Monitoring Results during Second Round Monitoring on 13 October 2012**

Date: 13-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)				Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**				
E1	1504-1519	48.0	W	0.9	Surface	27.6	27.6	27.6	26.7	26.7	26.7	5.6	5.7	5.7	83.1	83.7	83.4	1.9	1.9	1.9		2.8	2.9	2.9		
					Middle	27.5	27.5	27.5	26.9	27.0	27.0	5.6	5.5	5.6	82.1	81.5	81.8	2.3	2.2	2.2	2.3	3.3	3.1	3.2	3.3	
					Bottom	27.4	27.3	27.4	27.2	27.3	27.3	5.5	5.5	5.5	81.0	81.5	81.3	2.9	2.8	2.8		3.7	3.8	3.8		
G7	1523-1539	33.2	W	0.8	Surface	27.6	27.5	27.6	26.7	26.6	26.7	5.7	5.8	5.7	84.3	84.7	84.5	1.8	1.9	1.9		2.9	2.6	2.8		
					Middle	27.5	27.4	27.5	26.9	26.9	26.9	5.6	5.6	5.6	83.1	82.5	82.8	1.9	1.9	1.9	1.9	3.0	3.1	3.1	3.0	
					Bottom	27.4	27.4	27.4	27.1	27.1	27.1	5.5	5.5	5.5	80.9	80.3	80.6	2.0	2.1	2.1		3.0	3.2	3.1		
B3	1544-1558	13.6	W	0.5	Surface	27.6	27.6	27.6	26.6	26.6	26.6	5.6	5.6	5.6	82.3	82.8	82.6	1.4	1.4	1.4		2.3	2.4	2.4		
					Middle	27.4	27.3	27.4	26.8	26.7	26.8	5.3	5.2	5.3	77.5	77.1	77.3	2.0	1.9	1.9	1.9	3.0	2.8	2.9	2.9	
					Bottom	27.4	27.4	27.4	27.0	27.1	27.1	5.1	5.2	5.2	75.6	73.8	74.7	2.3	2.4	2.4		3.3	3.4	3.4		
B2	1603-1616	16.4	W	0.2	Surface	27.6	27.7	27.7	26.6	26.7	26.7	5.7	5.8	5.7	84.3	84.8	84.6	1.9	1.9	1.9		2.7	2.8	2.8		
					Middle	27.5	27.5	27.5	26.8	26.9	26.9	5.3	5.3	5.3	78.3	78.0	78.2	2.5	2.6	2.6	2.4	3.4	3.6	3.5	3.3	
					Bottom	27.3	27.4	27.4	27.1	27.0	27.1	5.1	5.1	5.1	75.1	74.7	74.9	2.7	2.8	2.8		3.9	3.6	3.8		
B1	1622-1636	10.8	W	0.3	Surface	27.6	27.6	27.6	26.7	26.8	26.8	5.6	5.6	5.6	82.5	83.1	82.8	2.0	2.1	2.1		3.0	3.2	3.1		
					Middle	27.5	27.4	27.5	26.9	27.0	27.0	5.3	5.2	5.3	77.5	77.1	77.3	2.4	2.4	2.4	2.3	3.5	3.6	3.6	3.4	
					Bottom	27.4	27.4	27.4	27.1	27.1	27.1	5.1	5.0	5.1	74.5	74.1	74.3	2.4	2.5	2.4		3.5	3.8	3.7		
E6	1641-1657	27.2	W	0.4	Surface	27.6	27.5	27.6	26.8	26.7	26.8	5.8	5.7	5.8	85.1	84.6	84.9	1.9	1.9	1.9		2.8	2.9	2.9		
					Middle	27.4	27.4	27.4	27.0	27.0	27.0	5.5	5.5	5.5	80.8	80.4	80.6	2.3	2.2	2.3	2.2	3.3	3.2	3.3	3.2	
					Bottom	27.4	27.3	27.4	27.2	27.1	27.2	5.4	5.4	5.4	79.5	80.1	79.8	2.5	2.6	2.6		3.4	3.4	3.4		
G4	1700-1715	25.6	W	0.5	Surface	27.6	27.6	27.6	26.8	26.8	26.8	5.4	5.5	5.5	79.9	80.5	80.2	2.1	2.1	2.1		3.0	3.2	3.1		
					Middle	27.4	27.4	27.4	27.0	26.9	27.0	5.2	5.1	5.2	76.0	75.6	75.8	2.4	2.4	2.4	2.4	3.3	3.6	3.5	3.4	
					Bottom	27.3	27.3	27.3	27.2	27.2	27.2	5.1	5.1	5.1	75.3	74.7	75.0	2.7	2.7	2.7		3.6	3.7	3.7		
E2	1718-1734	8.8	W	0.5	Surface	27.6	27.6	27.6	26.8	26.7	26.8	5.7	5.7	5.7	83.8	83.2	83.5	2.2	2.3	2.3		3.0	3.2	3.1		
					Middle	27.4	27.4	27.4	27.0	26.9	27.0	5.3	5.3	5.3	78.3	77.7	78.0	2.5	2.4	2.4	2.4	3.3	3.2	3.3	3.3	
					Bottom	27.4	27.3	27.4	27.2	27.2	27.2	5.3	5.3	5.3	77.5	78.0	77.8	2.6	2.6	2.6		3.6	3.4	3.5		
C2	1740-1755	31.4	W	0.7	Surface	27.6	27.5	27.6	26.9	26.8	26.9	6.1	6.1	6.1	90.2	89.5	89.9	1.9	2.0	1.9		2.9	2.8	2.9		
					Middle	27.4	27.3	27.4	27.0	27.1	27.1	5.9	5.9	5.9	87.6	87.0	87.3	2.3	2.4	2.4	2.2	3.4	3.6	3.5	3.3	
					Bottom	27.3	27.3	27.3	27.3	27.2	27.3	5.9	5.9	5.9	87.0	86.2	86.6	2.3	2.3	2.3		3.3	3.6	3.5		
F1	1803-1817	8.4	W	0.3	Surface	27.6	27.6	27.6	26.9	26.9	26.9	5.7	5.7	5.7	84.6	84.0	84.3	2.9	2.9	2.9		4.0	3.7	3.9		
					Middle	27.4	27.4	27.4	27.1	27.1	27.1	5.3	5.4	5.4	78.6	79.1	78.9	3.1	3.1	3.1	3.1	4.1	4.0	4.1	4.1	
					Bottom	27.4	27.3	27.4	27.3	27.3	27.3	5.4	5.3	5.4	79.1	78.6	78.9	3.3	3.3	3.3		4.3	4.2	4.3		
G3	1820-1835	13.2	W	0.3	Surface	27.6	27.5	27.6	26.9	26.8	26.9	5.8	5.8	5.8	85.4	84.8	85.1	3.0	3.1	3.0		4.2	4.0	4.1		
					Middle	27.4	27.4	27.4	27.1	27.0	27.1	5.5	5.5	5.5	80.3	80.7	80.5	3.3	3.2	3.3	3.2	4.4	4.2	4.3	4.3	
					Bottom	27.3	27.4	27.4	27.3	27.2	27.3	5.2	5.2	5.2	76.5	77.1	76.8	3.3	3.3	3.3		4.5	4.4	4.5		
E9	1844-1900	19.6	W	0.4	Surface	27.5	27.4	27.5	26.8	26.7	26.8	5.6	5.5	5.6	82.1	81.6	81.9	3.2	3.3	3.2		4.0	4.1	4.1		
					Middle	27.3	27.3	27.3	26.9	26.9	26.9	5.2	5.2	5.2	76.6	76.1	76.4	3.1	3.1	3.1	3.2	4.2	3.9	4.1	4.2	
					Bottom	27.3	27.2	27.3	27.1	27.0	27.1	5.0	5.0	5.0	73.1	73.4	73.3	3.2	3.2	3.2		4.4	4.4	4.4		

Remark or Observation:

Note: \* Average \*\* Depth Average



## Annex C33 Impact Water Quality Monitoring Results during Third Round Monitoring on 13 October 2012

Date: 13-Oct-12  
 Weather: Fine  
 Sea Conditions: Small Wave  
 Zone: B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
E9	1902-1918	19.8	W	0.4	Surface	27.4	27.5	27.5	26.8	26.8	26.8	5.6	5.6	5.6	83.1	82.5	82.8	3.3	3.3	3.3		3.8	3.9	3.9	
					Middle	27.3	27.2	27.3	26.9	26.9	26.9	5.3	5.3	5.3	78.0	78.6	78.3	3.4	3.3	3.4	3.3	3.9	4.0	4.0	4.0
					Bottom	27.2	27.2	27.2	27.0	27.1	27.1	5.0	5.0	5.0	73.6	73.4	73.5	3.2	3.2	3.2		4.0	4.2	4.1	
G3	1926-1940	13.6	W	0.4	Surface	27.4	27.4	27.4	26.9	26.8	26.9	5.7	5.7	5.7	84.3	83.7	84.0	3.0	3.1	3.0		4.2	4.2	4.2	
					Middle	27.4	27.3	27.4	26.9	27.0	27.0	5.6	5.6	5.6	83.1	82.7	82.9	3.4	3.4	3.4	3.3	4.3	4.6	4.5	4.3
					Bottom	27.3	27.2	27.3	27.1	27.2	27.2	5.6	5.6	5.6	82.3	82.1	82.2	3.4	3.4	3.4		4.2	4.4	4.3	
F1	1944-1959	9.2	W	0.3	Surface	27.4	27.4	27.4	26.9	26.9	26.9	5.8	5.7	5.8	85.2	84.6	84.9	2.9	3.0	2.9		3.7	0.8	2.3	
					Middle	27.3	27.3	27.3	27.0	27.0	27.0	5.4	5.4	5.4	80.0	79.0	79.5	2.9	2.8	2.8	3.0	3.7	3.6	3.7	3.4
					Bottom	27.2	27.2	27.2	27.1	27.1	27.1	5.3	5.2	5.3	77.6	77.1	77.4	3.2	3.2	3.2		4.3	4.2	4.3	
C2	2008-2023	31.8	W	0.8	Surface	27.4	27.4	27.4	26.9	26.9	26.9	6.0	6.1	6.1	89.0	89.5	89.3	1.7	1.8	1.8		2.8	2.7	2.8	
					Middle	27.3	27.2	27.3	27.0	27.0	27.0	6.0	6.0	6.0	88.2	88.7	88.5	1.9	1.9	1.9	1.9	3.1	2.9	3.0	3.0
					Bottom	27.1	27.2	27.2	27.1	27.1	27.1	6.0	5.9	5.9	87.7	87.0	87.4	2.1	2.1	2.1		3.1	3.1	3.1	
E2	2030-2044	9.2	W	0.5	Surface	27.4	27.3	27.4	26.9	26.8	26.9	5.6	5.6	5.6	82.5	83.1	82.8	2.1	2.1	2.1		3.1	3.2	3.2	
					Middle	27.3	27.3	27.3	26.8	26.9	26.9	5.2	5.2	5.2	76.6	76.1	76.4	2.4	2.3	2.3	2.3	3.5	3.6	3.6	3.4
					Bottom	27.2	27.2	27.2	27.2	27.1	27.2	5.2	5.1	5.2	75.9	75.6	75.8	2.3	2.4	2.4		3.4	3.6	3.5	
G4	2047-2101	25.8	W	0.4	Surface	27.4	27.4	27.4	26.9	26.9	26.9	5.6	5.6	5.6	83.0	82.5	82.8	1.9	2.0	2.0		2.8	2.9	2.9	
					Middle	27.3	27.2	27.3	26.9	27.0	27.0	5.2	5.2	5.2	76.8	76.1	76.5	2.3	2.3	2.3	2.2	3.3	3.2	3.3	3.1
					Bottom	27.2	27.1	27.2	27.2	27.2	27.2	5.2	5.1	5.1	75.9	75.3	75.6	2.2	2.2	2.2		3.0	3.2	3.1	
E6	2105-2120	27.8	W	0.5	Surface	27.4	27.4	27.4	26.9	26.9	26.9	5.7	5.7	5.7	84.3	83.7	84.0	2.0	2.0	2.0		3.0	2.8	2.9	
					Middle	27.2	27.2	27.2	27.0	27.0	27.0	5.3	5.3	5.3	78.6	78.0	78.3	2.4	2.5	2.4	2.3	3.2	3.5	3.4	3.1
					Bottom	27.2	27.2	27.2	27.2	27.1	27.2	5.3	5.3	5.3	77.2	77.8	77.5	2.3	2.3	2.3		3.0	3.1	3.1	
B1	2126-2140	11.2	W	0.3	Surface	27.4	27.3	27.4	26.8	26.8	26.8	5.4	5.3	5.4	79.1	78.6	78.9	1.9	1.9	1.9		2.9	2.7	2.8	
					Middle	27.2	27.1	27.2	27.0	26.9	27.0	5.2	5.3	5.3	77.1	77.5	77.3	1.9	1.9	1.9	1.9	2.9	2.9	2.9	3.0
					Bottom	27.0	27.1	27.1	27.2	27.3	27.3	5.0	5.1	5.0	73.8	74.4	74.1	2.1	2.0	2.1		3.0	3.3	3.2	
B2	2145-2158	16.8	W	0.2	Surface	27.3	27.3	27.3	26.8	26.9	26.9	5.4	5.4	5.4	79.3	78.8	79.1	1.9	1.9	1.9		2.8	2.8	2.8	
					Middle	27.2	27.2	27.2	27.1	27.0	27.1	5.2	5.2	5.2	75.9	76.3	76.1	2.1	2.1	2.1	2.0	3.0	3.1	3.1	3.0
					Bottom	27.1	27.1	27.1	27.2	27.2	27.2	5.1	5.0	5.1	74.7	74.1	74.4	2.1	2.1	2.1		3.3	3.0	3.2	
B3	2202-2215	13.2	W	0.4	Surface	27.4	27.3	27.4	26.9	26.9	26.9	5.5	5.5	5.5	81.3	80.5	80.9	2.0	2.1	2.1		2.9	3.0	3.0	
					Middle	27.2	27.1	27.2	27.1	27.0	27.1	5.3	5.3	5.3	77.9	78.5	78.2	2.6	2.5	2.5	2.4	3.5	3.4	3.5	3.3
					Bottom	27.1	27.0	27.1	27.2	27.1	27.2	5.2	5.2	5.2	76.5	77.1	76.8	2.6	2.7	2.6		3.5	3.7	3.6	
G7	2222-2236	33.4	W	0.4	Surface	27.3	27.3	27.3	26.9	26.9	26.9	5.5	5.4	5.5	80.5	80.1	80.3	1.8	1.8	1.8		2.8	2.9	2.9	
					Middle	27.1	27.1	27.1	27.2	27.1	27.2	5.2	5.3	5.2	76.8	77.2	77.0	2.5	2.6	2.6	2.3	3.4	3.3	3.4	3.3
					Bottom	27.1	27.1	27.1	27.2	27.2	27.2	5.3	5.3	5.3	77.2	77.8	77.5	2.5	2.5	2.5		3.5	3.7	3.6	
E1	2242-2300	47.6	W	0.6	Surface	27.3	27.3	27.3	27.0	26.9	27.0	5.7	5.7	5.7	83.8	83.2	83.5	2.0	2.1	2.0		3.2	3.2	3.2	
					Middle	27.1	27.1	27.1	27.2	27.1	27.2	5.3	5.4	5.4	78.5	78.9	78.7	2.0	1.9	1.9	2.1	2.8	2.8	2.8	3.1
					Bottom	27.1	27.0	27.1	27.3	27.3	27.3	5.3	5.3	5.3	77.9	77.3	77.6	2.4	2.4	2.4		3.2	3.5	3.4	

Remark or Observation:

Note: \* Average \*\* Depth Average

### Annex C34 Summary of Compliance with Action and Limit Level for Zone B

Compliance with Action Level and Limit Level for Zone B - Round 1 (11:00), 13 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.76	3.88
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	2.99	4.20
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	Y
F1	Exceedance of Action Level	N	Y	N	Y	Y
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone B - Round 2 (15:00), 13 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.64	3.92
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	2.86	4.25
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	N
F1	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

## Annex C35 Summary of Compliance with Action and Limit Level for Zone B

Compliance with Action Level and Limit Level for Zone B - Round 3 (19:00), 13 October						
Station	Limits	DO (Surface)	DO (Middle)	DO (Bottom)	Turbidity (*DA)	SS (*DA)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.31	3.54
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	2.50	3.84
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	Y	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	N
F1	Exceedance of Action Level	N	N	N	Y	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

