AECOM

China Harbour Engineering Company Limited

Contract No. HY/2010/02

Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works

Monthly EM&A Report for April 2015

[05/2015]

	Name	Signature
Prepared & Checked:	Y T Tang	
Reviewed, Approved and Certified:	Echo Leong (ETL)	

Version:	Rev. 0	Date:	14 May 2015

Disclaimer

This report is prepared for China Harbour Engineering Company Limited and is given for its sole benefit in relation to and pursuant to Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities-Reclamation Works and may not be disclosed to, quoted to or relied upon by any person other than China Harbour Engineering Company Limited without our prior written consent. No person (other than China Harbour Engineering Company Limited) into whose possession a copy of this report comes may rely on this report without our express written consent and China Harbour Engineering Company Limited may not rely on it for any purpose other than as described above.

AECOM Asia Co. Ltd.
15/F, Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong
Tel: (852) 3922 9000 Fax: (852) 2317 7609 www.aecom.com

Ref.: HYDHZMBEEM00_0_2965L.15 14 May 2015

Engineer's Representative By Fax (3698 5999) and By Post
Ove Arup & Partners
Chief Resident Engineer's Office
5 Ying Hei Road, Tung Chung, Lantau
Hong Kong

Attention: Mr. Roger Marechal

Dear Sir,

Re: Agreement No. CE 48/2011 (EP)
Environmental Project Office for the
HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing Facilities, and Tuen Mun-Chek Lap Kok Link – Investigation

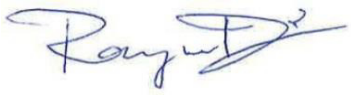
Contract No. HY/2010/02 HZMB HKBCF – Reclamation Works
Monthly Environmental Monitoring & Audit Report for April 2015

Reference is made to the Environmental Team's submission of the Monthly Environmental Monitoring & Audit Report for April 2015 (letter ref: 60249820/C/RMKY15051401 dated 14 May 2015) copied to us by E-mail on 14 May 2015.

We are pleased to inform you that we have no adverse comment on the captioned Monthly EM&A Report. We write to verify the captioned report in accordance with Condition 5.4 of EP-353/2009/H and Condition 4.4 of EP-354/2009/D (for TM-CLKL Southern Landfall Reclamation only).

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,



Raymond Dai
Independent Environmental Checker

c.c.	HyD	Mr. Matthew Fung	(By Fax: 3188 6614)
	HyD	Mr. Wai-ping Lee	(By Fax: 3188 6614)
	AECOM	Ms. Echo Leong	(By Fax: 2317 7609)
	CHEC	Mr. Lim Kim Chuan	(By Fax: 2578 0413)

Internal: DY, YH, SL, JM, ENPO Site

Q:\Projects\HYDHZMBEEM00\02_Proj_Mgt\02_Corr\HYDHZMBEEM00_0_2965L.15.docx

ENVIRON Hong Kong Limited 英環香港有限公司
Room 2403 Jubilee Centre, 18 Fenwick Street, Wan Chai, Hong Kong. Tel: 852 3465 2888 Fax: 852 3465 2899
www.environcorp.com

TABLE OF CONTENTS

List of Tables

Figures

List of Appendices

EXECUTIVE SUMMARY

Contract No. HY/2010/02 – Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Work (here below, known as "the Project") mainly comprises reclamation at the northeast of the Hong Kong International Airport of an area of about 130-hectare for the construction of an artificial island for the development of the Hong Kong Boundary Crossing Facilities (HKBCF), and about 19-hectare for the southern landfall of the Tuen Mun - Chek Lap Kok Link (TMCLKL). It is a designated project and is governed by the current permits for the Project, i.e. the amended Environmental Permits (EPs) issued on 19 January 2015 (EP-353/2009/H) and 13 March 2015 (EP-354/2009/D) (for TMCLKL Southern Landfall Reclamation only).

Ove Arup & Partners Hong Kong Limited (Arup) was appointed by Highways Department (HyD) as the consultants for the design and construction assignment for the Project's reclamation works (i.e. the Engineer for the Project).

China Harbour Engineering Company Limited (CHEC) was awarded by HyD as the Contractor to undertake the construction work of the Project.

ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) for the Project.

AECOM Asia Co. Ltd. (AECOM) was appointed by CHEC to undertake the role of Environmental Team for the Project for carrying out the environmental monitoring and audit (EM&A) works.

The construction phase of the Project under the EPs was commenced on 12 March 2012 and will be tentatively completed by early Year 2016. The EM&A programme, including air quality, noise, water quality and dolphin monitoring and environmental site inspections, was commenced on 12 March 2012.

This report documents the findings of EM&A works conducted in the period between 1 and 30 April 2015. As informed by the Contractor, major activities in the reporting period were:-

Marine-base

- Cellular structure installation and backfilling
- Capping Beams structures
- Surcharge remove & laying
- Earthwork fill
- Deep Cement Mixing
- Jet grout columns works
- Geotechnical Instrumentation works
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base

- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Maintenance of Temporary Marine Access at Works Area WA2

A summary of monitoring and audit activities conducted in the reporting period is listed below:

24-hour Total Suspended Particulates (TSP) monitoring	6 sessions
1-hour TSP monitoring	6 sessions
Noise monitoring	4 sessions
Impact water quality monitoring	13 sessions
Impact dolphin monitoring	2 surveys
Joint Environmental site inspection	5 sessions

Breaches of Action and Limit Levels for Air Quality

All 1-Hour TSP and 24-Hour TSP results were below the Action and Limit Level in the reporting month.

Breaches of Action and Limit Levels for Noise

For construction noise, no exceedance was recorded at all monitoring stations in the reporting month.

Breaches of Action and Limit Levels for Water Quality

All impact water quality monitoring results were below the Action and Limit Level in the reporting month.

Impact Dolphin Monitoring

A total of two sightings were made, two "on effort" sightings. One sighting was recorded on 20 April 2015 and one sighting was recorded on 28 April 2015 in NWL. A total of 10 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

Behaviour: Of the two sightings, one group was noted as feeding and one group was noted as travelling, locations of sighting with different behaviour are mapped in Figure 5d.

Complaint, Notification of Summons and Successful Prosecution

Environmental Protection Department (EPD) referred a noise complaint to this project on 10 April 2015 and ENPO forwarded the noise complaint to Environmental Team on 15 April 2015. The complaint involves a complainant, who is resident of Caribbean Coast, Tung Chung and he was disturbed by noise from construction activities of the HZMB Project during weekends and holidays. After investigation, there is no adequate information to conclude the observed noise nuisance is related to this Contract.

No notification of summons or prosecution was received in the reporting period

Reporting Change

There was no reporting change required in the reporting period.

Future Key Issues

Key issues to be considered in the coming month included:-

- Site runoff should be properly collected and treated prior to discharge;
- Minimize loss of sediment from filling works;
- Regular review and maintenance of silt curtain systems, drainage systems and desilting facilities;
- Exposed surfaces/soil stockpiles should be properly treated to avoid generation of silty surface run-off during rainstorm;
- Regular review and maintenance of wheel washing facilities provided at all site entrances/exits;
- Conduct regular inspection of various working machineries and vessels within works areas to avoid any dark smoke emission;
- Suppress dust generated from work processes with use of bagged cements, earth movements, excavation activities, exposed surfaces/soil stockpiles and haul road traffic;
- Quieter powered mechanical equipment should be used;
- Provision of proper and effective noise control measures for operating equipment and machinery on-site, such as erection of movable noise barriers or enclosure for noisy plants;
- Closely check and replace the sound insulation materials regularly;
- Better scheduling of construction works to minimize noise nuisance;
- Properly store and label oil drums and chemical containers placed on site;
- Proper chemicals, chemical wastes and wastes management;
- Maintenance works should be carried out within roofed, paved and confined areas;
- Collection and segregation of construction waste and general refuse on land and in the sea should be carried out properly and regularly; and
- Proper protection and regular inspection of existing trees, transplanted/retained trees.
- Control night-time lighting and glare by hooding all lights.
- Regular review and provide maintenance to dust control measures such as sprinkler system.

1 INTRODUCTION

1.1 Background

1.1.1 Contract No. HY/2010/02 – Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Work (here below, known as "the Project") mainly comprises reclamation at the northeast of the Hong Kong International Airport of an area of about 130-hectare for the construction of an artificial island for the development of the Hong Kong Boundary Crossing Facilities (HKBCF), and about 19-hectare for the southern landfall of the Tuen Mun - Chek Lap Kok Link (TMCLKL).

1.1.2 The environmental impact assessment (EIA) reports (Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities – EIA Report (Register No. AEIAR-145/2009) (HKBCFEIA) and Tuen Mun – Chek Lap Kok Link – EIA Report (Register No. AEIAR-146/2009) (TMCLKLEIA), and their environmental monitoring and audit (EM&A) Manuals (original EM&A Manuals), for the Project were approved by Environmental Protection Department (EPD) in October 2009.

1.1.3 EPD subsequently issued the Environmental Permit (EP) for HKBCF in November 2009 (EP-353/2009) and the Variation of Environmental Permit (VEP) in June 2010 (EP-353/2009/A), November 2010 (EP-353/2009/B), November 2011 (EP-353/2009/C), March 2012 (EP-353/2009/D), October 2012 (EP-353/2009/E), April 2013 (EP-353/2009/F), August 2013 (EP-353/2009/G) and January 2015 (EP-353/2009/H). Similarly, EPD issued the Environmental Permit (EP) for TMCLKL in November 2009 (EP-354/2009) and the Variation of Environmental Permit (VEP) in December 2010 (EP-354/2009/A), January 2014 (EP-354/2009/B), December 2014 (EP-354/2009/C) and March 2015 (EP-354/2009/D).

1.1.4 The Project is a designated project and is governed by the current permits for the Project, i.e. the amended EPs issued on 19 January 2015 (EP-353/2009/H) and 13 March 2015 (EP-354/2009/D) (for TMCLKL Southern Landfall Reclamation only).

1.1.5 A Project Specific EM&A Manual, which included all project-relation contents from the original EM&A Manuals for the Project, was issued in May 2012.

1.1.6 Ove Arup & Partners Hong Kong Limited (Arup) was appointed by Highways Department (HyD) as the consultants for the design and construction assignment for the Project's reclamation works (i.e. the Engineer for the Project).

1.1.7 China Harbour Engineering Company Limited (CHEC) was awarded by HyD as the Contractor to undertake the construction work of the Project.

1.1.8 ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) for the Project.

1.1.9 AECOM Asia Co. Ltd. (AECOM) was appointed by CHEC to undertake the role of Environmental Team for the Project for carrying out the EM&A works.

1.1.10 The construction phase of the Project under the EPs was commenced on 12 March 2012 and will be tentatively completed by early Year 2016.

1.1.11 According to the Project Specific EM&A Manual, there is a need of an EM&A programme including air quality, noise, water quality and dolphin monitoring and environmental site inspections. The EM&A programme of the Project commenced on 12 March 2012.

1.2 Scope of Report

1.2.1 This is the thirty-eighth monthly EM&A Report under the Contract No.HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. This report presents a summary of the environmental monitoring and audit works, list of activities and mitigation measures proposed by the ET for the Project in April 2015.

1.3 Project Organization

1.3.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Engineer's Representative (ER) (Ove Arup & Partners Hong Kong Limited)	Chief Resident Engineer	Roger Marechal	3698 5700	2698 5999
IEC / ENPO (ENVIRON Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
	Environmental Project Office Leader	Y. H. Hui	3465 2868	3465 2899
Contractor (China Harbour Engineering Company Limited)	Environmental Officer	Richard Ng	36932253	2578 0413
	24-hour Hotline	Alan C.C. Yeung	9448 0325	--
ET (AECOM Asia Company Limited)	ET Leader	Echo Leong	3922 9280	2317 7609

1.4 Summary of Construction Works

1.4.1 The construction phase of the Project under the EP commenced on 12 March 2012.

1.4.2 As informed by the Contractor, details of the major works carried out in this reporting period are listed below:-

Marine-base
- Cellular structure installation and backfilling
- Capping Beams structures
- Surcharge remove & laying
- Earthwork fill
- Deep Cement Mixing
- Jet grout columns works
- Geotechnical Instrumentation works
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base
- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Maintenance of Temporary Marine Access at Works Area WA2

1.4.3 The 3-month rolling construction programme of the Project is shown in Appendix B.

1.4.4 The general layout plan of the Project site showing the detailed works areas is shown in Figure 1.

1.4.5 The environmental mitigation measures implementation schedule are presented in Appendix C.

1.5 Summary of EM&A Programme Requirements

1.5.1 The EM&A programme required environmental monitoring for air quality, noise, water quality, marine ecology and environmental site inspections for air quality, noise, water quality, waste management, marine ecology, and landscape and visual impact. The EM&A requirements for each parameter described in the following sections include:-

- All monitoring parameters;
- Monitoring schedules for the reporting month and forthcoming month;
- Action and Limit levels for all environmental parameters;
- Event / Action Plan;
- Environmental mitigation measures, as recommended in the Project EIA reports; and
- Environmental requirement in contract documents.

2 AIR QUALITY MONITORING

2.1 Monitoring Requirements

2.1.1 In accordance with the Project Specific EM&A Manual, baseline 1-hour and 24-hour Total Suspended Particulates (TSP) levels at 4 air quality monitoring stations were established. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days. The Action and Limit level of the air quality monitoring is provided in Appendix D.

2.2 Monitoring Equipment

2.2.1 24-hour TSP air quality monitoring was performed using High Volume Sampler (HVS) located at each designated monitoring station. The HVS meets all the requirements of the Project Specific EM&A Manual. Portable direct reading dust meters were used to carry out the 1-hour TSP monitoring. Brand and model of the equipment is given in Table 2.1.

Table 2.1 Air Quality Monitoring Equipment

Equipment	Brand and Model
Portable direct reading dust meter (1-hour TSP)	Sibata Digital Dust Monitor (Model No. LD-3 and LD-3B)
High Volume Sampler (24-hour TSP)	Tisch Environmental Mass Flow Controlled Total Suspended Particulate (TSP) High Volume Air Sampler (Model No. TE-5170)

2.3 Monitoring Locations

2.3.1 Monitoring locations AMS2 and AMS7 were set up at the proposed locations in accordance with Project Specific EM&A Manual. For AMS6 (Dragonair/CNAC (Group) Building), permission on setting up and carrying out impact monitoring works was sought, however, access to the premise has not been granted yet on this report issuing date. For monitoring location AMS3 (Ho Yu College), as proposed in the Project Specific EM&A Manual, approval for carrying out impact monitoring could not be obtained from the principal of the school. Permission on setting up and carrying out impact monitoring works at nearby sensitive receivers, like Caribbean Coast and Coastal Skyline, was also sought. However, approvals for carrying out impact monitoring works within their premises were not obtained. Impact air quality monitoring was conducted at site boundary of the site office area in Works Area WA2 (AMS3B) respectively. Same baseline and Action Level for air quality, as derived from the baseline monitoring data recorded at Ho Yu College, was adopted for this alternative air quality location.

2.3.2 It was observed that a tree near AMS3B may affect the wind flow around the HVS located at AMS3B. With no further comment received from IEC, the HVS at AMS3B has been relocated on 8 September 2014 to slightly more than 2 meters separation from it, measured horizontally. Same baseline and Action Level for air quality, as derived from the baseline monitoring data recorded at Ho Yu College, was adopted for this alternative air quality location.

2.3.3 Reference is made to ET's proposal of the omission of air monitoring station (AMS 6) dated on 1 November 2012 and EPD's letter dated on 19 November 2012 regarding the conditional approval of the proposed omission of air monitoring station (AMS 6) for Contract No. HY/2010/02. The aforesaid omission of Monitoring Station AMS6 is effective since 19 November 2012.

2.3.4 Reference is made to ET's proposal of relocation of air quality monitoring station (AMS7) dated on 2 February 2015, with no further comment received from IEC on 2 February 2015 and no objection received from EPD on 5 February 2015, the impact air quality monitoring station AMS7 (Hong Kong SkyCity Marriott Hotel) has been relocated to AMS7A (Chu Kong Air-Sea Union Transportation Company Limited) on 3 February 2015. Action Level for air quality, as derived from the baseline monitoring data recorded at Hong Kong SkyCity Marriott Hotel, was adopted for this alternative air quality location.

2.3.5 Figure 2 shows the locations of monitoring stations. Table 2.2 describes the details of the monitoring stations.

Table 2.2 Locations of Impact Air Quality Monitoring Stations

Monitoring Station	Location	Description
AMS2	Tung Chung Development Pier	Rooftop of the premise
AMS3B	Site Boundary of Site Office Area at Works Area WA2	On ground at the area boundary
AMS6*	Dragonair/CNAC (Group) Building	On ground at boundary of the premise
AMS7A	Chu Kong Air-Sea Union Transportation Company Limited	On ground at boundary of the premise

#Remarks: Reference is made to EPD conditional approval of the omission of air monitoring station (AMS 6) for the project. The omission will be effective on 19 November 2012.

2.4 Monitoring Parameters, Frequency and Duration

2.4.1 Table 2.3 summarizes the monitoring parameters, frequency and duration of impact TSP monitoring.

Table 2.3 Air Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
1-hour TSP	Three times every 6 days while the highest dust impact was expected
24-hour TSP	Once every 6 days

2.5 Monitoring Methodology

2.5.1 24-hour TSP Monitoring

(a) The HVS was installed in the vicinity of the air sensitive receivers. The following criteria were considered in the installation of the HVS.

(i) A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
(ii) No two samplers should be placed less than 2 meters apart.
(iii) The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
(iv) A minimum of 2 meters separation from walls, parapets and penthouse for rooftop sampler.
(v) A minimum of 2 meters separation from any supporting structure, measured horizontally is required.
(vi) No furnace or incinerator flues nearby.
(vii) Airflow around the sampler was unrestricted.
(viii) Permission was obtained to set up the samplers and access to the monitoring stations.
(ix) A secured supply of electricity was obtained to operate the samplers.
(x) The sampler was located more than 20 meters from any dripline.
(xi) Any wire fence and gate, required to protect the sampler, did not obstruct the monitoring process.
(xii) Flow control accuracy was kept within ±2.5% deviation over 24-hour sampling period.

(b) Preparation of Filter Papers

(i) Glass fibre filters, G810 were labelled and sufficient filters that were clean and without pinholes were selected.
(ii) All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±5%. A convenient working RH was 40%.

(iii) All filter papers were prepared and analysed by ALS Technichem (HK) Pty Ltd., which is a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes.

(c) Field Monitoring

(i) The power supply was checked to ensure the HVS works properly.
(ii) The filter holder and the area surrounding the filter were cleaned.
(iii) The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
(iv) The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
(v) The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied was sufficient to avoid air leakage at the edges.
(vi) Then the shelter lid was closed and was secured with the aluminum strip.
(vii) The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
(viii) A new flow rate record sheet was set into the flow recorder.
(ix) On site temperature and atmospheric pressure readings were taken and the flow rate of the HVS was checked and adjusted at around 1.1 m^3/min, and complied with the range specified in the updated EM&A Manual (i.e. 0.6-1.7 m^3/min).
(x) The programmable digital timer was set for a sampling period of 24 hrs, and the starting time, weather condition and the filter number were recorded.
(xi) The initial elapsed time was recorded.
(xii) At the end of sampling, on site temperature and atmospheric pressure readings were taken and the final flow rate of the HVS was checked and recorded.
(xiii) The final elapsed time was recorded.
(xiv) The sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
(xv) It was then placed in a clean plastic envelope and sealed.
(xvi) All monitoring information was recorded on a standard data sheet.
(xvii) Filters were then sent to ALS Technichem (HK) Pty Ltd. for analysis.

(d) Maintenance and Calibration

(i) The HVS and its accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
(ii) 5-point calibration of the HVS was conducted using TE-5025A Calibration Kit prior to the commencement of baseline monitoring. Bi-monthly 5-point calibration of the HVS will be carried out during impact monitoring.
(iii) Calibration certificate of the HVSs are provided in Appendix E.

2.5.2 1-hour TSP Monitoring

(a) Measuring Procedures

The measuring procedures of the 1-hour dust meter were in accordance with the Manufacturer's Instruction Manual as follows:-

(i) Turn the power on.
(ii) Close the air collecting opening cover.
(iii) Push the "TIME SETTING" switch to [BG].
(iv) Push "START/STOP" switch to perform background measurement for 6 seconds.
(v) Turn the knob at SENSI ADJ position to insert the light scattering plate.
(vi) Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
(vii) Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
(viii) Pull out the knob and return it to MEASURE position.
(ix) Push the "TIME SETTING" switch the time set in the display to 3 hours.
(x) Lower down the air collection opening cover.
(xi) Push "START/STOP" switch to start measurement.

(b) Maintenance and Calibration

(i) The 1-hour TSP meter was calibrated at 1-year intervals against a continuous particulate TEOM Monitor, Series 1400ab. Calibration certificates of the Laser Dust Monitors are provided in Appendix E.

(ii) 1-hour validation checking of the TSP meter against HVS is carried out on half-year basis at the air quality monitoring locations.

2.6 Monitoring Schedule for the Reporting Month

2.6.1 The schedule for air quality monitoring in April 2015 is provided in Appendix F.

2.7 Results and Observations

2.7.1 The monitoring results for 1-hour TSP and 24-hour TSP are summarized in Table 2.4 and 2.5 respectively. Detailed impact air quality monitoring results are presented in Appendix G.

Table 2.4 Summary of 1-hour TSP Monitoring Results in the Reporting Period

	Average ($\mu g/m^3$)	Range ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AMS2	81	71-91	374	500
AMS3B	81	72-89	368	500
AMS7A	81	71-91	370	500

Table 2.5 Summary of 24-hour TSP Monitoring Results in the Reporting Period

	Average ($\mu g/m^3$)	Range ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AMS2	52	22-107	176	260
AMS3B	53	30-94	167	260
AMS7A	62	31-113	183	260

2.7.2 The event action plan is annexed in Appendix L.

2.7.3 Meteorological information collected from the wind station during the monitoring periods on the monitoring dates, as shown in Figure 2, including wind speed and wind direction, is annexed in Appendix H.

3 NOISE MONITORING

3.1 Monitoring Requirements

3.1.1 In accordance with the Project Specific EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of the Project. The Action and Limit level of the noise monitoring is provided in Appendix D.

3.2 Monitoring Equipment

3.2.1 Noise monitoring was performed using sound level meter at each designated monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in Table 3.1.

Table 3.1 Noise Monitoring Equipment

Equipment	Brand and Model
Integrated Sound Level Meter	Rion NL-31 & B&K2238
Acoustic Calibrator	Rion NC-73 & B&K 4231

3.3 Monitoring Locations

3.3.1 Monitoring locations NMS2 was set up at the proposed locations in accordance with Project Specific EM&A Manual. However, for monitoring location NMS3 (Ho Yu College), as proposed in the Project Specific EM&A Manual, approval for carrying out impact monitoring could not be obtained from the principal of the school. Permission on setting up and carrying out impact monitoring works at nearby sensitive receivers, like Caribbean Coast and Coastal Skyline, was also sought. However, approvals for carrying out impact monitoring works within their premises were not obtained. Impact noise monitoring was conducted at site boundary of the site office area in Works Area WA2 (NMS3B) respectively. Same baseline noise level (as derived from the baseline monitoring data recorded at Ho Yu College) and Limit Level were adopted for this alternative noise monitoring location.

3.3.2 Figure 2 shows the locations of the monitoring stations. Table 3.2 describes the details of the monitoring stations.

Table 3.2 Locations of Impact Noise Monitoring Stations

Monitoring Station	Location	Description
NMS2	Seaview Crescent Tower 1	Free-field on the rooftop of the premise
NMS3B	Site Boundary of Site Office Area at Works Area WA2	Free-field on ground at the area boundary.

3.4 Monitoring Parameters, Frequency and Duration

3.4.1 Table 3.3 summarizes the monitoring parameters, frequency and duration of impact noise monitoring.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). L_{eq}, L_{10} and L_{90} would be recorded.	At least once per week

3.5 Monitoring Methodology

3.5.1 Monitoring Procedure

(a) The sound level meter was set on a tripod at a height of 1.2 m above the ground for free-field measurements at NMS2. A correction of +3 dB(A) shall be made to the free field measurements.

(b) All measurement at NMS3B were free field measurements in the reporting month at NMS3B. A correction of +3 dB(A) shall be made to the free field measurements.

(c) The battery condition was checked to ensure the correct functioning of the meter.

(d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:-

(i) frequency weighting: A
(ii) time weighting: Fast
(iii) time measurement: $L_{eq(30\text{-}minutes)}$ during non-restricted hours i.e. 07:00 – 1900 on normal weekdays.

(e) Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator for 94dB(A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1 dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

(f) During the monitoring period, the L_{eq}, L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.

(g) Noise measurement was paused during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible. Observations were recorded when intrusive noise was unavoidable.

(h) Noise monitoring was cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

3.5.2 Maintenance and Calibration

(a) The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.

(b) The meter and calibrator were sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.

(c) Calibration certificates of the sound level meters and acoustic calibrators are provided in Appendix E.

3.6 Monitoring Schedule for the Reporting Month

3.6.1 The schedule for construction noise monitoring in April 2015 is provided in Appendix F.

3.7 Monitoring Results

3.7.1 The monitoring results for construction noise are summarized in Table 3.4 and the monitoring data is provided in Appendix I.

Table 3.4 Summary of Construction Noise Monitoring Results in the Reporting Period

	Average, dB(A), $L_{eq\ (30\ mins)}$	Range, dB(A), $L_{eq\ (30\ mins)}$	Limit Level, dB(A), $L_{eq\ (30\ mins)}$
NMS2	67	66-69*	75
NMS3B	66	64-67*	70/65^

*+3dB(A) Façade correction included
^ Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period.

3.7.2 No Action or Limit Level Exceedance of construction noise was recorded in the reporting month.

3.7.3 Major noise sources during the noise monitoring included construction activities of the Project, construction activities by other contracts and nearby traffic noise.

3.7.4 The event action plan is annexed in Appendix L.

4 WATER QUALITY MONITORING

4.1 Monitoring Requirements

4.1.1 Impact water quality monitoring was carried out to ensure that any deterioration of water quality was detected, and that timely action was taken to rectify the situation. For impact water quality monitoring, measurements were taken in accordance with the Project Specific EM&A Manual. Appendix D shows the established Action/Limit Levels for the environmental monitoring works.

4.2 Monitoring Equipment

4.2.1 Table 4.1 summarises the equipment used in the impact water quality monitoring programme.

Table 4.1 Water Quality Monitoring Equipment

Equipment	Brand and Model
Dissolved Oxygen (DO) and Temperature Meter, Salinity Meter and Turbidimeter	YSI Model 6820
pH Meter	YSI Model 6820 or Thermo Orion 230A+
Positioning Equipment	JRC DGPS 224 Model JLR-4341 with J-NAV 500 Model NWZ4551
Water Depth Detector	Eagle Cuda-168 and Lowrance x-4
Water Sampler	Kahlsio Water Sampler (Vertical) 2.2 L with messenger

4.3 Monitoring Parameters, Frequency and Duration

4.3.1 Table 4.2 summarises the monitoring parameters, frequency and monitoring depths of impact water quality monitoring as required in the Project Specific EM&A Manual.

Table 4.2 Impact Water Quality Monitoring Parameters and Frequency

Monitoring Stations	Parameter, unit	Frequency	No. of depth
Impact Stations: IS5, IS(Mf)6, IS7, IS8, IS(Mf)9, IS10, IS(Mf)11, IS(Mf)16, IS17 *Control/Far Field Stations:* CS(Mf)3, CS(Mf)5, CS4, CS6, CSA *Sensitive Receiver Stations:* SR3-SR7, SR10A&SR10B	• Depth, m • Temperature, ^{o}C • Salinity, ppt • Dissolved Oxygen (DO), mg/L • DO Saturation, % • Turbidity, NTU • pH • Suspended Solids (SS), mg/L	Three times per week during mid-ebb and mid-flood tides (within ± 1.75 hour of the predicted time)	3 (1 m below water surface, mid-depth and 1 m above sea bed, except where the water depth is less than 6 m, in which case the mid-depth station may be omitted. Should the water depth be less than 3 m, only the mid-depth station will be monitored).

4.4 Monitoring Locations

4.4.1 In accordance with the Project Specific EM&A Manual, twenty-one stations (9 Impact Stations, 7 Sensitive Receiver Stations and 5 Control/Far Field Stations) were designated for impact water quality monitoring. The nine Impact Stations (IS) were chosen on the basis of their proximity to the reclamation and thus the greatest potential for water quality impacts, the seven Sensitive Receiver Stations (SR) were chosen as they are close to the key sensitive receives and the five Control/ Far Field Stations (CS) were chosen to facilitate comparison of the water quality of the IS stations with less influence by the Project/ ambient water quality conditions.

4.4.2 Due to safety concern and topographical condition of the original locations of SR4 and SR10B, alternative impact water quality monitoring stations, naming as SR4 (N) and SR10B (N), were adopted, which are situated in vicinity of the original impact water quality monitoring stations (SR4 and SR10B) and could be reachable.

4.4.3 Same baseline and Action Level for water quality, as derived from the baseline monitoring data recorded, were adopted for these alternative impact water quality monitoring stations.

4.4.4 The locations of these monitoring stations are summarized in Table 4.3 and depicted in Figure 3.

Table 4.3 Impact Water Quality Monitoring Stations

Station	Description	East	North
IS5	Impact Station (Close to HKBCF construction site)	811579	817106
IS(Mf)6	Impact Station (Close to HKBCF construction site)	812101	817873
IS7	Impact Station (Close to HKBCF construction site)	812244	818777
IS8	Impact Station (Close to HKBCF construction site)	814251	818412
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850
IS10	Impact Station (Close to HKBCF construction site)	812577	820670
IS(Mf)11	Impact Station (Close to HKBCF construction site)	813562	820716
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497
IS17	Impact Station (Close to HKBCF construction site)	814539	820391
SR3	Sensitive receivers (San Tau SSSI)	810525	816456
SR4(N)	Sensitive receivers (Tai Ho)	814705	817859
SR5	Sensitive receivers (Artificial Reef in NE Airport)	811489	820455
SR6	Sensitive receivers (Sha Chau and Lung Kwu Chau Marine Park)	805837	821818
SR7	Sensitive receivers (Tai Mo Do)	814293	821431
SR10A	Sensitive receivers (Ma Wan FCZ)1	823741	823495
SR10B(N)	Sensitive receivers (Ma Wan FCZ)2	823683	823187
CS(Mf)3	Control Station	809989	821117
CS(Mf)5	Control Station	817990	821129
CS4	Control Station	810025	824004
CS6	Control Station	817028	823992
CSA	Control Station	818103	823064

4.5 Monitoring Methodology

4.5.1 Instrumentation

(a) The in-situ water quality parameters, viz. dissolved oxygen, temperature, salinity, turbidity and pH, were measured by multi-parameter meters (i.e. Model YSI 6820 CE-C-M-Y) and pH meter (i.e. Thermo Orion 230A+) respectively.

4.5.2 Operating/Analytical Procedures

(a) Digital Differential Global Positioning Systems (DGPS) were used to ensure that the correct location was selected prior to sample collection.

(b) Portable, battery-operated echo sounders were used for the determination of water depth at each designated monitoring station.

(c) All in-situ measurements were taken at 3 water depths, 1 m below water surface, mid-depth and 1 m above sea bed, except where the water depth was less than 6 m, in which case the mid-depth station was omitted. Should the water depth be less than 3 m, only the mid-depth station was monitored.

(d) At each measurement/sampling depth, two consecutive in-situ monitoring (DO concentration and saturation, temperature, turbidity, pH, salinity) and water sample for SS. The probes were retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of DO or turbidity parameters was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.

(e) Duplicate samples from each independent sampling event were collected for SS measurement. Water samples were collected using the water samplers and the samples were stored in high-density polythene bottles. Water samples collected were well-mixed in the water sampler prior to pre-rinsing and transferring to sample bottles. Sample bottles were pre-rinsed with the same water samples. The sample bottles were then be packed in cool-boxes (cooled at $4^{o}C$ without being frozen), and delivered to ALS Technichem (HK) Pty Ltd. for the analysis of suspended solids concentrations. The laboratory determination work would be started within 24 hours after collection of the water samples. ALS Technichem (HK) Pty Ltd. is a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes. For QA/QC procedures, one duplicate samples of every batch of 20 samples was analyzed.

(f) The analysis method and reporting and detection limit for SS is shown in Table 4.4.

Table 4.4 Laboratory Analysis for Suspended Solids

Parameters	Instrumentation	Analytical Method	Reporting Limit	Detection Limit
Suspended Solid (SS)	Weighting	APHA 2540-D	0.5mg/L	0.5mg/L

(g) Other relevant data were recorded, including monitoring location / position, time, water depth, tidal stages, weather conditions and any special phenomena or work underway at the construction site in the field log sheet for information.

4.5.3 Maintenance and Calibration

(a) All in situ monitoring instruments would be calibrated and calibrated by ALS Technichem (HK) Pty Ltd. before use and at 3-monthly intervals throughout all stages of the water quality monitoring programme. Calibration details are provided in Appendix E.

(b) The dissolved oxygen probe of YSI 6820 was calibrated by wet bulb method. Before the calibration routine, the sensor for dissolved oxygen was thermally equilibrated in water-saturated air. Calibration cup is served as a calibration chamber and it was loosened from airtight condition before it is used for the calibration. Calibration at ALS Technichem (HK) Pty Ltd. was carried out once every three months in a water sample with a known concentration of dissolved oxygen. The sensor was immersed in the water and after thermal equilibration, the known mg/L value was keyed in and the calibration was carried out automatically.

(c) The turbidity probe of YSI 6820 is calibrated two times a month. A zero check in distilled water was performed with the turbidity probe of YSI 6820 once per monitoring day. The probe will be calibrated with a solution of known NTU at ALS Technichem (HK) Pty Ltd. once every three months.

4.6 Monitoring Schedule for the Reporting Month

4.6.1 The schedule for impact water quality monitoring in April 2015 is provided in Appendix F.

4.7 Results and Observations

4.7.1 Impact water quality monitoring results and graphical presentations are provided in Appendix J.

Table 4.5 Summary of Water Quality Exceedances

Station	Exceedance Level	DO (S&M)		DO (Bottom)		Turbidity		SS		Total	
		Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood
IS5	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)6	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS7	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS8	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)9	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS10	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)11	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)16	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS17	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR3	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR4(N)	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR5	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR6	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR7	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR10A	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR10B (N)	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
Total	**Action**	0	0	0	0	0	0	0	0	0	
	Limit	0	0	0	0	0	0	0	0	0	

Note: S: Surface; and
M: Mid-depth.

4.7.2 The event action plan is annexed in Appendix L.

5 DOLPHIN MONITORING

5.1 Monitoring Requirements

5.1.1 Vessel based surveys for the Chinese White Dolphin (CWD), *Sousa chinensis,* are to be conducted by a dedicated team comprising a qualified marine mammal ecologist and experienced marine mammal observers (MMOs). The purpose of the surveys are to evaluate the impact of the HKCBF reclamation and, if deemed detrimental, to take appropriate action as per the EM&A manual.

5.1.2 This 'Impact Monitoring' follows several months of 'Baseline Monitoring' so similar survey methodologies have been adopted to facilitate comparisons between datasets. Further, the data collected are compatible with, and are available for, incorporation into the data set managed by the Agriculture, Fisheries and Conservation Department (AFCD) as part of Hong Kong's long term Marine Mammal Monitoring Programme.

5.2 Monitoring Equipment

Table 5.1 summarises the equipment used for the impact dolphin monitoring.

Table 5.1 Dolphin Monitoring Equipment

Equipment	Model
Commercially licensed motor vessel	15m in length with a 4.5m viewing platform
Global Positioning System (GPS) x2	Integrated into T7000 Garmin GPS Map 76C
Computers (T7000 Tablet, Intel Atom)	Windows 7/MSO 13 Logger
Camera	Nikon D7100 300m 2.8D fixed focus Nikon D90 80-400mm zoom lens
Laser Rangefinder	Range Finder Bushnell 1000m
Marine Binocular x3	Nexus 7 x 50 marine binocular with compass and reticules Fujinon 7 x 50 marine binocular with compass and reticules

5.3 Monitoring Frequency and Conditions

5.3.1 Dolphin monitoring is conducted twice per month in each survey area.

5.3.2 Dolphin monitoring is conducted only when visibility is good (e.g., over 1km) and the sea condition is at a Beaufort Sea State of 4 or better.

5.3.3 When thunder storm, black rain or typhoon warnings are in force, all survey effort is stopped.

5.4 Monitoring Methodology and Location

5.4.1 The impact dolphin monitoring is vessel-based and combines line-transect and photo-ID methodology. The survey follows pre-set and fixed transect lines in the two areas defined by AFCD as:

5.4.2 Northeast Lantau survey area; and

5.4.3 Northwest Lantau survey area.

5.4.4 The co-ordinates for the transect lines and layout map have been provided by AFCD and are shown in Table 5.2 and Figure 4.

Table 5.2 Impact Dolphin Monitoring Line Transect Co-ordinates (Provided by AFCD)

	HK Grid System		Long Lat in WGS84	
ID	X	Y	Long	Lat
1	804671	814577	113.870308	22.269741
1	804671	831404	113.869975	22.421696
2	805475	815457	113.878087	22.277704
2	805477	826654	113.877896	22.378814
3	806464	819435	113.887615	22.313643
3	806464	822911	113.887550	22.345030
4	807518	819771	113.897833	22.316697
4	807518	829230	113.897663	22.402113
5	808504	820220	113.907397	22.320761
5	808504	828602	113.907252	22.396462
6	809490	820466	113.916965	22.323003
6	809490	825352	113.916884	22.367128
7	810499	820690	113.926752	22.325043
7	810499	824613	113.926688	22.360464
8	811508	820847	113.936539	22.326475
8	811508	824254	113.936486	22.357241
9	812516	820892	113.946329	22.326894
9	812516	824254	113.946279	22.357255
10*	813525	820827	113.956112	22.326321
10*	813525	824657	113.956066	22.360908
11	814556	818449	113.966160	22.304858
11	814556	820992	113.966125	22.327820
12	815542	818807	113.975726	22.308109
12	815542	824882	113.975647	22.362962
13	816506	819480	113.985072	22.314192
13	816506	824859	113.985005	22.362771
14	817537	820220	113.995070	22.320883
14	817537	824613	113.995018	22.360556
15	818568	820735	114.005071	22.325550
15	818568	824433	114.005030	22.358947
16	819532	821420	114.014420	22.331747
16	819532	824209	114.014390	22.356933
17	820451	822125	114.023333	22.338117
17	820451	823671	114.023317	22.352084
18	821504	822371	114.033556	22.340353
18	821504	823761	114.033544	22.352903
19	822513	823268	114.043340	22.348458
19	822513	824321	114.043331	22.357971
20	823477	823402	114.052695	22.349680
20	823477	824613	114.052686	22.360610
21	805476	827081	113.877878	22.382668
21	805476	830562	113.877811	22.414103
22	806464	824033	113.887520	22.355164
22	806464	829598	113.887416	22.405423
23	814559	821739	113.966142	22.334574
23	814559	824768	113.966101	22.361920

*****Remark: Due to the presence of deployed silt curtain systems at the site boundaries of the Project, some of the transect lines shown in Figure 5 could not be fully surveyed during the regular survey. Transect 10 is reduced from 6.4km to approximately 3.6km in length due to the HKBCF construction site. Therefore the total transect length for both NEL and NWL combined is reduced to approximately 111km.

5.5 Monitoring Procedures

5.5.1 The study area incorporates 23 transects which are to be surveyed twice per month. Each survey day lasts approximately 9 hours.

5.5.2 The survey vessel departs from Tung Chung Development Pier, Tsing Yi Public Pier or the nearest safe and convenient pier.

5.5.3 When the vessel reaches the start of a transect line, “on effort” survey begins. Areas between transect lines and traveling to and from the study area are defined as “off effort”.

5.5.4 The transect line is surveyed at a speed of 6-8 knots (11-14 km/hr). For the sake of safety, the speed was sometimes a bit slower to avoid collision with other vessels. During some periods, tide and current flow in the survey areas exceeds 7 knots which can affect survey speed. There are a minimum of four marine mammal observers (MMOs) present on each survey, rotating through four positions, observers (2), data recorder (1) and ‘rest’ (1). Rotations occur every 30 minutes or at the end of dolphin encounters. The data recorder records effort, weather and sightings data directly onto the programme Logger and is not part of the observer team. The observers search with naked eye and binoculars between 90° and 270° abeam (bow being 0°).

5.5.5 When a group of dolphins is sighted, position, bearing and distance data are recorded immediately onto the computer and, after a short observation, an estimate made of group size. These parameters are linked to the time-GPS-ships data which are automatically stored in the programme Logger throughout the survey period. In this manner, information on heading, position, speed, weather, effort and sightings are stored in a format suitable for use with DISTANCE software for subsequent line transect analyses.

5.5.6 Once the vessel leaves the transect line, it is deemed to be “off effort”. The dolphins are approached with the purpose of taking high resolution pictures for proper photo-identification of individual CWD. Attempts to photograph all dolphins in the group are made. Both the left and right hand sides of the dorsal fin area of each dolphin in the group are photographed, if possible. On finishing photographing, the vessel will return to the transect line at the point of departure and “on effort” survey is resumed.

5.5.7 Sightings which are made while on the transect line are referred to as "on effort sightings", while not on the actual transect line are referred to as an “opportunistic sightings” (e.g. another group of dolphins is sighted while travelling back to the transect line). Only “on effort sightings” can be used in analyses which require effort or rate quantification, e.g., encounter rate per 100km searched. This is also how “on effort sightings” are treated in the baseline report. “Opportunistic sightings” provide additional information on individual habitat use and population distribution and they are noted accordingly.

5.5.8 As time and GPS data are automatically logged throughout the survey and are linked to sightings data input, start and end times of encounters and deviation from the transect lines are recorded and can be subsequently reviewed.

5.6 Monitoring Schedule for the Reporting Month

5.6.1 The schedule for dolphin monitoring in April 2015 is provided in Appendix F.

5.6.2 Two surveys covering both study areas were completed.

5.7 Results and Observations

5.7.1 Dolphin surveys were conducted on 20, 21, 28 and 29 April 2015. A total of 220.9 km of transect line was conducted all of which during Beaufort Sea State 3 or better (favourable water conditions). Please note that that some lines were shortened due to works and/or shipping traffic.

The effort summary and sightings data are shown in Tables 5.3 and 5.4, respectively. The survey efforts conducted in April 2015 are plotted in Figure 5a-b. For Table 5.3, only on-effort information is included. Transects conducted in all Beaufort Sea State are included. Compared to previous monthly reports, the whole number Beaufort Sea State scale is used so as to ease comparison with other dolphin monitoring reports.

Table 5.3 Impact Dolphin Monitoring Survey Effort Summary, Effort by Area and Beaufort Sea State

Survey	Date	Area	Beaufort	Effort (km)	Total Distance Travelled (km)
1	4/20/2015	NWL	1	11.1	63.3
	4/20/2015	NWL	2	52.2	
	4/21/2015	NWL	1	6.2	47.5
	4/21/2015	NWL	2	4	
	4/21/2015	NEL	1	33.1	
	4/21/2015	NEL	2	4.2	
2	4/28/2015	NWL	1	11.7	63.6
	4/28/2015	NWL	2	40.8	
	4/28/2015	NWL	3	11.1	
	4/29/2015	NWL	1	6.2	46.5
	4/29/2015	NWL	2	3.9	
	4/29/2015	NEL	1	36.4	
TOTAL in April 2015					**220.9**

*Remark: Surveys conduct under Beaufort Sea State 3 or below are considered as under favourable condition.

Table 5.4 Impact Dolphin Monitoring Survey Details April 2015

Date	Location	No. Sightings "on effort"	No. Sightings "opportunistic"
04/20/2015	NW L	1	0
	NEL	0	0
04/21/2015	NW L	0	0
	NEL	0	0
04/28/2015	NW L	1	0
	NEL	0	0
04/29/2015	NW L	0	0
	NEL	0	0
TOTAL in April 2015		2	0

Table 5.5 The Encounter Rate of Number of Dolphin Sightings & Total Number of Dolphins per Area^

Encounter Rate of Number of Dolphin Sightings (STG)*						
Date	**NEL Track (km)**	**NWL Track (km)**	**NEL Sightings**	**NWL Sightings**	**NEL Encounter Rate**	**NWL Encounter Rate**
20 & 21 April 2015	37.3	73.5	0	1	0.0	1.4
28 & 29 April 2015	36.4	73.7	0	1	0.0	1.4
Encounter Rate of Total Number of Dolphins (ANI)**						
Date	**NEL Track (km)**	**NWL Track (km)**	**NEL Dolphins**	**NWL Dolphins**	**NEL Encounter Rate**	**NWL Encounter Rate**
20 & 21 April 2015	37.3	73.5	0	5	0.0	6.8
28 & 29 April 2015	36.4	73.7	0	5	0.0	6.8

* Encounter Rate of Number of Dolphin Sightings (STG) presents encounter rates in terms of groups per 100km.
** Encounter Rate of Total Number of Dolphins (ANI) presents encounter rates in terms of individuals per 100km. And the encounter rate is not corrected for individuals, calculation may represent double counting.
^The table is made only for reference to the quarterly STG & ANI, which were adopted for the Event & Action Plan.

5.7.2 A total of two sightings were made, two "on effort" sightings. One sighting was recorded on 20 April 2015 and one sighting was recorded on 28 April 2015 in NWL. A total of 10 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

5.7.3 Behaviour: Of the two sightings, one group was noted as feeding and one group was noted as travelling, locations of sighting with different behaviour are mapped in Figure 5d

5.7.4 Photo ID analyses for March 2015 is presented in Appendix K.

5.7.5 Three resightings were noted in March 2015. On 19 March 2015, HZMB 009, HZMB 064 and HZMB 086 were sighted over two different encounters. HZMB 009 has only been sighted once previously, in May 2012. HZMB 064 has been sighted five times previously, twice in 2012, twice in 2013 and once in 2014. HZMB 086 (AFCD catalogue NL242) has been sighted four times in total, including once in the baseline study. This individual was sighted twice in 2013. All individuals have only ever been recorded in NWL waters. Images and resightings data are included in Annex I of Appendix K.

5.7.6 Noteworthy Observation[1]:

5.7.6.1 When impact monitoring was conducted at the southern parts of transect lines 1 & 2, the view of the area was partially blocked by the working vessels and fixed structures which do not belong to HKBCF Reclamation Works. The number of fixed structures has increased and in many areas, it is no longer possible to pass between them by ship. As the working vessels will move during the on-going works, it is considered that they will temporarily affect survey protocol, survey data collection, dolphin movement, dolphin habitat use and dolphin behaviour, whereas the fixed structures will continuously affect survey protocol, survey data collection, dolphin movement, dolphin habitat use and dolphin behaviour.

[1] A noteworthy observation is to show that either the conduct of the surveys themselves is affected, i.e., the noted vessel or works impedes the progress or view of the survey platform. In addition, the vessel or construction works may be different or additional to that observed previously and further, are of such a nature that they are a likely to create an impact on the movement or behaviour of the subject of the impact survey, in this case, the dolphins.

5.7.6.2 The HKBCF and adjoining “Southern Landfall” Projects effected lines 10, 11 and 12. The view of the area was partially blocked by the working vessels and in water structures. As the working vessels will move as construction progresses, they will cause temporary effects to survey protocol and survey data collection. In time, the fixed structures will affect all survey protocols and dolphin ecology in the long term.

5.7.6.3 The northern end of lines 9-10 was affected by works which do not belong to the HKBCF Project; in particular, the view of the area was partially blocked by the now fixed structure. An anchorage also is located in this area. Due to its permanency, the reclamation will continuously affect all survey protocols and dolphin ecology.

5.7.6.4 New projects were ongoing at the southern ends of line 5. At line 5, an anchored vessel with an extended perimeter designated by yellow buoys overlapped the transect line. There are no apparent fixed structure associated with this project only platforms and servicing vessels. As it is not known what activity was being conducted, the effect that this project may have specifically on dolphins is not known.

5.7.6.5 The survey effort log notes the areas in which the visibility is limited or the survey is affected so that these can be accounted for in any subsequent analyses. Some of these obstructions will become permanent and some will be temporary as the HZMB is built and other projects progress. It is advised that the impact monitoring surveys should be completed as close to the predefined lines as possible (as per Figure 4 of this report).

5.7.6.6 The above noteworthy observations are largely a result of multiple and on-going infrastructure projects within the Lantau area. No amendment to EM&A protocols can negate the effects of these projects, e.g., it is a highly dynamic environment and viewing conditions may alter every survey (sometimes within surveys) and most of the survey area is affected, to some degree, by marine construction works. Instead, survey data analyses should incorporate any noteworthy observations which may affect either data collection or dolphin distribution and behavioural changes. The above mentioned activities recorded during boat survey will not affect implementation of the EM&A Programme provided appropriate data analyses are conducted.

5.7.6.7 The works at lines 1 and 2 are progressing and permanent in water structures are in place. A review of survey conditions was conducted on 27 April 2015 and discussion with other project teams and ENPO has reached an agreement on the new positions of some lines. The draft proposal previously submitted since January 2015 will be revised to include the agreed positions of some transect lines and submitted by the ET for IEC/ENPO's review and verification soon..

5.7.7 The event action plan is annexed in Appendix L.

6 ENVIRONMENTAL SITE INSPECTION AND AUDIT

6.1 Site Inspection

6.1.1 Site Inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. In the reporting month, 5 site inspections were carried out on 2, 9, 16, 23 and 30 April 2015.

6.1.2 Particular observations during the site inspections are described below:

Air Quality

6.1.3 Haul road at Portion B was observed dry during site walk, however, watering was subsequently observed provided by the Contractor. The Contractor was reminded to provide sufficient watering to haul roads. (Reminder)

6.1.4 Fugitive dust was observed generated during unloading of rocks; the Contractor was reminded to sprayed dusty materials with water or a dust suppression chemical immediately prior to loading or unloading or transfer operation. (Reminder)

Noise

6.1.5 No adverse observation was identified in the reporting month.

Water Quality

6.1.6 Defects were observed on the secondary enclosure of grout delivery pipes. The Contractor was reminded to provide effective measure to contain any potential leakage of wastewater/grout and prevent them from releasing to the sea. The Contractor enhanced the measures to contain any potential leakage of wastewater/grout and prevent them from releasing to the sea. (Closed)

6.1.7 Soil was observed accumulated one side of the vessel, the Contractor was reminded to clear them regularly prevent runoff and keep the site clean and tidy. (Reminder)

6.1.8 Grout mixture was observed on land at the connection point of pipes. The Contractor was reminded to ensure no grout material is released to the sea. (Reminder)

Chemical and Waste Management

6.1.9 Generator was observed without drip tray. The Contractor was reminded to provide mitigation measures such as drip tray to all generators. Contractor removed the generator from the area. (Closed)

6.1.10 Oil drums without drip trays were observed on deck surface of barge Evershine18 and barge 振明 and material supplying vessel. The Contractor was reminded to provide mitigation measures such as drip tray to oil drums. The Contractor removed the oil drums on deck surface of barge Evershine18 and barge 振明. The contractor provided drip tray to the oil drum on ground. The material supplying vessel where the oil drums were observed left the site. (Closed)

6.1.11 General refuse was observed at portion at portion C2c and on site, the Contractor was reminded to clear the general refuse and keep the site clean and tidy. The Contractor cleared the general refuse and keeps the site clean and tidy. (Closed)

6.1.12 General refuse was observed on site; the Contractor was reminded to provide sufficient rubbish bin on site and regular properly collect and dispose of general refuse. General refuse was removed by the Contractor. (Closed)

6.1.13 It was observed that waste water was generated from the jet grout process; the Contractor was advised to provide sufficient enclosure and ensure the wastewater from the work process is not released to the sea. Contractor enhanced the soil bund and ensures the wastewater from the work process is not released to the se. (Closed)

Landscape and Visual Impact

6.1.14 No relevant adverse impact was observed in the reporting month.

Others

6.1.15 Rectifications of remaining identified items are undergoing by the Contractor. Follow-up inspections on the status on provision of mitigation measures will be conducted to ensure all identified items are mitigated properly.

6.2 Advice on the Solid and Liquid Waste Management Status

6.2.1 The Contractor had registered as a chemical waste producer for this Project. Receptacles were available for general refuse collection and sorting.

6.2.2 As advised by the Contractor, 251,318.3m^3 of fill were imported for the Project use in the reporting period. 140kg of paper/cardboard packaging and 39m^3 of general refuse were generated and disposed of in the reporting period. Monthly summary of waste flow table is detailed in Appendix M.

6.2.3 The Contractor is advised to properly maintain on site C&D materials and wastes storage, collection, sorting and recording system, dispose of C&D materials and wastes at designated ground and maximize reuse / recycle of C&D materials and wastes. The Contractor is reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

6.2.4 The Contractor is reminded that chemical waste should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labeling and Storage of Chemical Wastes.

6.3 Environmental Licenses and Permits

6.3.1 The environmental licenses and permits for the Project and valid in the reporting month is summarized in Table 6.1.

Table 6.1 Summary of Environmental Licensing and Permit Status

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
EIAO	Environmental Permit	EP-353/2009/H	19/01/2015	N/A	HyD	Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities
		EP-354/2009/D	13/03/2015	N/A		Tuen Mun – Chek Lap Kok Link (TMCLKL Southern Landfall Reclamation only)
APCO	NA notification	--	30/12/2011	--	CHEC	Works Area WA2 and WA3
APCO	NA notification	--	17/01/2012	--	CHEC	Works Area WA4
WDO	Chemical Waste Producer Registration	5213-951-C1186-21	30/3/2012	N/A	CHEC	Chemical waste produced in Contract HY/2010/02
WDO	Chemical Waste Producer Registration	5213-974-C3750-01	31/10/2012	--	CHEC	Registration as Chemical Waste Producer at To Kau Wan(WA4)
WDO	Chemical Waste Producer Registration	5213-839-C3750-02	13/09/2012	--	CHEC	Registration as Chemical Waste Producer at TKO 137(FB)
WDO	Billing Account for Disposal of Construction Waste	7014181	05/12/2011	N/A	CHEC	Waste disposal in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RS0270-15	18/03/2015	20/06/2015	CHEC	Reclamation Works in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RE1405-14	22/12/2014	21/06/2015	CHEC	Section of TKO Fill Bank under Contract HY/2010/02

6.4 Implementation Status of Environmental Mitigation Measures

6.4.1 In response to the site audit findings, the Contractors carried out corrective actions.

6.4.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in Appendix C. Most of the necessary mitigation measures were implemented properly.

6.4.3 Training of marine travel route for marine vessels operator was given to relevant staff and relevant records were kept properly.

6.4.4 Regarding the implementation of dolphin monitoring and protection measures (i.e. implementation of Dolphin Watching Plan, Dolphin Exclusion Zone and Silt Curtain integrity Check), regular checking were conducted by the experienced MMOs within the works area to ensure no dolphin was trapped by the enclosed silt curtain systems. Any dolphin spotted within the enclosed silt curtain systems was

reported and recorded. Relevant procedures were followed and measures were well implemented. Silt curtain systems were also inspected timely in accordance to the submitted plan. All inspection records were kept properly.

6.4.5 Acoustic decoupling measures on noisy plants on construction vessels were checked regularly and the Contractor was reminded to ensure provision of ongoing maintenance to noisy plants and to carry out improvement work once insufficient acoustic decoupling measures were found.

6.4.6 Frequency of watering per day on exposed soil was checked; with reference to the record provided by the Contract, watering was conducted at least 8 times per day on reclaimed land. The frequency of watering is the mainly refer to water truck. Sprinklers are only served to strengthen dust control measure for busy traffic at the entrance of Portion D. As informed by the Contractor, during the mal-function period of sprinkler, water truck will enhance watering at such area. The Contractor was reminded to ensure provision of watering of at least 8 times per day on all exposed soil within the Project site and associated works areas throughout the construction phase.

6.4.7 There is a report of silt plume observed near the silt curtain for HZMB HKBCF Project maintained by Contract No. HY/2010/02 during a site visit conducted by HyD on 15 April 2015. The location is near the eastern part of HKBCF reclamation works (portion B and E), near the silt curtain for HZMB HKBCF Project maintained by Contract No. HY/2010/02

6.4.7.1 Investigation action taken:

- Site inspection was conducted jointly with the Contractor, RSS and ESS on 16 April 2015.
- Construction activities and implementation of mitigation measures were reviewed.
- Review of available impact water quality monitoring data of monitoring station IS17, IS(Mf)16 and IS(Mf)9 recorded on 15 April 2015.

6.4.7.2 Investigation results

- No silt plume around the Portion B and Portion E2 of HKBCF reclamation works were observed during the joint site inspection conducted jointly with the Contractor, RSS and ESS on 16 April 2015. Photos were taken and please see below photo record for reference
- No disconnection of silt curtain was observed during the joint site inspection conducted jointly with the Contractor, RSS and ESS on 16 April 2015.
- Works activity such as deep cement mixing on land was observed at the Portion B and Portion E2 of HKBCF reclamation works and relocating rock material of cellular structure was observed at the Portion B of HKBCF reclamation works during the joint site inspection conducted jointly with the Contractor, RSS and ESS on 16 April 2015, however, silt plume or discharge of silt plume was not observed.
- In addition, available impact water quality monitoring data of monitoring station IS17, IS(Mf)16 and IS(Mf)9 obtained on 15 April 2015 was reviewed and the turbidity and suspended solids levels of all monitoring stations were well below the action and limit level.

6.4.7.3 Nevertheless, the Contractor was reminded to continue to properly and implement all water quality mitigation measure.

6.4.7.4 Photo record taken on 15 April 2015 shows that silt plume was observed near the silt curtain for HZMB HKBCF Project maintained by Contract No. HY/2010/02 during a site visit conducted by HyD on 15 April 2015:

6.4.7.5 Photo record taken on 16 April 2015 shows that no silt plume around the Portion B and Portion E2 of HKBCF reclamation works were observed during the joint site inspection conducted jointly with the Contractor, RSS and ESS on 16 April 2015.

6.5 Summary of Exceedances of the Environmental Quality Performance Limit

6.5.1 All 1-Hour TSP and 24-Hour TSP results were below the Action and Limit Level in the reporting month.

6.5.2 For construction noise, no exceedance was recorded at all monitoring stations in the reporting month.

6.5.3 For water quality, no exceedance was recorded at all monitoring stations in the reporting month.

6.5.4 A total of two sightings were made, two “on effort” sightings. One sighting was recorded on 20 April 2015 and one sighting was recorded on 28 April 2015 in NWL. A total of 10 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

6.5.5 Behaviour: Of the two sightings, one group was noted as feeding and one group was noted as travelling, locations of sighting with different behaviour are mapped in Figure 5d

6.5.6 Environmental site inspection was carried out 5 times in April 2015. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

6.5.7 Cumulative statistics on exceedance is provided in Appendix N.

6.6 Summary of Complaints, Notification of Summons and Successful Prosecutions

6.6.1 The Environmental Complaint Handling Procedure is annexed in Figure 6.

6.6.2 One (1) environmental complaint has been received in the reporting month.

6.6.3 Environmental Protection Department (EPD) referred a noise complaint to this project on 10 April 2015 and ENPO forwarded the noise complaint to Environmental Team on 15 April 2015. The complaint involves a complainant, who is resident of Caribbean Coast, Tung Chung and he was disturbed by noise from construction activities of the HZMB Project during weekends and holidays.

6.6.3.1 Investigation Actions:

- Information provided by the complainant was reviewed.
- Available construction noise monitoring results NMS2 and NMS3B (on 8 and 13 April 2015) were reviewed.
- Review of available CNP compliance checking records of 30 March 2015 and 08 April 2015.
- Although sufficient details of the noise problem (such as exact date and location) were not provided by the complainant, the construction activities conducted at Portion B of the reclamation works (which is the works area closest to Caribbean Coast) from 4-7 April 2015 were checked.

6.6.3.2 Investigation findings:

- Construction activities conducted at Portion B of the reclamation works (which is the closest works Portion to Caribbean Coast) from 4-7 April 2015 were reviewed. It is noted that only DCM and jet grouting were in operation and considering they are relatively far away, over 2km, from Caribbean Coast, it is unlikely that the construction activities conducted during from 4-7 April 2015 would cause the noise problem.
- Available CNP compliance checking records of 30 March 2015 and 08 April 2015 shows that the CNP condition was complied with.
- Furthermore, no exceedances of construction noise monitoring results were recorded on 8 and 13 April 2015.

6.6.3.3 After investigation, there is no adequate information to conclude the observed impact is related to this Contract.

6.6.3.4 Recommended Mitigation Measures:

6.6.3.5 Nevertheless, the Contractor was reminded to carry out works on Sunday and public holiday according to the condition of Construction Noise Permit issued by EPD. The Contractor was advised to remind their construction team to draw their attention on relevant noise control ordinance.

6.6.4 No notification of summons and successful prosecutions was received in the reporting period.

6.6.5 Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix N.

7 FUTURE KEY ISSUES

7.2 Construction Programme for the Coming Months

7.2.1 As informed by the Contractor, the major works for the Project in May and June 2015 will be*:-

Marine-base

- Cellular structure installation and backfilling
- Capping Beams structures
- Conforming sloping seawalls
- Laying geo-textile
- Surcharge remove & laying
- Rock fill
- Marine fill
- Earthwork fill
- Deep Cement Mixing
- Jet grout columns works
- Removal of Temporary Seawall
- Installations of Precast Culverts except sloping outfalls
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base

- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Maintenance of Temporary Marine Access at Works Area WA2

*Construction activities in May and June 2015 will be changed subject to works progress.

7.3 Key Issues for the Coming Month

7.3.1 Key issues to be considered in the coming months:-

- Site runoff should be properly collected and treated prior to discharge;
- Minimize loss of sediment from filling works;
- Regular review and maintenance of silt curtain systems, drainage systems and desilting facilities;
- Exposed surfaces/soil stockpiles should be properly treated to avoid generation of silty surface run-off during rainstorm;
- Regular review and maintenance of wheel washing facilities provided at all site entrances/exits;
- Conduct regular inspection of various working machineries and vessels within works areas to avoid any dark smoke emission;
- Suppress dust generated from work processes with use of bagged cements, earth movements, excavation activities, exposed surfaces/soil stockpiles and haul road traffic;
- Quieter powered mechanical equipment should be used;
- Provision of proper and effective noise control measures for operating equipment and machinery on-site, such as erection of movable noise barriers or enclosure for noisy plants;
- Closely check and replace the sound insulation materials regularly;
- Better scheduling of construction works to minimize noise nuisance;
- Properly store and label oil drums and chemical containers placed on site;
- Proper chemicals, chemical wastes and wastes management;
- Maintenance works should be carried out within roofed, paved and confined areas;
- Collection and segregation of construction waste and general refuse on land and in the sea should be carried out properly and regularly; and
- Proper protection and regular inspection of existing trees, transplanted/retained trees.
- Control night-time lighting and glare by hooding all lights.
- Regular review and provide maintenance to dust control measures such as sprinkler system.

7.4 Monitoring Schedule for the Coming Month

7.4.1 The tentative schedule for environmental monitoring in May 2015 is provided in Appendix F.

8 CONCLUSIONS AND RECOMMENDATIONS

8.2 Conclusions

8.2.1 The construction phase and EM&A programme of the Project commenced on 12 March 2012.

8.2.2 All 1-Hour TSP and 24-Hour TSP results were below the Action and Limit Level in the reporting month.

8.2.3 For construction noise, no exceedance was recorded at all monitoring stations in the reporting month.

8.2.4 All impact water quality monitoring results were below the Action and Limit Level in the reporting month.

8.2.5 A total of two sightings were made, two “on effort” sightings. One sighting was recorded on 20 April 2015 and one sighting was recorded on 28 April 2015 in NWL. A total of 10 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

8.2.6 Behaviour: Of the two sightings, one group was noted as feeding and one group was noted as travelling, locations of sighting with different behaviour are mapped in Figure 5d

8.2.7 Environmental Protection Department (EPD) referred a noise complaint to this project on 10 April 2015 and ENPO forwarded the noise complaint to Environmental Team on 15 April 2015. The complaint involves a complainant, who is resident of Caribbean Coast, Tung Chung and he was disturbed by noise from construction activities of the HZMB Project during weekends and holidays. After investigation, there is no adequate information to conclude the observed noise nuisance is related to this Contract.

8.2.8 No notification of summons or prosecution was received in the reporting period.

8.2.9 Environmental site inspection was carried out 5 times in April 2015. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

8.3 Recommendations

8.3.1 According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

Air Quality Impact

- All working plants and vessels on site should be regularly inspected and properly maintained to avoid dark smoke emission.
- All vehicles should be washed to remove any dusty materials before leaving the site.
- Haul roads should be sufficiently dampened to minimize fugitive dust generation.
- Wheel washing facilities should be properly maintained and reviewed to ensure properly functioning.
- Temporary exposed slopes and open stockpiles should be properly covered.
- Enclosure should be erected for cement debagging, batching and mixing operations.
- Water spraying should be provided to suppress fugitive dust for any dusty construction activity.
- Regular review and provide maintenance to dust control measures such as sprinkler system.

Construction Noise Impact

- Quieter powered mechanical equipment should be used as far as possible.
- Noisy operations should be oriented to a direction away from sensitive receivers as far as possible.
- Proper and effective noise control measures for operating equipment and machinery on-site should be provided, such as erection of movable noise barriers, enclosure for noisy plants or enhancement works to provide sufficient acoustic decoupling measure(s). Closely check and replace the sound insulation materials regularly
- Vessels and equipment operating should be checked regularly and properly maintained.
- Noise Emission Label (NEL) shall be affixed to the air compressor and hand-held breaker operating within works area.
- Acoustic decoupling measures should be properly implemented for all existing and incoming construction vessels with continuous and regularly checking to ensure effective implementation of acoustic decoupling measures.

Water Quality Impact

- Regular review and maintenance of silt curtain systems, drainage systems and desilting facilities in order to make sure they are functioning effectively.
- Construction of seawall should be completed as early as possible.
- Regular inspect and review the loading process from barges to avoid splashing of material.
- Silt, debris and leaves accumulated at public drains, wheel washing bays and perimeter u-channels and desilting facilities should be cleaned up regularly.
- Silty effluent should be treated/ desilted before discharged. Untreated effluent should be prevented from entering public drain channel.
- Proper drainage channels/bunds should be provided at the site boundaries to collect/intercept the surface run-off from works areas.
- Exposed slopes and stockpiles should be covered up properly during rainstorm.

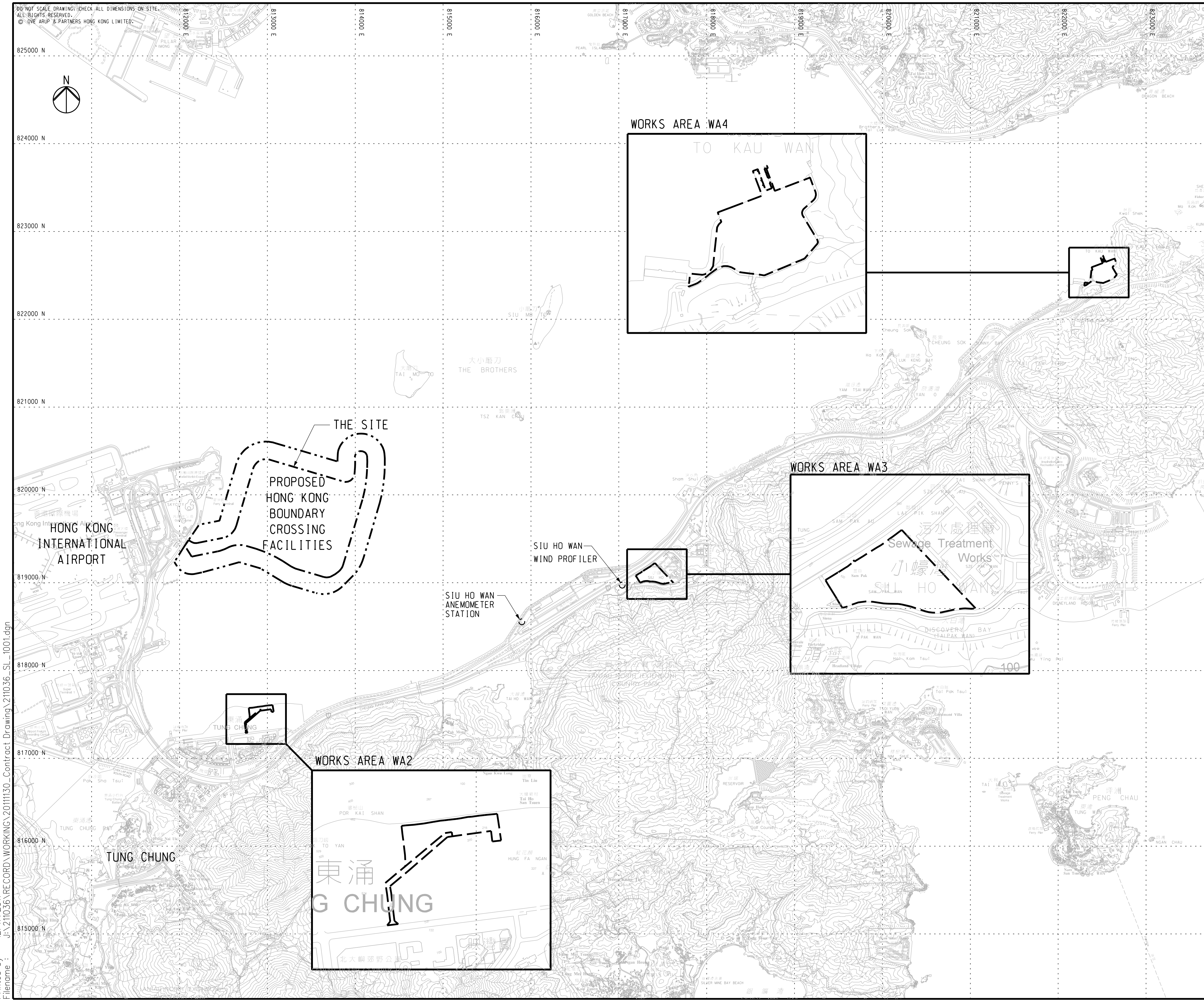
Chemical and Waste Management

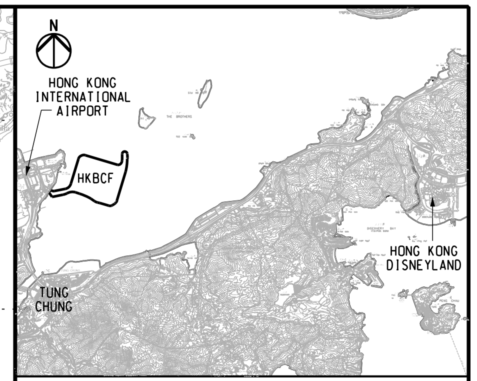
- All types of wastes, both on land and floating in the sea, should be collected and sorted properly and disposed of timely and properly. They should be properly stored in designated areas within works areas temporarily.
- All chemical containers, batteries and oil drums should be properly stored and labelled.
- All plants and vehicles on site should be properly maintained to prevent oil leakage. Proper measures, like drip trays and/or bundings, should be provided for retaining leaked oil/chemical from plants.
- All kinds of maintenance works should be carried out within roofed, paved and confined areas.
- All drain holes of the drip trays utilized within works areas should be properly plugged to avoid any oil and chemical waste leakage.
- Oil stains on soil surface, accumulated oil mixture and empty chemical containers should be cleared and disposed of as chemical waste.
- Regular review should be conducted for working barges and patrol boats to ensure sufficient measures and spill control kits were provided on working barges and patrol boats to avoid any spreading of leaked oil/chemicals.

Landscape and Visual Impact

- All existing, retained/transplanted trees at the works areas should be properly fenced off and regularly inspected.
- Control night-time lighting and glare by hooding all lights.

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
ALL RIGHTS RESERVED.
© OVE ARUP & PARTNERS HONG KONG LIMITED.





KEY PLAN

NOTES

1. ALL COORDINATES ARE RELATED TO HONG KONG 1980 GRID.
2. ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM (mPD).
3. REFER TO DRG NO. 211036/SL/1002 FOR THE DEFINITION OF SETTING OUT LINE (SOL) FOR THE HONG KONG BOUNDARY CROSSING FACILITIES (HKBCF) RECLAMATION SITE.
4. REFER TO DRG NO. 211036/SL/1004 FOR DETAILS OF SITE BOUNDARY.
5. FOR EXTENT OF SORTING FACILITIES AT FILL BANK AT TSEUNG KWAN O AREA 137 REFER TO DRG NO. 211036/SL/1015.

LEGEND

- SITE BOUNDARY
- SETTING OUT LINE (SOL)
- WORKS AREA BOUNDARY

Rev	Description	By	Date
-	FOR CONSTRUCTION	HYJL	11/11

Consultant

ARUP 奧雅納工程顧問 Ove Arup & Partners Hong Kong Limited

Supported By :
- Ecosystems Ltd.
- EDA Marine Ltd.
- Geotechnical Consulting Group (Asia) Ltd.
- Hong Kong Cetacean Research Project
- InteliBuild Technyx Asia Limited
- Tony Gee and Partners LLP

Contract No. and Title:

Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities
- Reclamation Works

Drawing title

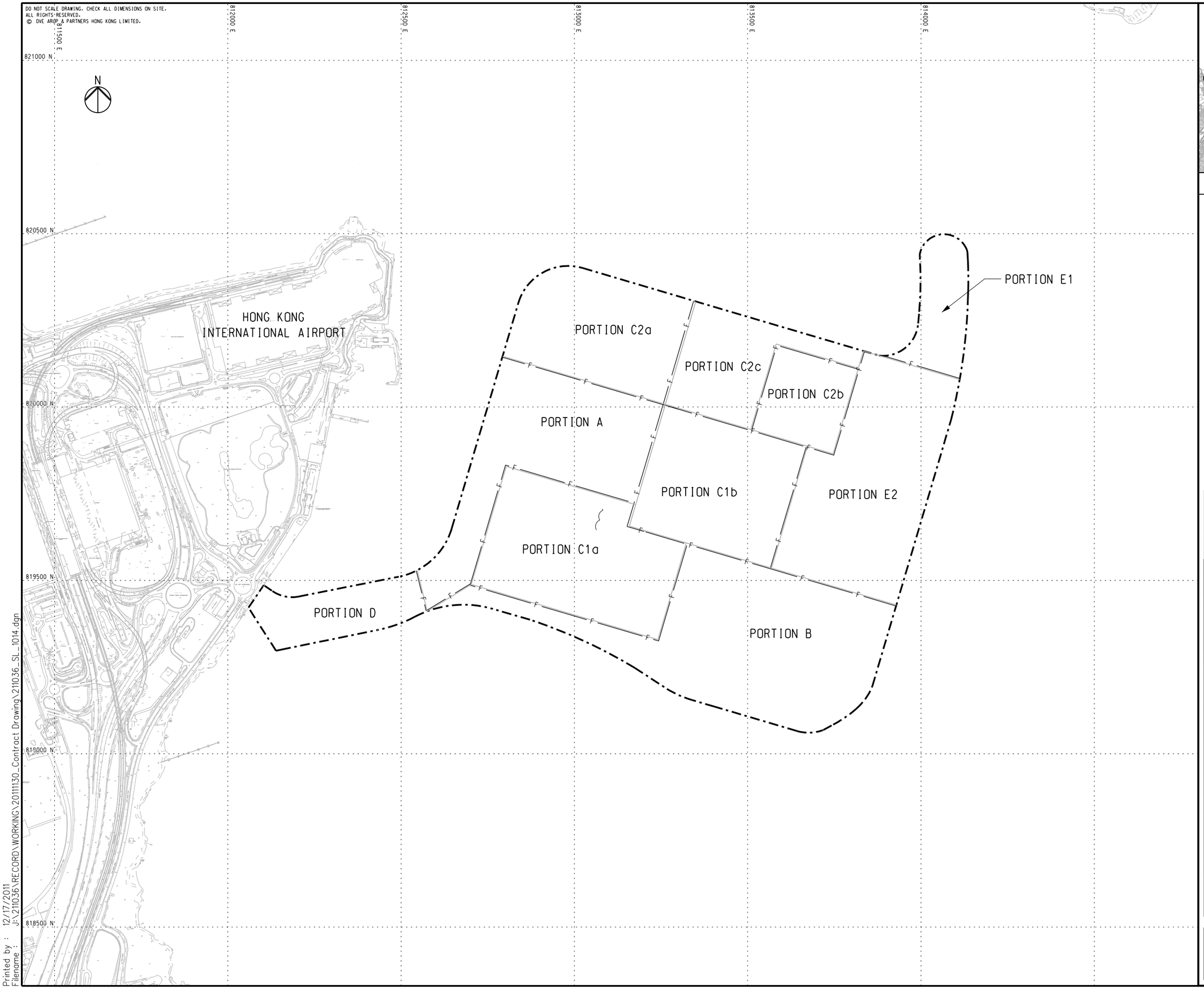
KEY PLAN

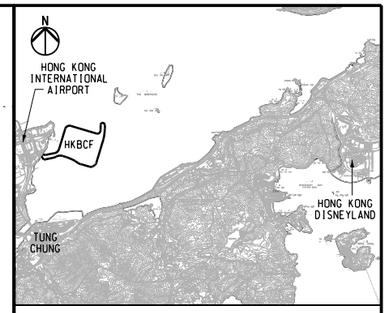
Drawing no.			Rev.
211036/SL/1001			-
Drawn: RL	Date: 11/09	Checked: KKY	Approved: DML
Scale: 1:20000 @A1 1:40000 @A3		Status: WORKING	

COPYRIGHT RESERVED

路政署
HIGHWAYS DEPARTMENT
港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
ALL RIGHTS RESERVED.
© OVE ARUP & PARTNERS HONG KONG LIMITED.





KEY PLAN

NOTES

1. FOR LEGENDS AND NOTES FOR CHAIN LINK FENCE AND GATE REFER TO DRG NO. 211036/SL/1013.
2. THE ERECTION OF CHAIN LINK FENCE AND GATES SHALL BE COMPLETED BY THE HANDOVER DATE OF EACH PORTION OF SITE, OR AS INSTRUCTED BY THE ENGINEER.
3. FOR SETTING OUT COORDINATES OF DIFFERENT PORTIONS OF SITE REFER TO DRG NO. 211036/SL/1003.
4. ACCESS POINTS BETWEEN PORTIONS SHALL BE PROVIDED BY THE CONTRACTOR. AND THE LOCATIONS SHALL BE AGREED WITH THE ENGINEER ON SITE.
5. FOR HOARDING AND FENCE AT FILL BANK AT TSEUNG KWAN O AREA 137 REFER TO DRG NO. 211036/SL/1015.

LEGEND

- SETTING OUT LINE (SOL)
- WORKS AREA BOUNDARY
- PORTIONS BOUNDARY LINE

Rev	Description	By	Date
-	FOR CONSTRUCTION	HYJL	11/11

Consultant

ARUP 奧雅納工程顧問 Ove Arup & Partners Hong Kong Limited

Supported By :
- Ecosystems Ltd.
- EDA Marine Ltd.
- Geotechnical Consulting Group (Asia) Ltd.
- Hong Kong Cetacean Research Project
- InteliBuild Technyx Asia Limited
- Tony Gee and Partners LLP

Contract No. and Title:
Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities
- Reclamation Works

Drawing title
WORKS AREA LAYOUT
AND HORADING PLAN
(SHEET 2 OF 3)

Drawing no.	Rev.
211036/SL/1014	-

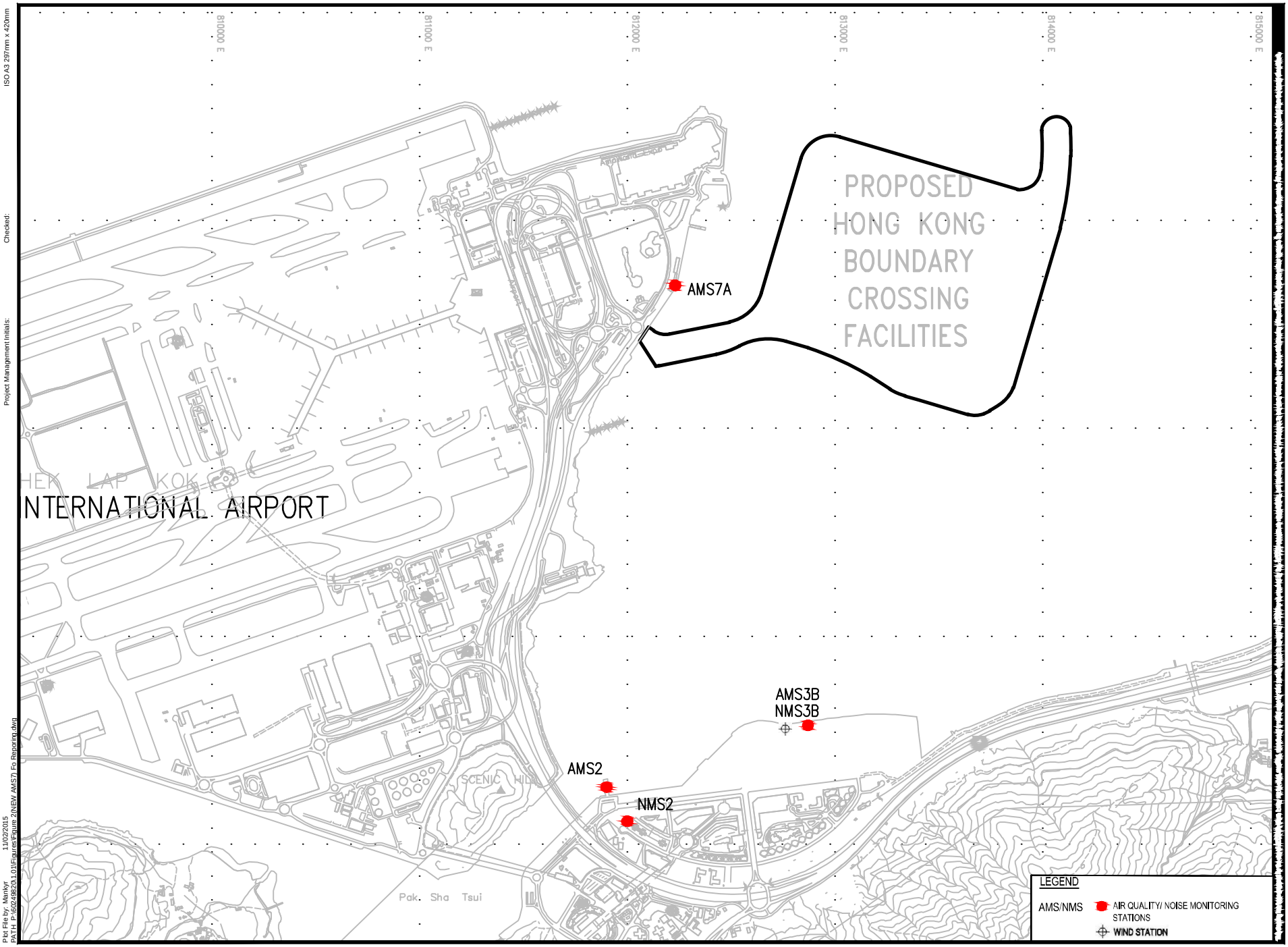
Drawn	Date	Checked	Approved
RL	06/10	KKY	DML

Scale 1:5000 @A1 1:10000 @A3
Status WORKING

COPYRIGHT RESERVED

路政署 HIGHWAYS DEPARTMENT
港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Printed by : 12/17/2011
Filename : J:\211036\RECORD\WORKING\20111130_Contract Drawing\211036_SL_1014.dgn



ISO A3 297mm x 420mm

Checked:

Project Management Initials:

Plot File by: Marklyn 11/02/2015
PATH: P:\60249820\1.01\Figures\Figure 2(NEW AMS7) Fo Reporting.dwg

AECOM

Figure 2

AIR QUALITY AND NOISE MONITORING STATIONS FOR HKBCF

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Project No.: -

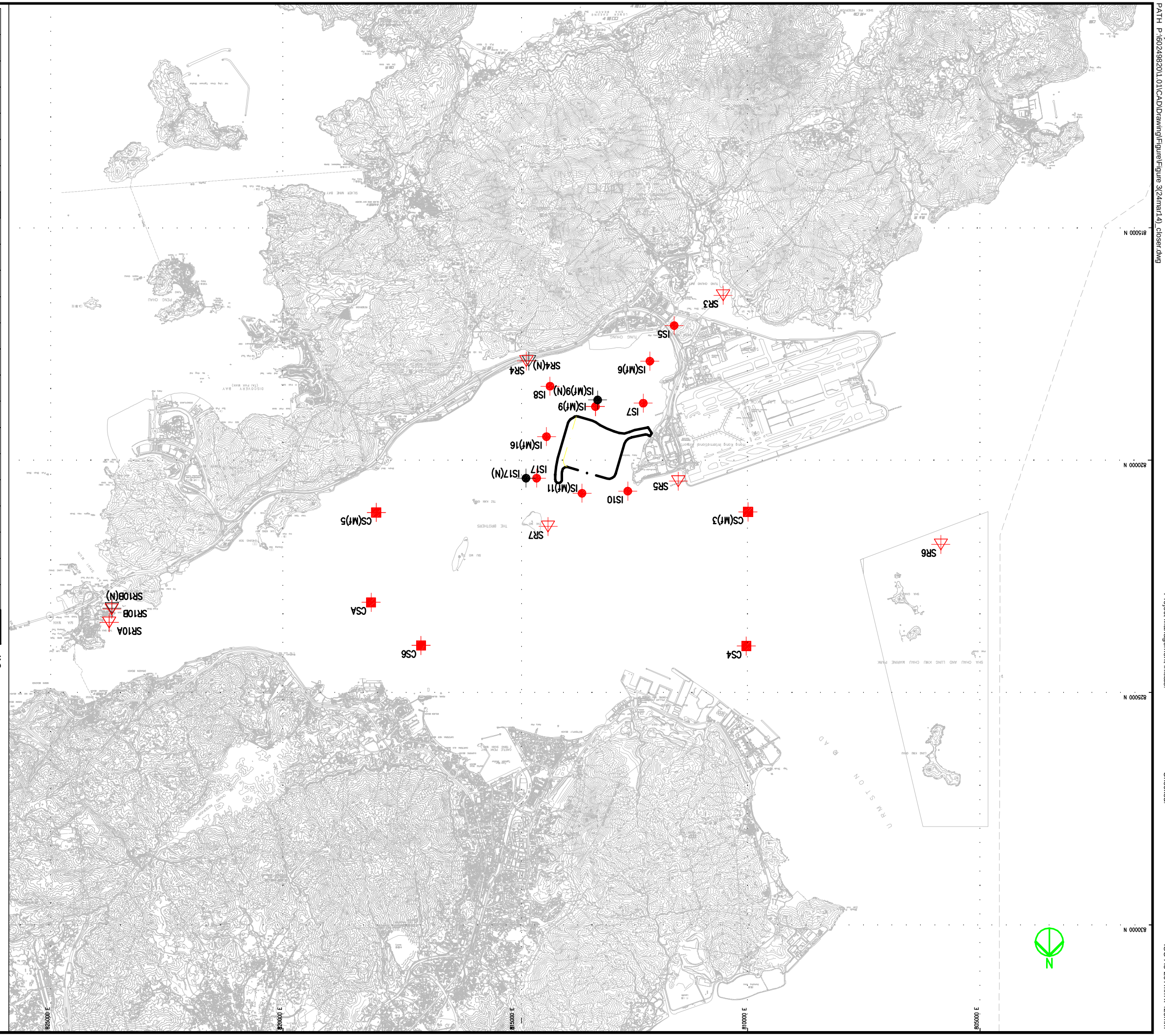
Date: JANUARY 2015

Plot File by: Kwokhc
PATH P:\60249820\1.01CAD\Drawing\Figure\Figure 3(24mar14)_closer.dwg
25/03/2014

Project Management Initials:

Checked:

ISO A3 297mm x 420mm



MONITORING STATIONS	CO-ORDINATES	
	EASTING	NORTHING
IS5	811579	817106
IS(M)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(M)9	813273	818850
IS(M)9(N)	813226	818708
IS10	812577	820670
IS(M)11	813562	820716
IS(M)16	814328	819497
IS17	814539	820391
IS17(N)	814767	820391
SR3	810525	816456
SR4(N)	814705	817859
SR5	811489	820455
SR6	805837	821818
SR7	814293	821431
SR10A	823741	823495
SR10B(N)	823683	823187
CS(M)3	809989	821117
CS(M)5	817990	821129
CS4	810025	824004
CS6	817028	823992
CSA	818103	823064

SETTING OUT SCHEDULE

LEGEND

- IS — IMPACT STATIONS
- CS — CONTROL / FAR FIELD STATIONS
- SR — SENSITIVE RECEIVERS STATIONS
- SR — SENSITIVE RECEIVERS STATIONS (RELOCATED)
- IS — IMPACT STATIONS (RELOCATED)

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

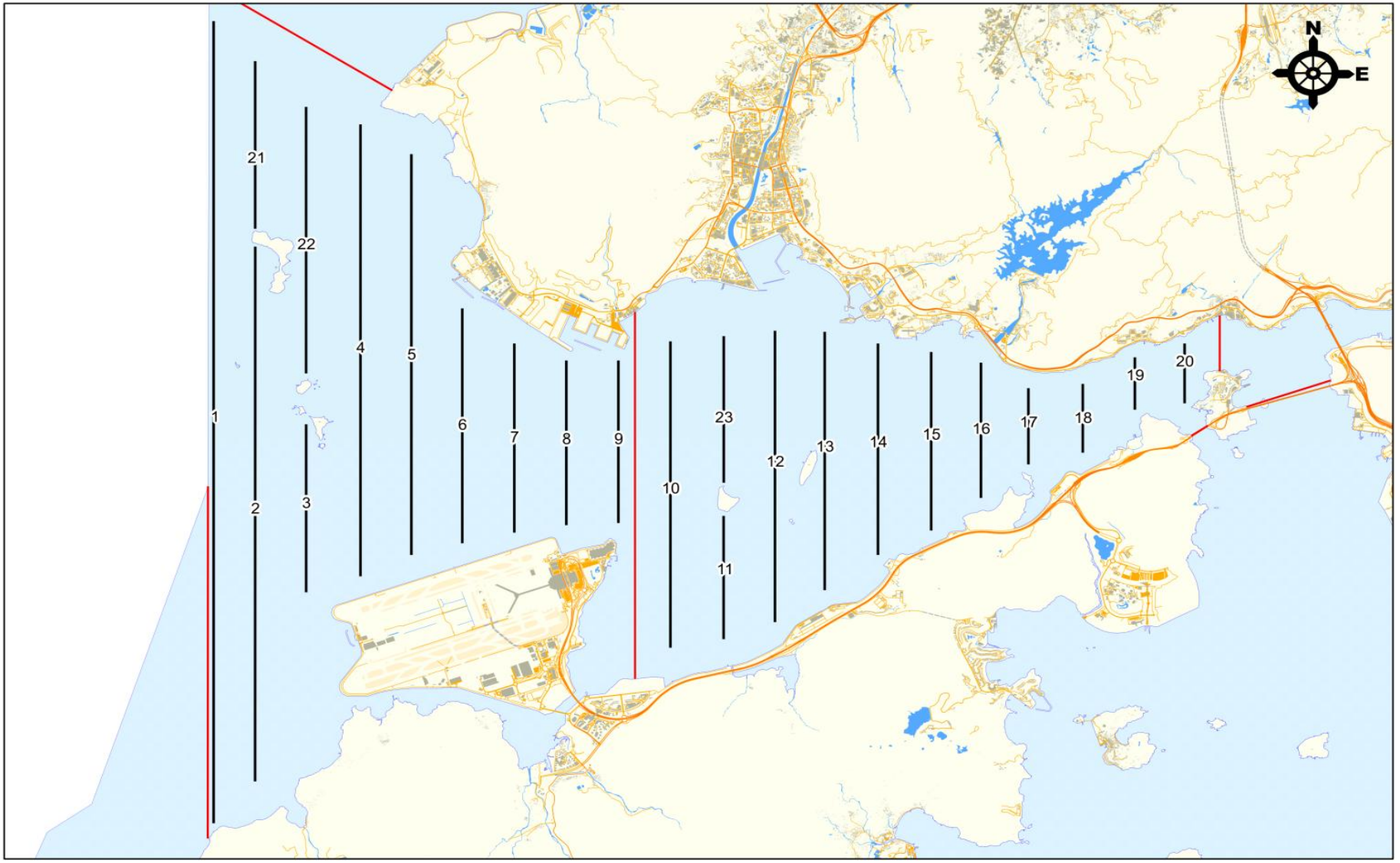
Project No.: -

Date: MAR 2014

WATER QUALITY MONITORING STATION

AECOM

Figure 3



***Remark: Transect 10 is now 3.6km in length due to the HKBCF construction site. The total transect length for both NEL and NWL combined is 111km.**

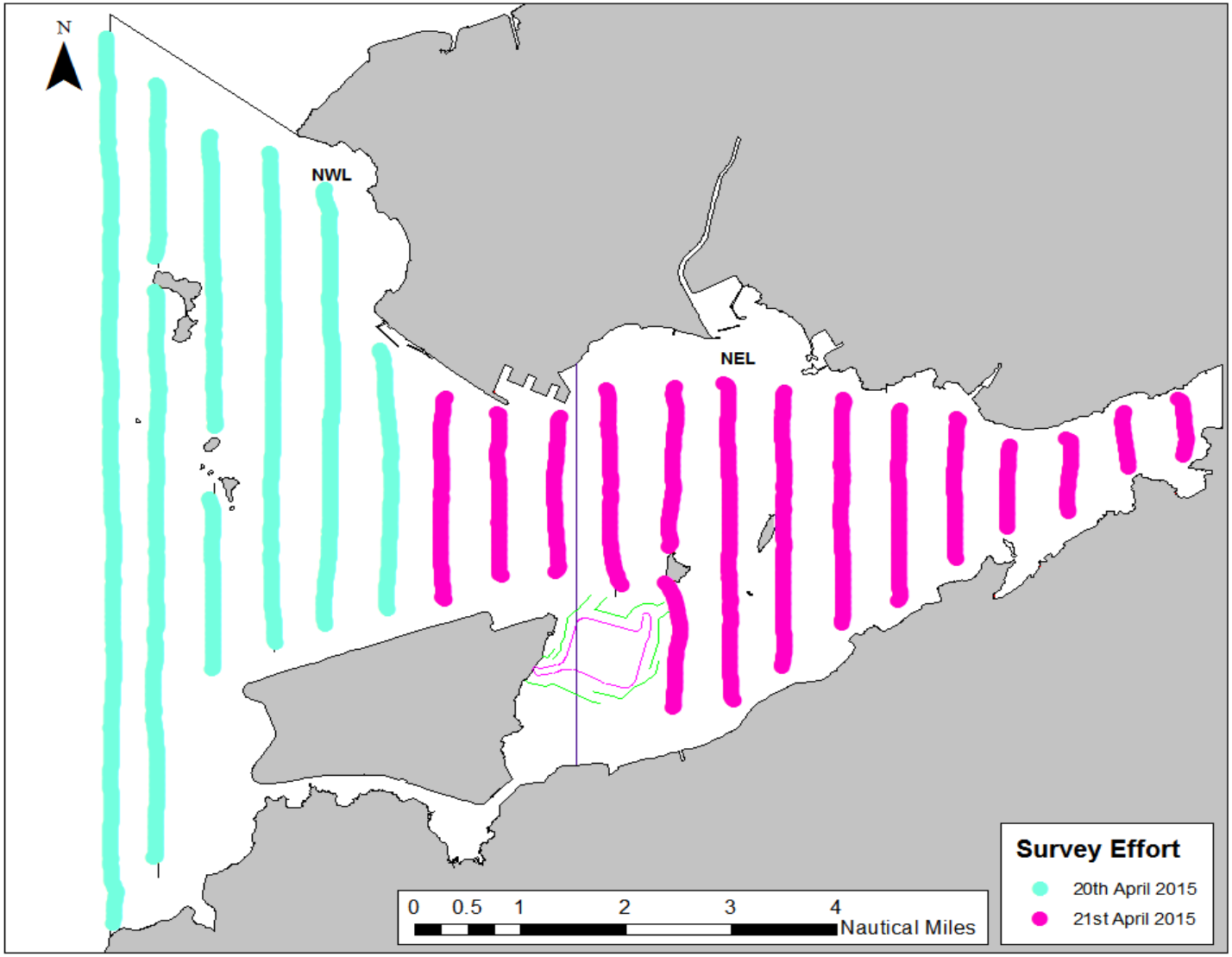
This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained fron