### Annex C36 Impact Water Quality Monitoring Results during First Round Monitoring on 14 October 2012

Date:	14-Oct-12
Weather:	Cloudy
Sea Conditions:	Small Wave
Zone	B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)				Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
E1	0700-0718	46.0	E	0.5	Surface	27.3	27.3	27.3	26.6	26.7	26.7	5.8	5.7	5.7	84.5	84.2	84.4	1.3	1.4	1.4	2.0	2.2	2.3	2.3	3.0	
					Middle	27.3	27.2	27.3	26.8	26.9	26.9	5.8	5.8	5.8	85.8	85.4	85.6	2.1	2.1	2.1		2.9	3.0	3.0		
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	5.5	5.4	5.4	80.4	79.5	80.0	2.7	2.7	2.7		3.5	3.8	3.7		
G7	0726-0740	32.2	E	0.7	Surface	27.3	27.2	27.3	26.5	26.5	26.5	5.6	5.6	5.6	82.6	82.0	82.3	1.4	1.5	1.5	1.9	2.5	2.6	2.6	3.0	
					Middle	27.1	27.1	27.1	26.6	26.7	26.7	5.4	5.4	5.4	79.8	79.4	79.6	1.9	1.9	1.9		2.7	3.0	2.9		
					Bottom	27.0	27.0	27.0	26.8	26.9	26.9	5.2	5.2	5.2	76.4	76.0	76.2	2.4	2.4	2.4		3.4	3.6	3.5		
B3	0744-0800	12.8	E	0.4	Surface	27.4	27.3	27.4	26.4	26.5	26.5	5.4	5.3	5.4	79.1	78.5	78.8	1.3	1.3	1.3	1.8	2.4	2.5	2.5	2.8	
					Middle	27.3	27.2	27.3	26.6	26.7	26.7	5.2	5.2	5.2	76.1	75.7	75.9	1.8	1.8	1.8		2.6	2.6	2.6		
					Bottom	27.1	27.0	27.1	26.8	26.0	26.4	5.2	5.1	5.1	76.1	75.0	75.6	2.3	2.3	2.3		3.4	3.3	3.4		
B2	0805-0818	15.2	E	0.3	Surface	27.4	27.4	27.4	26.7	26.8	26.8	5.6	5.7	5.7	82.9	83.6	83.3	2.0	2.1	2.1	2.5	3.0	3.0	3.0	3.4	
					Middle	27.3	27.3	27.3	26.9	26.9	26.9	5.3	5.3	5.3	77.5	77.6	77.6	2.5	2.6	2.5		3.4	3.1	3.3		
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	5.4	5.3	5.3	78.8	78.2	78.5	2.9	3.0	3.0		3.9	3.8	3.9		
B1	0824-0838	10.4	E	0.4	Surface	27.5	27.4	27.5	26.7	26.7	26.7	5.4	5.3	5.4	78.9	78.7	78.8	1.9	1.9	1.9	2.3	2.9	2.8	2.9	3.3	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	4.9	4.9	4.9	72.5	72.1	72.3	2.4	2.4	2.4		3.4	3.6	3.5		
					Bottom	27.2	27.2	27.2	27.0	27.1	27.1	4.8	4.7	4.8	70.6	69.4	70.0	2.6	2.6	2.6		3.3	3.5	3.4		
E6	0843-0859	26.2	E	0.7	Surface	27.4	27.5	27.5	26.6	26.7	26.7	5.6	5.6	5.6	82.6	81.9	82.3	1.9	2.0	2.0	2.2	2.7	2.8	2.8	3.2	
					Middle	27.4	27.4	27.4	26.8	26.8	26.8	5.3	5.3	5.3	78.2	77.8	78.0	2.3	2.3	2.3		3.1	3.4	3.3		
					Bottom	27.5	27.5	27.5	26.9	27.0	27.0	5.4	5.3	5.3	78.8	78.2	78.5	2.4	2.5	2.4		3.5	3.5	3.5		
G4	0902-0916	24.6	E	0.6	Surface	27.4	27.4	27.4	26.7	26.7	26.7	5.8	5.8	5.8	85.3	84.5	84.9	2.5	2.4	2.5	2.6	3.2	3.4	3.3	3.6	
					Middle	27.3	27.2	27.3	26.8	26.9	26.9	5.7	5.6	5.7	83.5	82.8	83.2	2.6	2.6	2.6		3.6	3.8	3.7		
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	5.5	5.4	5.5	80.7	80.0	80.4	2.9	2.8	2.8		3.8	3.7	3.8		
E2	0919-0936	7.8	E	0.5	Surface	27.4	27.5	27.5	26.7	2.8	14.8	5.4	5.3	5.4	79.1	78.2	78.7	2.2	2.3	2.3	2.6	3.3	3.2	3.3	3.6	
					Middle	27.4	27.4	27.4	26.9	27.0	27.0	5.2	5.2	5.2	76.7	76.1	76.4	2.5	2.5	2.5		3.4	3.6	3.5		
					Bottom	27.3	27.3	27.3	27.1	27.1	27.1	5.0	4.9	4.9	73.1	72.3	72.7	2.9	3.0	2.9		3.9	4.0	4.0		
C2	0941-0956	30.4	E	0.4	Surface	27.5	27.4	27.5	26.6	26.7	26.7	6.4	6.3	6.4	93.9	92.9	93.4	2.1	2.1	2.1	2.3	3.0	3.3	3.2	3.4	
					Middle	27.4	27.4	27.4	26.8	26.8	26.8	6.1	6.1	6.1	90.1	89.4	89.8	2.3	2.3	2.3		3.3	3.4	3.4		
					Bottom	27.3	27.2	27.3	26.9	27.0	27.0	5.8	5.8	5.8	85.6	84.8	85.2	2.6	2.7	2.6		3.7	3.6	3.7		
F1	1004-1019	7.4	E	0.4	Surface	27.5	27.4	27.5	26.7	26.7	26.7	5.5	5.5	5.5	81.0	80.7	80.9	2.8	2.8	2.8	3.0	3.6	3.7	3.7	4.0	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	4.7	4.6	4.7	69.1	68.2	68.7	3.1	3.1	3.1		4.1	4.0	4.1		
					Bottom	27.3	27.2	27.3	27.0	27.1	27.1	4.6	4.6	4.6	67.9	67.2	67.6	3.2	3.3	3.2		4.2	4.4	4.3		
G3	1022-1037	12.4	E	0.5	Surface	27.5	27.4	27.5	26.6	26.7	26.7	5.2	5.1	5.2	76.6	75.6	76.1	2.7	2.7	2.7	3.0	3.8	3.9	3.9	4.1	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	5.3	5.3	5.3	78.4	77.8	78.1	3.1	3.0	3.1		4.1	4.0	4.1		
					Bottom	27.2	27.1	27.2	27.0	27.0	27.0	5.2	5.2	5.2	76.9	76.6	76.8	3.3	3.3	3.3		4.5	4.3	4.4		
E9	1045-1101	18.6	E	0.4	Surface	27.4	27.4	27.4	26.6	26.7	26.7	5.3	5.3	5.3	78.1	77.2	77.7	3.7	3.7	3.7	3.9	4.8	4.9	4.9	5.0	
					Middle	27.3	27.3	27.3	26.8	26.9	26.9	5.1	5.1	5.1	74.5	74.2	74.4	3.9	3.9	3.9		5.1	4.9	5.0		
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	4.9	4.9	4.9	71.7	72.2	72.0	4.2	4.2	4.2		5.1	5.2	5.2		

Remark or Observation:

Note: \* Average    \*\* Depth Average

### Annex C37 Impact Water Quality Monitoring Results during Second Round Monitoring on 14 October 2012

Date:	14-Oct-12
Weather:	Cloudy
Sea Conditions:	Small Wave
Zone	B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**			
E9	1102-1120	18.8	W	0.5	Surface	27.5	27.4	27.5	26.6	26.7	26.7	5.3	5.3	5.3	78.5	77.6	78.1	3.7	3.7	3.7		4.5	4.7	4.6	
					Middle	27.4	27.4	27.4	26.8	26.8	26.8	5.1	5.1	5.1	74.8	75.4	75.1	3.9	3.9	3.9	3.9	4.9	5.0	5.0	4.9
					Bottom	27.3	27.2	27.3	26.9	27.0	27.0	5.0	5.0	5.0	72.8	73.4	73.1	4.2	4.2	4.2		5.0	5.2	5.1	
G3	1128-1142	12.6	W	0.4	Surface	27.5	27.5	27.5	26.6	26.7	26.7	5.2	5.2	5.2	77.0	76.1	76.6	2.7	2.7	2.7		3.6	3.7	3.7	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	5.4	5.3	5.3	78.9	78.2	78.6	3.1	3.0	3.0	3.0	4.0	3.9	4.0	4.0
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	5.3	5.3	5.3	77.5	77.2	77.4	3.3	3.3	3.3		4.4	4.2	4.3	
F1	1146-1201	7.6	W	0.3	Surface	27.5	27.4	27.5	26.6	26.6	26.6	5.5	5.5	5.5	80.4	80.1	80.3	2.7	2.8	2.8		3.8	3.7	3.8	
					Middle	27.3	27.3	27.3	26.7	26.8	26.8	4.7	4.8	4.7	69.7	69.8	69.8	3.0	3.1	3.1	3.0	4.0	4.2	4.1	4.0
					Bottom	27.2	27.1	27.2	26.9	27.0	27.0	4.6	4.7	4.7	68.2	68.6	68.4	3.2	3.2	3.2		4.1	4.2	4.2	
C2	1208-1223	30.4	W	0.4	Surface	27.6	27.5	27.6	26.6	26.7	26.7	6.4	6.3	6.4	94.2	93.2	93.7	2.1	2.1	2.1		3.2	3.1	3.2	
					Middle	27.4	27.4	27.4	26.8	26.9	26.9	6.1	6.1	6.1	90.3	89.7	90.0	2.3	2.2	2.3	2.3	3.4	3.3	3.4	3.4
					Bottom	27.3	27.2	27.3	27.0	27.0	27.0	5.9	5.8	5.8	86.0	85.3	85.7	2.6	2.6	2.6		3.7	3.7	3.7	
E2	1232-1246	7.8	W	0.5	Surface	27.5	27.5	27.5	26.7	26.8	26.8	5.4	5.4	5.4	79.5	78.6	79.1	2.2	2.3	2.2		3.1	3.0	3.1	
					Middle	27.4	27.4	27.4	26.9	27.0	27.0	5.3	5.2	5.3	77.5	77.0	77.3	2.5	2.5	2.5	2.5	3.5	3.6	3.6	3.5
					Bottom	27.3	27.2	27.3	27.1	27.1	27.1	5.0	5.0	5.0	73.8	73.4	73.6	2.9	2.9	2.9		4.0	3.8	3.9	
G4	1249-1303	24.8	W	0.6	Surface	27.5	27.4	27.5	26.7	26.7	26.7	5.8	5.8	5.8	85.7	85.0	85.4	2.5	2.4	2.4		3.4	3.6	3.5	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	5.7	5.6	5.7	83.6	82.9	83.3	2.6	2.6	2.6	2.6	3.8	3.6	3.7	3.7
					Bottom	27.3	27.3	27.3	27.0	27.0	27.0	5.5	5.5	5.5	81.0	80.4	80.7	2.8	2.8	2.8		4.0	3.8	3.9	
E6	1307-1322	26.4	W	0.6	Surface	27.5	27.5	27.5	26.6	26.7	26.7	5.6	5.6	5.6	82.3	81.7	82.0	1.9	2.0	1.9		2.7	2.9	2.8	
					Middle	27.4	27.4	27.4	26.8	26.8	26.8	5.3	5.3	5.3	78.1	77.5	77.8	2.3	2.3	2.3	2.2	3.3	3.1	3.2	3.2
					Bottom	27.4	27.5	27.5	26.9	27.0	27.0	5.3	5.3	5.3	78.5	78.1	78.3	2.4	2.4	2.4		3.5	3.6	3.6	
B1	1326-1342	10.8	W	0.4	Surface	27.5	27.4	27.5	26.7	26.7	26.7	5.4	5.4	5.4	79.1	78.9	79.0	1.9	1.9	1.9		2.9	3.0	3.0	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	5.0	5.0	5.0	73.2	72.8	73.0	2.4	2.3	2.3	2.3	3.3	3.1	3.2	3.2
					Bottom	27.3	27.2	27.3	27.0	27.0	27.0	4.8	4.8	4.8	70.9	70.3	70.6	2.6	2.6	2.6		3.4	3.7	3.6	
B2	1347-1400	15.4	W	0.2	Surface	27.5	27.4	27.5	26.7	26.8	26.8	5.7	5.7	5.7	83.1	84.1	83.6	2.0	2.1	2.0		2.9	2.8	2.9	
					Middle	27.3	27.3	27.3	26.9	27.0	27.0	5.3	5.3	5.3	77.8	78.2	78.0	2.5	2.5	2.5	2.5	3.6	3.3	3.5	3.4
					Bottom	27.2	27.2	27.2	27.1	27.1	27.1	5.4	5.4	5.4	79.1	78.6	78.9	2.9	3.0	2.9		4.0	4.0	4.0	
B3	1404-1417	12.9	W	0.3	Surface	27.5	27.4	27.5	26.4	26.5	26.5	5.4	5.4	5.4	79.5	79.2	79.4	1.3	1.3	1.3		2.4	2.5	2.5	
					Middle	27.3	27.3	27.3	26.6	26.7	26.7	5.2	5.2	5.2	77.0	76.6	76.8	1.8	1.7	1.8	1.8	2.9	2.7	2.8	2.8
					Bottom	27.2	27.1	27.2	26.8	26.9	26.9	5.2	5.1	5.2	76.3	75.4	75.9	2.2	2.3	2.3		3.1	3.0	3.1	
G7	1424-1438	32.4	W	0.7	Surface	27.5	27.5	27.5	26.5	26.5	26.5	5.6	5.6	5.6	83.0	82.5	82.8	1.4	1.5	1.5		2.3	2.6	2.5	
					Middle	27.4	27.4	27.4	26.6	26.7	26.7	5.5	5.4	5.4	80.1	79.5	79.8	1.8	1.9	1.9	1.9	2.9	3.1	3.0	3.0
					Bottom	27.3	27.3	27.3	26.8	26.9	26.9	5.2	5.2	5.2	76.7	76.4	76.6	2.4	2.3	2.4		3.5	3.3	3.4	
E1	1444-1502	46.2	W	0.5	Surface	27.5	27.4	27.5	26.6	26.7	26.7	5.8	5.8	5.8	85.1	84.7	84.9	1.3	1.4	1.3		2.4	2.3	2.4	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	5.9	5.8	5.9	86.3	85.7	86.0	2.1	2.0	2.0	2.0	3.1	3.2	3.2	3.2
					Bottom	27.2	27.2	27.2	27.0	27.1	27.1	5.5	5.4	5.5	80.7	80.0	80.4	2.7	2.7	2.7		3.9	4.0	4.0	

Remark or Observation:

Note: \* Average \*\* Depth Average

### Annex C38 Impact Water Quality Monitoring Results during Third Round Monitoring on 14 October 2012

Date: 14-Oct-12  
 Weather: Cloudy  
 Sea Conditions: Small Wave  
 Zone: B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)				
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**				
E1	1505-1520	46.3	W	0.5	Surface	27.4	27.5	27.5	26.6	26.6	26.6	5.9	5.8	5.8	86.0	85.4	85.7	1.3	1.4	1.4	2.0	2.4	2.3	2.4	3.1	
					Middle	27.3	27.3	27.3	26.9	26.8	26.9	5.8	5.8	5.8	85.1	84.5	84.8	2.0	2.0	2.0	2.0	3.0	3.2	3.1	3.1	3.1
					Bottom	27.2	27.1	27.2	27.0	27.1	27.1	5.5	5.5	5.5	81.0	81.4	81.2	2.7	2.7	2.7	2.7	3.9	3.7	3.8		
G7	1524-1539	32.6	W	0.7	Surface	27.5	27.4	27.5	26.5	26.5	26.5	5.6	5.6	5.6	81.9	82.4	82.2	1.4	1.5	1.5	1.9	2.6	2.4	2.5	3.0	
					Middle	27.3	27.4	27.4	26.6	26.7	26.7	5.4	5.4	5.4	79.4	79.8	79.6	1.9	1.9	1.9	1.9	3.1	2.8	3.0	3.0	
					Bottom	27.2	27.3	27.3	26.9	26.9	26.9	5.3	5.2	5.2	77.3	76.9	77.1	2.4	2.4	2.4	2.4	3.5	3.4	3.5		
B3	1544-1559	13.0	W	0.4	Surface	27.5	27.5	27.5	26.7	26.6	26.7	5.4	5.4	5.4	78.6	79.4	79.0	1.4	1.3	1.4	1.8	2.5	2.3	2.4	2.9	
					Middle	27.3	27.4	27.4	26.9	26.8	26.9	5.2	5.2	5.2	76.3	75.7	76.0	1.8	1.8	1.8	1.8	2.9	2.9	2.9	2.9	
					Bottom	27.2	27.2	27.2	27.0	27.1	27.1	5.1	5.1	5.1	74.4	74.8	74.6	2.3	2.3	2.3	2.3	3.3	3.2	3.3		
B2	1604-1619	15.6	W	0.3	Surface	27.4	27.4	27.4	26.8	26.8	26.8	5.7	5.7	5.7	83.8	84.4	84.1	2.1	2.1	2.1	2.5	3.0	3.2	3.1	3.4	
					Middle	27.3	27.3	27.3	26.9	27.0	27.0	5.4	5.4	5.4	79.4	78.9	79.2	2.4	2.4	2.4	2.4	3.4	3.3	3.4	3.4	
					Bottom	27.2	27.1	27.2	27.2	27.1	27.2	5.5	5.5	5.5	80.3	80.7	80.5	3.0	3.0	3.0	3.0	3.9	3.8	3.9	3.9	
B1	1624-1639	10.8	W	0.4	Surface	27.5	27.4	27.5	26.7	26.6	26.7	5.3	5.3	5.3	77.9	78.4	78.2	2.0	2.0	2.0	2.3	3.0	3.2	3.1	3.5	
					Middle	27.3	27.4	27.4	26.8	26.8	26.8	4.9	4.9	4.9	72.5	72.0	72.3	2.4	2.4	2.4	2.4	3.3	3.6	3.5	3.5	
					Bottom	27.2	27.2	27.2	27.0	26.9	27.0	4.8	4.8	4.8	70.7	71.1	70.9	2.7	2.6	2.6	2.6	3.9	4.0	4.0		
E6	1643-1658	26.6	W	0.5	Surface	27.4	27.4	27.4	26.7	26.6	26.7	5.8	5.7	5.7	84.7	83.8	84.3	1.9	1.9	1.9	2.2	2.9	3.1	3.0	3.2	
					Middle	27.3	27.3	27.3	26.8	26.9	26.9	5.3	5.4	5.4	78.5	78.8	78.7	2.3	2.3	2.3	2.3	3.3	3.4	3.4	3.4	
					Bottom	27.1	27.2	27.2	27.0	27.1	27.1	5.2	5.3	5.3	77.0	77.5	77.3	2.5	2.5	2.5	2.5	3.4	3.3	3.4	3.4	
G4	1701-1716	25.0	W	0.6	Surface	27.4	27.5	27.5	26.7	26.7	26.7	5.9	5.9	5.9	86.6	86.9	86.8	2.4	2.5	2.5	2.7	3.5	3.6	3.6	3.8	
					Middle	27.3	27.3	27.3	26.9	26.9	26.9	5.7	5.7	5.7	83.8	84.4	84.1	2.7	2.7	2.7	2.7	3.9	3.8	3.9	3.9	
					Bottom	27.2	27.2	27.2	27.1	27.0	27.1	5.6	5.6	5.6	82.5	82.0	82.3	2.9	2.9	2.9	2.9	4.0	3.8	3.9		
E2	1720-1735	8.2	W	0.4	Surface	27.5	27.4	27.5	26.7	26.8	26.8	5.4	5.5	5.5	80.0	80.4	80.2	2.3	2.3	2.3	2.6	3.3	3.4	3.4	3.6	
					Middle	27.4	27.3	27.4	26.9	26.9	26.9	5.3	5.3	5.3	78.2	77.8	78.0	2.5	2.5	2.5	2.5	3.6	3.6	3.6	3.6	
					Bottom	27.2	27.3	27.3	27.0	27.1	27.1	5.1	5.0	5.1	74.8	73.9	74.4	2.9	2.9	2.9	2.9	3.9	3.7	3.8		
C2	1740-1755	30.2	W	0.5	Surface	27.5	27.5	27.5	26.6	26.6	26.6	6.3	6.4	6.3	92.9	93.5	93.2	2.1	2.1	2.1	2.4	3.3	3.1	3.2	3.5	
					Middle	27.4	27.3	27.4	26.8	26.9	26.9	6.2	6.2	6.2	90.8	90.4	90.6	2.3	2.4	2.4	2.4	3.5	3.6	3.6	3.6	
					Bottom	27.2	27.1	27.2	27.1	27.0	27.1	5.9	5.9	5.9	87.0	86.3	86.7	2.6	2.6	2.6	2.6	3.8	3.5	3.7		
F1	1804-1820	8.2	W	0.3	Surface	27.4	27.4	27.4	26.6	26.7	26.7	5.5	5.5	5.5	81.4	81.0	81.2	2.7	2.7	2.7	3.0	3.5	3.6	3.6	4.1	
					Middle	27.2	27.3	27.3	26.8	26.8	26.8	4.9	4.8	4.9	71.6	71.0	71.3	3.0	3.1	3.0	3.0	4.1	4.4	4.3	4.1	
					Bottom	27.1	27.1	27.1	26.9	27.0	27.0	4.7	4.7	4.7	69.4	68.6	69.0	3.2	3.2	3.2	3.2	4.5	4.2	4.4		
G3	1823-1838	13.0	W	0.4	Surface	27.4	27.5	27.5	26.7	26.7	26.7	5.4	5.3	5.3	78.6	77.9	78.3	2.5	2.6	2.5	2.9	3.4	3.5	3.5	3.9	
					Middle	27.3	27.2	27.3	26.8	26.8	26.8	5.2	5.2	5.2	76.6	76.0	76.3	3.0	3.0	3.0	3.0	4.2	3.9	4.1	3.9	
					Bottom	27.1	27.0	27.1	26.9	27.1	27.0	5.4	5.4	5.4	79.4	78.8	79.1	3.2	3.3	3.2	3.2	4.3	4.3	4.3		
E9	1845-1902	19.4	W	0.4	Surface	27.4	27.4	27.4	26.7	26.6	26.7	5.3	5.3	5.3	78.4	77.8	78.1	3.6	3.6	3.6	3.9	4.4	4.5	4.5	4.8	
					Middle	27.3	27.2	27.3	26.8	26.8	26.8	5.2	5.1	5.1	75.9	75.3	75.6	3.8	3.9	3.8	3.9	4.8	4.9	4.9	4.8	
					Bottom	27.1	27.1	27.1	27.1	27.2	27.2	4.9	5.0	5.0	72.5	73.1	72.8	4.1	4.1	4.1	4.1	4.9	5.2	5.1		

Remark or Observation:

Note: \* Average \*\* Depth Average

**Annex C39 Impact Water Quality Monitoring Results during Forth Round Monitoring on 14 October 2012**

Date: 14-Oct-12  
 Weather: Cloudy  
 Sea Conditions: Small Wave  
 Zone: B

Location	Sampling Time	Water Depth (m)	Current direction	Current speed (ms <sup>-1</sup> )	Monitoring Depth	Temperature (°C)			Salinity (ppt)			DO (mg/l)			DO Saturation (%)				Turbidity (NTU)				Suspended Solids (mg/l)			
						1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**				
E9	1905-1920	19.6	W	0.3	Surface	27.5	27.4	27.5	26.6	26.6	26.6	5.4	5.4	5.4	79.4	79.7	79.6	3.5	3.5	3.5		4.6	4.4	4.5		
					Middle	27.3	27.3	27.3	26.8	26.9	26.9	5.3	5.3	5.3	77.3	77.8	77.6	3.8	3.8	3.8	3.8	4.9	4.7	4.8	4.8	
					Bottom	27.1	27.1	27.1	27.2	27.2	27.2	5.0	5.0	5.0	73.4	72.9	73.2	4.0	4.1	4.1		5.1	5.0	5.1		
G3	1924-1940	13.2	W	0.4	Surface	27.4	27.3	27.4	26.7	26.6	26.7	5.3	5.3	5.3	78.1	77.7	77.9	2.5	2.5	2.5		3.4	3.6	3.5		
					Middle	27.3	27.2	27.3	26.8	26.7	26.8	5.3	5.2	5.3	77.5	77.0	77.3	2.9	3.0	2.9	2.9	4.1	4.2	4.2	4.0	
					Bottom	27.0	27.0	27.0	26.9	27.0	27.0	5.4	5.4	5.4	79.1	79.2	79.2	3.2	3.2	3.2		4.5	4.4	4.5		
F1	1944-1959	8.4	W	0.4	Surface	27.4	27.3	27.4	26.7	26.8	26.8	5.5	5.5	5.5	80.9	80.7	80.8	2.6	2.6	2.6		3.6	3.4	3.5		
					Middle	27.3	27.3	27.3	26.8	26.9	26.9	5.4	5.4	5.4	79.1	78.8	79.0	3.0	2.9	2.9	2.9	3.9	4.1	4.0	4.0	
					Bottom	27.0	27.1	27.1	27.0	27.0	27.0	5.5	5.5	5.5	81.3	80.9	81.1	3.2	3.2	3.2		4.3	4.4	4.4		
C2	2002-2017	30.4	W	0.5	Surface	27.5	27.5	27.5	26.6	26.7	26.7	6.3	6.3	6.3	92.8	92.5	92.7	2.1	2.1	2.1		3.0	2.9	3.0		
					Middle	27.3	27.4	27.4	26.8	26.9	26.9	6.2	6.2	6.2	91.1	90.7	90.9	2.3	2.3	2.3	2.3	3.3	3.4	3.4	3.3	
					Bottom	27.2	27.1	27.2	27.0	27.0	27.0	6.0	6.0	6.0	88.1	87.5	87.8	2.4	2.4	2.4		3.5	3.5	3.5		
E2	2021-2036	8.4	W	0.4	Surface	27.4	27.5	27.5	26.7	26.6	26.7	5.6	5.6	5.6	82.3	82.9	82.6	2.4	2.4	2.4		3.3	3.5	3.4		
					Middle	27.3	27.3	27.3	26.8	26.8	26.8	5.4	5.5	5.4	79.5	80.4	80.0	2.4	2.4	2.4	2.5	3.3	3.3	3.3	3.5	
					Bottom	27.2	27.2	27.2	27.0	27.1	27.1	5.3	5.3	5.3	77.5	77.2	77.4	2.8	2.8	2.8		3.8	4.0	3.9		
G4	2041-2056	25.2	W	0.5	Surface	27.4	27.5	27.5	26.8	26.9	26.9	6.0	6.0	6.0	87.5	87.8	87.7	2.4	2.5	2.4		3.5	3.4	3.5		
					Middle	27.2	27.3	27.3	26.9	26.9	26.9	5.8	5.8	5.8	84.9	84.7	84.8	2.6	2.6	2.6	2.6	3.6	3.4	3.5	3.6	
					Bottom	27.2	27.1	27.2	27.1	27.0	27.1	5.7	5.7	5.7	83.8	84.4	84.1	2.7	2.8	2.8		3.6	3.8	3.7		
E6	2105-2120	26.8	W	0.5	Surface	27.4	27.4	27.4	26.6	26.7	26.7	5.8	5.9	5.8	85.4	85.9	85.7	1.8	1.7	1.7		2.7	2.7	2.7		
					Middle	27.3	27.3	27.3	26.7	26.8	26.8	5.5	5.6	5.6	80.9	82.2	81.6	2.3	2.2	2.3	2.1	3.3	3.5	3.4	3.2	
					Bottom	27.1	27.2	27.2	27.0	27.0	27.0	5.4	5.4	5.4	78.8	79.4	79.1	2.4	2.4	2.4		3.5	3.4	3.5		
B1	2123-2137	11.0	W	0.5	Surface	27.4	27.3	27.4	26.7	26.6	26.7	5.5	5.5	5.5	80.7	80.1	80.4	1.8	1.9	1.9		2.9	3.2	3.1		
					Middle	27.3	27.3	27.3	26.8	26.9	26.9	5.0	5.0	5.0	73.6	73.9	73.8	2.4	2.4	2.4	2.3	3.5	3.6	3.6	3.5	
					Bottom	27.1	27.2	27.2	27.0	27.1	27.1	5.0	5.0	5.0	72.9	73.4	73.2	2.6	2.6	2.6		3.9	4.0	4.0		
B2	2145-2203	15.8	W	0.4	Surface	27.4	27.5	27.5	26.7	26.7	26.7	5.9	5.9	5.9	86.9	87.2	87.1	2.0	2.1	2.0		3.1	3.0	3.1		
					Middle	27.3	27.4	27.4	26.8	26.9	26.9	5.6	5.6	5.6	82.0	81.6	81.8	2.3	2.4	2.3	2.4	3.6	3.4	3.5	3.5	
					Bottom	27.2	27.1	27.2	27.1	27.0	27.1	5.4	5.4	5.4	79.4	79.8	79.6	2.9	3.0	3.0		3.9	3.7	3.8		
B3	2208-2223	13.2	W	0.3	Surface	27.6	27.5	27.6	26.7	26.6	26.7	5.4	5.4	5.4	79.2	79.5	79.4	1.5	1.5	1.5		2.3	2.6	2.5		
					Middle	27.4	27.4	27.4	26.8	26.8	26.8	5.2	5.2	5.2	76.1	76.4	76.3	1.7	1.8	1.8	1.8	2.9	2.7	2.8	2.8	
					Bottom	27.1	27.2	27.2	27.0	27.0	27.0	5.0	5.0	5.0	73.8	74.0	73.9	2.2	2.2	2.2		3.0	3.1	3.1		
G7	2228-2244	32.8	W	0.3	Surface	27.5	27.4	27.5	26.4	26.5	26.5	5.7	5.7	5.7	83.5	83.6	83.6	1.3	1.4	1.4		2.3	2.5	2.4		
					Middle	27.4	27.3	27.4	26.7	26.8	26.8	5.6	5.5	5.5	81.7	81.0	81.4	1.8	1.9	1.9	1.9	2.9	2.9	2.9	2.9	
					Bottom	27.2	27.1	27.2	26.9	26.9	26.9	5.1	5.1	5.1	75.4	74.9	75.2	2.4	2.4	2.4		3.4	3.2	3.3		
E1	2249-2304	46.0	W	0.5	Surface	27.5	27.6	27.6	26.7	26.8	26.8	5.9	5.9	5.9	87.2	86.7	87.0	1.3	1.3	1.3		2.4	2.3	2.4		
					Middle	27.4	27.4	27.4	26.8	26.7	26.8	5.8	5.8	5.8	85.4	85.7	85.6	2.0	1.9	1.9	1.9	2.9	2.8	2.9	2.9	
					Bottom	27.1	27.1	27.1	27.0	27.1	27.1	5.7	5.7	5.7	83.5	83.8	83.7	2.6	2.6	2.6		3.5	3.7	3.6		

Remark or Observation:

Note: \* Average \*\* Depth Average

## Annex C40 Summary of Compliance with Action and Limit Level for Zone B

Compliance with Action Level and Limit Level for Zone B - Round 1 (07:00), 14 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.80	4.06
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	3.04	4.40
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	Y
F1	Exceedance of Action Level	N	Y	N	Y	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone B - Round 2 (11:00), 14 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.78	4.08
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	3.01	4.42
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	Y
F1	Exceedance of Action Level	N	N	N	Y	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged



## Annex C41 Summary of Compliance with Action and Limit Level for Zone B

Compliance with Action Level and Limit Level for Zone B - Round 3 (15:00), 14 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.83	4.16
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	3.06	4.51
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	Y
F1	Exceedance of Action Level	N	N	N	Y	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

Compliance with Action Level and Limit Level for Zone B - Round 4 (19:00), 14 October						
Station	Limits	Surface DO (mg/L)	Middle DO (mg/L)	Bottom DO (mg/L)	* DA Turbidity (NTU)	*DA SS (mg/L)
	Action Level (Baseline)	4.72	4.72	4.52	3.01	4.09
	Or Action Level (C2*1.2)	N.A.	N.A.	N.A.	2.71	3.92
	Limit Level (Baseline)	4.57	4.57	4.44	3.13	4.60
	And Limit Level (C2*1.3)	N.A.	N.A.	N.A.	2.93	4.25
B1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
B3	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E1	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E2	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E6	Exceedance of Action Level	N	N	N	N	N
	Exceedance of Limit Level	N	N	N	N	N
E9	Exceedance of Action Level	N	N	N	Y	Y
	Exceedance of Limit Level	N	N	N	Y	Y
F1	Exceedance of Action Level	N	N	N	Y	N
	Exceedance of Limit Level	N	N	N	N	N