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 Date: January 13

Impact Dolphin Monitoring
Line Transect Layout Map

AECOM

Figure 4

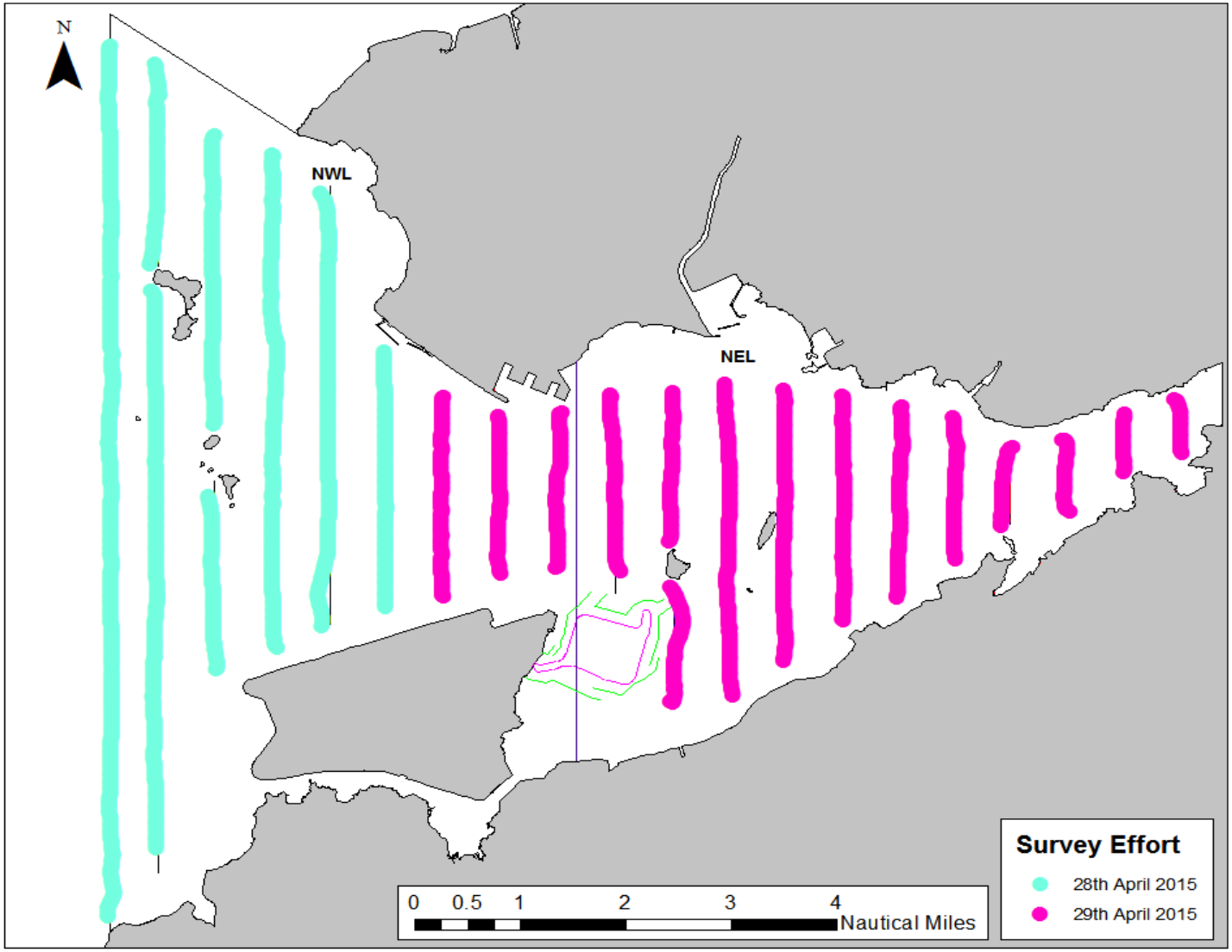


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2015**

Impact Dolphin Monitoring Survey Efforts on 20 and 21 April 2015

Figure 5a

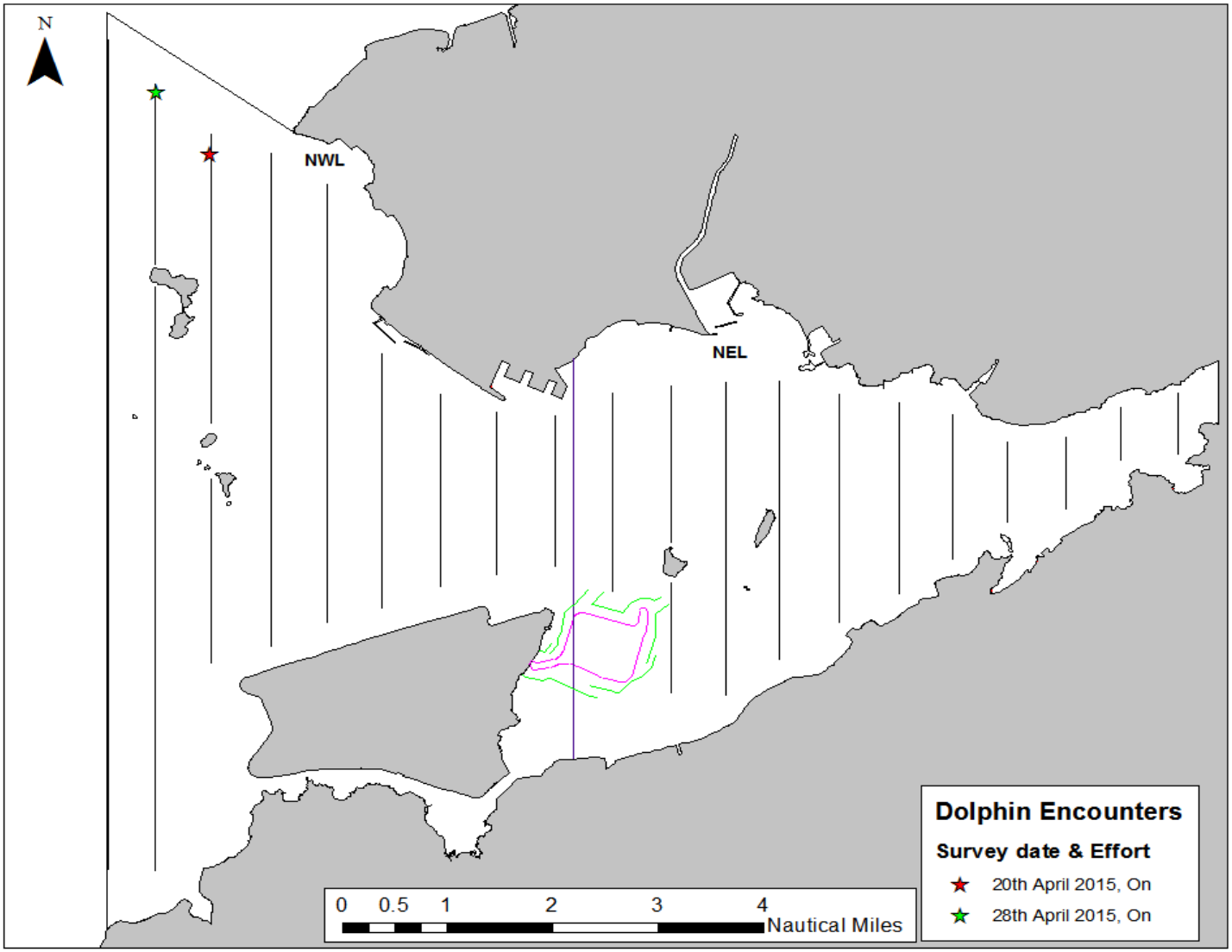


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2015**

Impact Dolphin Monitoring Survey Efforts on 28 and 29 April 2015

Figure 5b

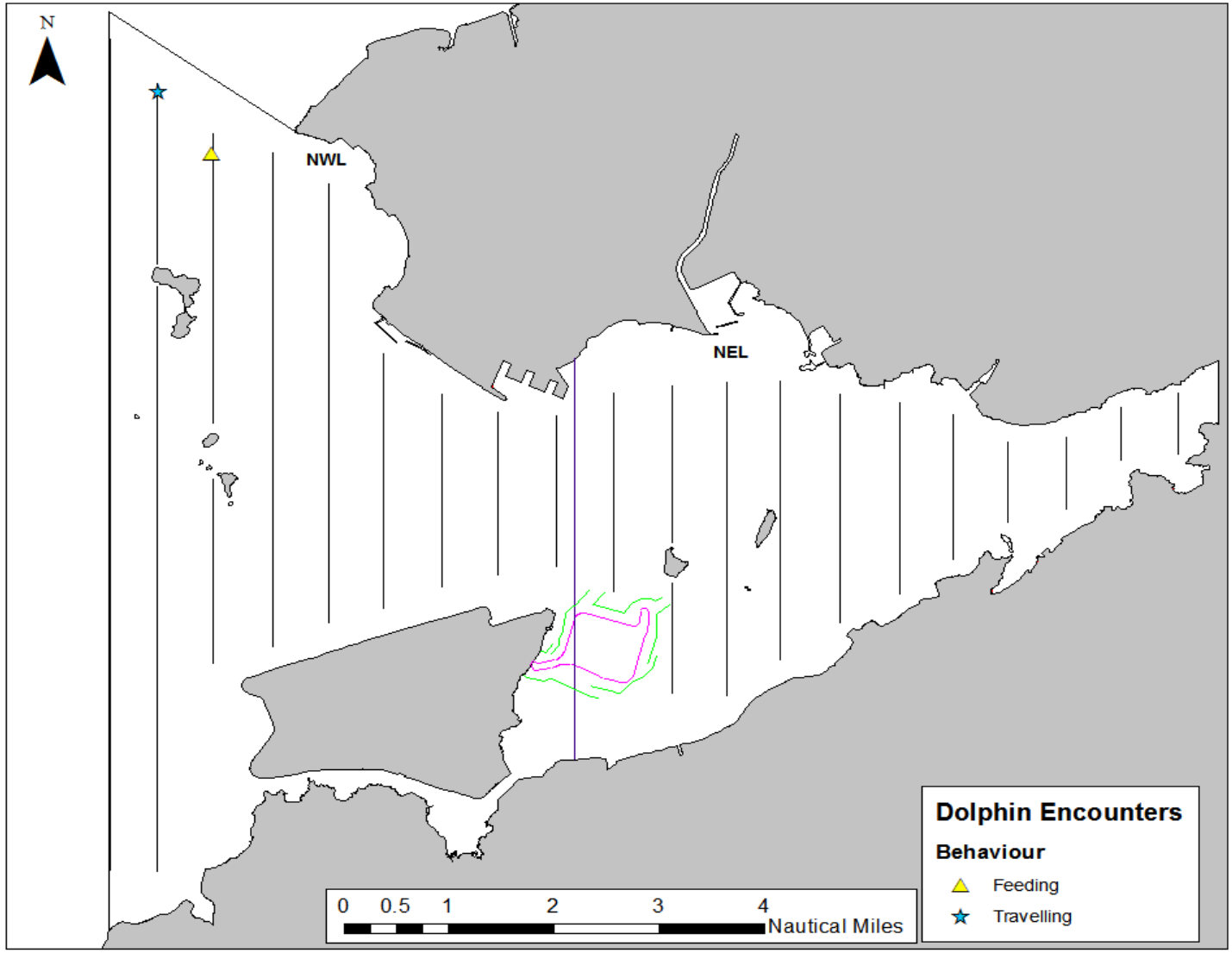


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2015**

Impact Dolphin Monitoring Survey
Sightings in April 2015

Figure 5c

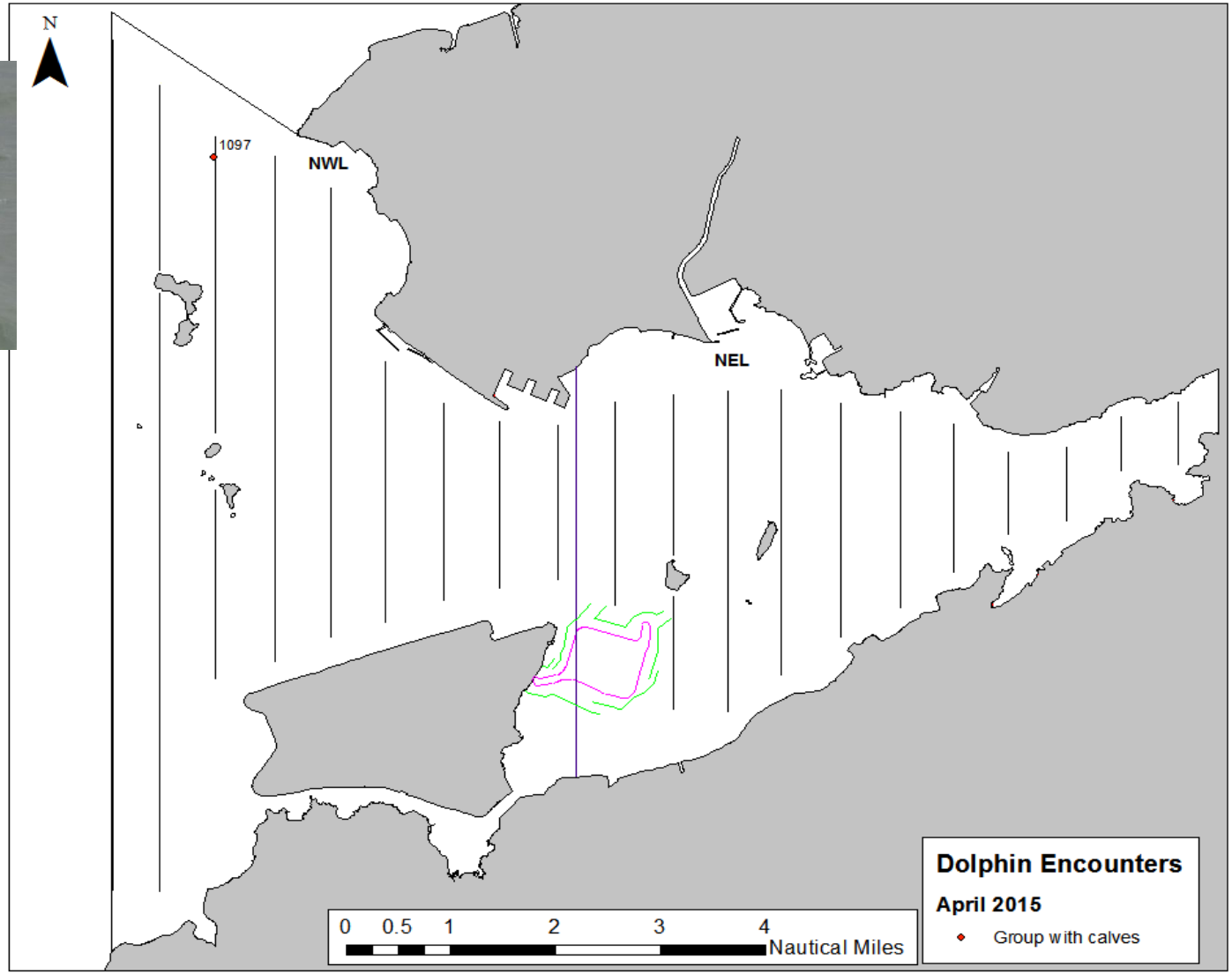


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2015**

Impact Dolphin Monitoring Survey
Behaviour Map in April 2015

Figure 5d

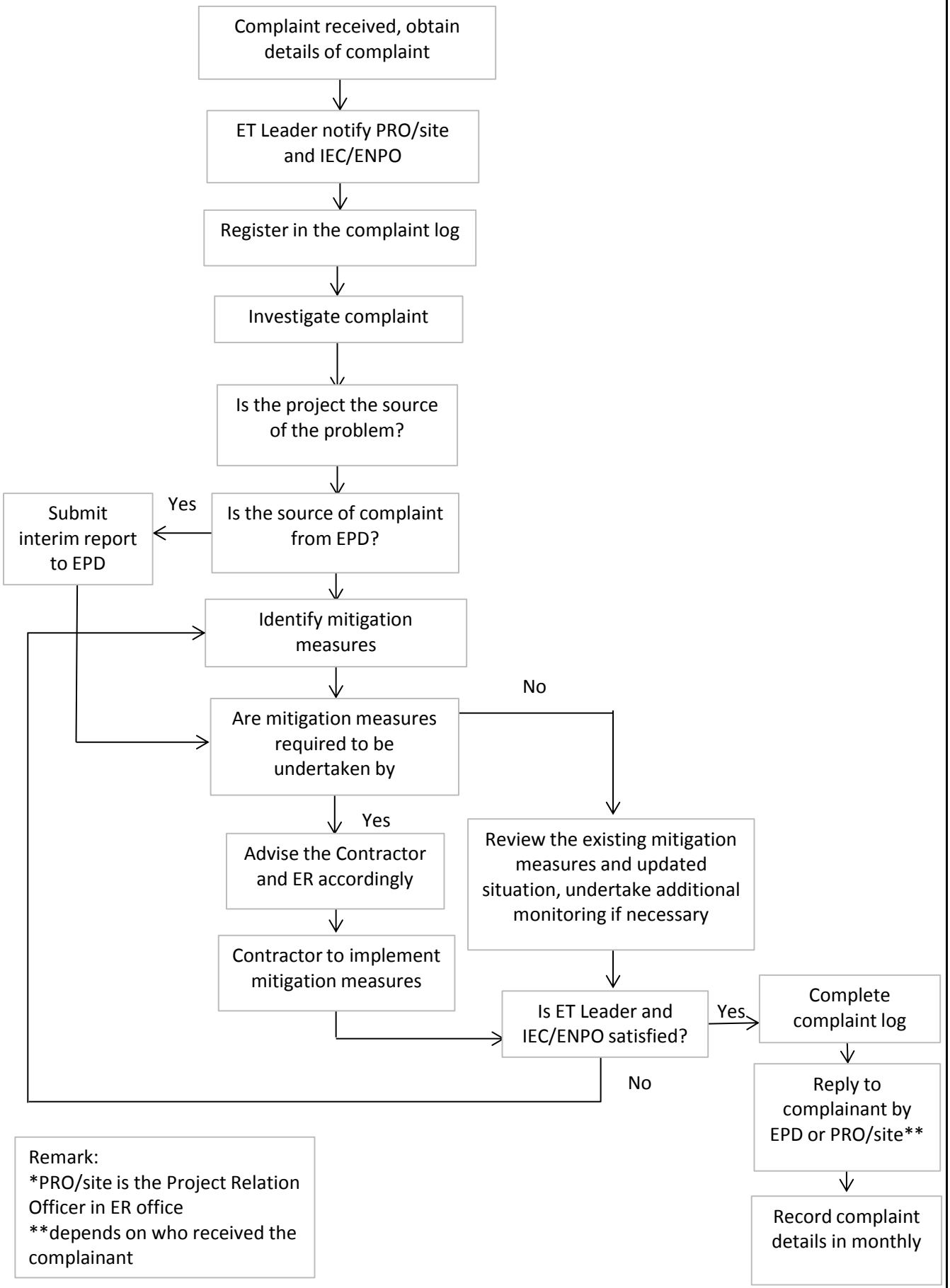


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2015**

Impact Dolphin Monitoring Survey Calf
Map in April 2015

Figure 5e



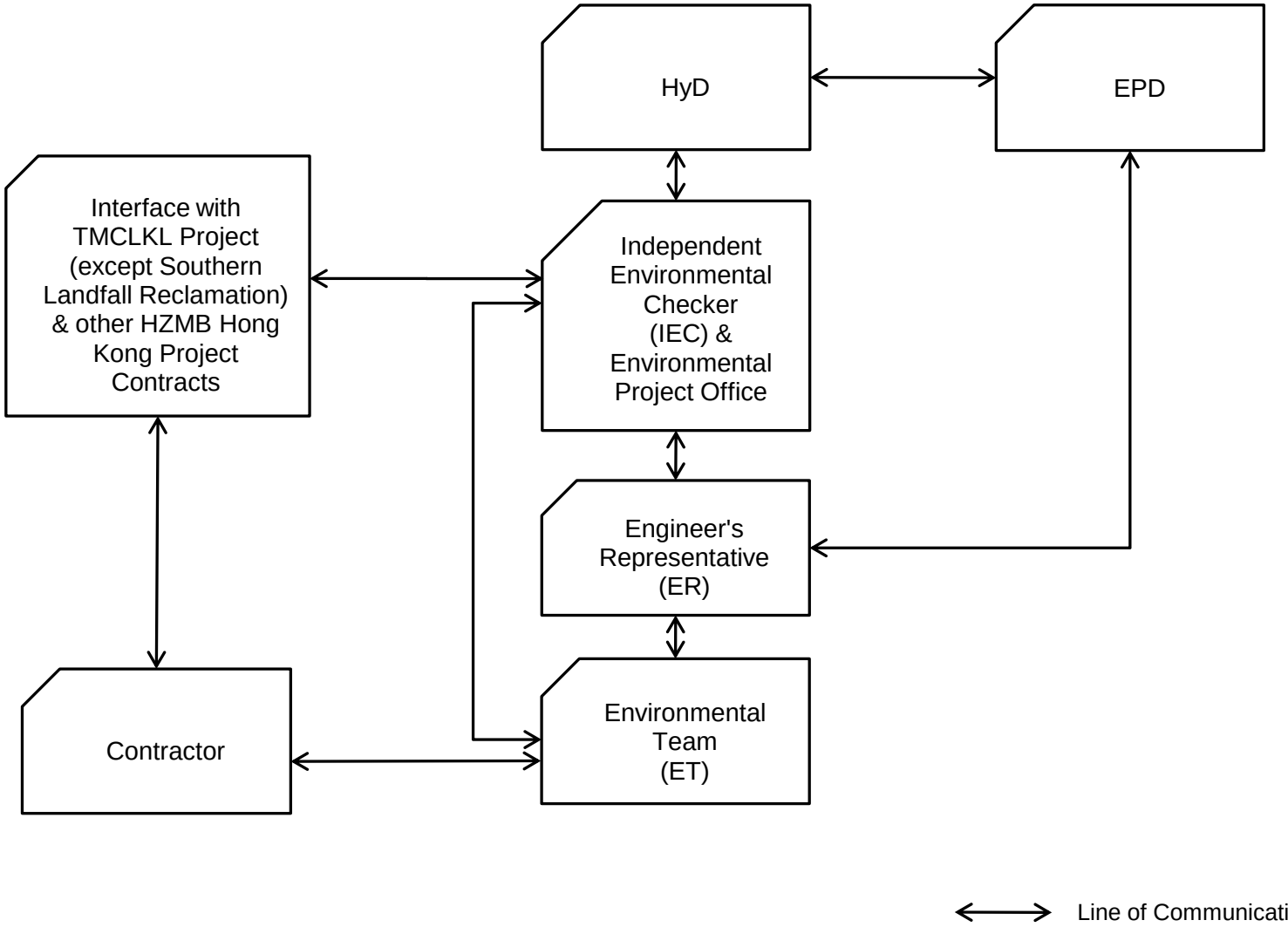
This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Environmental Complaint Handling Procedure

Project No.: 60249820 **Date: July 2012** **Figure 6**



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

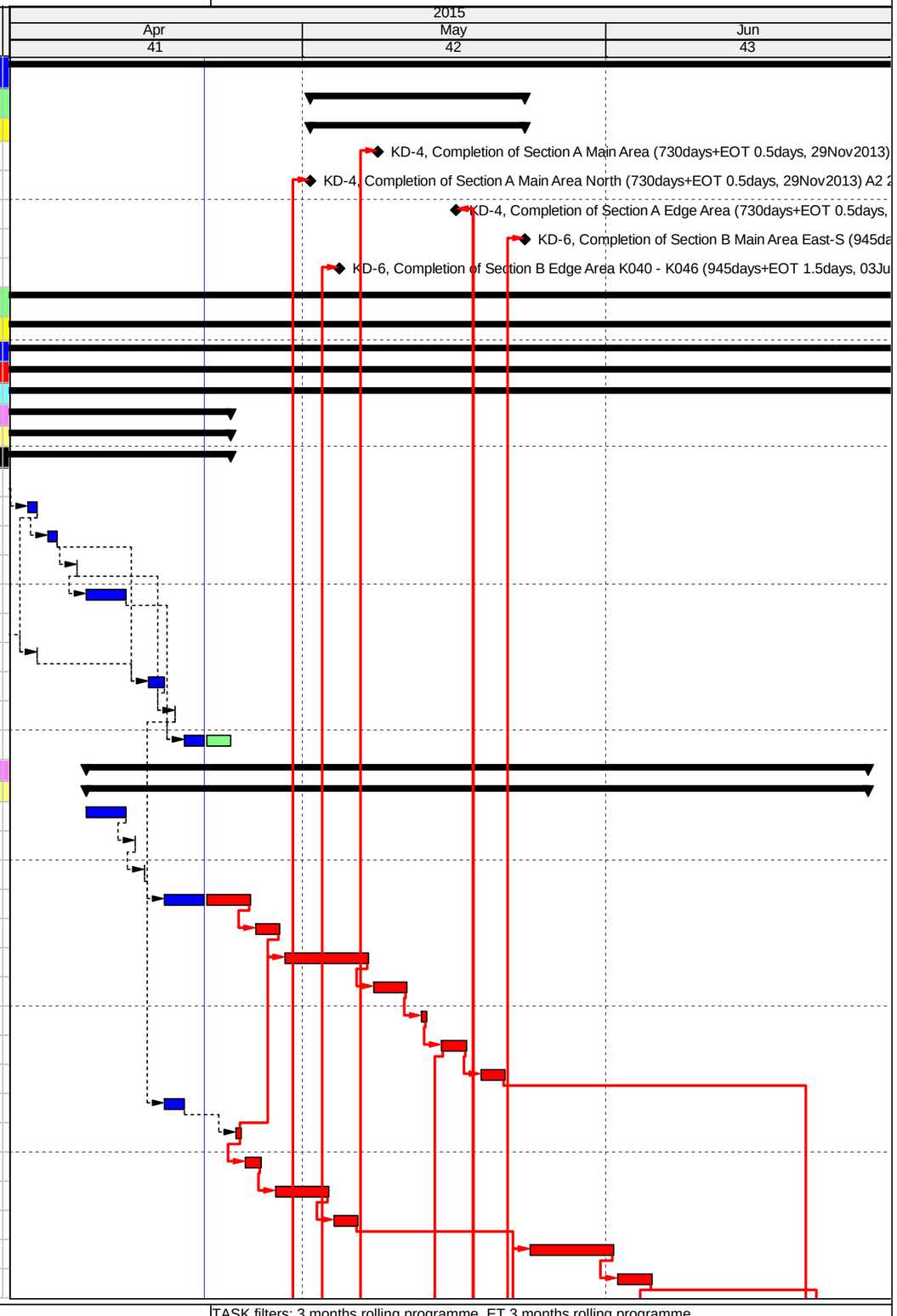
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
--RECLAMATION WORKS
Project No.: 60249820 Date: April 2013

Project Organisation for Environmental Works

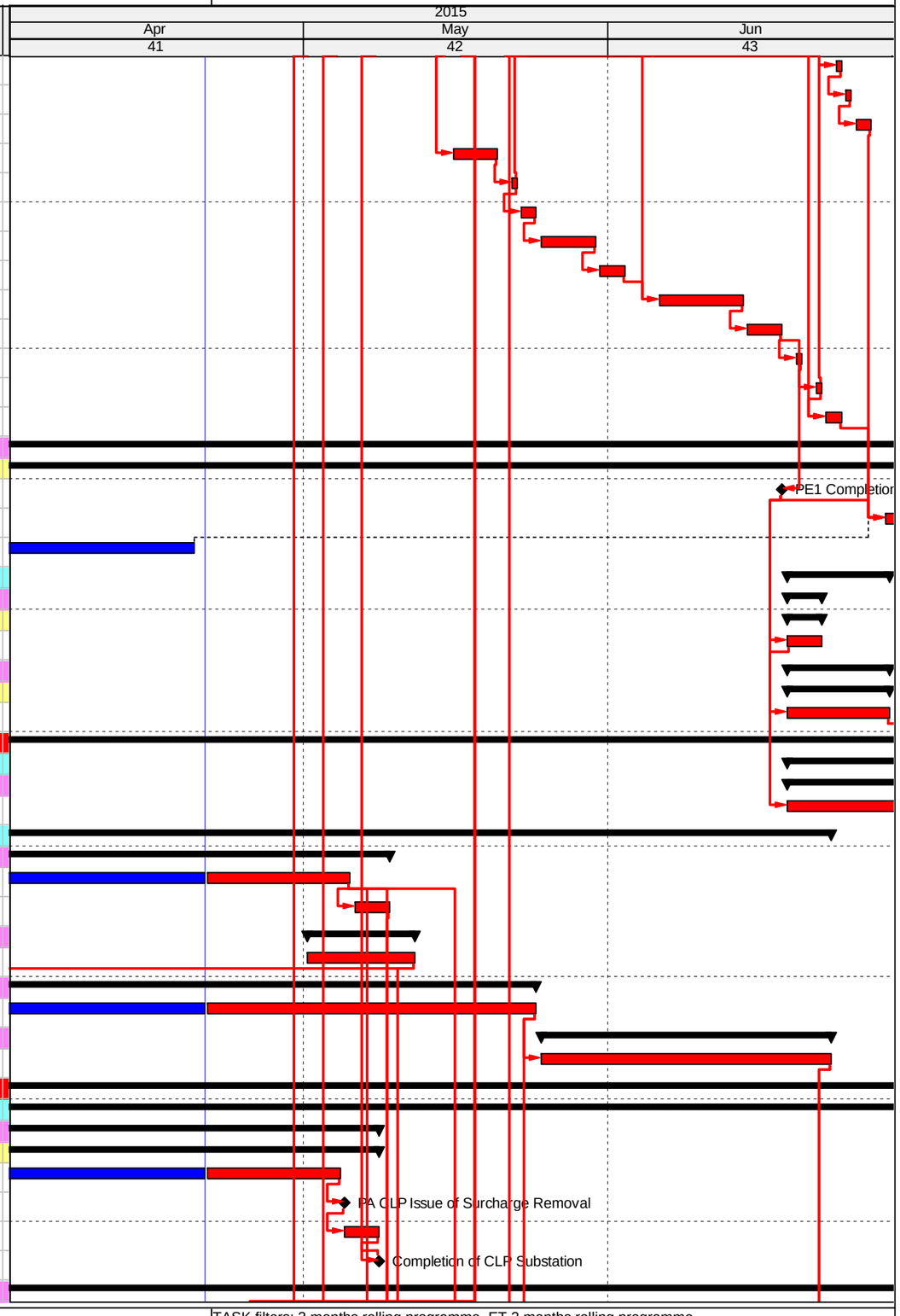
AECOM

Appendix A

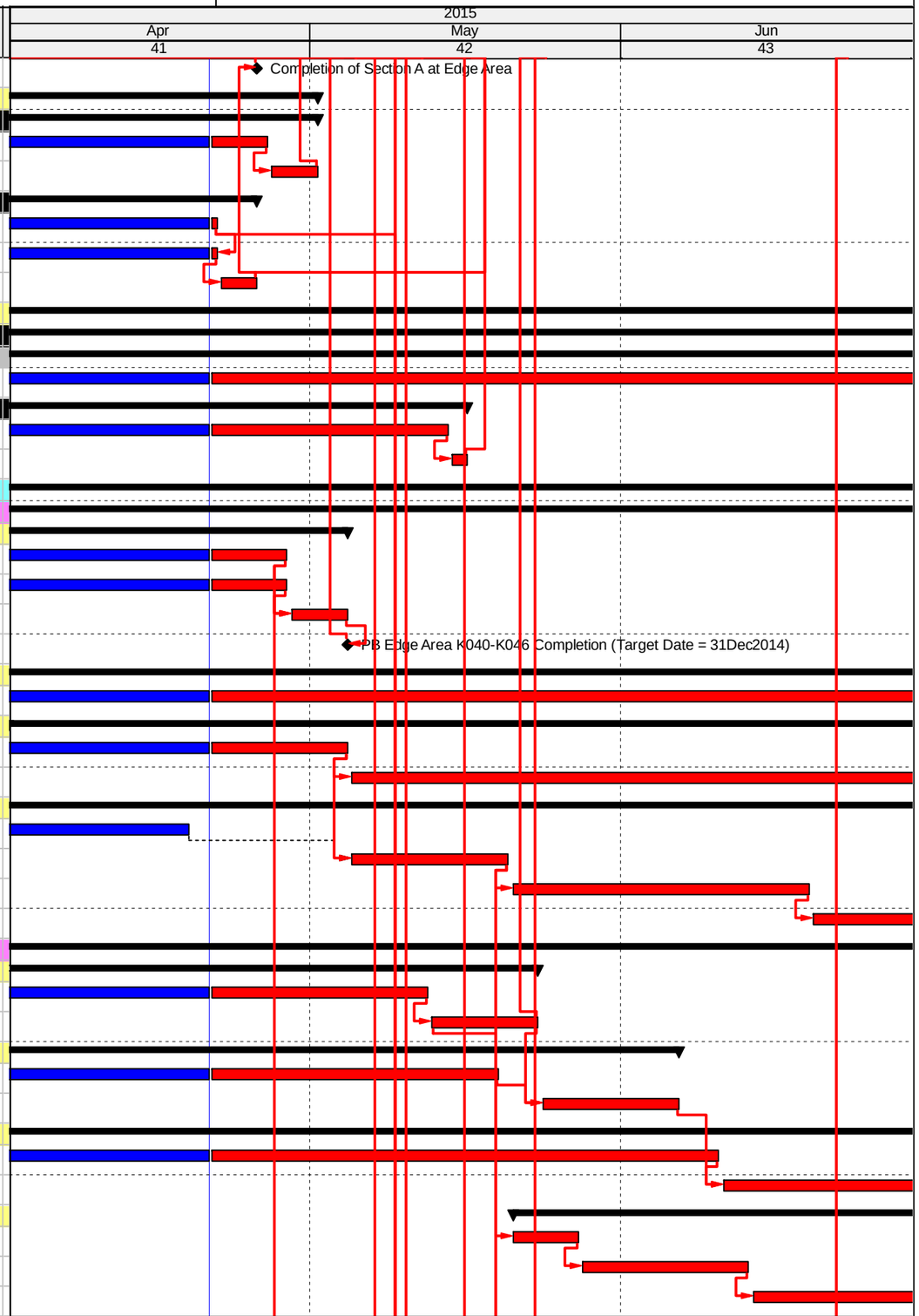
Activity ID	Activity Name	Start	Finish
41st Monthly Progress Report Status as on 21Apr2015		21-May-12 A	28-Feb-17
Contract Key Dates		01-May-15	23-May-15
Key Dates for achievement of Stages and completion of Sections		01-May-15	23-May-15
G1060	KD-4, Completion of Section A Main Area (730days+EOT 0.5days, 29Nov2013) CLP Substation 28 Apr2014		08-May-15*
G1064	KD-4, Completion of Section A Main Area North (730days+EOT 0.5days, 29Nov2013) A2 29 Apr2014		01-May-15*
G1065	KD-4, Completion of Section A Edge Area (730days+EOT 0.5days, 29Nov2013) 25 Oct2014		16-May-15*
G1080	KD-6, Completion of Section B Main Area East-S (945days+EOT 1.5days, 03Jul2014) 31Oct2014		23-May-15*
G1085	KD-6, Completion of Section B Edge Area K040 - K046 (945days+EOT 1.5days, 03Jul2014) 31Dec2014 w DCN		04-May-15*
Work Zone, as defined in PS Clause 1.03(6)		05-Sep-14 A	16-Dec-15
Portion A, B, C & E		05-Sep-14 A	16-Dec-15
Portion A, B, C & E		05-Sep-14 A	16-Dec-15
Seawall		20-Mar-15 A	15-Jul-15
Cellular Structures		20-Mar-15 A	15-Jul-15
Cellular Main Cells 85cells		20-Mar-15 A	23-Apr-15
Full Guide Frames Method 85cells		20-Mar-15 A	23-Apr-15
Portion E1 C078 & C079 & Portion E2 C065 & C066 4cells		20-Mar-15 A	23-Apr-15
CSE1-040-(	PE1 C078 Extension Sheetpiles 2m removal	28-Mar-15 A	01-Apr-15 A
CSE1-040-(	PE1 C078 Removal of Crane and Temp Guide Frame	03-Apr-15 A	04-Apr-15 A
CSE1-040-(	PE1 C078 Removal of underwater guard ring	05-Apr-15 A	06-Apr-15 A
CSE1-040-(	PE1 C078 Removal of Temp Piles	08-Apr-15 A	08-Apr-15 A
CSE1-040-(	PE1 C078 Backfill inside cell stg2 5,752m3	09-Apr-15 A	13-Apr-15 A
CSE1-040-1	PE1 C079 Extension Sheetpiles 2m removal	20-Mar-15 A	01-Apr-15 A
CSE1-040-1	PE1 C079 Removal of Crane & Temp Guide Frame	04-Apr-15 A	04-Apr-15 A
CSE1-040-1	PE1 C079 Removal of underwater guard ring	15-Apr-15 A	17-Apr-15 A
CSE1-040-1	PE1 C079 Removal of Temp Piles	18-Apr-15 A	18-Apr-15 A
CSE1-040-1	PE1 C079 Backfill inside cell stg2 6,134m3	19-Apr-15 A	23-Apr-15
Connecting Arcs		09-Apr-15 A	27-Jun-15
Portion E1 between C073/C074 to C090/C091 18arcs		09-Apr-15 A	27-Jun-15
CAE1-2010	PE1 C077/078 - Temp Piles Drivening	09-Apr-15 A	13-Apr-15 A
CAE1-2020	PE1 C077/078 - Temp Guide Frame Installation	14-Apr-15 A	14-Apr-15 A
CAE1-2030	PE1 C077/078 - ICE Certificate & Form 5	15-Apr-15 A	15-Apr-15 A
CAE1-2040	PE1 C077/078 - Sea Side Arc Sheetpile Assemby	17-Apr-15 A	25-Apr-15
CAE1-2050	PE1 C077/078 - Sea Side Arc Sheetpile Drivening	26-Apr-15	28-Apr-15
CAE1-2060	PE1 C077/078 - Land Side Arc Sheetpile Assemby	29-Apr-15	07-May-15
CAE1-2070	PE1 C077/078 - Land Side Arc Sheetpile Drivening	08-May-15	11-May-15
CAE1-2080	PE1 C077/078 - Removal of Guide Frame	13-May-15	13-May-15
CAE1-2090	PE1 C077/078 - Removal of Temp Piles	15-May-15	17-May-15
CAE1-2100	PE1 C077/078 - Backfill	19-May-15	21-May-15
CAE1-3010	PE1 C079/080 - Temp Piles Drivening	17-Apr-15 A	19-Apr-15 A
CAE1-3020	PE1 C079/080 - Temp Guide Frame Installation	24-Apr-15*	24-Apr-15
CAE1-3030	PE1 C079/080 - ICE Certificate & Form 5	25-Apr-15	26-Apr-15
CAE1-3040	PE1 C079/080 - Sea Side Arc Sheetpile Assemby	28-Apr-15	03-May-15
CAE1-3050	PE1 C079/080 - Sea Side Arc Sheetpile Drivening	04-May-15	06-May-15
CAE1-3060	PE1 C079/080 - Land Side Arc Sheetpile Assemby	24-May-15	01-Jun-15
CAE1-3070	PE1 C079/080 - Land Side Arc Sheetpile Drivening	02-Jun-15	05-Jun-15



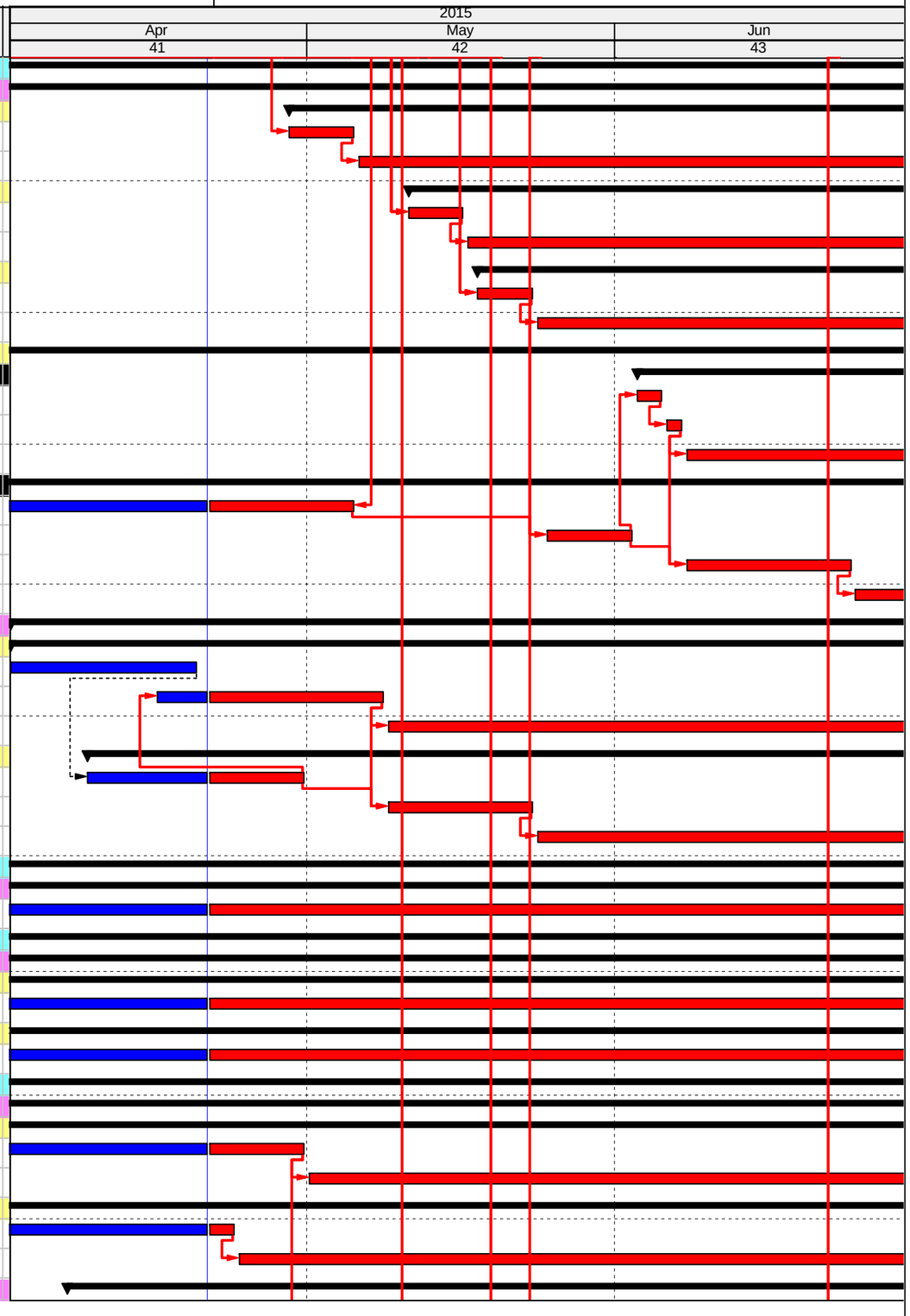
Activity ID	Activity Name	Start	Finish
CAE1-3080	PE1 C079/080 - Removal of Guide Frame	24-Jun-15	24-Jun-15
CAE1-3090	PE1 C079/080 - Removal of Temp Piles	25-Jun-15	25-Jun-15
CAE1-3100	PE1 C079/080 - Backfill	26-Jun-15	27-Jun-15
CAE1-4010	PE1 C078/079 - Temp Piles Drivening	16-May-15	20-May-15
CAE1-4020	PE1 C078/079 - Temp Guide Frame Installation	22-May-15	22-May-15
CAE1-4030	PE1 C078/079 - ICE Certificate & Form 5	23-May-15	24-May-15
CAE1-4040	PE1 C078/079 - Sea Side Arc Sheetpile Assemby	25-May-15	30-May-15
CAE1-4050	PE1 C078/079 - Sea Side Arc Sheetpile Drivening	31-May-15	02-Jun-15
CAE1-4060	PE1 C078/079 - Land Side Arc Sheetpile Assemby	06-Jun-15	14-Jun-15
CAE1-4070	PE1 C078/079 - Land Side Arc Sheetpile Drivening	15-Jun-15	18-Jun-15
CAE1-4080	PE1 C078/079 - Removal of Guide Frame	20-Jun-15	20-Jun-15
CAE1-4090	PE1 C078/079 - Removal of Temp Piles	22-Jun-15	22-Jun-15
CAE1-4100	PE1 C078/079 - Backfill	23-Jun-15	24-Jun-15
Capping Beams		21-Mar-15 A	15-Jul-15
Portion E1 between C090 to C074 Capping Beams		21-Mar-15 A	15-Jul-15
CAE1-027	PE1 Completion of Connecting Arcs C077/C078, C078/C079 & C079/C080 on 30Jun2015		18-Jun-15
CBE1-020	PE1 Capping Beams structure C080 to C077 4cells 4days/cell	29-Jun-15	15-Jul-15
CBE1-030	PE1 Capping Beams structure C068 to C076 9cells 4days/cell	21-Mar-15 A	20-Apr-15 A
Conforming Sloping Seawalls		19-Jun-15	29-Jun-15
Geotextile		19-Jun-15	22-Jun-15
Seawall Portion E1 at C068 - C090 23cells		19-Jun-15	22-Jun-15
SGE1-020	PE1 Geotextile at C079 - C078 2cells	19-Jun-15	22-Jun-15
Rockfill		19-Jun-15	29-Jun-15
Seawall Portion E1 at C068 - C090 23cells		19-Jun-15	29-Jun-15
RFE1-020	PE1 Rockfill at C080 - C077 4cells	19-Jun-15	29-Jun-15
Reclamation		31-Dec-14 A	06-Jul-15
Marine Fill		19-Jun-15	06-Jul-15
Land Portion E1		19-Jun-15	06-Jul-15
MFE1-010	PE1 Marine Sand Fill upto +2.5mPD 255,355m3 20,000m3/day	19-Jun-15	06-Jul-15
Earthwork Fill		31-Dec-14 A	23-Jun-15
Land Portion C2a		23-Mar-15 A	09-May-15
EFC2a-051	PC2a Edge Area C108-C112 Remedial works by additional band drains	23-Mar-15 A	05-May-15
EFC2a-055	PC2a Edge Area EastWest Earthwork Fill Type D Sand 100% stg2 30,450m3 7,500m/day	06-May-15*	09-May-15
Land Portion E2		01-May-15	12-May-15
EFE2-024	PE2 North(N) -Edge 100m Type D Earthwork Sand Fill upto +5.5mPD 55,000m3 20,000m3/day	01-May-15*	12-May-15
Land Portion C2b		31-Dec-14 A	24-May-15
EFC2b-010	PC2b Earthwork Fill Type B public w compaction upto +5.5mPD 168,546m3 5,000m3/day	31-Dec-14 A	24-May-15
Land Portion C2c		25-May-15	23-Jun-15
EFC2c-010	PC2c Earthwork Fill Type B public w compaction upto +5.5mPD 276,853m3 10,000m3/day	25-May-15	23-Jun-15
Surcharge		05-Sep-14 A	16-Dec-15
Portion A Surcharge		05-Sep-14 A	13-Sep-15
Main Reclamation Areas		05-Sep-14 A	08-May-15
Area of CLP substation		05-Sep-14 A	08-May-15
SUEA2-0070	PA CLP Substation Sand Surcharge Period as +11.5mPD (4 May2015 after 8mths surcharge)	05-Sep-14 A	04-May-15
SUEA2-0075	PA CLP Issue of Surcharge Removal	05-May-15*	
SUEA2-0080	PA CLP Substation Sand Surcharge Removal on Main Area 40,410m3 10,000m3/day	05-May-15	08-May-15
SUEA2-0090	Completion of CLP Substation		08-May-15*
Edge Area From SOL offset within 180m to 50m		19-Oct-14 A	13-Sep-15



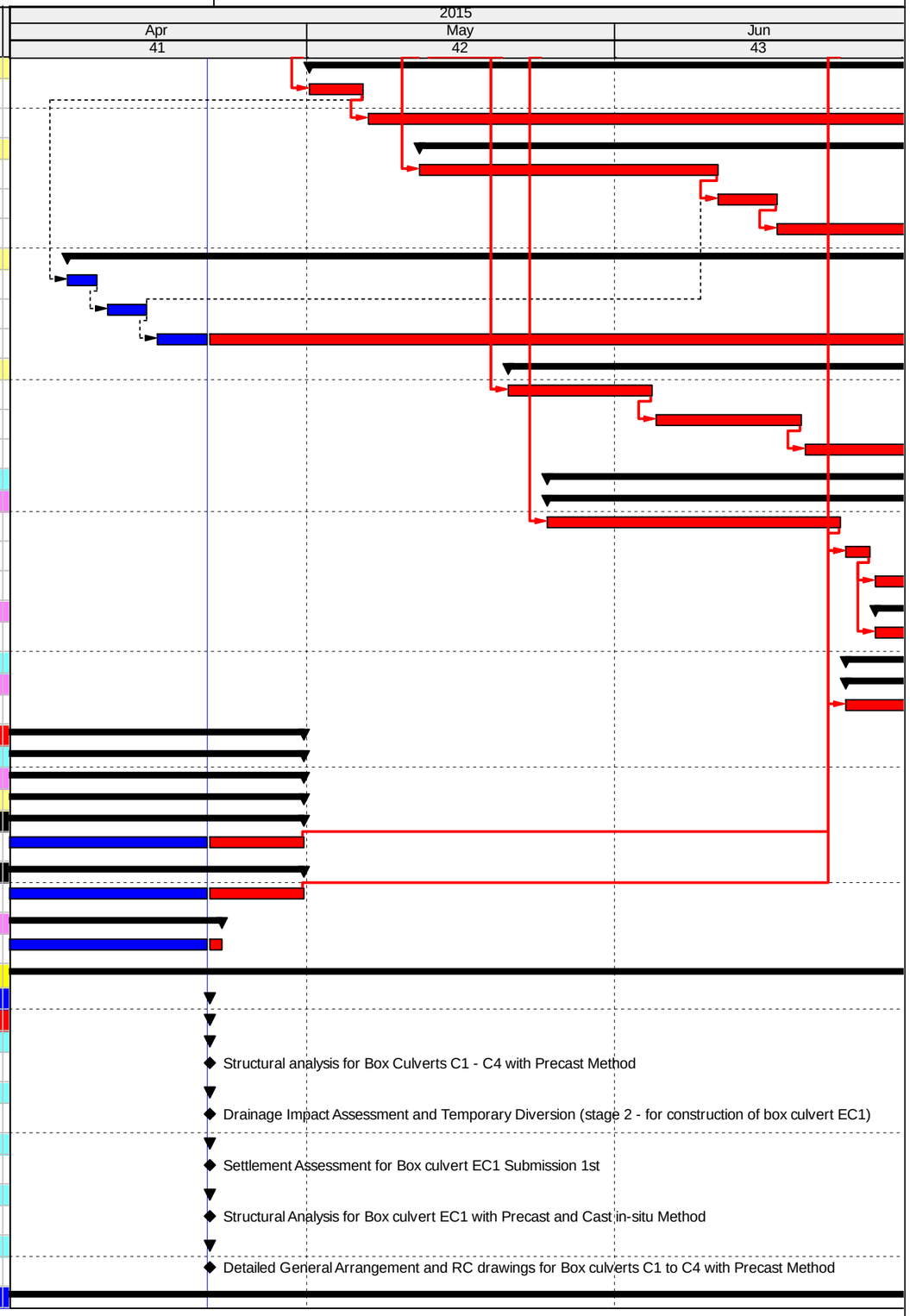
Activity ID	Activity Name	Start	Finish
SUEA0-199	Completion of Section A at Edge Area		25-Apr-15
CH5+110 to 5+440 Portion A North		19-Oct-14 A	01-May-15
Area of 50m to 120 from Offset		28-Dec-14 A	01-May-15
SUEA1-2090	PA North 120m-50m from Offset Surcharge Period +11.5mPD 4mths (8-2-2=4mths)	28-Dec-14 A	26-Apr-15
SUEA1-2100	PA North 120m-50m from Offset Surcharge Removal 49,830m3 10,000m3/day	27-Apr-15	01-May-15
Area of 0 to 50m from Offset		19-Oct-14 A	25-Apr-15
SUEA1-2150	PA North 50m-40m Surcharge Sand Laying upto +11.5mPD 87520m3 8,000m3/day	14-Mar-15 A	21-Apr-15
SUEA1-2180	PA North 50m-10m Surcharge Period +7.0mPD (18Apr2015 after 6mths surcharge)	19-Oct-14 A	21-Apr-15
SUEA1-2190	PA North 50m-10m Surcharge Sand Removal 9,900m3 10,000m3/day	22-Apr-15	25-Apr-15
CH5+440 to 5+650 Portion A South		15-Nov-14 A	13-Sep-15
Area of 40m - 120m from Offset (other CLP area)		14-Mar-15 A	13-Sep-15
Upto +11.5mPD Area		14-Mar-15 A	13-Sep-15
SUEA3-00	PA South Surcharge Period +11.5mPD (13Sep2015 after 6mths surcharge)	14-Mar-15 A	13-Sep-15
Area of 10m - 40m from Offset (other CLP area)		15-Nov-14 A	16-May-15
SUEA4-0070	PA South 40m-10m Surcharge Period (14May2015 after 6mths surcharge)	15-Nov-14 A	14-May-15
SUEA4-0080	PA South 40m-10m Surcharge Sand Removal 5,670m3 5,000m3/day	15-May-15	16-May-15
Land Portion B		13-Oct-14 A	10-Dec-15
Edge Areas		21-Jan-15 A	16-Sep-15
Deep Cement Mixing at K040 - K046		21-Jan-15 A	04-May-15
DCM-1050	PB Edge Area K040-K046 Deep Cement Mixing 73m width - 1st 3plants Installation 98,000m3	21-Jan-15 A	28-Apr-15
DCM-1060	PB Edge Area K040-K046 Deep Cement Mixing 73m width - 2nd 3plants Installation 83,500m3	04-Feb-15 A	28-Apr-15
DCM-1080	PB Edge Area K040-K046 Filling up to +5.5mPD 41,000m3 10,000m3/day at DCM by Dump Trucks	29-Apr-15	04-May-15
DCM-1090	PB Edge Area K040-K046 Completion (Target Date = 31Dec2014)		04-May-15*
Deep Cement Mixing at K047 - K052		11-Mar-15 A	30-Jun-15
DCM-2020	PB Edge Area K047-K052 Deep Cement Mixing 30m width - Installation 123,470m3	11-Mar-15 A	30-Jun-15
at K028 - K039		01-Apr-15 A	16-Sep-15
SUEB0-060	PB Edge Area K028-K039 Sand Surcharge upto 8.5mPD 90,720m3 5,000m3/day	01-Apr-15 A	04-May-15
SUEB0-070	PB Edge Area K028-K039 Surcharge Period +8.5mPD 4.5mths	05-May-15	16-Sep-15
at K013 - K027		26-Jan-15 A	06-Jul-15
SUEB0-007	PB Edge Area K013-K027 Additional Works by Additional Band Drains 8,480nrs	26-Jan-15 A	19-Apr-15 A
SUEB0-010	PB Edge Area K013-K027 Sand Surcharge upto 8.5mPD 135,000m3 10,000m3/day	05-May-15	20-May-15
SUEB0-020	PB Edge Area K013-K027 Surcharge Period +8.5mPD 1mth	21-May-15	19-Jun-15
SUEB0-030	PB Edge Area K013-K027 Sand Surcharge up to 11.5mPD 135,000m3 10,000m3/day	20-Jun-15	06-Jul-15
Reclamation Areas		13-Oct-14 A	10-Dec-15
at East of Main Area		13-Oct-14 A	23-May-15
SURB0-040	PB Main Area East Sand Surcharge Period +11.5mPD (12May2015 after 7mths surcharge)	13-Oct-14 A	12-May-15
SURB0-050	PB Main Area East Sand Surcharge Removal 182,400m3 20,000m3/day	13-May-15	23-May-15
at West of Main Area stg1		20-Oct-14 A	06-Jun-15
SURB1-030	PB Main Area West-S Sand Surcharge Period +11.5mPD (19May2015 after 7mths surcharge)	20-Oct-14 A	19-May-15
SURB1-040	PB Main Area West-S Sand Surcharge Removal 250,365m3 20,000m3/day	24-May-15	06-Jun-15
at West of Main Area stg2		11-Nov-14 A	30-Jun-15
SURB2-030	PB Main Area West-N Sand Surcharge Period +11.5mPD (10Jun2015 after 7mths)	11-Nov-14 A	10-Jun-15
SURB2-040	PB Main Area West-N Sand Surcharge Removal 346,454m3 20,000m3/day	11-Jun-15	30-Jun-15
at North- East of Main Area		21-May-15	10-Dec-15
SURB3-010	PB Main Area East-N Sand Surcharge upto +8.5mPD 60,000m3 10,000m3/day by Dump Trucks	21-May-15*	27-May-15
SURB3-020	PB Main Area East-N Sand Surcharge upto +11.5mPD 75,000m3 5,000m3/day by Dump Trucks	28-May-15	13-Jun-15
SURB3-030	PB Main Area East-N Sand Surcharge Period +11.5mPD 6mths (7-1=6mths)	14-Jun-15	10-Dec-15



Activity ID	Activity Name	Start	Finish
Land Portion C2a		01-Mar-15 A	19-Nov-15
Edge Areas		01-Mar-15 A	22-Oct-15
Deep Cement Mixing Works at C101 - C103		29-Apr-15	07-Jul-15
DCM-3010	PC2a Edge Area C101-C103 Mobilization from K040-K046 3plants	29-Apr-15	05-May-15
DCM-3020	PC2a Edge Area C101-C103 30m width x 128.5m Length Installation 56,700m3	06-May-15	07-Jul-15
at C104 - C107 Cellular Seawall		11-May-15	28-Sep-15
SUEC2a-010	PC2a Edge Area C104-C107 Sand Surcharge Laying up to 8.5mPD 40,573m3 7,500m3/day	11-May-15	16-May-15
SUEC2a-020a	PC2a Edge Area C104-C107 Sand Surcharge Period +8.5mPD 4.5mths	17-May-15	28-Sep-15
at C108 - C112 Cellular Seawall		18-May-15	05-Oct-15
SUEC2a-020	PC2a Edge Area C108-C112 Sand Surcharge Laying up to 8.5mPD 45,738m3 7,500m3/day	18-May-15	23-May-15
SUEC2a-02(	PC2a Edge Area C108-C112 Sand Surcharge Period +8.5mPD 4.5mths	24-May-15	05-Oct-15
CH4+710 - CH5+110 Rubble Mound Seawall		01-Mar-15 A	22-Oct-15
10-40m		03-Jun-15	07-Jul-15
SUEC2a-10	PC2a 40m-10m from SOL Surcharge Sand Laying upto 7.5mPD 28,800m3 10,000m3/day by Conveyors	03-Jun-15	05-Jun-15
SUEC2a-10	PC2a 40-10m Surcharge Sand Laying upto 8.5mPD 14,400m3 10,000m3/day	06-Jun-15	07-Jun-15
SUEC2a-10	PC2a 40-10m Sucharge Period as 8.5mPD 1mth	08-Jun-15	07-Jul-15
40-120m		01-Mar-15 A	22-Oct-15
SUEC2a-10	PC2a 70m from SOL Check Point for Undrained shear strength Area at +5.5mPD 1mths	01-Mar-15 A	05-May-15
SUEC2a-10	PC2a 120m-40m from SOL Surcharge Sand Laying upto 7.5mPD 76,800m3 10,000m3/day	25-May-15	02-Jun-15
SUEC2a-10	PC2a 120m-40m from SOL Surcharge Sand Laying upto 11.5mPD 153,600m3 10,000m3/day	08-Jun-15	24-Jun-15
SUEC2a-20	PC2a 10m-120m from SOL Surcharge Sand Period 4mths	25-Jun-15	22-Oct-15
Reclamation Areas		01-Apr-15 A	19-Nov-15
South		01-Apr-15 A	04-Nov-15
SURC2a-010	PC2a Main East Sand Surcharge Laying upto 8.5mPD 184,068m3 7,500m3/day by TSHD	01-Apr-15 A	20-Apr-15 A
SURC2a-014	PC2a Main South Sand Surcharge Laying upto 11.5mPD 184,068m3 7,500m3/day by TSHD	16-Apr-15 A	08-May-15
SURC2a-020	PC2a Main South Sand Surcharge Period 6mths (8-2=6mths)	09-May-15	04-Nov-15
North		09-Apr-15 A	19-Nov-15
SURC2a-060	PC2a Main North Sand Surcharge Laying upto 8.5mPD 184,068m3 7,500m3/day by TSHD	09-Apr-15 A	30-Apr-15
SURC2a-066	PC2a Main North Sand Surcharge Laying upto 11.5mPD 184,068m3 14,000m3/day by TSHD	09-May-15*	23-May-15
SURC2a-070	PC2a Main North Sand Surcharge Period 6mths (8-2=6mths)	24-May-15	19-Nov-15
Land Portion C1a		01-Jan-15 A	31-Jul-15
Reclamation Areas		01-Jan-15 A	31-Jul-15
SURC1a-020	PC1a Main Area Sand Surcharge Period as +11.5mPD (30Jun2015 after 7mths surcharge)	01-Jan-15 A	31-Jul-15
Land Portion C1b		22-Jan-15 A	31-Aug-15
Reclamation Areas		22-Jan-15 A	31-Aug-15
West (1/4 Areas)		22-Jan-15 A	21-Aug-15
SURC1b-020	PC1b West Sand Surcharge Period (21Aug2015 after 7mths surcharge)	22-Jan-15 A	21-Aug-15
East (3/4 Areas)		01-Feb-15 A	31-Aug-15
SURC1b-050	PC1b East Sand Surcharge Period +11.5mPD (31Aug2015 after 7mths surcharge)	01-Feb-15 A	31-Aug-15
Land Portion E2		09-Feb-15 A	16-Dec-15
South Part		09-Feb-15 A	20-Oct-15
Edge Areas		12-Mar-15 A	12-Sep-15
SUEE2-010	PE2 South Edge Sand Surcharge Laying up to 8.5mPD 103,500m3 20,000m3/day	12-Mar-15 A	30-Apr-15
SUEE2-020	PE2 South Edge Sand Surcharge Period as +8.5mPD 4.5mths	01-May-15	12-Sep-15
Reclamation Areas		09-Feb-15 A	20-Oct-15
SURE2-015	PE2 South Main Sand Surcharge Laying upto 11.5mPD 293,063m3 20,000m3/day by TSHD	09-Feb-15 A	23-Apr-15
SURE2-020	PE2 South Main Sand Surcharge Period as +11.5mPD 6mths (7-1=6mths) with Top Up 67,989m3	24-Apr-15	20-Oct-15
North Part		07-Apr-15 A	16-Dec-15



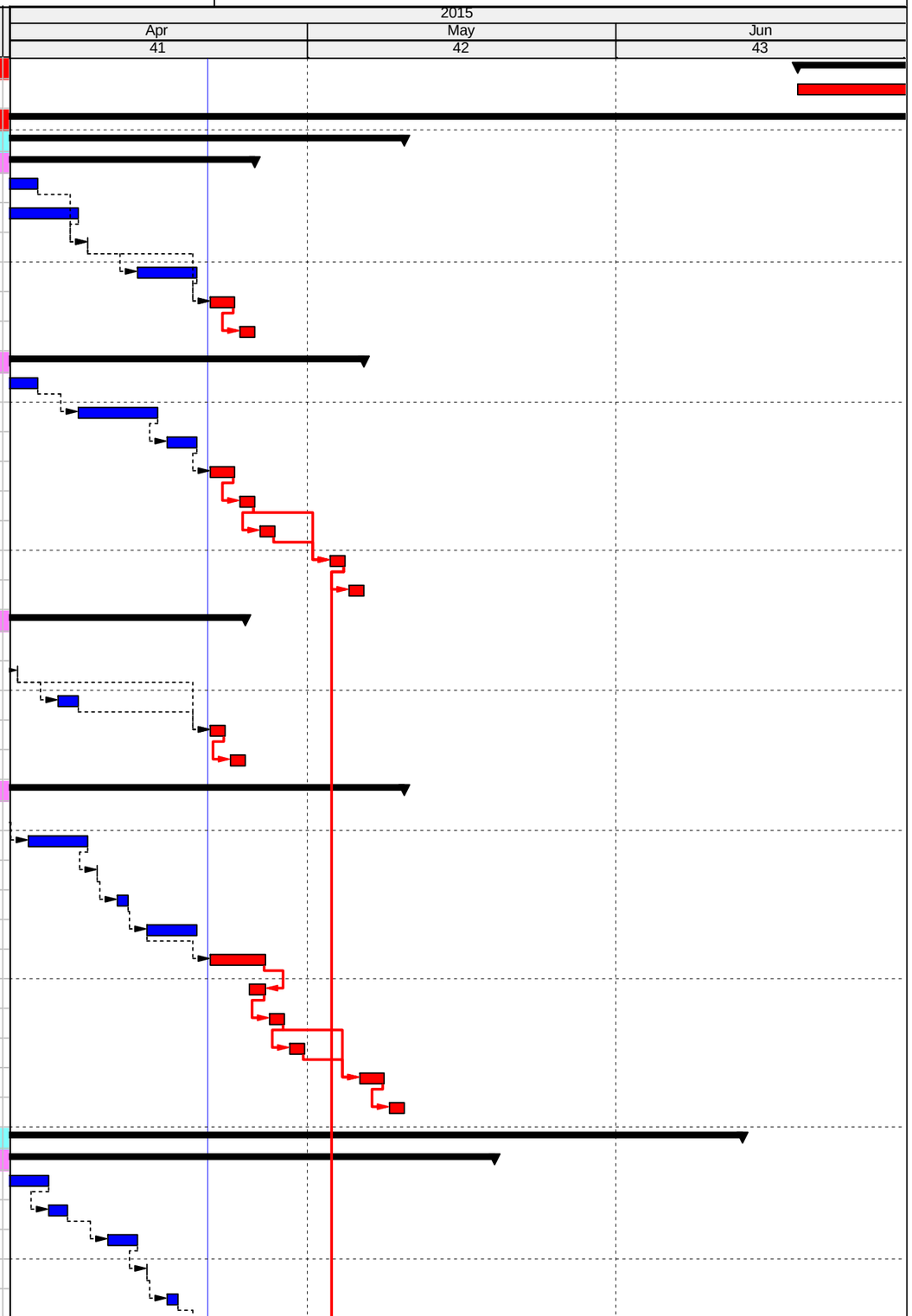
Activity ID	Activity Name	Start	Finish
Edge Areas - East		01-May-15	18-Sep-15
SUEE2-060	PE2 North(E) Edge Sand Surcharge Laying up to 8.5mPD 103,499m3 20,000m3/day	01-May-15	06-May-15
SUEE2-070	PE2 North-E Edge Sand Surcharge Period as +8.5mPD 4.5mths	07-May-15	18-Sep-15
Edge Areas - North		12-May-15	30-Oct-15
SUEE2-110	PE2 North-N Edge Sand Surcharge Period as +5.5mPD 30days	12-May-15	11-Jun-15
SUEE2-120	PE2 North(N) Edge Sand Surcharge Laying up to 8.5mPD 103,800m3 20,000m3/day	11-Jun-15	17-Jun-15
SUEE2-130	PE2 North-N Edge Sand Surcharge Period as +8.5mPD 4.5mths	17-Jun-15	30-Oct-15
Inland Areas - East (Tunnel Areas)		07-Apr-15 A	12-Oct-15
SURE2-040-1	PE2 North Main Sand Surcharge tunnel area Laying upto 8.5mPD 64,632m3 20,000m3/day	07-Apr-15 A	10-Apr-15 A
SURE2-042-1	PE2 North Main Sand Surcharge tunnel area Laying upto 11.5mPD at tunnel area 64,631m3 20,000m3/day	11-Apr-15 A	15-Apr-15 A
SURE2-050	PE2 North Main Sand Surcharge Period as +11.5mPD at tunnel area 6mths (7-1=6mths) with Top Up 28914m3	16-Apr-15 A	12-Oct-15
InLand Areas - West (Non Tunnel Areas)		21-May-15	16-Dec-15
SURE2-040-2	PE2 North Main Sand Surcharge non tunnel area Laying upto 8.5mPD 124,632m3 10,000m3/day	21-May-15	04-Jun-15
SURE2-042-2	PE2 North Main Sand Surcharge non tunnel area Laying upto 11.5mPD 124,631m3 10,000m3/day	05-Jun-15	19-Jun-15
SURE2-180	PE2 North Main Sand Surcharge Period as +11.5mPD non tunnel area 6mths (7-1=6mths) with Top Up 28913m	20-Jun-15	16-Dec-15
Land Portion C2b		25-May-15	08-Nov-15
Edge Areas		25-May-15	08-Nov-15
SUEC2c-40	PC2b Edge Area Surcharge Period as +5.5mPD 1mth	25-May-15	23-Jun-15
SUEC2c-50	PC2b Edge Area Public Surcharge Laying upto 8.5mPD 12,054m3 5,000m3/day	24-Jun-15	26-Jun-15
SUEC2c-60	PC2b Edge Area Surcharge Period as +8.5mPD 4.5mths	27-Jun-15	08-Nov-15
Reclamation Areas		27-Jun-15	20-Aug-15
SURC2b-010	PC2b Main Area Public Surcharge Laying upto 8.5mPD stg2 251,857m3 5,000m3/day	27-Jun-15	20-Aug-15
Land Portion C2c		24-Jun-15	23-Jul-15
Edge Areas		24-Jun-15	23-Jul-15
SUEC2c-005	PC2c Edge Area PBF Surcharge Period +5.5mPD 1mth	24-Jun-15	23-Jul-15
Geotechnical Instrumentation Works		16-Dec-14 A	30-Apr-15
Geotechnical Instrumentation Works for Seawalls		16-Dec-14 A	30-Apr-15
Cluster Type SD 26nrs Instrumentation and CPT Cluster behind cells		16-Dec-14 A	30-Apr-15
Portion C2b & C2c		16-Dec-14 A	30-Apr-15
SD-18 C094		16-Dec-14 A	30-Apr-15
CTSD-180	Installation of SD-18 (C094) PC2c	16-Dec-14 A	30-Apr-15
SD-19 C099		16-Dec-14 A	30-Apr-15
CTSD-190	Installation of SD-19 (C099) PC2c	16-Dec-14 A	30-Apr-15
Cluster Type SE 26nrs Surface movement marker cluster at top of cell and sloping seawall		16-Mar-15 A	22-Apr-15
CTSE-120	Installation of SE-12 (C069) PE2	16-Mar-15 A	22-Apr-15
Portion D		28-Oct-14 A	15-Nov-15
Submission		21-Apr-15	21-Apr-15
Design Submission		21-Apr-15	21-Apr-15
Structural Analysis for Culverts C1 - C4 w Precast Method		21-Apr-15	21-Apr-15
PD-DGN-05010	Structural analysis for Box Culverts C1 - C4 with Precast Method		21-Apr-15*
Drainage Impact Assessment & Temporary Diversion (stg2 - for construction of box culvert EC1)		21-Apr-15	21-Apr-15
PD-DGN-07010	Drainage Impact Assessment and Temporary Diversion (stage 2 - for construction of box culvert EC1)		21-Apr-15*
Settlement Assessment for Box Culvert EC1		21-Apr-15	21-Apr-15
PD-DGN-08010	Settlement Assessment for Box culvert EC1 Submission 1st		21-Apr-15*
Structural Analysis for Box Culvert EC1 w Precast & Cast in-situ Method		21-Apr-15	21-Apr-15
PD-DGN-09010	Structural Analysis for Box culvert EC1 with Precast and Cast in-situ Method		21-Apr-15*
Detailed General Arrangement & RC drawings for C1 to C4 w Precast Method		21-Apr-15	21-Apr-15
PD-DGN-10010	Detailed General Arrangement and RC drawings for Box culverts C1 to C4 with Precast Method		21-Apr-15*
Precast Yard for Seawall Blocks & Culverts		24-Mar-15 A	15-Nov-15



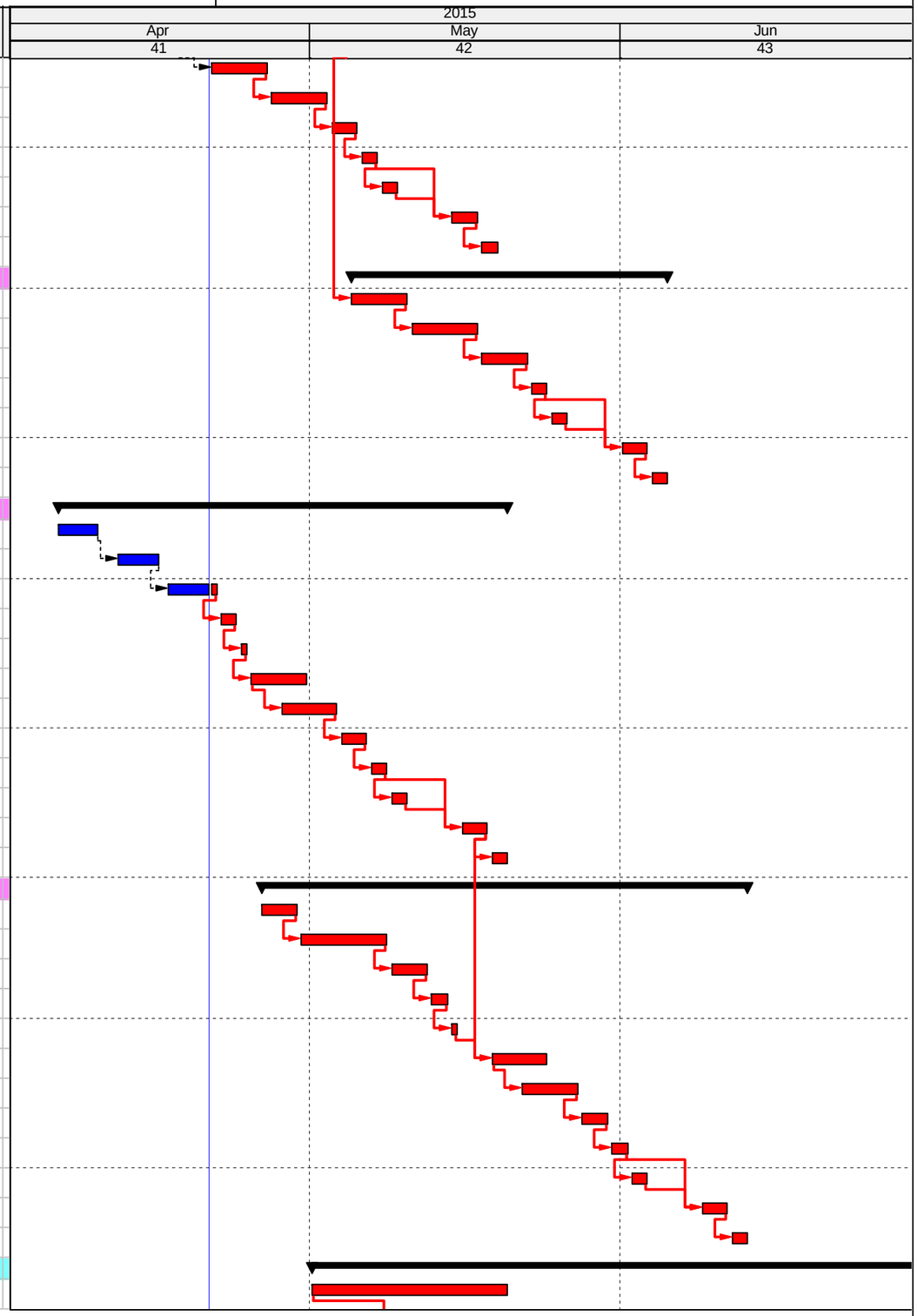
Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

TASK filters: 3 months rolling programme, ET 3 months rolling programme .

Activity ID	Activity Name	Start	Finish
Concrete Blocks		19-Jun-15	15-Nov-15
PD-PY1-0200	Seawall Blocks for Permanent construction 1,990nrs (3,180 - 1190)	19-Jun-15	15-Nov-15
Culverts		24-Mar-15 A	04-Jul-15
Culverts C1		24-Mar-15 A	10-May-15
C1-2		30-Mar-15 A	25-Apr-15
PY-C1-2070	PD C01-2 - Wall Rebar Fixing	30-Mar-15 A	04-Apr-15 A
PY-C1-2080	PD C01-2 - Wall External Formwork	01-Apr-15 A	08-Apr-15 A
PY-C1-2090	PD C01-2 - Wall Concrete	09-Apr-15 A	09-Apr-15 A
PY-C1-2100	PD C01-2 - Wall External Formwork Removal	14-Apr-15 A	20-Apr-15 A
PY-C1-2110	PD C01-2 - Wall Internal Formwork Removal	21-Apr-15	23-Apr-15
PY-C1-2120	PD C01-2 - Top Slab Formwork Removal	24-Apr-15	25-Apr-15
C1-3		01-Apr-15 A	06-May-15
PY-C1-3050	PD C01-3 - Foundation Formwork Removal	01-Apr-15 A	04-Apr-15 A
PY-C1-3060	PD C01-3 - Wall internal Formwork	08-Apr-15 A	16-Apr-15 A
PY-C1-3070	PD C01-3 - Wall Rebar Fixing	17-Apr-15 A	20-Apr-15 A
PY-C1-3080	PD C01-3 - Wall External Formwork	21-Apr-15	23-Apr-15
PY-C1-3090	PD C01-3 - Wall Concrete	24-Apr-15	25-Apr-15
PY-C1-3100	PD C01-3 - Wall External Formwork Removal	26-Apr-15	27-Apr-15
PY-C1-3110	PD C01-3 - Wall Internal Formwork Removal	03-May-15	04-May-15
PY-C1-3120	PD C01-3 - Top Slab Formwork Removal	05-May-15	06-May-15
C1-4		24-Mar-15 A	24-Apr-15
PY-C1-4080	PD C01-4 - Wall External Formwork	24-Mar-15 A	01-Apr-15 A
PY-C1-4090	PD C01-4 - Wall Concrete	02-Apr-15 A	02-Apr-15 A
PY-C1-4100	PD C01-4 - Wall External Formwork Removal	06-Apr-15 A	08-Apr-15 A
PY-C1-4110	PD C01-4 - Wall Internal Formwork Removal	21-Apr-15	22-Apr-15
PY-C1-4120	PD C01-4 - Top Slab Formwork Removal	23-Apr-15	24-Apr-15
C1-6		31-Mar-15 A	10-May-15
PY-C1-6020	PD C01-6 - Foundation Rebar Fixing	31-Mar-15 A	01-Apr-15 A
PY-C1-6030	PD C01-6 - Foundation Formwork	03-Apr-15 A	09-Apr-15 A
PY-C1-6040	PD C01-6 - Foundation Concrete	10-Apr-15 A	10-Apr-15 A
PY-C1-6050	PD C01-6 - Foundation Formwork Removal	12-Apr-15 A	13-Apr-15 A
PY-C1-6060	PD C01-6 - Wall internal Formwork	15-Apr-15 A	20-Apr-15 A
PY-C1-6070	PD C01-6 - Wall Rebar Fixing	21-Apr-15	26-Apr-15
PY-C1-6080	PD C01-6 - Wall External Formwork	25-Apr-15	26-Apr-15
PY-C1-6090	PD C01-6 - Wall Concrete	27-Apr-15	28-Apr-15
PY-C1-6100	PD C01-6 - Wall External Formwork Removal	29-Apr-15	30-Apr-15
PY-C1-6110	PD C01-6 - Wall Internal Formwork Removal	06-May-15	08-May-15
PY-C1-6120	PD C01-6 - Top Slab Formwork Removal	09-May-15	10-May-15
Culverts C2		29-Mar-15 A	13-Jun-15
C2-2		29-Mar-15 A	19-May-15
PY-C2-2010	PD C02-2 - Foundation Platform	29-Mar-15 A	05-Apr-15 A
PY-C2-2020	PD C02-2 - Foundation Rebar Fixing	05-Apr-15 A	07-Apr-15 A
PY-C2-2030	PD C02-2 - Foundation Formwork	11-Apr-15 A	14-Apr-15 A
PY-C2-2040	PD C02-2 - Foundation Concrete	15-Apr-15 A	15-Apr-15 A
PY-C2-2050	PD C02-2 - Foundation Formwork Removal	17-Apr-15 A	18-Apr-15 A



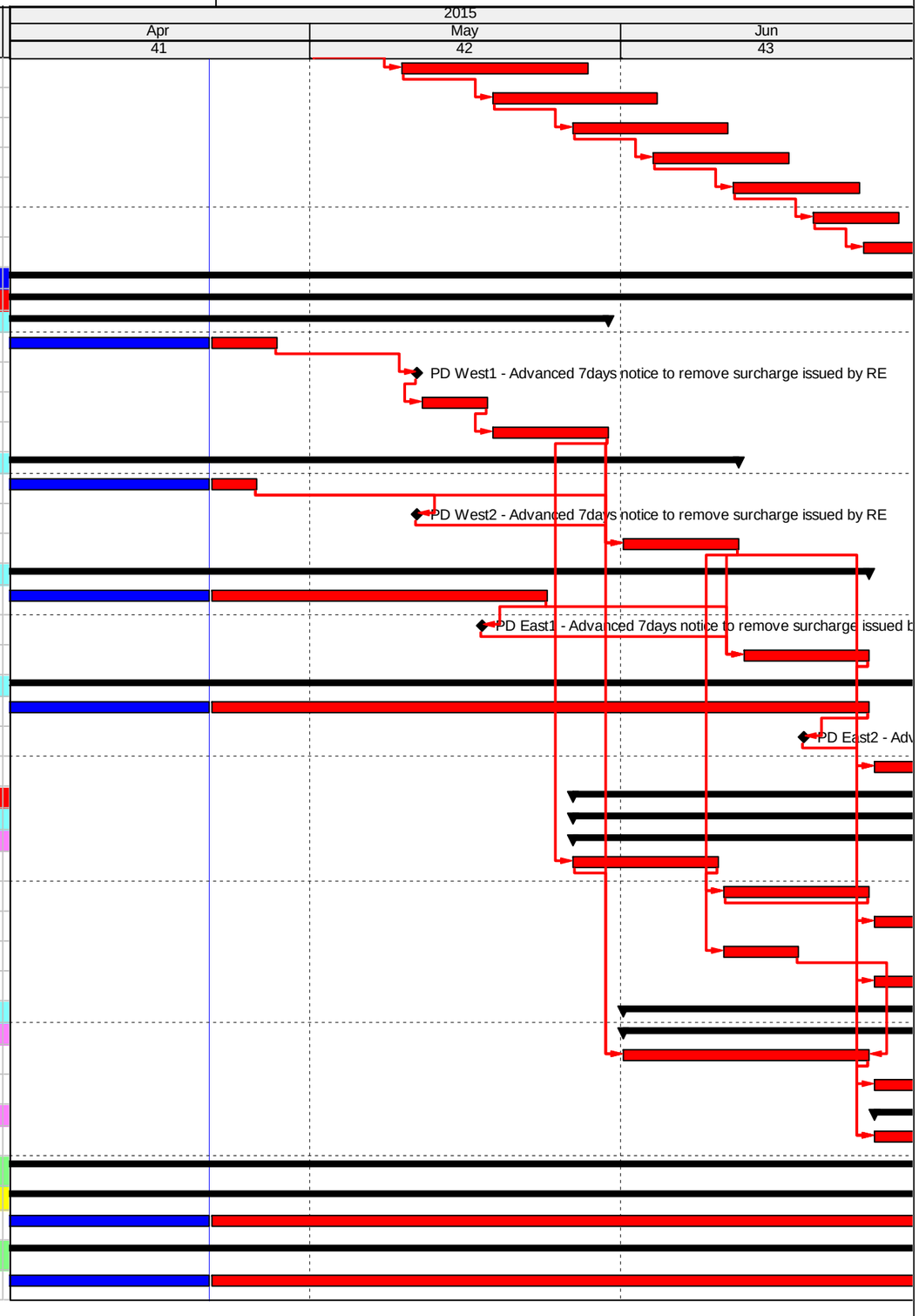
Activity ID	Activity Name	Start	Finish
PY-C2-2060	PD C02-2 - Wall internal Formwork	21-Apr-15	26-Apr-15
PY-C2-2070	PD C02-2 - Wall Rebar Fixing	27-Apr-15	02-May-15
PY-C2-2080	PD C02-2 - Wall External Formwork	03-May-15	05-May-15
PY-C2-2090	PD C02-2 - Wall Concrete	06-May-15	07-May-15
PY-C2-2100	PD C02-2 - Wall External Formwork Removal	08-May-15	09-May-15
PY-C2-2110	PD C02-2 - Wall Internal Formwork Removal	15-May-15	17-May-15
PY-C2-2120	PD C02-2 - Top Slab Formwork Removal	18-May-15	19-May-15
C2-3		05-May-15	05-Jun-15
PY-C2-3060	PD C02-3 - Wall internal Formwork	05-May-15	10-May-15
PY-C2-3070	PD C02-3 - Wall Rebar Fixing	11-May-15	17-May-15
PY-C2-3080	PD C02-3 - Wall External Formwork	18-May-15	22-May-15
PY-C2-3090	PD C02-3 - Wall Concrete	23-May-15	24-May-15
PY-C2-3100	PD C02-3 - Wall External Formwork Removal	25-May-15	26-May-15
PY-C2-3110	PD C02-3 - Wall Internal Formwork Removal	01-Jun-15	03-Jun-15
PY-C2-3120	PD C02-3 - Top Slab Formwork Removal	04-Jun-15	05-Jun-15
C2-4		06-Apr-15 A	20-May-15
PY-C2-4010	PD C02-4 - Foundation Platform	06-Apr-15 A	10-Apr-15 A
PY-C2-4020	PD C02-4 - Foundation Rebar Fixing	12-Apr-15 A	16-Apr-15 A
PY-C2-4030	PD C02-4 - Foundation Formwork	17-Apr-15 A	21-Apr-15
PY-C2-4040	PD C02-4 - Foundation Concrete	22-Apr-15	23-Apr-15
PY-C2-4050	PD C02-4 - Foundation Formwork Removal	24-Apr-15	24-Apr-15
PY-C2-4060	PD C02-4 - Wall internal Formwork	25-Apr-15	30-Apr-15
PY-C2-4070	PD C02-4 - Wall Rebar Fixing	28-Apr-15	03-May-15
PY-C2-4080	PD C02-4 - Wall External Formwork	04-May-15	06-May-15
PY-C2-4090	PD C02-4 - Wall Concrete	07-May-15	08-May-15
PY-C2-4100	PD C02-4 - Wall External Formwork Removal	09-May-15	10-May-15
PY-C2-4110	PD C02-4 - Wall Internal Formwork Removal	16-May-15	18-May-15
PY-C2-4120	PD C02-4 - Top Slab Formwork Removal	19-May-15	20-May-15
C2-5		26-Apr-15	13-Jun-15
PY-C2-5010	PD C02-5 - Foundation Platform	26-Apr-15*	29-Apr-15
PY-C2-5020	PD C02-5 - Foundation Rebar Fixing	30-Apr-15	08-May-15
PY-C2-5030	PD C02-5 - Foundation Formwork	09-May-15	12-May-15
PY-C2-5040	PD C02-5 - Foundation Concrete	13-May-15	14-May-15
PY-C2-5050	PD C02-5 - Foundation Formwork Removal	15-May-15	15-May-15
PY-C2-5060	PD C02-5 - Wall internal Formwork	19-May-15	24-May-15
PY-C2-5070	PD C02-5 - Wall Rebar Fixing	22-May-15	27-May-15
PY-C2-5080	PD C02-5 - Wall External Formwork	28-May-15	30-May-15
PY-C2-5090	PD C02-5 - Wall Concrete	31-May-15	01-Jun-15
PY-C2-5100	PD C02-5 - Wall External Formwork Removal	02-Jun-15	03-Jun-15
PY-C2-5110	PD C02-5 - Wall Internal Formwork Removal	09-Jun-15	11-Jun-15
PY-C2-5120	PD C02-5 - Top Slab Formwork Removal	12-Jun-15	13-Jun-15
Culverts EC1		01-May-15	04-Jul-15
PY-EC1-01000	PD EC01-01 (6.19m) & 02 (17.3m) Casting	01-May-15*	20-May-15



Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

TASK filters: 3 months rolling programme, ET 3 months rolling programme .

Activity ID	Activity Name	Start	Finish
PY-EC1-03000	PD EC01-03 (21m) Casting	10-May-15	28-May-15
PY-EC1-04000	PD EC01-04 (21m) Casting	19-May-15	04-Jun-15
PY-EC1-05000	PD EC01-05 (21m) Casting	27-May-15	11-Jun-15
PY-EC1-06000	PD EC01-06 (21m) Casting	04-Jun-15	17-Jun-15
PY-EC1-07000	PD EC01-07 (21m) Casting	12-Jun-15	24-Jun-15
PY-EC1-08000	PD EC01-08 (15m) Casting	20-Jun-15	28-Jun-15
PY-EC1-09000	PD EC01-09 (15.23+3m) Casting	25-Jun-15	04-Jul-15
Site Construction		28-Oct-14 A	22-Jul-15
Surcharge		28-Oct-14 A	08-Jul-15
West1 Portion		30-Oct-14 A	30-May-15
A1660	PD West1 - Surcharge Period +11.5mPD 6mths	30-Oct-14 A	27-Apr-15
A1670	PD West1 - Advanced 7days notice to remove surcharge issued by RE		11-May-15*
A1700	PD West1 - Mobilization of plant	12-May-15	18-May-15
A1930	PD West1 - Surcharge Removal 60,000m3 5,000m3/day	19-May-15	30-May-15
West2 Portion		28-Oct-14 A	12-Jun-15
A2220	PD West2 - Surcharge Period +11.5mPD 6mths	28-Oct-14 A	25-Apr-15
A2224	PD West2 - Advanced 7days notice to remove surcharge issued by RE		11-May-15*
A2230	PD West2 - Surcharge Removal 60,000m3 5,000m3/day	01-Jun-15	12-Jun-15
East1 Portion		26-Nov-14 A	25-Jun-15
A1690	PD East1 - Surcharge Period +11.5mPD 6mths	26-Nov-14 A	24-May-15
A1695	PD East1 - Advanced 7days notice to remove surcharge issued by RE		18-May-15
A1705	PD East1 - Surcharge Removal 60,000m3 5,000m3/day	13-Jun-15	25-Jun-15
East2 Portion		28-Dec-14 A	08-Jul-15
A2260	PD East2 - Surcharge Period +11.5mPD 6mths	28-Dec-14 A	25-Jun-15
A2265	PD East2 - Advanced 7days notice to remove surcharge issued by RE		19-Jun-15
A2270	PD East2 - Surcharge Removal 60,000m3 5,000m3/day	26-Jun-15	08-Jul-15
C1 to C4		27-May-15	22-Jul-15
Removal of Temporary Seawall		27-May-15	10-Jul-15
Removal of North Temporary Seawall		27-May-15	10-Jul-15
PD-V2-0010	PD C1 - Removal of Temporary Seawall blocks West1 CH6+136 to 6+000 400nrs	27-May-15	10-Jun-15
PD-V2-0015	PD C2 - Removal of Temporary Seawall blocks West2 CH6+000 to 5+893 400nrs	11-Jun-15	25-Jun-15
PD-V2-0020	PD C3 - Removal of Temporary Seawall blocks East1 CH5+893 to 5+800 400nrs	26-Jun-15	10-Jul-15
PD-V2-0030	PD C1 - Removal of North Temporary Seawall West1 Ch6+136 to CH6+000	11-Jun-15	18-Jun-15
PD-V2-0035	PD C2 - Removal of North Temporary Seawall West2 Ch6+000 to CH5+900	26-Jun-15	03-Jul-15
Installations of Precast Culverts except sloping outfalls		01-Jun-15	22-Jul-15
Culvert C1		01-Jun-15	18-Jul-15
PD-C1-0010	PD C1 Excavation 83,000m3 3,500m3/day	01-Jun-15	25-Jun-15
PD-C1-0020	PD C1 Leveling of Foundation 4,200m2 200m2/day	26-Jun-15	18-Jul-15
Culvert C2		26-Jun-15	22-Jul-15
PD-C2-0010	PD C2 Excavation 73,000m3 3,000m3/day	26-Jun-15	22-Jul-15
Works Area WA2 (Tung Chung)		21-May-12 A	28-Feb-17
Zone A		21-May-12 A	28-Feb-17
A1880	Maintenance of Engineer's Accommodation	21-May-12 A	28-Feb-17
Works Area TKO Fill Bank		25-Sep-12 A	30-Nov-16
WA-TKO-1040	Operate and Maintain Public Fill Sorting Facilities in Zone A, B1 & B2	25-Sep-12 A	30-Nov-16



Appendix C - Implementation Schedule of Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
Air Quality				
S5.5.6.1 of HKBCFEIA	A1	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	All construction sites	V
S5.5.6.2 of HKBCFEIA and S4.8.1 of TKCLKLEIA	A2	Proper watering of exposed spoil should be undertaken throughout the construction phase: • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones. • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary	All construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period; • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an		

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • All unpaved roads/exposed area shall be watered which results in dust suppression by forming moist cohesive films among the discrete grains of road surface material. • No burning of debris or other materials on the works areas is allowed; • Water spray shall be used during the handling of fill material at the site and at active cuts, excavation and fill sites where dust is likely to be created; • Open dropping heights for excavated materials shall be controlled to a maximum height of 2m to minimise the fugitive dust arising from unloading; • During transportation by truck, materials shall not be loaded to a level higher than the side and tail boards, and shall be dampened or covered before transport. Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards; • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable		

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.		
S5.5.6.3 of HKBCFEIA and S4.8.1 of TKCLKLEIA	A3	The Contractor should undertake proper watering on all exposed spoil and associated work areas (with at least 8 times per day) throughout the construction phase.	All construction sites	V
S5.5.6.4 of HKBCFEIA and S4.11 of TKCLKLEIA	A4	Implement regular dust monitoring under EM&A programme during the construction stage.	Selected representative dust monitoring station	V
S5.5.7.1 of HKBCFEIA	A5	The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant: • Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system; • All dust-laden air or waste gas generated by the process operations should be properly extracted and vented to fabric filtering system to meet the emission limits for TSP; • Vents for all silos and cement/ pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system; • The materials which may generate airborne dusty emissions should be wetted by water spray system;	All construction sites	N/A

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		• All receiving hoppers should be enclosed on three sides up to 3m above unloading point; • All conveyor transfer points should be totally enclosed; • All access and route roads within the premises should be paved and wetted; and • Vehicle cleaning facilities should be provided and used by all concrete trucks before leaving the premises to wash off any dust on the wheels and/or body.		
S5.5.2.7 of HKBCFEIA	A6	The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point: • All road surface within the barging facilities will be paved; • Dust enclosures will be provided for the loading ramp; • Vehicles will be required to pass through designated wheels wash facilities; and • Continuous water spray at the loading points.	All construction sites	N/A (Construction in process)
Construction Noise (Air borne)				
S6.4.10 of HKBCFEIA	N1	Use of good site practices to limit noise emissions by considering the following: • only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • plant known to emit noise strongly in one direction, where possible, be orientated	All construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		so that the noise is directed away from nearby NSRs; • silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • mobile plant should be sited as far away from NSRs as possible and practicable; • material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.		
S6.4.11 of HKBCFEIA	N2	Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	All construction sites	V
S6.4.12 of HKBCFEIA	N3	Install movable noise barriers (typically density @14kg/m^2), acoustic mat or full enclosure close to noisy plants including air compressor, generators, saw.	For plant items listed in Appendix 6D of the EIA report at all construction sites	N/A
S6.4.13 of HKBCFEIA	N4	Select “Quiet plants” which comply with the BS 5228 Part 1 or TM standards.	For plant items listed in Appendix 6D of the EIA report at all construction sites	V
S6.4.14 of HKBCFEIA	N5	Sequencing operation of construction plants where practicable.	All construction sites where practicable	V
S5.1 of	N6	Implement a noise monitoring under EM&A programme.	Selected	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
TMCLKLEIA			representative noise monitoring station	
Waste Management (Construction Waste)				
S12.6 of TMCLKLEIA	WM1	The Contractor shall identify a coordinator for the management of waste.	All construction sites	V
S12.6 of TMCLKLEIA	WM2	The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	All construction sites	V
S12.6 of TMCLKLEIA	WM3	EM&A of waste handling, storage, transportation, disposal procedures and documentation through the site audit programme shall be undertaken.	All construction sites	V
S8.3.8 of HKBCFEIA and S12.6 of TMCLKLEIA	WM4	*Construction and Demolition Material* The following mitigation measures should be implemented in handling the waste: • Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; • Carry out on-site sorting; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; • Adopt 'Selective Demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;	All construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		• Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; • Implement an enhanced Waste Management Plan similar to ETWBTC (Works) No. 19/2005 – "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction; • In addition, disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation; and • The surplus surcharge should be transferred to a fill bank.		
S8.3.9-S8.3.11 of HKBCFEIA and S12.6 of TMCLKLEIA	WM5	*C&D Waste* • Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding and falsework should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage. • The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers	All construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.		
S8.2.12-S8.3.15 of HKBCFEIA and S12.6 of TMCLKLEIA	WM6	*Chemical Waste* • Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. • Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation. • The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated. • Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre	All construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.		
S8.3.16 of HKBCFEIA and S12.6 of TMCLKLEIA	WM7	*Sewage* • Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state, which will not deter the workers from utilizing these portable toilets. Night soil should be collected by licensed collectors regularly.	All construction sites	V
S8.3.17 of HKBCFEIA and S12.6 of TMCLKLEIA	WM8	*General Refuse* • The site and surroundings shall be kept tidy and litter free. General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. • A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. • Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible. • Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be	All construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		considered by the Contractor. In addition, waste separation facilities for paper, aluminum cans, plastic bottles etc., should be provided. • Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes. • Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared daily and shall be disposed of to the nearest licensed landfill or refuse transfer station. • All waste containers shall be in a secure area on hardstanding.		
Water Quality (Construction Phase)				
	W1	Mitigation during the marine works to reduce impacts to within acceptable levels have been recommended and will comprise a series of measures that restrict the method and sequencing of backfilling, as well as protection measures. Details of the measures are provided below:	During filling	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		• Reclamation filling for the Project shall not proceed until at least 200m of leading seawall at the reclamation area formed above +2.2mPD, unless otherwise agreement was obtained from EPD, except for the 300m gaps for marine access. All underwater filling works shall be carried out behind seawalls to avoid dispersion of suspended solids outside the Project limit; • Except for the filling of the cellular structures, not more than 15% public fill shall be used for reclamation filling below +2.5mPD during construction of the seawall; • After the seawall is completed except for the 300m marine access as indicated in the EPs, not more than 30% public fill shall be used for reclamation filling below +2.5mPD, unless otherwise agreement from EPD was obtained; • Upon completion of 200m leading seawall, no more than a total of 60 filling barge trips per day shall be made with a cumulative maximum daily filling rate of 60,000 m3 for HKBCF and TMCLKL southern landfall reclamation during the filling operation; and • Upon completion of the whole section of seawall except for the 300m marine access as indicated in the EPs, no more than a total of 190 filling barge trips per day shall be made with a cumulative maximum daily filling rate of 190,000 m3 for the remaining filling operations for HKBCF and TMCLKL southern landfall reclamation. • Floating type perimeter silt curtains shall be around the HKBCF site before the commencement of marine works. Staggered layers of silt curtain shall be provided		

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		to prevent sediment loss at navigation accesses. The length of each staggered layers shall be at least 200m; • Single layer silt curtain to be applied around the North-east airport water intake; • The silt-curtains should be maintained in good condition to ensure the sediment plume generated from filling be confined effectively within the site boundary; • The filling works shall be scheduled to spread the works evenly over a working day; • Cellular structure shall be used for seawall construction; • A layer of geotextile shall be placed on top of the seabed before any filling activities take place inside the cellular structures to form the seawall; • The conveyor belts shall be fitted with windboards and conveyor release points shall be covered with curtain to prevent any spillage of filling materials onto the surrounding waters; and • An additional layer of silt curtain shall be installed near the active stone column installation points. A layer of geotextile with stone blanket on top shall be placed on the seabed prior to stone column installation works.		
S9.11.1.3 of HKBCFEIA and S6.10 of	W2	<u>Land Works</u> General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:	All land-based construction sites	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
TMCLKLEIA		• wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters; • sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided; • storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks; • silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm; • temporary access roads should be surfaced with crushed stone or gravel; • rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities; • measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system; • open stockpiles of construction materials (e.g. aggregates and sand) on site		

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		should be covered with tarpaulin or similar fabric during rainstorms; • manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers; • discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system; • all vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit; • wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain; • the section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel; • wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects; • vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for offsite disposal;		

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		• the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately; • waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance; • all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and • surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the storm water system..		
S9.14 of HKBCFEIA and S6.10 of TMCLKLEIA	W3	Implement a water quality monitoring programme	At identified monitoring location	V
S6.10 of TMCLKLEIA	W4	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	All construction site areas	V
Ecology (Construction Phase)				
S10.7 of HKBCFEIA and S8.14 of TMCLKLEIA	E1	• Install silt curtain during the construction • Limit works fronts • Construct seawall prior to reclamation filling where practicable	Seawall, reclamation area	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		• Good site practices • Strict enforcement of no marine dumping • Site runoff control • Spill response plan		
S10.7 of HKBCFEIA	E2	• Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater.	Land-based works areas	V
S10.7 of HKBCFEIA and S8.14 of TMCLKLEIA	E3	• Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time.	Land-based works areas	V
S10.7 of HKBCFEIA and S8.14 of TMCLKLEIA	E4	• Dolphin Exclusion Zone • Dolphin watching plan	Marine works	V
S10.7 of HKBCFEIA and S8.14 of TMCLKLEIA	E5	• Decouple compressors and other equipment on working vessels • Proposal on design and implementation of acoustic decoupling measures applied during reclamation works • Avoidance of percussive piling	Marine works	V
S10.7 of	E6	• Control vessel speed	Marine traffic	V

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
HKBCFEIA and S8.14 of TMCLKLEIA		• Skipper training • Predefined and regular routes for working vessels; avoid Brothers Islands		
S10.10 of HKBCFEIA and S8.14 of TMCLKLEIA	E7	• Vessel based dolphin monitoring	Northeast and Northwest Lantau	V
Fisheries				
S11.7 of HKBCFEIA	F1	• Reduce re-suspension of sediments • Limit works fronts • Good site practices • Strict enforcement of no marine dumping • Spill response plan	Seawall, reclamation area	V
S11.7 of HKBCFEIA	F2	• Install silt-grease trap in the drainage system collecting surface runoff	Reclamation area	V
Landscape & Visual (Construction Phase)				
S14.3.3. 3 of HKBCFEIA and S10.9 of TMCLKLEIA	LV1	*Mitigate Landscape Impacts* G1/CM4 Grass-hydroseed or sheeting bare soil surface and stock pile areas. G9 Reserve of loose natural granite rocks for re-use. Provide new coastline to adopt “natural-look” by means of using armour rocks in the form of natural	All construction site areas	N/A

EIA Ref.	EM&A Log Ref	Environmental Mitigation Measures	Location	Implementation Status
		rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of new coastline.		
S10.9 of TMCLKLEIA	LV2	*Mitigate Landscape Impacts* CM7 Ensure no run-off into water body adjacent to the Project Area.	All construction site areas	V
S14.3.3. 3 of HKBCFEIA	LV4	*Mitigate Visual Impacts* V1 Minimize time for construction activities during construction period.	All construction site areas	V
S10.9 of TMCLKLEIA	LV5	*Mitigate Visual Impacts* CM6 Control night-time lighting and glare by hooding all lights.	All construction site areas	V
EM&A				
S15.2.2 of HKBCFEIA	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual.	All construction site areas	V
S15.5 - S15.6 of HKBCFEIA	EM2	• An Environmental Team needs to be employed as per the EM&A Manual. • Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures. • An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with.	All construction site areas	V

Legend: V = implemented; x = not implemented; N/A = not applicable

Appendix D - Summary of Action and Limit Levels

Table 1 – Action and Limit Levels for 1-hour TSP

Location	Action Level	Limit Level
AMS2	374 μg/m^3	500 μg/m^3
AMS3B*	368 μg/m^3	500 μg/m^3
AMS6	360 μg/m^3	500 μg/m^3
AMS7A#	370 μg/m^3	500 μg/m^3

Remarks: * Action Level set out at AMS3 Ho Yu College is adopted.

#Action level set out at AMS7 Hong Kong SkyCity Marriott Hotel is adopted.

Table 2 – Action and Limit Levels for 24-hour TSP

Location	Action Level	Limit Level
AMS2	176 μg/m^3	260 μg/m^3
AMS3B*	167 μg/m^3	260 μg/m^3
AMS6	173 μg/m^3	260 μg/m^3
AMS7A#	183 μg/m^3	260 μg/m^3

Remarks: * Action Level set out at AMS3 Ho Yu College is adopted.

#Action level set out at AMS7 Hong Kong SkyCity Marriott Hotel is adopted.

Table 3 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

Location	Action Level	Limit Level
NMS2	When one documented complaint, related to 0700 – 1900 hours on normal weekdays, is received from any one of the sensitive receivers	75 dB(A)
NMS3B		*65 / 70 dB(A)

*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period.

Table 4 – Action and Limit Levels for Water Quality

Parameters	**Action**	**Limit**
DO in mg L^{-1} (Surface, Middle & Bottom)	Surface and Middle 5.0 Bottom 4.7	Surface and Middle 4 .2 (except 5 mg/L for FCZ) Bottom 3.6
SS in mg L^{-1} (depth-averaged)	23.5 and 120% of upstream control station's SS at the same tide of the same day	34.4 and 130% of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes
Turbidity in NTU (depth-averaged)	27.5 and 120% of upstream control station's turbidity at the same tide of the same day	47.0 and130% of upstream control station's turbidity at the same tide of the same day

Notes:

1. "depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
3. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

Table 5(a) Action and Limit Levels for Chinese White Dolphin Monitoring - Approach to Define Action Level (AL) and Limit Level (LL):

	North Lantau Social Cluster	
	NEL	**NWL**
Action Level	(STG < 70% of baseline) & (ANI < 70% of baseline)	(STG < 70% of baseline) & (ANI < 70% of baseline)
Limit Level	[(STG < 40% of baseline) & (ANI < 40% of baseline)] AND [(STG < 40% of baseline) & (ANI < 40% of baseline)]	

For North Lantau Social Cluster, action level will be trigger if either NEL **or** NWL fall below the criteria; limit level will be triggered if both NEL **and** NWL fall below the criteria.