\*DA: Depth-averaged

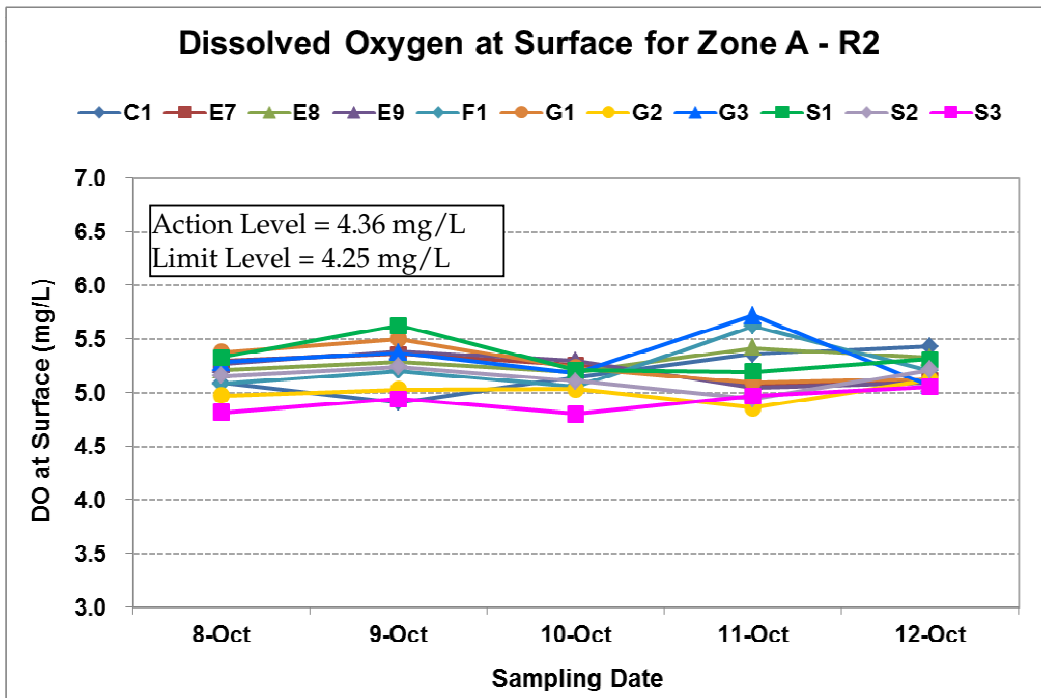
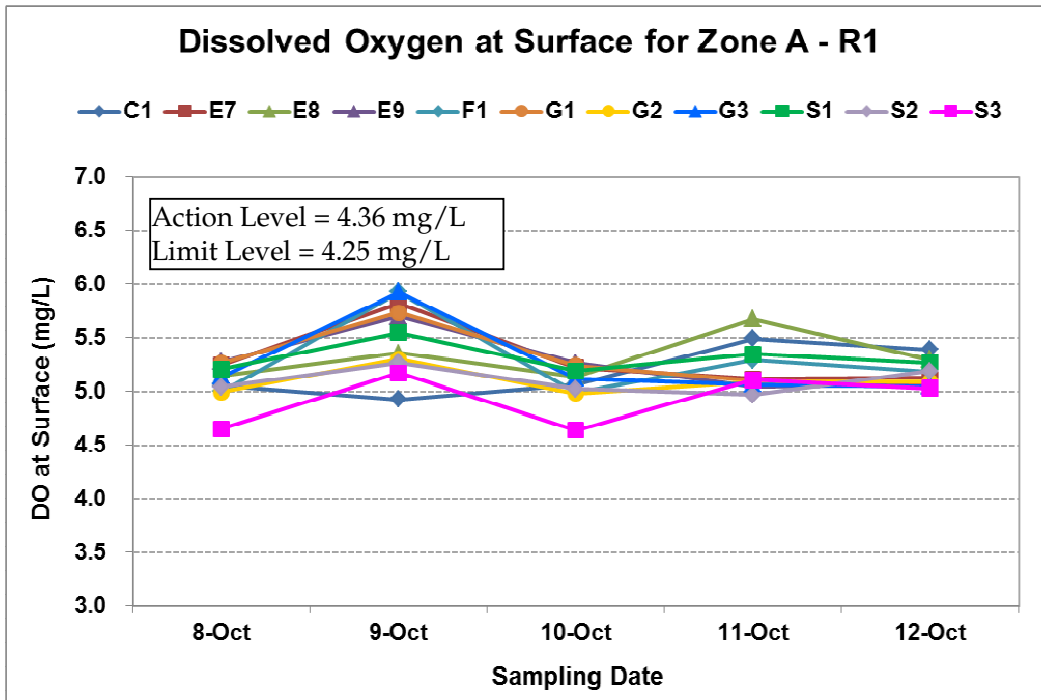


Figure C1 Dissolved oxygen (mg/L) at surface of water column measured during the impact monitoring Round 1 (07:00) and Round 2 (11:00) period from 8 October to 12 October for Zone A



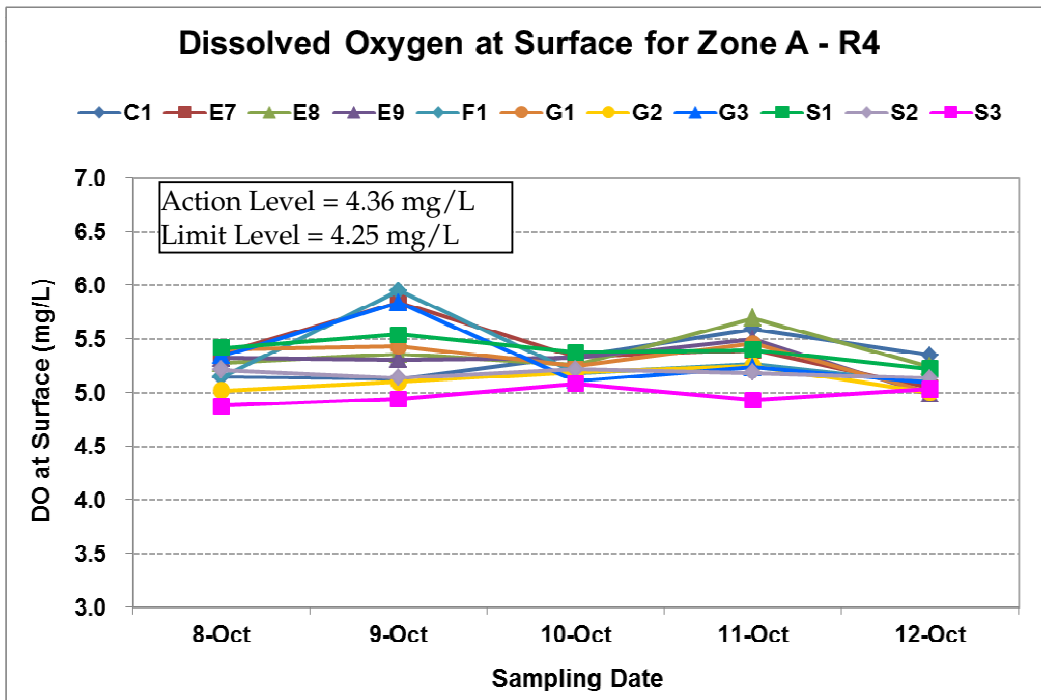
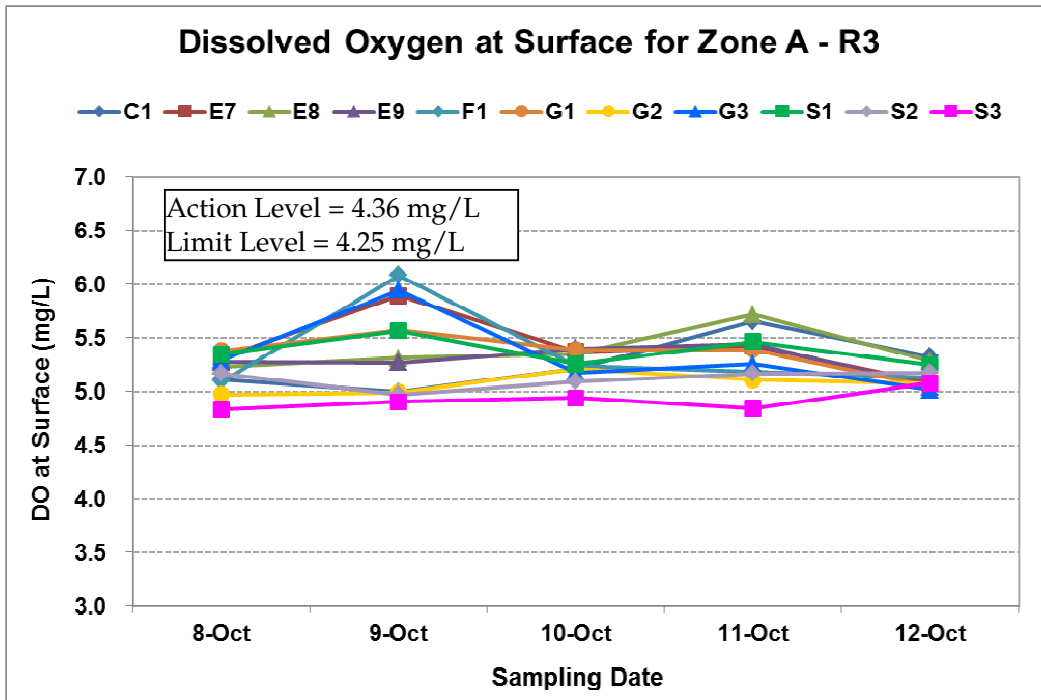


Figure C2 Dissolved oxygen (mg/L) at surface of water column measured during the impact monitoring Round 3 (15:00) and Round 4 (19:00) period from 8 October to 12 October for Zone A



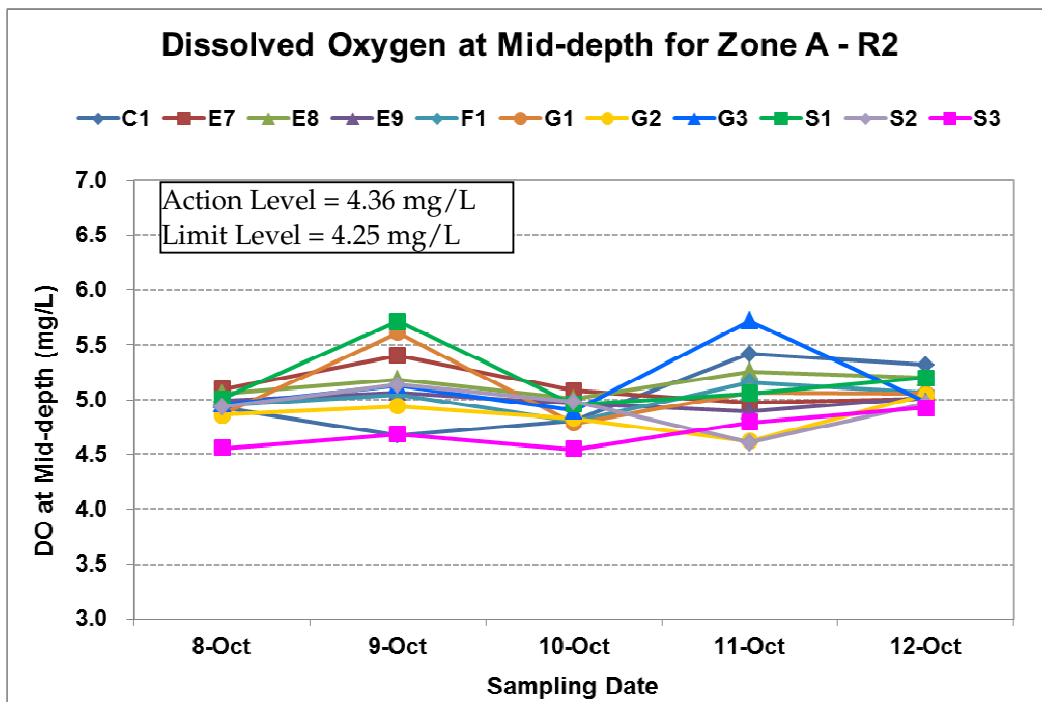
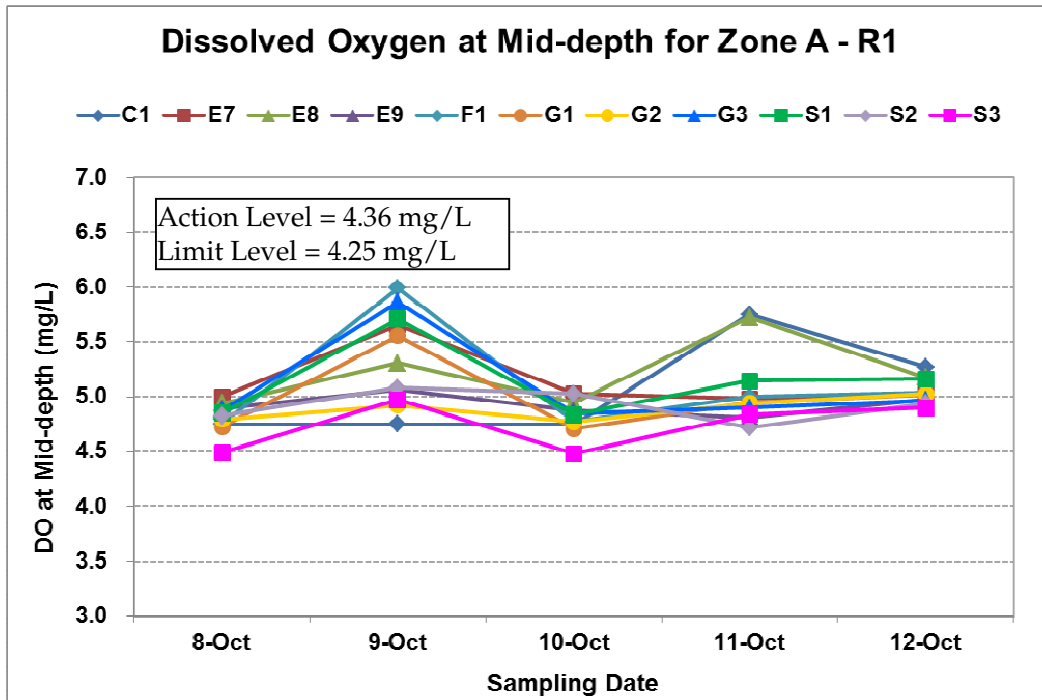


Figure C3 Dissolved oxygen (mg/L) at mid-depth of water column measured during the impact monitoring Round 1 (07:00) and Round 2 (11:00) period from 8 October to 12 October for Zone A



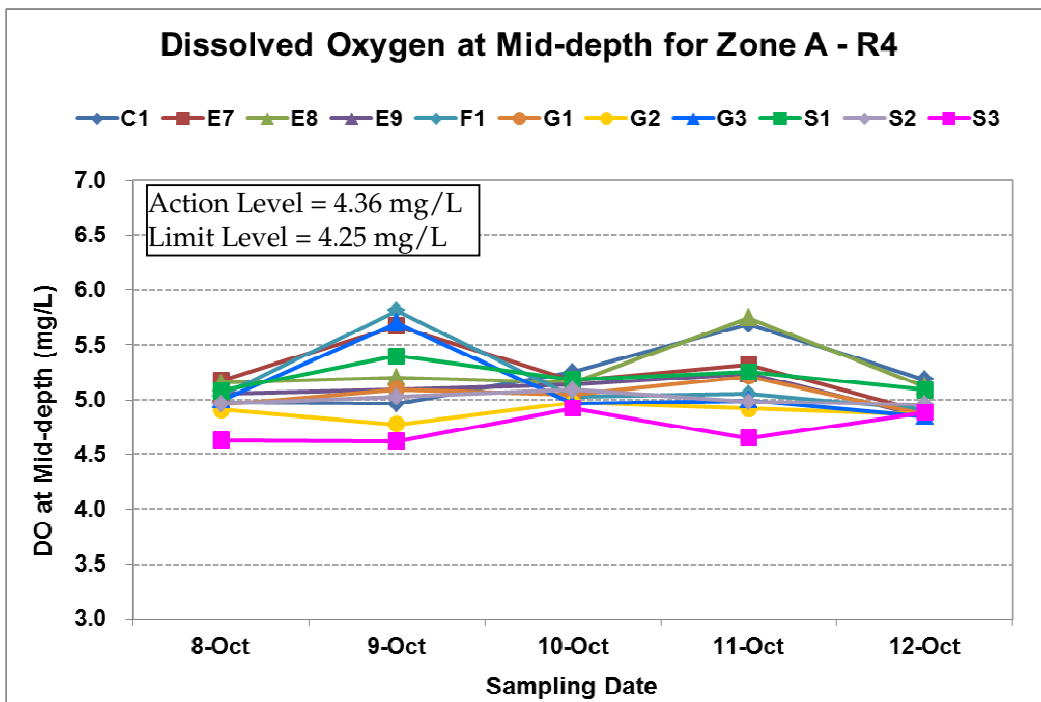
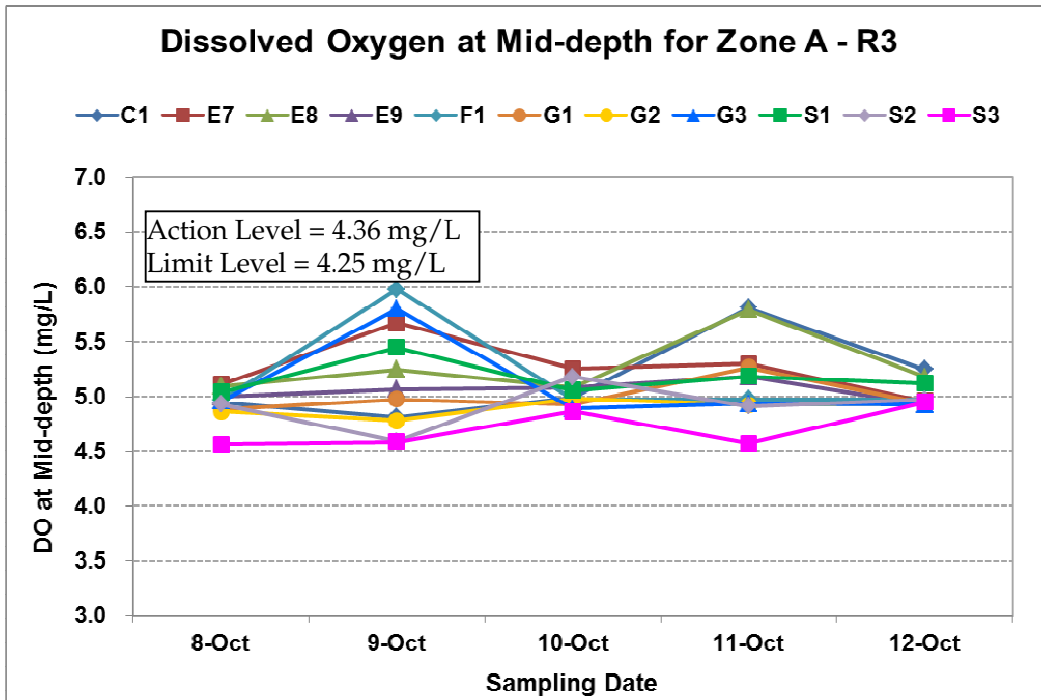


Figure C4 Dissolved oxygen (mg/L) at mid-depth of water column measured during the impact monitoring Round 3 (15:00) and Round 4 (19:00) period from 8 October to 12 October for Zone A



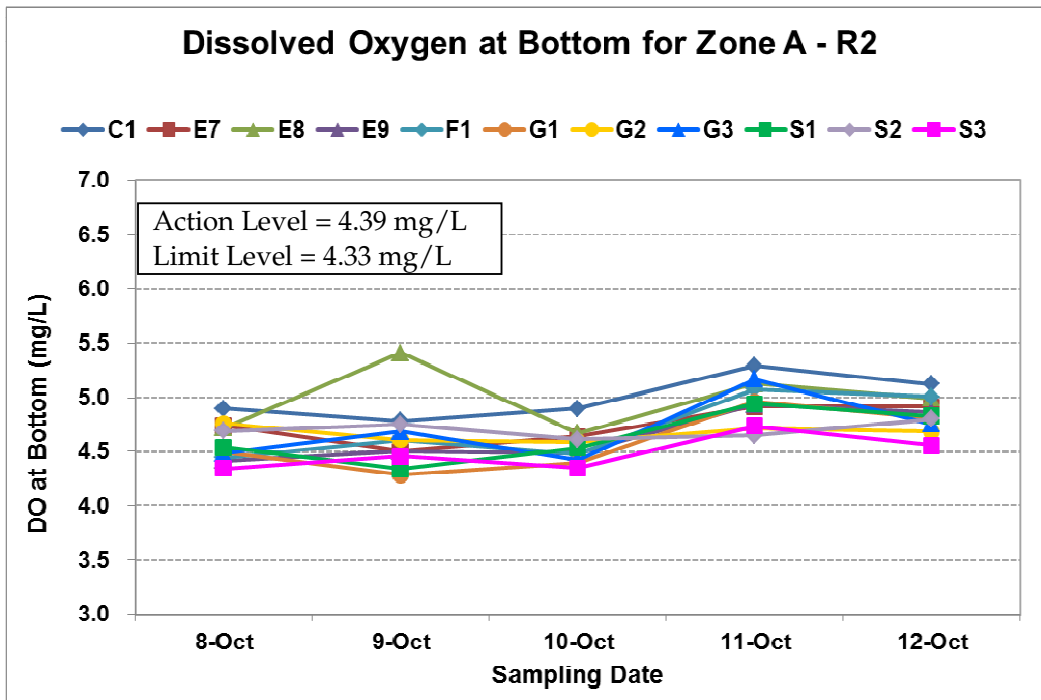
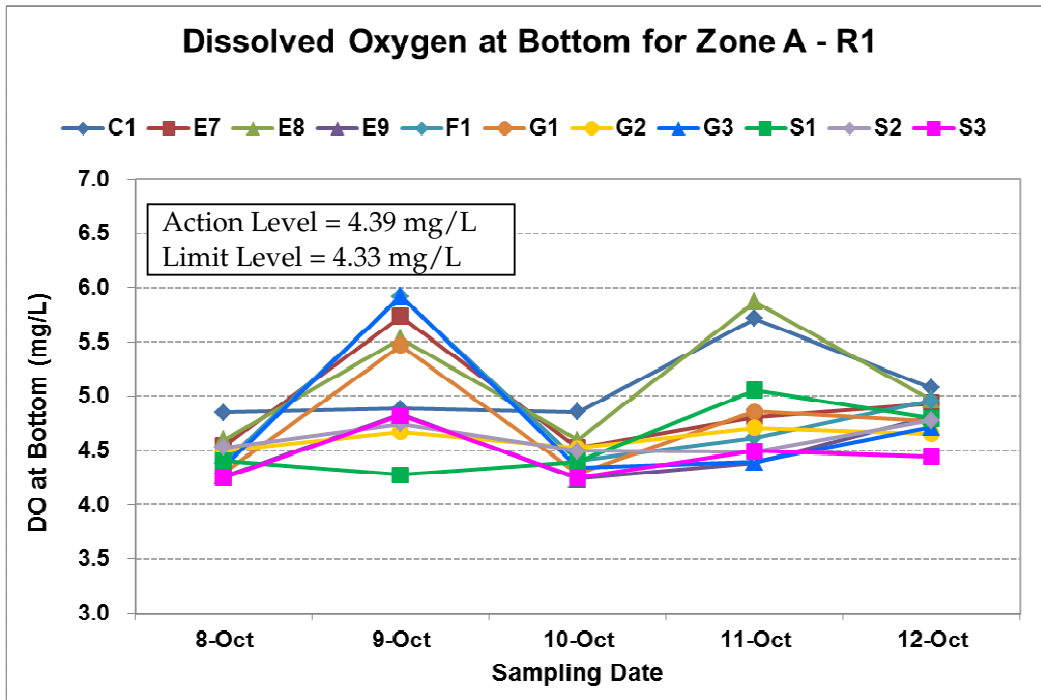


Figure C5 Dissolved oxygen (mg/L) at bottom of water column measured during the impact monitoring Round 1 (07:00) and Round 2 (11:00) period from 8 October to 12 October for Zone A



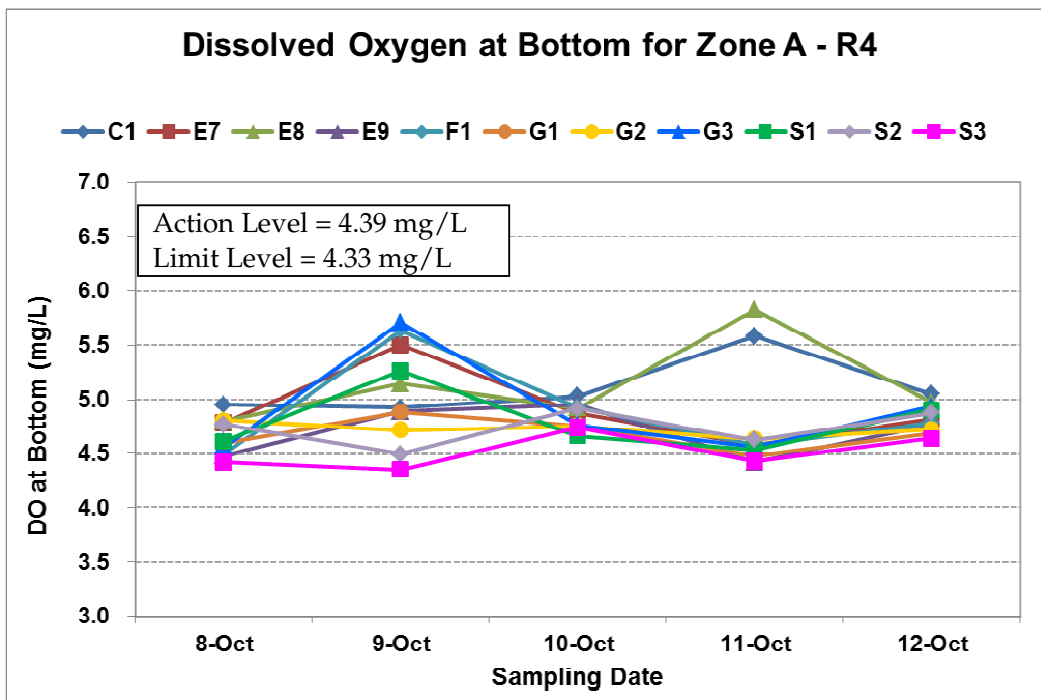
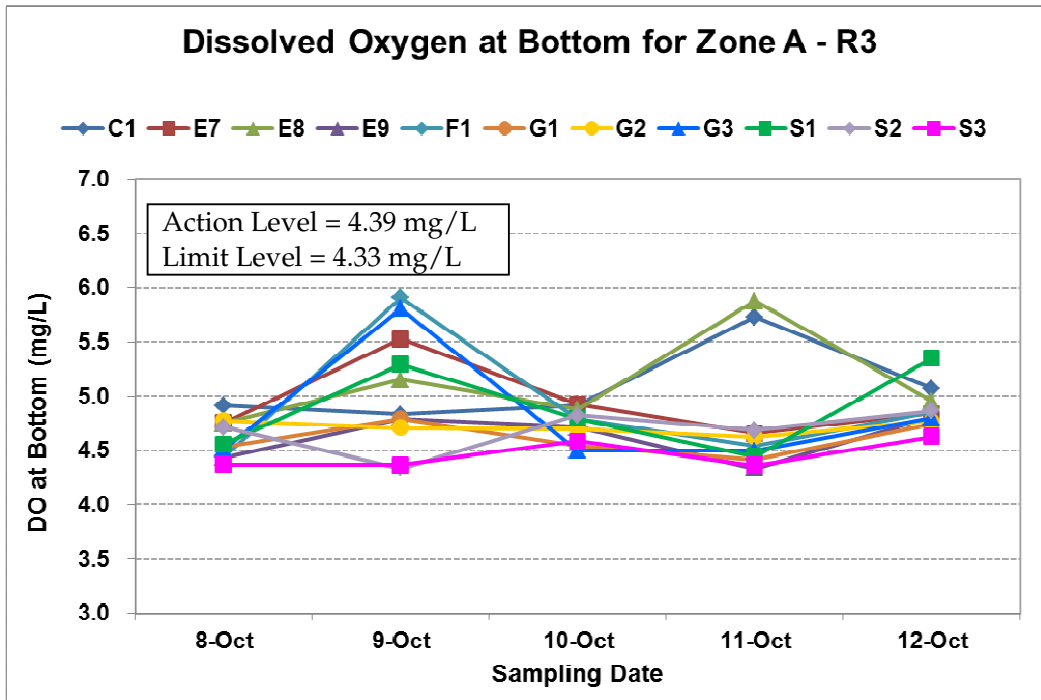


Figure C6 Dissolved oxygen (mg/L) at bottom of water column measured during the impact monitoring Round 3 (15:00) and Round 4 (19:00) period from 8 October to 12 October for Zone A



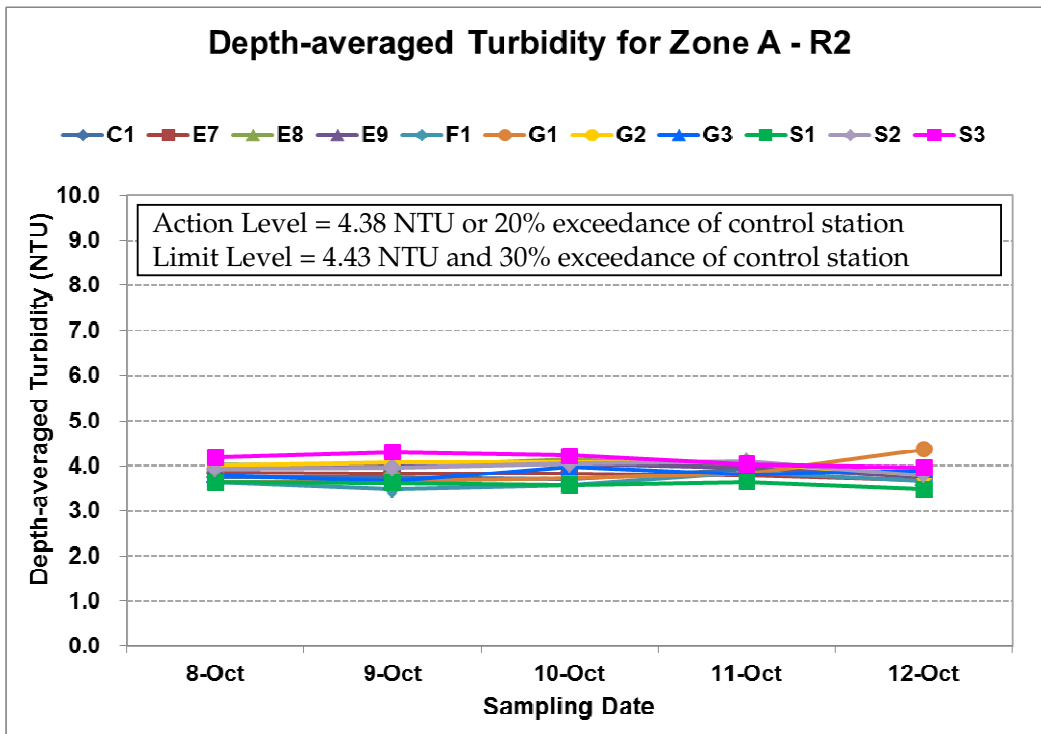
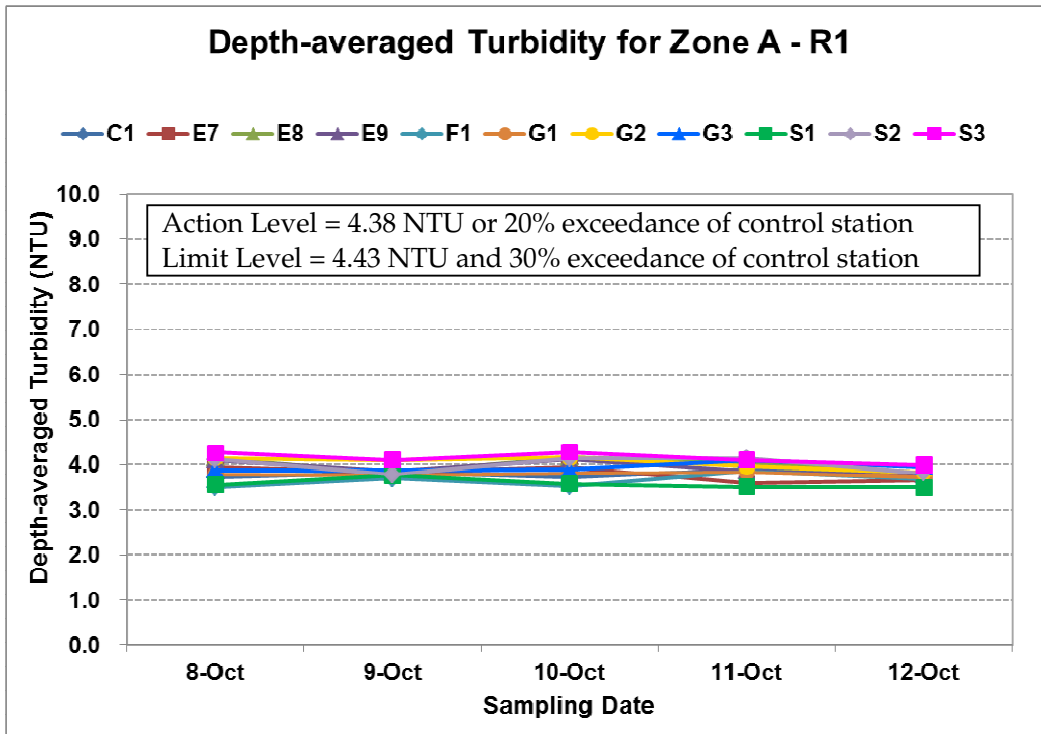


Figure C7 Depth-averaged Turbidity (NTU) of water column measured during the impact monitoring Round 1 (07:00) and Round 2 (11:00) period from 8 October to 12 October for Zone A