Table 5(b) Derived Value of Action Level (AL) and Limit Level (LL) for Chinese White Dolphin Monitoring

	North Lantau Social Cluster	
	NEL	**NWL**
Action Level	(STG < 4.2) & (ANI < 15.5)	(STG < 6.9) & (ANI < 31.3)
Limit Level	[(STG < 2.4) & (ANI <8.9)] AND [(STG < 3.9)& (ANI < 17.9)]	

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Tung Chung Development Pier (AMS2)	Operator:	Leung Yiu Ting
Cal. Date:	27-Mar-15	Next Due Date:	26-May-15
Equipment No.:	A-001-78T	Serial No.	3383

Ambient Condition			
Temperature, Ta (K)	294	Pressure, Pa (mmHg)	763.0

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.97518	Intercept, bc	-0.01001
Last Calibration Date:	28-May-14	**mc x Qstd + bc = [DH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	28-May-15	**Qstd = {[DH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	8.2	2.89	1.47	48.0	48.41
13	7.0	2.67	1.36	44.0	44.38
10	5.3	2.32	1.18	36.0	36.31
7	4.2	2.07	1.05	32.0	32.27
5	2.6	1.63	0.83	24.0	24.21

By Linear Regression of Y on X

Slope , mw = **38.1883** **Intercept, bw =** **-7.8238**

Correlation Coefficient* = **0.9965**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m^3/min

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = IC x [(Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]$^{1/2}$= **41.46**

Remarks:

QC Reviewer: K Leung Signature: Date: 27-3-15

D:\HVS Calibration Certificate (Existing)

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Site Boundary of Site Office (WA2) (AMS3B)	Operator:	Leung Yiu Ting
Cal. Date:	6-Mar-15	Next Due Date:	6-May-15
Equipment No.:	A-001-79T	Serial No.	3384

Ambient Condition			
Temperature, Ta (K)	290	Pressure, Pa (mmHg)	762.2

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.97518	Intercept, bc	-0.01001
Last Calibration Date:	28-May-14	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	28-May-15	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	$[DH \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.6	2.80	1.42	52.0	52.79
13	6.0	2.49	1.26	44.0	44.67
10	5.0	2.27	1.15	36.0	36.55
7	3.0	1.76	0.90	24.0	24.36
5	2.0	1.44	0.73	16.0	16.24

By Linear Regression of Y on X

Slope , mw = **53.0294** **Intercept, bw =** **-23.0658**

Correlation Coefficient* = **0.9960**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m^3/min

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2}$ = **45.19**

Remarks: _____

QC Reviewer: WS CHAN Signature: _____ Date: 06/5/15

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Chu Kong Air-Sea Union Transportation Co.Ltd. (AMS7A)	Operator:	Cheung Hung Wai
Cal. Date:	2-Apr-15	Next Due Date:	2-Jun-15
Equipment No.:	A-001-80T	Serial No.	3385

Ambient Condition			
Temperature, Ta (K)	297	Pressure, Pa (mmHg)	755.1

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.97518	Intercept, bc	-0.01001
Last Calibration Date:	28-May-14	**mc x Qstd + bc = [DH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	28-May-15	**Qstd = {[DH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (m^3/min) **X-axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	6.9	2.62	1.33	48.0	47.93
13	6.0	2.45	1.24	42.0	41.93
10	4.7	2.16	1.10	34.0	33.95
7	3.6	1.89	0.96	28.0	27.96
5	2.8	1.67	0.85	21.0	20.97

By Linear Regression of Y on X

Slope , mw = **54.4381** **Intercept, bw =** **-25.2512**

Correlation Coefficient* = **0.9963**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m^3/min

From the Regression Equation, the "Y" value according to

mw x Qstd + bw = IC x [(Pa/760) x (298/Ta)]$^{1/2}$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]$^{1/2}$= **45.59**

Remarks:

QC Reviewer: WS CHAN Signature: Date: 2/4/15

TISCH Environmental

TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE
VILLAGE OF CLEVES, OH
45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 28, 2014 Rootsmeter S/N 0438320 Ta (K) - 296
Operator Tisch Orifice I.D. - 0988 Pa (mm) - 751.84

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3790	3.2	2.00
2	NA	NA	1.00	0.9720	6.4	4.00
3	NA	NA	1.00	0.8690	7.9	5.00
4	NA	NA	1.00	0.8260	8.8	5.50
5	NA	NA	1.00	0.6830	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9917	0.7191	1.4113		0.9957	0.7221	0.8874
0.9875	1.0159	1.9959		0.9915	1.0201	1.2549
0.9854	1.1339	2.2315		0.9894	1.1385	1.4030
0.9843	1.1916	2.3405		0.9883	1.1965	1.4715
0.9790	1.4333	2.8227		0.9829	1.4392	1.7747
Qstd slope (m) =		1.97518		Qa slope (m) =		1.23683
intercept (b) =		-0.01001		intercept (b) =		-0.00630
coefficient (r) =		0.99998		coefficient (r) =		0.99998
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

EQUIPMENT CALIBRATION RECORD

Type:	***Laser Dust Monitor***
Manufacturer/Brand:	***SIBATA***
Model No.:	***LD-3***
Equipment No.:	***A.005.07a***
Sensitivity Adjustment Scale Setting:	***557 CPM***
Operator:	*Mike Shek (MSKM)*

Standard Equipment

Equipment:	*Rupprecht & Patashnick TEOM®*		
Venue:	*Cyberport (Pui Ying Secondary School)*		
Model No.:	*Series 1400AB*		
Serial No:	Control: *140AB219899803*		
	Sensor: *1200C143659803*	K_o: *12500*	
Last Calibration Date*:	*10 May 2014*		

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *557* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *557* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*11-05-14*	*09:30 - 10:30*	*26.7*	*75*	*0.04434*	*1775*	*29.58*
2	*11-05-14*	*10:30 - 11:30*	*26.7*	*75*	*0.04716*	*1880*	*31.33*
3	*11-05-14*	*11:30 - 12:30*	*26.8*	*76*	*0.04927*	*1964*	*32.73*
4	*11-05-14*	*12:30 - 13:30*	*26.8*	*75*	*0.05035*	*2015*	*33.58*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9982*

Validity of Calibration Record: *11 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 12 May 2014

EQUIPMENT CALIBRATION RECORD

Type:	***Laser Dust Monitor***
Manufacturer/Brand:	***SIBATA***
Model No.:	***LD-3***
Equipment No.:	***A.005.08a***
Sensitivity Adjustment Scale Setting:	***702 CPM***
Operator:	*Mike Shek (MSKM)*

Standard Equipment

Equipment:	*Rupprecht & Patashnick TEOM®*		
Venue:	*Cyberport (Pui Ying Secondary School)*		
Model No.:	*Series 1400AB*		
Serial No:	Control: *140AB219899803*		
	Sensor: *1200C143659803*	K_o: *12500*	
Last Calibration Date*:	*10 May 2014*		

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *702* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *702* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*11-05-14*	*09:45 - 10:45*	*26.7*	*75*	*0.04568*	*1713*	*28.50*
2	*11-05-14*	*10:45 - 11:45*	*26.7*	*75*	*0.04857*	*1819*	*30.32*
3	*11-05-14*	*11:45 - 12:45*	*26.8*	*76*	*0.05063*	*1903*	*31.72*
4	*11-05-14*	*12:45 - 13:45*	*26.8*	*75*	*0.05116*	*1922*	*32.03*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0016*
Correlation coefficient: *0.9984*

Validity of Calibration Record: *11 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 12 May 2014

EQUIPMENT CALIBRATION RECORD

Type: ***Laser Dust Monitor***
Manufacturer/Brand: ***SIBATA***
Model No.: ***LD-3***
Equipment No.: ***A.005.09a***
Sensitivity Adjustment Scale Setting: ***797 CPM***

Operator: *Mike Shek (MSKM)*

Standard Equipment

Equipment: *Rupprecht & Patashnick TEOM®*
Venue: *Cyberport (Pui Ying Secondary School)*
Model No.: *Series 1400AB*
Serial No: Control: *140AB219899803*
Sensor: *1200C143659803* K_o: *12500*
Last Calibration Date*: *10 May 2014*

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *797* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *797* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*11-05-14*	*13:30 - 14:30*	*26.8*	*75*	*0.05034*	*2017*	*33.62*
2	*11-05-14*	*14:30 - 15:30*	*26.9*	*76*	*0.05211*	*2084*	*34.73*
3	*11-05-14*	*15:30 - 16:30*	*26.9*	*76*	*0.05163*	*2066*	*34.43*
4	*11-05-14*	*16:30 - 17:30*	*26.9*	*76*	*0.05272*	*2113*	*35.22*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9965*

Validity of Calibration Record: *11 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 12 May 2014

EQUIPMENT CALIBRATION RECORD

Type:	***Laser Dust Monitor***
Manufacturer/Brand:	***SIBATA***
Model No.:	***LD-3***
Equipment No.:	***A.005.10a***
Sensitivity Adjustment Scale Setting:	***753 CPM***
Operator:	*Mike Shek (MSKM)*

Standard Equipment

Equipment:	*Rupprecht & Patashnick TEOM®*		
Venue:	*Cyberport (Pui Ying Secondary School)*		
Model No.:	*Series 1400AB*		
Serial No:	Control: *140AB219899803*		
	Sensor: *1200C143659803*	K_o: *12500*	
Last Calibration Date*:	*10 May 2014*		

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *753* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *753* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*11-05-14*	*13:45 - 14:45*	*26.8*	*75*	*0.04984*	*1996*	*33.27*
2	*11-05-14*	*14:45 - 15:45*	*26.9*	*76*	*0.05196*	*2077*	*34.62*
3	*11-05-14*	*15:45 - 16:45*	*26.9*	*76*	*0.05141*	*2055*	*34.25*
4	*11-05-14*	*16:45 - 17:45*	*26.9*	*76*	*0.05263*	*2109*	*35.15*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9969*

Validity of Calibration Record: *11 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 12 May 2014

EQUIPMENT CALIBRATION RECORD

Type:	***Laser Dust Monitor***
Manufacturer/Brand:	***SIBATA***
Model No.:	***LD-3***
Equipment No.:	***A.005.11a***
Sensitivity Adjustment Scale Setting:	***799 CPM***
Operator:	*Mike Shek (MSKM)*

Standard Equipment

Equipment:	*Rupprecht & Patashnick TEOM®*		
Venue:	*Cyberport (Pui Ying Secondary School)*		
Model No.:	*Series 1400AB*		
Serial No:	Control: *140AB219899803*		
	Sensor: *1200C143659803*	K_o: *12500*	
Last Calibration Date*:	*10 May 2014*		

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *799* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *799* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*18-05-14*	*09:00 - 10:00*	*28.3*	*77*	*0.04527*	*1815*	*30.25*
2	*18-05-14*	*10:00 - 11:00*	*28.3*	*77*	*0.04811*	*1923*	*32.05*
3	*18-05-14*	*11:00 - 12:00*	*28.3*	*77*	*0.05103*	*2041*	*34.02*
4	*18-05-14*	*12:00 - 13:00*	*28.4*	*77*	*0.05366*	*2157*	*35.95*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9987*

Validity of Calibration Record: *18 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 19 May 2014

EQUIPMENT CALIBRATION RECORD

Type: ***Laser Dust Monitor***
Manufacturer/Brand: ***SIBATA***
Model No.: ***LD-3B***
Equipment No.: ***A.005.13a***
Sensitivity Adjustment Scale Setting: ***643 CPM***

Operator: *Mike Shek (MSKM)*

Standard Equipment

Equipment: *Rupprecht & Patashnick TEOM®*
Venue: *Cyberport (Pui Ying Secondary School)*
Model No.: *Series 1400AB*
Serial No: Control: *140AB219899803*
Sensor: *1200C143659803* K_o: *12500*
Last Calibration Date*: *10 May 2014*

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *643* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *643* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*18-05-14*	*09:30 - 10:30*	*28.3*	*77*	*0.04614*	*1846*	*30.77*
2	*18-05-14*	*10:30 - 11:30*	*28.3*	*77*	*0.04823*	*1934*	*32.23*
3	*18-05-14*	*11:30 - 12:30*	*28.3*	*77*	*0.05152*	*2053*	*34.22*
4	*18-05-14*	*12:30 - 13:30*	*28.4*	*77*	*0.05391*	*2162*	*36.03*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9981*

Validity of Calibration Record: *18 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 19 May 2014

EQUIPMENT CALIBRATION RECORD

Type:	***Laser Dust Monitor***
Manufacturer/Brand:	***SIBATA***
Model No.:	***LD-3B***
Equipment No.:	***A.005.14a***
Sensitivity Adjustment Scale Setting:	***786 CPM***
Operator:	*Mike Shek (MSKM)*

Standard Equipment

Equipment:	*Rupprecht & Patashnick TEOM®*
Venue:	*Cyberport (Pui Ying Secondary School)*
Model No.:	*Series 1400AB*
Serial No:	Control: *140AB219899803*
	Sensor: *1200C143659803* K_o: *12500*
Last Calibration Date*:	*10 May 2014*

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *786* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *786* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*18-05-14*	*12:45 - 13:45*	*28.4*	*77*	*0.05027*	*2158*	*35.97*
2	*18-05-14*	*13:45 - 14:45*	*28.5*	*76*	*0.05161*	*2211*	*36.85*
3	*18-05-14*	*14:45 - 15:45*	*28.5*	*76*	*0.05235*	*2247*	*37.45*
4	*18-05-14*	*15:45 - 16:45*	*28.4*	*77*	*0.05203*	*2233*	*37.22*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0014*
Correlation coefficient: *0.9969*

Validity of Calibration Record: *18 May 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 19 May 2014

EQUIPMENT CALIBRATION RECORD

Type:	***Laser Dust Monitor***
Manufacturer/Brand:	***SIBATA***
Model No.:	***LD-3B***
Equipment No.:	***A.005.16a***
Sensitivity Adjustment Scale Setting:	***521 CPM***
Operator:	*Mike Shek (MSKM)*

Standard Equipment

Equipment:	*Rupprecht & Patashnick TEOM®*		
Venue:	*Cyberport (Pui Ying Secondary School)*		
Model No.:	*Series 1400AB*		
Serial No:	Control: *140AB219899803*		
	Sensor: *1200C143659803*	K_o: *12500*	
Last Calibration Date*:	*10 May 2014*		

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): *521* CPM
Sensitivity Adjustment Scale Setting (After Calibration): *521* CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration[1] (mg/m^3) **Y-axis**	Total Count[2]	Count/ Minute[3] **X-axis**
			Temp (°C)	R.H. (%)			
1	*26-07-14*	*10:30 - 11:30*	*28.6*	*77*	*0.04931*	*1971*	*32.85*
2	*26-07-14*	*11:45 - 12:45*	*28.6*	*77*	*0.05142*	*2052*	*34.20*
3	*26-07-14*	*13:15 - 14:15*	*28.7*	*77*	*0.05589*	*2243*	*37.38*
4	*26-07-14*	*14:40 - 15:40*	*28.8*	*78*	*0.05293*	*2116*	*35.27*

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
2. Total Count was logged by Laser Dust Monitor
3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9934*

Validity of Calibration Record: *26 July 2015*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 28 July 2014

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533

HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 14CA1106 04-02 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Rion Co., Ltd.
Type/Model No.:	NC-73
Serial/Equipment No.:	10307223 / N.004.08
Adaptors used:	-

Item submitted by

Curstomer:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	06-Nov-2014

Date of test: 07-Nov-2014

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	13-May-2015	SCL
Preamplifier	B&K 2673	2239857	10-Apr-2015	CEPREI
Measuring amplifier	B&K 2610	2346941	08-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI
Digital multi-meter	34401A	US36087050	17-Dec-2014	CEPREI
Audio analyzer	8903B	GB41300350	07-Apr-2015	CEPREI
Universal counter	53132A	MY40003662	11-Apr-2015	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	65 ± 10 %
Air pressure:	1010 ± 10 hPa

Test specifications

1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.

2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.

3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 08-Nov-2014 **Company Chop:**

SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the conditon of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

© Soils & Materials Engineering Co., Ltd.

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533
HOKLAS 028
CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 15CA0303 01-02 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	B & K
Type/Model No.:	4231
Serial/Equipment No.:	3006428
Adaptors used:	-

Item submitted by

Curstomer:	AECOM ASIA CO LIMITED
Address of Customer:	-
Request No.:	-
Date of receipt:	03-Mar-2015

Date of test: 03-Mar-2015

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	13-May-2015	SCL
Preamplifier	B&K 2673	2743150	10-Apr-2015	CEPREI
Measuring amplifier	B&K 2610	2346941	08-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI
Digital multi-meter	34401A	US36087050	01-Dec-2015	CEPREI
Audio analyzer	8903B	GB41300350	07-Apr-2015	CEPREI
Universal counter	53132A	MY40003662	11-Apr-2015	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1010 ± 5 hPa

Test specifications

1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.

2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.

3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory: **Date:** 04-Mar-2015 **Company Chop:**

Huang Jian Min/Feng Jun Qi

SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the conditon of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

© Soils & Materials Engineering Co., Ltd.

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. Tel : (852) 2873 6860
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓 Fax : (852) 2555 7533
E-mail: smec@cigismec.com Website: www.cigismec.com
HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 14CA1106 04-01 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	Rion Co., Ltd.	,	Rion Co., Ltd.
Type/Model No.:	NL-31	,	UC-53A
Serial/Equipment No.:	00320528 / N.007.03A	,	90565
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	06-Nov-2014

Date of test: 07-Nov-2014

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	15-Jun-2015	CIGISMEC
Signal generator	DS 360	33873	09-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	65 ± 10 %
Air pressure:	1010 ± 10 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 08-Nov-2014 **Company Chop:** SOILS & MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

© Soils & Materials Engineering Co., Ltd.

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. 028 - CAL) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong.
香港黃竹坑道37號利達中心地下，9樓，12樓，13樓及20樓
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel : (852) 2873 6860
Fax : (852) 2555 7533
HOKLAS 028

CERTIFICATE OF CALIBRATION

Certificate No.: 14CA0702 01-01 **Page** 1 **of** 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	B & K	,	B & K
Type/Model No.:	2238	,	4188
Serial/Equipment No.:	2800927 / N.009.06	,	2791211
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	02-Jul-2014

Date of test: 03-Jul-2014

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	20-Jun-2015	CIGISMEC
Signal generator	DS 360	33873	09-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1000 ± 10 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory: Huang Jian Min/Feng Jun Qi **Date:** 04-Jul-2014 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

© Soils & Materials Engineering Co., Ltd.

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this certificate were determined by this laboratory in accordance with its terms of accreditation. Such terms of accreditation stipulate that the results shall be traceable to the International System of Units (S.I.) or recognised measurement standards. This certificate shall not be reproduced except in full.

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1504531
Sub-batch: 0
Date of Issue: 07/02/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 05 February, 2015 Date of next Calibration: 05 May, 2015

Parameters:

Conductivity **Method Ref: APHA (21th edition), 2510B**

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	147.7	+0.5
6667	6600	-1.0
12890	12750	-1.1
58670	58200	-0.8
	Tolerance Limit (%)	±10.0

Dissolved Oxygen **Method Ref: APHA (21st edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.50	3.40	-0.10
5.85	5.88	+0.03
7.70	7.65	-0.05
	Tolerance Limit (mg/L)	±0.20

Temperature **Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)
12.5	12.45	-0.1
25.0	25.02	+0.0
39.0	38.91	-0.1
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1504531
Sub-batch: 0
Date of Issue: 07/02/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 05 February, 2015 Date of next Calibration: 05 May, 2015

Parameters:

Salinity

Method Ref: APHA (21st edition), 2520B

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0.00	--
10	9.95	-0.5
20	19.62	-1.9
30	29.56	-1.5
	Tolerance Limit (%)	±10.0

Turbidity

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.9	-2.5
10	9.6	-4.0
20	19.7	-1.5
50	49.4	-1.2
100	99.1	-0.9
	Tolerance Limit (%)	±10.0

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.02	+0.02
7.0	7.03	+0.03
10.0	10.02	+0.02
	Tolerance Limit (pH Unit)	±0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1504530
Sub-batch: 0
Date of Issue: 07/02/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 05 February, 2015 Date of next Calibration: 05 May, 2015

Parameters:

Conductivity **Method Ref: APHA (21th edition), 2510B**

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	145.0	-1.3
6667	6640	-0.4
12890	12800	-0.7
58670	58850	+0.3
	Tolerance Limit (%)	±10.0

Dissolved Oxygen **Method Ref: APHA (21st edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.50	3.44	-0.06
5.85	5.81	-0.04
7.70	7.66	-0.04
	Tolerance Limit (mg/L)	±0.20

Temperature **Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)
12.5	12.53	+0.0
25.0	25.05	+0.1
39.0	38.85	-0.1
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1504530
Sub-batch: 0
Date of Issue: 07/02/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 05 February, 2015 Date of next Calibration: 05 May, 2015

Parameters:

Salinity

Method Ref: APHA (21st edition), 2520B

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0.00	--
10	9.98	-0.2
20	20.03	+0.2
30	30.05	+0.2
	Tolerance Limit (%)	±10.0

Turbidity

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	4.1	+2.5
10	9.7	-3.0
20	20.2	+1.0
50	50.5	+1.0
100	100.6	+0.6
	Tolerance Limit (%)	±10.0

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.01	+0.01
7.0	7.03	+0.03
10.0	9.95	-0.05
	Tolerance Limit (pH Unit)	±0.20

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

Hong Kong Boundary Crossing Facilities – Reclamation Works
Impact Monitoring Schedule for April 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			01-Apr	02-Apr	03-Apr	04-Apr
			Mid-Ebb 11:45 Mid-Flood 17:29	24-hour TSP 1-hour TSP	Mid-Ebb 12:37 Mid-Flood 18:45	
05-Apr	06-Apr	07-Apr	08-Apr	09-Apr	10-Apr	11-Apr
	Mid-Flood 07:48 Mid-Ebb 14:03		Mid-Flood 08:43 Mid-Ebb 15:12 24-hour TSP 1-hour TSP Noise		Mid-Flood 09:47 Mid-Ebb 16:41	
12-Apr	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr
	Mid-Ebb 08:48 Mid-Flood 13:27 24-hour TSP 1-hour TSP Noise		Mid-Ebb 10:42 Mid-Flood 16:07		Mid-Ebb 12:04 Mid-Flood 18:03 24-hour TSP 1-hour TSP	
19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr
	Mid-Flood 07:34 Mid-Ebb 14:05 Dolphin monitoring	Dolphin monitoring	Mid-Flood 08:41 Mid-Ebb 15:31	24-hour TSP 1-hour TSP Noise	Mid-Flood 09:52 Mid-Ebb 17:03	
26-Apr	27-Apr	28-Apr	29-Apr	30-Apr		
	Mid-Ebb 09:07 Mid-Flood 14:50	Dolphin monitoring	Mid-Ebb 10:42 Mid-Flood 16:24 Dolphin monitoring 24-hour TSP 1-hour TSP Noise			

The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)

Hong Kong Boundary Crossing Facilities – Reclamation Works
Tentative Impact Monitoring Schedule for May 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					01-May	02-May
					Mid-Ebb 11:43 Mid-Flood 17:53	
03-May	04-May	05-May	06-May	07-May	08-May	09-May
	Mid-Flood 06:43 Mid-Ebb 13:11	24-hour TSP 1-hour TSP Noise	Mid-Flood 07:42 Mid-Ebb 14:18		Mid-Flood 08:50 Mid-Ebb 15:39	
10-May	11-May	12-May	13-May	14-May	15-May	16-May
	Mid-Flood 11:34 Mid-Ebb 18:27 Dolphin monitoring 24-hour TSP 1-hour TSP Noise	Dolphin monitoring	Mid-Ebb 09:25 Mid-Flood 14:44		Mid-Ebb 11:02 Mid-Flood 17:01 24-hour TSP 1-hour TSP	
17-May	18-May	19-May	20-May	21-May	22-May	23-May
	Mid-Flood 06:26 Mid-Ebb 13:06 Dolphin monitoring		Mid-Flood 07:37 Mid-Ebb 14:30 Dolphin monitoring	24-hour TSP 1-hour TSP Noise	Mid-Flood 08:49 Mid-Ebb 15:53	
24-May	25-May	26-May	27-May	28-May	29-May	30-May
	Mid-Flood 11:08 Mid-Ebb 18:11		Mid-Ebb 09:06 Mid-Flood 14:24 24-hour TSP 1-hour TSP Noise		Mid-Ebb 10:38 Mid-Flood 16:47	
31-May						

The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)

Appendix G Impact Air Quality Monitoring Results

1-hour TSP Monitoring Results at Station AMS2 - Tung Chung Development Pier

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
02-Apr-15	1st Hour	Fine	0.4	09:40	73	374	500
02-Apr-15	2nd Hour	Fine	1.2	10:40	75	374	500
02-Apr-15	3rd Hour	Fine	0.5	11:40	71	374	500
08-Apr-15	1st Hour	Fine	0.1	10:20	83	374	500
08-Apr-15	2nd Hour	Fine	0.1	11:20	84	374	500
08-Apr-15	3rd Hour	Fine	0.3	12:20	81	374	500
13-Apr-15	1st Hour	Sunny	1.2	10:10	83	374	500
13-Apr-15	2nd Hour	Sunny	1.2	11:10	84	374	500
13-Apr-15	3rd Hour	Sunny	2.1	12:10	83	374	500
17-Apr-15	1st Hour	Sunny	2.2	10:20	84	374	500
17-Apr-15	2nd Hour	Sunny	4.0	11:20	86	374	500
17-Apr-15	3rd Hour	Sunny	1.7	12:20	86	374	500
23-Apr-15	1st Hour	Fine	0.4	10:16	74	374	500
23-Apr-15	2nd Hour	Fine	0.1	11:16	75	374	500
23-Apr-15	3rd Hour	Fine	0.6	12:16	73	374	500
29-Apr-15	1st Hour	Sunny	N.A.	10:10	88	374	500
29-Apr-15	2nd Hour	Sunny	N.A.	11:10	90	374	500
29-Apr-15	3rd Hour	Sunny	N.A.	12:10	91	374	500
				Average	81		
				Min	71		
				Max	91		

1-hour TSP Monitoring Results at Station AMS3B - Site Boundary of Site Office (WA2)

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m^3)	Action Level (μg/m^3) ^	Limit Level (μg/m^3)
02-Apr-15	1st Hour	Fine	0.4	09:30	72	368	500
02-Apr-15	2nd Hour	Fine	1.2	10:30	72	368	500
02-Apr-15	3rd Hour	Fine	0.5	11:30	73	368	500
08-Apr-15	1st Hour	Fine	0.1	12:00	84	368	500
08-Apr-15	2nd Hour	Fine	0.1	13:00	84	368	500
08-Apr-15	3rd Hour	Fine	0.3	14:00	82	368	500
13-Apr-15	1st Hour	Sunny	1.2	10:20	84	368	500
13-Apr-15	2nd Hour	Sunny	1.2	11:20	82	368	500
13-Apr-15	3rd Hour	Sunny	2.1	12:20	84	368	500
17-Apr-15	1st Hour	Sunny	2.2	10:30	83	368	500
17-Apr-15	2nd Hour	Sunny	4.0	11:30	84	368	500
17-Apr-15	3rd Hour	Sunny	1.7	12:30	87	368	500
23-Apr-15	1st Hour	Fine	0.4	10:24	75	368	500
23-Apr-15	2nd Hour	Fine	0.1	11:24	74	368	500
23-Apr-15	3rd Hour	Fine	0.6	12:24	76	368	500
29-Apr-15	1st Hour	Sunny	N.A.	10:20	86	368	500
29-Apr-15	2nd Hour	Sunny	N.A.	11:20	87	368	500
29-Apr-15	3rd Hour	Sunny	N.A.	12:20	89	368	500
				Average	81		
				Min	72		
				Max	89		

Remarks:
^ Action Level set out at AMS3 Ho Yu College is adopted.

1-hour TSP Monitoring Results at Station AMS7A - Chu Kong Air-Sea Union Transportation Company Limited

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
02-Apr-15	1st Hour	Fine	0.4	09:48	73	370	500
02-Apr-15	2nd Hour	Fine	1.2	10:48	71	370	500
02-Apr-15	3rd Hour	Fine	0.5	11:48	74	370	500
08-Apr-15	1st Hour	Fine	0.3	12:15	82	370	500
08-Apr-15	2nd Hour	Sunny	1.8	13:15	85	370	500
08-Apr-15	3rd Hour	Sunny	0.1	14:15	83	370	500
13-Apr-15	1st Hour	Sunny	1.2	11:10	84	370	500
13-Apr-15	2nd Hour	Sunny	1.2	12:10	82	370	500
13-Apr-15	3rd Hour	Sunny	2.1	13:10	85	370	500
17-Apr-15	1st Hour	Sunny	2.2	10:00	86	370	500
17-Apr-15	2nd Hour	Fine	4.0	11:00	83	370	500
17-Apr-15	3rd Hour	Fine	1.7	12:00	83	370	500
23-Apr-15	1st Hour	Fine	0.4	10:02	78	370	500
23-Apr-15	2nd Hour	Sunny	0.1	11:02	78	370	500
23-Apr-15	3rd Hour	Sunny	0.6	12:02	77	370	500
29-Apr-15	1st Hour	Sunny	N.A.	10:00	87	370	500
29-Apr-15	2nd Hour	0.00	N.A.	11:00	91	370	500
29-Apr-15	3rd Hour	0.00	N.A.	12:00	84	370	500
				Average	81		
				Min	71		
				Max	91		

Remarks:

Due to power failure of wind data monitoring equipment, wind data was not able to be obtained for monitoring event(s) conducted between 28 April – 29 April 2015. Wind speed and direction dataset 28 April – 29 April 2015 from the Hong Kong Observatory is not available at time this monthly report is submitted.

Appendix G Impact Air Quality Monitoring Results

24-hour TSP Monitoring Results at Station AMS2 - Tung Chung Development Pier

Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
01-Apr-15	16:00	02-Apr-15	16:00	Fine	23.6	1008.5	1.33	1.33	1.33	1912.3	2.8850	2.9276	0.0426	4781.84	4805.84	24.00	22	176	260
08-Apr-15	09:00	09-Apr-15	09:00	Fine	18.9	1018.3	1.33	1.33	1.33	1912.3	2.8950	2.9647	0.0697	4805.84	4829.84	24.00	36	176	260
13-Apr-15	09:00	14-Apr-15	09:00	Sunny	22.4	1018.7	1.33	1.33	1.33	1912.3	2.8643	3.0693	0.2050	4829.84	4853.84	24.00	107	176	260
16-Apr-15	16:00	17-Apr-15	16:00	Sunny	23.7	1012.4	1.33	1.33	1.33	1912.3	2.8485	2.9380	0.0895	4853.84	4877.84	24.00	47	176	260
22-Apr-15	16:00	23-Apr-15	16:00	Fine	22.6	1018.4	1.33	1.33	1.33	1912.3	2.8842	2.9951	0.1109	4877.84	4901.84	24.00	58	176	260
28-Apr-15	16:00	29-Apr-15	16:00	Sunny	26.6	1011.1	1.33	1.33	1.33	1912.3	2.8695	2.9481	0.0786	4901.84	4925.84	24.00	41	176	260
																Average	52		
																Min	22		
																Max	107		

24-hour TSP Monitoring Results at Station AMS3B - Site Boundary of Site Office (WA2)

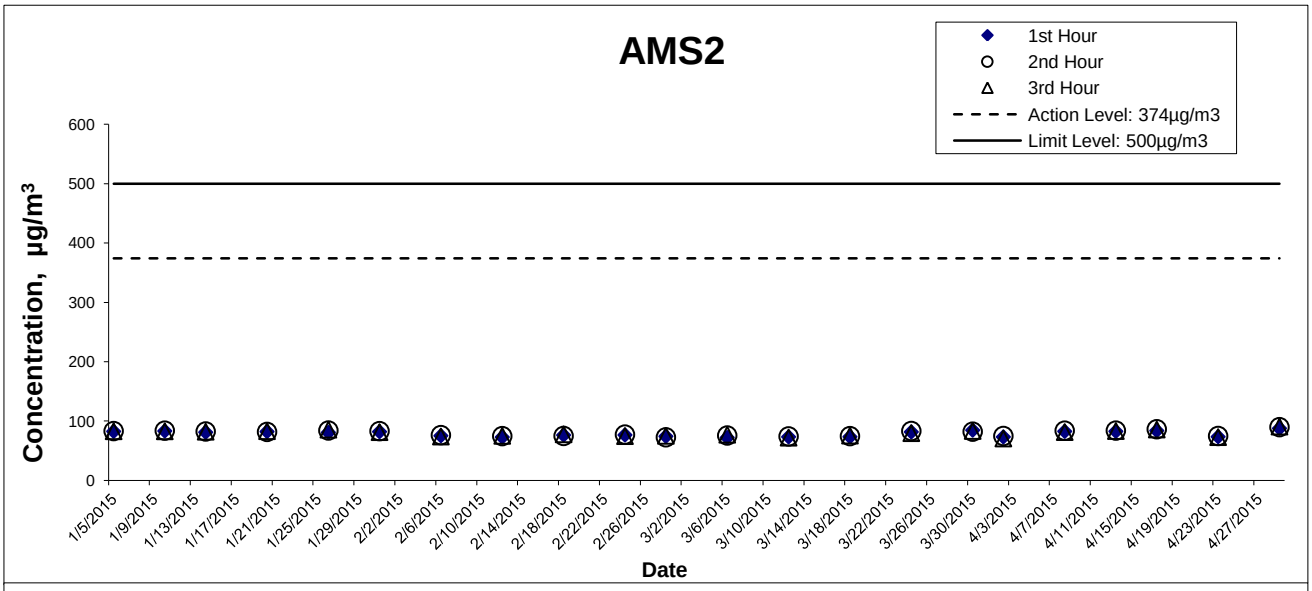
Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
01-Apr-15	16:00	02-Apr-15	16:00	Fine	23.6	1008.5	1.34	1.34	1.34	1923.8	2.8846	2.9420	0.0574	4717.80	4741.80	24.00	30	167	260
08-Apr-15	09:00	09-Apr-15	09:00	Fine	18.9	1018.3	1.34	1.34	1.34	1923.8	2.8977	2.9593	0.0616	4741.80	4765.80	24.00	32	167	260
13-Apr-15	09:00	14-Apr-15	09:00	Sunny	22.4	1018.7	1.34	1.34	1.34	1923.8	2.8529	3.0336	0.1807	4765.80	4789.80	24.00	94	167	260
16-Apr-15	16:00	17-Apr-15	16:00	Sunny	23.7	1012.4	1.34	1.34	1.34	1923.8	2.8509	2.9384	0.0875	4789.80	4813.80	24.00	45	167	260
22-Apr-15	16:00	23-Apr-15	16:00	Fine	22.6	1018.4	1.34	1.34	1.34	1923.8	2.8866	3.0453	0.1587	4813.80	4837.80	24.00	82	167	260
28-Apr-15	16:00	29-Apr-15	16:00	Sunny	26.6	1011.1	1.34	1.34	1.34	1923.8	2.8892	2.9602	0.0710	4837.80	4861.80	24.00	37	167	260
																Average	53		
																Min	30		
																Max	94		

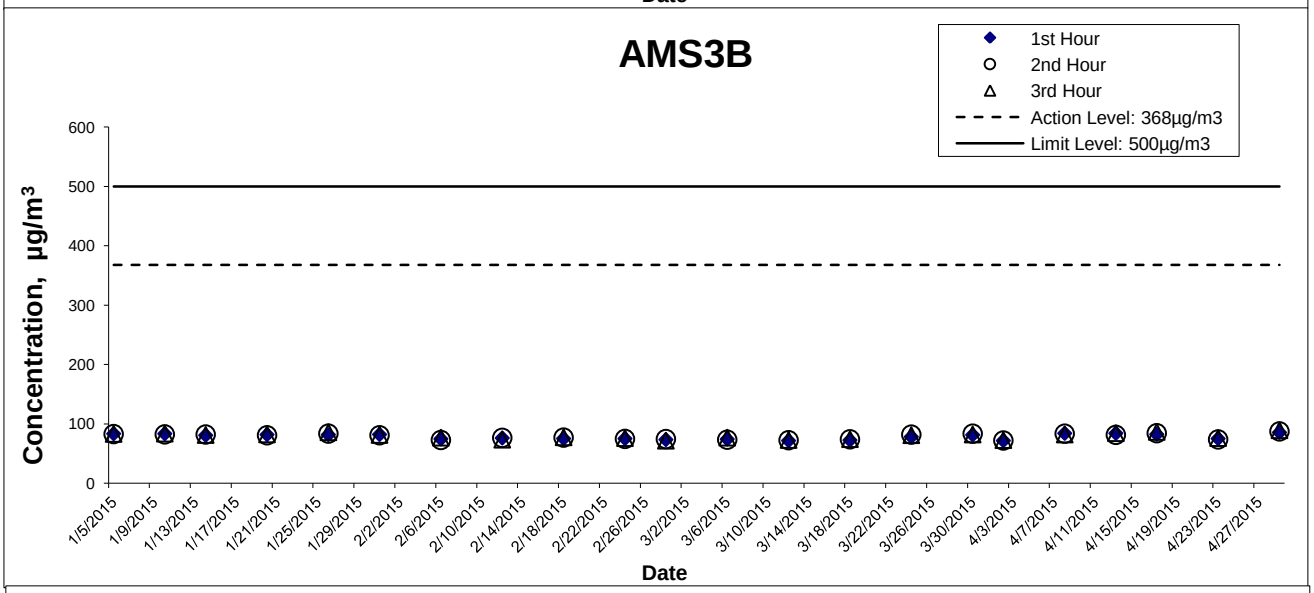
^ Action Level set out at AMS3 Ho Yu College is adopted.

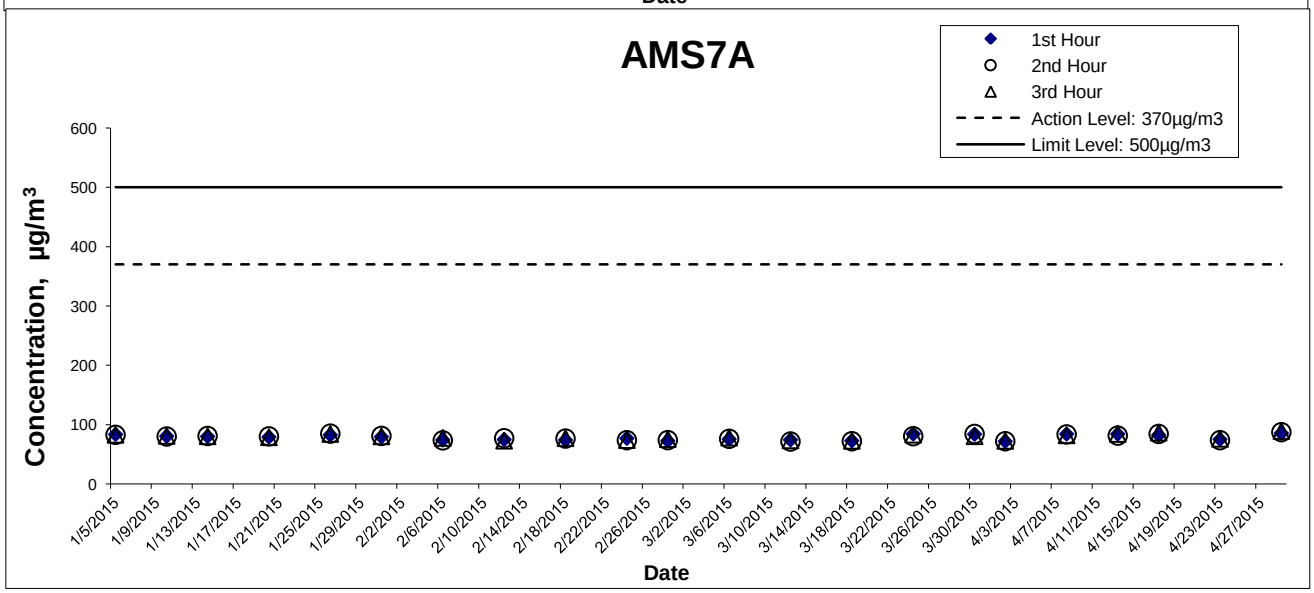
24-hour TSP Monitoring Results at Station AMS7A - Chu Kong Air-Sea Union Transportation Company Limited

Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
01-Apr-15	16:00	02-Apr-15	16:00	Fine	23.6	1008.5	1.31	1.31	1.31	1890.7	2.8896	2.9476	0.0580	4638.98	4662.98	24.00	31	183	260
08-Apr-15	09:00	09-Apr-15	09:00	Fine	18.9	1018.3	1.31	1.31	1.31	1890.7	2.8771	2.9747	0.0976	4662.98	4686.98	24.00	52	183	260
13-Apr-15	09:00	14-Apr-15	09:00	Sunny	22.4	1018.7	1.37	1.37	1.37	1977.1	2.8381	3.0611	0.2230	4686.98	4710.98	24.00	113	183	260
16-Apr-15	16:00	17-Apr-15	16:00	Sunny	23.7	1012.4	1.30	1.30	1.30	1869.1	2.8667	2.9463	0.0796	4710.98	4734.98	24.00	43	183	260
22-Apr-15	16:00	23-Apr-15	16:00	Fine	22.6	1018.4	1.30	1.30	1.30	1869.1	2.8993	3.0309	0.1316	4734.98	4758.98	24.00	70	183	260
28-Apr-15	16:00	29-Apr-15	16:00	Sunny	26.6	1011.1	1.35	1.35	1.35	1939.7	2.8920	3.0103	0.1183	4758.98	4782.98	24.00	61	183	260
																Average	62		
																Min	31		
																Max	113		

^ Action Level set out at AMS7 Hong Kong SkyCity Marriot Hotel is adopted







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent

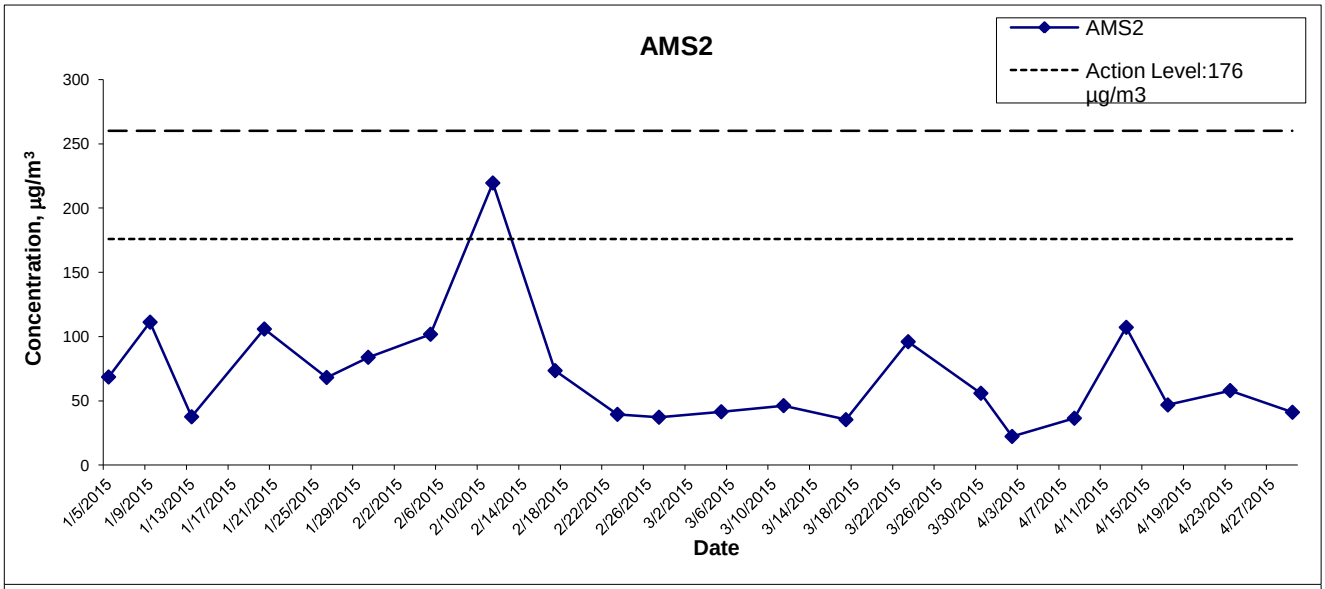
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

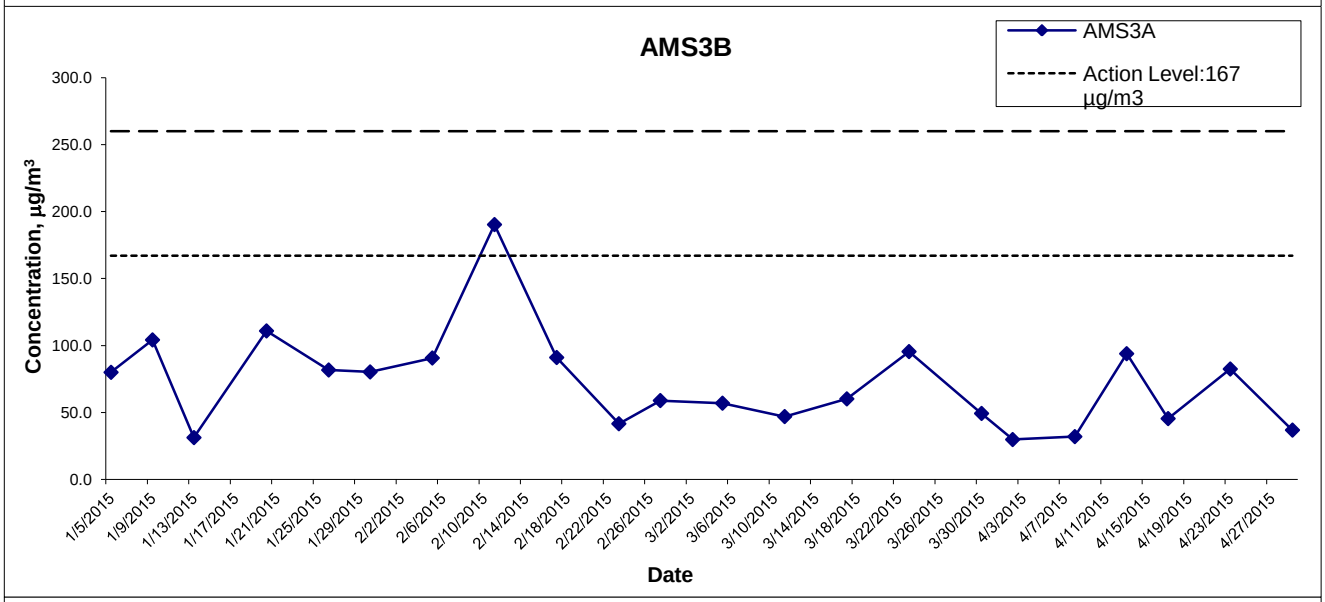
AECOM

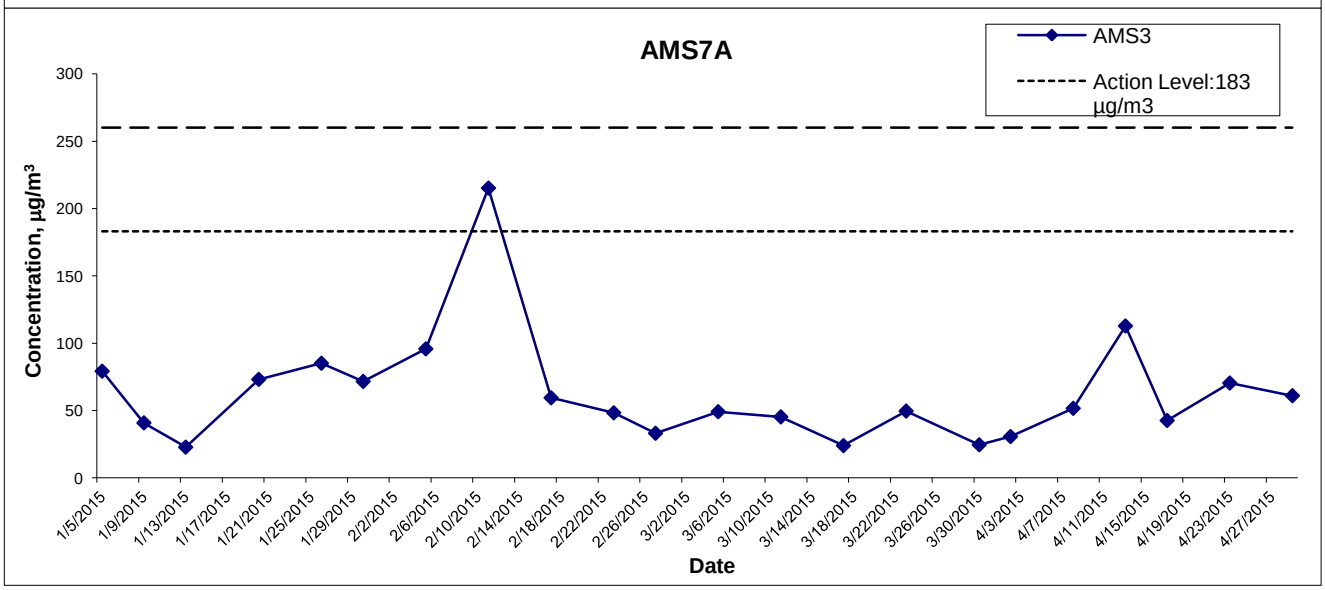
Graphical Presentation of Impact 1-hour TSP Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix G







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written cons

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Graphical Presentation of Impact 24-hour TSP Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix G

APPENDIX H Meteorological Data for Monitoring Periods on Monitoring Dates in April 2015

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
04/01/2015	16:00:15	0.60	73
04/01/2015	17:00:15	0.94	106
04/01/2015	18:00:15	0.56	64
04/01/2015	19:00:15	0.18	85
04/01/2015	20:00:15	1.40	118
04/01/2015	21:00:15	1.01	98
04/01/2015	22:00:15	1.85	121
04/01/2015	23:00:15	0.31	144
04/02/2015	00:00:15	0.55	70
04/02/2015	01:00:15	0.21	109
04/02/2015	02:00:15	0.08	215
04/02/2015	03:00:15	0.21	215
04/02/2015	04:00:15	0.74	275
04/02/2015	05:00:15	0.77	138
04/02/2015	06:00:15	0.20	55
04/02/2015	07:00:15	3.12	104
04/02/2015	08:00:15	0.99	82
04/02/2015	09:00:15	0.36	48
04/02/2015	10:00:15	1.22	23
04/02/2015	11:00:15	0.52	61
04/02/2015	12:00:15	1.58	49
04/02/2015	13:00:15	1.72	45
04/02/2015	14:00:15	0.32	288
04/02/2015	15:00:15	1.06	96
04/02/2015	16:00:15	2.71	222
04/08/2015	09:00:15	0.08	89
04/08/2015	10:00:15	0.07	223
04/08/2015	10:39:29	0.10	166
04/08/2015	11:39:29	0.08	251
04/08/2015	12:39:29	0.29	108
04/08/2015	13:39:29	1.83	60
04/08/2015	14:39:29	0.11	97
04/08/2015	15:39:29	0.76	43
04/08/2015	16:39:29	2.35	55
04/08/2015	17:39:29	0.36	133
04/08/2015	18:39:29	0.77	229
04/08/2015	19:39:29	3.32	110
04/08/2015	20:39:29	2.46	123
04/08/2015	21:39:29	0.98	117
04/08/2015	22:39:29	1.68	119
04/08/2015	23:39:29	1.29	100
04/09/2015	00:39:29	0.59	99
04/09/2015	01:39:29	0.13	108
04/09/2015	02:39:29	0.78	121
04/09/2015	03:39:29	1.87	117
04/09/2015	04:39:29	0.56	69
04/09/2015	05:39:29	0.60	102
04/09/2015	06:39:29	0.39	67
04/09/2015	07:39:29	0.11	87
04/09/2015	08:39:29	0.36	53
04/09/2015	09:39:29	0.14	66
04/13/2015	09:39:29	0.29	51
04/13/2015	10:39:29	1.23	23
04/13/2015	11:39:29	1.15	337
04/13/2015	12:39:29	2.10	342
04/13/2015	13:39:29	1.06	314
04/13/2015	14:39:29	2.62	11
04/13/2015	15:39:29	4.03	325
04/13/2015	16:39:29	1.79	354
04/13/2015	17:39:29	0.11	297
04/13/2015	18:39:29	0.31	97
04/13/2015	19:39:29	0.25	253
04/13/2015	20:39:29	0.29	138
04/13/2015	21:39:29	0.21	230
04/13/2015	22:39:29	0.20	103
04/13/2015	23:39:29	1.15	124
04/14/2015	00:39:29	0.06	120
04/14/2015	01:39:29	0.31	137
04/14/2015	02:39:29	2.45	119
04/14/2015	03:39:29	0.20	66
04/14/2015	04:39:29	0.43	260
04/14/2015	05:39:29	0.18	123
04/14/2015	06:39:29	0.28	12
04/14/2015	07:39:29	0.85	79
04/14/2015	08:39:29	0.10	83
04/14/2015	09:39:29	0.91	91
04/16/2015	16:39:29	0.10	93
04/16/2015	17:39:29	0.10	107
04/16/2015	18:39:29	0.22	299
04/16/2015	19:39:29	0.18	61
04/16/2015	20:39:29	0.49	234
04/16/2015	21:39:29	0.08	222
04/16/2015	22:39:29	0.10	242
04/16/2015	23:39:29	0.20	241
04/17/2015	00:39:29	0.04	241
04/17/2015	01:39:29	0.03	241
04/17/2015	02:39:29	0.01	236
04/17/2015	03:39:29	0.04	236
04/17/2015	04:39:29	0.31	254

APPENDIX H Meteorological Data for Monitoring Periods on Monitoring Dates in April 2015

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
04/17/2015	05:39:29	0.13	252
04/17/2015	06:39:29	0.14	261
04/17/2015	07:39:29	0.10	61
04/17/2015	08:39:29	0.04	60
04/17/2015	09:39:29	0.14	55
04/17/2015	10:39:29	2.17	255
04/17/2015	11:39:29	4.00	299
04/17/2015	12:39:29	1.73	257
04/17/2015	13:39:29	2.22	274
04/17/2015	14:39:29	0.87	308
04/17/2015	15:39:29	1.96	242
04/17/2015	16:39:29	1.16	135
04/22/2015	16:39:29	2.39	99
04/22/2015	17:39:29	1.50	79
04/22/2015	18:39:29	0.15	326
04/22/2015	19:39:29	3.13	131
04/22/2015	20:39:29	0.14	63
04/22/2015	21:39:29	3.82	107
04/22/2015	22:39:29	1.05	94
04/22/2015	23:39:29	6.56	85
04/23/2015	00:39:29	3.48	120
04/23/2015	01:39:29	1.05	101
04/23/2015	02:39:29	0.13	71
04/23/2015	03:39:29	1.55	108
04/23/2015	04:39:29	0.85	74
04/23/2015	05:39:29	0.73	95
04/23/2015	06:39:29	0.81	104
04/23/2015	07:39:29	0.35	136
04/23/2015	08:39:29	0.08	140
04/23/2015	09:39:29	0.55	76

Remarks: Due to power failure of wind data monitoring equipment, wind data was not able to be obtained for monitoring event(s) conducted between 28 April – 29 April 2015. Wind speed and direction dataset 28 April – 29 April 2015 from the Hong Kong Observatory is not available at time this monthly report is submitted.

Appendix I Impact Daytime Construction Noise Monitoring Results

Daytime Noise Monitoring Results at Station NMS2 - Seaview Crescent Tower 1

Date	Weather Condition	Noise Level for 30-min, dB(A)[#]				Averaged Wind Speed (m/s)	Baseline Noise Level, dB(A)	Limit Level, dB(A)	Exceedance (Y/N)
		Time	L90	L10	Leq				
08-Apr-15	Fine	10:30	66	72	69	<5m/s	62.9	75	N
13-Apr-15	Sunny	10:30	63	67	66	<5m/s	62.9	75	N
23-Apr-15	Fine	10:36	64	69	67	<5m/s	62.9	75	N
29-Apr-15	Sunny	10:40	64	69	67	<5m/s	62.9	75	N
		Min	63	67	66				
		Max	66	72	69				
		Average	--	--	67				

Daytime Noise Monitoring Results at Station NMS3B - Site Boundary of Site Office (WA2)

Date	Weather Condition	Noise Level for 30-min, dB(A)[#]				Averaged Wind Speed (m/s)	Baseline Noise Level, dB(A) ^	Limit Level, dB(A)**	Exceedance (Y/N)
		Time	L90	L10	Leq				
08-Apr-15	Fine	11:25	64	72	67	<5m/s	66.3	70	N
13-Apr-15	Sunny	13:30	62	66	64	<5m/s	66.3	70	N
23-Apr-15	Fine	11:25	63	68	66	<5m/s	66.3	70	N
29-Apr-15	Sunny	11:25	63	67	65	<5m/s	66.3	70	N
		Min	62	66	64				
		Max	64	72	67				
		Average	--	--	66				

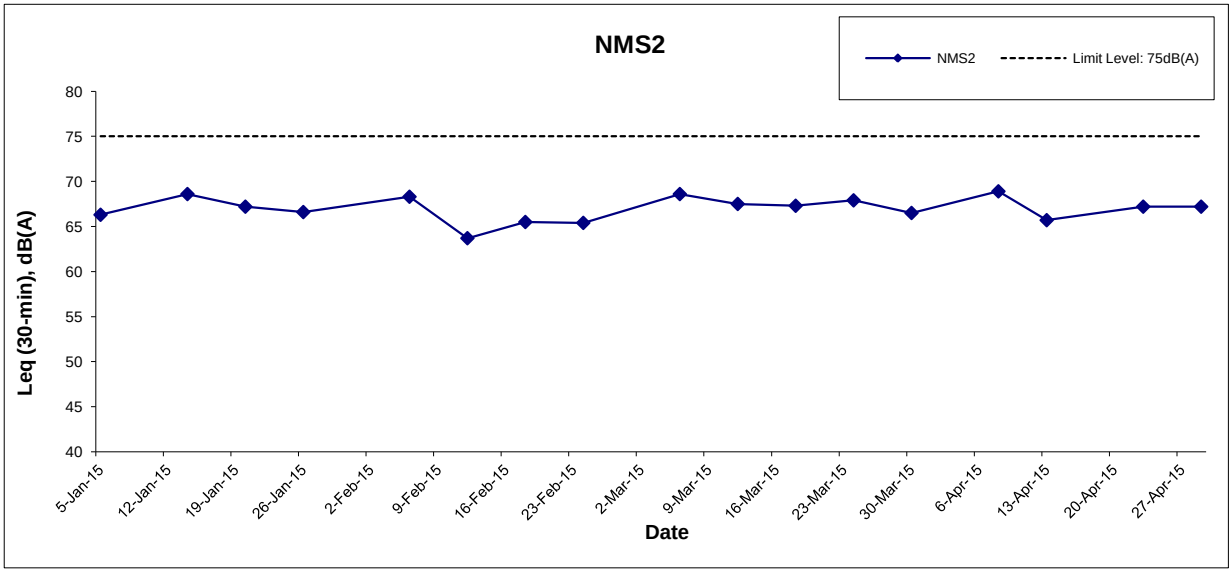
Remark:

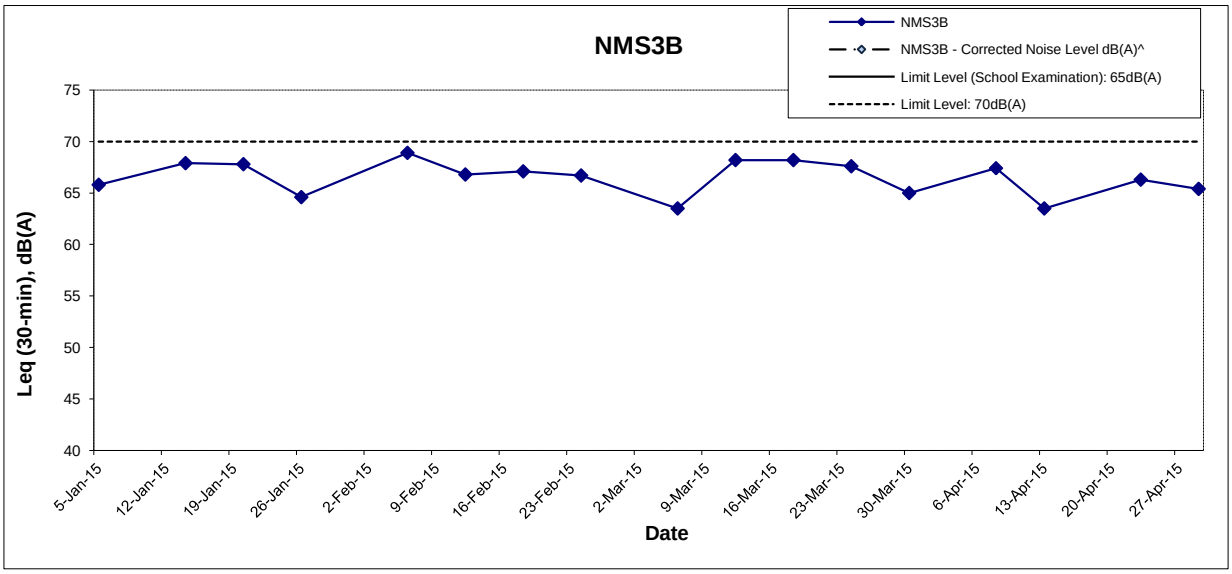
[#] A correction of +3dB(A) was made to the free field measurement.

* Façade measurement.

^ Averaged baseline noise level recorded at NMS3 Ho Yu College is adopted.

** Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.





Remarks: Effective from July 2012, the Limit Level at NMS3A was revised to 70dB(A). Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period.