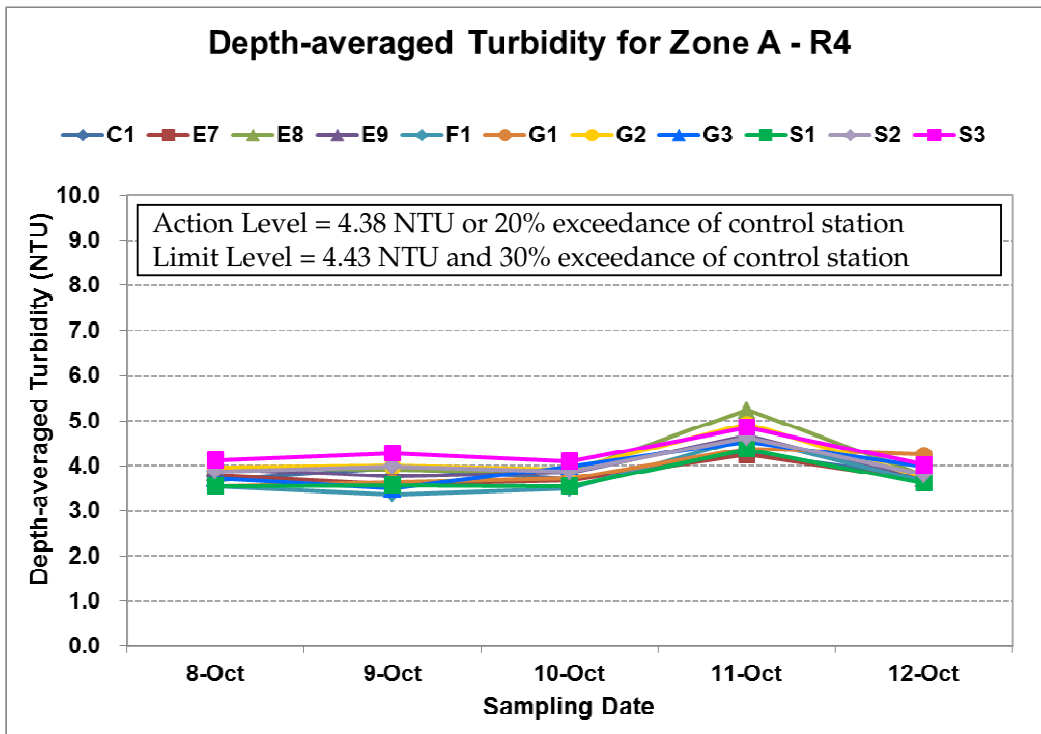
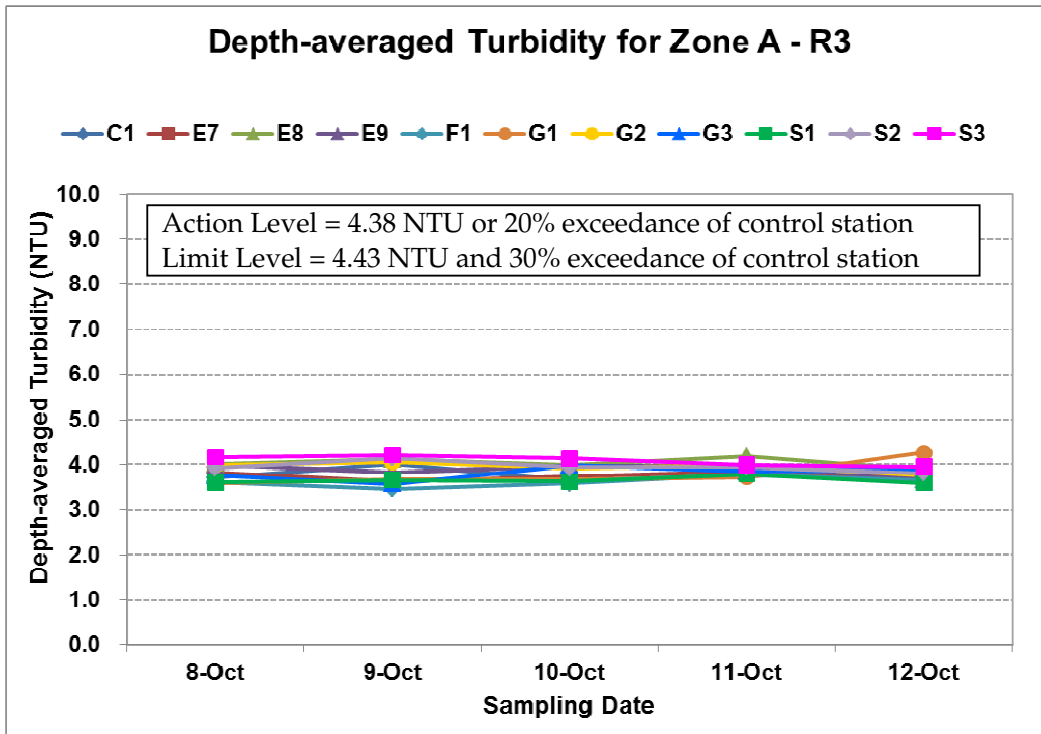


Figure C8 Depth-averaged Turbidity (NTU) of water column measured during the impact monitoring Round 3 (15:00) and Round 4 (19:00) period from 8 October to 12 October for Zone A



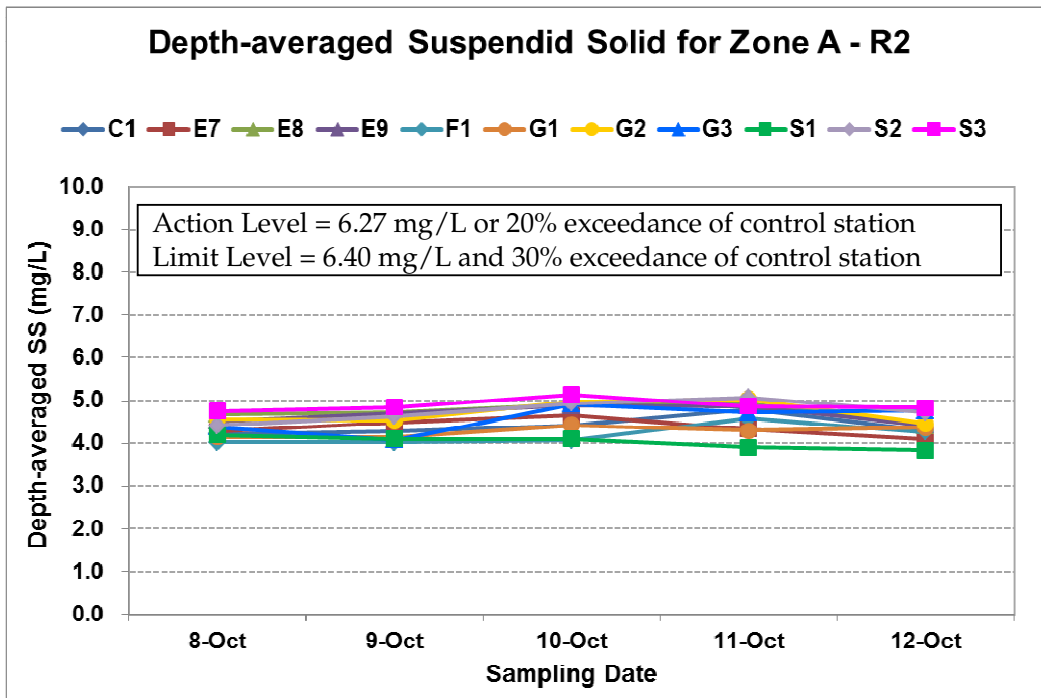
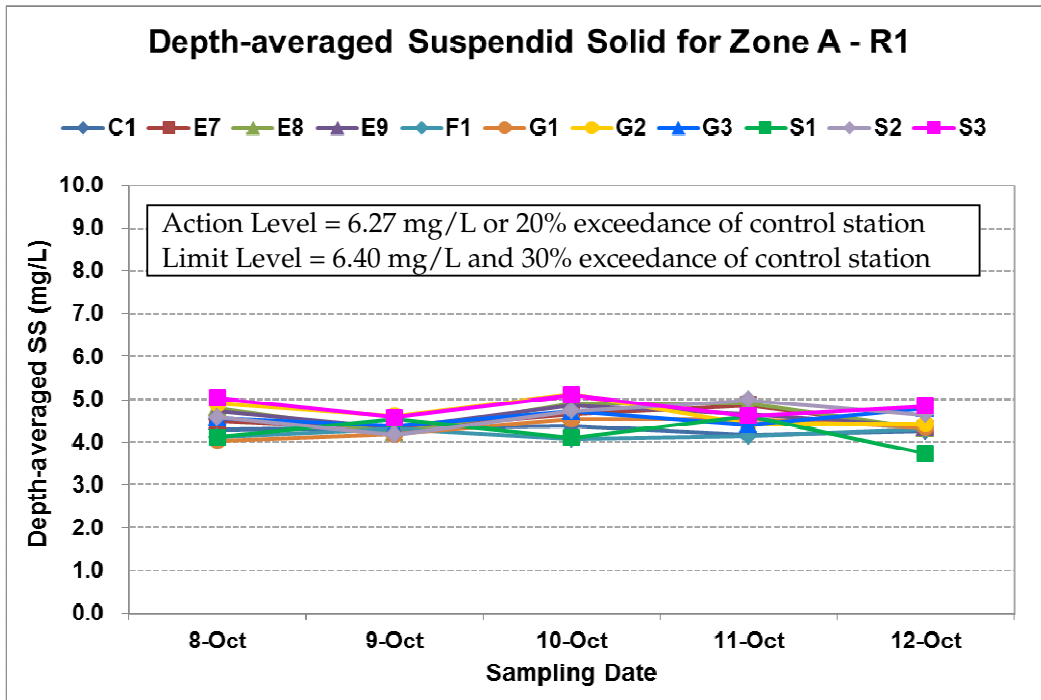


Figure C9 Depth-averaged suspended solid (mg/L) of water column measured during the impact monitoring Round 1 (07:00) and Round 2 (11:00) period from 8 October to 12 October for Zone A



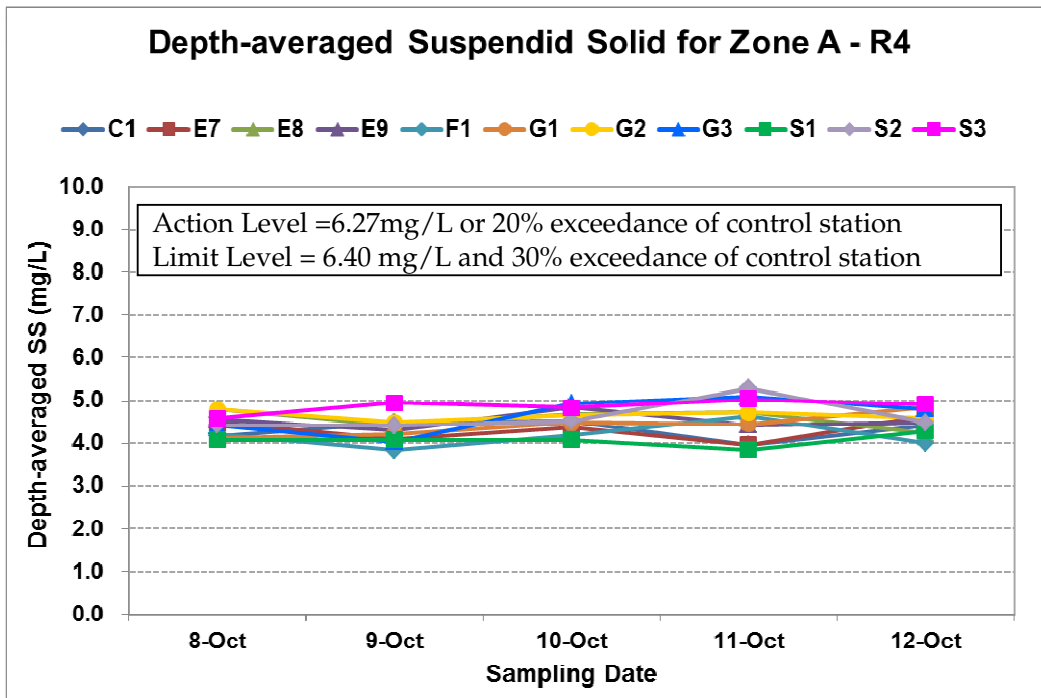
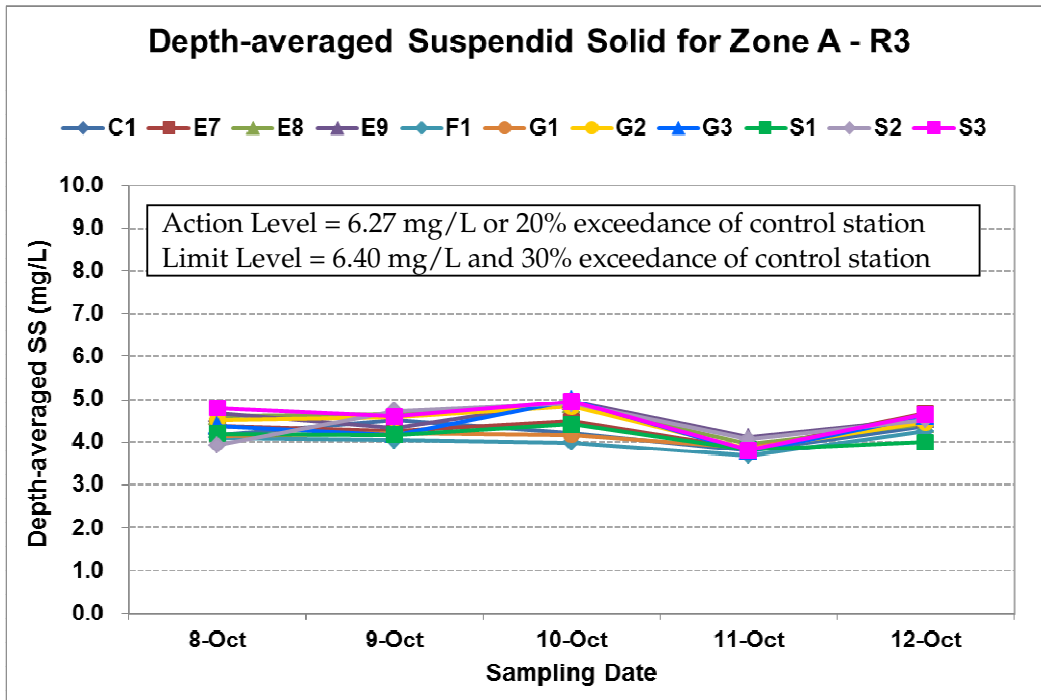


Figure C10 Depth-averaged suspended solid (mg/L) of water column measured during the impact monitoring Round 3 (15:00) and Round 4 (19:00) period from 8 October to 12 October for Zone A



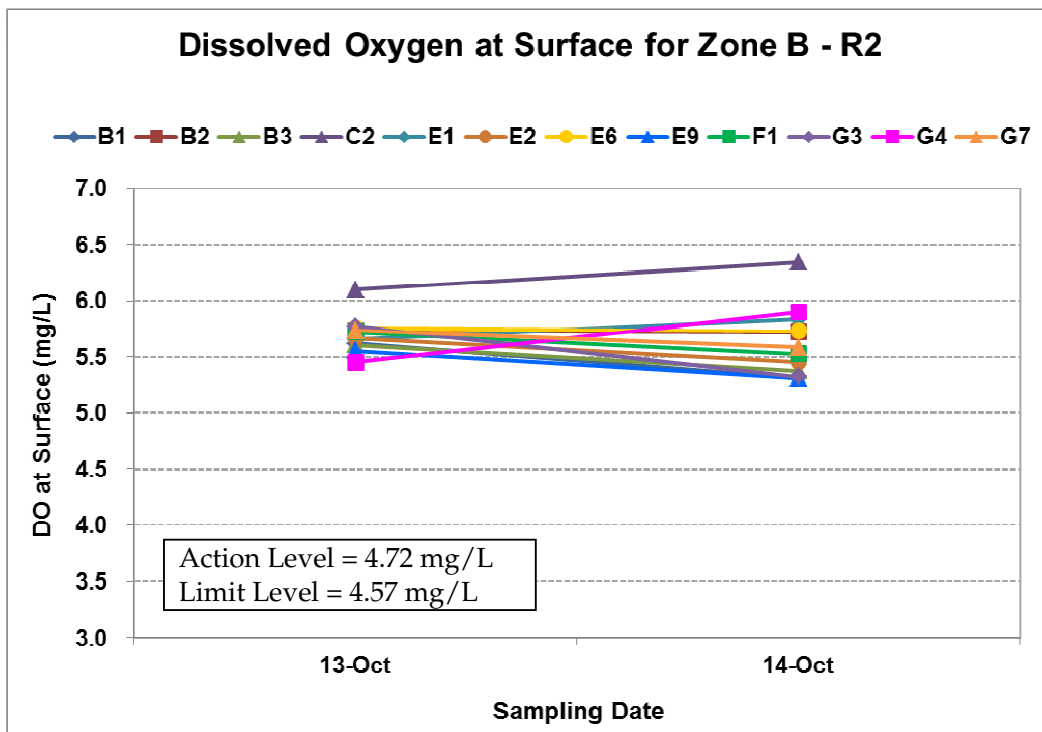
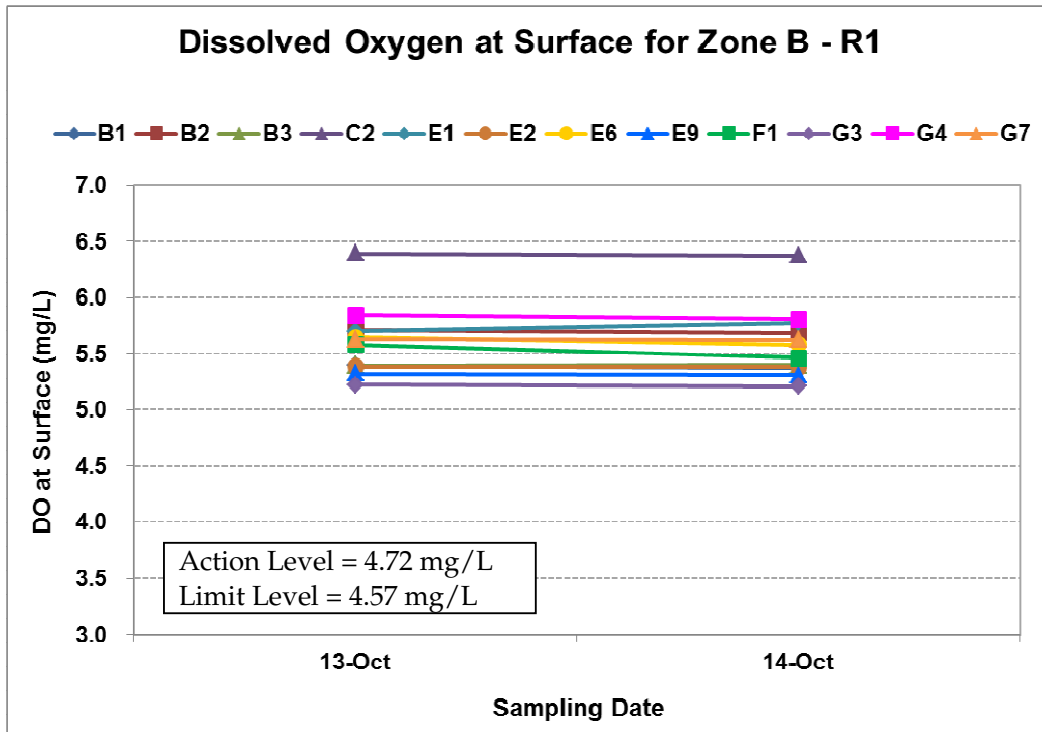