This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consu

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:08	6.3	Surface	1.0	21.6 21.7	21.7	8.1 8.1	8.1	25.3 25.2	25.3	107.5 111.8	109.7	8.2 8.5	8.3	8.0	1.6 1.6	1.6	2.2	4.8 3.7	4.3	4.4
					Middle	3.2	20.7 20.8	20.8	8.0 8.0	8.0	28.4 28.1	28.2	100.7 98.2	99.5	7.7 7.5	7.6		2.4 2.5	2.5		4.4 4.1	4.3	
					Bottom	5.3	20.6 20.6	20.6	8.0 8.0	8.0	28.9 29.0	29.0	102.7 97.9	100.3	7.8 7.4	7.6	7.6	2.6 2.6	2.6		4.5 4.6	4.6	
3-Apr-15	Cloudy	Moderate	13:11	6.9	Surface	1.0	21.8 21.6	21.7	8.0 8.0	8.0	25.0 25.4	25.2	99.4 99.3	99.4	7.5 7.6	7.5	7.5	3.6 3.3	3.5	5.3	1.4 1.1	1.3	1.2
					Middle	3.5	21.5 21.5	21.5	8.0 8.0	8.0	26.6 26.7	26.7	98.0 98.1	98.1	7.4 7.4	7.4		6.0 5.8	5.9		1.4 1.3	1.4	
					Bottom	5.9	21.5 21.5	21.5	8.0 8.0	8.0	27.5 27.4	27.5	97.6 97.4	97.5	7.4 7.3	7.3	7.3	6.3 6.4	6.4		1.0 0.8	0.9	
6-Apr-15	Sunny	Moderate	13:23	6.2	Surface	1.0	22.7 22.7	22.7	7.8 7.8	7.8	25.4 25.4	25.4	93.2 93.1	93.2	7.0 6.9	6.9	6.9	2.3 2.6	2.5	3.1	4.2 3.3	3.8	3.7
					Middle	3.1	22.5 22.4	22.5	7.8 7.8	7.8	26.9 27.0	27.0	93.0 91.9	92.5	6.9 6.8	6.9		3.3 3.2	3.3		2.9 2.8	2.9	
					Bottom	5.2	22.6 22.3	22.5	7.8 7.8	7.8	27.2 27.6	27.4	93.8 92.0	92.9	6.9 6.8	6.9	6.9	3.2 3.5	3.4		4.1 4.8	4.5	
8-Apr-15	Cloudy	Moderate	14:40	6.4	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.5 29.5	29.5	90.4 93.3	91.9	6.7 6.9	6.8	6.8	8.6 8.5	8.6	8.7	5.0 5.1	5.1	6.0
					Middle	3.2	21.9 21.9	21.9	7.8 7.8	7.8	29.6 29.6	29.6	94.9 90.9	92.9	7.0 6.7	6.8		8.5 8.7	8.6		6.3 6.7	6.5	
					Bottom	5.4	21.9 22.0	21.9	7.8 7.8	7.8	29.7 29.6	29.6	97.5 92.4	95.0	7.2 6.8	7.0	7.0	8.9 9.0	9.0		6.9 5.9	6.4	
10-Apr-15	Cloudy	Moderate	15:52	6.5	Surface	1.0	20.8 20.8	20.8	7.8 7.8	7.8	30.2 30.2	30.2	90.0 89.1	89.6	6.8 6.7	6.7	6.7	3.4 3.5	3.5	4.9	3.8 5.9	4.9	5.0
					Middle	3.3	20.9 20.9	20.9	7.8 7.8	7.8	30.3 30.3	30.3	88.8 89.3	89.1	6.7 6.7	6.7		5.4 5.6	5.5		6.2 4.7	5.5	
					Bottom	5.5	20.9 21.0	21.0	7.8 7.8	7.8	31.5 31.5	31.5	90.1 89.6	89.9	6.7 6.6	6.7	6.7	5.7 5.8	5.8		5.0 4.4	4.7	
13-Apr-15	Sunny	Moderate	08:27	6.7	Surface	1.0	20.8 20.8	20.8	7.8 7.8	7.8	31.0 30.8	30.9	93.4 91.4	92.4	6.9 6.8	6.9	6.9	2.1 2.2	2.2	2.2	3.7 2.8	3.3	2.8
					Middle	3.4	20.7 20.7	20.7	7.8 7.8	7.8	32.6 32.6	32.6	92.3 90.6	91.5	6.9 6.7	6.8		2.2 2.2	2.2		2.6 2.8	2.7	
					Bottom	5.7	20.8 20.7	20.7	7.8 7.8	7.8	32.6 32.6	32.6	89.6 91.3	90.5	6.7 6.8	6.7	6.7	2.3 2.3	2.3		2.2 2.3	2.3	
15-Apr-15	Sunny	Moderate	11:24	6.5	Surface	1.0	21.1 21.2	21.2	7.9 7.9	7.9	29.4 28.4	28.9	100.1 100.3	100.2	7.5 7.5	7.5	7.4	1.8 1.6	1.7	1.7	3.3 2.4	2.9	2.7
					Middle	3.3	21.0 21.0	21.0	7.9 7.9	7.9	30.6 32.2	31.4	97.6 99.5	98.6	7.3 7.4	7.3		1.8 1.6	1.7		3.3 2.2	2.8	
					Bottom	5.5	21.0 21.0	21.0	7.9 7.9	7.9	32.4 32.3	32.3	98.5 101.5	100.0	7.3 7.5	7.4	7.4	1.8 1.8	1.8		2.6 2.2	2.4	
17-Apr-15	Sunny	Moderate	12:31	6.7	Surface	1.0	22.3 22.2	22.3	7.9 7.9	7.9	28.9 29.0	28.9	101.4 99.5	100.5	7.5 7.3	7.4	7.4	5.3 5.5	5.4	6.8	7.7 7.7	7.7	7.2
					Middle	3.4	21.8 21.8	21.8	8.0 7.9	7.9	29.9 29.8	29.8	99.2 100.5	99.9	7.3 7.4	7.4		6.3 6.6	6.5		6.4 7.4	6.9	
					Bottom	5.7	21.8 21.8	21.8	8.0 7.9	8.0	30.1 30.0	30.0	97.5 100.2	98.9	7.2 7.4	7.3	7.3	8.2 8.8	8.5		6.8 7.3	7.1	
20-Apr-15	Cloudy	Moderate	13:26	6.8	Surface	1.0	22.8 22.8	22.8	7.9 7.9	7.9	29.7 29.7	29.7	90.6 90.4	90.5	6.6 6.6	6.6	6.6	9.7 9.8	9.8	11.0	4.3 5.5	4.9	4.9
					Middle	3.4	22.4 22.4	22.4	7.9 7.9	7.9	31.0 31.3	31.2	89.4 89.2	89.3	6.5 6.5	6.5		11.0 10.6	10.8		4.9 5.3	5.1	
					Bottom	5.8	22.4 22.4	22.4	7.9 7.9	7.9	31.3 31.4	31.4	89.8 89.4	89.6	6.5 6.5	6.5	6.5	12.1 12.4	12.3		5.0 4.4	4.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:56	6.4	Surface	1.0	22.9 22.9	22.9	8.1 8.0	8.1	30.2 30.2	30.2	87.8 87.5	87.7	6.3 6.3	6.3	6.3	4.7 4.6	4.7	4.7	8.6 7.9	8.3	7.0
					Middle	3.2	22.6 22.5	22.5	8.0 8.0	8.0	30.5 30.7	30.6	86.7 86.0	86.4	6.3 6.2	6.3		4.8 4.6	4.7		4.8 5.4	5.1	
					Bottom	5.4	22.5 22.3	22.4	8.0 8.0	8.0	30.8 31.3	31.0	87.3 86.2	86.8	6.3 6.3	6.3	6.3	4.6 4.7	4.7		7.5 7.9	7.7	
24-Apr-15	Sunny	Moderate	16:22	6.6	Surface	1.0	23.0 22.9	22.9	8.1 8.0	8.1	29.1 29.3	29.2	91.0 90.8	90.9	6.6 6.6	6.6	6.5	1.4 1.5	1.5	2.9	4.2 3.8	4.0	3.4
					Middle	3.3	22.6 22.4	22.5	8.0 8.0	8.0	30.0 30.7	30.3	89.0 87.7	88.4	6.5 6.4	6.4		3.3 3.6	3.5		3.7 2.6	3.2	
					Bottom	5.6	22.3 22.2	22.3	8.0 8.0	8.0	31.0 31.0	31.0	89.1 86.9	88.0	6.5 6.3	6.4	6.4	3.7 3.9	3.8		2.8 3.4	3.1	
27-Apr-15	Sunny	Moderate	09:26	6.6	Surface	1.0	23.6 23.5	23.6	8.1 8.0	8.1	25.2 25.2	25.2	105.5 103.1	104.3	7.7 7.6	7.7	7.5	1.4 1.5	1.5	1.6	3.0 3.3	3.2	2.9
					Middle	3.3	23.1 23.1	23.1	8.0 8.0	8.0	29.1 29.1	29.1	100.5 99.9	100.2	7.3 7.2	7.3		1.5 1.6	1.6		2.3 2.8	2.6	
					Bottom	5.6	23.0 23.0	23.0	8.0 8.0	8.0	29.5 29.5	29.5	100.2 100.9	100.6	7.3 7.3	7.3	7.3	1.6 1.6	1.6		2.7 2.8	2.8	
29-Apr-15	Sunny	Moderate	10:59	6.5	Surface	1.0	24.3 24.7	24.5	8.1 8.1	8.1	21.8 20.3	21.1	92.7 96.1	94.4	6.9 7.1	7.0	6.9	2.4 2.2	2.3	2.8	2.6 2.0	2.3	2.7
					Middle	3.3	24.0 23.8	23.9	8.0 7.9	8.0	24.3 25.9	25.1	91.4 94.5	93.0	6.7 6.9	6.8		2.9 3.1	3.0		2.0 4.2	3.1	
					Bottom	5.5	23.8 23.8	23.8	7.9 7.9	7.9	26.7 26.6	26.7	85.1 84.2	84.7	6.2 6.1	6.1	6.1	3.2 3.0	3.1		2.5 2.9	2.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:51	6.4	Surface	1.0	21.9 21.8	21.9	8.1 8.1	8.1	26.1 26.1	26.1	116.4 120.3	118.4	8.8 9.1	9.0	8.9	1.6 1.7	1.7	1.7	3.8 2.7	3.3	3.7
					Middle	3.2	20.9 20.8	20.8	8.0 8.0	8.0	28.1 28.3	28.2	119.4 111.9	115.7	9.1 8.4	8.7		1.6 1.6	1.6		3.2 3.7	3.5	
					Bottom	5.4	20.7 20.7	20.7	8.0 8.0	8.0	28.5 28.4	28.5	113.5 110.4	112.0	8.6 8.4	8.5	8.5	1.7 1.8	1.8		4.2 4.4	4.3	
3-Apr-15	Cloudy	Moderate	18:08	6.9	Surface	1.0	21.8 22.0	21.9	8.0 8.0	8.0	25.5 25.0	25.3	100.3 100.7	100.5	7.6 7.6	7.6	7.6	2.5 2.1	2.3	3.8	1.1 0.5	0.8	1.1
					Middle	3.5	21.6 21.6	21.6	8.0 8.0	8.0	26.8 26.9	26.8	99.2 98.6	98.9	7.5 7.4	7.5		3.8 3.6	3.7		1.7 1.5	1.6	
					Bottom	5.9	21.4 21.4	21.4	8.0 8.0	8.0	27.7 27.7	27.7	98.5 98.6	98.6	7.4 7.4	7.4	7.4	5.4 5.2	5.3		0.7 0.9	0.8	
6-Apr-15	Sunny	Moderate	08:01	6.6	Surface	1.0	22.7 22.6	22.7	7.8 7.8	7.8	25.8 25.8	25.8	94.3 93.6	94.0	7.0 7.0	7.0	7.0	1.8 2.0	1.9	3.2	3.7 3.8	3.8	3.7
					Middle	3.3	22.6 22.6	22.6	7.8 7.8	7.8	26.7 26.6	26.7	92.5 93.0	92.8	6.9 6.9	6.9		3.8 3.6	3.7		3.5 2.9	3.2	
					Bottom	5.6	22.5 22.4	22.4	7.8 7.8	7.8	27.3 27.5	27.4	93.1 92.1	92.6	6.9 6.8	6.9	6.9	3.9 4.2	4.1		4.1 3.8	4.0	
8-Apr-15	Cloudy	Moderate	09:11	6.8	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.2 29.2	29.2	92.2 94.1	93.2	6.8 6.9	6.9	6.9	9.8 9.8	9.8	10.0	13.4 12.8	13.1	14.2
					Middle	3.4	22.0 22.0	22.0	7.8 7.8	7.8	29.2 29.2	29.2	92.5 95.9	94.2	6.8 7.1	6.9		10.0 9.8	9.9		15.0 14.7	14.9	
					Bottom	5.8	22.0 22.0	22.0	7.8 7.8	7.8	29.2 29.2	29.2	93.2 99.5	96.4	6.9 7.3	7.1	7.1	10.3 10.2	10.3		15.2 14.1	14.7	
10-Apr-15	Fine	Moderate	10:14	6.5	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	29.7 29.7	29.7	89.6 87.6	88.6	6.7 6.6	6.6	6.7	5.6 5.5	5.6	5.6	4.3 4.9	4.6	4.9
					Middle	3.3	21.0 21.0	21.0	7.8 7.8	7.8	29.9 29.8	29.9	90.2 87.9	89.1	6.8 6.6	6.7		5.6 5.6	5.6		4.4 4.6	4.5	
					Bottom	5.5	21.0 21.0	21.0	7.8 7.7	7.8	30.6 30.5	30.6	92.1 88.7	90.4	6.9 6.6	6.7	6.7	5.6 5.7	5.7		5.6 5.4	5.5	
13-Apr-15	Sunny	Moderate	13:33	6.8	Surface	1.0	21.3 21.2	21.2	7.8 7.8	7.8	31.0 31.0	31.0	93.6 94.7	94.2	6.9 7.0	7.0	7.0	1.7 1.6	1.7	1.8	1.6 1.8	1.7	1.9
					Middle	3.4	21.1 21.1	21.1	7.8 7.8	7.8	31.3 31.2	31.3	95.0 93.4	94.2	7.0 6.9	7.0		1.7 1.8	1.8		1.3 1.8	1.6	
					Bottom	5.8	21.3 21.0	21.1	7.8 7.8	7.8	31.1 31.6	31.4	94.2 96.4	95.3	7.0 7.1	7.1	7.1	1.9 1.9	1.9		2.2 2.7	2.5	
15-Apr-15	Sunny	Moderate	15:25	6.6	Surface	1.0	22.3 22.6	22.4	7.9 7.9	7.9	28.6 28.7	28.7	107.4 106.9	107.2	7.9 7.8	7.9	7.8	2.4 2.4	2.4	2.4	3.4 2.7	3.1	3.7
					Middle	3.3	22.3 21.8	22.1	7.9 7.9	7.9	29.4 30.1	29.7	104.1 106.0	105.1	7.6 7.8	7.7		2.4 2.4	2.4		4.0 3.6	3.8	
					Bottom	5.6	21.3 21.4	21.3	7.9 7.9	7.9	31.7 31.4	31.5	106.9 107.4	107.2	7.9 7.9	7.9	7.9	2.4 2.5	2.5		4.6 3.7	4.2	
17-Apr-15	Sunny	Moderate	17:23	6.6	Surface	1.0	22.2 22.3	22.3	7.9 7.9	7.9	28.7 28.7	28.7	101.6 102.2	101.9	7.5 7.5	7.5	7.5	2.4 2.4	2.4	3.3	6.3 5.7	6.0	5.4
					Middle	3.3	21.9 21.9	21.9	7.9 7.9	7.9	29.3 29.3	29.3	99.6 100.5	100.1	7.4 7.4	7.4		3.3 3.1	3.2		4.5 5.2	4.9	
					Bottom	5.6	21.9 21.9	21.9	7.9 7.9	7.9	29.4 29.4	29.4	100.3 100.1	100.2	7.4 7.4	7.4	7.4	4.2 4.5	4.4		6.2 4.5	5.4	
20-Apr-15	Cloudy	Moderate	07:59	6.5	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	89.1 90.4	89.8	6.5 6.6	6.5	6.6	11.0 10.6	10.8	12.3	28.8 28.4	28.6	**29.2**
					Middle	3.3	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	89.7 90.7	90.2	6.5 6.6	6.6		14.0 13.5	13.8		29.0 32.7	30.9	
					Bottom	5.5	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	90.2 92.0	91.1	6.6 6.7	6.6	6.6	12.6 12.2	12.4		28.0 27.9	28.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:58	6.7	Surface	1.0	22.4 22.5	22.5	8.0 8.0	8.0	29.9 29.9	29.9	88.8 86.6	87.7	6.5 6.3	6.4	6.5	13.1 13.2	13.2	13.3	15.9 16.0	16.0	15.0
					Middle	3.4	22.4 22.4	22.4	8.0 8.0	8.0	29.9 30.0	30.0	90.5 86.8	88.7	6.6 6.3	6.5		13.4 13.1	13.3		15.2 14.5	14.9	
					Bottom	5.7	22.4 22.4	22.4	8.0 8.0	8.0	30.0 30.0	30.0	94.3 87.8	91.1	6.9 6.4	6.6	6.6	13.2 13.6	13.4		13.5 14.5	14.0	
24-Apr-15	Sunny	Moderate	10:36	6.7	Surface	1.0	22.4 22.3	22.4	8.0 8.0	8.0	29.7 29.9	29.8	85.0 84.7	84.9	6.2 6.2	6.2	6.2	4.8 4.5	4.7	5.5	4.9 3.8	4.4	4.8
					Middle	3.4	22.3 22.3	22.3	8.0 8.0	8.0	30.3 30.3	30.3	84.4 85.3	84.9	6.2 6.2	6.2		5.7 5.5	5.6		4.4 4.0	4.2	
					Bottom	5.7	22.3 22.3	22.3	8.0 8.0	8.0	30.6 30.4	30.5	86.2 85.1	85.7	6.3 6.2	6.2	6.2	6.2 6.1	6.2		6.0 5.3	5.7	
27-Apr-15	Sunny	Moderate	13:21	6.5	Surface	1.0	24.1 23.9	24.0	8.0 8.0	8.0	27.1 27.2	27.1	112.2 110.1	111.2	8.1 7.9	8.0	7.8	1.7 1.6	1.7	1.7	2.4 2.4	2.4	2.8
					Middle	3.3	23.2 23.2	23.2	8.0 8.0	8.0	28.9 28.9	28.9	108.3 102.8	105.6	7.8 7.4	7.6		1.7 1.7	1.7		2.7 3.3	3.0	
					Bottom	5.5	23.3 23.1	23.2	8.0 8.0	8.0	29.1 29.1	29.1	106.3 104.3	105.3	7.7 7.5	7.6	7.6	1.8 1.8	1.8		3.2 2.5	2.9	
29-Apr-15	Sunny	Moderate	15:50	6.5	Surface	1.0	25.5 25.5	25.5	8.3 8.2	8.3	21.1 21.1	21.1	114.4 107.8	111.1	8.4 7.9	8.1	7.8	3.2 3.5	3.4	4.5	3.6 3.6	3.6	3.6
					Middle	3.3	25.2 24.0	24.6	8.1 8.0	8.1	21.5 22.6	22.1	102.7 98.9	100.8	7.5 7.3	7.4		4.2 4.7	4.5		3.4 4.5	4.0	
					Bottom	5.5	23.8 23.9	23.8	8.0 8.0	8.0	27.2 26.9	27.0	104.1 106.0	105.1	7.6 7.7	7.7	7.7	5.2 5.8	5.5		3.6 2.8	3.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS4 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:26	16.0	Surface	1.0	21.6 21.6	21.6	8.1 8.1	8.1	25.3 25.3	25.3	107.0 110.5	108.8	8.1 8.4	8.3	8.1	4.0 3.8	3.9	3.8	3.4 3.1	3.3	3.9
					Middle	8.0	20.6 20.6	20.6	7.9 7.9	7.9	29.0 29.0	29.0	105.1 101.3	103.2	8.0 7.7	7.8		3.6 3.8	3.7		3.6 2.8	3.2	
					Bottom	15.0	20.7 20.6	20.7	8.0 7.9	8.0	29.0 29.1	29.0	100.0 98.6	99.3	7.6 7.5	7.5	7.5	3.7 3.8	3.8		5.3 5.3	5.3	
3-Apr-15	Cloudy	Moderate	13:31	18.4	Surface	1.0	21.5 21.7	21.6	8.0 8.0	8.0	25.5 25.3	25.4	98.6 98.8	98.7	7.5 7.5	7.5	7.5	4.1 3.8	4.0	5.4	1.1 1.6	1.4	1.5
					Middle	9.2	21.5 21.5	21.5	8.0 8.0	8.0	26.7 26.6	26.7	98.0 98.0	98.0	7.4 7.4	7.4		5.7 5.4	5.6		0.5 0.9	0.7	
					Bottom	17.4	21.5 21.5	21.5	8.0 8.0	8.0	27.4 27.6	27.5	97.9 98.1	98.0	7.4 7.4	7.4	7.4	6.7 6.5	6.6		2.5 2.5	2.5	
6-Apr-15	Sunny	Moderate	13:02	16.0	Surface	1.0	22.7 22.7	22.7	7.8 7.8	7.8	25.5 25.5	25.5	93.7 93.0	93.4	7.0 6.9	6.9	6.9	3.4 3.2	3.3	5.5	3.6 2.4	3.0	2.8
					Middle	8.0	22.3 22.4	22.4	7.8 7.8	7.8	27.5 27.4	27.4	91.2 91.3	91.3	6.8 6.8	6.8		5.3 5.2	5.3		2.1 2.7	2.4	
					Bottom	15.0	22.2 22.2	22.2	7.8 7.8	7.8	28.1 27.8	28.0	92.7 91.3	92.0	6.9 6.8	6.8	6.8	7.8 8.1	8.0		3.1 3.1	3.1	
8-Apr-15	Cloudy	Moderate	14:18	16.7	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.3 29.3	29.3	96.5 93.5	95.0	7.1 6.9	7.0	7.1	5.0 5.3	5.2	5.3	4.3 5.0	4.7	4.8
					Middle	8.4	22.0 22.0	22.0	7.8 7.8	7.8	29.4 29.3	29.3	94.2 98.2	96.2	7.0 7.3	7.1		5.3 5.1	5.2		4.3 5.4	4.9	
					Bottom	15.7	22.0 21.9	21.9	7.8 7.8	7.8	29.4 29.4	29.4	95.0 101.0	98.0	7.0 7.5	7.2	7.2	5.4 5.3	5.4		4.6 5.0	4.8	
10-Apr-15	Cloudy	Moderate	15:31	15.9	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	30.2 30.2	30.2	89.8 88.9	89.4	6.7 6.7	6.7	6.7	3.2 3.4	3.3	4.1	4.4 5.0	4.7	4.9
					Middle	8.0	21.0 21.0	21.0	7.8 7.8	7.8	30.8 31.6	31.2	88.7 88.6	88.7	6.6 6.6	6.6		4.3 4.4	4.4		3.4 4.6	4.0	
					Bottom	14.9	21.0 21.0	21.0	7.8 7.8	7.8	30.8 31.6	31.2	89.9 89.9	89.9	6.7 6.7	6.7	6.7	4.4 4.5	4.5		5.4 6.3	5.9	
13-Apr-15	Sunny	Moderate	08:50	16.8	Surface	1.0	20.8 20.7	20.7	7.8 7.8	7.8	31.6 32.0	31.8	90.4 92.8	91.6	6.7 6.9	6.8	6.9	2.5 2.4	2.5	2.6	2.9 2.5	2.7	2.8
					Middle	8.4	20.7 20.7	20.7	7.8 7.8	7.8	32.5 32.7	32.6	90.9 94.7	92.8	6.7 7.0	6.9		2.6 2.5	2.6		2.5 3.2	2.9	
					Bottom	15.8	20.7 20.7	20.7	7.8 7.7	7.8	32.3 32.9	32.6	92.1 98.1	95.1	6.8 7.3	7.0	7.0	2.7 2.7	2.7		3.0 2.6	2.8	
15-Apr-15	Sunny	Moderate	11:41	16.7	Surface	1.0	21.0 21.0	21.0	7.9 7.9	7.9	30.1 30.2	30.1	99.3 101.9	100.6	7.3 7.5	7.4	7.3	3.4 3.3	3.4	3.4	2.6 2.8	2.7	3.0
					Middle	8.4	21.0 21.0	21.0	7.8 7.8	7.8	32.4 32.3	32.3	96.9 96.8	96.9	7.2 7.2	7.2		3.5 3.3	3.4		2.7 3.3	3.0	
					Bottom	15.7	21.0 21.0	21.0	7.9 7.9	7.9	32.3 32.4	32.4	96.7 96.7	96.7	7.1 7.1	7.1	7.1	3.3 3.4	3.4		3.5 3.0	3.3	
17-Apr-15	Sunny	Moderate	12:51	16.6	Surface	1.0	22.1 22.2	22.2	7.9 7.9	7.9	28.9 28.8	28.9	102.1 101.8	102.0	7.5 7.5	7.5	7.5	6.3 6.2	6.3	6.9	5.4 6.3	5.9	6.5
					Middle	8.3	21.8 21.8	21.8	7.9 7.9	7.9	30.1 30.2	30.2	101.2 101.0	101.1	7.5 7.4	7.5		7.0 6.9	7.0		7.5 6.1	6.8	
					Bottom	15.6	21.8 21.9	21.8	7.9 7.9	7.9	30.2 30.1	30.1	100.6 101.1	100.9	7.4 7.5	7.4	7.4	7.1 7.4	7.3		7.6 5.8	6.7	
20-Apr-15	Cloudy	Moderate	13:04	16.5	Surface	1.0	22.8 22.7	22.8	7.9 7.9	7.9	29.8 30.0	29.9	91.2 90.7	91.0	6.6 6.6	6.6	6.5	8.6 8.8	8.7	9.9	4.1 4.9	4.5	4.4
					Middle	8.3	22.4 22.4	22.4	7.9 7.9	7.9	31.4 31.4	31.4	89.3 88.5	88.9	6.5 6.4	6.4		8.2 8.3	8.3		4.1 4.8	4.5	
					Bottom	15.5	22.4 22.4	22.4	7.9 7.9	7.9	31.3 31.4	31.4	90.2 89.0	89.6	6.5 6.4	6.5	6.5	13.0 12.2	12.6		4.0 4.2	4.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS4 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:32	16.0	Surface	1.0	23.0 22.8	22.9	8.1 8.1	8.1	30.2 30.3	30.3	88.2 87.1	87.7	6.4 6.3	6.3	6.3	4.2 4.2	4.2	4.4	9.8 8.9	9.4	8.7
					Middle	8.0	22.5 22.3	22.4	8.0 8.0	8.0	30.6 31.2	30.9	87.0 86.1	86.6	6.3 6.3	6.3		4.4 4.5	4.5		9.7 8.9	9.3	
					Bottom	15.0	22.5 22.7	22.6	8.0 8.0	8.0	31.0 30.6	30.8	87.6 87.8	87.7	6.3 6.3	6.3	6.3	4.4 4.6	4.5		7.3 7.6	7.5	
24-Apr-15	Sunny	Moderate	16:02	16.6	Surface	1.0	22.9 22.8	22.9	8.1 8.1	8.1	29.2 29.3	29.2	91.1 90.3	90.7	6.6 6.6	6.6	6.5	1.8 2.0	1.9	4.1	2.7 2.4	2.6	4.2
					Middle	8.3	22.2 22.2	22.2	8.0 8.0	8.0	31.1 31.1	31.1	86.9 86.9	86.9	6.3 6.3	6.3		5.0 5.2	5.1		4.7 4.3	4.5	
					Bottom	15.6	22.2 22.3	22.2	8.0 8.0	8.0	31.1 31.1	31.1	88.5 88.5	88.5	6.4 6.4	6.4	6.4	5.3 5.5	5.4		5.2 6.0	5.6	
27-Apr-15	Sunny	Moderate	09:51	16.6	Surface	1.0	23.5 23.4	23.5	8.1 8.1	8.1	25.1 25.5	25.3	104.7 103.9	104.3	7.6 7.5	7.5	7.5	1.7 1.6	1.7	1.8	2.8 2.8	2.8	2.8
					Middle	8.3	23.1 23.0	23.0	8.0 8.0	8.0	29.5 29.5	29.5	102.5 103.0	102.8	7.4 7.6	7.5		1.8 1.8	1.8		3.0 3.0	3.0	
					Bottom	15.6	23.0 23.1	23.1	8.0 8.0	8.0	29.5 29.5	29.5	99.3 100.4	99.9	7.2 7.3	7.2	7.2	1.7 1.8	1.8		2.5 2.4	2.5	
29-Apr-15	Sunny	Moderate	11:18	16.3	Surface	1.0	24.5 24.3	24.4	8.1 8.1	8.1	21.9 21.1	21.5	96.6 90.6	93.6	7.1 6.7	6.9	6.7	2.8 3.1	3.0	4.5	4.5 4.4	4.5	4.5
					Middle	8.2	23.8 23.8	23.8	7.9 7.9	7.9	26.6 26.3	26.4	88.7 88.7	88.7	6.4 6.5	6.4		4.5 4.2	4.4		4.9 4.2	4.6	
					Bottom	15.3	23.8 23.8	23.8	7.9 7.9	7.9	26.9 27.1	27.0	90.7 89.7	90.2	6.6 6.5	6.5	6.5	6.2 6.1	6.2		5.2 3.6	4.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS4 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:30	16.6	Surface	1.0	22.0 22.0	22.0	8.1 8.1	8.1	26.1 26.0	26.0	121.6 120.7	121.2	9.1 9.2	9.2	9.1	2.7 2.7	2.7	2.7	4.7 4.7	4.7	5.4
					Middle	8.3	20.7 20.6	20.6	8.0 8.0	8.0	28.5 28.6	28.5	116.6 120.0	118.3	8.8 9.1	8.9		2.4 2.7	2.6		5.1 5.8	5.5	
					Bottom	15.6	20.6 20.6	20.6	8.0 8.0	8.0	28.5 28.6	28.5	110.6 110.8	110.7	8.4 8.4	8.4	8.4	2.8 2.5	2.7		6.4 5.6	6.0	
3-Apr-15	Cloudy	Moderate	17:52	18.3	Surface	1.0	21.9 21.8	21.8	8.0 8.0	8.0	25.7 26.0	25.9	101.1 100.8	101.0	7.6 7.6	7.6	7.6	2.1 2.2	2.2	3.0	1.9 1.1	1.5	1.3
					Middle	9.2	21.6 21.7	21.7	8.0 8.0	8.0	26.8 26.4	26.6	99.8 100.0	99.9	7.5 7.6	7.5		3.3 3.2	3.3		1.3 0.8	1.1	
					Bottom	17.3	21.5 21.5	21.5	8.0 8.0	8.0	27.4 27.3	27.3	99.5 99.7	99.6	7.5 7.5	7.5	7.5	3.4 3.5	3.5		1.5 1.1	1.3	
6-Apr-15	Sunny	Moderate	08:21	16.2	Surface	1.0	22.7 22.7	22.7	7.8 7.8	7.8	25.6 25.6	25.6	93.6 93.0	93.3	7.0 6.9	6.9	6.9	2.1 2.3	2.2	3.1	3.2 2.6	2.9	3.0
					Middle	8.1	22.4 22.3	22.4	7.8 7.8	7.8	27.5 27.6	27.5	91.5 90.8	91.2	6.8 6.7	6.8		2.8 3.0	2.9		3.9 2.5	3.2	
					Bottom	15.2	22.5 22.3	22.4	7.8 7.8	7.8	27.5 27.6	27.6	93.3 91.0	92.2	6.9 6.7	6.8	6.8	4.1 4.4	4.3		3.6 2.2	2.9	
8-Apr-15	Cloudy	Moderate	09:33	17.3	Surface	1.0	22.1 22.1	22.1	7.8 7.8	7.8	29.1 29.0	29.0	92.0 92.5	92.3	6.8 6.8	6.8	6.8	5.1 4.9	5.0	5.1	6.5 6.5	6.5	6.5
					Middle	8.7	22.1 22.1	22.1	7.8 7.8	7.8	29.0 29.2	29.1	92.9 91.7	92.3	6.9 6.8	6.8		5.1 5.1	5.1		6.0 5.0	5.5	
					Bottom	16.3	22.1 22.1	22.1	7.8 7.8	7.8	29.1 29.0	29.1	92.1 93.5	92.8	6.8 6.9	6.8	6.8	5.2 5.3	5.3		7.4 7.8	7.6	
10-Apr-15	Fine	Moderate	10:42	16.9	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	29.6 29.7	29.7	86.7 86.7	86.7	6.5 6.5	6.5	6.5	6.1 6.2	6.2	6.5	4.7 5.8	5.3	4.9
					Middle	8.5	21.1 21.1	21.1	7.8 7.8	7.8	30.8 30.8	30.8	85.6 86.5	86.1	6.4 6.4	6.4		6.6 6.7	6.7		4.9 5.7	5.3	
					Bottom	15.9	21.0 21.1	21.0	7.8 7.8	7.8	30.5 30.8	30.6	88.6 86.5	87.6	6.6 6.4	6.5	6.5	6.6 6.6	6.6		4.2 4.1	4.2	
13-Apr-15	Sunny	Moderate	13:11	17.0	Surface	1.0	21.0 21.0	21.0	7.7 7.7	7.7	32.1 32.1	32.1	94.1 92.2	93.2	7.0 6.9	6.9	6.9	2.4 2.3	2.4	2.5	3.2 2.5	2.9	2.6
					Middle	8.5	20.9 20.8	20.8	7.7 7.7	7.7	32.3 32.5	32.4	92.7 91.3	92.0	6.9 6.8	6.8		2.5 2.5	2.5		2.5 2.2	2.4	
					Bottom	16.0	20.8 21.0	20.9	7.7 7.7	7.7	32.7 32.2	32.5	88.6 89.4	89.0	6.6 6.6	6.6	6.6	2.6 2.7	2.7		2.8 2.4	2.6	
15-Apr-15	Sunny	Moderate	15:07	17.2	Surface	1.0	22.6 22.4	22.5	7.9 7.9	7.9	28.5 28.7	28.6	106.5 107.4	107.0	7.8 7.9	7.9	7.8	2.2 2.3	2.3	2.3	4.1 4.5	4.3	4.4
					Middle	8.6	21.3 21.7	21.5	7.9 7.9	7.9	31.6 31.2	31.4	102.4 105.8	104.1	7.6 7.8	7.7		2.3 2.2	2.3		5.1 4.5	4.8	
					Bottom	16.2	21.2 21.3	21.2	7.8 7.9	7.9	31.7 31.6	31.7	102.0 106.2	104.1	7.5 7.8	7.7	7.7	2.2 2.2	2.2		4.2 3.8	4.0	
17-Apr-15	Sunny	Moderate	17:03	16.3	Surface	1.0	22.3 22.2	22.3	7.9 7.9	7.9	28.7 28.8	28.7	102.3 101.9	102.1	7.5 7.5	7.5	7.5	2.4 2.4	2.4	3.8	3.7 4.4	4.1	5.0
					Middle	8.2	21.9 21.9	21.9	7.9 7.8	7.9	29.4 29.4	29.4	100.3 99.3	99.8	7.4 7.3	7.4		4.0 4.3	4.2		5.6 4.5	5.1	
					Bottom	15.3	21.9 22.0	22.0	7.8 7.9	7.9	29.5 29.3	29.4	98.9 101.8	100.4	7.3 7.5	7.4	7.4	5.0 4.7	4.9		5.6 6.0	5.8	
20-Apr-15	Cloudy	Moderate	08:19	16.4	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	89.6 89.3	89.5	6.5 6.5	6.5	6.5	10.4 10.8	10.6	10.7	25.0 26.1	25.6	**28.6**
					Middle	8.2	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	88.4 89.2	88.8	6.4 6.5	6.5		9.6 9.2	9.4		27.2 30.3	28.8	
					Bottom	15.4	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	89.2 89.4	89.3	6.5 6.5	6.5	6.5	11.9 12.2	12.1		32.8 30.0	31.4	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS4 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:21	16.8	Surface	1.0	22.4 22.5	22.5	8.0 8.0	8.0	29.9 29.9	29.9	85.6 85.3	85.5	6.2 6.2	6.2	6.2	11.4 11.5	11.5	11.4	16.6 16.9	16.8	15.2
					Middle	8.4	22.4 22.4	22.4	8.0 8.0	8.0	30.0 30.0	30.0	85.3 85.0	85.2	6.2 6.2	6.2		11.2 11.4	11.3		15.1 15.8	15.5	
					Bottom	15.8	22.4 22.4	22.4	8.0 8.0	8.0	30.0 30.0	30.0	85.1 85.5	85.3	6.2 6.2	6.2	6.2	11.2 11.5	11.4		13.9 12.6	13.3	
24-Apr-15	Sunny	Moderate	10:56	16.6	Surface	1.0	22.3 22.3	22.3	8.0 8.0	8.0	30.0 30.0	30.0	83.1 82.8	83.0	6.1 6.1	6.1	6.1	5.5 5.8	5.7	6.4	4.1 3.4	3.8	4.0
					Middle	8.3	22.3 22.3	22.3	8.0 8.0	8.0	30.7 30.7	30.7	83.0 83.4	83.2	6.0 6.1	6.1		6.1 6.3	6.2		5.0 4.0	4.5	
					Bottom	15.6	22.3 22.3	22.3	8.0 8.0	8.0	30.7 30.8	30.7	83.5 83.4	83.5	6.1 6.1	6.1	6.1	7.0 7.3	7.2		3.8 3.3	3.6	
27-Apr-15	Sunny	Moderate	12:47	17.5	Surface	1.0	23.8 23.4	23.6	8.0 8.0	8.0	27.3 27.8	27.6	106.9 106.6	106.8	7.7 7.7	7.7	7.7	1.4 1.5	1.5	1.5	2.7 2.6	2.7	2.8
					Middle	8.8	23.1 23.0	23.1	8.0 8.0	8.0	29.7 29.8	29.8	102.8 105.9	104.4	7.5 7.7	7.6		1.5 1.5	1.5		2.9 3.5	3.2	
					Bottom	16.5	23.1 23.2	23.2	8.0 8.0	8.0	29.7 29.8	29.7	102.3 103.0	102.7	7.4 7.4	7.4	7.4	1.5 1.5	1.5		2.7 2.5	2.6	
29-Apr-15	Sunny	Moderate	15:29	16.3	Surface	1.0	25.5 25.5	25.5	8.2 8.3	8.3	21.1 21.1	21.1	121.8 117.7	119.8	8.9 8.6	8.7	8.3	3.7 3.4	3.6	4.8	4.2 4.5	4.4	4.1
					Middle	8.2	23.8 23.7	23.7	7.9 7.9	7.9	26.7 27.1	26.9	105.3 108.1	106.7	7.7 7.9	7.8		4.2 4.0	4.1		4.3 3.3	3.8	
					Bottom	15.3	23.6 23.9	23.7	7.9 8.2	8.1	27.7 27.3	27.5	97.6 102.0	99.8	7.1 7.5	7.3	7.3	6.3 6.8	6.6		4.0 4.4	4.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)5 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:26	13.1	Surface	1.0	21.9 21.9	21.9	7.9 7.9	7.9	28.1 28.2	28.2	101.4 100.1	100.8	7.5 7.5	7.5	7.3	2.7 2.7	2.7	3.1	0.7 1.2	1.0	1.2
					Middle	6.6	21.1 21.1	21.1	7.9 7.9	7.9	30.5 30.4	30.4	95.7 93.3	94.5	7.1 7.0	7.0		3.3 3.3	3.3		1.5 1.2	1.4	
					Bottom	12.1	21.1 21.1	21.1	7.9 7.9	7.9	30.4 30.6	30.5	97.3 93.3	95.3	7.3 7.0	7.1	7.1	3.4 3.3	3.4		1.2 1.4	1.3	
3-Apr-15	Cloudy	Moderate	11:52	13.2	Surface	1.0	22.5 22.5	22.5	7.5 7.4	7.5	26.2 26.2	26.2	98.6 99.1	98.9	7.3 7.4	7.4	7.3	5.7 5.9	5.8	6.8	1.0 1.2	1.1	1.5
					Middle	6.6	22.1 22.1	22.1	7.4 7.5	7.4	27.4 27.4	27.4	96.5 96.4	96.5	7.2 7.2	7.2		6.6 6.5	6.6		1.5 1.8	1.7	
					Bottom	12.2	21.8 21.9	21.9	7.4 7.4	7.4	28.3 28.3	28.3	96.0 96.3	96.2	7.1 7.2	7.2	7.2	7.9 7.8	7.9		2.0 1.3	1.7	
6-Apr-15	Sunny	Moderate	13:57	12.0	Surface	1.0	23.3 23.5	23.4	7.4 7.4	7.4	26.9 26.8	26.9	92.7 93.2	93.0	6.8 6.8	6.8	6.7	4.6 4.7	4.7	4.8	2.2 3.2	2.7	3.3
					Middle	6.0	22.4 22.4	22.4	7.4 7.4	7.4	29.3 29.2	29.2	89.5 90.1	89.8	6.6 6.6	6.6		4.8 4.8	4.8		3.4 2.8	3.1	
					Bottom	11.0	22.3 22.6	22.5	7.3 7.3	7.3	29.7 29.3	29.5	90.3 91.6	91.0	6.6 6.7	6.6	6.6	4.8 4.8	4.8		4.1 3.8	4.0	
8-Apr-15	Cloudy	Moderate	15:26	12.2	Surface	1.0	22.7 22.7	22.7	7.3 7.4	7.4	29.2 29.2	29.2	91.2 89.1	90.2	6.6 6.5	6.6	6.5	6.1 6.1	6.1	6.2	4.3 4.3	4.3	4.4
					Middle	6.1	22.1 22.5	22.3	7.4 7.4	7.4	31.7 30.8	31.3	88.5 88.1	88.3	6.4 6.4	6.4		6.3 6.1	6.2		3.9 3.9	3.9	
					Bottom	11.2	22.1 22.4	22.3	7.4 7.3	7.4	31.9 31.4	31.7	89.4 90.4	89.9	6.5 6.5	6.5	6.5	6.4 6.3	6.4		4.6 5.1	4.9	
10-Apr-15	Cloudy	Moderate	16:51	13.3	Surface	1.0	21.9 21.9	21.9	8.1 8.0	8.1	30.1 30.2	30.2	87.2 86.5	86.9	6.4 6.4	6.4	6.4	7.1 7.2	7.2	8.2	4.7 6.4	5.6	6.1
					Middle	6.7	22.0 22.0	22.0	7.9 7.8	7.8	30.5 30.5	30.5	85.9 88.6	87.3	6.3 6.5	6.4		8.5 9.0	8.8		5.6 5.8	5.7	
					Bottom	12.3	22.0 22.0	22.0	7.9 7.7	7.8	30.5 30.5	30.5	86.1 90.2	88.2	6.3 6.6	6.5	6.5	8.2 8.7	8.5		8.0 6.1	7.1	
13-Apr-15	Sunny	Moderate	08:18	12.0	Surface	1.0	21.8 21.8	21.8	7.2 7.2	7.2	31.7 31.5	31.6	85.6 86.8	86.2	6.3 6.4	6.3	6.3	3.8 3.9	3.9	4.1	2.9 2.4	2.7	2.7
					Middle	6.0	21.8 21.8	21.8	7.1 7.1	7.1	31.8 31.9	31.9	87.6 85.4	86.5	6.4 6.2	6.3		4.0 4.2	4.1		3.2 2.1	2.7	
					Bottom	11.0	21.8 21.8	21.8	7.1 7.1	7.1	31.9 31.9	31.9	85.4 89.8	87.6	6.2 6.6	6.4	6.4	4.2 4.1	4.2		3.5 2.1	2.8	
15-Apr-15	Sunny	Moderate	10:12	13.7	Surface	1.0	22.3 22.4	22.3	7.8 7.8	7.8	31.2 31.2	31.2	94.3 95.2	94.8	6.8 6.9	6.9	6.9	3.4 3.8	3.6	3.8	2.8 2.5	2.7	2.9
					Middle	6.9	22.1 22.1	22.1	7.8 7.8	7.8	31.5 31.4	31.4	94.5 93.9	94.2	6.9 6.8	6.8		3.7 3.3	3.5		3.8 2.3	3.1	
					Bottom	12.7	22.2 22.1	22.2	7.8 7.8	7.8	31.4 31.5	31.5	94.5 95.4	95.0	6.9 6.9	6.9	6.9	4.3 4.0	4.2		2.8 3.0	2.9	
17-Apr-15	Sunny	Moderate	11:39	12.3	Surface	1.0	22.9 23.1	23.0	7.3 7.2	7.3	29.0 28.9	29.0	100.5 102.3	101.4	7.3 7.4	7.4	7.3	5.2 5.0	5.1	5.3	7.8 6.8	7.3	7.1
					Middle	6.2	22.7 22.8	22.8	7.3 7.2	7.3	29.6 29.4	29.5	96.6 97.7	97.2	7.0 7.1	7.1		5.4 5.2	5.3		7.1 6.1	6.6	
					Bottom	11.3	22.6 22.6	22.6	7.3 7.1	7.2	30.4 30.4	30.4	97.1 97.0	97.1	7.1 7.0	7.0	7.0	5.5 5.4	5.5		6.7 7.9	7.3	
20-Apr-15	Cloudy	Moderate	14:05	12.1	Surface	1.0	23.8 23.7	23.8	7.1 7.1	7.1	28.9 29.0	28.9	90.0 89.1	89.6	6.4 6.4	6.4	6.4	8.3 8.2	8.3	8.6	4.4 5.5	5.0	5.2
					Middle	6.1	23.6 23.6	23.6	7.1 7.1	7.1	29.2 29.1	29.1	89.3 88.5	88.9	6.4 6.4	6.4		8.8 8.3	8.6		6.0 4.5	5.3	
					Bottom	11.1	23.6 23.6	23.6	7.1 7.1	7.1	29.2 29.1	29.1	90.8 88.8	89.8	6.5 6.4	6.5	6.5	8.8 8.7	8.8		5.5 5.1	5.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)5 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:35	13.2	Surface	1.0	23.6 23.6	23.6	8.1 8.1	8.1	30.8 30.7	30.7	85.4 87.6	86.5	6.1 6.2	6.2	6.2	9.5 10.0	9.8	11.1	4.2 4.9	4.6	6.7
					Middle	6.6	23.6 23.6	23.6	8.1 8.0	8.0	30.9 30.8	30.8	85.4 89.2	87.3	6.1 6.3	6.2		11.7 12.2	12.0		5.2 5.9	5.6	
					Bottom	12.2	23.6 23.6	23.6	8.1 8.0	8.0	30.9 30.8	30.8	86.0 83.3	84.7	6.1 5.9	6.0	6.0	11.1 11.8	11.5		10.3 9.6	10.0	
24-Apr-15	Sunny	Moderate	16:58	12.4	Surface	1.0	23.9 24.1	24.0	8.1 8.1	8.1	32.3 32.2	32.2	89.0 89.9	89.5	6.2 6.3	6.3	6.3	5.3 5.4	5.4	5.6	4.5 5.6	5.1	5.5
					Middle	6.2	23.8 23.8	23.8	8.1 8.0	8.0	32.4 32.3	32.4	88.4 87.9	88.2	6.2 6.2	6.2		5.7 5.6	5.7		5.4 4.7	5.1	
					Bottom	11.4	23.7 23.7	23.7	8.1 8.0	8.0	32.5 32.4	32.4	88.8 87.8	88.3	6.2 6.2	6.2	6.2	5.8 5.7	5.8		6.6 6.0	6.3	
27-Apr-15	Sunny	Moderate	08:27	13.5	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	30.9 31.0	31.0	97.6 96.8	97.2	6.9 6.8	6.9	6.8	2.8 3.0	2.9	2.9	1.3 1.1	1.2	1.4
					Middle	6.8	23.7 23.7	23.7	8.1 8.0	8.0	33.1 33.0	33.1	94.2 95.1	94.7	6.6 6.7	6.6		2.7 2.7	2.7		1.0 1.1	1.1	
					Bottom	12.5	23.7 23.8	23.7	8.1 8.0	8.0	33.1 33.0	33.0	96.4 97.8	97.1	6.8 6.9	6.8	6.8	3.0 3.0	3.0		1.7 2.0	1.9	
29-Apr-15	Sunny	Moderate	09:56	12.4	Surface	1.0	25.1 25.2	25.1	8.2 8.1	8.2	26.3 26.0	26.1	111.6 115.7	113.7	7.9 8.2	8.1	7.5	2.5 2.5	2.5	2.5	- 1.2	0.6	0.9
					Middle	6.2	24.1 23.9	24.0	7.9 8.0	8.0	32.2 32.7	32.4	96.9 99.1	98.0	6.8 6.9	6.9		2.4 2.4	2.4		1.0 -	0.5	
					Bottom	11.4	23.8 23.8	23.8	7.8 8.0	7.9	33.6 33.5	33.6	96.7 96.7	96.7	6.8 6.8	6.8	6.8	2.5 2.4	2.5		1.8 1.2	1.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:37	12.5	Surface	1.0	22.3 22.2	22.3	8.1 8.1	8.1	27.7 27.7	27.7	109.7 104.8	107.3	8.1 7.8	8.0	7.7	3.2 3.2	3.2	3.2	2.5 3.6	3.1	3.1
					Middle	6.3	21.5 21.4	21.5	8.0 8.0	8.0	30.0 30.0	30.0	102.0 96.8	99.4	7.6 7.2	7.4		3.2 3.2	3.2		3.0 2.7	2.9	
					Bottom	11.5	21.5 21.5	21.5	7.9 8.0	8.0	30.0 30.5	30.3	97.1 105.1	101.1	7.2 7.8	7.5	7.5	3.4 3.2	3.3		3.4 3.2	3.3	
3-Apr-15	Cloudy	Moderate	19:18	13.7	Surface	1.0	22.9 22.9	22.9	7.5 7.5	7.5	25.5 25.5	25.5	100.3 99.7	100.0	7.5 7.4	7.4	7.3	5.5 5.6	5.6	6.9	1.2 1.5	1.4	1.4
					Middle	6.9	22.5 22.5	22.5	7.5 7.5	7.5	26.9 26.9	26.9	97.2 97.4	97.3	7.2 7.2	7.2		7.1 7.2	7.2		1.7 1.5	1.6	
					Bottom	12.7	22.3 22.3	22.3	7.5 7.5	7.5	27.7 27.7	27.7	96.0 96.3	96.2	7.1 7.1	7.1	7.1	7.8 7.9	7.9		1.8 0.7	1.3	
6-Apr-15	Sunny	Moderate	07:43	12.5	Surface	1.0	22.8 22.8	22.8	7.2 7.2	7.2	27.3 28.0	27.6	89.1 90.0	89.6	6.6 6.6	6.6	6.5	6.4 6.5	6.5	6.6	1.3 0.7	1.0	3.1
					Middle	6.3	22.1 22.2	22.2	7.2 7.2	7.2	29.8 29.8	29.8	86.3 88.1	87.2	6.3 6.5	6.4		6.6 6.8	6.7		4.3 3.7	4.0	
					Bottom	11.5	22.0 22.0	22.0	7.2 7.1	7.2	30.2 30.2	30.2	84.9 87.4	86.2	6.2 6.4	6.3	6.3	6.7 6.6	6.7		4.8 3.7	4.3	
8-Apr-15	Cloudy	Moderate	08:04	12.7	Surface	1.0	22.7 22.7	22.7	7.2 7.2	7.2	27.7 27.5	27.6	87.9 90.1	89.0	6.5 6.6	6.6	6.5	5.9 5.8	5.9	6.9	3.2 3.0	3.1	3.4
					Middle	6.4	22.4 22.4	22.4	7.2 7.2	7.2	29.5 29.1	29.3	86.9 86.9	86.9	6.4 6.4	6.4		7.3 7.4	7.4		2.8 4.8	3.8	
					Bottom	11.7	22.4 22.4	22.4	7.2 7.2	7.2	29.4 29.7	29.6	87.2 87.1	87.2	6.4 6.4	6.4	6.4	7.5 7.5	7.5		3.3 3.4	3.4	
10-Apr-15	Fine	Moderate	09:10	13.5	Surface	1.0	21.8 21.8	21.8	7.8 7.8	7.8	28.8 28.7	28.8	86.7 87.1	86.9	6.4 6.5	6.5	6.4	4.3 4.1	4.2	4.2	3.5 4.1	3.8	7.5
					Middle	6.8	21.9 21.9	21.9	7.8 7.8	7.8	30.2 30.2	30.2	85.6 85.9	85.8	6.3 6.3	6.3		4.1 3.8	4.0		7.0 8.7	7.9	
					Bottom	12.5	21.9 21.9	21.9	7.7 7.8	7.8	30.4 30.4	30.4	87.3 87.0	87.2	6.4 6.4	6.4	6.4	4.2 4.6	4.4		10.7 10.9	10.8	
13-Apr-15	Sunny	Moderate	13:47	12.7	Surface	1.0	22.3 22.3	22.3	7.3 7.3	7.3	32.0 32.1	32.0	91.8 89.8	90.8	6.6 6.5	6.6	6.5	3.2 3.3	3.3	3.2	1.5 1.7	1.6	1.6
					Middle	6.4	21.9 21.9	21.9	7.3 7.4	7.4	32.7 32.7	32.7	90.4 87.4	88.9	6.6 6.3	6.4		3.1 3.1	3.1		1.8 1.8	1.8	
					Bottom	11.7	21.9 21.8	21.8	7.3 7.4	7.3	32.8 32.9	32.8	92.6 87.4	90.0	6.7 6.3	6.5	6.5	3.1 3.2	3.2		1.5 1.3	1.4	
15-Apr-15	Sunny	Moderate	16:18	13.7	Surface	1.0	22.8 22.8	22.8	7.7 7.7	7.7	31.7 31.6	31.6	104.5 104.7	104.6	7.5 7.5	7.5	7.3	4.4 4.9	4.7	4.7	2.8 3.2	3.0	3.0
					Middle	6.9	22.4 22.4	22.4	7.7 7.8	7.7	32.4 32.2	32.3	98.6 99.5	99.1	7.1 7.2	7.1		4.8 5.0	4.9		3.8 3.8	3.8	
					Bottom	12.7	22.3 22.4	22.3	7.6 7.7	7.7	32.7 32.4	32.5	99.9 100.1	100.0	7.2 7.2	7.2	7.2	4.6 4.6	4.6		2.2 2.0	2.1	
17-Apr-15	Sunny	Moderate	18:12	12.8	Surface	1.0	23.2 23.2	23.2	7.3 7.3	7.3	30.0 30.1	30.1	101.6 100.3	101.0	7.3 7.2	7.3	7.2	9.5 9.4	9.5	9.6	3.1 3.0	3.1	3.9
					Middle	6.4	22.9 22.9	22.9	7.4 7.4	7.4	30.7 30.7	30.7	98.3 98.0	98.2	7.1 7.1	7.1		9.6 9.6	9.6		3.4 4.3	3.9	
					Bottom	11.8	22.9 22.9	22.9	7.3 7.3	7.3	31.2 31.2	31.2	98.2 98.8	98.5	7.1 7.1	7.1	7.1	9.9 9.6	9.8		5.0 4.5	4.8	
20-Apr-15	Cloudy	Moderate	06:49	12.3	Surface	1.0	23.6 23.6	23.6	7.4 7.3	7.3	27.6 27.1	27.3	89.2 89.7	89.5	6.5 6.5	6.5	6.5	7.8 7.9	7.9	7.8	5.2 4.1	4.7	4.7
					Middle	6.2	23.3 23.3	23.3	7.3 7.2	7.3	28.1 27.1	27.6	87.9 87.7	87.8	6.4 6.4	6.4		7.7 7.8	7.8		5.4 5.4	5.4	
					Bottom	11.3	23.3 23.3	23.3	7.2 7.3	7.2	26.6 27.9	27.3	87.9 88.4	88.2	6.4 6.4	6.4	6.4	7.8 7.7	7.8		4.4 3.7	4.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:16	13.3	Surface	1.0	23.5 23.5	23.5	8.0 8.0	8.0	28.2 28.3	28.3	86.6 85.8	86.2	6.3 6.2	6.2	6.2	6.5 6.8	6.7	7.6	4.8 4.2	4.5	6.8
					Middle	6.7	23.4 23.4	23.4	8.0 7.9	7.9	29.0 29.1	29.1	85.4 86.3	85.9	6.2 6.2	6.2		7.2 7.5	7.4		8.3 7.4	7.9	
					Bottom	12.3	23.4 23.4	23.4	7.8 8.0	7.9	29.0 29.1	29.1	90.6 85.7	88.2	6.5 6.2	6.4	6.4	8.5 9.0	8.8		7.6 8.3	8.0	
24-Apr-15	Sunny	Moderate	09:48	12.4	Surface	1.0	23.5 23.4	23.5	8.0 8.0	8.0	28.8 29.0	28.9	86.3 84.8	85.6	6.2 6.1	6.2	6.2	4.7 4.7	4.7	4.8	6.1 5.8	6.0	5.0
					Middle	6.2	23.3 23.4	23.4	8.0 7.9	7.9	29.5 29.3	29.4	84.3 84.7	84.5	6.1 6.1	6.1		4.9 4.7	4.8		4.9 3.8	4.4	
					Bottom	11.4	23.3 23.3	23.3	7.8 8.0	7.9	29.7 30.1	29.9	85.2 85.1	85.2	6.1 6.1	6.1	6.1	4.8 4.7	4.8		4.3 4.9	4.6	
27-Apr-15	Sunny	Moderate	13:47	13.6	Surface	1.0	25.5 25.4	25.5	8.0 8.0	8.0	28.0 28.0	28.0	112.3 106.3	109.3	7.8 7.4	7.6	7.4	3.6 3.6	3.6	3.6	1.1 1.1	1.1	1.4
					Middle	6.8	24.1 24.2	24.2	8.0 7.9	7.9	31.7 31.4	31.5	105.1 101.5	103.3	7.4 7.1	7.2		3.5 3.7	3.6		1.4 1.4	1.4	
					Bottom	12.6	24.3 24.3	24.3	7.8 8.0	7.9	31.9 31.3	31.6	110.2 102.4	106.3	7.7 7.2	7.4	7.4	3.5 3.7	3.6		1.7 1.5	1.6	
29-Apr-15	Sunny	Moderate	16:31	12.7	Surface	1.0	26.0 26.0	26.0	8.4 8.3	8.3	25.0 24.9	25.0	130.0 130.6	130.3	9.2 9.2	9.2	8.3	4.4 4.6	4.5	4.6	2.6 2.2	2.4	2.6
					Middle	6.4	24.3 24.2	24.3	8.1 8.1	8.1	31.0 31.3	31.2	103.5 105.9	104.7	7.2 7.4	7.3		4.7 4.6	4.7		3.1 2.7	2.9	
					Bottom	11.7	23.9 23.9	23.9	8.0 8.1	8.1	33.2 33.1	33.2	100.4 100.9	100.7	7.0 7.1	7.1	7.1	4.7 4.6	4.7		2.5 2.3	2.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS6 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	10:51	10.3	Surface	1.0	20.7 20.8	20.8	8.0 8.0	8.0	29.5 29.4	29.4	98.3 99.5	98.9	7.4 7.5	7.5	7.4	1.2 1.2	1.2	1.3	3.4 2.7	3.1	3.1
					Middle	5.2	20.2 20.2	20.2	8.0 8.0	8.0	31.3 31.4	31.3	97.1 95.3	96.2	7.3 7.2	7.2		1.3 1.3	1.3		3.1 3.6	3.4	
					Bottom	9.3	19.9 20.1	20.0	8.0 8.0	8.0	32.2 31.9	32.0	96.9 98.4	97.7	7.3 7.4	7.4	7.4	1.3 1.4	1.4		2.8 3.0	2.9	
3-Apr-15	Cloudy	Moderate	11:36	10.1	Surface	1.0	21.6 21.6	21.6	8.0 8.0	8.0	28.3 28.3	28.3	102.3 102.1	102.2	7.7 7.6	7.6	7.6	2.6 2.7	2.7	2.7	1.6 1.5	1.6	1.5
					Middle	5.1	21.4 21.4	21.4	8.0 8.0	8.0	28.5 28.6	28.6	100.8 100.9	100.9	7.6 7.6	7.6		2.7 2.7	2.7		1.8 1.6	1.7	
					Bottom	9.1	21.2 21.2	21.2	8.0 8.0	8.0	28.9 29.0	29.0	99.8 99.8	99.8	7.5 7.5	7.5	7.5	2.7 2.7	2.7		1.0 1.3	1.2	
6-Apr-15	Sunny	Moderate	14:38	10.2	Surface	1.0	21.9 21.8	21.8	7.8 7.8	7.8	30.3 30.4	30.3	91.6 91.3	91.5	6.7 6.7	6.7	6.7	0.8 1.0	0.9	1.2	2.6 2.3	2.5	2.9
					Middle	5.1	21.5 21.5	21.5	7.8 7.8	7.8	31.1 31.1	31.1	91.0 90.7	90.9	6.7 6.7	6.7		1.2 1.1	1.2		4.2 2.6	3.4	
					Bottom	9.2	21.5 21.5	21.5	7.8 7.8	7.8	31.1 31.2	31.1	91.2 91.1	91.2	6.7 6.7	6.7	6.7	1.5 1.3	1.4		2.8 2.7	2.8	
8-Apr-15	Cloudy	Moderate	15:46	10.9	Surface	1.0	21.7 21.7	21.7	7.8 7.8	7.8	30.2 30.0	30.1	94.9 94.5	94.7	7.0 7.0	7.0	7.0	7.5 7.4	7.5	7.6	2.6 2.3	2.5	2.9
					Middle	5.5	21.6 21.7	21.6	7.8 7.8	7.8	30.5 30.1	30.3	95.4 94.4	94.9	7.0 7.0	7.0		7.5 7.5	7.5		4.1 2.3	3.2	
					Bottom	9.9	21.7 21.6	21.6	7.8 7.8	7.8	30.2 30.7	30.4	95.0 96.9	96.0	7.0 7.1	7.1	7.1	7.7 7.6	7.7		3.8 2.1	3.0	
10-Apr-15	Cloudy	Moderate	17:12	10.3	Surface	1.0	20.8 20.7	20.7	7.8 7.8	7.8	31.5 31.4	31.5	90.2 88.6	89.4	6.7 6.6	6.7	6.7	2.1 2.2	2.2	2.2	5.5 4.8	5.2	5.2
					Middle	5.2	20.8 20.8	20.8	7.8 7.8	7.8	32.3 32.1	32.2	88.3 90.7	89.5	6.5 6.7	6.6		2.2 2.2	2.2		4.9 5.1	5.0	
					Bottom	9.3	20.8 20.8	20.8	7.8 7.8	7.8	33.1 32.9	33.0	93.2 89.1	91.2	6.9 6.6	6.7	6.7	2.2 2.2	2.2		5.6 4.9	5.3	
13-Apr-15	Sunny	Moderate	07:31	10.3	Surface	1.0	20.6 20.7	20.6	7.8 7.8	7.8	32.8 32.8	32.8	96.2 93.1	94.7	7.2 6.9	7.0	7.0	3.0 3.1	3.1	3.1	3.7 3.4	3.6	3.3
					Middle	5.2	20.7 20.7	20.7	7.8 7.8	7.8	33.4 33.2	33.3	91.5 93.3	92.4	6.8 6.9	6.9		3.1 3.0	3.1		3.0 3.3	3.2	
					Bottom	9.3	20.7 20.7	20.7	7.8 7.8	7.8	33.4 33.5	33.4	89.0 92.3	90.7	6.6 6.8	6.7	6.7	3.3 3.1	3.2		3.0 2.9	3.0	
15-Apr-15	Sunny	Moderate	10:01	10.0	Surface	1.0	21.1 21.1	21.1	7.8 7.8	7.8	33.5 33.5	33.5	90.3 91.2	90.8	6.6 6.7	6.6	6.6	1.5 1.4	1.5	1.5	1.0 1.2	1.1	1.9
					Middle	5.0	21.1 21.1	21.1	7.8 7.8	7.8	33.5 33.6	33.6	90.6 89.4	90.0	6.6 6.6	6.6		1.5 1.5	1.5		1.4 1.5	1.5	
					Bottom	9.0	21.1 21.0	21.0	7.8 7.8	7.8	33.5 33.7	33.6	90.6 90.1	90.4	6.6 6.6	6.6	6.6	1.5 1.5	1.5		3.2 3.0	3.1	
17-Apr-15	Sunny	Moderate	11:17	9.8	Surface	1.0	22.1 22.1	22.1	7.9 7.9	7.9	30.6 30.6	30.6	100.9 102.2	101.6	7.4 7.5	7.4	7.4	0.6 0.7	0.7	0.7	4.1 3.4	3.8	4.3
					Middle	4.9	21.8 22.0	21.9	7.9 7.9	7.9	31.2 30.8	31.0	99.4 101.0	100.2	7.3 7.4	7.3		0.7 0.7	0.7		4.5 3.1	3.8	
					Bottom	8.8	21.8 21.7	21.8	7.9 7.9	7.9	31.6 31.5	31.6	100.7 99.2	100.0	7.4 7.3	7.3	7.3	0.6 0.6	0.6		6.0 4.8	5.4	
20-Apr-15	Cloudy	Moderate	14:44	9.7	Surface	1.0	22.5 22.5	22.5	7.9 7.9	7.9	30.3 30.2	30.3	89.6 90.1	89.9	6.5 6.6	6.5	6.5	1.6 1.6	1.6	1.8	6.3 5.0	5.7	5.9
					Middle	4.9	22.4 22.4	22.4	7.9 7.9	7.9	30.6 30.5	30.6	90.3 89.8	90.1	6.6 6.5	6.5		1.7 1.5	1.6		5.3 4.9	5.1	
					Bottom	8.7	22.4 22.4	22.4	7.9 7.9	7.9	30.6 30.7	30.6	89.8 91.2	90.5	6.5 6.6	6.6	6.6	2.2 2.0	2.1		7.2 6.7	7.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS6 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	16:12	10.1	Surface	1.0	22.7 22.6	22.7	8.0 8.0	8.0	30.6 30.7	30.7	89.1 86.6	87.9	6.4 6.3	6.4	6.4	1.2 1.2	1.2	1.3	4.0 5.3	4.7	5.1
					Middle	5.1	22.5 22.5	22.5	8.0 8.0	8.0	31.1 31.1	31.1	86.3 88.9	87.6	6.2 6.4	6.3		1.3 1.4	1.4		3.8 4.9	4.4	
					Bottom	9.1	22.4 22.3	22.3	8.0 8.0	8.0	31.5 31.6	31.5	86.6 90.8	88.7	6.3 6.6	6.4	6.4	1.4 1.4	1.4		5.7 6.7	6.2	
24-Apr-15	Sunny	Moderate	17:34	9.8	Surface	1.0	23.0 22.8	22.9	8.0 8.0	8.0	30.4 30.5	30.4	89.6 89.0	89.3	6.5 6.4	6.4	6.4	0.6 0.7	0.7	0.7	4.9 4.0	4.5	4.4
					Middle	4.9	22.5 22.4	22.5	8.0 8.0	8.0	31.0 31.0	31.0	86.8 88.7	87.8	6.3 6.4	6.4		0.6 0.5	0.6		4.9 3.8	4.4	
					Bottom	8.8	22.4 22.5	22.4	8.0 8.0	8.0	31.1 31.0	31.1	91.1 87.9	89.5	6.6 6.4	6.5	6.5	0.7 0.8	0.8		4.0 4.5	4.3	
27-Apr-15	Sunny	Moderate	08:11	10.1	Surface	1.0	22.9 22.9	22.9	8.0 8.0	8.0	30.3 30.3	30.3	97.3 97.1	97.2	7.0 7.0	7.0	6.9	2.1 2.1	2.1	2.2	2.4 3.2	2.8	2.9
					Middle	5.1	22.7 22.6	22.7	8.0 8.0	8.0	31.1 31.0	31.1	94.2 95.6	94.9	6.8 6.9	6.8		2.2 2.1	2.2		3.0 3.9	3.5	
					Bottom	9.1	22.4 22.6	22.5	8.0 8.0	8.0	32.2 32.0	32.1	94.0 96.8	95.4	6.8 7.0	6.9	6.9	2.2 2.2	2.2		2.4 2.1	2.3	
29-Apr-15	Sunny	Moderate	09:47	10.3	Surface	1.0	23.8 24.1	24.0	8.1 8.1	8.1	25.5 25.0	25.3	100.5 100.8	100.7	7.4 7.4	7.4	7.3	1.6 1.7	1.7	1.4	2.1 3.9	3.0	3.4
					Middle	5.2	23.5 23.4	23.4	8.0 8.0	8.0	27.9 27.8	27.8	100.2 96.6	98.4	7.3 7.0	7.1		1.6 1.6	1.6		4.0 4.0	4.0	
					Bottom	9.3	23.5 22.9	23.2	8.0 8.0	8.0	30.5 31.0	30.8	102.6 96.3	99.5	7.3 6.9	7.1	7.1	0.9 0.9	0.9		3.2 3.1	3.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	18:21	10.3	Surface	1.0	21.1 21.2	21.2	8.1 8.1	8.1	28.6 28.4	28.5	107.2 110.4	108.8	8.1 8.3	8.2	8.2	2.1 2.1	2.1	2.2	4.2 4.7	4.5	4.5
					Middle	5.2	20.8 20.8	20.8	8.0 8.0	8.0	29.2 29.1	29.2	106.6 108.1	107.4	8.0 8.2	8.1		2.2 2.2	2.2		5.2 3.9	4.6	
					Bottom	9.3	20.7 20.7	20.7	8.0 8.0	8.0	29.6 29.7	29.6	104.8 105.6	105.2	7.9 8.0	7.9	7.9	2.2 2.2	2.2		3.6 5.0	4.3	
3-Apr-15	Cloudy	Moderate	19:26	10.1	Surface	1.0	21.6 21.6	21.6	8.0 8.0	8.0	26.8 26.7	26.7	98.7 99.0	98.9	7.4 7.5	7.5	7.5	2.7 2.6	2.7	2.7	1.9 0.7	1.3	1.5
					Middle	5.1	21.5 21.5	21.5	8.0 8.0	8.0	27.0 27.0	27.0	98.4 98.1	98.3	7.4 7.4	7.4		2.7 2.7	2.7		1.7 1.7	1.7	
					Bottom	9.1	21.3 21.3	21.3	8.0 8.0	8.0	28.1 28.1	28.1	98.5 98.1	98.3	7.4 7.4	7.4	7.4	2.7 2.7	2.7		1.7 1.4	1.6	
6-Apr-15	Sunny	Moderate	06:42	10.1	Surface	1.0	21.2 21.2	21.2	7.8 7.8	7.8	31.6 31.6	31.6	88.3 88.9	88.6	6.5 6.6	6.5	6.6	1.0 0.9	1.0	1.3	3.8 4.7	4.3	4.3
					Middle	5.1	21.2 21.2	21.2	7.8 7.8	7.8	31.7 31.7	31.7	88.6 88.8	88.7	6.6 6.6	6.6		1.2 1.2	1.2		4.5 3.9	4.2	
					Bottom	9.1	21.1 21.2	21.2	7.8 7.8	7.8	31.8 31.7	31.7	88.4 88.8	88.6	6.5 6.6	6.5	6.5	1.5 1.7	1.6		4.6 4.3	4.5	
8-Apr-15	Cloudy	Moderate	08:08	11.4	Surface	1.0	21.8 21.8	21.8	7.8 7.8	7.8	29.7 29.6	29.6	95.0 92.1	93.6	7.0 6.8	6.9	6.9	7.9 8.0	8.0	8.1	3.9 3.0	3.5	5.0
					Middle	5.7	21.7 21.8	21.7	7.8 7.8	7.8	29.9 29.8	29.8	91.3 96.6	94.0	6.8 7.1	6.9		8.0 8.2	8.1		5.2 6.4	5.8	
					Bottom	10.4	21.6 21.5	21.6	7.8 7.8	7.8	31.4 31.8	31.6	101.4 93.2	97.3	7.5 6.8	7.1	7.1	8.2 8.3	8.3		5.7 5.6	5.7	
10-Apr-15	Fine	Moderate	09:06	10.4	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	31.3 31.3	31.3	88.3 87.6	88.0	6.6 6.5	6.5	6.5	2.2 2.2	2.2	2.3	4.1 2.4	3.3	3.4
					Middle	5.2	20.9 20.9	20.9	7.8 7.8	7.8	31.4 31.4	31.4	87.2 87.5	87.4	6.5 6.5	6.5		2.4 2.4	2.4		3.3 3.5	3.4	
					Bottom	9.4	20.9 20.9	20.9	7.8 7.8	7.8	31.4 31.4	31.4	88.2 88.2	88.2	6.6 6.6	6.6	6.6	2.3 2.4	2.4		4.2 2.9	3.6	
13-Apr-15	Sunny	Moderate	14:34	10.5	Surface	1.0	21.1 21.1	21.1	7.8 7.8	7.8	33.0 33.0	33.0	90.3 92.2	91.3	6.6 6.8	6.7	6.7	2.5 2.4	2.5	2.7	2.3 2.4	2.4	2.5
					Middle	5.3	21.0 21.0	21.0	7.8 7.8	7.8	33.1 33.1	33.1	90.5 92.9	91.7	6.6 6.8	6.7		2.7 2.6	2.7		2.8 2.4	2.6	
					Bottom	9.5	21.0 21.1	21.0	7.8 7.8	7.8	33.2 33.0	33.1	94.8 91.1	93.0	7.0 6.7	6.8	6.8	2.8 2.8	2.8		2.5 2.7	2.6	
15-Apr-15	Sunny	Moderate	16:52	10.5	Surface	1.0	21.7 21.7	21.7	7.9 7.9	7.9	32.2 32.0	32.1	97.4 98.5	98.0	7.1 7.2	7.1	7.0	2.1 2.1	2.1	2.2	2.6 2.0	2.3	4.3
					Middle	5.3	21.3 21.1	21.2	7.9 7.8	7.8	33.1 33.3	33.2	93.6 94.8	94.2	6.8 6.9	6.9		2.2 2.2	2.2		5.5 4.7	5.1	
					Bottom	9.5	21.1 21.0	21.1	7.8 7.9	7.8	33.4 33.5	33.5	96.7 93.5	95.1	7.1 6.9	7.0	7.0	2.2 2.2	2.2		5.3 5.8	5.6	
17-Apr-15	Sunny	Moderate	18:46	10.0	Surface	1.0	21.9 21.9	21.9	7.8 7.8	7.8	30.3 30.3	30.3	97.8 97.8	97.8	7.2 7.2	7.2	7.2	2.0 1.8	1.9	1.7	5.4 4.6	5.0	4.4
					Middle	5.0	21.8 21.8	21.8	7.8 7.8	7.8	30.6 30.6	30.6	96.2 96.7	96.5	7.1 7.1	7.1		1.6 1.6	1.6		4.8 4.1	4.5	
					Bottom	9.0	21.7 21.8	21.7	7.8 7.8	7.8	30.9 30.7	30.8	96.3 97.2	96.8	7.1 7.1	7.1	7.1	1.6 1.8	1.7		3.8 3.7	3.8	
20-Apr-15	Cloudy	Moderate	06:41	9.8	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	30.1 30.2	30.2	90.4 90.1	90.3	6.6 6.6	6.6	6.6	1.9 1.9	1.9	1.8	6.2 6.1	6.2	5.4
					Middle	4.9	22.4 22.4	22.4	7.8 7.8	7.8	30.3 30.4	30.4	89.9 89.8	89.9	6.5 6.5	6.5		1.7 1.9	1.8		5.4 5.5	5.5	
					Bottom	8.8	22.4 22.4	22.4	7.8 7.8	7.8	30.4 30.4	30.4	89.9 90.0	90.0	6.5 6.6	6.5	6.5	1.8 1.7	1.8		4.9 4.0	4.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	07:51	10.4	Surface	1.0	22.4 22.4	22.4	8.0 8.0	8.0	30.3 30.3	30.3	87.1 87.0	87.1	6.3 6.3	6.3	6.3	1.2 1.3	1.3	1.3	4.7 3.8	4.3	4.9
					Middle	5.2	22.4 22.4	22.4	8.0 8.0	8.0	30.3 30.3	30.3	87.0 86.8	86.9	6.3 6.3	6.3		1.3 1.3	1.3		4.9 4.6	4.8	
					Bottom	9.4	22.4 22.4	22.4	8.0 8.0	8.0	30.3 30.4	30.4	86.9 87.1	87.0	6.3 6.3	6.3	6.3	1.4 1.4	1.4		6.0 5.4	5.7	
24-Apr-15	Sunny	Moderate	09:21	10.0	Surface	1.0	22.3 22.4	22.4	8.0 8.0	8.0	30.3 30.2	30.3	87.4 88.2	87.8	6.4 6.4	6.4	6.4	0.6 0.7	0.7	0.9	3.3 2.7	3.0	3.2
					Middle	5.0	22.4 22.4	22.4	8.0 8.0	8.0	30.4 30.3	30.4	87.8 88.2	88.0	6.4 6.4	6.4		0.7 0.8	0.8		3.3 3.5	3.4	
					Bottom	9.0	22.4 22.4	22.4	8.0 8.0	8.0	30.4 30.4	30.4	87.8 88.3	88.1	6.4 6.4	6.4	6.4	1.1 1.0	1.1		3.4 3.2	3.3	
27-Apr-15	Sunny	Moderate	14:41	10.5	Surface	1.0	23.1 23.2	23.2	8.0 8.0	8.0	28.7 28.4	28.6	107.5 105.2	106.4	7.8 7.6	7.7	7.7	1.3 1.4	1.4	1.4	2.7 2.7	2.7	2.9
					Middle	5.3	22.9 22.8	22.8	8.0 8.0	8.0	30.3 30.7	30.5	101.1 109.4	105.3	7.3 7.9	7.6		1.4 1.4	1.4		3.0 2.8	2.9	
					Bottom	9.5	22.9 22.7	22.8	8.0 8.0	8.0	31.1 31.3	31.2	105.4 100.6	103.0	7.6 7.3	7.4	7.4	1.4 1.4	1.4		2.9 3.2	3.1	
29-Apr-15	Sunny	Moderate	17:12	10.1	Surface	1.0	24.7 24.9	24.8	8.1 8.2	8.2	24.0 23.9	24.0	108.1 104.9	106.5	7.9 7.6	7.7	7.7	1.7 1.7	1.7	1.6	3.6 3.6	3.6	3.5
					Middle	5.1	24.1 24.0	24.0	8.1 8.0	8.1	25.6 26.0	25.8	105.3 104.6	105.0	7.6 7.6	7.6		1.4 1.5	1.5		3.6 2.8	3.2	
					Bottom	9.1	24.0 24.0	24.0	8.1 8.1	8.1	26.0 26.3	26.1	94.4 97.0	95.7	6.7 7.0	6.9	6.9	1.6 1.6	1.6		4.3 2.9	3.6	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CSA - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	10:41	34.1	Surface	1.0	20.9 20.8	20.8	8.0 8.0	8.0	29.2 29.4	29.3	96.0 95.5	95.8	7.2 7.2	7.2	7.2	1.8 1.7	1.8	1.8	2.6 3.2	2.9	3.4
					Middle	17.1	19.9 19.9	19.9	8.0 8.0	8.0	32.3 32.3	32.3	93.4 95.7	94.6	7.0 7.2	7.1		1.7 1.7	1.7		3.7 2.6	3.2	
					Bottom	33.1	19.9 20.0	19.9	8.0 8.0	8.0	32.4 32.3	32.4	92.3 93.0	92.7	7.0 7.0	7.0	7.0	1.7 1.8	1.8		4.6 3.7	4.2	
3-Apr-15	Cloudy	Moderate	11:19	36.6	Surface	1.0	21.5 21.4	21.5	7.9 8.0	8.0	28.2 28.4	28.3	100.7 100.9	100.8	7.5 7.6	7.6	7.6	2.7 2.7	2.7	2.7	1.3 0.9	1.1	1.1
					Middle	18.3	21.3 21.3	21.3	8.0 7.9	7.9	28.7 28.5	28.6	99.7 99.1	99.4	7.5 7.4	7.5		2.7 2.7	2.7		1.4 1.0	1.2	
					Bottom	35.6	21.1 21.0	21.1	7.9 7.9	7.9	28.9 29.3	29.1	98.9 99.2	99.1	7.4 7.5	7.4	7.4	2.8 2.8	2.8		0.9 1.3	1.1	
6-Apr-15	Sunny	Moderate	14:52	35.1	Surface	1.0	22.0 21.8	21.9	7.8 7.8	7.8	30.2 30.5	30.4	92.1 90.6	91.4	6.8 6.7	6.7	6.7	1.6 1.7	1.7	1.9	2.6 2.0	2.3	3.1
					Middle	17.6	21.3 21.3	21.3	7.8 7.8	7.8	31.5 31.5	31.5	89.0 89.0	89.0	6.6 6.6	6.6		1.9 1.8	1.9		3.5 2.7	3.1	
					Bottom	34.1	21.2 21.3	21.3	7.8 7.8	7.8	31.6 31.5	31.5	88.8 89.5	89.2	6.6 6.6	6.6	6.6	2.0 2.2	2.1		4.6 3.3	4.0	
8-Apr-15	Cloudy	Moderate	15:58	35.4	Surface	1.0	21.5 21.6	21.5	7.9 7.8	7.8	30.3 30.2	30.3	100.0 97.1	98.6	7.4 7.2	7.3	7.4	3.2 3.0	3.1	3.2	3.3 3.2	3.3	3.2
					Middle	17.7	21.5 21.5	21.5	7.8 7.9	7.8	30.6 30.6	30.6	97.7 101.3	99.5	7.2 7.5	7.4		3.1 3.2	3.2		3.7 3.2	3.5	
					Bottom	34.4	21.5 21.6	21.5	7.9 7.8	7.9	30.6 30.4	30.5	102.7 98.6	100.7	7.6 7.3	7.4	7.4	3.5 3.3	3.4		3.0 2.6	2.8	
10-Apr-15	Cloudy	Moderate	17:21	34.1	Surface	1.0	20.7 20.7	20.7	7.8 7.8	7.8	31.5 31.4	31.4	88.0 87.4	87.7	6.6 6.5	6.5	6.5	2.1 2.1	2.1	2.2	5.0 4.6	4.8	4.6
					Middle	17.1	20.8 20.8	20.8	7.8 7.8	7.8	33.0 32.9	33.0	86.5 86.5	86.5	6.4 6.4	6.4		2.2 2.1	2.2		4.3 3.4	3.9	
					Bottom	33.1	20.8 20.8	20.8	7.8 7.8	7.8	33.4 33.2	33.3	87.5 88.3	87.9	6.4 6.5	6.5	6.5	2.3 2.3	2.3		4.8 5.2	5.0	
13-Apr-15	Sunny	Moderate	07:04	35.5	Surface	1.0	20.6 20.7	20.6	7.7 7.7	7.7	33.1 33.3	33.2	92.5 92.2	92.4	6.9 6.9	6.9	6.9	2.3 2.3	2.3	2.4	1.8 2.0	1.9	2.7
					Middle	17.8	20.7 20.7	20.7	7.7 7.7	7.7	33.4 33.6	33.5	91.5 91.8	91.7	6.8 6.8	6.8		2.4 2.4	2.4		3.0 2.3	2.7	
					Bottom	34.5	20.7 20.7	20.7	7.7 7.7	7.7	33.6 33.3	33.4	87.9 90.7	89.3	6.5 6.7	6.6	6.6	2.5 2.5	2.5		3.1 3.9	3.5	
15-Apr-15	Sunny	Moderate	09:51	34.3	Surface	1.0	21.1 21.1	21.1	7.8 7.8	7.8	33.4 33.4	33.4	90.6 90.4	90.5	6.6 6.6	6.6	6.6	1.4 1.4	1.4	1.5	3.0 2.8	2.9	2.8
					Middle	17.2	21.0 20.9	21.0	7.8 7.8	7.8	33.6 33.6	33.6	89.4 89.8	89.6	6.5 6.6	6.6		1.5 1.4	1.5		2.9 2.1	2.5	
					Bottom	33.3	21.0 20.9	21.0	7.8 7.8	7.8	33.6 33.5	33.6	90.5 91.8	91.2	6.6 6.7	6.7	6.7	1.5 1.5	1.5		3.3 2.4	2.9	
17-Apr-15	Sunny	Moderate	11:03	34.8	Surface	1.0	22.1 22.1	22.1	8.0 7.9	8.0	30.5 30.6	30.5	97.9 97.9	97.9	7.2 7.2	7.2	7.0	0.4 0.4	0.4	0.4	3.0 2.7	2.9	4.0
					Middle	17.4	21.5 21.5	21.5	8.0 7.9	8.0	32.3 32.4	32.3	90.6 95.4	93.0	6.6 7.0	6.8		0.4 0.4	0.4		4.2 4.2	4.2	
					Bottom	33.8	21.5 21.4	21.5	8.0 8.0	8.0	32.5 32.5	32.5	96.5 90.6	93.6	7.1 6.6	6.8	6.8	0.4 0.5	0.5		4.5 5.5	5.0	
20-Apr-15	Cloudy	Moderate	15:01	34.2	Surface	1.0	22.5 22.5	22.5	7.9 7.8	7.9	30.2 30.2	30.2	88.7 89.1	88.9	6.5 6.5	6.5	6.5	1.6 1.5	1.6	1.8	5.8 5.5	5.7	6.3
					Middle	17.1	22.3 22.2	22.2	7.9 7.8	7.9	31.0 31.2	31.1	87.7 87.5	87.6	6.4 6.4	6.4		1.8 1.6	1.7		6.4 6.2	6.3	
					Bottom	33.2	22.2 22.2	22.2	7.9 7.8	7.9	31.1 31.3	31.2	87.9 87.8	87.9	6.4 6.4	6.4	6.4	2.3 2.1	2.2		7.8 5.8	6.8	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CSA - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	16:22	34.1	Surface	1.0	22.8 22.6	22.7	8.0 8.0	8.0	30.7 30.8	30.7	86.2 85.8	86.0	6.2 6.2	6.2	6.2	1.3 1.3	1.3	1.4	4.6 5.2	4.9	4.7
					Middle	17.1	22.1 22.1	22.1	8.0 8.0	8.0	32.0 32.0	32.0	85.0 84.9	85.0	6.2 6.2	6.2		1.4 1.4	1.4		3.8 4.0	3.9	
					Bottom	33.1	22.0 22.1	22.0	8.0 8.0	8.0	32.5 32.4	32.5	85.2 85.0	85.1	6.2 6.2	6.2	6.2	1.4 1.4	1.4		5.0 5.4	5.2	
24-Apr-15	Sunny	Moderate	17:51	34.9	Surface	1.0	23.0 23.1	23.0	8.0 8.0	8.0	30.4 30.3	30.3	86.7 89.7	88.2	6.3 6.5	6.4	6.3	0.4 0.5	0.5	0.5	3.4 3.9	3.7	4.1
					Middle	17.5	22.3 22.3	22.3	8.0 8.0	8.0	31.2 31.2	31.2	85.2 84.4	84.8	6.2 6.1	6.1		0.4 0.4	0.4		3.6 3.9	3.8	
					Bottom	33.9	22.3 22.3	22.3	8.0 8.0	8.0	31.3 31.3	31.3	84.7 86.1	85.4	6.1 6.2	6.2	6.2	0.5 0.6	0.6		4.6 4.7	4.7	
27-Apr-15	Sunny	Moderate	08:01	34.2	Surface	1.0	22.8 22.9	22.8	8.0 8.0	8.0	30.3 30.3	30.3	94.3 95.4	94.9	6.8 6.9	6.9	6.8	2.1 2.1	2.1	2.2	2.9 2.5	2.7	3.2
					Middle	17.1	22.3 22.3	22.3	8.0 8.0	8.0	32.3 32.5	32.4	92.7 94.1	93.4	6.7 6.8	6.7		2.3 2.2	2.3		3.1 3.6	3.4	
					Bottom	33.2	22.4 22.2	22.3	8.0 8.0	8.0	32.4 32.5	32.4	91.4 91.2	91.3	6.6 6.6	6.6	6.6	2.2 2.3	2.3		3.6 3.2	3.4	
29-Apr-15	Sunny	Moderate	09:34	35.1	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	25.6 25.5	25.6	97.3 95.6	96.5	7.1 7.0	7.1	6.8	1.5 1.4	1.5	1.3	4.1 3.8	4.0	3.8
					Middle	17.6	22.7 22.7	22.7	7.9 7.9	7.9	31.7 31.5	31.6	91.3 89.2	90.3	6.6 6.4	6.5		1.1 1.2	1.2		2.6 3.9	3.3	
					Bottom	34.1	22.6 22.6	22.6	7.9 7.9	7.9	32.1 31.9	32.0	92.9 89.0	91.0	6.7 6.4	6.5	6.5	1.1 1.1	1.1		4.7 3.4	4.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CSA - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	18:32	34.2	Surface	1.0	21.3 21.2	21.2	8.0 8.0	8.0	28.4 28.4	28.4	109.8 108.2	109.0	8.3 8.1	8.2	8.0	1.6 1.6	1.6	1.6	5.1 4.4	4.8	4.7
					Middle	17.1	20.6 20.5	20.5	8.0 8.0	8.0	30.1 30.3	30.2	101.6 105.2	103.4	7.7 7.9	7.8		1.6 1.6	1.6		4.5 4.6	4.6	
					Bottom	33.2	20.4 20.5	20.4	8.0 8.0	8.0	30.5 30.3	30.4	102.4 101.4	101.9	7.7 7.7	7.7	7.7	1.7 1.7	1.7		4.8 4.4	4.6	
3-Apr-15	Cloudy	Moderate	19:38	36.5	Surface	1.0	21.6 21.6	21.6	8.0 8.0	8.0	26.8 26.7	26.8	99.4 99.4	99.4	7.5 7.5	7.5	7.5	2.5 2.6	2.6	2.8	1.7 2.0	1.9	1.6
					Middle	18.3	21.4 21.5	21.4	8.0 8.0	8.0	27.5 27.3	27.4	99.1 98.9	99.0	7.5 7.5	7.5		2.9 2.8	2.9		1.5 1.9	1.7	
					Bottom	35.5	21.3 21.4	21.3	8.0 8.0	8.0	28.0 27.9	28.0	99.2 99.0	99.1	7.5 7.5	7.5	7.5	2.8 2.8	2.8		0.9 1.5	1.2	
6-Apr-15	Sunny	Moderate	06:29	35.3	Surface	1.0	21.1 21.1	21.1	7.8 7.8	7.8	31.7 31.7	31.7	88.8 88.3	88.6	6.6 6.5	6.5	6.6	2.0 1.8	1.9	2.5	5.1 4.3	4.7	4.7
					Middle	17.7	21.1 21.1	21.1	7.8 7.8	7.8	31.8 31.8	31.8	88.9 88.6	88.8	6.6 6.5	6.6		2.6 2.4	2.5		4.4 4.8	4.6	
					Bottom	34.3	21.1 21.1	21.1	7.8 7.8	7.8	31.8 31.8	31.8	88.9 89.8	89.4	6.6 6.6	6.6	6.6	3.0 3.0	3.0		4.7 4.8	4.8	
8-Apr-15	Cloudy	Moderate	07:44	36.3	Surface	1.0	21.7 21.7	21.7	7.8 7.7	7.8	29.8 29.8	29.8	92.0 93.2	92.6	6.8 6.9	6.9	6.9	3.1 3.2	3.2	3.2	2.3 3.6	3.0	2.7
					Middle	18.2	21.7 21.7	21.7	7.8 7.7	7.7	30.0 29.9	29.9	92.1 93.3	92.7	6.8 6.9	6.9		3.1 3.2	3.2		2.4 3.0	2.7	
					Bottom	35.3	21.6 21.7	21.6	7.6 7.7	7.7	29.8 29.9	29.9	100.8 92.9	96.9	7.5 6.9	7.2	7.2	3.3 3.1	3.2		3.0 2.0	2.5	
10-Apr-15	Fine	Moderate	08:59	35.2	Surface	1.0	20.9 20.8	20.9	7.8 7.8	7.8	31.4 31.4	31.4	87.3 88.0	87.7	6.5 6.6	6.5	6.5	2.1 2.1	2.1	2.2	4.1 3.4	3.8	4.8
					Middle	17.6	20.9 20.9	20.9	7.8 7.8	7.8	31.5 31.4	31.5	86.7 86.7	86.7	6.4 6.5	6.4		2.2 2.2	2.2		3.5 3.4	3.5	
					Bottom	34.2	20.9 20.9	20.9	7.8 7.8	7.8	32.4 31.5	31.9	85.6 87.8	86.7	6.3 6.5	6.4	6.4	2.2 2.2	2.2		6.8 7.4	7.1	
13-Apr-15	Sunny	Moderate	14:49	36.0	Surface	1.0	21.1 21.0	21.0	7.8 7.8	7.8	33.5 33.5	33.5	93.1 93.2	93.2	6.9 6.8	6.9	6.9	1.6 1.6	1.6	1.8	1.3 0.7	1.0	1.3
					Middle	18.0	20.8 20.8	20.8	7.8 7.8	7.8	33.6 33.6	33.6	93.0 91.7	92.4	6.9 6.8	6.9		1.7 1.8	1.8		1.7 1.1	1.4	
					Bottom	35.0	20.9 20.8	20.8	7.8 7.8	7.8	33.5 33.6	33.6	91.1 92.5	91.8	6.7 6.9	6.8	6.8	2.0 1.9	2.0		1.3 1.8	1.6	
15-Apr-15	Sunny	Moderate	17:02	34.2	Surface	1.0	21.7 21.7	21.7	7.9 7.9	7.9	32.1 32.2	32.2	96.6 96.4	96.5	7.1 7.0	7.0	6.9	1.6 1.6	1.6	1.7	5.4 4.5	5.0	4.4
					Middle	17.1	21.0 21.1	21.0	7.8 7.8	7.8	33.5 33.4	33.4	93.1 91.0	92.1	6.8 6.7	6.7		1.7 1.7	1.7		4.7 3.6	4.2	
					Bottom	33.2	21.0 21.1	21.0	7.8 7.8	7.8	33.7 33.5	33.6	90.6 96.0	93.3	6.6 7.0	6.8	6.8	1.7 1.8	1.8		3.8 4.2	4.0	
17-Apr-15	Sunny	Moderate	19:01	35.2	Surface	1.0	21.8 21.8	21.8	7.8 7.8	7.8	30.2 30.2	30.2	97.2 97.8	97.5	7.2 7.2	7.2	7.1	1.8 1.7	1.8	1.8	3.7 3.1	3.4	4.4
					Middle	17.6	21.7 21.7	21.7	7.8 7.8	7.8	30.9 30.8	30.8	96.1 95.6	95.9	7.1 7.0	7.0		1.9 1.6	1.8		4.2 5.7	5.0	
					Bottom	34.2	21.7 21.7	21.7	7.8 7.8	7.8	30.8 30.9	30.9	96.1 96.6	96.4	7.1 7.1	7.1	7.1	1.8 1.7	1.8		3.9 5.7	4.8	
20-Apr-15	Cloudy	Moderate	06:28	34.8	Surface	1.0	22.5 22.5	22.5	7.8 7.7	7.8	30.2 30.1	30.1	89.5 90.0	89.8	6.5 6.6	6.5	6.5	2.0 1.8	1.9	1.5	6.1 5.3	5.7	6.5
					Middle	17.4	22.4 22.4	22.4	7.8 7.7	7.8	30.4 30.3	30.4	88.5 89.2	88.9	6.4 6.5	6.5		1.3 1.4	1.4		6.0 6.6	6.3	
					Bottom	33.8	22.3 22.4	22.3	7.8 7.7	7.8	30.5 30.2	30.3	89.4 90.5	90.0	6.5 6.6	6.6	6.6	1.3 1.3	1.3		7.4 7.6	7.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CSA - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	07:41	34.3	Surface	1.0	22.4 22.4	22.4	7.9 8.0	7.9	30.2 30.3	30.3	87.2 86.6	86.9	6.4 6.3	6.3	6.3	1.5 1.4	1.5	1.4	5.5 6.3	5.9	6.1
					Middle	17.2	22.3 22.4	22.4	7.9 8.0	7.9	30.7 30.5	30.6	86.3 85.6	86.0	6.3 6.2	6.3		1.4 1.4	1.4		4.4 5.0	4.7	
					Bottom	33.3	22.3 22.3	22.3	7.8 7.9	7.9	31.0 30.5	30.8	86.6 87.9	87.3	6.3 6.4	6.3	6.3	1.4 1.4	1.4		8.2 7.3	7.8	
24-Apr-15	Sunny	Moderate	09:10	35.2	Surface	1.0	22.4 22.4	22.4	7.9 8.0	7.9	30.2 30.3	30.2	87.7 87.7	87.7	6.4 6.4	6.4	6.4	0.5 0.6	0.6	0.6	3.0 3.9	3.5	3.2
					Middle	17.6	22.2 22.3	22.3	7.9 8.0	7.9	30.7 30.5	30.6	86.1 86.9	86.5	6.3 6.3	6.3		0.6 0.6	0.6		2.4 3.7	3.1	
					Bottom	34.2	22.2 22.2	22.2	7.8 7.9	7.9	30.6 30.7	30.7	86.5 86.9	86.7	6.3 6.3	6.3	6.3	0.6 0.5	0.6		3.9 2.1	3.0	
27-Apr-15	Sunny	Moderate	14:51	34.6	Surface	1.0	23.4 23.5	23.5	7.9 8.0	7.9	28.4 28.4	28.4	103.3 110.7	107.0	7.5 8.0	7.7	7.5	1.2 1.2	1.2	1.3	2.5 2.0	2.3	2.6
					Middle	17.3	22.7 22.6	22.6	7.9 8.0	7.9	31.3 31.6	31.5	97.0 103.6	100.3	7.0 7.5	7.2		1.4 1.3	1.4		3.0 2.8	2.9	
					Bottom	33.6	22.5 22.5	22.5	7.8 7.9	7.9	31.8 31.9	31.9	96.5 97.0	96.8	7.0 7.0	7.0	7.0	1.4 1.4	1.4		3.2 2.1	2.7	
29-Apr-15	Sunny	Moderate	17:28	35.0	Surface	1.0	24.9 24.3	24.6	8.2 8.1	8.1	23.9 24.4	24.1	112.9 105.1	109.0	8.2 7.5	7.8	7.5	1.5 1.7	1.6	1.3	3.6 3.6	3.6	3.1
					Middle	17.5	23.3 23.5	23.4	8.0 8.0	8.0	29.0 28.4	28.7	101.7 96.6	99.2	7.4 6.9	7.2		1.1 1.2	1.2		2.3 3.8	3.1	
					Bottom	34.0	23.3 23.3	23.3	8.0 8.0	8.0	29.3 29.4	29.3	97.0 95.8	96.4	6.9 6.8	6.9	6.9	1.1 1.0	1.1		2.5 2.7	2.6	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)6 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{o}C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:56	3.3	Surface	1.0	22.8 22.8	22.8	8.1 8.1	8.1	28.1 28.1	28.1	103.8 102.2	103.0	7.6 7.5	7.5	7.5	8.7 8.0	8.4	9.4	5.5 5.9	5.7	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.7 22.7	22.7	8.1 8.0	8.0	28.1 28.2	28.1	102.9 100.2	101.6	7.6 7.4	7.5	7.5	10.2 10.6	10.4		4.7 4.8	4.8	
3-Apr-15	Cloudy	Moderate	13:09	3.1	Surface	1.0	23.2 23.2	23.2	7.4 7.4	7.4	27.6 27.6	27.6	97.7 97.9	97.8	7.1 7.1	7.1	7.1	7.4 7.0	7.2	7.6	1.3 0.5	0.9	1.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	23.2 23.2	23.2	7.4 7.4	7.4	27.5 27.5	27.5	97.6 97.7	97.7	7.1 7.1	7.1	7.1	8.0 7.9	8.0		1.7 1.4	1.6	
6-Apr-15	Sunny	Moderate	12:48	3.3	Surface	1.0	24.1 24.1	24.1	7.4 7.4	7.4	26.8 26.8	26.8	93.4 92.8	93.1	6.7 6.7	6.7	6.7	7.6 7.5	7.6	7.7	3.9 3.4	3.7	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	24.1 24.1	24.1	7.4 7.4	7.4	26.8 26.8	26.8	93.1 94.4	93.8	6.7 6.8	6.8	6.8	7.7 7.6	7.7		4.9 4.6	4.8	
8-Apr-15	Cloudy	Moderate	14:18	3.4	Surface	1.0	24.0 24.0	24.0	7.3 7.3	7.3	26.9 26.9	26.9	96.6 96.3	96.5	7.0 7.0	7.0	7.0	7.4 7.3	7.4	7.4	4.8 4.7	4.8	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.0 24.0	24.0	7.3 7.3	7.3	26.9 27.0	27.0	96.6 97.3	97.0	7.0 7.0	7.0	7.0	7.2 7.3	7.3		5.8 5.0	5.4	
10-Apr-15	Cloudy	Moderate	15:38	3.2	Surface	1.0	22.1 22.1	22.1	8.0 8.0	8.0	28.8 28.8	28.8	88.5 92.9	90.7	6.5 6.9	6.7	6.7	9.3 8.7	9.0	9.3	10.4 9.7	10.1	9.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.1 22.0	22.0	8.0 8.0	8.0	28.8 28.8	28.8	90.4 96.9	93.7	6.7 7.2	6.9	6.9	9.6 9.5	9.6		10.3 9.0	9.7	
13-Apr-15	Sunny	Moderate	09:27	3.2	Surface	1.0	21.6 21.6	21.6	7.4 7.5	7.5	30.1 30.1	30.1	85.4 86.3	85.9	6.3 6.4	6.4	6.4	7.0 7.3	7.2	7.1	3.0 3.6	3.3	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	21.5 21.6	21.6	7.5 7.5	7.5	30.2 30.1	30.1	87.6 85.7	86.7	6.5 6.3	6.4	6.4	7.0 6.9	7.0		3.1 3.4	3.3	
15-Apr-15	Sunny	Moderate	11:38	3.3	Surface	1.0	22.4 22.4	22.4	7.8 7.8	7.8	30.7 30.7	30.7	93.7 95.1	94.4	6.8 6.9	6.9	6.9	8.5 9.3	8.9	9.3	4.5 4.6	4.6	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.4 22.3	22.3	7.8 7.8	7.8	30.7 30.8	30.8	94.0 96.1	95.1	6.8 7.0	6.9	6.9	9.4 9.9	9.7		6.4 5.5	6.0	
17-Apr-15	Sunny	Moderate	12:47	3.3	Surface	1.0	23.4 23.4	23.4	7.5 7.5	7.5	29.6 29.6	29.6	103.1 104.3	103.7	7.4 7.5	7.5	7.5	9.4 9.4	9.4	9.4	6.3 5.5	5.9	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.4 23.4	23.4	7.4 7.5	7.5	29.6 29.6	29.6	101.3 103.6	102.5	7.3 7.5	7.4	7.4	9.5 9.1	9.3		5.5 6.3	5.9	
20-Apr-15	Cloudy	Moderate	12:57	3.4	Surface	1.0	23.9 23.9	23.9	7.5 7.5	7.5	30.0 30.1	30.1	88.2 87.6	87.9	6.3 6.2	6.2	6.2	12.5 12.7	12.6	12.6	5.5 5.8	5.7	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	23.9 23.9	23.9	7.4 7.5	7.5	30.1 30.1	30.1	89.5 87.9	88.7	6.4 6.2	6.3	6.3	12.5 12.5	12.5		6.5 5.7	6.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)6 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:18	3.2	Surface	1.0	23.8 23.9	23.9	8.0 7.9	8.0	31.5 31.5	31.5	86.8 88.7	87.8	6.1 6.3	6.2	6.2	8.8 8.6	8.7	8.8	6.9 7.8	7.4	9.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.8 23.8	23.8	8.0 7.9	7.9	31.6 31.5	31.6	91.6 87.4	89.5	6.5 6.2	6.3	6.3	8.9 8.6	8.8		10.9 11.8	11.4	
24-Apr-15	Sunny	Moderate	15:49	3.3	Surface	1.0	24.0 23.9	23.9	8.0 7.9	8.0	33.0 33.1	33.0	93.2 91.4	92.3	6.5 6.4	6.4	6.4	7.7 7.6	7.7	7.7	11.2 11.7	11.5	11.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.8 23.7	23.8	8.0 7.9	7.9	33.0 33.1	33.1	93.2 91.3	92.3	6.5 6.4	6.5	6.5	7.6 7.7	7.7		11.8 11.1	11.5	
27-Apr-15	Sunny	Moderate	09:45	3.3	Surface	1.0	24.2 24.2	24.2	8.0 7.9	8.0	30.9 31.0	30.9	109.4 105.3	107.4	7.7 7.4	7.5	7.5	3.8 3.5	3.7	4.1	1.6 1.6	1.6	1.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	24.3 24.2	24.2	8.0 7.9	7.9	31.1 31.1	31.1	107.8 102.0	104.9	7.6 7.2	7.4	7.4	4.2 4.5	4.4		0.9 1.3	1.1	
29-Apr-15	Sunny	Moderate	11:37	3.2	Surface	1.0	26.0 25.9	26.0	8.3 8.3	8.3	26.7 26.8	26.8	138.0 131.2	134.6	9.6 9.2	9.4	9.4	5.4 5.6	5.5	5.7	2.1 1.2	1.7	1.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	25.9 25.8	25.9	8.3 8.2	8.2	28.0 28.2	28.1	134.6 130.5	132.6	9.4 9.1	9.2	9.2	5.8 5.7	5.8		1.1 1.5	1.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:12	3.1	Surface	1.0	23.0 23.0	23.0	8.2 8.2	8.2	28.8 28.7	28.8	110.9 117.3	114.1	8.1 8.5	8.3	8.3	7.9 8.2	8.1	8.7	4.3 3.2	3.8	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	23.0 22.9	22.9	8.1 8.2	8.1	28.9 28.9	28.9	107.1 114.9	111.0	7.8 8.4	8.1	8.1	9.1 9.3	9.2		2.9 3.9	3.4	
3-Apr-15	Cloudy	Moderate	18:06	3.2	Surface	1.0	23.3 23.3	23.3	7.5 7.4	7.5	28.0 28.0	28.0	102.7 102.6	102.7	7.5 7.5	7.5	7.5	7.3 7.4	7.4	7.6	3.0 2.6	2.8	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.3 23.3	23.3	7.4 7.5	7.5	28.0 28.0	28.0	103.2 103.3	103.3	7.5 7.5	7.5	7.5	7.7 7.9	7.8		3.9 3.8	3.9	
6-Apr-15	Sunny	Moderate	08:47	3.2	Surface	1.0	24.1 24.1	24.1	7.3 7.4	7.3	26.6 26.6	26.6	95.5 95.2	95.4	6.9 6.9	6.9	6.9	5.6 5.5	5.6	5.6	3.0 4.7	3.9	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.1 24.1	24.1	7.3 7.3	7.3	26.6 26.6	26.6	95.4 96.0	95.7	6.9 6.9	6.9	6.9	5.5 5.5	5.5		2.7 2.9	2.8	
8-Apr-15	Cloudy	Moderate	09:05	3.1	Surface	1.0	24.0 24.0	24.0	7.4 7.4	7.4	26.4 26.3	26.4	96.1 96.8	96.5	7.0 7.0	7.0	7.0	7.7 7.7	7.7	7.8	7.9 7.0	7.5	7.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	24.0 24.0	24.0	7.3 7.4	7.4	26.3 26.4	26.4	98.3 96.3	97.3	7.1 7.0	7.0	7.0	7.8 7.8	7.8		8.4 7.4	7.9	
10-Apr-15	Fine	Moderate	10:29	3.2	Surface	1.0	22.1 22.1	22.1	8.1 8.1	8.1	28.1 28.1	28.1	91.4 88.8	90.1	6.8 6.6	6.7	6.7	6.9 6.9	6.9	6.9	7.3 8.4	7.9	8.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.1 22.1	22.1	8.1 8.1	8.1	28.1 28.1	28.1	89.7 95.1	92.4	6.7 7.1	6.9	6.9	6.8 6.7	6.8		9.4 8.2	8.8	
13-Apr-15	Sunny	Moderate	12:42	3.3	Surface	1.0	22.1 22.0	22.1	7.2 7.2	7.2	31.1 31.1	31.1	87.4 86.6	87.0	6.4 6.3	6.3	6.3	8.1 8.3	8.2	8.3	6.2 5.5	5.9	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	21.9 22.0	21.9	7.2 7.2	7.2	31.4 31.3	31.3	89.2 86.4	87.8	6.5 6.3	6.4	6.4	8.3 8.2	8.3		6.2 7.9	7.1	
15-Apr-15	Sunny	Moderate	15:01	3.2	Surface	1.0	22.8 22.8	22.8	7.6 7.7	7.6	33.0 32.9	32.9	99.5 99.5	99.5	7.1 7.1	7.1	7.1	4.7 4.4	4.6	5.1	4.2 5.9	5.1	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.9 22.8	22.8	7.7 7.7	7.7	32.9 33.0	33.0	99.2 99.5	99.4	7.1 7.1	7.1	7.1	5.4 5.5	5.5		6.4 5.9	6.2	
17-Apr-15	Sunny	Moderate	16:59	3.0	Surface	1.0	24.1 24.1	24.1	7.5 7.4	7.5	31.7 31.7	31.7	115.6 115.8	115.7	8.1 8.1	8.1	8.1	11.2 11.5	11.4	11.3	11.4 11.0	11.2	10.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	24.1 24.1	24.1	7.5 7.5	7.5	31.7 31.7	31.7	114.7 115.4	115.1	8.0 8.1	8.1	8.1	11.2 11.1	11.2		11.2 9.6	10.4	
20-Apr-15	Cloudy	Moderate	07:50	3.2	Surface	1.0	23.8 23.8	23.8	7.4 7.4	7.4	29.2 29.2	29.2	90.4 90.0	90.2	6.5 6.4	6.5	6.5	5.6 5.5	5.6	5.6	5.1 4.5	4.8	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.8 23.8	23.8	7.4 7.3	7.4	29.3 29.5	29.4	90.3 91.6	91.0	6.5 6.5	6.5	6.5	5.5 5.6	5.6		5.2 3.1	4.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:31	3.4	Surface	1.0	23.7 23.7	23.7	8.0 8.0	8.0	28.8 28.8	28.8	86.5 88.1	87.3	6.2 6.3	6.3	6.3	8.1 7.9	8.0	7.9	8.1 8.7	8.4	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	23.7 23.7	23.7	8.0 7.9	7.9	28.8 28.8	28.8	89.6 86.9	88.3	6.4 6.2	6.3	6.3	7.4 8.0	7.7		7.8 7.1	7.5	
24-Apr-15	Sunny	Moderate	10:50	3.0	Surface	1.0	23.4 23.5	23.5	8.0 8.0	8.0	29.2 29.2	29.2	91.0 89.9	90.5	6.6 6.5	6.5	6.5	7.3 7.4	7.4	7.4	5.8 4.8	5.3	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	23.3 23.3	23.3	8.0 7.9	7.9	29.2 29.3	29.3	90.4 93.7	92.1	6.5 6.8	6.6	6.6	7.3 7.3	7.3		6.7 4.9	5.8	
27-Apr-15	Sunny	Moderate	12:31	3.2	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	30.6 30.6	30.6	116.3 121.5	118.9	8.1 8.4	8.2	8.2	4.0 3.9	4.0	4.2	2.2 2.7	2.5	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	25.0 24.9	25.0	8.0 7.9	7.9	30.7 30.8	30.7	118.3 109.8	114.1	8.2 7.6	7.9	7.9	4.2 4.4	4.3		2.9 2.7	2.8	
29-Apr-15	Sunny	Moderate	15:18	3.3	Surface	1.0	26.8 26.8	26.8	8.4 8.4	8.4	26.6 26.5	26.6	149.1 151.3	150.2	10.3 10.4	10.4	10.4	6.9 6.8	6.9	6.9	- 0.7	0.4	0.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	26.6 26.4	26.5	8.4 7.9	8.1	27.8 28.2	28.0	150.9 148.4	149.7	10.4 10.2	10.3	10.3	6.7 6.8	6.8		- -	-	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)9 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{o}C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:38	3.5	Surface	1.0	22.5 22.5	22.5	8.1 8.1	8.1	27.6 27.6	27.6	107.4 104.7	106.1	7.9 7.7	7.8	7.8	6.3 6.8	6.6	6.8	4.2 4.1	4.2	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	22.5 22.5	22.5	8.0 8.0	8.0	27.6 27.7	27.7	105.9 101.7	103.8	7.8 7.5	7.7	7.7	6.7 7.0	6.9		3.9 3.8	3.9	
3-Apr-15	Cloudy	Moderate	12:52	3.5	Surface	1.0	23.0 23.0	23.0	7.4 7.4	7.4	27.1 27.1	27.1	104.7 105.0	104.9	7.7 7.7	7.7	7.7	7.1 6.9	7.0	7.6	1.3 0.9	1.1	1.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.1 23.1	23.1	7.4 7.4	7.4	27.2 27.2	27.2	104.7 104.1	104.4	7.7 7.6	7.7	7.7	8.3 7.9	8.1		1.1 1.2	1.2	
6-Apr-15	Sunny	Moderate	13:02	3.8	Surface	1.0	24.3 24.3	24.3	7.4 7.4	7.4	26.1 26.1	26.1	99.0 99.1	99.1	7.1 7.2	7.1	7.1	4.9 4.8	4.9	5.0	2.1 2.8	2.5	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.2 24.2	24.2	7.4 7.4	7.4	26.3 26.3	26.3	98.8 98.2	98.5	7.1 7.1	7.1	7.1	5.1 5.1	5.1		3.4 2.3	2.9	
8-Apr-15	Cloudy	Moderate	14:31	3.6	Surface	1.0	23.8 23.8	23.8	7.4 7.4	7.4	26.9 26.9	26.9	103.8 103.6	103.7	7.5 7.5	7.5	7.5	5.0 5.0	5.0	5.1	5.1 3.4	4.3	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.8 23.8	23.8	7.4 7.4	7.4	27.0 26.9	26.9	104.2 103.7	104.0	7.5 7.5	7.5	7.5	5.1 5.0	5.1		4.0 6.0	5.0	
10-Apr-15	Cloudy	Moderate	15:51	3.4	Surface	1.0	22.0 22.0	22.0	8.1 8.2	8.1	28.6 28.6	28.6	92.9 90.5	91.7	6.9 6.7	6.8	6.8	7.3 6.7	7.0	7.1	7.1 5.5	6.3	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.1 22.0	22.1	8.1 8.1	8.1	28.7 28.7	28.7	96.9 91.7	94.3	7.2 6.8	7.0	7.0	7.2 6.9	7.1		8.0 7.2	7.6	
13-Apr-15	Sunny	Moderate	09:12	3.7	Surface	1.0	21.5 21.5	21.5	7.4 7.4	7.4	29.4 29.6	29.5	87.0 88.8	87.9	6.5 6.6	6.5	6.5	7.5 7.7	7.6	7.7	1.8 1.9	1.9	1.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	21.7 21.6	21.6	7.4 7.4	7.4	30.0 30.0	30.0	91.7 88.1	89.9	6.8 6.5	6.7	6.7	7.6 7.7	7.7		1.5 2.0	1.8	
15-Apr-15	Sunny	Moderate	11:23	3.3	Surface	1.0	22.3 22.2	22.2	7.6 7.6	7.6	30.3 30.4	30.3	99.7 99.8	99.8	7.3 7.3	7.3	7.3	6.0 6.3	6.2	7.0	3.8 3.8	3.8	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.3 22.2	22.2	7.6 7.6	7.6	30.4 30.5	30.4	99.7 99.5	99.6	7.3 7.3	7.3	7.3	7.8 7.6	7.7		5.0 4.5	4.8	
17-Apr-15	Sunny	Moderate	12:33	3.7	Surface	1.0	23.5 23.6	23.6	7.5 7.5	7.5	29.6 29.6	29.6	115.8 114.7	115.3	8.3 8.2	8.3	8.3	8.5 8.5	8.5	8.6	2.8 3.6	3.2	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.4 23.5	23.5	7.4 7.5	7.5	29.6 29.6	29.6	112.7 115.0	113.9	8.1 8.2	8.2	8.2	8.5 8.9	8.7		4.7 3.6	4.2	
20-Apr-15	Cloudy	Moderate	13:11	3.7	Surface	1.0	23.8 23.8	23.8	7.5 7.5	7.5	29.4 29.4	29.4	89.9 90.1	90.0	6.4 6.4	6.4	6.4	4.8 4.7	4.8	4.8	3.9 3.4	3.7	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.8 23.8	23.8	7.5 7.5	7.5	29.5 29.5	29.5	89.9 90.2	90.1	6.4 6.4	6.4	6.4	4.8 4.8	4.8		3.0 2.2	2.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)9 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:31	3.5	Surface	1.0	24.1 24.0	24.1	7.9 8.0	8.0	30.8 30.8	30.8	92.9 90.9	91.9	6.6 6.4	6.5	6.5	5.9 6.6	6.3	6.7	5.1 5.7	5.4	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.9 24.0	23.9	8.0 7.9	7.9	30.8 30.8	30.8	94.8 91.4	93.1	6.7 6.5	6.6	6.6	7.2 7.0	7.1		5.3 4.0	4.7	
24-Apr-15	Sunny	Moderate	16:09	3.7	Surface	1.0	24.2 24.1	24.1	7.9 8.0	8.0	32.8 32.8	32.8	104.9 103.6	104.3	7.3 7.2	7.3	7.3	6.4 6.3	6.4	6.5	7.3 7.5	7.4	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.7 23.9	23.8	8.0 7.9	7.9	32.9 32.8	32.9	100.4 103.3	101.9	7.0 7.2	7.1	7.1	6.4 6.5	6.5		7.0 6.8	6.9	
27-Apr-15	Sunny	Moderate	09:32	3.4	Surface	1.0	24.3 24.3	24.3	7.9 8.0	8.0	30.6 30.6	30.6	112.3 109.2	110.8	7.9 7.7	7.8	7.8	3.6 3.9	3.8	4.0	3.0 2.2	2.6	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.3 24.2	24.3	8.0 7.9	7.9	30.7 30.7	30.7	110.8 105.9	108.4	7.8 7.5	7.6	7.6	4.0 4.3	4.2		2.6 3.1	2.9	
29-Apr-15	Sunny	Moderate	10:47	3.7	Surface	1.0	25.7 25.8	25.7	8.4 8.3	8.4	26.4 26.4	26.4	149.1 142.5	145.8	10.5 10.0	10.2	10.2	4.5 4.6	4.6	4.6	2.4 3.1	2.8	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	25.7 25.8	25.8	8.3 8.3	8.3	27.4 28.0	27.7	146.8 142.7	144.8	10.3 10.0	10.1	10.1	4.5 4.6	4.6		2.4 2.2	2.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)9 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:28	3.4	Surface	1.0	22.8 22.8	22.8	8.2 8.1	8.1	29.1 29.1	29.1	107.1 107.0	107.1	7.8 7.8	7.8	7.8	12.0 12.9	12.5	12.0	11.8 11.8	11.8	12.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.8 22.8	22.8	8.1 8.1	8.1	29.1 29.1	29.1	106.8 106.9	106.9	7.8 7.8	7.8	7.8	11.5 11.5	11.5		14.1 13.7	13.9	
3-Apr-15	Cloudy	Moderate	18:22	3.6	Surface	1.0	23.2 23.2	23.2	7.4 7.4	7.4	27.6 27.6	27.6	101.6 101.6	101.6	7.4 7.4	7.4	7.4	5.1 5.1	5.1	5.3	1.4 0.8	1.1	1.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.2 23.2	23.2	7.4 7.4	7.4	27.7 27.8	27.8	101.4 101.2	101.3	7.4 7.4	7.4	7.4	5.3 5.5	5.4		2.2 2.9	2.6	
6-Apr-15	Sunny	Moderate	08:33	3.7	Surface	1.0	23.9 23.9	23.9	7.2 7.3	7.3	26.1 26.3	26.2	95.4 94.6	95.0	6.9 6.9	6.9	6.9	7.8 7.9	7.9	7.8	2.9 2.9	2.9	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.9 23.9	23.9	7.2 7.3	7.2	26.3 26.3	26.3	96.3 95.2	95.8	7.0 6.9	6.9	6.9	7.6 7.5	7.6		3.0 2.8	2.9	
8-Apr-15	Cloudy	Moderate	08:52	3.8	Surface	1.0	23.5 23.5	23.5	7.4 7.4	7.4	26.8 26.7	26.7	92.2 93.1	92.7	6.7 6.8	6.8	6.8	6.3 6.4	6.4	6.5	6.2 4.4	5.3	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.4 23.4	23.4	7.3 7.4	7.3	26.9 26.9	26.9	93.7 92.1	92.9	6.8 6.7	6.8	6.8	6.6 6.4	6.5		5.4 5.3	5.4	
10-Apr-15	Fine	Moderate	10:13	3.4	Surface	1.0	22.1 22.1	22.1	7.9 7.8	7.9	28.5 28.5	28.5	91.7 95.0	93.4	6.8 7.0	6.9	6.9	9.5 9.9	9.7	9.8	11.7 12.0	11.9	11.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.1 22.0	22.0	8.0 7.9	8.0	28.5 28.5	28.5	93.0 99.2	96.1	6.9 7.4	7.1	7.1	9.6 10.0	9.8		12.6 10.9	11.8	
13-Apr-15	Sunny	Moderate	12:58	3.2	Surface	1.0	22.1 22.0	22.1	7.3 7.3	7.3	30.9 30.9	30.9	87.7 87.4	87.6	6.4 6.4	6.4	6.4	11.2 11.2	11.2	11.2	2.5 3.0	2.8	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.0 21.9	22.0	7.3 7.3	7.3	31.1 31.5	31.3	87.5 88.5	88.0	6.4 6.5	6.4	6.4	11.1 11.1	11.1		2.7 2.9	2.8	
15-Apr-15	Sunny	Moderate	15:15	3.3	Surface	1.0	22.7 22.9	22.8	7.7 7.7	7.7	32.5 32.4	32.5	104.5 105.3	104.9	7.5 7.5	7.5	7.5	7.6 8.3	8.0	8.1	5.1 5.6	5.4	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.9 22.5	22.7	7.7 7.7	7.7	32.5 32.6	32.5	104.7 103.7	104.2	7.5 7.4	7.5	7.5	8.4 8.0	8.2		4.5 4.0	4.3	
17-Apr-15	Sunny	Moderate	17:12	3.6	Surface	1.0	23.7 23.7	23.7	7.4 7.4	7.4	31.3 31.3	31.3	115.9 117.7	116.8	8.2 8.3	8.3	8.3	12.1 12.4	12.3	12.3	8.4 6.3	7.4	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.8 23.8	23.8	7.3 7.4	7.4	31.4 31.4	31.4	111.7 116.7	114.2	7.9 8.2	8.1	8.1	12.2 12.4	12.3		9.7 9.6	9.7	
20-Apr-15	Cloudy	Moderate	07:37	3.6	Surface	1.0	23.6 23.6	23.6	7.4 7.4	7.4	28.8 28.8	28.8	89.4 88.8	89.1	6.4 6.4	6.4	6.4	6.0 5.8	5.9	6.0	5.6 5.8	5.7	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.7 23.7	23.7	7.4 7.4	7.4	28.9 28.9	28.9	90.2 88.9	89.6	6.5 6.4	6.4	6.4	6.1 6.0	6.1		4.9 5.2	5.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)9 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:15	3.5	Surface	1.0	23.7 23.7	23.7	8.0 8.0	8.0	28.6 28.6	28.6	93.0 88.9	91.0	6.7 6.4	6.5	6.5	7.5 7.8	7.7	8.3	8.2 9.5	8.9	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.7 23.7	23.7	8.0 8.0	8.0	28.8 28.6	28.7	97.2 91.0	94.1	7.0 6.5	6.8	6.8	9.1 8.5	8.8		7.0 7.5	7.3	
24-Apr-15	Sunny	Moderate	10:37	3.7	Surface	1.0	23.2 23.2	23.2	8.0 8.0	8.0	29.2 29.2	29.2	90.8 89.5	90.2	6.6 6.5	6.5	6.5	8.3 8.6	8.5	8.5	7.7 6.7	7.2	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.2 23.2	23.2	8.0 8.0	8.0	29.3 29.3	29.3	89.9 92.9	91.4	6.5 6.7	6.6	6.6	8.5 8.5	8.5		6.8 6.6	6.7	
27-Apr-15	Sunny	Moderate	12:46	3.5	Surface	1.0	24.8 24.8	24.8	8.0 8.0	8.0	30.8 30.9	30.9	128.1 128.2	128.2	8.9 8.9	8.9	8.9	3.2 3.4	3.3	4.8	2.4 2.6	2.5	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.6 24.6	24.6	8.0 8.0	8.0	31.1 31.3	31.2	126.8 127.6	127.2	8.8 8.9	8.9	8.9	6.3 6.0	6.2		2.7 2.5	2.6	
29-Apr-15	Sunny	Moderate	15:32	3.8	Surface	1.0	26.5 26.5	26.5	8.4 8.4	8.4	26.7 26.7	26.7	146.7 151.1	148.9	10.2 10.5	10.3	10.3	4.8 4.9	4.9	4.9	1.2 1.7	1.5	1.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	26.5 26.1	26.3	8.4 8.3	8.3	27.8 28.4	28.1	145.1 144.2	144.7	10.0 10.0	10.0	10.0	4.8 4.8	4.8		0.7 0.8	0.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS10 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:48	10.7	Surface	1.0	21.5 21.5	21.5	8.1 8.1	8.1	26.5 26.4	26.5	110.1 112.6	111.4	8.3 8.5	8.4	8.3	3.2 3.2	3.2	3.3	2.4 2.5	2.5	2.6
					Middle	5.4	20.7 20.8	20.7	8.0 8.0	8.0	28.7 28.5	28.6	105.4 109.9	107.7	8.0 8.3	8.2		3.3 3.4	3.4		2.1 2.5	2.3	
					Bottom	9.7	20.8 20.7	20.8	8.0 8.0	8.0	28.9 29.1	29.0	99.7 101.0	100.4	7.6 7.6	7.6	7.6	3.4 3.3	3.4		3.0 2.9	3.0	
3-Apr-15	Cloudy	Moderate	12:44	11.6	Surface	1.0	21.6 21.5	21.6	8.0 8.0	8.0	25.7 26.2	25.9	97.8 98.0	97.9	7.4 7.4	7.4	7.4	1.9 2.0	2.0	2.8	1.7 0.8	1.3	1.4
					Middle	5.8	21.5 21.5	21.5	8.0 8.0	8.0	26.2 26.7	26.4	97.1 97.5	97.3	7.4 7.4	7.4		2.8 3.0	2.9		1.5 1.2	1.4	
					Bottom	10.6	21.5 21.5	21.5	8.0 8.0	8.0	27.3 27.8	27.6	97.1 98.2	97.7	7.3 7.4	7.3	7.3	3.3 3.5	3.4		1.2 1.5	1.4	
6-Apr-15	Sunny	Moderate	13:46	10.3	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	27.9 28.0	28.0	92.2 92.5	92.4	6.8 6.8	6.8	6.8	2.2 2.3	2.3	2.4	4.9 6.3	5.6	5.0
					Middle	5.2	22.1 22.1	22.1	7.8 7.8	7.8	28.2 28.2	28.2	91.3 91.9	91.6	6.8 6.8	6.8		2.3 2.4	2.4		5.9 4.7	5.3	
					Bottom	9.3	22.1 22.1	22.1	7.8 7.8	7.8	28.3 28.3	28.3	92.3 92.1	92.2	6.8 6.8	6.8	6.8	2.4 2.5	2.5		4.8 3.6	4.2	
8-Apr-15	Cloudy	Moderate	14:52	10.8	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.1 29.1	29.1	92.0 91.3	91.7	6.8 6.7	6.8	6.8	6.3 6.3	6.3	6.4	6.0 5.4	5.7	5.8
					Middle	5.4	22.0 22.0	22.0	7.8 7.8	7.8	29.4 29.5	29.5	91.3 92.7	92.0	6.7 6.8	6.8		6.3 6.4	6.4		5.5 4.8	5.2	
					Bottom	9.8	22.0 22.0	22.0	7.8 7.8	7.8	29.6 29.4	29.5	95.9 92.2	94.1	7.1 6.8	6.9	6.9	6.5 6.5	6.5		7.0 5.9	6.5	
10-Apr-15	Cloudy	Moderate	16:11	10.5	Surface	1.0	21.0 21.0	21.0	7.8 7.8	7.8	29.6 29.2	29.4	87.5 87.7	87.6	6.6 6.6	6.6	6.6	2.7 2.6	2.7	3.3	5.2 4.7	5.0	4.9
					Middle	5.3	21.0 21.0	21.0	7.8 7.8	7.8	30.6 30.6	30.6	88.0 88.1	88.1	6.6 6.6	6.6		3.5 3.5	3.5		4.1 4.8	4.5	
					Bottom	9.5	21.0 21.0	21.0	7.8 7.8	7.8	30.8 30.9	30.9	88.5 88.9	88.7	6.6 6.6	6.6	6.6	3.7 3.8	3.8		4.7 5.8	5.3	
13-Apr-15	Sunny	Moderate	08:14	10.9	Surface	1.0	20.8 20.8	20.8	7.8 7.8	7.8	32.2 32.0	32.1	91.9 89.4	90.7	6.8 6.6	6.7	6.8	2.5 2.4	2.5	2.6	2.5 3.1	2.8	2.4
					Middle	5.5	20.8 20.8	20.8	7.8 7.8	7.8	32.4 32.5	32.4	89.7 93.6	91.7	6.6 6.9	6.8		2.6 2.6	2.6		2.1 2.5	2.3	
					Bottom	9.9	20.8 20.8	20.8	7.8 7.8	7.8	32.6 32.4	32.5	96.5 90.5	93.5	7.1 6.7	6.9	6.9	2.8 2.7	2.8		2.1 2.2	2.2	
15-Apr-15	Sunny	Moderate	11:00	10.9	Surface	1.0	21.2 21.1	21.1	7.9 7.9	7.9	30.4 30.9	30.6	98.5 97.1	97.8	7.2 7.2	7.2	7.2	1.9 1.9	1.9	2.1	3.1 2.6	2.9	2.7
					Middle	5.5	21.1 21.1	21.1	7.8 7.8	7.8	32.3 32.5	32.4	96.9 96.3	96.6	7.2 7.1	7.2		2.1 2.2	2.2		2.8 2.4	2.6	
					Bottom	9.9	21.1 21.1	21.1	7.8 7.8	7.8	32.6 32.5	32.6	94.9 96.3	95.6	7.0 7.1	7.0	7.0	2.2 2.3	2.3		2.5 2.7	2.6	
17-Apr-15	Sunny	Moderate	12:08	10.3	Surface	1.0	22.3 22.2	22.2	7.9 7.9	7.9	29.2 29.4	29.3	103.5 100.7	102.1	7.6 7.4	7.5	7.4	4.0 3.8	3.9	5.1	6.2 6.4	6.3	6.8
					Middle	5.2	21.9 21.9	21.9	7.9 7.9	7.9	29.8 29.8	29.8	98.5 99.6	99.1	7.3 7.3	7.3		5.0 4.7	4.9		7.2 7.3	7.3	
					Bottom	9.3	21.9 21.8	21.9	7.9 7.9	7.9	29.9 29.9	29.9	100.1 97.8	99.0	7.4 7.2	7.3	7.3	6.6 6.4	6.5		6.9 6.8	6.9	
20-Apr-15	Cloudy	Moderate	13:52	10.3	Surface	1.0	22.6 22.7	22.6	7.9 7.9	7.9	30.2 30.2	30.2	88.2 88.6	88.4	6.4 6.4	6.4	6.4	6.2 5.7	6.0	6.6	6.7 7.1	6.9	6.5
					Middle	5.2	22.5 22.5	22.5	7.9 7.9	7.9	30.5 30.7	30.6	88.1 87.9	88.0	6.4 6.4	6.4		6.8 6.6	6.7		6.6 6.2	6.4	
					Bottom	9.3	22.5 22.5	22.5	7.9 7.9	7.9	30.7 30.8	30.7	88.0 88.5	88.3	6.4 6.4	6.4	6.4	7.0 7.3	7.2		6.3 6.2	6.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS10 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:17	11.1	Surface	1.0	22.7 23.1	22.9	8.0 8.0	8.0	30.0 29.5	29.8	86.3 87.4	86.9	6.3 6.3	6.3	6.3	4.2 4.2	4.2	4.4	6.3 7.3	6.8	7.2
					Middle	5.6	22.3 22.6	22.5	8.0 8.0	8.0	30.7 30.2	30.5	85.6 85.7	85.7	6.2 6.2	6.2		4.4 4.3	4.4		6.0 6.8	6.4	
					Bottom	10.1	22.3 22.4	22.3	8.0 8.0	8.0	31.0 30.8	30.9	86.8 86.2	86.5	6.3 6.3	6.3		4.5 4.5	4.5		8.1 8.6	8.4	
24-Apr-15	Sunny	Moderate	16:43	10.4	Surface	1.0	22.8 22.9	22.8	8.0 8.0	8.0	29.2 29.2	29.2	89.4 89.5	89.5	6.5 6.5	6.5	6.5	0.7 0.7	0.7	1.0	2.5 2.0	2.3	2.3
					Middle	5.2	22.5 22.4	22.5	8.0 8.0	8.0	29.9 29.9	29.9	88.8 88.1	88.5	6.5 6.4	6.5		1.1 1.0	1.1		2.1 2.4	2.3	
					Bottom	9.4	22.5 22.5	22.5	8.0 8.0	8.0	29.9 30.0	29.9	88.9 89.1	89.0	6.5 6.5	6.5	6.5	1.0 1.1	1.1		2.7 2.1	2.4	
27-Apr-15	Sunny	Moderate	09:04	10.8	Surface	1.0	23.4 23.3	23.3	8.0 8.0	8.0	24.4 24.5	24.5	99.7 100.1	99.9	7.4 7.4	7.4	7.3	2.4 2.3	2.4	2.4	2.5 2.3	2.4	2.7
					Middle	5.4	23.0 23.0	23.0	8.0 8.0	8.0	30.0 29.9	29.9	99.9 97.0	98.5	7.2 7.0	7.1		2.3 2.3	2.3		3.3 2.5	2.9	
					Bottom	9.8	23.0 23.1	23.1	8.0 8.0	8.0	30.1 29.9	30.0	99.1 102.5	100.8	7.2 7.4	7.3	7.3	2.4 2.4	2.4		3.0 2.8	2.9	
29-Apr-15	Sunny	Moderate	10:37	10.6	Surface	1.0	24.2 24.3	24.2	8.0 8.1	8.0	22.0 22.2	22.1	95.0 92.8	93.9	7.1 6.9	7.0	6.9	2.8 2.6	2.7	3.4	2.7 2.9	2.8	3.0
					Middle	5.3	23.8 23.7	23.8	7.9 7.9	7.9	26.1 26.1	26.1	91.9 92.4	92.2	6.7 6.6	6.7		3.5 3.5	3.5		4.0 2.8	3.4	
					Bottom	9.6	23.5 23.8	23.7	7.9 8.0	7.9	28.5 28.1	28.3	85.8 86.6	86.2	6.1 6.3	6.2	6.2	4.1 4.0	4.1		2.2 3.1	2.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS10 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:13	10.9	Surface	1.0	21.5 21.5	21.5	8.0 8.0	8.0	27.4 27.3	27.3	106.8 107.8	107.3	8.0 8.2	8.1	8.0	2.2 2.3	2.3	2.4	2.9 3.6	3.3	3.1
					Middle	5.5	20.7 20.7	20.7	8.0 8.0	8.0	28.6 28.5	28.5	107.7 100.3	104.0	8.1 7.6	7.9		2.3 2.3	2.3		3.8 3.0	3.4	
					Bottom	9.9	20.7 20.6	20.7	8.0 8.0	8.0	28.9 29.3	29.1	103.7 101.1	102.4	7.9 7.7	7.8	7.8	2.6 2.7	2.7		2.7 2.7	2.7	
3-Apr-15	Cloudy	Moderate	18:33	11.3	Surface	1.0	22.0 22.0	22.0	8.0 8.0	8.0	25.5 25.5	25.5	105.1 105.1	105.1	7.9 7.9	7.9	7.9	2.4 2.5	2.5	2.7	0.5 0.9	0.7	0.8
					Middle	5.7	21.9 21.9	21.9	8.0 8.0	8.0	25.8 25.8	25.8	104.3 104.4	104.4	7.9 7.9	7.9		2.7 2.7	2.7		0.5 1.1	0.8	
					Bottom	10.3	21.7 21.7	21.7	8.0 8.0	8.0	26.3 26.3	26.3	103.8 103.9	103.9	7.8 7.8	7.8	7.8	2.8 3.0	2.9		0.8 1.2	1.0	
6-Apr-15	Sunny	Moderate	07:37	10.7	Surface	1.0	22.4 22.4	22.4	7.8 7.8	7.8	27.7 27.8	27.8	92.2 91.4	91.8	6.8 6.8	6.8	6.8	2.7 2.4	2.6	3.7	4.4 3.9	4.2	4.5
					Middle	5.4	21.8 22.0	21.9	7.8 7.8	7.8	29.0 28.5	28.7	90.3 91.6	91.0	6.7 6.8	6.7		4.0 4.2	4.1		4.7 4.8	4.8	
					Bottom	9.7	21.8 21.7	21.8	7.8 7.8	7.8	29.2 29.4	29.3	91.4 90.5	91.0	6.8 6.7	6.7	6.7	4.3 4.6	4.5		5.0 3.7	4.4	
8-Apr-15	Cloudy	Moderate	08:55	11.5	Surface	1.0	22.2 22.2	22.2	7.8 7.8	7.8	29.0 28.9	29.0	90.6 92.5	91.6	6.7 6.8	6.8	6.8	6.1 6.0	6.1	6.3	8.0 6.7	7.4	8.3
					Middle	5.8	22.1 22.1	22.1	7.8 7.8	7.8	29.1 29.3	29.2	94.1 90.9	92.5	6.9 6.7	6.8		6.2 6.3	6.3		8.8 8.0	8.4	
					Bottom	10.5	22.1 22.1	22.1	7.8 7.8	7.8	29.3 29.2	29.2	97.9 92.0	95.0	7.2 6.8	7.0	7.0	6.7 6.5	6.6		8.8 9.2	9.0	
10-Apr-15	Fine	Moderate	09:52	10.9	Surface	1.0	21.0 21.0	21.0	7.8 7.8	7.8	30.3 30.8	30.6	87.7 90.7	89.2	6.6 6.8	6.7	6.7	9.7 9.6	9.7	9.7	8.6 9.0	8.8	9.9
					Middle	5.5	21.0 21.0	21.0	7.8 7.8	7.8	30.9 30.9	30.9	88.3 92.5	90.4	6.6 6.9	6.7		9.6 9.7	9.7		9.9 9.8	9.9	
					Bottom	9.9	21.0 21.0	21.0	7.8 7.8	7.8	31.1 31.0	31.0	95.4 89.2	92.3	7.1 6.6	6.9	6.9	9.7 9.8	9.8		11.4 10.7	11.1	
13-Apr-15	Sunny	Moderate	13:47	10.9	Surface	1.0	21.3 21.3	21.3	7.8 7.8	7.8	31.8 30.9	31.4	93.8 92.4	93.1	6.9 6.8	6.9	6.9	1.8 1.7	1.8	2.1	2.1 2.3	2.2	2.4
					Middle	5.5	21.1 21.2	21.2	7.8 7.8	7.8	31.3 30.9	31.1	92.1 94.6	93.4	6.8 7.0	6.9		2.0 2.1	2.1		2.8 2.5	2.7	
					Bottom	9.9	21.3 21.3	21.3	7.8 7.8	7.8	30.8 30.8	30.8	92.9 96.4	94.7	6.9 7.1	7.0	7.0	2.3 2.2	2.3		2.3 2.2	2.3	
15-Apr-15	Sunny	Moderate	15:50	11.0	Surface	1.0	21.6 21.5	21.6	7.9 7.9	7.9	30.0 30.4	30.2	103.2 102.1	102.7	7.6 7.6	7.6	7.5	2.3 2.2	2.3	2.4	5.7 4.8	5.3	4.8
					Middle	5.5	21.2 21.2	21.2	7.9 7.9	7.9	31.3 31.3	31.3	101.1 98.9	100.0	7.5 7.3	7.4		2.3 2.4	2.4		4.8 4.4	4.6	
					Bottom	10.0	21.3 21.1	21.2	7.9 7.8	7.9	32.2 32.4	32.3	104.8 97.0	100.9	7.7 7.1	7.4	7.4	2.5 2.4	2.5		4.4 4.5	4.5	
17-Apr-15	Sunny	Moderate	17:50	10.3	Surface	1.0	22.5 22.3	22.4	7.8 7.8	7.8	28.8 28.9	28.8	104.3 103.8	104.1	7.7 7.6	7.6	7.6	2.0 2.2	2.1	2.5	4.5 5.0	4.8	4.4
					Middle	5.2	22.1 22.1	22.1	7.8 7.8	7.8	29.3 29.3	29.3	102.7 102.4	102.6	7.6 7.6	7.6		2.5 2.7	2.6		5.2 3.3	4.3	
					Bottom	9.3	22.1 22.1	22.1	7.8 7.8	7.8	29.4 29.3	29.3	102.7 103.1	102.9	7.6 7.6	7.6	7.6	2.8 3.0	2.9		4.1 3.9	4.0	
20-Apr-15	Cloudy	Moderate	07:34	10.3	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	30.3 30.3	30.3	89.1 89.6	89.4	6.5 6.5	6.5	6.5	8.2 8.3	8.3	8.4	16.6 16.4	16.5	17.4
					Middle	5.2	22.5 22.5	22.5	7.8 7.8	7.8	30.3 30.3	30.3	90.3 89.7	90.0	6.6 6.5	6.5		7.9 8.0	8.0		17.0 16.2	16.6	
					Bottom	9.3	22.5 22.5	22.5	7.8 7.8	7.8	30.3 30.3	30.3	89.8 90.5	90.2	6.5 6.6	6.6	6.6	9.2 8.8	9.0		18.6 19.3	19.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS10 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:39	10.8	Surface	1.0	22.5 22.5	22.5	8.0 8.0	8.0	30.3 30.3	30.3	86.9 85.7	86.3	6.3 6.2	6.3	6.3	9.0 9.3	9.2	9.5	9.7 9.0	9.4	10.3
					Middle	5.4	22.4 22.4	22.4	8.0 8.0	8.0	30.4 30.4	30.4	85.9 87.4	86.7	6.3 6.4	6.3		9.6 9.6	9.6		10.5 10.9	10.7	
					Bottom	9.8	22.4 22.4	22.4	8.0 8.0	8.0	30.5 30.4	30.5	89.9 86.9	88.4	6.5 6.3	6.4	6.4	9.8 9.5	9.7		11.1 10.2	10.7	
24-Apr-15	Sunny	Moderate	10:12	10.3	Surface	1.0	22.6 22.7	22.6	8.0 8.0	8.0	28.8 28.8	28.8	88.2 89.0	88.6	6.5 6.5	6.5	6.5	0.9 0.9	0.9	0.9	3.9 5.1	4.5	4.4
					Middle	5.2	22.4 22.4	22.4	8.0 8.0	8.0	29.5 29.5	29.5	87.7 88.7	88.2	6.4 6.5	6.4		0.9 0.8	0.9		4.0 5.2	4.6	
					Bottom	9.3	22.4 22.4	22.4	8.0 8.0	8.0	29.8 29.7	29.8	91.1 88.3	89.7	6.7 6.4	6.5	6.5	0.9 0.9	0.9		4.1 4.1	4.1	
27-Apr-15	Sunny	Moderate	13:43	11.0	Surface	1.0	23.6 23.5	23.6	8.0 8.0	8.0	25.2 25.4	25.3	104.6 110.4	107.5	7.7 8.0	7.8	7.7	2.2 2.2	2.2	2.3	3.7 3.9	3.8	4.3
					Middle	5.5	23.1 23.2	23.1	8.0 8.0	8.0	29.6 29.3	29.4	106.7 101.1	103.9	7.8 7.3	7.6		2.2 2.3	2.3		3.8 4.3	4.1	
					Bottom	10.0	23.2 22.9	23.1	8.0 8.0	8.0	29.7 30.1	29.9	105.6 98.9	102.3	7.6 7.1	7.4	7.4	2.3 2.3	2.3		4.4 5.4	4.9	
29-Apr-15	Sunny	Moderate	16:17	10.5	Surface	1.0	25.6 25.5	25.6	8.3 8.1	8.2	21.6 21.7	21.7	110.5 107.8	109.2	8.0 7.8	7.9	7.6	3.0 3.0	3.0	2.9	3.3 3.8	3.6	3.5
					Middle	5.3	23.8 23.9	23.8	8.0 8.0	8.0	26.3 26.1	26.2	102.8 96.7	99.8	7.4 7.1	7.3		2.8 3.1	3.0		2.1 4.1	3.1	
					Bottom	9.5	23.8 23.8	23.8	8.0 8.1	8.0	26.6 26.6	26.6	97.9 95.2	96.6	7.1 7.0	7.0	7.0	2.7 2.6	2.7		3.5 4.1	3.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)11 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:35	10.5	Surface	1.0	21.1 21.5	21.3	8.0 8.1	8.0	26.3 26.0	26.2	106.7 107.1	106.9	8.1 8.1	8.1	8.0	5.6 5.4	5.5	5.4	2.2 4.0	3.1	4.6
					Middle	5.3	20.5 20.5	20.5	8.0 7.9	8.0	29.6 29.9	29.8	103.6 105.9	104.8	7.9 8.0	7.9		5.5 5.3	5.4		4.3 5.2	4.8	
					Bottom	9.5	20.4 20.6	20.5	8.0 8.0	8.0	30.3 29.9	30.1	101.1 101.1	101.1	7.6 7.6	7.6	7.6	5.3 5.5	5.4		6.2 5.4	5.8	
3-Apr-15	Cloudy	Moderate	12:32	11.4	Surface	1.0	21.7 21.7	21.7	8.0 8.0	8.0	26.6 26.6	26.6	98.1 98.4	98.3	7.4 7.4	7.4	7.4	2.4 2.6	2.5	3.9	1.6 1.0	1.3	1.3
					Middle	5.7	21.6 21.6	21.6	8.0 8.0	8.0	27.5 27.4	27.4	97.1 97.1	97.1	7.3 7.3	7.3		4.3 4.1	4.2		1.0 0.5	0.8	
					Bottom	10.4	21.4 21.3	21.3	8.0 8.0	8.0	28.2 28.3	28.3	97.0 96.6	96.8	7.3 7.3	7.3	7.3	5.0 5.1	5.1		1.5 1.8	1.7	
6-Apr-15	Sunny	Moderate	13:58	10.5	Surface	1.0	22.3 22.3	22.3	7.8 7.8	7.8	27.9 27.9	27.9	89.7 90.6	90.2	6.6 6.7	6.7	6.7	5.8 5.5	5.7	5.8	7.4 6.7	7.1	6.7
					Middle	5.3	21.7 21.8	21.8	7.8 7.8	7.8	29.4 29.2	29.3	88.5 88.8	88.7	6.6 6.6	6.6		5.4 5.2	5.3		5.8 6.8	6.3	
					Bottom	9.5	21.4 21.5	21.4	7.8 7.8	7.8	30.8 30.5	30.6	88.1 89.2	88.7	6.5 6.6	6.6	6.6	6.5 6.3	6.4		6.7 6.9	6.8	
8-Apr-15	Cloudy	Moderate	15:02	10.6	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.2 29.1	29.2	95.1 92.9	94.0	7.0 6.9	6.9	7.0	4.4 4.6	4.5	4.7	5.6 4.3	5.0	4.7
					Middle	5.3	21.8 21.9	21.9	7.8 7.8	7.8	30.0 29.7	29.9	97.0 93.1	95.1	7.2 6.9	7.0		4.7 4.7	4.7		4.6 6.0	5.3	
					Bottom	9.6	22.0 21.7	21.9	7.8 7.8	7.8	30.1 30.3	30.2	94.4 100.1	97.3	6.9 7.4	7.2	7.2	4.8 4.9	4.9		4.8 2.9	3.9	
10-Apr-15	Cloudy	Moderate	16:21	10.5	Surface	1.0	20.9 21.0	20.9	7.8 7.8	7.8	30.4 30.5	30.5	89.7 87.1	88.4	6.7 6.5	6.6	6.6	3.0 2.9	3.0	3.4	8.3 7.6	8.0	8.5
					Middle	5.3	21.0 21.0	21.0	7.8 7.8	7.8	31.0 30.8	30.9	87.2 90.8	89.0	6.5 6.8	6.6		3.5 3.5	3.5		9.8 9.4	9.6	
					Bottom	9.5	21.0 21.0	21.0	7.8 7.8	7.8	31.1 31.1	31.1	88.7 94.9	91.8	6.6 7.1	6.8	6.8	3.8 3.6	3.7		8.1 7.6	7.9	
13-Apr-15	Sunny	Moderate	08:04	10.8	Surface	1.0	20.8 20.8	20.8	7.8 7.8	7.8	31.9 32.2	32.0	89.1 92.3	90.7	6.6 6.9	6.7	6.7	2.5 2.4	2.5	2.8	2.6 4.1	3.4	3.1
					Middle	5.4	20.7 20.7	20.7	7.8 7.8	7.8	32.8 32.9	32.8	91.3 89.5	90.4	6.8 6.6	6.7		2.6 2.7	2.7		2.7 2.4	2.6	
					Bottom	9.8	20.7 20.7	20.7	7.8 7.8	7.8	32.7 32.9	32.8	87.5 91.3	89.4	6.5 6.8	6.6	6.6	3.0 3.1	3.1		3.5 3.1	3.3	
15-Apr-15	Sunny	Moderate	10:50	12.0	Surface	1.0	21.4 21.2	21.3	7.9 7.9	7.9	30.4 31.1	30.7	97.2 96.1	96.7	7.2 7.1	7.2	7.2	2.3 2.3	2.3	3.0	2.5 2.9	2.7	3.2
					Middle	6.0	21.1 21.1	21.1	7.8 7.8	7.8	32.7 32.7	32.7	96.0 95.8	95.9	7.1 7.0	7.1		3.3 3.2	3.3		3.0 3.0	3.0	
					Bottom	11.0	21.1 21.1	21.1	7.8 7.8	7.8	32.7 32.7	32.7	93.9 94.5	94.2	6.9 7.0	6.9	6.9	3.4 3.4	3.4		4.2 3.8	4.0	
17-Apr-15	Sunny	Moderate	11:59	10.2	Surface	1.0	22.4 22.5	22.5	7.9 7.9	7.9	29.2 29.2	29.2	105.5 104.0	104.8	7.7 7.6	7.7	7.6	4.3 4.6	4.5	5.8	6.4 6.9	6.7	5.9
					Middle	5.1	21.8 21.9	21.8	7.9 7.9	7.9	30.1 30.1	30.1	99.9 102.7	101.3	7.4 7.6	7.5		5.5 5.5	5.5		5.8 5.8	5.8	
					Bottom	9.2	21.9 22.1	22.0	7.9 7.9	7.9	30.1 29.8	29.9	101.0 104.6	102.8	7.4 7.7	7.6	7.6	7.2 7.6	7.4		4.7 5.5	5.1	
20-Apr-15	Cloudy	Moderate	14:01	10.3	Surface	1.0	22.8 22.8	22.8	7.9 7.9	7.9	30.0 30.0	30.0	91.4 91.6	91.5	6.6 6.6	6.6	6.6	3.6 3.8	3.7	4.5	5.0 4.6	4.8	5.2
					Middle	5.2	22.7 22.7	22.7	7.9 7.9	7.9	30.2 30.3	30.2	91.3 90.9	91.1	6.6 6.6	6.6		5.0 5.3	5.2		5.6 5.5	5.6	
					Bottom	9.3	22.7 22.7	22.7	7.9 7.9	7.9	30.4 30.2	30.3	91.0 91.5	91.3	6.6 6.6	6.6	6.6	4.8 4.5	4.7		5.7 4.6	5.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)11 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:27	10.3	Surface	1.0	22.9 23.0	23.0	8.0 8.1	8.1	30.2 30.1	30.1	86.7 88.7	87.7	6.3 6.4	6.3	6.3	6.3 6.2	6.3	6.5	7.6 8.4	8.0	6.8
					Middle	5.2	22.4 22.4	22.4	8.0 8.0	8.0	30.6 30.6	30.6	86.0 88.0	87.0	6.3 6.4	6.3		6.6 6.7	6.7		5.6 6.1	5.9	
					Bottom	9.3	22.5 22.4	22.4	8.0 8.0	8.0	30.7 30.8	30.8	87.5 90.0	88.8	6.4 6.5	6.4	6.4	6.5 6.6	6.6		6.1 6.9	6.5	
24-Apr-15	Sunny	Moderate	16:52	10.4	Surface	1.0	22.9 23.0	23.0	8.0 8.1	8.1	29.5 29.4	29.4	88.9 88.1	88.5	6.4 6.4	6.4	6.4	1.8 1.6	1.7	2.3	3.9 4.4	4.2	3.9
					Middle	5.2	22.4 22.4	22.4	8.0 8.0	8.0	30.2 30.3	30.3	86.8 85.4	86.1	6.3 6.2	6.3		2.6 2.4	2.5		4.4 3.9	4.2	
					Bottom	9.4	22.4 22.4	22.4	8.0 8.0	8.0	30.4 30.4	30.4	88.8 86.1	87.5	6.5 6.3	6.4	6.4	2.9 2.6	2.8		3.3 3.0	3.2	
27-Apr-15	Sunny	Moderate	08:55	10.2	Surface	1.0	23.2 23.3	23.3	8.0 8.1	8.1	26.2 24.9	25.6	102.5 104.3	103.4	7.4 7.7	7.5	7.3	2.4 2.4	2.4	2.5	2.4 2.8	2.6	2.8
					Middle	5.1	22.9 22.9	22.9	8.0 8.0	8.0	30.2 30.2	30.2	97.6 97.1	97.4	7.2 7.0	7.1		2.5 2.5	2.5		3.5 2.8	3.2	
					Bottom	9.2	22.9 23.0	22.9	8.0 8.0	8.0	30.3 30.2	30.3	95.4 96.8	96.1	6.9 7.0	6.9	6.9	2.5 2.6	2.6		2.5 2.6	2.6	
29-Apr-15	Sunny	Moderate	10:28	10.6	Surface	1.0	24.4 24.4	24.4	8.1 8.1	8.1	21.4 21.9	21.7	106.0 105.8	105.9	7.9 7.8	7.9	7.5	1.9 1.9	1.9	2.0	3.5 3.9	3.7	3.9
					Middle	5.3	23.9 23.8	23.9	8.0 8.0	8.0	25.7 25.9	25.8	96.5 99.7	98.1	7.0 7.2	7.1		1.8 1.9	1.9		3.1 3.6	3.4	
					Bottom	9.6	23.7 23.9	23.8	8.0 8.0	8.0	27.1 27.5	27.3	98.8 104.4	101.6	7.1 7.5	7.3	7.3	2.1 2.0	2.1		4.5 4.5	4.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)11 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:22	10.7	Surface	1.0	21.4 21.3	21.3	8.0 8.0	8.0	28.8 28.9	28.8	105.5 104.8	105.2	7.9 7.9	7.9	7.9	2.2 2.1	2.2	2.2	2.2 3.2	2.7	2.8
					Middle	5.4	21.0 20.9	20.9	8.0 8.0	8.0	29.1 29.0	29.1	103.4 103.8	103.6	7.7 7.8	7.8		2.2 2.2	2.2		3.0 2.7	2.9	
					Bottom	9.7	21.1 20.7	20.9	8.0 8.0	8.0	29.0 29.4	29.2	99.2 99.0	99.1	7.5 7.5	7.5	7.5	2.3 2.3	2.3		2.6 2.7	2.7	
3-Apr-15	Cloudy	Moderate	18:46	11.3	Surface	1.0	22.2 22.2	22.2	8.0 8.0	8.0	25.2 25.2	25.2	104.1 104.0	104.1	7.8 7.8	7.8	7.8	2.4 2.5	2.5	3.0	0.5 0.6	0.6	0.8
					Middle	5.7	21.9 21.9	21.9	8.0 8.0	8.0	25.9 26.0	26.0	102.1 102.1	102.1	7.7 7.7	7.7		2.9 2.7	2.8		0.6 1.0	0.8	
					Bottom	10.3	21.6 21.6	21.6	8.0 8.0	8.0	26.7 26.7	26.7	101.5 101.4	101.5	7.7 7.7	7.7	7.7	3.5 3.6	3.6		1.0 0.8	0.9	
6-Apr-15	Sunny	Moderate	07:27	10.6	Surface	1.0	22.5 22.4	22.4	7.8 7.8	7.8	27.5 27.6	27.5	91.9 90.9	91.4	6.8 6.7	6.8	6.7	4.5 4.8	4.7	6.9	5.0 5.3	5.2	5.1
					Middle	5.3	21.8 21.7	21.8	7.8 7.8	7.8	29.4 29.5	29.4	90.0 89.0	89.5	6.7 6.6	6.6		10.6 10.7	10.7		4.9 5.6	5.3	
					Bottom	9.6	21.7 22.2	22.0	7.8 7.8	7.8	29.5 29.1	29.3	90.1 91.1	90.6	6.7 6.7	6.7	6.7	5.3 5.5	5.4		5.3 4.2	4.8	
8-Apr-15	Cloudy	Moderate	08:48	11.3	Surface	1.0	22.1 22.1	22.1	7.8 7.8	7.8	29.3 29.1	29.2	89.4 91.7	90.6	6.6 6.8	6.7	6.7	5.0 5.0	5.0	5.2	4.5 5.0	4.8	4.6
					Middle	5.7	21.9 21.9	21.9	7.8 7.8	7.8	30.0 30.0	30.0	89.6 91.2	90.4	6.6 6.7	6.7		5.2 5.1	5.2		5.4 3.5	4.5	
					Bottom	10.3	22.0 21.9	22.0	7.8 7.8	7.8	29.9 30.1	30.0	91.2 92.7	92.0	6.7 6.8	6.8	6.8	5.4 5.3	5.4		4.4 4.4	4.4	
10-Apr-15	Fine	Moderate	09:43	10.5	Surface	1.0	21.0 20.9	20.9	7.8 7.8	7.8	30.2 30.0	30.1	87.7 88.8	88.3	6.6 6.7	6.6	6.6	4.5 4.3	4.4	4.4	3.5 3.7	3.6	4.0
					Middle	5.3	21.0 21.0	21.0	7.8 7.8	7.8	30.6 30.6	30.6	88.2 88.3	88.3	6.6 6.6	6.6		4.4 4.4	4.4		4.1 4.8	4.5	
					Bottom	9.5	20.9 21.0	21.0	7.8 7.8	7.8	30.4 30.7	30.6	89.0 89.2	89.1	6.6 6.7	6.6	6.6	4.3 4.4	4.4		4.1 3.6	3.9	
13-Apr-15	Sunny	Moderate	13:57	11.0	Surface	1.0	21.1 21.2	21.1	7.8 7.8	7.8	31.5 31.5	31.5	93.6 95.5	94.6	6.9 7.1	7.0	7.0	2.6 2.4	2.5	2.7	1.8 1.3	1.6	1.6
					Middle	5.5	20.9 21.0	20.9	7.8 7.8	7.8	32.2 31.8	32.0	93.4 95.7	94.6	6.9 7.1	7.0		2.7 2.7	2.7		1.4 1.1	1.3	
					Bottom	10.0	20.9 21.2	21.0	7.8 7.8	7.8	32.2 32.3	32.3	97.9 95.4	96.7	7.2 7.0	7.1	7.1	3.0 2.9	3.0		2.0 1.6	1.8	
15-Apr-15	Sunny	Moderate	15:56	10.5	Surface	1.0	21.4 21.4	21.4	7.9 7.9	7.9	31.7 31.9	31.8	100.4 99.3	99.9	7.4 7.3	7.3	7.3	2.6 2.8	2.7	2.8	4.3 4.3	4.3	4.0
					Middle	5.3	21.3 21.3	21.3	7.9 7.9	7.9	32.5 32.6	32.6	98.6 98.8	98.7	7.2 7.2	7.2		2.9 2.7	2.8		3.3 5.2	4.3	
					Bottom	9.5	21.3 21.3	21.3	7.9 7.9	7.9	32.6 32.5	32.6	99.7 100.8	100.3	7.3 7.4	7.4	7.4	2.9 2.8	2.9		3.3 3.4	3.4	
17-Apr-15	Sunny	Moderate	18:01	10.6	Surface	1.0	22.2 22.2	22.2	7.8 7.9	7.9	29.8 29.9	29.9	106.0 105.8	105.9	7.8 7.8	7.8	7.8	6.7 7.2	7.0	8.0	5.7 5.3	5.5	5.9
					Middle	5.3	22.3 22.3	22.3	7.9 7.9	7.9	30.4 30.4	30.4	105.5 106.8	106.2	7.7 7.8	7.7		8.5 8.8	8.7		6.2 7.0	6.6	
					Bottom	9.6	22.3 22.3	22.3	7.9 7.9	7.9	30.4 30.4	30.4	105.9 103.8	104.9	7.7 7.6	7.6	7.6	8.3 8.4	8.4		5.1 5.8	5.5	
20-Apr-15	Cloudy	Moderate	07:23	10.3	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	30.2 30.2	30.2	89.4 89.4	89.4	6.5 6.5	6.5	6.5	8.1 7.7	7.9	9.0	6.3 6.6	6.5	9.2
					Middle	5.2	22.4 22.4	22.4	7.8 7.8	7.8	30.4 30.4	30.4	89.4 89.3	89.4	6.5 6.5	6.5		9.6 9.0	9.3		10.5 10.9	10.7	
					Bottom	9.3	22.4 22.4	22.4	7.8 7.8	7.8	30.4 30.4	30.4	89.6 89.5	89.6	6.5 6.5	6.5	6.5	9.3 10.4	9.9		10.9 9.9	10.4	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)11 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:29	10.4	Surface	1.0	22.5 22.4	22.4	8.0 8.0	8.0	30.4 30.5	30.4	84.7 85.1	84.9	6.2 6.2	6.2	6.2	9.6 9.7	9.7	9.7	14.0 12.4	13.2	12.4
					Middle	5.2	22.4 22.4	22.4	8.0 8.0	8.0	30.6 30.6	30.6	84.5 85.0	84.8	6.1 6.2	6.2		9.8 9.6	9.7		12.2 12.5	12.4	
					Bottom	9.4	22.4 22.4	22.4	8.0 8.0	8.0	30.7 30.7	30.7	85.8 85.0	85.4	6.2 6.2	6.2	6.2	9.5 9.7	9.6		12.3 10.9	11.6	
24-Apr-15	Sunny	Moderate	10:02	10.5	Surface	1.0	22.3 22.4	22.4	8.0 8.0	8.0	30.4 30.2	30.3	84.4 84.9	84.7	6.2 6.2	6.2	6.2	3.6 3.5	3.6	5.2	4.6 4.8	4.7	5.0
					Middle	5.3	22.3 22.3	22.3	8.0 8.0	8.0	30.7 30.7	30.7	84.7 84.1	84.4	6.2 6.1	6.1		6.0 6.1	6.1		5.5 5.3	5.4	
					Bottom	9.5	22.3 22.3	22.3	8.0 8.0	8.0	30.7 30.7	30.7	84.5 85.1	84.8	6.2 6.2	6.2	6.2	5.7 5.9	5.8		4.8 4.7	4.8	
27-Apr-15	Sunny	Moderate	13:53	10.8	Surface	1.0	23.9 23.8	23.8	8.0 8.0	8.0	25.2 25.2	25.2	105.7 107.8	106.8	7.7 7.9	7.8	7.6	2.2 2.2	2.2	2.3	2.2 2.5	2.4	2.6
					Middle	5.4	23.2 23.2	23.2	8.0 8.0	8.0	28.2 28.4	28.3	99.6 103.1	101.4	7.2 7.4	7.3		2.3 2.3	2.3		2.7 2.2	2.5	
					Bottom	9.8	22.8 22.8	22.8	8.0 8.0	8.0	30.7 30.7	30.7	97.7 99.5	98.6	7.1 7.2	7.2	7.2	2.5 2.4	2.5		2.9 2.6	2.8	
29-Apr-15	Sunny	Moderate	16:27	10.3	Surface	1.0	25.1 25.1	25.1	8.3 8.3	8.3	22.7 22.8	22.7	121.7 111.5	116.6	8.9 8.1	8.5	8.3	2.7 2.9	2.8	3.1	2.8 4.3	3.6	2.8
					Middle	5.2	25.1 25.0	25.1	8.2 8.2	8.2	25.2 25.5	25.3	112.6 109.4	111.0	8.1 8.0	8.0		3.2 2.9	3.1		2.1 2.5	2.3	
					Bottom	9.3	24.8 24.6	24.7	8.2 8.1	8.2	26.5 26.7	26.6	101.4 98.8	100.1	7.3 7.1	7.2	7.2	3.5 3.4	3.5		2.3 2.4	2.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)16 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:02	6.2	Surface	1.0	22.2 22.2	22.2	8.0 8.1	8.1	27.0 27.0	27.0	106.2 107.0	106.6	7.9 8.0	7.9	7.8	4.9 5.5	5.2	5.2	3.5 3.9	3.7	4.3
					Middle	3.1	22.1 22.1	22.1	8.0 8.0	8.0	27.5 27.4	27.4	104.2 102.9	103.6	7.8 7.7	7.7		4.8 4.8	4.8		3.5 3.9	3.7	
					Bottom	5.2	21.5 21.7	21.6	7.9 8.0	7.9	28.9 28.5	28.7	99.0 102.0	100.5	7.4 7.6	7.5	7.5	5.6 5.4	5.5		4.7 6.2	5.5	
3-Apr-15	Cloudy	Moderate	12:25	6.2	Surface	1.0	23.2 23.2	23.2	7.4 7.4	7.4	26.1 26.2	26.2	104.8 104.6	104.7	7.7 7.7	7.7	7.5	4.8 5.2	5.0	5.6	0.9 0.5	0.7	0.7
					Middle	3.1	22.9 22.8	22.9	7.4 7.3	7.4	26.9 26.9	26.9	99.5 99.0	99.3	7.3 7.3	7.3		5.8 5.5	5.7		0.8 0.7	0.8	
					Bottom	5.2	22.4 22.4	22.4	7.4 7.4	7.4	27.2 27.2	27.2	96.3 97.0	96.7	7.2 7.2	7.2	7.2	6.3 6.1	6.2		0.5 0.6	0.6	
6-Apr-15	Sunny	Moderate	13:24	6.2	Surface	1.0	23.5 23.5	23.5	7.4 7.4	7.4	26.3 26.2	26.2	94.1 94.4	94.3	6.9 6.9	6.9	6.9	5.6 5.6	5.6	5.6	2.5 2.3	2.4	3.4
					Middle	3.1	23.4 23.1	23.3	7.4 7.4	7.4	26.6 26.9	26.8	93.8 93.4	93.6	6.9 6.8	6.9		5.5 5.5	5.5		2.7 3.1	2.9	
					Bottom	5.2	23.1 23.3	23.2	7.3 7.4	7.4	27.2 26.8	27.0	93.4 93.4	93.4	6.8 6.8	6.8	6.8	5.7 5.6	5.7		5.3 4.2	4.8	
8-Apr-15	Cloudy	Moderate	14:55	6.3	Surface	1.0	23.2 23.0	23.1	7.1 7.1	7.1	27.9 28.3	28.1	93.5 91.1	92.3	6.8 6.6	6.7	6.7	6.5 6.4	6.5	6.5	4.7 4.0	4.4	4.7
					Middle	3.2	22.6 22.8	22.7	7.1 7.1	7.1	29.0 28.3	28.6	90.7 93.1	91.9	6.6 6.8	6.7		6.4 6.4	6.4		5.0 5.2	5.1	
					Bottom	5.3	22.6 22.6	22.6	7.1 7.1	7.1	30.4 30.5	30.4	91.4 94.4	92.9	6.6 6.9	6.7	6.7	6.3 6.6	6.5		5.0 4.0	4.5	
10-Apr-15	Cloudy	Moderate	16:24	6.2	Surface	1.0	22.0 22.0	22.0	7.8 7.9	7.8	29.3 29.4	29.4	89.6 87.5	88.6	6.6 6.5	6.5	6.5	8.4 8.7	8.6	8.7	9.0 8.8	8.9	9.8
					Middle	3.1	22.0 22.0	22.0	7.9 7.8	7.8	30.1 29.5	29.8	87.2 90.1	88.7	6.4 6.6	6.5		9.0 8.9	9.0		9.3 10.5	9.9	
					Bottom	5.2	21.9 21.9	21.9	7.9 7.8	7.8	30.7 30.5	30.6	88.1 91.6	89.9	6.5 6.7	6.6	6.6	8.2 9.0	8.6		10.4 10.9	10.7	
13-Apr-15	Sunny	Moderate	08:47	6.2	Surface	1.0	21.8 21.8	21.8	7.5 7.4	7.5	30.8 30.7	30.7	87.8 89.1	88.5	6.4 6.5	6.5	6.5	5.6 5.8	5.7	5.7	2.4 2.9	2.7	2.8
					Middle	3.1	21.8 21.8	21.8	7.4 7.5	7.4	31.0 30.9	30.9	89.9 87.7	88.8	6.6 6.4	6.5		5.7 5.7	5.7		2.7 2.7	2.7	
					Bottom	5.2	21.8 21.8	21.8	7.4 7.3	7.4	31.1 31.5	31.3	88.6 92.7	90.7	6.5 6.8	6.6	6.6	5.6 5.7	5.7		2.8 3.4	3.1	
15-Apr-15	Sunny	Moderate	10:46	6.2	Surface	1.0	22.3 22.3	22.3	7.6 7.6	7.6	30.8 30.8	30.8	94.0 93.9	94.0	6.8 6.8	6.8	6.8	7.7 8.1	7.9	8.5	5.0 5.2	5.1	5.4
					Middle	3.1	22.2 22.2	22.2	7.6 7.6	7.6	30.9 30.9	30.9	93.4 93.4	93.4	6.8 6.8	6.8		8.5 8.7	8.6		4.4 4.7	4.6	
					Bottom	5.2	22.2 22.2	22.2	7.6 7.6	7.6	31.0 31.0	31.0	93.1 93.4	93.3	6.8 6.8	6.8	6.8	9.0 8.7	8.9		6.8 6.1	6.5	
17-Apr-15	Sunny	Moderate	12:08	6.3	Surface	1.0	23.3 23.2	23.3	7.3 7.2	7.2	29.1 29.1	29.1	111.0 109.3	110.2	8.0 7.9	8.0	7.9	6.8 6.9	6.9	7.4	5.6 6.1	5.9	5.7
					Middle	3.2	23.2 23.1	23.2	7.2 7.2	7.2	29.3 29.4	29.3	110.1 106.8	108.5	8.0 7.7	7.8		7.6 7.7	7.7		5.6 5.7	5.7	
					Bottom	5.3	23.1 23.2	23.1	7.2 7.2	7.2	29.6 29.3	29.4	105.5 109.5	107.5	7.6 7.9	7.8	7.8	7.6 7.5	7.6		6.1 5.1	5.6	
20-Apr-15	Cloudy	Moderate	13:34	6.3	Surface	1.0	23.8 23.8	23.8	7.5 7.6	7.5	28.9 28.9	28.9	90.8 90.2	90.5	6.5 6.5	6.5	6.5	8.5 8.5	8.5	8.5	3.9 4.7	4.3	3.8
					Middle	3.2	23.8 23.8	23.8	7.5 7.5	7.5	29.1 29.1	29.1	90.8 89.7	90.3	6.5 6.4	6.5		8.4 8.6	8.5		4.4 3.3	3.9	
					Bottom	5.3	23.8 23.8	23.8	7.5 7.5	7.5	29.2 29.3	29.2	90.5 92.5	91.5	6.5 6.6	6.5	6.5	8.5 8.6	8.6		3.1 3.5	3.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)16 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:07	6.3	Surface	1.0	24.0 24.0	24.0	8.0 8.1	8.0	30.7 30.7	30.7	88.0 87.1	87.6	6.2 6.2	6.2	6.2	8.2 8.5	8.4	8.4	9.2 8.1	8.7	8.0
					Middle	3.2	24.0 23.9	23.9	8.1 8.0	8.0	30.8 30.8	30.8	86.9 88.3	87.6	6.1 6.2	6.2		7.8 7.4	7.6		6.7 7.2	7.0	
					Bottom	5.3	23.9 23.9	23.9	8.0 8.0	8.0	30.9 30.8	30.8	89.5 87.4	88.5	6.3 6.2	6.3	6.3	9.3 8.9	9.1		7.8 8.5	8.2	
24-Apr-15	Sunny	Moderate	16:31	6.6	Surface	1.0	23.8 23.8	23.8	8.0 8.1	8.0	32.3 32.3	32.3	92.4 93.1	92.8	6.5 6.5	6.5	6.5	10.3 10.4	10.4	10.4	8.5 7.2	7.9	8.1
					Middle	3.3	23.8 23.5	23.7	8.1 8.0	8.0	32.4 32.7	32.6	92.8 91.5	92.2	6.5 6.4	6.5		10.4 10.5	10.5		8.5 9.1	8.8	
					Bottom	5.6	23.4 23.5	23.5	8.0 8.0	8.0	32.7 32.7	32.7	92.7 91.8	92.3	6.5 6.5	6.5	6.5	10.3 10.5	10.4		8.2 7.2	7.7	
27-Apr-15	Sunny	Moderate	08:58	6.4	Surface	1.0	24.2 24.3	24.3	8.0 8.1	8.0	29.5 29.4	29.5	98.3 98.3	98.3	7.0 7.0	7.0	6.9	5.4 5.5	5.5	5.3	4.0 4.3	4.2	4.4
					Middle	3.2	24.2 24.1	24.1	8.1 8.0	8.0	31.5 31.5	31.5	97.7 94.6	96.2	6.9 6.6	6.7		5.4 5.3	5.4		4.1 4.6	4.4	
					Bottom	5.4	24.2 24.0	24.1	8.0 8.0	8.0	31.8 31.9	31.8	99.4 94.1	96.8	7.0 6.6	6.8	6.8	5.2 4.8	5.0		4.6 4.5	4.6	
29-Apr-15	Sunny	Moderate	10:25	6.3	Surface	1.0	25.6 25.6	25.6	8.1 8.2	8.2	27.3 27.5	27.4	121.0 122.8	121.9	8.5 8.6	8.5	8.2	2.6 2.6	2.6	2.7	2.4 2.4	2.4	2.4
					Middle	3.2	25.1 25.2	25.1	8.1 8.1	8.1	28.6 28.8	28.7	114.5 112.3	113.4	8.0 7.9	7.9		2.7 2.8	2.8		2.5 2.5	2.5	
					Bottom	5.3	24.6 24.6	24.6	8.1 8.0	8.0	30.8 30.8	30.8	115.1 110.4	112.8	8.0 7.7	7.9	7.9	2.8 2.7	2.8		2.0 2.7	2.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)16 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:03	6.2	Surface	1.0	22.4 22.4	22.4	8.1 8.2	8.1	28.6 28.6	28.6	105.5 106.4	106.0	7.8 7.8	7.8	7.7	6.9 6.5	6.7	6.8	2.9 3.3	3.1	3.8
					Middle	3.1	22.1 22.1	22.1	8.1 8.1	8.1	29.0 28.9	29.0	100.4 104.7	102.6	7.4 7.7	7.6		7.2 6.9	7.1		4.4 3.7	4.1	
					Bottom	5.2	21.8 22.0	21.9	7.9 8.0	8.0	29.6 29.2	29.4	98.5 104.9	101.7	7.3 7.7	7.5	7.5	6.8 6.4	6.6		4.6 4.0	4.3	
3-Apr-15	Cloudy	Moderate	18:51	6.4	Surface	1.0	23.1 23.1	23.1	7.5 7.5	7.5	27.0 27.0	27.0	103.5 103.3	103.4	7.6 7.6	7.6	7.5	5.1 4.9	5.0	5.6	1.3 1.3	1.3	1.4
					Middle	3.2	22.9 22.9	22.9	7.5 7.4	7.5	27.5 27.5	27.5	100.0 100.1	100.1	7.3 7.4	7.3		5.5 5.6	5.6		1.5 1.3	1.4	
					Bottom	5.4	22.7 22.7	22.7	7.4 7.4	7.4	27.7 27.7	27.7	97.4 96.9	97.2	7.2 7.2	7.2	7.2	6.0 6.1	6.1		1.5 1.3	1.4	
6-Apr-15	Sunny	Moderate	08:09	6.3	Surface	1.0	23.5 23.6	23.5	7.3 7.2	7.2	25.6 25.6	25.6	93.1 93.6	93.4	6.8 6.9	6.8	6.8	6.5 6.6	6.6	6.7	3.8 4.7	4.3	3.4
					Middle	3.2	23.3 23.3	23.3	7.2 7.2	7.2	26.1 26.3	26.2	92.9 92.6	92.8	6.8 6.8	6.8		6.5 7.0	6.8		3.2 3.7	3.5	
					Bottom	5.3	23.2 23.4	23.3	7.1 7.2	7.2	26.6 26.1	26.3	93.6 93.1	93.4	6.9 6.8	6.8	6.8	6.6 6.6	6.6		2.5 2.4	2.5	
8-Apr-15	Cloudy	Moderate	08:27	6.4	Surface	1.0	23.2 23.2	23.2	7.2 7.2	7.2	27.1 27.0	27.0	91.2 91.4	91.3	6.7 6.7	6.7	6.7	5.7 5.8	5.8	6.1	5.5 6.2	5.9	4.7
					Middle	3.2	23.2 23.2	23.2	7.2 7.2	7.2	27.2 27.2	27.2	91.1 90.7	90.9	6.7 6.6	6.6		6.4 6.0	6.2		4.0 5.0	4.5	
					Bottom	5.4	23.2 23.2	23.2	7.2 7.2	7.2	27.6 27.4	27.5	92.5 91.5	92.0	6.8 6.7	6.7	6.7	6.3 6.1	6.2		4.0 3.6	3.8	
10-Apr-15	Fine	Moderate	09:41	6.7	Surface	1.0	22.0 22.0	22.0	7.7 7.8	7.8	28.4 28.5	28.5	87.7 87.6	87.7	6.5 6.5	6.5	6.5	5.3 4.9	5.1	5.1	6.2 6.5	6.4	7.7
					Middle	3.4	22.1 22.1	22.1	7.8 8.0	7.9	28.8 28.8	28.8	87.4 87.5	87.5	6.5 6.5	6.5		5.0 4.9	5.0		7.4 9.0	8.2	
					Bottom	5.7	22.1 22.1	22.1	8.0 8.1	8.1	29.1 28.8	29.0	87.6 87.8	87.7	6.5 6.5	6.5	6.5	5.5 5.1	5.3		7.9 9.1	8.5	
13-Apr-15	Sunny	Moderate	13:19	6.3	Surface	1.0	22.0 22.1	22.0	7.3 7.3	7.3	31.9 31.8	31.9	88.4 88.9	88.7	6.4 6.5	6.4	6.4	5.5 5.6	5.6	5.5	3.7 4.9	4.3	4.4
					Middle	3.2	21.9 21.9	21.9	7.3 7.2	7.3	32.0 32.1	32.1	88.1 88.5	88.3	6.4 6.4	6.4		5.5 5.5	5.5		4.7 4.4	4.6	
					Bottom	5.3	21.8 21.9	21.9	7.2 7.3	7.3	32.2 32.1	32.2	89.7 88.5	89.1	6.5 6.4	6.5	6.5	5.5 5.3	5.4		5.1 3.3	4.2	
15-Apr-15	Sunny	Moderate	15:48	6.1	Surface	1.0	22.6 22.8	22.7	7.7 7.7	7.7	32.5 32.4	32.4	99.8 100.8	100.3	7.2 7.2	7.2	7.2	7.3 7.1	7.2	7.1	6.0 6.4	6.2	5.5
					Middle	3.1	22.3 22.3	22.3	7.7 7.7	7.7	32.6 32.5	32.6	98.6 98.4	98.5	7.1 7.1	7.1		7.2 7.1	7.2		5.3 4.1	4.7	
					Bottom	5.1	22.3 22.2	22.3	7.7 7.7	7.7	32.6 32.5	32.6	99.5 99.0	99.3	7.2 7.1	7.1	7.1	7.0 7.0	7.0		5.5 5.8	5.7	
17-Apr-15	Sunny	Moderate	17:36	6.4	Surface	1.0	23.4 23.4	23.4	7.5 7.5	7.5	30.7 30.7	30.7	111.0 112.9	112.0	7.9 8.1	8.0	8.0	6.4 6.4	6.4	6.5	5.0 5.3	5.2	6.3
					Middle	3.2	23.4 23.4	23.4	7.5 7.5	7.5	30.8 30.8	30.8	110.0 112.7	111.4	7.8 8.0	7.9		6.5 6.6	6.6		3.9 4.7	4.3	
					Bottom	5.4	23.4 23.4	23.4	7.4 7.5	7.5	30.8 30.8	30.8	104.3 111.4	107.9	7.4 8.0	7.7	7.7	6.6 6.5	6.6		8.1 10.4	9.3	
20-Apr-15	Cloudy	Moderate	07:12	6.2	Surface	1.0	23.6 23.6	23.6	7.4 7.4	7.4	28.3 28.1	28.2	89.7 90.4	90.1	6.5 6.5	6.5	6.5	8.3 8.1	8.2	8.3	3.2 2.6	2.9	3.3
					Middle	3.1	23.6 23.6	23.6	7.3 7.4	7.4	28.5 28.5	28.5	90.6 89.8	90.2	6.5 6.5	6.5		8.4 8.4	8.4		3.1 3.4	3.3	
					Bottom	5.2	23.6 23.6	23.6	7.4 7.3	7.3	28.5 28.5	28.5	90.0 91.8	90.9	6.5 6.6	6.5	6.5	8.3 8.5	8.4		3.6 3.8	3.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)16 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:41	6.3	Surface	1.0	23.6 23.6	23.6	8.1 8.0	8.1	28.1 28.1	28.1	85.5 85.8	85.7	6.2 6.2	6.2	6.2	6.7 6.5	6.6	7.1	5.0 5.0	5.0	4.8
					Middle	3.2	23.6 23.6	23.6	8.1 8.0	8.0	28.4 28.4	28.4	85.7 85.3	85.5	6.2 6.2	6.2		6.9 7.3	7.1		4.8 4.2	4.5	
					Bottom	5.3	23.6 23.6	23.6	8.1 7.9	8.0	28.4 28.5	28.5	85.7 85.5	85.6	6.2 6.2	6.2	6.2	7.6 7.3	7.5		5.0 4.8	4.9	
24-Apr-15	Sunny	Moderate	10:14	6.2	Surface	1.0	23.7 23.7	23.7	8.1 8.0	8.1	28.9 28.9	28.9	87.2 88.5	87.9	6.3 6.3	6.3	6.3	5.3 5.4	5.4	5.6	3.9 3.3	3.6	4.3
					Middle	3.1	23.5 23.5	23.5	8.1 8.0	8.0	29.0 29.0	29.0	88.9 86.9	87.9	6.4 6.3	6.3		5.6 5.6	5.6		3.2 3.6	3.4	
					Bottom	5.2	23.5 23.5	23.5	8.1 7.9	8.0	29.0 28.9	29.0	91.6 87.4	89.5	6.6 6.3	6.4	6.4	5.7 5.6	5.7		5.8 5.9	5.9	
27-Apr-15	Sunny	Moderate	13:17	6.2	Surface	1.0	25.1 25.3	25.2	8.1 8.0	8.1	30.0 28.9	29.5	124.8 118.7	121.8	8.7 8.3	8.5	8.2	4.2 4.0	4.1	4.7	0.9 1.1	1.0	1.6
					Middle	3.1	24.8 24.7	24.7	8.1 8.0	8.0	30.7 30.7	30.7	115.7 107.7	111.7	8.1 7.5	7.8		4.5 4.2	4.4		2.0 2.1	2.1	
					Bottom	5.2	24.6 24.3	24.5	8.1 7.9	8.0	31.1 31.4	31.2	107.5 102.7	105.1	7.5 7.2	7.3	7.3	5.8 5.6	5.7		1.6 1.8	1.7	
29-Apr-15	Sunny	Moderate	15:56	6.4	Surface	1.0	26.2 26.2	26.2	8.5 8.4	8.5	26.1 26.1	26.1	152.6 151.5	152.1	10.7 10.6	10.6	10.2	7.8 7.7	7.8	7.8	2.5 3.5	3.0	3.4
					Middle	3.2	26.0 26.0	26.0	8.4 8.4	8.4	26.2 26.3	26.2	140.3 136.4	138.4	9.8 9.6	9.7		7.7 7.7	7.7		4.0 3.4	3.7	
					Bottom	5.4	25.7 25.6	25.7	8.3 8.3	8.3	29.0 28.9	28.9	137.9 135.4	136.7	9.6 9.4	9.5	9.5	7.8 7.8	7.8		2.6 4.4	3.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS5 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	13:08	8.7	Surface	1.0	22.5 22.5	22.5	8.1 8.1	8.1	27.4 27.4	27.4	103.8 103.5	103.7	7.7 7.7	7.7	7.6	7.1 6.7	6.9	6.9	5.0 6.3	5.7	5.9
					Middle	4.4	22.4 22.4	22.4	8.0 8.0	8.0	27.6 27.8	27.7	101.4 102.3	101.9	7.5 7.6	7.5		6.7 6.8	6.8		5.7 6.9	6.3	
					Bottom	7.7	22.5 22.4	22.4	8.0 8.0	8.0	27.7 27.8	27.7	99.8 102.9	101.4	7.4 7.6	7.5	7.5	6.9 6.9	6.9		6.4 5.2	5.8	
3-Apr-15	Cloudy	Moderate	13:18	8.4	Surface	1.0	22.9 22.9	22.9	7.4 7.4	7.4	27.5 27.5	27.5	97.8 97.6	97.7	7.2 7.2	7.2	7.2	7.7 7.7	7.7	7.9	5.0 6.0	5.5	4.7
					Middle	4.2	22.9 22.9	22.9	7.4 7.4	7.4	27.5 27.5	27.5	97.4 97.3	97.4	7.2 7.2	7.2		8.2 7.9	8.1		4.6 3.6	4.1	
					Bottom	7.4	22.9 22.9	22.9	7.4 7.4	7.4	27.5 27.5	27.5	97.1 96.9	97.0	7.1 7.1	7.1	7.1	7.8 7.7	7.8		5.3 3.7	4.5	
6-Apr-15	Sunny	Moderate	12:42	8.6	Surface	1.0	24.2 24.2	24.2	7.4 7.4	7.4	26.7 26.8	26.8	94.5 93.9	94.2	6.8 6.8	6.8	6.8	5.9 5.9	5.9	5.9	4.5 3.7	4.1	3.8
					Middle	4.3	24.2 24.2	24.2	7.4 7.4	7.4	26.8 26.8	26.8	93.7 95.0	94.4	6.8 6.8	6.8		6.1 5.9	6.0		4.1 4.0	4.1	
					Bottom	7.6	24.2 24.2	24.2	7.4 7.4	7.4	26.8 26.8	26.8	95.7 93.9	94.8	6.9 6.8	6.8	6.8	5.8 6.0	5.9		3.6 2.7	3.2	
8-Apr-15	Cloudy	Moderate	14:11	8.6	Surface	1.0	23.8 23.7	23.8	7.3 7.2	7.3	27.4 27.4	27.4	93.8 93.6	93.7	6.8 6.8	6.8	6.8	9.6 9.6	9.6	9.8	7.3 5.9	6.6	6.2
					Middle	4.3	23.7 23.7	23.7	7.2 7.3	7.2	27.6 27.6	27.6	93.5 94.0	93.8	6.8 6.8	6.8		9.6 10.1	9.9		5.3 6.3	5.8	
					Bottom	7.6	23.7 23.7	23.7	7.2 7.2	7.2	27.6 27.5	27.6	94.4 93.8	94.1	6.8 6.8	6.8	6.8	10.0 9.5	9.8		6.5 5.8	6.2	
10-Apr-15	Cloudy	Moderate	15:28	8.4	Surface	1.0	22.0 22.0	22.0	8.0 8.0	8.0	29.2 29.2	29.2	87.2 87.4	87.3	6.4 6.5	6.5	6.5	9.4 9.7	9.6	10.0	10.4 11.1	10.8	10.9
					Middle	4.2	22.0 22.0	22.0	8.0 8.0	8.0	29.4 29.4	29.4	87.4 87.2	87.3	6.5 6.4	6.4		9.3 9.9	9.6		11.9 10.9	11.4	
					Bottom	7.4	22.0 22.0	22.0	8.0 8.0	8.0	29.6 29.5	29.6	87.6 87.3	87.5	6.5 6.4	6.4	6.4	11.1 10.6	10.9		9.8 11.0	10.4	
13-Apr-15	Sunny	Moderate	09:34	8.4	Surface	1.0	21.6 21.6	21.6	7.6 7.6	7.6	30.4 30.3	30.3	85.5 87.4	86.5	6.3 6.5	6.4	6.4	6.5 6.5	6.5	7.1	2.6 3.2	2.9	3.2
					Middle	4.2	21.6 21.6	21.6	7.5 7.6	7.6	30.5 30.5	30.5	88.9 85.5	87.2	6.6 6.3	6.4		7.3 7.3	7.3		3.1 3.4	3.3	
					Bottom	7.4	21.7 21.7	21.7	7.6 7.5	7.5	30.8 30.7	30.8	86.1 92.9	89.5	6.3 6.8	6.6	6.6	7.6 7.4	7.5		3.2 3.3	3.3	
15-Apr-15	Sunny	Moderate	11:49	8.6	Surface	1.0	22.4 22.4	22.4	7.8 7.8	7.8	30.9 30.9	30.9	93.9 94.1	94.0	6.8 6.8	6.8	6.8	9.5 9.9	9.7	9.9	7.6 6.9	7.3	9.0
					Middle	4.3	22.3 22.4	22.3	7.8 7.8	7.8	30.9 30.9	30.9	93.7 94.0	93.9	6.8 6.8	6.8		9.6 10.3	10.0		9.6 9.7	9.7	
					Bottom	7.6	22.3 22.3	22.3	7.8 7.7	7.8	30.9 31.0	31.0	93.8 94.6	94.2	6.8 6.9	6.8	6.8	9.6 10.3	10.0		9.7 10.2	10.0	
17-Apr-15	Sunny	Moderate	12:54	8.7	Surface	1.0	23.1 23.1	23.1	7.5 7.5	7.5	29.4 29.4	29.4	105.2 105.4	105.3	7.6 7.6	7.6	7.6	9.7 10.2	10.0	9.9	7.6 9.0	8.3	8.7
					Middle	4.4	23.1 23.1	23.1	7.5 7.5	7.5	29.4 29.4	29.4	104.4 105.2	104.8	7.6 7.6	7.6		9.6 10.0	9.8		8.2 9.4	8.8	
					Bottom	7.7	23.2 23.1	23.1	7.4 7.5	7.5	29.5 29.4	29.4	103.5 105.1	104.3	7.5 7.6	7.5	7.5	9.7 10.0	9.9		9.7 8.0	8.9	
20-Apr-15	Cloudy	Moderate	12:50	8.7	Surface	1.0	23.7 23.7	23.7	7.5 7.4	7.4	30.3 30.3	30.3	88.6 89.0	88.8	6.3 6.3	6.3	6.3	14.5 14.4	14.5	14.4	10.6 12.6	11.6	12.0
					Middle	4.4	23.7 23.7	23.7	7.4 7.5	7.4	30.3 30.3	30.3	88.8 88.4	88.6	6.3 6.3	6.3		14.1 14.5	14.3		12.4 12.0	12.2	
					Bottom	7.7	23.7 23.7	23.7	7.4 7.4	7.4	30.3 30.3	30.3	88.4 88.9	88.7	6.3 6.3	6.3	6.3	14.3 14.3	14.3		12.4 12.0	12.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS5 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:08	8.9	Surface	1.0	23.7 23.7	23.7	8.0 8.0	8.0	32.0 32.0	32.0	85.1 85.1	85.1	6.0 6.0	6.0	6.0	9.7 8.9	9.3	9.5	6.2 6.5	6.4	6.4
					Middle	4.5	23.6 23.7	23.6	8.0 8.0	8.0	32.1 32.0	32.0	84.9 84.9	84.9	6.0 6.0	6.0		9.3 9.5	9.4		5.1 5.7	5.4	
					Bottom	7.9	23.7 23.6	23.6	8.0 8.0	8.0	32.0 32.1	32.0	85.0 85.0	85.0	6.0 6.0	6.0	6.0	9.5 10.2	9.9		7.7 6.9	7.3	
24-Apr-15	Sunny	Moderate	15:29	8.4	Surface	1.0	23.7 23.7	23.7	8.0 8.0	8.0	34.4 34.4	34.4	89.1 88.8	89.0	6.2 6.2	6.2	6.2	8.6 8.5	8.6	8.6	5.6 6.7	6.2	6.7
					Middle	4.2	23.7 23.7	23.7	8.0 8.0	8.0	34.4 34.5	34.4	88.9 89.1	89.0	6.2 6.2	6.2		8.5 8.8	8.7		7.5 7.4	7.5	
					Bottom	7.4	23.7 23.7	23.7	8.0 8.0	8.0	34.6 34.4	34.5	88.9 88.6	88.8	6.2 6.2	6.2	6.2	8.6 8.6	8.6		6.4 6.6	6.5	
27-Apr-15	Sunny	Moderate	09:56	8.4	Surface	1.0	24.5 24.6	24.5	8.0 8.0	8.0	30.6 30.3	30.5	108.5 108.8	108.7	7.6 7.6	7.6	7.6	4.1 4.1	4.1	4.0	1.8 1.8	1.8	1.8
					Middle	4.2	24.5 24.5	24.5	8.0 8.0	8.0	30.8 30.9	30.8	107.3 108.4	107.9	7.5 7.6	7.6		4.1 4.0	4.1		1.8 1.8	1.8	
					Bottom	7.4	24.5 24.5	24.5	8.0 8.0	8.0	30.8 30.8	30.8	105.3 110.2	107.8	7.4 7.7	7.5	7.5	3.7 4.1	3.9		1.6 2.0	1.8	
29-Apr-15	Sunny	Moderate	11:47	9.0	Surface	1.0	25.9 25.8	25.9	8.3 8.3	8.3	26.7 26.8	26.7	125.2 123.9	124.6	8.8 8.7	8.7	8.7	5.5 5.4	5.5	5.6	2.7 2.2	2.5	2.9
					Middle	4.5	25.7 25.7	25.7	8.3 8.3	8.3	27.2 27.1	27.1	121.3 123.3	122.3	8.5 8.6	8.6		5.6 5.5	5.6		2.9 2.2	2.6	
					Bottom	8.0	25.7 25.7	25.7	8.3 8.2	8.2	27.6 28.0	27.8	123.7 119.8	121.8	8.6 8.4	8.5	8.5	5.5 5.6	5.6		3.1 3.9	3.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:02	8.8	Surface	1.0	22.7 22.7	22.7	8.2 8.0	8.1	29.1 29.3	29.2	103.3 102.4	102.9	7.5 7.5	7.5	7.5	5.7 5.9	5.8	6.0	4.0 5.1	4.6	4.9
					Middle	4.4	22.6 22.6	22.6	8.0 8.0	8.0	29.4 29.4	29.4	102.3 102.1	102.2	7.5 7.4	7.5		5.8 6.3	6.1		4.8 5.4	5.1	
					Bottom	7.8	22.6 22.6	22.6	8.0 8.0	8.0	29.4 29.3	29.4	102.5 102.6	102.6	7.5 7.5	7.5	7.5	6.3 5.7	6.0		4.1 5.8	5.0	
3-Apr-15	Cloudy	Moderate	17:57	8.4	Surface	1.0	23.0 23.0	23.0	7.4 7.4	7.4	28.2 28.1	28.1	96.4 96.5	96.5	7.0 7.0	7.0	7.0	6.2 6.0	6.1	6.4	2.8 2.7	2.8	2.6
					Middle	4.2	23.1 23.1	23.1	7.4 7.4	7.4	28.2 28.2	28.2	96.1 96.3	96.2	7.0 7.0	7.0		6.5 6.1	6.3		2.6 2.1	2.4	
					Bottom	7.4	23.1 23.1	23.1	7.4 7.4	7.4	28.2 28.2	28.2	95.9 96.0	96.0	7.0 7.0	7.0	7.0	6.9 6.7	6.8		2.8 2.6	2.7	
6-Apr-15	Sunny	Moderate	08:55	8.7	Surface	1.0	24.1 24.1	24.1	7.3 7.3	7.3	26.8 26.8	26.8	93.4 93.2	93.3	6.7 6.7	6.7	6.7	6.7 6.7	6.7	6.6	4.4 4.2	4.3	4.6
					Middle	4.4	24.1 24.1	24.1	7.3 7.4	7.3	26.8 26.8	26.8	93.6 93.0	93.3	6.8 6.7	6.7		6.6 6.5	6.6		3.5 3.4	3.5	
					Bottom	7.7	24.1 24.1	24.1	7.3 7.3	7.3	26.8 26.8	26.8	94.2 93.1	93.7	6.8 6.7	6.8	6.8	6.6 6.6	6.6		6.7 5.4	6.1	
8-Apr-15	Cloudy	Moderate	09:13	9.0	Surface	1.0	24.1 24.1	24.1	7.4 7.4	7.4	26.3 26.3	26.3	94.0 94.0	94.0	6.8 6.8	6.8	6.8	5.9 6.0	6.0	5.9	7.0 6.6	6.8	6.8
					Middle	4.5	24.1 24.1	24.1	7.4 7.4	7.4	26.4 26.4	26.4	93.7 93.3	93.5	6.8 6.7	6.8		5.8 5.9	5.9		8.0 6.2	7.1	
					Bottom	8.0	24.1 24.1	24.1	7.4 7.4	7.4	26.4 26.5	26.5	93.9 93.0	93.5	6.8 6.7	6.7	6.7	5.9 5.8	5.9		6.5 6.2	6.4	
10-Apr-15	Fine	Moderate	10:39	8.4	Surface	1.0	22.1 22.1	22.1	8.2 8.1	8.2	28.1 28.0	28.1	85.3 85.0	85.2	6.3 6.3	6.3	6.3	6.7 6.7	6.7	6.7	7.2 7.2	7.2	8.2
					Middle	4.2	22.1 22.1	22.1	8.2 8.2	8.2	28.0 28.1	28.1	85.1 85.2	85.2	6.3 6.3	6.3		6.8 6.7	6.8		8.2 8.5	8.4	
					Bottom	7.4	22.1 22.1	22.1	8.2 8.1	8.2	28.1 28.1	28.1	85.2 84.9	85.1	6.3 6.3	6.3	6.3	6.6 6.7	6.7		10.1 8.0	9.1	
13-Apr-15	Sunny	Moderate	12:11	8.3	Surface	1.0	21.9 22.0	21.9	7.2 7.2	7.2	31.7 31.8	31.7	87.5 86.9	87.2	6.4 6.3	6.4	6.4	7.7 7.3	7.5	7.8	3.2 2.8	3.0	3.3
					Middle	4.2	21.8 21.7	21.8	7.2 7.2	7.2	31.9 32.1	32.0	86.9 86.5	86.7	6.3 6.3	6.3		7.6 7.7	7.7		2.9 3.9	3.4	
					Bottom	7.3	21.7 21.7	21.7	7.2 7.2	7.2	32.2 32.2	32.2	87.4 86.9	87.2	6.4 6.3	6.4	6.4	8.0 8.3	8.2		3.9 2.9	3.4	
15-Apr-15	Sunny	Moderate	14:50	8.4	Surface	1.0	22.9 22.9	22.9	7.7 7.7	7.7	33.1 33.0	33.1	95.6 96.0	95.8	6.8 6.8	6.8	6.8	6.5 6.5	6.5	6.8	5.2 4.1	4.7	4.8
					Middle	4.2	22.9 22.8	22.9	7.7 7.8	7.7	33.2 33.1	33.2	95.5 95.2	95.4	6.8 6.8	6.8		6.8 6.7	6.8		3.8 4.4	4.1	
					Bottom	7.4	22.8 22.8	22.8	7.7 7.7	7.7	33.2 33.2	33.2	95.3 95.5	95.4	6.8 6.8	6.8	6.8	7.2 6.9	7.1		5.8 5.2	5.5	
17-Apr-15	Sunny	Moderate	16:51	8.7	Surface	1.0	23.6 23.6	23.6	7.3 7.2	7.3	31.7 31.7	31.7	111.9 111.9	111.9	7.9 7.9	7.9	7.9	8.6 8.5	8.6	8.6	7.1 6.5	6.8	7.2
					Middle	4.4	23.5 23.5	23.5	7.3 7.3	7.3	31.8 31.8	31.8	111.7 111.7	111.7	7.9 7.9	7.9		8.6 8.5	8.6		6.4 8.6	7.5	
					Bottom	7.7	23.5 23.5	23.5	7.4 7.3	7.3	31.8 31.8	31.8	111.3 111.6	111.5	7.9 7.9	7.9	7.9	8.6 8.7	8.7		6.9 7.8	7.4	
20-Apr-15	Cloudy	Moderate	07:57	8.3	Surface	1.0	23.8 23.8	23.8	7.5 7.5	7.5	29.5 29.5	29.5	88.9 88.3	88.6	6.3 6.3	6.3	6.3	6.9 6.9	6.9	6.9	6.0 6.1	6.1	4.9
					Middle	4.2	23.8 23.8	23.8	7.4 7.5	7.5	29.6 29.6	29.6	89.4 88.3	88.9	6.4 6.3	6.3		6.9 6.8	6.9		4.3 4.1	4.2	
					Bottom	7.3	23.8 23.8	23.8	7.5 7.4	7.4	29.6 29.6	29.6	88.5 90.6	89.6	6.3 6.5	6.4	6.4	6.9 6.8	6.9		4.5 4.2	4.4	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:43	8.7	Surface	1.0	23.7 23.7	23.7	8.0 7.9	8.0	28.8 28.8	28.8	85.2 86.5	85.9	6.1 6.2	6.2	6.2	8.5 8.4	8.5	8.5	6.2 6.8	6.5	7.6
					Middle	4.4	23.7 23.7	23.7	7.9 8.0	8.0	28.8 28.8	28.8	85.2 87.7	86.5	6.1 6.3	6.2		8.6 8.4	8.5		8.1 7.1	7.6	
					Bottom	7.7	23.7 23.7	23.7	8.0 7.9	7.9	28.8 28.8	28.8	85.6 88.9	87.3	6.1 6.4	6.3	6.3	8.5 8.7	8.6		8.3 9.3	8.8	
24-Apr-15	Sunny	Moderate	11:01	8.7	Surface	1.0	23.3 23.3	23.3	8.0 7.9	8.0	29.4 29.4	29.4	86.9 86.7	86.8	6.3 6.2	6.2	6.2	6.5 6.5	6.5	6.6	4.7 3.9	4.3	4.7
					Middle	4.4	23.2 23.3	23.3	7.9 8.0	8.0	29.5 29.5	29.5	86.3 86.5	86.4	6.2 6.2	6.2		6.7 6.7	6.7		5.4 4.7	5.1	
					Bottom	7.7	23.2 23.3	23.3	8.0 7.9	7.9	29.5 29.5	29.5	87.8 87.1	87.5	6.3 6.3	6.3	6.3	6.7 6.7	6.7		3.6 5.7	4.7	
27-Apr-15	Sunny	Moderate	12:21	8.2	Surface	1.0	25.1 25.0	25.1	8.0 7.9	8.0	29.8 29.8	29.8	120.1 120.1	120.1	8.4 8.4	8.4	8.3	4.3 4.2	4.3	4.1	3.3 3.9	3.6	3.4
					Middle	4.1	24.8 24.8	24.8	7.9 8.0	8.0	30.5 30.5	30.5	118.0 118.0	118.0	8.2 8.2	8.2		4.0 4.2	4.1		3.7 3.1	3.4	
					Bottom	7.2	24.8 24.8	24.8	8.0 7.9	7.9	30.6 30.5	30.5	120.8 120.4	120.6	8.4 8.4	8.4	8.4	3.9 4.1	4.0		3.2 3.1	3.2	
29-Apr-15	Sunny	Moderate	15:11	8.8	Surface	1.0	26.3 26.3	26.3	8.3 8.3	8.3	27.7 27.7	27.7	126.4 127.0	126.7	8.7 8.8	8.8	8.7	6.5 6.4	6.5	6.5	3.3 3.5	3.4	3.2
					Middle	4.4	25.9 25.9	25.9	8.3 8.3	8.3	28.1 28.2	28.1	122.9 123.1	123.0	8.5 8.5	8.5		6.6 6.5	6.6		2.6 3.6	3.1	
					Bottom	7.8	25.9 25.9	25.9	8.3 8.3	8.3	28.2 28.2	28.2	124.6 125.8	125.2	8.6 8.7	8.7	8.7	6.3 6.5	6.4		3.2 3.2	3.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:44	3.4	Surface	1.0	22.5 22.5	22.5	8.1 8.1	8.1	27.6 27.6	27.6	110.2 110.2	110.2	8.1 8.1	8.1	8.1	6.0 6.1	6.1	6.3	3.0 2.5	2.8	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.5 22.5	22.5	7.9 8.0	8.0	27.6 27.7	27.6	110.0 110.2	110.1	8.1 8.1	8.1	8.1	6.2 6.5	6.4		4.3 3.4	3.9	
3-Apr-15	Cloudy	Moderate	13:01	3.2	Surface	1.0	23.3 23.3	23.3	7.4 7.4	7.4	27.4 27.5	27.5	103.0 103.3	103.2	7.5 7.5	7.5	7.5	5.5 5.7	5.6	6.3	1.3 2.0	1.7	1.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.3 23.3	23.3	7.4 7.4	7.4	27.4 27.4	27.4	102.8 103.0	102.9	7.5 7.5	7.5	7.5	6.7 7.0	6.9		1.3 1.9	1.6	
6-Apr-15	Sunny	Moderate	12:55	3.2	Surface	1.0	24.1 24.1	24.1	7.4 7.4	7.4	26.0 26.1	26.0	98.1 98.1	98.1	7.1 7.1	7.1	7.1	4.2 4.2	4.2	4.2	2.2 2.3	2.3	2.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.1 24.0	24.1	7.4 7.4	7.4	26.3 26.2	26.3	97.9 98.0	98.0	7.1 7.1	7.1	7.1	4.1 4.2	4.2		2.5 2.1	2.3	
8-Apr-15	Cloudy	Moderate	14:24	3.3	Surface	1.0	23.9 23.9	23.9	7.4 7.2	7.3	26.7 26.7	26.7	100.3 101.1	100.7	7.3 7.3	7.3	7.3	7.7 7.6	7.7	7.7	6.1 5.1	5.6	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.9 23.9	23.9	7.3 7.1	7.2	26.7 26.7	26.7	103.5 100.9	102.2	7.5 7.3	7.4	7.4	7.8 7.6	7.7		4.6 5.6	5.1	
10-Apr-15	Cloudy	Moderate	15:44	3.4	Surface	1.0	22.2 22.2	22.2	8.1 8.1	8.1	28.6 28.6	28.6	88.5 92.1	90.3	6.5 6.8	6.7	6.7	10.5 9.7	10.1	11.4	4.1 5.8	5.0	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.2 22.2	22.2	8.1 8.1	8.1	28.7 28.7	28.7	85.9 85.2	85.6	6.3 6.3	6.3	6.3	12.1 13.1	12.6		11.0 11.7	11.4	
13-Apr-15	Sunny	Moderate	09:20	3.0	Surface	1.0	21.6 21.5	21.5	7.4 7.4	7.4	29.6 29.6	29.6	86.6 87.1	86.9	6.4 6.5	6.4	6.4	5.2 5.5	5.4	5.5	2.2 2.5	2.4	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	21.7 21.7	21.7	7.4 7.5	7.4	29.8 29.9	29.9	89.0 86.9	88.0	6.6 6.4	6.5	6.5	5.4 5.5	5.5		2.5 3.0	2.8	
15-Apr-15	Sunny	Moderate	11:31	3.3	Surface	1.0	22.2 22.3	22.3	7.8 7.8	7.8	30.3 30.3	30.3	99.4 99.5	99.5	7.3 7.3	7.3	7.3	5.5 5.1	5.3	5.1	4.0 5.1	4.6	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.3 22.2	22.3	7.8 7.8	7.8	30.4 30.4	30.4	99.3 99.5	99.4	7.3 7.3	7.3	7.3	5.0 4.6	4.8		5.1 3.4	4.3	
17-Apr-15	Sunny	Moderate	12:41	3.2	Surface	1.0	23.5 23.5	23.5	7.5 7.4	7.5	29.7 29.7	29.7	118.4 114.9	116.7	8.5 8.2	8.4	8.4	7.4 7.5	7.5	7.5	5.1 5.4	5.3	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.4 23.4	23.4	7.5 7.4	7.4	29.7 29.7	29.7	117.0 108.9	113.0	8.4 7.8	8.1	8.1	7.6 7.3	7.5		4.1 4.9	4.5	
20-Apr-15	Cloudy	Moderate	13:04	3.3	Surface	1.0	24.0 24.0	24.0	7.4 7.4	7.4	29.4 29.4	29.4	90.4 90.4	90.4	6.4 6.4	6.4	6.4	5.5 5.5	5.5	5.5	2.6 2.8	2.7	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.9 23.9	23.9	7.4 7.4	7.4	29.6 29.7	29.7	90.5 91.5	91.0	6.4 6.5	6.5	6.5	5.5 5.5	5.5		2.7 3.1	2.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:24	3.4	Surface	1.0	24.2 24.1	24.2	8.0 7.9	8.0	31.0 31.0	31.0	91.1 92.3	91.7	6.4 6.5	6.4	6.4	6.8 6.7	6.8	6.7	5.6 5.2	5.4	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.0 24.0	24.0	7.9 7.8	7.9	31.1 31.1	31.1	93.7 91.4	92.6	6.6 6.4	6.5	6.5	6.3 6.6	6.5		3.8 3.6	3.7	
24-Apr-15	Sunny	Moderate	15:59	3.5	Surface	1.0	23.6 23.5	23.5	8.0 7.9	8.0	32.9 32.9	32.9	94.1 91.0	92.6	6.6 6.4	6.5	6.5	8.4 8.3	8.4	8.4	7.9 8.1	8.0	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.5 23.4	23.4	7.9 7.8	7.9	32.9 33.0	33.0	92.4 88.5	90.5	6.5 6.2	6.4	6.4	8.3 8.4	8.4		9.0 9.3	9.2	
27-Apr-15	Sunny	Moderate	09:38	3.4	Surface	1.0	24.2 24.2	24.2	8.0 7.9	8.0	30.5 30.5	30.5	111.6 110.1	110.9	7.9 7.8	7.8	7.8	4.1 4.1	4.1	4.3	2.1 1.5	1.8	1.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.2 24.2	24.2	7.9 7.8	7.9	30.6 30.5	30.5	108.0 111.4	109.7	7.6 7.9	7.7	7.7	4.6 4.3	4.5		1.3 1.3	1.3	
29-Apr-15	Sunny	Moderate	11:26	3.3	Surface	1.0	25.6 25.6	25.6	8.3 8.4	8.3	26.0 26.0	26.0	152.0 158.0	155.0	10.7 11.2	10.9	10.9	4.6 4.8	4.7	4.8	0.8 1.5	1.2	1.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	25.6 25.7	25.6	8.3 8.2	8.3	26.4 26.9	26.6	156.5 151.5	154.0	11.0 10.7	10.9	10.9	4.8 4.8	4.8		0.9 1.4	1.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS7 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:21	3.5	Surface	1.0	22.8 22.8	22.8	8.1 8.2	8.2	29.1 29.1	29.1	104.6 102.9	103.8	7.6 7.5	7.6	7.6	12.8 13.0	12.9	12.7	13.6 13.3	13.5	13.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	22.8 22.8	22.8	8.0 8.0	8.0	29.1 29.1	29.1	101.3 103.9	102.6	7.4 7.6	7.5	7.5	12.1 12.8	12.5		12.2 13.4	12.8	
3-Apr-15	Cloudy	Moderate	18:13	3.2	Surface	1.0	23.3 23.3	23.3	7.5 7.5	7.5	27.4 27.4	27.4	100.6 100.9	100.8	7.4 7.4	7.4	7.4	5.6 5.5	5.6	5.7	2.0 1.7	1.9	1.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.3 23.3	23.3	7.5 7.5	7.5	27.6 27.6	27.6	100.8 100.5	100.7	7.4 7.4	7.4	7.4	5.8 5.7	5.8		1.8 1.5	1.7	
6-Apr-15	Sunny	Moderate	08:40	3.1	Surface	1.0	24.0 23.9	23.9	7.3 7.3	7.3	25.8 25.9	25.8	97.0 96.6	96.8	7.1 7.0	7.0	7.0	4.6 4.5	4.6	4.7	2.3 2.6	2.5	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	23.8 23.8	23.8	7.3 7.3	7.3	26.1 26.2	26.1	96.6 96.9	96.8	7.0 7.0	7.0	7.0	4.7 4.6	4.7		2.3 3.1	2.7	
8-Apr-15	Cloudy	Moderate	08:58	3.3	Surface	1.0	23.9 23.9	23.9	7.4 7.4	7.4	26.3 26.3	26.3	96.3 95.8	96.1	7.0 7.0	7.0	7.0	6.6 6.5	6.6	6.7	5.4 5.9	5.7	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.9 23.9	23.9	7.4 7.4	7.4	26.3 26.3	26.3	96.0 97.8	96.9	7.0 7.1	7.0	7.0	6.6 6.7	6.7		6.0 4.9	5.5	
10-Apr-15	Fine	Moderate	10:21	3.2	Surface	1.0	22.1 22.1	22.1	8.2 8.2	8.2	28.4 28.3	28.4	87.8 88.1	88.0	6.5 6.5	6.5	6.5	9.0 8.6	8.8	8.7	7.6 7.6	7.6	8.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.1 22.1	22.1	8.2 8.2	8.2	28.5 28.4	28.5	87.7 88.1	87.9	6.5 6.5	6.5	6.5	8.3 8.8	8.6		9.5 8.8	9.2	
13-Apr-15	Sunny	Moderate	12:49	3.3	Surface	1.0	21.9 21.9	21.9	7.2 7.3	7.3	30.9 30.9	30.9	90.7 88.9	89.8	6.6 6.5	6.6	6.6	9.6 9.8	9.7	9.7	4.5 5.1	4.8	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.0 21.9	21.9	7.3 7.3	7.3	31.0 30.8	30.9	90.0 95.0	92.5	6.6 7.0	6.8	6.8	9.5 9.8	9.7		5.4 4.4	4.9	
15-Apr-15	Sunny	Moderate	15:08	3.2	Surface	1.0	22.9 22.7	22.8	7.6 7.6	7.6	32.4 32.5	32.4	103.6 102.0	102.8	7.4 7.3	7.3	7.3	8.2 7.9	8.1	9.3	3.9 5.5	4.7	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.6 22.5	22.5	7.6 7.6	7.6	32.4 32.5	32.4	102.3 100.7	101.5	7.3 7.2	7.3	7.3	10.6 10.4	10.5		4.5 6.5	5.5	
17-Apr-15	Sunny	Moderate	17:06	3.2	Surface	1.0	24.2 24.1	24.1	7.4 7.4	7.4	31.6 31.5	31.6	129.2 126.0	127.6	9.1 8.8	8.9	8.9	14.1 14.3	14.2	14.3	11.1 10.0	10.6	10.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.1 24.1	24.1	7.4 7.4	7.4	31.5 31.6	31.5	119.1 128.1	123.6	8.4 9.0	8.7	8.7	14.3 14.2	14.3		11.5 10.1	10.8	
20-Apr-15	Cloudy	Moderate	07:44	3.2	Surface	1.0	23.7 23.7	23.7	7.4 7.4	7.4	29.1 29.1	29.1	89.4 89.9	89.7	6.4 6.4	6.4	6.4	6.2 6.3	6.3	6.4	5.7 6.4	6.1	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.8 23.7	23.7	7.4 7.4	7.4	29.3 29.2	29.3	91.4 89.7	90.6	6.5 6.4	6.5	6.5	6.4 6.4	6.4		5.4 6.9	6.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS7 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:22	3.5	Surface	1.0	23.6 23.7	23.7	8.0 8.0	8.0	28.6 28.6	28.6	94.5 89.8	92.2	6.8 6.5	6.6	6.6	7.4 7.9	7.7	8.1	7.4 6.5	7.0	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.6 23.7	23.6	8.0 8.0	8.0	28.7 28.7	28.7	97.8 91.2	94.5	7.0 6.6	6.8	6.8	8.4 8.3	8.4		9.6 8.9	9.3	
24-Apr-15	Sunny	Moderate	10:44	3.3	Surface	1.0	23.2 23.3	23.2	8.0 8.0	8.0	29.2 29.2	29.2	90.1 91.4	90.8	6.5 6.6	6.6	6.6	8.5 8.6	8.6	8.6	7.3 7.5	7.4	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.2 23.2	23.2	8.0 8.0	8.0	29.2 29.2	29.2	93.7 90.4	92.1	6.8 6.5	6.7	6.7	8.5 8.4	8.5		8.6 8.3	8.5	
27-Apr-15	Sunny	Moderate	12:38	3.2	Surface	1.0	24.8 24.8	24.8	8.0 8.0	8.0	30.7 30.7	30.7	116.8 125.0	120.9	8.1 8.7	8.4	8.4	3.6 3.6	3.6	3.7	2.2 1.7	2.0	1.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.7 24.7	24.7	8.0 8.0	8.0	30.6 30.5	30.6	110.3 108.6	109.5	7.7 7.6	7.6	7.6	3.6 3.9	3.8		2.2 1.4	1.8	
29-Apr-15	Sunny	Moderate	15:25	3.3	Surface	1.0	26.3 26.2	26.2	8.4 8.4	8.4	26.5 26.6	26.5	145.6 152.5	149.1	10.2 10.7	10.4	10.4	4.6 4.6	4.6	4.7	- 0.5	0.3	0.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	26.2 26.2	26.2	8.3 8.4	8.4	27.7 28.0	27.9	144.8 152.8	148.8	10.1 10.6	10.4	10.4	4.8 4.7	4.8		0.7 -	0.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS8 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:14	3.8	Surface	1.0	22.3 22.4	22.4	8.1 8.1	8.1	27.6 27.7	27.6	103.8 105.2	104.5	7.7 7.8	7.7	7.7	6.1 6.1	6.1	6.3	4.5 5.4	5.0	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.4 22.4	22.4	8.0 7.9	8.0	27.9 28.0	27.9	105.1 101.0	103.1	7.8 7.5	7.6	7.6	6.5 6.2	6.4		5.3 5.3	5.3	
3-Apr-15	Cloudy	Moderate	12:33	3.7	Surface	1.0	22.9 22.9	22.9	7.4 7.4	7.4	26.6 26.6	26.6	104.3 104.1	104.2	7.7 7.7	7.7	7.7	5.0 5.3	5.2	5.3	1.1 0.7	0.9	1.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.9 22.9	22.9	7.4 7.4	7.4	27.1 27.2	27.1	104.5 104.4	104.5	7.7 7.7	7.7	7.7	5.3 5.5	5.4		1.9 1.1	1.5	
6-Apr-15	Sunny	Moderate	13:17	4.1	Surface	1.0	23.9 23.7	23.8	7.5 7.4	7.5	25.3 25.3	25.3	96.2 95.8	96.0	7.0 7.0	7.0	7.0	4.5 4.5	4.5	4.6	2.6 2.6	2.6	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	23.6 23.8	23.7	7.4 7.4	7.4	26.2 25.5	25.8	96.0 95.7	95.9	7.0 7.0	7.0	7.0	4.6 4.6	4.6		3.0 3.6	3.3	
8-Apr-15	Cloudy	Moderate	14:48	4.0	Surface	1.0	23.5 23.5	23.5	7.4 7.4	7.4	27.3 27.3	27.3	93.4 93.9	93.7	6.8 6.8	6.8	6.8	6.4 6.2	6.3	6.3	4.8 5.0	4.9	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.5 23.3	23.4	7.4 7.4	7.4	27.4 27.6	27.5	93.5 93.6	93.6	6.8 6.8	6.8	6.8	6.3 6.3	6.3		5.2 5.8	5.5	
10-Apr-15	Cloudy	Moderate	16:14	3.7	Surface	1.0	22.2 22.2	22.2	8.0 8.0	8.0	28.9 28.9	28.9	85.6 85.4	85.5	6.3 6.3	6.3	6.3	8.6 8.5	8.6	9.1	9.4 9.0	9.2	9.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.2 22.1	22.2	8.0 8.0	8.0	29.1 29.0	29.0	86.4 85.8	86.1	6.4 6.3	6.3	6.3	9.3 9.6	9.5		8.9 8.5	8.7	
13-Apr-15	Sunny	Moderate	08:55	4.0	Surface	1.0	21.7 21.7	21.7	7.5 7.5	7.5	30.1 30.1	30.1	83.9 84.8	84.4	6.2 6.3	6.2	6.2	7.8 7.7	7.8	7.8	3.4 2.8	3.1	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	21.8 21.7	21.7	7.5 7.5	7.5	30.5 30.4	30.5	84.8 84.9	84.9	6.2 6.3	6.2	6.2	7.8 7.7	7.8		2.1 2.9	2.5	
15-Apr-15	Sunny	Moderate	10:57	3.6	Surface	1.0	22.2 22.1	22.2	7.6 7.5	7.6	30.5 30.6	30.6	98.1 98.4	98.3	7.2 7.2	7.2	7.2	5.2 5.5	5.4	5.9	2.9 2.6	2.8	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	22.1 22.1	22.1	7.5 7.5	7.5	30.6 30.7	30.6	98.0 98.9	98.5	7.2 7.2	7.2	7.2	6.1 6.5	6.3		2.8 3.8	3.3	
17-Apr-15	Sunny	Moderate	12:15	4.0	Surface	1.0	23.5 23.5	23.5	7.3 7.4	7.3	29.4 29.4	29.4	112.3 113.9	113.1	8.1 8.2	8.1	8.1	7.7 7.5	7.6	7.6	4.0 4.6	4.3	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.3 23.2	23.3	7.3 7.3	7.3	29.6 29.8	29.7	113.1 109.0	111.1	8.1 7.9	8.0	8.0	7.6 7.5	7.6		6.2 4.8	5.5	
20-Apr-15	Cloudy	Moderate	13:28	3.9	Surface	1.0	23.7 23.7	23.7	7.2 7.2	7.2	29.3 29.3	29.3	88.2 88.3	88.3	6.3 6.3	6.3	6.3	4.7 4.7	4.7	4.7	4.1 3.5	3.8	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.7 23.8	23.8	7.2 7.2	7.2	29.6 29.6	29.6	88.5 88.0	88.3	6.3 6.3	6.3	6.3	4.7 4.7	4.7		4.4 3.0	3.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS8 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:55	3.6	Surface	1.0	23.9 24.0	23.9	8.1 8.1	8.1	30.8 30.7	30.7	86.5 86.8	86.7	6.1 6.1	6.1	6.1	6.6 7.0	6.8	7.1	5.3 6.0	5.7	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.9 23.8	23.9	8.1 8.1	8.1	30.8 30.9	30.8	86.4 86.6	86.5	6.1 6.1	6.1	6.1	7.1 7.5	7.3		6.4 7.0	6.7	
24-Apr-15	Sunny	Moderate	16:23	4.2	Surface	1.0	24.6 24.6	24.6	8.1 8.1	8.1	32.6 32.5	32.5	99.1 99.3	99.2	6.9 6.9	6.9	6.9	8.5 8.8	8.7	8.7	6.7 7.8	7.3	7.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	24.6 24.4	24.5	8.1 8.1	8.1	32.4 32.4	32.4	99.7 99.7	99.7	6.9 6.9	6.9	6.9	8.7 8.6	8.7		8.6 7.5	8.1	
27-Apr-15	Sunny	Moderate	09:09	3.6	Surface	1.0	24.3 24.3	24.3	8.1 8.1	8.1	31.0 31.0	31.0	104.6 103.4	104.0	7.3 7.3	7.3	7.3	13.4 14.1	13.8	14.0	19.0 18.5	18.8	18.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	24.3 24.3	24.3	8.1 8.1	8.1	31.0 31.0	31.0	104.1 102.2	103.2	7.3 7.2	7.2	7.2	13.8 14.5	14.2		18.0 18.1	18.1	
29-Apr-15	Sunny	Moderate	10:33	4.0	Surface	1.0	25.9 25.9	25.9	8.3 8.4	8.4	26.4 26.4	26.4	144.7 144.9	144.8	10.1 10.2	10.1	10.1	8.3 8.8	8.6	8.8	2.4 2.2	2.3	2.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	25.8 25.9	25.9	8.3 8.3	8.3	27.4 27.9	27.6	145.4 146.2	145.8	10.2 10.2	10.2	10.2	8.9 8.8	8.9		2.3 2.2	2.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS8 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:51	3.7	Surface	1.0	22.4 22.5	22.5	8.1 8.1	8.1	29.0 29.0	29.0	104.8 105.6	105.2	7.7 7.7	7.7	7.7	12.5 12.2	12.4	13.2	10.6 9.8	10.2	10.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.1	22.2	8.1 8.1	8.1	29.0 29.3	29.2	104.8 104.5	104.7	7.7 7.7	7.7	7.7	14.1 13.6	13.9		9.6 10.3	10.0	
3-Apr-15	Cloudy	Moderate	18:43	3.8	Surface	1.0	23.0 23.0	23.0	7.5 7.5	7.5	27.5 27.5	27.5	100.3 100.0	100.2	7.4 7.3	7.3	7.3	11.2 11.5	11.4	11.9	6.1 7.1	6.6	9.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.0 23.0	23.0	7.5 7.5	7.5	27.7 27.7	27.7	100.9 101.2	101.1	7.4 7.4	7.4	7.4	12.4 12.1	12.3		12.8 13.6	13.2	
6-Apr-15	Sunny	Moderate	08:17	4.1	Surface	1.0	23.6 23.6	23.6	7.3 7.3	7.3	25.0 25.1	25.1	95.3 95.0	95.2	7.0 7.0	7.0	7.0	5.2 5.3	5.3	5.3	3.0 3.7	3.4	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	23.5 23.5	23.5	7.3 7.2	7.3	25.4 25.4	25.4	95.0 95.9	95.5	7.0 7.0	7.0	7.0	5.1 5.3	5.2		5.7 3.9	4.8	
8-Apr-15	Cloudy	Moderate	08:33	4.0	Surface	1.0	23.2 23.2	23.2	7.2 7.3	7.3	27.1 27.1	27.1	92.9 91.6	92.3	6.8 6.7	6.8	6.8	7.3 7.4	7.4	7.4	5.9 6.6	6.3	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.2 23.2	23.2	7.2 7.3	7.3	27.1 27.1	27.1	95.8 92.0	93.9	7.0 6.7	6.9	6.9	7.2 7.5	7.4		5.9 5.5	5.7	
10-Apr-15	Fine	Moderate	09:53	3.8	Surface	1.0	21.9 21.9	21.9	7.9 7.8	7.9	28.2 28.2	28.2	91.0 92.7	91.9	6.8 6.9	6.8	6.8	5.7 5.7	5.7	5.8	7.5 7.3	7.4	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	21.9 21.9	21.9	7.9 8.0	7.9	28.2 28.2	28.2	91.6 94.8	93.2	6.8 7.1	6.9	6.9	5.8 5.9	5.9		9.0 8.0	8.5	
13-Apr-15	Sunny	Moderate	13:11	4.1	Surface	1.0	22.0 22.0	22.0	7.4 7.4	7.4	31.1 31.1	31.1	87.1 87.2	87.2	6.4 6.4	6.4	6.4	10.4 10.3	10.4	10.3	4.6 5.0	4.8	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.0 21.9	21.9	7.4 7.4	7.4	31.3 31.4	31.4	87.3 87.8	87.6	6.4 6.4	6.4	6.4	10.1 10.2	10.2		2.9 3.7	3.3	
15-Apr-15	Sunny	Moderate	15:40	3.3	Surface	1.0	23.1 22.9	23.0	7.7 7.6	7.7	32.4 32.5	32.5	103.0 101.7	102.4	7.3 7.3	7.3	7.3	12.5 11.1	11.8	12.1	9.3 9.1	9.2	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.0 22.6	22.8	7.7 7.6	7.7	32.4 32.6	32.5	102.4 100.8	101.6	7.3 7.2	7.3	7.3	12.1 12.7	12.4		10.5 10.3	10.4	
17-Apr-15	Sunny	Moderate	17:30	4.1	Surface	1.0	23.3 23.2	23.3	7.6 7.6	7.6	31.2 31.2	31.2	107.9 107.8	107.9	7.7 7.7	7.7	7.7	20.5 20.1	20.3	20.3	13.0 15.3	14.2	16.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	23.2 23.3	23.3	7.6 7.6	7.6	31.2 31.2	31.2	107.8 107.8	107.8	7.7 7.7	7.7	7.7	20.2 20.3	20.3		19.0 19.5	19.3	
20-Apr-15	Cloudy	Moderate	07:19	4.0	Surface	1.0	23.6 23.6	23.6	7.3 7.3	7.3	28.3 28.3	28.3	90.3 91.5	90.9	6.5 6.6	6.6	6.6	9.3 9.5	9.4	9.4	6.2 5.6	5.9	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.6 23.6	23.6	7.3 7.2	7.3	28.3 28.3	28.3	91.0 93.4	92.2	6.6 6.7	6.6	6.6	9.3 9.4	9.4		7.0 8.4	7.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS8 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:52	3.8	Surface	1.0	23.6 23.6	23.6	8.0 7.9	8.0	28.4 28.4	28.4	88.5 93.1	90.8	6.4 6.7	6.5	6.5	9.8 9.3	9.6	9.7	9.3 9.3	9.3	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.6 23.6	23.6	7.9 8.0	8.0	28.4 28.4	28.4	95.9 89.7	92.8	6.9 6.5	6.7	6.7	9.5 9.9	9.7		9.1 8.5	8.8	
24-Apr-15	Sunny	Moderate	10:21	4.2	Surface	1.0	23.5 23.5	23.5	8.0 7.9	8.0	29.0 29.0	29.0	86.6 86.0	86.3	6.2 6.2	6.2	6.2	7.7 7.7	7.7	7.7	8.1 8.5	8.3	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.4 23.5	23.4	7.9 8.0	8.0	29.0 29.0	29.0	87.5 86.3	86.9	6.3 6.2	6.3	6.3	7.7 7.6	7.7		7.4 8.5	8.0	
27-Apr-15	Sunny	Moderate	13:09	3.5	Surface	1.0	24.6 24.6	24.6	8.0 7.9	8.0	30.9 31.0	30.9	122.8 120.2	121.5	8.6 8.4	8.5	8.5	4.4 4.5	4.5	4.9	2.1 2.5	2.3	2.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.5 24.6	24.5	7.9 8.0	8.0	31.3 31.0	31.1	120.1 122.0	121.1	8.4 8.5	8.4	8.4	5.5 5.0	5.3		2.4 2.1	2.3	
29-Apr-15	Sunny	Moderate	15:48	4.1	Surface	1.0	26.2 26.2	26.2	8.6 8.6	8.6	25.5 25.6	25.6	154.1 151.0	152.6	10.8 10.6	10.7	10.7	8.9 8.9	8.9	8.9	7.5 7.0	7.3	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	26.2 26.3	26.2	8.5 8.5	8.5	27.6 27.9	27.7	149.3 154.4	151.9	10.4 10.7	10.5	10.5	8.8 8.8	8.8		8.4 8.6	8.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS17 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{o}C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:50	10.6	Surface	1.0	22.1 22.2	22.2	8.0 7.9	8.0	27.0 27.1	27.0	103.5 102.9	103.2	7.7 7.7	7.7	7.5	5.4 5.2	5.3	6.1	3.8 4.4	4.1	5.4
					Middle	5.3	21.7 21.5	21.6	7.9 7.9	7.9	28.6 29.1	28.8	97.6 98.8	98.2	7.3 7.4	7.3		6.2 6.4	6.3		4.9 5.3	5.1	
					Bottom	9.6	21.5 21.5	21.5	7.9 7.8	7.9	29.2 29.0	29.1	100.3 97.6	99.0	7.5 7.3	7.4	7.4	6.4 6.7	6.6		6.2 7.6	6.9	
3-Apr-15	Cloudy	Moderate	12:18	10.8	Surface	1.0	22.7 22.7	22.7	7.4 7.4	7.4	26.3 26.3	26.3	99.5 100.0	99.8	7.4 7.4	7.4	7.4	6.7 6.8	6.8	7.3	1.2 1.3	1.3	1.2
					Middle	5.4	22.3 22.3	22.3	7.4 7.5	7.4	26.6 26.6	26.6	97.7 97.8	97.8	7.3 7.3	7.3		7.3 7.3	7.3		1.3 0.9	1.1	
					Bottom	9.8	22.1 22.0	22.0	7.4 7.4	7.4	27.4 27.3	27.3	97.2 97.3	97.3	7.2 7.3	7.2	7.2	7.8 7.7	7.8		1.0 1.5	1.3	
6-Apr-15	Sunny	Moderate	13:30	10.0	Surface	1.0	23.2 23.1	23.1	7.4 7.4	7.4	26.9 27.0	27.0	90.6 91.2	90.9	6.6 6.7	6.7	6.7	14.5 14.1	14.3	14.4	10.4 11.3	10.9	11.9
					Middle	5.0	22.8 22.8	22.8	7.4 7.3	7.4	27.7 27.7	27.7	90.1 91.1	90.6	6.6 6.7	6.6		14.4 14.4	14.4		12.2 12.9	12.6	
					Bottom	9.0	22.9 22.8	22.8	7.4 7.3	7.3	27.7 28.0	27.9	90.1 91.7	90.9	6.6 6.7	6.7	6.7	14.6 14.2	14.4		11.2 12.9	12.1	
8-Apr-15	Cloudy	Moderate	15:01	10.3	Surface	1.0	22.8 22.8	22.8	7.4 7.4	7.4	29.3 29.3	29.3	88.4 87.9	88.2	6.4 6.4	6.4	6.4	12.6 12.4	12.5	12.4	9.9 9.7	9.8	9.1
					Middle	5.2	22.6 22.5	22.5	7.4 7.4	7.4	30.1 30.6	30.4	87.5 86.5	87.0	6.4 6.3	6.3		12.3 12.3	12.3		9.4 9.3	9.4	
					Bottom	9.3	22.5 22.5	22.5	7.4 7.4	7.4	30.7 30.7	30.7	88.0 86.7	87.4	6.4 6.3	6.3	6.3	12.2 12.4	12.3		7.9 8.2	8.1	
10-Apr-15	Cloudy	Moderate	16:32	9.2	Surface	1.0	22.0 22.0	22.0	7.9 7.9	7.9	29.4 29.4	29.4	82.9 84.4	83.7	6.1 6.2	6.2	6.1	8.9 8.5	8.7	9.7	9.0 9.1	9.1	8.3
					Middle	4.6	21.9 21.9	21.9	7.9 7.9	7.9	30.8 30.8	30.8	82.1 78.8	80.5	6.0 5.8	5.9		9.3 9.2	9.3		8.5 7.1	7.8	
					Bottom	8.2	22.0 21.9	22.0	8.1 8.0	8.0	31.0 31.0	31.0	83.7 85.4	84.6	6.1 6.3	6.2	6.2	11.3 10.6	11.0		7.8 8.0	7.9	
13-Apr-15	Sunny	Moderate	08:42	10.4	Surface	1.0	21.8 21.8	21.8	7.4 7.4	7.4	30.7 30.8	30.7	85.6 86.6	86.1	6.3 6.4	6.3	6.3	8.3 8.2	8.3	8.4	3.9 2.1	3.0	3.2
					Middle	5.2	21.8 21.8	21.8	7.4 7.4	7.4	31.3 31.4	31.4	88.0 85.5	86.8	6.4 6.3	6.3		8.5 8.3	8.4		3.0 3.3	3.2	
					Bottom	9.4	21.8 21.8	21.8	7.4 7.4	7.4	31.4 31.4	31.4	85.7 91.2	88.5	6.3 6.7	6.5	6.5	8.3 8.4	8.4		3.4 3.1	3.3	
15-Apr-15	Sunny	Moderate	10:36	11.2	Surface	1.0	22.2 22.2	22.2	7.5 7.6	7.5	31.0 30.9	30.9	94.2 93.5	93.9	6.9 6.8	6.8	6.8	7.8 8.2	8.0	8.1	5.7 6.5	6.1	6.2
					Middle	5.6	22.2 22.2	22.2	7.5 7.5	7.5	31.0 31.0	31.0	93.1 94.3	93.7	6.8 6.9	6.8		8.4 7.9	8.2		6.5 6.4	6.5	
					Bottom	10.2	22.2 22.2	22.2	7.5 7.5	7.5	31.0 31.1	31.1	93.4 95.0	94.2	6.8 6.9	6.9	6.9	8.1 8.1	8.1		5.6 6.6	6.1	
17-Apr-15	Sunny	Moderate	12:02	10.6	Surface	1.0	23.1 23.1	23.1	7.2 7.2	7.2	29.0 29.0	29.0	104.2 103.5	103.9	7.6 7.5	7.5	7.5	4.3 4.5	4.4	4.6	4.0 3.5	3.8	4.4
					Middle	5.3	22.9 23.0	22.9	7.2 7.2	7.2	29.1 29.1	29.1	103.0 101.1	102.1	7.5 7.3	7.4		4.6 4.7	4.7		4.6 5.4	5.0	
					Bottom	9.6	22.9 22.7	22.8	7.2 7.2	7.2	29.1 29.4	29.3	103.8 98.8	101.3	7.5 7.2	7.4	7.4	4.6 4.7	4.7		4.1 4.8	4.5	
20-Apr-15	Cloudy	Moderate	13:41	10.3	Surface	1.0	23.7 23.7	23.7	7.2 7.1	7.2	28.9 28.9	28.9	89.3 89.7	89.5	6.4 6.4	6.4	6.4	6.4 6.5	6.5	6.4	3.3 2.5	2.9	3.7
					Middle	5.2	23.6 23.6	23.6	7.2 7.2	7.2	29.0 29.0	29.0	88.9 88.9	88.9	6.4 6.4	6.4		6.3 6.3	6.3		4.3 4.7	4.5	
					Bottom	9.3	23.6 23.5	23.6	7.1 7.2	7.2	29.0 29.1	29.0	89.0 89.0	89.0	6.4 6.4	6.4	6.4	6.2 6.4	6.3		3.6 3.5	3.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS17 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:17	11.1	Surface	1.0	23.9 23.9	23.9	8.0 8.0	8.0	30.8 30.8	30.8	84.7 85.1	84.9	6.0 6.0	6.0	6.0	10.7 10.6	10.7	11.3	6.9 7.6	7.3	7.1
					Middle	5.6	23.7 23.7	23.7	8.0 8.0	8.0	31.0 31.0	31.0	83.8 84.3	84.1	5.9 6.0	6.0		12.2 12.1	12.2		6.7 6.4	6.6	
					Bottom	10.1	23.5 23.7	23.6	8.0 8.0	8.0	31.2 31.1	31.2	84.5 84.4	84.5	6.0 6.0	6.0	6.0	11.3 10.9	11.1		6.9 7.9	7.4	
24-Apr-15	Sunny	Moderate	16:38	10.1	Surface	1.0	23.8 23.7	23.7	8.0 8.0	8.0	32.1 32.1	32.1	87.2 87.4	87.3	6.1 6.2	6.1	6.1	6.3 6.2	6.3	6.1	5.8 6.5	6.2	6.7
					Middle	5.1	23.6 23.6	23.6	8.0 8.0	8.0	32.5 32.6	32.6	86.3 87.4	86.9	6.1 6.2	6.1		6.1 5.9	6.0		6.7 6.6	6.7	
					Bottom	9.1	23.6 23.6	23.6	8.0 8.0	8.0	32.7 32.7	32.7	86.5 88.1	87.3	6.1 6.2	6.1	6.1	6.2 6.0	6.1		7.5 6.7	7.1	
27-Apr-15	Sunny	Moderate	08:47	11.0	Surface	1.0	24.2 24.3	24.2	8.0 8.0	8.0	30.7 30.7	30.7	96.3 99.1	97.7	6.8 7.0	6.9	6.8	5.3 5.6	5.5	5.1	4.2 4.5	4.4	4.4
					Middle	5.5	24.0 24.0	24.0	8.0 8.0	8.0	32.3 32.0	32.2	93.9 95.3	94.6	6.6 6.7	6.6		4.8 4.7	4.8		5.0 4.2	4.6	
					Bottom	10.0	24.1 24.0	24.1	8.0 8.0	8.0	32.0 32.6	32.3	97.6 95.0	96.3	6.8 6.6	6.7	6.7	5.3 4.7	5.0		4.4 4.1	4.3	
29-Apr-15	Sunny	Moderate	10:19	10.5	Surface	1.0	25.2 25.2	25.2	8.2 8.2	8.2	24.6 24.4	24.5	112.0 111.2	111.6	8.0 8.0	8.0	7.5	4.2 4.4	4.3	4.5	2.6 2.6	2.6	2.7
					Middle	5.3	24.3 24.3	24.3	8.0 8.0	8.0	30.5 30.7	30.6	106.7 93.7	100.2	7.5 6.6	7.0		4.5 4.5	4.5		2.6 2.5	2.6	
					Bottom	9.5	24.3 24.0	24.1	8.0 7.9	8.0	31.7 32.8	32.3	100.3 95.2	97.8	7.1 6.7	6.9	6.9	4.5 4.6	4.6		3.1 2.6	2.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS17 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:17	10.3	Surface	1.0	22.3 22.4	22.3	8.1 8.2	8.2	28.8 28.6	28.7	103.9 104.6	104.3	7.7 7.7	7.7	7.6	6.2 5.8	6.0	6.2	2.7 2.9	2.8	3.7
					Middle	5.2	21.8 21.8	21.8	8.0 8.0	8.0	29.5 29.5	29.5	101.7 100.6	101.2	7.5 7.5	7.5		6.1 6.3	6.2		4.1 3.9	4.0	
					Bottom	9.3	21.7 21.7	21.7	8.0 8.0	8.0	29.7 29.6	29.6	103.2 102.3	102.8	7.7 7.6	7.6	7.6	6.4 6.1	6.3		4.9 3.5	4.2	
3-Apr-15	Cloudy	Moderate	19:01	11.0	Surface	1.0	22.9 22.9	22.9	7.5 7.5	7.5	26.4 26.3	26.4	103.5 102.6	103.1	7.6 7.6	7.6	7.6	5.6 5.8	5.7	6.7	1.4 1.1	1.3	1.5
					Middle	5.5	22.9 23.0	23.0	7.5 7.4	7.5	27.2 27.2	27.2	101.7 101.6	101.7	7.5 7.5	7.5		6.8 6.6	6.7		1.9 1.3	1.6	
					Bottom	10.0	22.5 22.5	22.5	7.4 7.5	7.5	27.6 27.7	27.7	99.1 99.4	99.3	7.3 7.3	7.3	7.3	7.5 7.8	7.7		1.3 1.8	1.6	
6-Apr-15	Sunny	Moderate	08:04	10.2	Surface	1.0	23.3 23.2	23.3	7.2 7.2	7.2	26.4 26.6	26.5	92.9 92.9	92.9	6.8 6.8	6.8	6.8	5.5 5.7	5.6	5.8	4.2 3.4	3.8	4.1
					Middle	5.1	23.0 22.9	22.9	7.2 7.2	7.2	27.2 27.4	27.3	92.2 91.7	92.0	6.8 6.7	6.7		6.1 5.9	6.0		3.3 4.6	4.0	
					Bottom	9.2	23.0 22.9	23.0	7.2 7.1	7.2	27.5 27.8	27.6	92.0 93.4	92.7	6.7 6.8	6.8	6.8	5.6 6.0	5.8		3.8 5.0	4.4	
8-Apr-15	Cloudy	Moderate	08:20	10.6	Surface	1.0	23.2 23.1	23.2	7.2 7.2	7.2	27.7 27.5	27.6	88.3 88.5	88.4	6.4 6.5	6.5	6.5	6.4 6.0	6.2	6.8	4.8 4.7	4.8	4.0
					Middle	5.3	23.1 23.1	23.1	7.2 7.2	7.2	28.1 28.1	28.1	87.9 87.9	87.9	6.4 6.4	6.4		7.1 6.9	7.0		3.4 3.6	3.5	
					Bottom	9.6	23.1 23.0	23.0	7.2 7.2	7.2	28.1 28.3	28.2	88.1 88.2	88.2	6.4 6.4	6.4	6.4	7.2 7.3	7.3		3.5 3.9	3.7	
10-Apr-15	Fine	Moderate	09:30	10.8	Surface	1.0	22.0 22.0	22.0	7.9 7.9	7.9	28.5 28.5	28.5	88.2 90.8	89.5	6.5 6.7	6.6	6.7	5.0 5.0	5.0	5.0	8.3 9.0	8.7	8.1
					Middle	5.4	22.1 22.1	22.1	7.8 7.9	7.9	28.9 29.1	29.0	93.3 88.9	91.1	6.9 6.6	6.7		5.0 5.1	5.1		8.2 6.8	7.5	
					Bottom	9.8	22.1 22.1	22.1	7.9 7.8	7.8	29.1 29.1	29.1	89.5 90.0	89.8	6.6 6.6	6.6	6.6	5.0 4.8	4.9		8.3 8.1	8.2	
13-Apr-15	Sunny	Moderate	13:26	10.5	Surface	1.0	22.4 22.4	22.4	7.5 7.4	7.4	31.1 30.9	31.0	89.3 91.8	90.6	6.5 6.7	6.6	6.4	9.5 9.7	9.6	9.7	2.0 2.9	2.5	2.5
					Middle	5.3	21.8 21.8	21.8	7.5 7.5	7.5	32.6 32.5	32.5	85.1 85.7	85.4	6.2 6.2	6.2		9.8 9.3	9.6		1.8 2.1	2.0	
					Bottom	9.5	21.8 21.8	21.8	7.4 7.5	7.5	32.7 32.6	32.6	86.3 87.1	86.7	6.3 6.3	6.3	6.3	9.9 9.6	9.8		3.6 2.6	3.1	
15-Apr-15	Sunny	Moderate	15:56	11.0	Surface	1.0	22.7 22.7	22.7	7.7 7.7	7.7	32.5 32.4	32.4	94.9 100.2	97.6	6.8 7.2	7.0	6.9	6.5 6.8	6.7	7.2	5.3 5.2	5.3	5.5
					Middle	5.5	22.3 22.2	22.2	7.7 7.7	7.7	32.7 32.8	32.7	95.9 90.5	93.2	6.9 6.5	6.7		6.6 7.2	6.9		5.0 5.6	5.3	
					Bottom	10.0	22.2 22.1	22.2	7.7 7.7	7.7	32.9 32.9	32.9	94.4 96.4	95.4	6.8 7.0	6.9	6.9	8.2 7.8	8.0		6.1 5.6	5.9	
17-Apr-15	Sunny	Moderate	17:44	10.9	Surface	1.0	23.3 23.2	23.3	7.4 7.4	7.4	29.9 29.9	29.9	108.8 106.5	107.7	7.8 7.7	7.7	7.8	6.2 6.2	6.2	6.4	2.9 3.8	3.4	4.4
					Middle	5.5	23.3 23.3	23.3	7.5 7.5	7.5	30.4 30.6	30.5	110.8 109.1	110.0	7.9 7.8	7.9		6.6 6.4	6.5		3.5 5.1	4.3	
					Bottom	9.9	23.3 23.3	23.3	7.5 7.5	7.5	30.9 30.6	30.8	110.8 108.2	109.5	7.9 7.7	7.8	7.8	6.5 6.7	6.6		5.2 5.7	5.5	
20-Apr-15	Cloudy	Moderate	07:05	10.3	Surface	1.0	23.6 23.6	23.6	7.3 7.4	7.4	28.2 28.3	28.3	89.9 89.4	89.7	6.5 6.5	6.5	6.5	11.2 11.2	11.2	11.2	4.7 4.7	4.7	4.4
					Middle	5.2	23.6 23.6	23.6	7.4 7.3	7.3	28.5 28.5	28.5	89.1 89.9	89.5	6.4 6.5	6.5		11.1 11.2	11.2		5.0 3.8	4.4	
					Bottom	9.3	23.6 23.6	23.6	7.2 7.3	7.3	28.5 28.5	28.5	90.8 89.4	90.1	6.5 6.4	6.5	6.5	11.1 11.1	11.1		4.8 3.1	4.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS17 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:32	10.8	Surface	1.0	23.6 23.6	23.6	8.1 8.0	8.1	28.1 28.1	28.1	88.1 86.0	87.1	6.4 6.2	6.3	6.3	7.4 6.8	7.1	7.8	6.8 7.1	7.0	6.5
					Middle	5.4	23.5 23.5	23.5	8.1 8.0	8.0	28.6 28.5	28.6	85.7 89.8	87.8	6.2 6.5	6.3		8.3 8.5	8.4		7.1 6.2	6.7	
					Bottom	9.8	23.5 23.6	23.5	8.1 7.9	8.0	28.5 28.6	28.5	85.5 86.4	86.0	6.2 6.2	6.2	6.2	8.1 7.8	8.0		5.9 5.4	5.7	
24-Apr-15	Sunny	Moderate	10:07	10.5	Surface	1.0	23.5 23.5	23.5	8.1 8.0	8.1	28.8 28.8	28.8	84.4 84.2	84.3	6.1 6.1	6.1	6.1	5.3 5.4	5.4	5.6	4.9 5.4	5.2	5.5
					Middle	5.3	23.4 23.4	23.4	8.1 8.0	8.0	29.0 29.0	29.0	84.0 83.7	83.9	6.1 6.0	6.0		5.7 5.9	5.8		5.9 4.0	5.0	
					Bottom	9.5	23.4 23.4	23.4	8.1 7.9	8.0	29.2 29.1	29.2	84.1 84.2	84.2	6.1 6.1	6.1	6.1	5.7 5.7	5.7		7.1 5.6	6.4	
27-Apr-15	Sunny	Moderate	13:26	11.2	Surface	1.0	25.1 24.9	25.0	8.1 8.0	8.1	30.0 30.0	30.0	118.2 110.6	114.4	8.2 7.7	8.0	7.8	6.3 5.9	6.1	6.0	2.7 2.1	2.4	2.3
					Middle	5.6	24.3 24.5	24.4	8.1 8.0	8.0	31.5 31.2	31.3	108.1 105.7	106.9	7.6 7.4	7.5		6.2 6.6	6.4		2.6 2.8	2.7	
					Bottom	10.2	24.6 24.9	24.8	8.1 7.9	8.0	31.5 31.2	31.4	124.8 120.8	122.8	8.7 8.4	8.5	8.5	5.4 5.6	5.5		1.3 2.3	1.8	
29-Apr-15	Sunny	Moderate	16:02	10.7	Surface	1.0	26.0 26.0	26.0	8.4 8.4	8.4	26.6 26.3	26.5	135.2 134.6	134.9	9.4 9.4	9.4	8.8	5.5 5.4	5.5	5.5	2.4 3.6	3.0	3.4
					Middle	5.4	25.3 25.2	25.3	8.3 8.2	8.3	27.8 27.9	27.8	116.7 113.1	114.9	8.2 8.0	8.1		5.5 5.2	5.4		2.8 4.1	3.5	
					Bottom	9.7	24.7 24.8	24.8	8.2 8.2	8.2	30.7 30.5	30.6	121.1 113.4	117.3	8.4 7.9	8.2	8.2	5.5 5.4	5.5		3.9 3.5	3.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.7	-	-		-	-	
					Middle	0.8	22.5 22.4	22.5	8.1 8.1	8.1	27.4 27.5	27.5	104.8 103.6	104.2	7.8 7.7	7.7		6.8 6.9	6.9	6.9	6.3 6.9	6.6	6.6
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
3-Apr-15	Cloudy	Moderate	-	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-		-	-	
					Middle	0.6	22.9 22.9	22.9	7.4 7.4	7.4	27.5 27.5	27.5	97.5 97.7	97.6	7.2 7.2	7.2		7.2 7.0	7.1	7.1	3.5 4.3	3.9	3.9
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
6-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-		-	-	
					Middle	0.8	24.2 24.2	24.2	7.5 7.5	7.5	26.8 26.8	26.8	93.3 93.4	93.4	6.7 6.7	6.7		6.0 6.0	6.0	6.0	2.9 2.9	2.9	2.9
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
8-Apr-15	Cloudy	Moderate	-	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	7.4	-	-		-	-	
					Middle	0.9	23.8 23.8	23.8	7.4 7.3	7.3	27.2 27.3	27.3	100.2 103.7	102.0	7.2 7.5	7.4		7.5 7.5	7.5	7.5	6.1 4.1	5.1	5.1
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
10-Apr-15	Cloudy	Moderate	-	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-		-	-	
					Middle	0.9	22.0 22.0	22.0	8.0 7.9	7.9	29.3 29.3	29.3	91.1 92.8	92.0	6.7 6.9	6.8		8.9 8.9	8.9	8.9	10.6 10.7	10.7	10.7
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
13-Apr-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-		-	-	
					Middle	0.7	21.6 21.6	21.6	7.7 7.7	7.7	30.3 30.3	30.3	85.3 85.6	85.5	6.3 6.3	6.3		5.5 5.7	5.6	5.6	3.7 3.2	3.5	3.5
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
15-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-		-	-	
					Middle	0.8	22.4 22.4	22.4	7.9 7.9	7.9	30.9 30.9	30.9	94.1 94.3	94.2	6.8 6.8	6.8		9.2 9.1	9.2	9.2	8.7 8.3	8.5	8.5
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
17-Apr-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.6	-	-		-	-	
					Middle	0.7	23.1 23.1	23.1	7.6 7.6	7.6	29.4 29.4	29.4	105.7 105.8	105.8	7.6 7.6	7.6		9.5 9.7	9.6	9.6	7.3 7.4	7.4	7.4
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
20-Apr-15	Cloudy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-		-	-	
					Middle	0.7	23.7 23.7	23.7	7.2 7.3	7.3	30.4 30.4	30.4	91.1 89.9	90.5	6.5 6.4	6.4		12.8 13.0	12.9	12.9	10.6 12.6	11.6	11.6
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-	8.5	-	-	6.1
					Middle	0.8	23.7 23.7	23.7	7.9 7.9	7.9	31.3 31.4	31.4	89.0 88.1	88.6	6.3 6.2	6.3		8.6 8.3	8.5		5.7 6.4	6.1	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
24-Apr-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.2	-	-	7.2	-	-	8.3
					Middle	0.7	23.8 23.8	23.8	7.9 7.9	7.9	36.0 35.6	35.8	90.2 90.1	90.2	6.2 6.2	6.2		7.2 7.1	7.2		8.8 7.8	8.3	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
27-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-	3.8	-	-	1.8
					Middle	0.8	24.7 24.7	24.7	7.9 7.9	7.9	29.9 30.0	30.0	118.3 118.7	118.5	8.3 8.3	8.3		4.0 3.6	3.8		1.3 2.2	1.8	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
29-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.7	-	-	5.3	-	-	3.6
					Middle	0.8	25.8 25.8	25.8	8.2 8.2	8.2	26.3 26.3	26.3	124.7 122.6	123.7	8.8 8.6	8.7		5.2 5.3	5.3		3.1 4.1	3.6	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.4	-	-		-	-	
					Middle	0.8	22.8 22.7	22.8	8.0 8.1	8.0	28.9 29.0	29.0	101.2 102.8	102.0	7.4 7.5	7.4		5.2 5.2	5.2	5.2	4.1 4.2	4.2	4.2
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
3-Apr-15	Cloudy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.0	-	-		-	-	
					Middle	0.7	23.0 23.0	23.0	7.4 7.4	7.4	28.2 28.2	28.2	94.7 95.5	95.1	7.0 7.0	7.0		6.8 7.0	6.9	6.9	2.4 2.5	2.5	2.5
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
6-Apr-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-		-	-	
					Middle	0.7	24.2 24.2	24.2	7.5 7.5	7.5	26.8 26.8	26.8	93.4 93.4	93.4	6.7 6.7	6.7		6.3 6.3	6.3	6.3	3.7 3.7	3.7	3.7
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
8-Apr-15	Cloudy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-		-	-	
					Middle	0.7	24.1 24.1	24.1	7.4 7.4	7.4	26.3 26.3	26.3	95.3 95.3	95.3	6.9 6.9	6.9		6.2 6.0	6.1	6.1	5.9 5.2	5.6	5.6
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
10-Apr-15	Fine	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-		-	-	
					Middle	0.7	22.1 22.1	22.1	8.2 8.1	8.1	28.0 28.0	28.0	85.2 85.3	85.3	6.3 6.3	6.3		6.5 6.5	6.5	6.5	9.4 9.0	9.2	9.2
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
13-Apr-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-		-	-	
					Middle	0.7	21.9 21.9	21.9	7.4 7.4	7.4	31.4 31.6	31.5	92.4 90.8	91.6	6.7 6.6	6.7		5.6 5.6	5.6	5.6	3.7 3.0	3.4	3.4
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
15-Apr-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-		-	-	
					Middle	0.8	23.2 23.0	23.1	7.7 7.7	7.7	32.5 32.5	32.5	98.0 96.6	97.3	6.9 6.9	6.9		6.1 6.3	6.2	6.2	6.1 4.7	5.4	5.4
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
17-Apr-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.8	-	-		-	-	
					Middle	0.7	23.6 23.6	23.6	7.4 7.3	7.3	31.4 31.3	31.3	110.8 108.9	109.9	7.9 7.7	7.8		7.5 7.5	7.5	7.5	7.9 6.5	7.2	7.2
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
20-Apr-15	Cloudy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-		-	-	
					Middle	0.7	23.8 23.8	23.8	7.6 7.6	7.6	29.5 29.5	29.5	88.1 88.2	88.2	6.3 6.3	6.3		6.1 6.2	6.2	6.2	3.5 3.7	3.6	3.6
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	-	1.6	Surface	-	- -	-	- -	-	- -	-	- -	-	- -	-	6.1	- -	-	7.9	- -	-	7.7
					Middle	0.8	23.7 23.7	23.7	8.1 8.1	8.1	28.8 28.8	28.8	84.8 84.8	84.8	6.1 6.1	6.1		8.0 7.8	7.9		7.3 8.1	7.7	
					Bottom	-	- -	-	- -	-	- -	-	- -	-	- -	-	-	- -	-		- -	-	
24-Apr-15	Sunny	Moderate	-	1.4	Surface	-	- -	-	- -	-	- -	-	- -	-	- -	-	6.4	- -	-	6.4	- -	-	5.6
					Middle	0.7	23.3 23.3	23.3	8.1 8.1	8.1	29.4 29.4	29.4	88.7 88.9	88.8	6.4 6.4	6.4		6.4 6.4	6.4		5.6 5.5	5.6	
					Bottom	-	- -	-	- -	-	- -	-	- -	-	- -	-	-	- -	-		- -	-	
27-Apr-15	Sunny	Moderate	-	1.6	Surface	-	- -	-	- -	-	- -	-	- -	-	- -	-	7.9	- -	-	4.4	- -	-	2.5
					Middle	0.8	25.1 25.1	25.1	8.1 8.1	8.1	29.7 29.7	29.7	107.1 118.8	113.0	7.5 8.3	7.9		4.5 4.3	4.4		2.2 2.8	2.5	
					Bottom	-	- -	-	- -	-	- -	-	- -	-	- -	-	-	- -	-		- -	-	
29-Apr-15	Sunny	Moderate	-	1.2	Surface	-	- -	-	- -	-	- -	-	- -	-	- -	-	8.7	- -	-	5.6	- -	-	2.9
					Middle	0.6	26.5 26.4	26.5	8.1 8.2	8.2	27.1 27.4	27.3	126.1 126.5	126.3	8.7 8.7	8.7		5.5 5.6	5.6		2.7 3.1	2.9	
					Bottom	-	- -	-	- -	-	- -	-	- -	-	- -	-	-	- -	-		- -	-	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR4(N) - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:25	3.7	Surface	1.0	22.4 22.4	22.4	8.0 8.0	8.0	27.6 27.7	27.7	107.0 106.4	106.7	7.9 7.9	7.9	7.9	4.5 4.3	4.4	5.3	5.3 5.3	5.3	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.5	22.4	8.0 7.9	7.9	27.8 28.1	27.9	106.9 106.5	106.7	7.9 7.9	7.9	7.9	6.3 6.0	6.2		6.2 7.0	6.6	
3-Apr-15	Cloudy	Moderate	12:41	3.7	Surface	1.0	22.9 22.9	22.9	7.3 7.4	7.4	26.7 26.7	26.7	104.0 103.8	103.9	7.7 7.6	7.6	7.6	5.2 5.1	5.2	5.4	1.0 1.4	1.2	1.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.9 22.9	22.9	7.2 7.3	7.3	27.4 27.4	27.4	103.7 103.9	103.8	7.6 7.6	7.6	7.6	5.6 5.6	5.6		1.3 1.6	1.5	
6-Apr-15	Sunny	Moderate	13:10	3.8	Surface	1.0	24.0 23.8	23.9	7.4 7.4	7.4	25.2 25.4	25.3	95.2 95.7	95.5	7.0 7.0	7.0	7.0	5.9 5.9	5.9	6.0	1.3 1.6	1.5	1.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.7 23.6	23.7	7.4 7.3	7.4	25.8 26.1	26.0	95.3 94.3	94.8	7.0 6.9	6.9	6.9	6.1 6.1	6.1		1.5 1.8	1.7	
8-Apr-15	Cloudy	Moderate	14:42	3.7	Surface	1.0	23.5 23.6	23.6	7.2 7.2	7.2	27.3 27.2	27.3	97.4 97.1	97.3	7.1 7.1	7.1	7.1	7.0 6.8	6.9	6.9	5.8 6.0	5.9	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.5 23.5	23.5	7.1 7.1	7.1	27.3 27.3	27.3	97.3 98.9	98.1	7.1 7.2	7.1	7.1	6.8 7.0	6.9		4.2 5.1	4.7	
10-Apr-15	Cloudy	Moderate	16:02	3.5	Surface	1.0	22.1 22.1	22.1	8.0 7.9	7.9	28.8 28.8	28.8	90.7 88.4	89.6	6.7 6.5	6.6	6.6	7.9 8.3	8.1	8.1	6.7 7.1	6.9	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	22.1 22.1	22.1	7.9 7.9	7.9	28.8 28.8	28.8	93.4 89.2	91.3	6.9 6.6	6.7	6.7	8.1 7.9	8.0		7.4 8.4	7.9	
13-Apr-15	Sunny	Moderate	09:02	3.7	Surface	1.0	21.6 21.7	21.7	7.5 7.5	7.5	29.9 30.1	30.0	85.2 85.8	85.5	6.3 6.3	6.3	6.3	6.7 6.7	6.7	6.7	0.6 0.5	0.6	1.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	21.7 21.8	21.8	7.5 7.5	7.5	30.3 30.6	30.5	86.1 86.3	86.2	6.4 6.3	6.3	6.3	6.6 6.8	6.7		1.4 2.1	1.8	
15-Apr-15	Sunny	Moderate	11:10	3.7	Surface	1.0	22.1 22.2	22.2	7.6 7.6	7.6	30.6 30.5	30.6	96.7 97.4	97.1	7.1 7.1	7.1	7.1	4.9 4.7	4.8	5.0	2.5 3.6	3.1	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.1 22.1	22.1	7.6 7.6	7.6	30.6 30.7	30.6	96.9 96.5	96.7	7.1 7.1	7.1	7.1	4.9 5.3	5.1		3.5 2.0	2.8	
17-Apr-15	Sunny	Moderate	12:23	3.8	Surface	1.0	23.4 23.3	23.3	7.4 7.4	7.4	29.4 29.7	29.6	112.9 111.6	112.3	8.1 8.0	8.1	8.1	6.5 6.6	6.6	6.6	5.9 4.8	5.4	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.3 23.2	23.2	7.4 7.4	7.4	29.6 29.7	29.7	113.5 111.8	112.7	8.2 8.1	8.1	8.1	6.4 6.5	6.5		5.7 4.8	5.3	
20-Apr-15	Cloudy	Moderate	13:22	3.8	Surface	1.0	23.7 23.7	23.7	7.2 7.3	7.2	29.3 29.2	29.3	90.2 89.6	89.9	6.5 6.4	6.4	6.4	5.6 5.6	5.6	5.6	3.3 3.2	3.3	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.8 23.7	23.8	7.1 7.3	7.2	29.6 29.4	29.5	92.6 89.9	91.3	6.6 6.4	6.5	6.5	5.5 5.5	5.5		4.2 3.8	4.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR4(N) - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:43	3.6	Surface	1.0	23.9 24.0	24.0	8.0 8.0	8.0	30.7 30.7	30.7	92.2 90.4	91.3	6.5 6.4	6.5	6.5	6.6 6.3	6.5	6.4	6.8 6.2	6.5	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.9 24.0	24.0	7.9 8.0	8.0	30.7 30.7	30.7	94.5 91.2	92.9	6.7 6.4	6.6	6.6	6.3 6.3	6.3		5.4 5.2	5.3	
24-Apr-15	Sunny	Moderate	16:15	3.8	Surface	1.0	24.8 24.7	24.7	8.0 8.0	8.0	32.6 32.6	32.6	101.1 100.6	100.9	7.0 7.0	7.0	7.0	7.4 7.3	7.4	7.4	8.6 9.2	8.9	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.5 24.7	24.6	7.9 8.0	8.0	32.5 32.6	32.5	100.2 100.8	100.5	6.9 7.0	7.0	7.0	7.2 7.3	7.3		9.5 8.9	9.2	
27-Apr-15	Sunny	Moderate	09:20	3.6	Surface	1.0	24.3 24.3	24.3	8.0 8.0	8.0	31.0 31.0	31.0	104.0 104.3	104.2	7.3 7.3	7.3	7.3	14.6 15.1	14.9	14.6	16.4 16.5	16.5	15.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	24.3 24.3	24.3	7.9 8.0	8.0	31.0 31.0	31.0	104.2 104.4	104.3	7.3 7.3	7.3	7.3	13.8 14.5	14.2		15.1 14.7	14.9	
29-Apr-15	Sunny	Moderate	10:40	3.7	Surface	1.0	25.9 25.9	25.9	8.5 8.4	8.5	26.5 26.5	26.5	149.6 146.9	148.3	10.5 10.3	10.4	10.4	4.3 4.5	4.4	4.4	3.3 3.6	3.5	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	25.8 25.8	25.8	8.4 8.4	8.4	27.2 26.9	27.1	143.0 149.2	146.1	10.0 10.4	10.2	10.2	4.5 4.3	4.4		2.9 3.5	3.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR4(N) - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:41	3.5	Surface	1.0	22.6 22.6	22.6	8.1 8.1	8.1	29.0 29.0	29.0	102.4 105.3	103.9	7.5 7.7	7.6	7.6	10.2 9.6	9.9	11.3	9.2 9.4	9.3	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	22.6 22.5	22.6	8.1 8.1	8.1	29.0 29.0	29.0	103.8 99.0	101.4	7.6 7.3	7.4	7.4	12.3 13.0	12.7		10.1 10.3	10.2	
3-Apr-15	Cloudy	Moderate	18:34	3.7	Surface	1.0	22.9 22.9	22.9	7.5 7.5	7.5	27.3 27.3	27.3	101.5 101.8	101.7	7.5 7.5	7.5	7.5	9.8 9.5	9.7	10.0	4.6 4.1	4.4	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.0 23.0	23.0	7.4 7.4	7.4	27.6 27.6	27.6	101.1 101.3	101.2	7.4 7.4	7.4	7.4	10.2 10.2	10.2		5.3 5.4	5.4	
6-Apr-15	Sunny	Moderate	08:22	3.9	Surface	1.0	23.6 23.7	23.6	7.4 7.4	7.4	25.1 25.0	25.1	94.6 95.0	94.8	6.9 7.0	7.0	7.0	4.4 4.4	4.4	4.4	5.4 4.3	4.9	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.7 23.4	23.6	7.4 7.4	7.4	25.1 25.8	25.4	94.7 94.4	94.6	6.9 6.9	6.9	6.9	4.2 4.4	4.3		4.2 4.2	4.2	
8-Apr-15	Cloudy	Moderate	08:40	3.9	Surface	1.0	23.1 23.1	23.1	7.3 7.3	7.3	27.1 27.1	27.1	90.8 90.7	90.8	6.7 6.6	6.6	6.6	6.8 6.9	6.9	6.9	5.7 5.3	5.5	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.1 23.1	23.1	7.3 7.3	7.3	27.1 27.1	27.1	90.7 90.9	90.8	6.6 6.7	6.6	6.6	6.9 6.8	6.9		6.3 5.1	5.7	
10-Apr-15	Fine	Moderate	10:02	3.4	Surface	1.0	21.9 21.9	21.9	8.1 8.1	8.1	28.1 28.1	28.1	88.6 88.3	88.5	6.6 6.6	6.6	6.6	5.7 5.6	5.7	5.8	5.0 6.2	5.6	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.0 21.9	22.0	8.1 8.1	8.1	28.4 28.2	28.3	88.1 88.3	88.2	6.5 6.6	6.6	6.6	6.0 5.8	5.9		6.0 7.3	6.7	
13-Apr-15	Sunny	Moderate	13:04	3.8	Surface	1.0	22.1 22.1	22.1	7.3 7.3	7.3	30.9 31.0	31.0	89.1 89.5	89.3	6.5 6.5	6.5	6.5	9.7 9.8	9.8	9.8	3.9 3.6	3.8	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.0 22.0	22.0	7.2 7.3	7.2	31.3 31.3	31.3	90.7 89.3	90.0	6.6 6.5	6.6	6.6	9.7 9.9	9.8		3.3 5.0	4.2	
15-Apr-15	Sunny	Moderate	15:27	3.3	Surface	1.0	23.1 23.1	23.1	7.6 7.7	7.6	32.4 32.4	32.4	104.5 104.5	104.5	7.4 7.4	7.4	7.4	11.3 11.7	11.5	11.7	9.0 8.1	8.6	11.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.1 23.1	23.1	7.6 7.5	7.6	32.4 32.4	32.4	103.8 104.4	104.1	7.4 7.4	7.4	7.4	11.9 11.7	11.8		13.5 13.6	13.6	
17-Apr-15	Sunny	Moderate	17:25	3.8	Surface	1.0	23.3 23.2	23.2	7.5 7.5	7.5	31.2 31.2	31.2	106.9 107.1	107.0	7.6 7.6	7.6	7.6	19.4 19.7	19.6	19.4	13.7 14.4	14.1	14.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.2 23.2	23.2	7.5 7.5	7.5	31.2 31.2	31.2	106.8 107.2	107.0	7.6 7.7	7.6	7.6	19.9 18.3	19.1		14.5 15.9	15.2	
20-Apr-15	Cloudy	Moderate	07:27	3.8	Surface	1.0	23.6 23.6	23.6	7.5 7.5	7.5	28.3 28.3	28.3	89.5 89.5	89.5	6.5 6.5	6.5	6.5	9.0 8.9	9.0	9.1	7.6 6.7	7.2	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.6 23.6	23.6	7.5 7.5	7.5	28.4 28.4	28.4	89.5 89.5	89.5	6.5 6.5	6.5	6.5	9.3 9.1	9.2		8.8 9.0	8.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR4(N) - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:03	3.9	Surface	1.0	23.6 23.6	23.6	8.1 8.1	8.1	28.4 28.4	28.4	85.6 85.5	85.6	6.2 6.2	6.2	6.2	9.6 10.1	9.9	9.9	11.5 10.3	10.9	10.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.6 23.6	23.6	8.1 8.1	8.1	28.4 28.4	28.4	85.8 85.5	85.7	6.2 6.2	6.2	6.2	10.1 9.5	9.8		10.0 8.9	9.5	
24-Apr-15	Sunny	Moderate	10:26	3.7	Surface	1.0	23.5 23.5	23.5	8.1 8.1	8.1	29.0 29.0	29.0	85.5 85.4	85.5	6.2 6.2	6.2	6.2	9.7 9.8	9.8	9.7	10.3 8.2	9.3	8.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.4 23.5	23.5	8.1 8.1	8.1	29.0 29.0	29.0	85.4 85.4	85.4	6.2 6.2	6.2	6.2	9.6 9.6	9.6		8.4 8.2	8.3	
27-Apr-15	Sunny	Moderate	12:57	3.5	Surface	1.0	24.6 24.6	24.6	8.1 8.1	8.1	30.9 31.0	31.0	112.7 118.9	115.8	7.9 8.3	8.1	8.1	4.2 4.7	4.5	4.6	3.3 2.3	2.8	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.5 24.5	24.5	8.1 8.1	8.1	31.1 31.3	31.2	118.0 106.9	112.5	8.2 7.5	7.8	7.8	4.7 4.5	4.6		3.2 4.9	4.1	
29-Apr-15	Sunny	Moderate	15:39	3.8	Surface	1.0	26.2 26.2	26.2	8.5 8.5	8.5	25.7 25.8	25.7	149.7 153.1	151.4	10.5 10.7	10.6	10.6	9.4 9.3	9.4	9.4	10.3 9.6	10.0	10.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	26.2 26.2	26.2	8.4 8.5	8.4	27.5 27.5	27.5	147.8 152.1	150.0	10.3 10.6	10.4	10.4	9.2 9.4	9.3		11.0 11.9	11.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR5 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{o}C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:56	5.2	Surface	1.0	21.6 21.3	21.5	8.1 8.1	8.1	26.3 26.5	26.4	118.6 114.1	116.4	9.0 8.7	8.8	8.8	2.5 2.6	2.6	2.6	4.5 3.9	4.2	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.5 21.0	21.2	8.1 8.0	8.0	27.8 27.4	27.6	116.0 113.3	114.7	8.7 8.6	8.7	8.7	2.5 2.5	2.5		4.2 2.4	3.3	
3-Apr-15	Cloudy	Moderate	12:56	5.6	Surface	1.0	21.7 21.7	21.7	8.0 8.0	8.0	25.5 25.5	25.5	99.3 99.5	99.4	7.5 7.5	7.5	7.5	2.8 2.8	2.8	3.4	0.5 0.8	0.7	1.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	21.5 21.5	21.5	8.0 8.0	8.0	27.4 27.4	27.4	99.7 99.3	99.5	7.5 7.5	7.5	7.5	3.7 4.0	3.9		1.5 1.6	1.6	
6-Apr-15	Sunny	Moderate	13:36	5.0	Surface	1.0	22.4 22.4	22.4	7.8 7.8	7.8	28.0 28.0	28.0	93.1 92.8	93.0	6.9 6.9	6.9	6.9	2.3 2.2	2.3	2.3	2.6 3.5	3.1	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	22.3 22.2	22.2	7.8 7.8	7.8	28.1 28.2	28.1	93.4 94.0	93.7	6.9 7.0	6.9	6.9	2.3 2.1	2.2		3.4 3.5	3.5	
8-Apr-15	Cloudy	Moderate	14:47	5.2	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.0 28.9	29.0	93.0 93.9	93.5	6.9 6.9	6.9	6.9	3.9 3.8	3.9	4.0	4.9 4.5	4.7	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.9 22.0	22.0	7.8 7.8	7.8	29.8 28.9	29.4	96.2 93.9	95.1	7.1 6.9	7.0	7.0	4.1 4.0	4.1		4.6 3.8	4.2	
10-Apr-15	Cloudy	Moderate	16:00	4.8	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	29.3 29.4	29.3	91.0 90.3	90.7	6.9 6.8	6.8	6.8	2.5 2.6	2.6	2.6	4.7 3.8	4.3	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	20.9 21.0	20.9	7.8 7.8	7.8	30.1 29.9	30.0	91.6 92.8	92.2	6.9 7.0	6.9	6.9	2.6 2.6	2.6		6.8 6.7	6.8	
13-Apr-15	Sunny	Moderate	08:21	5.2	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	31.6 31.1	31.4	92.1 90.0	91.1	6.8 6.7	6.8	6.8	2.0 2.1	2.1	2.1	2.4 3.0	2.7	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	20.9 20.8	20.8	7.8 7.8	7.8	32.1 32.7	32.4	91.4 94.8	93.1	6.8 7.0	6.9	6.9	2.1 2.1	2.1		2.9 2.8	2.9	
15-Apr-15	Sunny	Moderate	11:09	5.1	Surface	1.0	21.1 21.1	21.1	7.9 7.9	7.9	31.0 31.6	31.3	99.1 99.6	99.4	7.4 7.4	7.4	7.4	1.8 1.8	1.8	1.8	2.7 3.6	3.2	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	21.1 21.1	21.1	7.9 7.8	7.9	31.7 32.3	32.0	99.9 98.5	99.2	7.4 7.3	7.3	7.3	1.7 1.8	1.8		2.8 2.4	2.6	
17-Apr-15	Sunny	Moderate	12:17	5.0	Surface	1.0	22.4 22.2	22.3	7.9 7.9	7.9	29.2 29.4	29.3	106.1 105.3	105.7	7.8 7.7	7.8	7.8	3.1 3.3	3.2	3.9	6.3 5.7	6.0	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	22.1 22.0	22.1	7.9 7.9	7.9	29.5 29.6	29.6	105.9 103.5	104.7	7.8 7.6	7.7	7.7	4.5 4.7	4.6		6.4 6.1	6.3	
20-Apr-15	Cloudy	Moderate	13:39	4.7	Surface	1.0	22.6 22.6	22.6	7.9 7.9	7.9	30.2 30.2	30.2	91.0 89.7	90.4	6.6 6.5	6.6	6.6	6.0 5.6	5.8	6.1	7.1 6.7	6.9	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	22.6 22.5	22.5	7.9 7.9	7.9	30.5 30.4	30.5	90.4 91.5	91.0	6.6 6.7	6.6	6.6	6.0 6.7	6.4		7.4 7.0	7.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR5 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:08	5.0	Surface	1.0	23.0 22.9	23.0	8.0 8.0	8.0	29.7 29.8	29.8	89.3 89.5	89.4	6.5 6.5	6.5	6.5	2.5 2.5	2.5	2.5	7.3 6.8	7.1	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	22.7 23.0	22.8	8.0 8.0	8.0	30.2 29.8	30.0	89.3 89.5	89.4	6.5 6.5	6.5	6.5	2.5 2.5	2.5		6.8 7.4	7.1	
24-Apr-15	Sunny	Moderate	16:34	4.6	Surface	1.0	23.2 23.4	23.3	8.0 8.0	8.0	28.9 28.7	28.8	94.4 93.1	93.8	6.8 6.7	6.8	6.8	0.7 0.8	0.8	1.0	4.6 4.4	4.5	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	22.6 22.7	22.7	8.0 8.0	8.0	29.6 29.5	29.6	94.3 92.4	93.4	6.9 6.7	6.8	6.8	1.0 1.1	1.1		4.6 2.1	3.4	
27-Apr-15	Sunny	Moderate	09:13	5.2	Surface	1.0	23.4 23.4	23.4	8.0 8.0	8.0	24.4 24.4	24.4	107.1 106.5	106.8	7.9 7.9	7.9	7.9	2.5 2.5	2.5	2.6	2.9 2.7	2.8	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	23.4 23.3	23.4	8.0 8.0	8.0	28.1 27.7	27.9	107.7 105.1	106.4	7.8 7.6	7.7	7.7	2.6 2.6	2.6		2.9 2.1	2.5	
29-Apr-15	Sunny	Moderate	10:46	4.9	Surface	1.0	24.4 24.2	24.3	8.0 8.0	8.0	22.0 22.2	22.1	100.2 103.4	101.8	7.4 7.7	7.5	7.5	2.1 1.9	2.0	2.1	3.5 3.9	3.7	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	24.2 24.0	24.1	8.0 8.0	8.0	24.6 25.0	24.8	103.4 97.1	100.3	7.6 7.1	7.3	7.3	2.0 2.2	2.1		3.4 3.2	3.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:02	5.2	Surface	1.0	21.2 21.4	21.3	8.0 8.0	8.0	27.9 27.6	27.7	107.3 107.8	107.6	8.1 8.1	8.1	8.1	1.8 1.8	1.8	1.8	2.9 3.2	3.1	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	20.8 20.6	20.7	8.0 8.0	8.0	28.3 28.5	28.4	105.8 106.3	106.1	8.0 8.1	8.0	8.0	1.7 1.8	1.8		3.1 2.2	2.7	
3-Apr-15	Cloudy	Moderate	18:22	5.5	Surface	1.0	21.9 22.2	22.1	8.0 8.0	8.0	25.6 25.1	25.4	103.9 104.3	104.1	7.8 7.9	7.8	7.8	2.6 2.5	2.6	2.8	0.7 0.5	0.6	0.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	21.7 21.9	21.8	8.0 8.0	8.0	26.4 25.8	26.1	103.0 102.8	102.9	7.8 7.8	7.8	7.8	2.8 2.9	2.9		1.1 0.5	0.8	
6-Apr-15	Sunny	Moderate	07:48	5.1	Surface	1.0	22.3 22.4	22.4	7.8 7.8	7.8	27.9 27.7	27.8	91.9 92.7	92.3	6.8 6.9	6.8	6.8	2.9 2.8	2.9	3.2	3.7 5.3	4.5	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.2 22.2	22.2	7.8 7.8	7.8	28.0 28.1	28.0	92.5 92.4	92.5	6.8 6.8	6.8	6.8	3.4 3.3	3.4		3.5 5.8	4.7	
8-Apr-15	Cloudy	Moderate	09:01	5.3	Surface	1.0	22.1 22.1	22.1	7.8 7.8	7.8	28.7 28.6	28.7	95.5 93.0	94.3	7.1 6.9	7.0	7.0	4.5 4.3	4.4	4.5	5.4 6.3	5.9	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	22.1 22.1	22.1	7.8 7.8	7.8	28.9 29.1	29.0	94.5 98.5	96.5	7.0 7.3	7.1	7.1	4.5 4.5	4.5		7.3 5.2	6.3	
10-Apr-15	Fine	Moderate	10:03	5.2	Surface	1.0	21.0 21.0	21.0	7.8 7.8	7.8	30.5 30.5	30.5	88.0 91.2	89.6	6.6 6.8	6.7	6.7	8.3 8.5	8.4	8.4	6.9 6.9	6.9	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.0 21.0	21.0	7.8 7.8	7.8	30.6 30.6	30.6	89.5 95.0	92.3	6.7 7.1	6.9	6.9	8.4 8.4	8.4		6.7 7.3	7.0	
13-Apr-15	Sunny	Moderate	13:40	5.4	Surface	1.0	21.3 21.2	21.2	7.8 7.8	7.8	30.5 30.6	30.6	95.5 92.0	93.8	7.1 6.8	7.0	7.0	1.6 1.6	1.6	1.7	1.9 1.9	1.9	1.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	21.0 21.0	21.0	7.7 7.8	7.8	32.3 30.8	31.5	93.4 96.8	95.1	6.9 7.2	7.1	7.1	1.8 1.8	1.8		1.7 1.9	1.8	
15-Apr-15	Sunny	Moderate	15:37	5.2	Surface	1.0	21.6 21.6	21.6	7.9 7.9	7.9	30.3 30.3	30.3	109.7 107.8	108.8	8.1 8.0	8.0	8.0	2.2 2.2	2.2	2.3	4.4 4.9	4.7	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.5 21.5	21.5	7.9 7.9	7.9	30.9 30.8	30.8	107.2 110.1	108.7	7.9 8.1	8.0	8.0	2.2 2.3	2.3		5.5 4.7	5.1	
17-Apr-15	Sunny	Moderate	17:40	5.3	Surface	1.0	22.4 22.5	22.5	7.8 7.8	7.8	28.8 28.8	28.8	102.6 103.9	103.3	7.5 7.6	7.6	7.6	1.9 1.8	1.9	2.1	3.9 4.0	4.0	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	22.1 22.0	22.1	7.8 7.8	7.8	29.1 29.2	29.2	102.6 99.9	101.3	7.6 7.4	7.5	7.5	2.2 2.3	2.3		4.9 4.7	4.8	
20-Apr-15	Cloudy	Moderate	07:44	4.6	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	30.3 30.3	30.3	88.6 89.4	89.0	6.4 6.5	6.5	6.5	10.4 10.7	10.6	11.0	14.4 13.0	13.7	14.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	22.5 22.5	22.5	7.8 7.8	7.8	30.3 30.3	30.3	89.5 89.4	89.5	6.5 6.5	6.5	6.5	11.2 11.4	11.3		14.7 15.1	14.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:49	5.1	Surface	1.0	22.5 22.5	22.5	8.0 8.0	8.0	30.3 30.2	30.2	85.8 85.9	85.9	6.2 6.2	6.2	6.2	6.6 6.3	6.5	6.6	10.5 9.4	10.0	10.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.5 22.5	22.5	8.0 8.0	8.0	30.3 30.3	30.3	85.8 85.7	85.8	6.2 6.2	6.2	6.2	6.6 6.6	6.6		10.5 11.0	10.8	
24-Apr-15	Sunny	Moderate	10:24	4.9	Surface	1.0	22.6 22.6	22.6	8.0 8.0	8.0	28.7 28.8	28.7	88.3 88.1	88.2	6.5 6.5	6.5	6.5	0.7 0.6	0.7	0.8	5.6 5.8	5.7	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	22.5 22.5	22.5	8.0 8.0	8.0	28.9 29.1	29.0	88.0 87.8	87.9	6.5 6.4	6.4	6.4	0.8 0.7	0.8		5.1 5.0	5.1	
27-Apr-15	Sunny	Moderate	13:31	5.4	Surface	1.0	23.6 23.8	23.7	8.0 8.0	8.0	25.5 25.1	25.3	114.7 116.2	115.5	8.3 8.5	8.4	8.4	2.1 2.2	2.2	2.2	3.3 3.6	3.5	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	23.5 23.4	23.5	8.0 8.0	8.0	28.1 27.8	28.0	107.5 104.8	106.2	7.9 7.6	7.7	7.7	2.1 2.1	2.1		3.9 4.4	4.2	
29-Apr-15	Sunny	Moderate	16:06	5.0	Surface	1.0	25.6 25.4	25.5	8.4 8.4	8.4	21.6 21.7	21.6	118.0 120.6	119.3	8.6 8.8	8.7	8.7	2.5 2.5	2.5	2.6	3.7 3.6	3.7	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	25.1 24.8	25.0	8.3 8.3	8.3	21.9 22.0	21.9	113.0 117.5	115.3	8.3 8.6	8.5	8.5	2.5 2.7	2.6		4.3 5.5	4.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR6 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	12:46	4.0	Surface	1.0	21.8 21.6	21.7	8.1 8.1	8.1	25.2 25.3	25.3	123.1 117.4	120.3	9.3 8.9	9.1	9.1	2.5 2.4	2.5	2.6	3.9 3.8	3.9	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	21.0 21.0	21.0	8.0 8.0	8.0	27.9 26.8	27.4	116.6 117.0	116.8	8.8 8.9	8.9	8.9	2.6 2.5	2.6		4.9 4.5	4.7	
3-Apr-15	Cloudy	Moderate	13:43	5.5	Surface	1.0	21.6 21.6	21.6	8.0 8.0	8.0	26.1 26.3	26.2	99.5 99.7	99.6	7.5 7.5	7.5	7.5	2.7 2.6	2.7	3.6	2.2 2.3	2.3	2.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	21.5 21.5	21.5	8.0 8.0	8.0	26.7 26.8	26.8	99.3 99.0	99.2	7.5 7.5	7.5	7.5	4.6 4.4	4.5		2.2 2.2	2.2	
6-Apr-15	Sunny	Moderate	12:41	3.9	Surface	1.0	22.8 22.7	22.8	7.8 7.8	7.8	25.5 25.6	25.6	94.4 94.9	94.7	7.0 7.1	7.0	7.0	1.5 1.4	1.5	1.8	4.5 4.4	4.5	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	22.7 22.6	22.7	7.8 7.8	7.8	26.1 26.4	26.3	94.6 93.3	94.0	7.0 6.9	7.0	7.0	2.0 2.1	2.1		3.8 4.9	4.4	
8-Apr-15	Cloudy	Moderate	13:57	4.1	Surface	1.0	22.0 22.0	22.0	7.9 7.9	7.9	29.1 29.1	29.1	93.5 94.1	93.8	6.9 6.9	6.9	6.9	3.7 3.6	3.7	3.8	5.2 3.6	4.4	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.0 22.0	22.0	7.9 7.9	7.9	29.7 29.3	29.5	94.9 94.3	94.6	7.0 7.0	7.0	7.0	3.8 3.7	3.8		4.5 3.9	4.2	
10-Apr-15	Cloudy	Moderate	15:15	4.2	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	30.3 30.2	30.2	89.5 90.5	90.0	6.7 6.8	6.7	6.7	2.4 2.4	2.4	2.4	4.9 4.2	4.6	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.9 21.0	20.9	7.8 7.8	7.8	30.2 30.5	30.4	90.4 90.3	90.4	6.8 6.7	6.8	6.8	2.3 2.4	2.4		4.6 6.4	5.5	
13-Apr-15	Sunny	Moderate	09:11	4.3	Surface	1.0	20.7 20.7	20.7	7.8 7.8	7.8	31.8 32.7	32.2	91.5 91.9	91.7	6.8 6.8	6.8	6.8	2.5 2.5	2.5	2.7	2.9 4.4	3.7	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.7 20.7	20.7	7.8 7.8	7.8	33.0 32.2	32.6	87.3 87.7	87.5	6.5 6.5	6.5	6.5	2.9 2.9	2.9		4.0 3.8	3.9	
15-Apr-15	Sunny	Moderate	12:01	4.2	Surface	1.0	21.1 21.1	21.1	7.9 7.9	7.9	29.8 29.9	29.8	105.6 103.1	104.4	7.9 7.7	7.8	7.8	1.7 1.8	1.8	1.8	2.8 2.6	2.7	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	21.0 21.1	21.0	7.9 7.9	7.9	30.8 30.9	30.8	104.1 104.8	104.5	7.8 7.8	7.8	7.8	1.8 1.8	1.8		2.8 2.1	2.5	
17-Apr-15	Sunny	Moderate	13:10	4.3	Surface	1.0	22.3 22.2	22.2	7.9 7.9	7.9	28.8 29.0	28.9	100.0 98.2	99.1	7.4 7.2	7.3	7.3	5.8 6.2	6.0	6.6	3.5 5.2	4.4	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	22.1 21.9	22.0	7.9 7.9	7.9	29.4 29.9	29.7	98.4 96.4	97.4	7.2 7.1	7.2	7.2	6.9 7.2	7.1		5.6 4.2	4.9	
20-Apr-15	Cloudy	Moderate	12:45	3.8	Surface	1.0	22.8 22.7	22.8	7.9 7.9	7.9	29.7 30.0	29.9	91.0 89.9	90.5	6.6 6.5	6.6	6.6	8.8 8.3	8.6	9.8	5.8 5.3	5.6	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.5 22.5	22.5	7.9 7.9	7.9	30.9 31.1	31.0	89.1 89.7	89.4	6.5 6.5	6.5	6.5	10.3 11.4	10.9		5.9 5.9	5.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR6 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	14:11	4.1	Surface	1.0	22.9 22.9	22.9	8.1 8.1	8.1	30.2 30.2	30.2	88.3 88.6	88.5	6.4 6.4	6.4	6.4	2.7 2.6	2.7	2.8	10.7 12.0	11.4	10.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.8 22.6	22.7	8.1 8.1	8.1	30.3 30.6	30.4	88.2 87.7	88.0	6.4 6.4	6.4	6.4	2.8 2.8	2.8		10.7 9.3	10.0	
24-Apr-15	Sunny	Moderate	15:43	4.1	Surface	1.0	22.7 22.7	22.7	8.1 8.1	8.1	29.6 29.6	29.6	91.5 92.1	91.8	6.7 6.7	6.7	6.7	1.5 1.3	1.4	1.8	3.4 4.6	4.0	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.6 22.5	22.6	8.1 8.1	8.1	30.1 30.3	30.2	91.6 90.2	90.9	6.7 6.6	6.6	6.6	2.2 2.2	2.2		3.8 3.5	3.7	
27-Apr-15	Sunny	Moderate	10:10	4.2	Surface	1.0	23.6 23.6	23.6	8.1 8.1	8.1	26.4 26.5	26.4	109.6 108.9	109.3	8.0 7.9	8.0	8.0	1.3 1.4	1.4	1.5	2.8 3.1	3.0	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.3 23.2	23.3	8.1 8.1	8.1	28.7 28.6	28.7	108.6 108.7	108.7	7.9 7.9	7.9	7.9	1.5 1.5	1.5		2.5 4.0	3.3	
29-Apr-15	Sunny	Moderate	11:39	3.8	Surface	1.0	24.5 24.4	24.5	8.2 8.2	8.2	20.8 21.0	20.9	106.5 104.5	105.5	7.9 7.8	7.8	7.8	2.0 2.0	2.0	2.2	3.4 3.0	3.2	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.2 24.3	24.3	8.1 8.1	8.1	22.2 22.2	22.2	104.8 106.3	105.6	7.7 7.8	7.8	7.8	2.4 2.3	2.4		3.1 2.4	2.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	16:10	4.1	Surface	1.0	22.0 21.9	22.0	8.2 8.1	8.2	26.0 26.1	26.0	138.1 131.7	134.9	10.4 9.9	10.1	10.1	2.5 2.5	2.5	2.5	4.2 3.9	4.1	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	21.1 21.9	21.5	8.0 8.1	8.1	27.6 26.3	27.0	125.5 125.8	125.7	9.4 9.5	9.5	9.5	2.5 2.4	2.5		5.4 3.7	4.6	
3-Apr-15	Cloudy	Moderate	17:39	5.5	Surface	1.0	21.9 21.8	21.8	8.0 8.0	8.0	25.8 26.0	25.9	102.8 102.7	102.8	7.8 7.8	7.8	7.8	2.4 2.6	2.5	2.7	0.5 0.5	0.5	0.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	21.7 21.7	21.7	8.0 8.0	8.0	26.3 26.6	26.5	102.7 102.3	102.5	7.7 7.7	7.7	7.7	2.9 2.8	2.9		0.5 1.2	0.9	
6-Apr-15	Sunny	Moderate	08:39	4.0	Surface	1.0	22.7 22.7	22.7	7.8 7.8	7.8	25.6 25.7	25.7	94.1 93.8	94.0	7.0 7.0	7.0	7.0	1.5 1.4	1.5	1.4	3.1 3.9	3.5	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	22.7 22.7	22.7	7.8 7.8	7.8	26.2 26.4	26.3	94.3 93.6	94.0	7.0 6.9	7.0	7.0	1.2 1.4	1.3		3.9 2.7	3.3	
8-Apr-15	Cloudy	Moderate	09:53	4.4	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.2 29.2	29.2	92.8 92.1	92.5	6.9 6.8	6.8	6.8	4.0 3.8	3.9	4.1	12.8 13.3	13.1	13.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	22.0 22.0	22.0	7.8 7.8	7.8	29.2 29.3	29.2	92.5 93.3	92.9	6.8 6.9	6.9	6.9	4.2 4.1	4.2		14.1 12.6	13.4	
10-Apr-15	Fine	Moderate	11:01	4.1	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	29.6 29.6	29.6	86.9 86.4	86.7	6.5 6.5	6.5	6.5	4.5 4.3	4.4	4.4	2.5 3.6	3.1	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.9 21.0	21.0	7.8 7.8	7.8	29.9 30.2	30.0	87.3 87.0	87.2	6.5 6.5	6.5	6.5	4.3 4.5	4.4		2.8 2.4	2.6	
13-Apr-15	Sunny	Moderate	12:50	4.4	Surface	1.0	20.8 21.0	20.9	7.7 7.7	7.7	32.7 32.0	32.4	89.8 91.7	90.8	6.6 6.8	6.7	6.7	2.4 2.4	2.4	2.5	2.6 2.6	2.6	2.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	21.0 21.0	21.0	7.7 7.7	7.7	32.0 32.0	32.0	91.3 91.7	91.5	6.7 6.8	6.8	6.8	2.6 2.6	2.6		2.5 2.3	2.4	
15-Apr-15	Sunny	Moderate	14:51	4.2	Surface	1.0	22.2 22.6	22.4	7.9 7.9	7.9	29.0 28.9	28.9	109.3 109.7	109.5	8.0 8.0	8.0	8.0	1.6 1.6	1.6	1.6	2.1 3.6	2.9	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	22.4 21.8	22.1	7.9 7.9	7.9	29.5 30.4	29.9	108.8 108.5	108.7	8.0 8.0	8.0	8.0	1.6 1.6	1.6		2.5 2.8	2.7	
17-Apr-15	Sunny	Moderate	16:43	4.3	Surface	1.0	22.2 22.3	22.2	7.9 7.9	7.9	28.8 28.8	28.8	101.9 100.7	101.3	7.5 7.4	7.5	7.5	2.2 2.2	2.2	2.6	3.5 5.3	4.4	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	21.9 22.0	22.0	7.8 7.8	7.8	29.3 29.1	29.2	100.1 100.9	100.5	7.4 7.5	7.4	7.4	2.9 3.0	3.0		4.5 5.0	4.8	
20-Apr-15	Cloudy	Moderate	08:38	3.9	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	89.7 89.7	89.7	6.5 6.5	6.5	6.5	12.4 11.8	12.1	12.9	14.1 14.5	14.3	14.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	22.5 22.5	22.5	7.8 7.8	7.8	29.9 29.9	29.9	89.4 89.6	89.5	6.5 6.5	6.5	6.5	14.0 13.2	13.6		14.9 14.9	14.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	09:41	4.2	Surface	1.0	22.4 22.4	22.4	8.0 8.0	8.0	29.9 29.9	29.9	84.9 84.9	84.9	6.2 6.2	6.2	6.2	11.2 11.2	11.2	11.5	11.5 11.8	11.7	11.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	22.4 22.4	22.4	8.0 8.0	8.0	30.0 29.9	30.0	85.4 85.2	85.3	6.2 6.2	6.2	6.2	11.6 11.7	11.7		11.4 12.4	11.9	
24-Apr-15	Sunny	Moderate	11:15	4.3	Surface	1.0	22.4 22.4	22.4	8.0 8.0	8.0	30.0 29.9	29.9	83.4 84.4	83.9	6.1 6.2	6.1	6.1	3.6 3.6	3.6	4.1	4.4 3.6	4.0	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	22.3 22.3	22.3	8.0 8.0	8.0	30.3 30.4	30.3	84.0 83.4	83.7	6.1 6.1	6.1	6.1	4.6 4.6	4.6		3.9 4.0	4.0	
27-Apr-15	Sunny	Moderate	12:26	4.2	Surface	1.0	23.6 23.4	23.5	8.0 8.0	8.0	28.0 27.7	27.8	108.8 105.6	107.2	7.9 7.7	7.8	7.8	1.3 1.2	1.3	1.3	2.1 2.7	2.4	2.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.4 23.1	23.3	8.0 8.0	8.0	28.7 29.4	29.0	107.5 105.7	106.6	7.8 7.6	7.7	7.7	1.3 1.3	1.3		2.6 2.4	2.5	
29-Apr-15	Sunny	Moderate	15:08	4.1	Surface	1.0	25.4 25.4	25.4	8.3 8.3	8.3	21.2 21.2	21.2	122.7 123.7	123.2	9.0 9.1	9.0	9.0	2.5 2.7	2.6	2.5	3.8 3.6	3.7	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	25.1 25.3	25.2	8.2 8.3	8.3	21.5 21.5	21.5	115.1 118.9	117.0	8.4 8.7	8.6	8.6	2.4 2.4	2.4		3.5 5.0	4.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:27	4.3	Surface	1.0	21.5 21.4	21.4	8.1 8.1	8.1	26.3 26.3	26.3	114.3 109.3	111.8	8.7 8.3	8.5	8.5	1.5 1.5	1.5	1.6	4.6 4.1	4.4	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.8 21.2	21.0	8.0 8.0	8.0	28.5 28.4	28.4	103.1 111.7	107.4	7.8 8.4	8.1	8.1	1.5 1.6	1.6		4.5 4.6	4.6	
3-Apr-15	Cloudy	Moderate	12:21	5.5	Surface	1.0	21.5 21.6	21.6	8.0 8.0	8.0	27.0 27.2	27.1	96.9 96.4	96.7	7.3 7.3	7.3	7.3	4.5 4.6	4.6	4.8	1.0 0.7	0.9	1.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	21.6 21.5	21.5	8.0 8.0	8.0	27.6 28.0	27.8	96.2 96.4	96.3	7.2 7.2	7.2	7.2	5.0 4.8	4.9		1.1 0.9	1.0	
6-Apr-15	Sunny	Moderate	14:03	3.8	Surface	1.0	22.4 22.5	22.5	7.8 7.8	7.8	27.9 27.8	27.9	90.9 91.6	91.3	6.7 6.8	6.7	6.7	4.6 4.8	4.7	5.3	4.4 5.3	4.9	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.2 21.9	22.1	7.8 7.8	7.8	28.3 28.8	28.6	90.9 89.9	90.4	6.7 6.7	6.7	6.7	6.0 5.8	5.9		6.8 6.4	6.6	
8-Apr-15	Cloudy	Moderate	15:13	4.1	Surface	1.0	21.8 21.8	21.8	7.8 7.8	7.8	29.7 30.0	29.8	98.5 94.7	96.6	7.3 7.0	7.1	7.1	5.7 5.7	5.7	5.8	5.3 5.1	5.2	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	21.8 21.7	21.7	7.8 7.8	7.8	30.1 30.2	30.2	96.7 102.2	99.5	7.1 7.5	7.3	7.3	5.7 5.8	5.8		4.9 6.6	5.8	
10-Apr-15	Cloudy	Moderate	16:30	4.2	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	30.3 30.3	30.3	87.8 87.9	87.9	6.6 6.6	6.6	6.6	2.1 2.3	2.2	2.2	4.7 4.2	4.5	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.9 21.0	21.0	7.8 7.8	7.8	30.5 30.5	30.5	88.1 87.2	87.7	6.6 6.5	6.5	6.5	2.1 2.2	2.2		4.2 3.8	4.0	
13-Apr-15	Sunny	Moderate	07:58	4.1	Surface	1.0	20.7 20.7	20.7	7.8 7.8	7.8	32.2 31.4	31.8	96.6 94.8	95.7	7.2 7.0	7.1	7.1	2.0 2.1	2.1	2.3	2.8 3.0	2.9	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.7 20.7	20.7	7.8 7.8	7.8	32.6 32.4	32.5	92.1 90.1	91.1	6.8 6.7	6.8	6.8	2.4 2.4	2.4		3.0 2.4	2.7	
15-Apr-15	Sunny	Moderate	10:41	4.4	Surface	1.0	21.3 21.3	21.3	7.9 7.9	7.9	32.2 32.5	32.3	98.8 98.6	98.7	7.3 7.2	7.3	7.3	3.0 3.3	3.2	3.3	4.0 4.8	4.4	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	21.2 21.2	21.2	7.9 7.9	7.9	32.7 32.4	32.6	98.7 98.8	98.8	7.2 7.3	7.2	7.2	3.3 3.3	3.3		6.0 5.9	6.0	
17-Apr-15	Sunny	Moderate	11:50	3.7	Surface	1.0	22.4 22.4	22.4	7.9 7.9	7.9	29.2 29.4	29.3	99.9 96.5	98.2	7.3 7.1	7.2	7.2	1.9 1.8	1.9	2.2	5.2 4.2	4.7	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.2	22.3	7.9 7.9	7.9	29.3 29.6	29.4	97.9 93.3	95.6	7.2 6.8	7.0	7.0	2.4 2.5	2.5		5.7 5.0	5.4	
20-Apr-15	Cloudy	Moderate	14:08	3.8	Surface	1.0	22.8 22.8	22.8	7.9 7.9	7.9	30.0 30.0	30.0	91.3 91.4	91.4	6.6 6.6	6.6	6.6	3.3 3.4	3.4	3.4	4.8 5.1	5.0	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.8 22.8	22.8	7.9 7.9	7.9	30.0 30.1	30.0	91.3 91.4	91.4	6.6 6.6	6.6	6.6	3.1 3.4	3.3		5.2 3.8	4.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:35	4.1	Surface	1.0	22.8 23.0	22.9	8.1 8.1	8.1	30.2 30.1	30.2	86.2 87.8	87.0	6.2 6.3	6.3	6.3	2.9 2.8	2.9	2.9	5.7 5.6	5.7	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.8 22.6	22.7	8.1 8.1	8.1	30.2 30.3	30.3	87.2 86.1	86.7	6.3 6.3	6.3	6.3	2.9 2.8	2.9		7.5 6.7	7.1	
24-Apr-15	Sunny	Moderate	17:01	3.7	Surface	1.0	22.9 22.8	22.9	8.1 8.1	8.1	29.5 29.6	29.5	87.7 87.4	87.6	6.4 6.3	6.4	6.4	2.0 1.8	1.9	2.1	4.6 4.6	4.6	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.5	22.4	8.1 8.1	8.1	30.1 30.0	30.1	86.5 87.2	86.9	6.3 6.3	6.3	6.3	2.4 2.2	2.3		5.7 4.9	5.3	
27-Apr-15	Sunny	Moderate	08:45	4.2	Surface	1.0	23.3 23.3	23.3	8.1 8.1	8.1	24.9 25.5	25.2	107.8 105.7	106.8	8.0 7.8	7.9	7.9	2.2 2.1	2.2	2.2	2.8 3.3	3.1	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.3 23.2	23.2	8.1 8.1	8.1	27.6 28.2	27.9	107.0 104.4	105.7	7.8 7.6	7.7	7.7	2.2 2.1	2.2		2.3 3.1	2.7	
29-Apr-15	Sunny	Moderate	10:20	3.9	Surface	1.0	24.5 24.4	24.4	8.2 8.2	8.2	20.9 20.8	20.9	103.1 106.6	104.9	7.7 7.9	7.8	7.8	1.8 1.9	1.9	1.8	3.6 3.2	3.4	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	24.3 24.2	24.3	8.1 8.1	8.1	22.9 22.8	22.9	105.6 99.9	102.8	7.7 7.3	7.5	7.5	1.7 1.6	1.7		2.8 2.9	2.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:30	4.2	Surface	1.0	21.5 21.4	21.5	8.1 8.0	8.0	27.9 28.8	28.4	113.8 110.1	112.0	8.5 8.2	8.4	8.4	2.4 2.3	2.4	2.4	3.8 2.7	3.3	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	21.4 21.5	21.4	8.0 8.0	8.0	28.8 28.3	28.6	108.8 112.1	110.5	8.1 8.4	8.3	8.3	2.3 2.4	2.4		4.8 3.2	4.0	
3-Apr-15	Cloudy	Moderate	18:57	5.6	Surface	1.0	22.1 22.2	22.2	8.0 8.0	8.0	25.1 25.1	25.1	105.5 105.4	105.5	8.0 7.9	8.0	8.0	2.7 2.7	2.7	3.1	0.5 0.8	0.7	0.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	21.8 21.7	21.7	8.0 8.0	8.0	26.3 26.4	26.3	104.7 104.3	104.5	7.9 7.9	7.9	7.9	3.5 3.3	3.4		1.0 0.9	1.0	
6-Apr-15	Sunny	Moderate	07:19	3.7	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	27.5 27.5	27.5	93.6 92.9	93.3	6.9 6.9	6.9	6.9	3.5 3.1	3.3	3.9	6.0 6.4	6.2	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.4	22.4	7.8 7.8	7.8	27.6 27.6	27.6	94.5 93.5	94.0	7.0 6.9	7.0	7.0	4.5 4.2	4.4		6.3 4.3	5.3	
8-Apr-15	Cloudy	Moderate	08:41	4.3	Surface	1.0	22.0 21.9	22.0	7.8 7.8	7.8	29.2 29.2	29.2	93.5 95.1	94.3	6.9 7.0	7.0	7.0	6.3 6.2	6.3	6.3	11.8 10.7	11.3	11.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	21.9 21.9	21.9	7.8 7.8	7.8	29.2 29.2	29.2	94.2 96.9	95.6	7.0 7.2	7.1	7.1	6.2 6.4	6.3		11.9 12.7	12.3	
10-Apr-15	Fine	Moderate	09:34	4.2	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	30.1 30.1	30.1	94.2 92.3	93.3	7.1 6.9	7.0	7.0	1.4 1.4	1.4	1.4	6.7 6.3	6.5	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.9 20.9	20.9	7.8 7.8	7.8	30.1 30.1	30.1	96.9 93.3	95.1	7.3 7.0	7.1	7.1	1.4 1.4	1.4		7.1 7.4	7.3	
13-Apr-15	Sunny	Moderate	14:03	4.4	Surface	1.0	21.0 20.9	20.9	7.8 7.8	7.8	31.7 31.8	31.8	95.3 92.1	93.7	7.1 6.8	7.0	7.0	2.0 1.9	2.0	2.1	1.8 2.2	2.0	2.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	20.9 21.0	21.0	7.8 7.8	7.8	32.8 32.8	32.8	98.6 94.1	96.4	7.3 6.9	7.1	7.1	2.2 2.2	2.2		2.2 2.5	2.4	
15-Apr-15	Sunny	Moderate	16:06	4.3	Surface	1.0	21.5 21.4	21.5	7.9 7.9	7.9	31.8 31.7	31.7	101.8 103.3	102.6	7.5 7.6	7.5	7.5	2.2 2.2	2.2	2.3	3.1 3.5	3.3	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	21.4 21.4	21.4	7.9 7.9	7.9	32.3 32.2	32.3	101.0 103.0	102.0	7.4 7.6	7.5	7.5	2.2 2.3	2.3		4.4 4.5	4.5	
17-Apr-15	Sunny	Moderate	18:07	3.8	Surface	1.0	22.2 22.2	22.2	7.9 7.9	7.9	29.7 29.9	29.8	104.6 105.5	105.1	7.7 7.7	7.7	7.7	3.3 3.5	3.4	5.0	5.6 5.5	5.6	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.3 22.2	22.2	7.9 7.9	7.9	30.3 30.1	30.2	104.7 104.4	104.6	7.6 7.6	7.6	7.6	6.5 6.6	6.6		5.8 7.0	6.4	
20-Apr-15	Cloudy	Moderate	07:15	4.1	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	30.2 30.1	30.2	90.1 92.0	91.1	6.6 6.7	6.6	6.6	6.3 6.1	6.2	6.2	7.8 8.4	8.1	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.5 22.5	22.5	7.8 7.8	7.8	30.2 30.2	30.2	93.3 91.5	92.4	6.8 6.7	6.7	6.7	6.2 6.0	6.1		8.5 8.0	8.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:20	4.4	Surface	1.0	22.5 22.5	22.5	8.0 8.0	8.0	30.4 30.4	30.4	89.4 87.2	88.3	6.5 6.3	6.4	6.4	8.6 8.6	8.6	8.7	13.1 11.8	12.5	14.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	22.5 22.5	22.5	8.0 8.0	8.0	30.5 30.4	30.4	92.4 87.9	90.2	6.7 6.4	6.6	6.6	8.7 8.9	8.8		16.4 14.8	15.6	
24-Apr-15	Sunny	Moderate	09:54	3.9	Surface	1.0	22.3 22.4	22.4	8.0 8.0	8.0	30.4 30.2	30.3	87.7 88.7	88.2	6.4 6.5	6.4	6.4	3.0 3.3	3.2	3.3	4.9 5.4	5.2	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	22.3 22.4	22.3	8.0 8.0	8.0	30.7 30.4	30.6	90.9 88.5	89.7	6.6 6.4	6.5	6.5	3.5 3.2	3.4		5.0 6.3	5.7	
27-Apr-15	Sunny	Moderate	14:01	4.3	Surface	1.0	24.1 23.8	23.9	8.0 8.0	8.0	25.2 25.5	25.4	122.9 123.1	123.0	9.0 8.9	8.9	8.9	1.5 1.5	1.5	1.5	2.3 2.2	2.3	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	23.6 23.3	23.4	8.0 8.0	8.0	27.9 28.1	28.0	120.4 113.5	117.0	8.8 8.2	8.5	8.5	1.4 1.5	1.5		2.0 2.8	2.4	
29-Apr-15	Sunny	Moderate	16:33	3.7	Surface	1.0	25.1 25.2	25.1	8.3 8.3	8.3	22.5 22.4	22.5	121.3 123.8	122.6	8.9 9.0	8.9	8.9	2.3 2.2	2.3	2.3	3.8 2.0	2.9	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	25.0 25.0	25.0	8.3 8.3	8.3	23.2 23.3	23.2	122.0 118.8	120.4	8.9 8.7	8.8	8.8	2.3 2.1	2.2		2.9 2.2	2.6	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	11:27	4.3	Surface	1.0	21.5 21.4	21.4	8.1 8.1	8.1	26.3 26.3	26.3	114.3 109.3	111.8	8.7 8.3	8.5	8.5	1.5 1.5	1.5	1.6	4.6 4.1	4.4	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.8 21.2	21.0	8.0 8.0	8.0	28.5 28.4	28.4	103.1 111.7	107.4	7.8 8.4	8.1	8.1	1.5 1.6	1.6		4.5 4.6	4.6	
3-Apr-15	Cloudy	Moderate	12:21	5.5	Surface	1.0	21.5 21.6	21.6	8.0 8.0	8.0	27.0 27.2	27.1	96.9 96.4	96.7	7.3 7.3	7.3	7.3	4.5 4.6	4.6	4.8	1.0 0.7	0.9	1.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	21.6 21.5	21.5	8.0 8.0	8.0	27.6 28.0	27.8	96.2 96.4	96.3	7.2 7.2	7.2	7.2	5.0 4.8	4.9		1.1 0.9	1.0	
6-Apr-15	Sunny	Moderate	14:03	3.8	Surface	1.0	22.4 22.5	22.5	7.8 7.8	7.8	27.9 27.8	27.9	90.9 91.6	91.3	6.7 6.8	6.7	6.7	4.6 4.8	4.7	5.3	4.4 5.3	4.9	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.2 21.9	22.1	7.8 7.8	7.8	28.3 28.8	28.6	90.9 89.9	90.4	6.7 6.7	6.7	6.7	6.0 5.8	5.9		6.8 6.4	6.6	
8-Apr-15	Cloudy	Moderate	15:13	4.1	Surface	1.0	21.8 21.8	21.8	7.8 7.8	7.8	29.7 30.0	29.8	98.5 94.7	96.6	7.3 7.0	7.1	7.1	5.7 5.7	5.7	5.8	5.3 5.1	5.2	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	21.8 21.7	21.7	7.8 7.8	7.8	30.1 30.2	30.2	96.7 102.2	99.5	7.1 7.5	7.3	7.3	5.7 5.8	5.8		4.9 6.6	5.8	
10-Apr-15	Cloudy	Moderate	16:30	4.2	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	30.3 30.3	30.3	87.8 87.9	87.9	6.6 6.6	6.6	6.6	2.1 2.3	2.2	2.2	4.7 4.2	4.5	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.9 21.0	21.0	7.8 7.8	7.8	30.5 30.5	30.5	88.1 87.2	87.7	6.6 6.5	6.5	6.5	2.1 2.2	2.2		4.2 3.8	4.0	
13-Apr-15	Sunny	Moderate	07:58	4.1	Surface	1.0	20.7 20.7	20.7	7.8 7.8	7.8	32.2 31.4	31.8	96.6 94.8	95.7	7.2 7.0	7.1	7.1	2.0 2.1	2.1	2.3	2.8 3.0	2.9	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.7 20.7	20.7	7.8 7.8	7.8	32.6 32.4	32.5	92.1 90.1	91.1	6.8 6.7	6.8	6.8	2.4 2.4	2.4		3.0 2.4	2.7	
15-Apr-15	Sunny	Moderate	10:41	4.4	Surface	1.0	21.3 21.3	21.3	7.9 7.9	7.9	32.2 32.5	32.3	98.8 98.6	98.7	7.3 7.2	7.3	7.3	3.0 3.3	3.2	3.3	4.0 4.8	4.4	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	21.2 21.2	21.2	7.9 7.9	7.9	32.7 32.4	32.6	98.7 98.8	98.8	7.2 7.3	7.2	7.2	3.3 3.3	3.3		6.0 5.9	6.0	
17-Apr-15	Sunny	Moderate	11:50	3.7	Surface	1.0	22.4 22.4	22.4	7.9 7.9	7.9	29.2 29.4	29.3	99.9 96.5	98.2	7.3 7.1	7.2	7.2	1.9 1.8	1.9	2.2	5.2 4.2	4.7	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.2	22.3	7.9 7.9	7.9	29.3 29.6	29.4	97.9 93.3	95.6	7.2 6.8	7.0	7.0	2.4 2.5	2.5		5.7 5.0	5.4	
20-Apr-15	Cloudy	Moderate	14:08	3.8	Surface	1.0	22.8 22.8	22.8	7.9 7.9	7.9	30.0 30.0	30.0	91.3 91.4	91.4	6.6 6.6	6.6	6.6	3.3 3.4	3.4	3.4	4.8 5.1	5.0	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.8 22.8	22.8	7.9 7.9	7.9	30.0 30.1	30.0	91.3 91.4	91.4	6.6 6.6	6.6	6.6	3.1 3.4	3.3		5.2 3.8	4.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	15:35	4.1	Surface	1.0	22.8 23.0	22.9	8.1 8.1	8.1	30.2 30.1	30.2	86.2 87.8	87.0	6.2 6.3	6.3	6.3	2.9 2.8	2.9	2.9	5.7 5.6	5.7	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.8 22.6	22.7	8.1 8.1	8.1	30.2 30.3	30.3	87.2 86.1	86.7	6.3 6.3	6.3	6.3	2.9 2.8	2.9		7.5 6.7	7.1	
24-Apr-15	Sunny	Moderate	17:01	3.7	Surface	1.0	22.9 22.8	22.9	8.1 8.1	8.1	29.5 29.6	29.5	87.7 87.4	87.6	6.4 6.3	6.4	6.4	2.0 1.8	1.9	2.1	4.6 4.6	4.6	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.5	22.4	8.1 8.1	8.1	30.1 30.0	30.1	86.5 87.2	86.9	6.3 6.3	6.3	6.3	2.4 2.2	2.3		5.7 4.9	5.3	
27-Apr-15	Sunny	Moderate	08:45	4.2	Surface	1.0	23.3 23.3	23.3	8.1 8.1	8.1	24.9 25.5	25.2	107.8 105.7	106.8	8.0 7.8	7.9	7.9	2.2 2.1	2.2	2.2	2.8 3.3	3.1	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.3 23.2	23.2	8.1 8.1	8.1	27.6 28.2	27.9	107.0 104.4	105.7	7.8 7.6	7.7	7.7	2.2 2.1	2.2		2.3 3.1	2.7	
29-Apr-15	Sunny	Moderate	10:20	3.9	Surface	1.0	24.5 24.4	24.4	8.2 8.2	8.2	20.9 20.8	20.9	103.1 106.6	104.9	7.7 7.9	7.8	7.8	1.8 1.9	1.9	1.8	3.6 3.2	3.4	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	24.3 24.2	24.3	8.1 8.1	8.1	22.9 22.8	22.9	105.6 99.9	102.8	7.7 7.3	7.5	7.5	1.7 1.6	1.7		2.8 2.9	2.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	17:30	4.2	Surface	1.0	21.5 21.4	21.5	8.1 8.0	8.0	27.9 28.8	28.4	113.8 110.1	112.0	8.5 8.2	8.4	8.4	2.4 2.3	2.4	2.4	3.8 2.7	3.3	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	21.4 21.5	21.4	8.0 8.0	8.0	28.8 28.3	28.6	108.8 112.1	110.5	8.1 8.4	8.3	8.3	2.3 2.4	2.4		4.8 3.2	4.0	
3-Apr-15	Cloudy	Moderate	18:57	5.6	Surface	1.0	22.1 22.2	22.2	8.0 8.0	8.0	25.1 25.1	25.1	105.5 105.4	105.5	8.0 7.9	8.0	8.0	2.7 2.7	2.7	3.1	0.5 0.8	0.7	0.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	21.8 21.7	21.7	8.0 8.0	8.0	26.3 26.4	26.3	104.7 104.3	104.5	7.9 7.9	7.9	7.9	3.5 3.3	3.4		1.0 0.9	1.0	
6-Apr-15	Sunny	Moderate	07:19	3.7	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	27.5 27.5	27.5	93.6 92.9	93.3	6.9 6.9	6.9	6.9	3.5 3.1	3.3	3.9	6.0 6.4	6.2	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.4 22.4	22.4	7.8 7.8	7.8	27.6 27.6	27.6	94.5 93.5	94.0	7.0 6.9	7.0	7.0	4.5 4.2	4.4		6.3 4.3	5.3	
8-Apr-15	Cloudy	Moderate	08:41	4.3	Surface	1.0	22.0 21.9	22.0	7.8 7.8	7.8	29.2 29.2	29.2	93.5 95.1	94.3	6.9 7.0	7.0	7.0	6.3 6.2	6.3	6.3	11.8 10.7	11.3	11.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	21.9 21.9	21.9	7.8 7.8	7.8	29.2 29.2	29.2	94.2 96.9	95.6	7.0 7.2	7.1	7.1	6.2 6.4	6.3		11.9 12.7	12.3	
10-Apr-15	Fine	Moderate	09:34	4.2	Surface	1.0	20.9 20.9	20.9	7.8 7.8	7.8	30.1 30.1	30.1	94.2 92.3	93.3	7.1 6.9	7.0	7.0	1.4 1.4	1.4	1.4	6.7 6.3	6.5	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.9 20.9	20.9	7.8 7.8	7.8	30.1 30.1	30.1	96.9 93.3	95.1	7.3 7.0	7.1	7.1	1.4 1.4	1.4		7.1 7.4	7.3	
13-Apr-15	Sunny	Moderate	14:03	4.4	Surface	1.0	21.0 20.9	20.9	7.8 7.8	7.8	31.7 31.8	31.8	95.3 92.1	93.7	7.1 6.8	7.0	7.0	2.0 1.9	2.0	2.1	1.8 2.2	2.0	2.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	20.9 21.0	21.0	7.8 7.8	7.8	32.8 32.8	32.8	98.6 94.1	96.4	7.3 6.9	7.1	7.1	2.2 2.2	2.2		2.2 2.5	2.4	
15-Apr-15	Sunny	Moderate	16:06	4.3	Surface	1.0	21.5 21.4	21.5	7.9 7.9	7.9	31.8 31.7	31.7	101.8 103.3	102.6	7.5 7.6	7.5	7.5	2.2 2.2	2.2	2.3	3.1 3.5	3.3	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	21.4 21.4	21.4	7.9 7.9	7.9	32.3 32.2	32.3	101.0 103.0	102.0	7.4 7.6	7.5	7.5	2.2 2.3	2.3		4.4 4.5	4.5	
17-Apr-15	Sunny	Moderate	18:07	3.8	Surface	1.0	22.2 22.2	22.2	7.9 7.9	7.9	29.7 29.9	29.8	104.6 105.5	105.1	7.7 7.7	7.7	7.7	3.3 3.5	3.4	5.0	5.6 5.5	5.6	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.3 22.2	22.2	7.9 7.9	7.9	30.3 30.1	30.2	104.7 104.4	104.6	7.6 7.6	7.6	7.6	6.5 6.6	6.6		5.8 7.0	6.4	
20-Apr-15	Cloudy	Moderate	07:15	4.1	Surface	1.0	22.5 22.5	22.5	7.8 7.8	7.8	30.2 30.1	30.2	90.1 92.0	91.1	6.6 6.7	6.6	6.6	6.3 6.1	6.2	6.2	7.8 8.4	8.1	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.5 22.5	22.5	7.8 7.8	7.8	30.2 30.2	30.2	93.3 91.5	92.4	6.8 6.7	6.7	6.7	6.2 6.0	6.1		8.5 8.0	8.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	08:20	4.4	Surface	1.0	22.5 22.5	22.5	8.0 8.0	8.0	30.4 30.4	30.4	89.4 87.2	88.3	6.5 6.3	6.4	6.4	8.6 8.6	8.6	8.7	13.1 11.8	12.5	14.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	22.5 22.5	22.5	8.0 8.0	8.0	30.5 30.4	30.4	92.4 87.9	90.2	6.7 6.4	6.6	6.6	8.7 8.9	8.8		16.4 14.8	15.6	
24-Apr-15	Sunny	Moderate	09:54	3.9	Surface	1.0	22.3 22.4	22.4	8.0 8.0	8.0	30.4 30.2	30.3	87.7 88.7	88.2	6.4 6.5	6.4	6.4	3.0 3.3	3.2	3.3	4.9 5.4	5.2	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	22.3 22.4	22.3	8.0 8.0	8.0	30.7 30.4	30.6	90.9 88.5	89.7	6.6 6.4	6.5	6.5	3.5 3.2	3.4		5.0 6.3	5.7	
27-Apr-15	Sunny	Moderate	14:01	4.3	Surface	1.0	24.1 23.8	23.9	8.0 8.0	8.0	25.2 25.5	25.4	122.9 123.1	123.0	9.0 8.9	8.9	8.9	1.5 1.5	1.5	1.5	2.3 2.2	2.3	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	23.6 23.3	23.4	8.0 8.0	8.0	27.9 28.1	28.0	120.4 113.5	117.0	8.8 8.2	8.5	8.5	1.4 1.5	1.5		2.0 2.8	2.4	
29-Apr-15	Sunny	Moderate	16:33	3.7	Surface	1.0	25.1 25.2	25.1	8.3 8.3	8.3	22.5 22.4	22.5	121.3 123.8	122.6	8.9 9.0	8.9	8.9	2.3 2.2	2.3	2.3	3.8 2.0	2.9	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	25.0 25.0	25.0	8.3 8.3	8.3	23.2 23.3	23.2	122.0 118.8	120.4	8.9 8.7	8.8	8.8	2.3 2.1	2.2		2.9 2.2	2.6	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10B(N) - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	10:36	4.8	Surface	1.0	21.3 21.2	21.3	7.8 7.8	7.8	28.0 28.5	28.3	95.7 95.7	95.7	7.2 7.2	7.2	7.2	2.7 2.7	2.7	2.8	3.8 3.1	3.5	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	21.2 21.2	21.2	7.8 7.8	7.8	28.4 27.0	27.7	95.7 93.4	94.6	7.2 7.1	7.1	7.1	2.7 2.9	2.8		5.9 6.3	6.1	
3-Apr-15	Cloudy	Moderate	11:01	4.9	Surface	1.0	21.8 21.8	21.8	7.5 7.5	7.5	28.2 28.2	28.2	95.0 95.5	95.3	7.1 7.1	7.1	7.1	4.6 4.5	4.6	4.6	3.0 3.2	3.1	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	21.8 21.8	21.8	7.5 7.5	7.5	28.4 28.3	28.4	94.4 94.8	94.6	7.1 7.1	7.1	7.1	4.5 4.4	4.5		2.5 2.9	2.7	
6-Apr-15	Sunny	Moderate	14:41	5.1	Surface	1.0	22.9 22.9	22.9	7.4 7.4	7.4	28.5 28.5	28.5	93.2 93.0	93.1	6.8 6.8	6.8	6.8	3.8 3.7	3.8	3.9	2.4 2.2	2.3	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.7 22.9	22.8	7.3 7.3	7.3	28.9 28.7	28.8	92.4 92.8	92.6	6.7 6.8	6.8	6.8	3.8 4.0	3.9		2.2 2.7	2.5	
8-Apr-15	Cloudy	Moderate	16:06	5.2	Surface	1.0	22.2 22.2	22.2	7.4 7.4	7.4	30.9 30.8	30.9	91.4 91.4	91.4	6.7 6.7	6.7	6.7	3.4 3.4	3.4	3.5	2.1 2.6	2.4	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	22.2 22.2	22.2	7.4 7.4	7.4	31.2 31.4	31.3	91.8 91.3	91.6	6.7 6.6	6.7	6.7	3.4 3.6	3.5		3.5 3.0	3.3	
10-Apr-15	Cloudy	Moderate	17:32	4.9	Surface	1.0	21.8 21.8	21.8	7.8 7.9	7.9	30.7 30.7	30.7	89.0 89.1	89.1	6.5 6.6	6.5	6.5	5.1 5.3	5.2	5.3	4.9 5.3	5.1	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	21.8 21.8	21.8	7.9 7.8	7.8	30.8 30.7	30.8	88.9 89.1	89.0	6.5 6.5	6.5	6.5	5.6 5.2	5.4		7.5 6.9	7.2	
13-Apr-15	Sunny	Moderate	07:32	5.2	Surface	1.0	21.7 21.7	21.7	7.2 7.3	7.3	31.1 31.2	31.2	86.1 86.0	86.1	6.3 6.3	6.3	6.3	3.4 3.3	3.4	3.4	2.5 2.0	2.3	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.7 21.7	21.7	7.2 7.2	7.2	31.2 31.1	31.2	86.1 85.9	86.0	6.3 6.3	6.3	6.3	3.3 3.2	3.3		3.3 2.5	2.9	
15-Apr-15	Sunny	Moderate	09:21	5.3	Surface	1.0	22.0 22.0	22.0	7.8 7.8	7.8	29.7 30.2	29.9	90.0 89.6	89.8	6.6 6.6	6.6	6.6	3.9 3.6	3.8	3.8	1.8 3.1	2.5	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	22.0 22.0	22.0	7.8 7.8	7.8	29.3 30.1	29.7	90.2 89.5	89.9	6.7 6.6	6.6	6.6	3.8 3.7	3.8		3.4 3.4	3.4	
17-Apr-15	Sunny	Moderate	10:49	5.0	Surface	1.0	22.8 22.8	22.8	7.2 7.2	7.2	29.2 29.3	29.2	97.2 97.7	97.5	7.1 7.1	7.1	7.1	3.3 3.2	3.3	3.3	2.5 3.6	3.1	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	22.7 22.7	22.7	7.2 7.2	7.2	29.5 29.1	29.3	97.0 97.1	97.1	7.1 7.1	7.1	7.1	3.3 3.3	3.3		2.7 3.2	3.0	
20-Apr-15	Cloudy	Moderate	14:40	5.1	Surface	1.0	23.6 23.6	23.6	7.4 7.5	7.5	29.4 29.3	29.3	90.0 90.0	90.0	6.5 6.5	6.5	6.5	4.9 4.8	4.9	4.9	4.8 4.9	4.9	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	23.5 23.6	23.6	7.5 7.4	7.4	29.5 29.4	29.5	89.7 90.0	89.9	6.4 6.4	6.4	6.4	4.8 4.9	4.9		4.4 5.0	4.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10B(N) - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	16:12	4.9	Surface	1.0	24.1 24.1	24.1	8.0 8.0	8.0	30.7 30.7	30.7	90.7 90.9	90.8	6.4 6.4	6.4	6.4	4.1 4.2	4.2	4.2	4.2 2.9	3.6	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	24.1 24.0	24.1	8.0 8.0	8.0	30.7 30.8	30.8	90.8 90.6	90.7	6.4 6.4	6.4	6.4	4.2 4.0	4.1		4.5 4.3	4.4	
24-Apr-15	Sunny	Moderate	17:41	5.0	Surface	1.0	24.0 24.1	24.0	8.0 8.0	8.0	32.4 32.3	32.4	93.6 93.6	93.6	6.6 6.6	6.6	6.6	3.8 3.9	3.9	3.9	3.8 2.8	3.3	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	23.9 24.0	23.9	8.0 8.0	8.0	32.5 32.5	32.5	92.7 93.7	93.2	6.5 6.6	6.5	6.5	3.9 3.7	3.8		4.9 5.0	5.0	
27-Apr-15	Sunny	Moderate	07:37	5.1	Surface	1.0	23.7 23.7	23.7	8.0 8.0	8.0	32.5 33.0	32.8	94.2 94.2	94.2	6.6 6.6	6.6	6.6	2.6 2.7	2.7	2.7	2.3 2.3	2.3	2.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	23.7 23.7	23.7	8.0 8.0	8.0	33.6 32.9	33.2	94.5 94.0	94.3	6.6 6.6	6.6	6.6	2.7 2.7	2.7		2.3 2.1	2.2	
29-Apr-15	Sunny	Moderate	09:12	5.4	Surface	1.0	24.6 24.6	24.6	7.9 8.0	7.9	30.2 29.8	30.0	117.9 117.4	117.7	8.3 8.2	8.3	8.3	2.5 2.5	2.5	2.6	3.0 3.3	3.2	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	24.5 24.6	24.6	7.8 7.9	7.8	30.8 30.0	30.4	115.6 109.9	112.8	8.1 7.7	7.9	7.9	2.6 2.6	2.6		3.5 4.0	3.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10B(N) - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
1-Apr-15	Sunny	Moderate	18:25	4.6	Surface	1.0	21.7 21.9	21.8	8.1 8.1	8.1	29.4 29.4	29.4	103.4 106.2	104.8	7.7 7.8	7.8	7.8	2.8 2.7	2.8	2.9	4.3 3.1	3.7	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	21.7 21.3	21.5	8.1 8.1	8.1	30.2 30.9	30.6	104.6 102.6	103.6	7.7 7.6	7.7	7.7	3.0 2.8	2.9		4.1 4.9	4.5	
3-Apr-15	Cloudy	Moderate	20:07	5.2	Surface	1.0	22.6 22.6	22.6	7.5 7.5	7.5	26.2 26.2	26.2	100.2 100.2	100.2	7.4 7.4	7.4	7.4	3.8 3.9	3.9	4.2	0.8 0.9	0.9	1.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	22.5 22.5	22.5	7.5 7.5	7.5	26.6 26.7	26.6	99.6 99.6	99.6	7.4 7.4	7.4	7.4	4.4 4.3	4.4		1.1 1.1	1.1	
6-Apr-15	Sunny	Moderate	07:01	5.3	Surface	1.0	22.3 22.3	22.3	7.0 6.9	7.0	28.7 28.6	28.7	89.0 89.3	89.2	6.6 6.6	6.6	6.6	5.5 5.5	5.5	5.6	3.0 3.6	3.3	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	22.2 22.2	22.2	6.8 7.0	6.9	28.8 29.0	28.9	89.6 88.8	89.2	6.6 6.5	6.6	6.6	5.5 5.6	5.6		3.1 4.3	3.7	
8-Apr-15	Cloudy	Moderate	07:26	5.1	Surface	1.0	22.5 22.5	22.5	7.2 7.2	7.2	27.0 26.2	26.6	89.2 90.0	89.6	6.6 6.7	6.7	6.7	4.2 4.1	4.2	4.2	3.6 2.9	3.3	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.5 22.5	22.5	7.2 7.2	7.2	25.1 26.9	26.0	92.8 89.4	91.1	7.0 6.6	6.8	6.8	4.2 4.2	4.2		2.5 3.4	3.0	
10-Apr-15	Fine	Moderate	08:27	4.9	Surface	1.0	21.8 21.8	21.8	7.8 7.8	7.8	26.2 27.1	26.6	91.7 89.7	90.7	6.9 6.7	6.8	6.8	4.3 4.3	4.3	4.4	6.2 3.8	5.0	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	21.8 21.8	21.8	7.8 7.8	7.8	25.9 27.0	26.4	93.4 90.4	91.9	7.1 6.8	6.9	6.9	4.3 4.4	4.4		5.6 4.0	4.8	
13-Apr-15	Sunny	Moderate	14:31	5.3	Surface	1.0	22.0 21.9	22.0	7.4 7.4	7.4	33.0 33.1	33.1	86.6 86.3	86.5	6.3 6.2	6.2	6.2	3.2 3.2	3.2	3.3	3.2 2.8	3.0	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	21.9 22.0	21.9	7.4 7.4	7.4	33.2 33.1	33.1	86.2 86.6	86.4	6.2 6.3	6.2	6.2	3.3 3.2	3.3		2.4 2.8	2.6	
15-Apr-15	Sunny	Moderate	17:08	5.2	Surface	1.0	22.2 22.2	22.2	7.8 7.8	7.8	33.7 33.7	33.7	90.9 90.9	90.9	6.5 6.5	6.5	6.5	4.1 4.3	4.2	4.1	2.6 2.1	2.4	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	22.2 22.2	22.2	7.8 7.8	7.8	33.7 33.7	33.7	90.7 90.9	90.8	6.5 6.5	6.5	6.5	4.2 3.7	4.0		4.5 4.8	4.7	
17-Apr-15	Sunny	Moderate	19:00	5.2	Surface	1.0	22.8 22.8	22.8	7.5 7.4	7.4	31.3 31.3	31.3	97.0 96.8	96.9	7.0 7.0	7.0	7.0	5.3 5.4	5.4	5.4	5.2 4.6	4.9	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	22.8 22.8	22.8	7.4 7.5	7.4	31.5 31.3	31.4	96.6 96.9	96.8	6.9 7.0	7.0	7.0	5.2 5.5	5.4		4.3 5.2	4.8	
20-Apr-15	Cloudy	Moderate	06:11	4.9	Surface	1.0	23.3 23.3	23.3	7.1 7.1	7.1	27.9 27.3	27.6	88.1 88.5	88.3	6.4 6.5	6.4	6.4	6.7 6.6	6.7	6.7	6.5 5.8	6.2	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	23.3 23.3	23.3	7.1 7.1	7.1	27.8 26.6	27.2	88.2 89.1	88.7	6.4 6.5	6.5	6.5	6.5 6.6	6.6		6.1 5.2	5.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