Figure C11 Dissolved Oxygen (mg/L) at surface of water column measured during the impact monitoring Round 1 (11:00) and Round 2 (15:00) period from 13 October to 14 October for Zone B



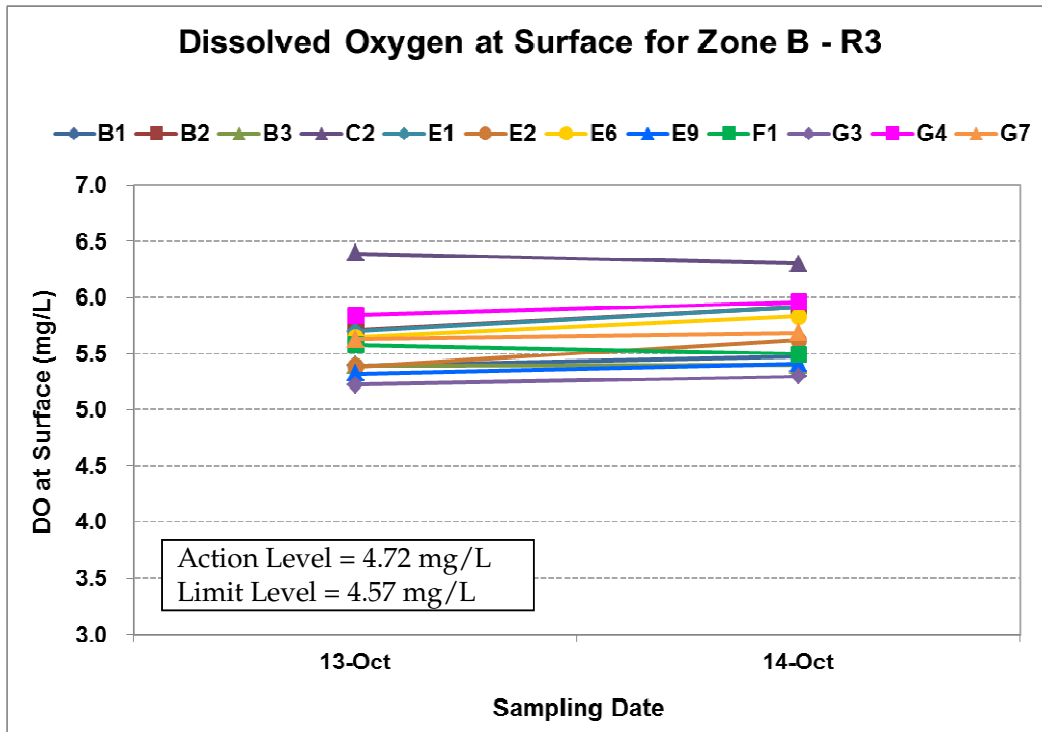


Figure C12 Dissolved Oxygen (mg/L) at surface of water column measured during the impact monitoring Round 3 (19:00) from 13 October to 14 October for Zone B



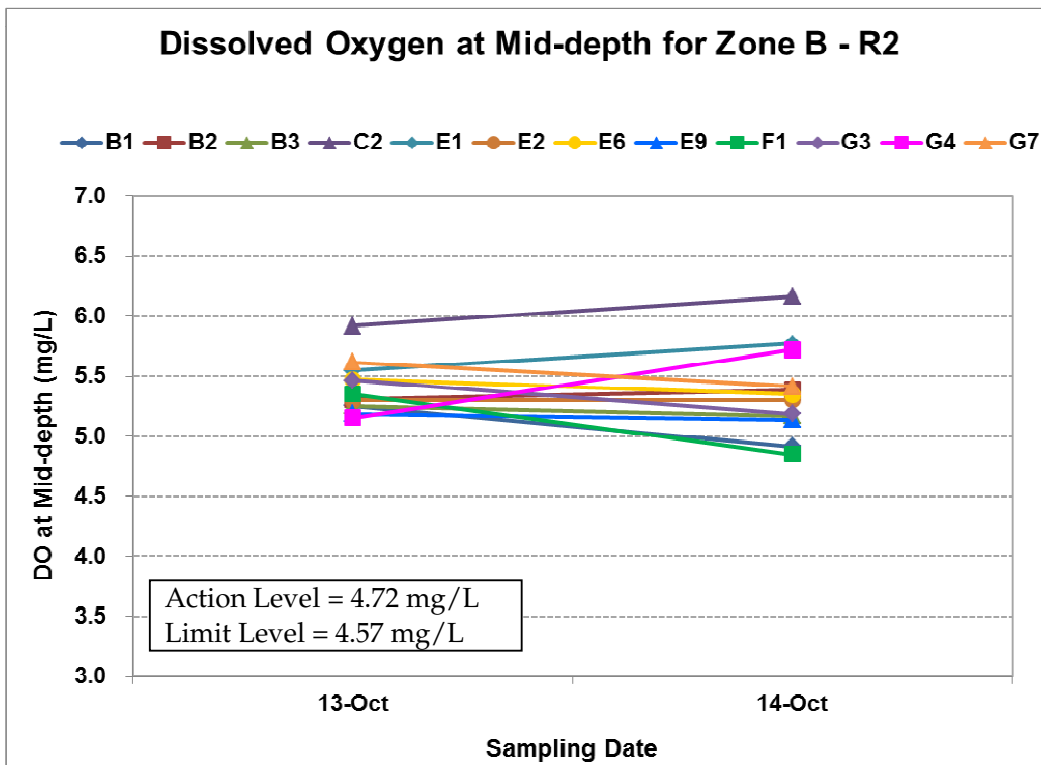
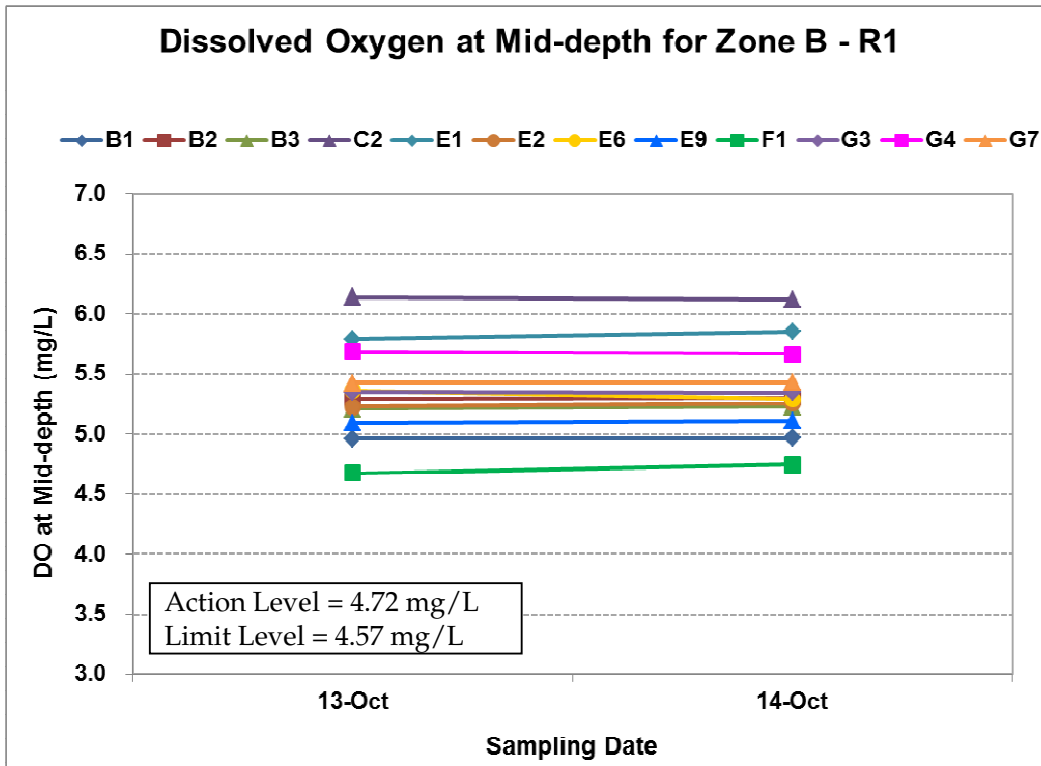


Figure C13 Dissolved Oxygen (mg/L) at mid-depth of water column measured during the impact monitoring Round 1 (11:00) and Round 2 (15:00) period from 13 October to 14 October for Zone B



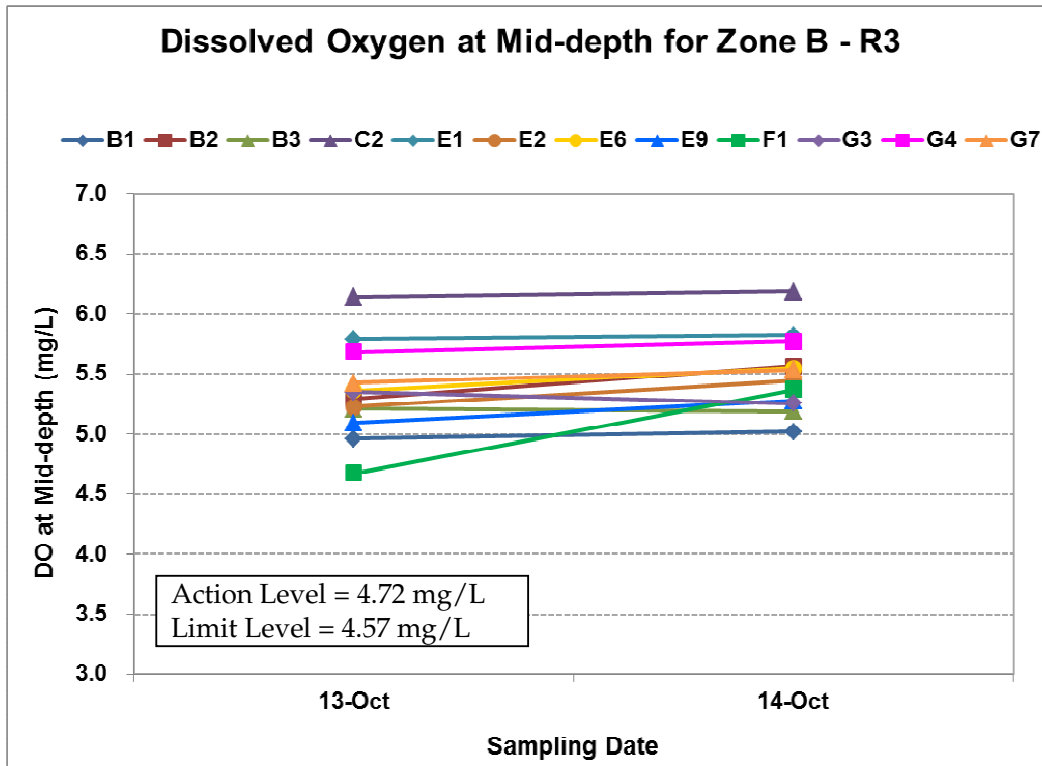


Figure C14 Dissolved Oxygen (mg/L) at mid-depth of water column measured during the impact monitoring Round 3 (19:00) from 13 October to 14 October for Zone B



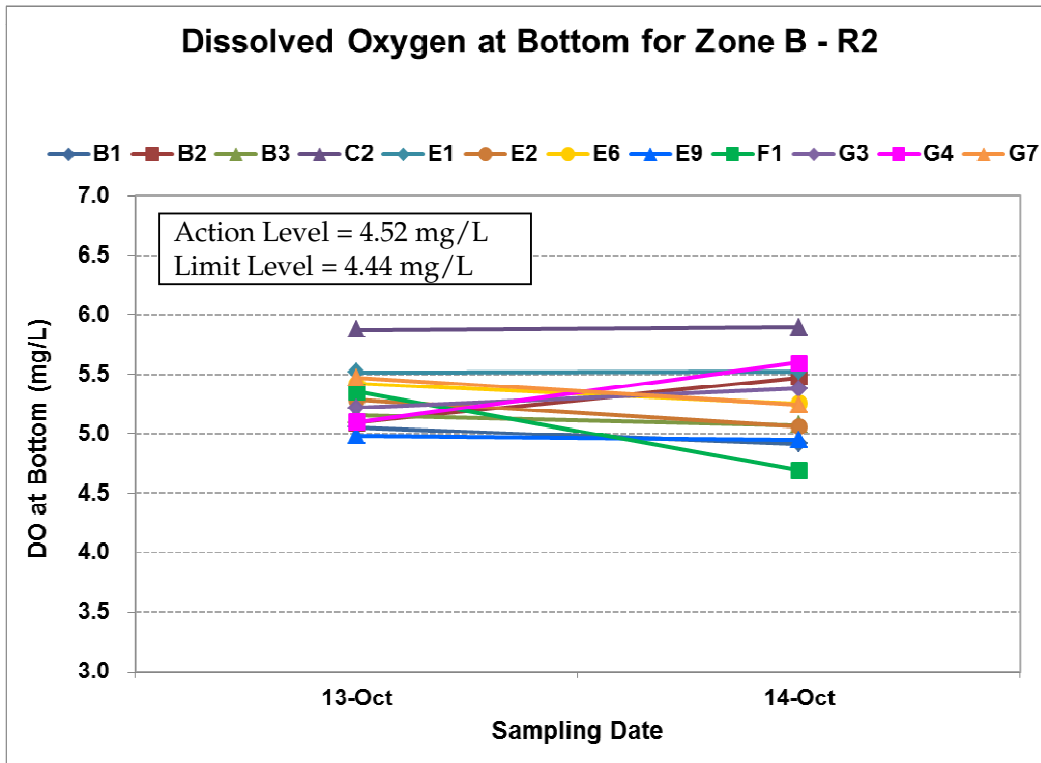
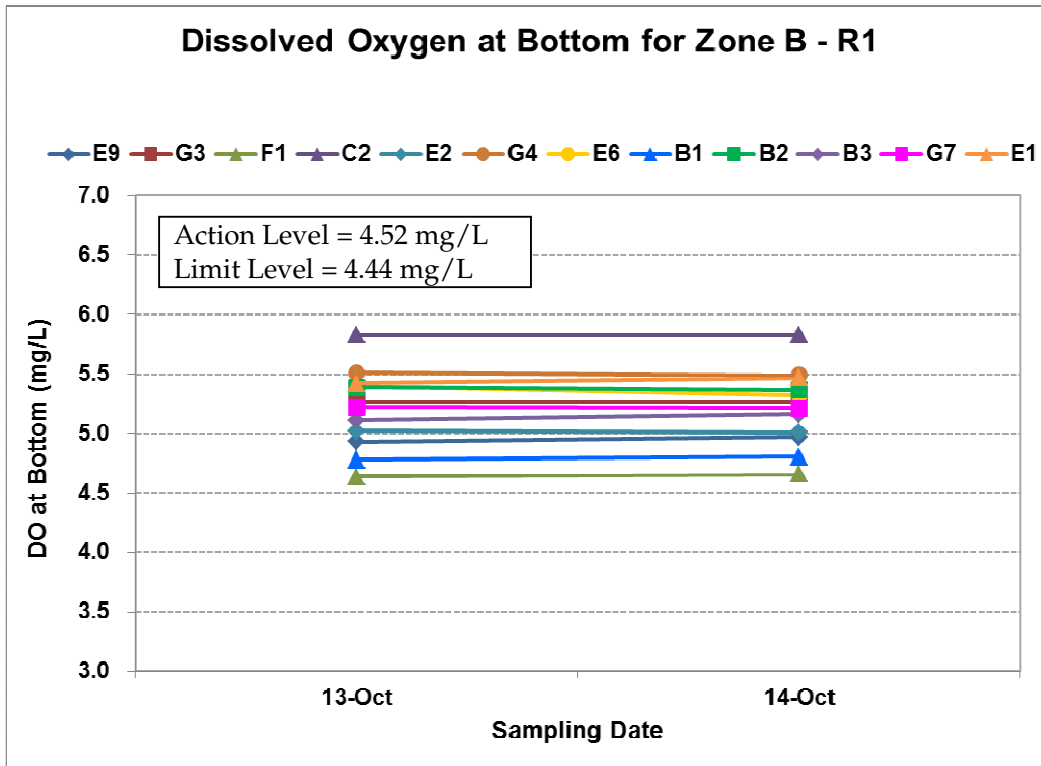


Figure C15 Dissolved Oxygen (mg/L) at bottom of water column measured during the impact monitoring Round 1 (11:00) and Round 2 (15:00) period from 13 October to 14 October for Zone B