Appendix J - Marine Water Quality Monitoring Results

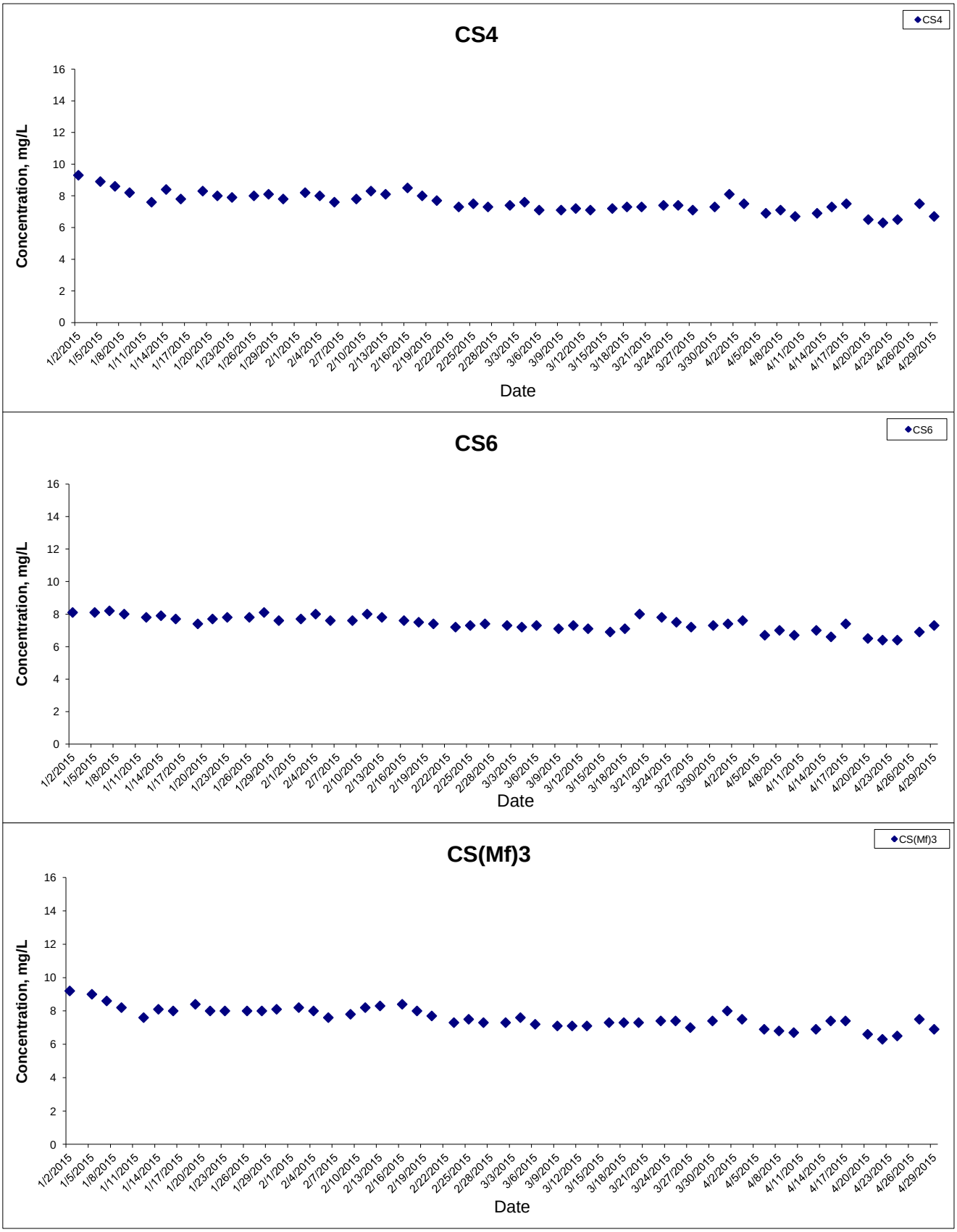
Water Quality Monitoring Results at SR10B(N) - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
22-Apr-15	Sunny	Moderate	07:34	4.9	Surface	1.0	23.3 23.3	23.3	7.9 7.9	7.9	25.4 27.0	26.2	87.5 85.8	86.7	6.5 6.3	6.4	6.4	5.4 5.4	5.4	5.5	7.5 7.8	7.7	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	23.3 23.3	23.3	7.9 7.9	7.9	24.7 26.8	25.7	89.2 86.0	87.6	6.6 6.3	6.5	6.5	5.5 5.4	5.5		4.0 3.6	3.8	
24-Apr-15	Sunny	Moderate	09:09	5.1	Surface	1.0	23.3 23.3	23.3	7.9 7.9	7.9	28.5 28.7	28.6	84.7 84.6	84.7	6.1 6.1	6.1	6.1	4.1 4.1	4.1	4.1	3.1 3.0	3.1	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	23.3 23.3	23.3	7.9 7.9	7.9	28.8 28.7	28.7	84.6 84.3	84.5	6.1 6.1	6.1	6.1	4.0 4.1	4.1		2.6 2.2	2.4	
27-Apr-15	Sunny	Moderate	14:39	5.0	Surface	1.0	24.1 24.1	24.1	7.9 7.9	7.9	32.5 32.5	32.5	113.3 111.2	112.3	7.9 7.8	7.8	7.8	2.8 2.6	2.7	2.7	2.4 3.5	3.0	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	23.9 23.9	23.9	7.9 7.9	7.9	32.9 32.8	32.9	109.9 110.3	110.1	7.7 7.7	7.7	7.7	2.6 2.7	2.7		2.9 2.3	2.6	
29-Apr-15	Sunny	Moderate	17:21	5.4	Surface	1.0	25.4 25.4	25.4	8.4 8.4	8.4	26.9 26.7	26.8	150.5 150.7	150.6	10.6 10.6	10.6	10.6	2.9 2.9	2.9	2.9	2.2 2.1	2.2	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	25.5 25.4	25.4	8.4 8.4	8.4	28.8 29.0	28.9	153.3 157.6	155.5	10.7 11.0	10.8	10.8	3.0 2.8	2.9		2.6 3.8	3.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

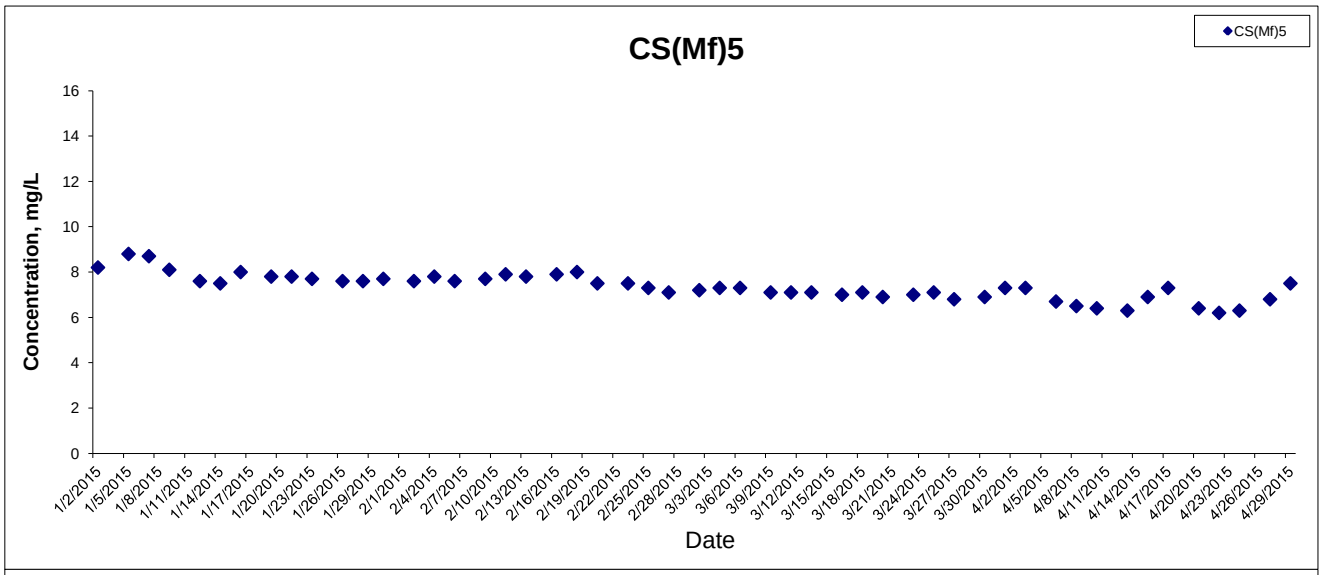
Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher

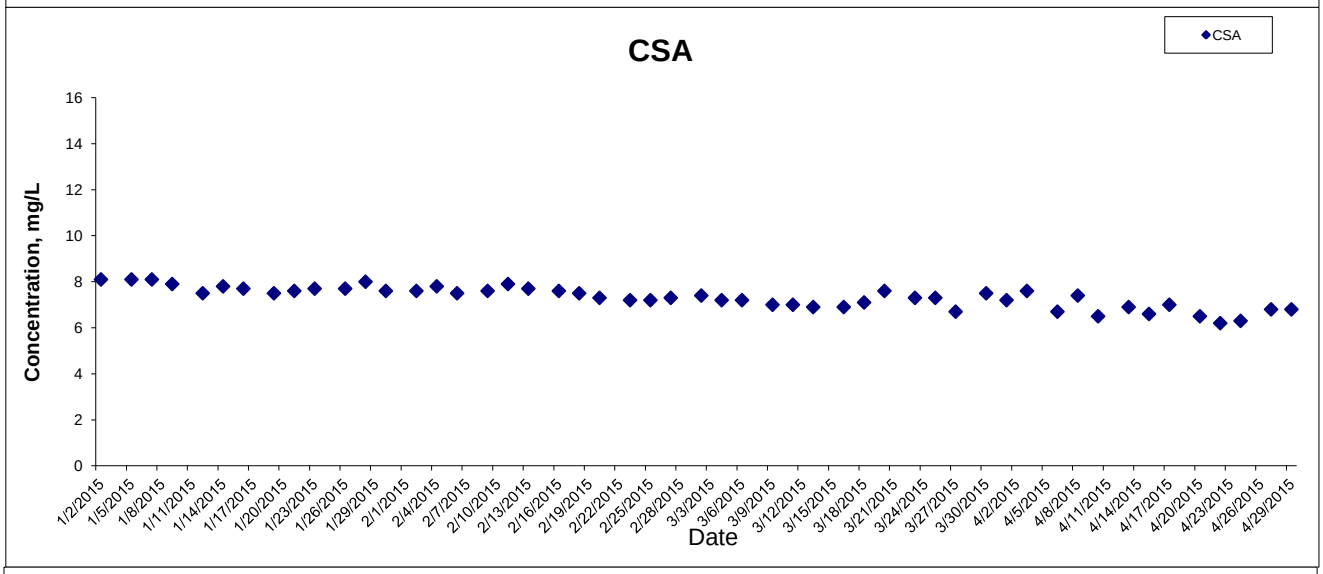
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

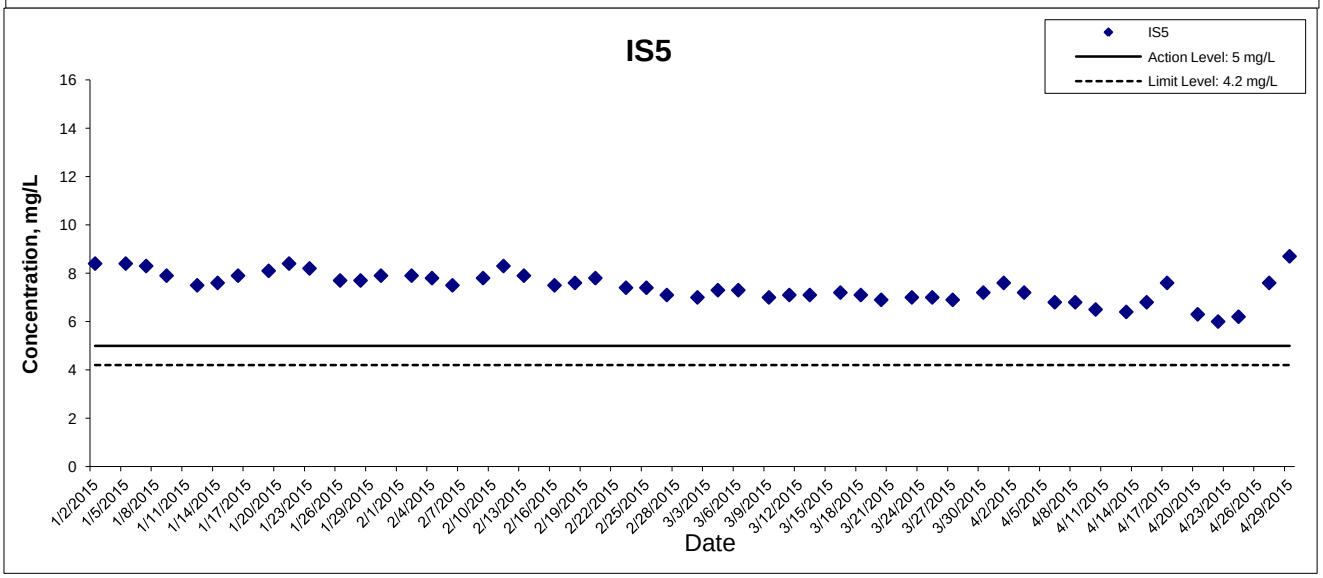


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

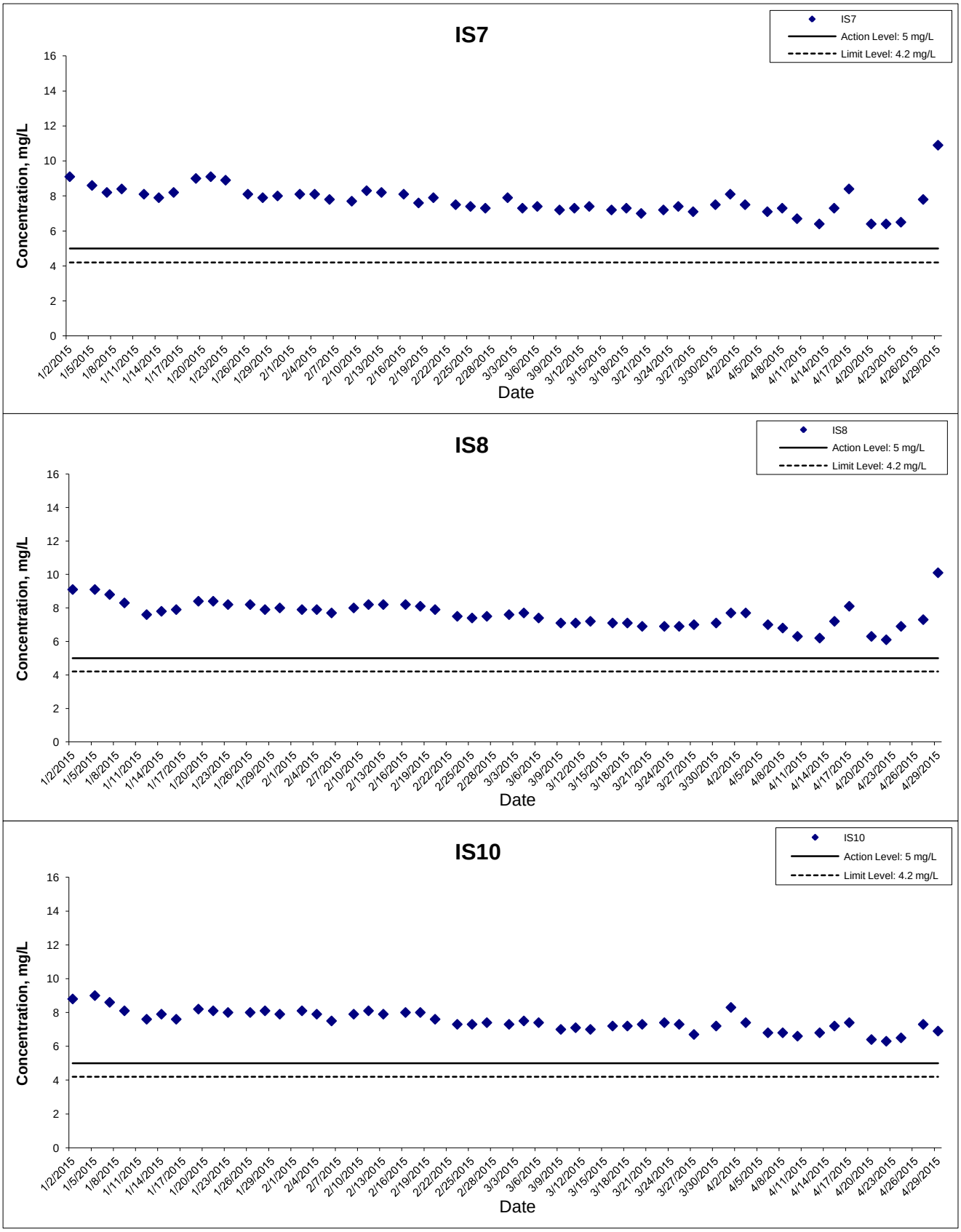
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

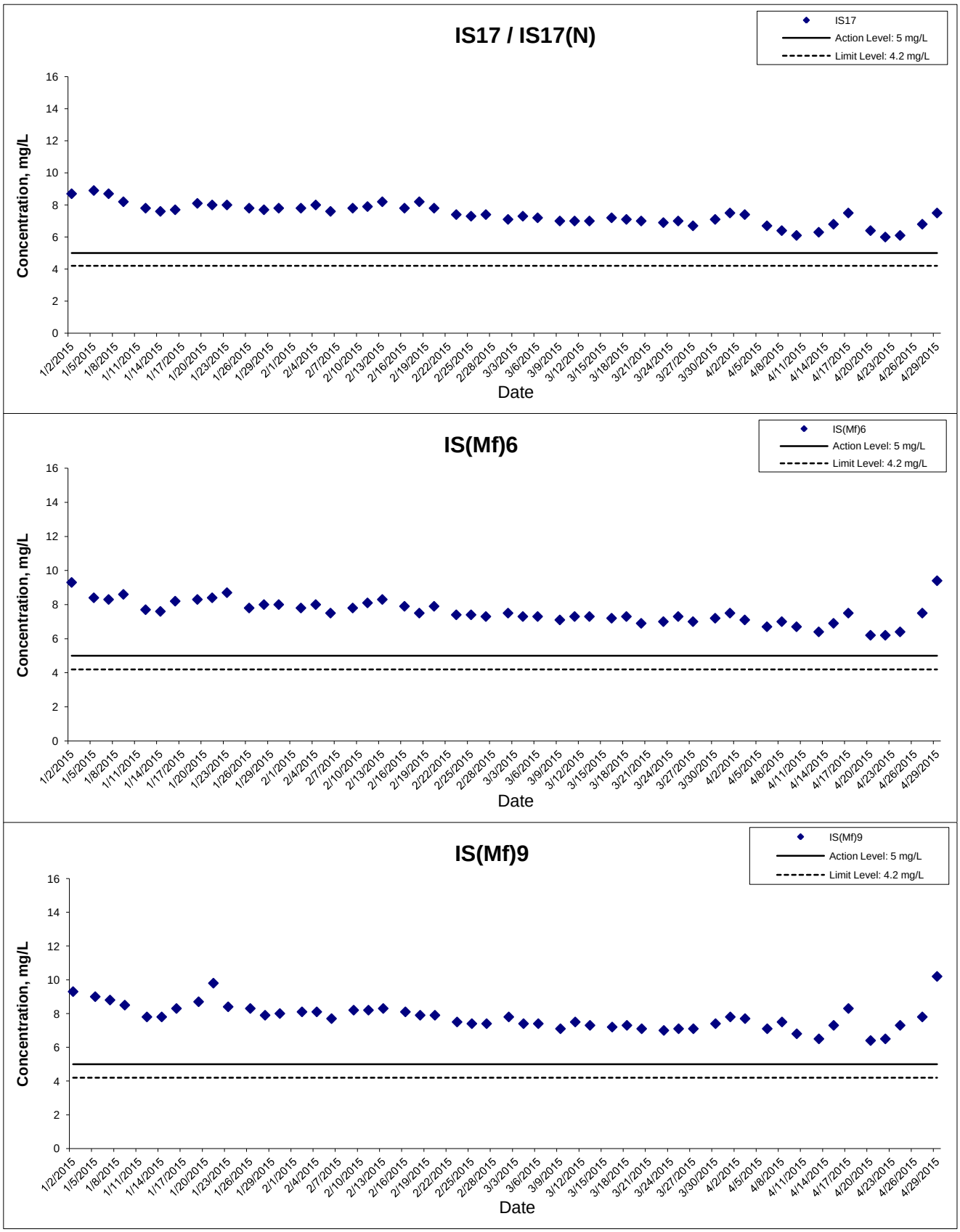
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



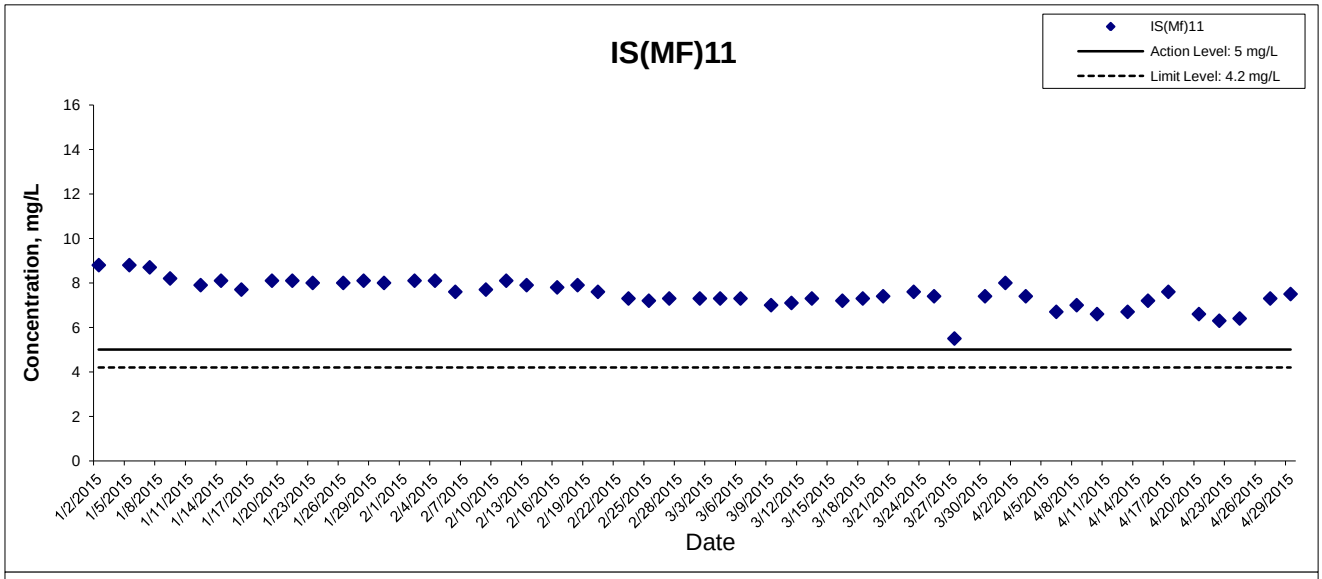
This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

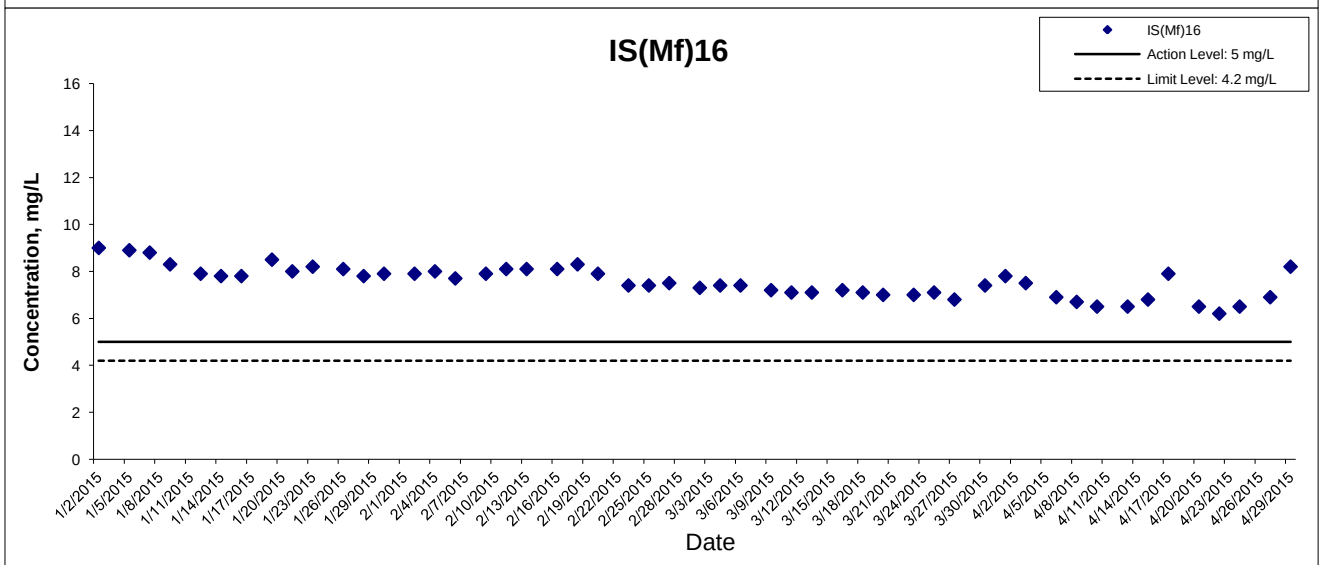
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

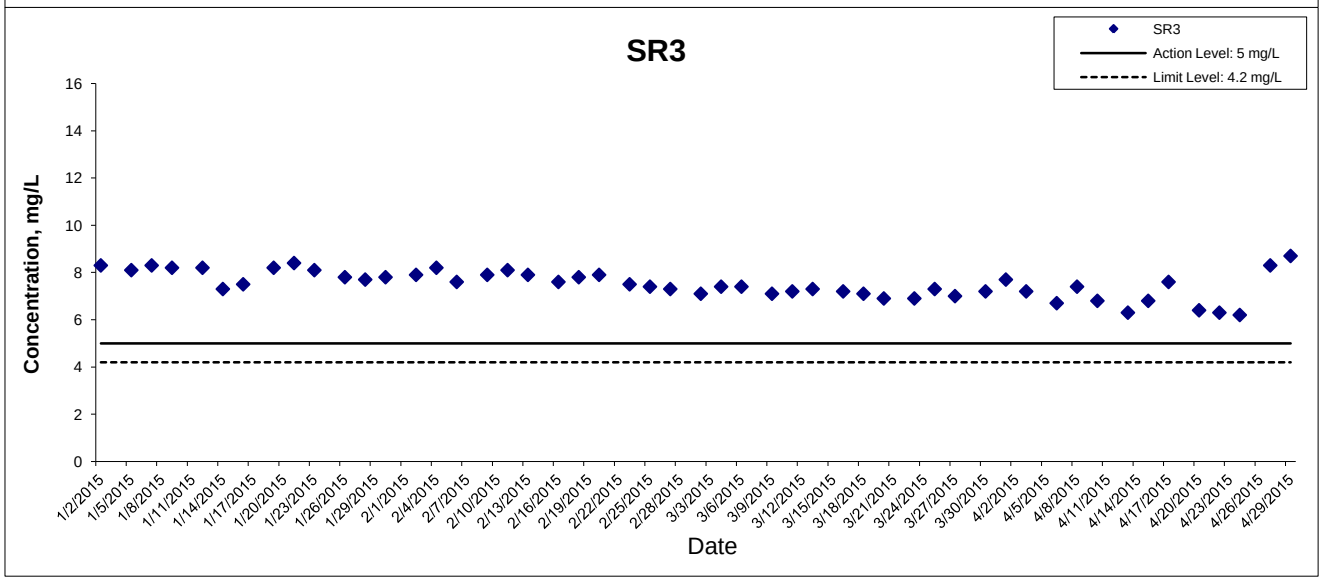
Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

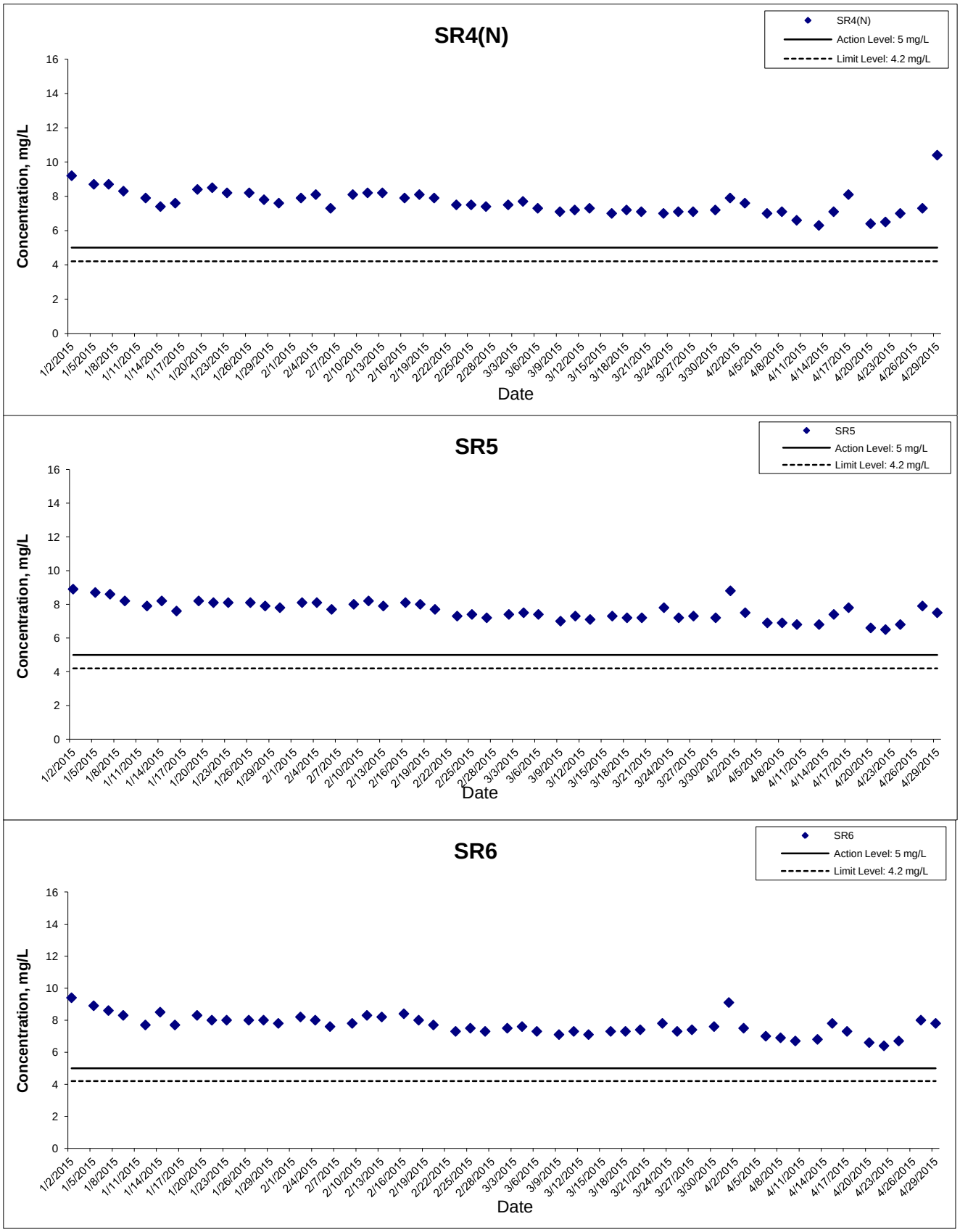
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

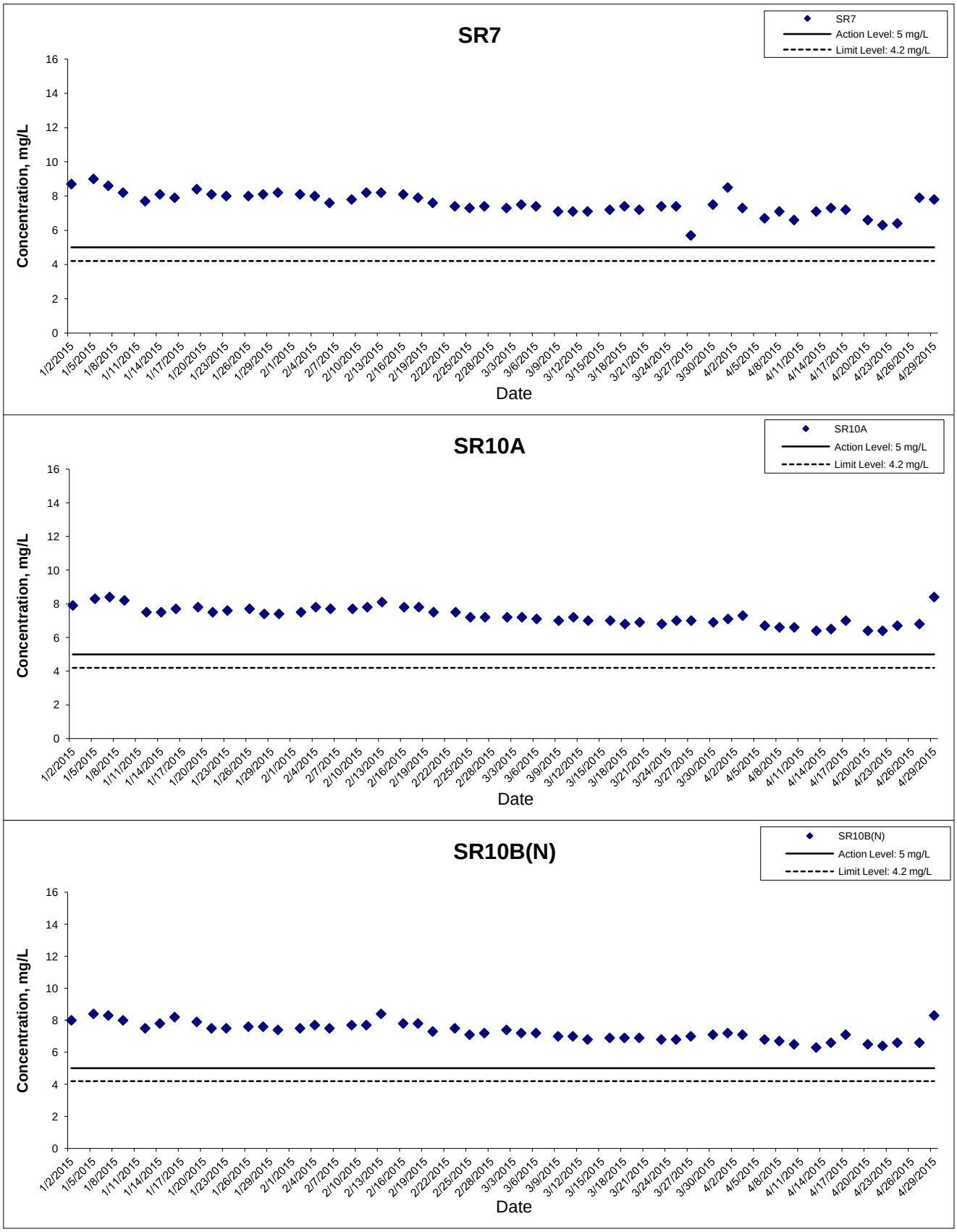
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

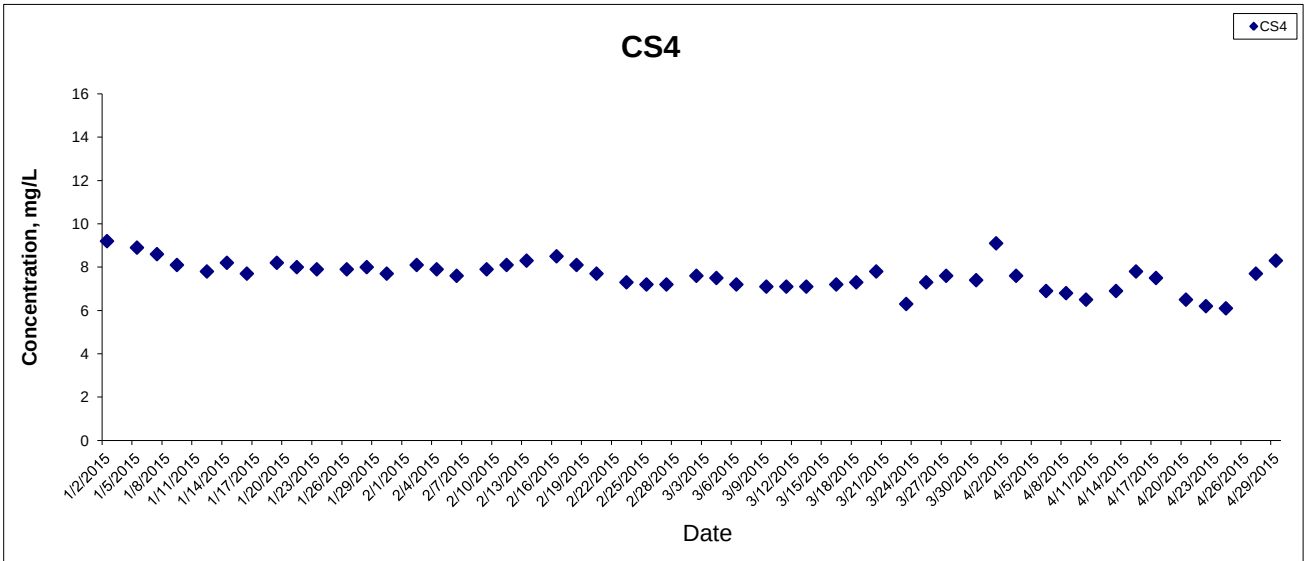
AECOM

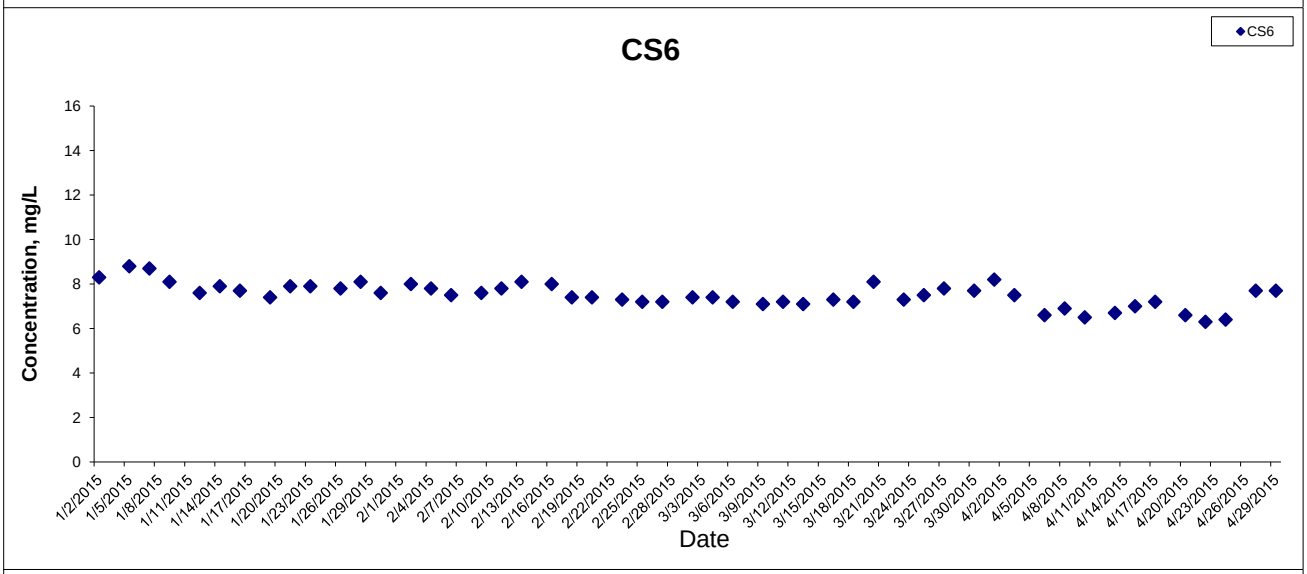
Graphical Presentation of Impact Water Quality Monitoring Results

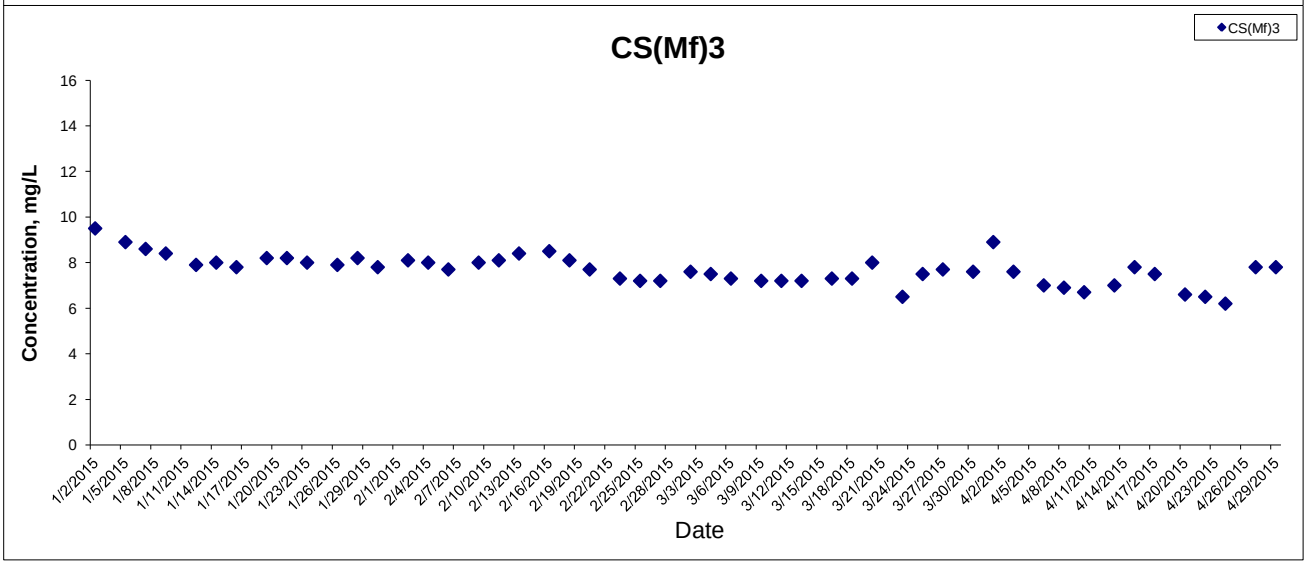
Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

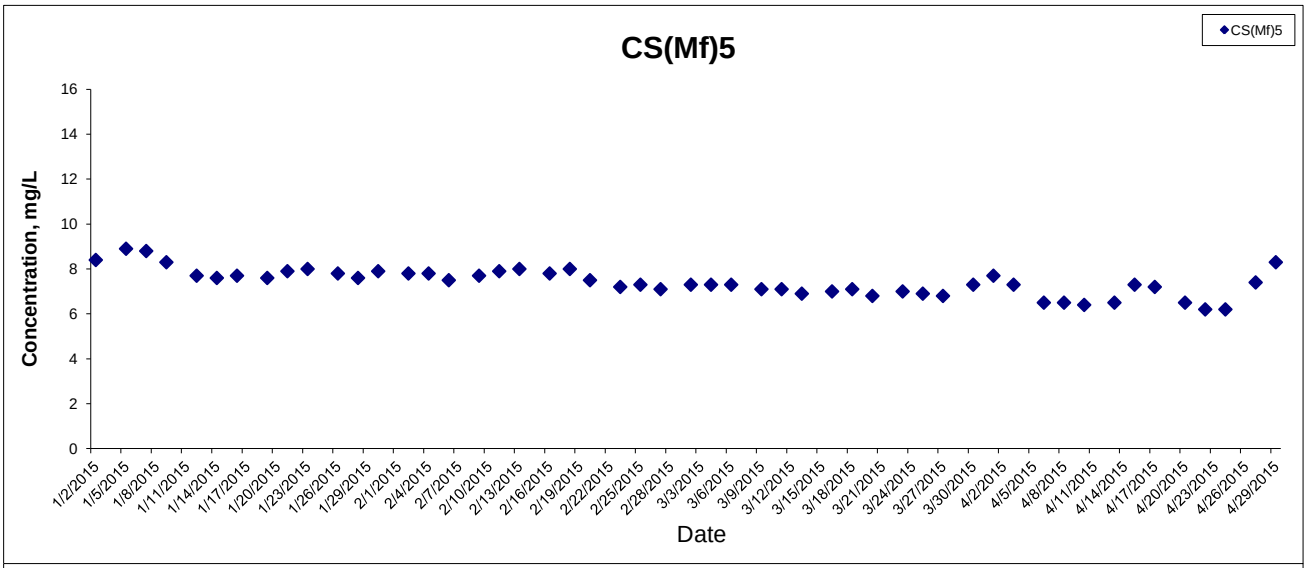


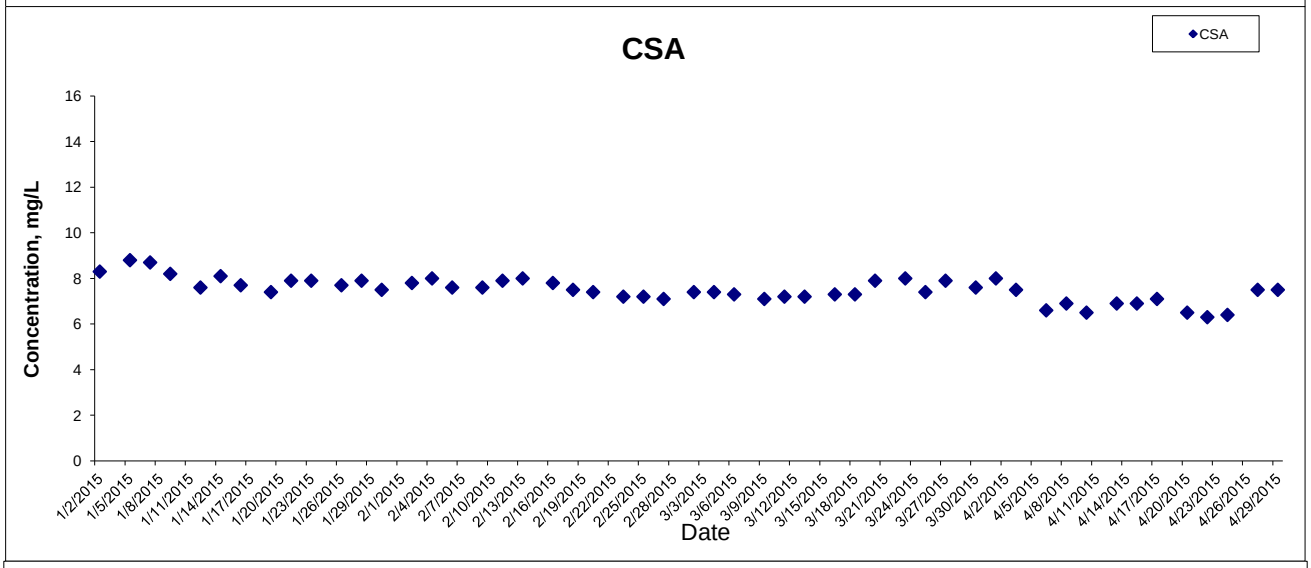


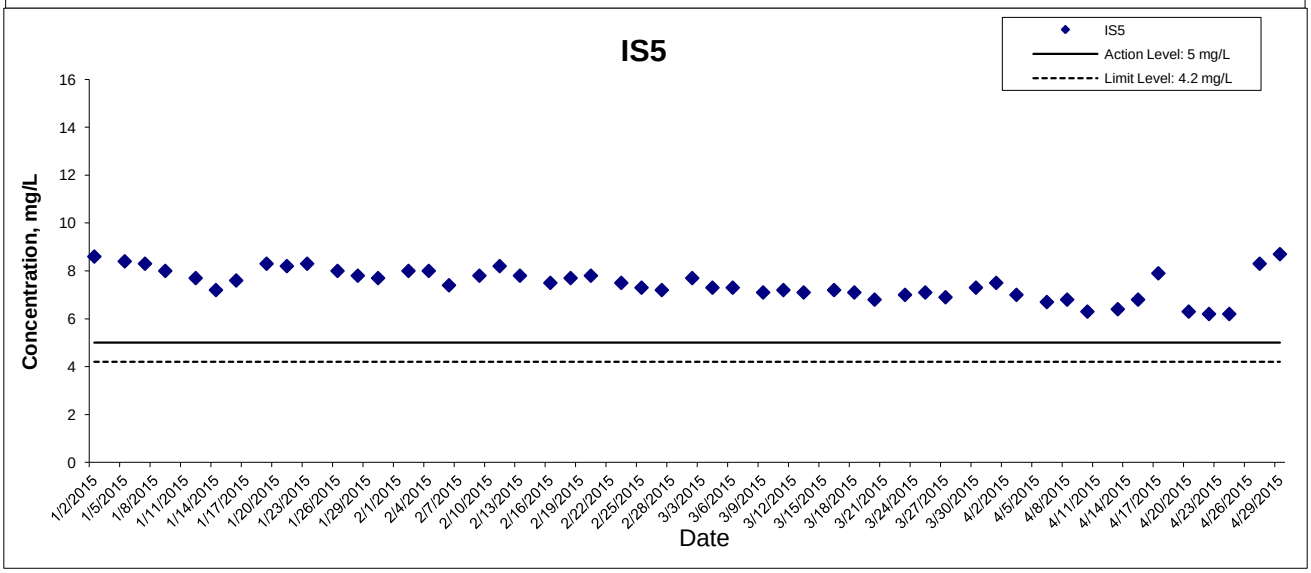


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

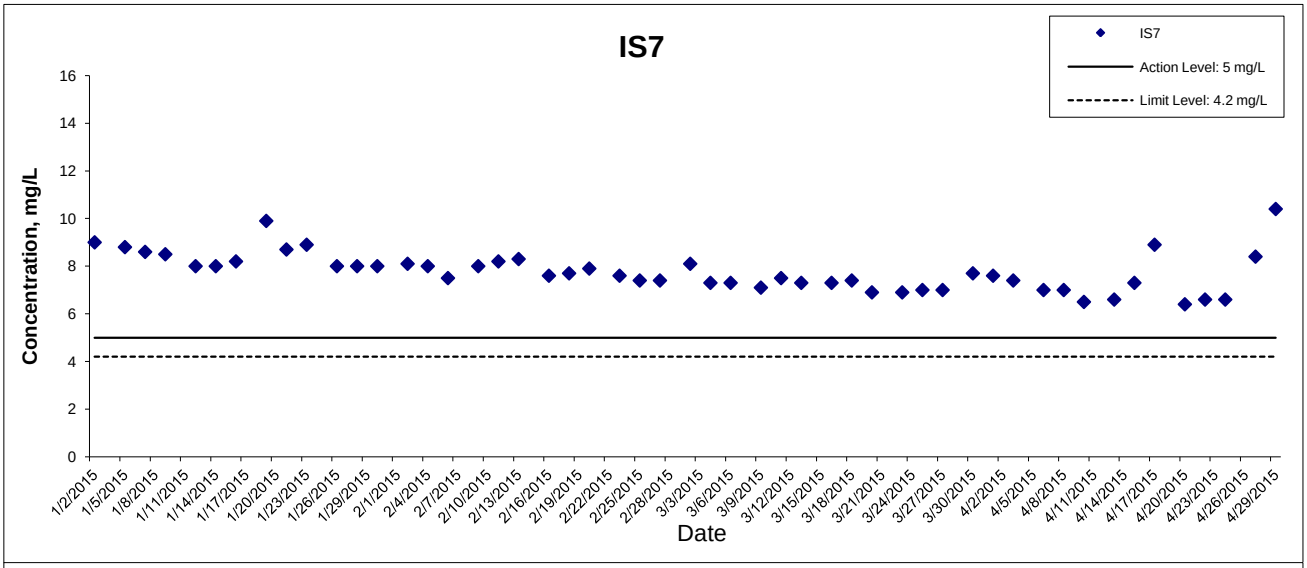
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

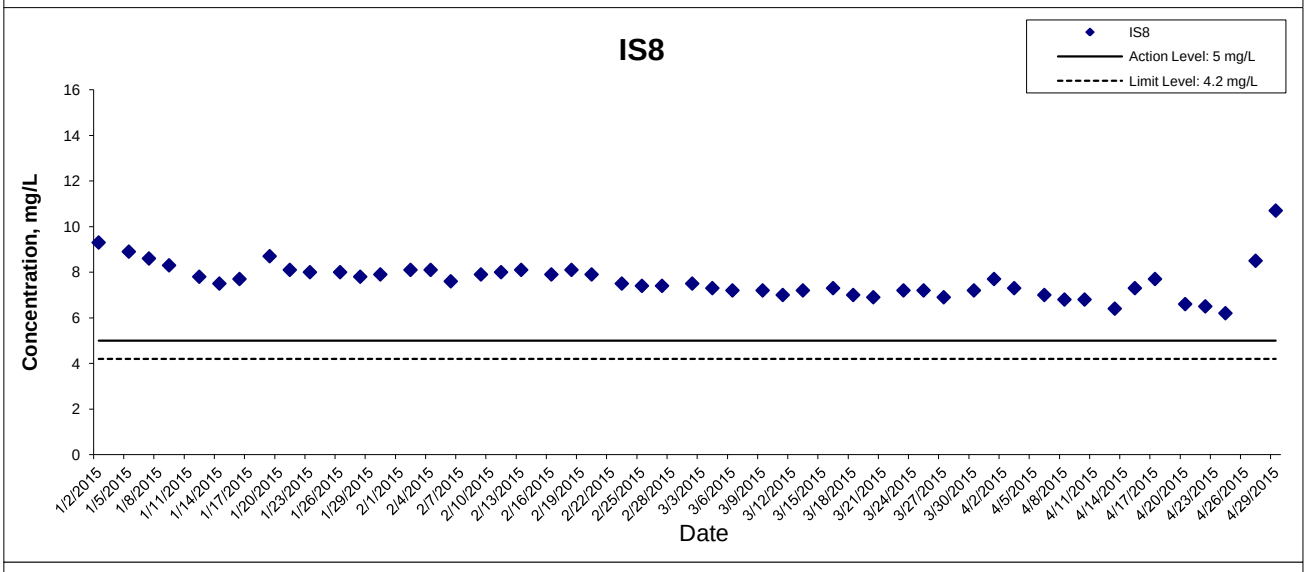
Graphical Presentation of Impact Water Quality Monitoring Results

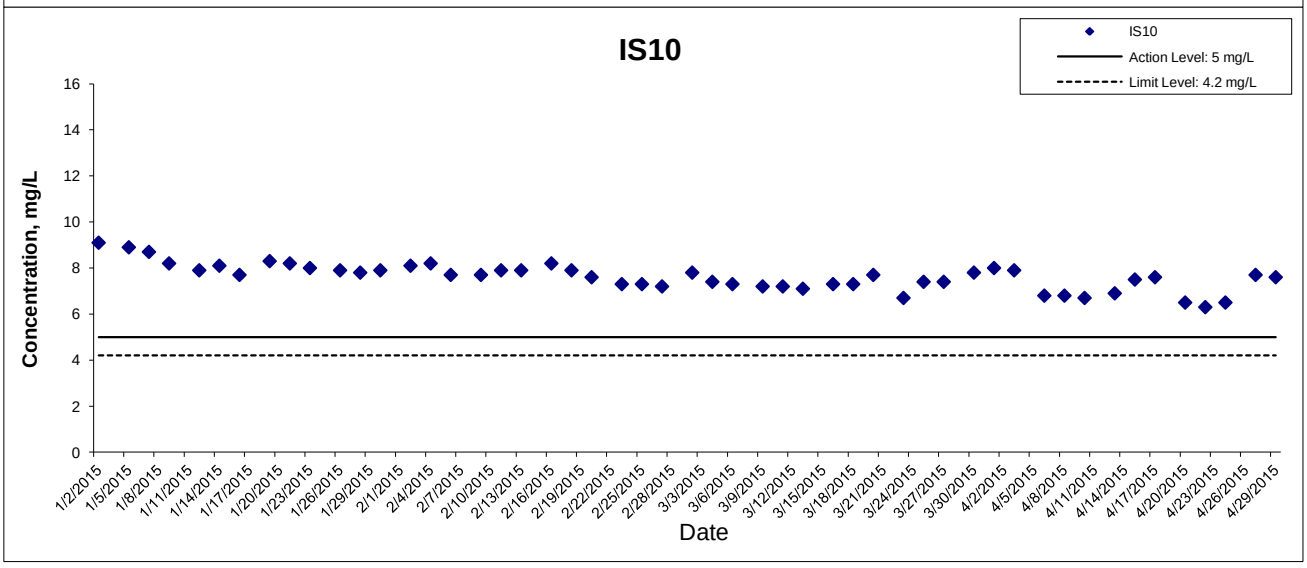
Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

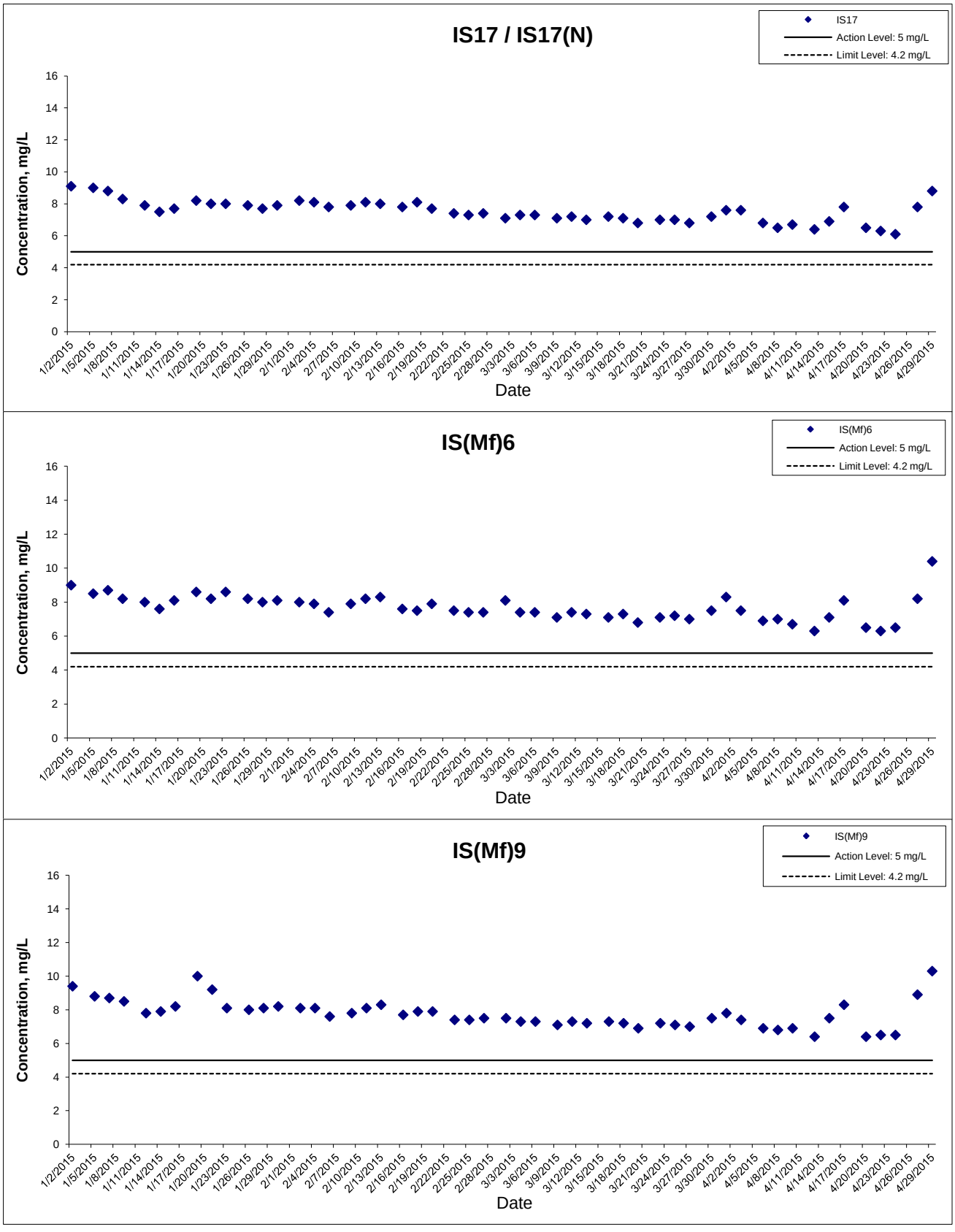






This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

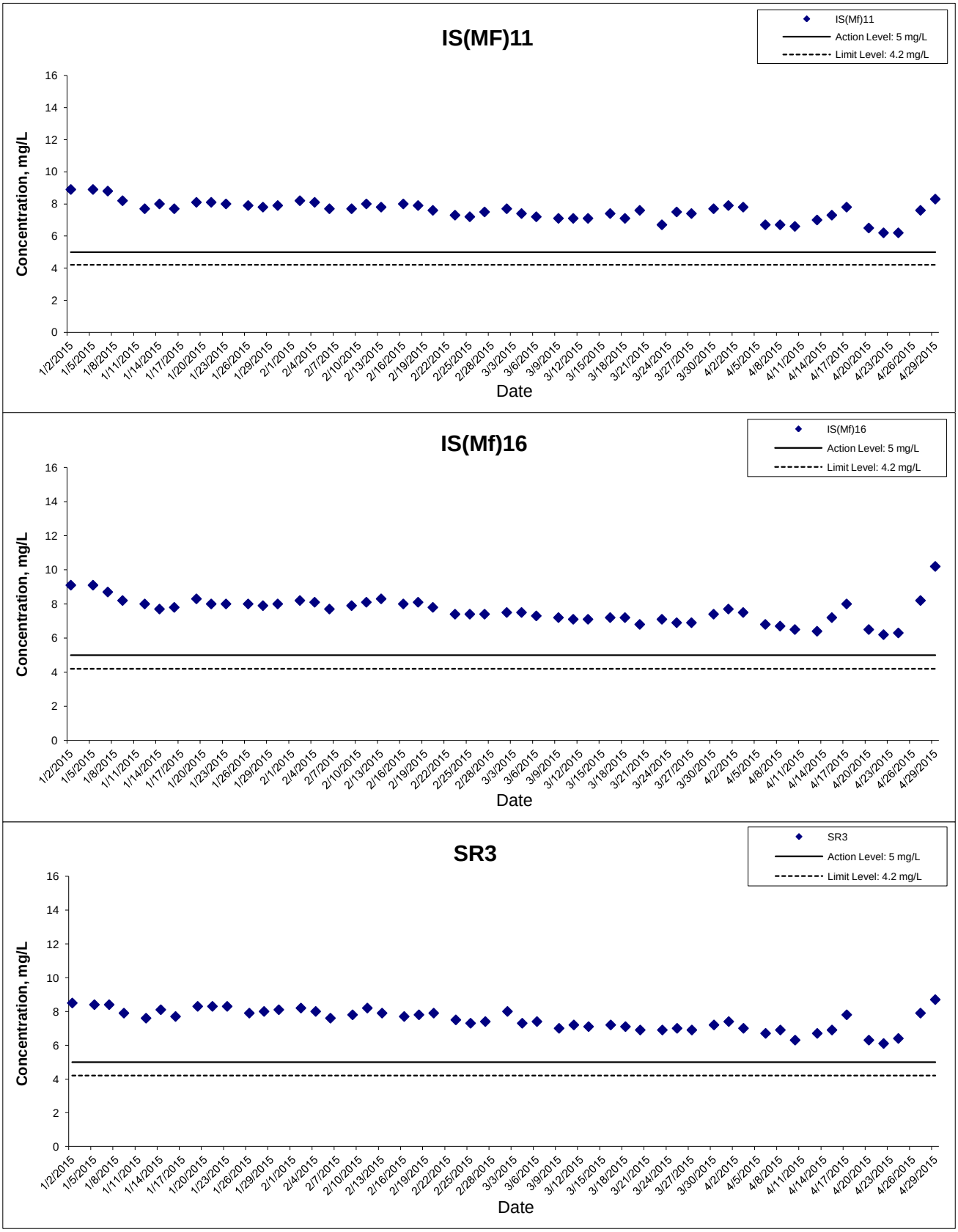
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

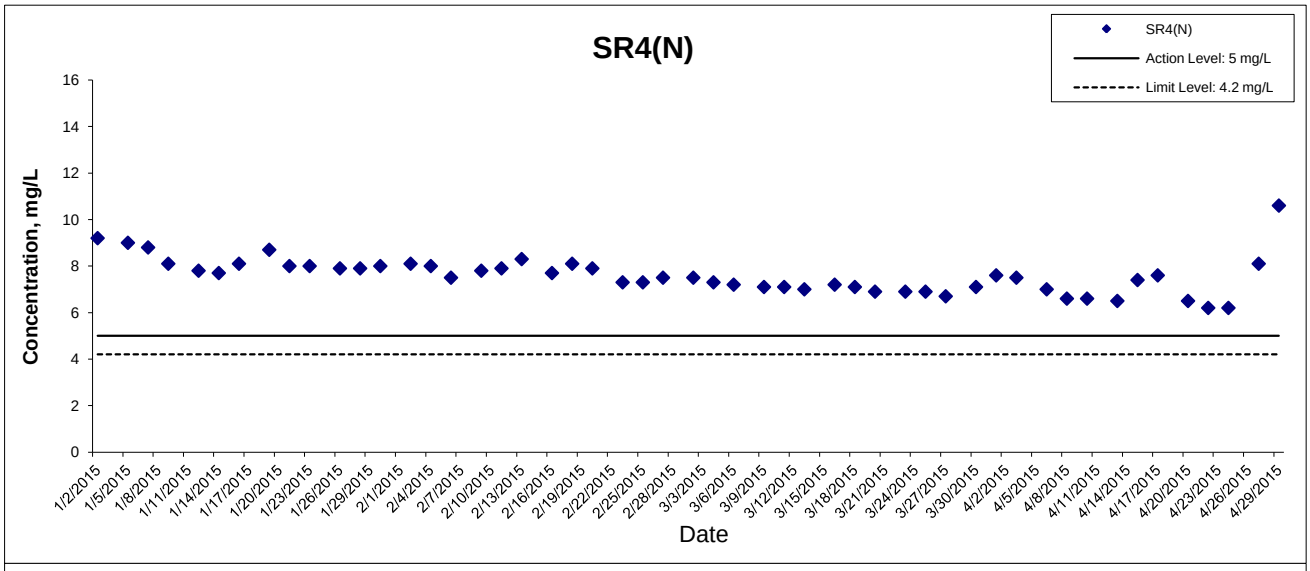
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

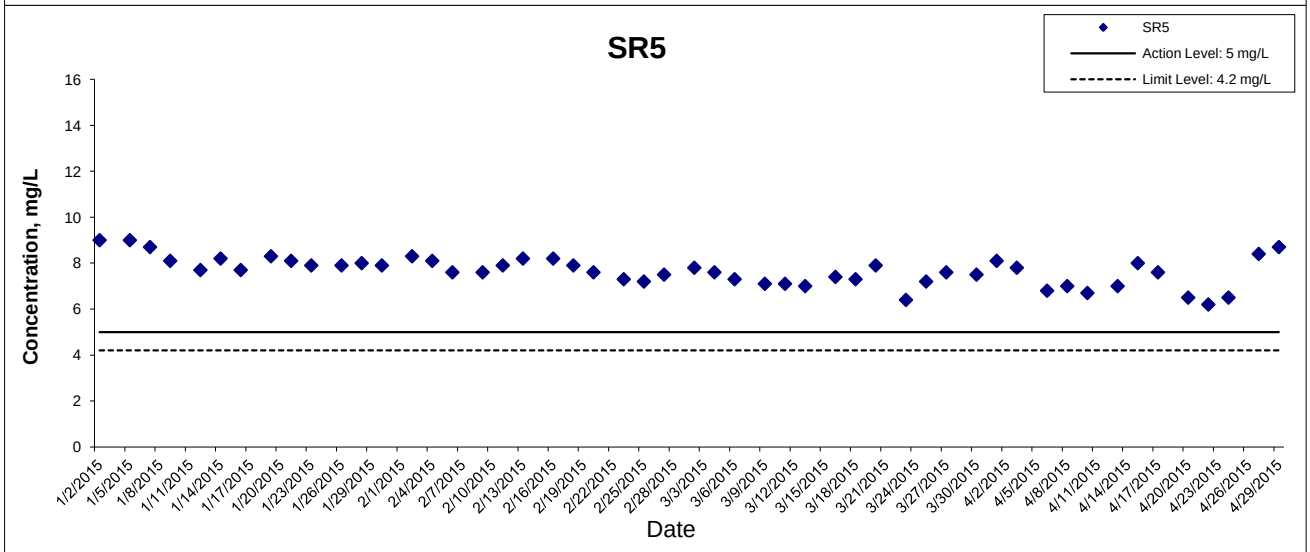
Graphical Presentation of Impact Water Quality Monitoring Results

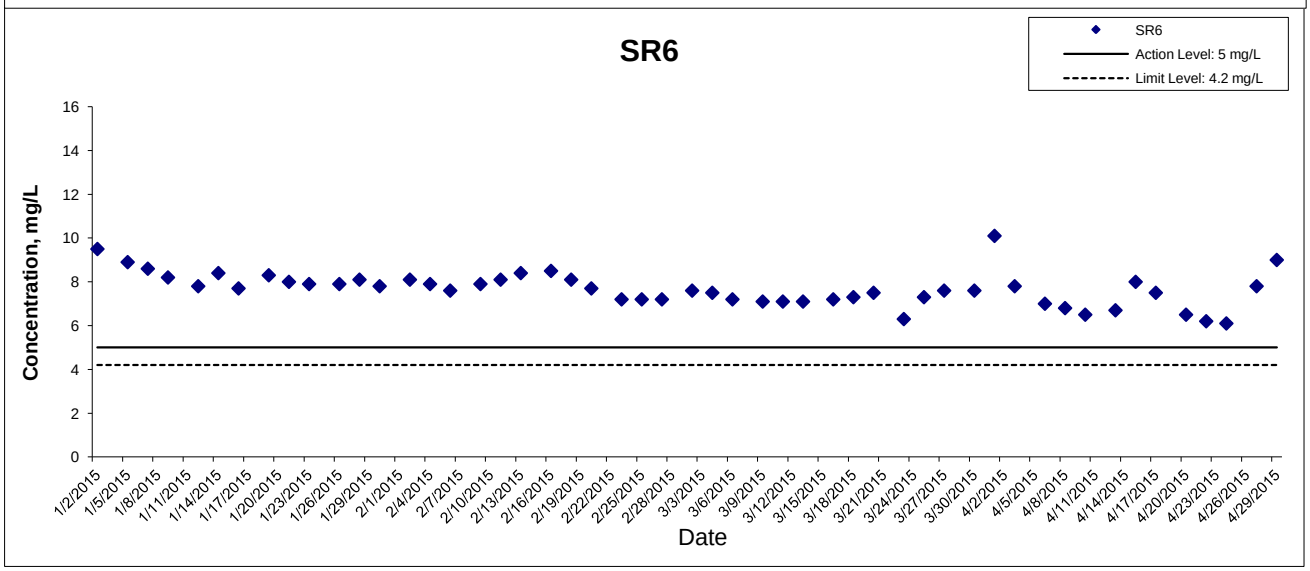
Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

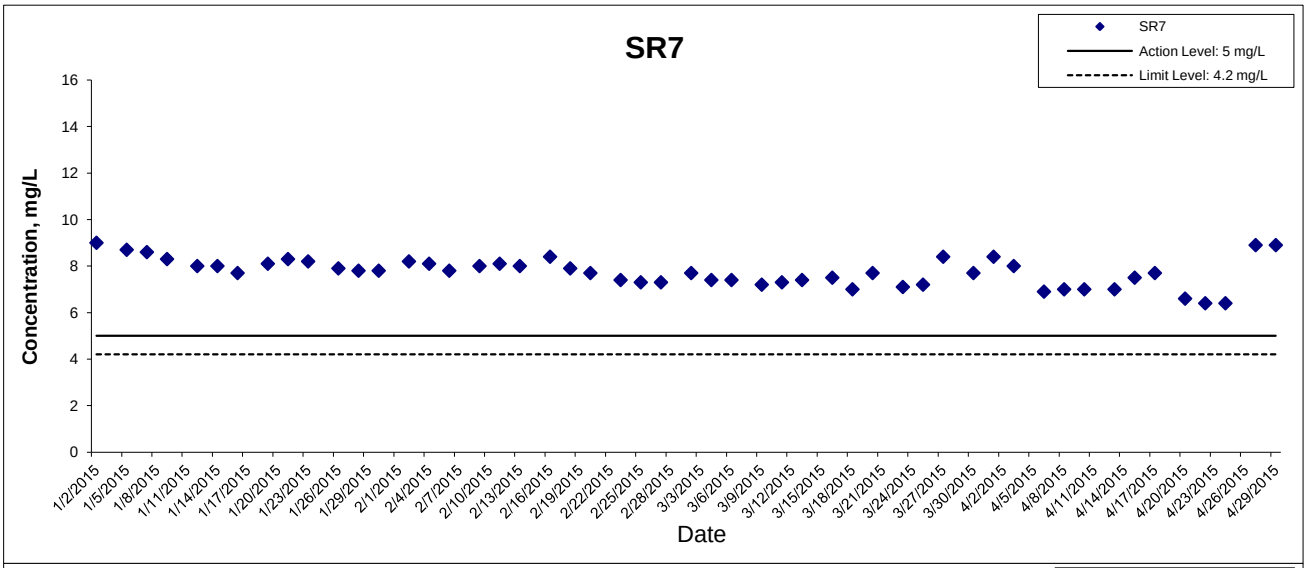


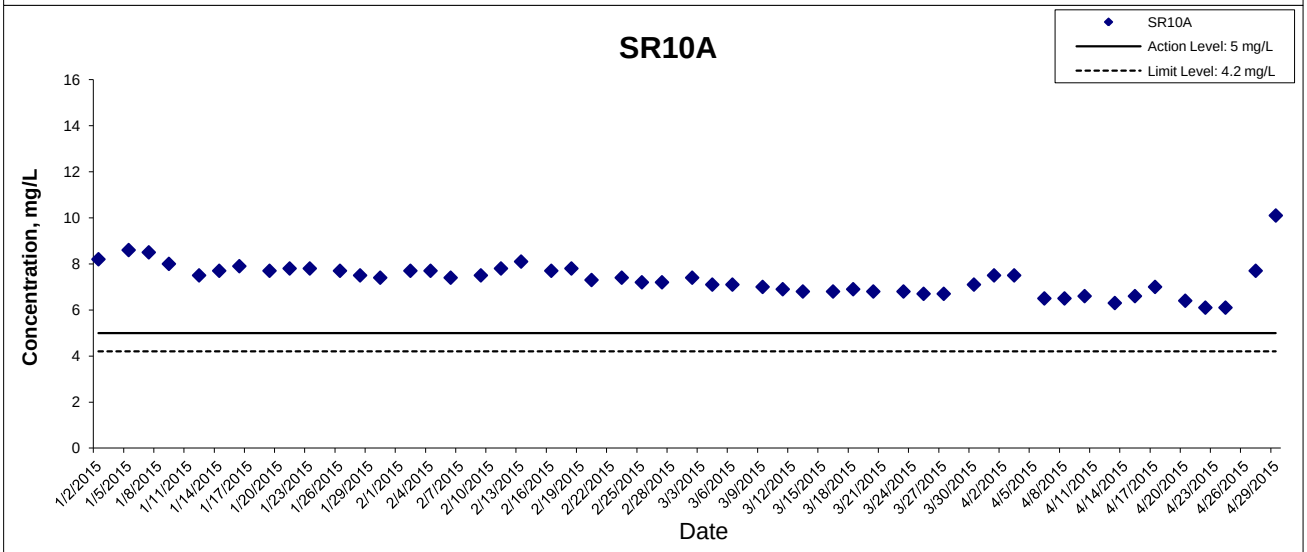


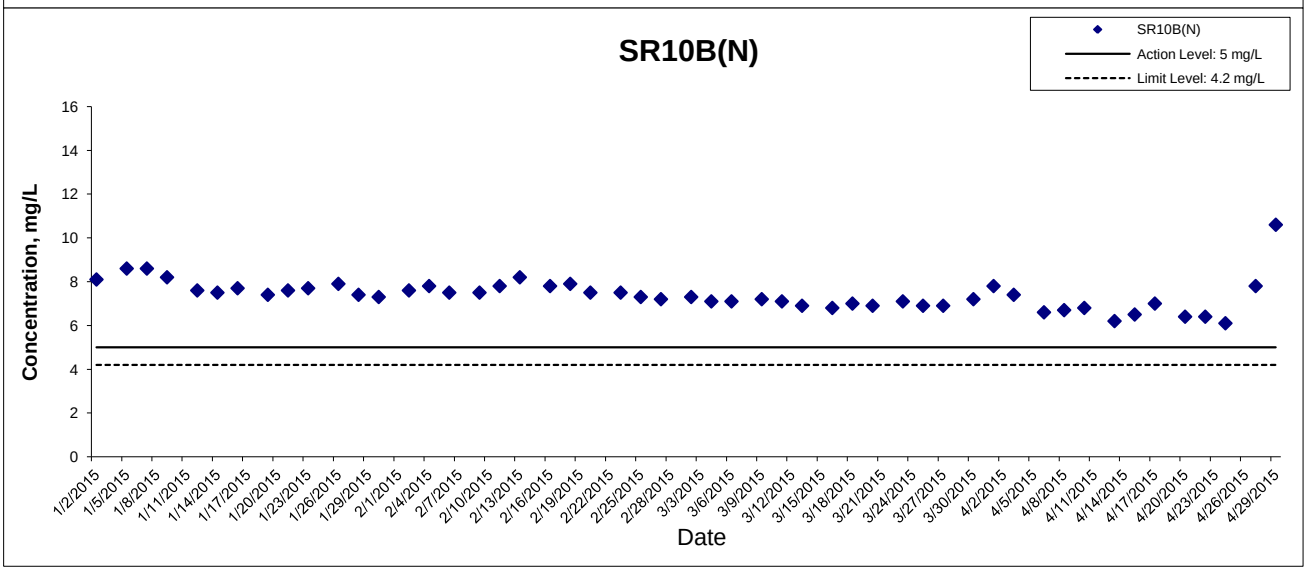


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

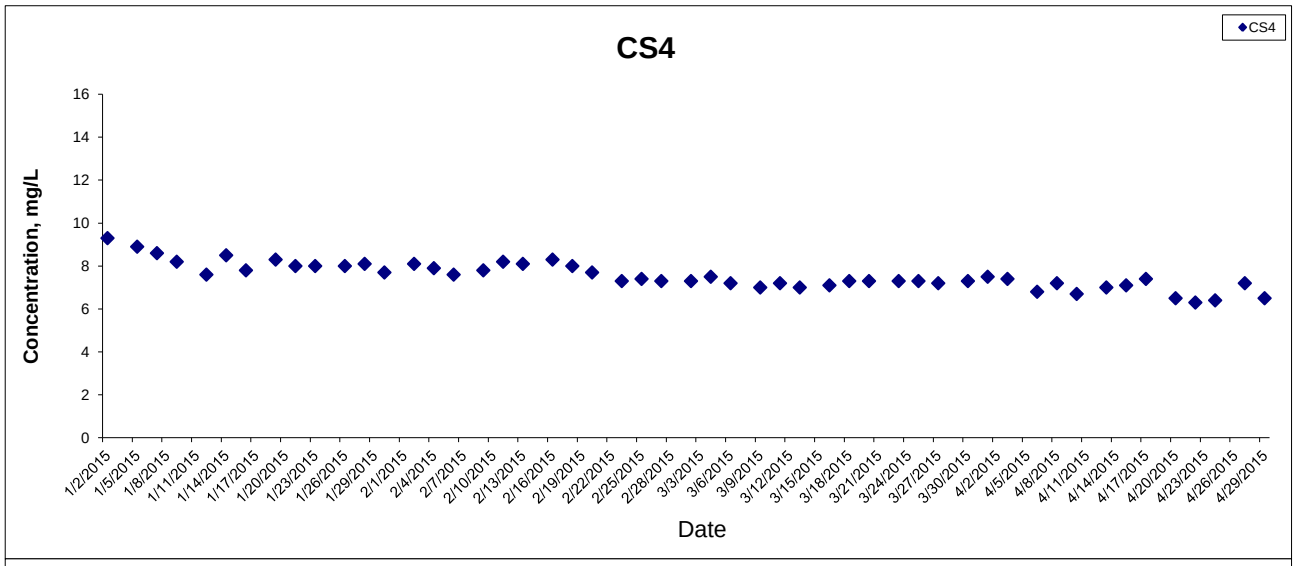
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

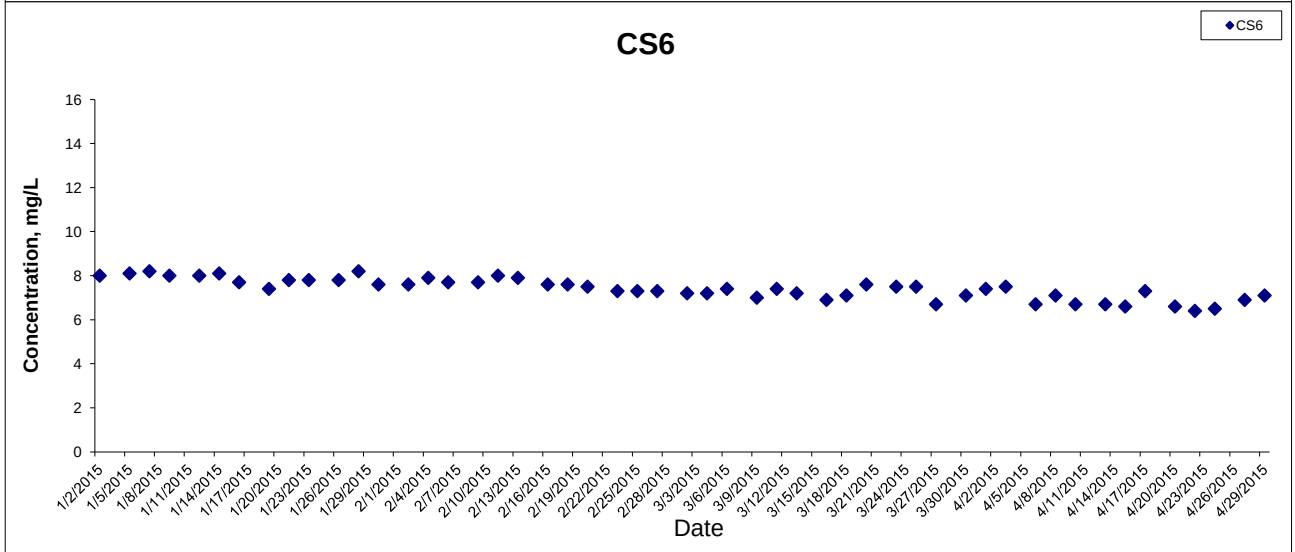
Graphical Presentation of Impact Water Quality Monitoring Results

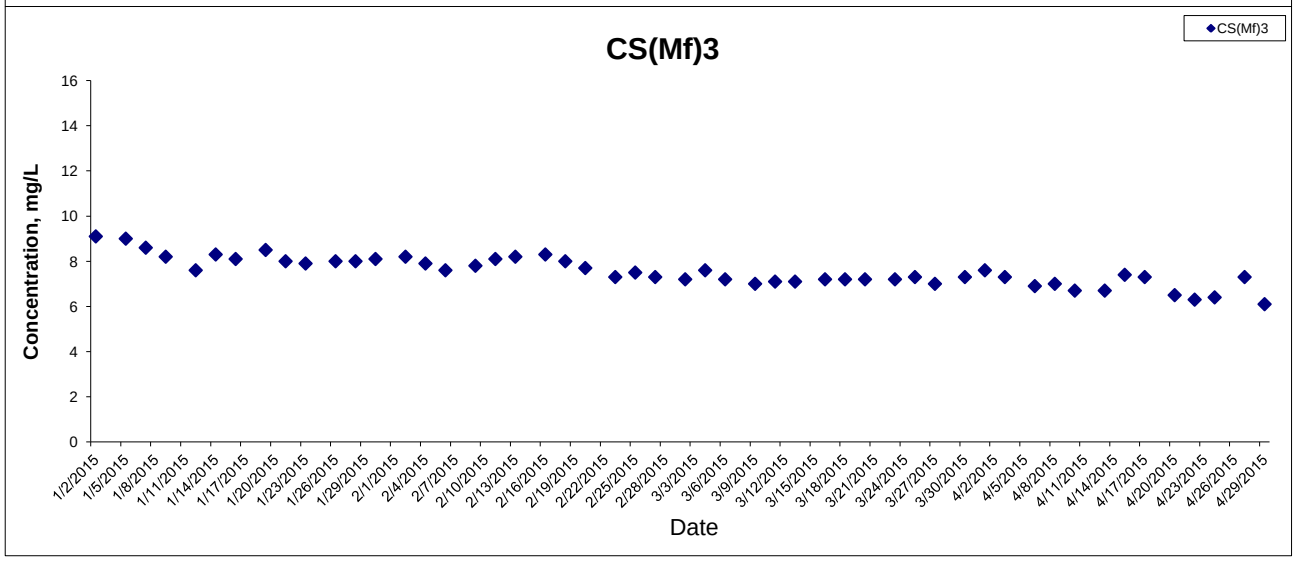
Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Bottom) at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

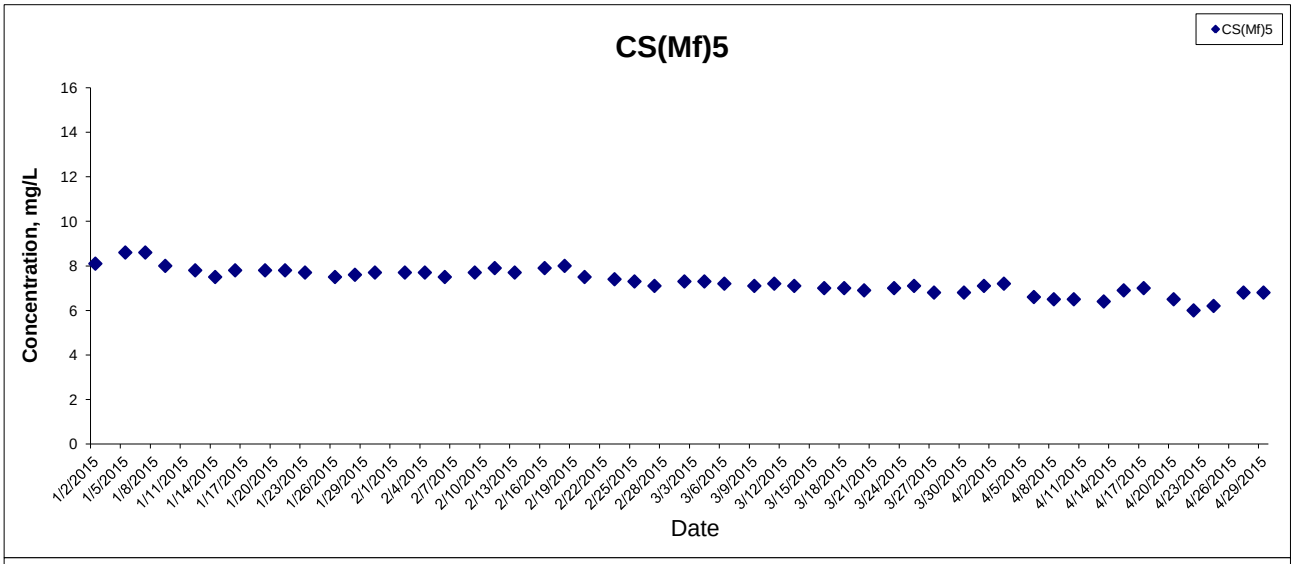
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

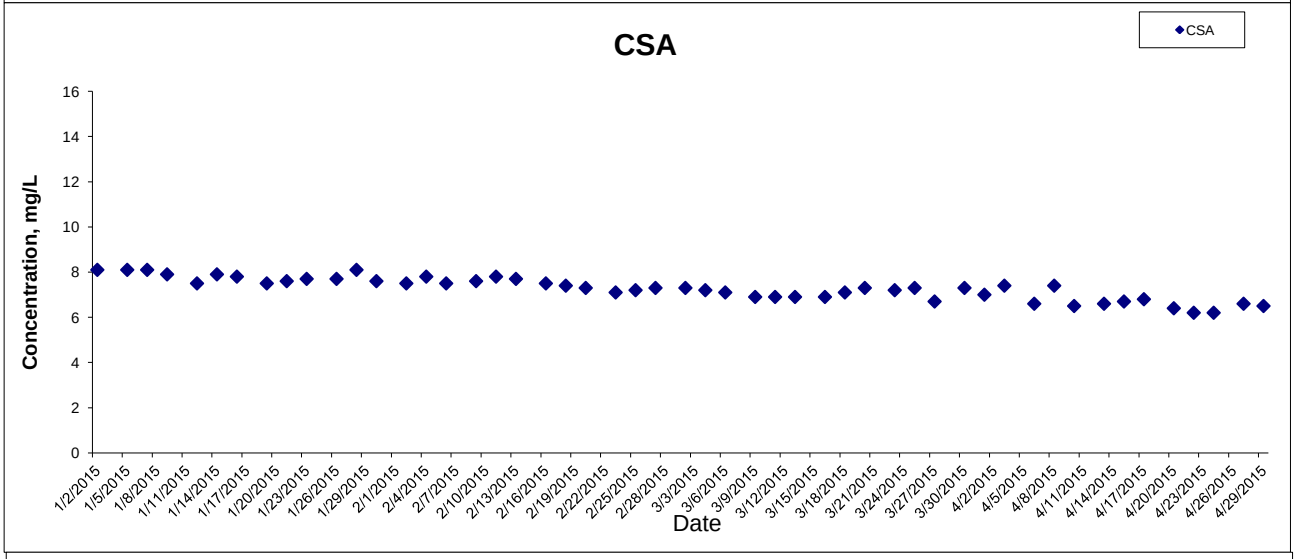
Graphical Presentation of Impact Water Quality Monitoring Results

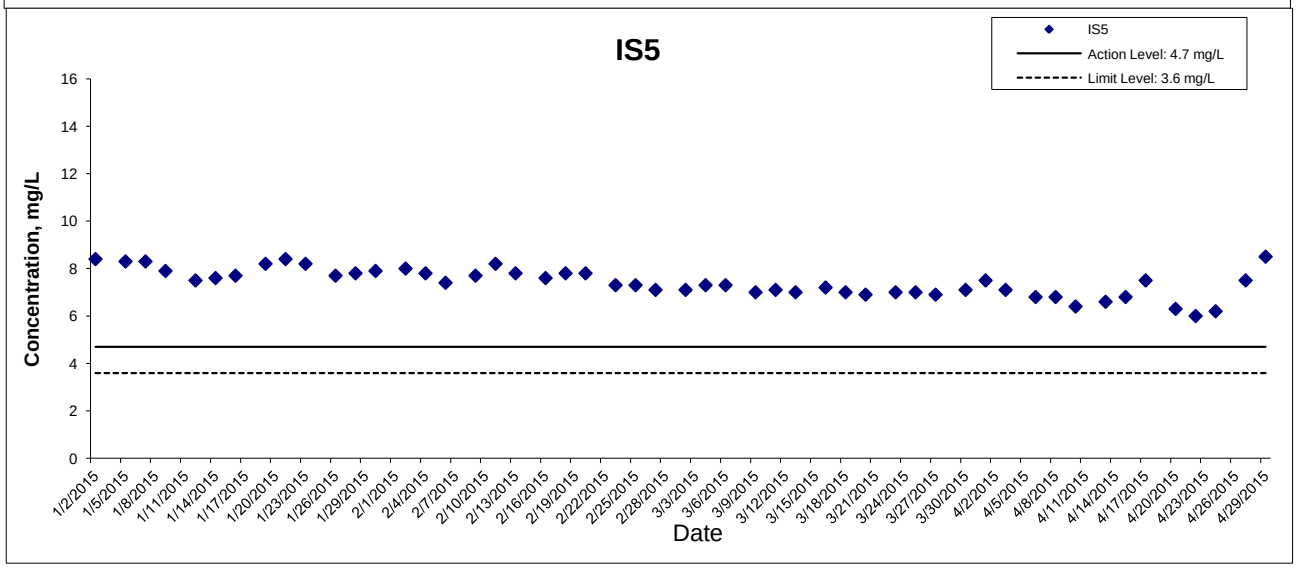
Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Bottom) at Mid-Ebb Tide

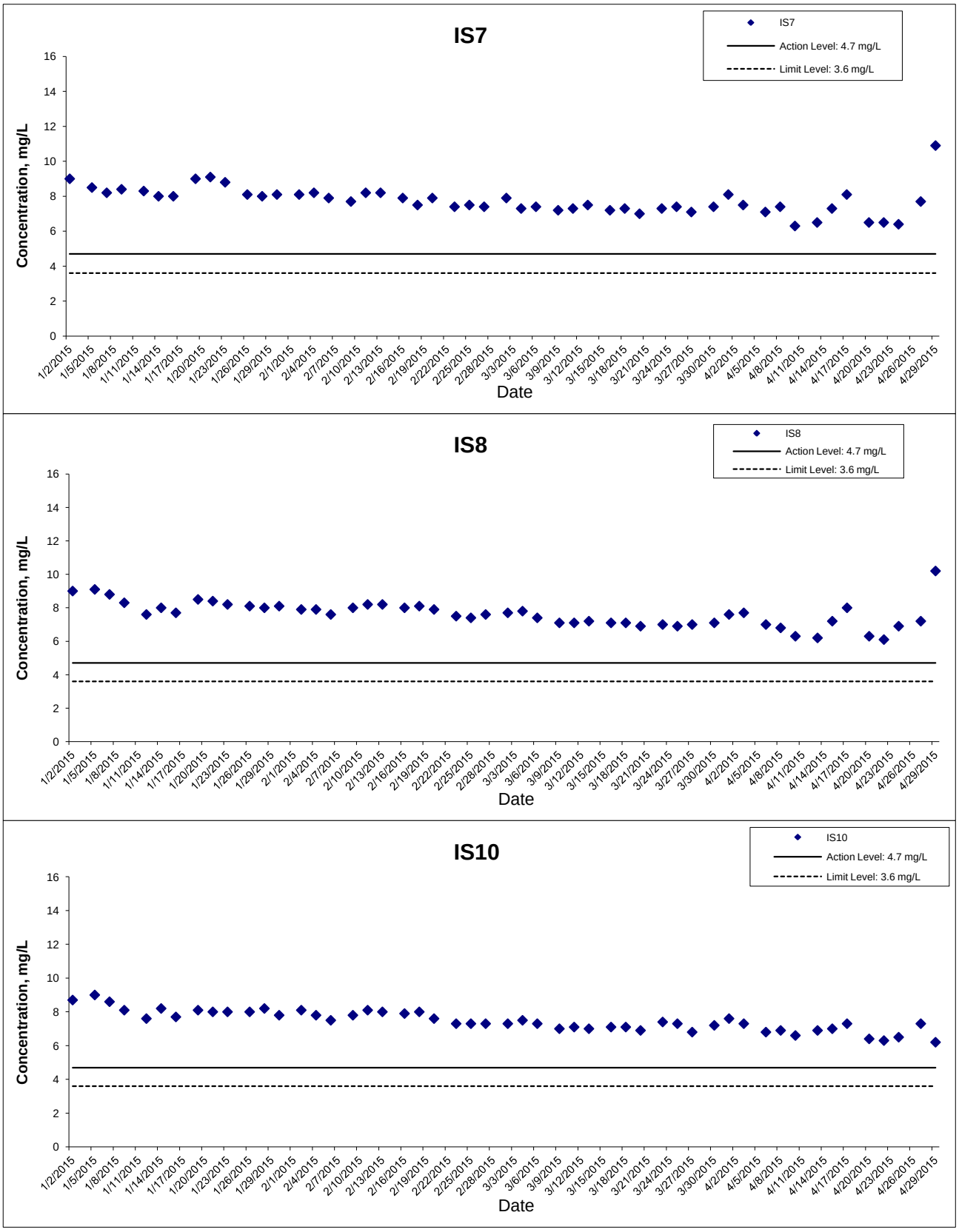






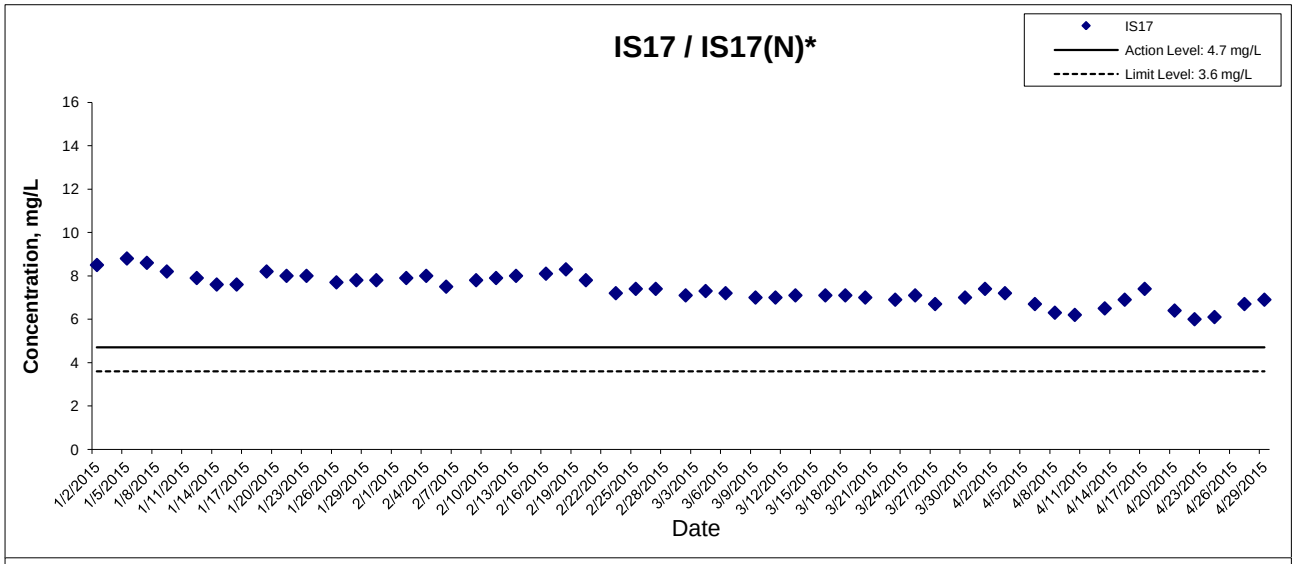
This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

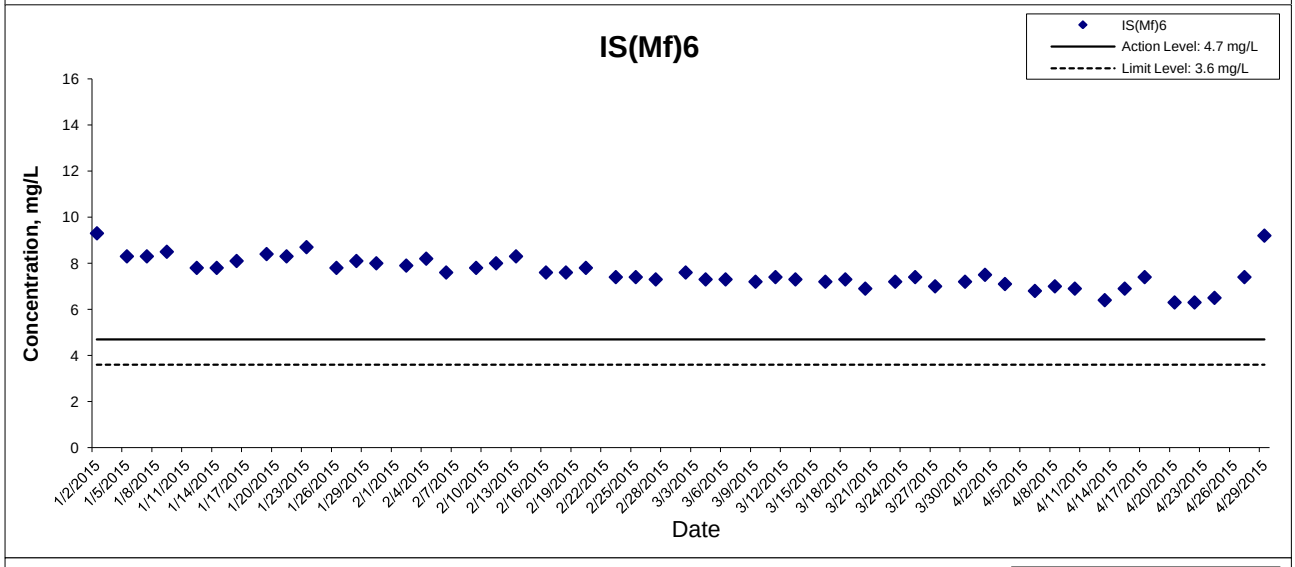
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

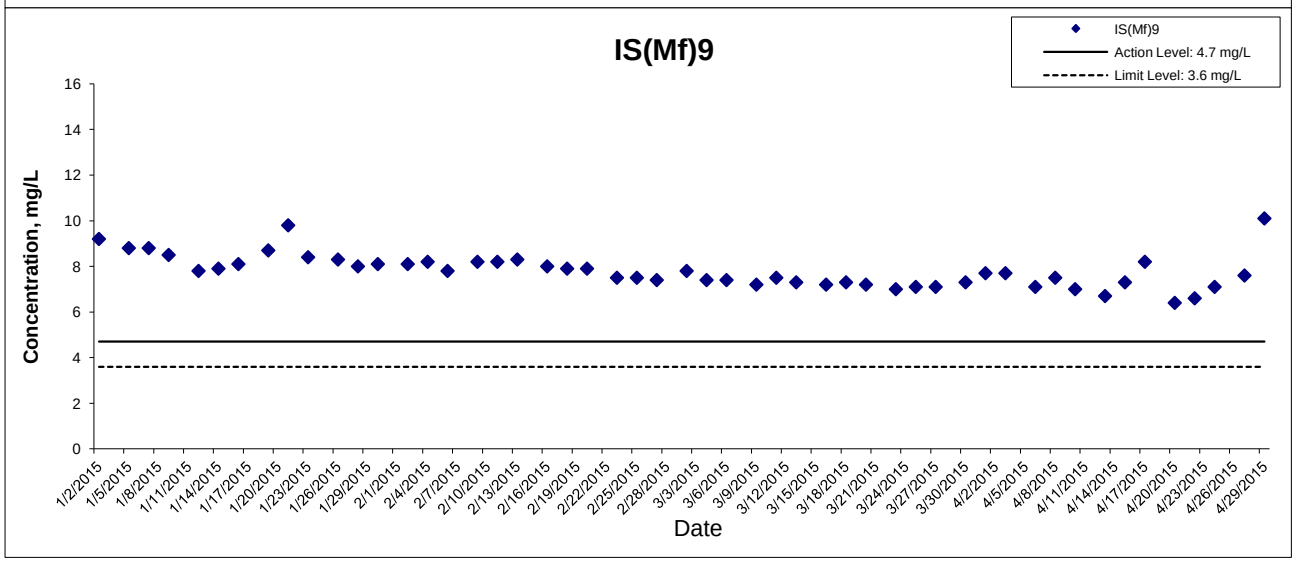


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

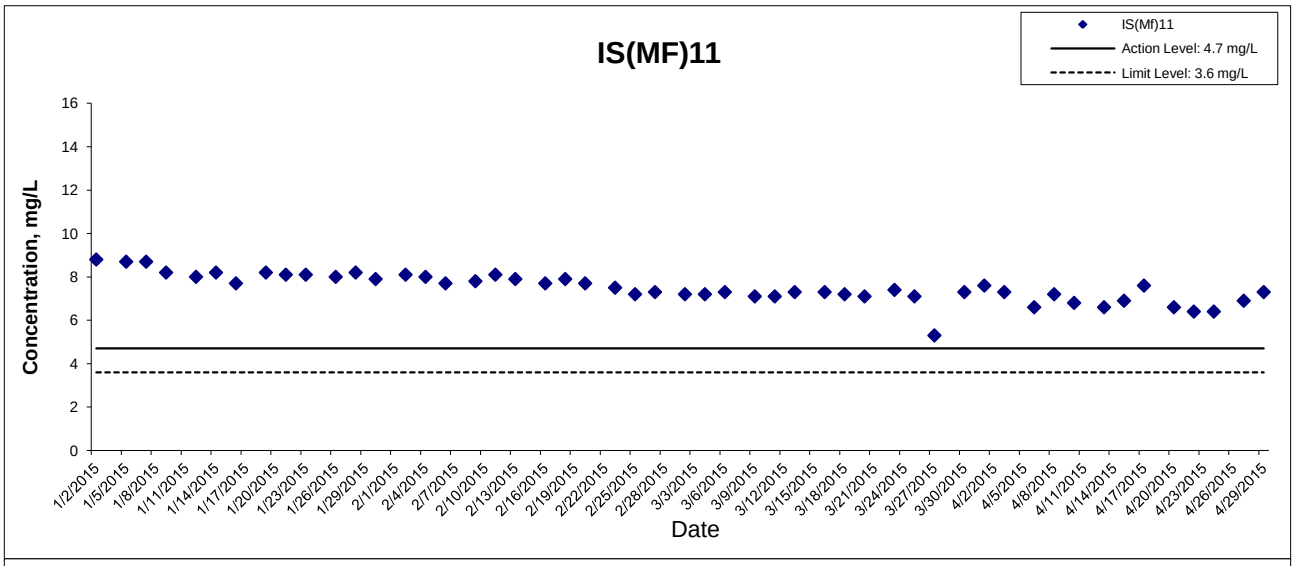
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

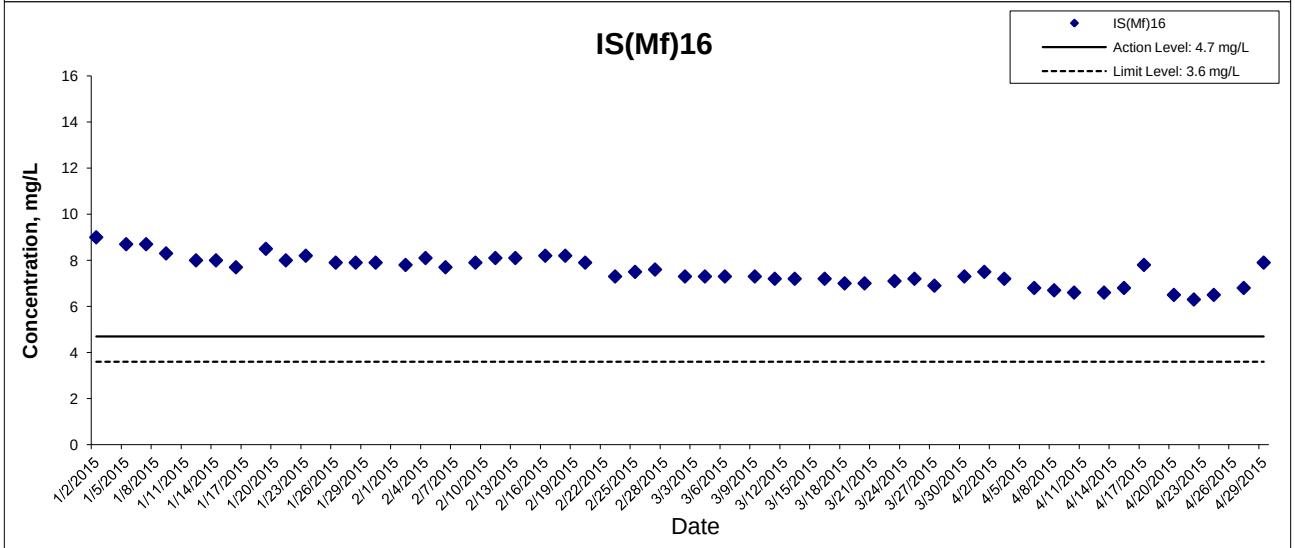
Graphical Presentation of Impact Water Quality Monitoring Results

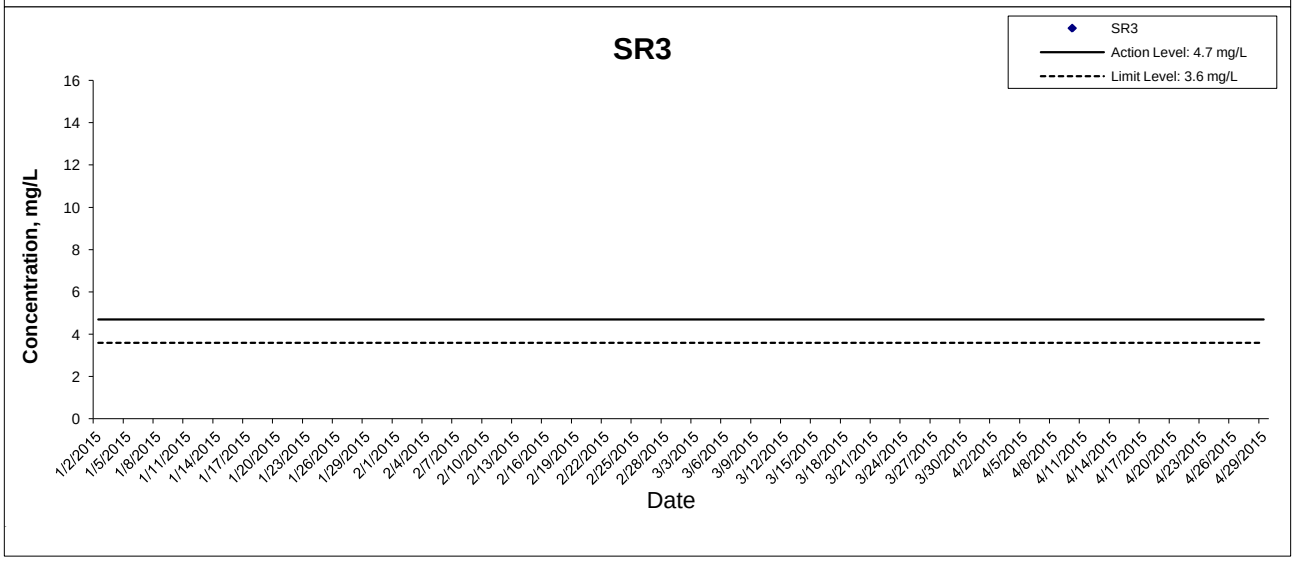
Project No.: 60249820 **Date: May 2015**

Appendix J

Dissolved Oxygen (Bottom) at Mid-Ebb Tide

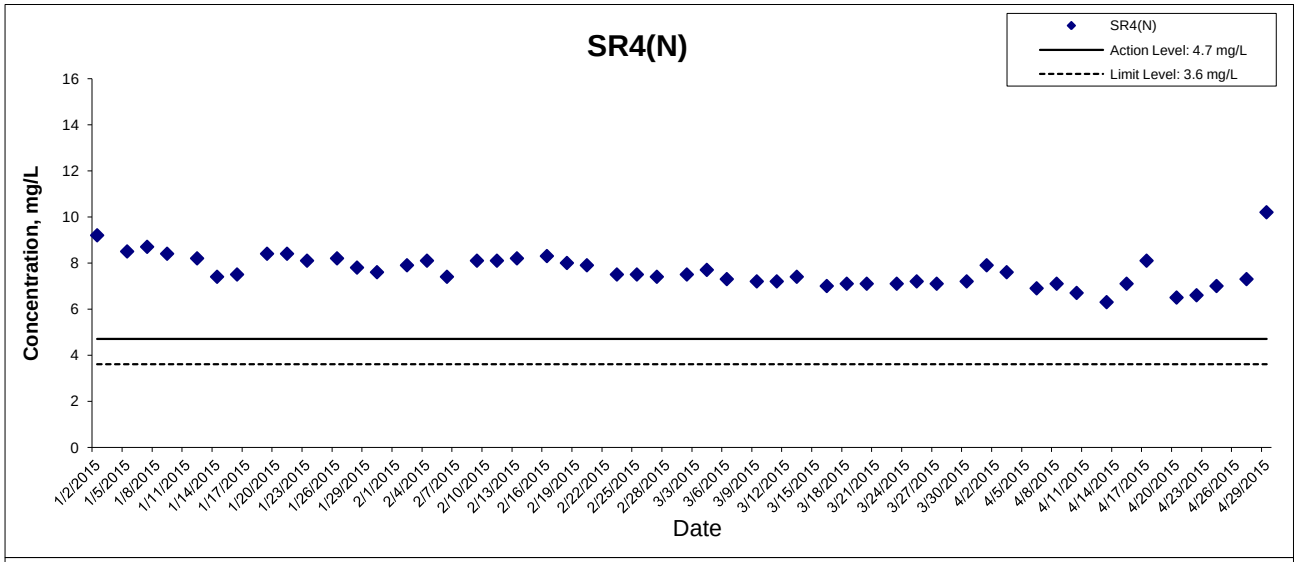


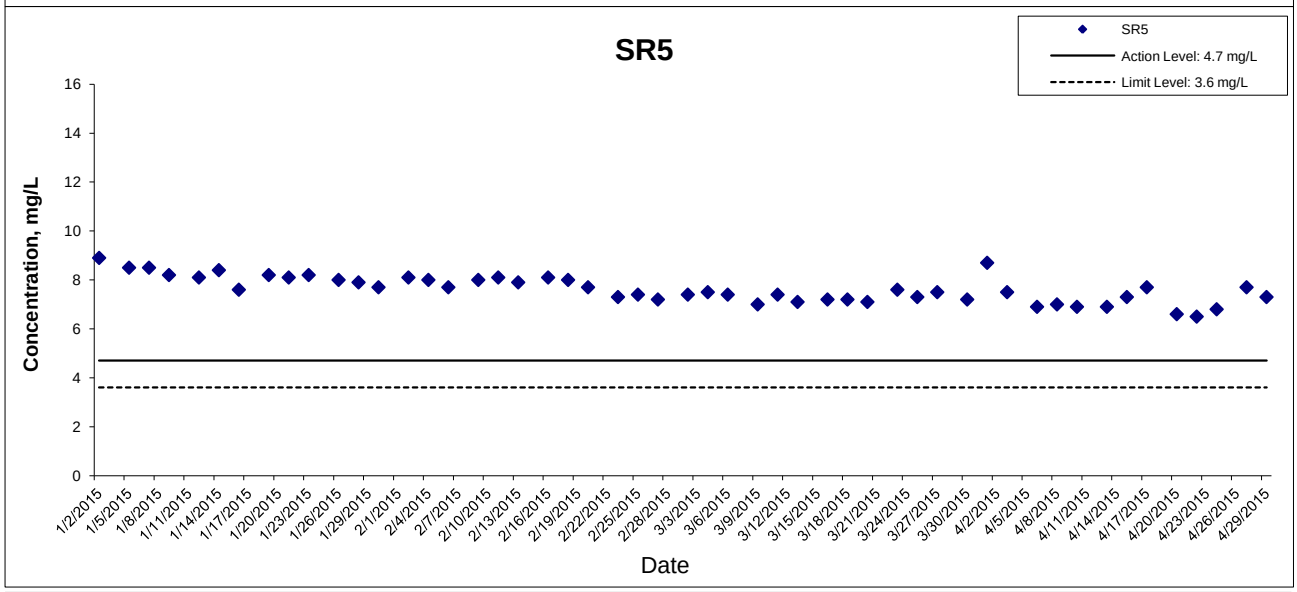


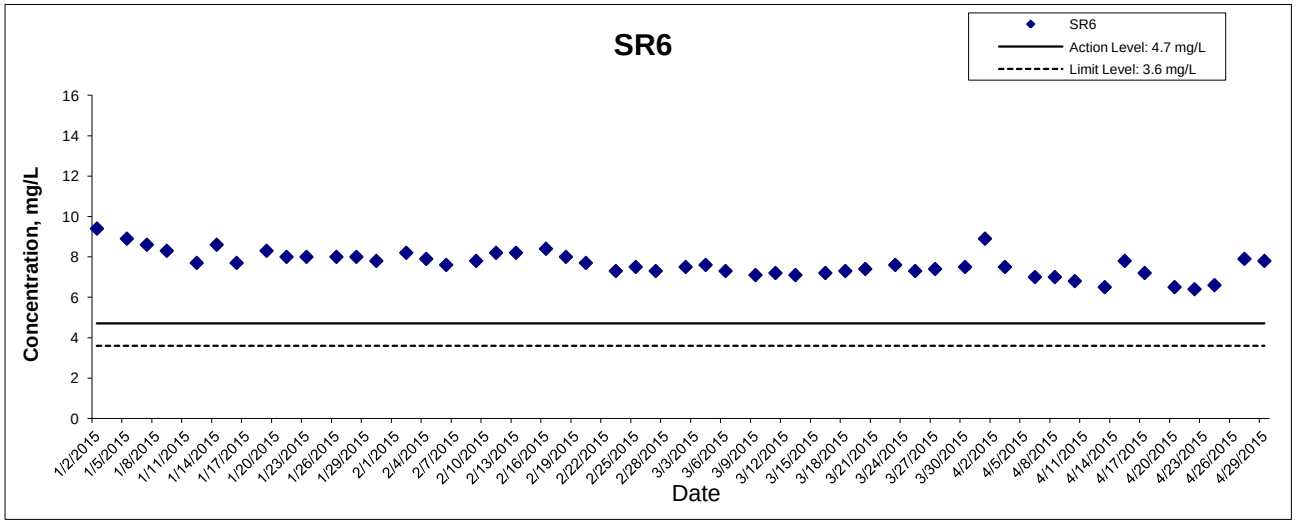


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Ebb Tide

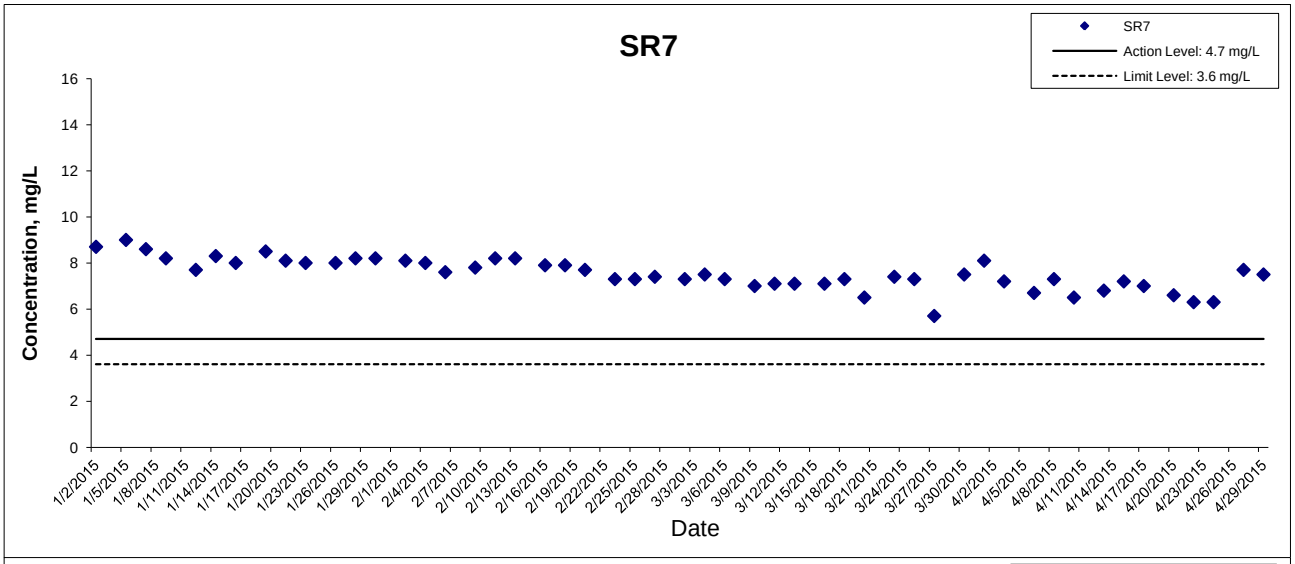


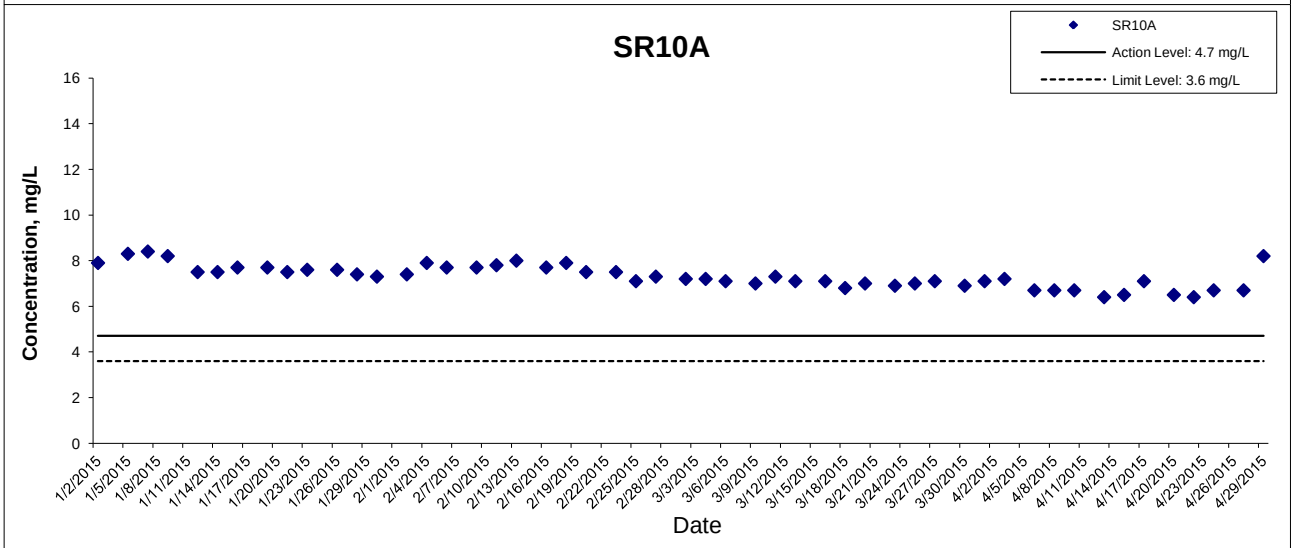


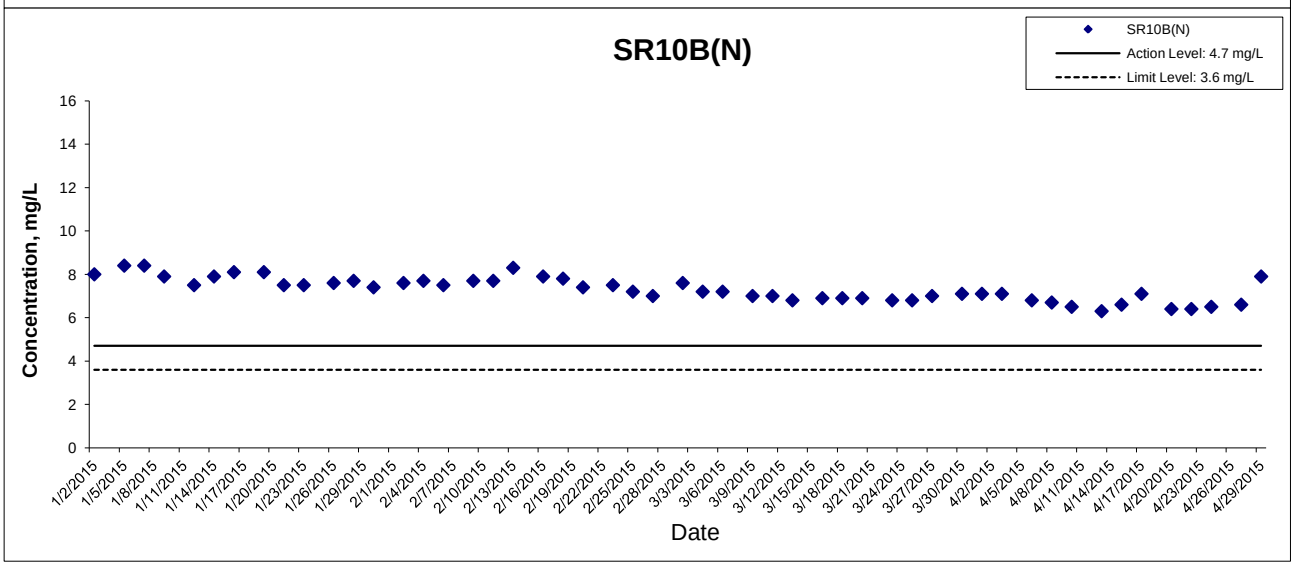


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Ebb Tide

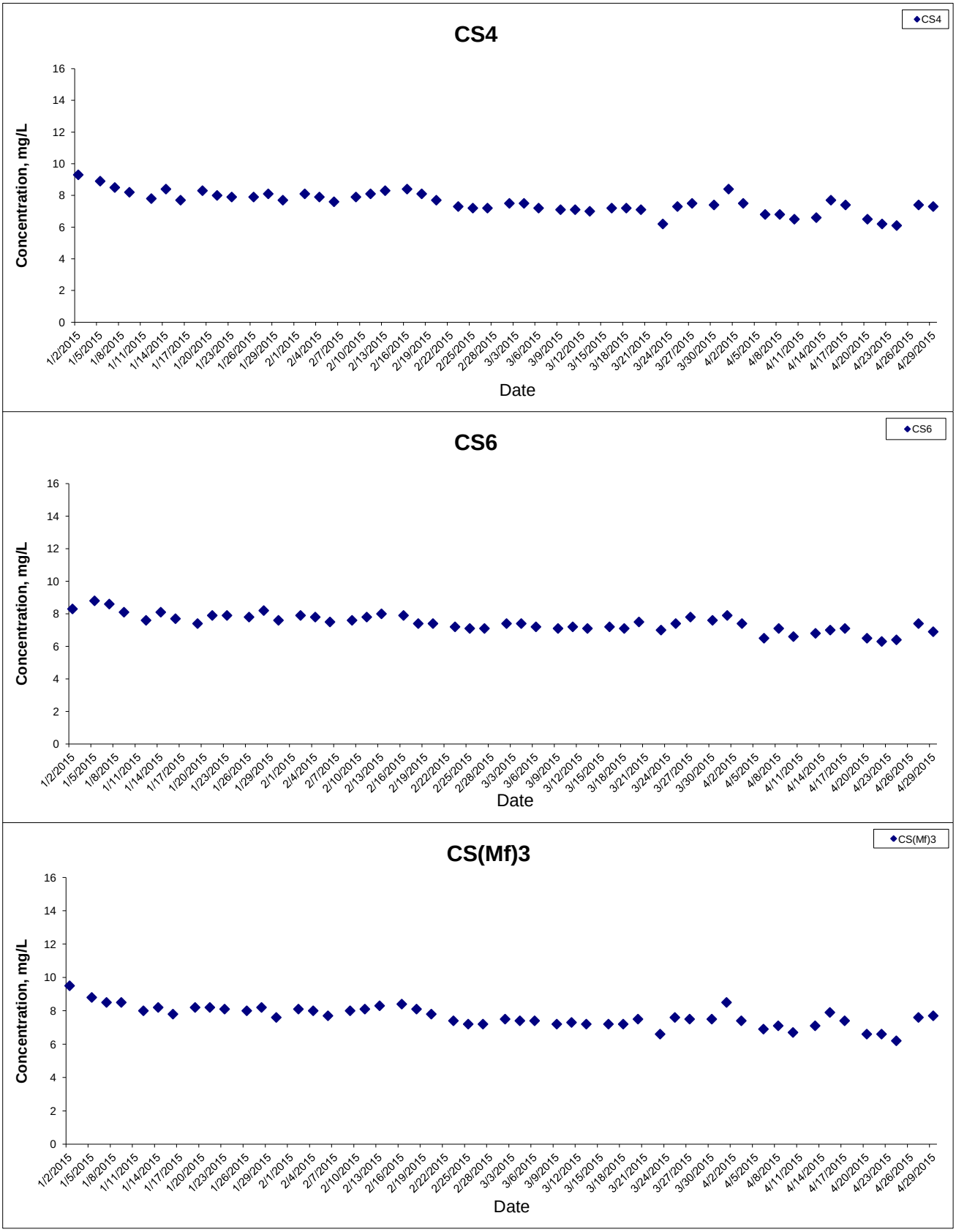






This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Flood Tide



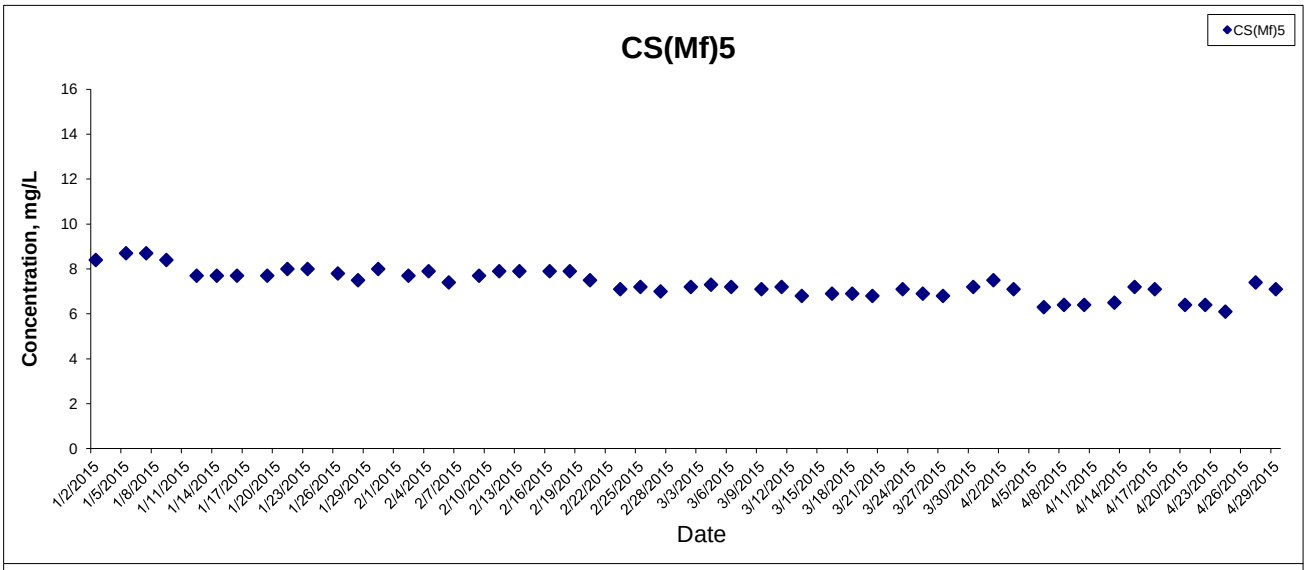
This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