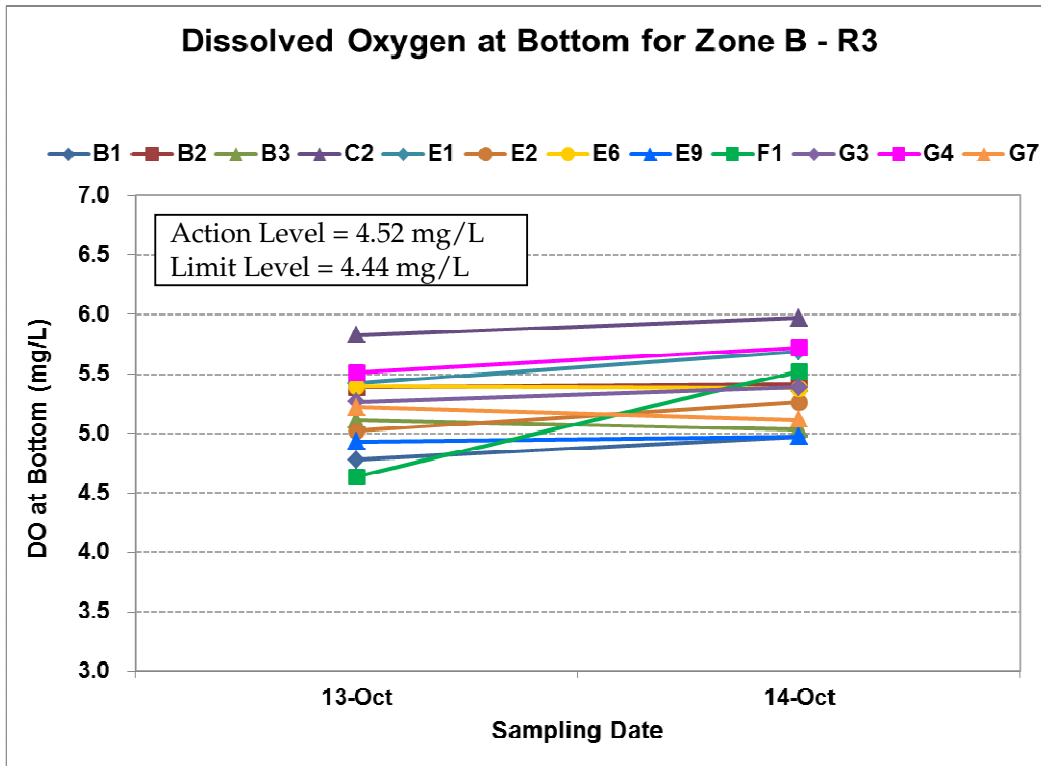


Figure C16 Dissolved Oxygen (mg/L) at bottom of water column measured during the impact monitoring Round 3 (19:00) from 13 October to 14 October for Zone B



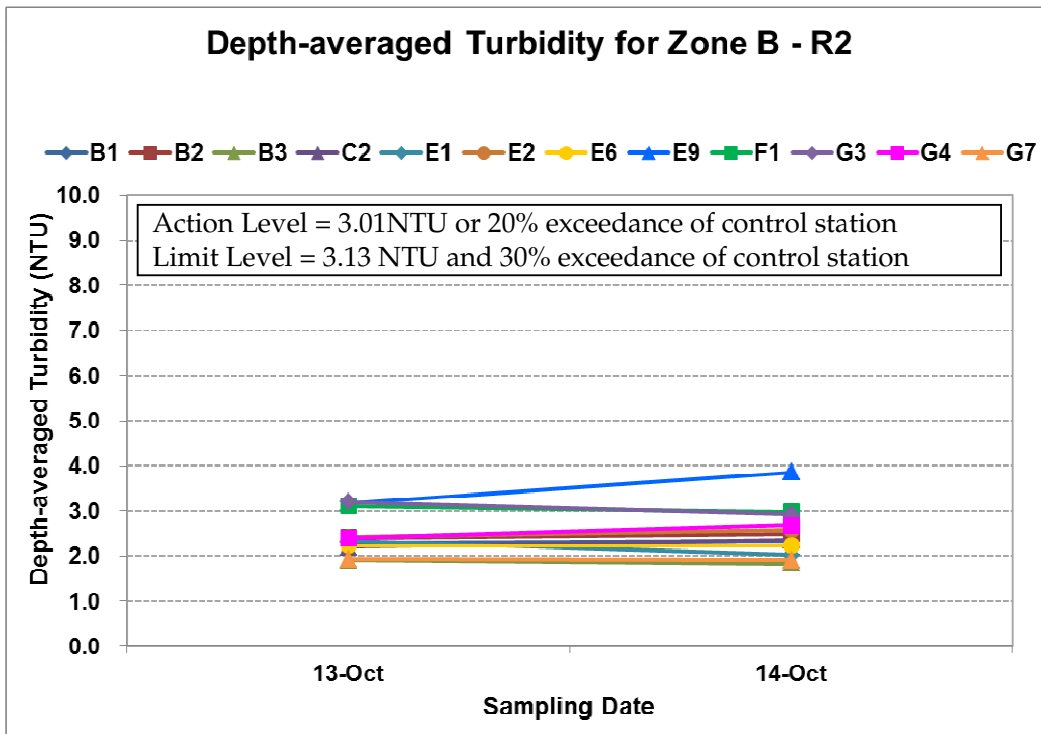
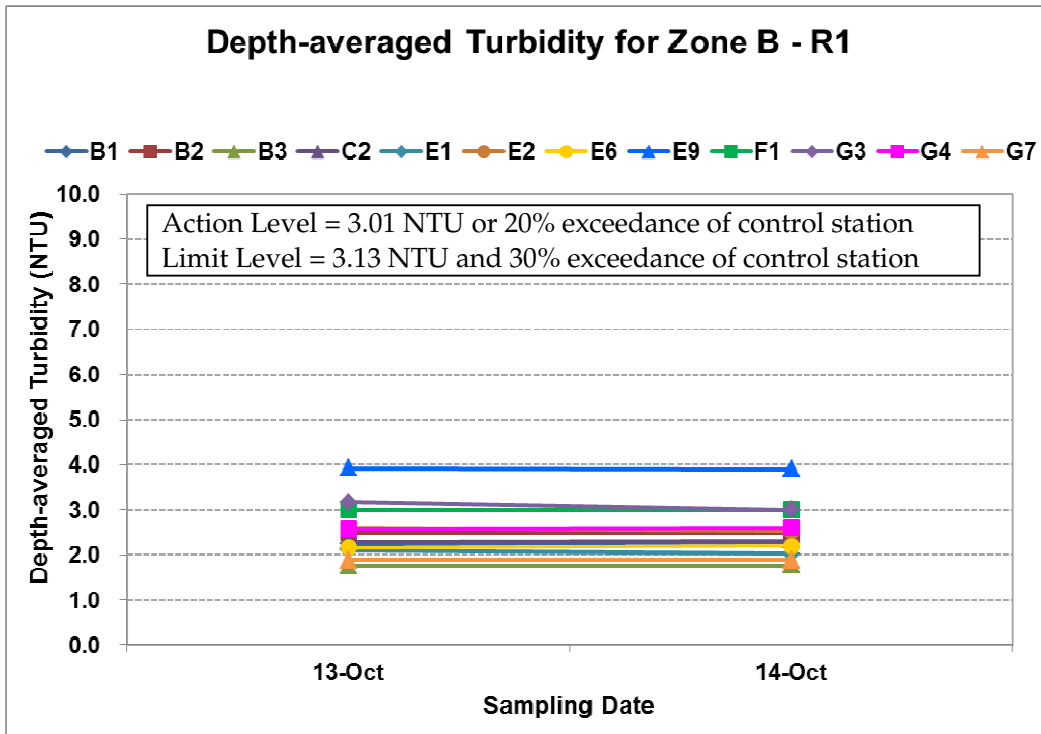


Figure C17 Depth-averaged Turbidity (NTU) of water column measured during the impact monitoring Round 1 (11:00) and Round 2 (15:00) period from 13 October to 14 October for Zone B



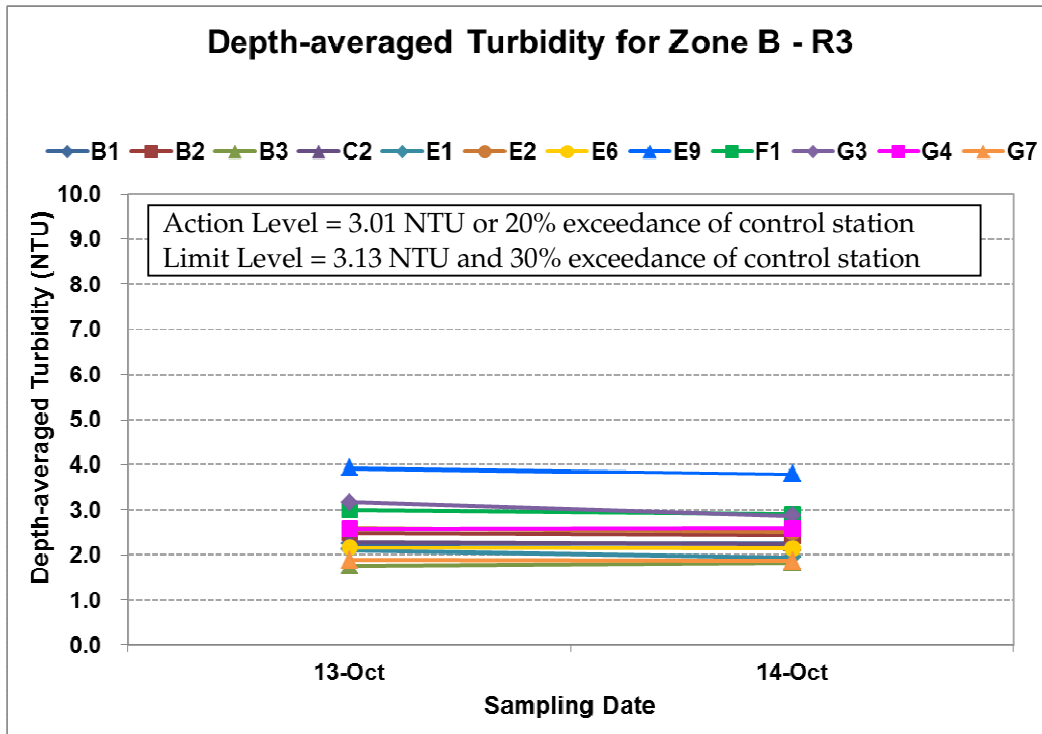


Figure C18 Depth-averaged Turbidity (NTU) of water column measured during the impact monitoring Round 3 (19:00) from 13 October to 14 October for Zone B



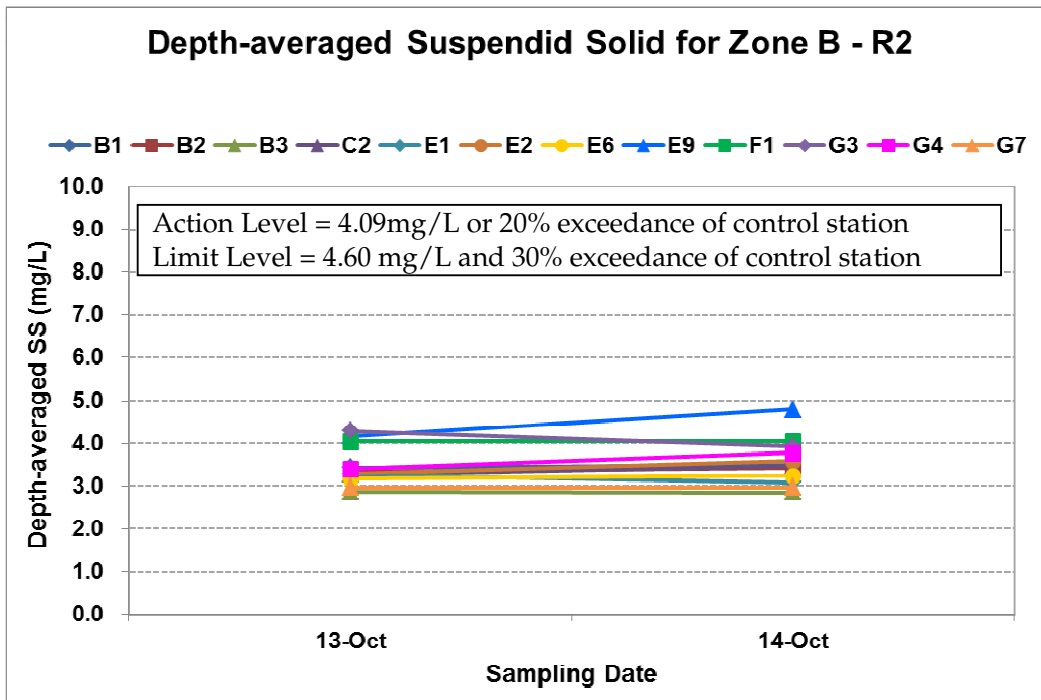
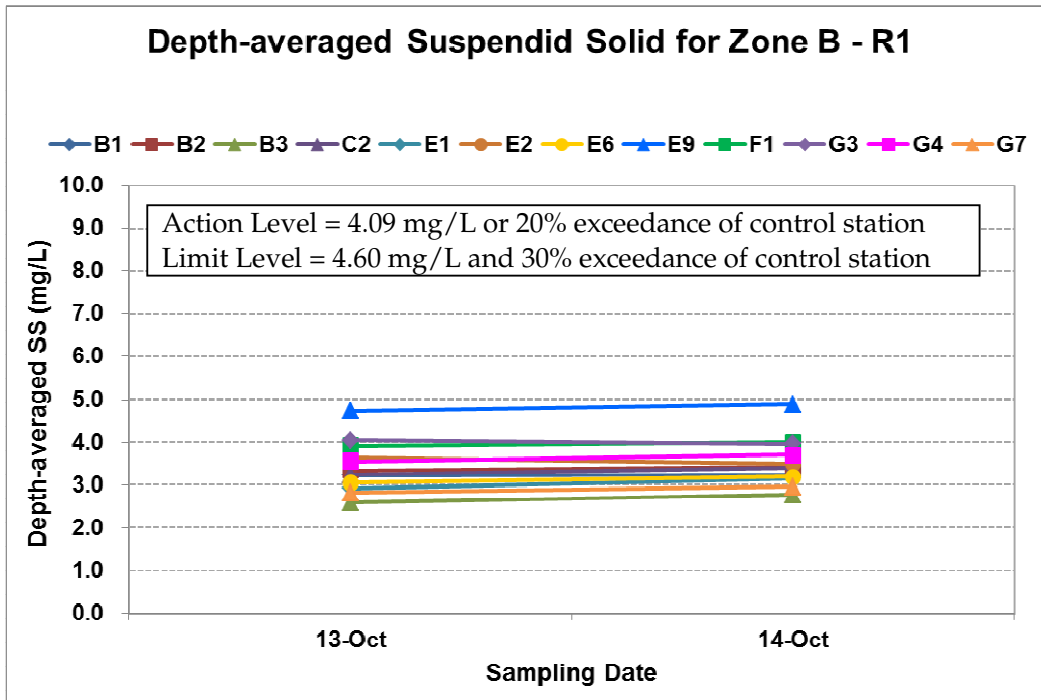


Figure C19 Depth-averaged suspended solid (mg/L) of water column measured during the impact monitoring Round 1 (11:00) and Round 2 (15:00) period from 13 October to 14 October for Zone B



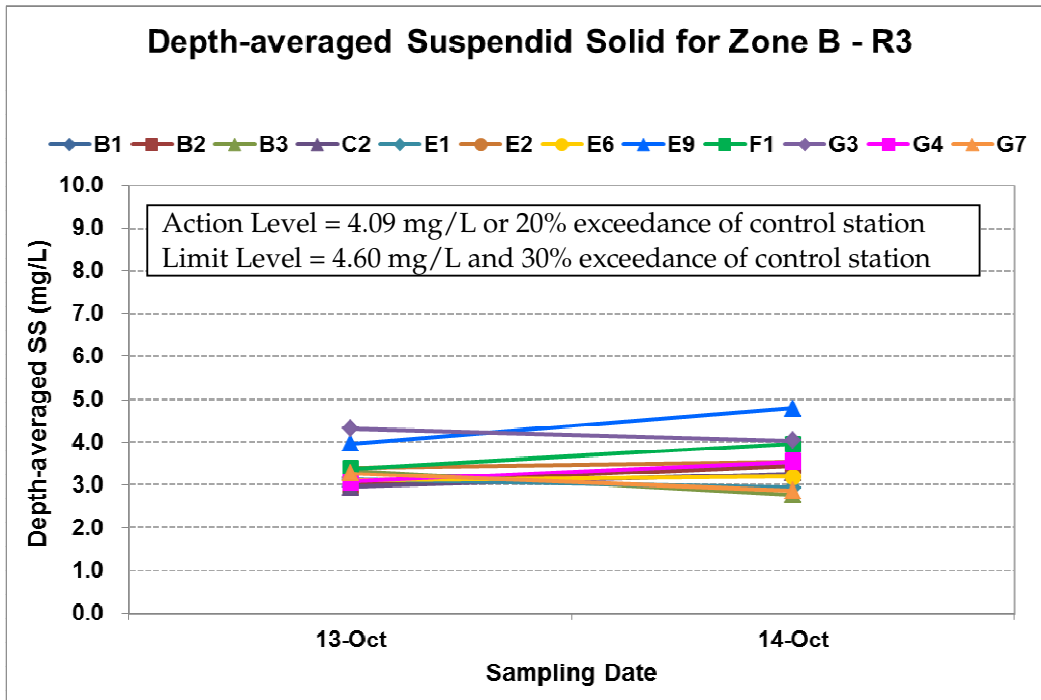


Figure C20 Depth-averaged suspended solid (mg/L) of water column measured during the impact monitoring Round 3 (19:00) from 13 October to 14 October for Zone B



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