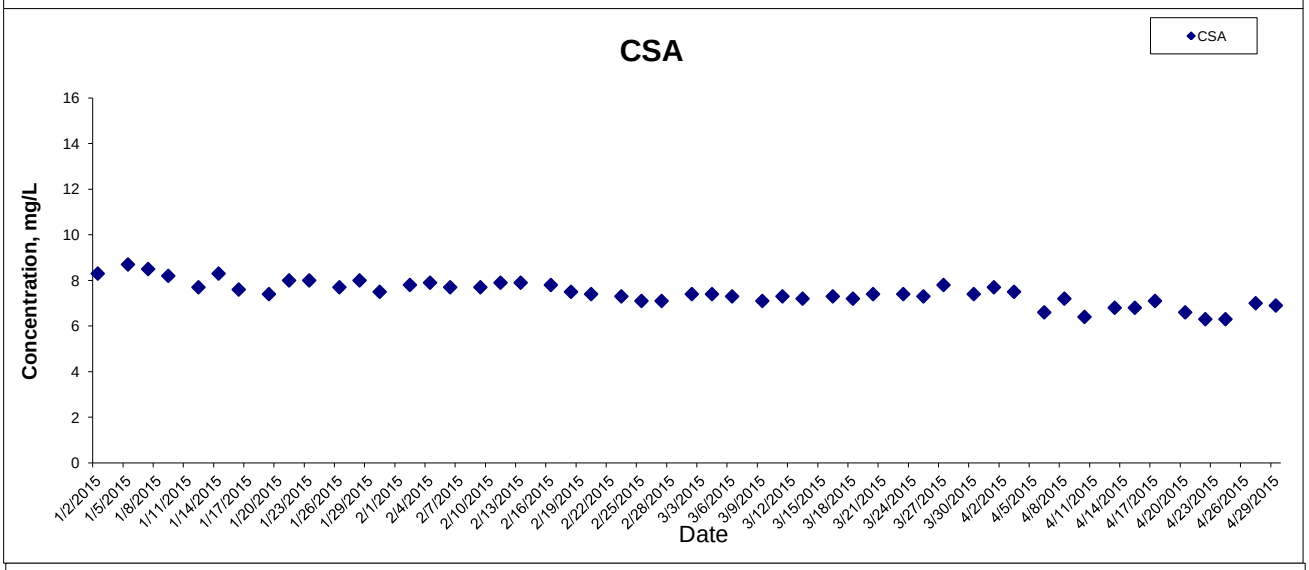
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

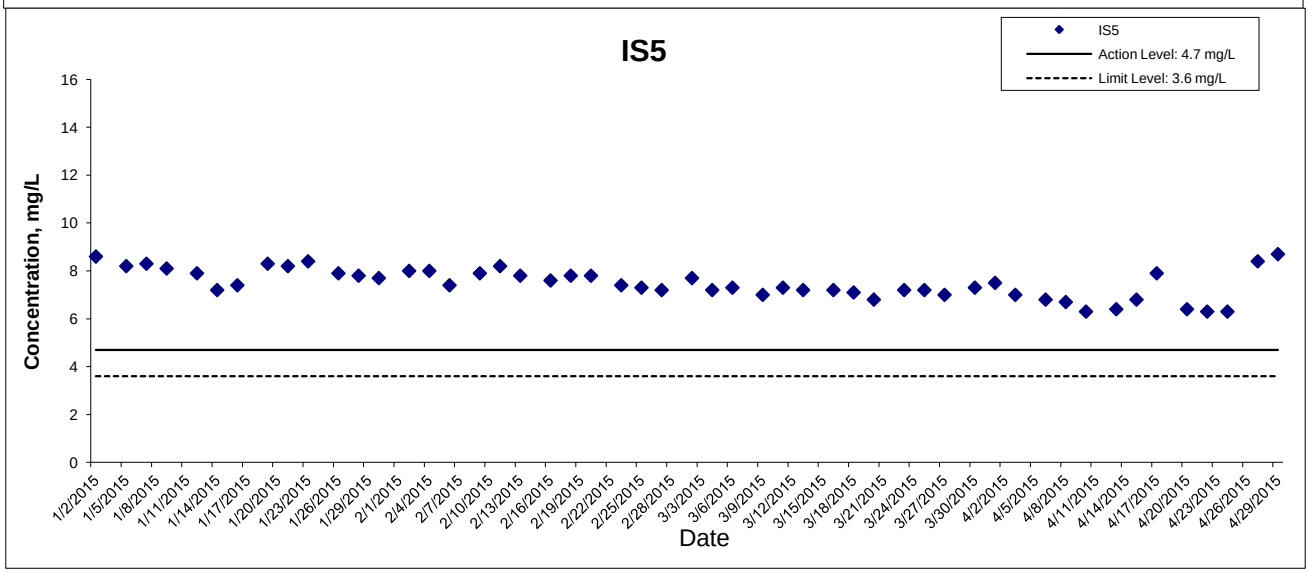
Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015** **Appendix J**

Dissolved Oxygen (Bottom) at Mid-Flood Tide

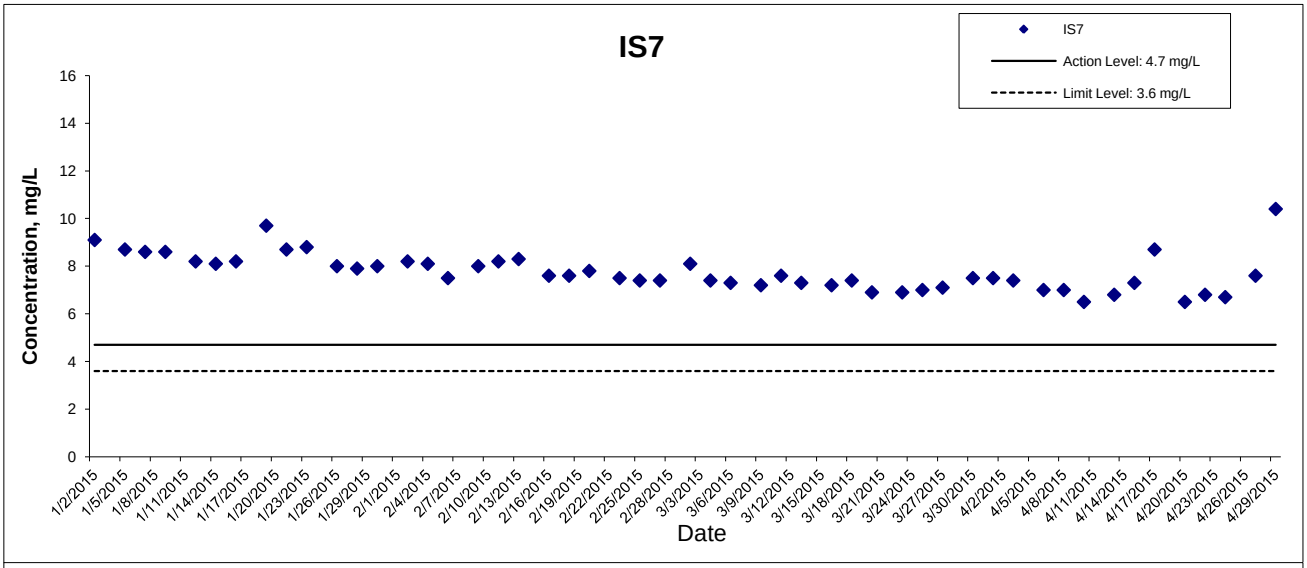


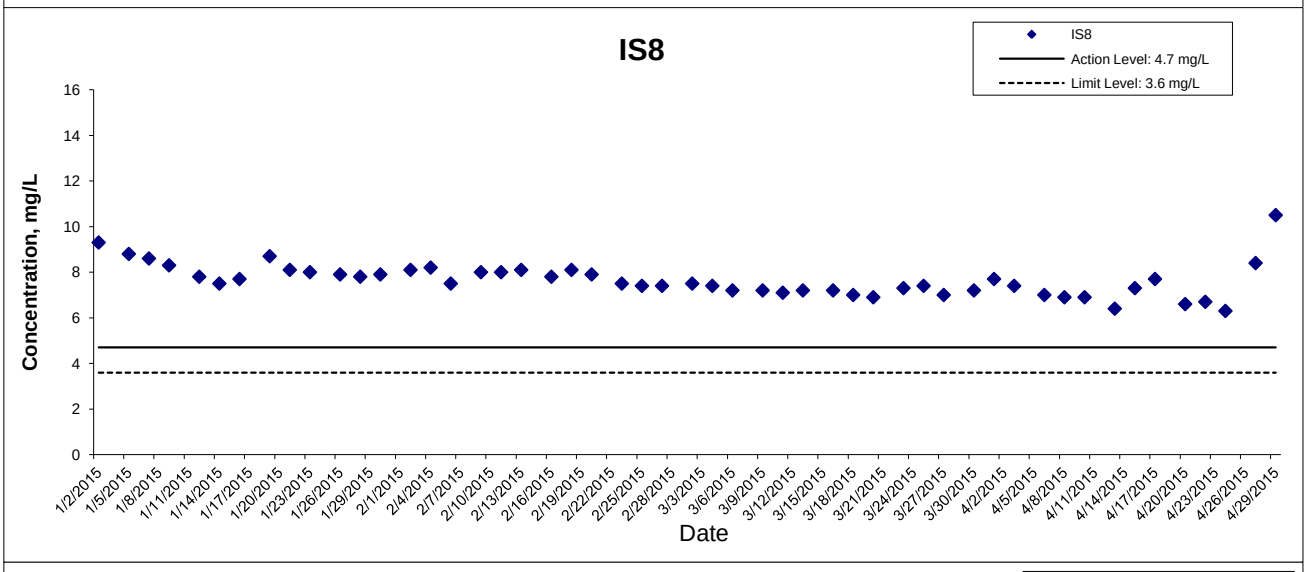


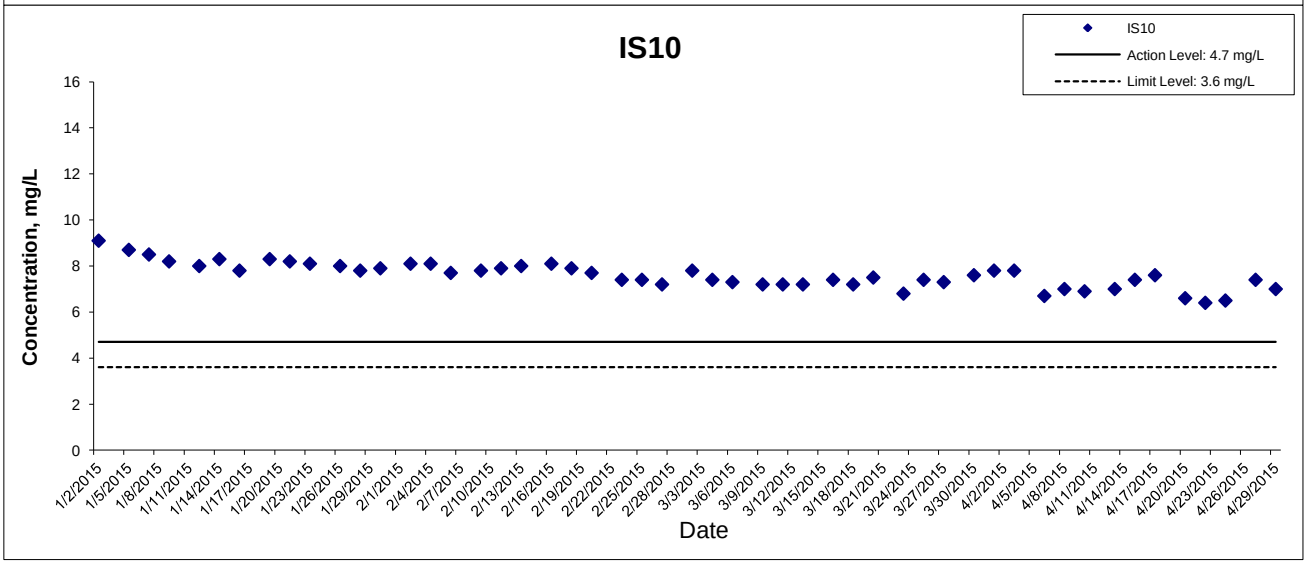


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsover, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Flood Tide

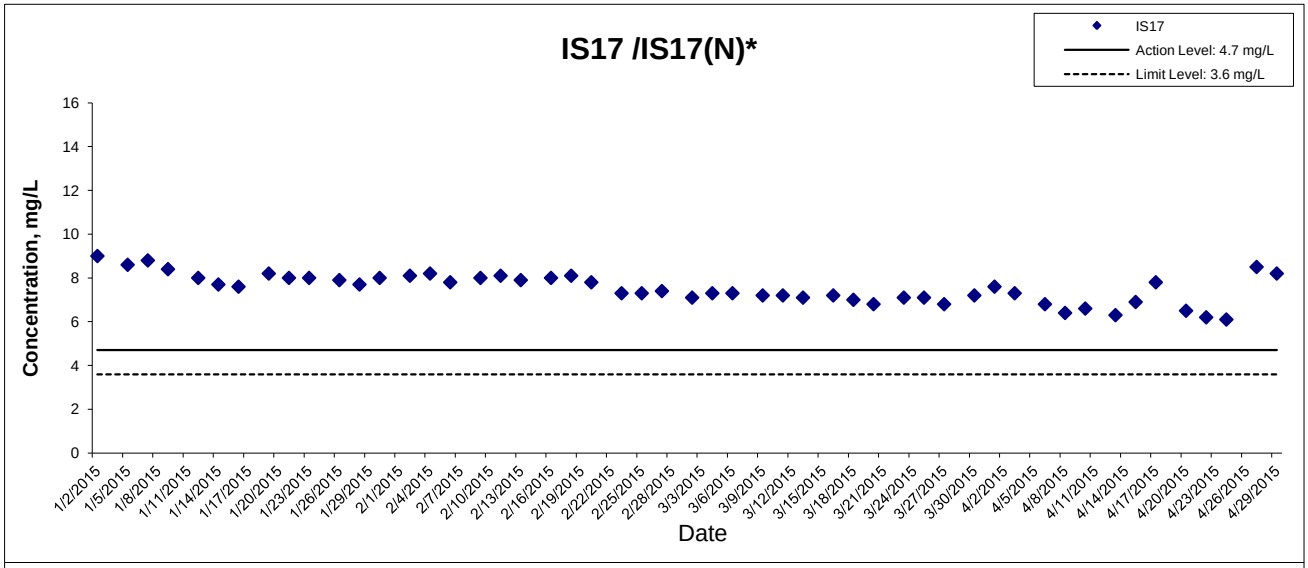


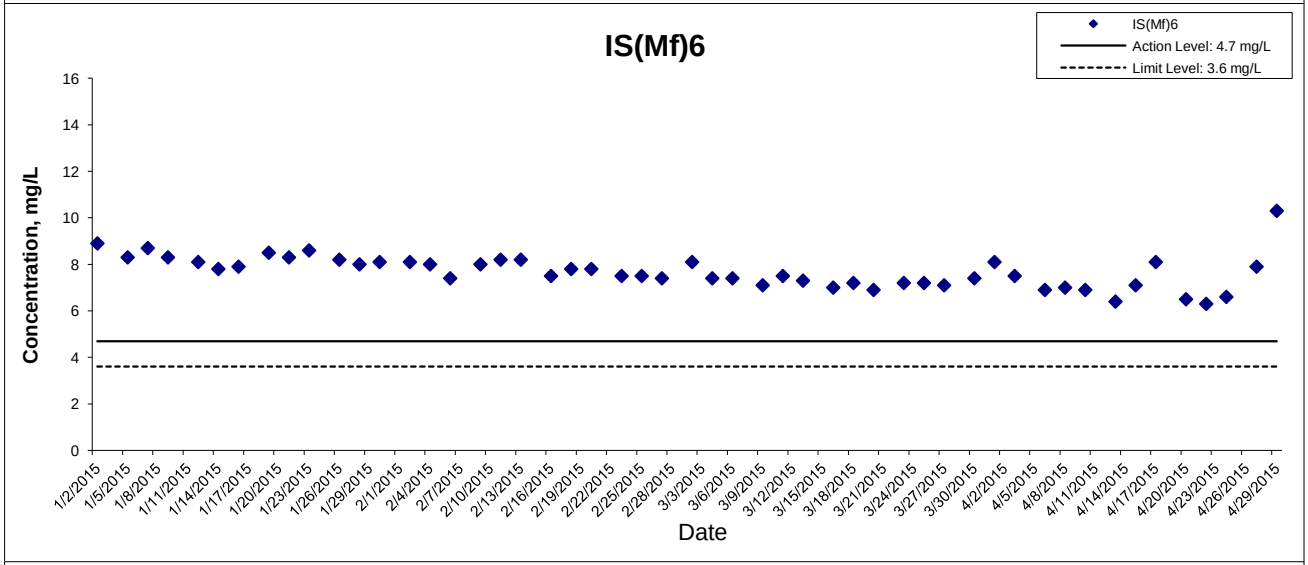


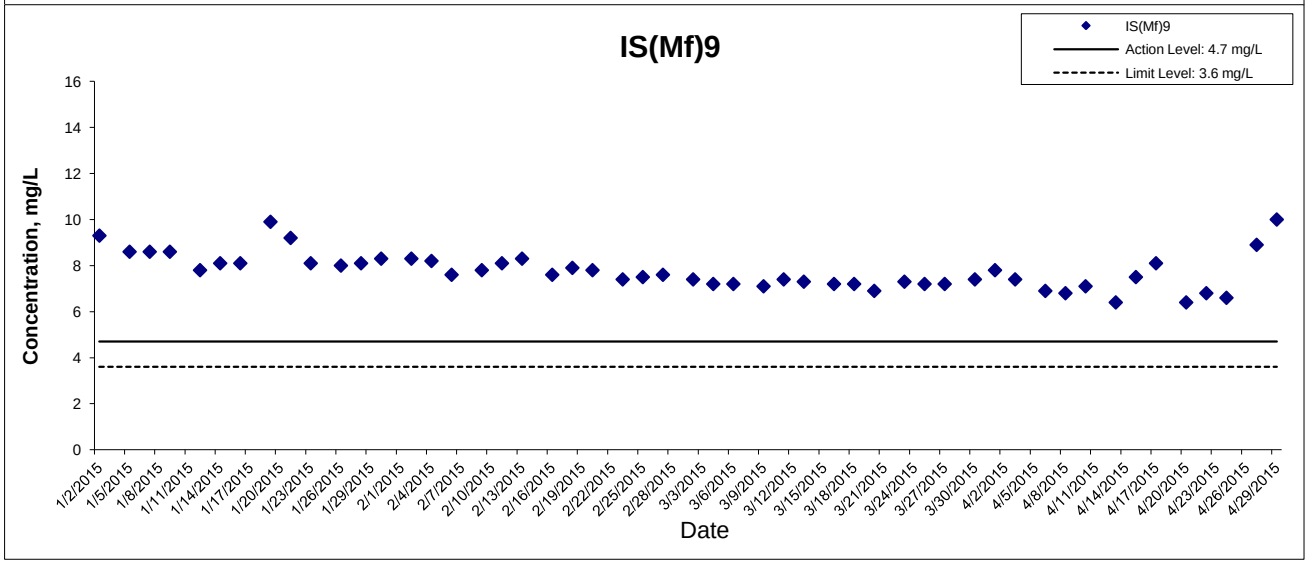


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Flood Tide

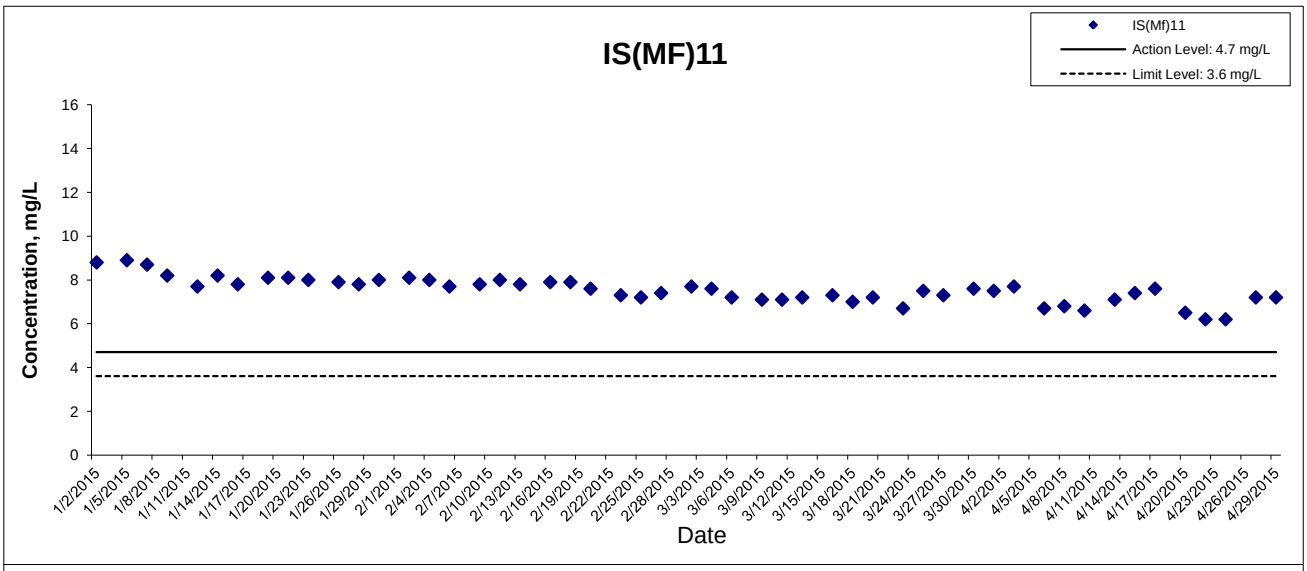


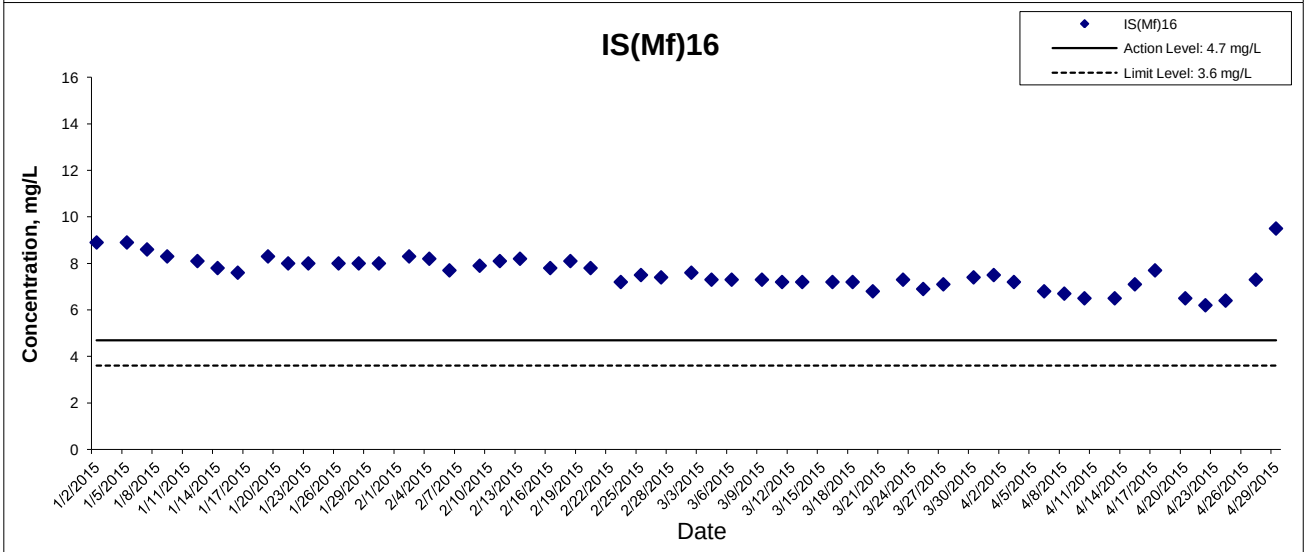


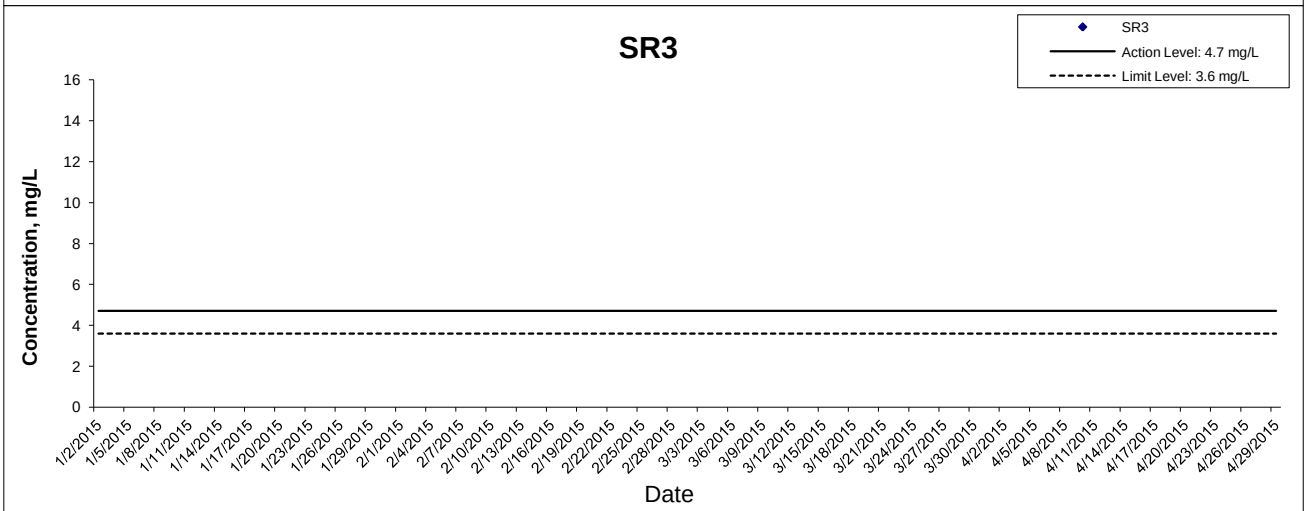


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Flood Tide



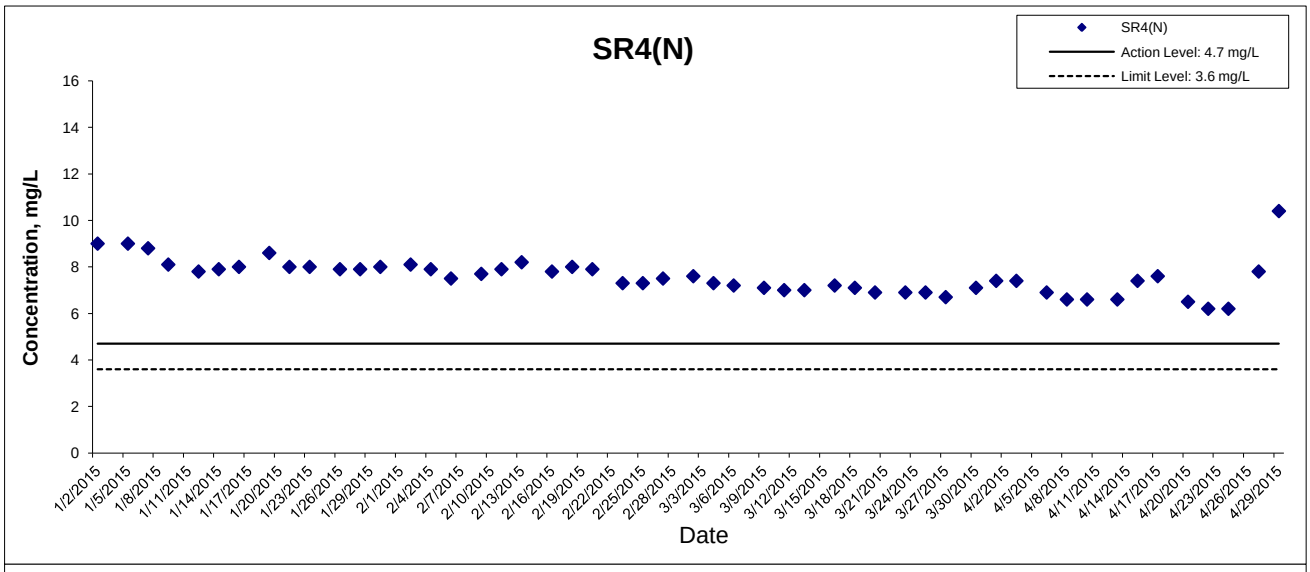


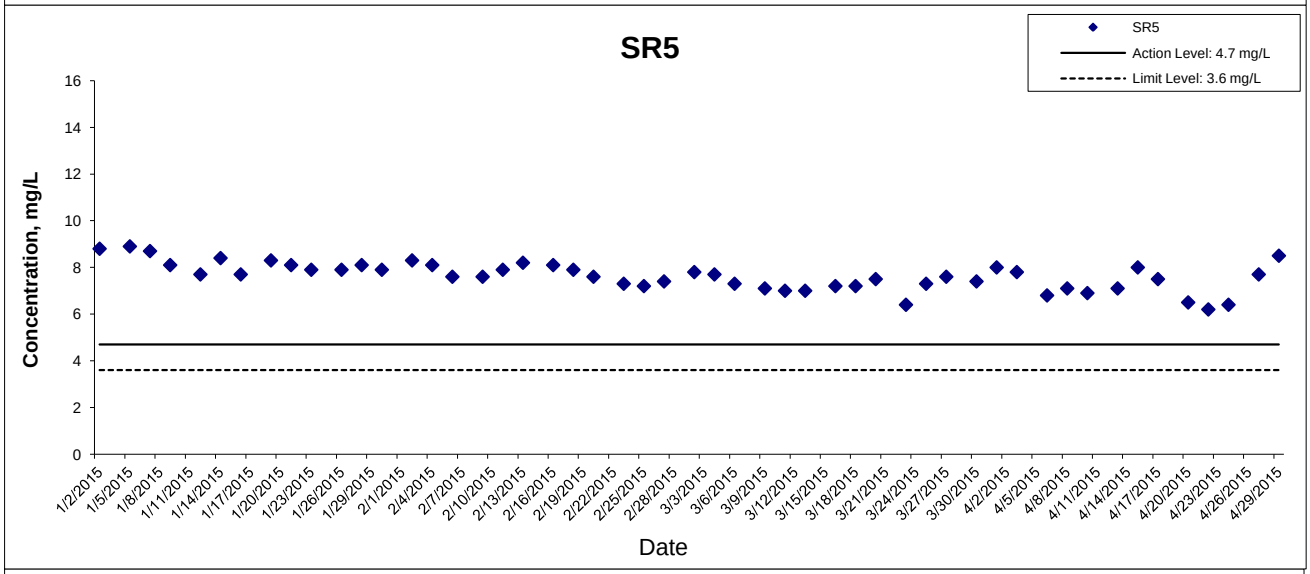


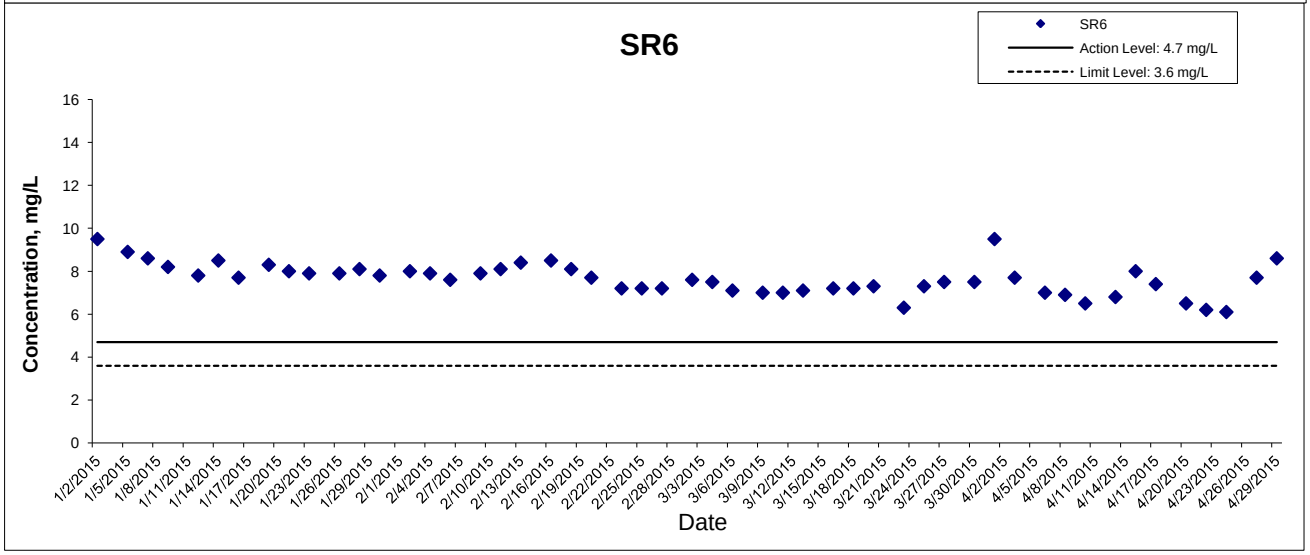
As the measured water depths were less than 3 m during all monitoring days, water samples are collected at mid-depth only .

This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Flood Tide

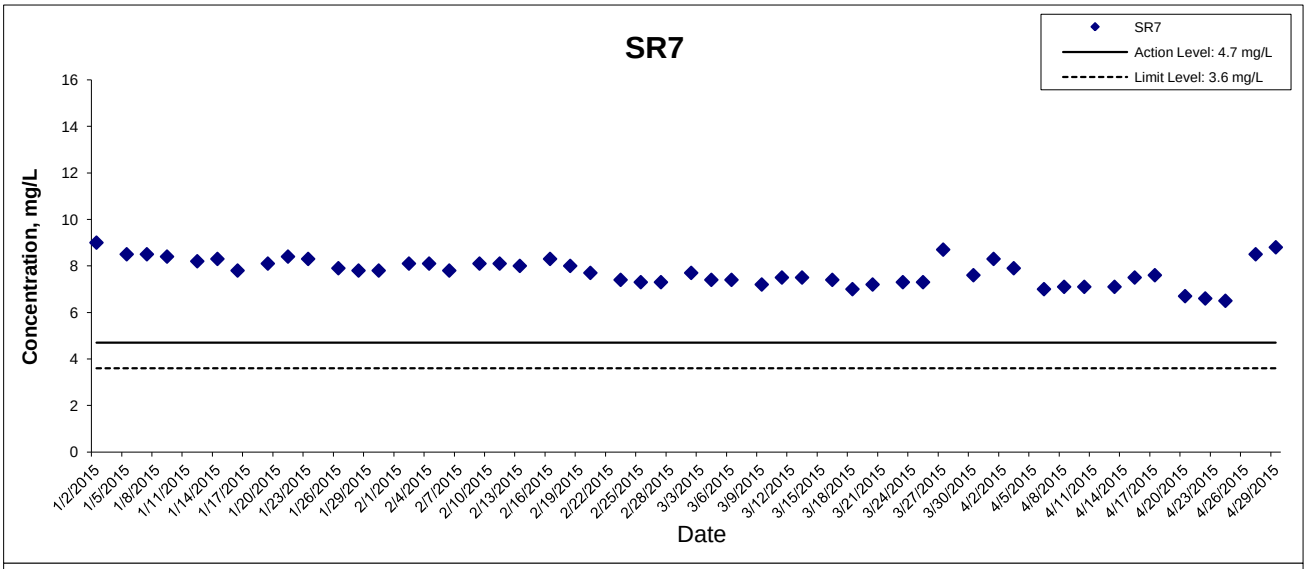


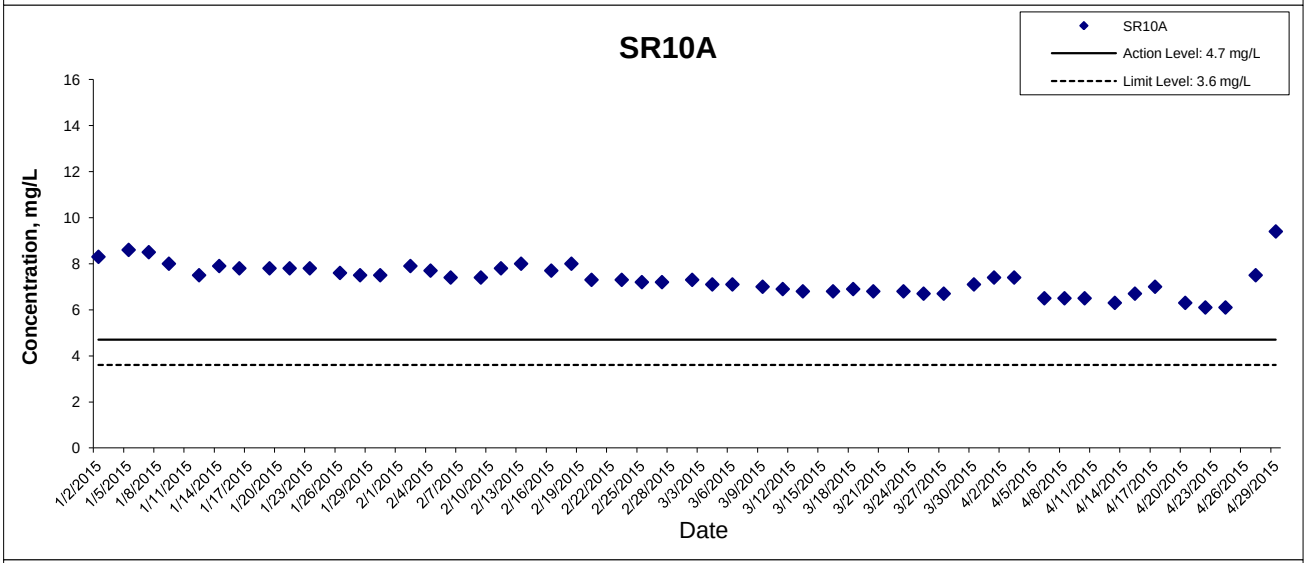


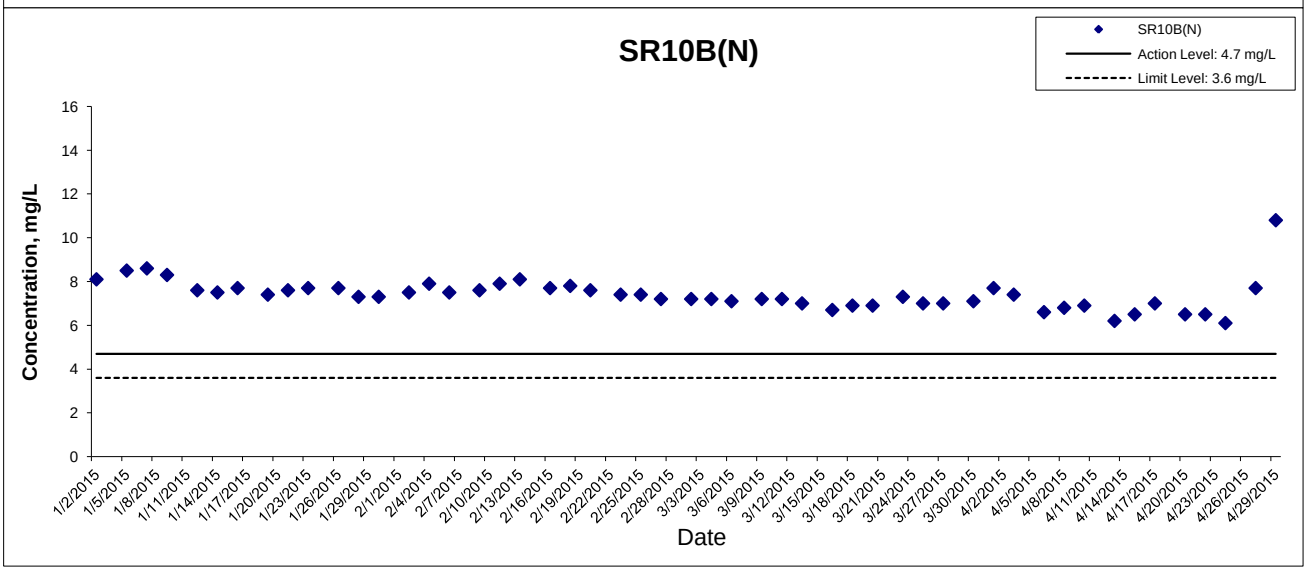


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Dissolved Oxygen (Bottom) at Mid-Flood Tide

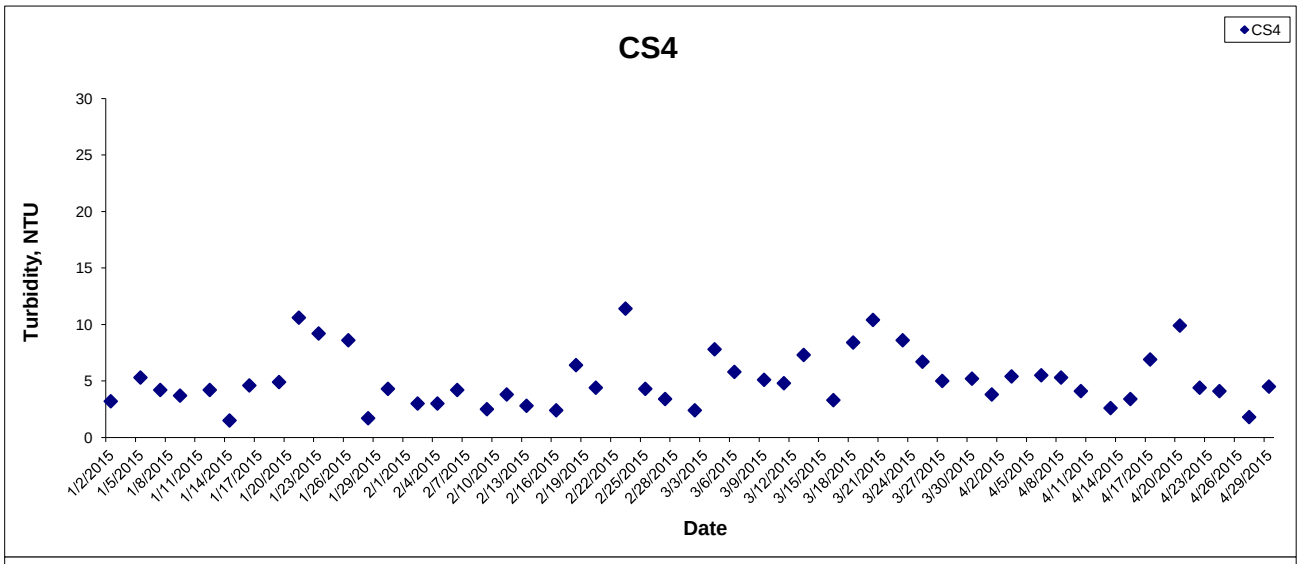


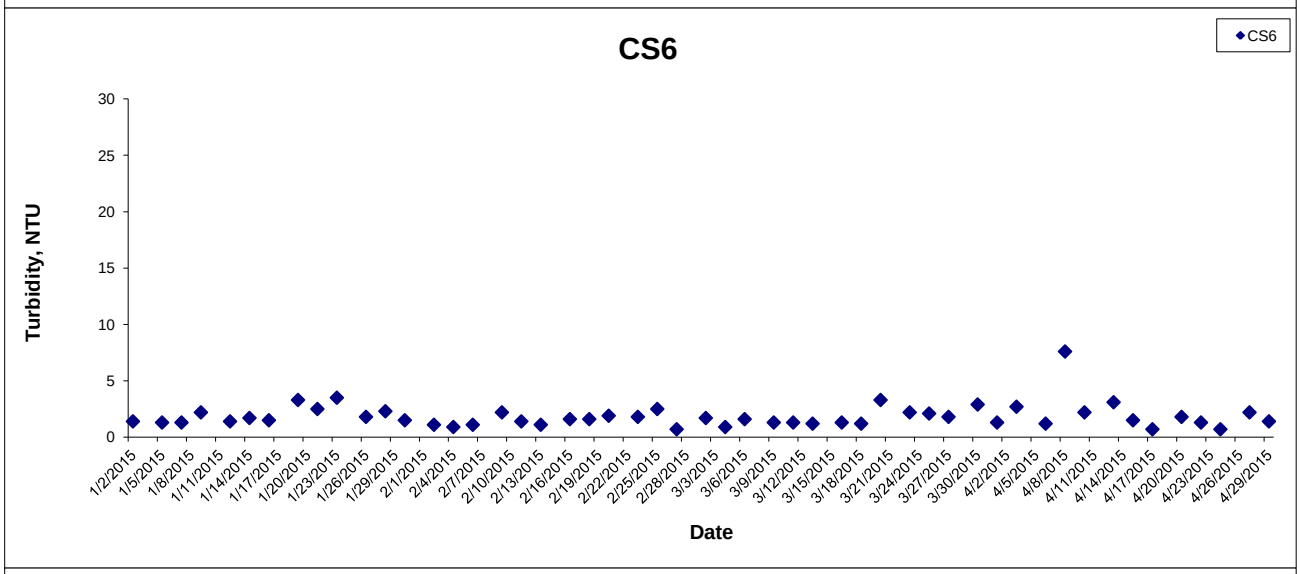


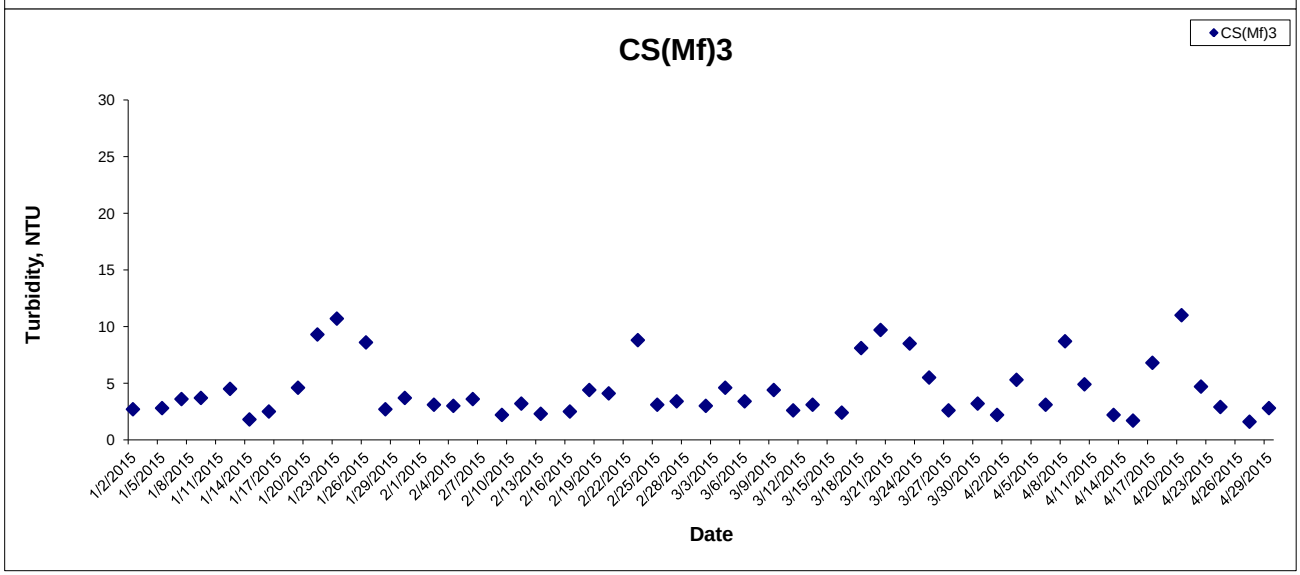


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Ebb Tide

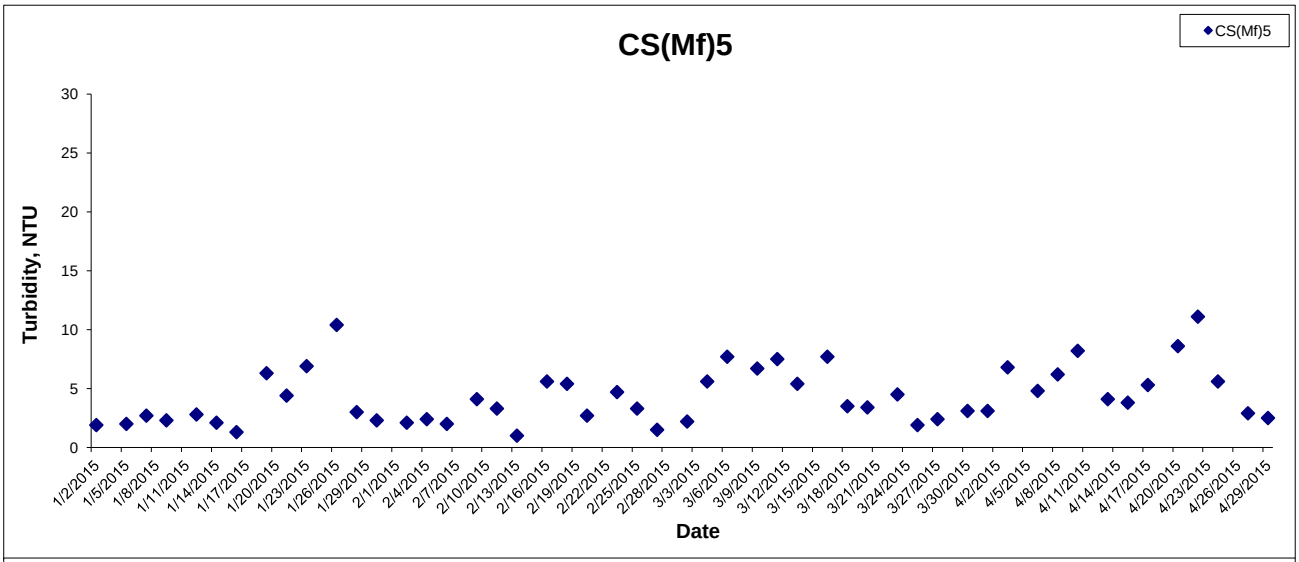


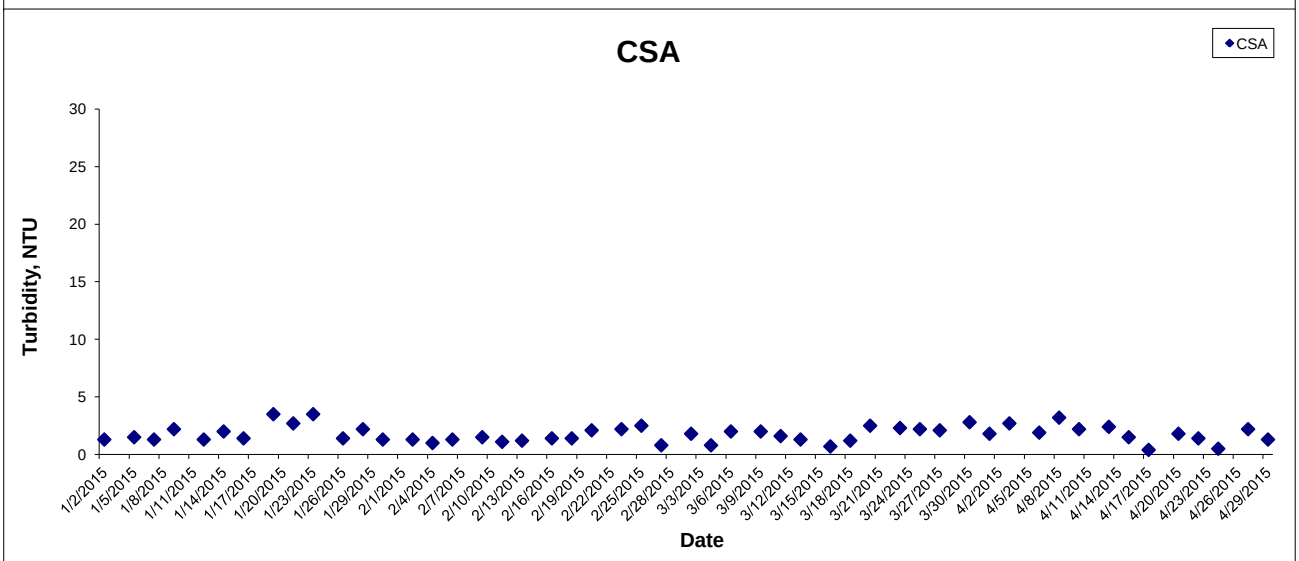


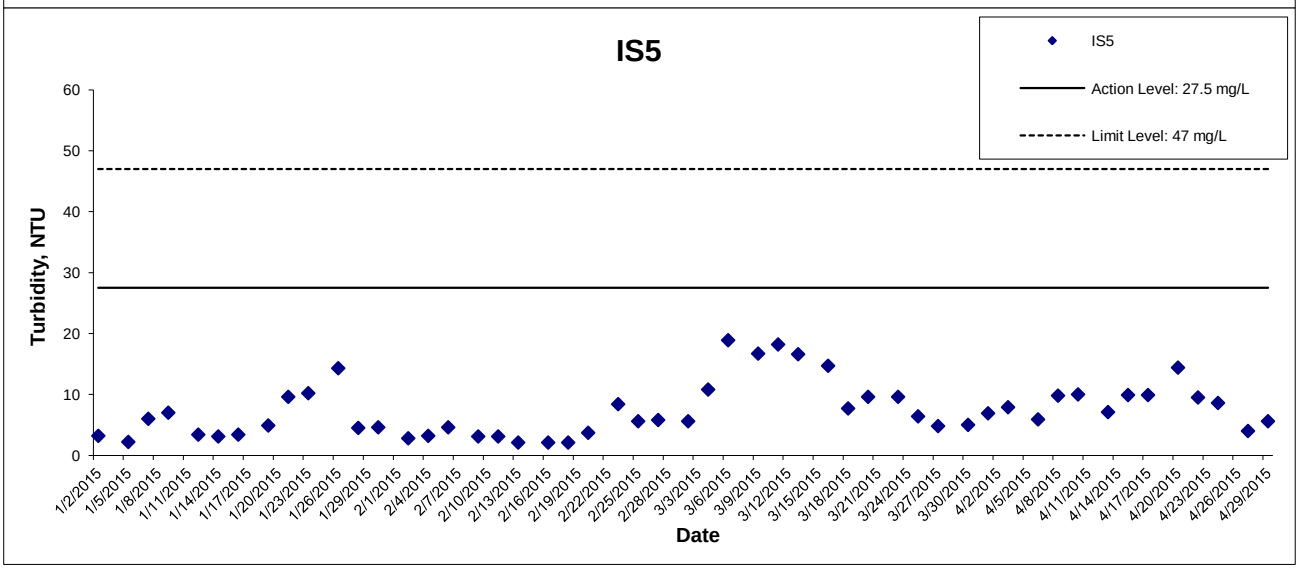


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

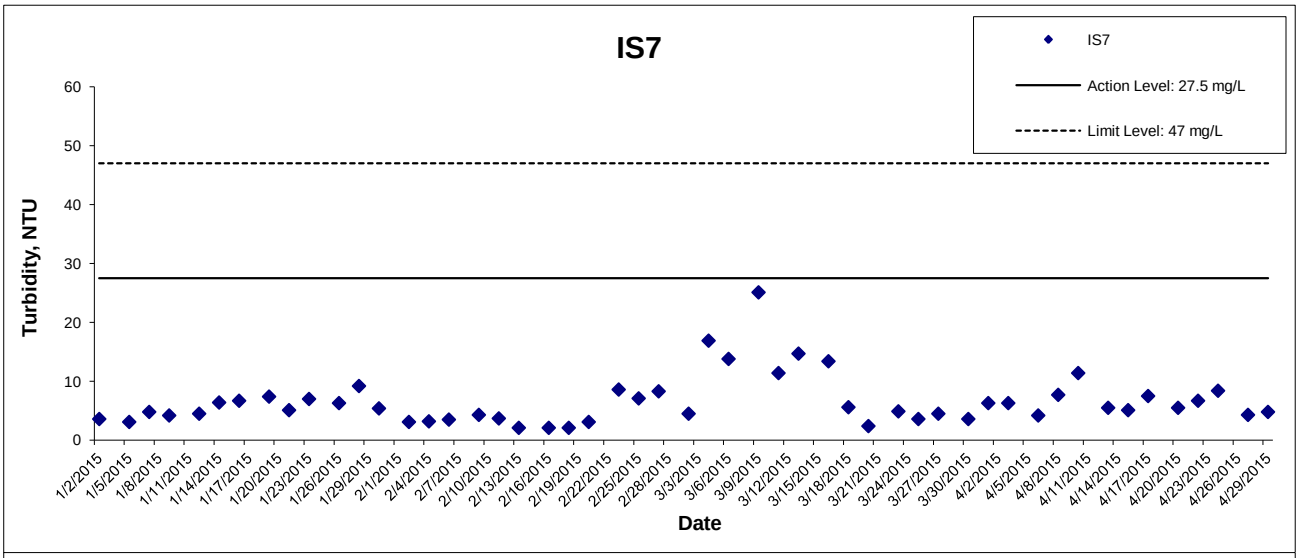
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

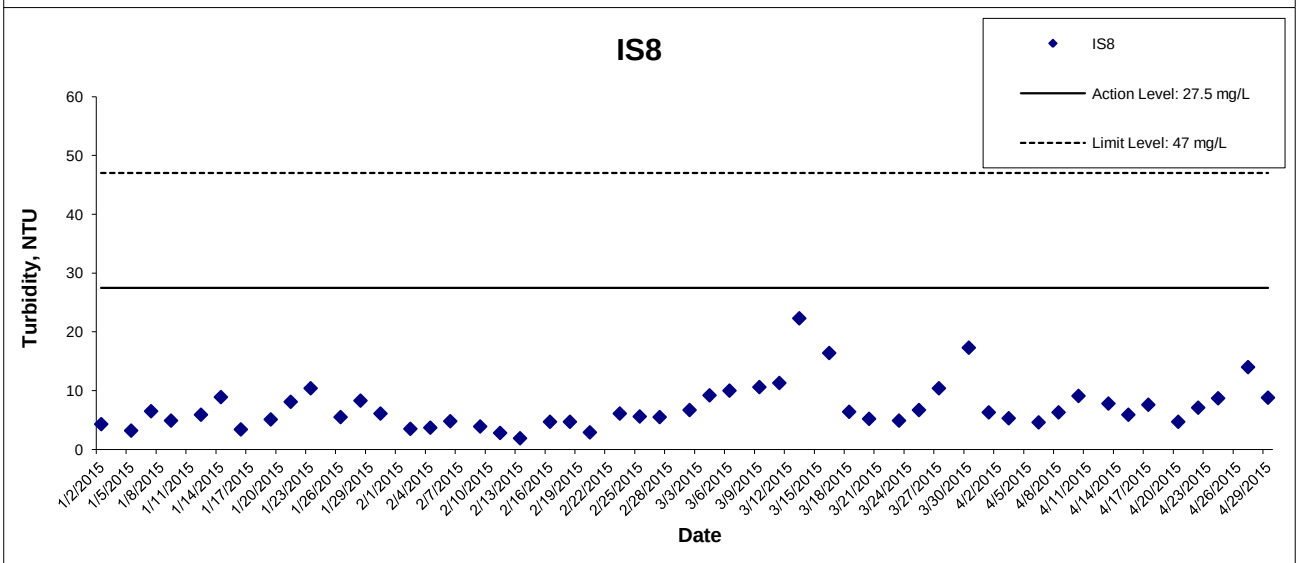
Graphical Presentation of Impact Water Quality Monitoring Results

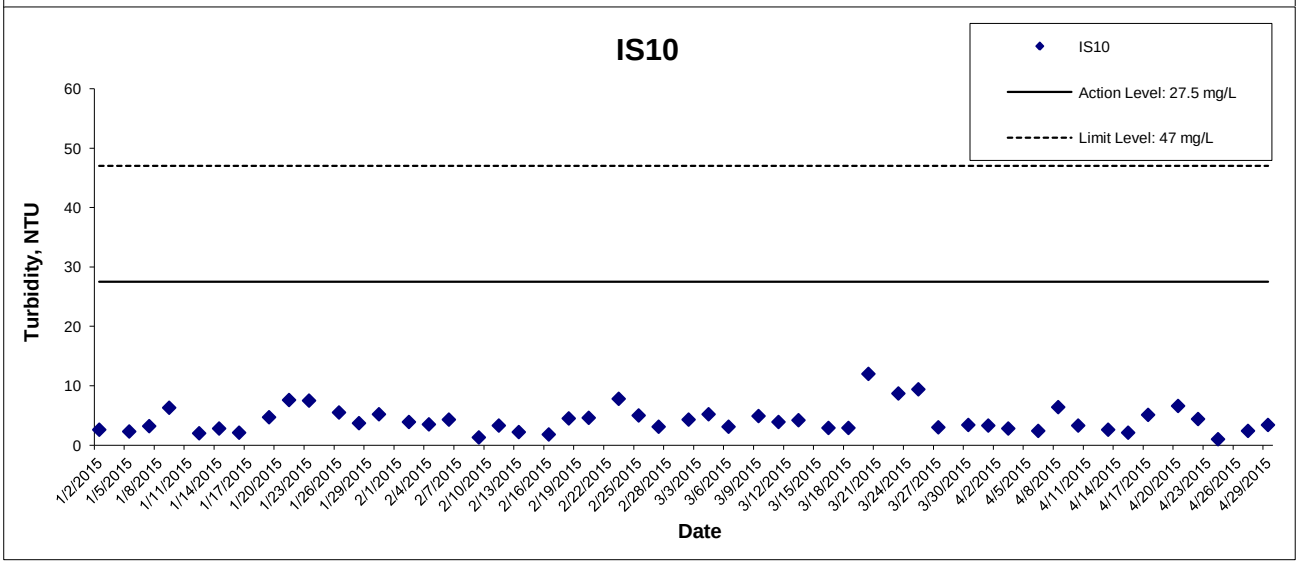
Project No.: 60249820 **Date: May 2015**

Appendix J

Turbidity at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

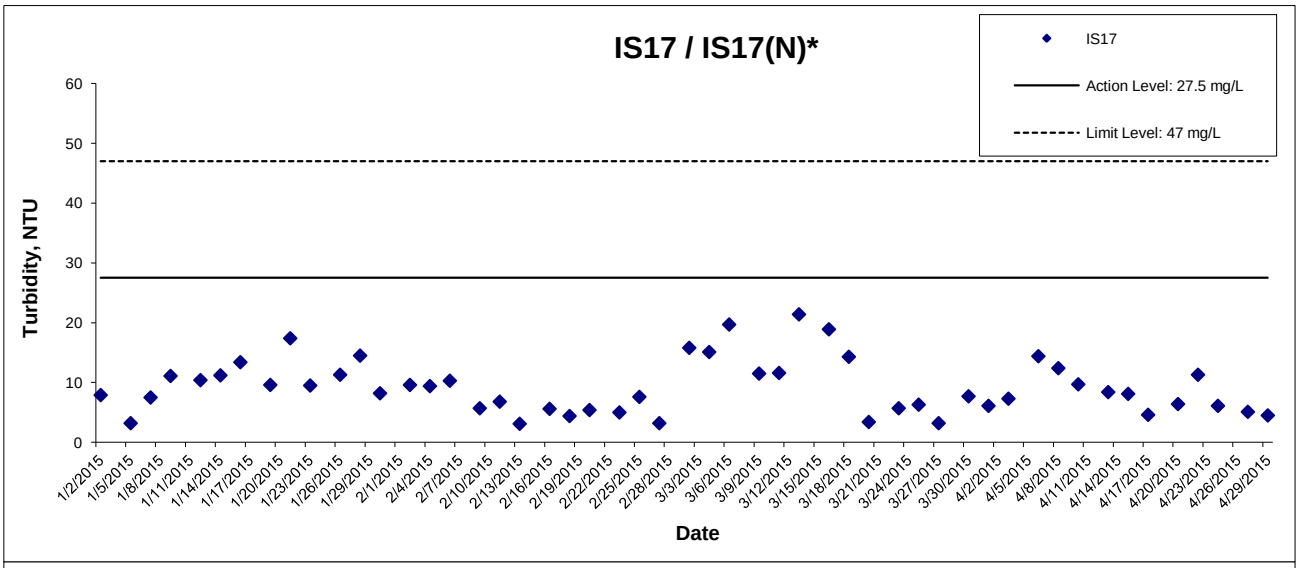
AECOM

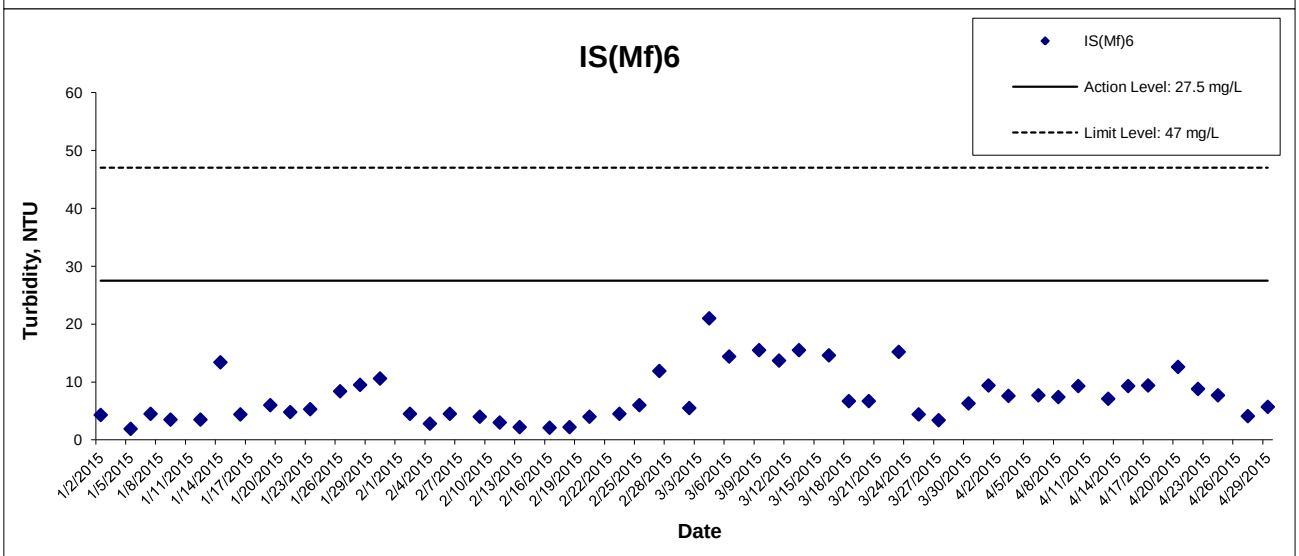
Graphical Presentation of Impact Water Quality Monitoring Results

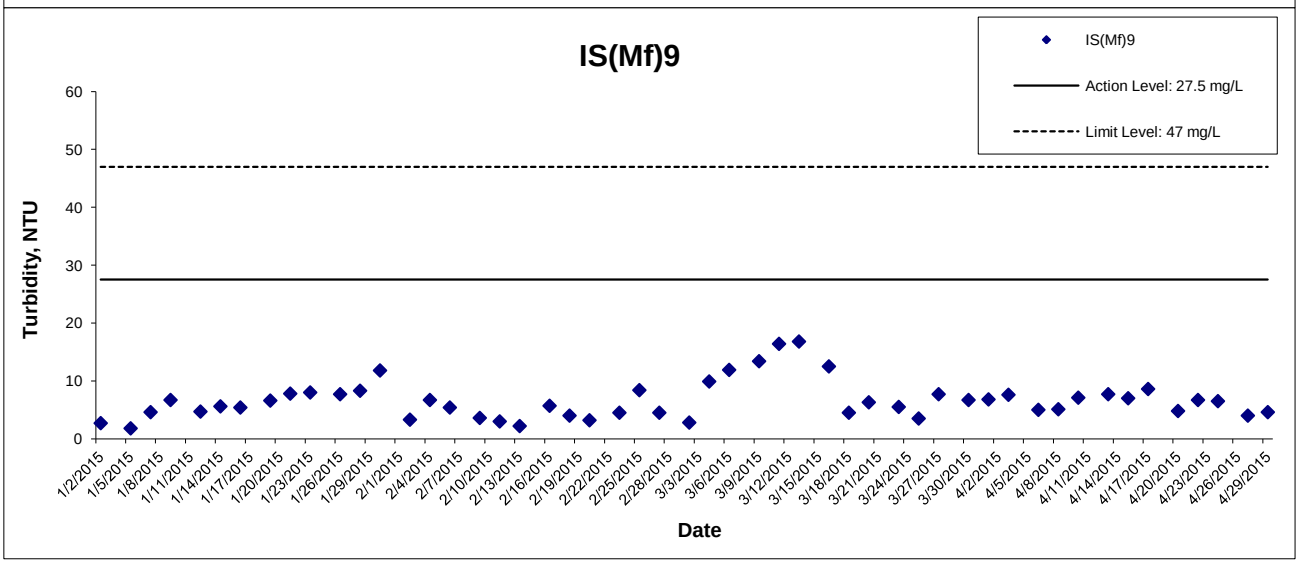
Project No.: 60249820 **Date: May 2015**

Appendix J

Turbidity at Mid-Ebb Tide

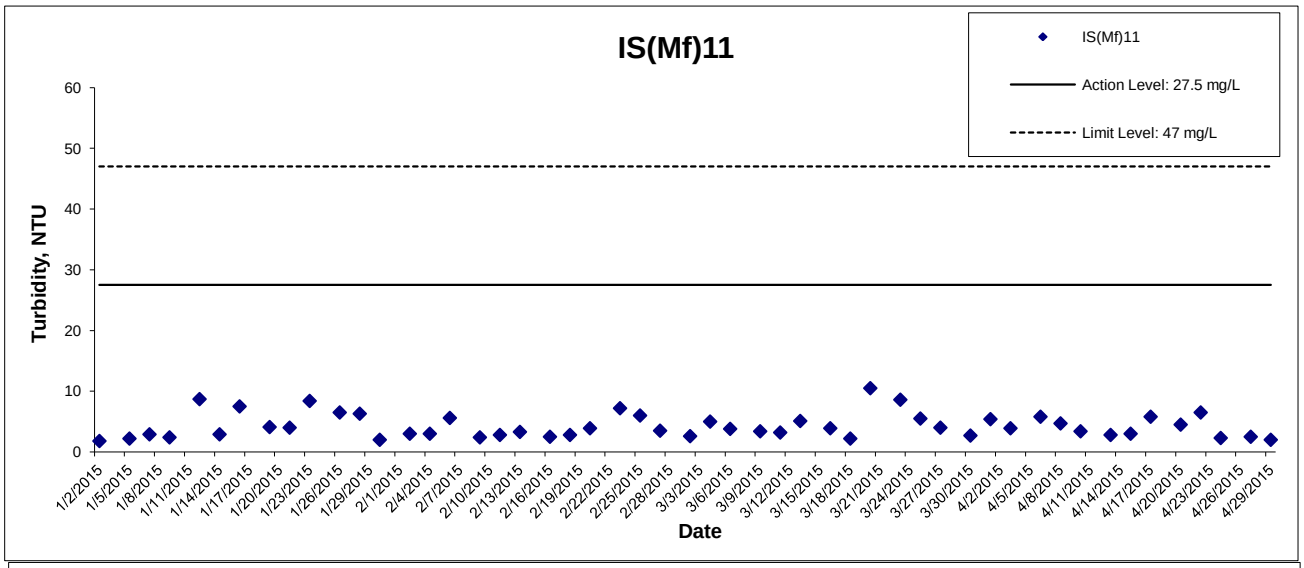


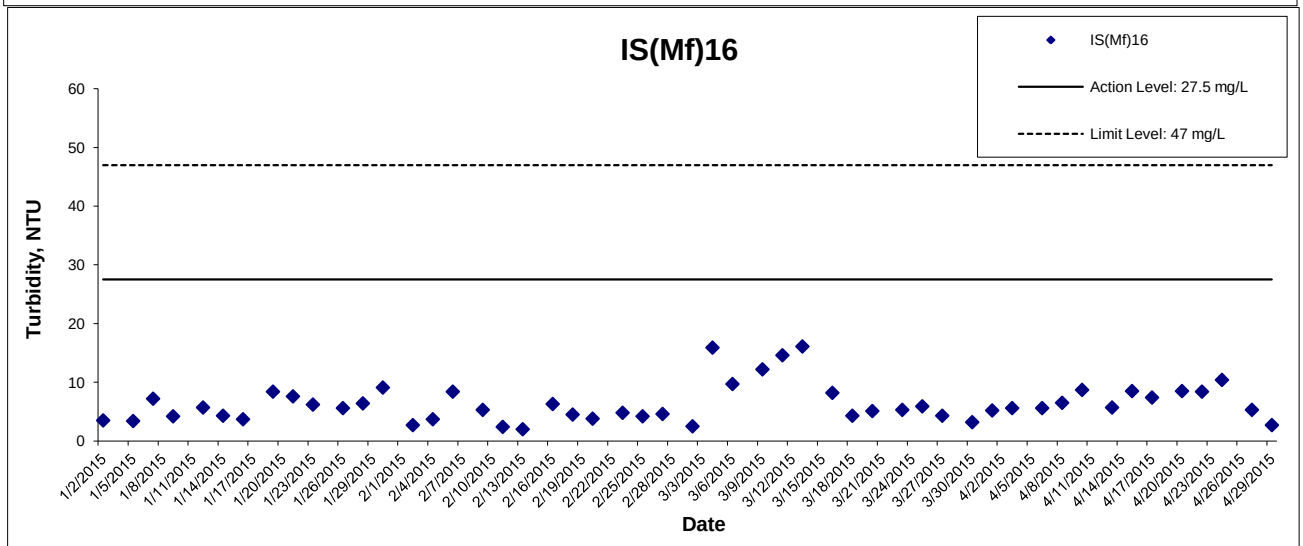


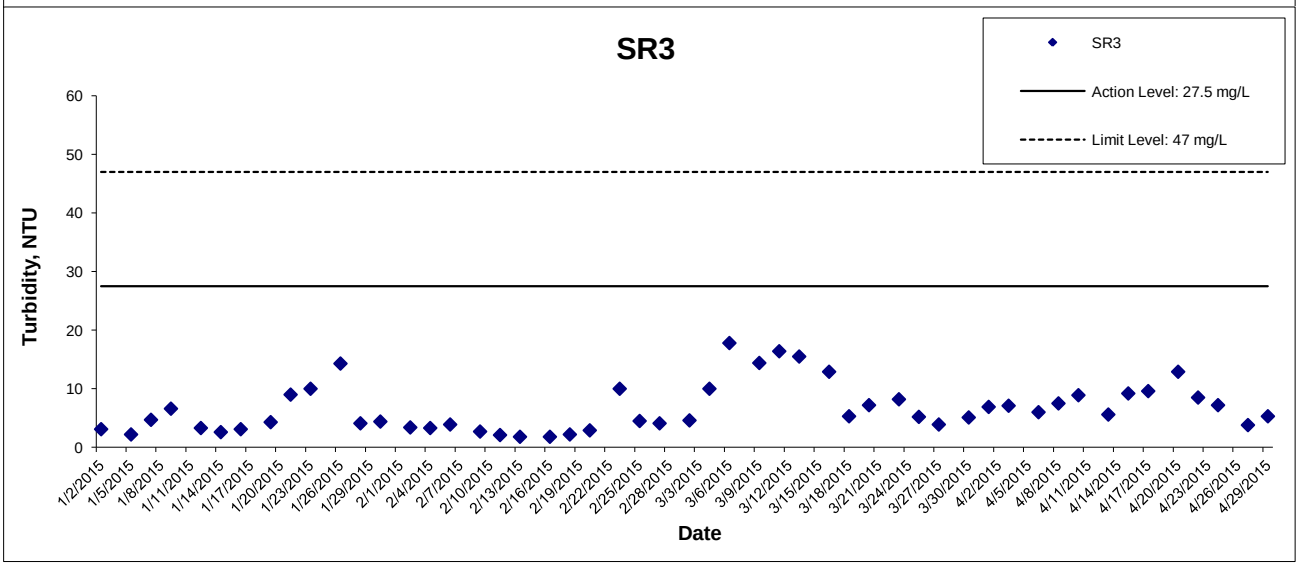


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

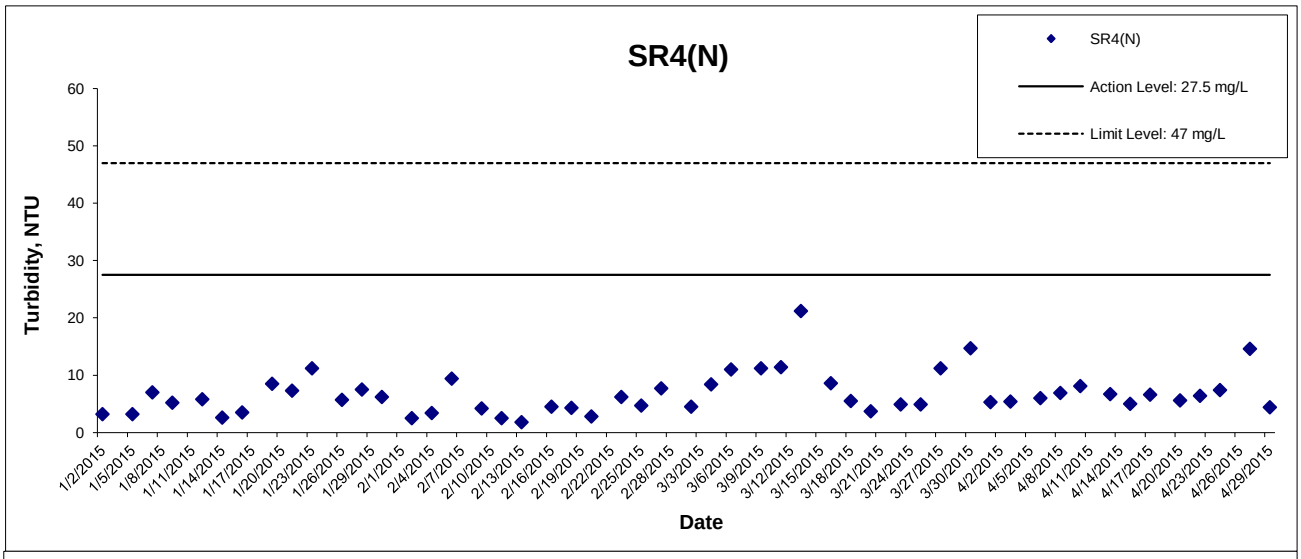
AECOM

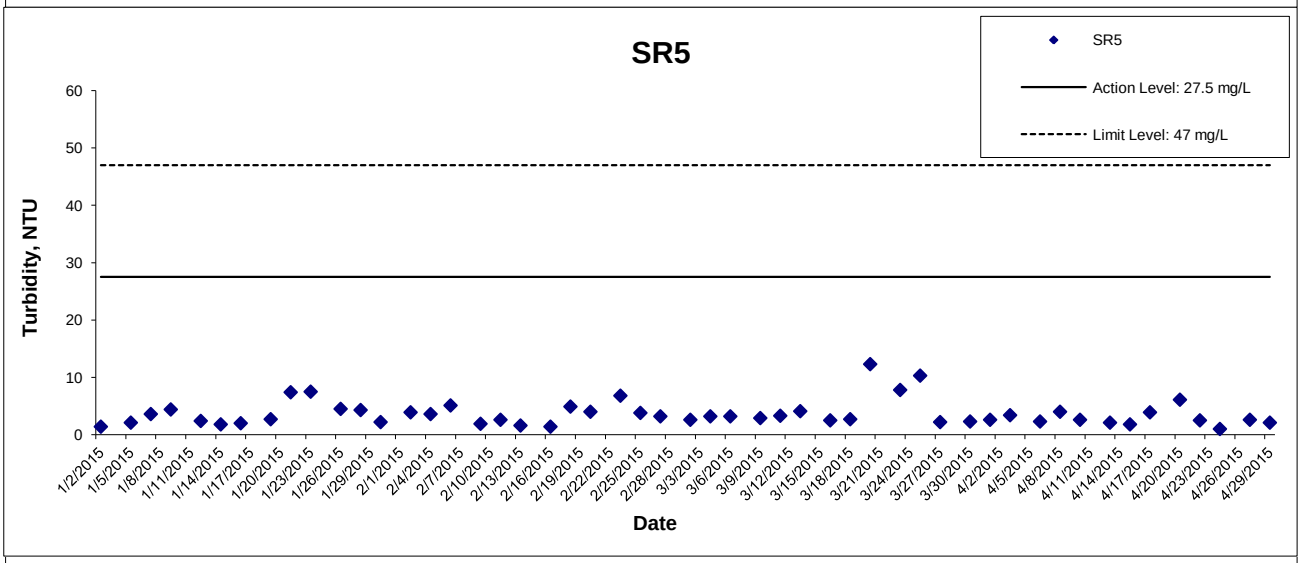
Graphical Presentation of Impact Water Quality Monitoring Results

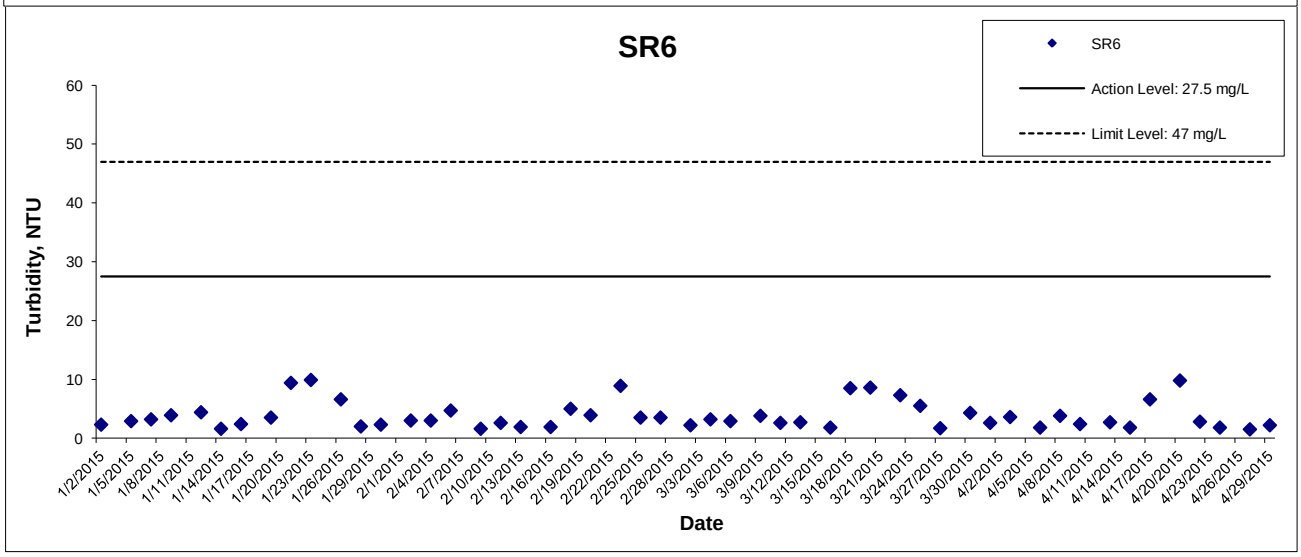
Project No.: 60249820 **Date: May 2015**

Appendix J

Turbidity at Mid-Ebb Tide

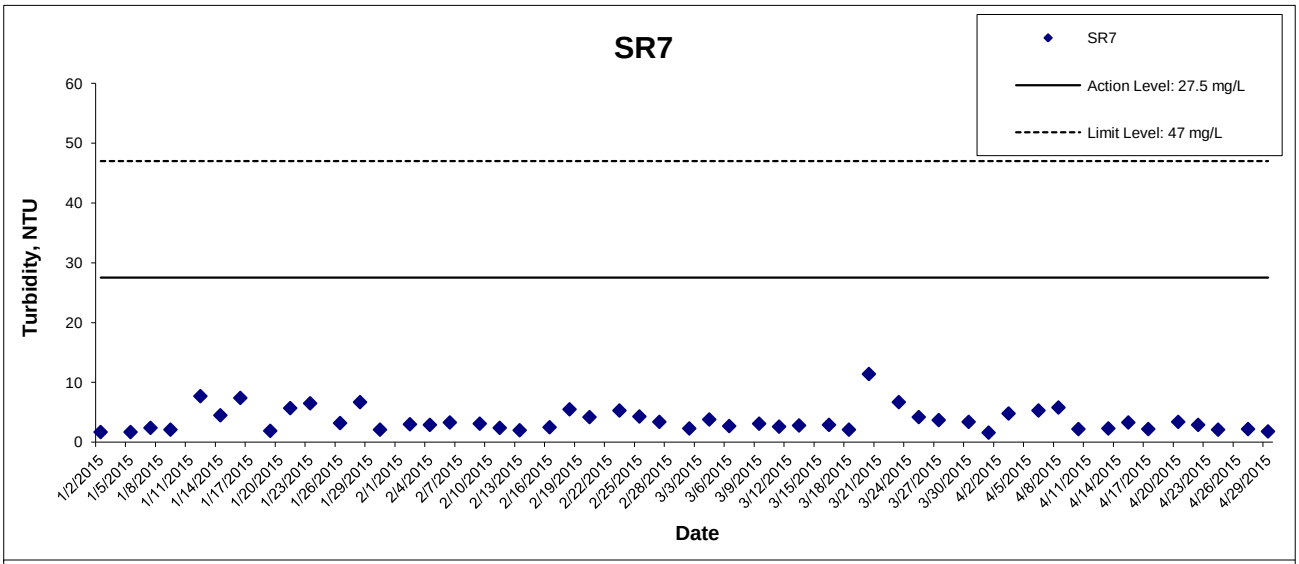


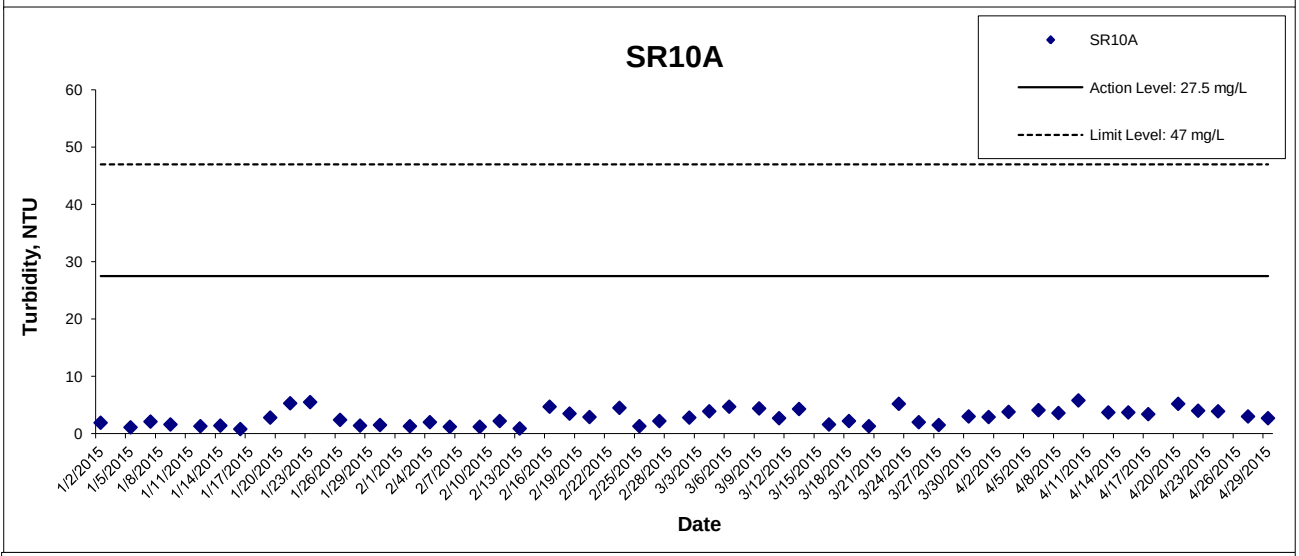


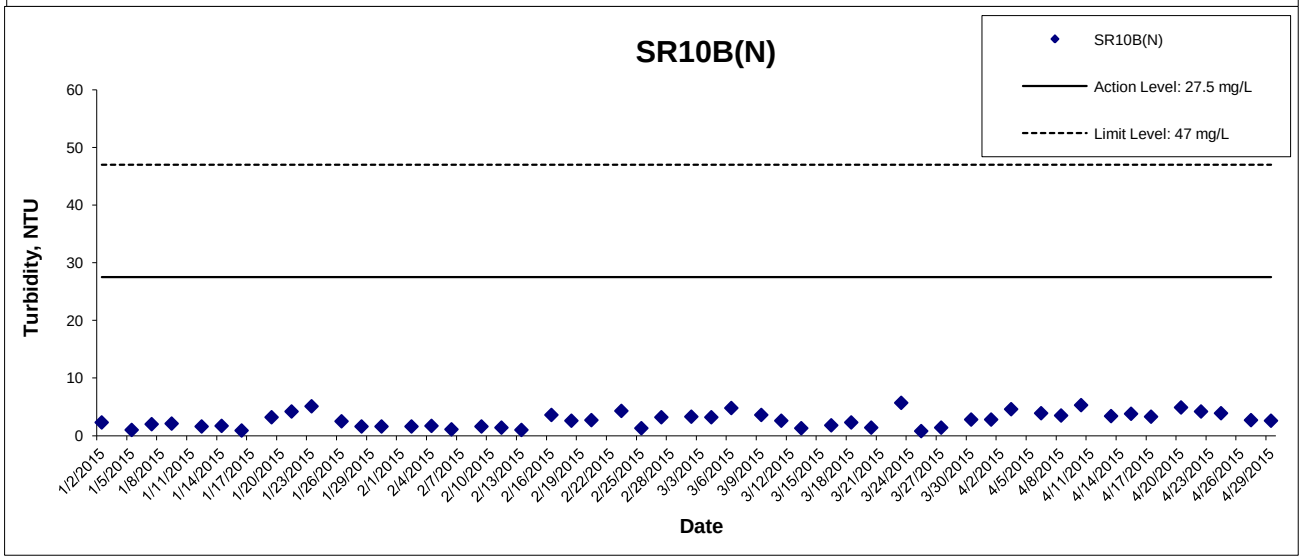


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Ebb Tide

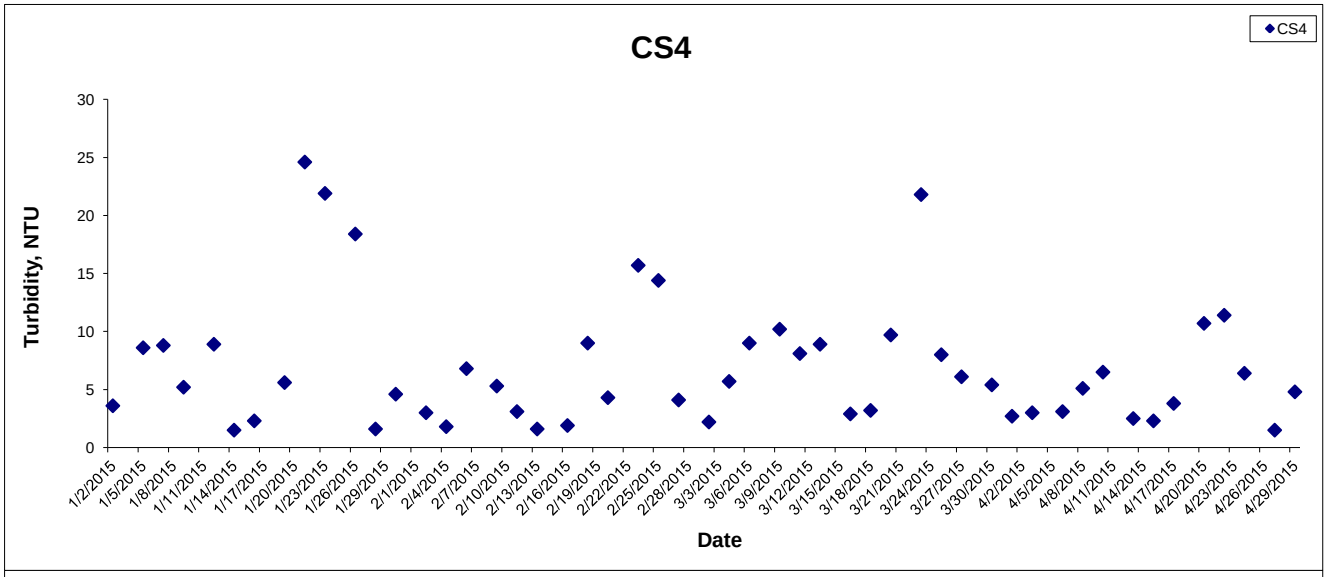


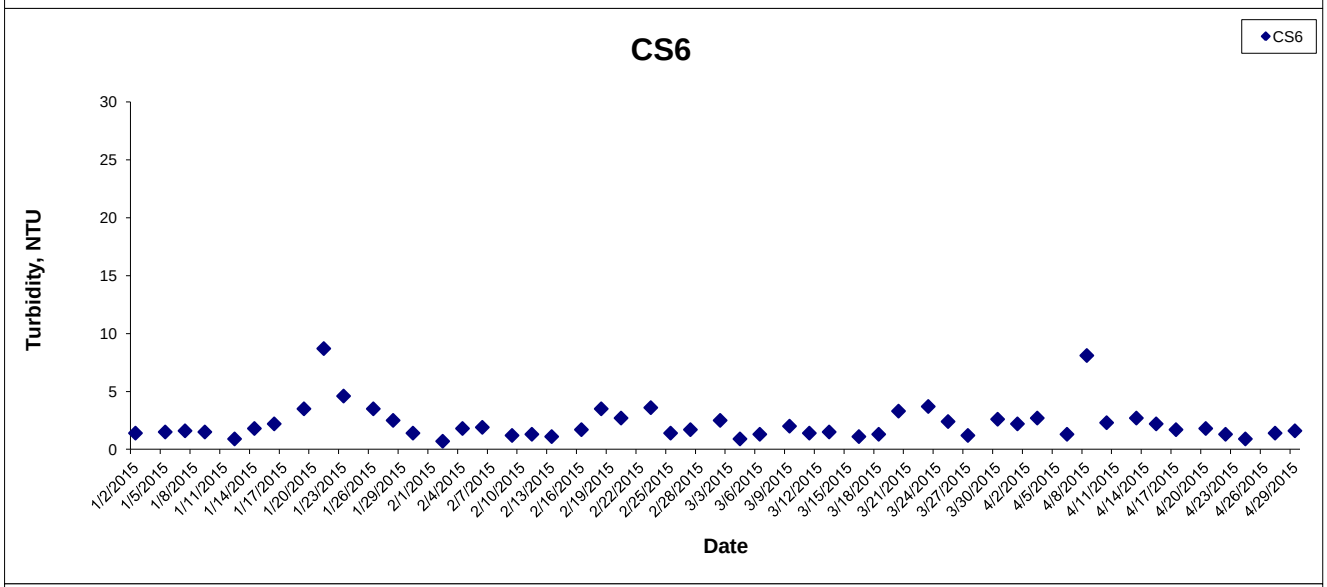


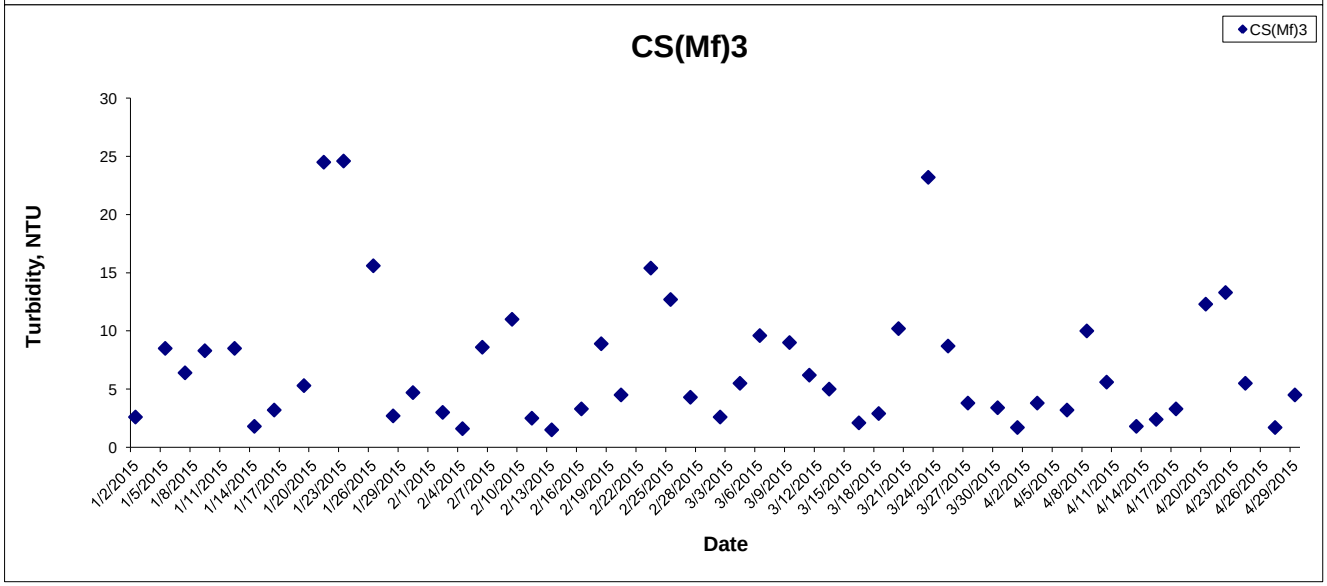


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Flood Tide

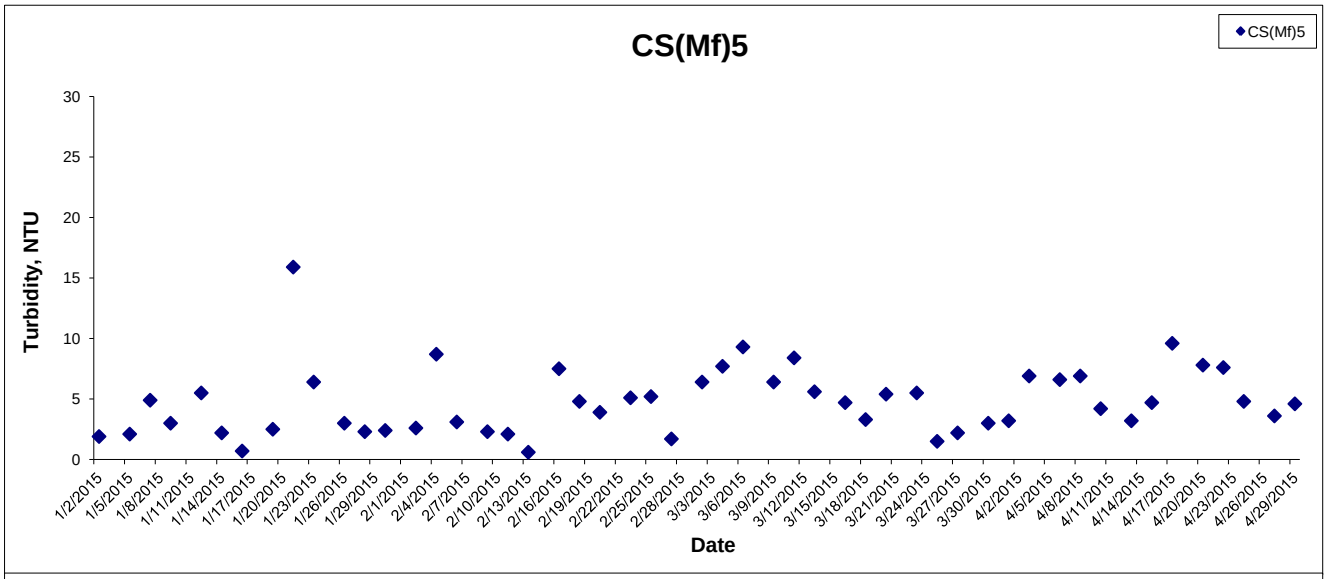


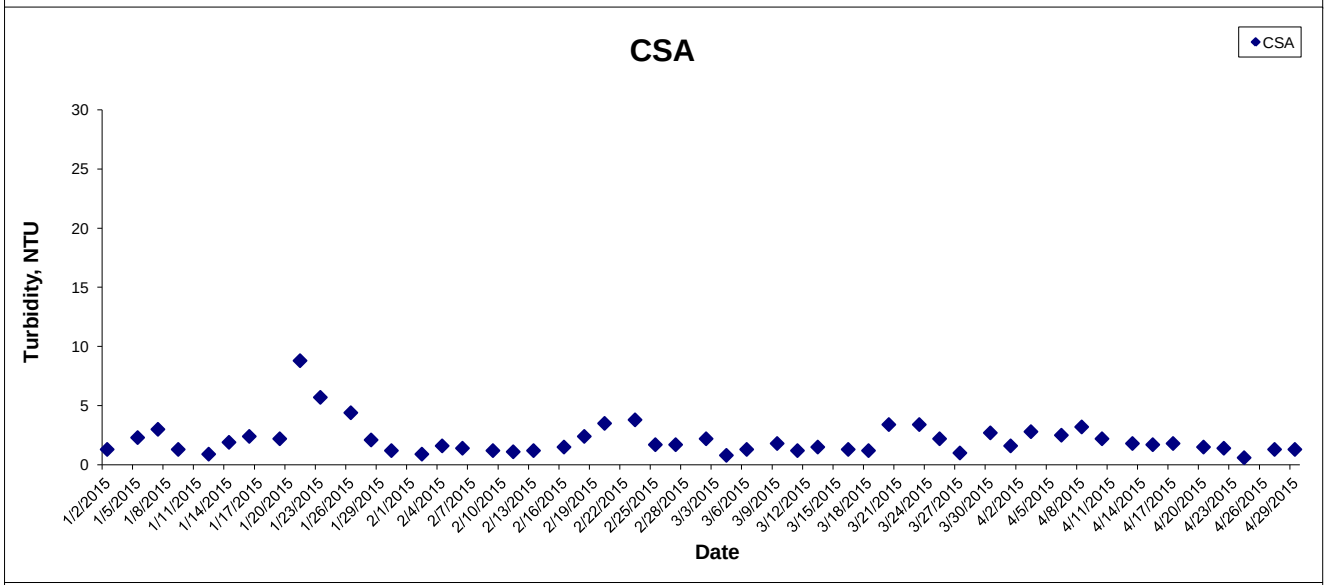


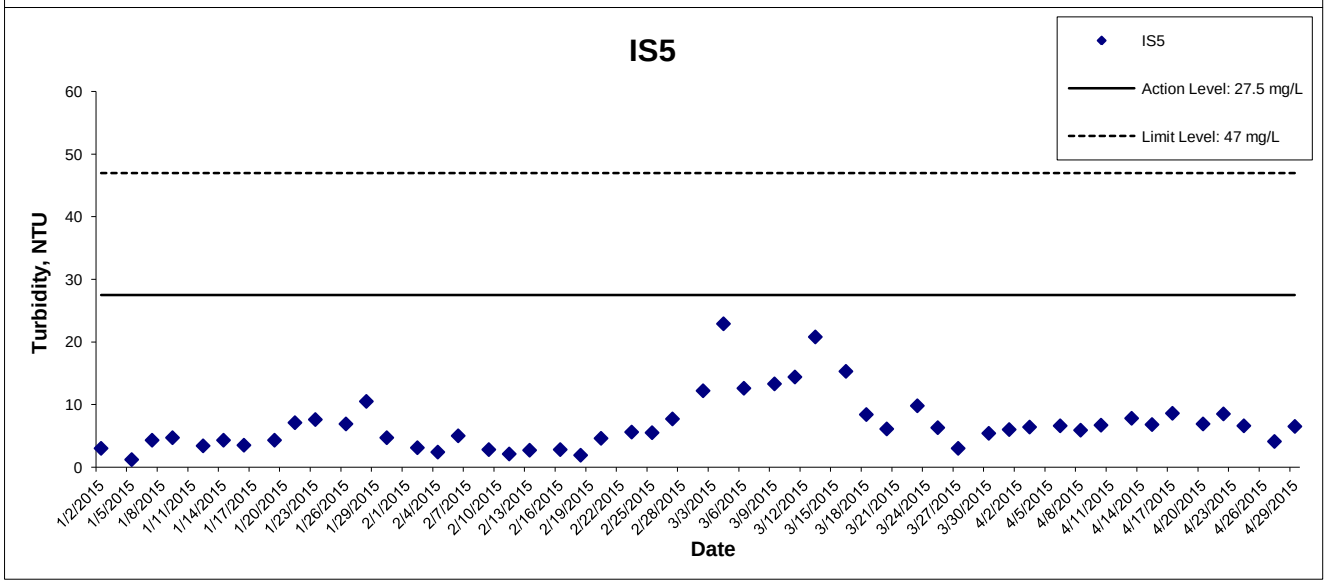


This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Flood Tide

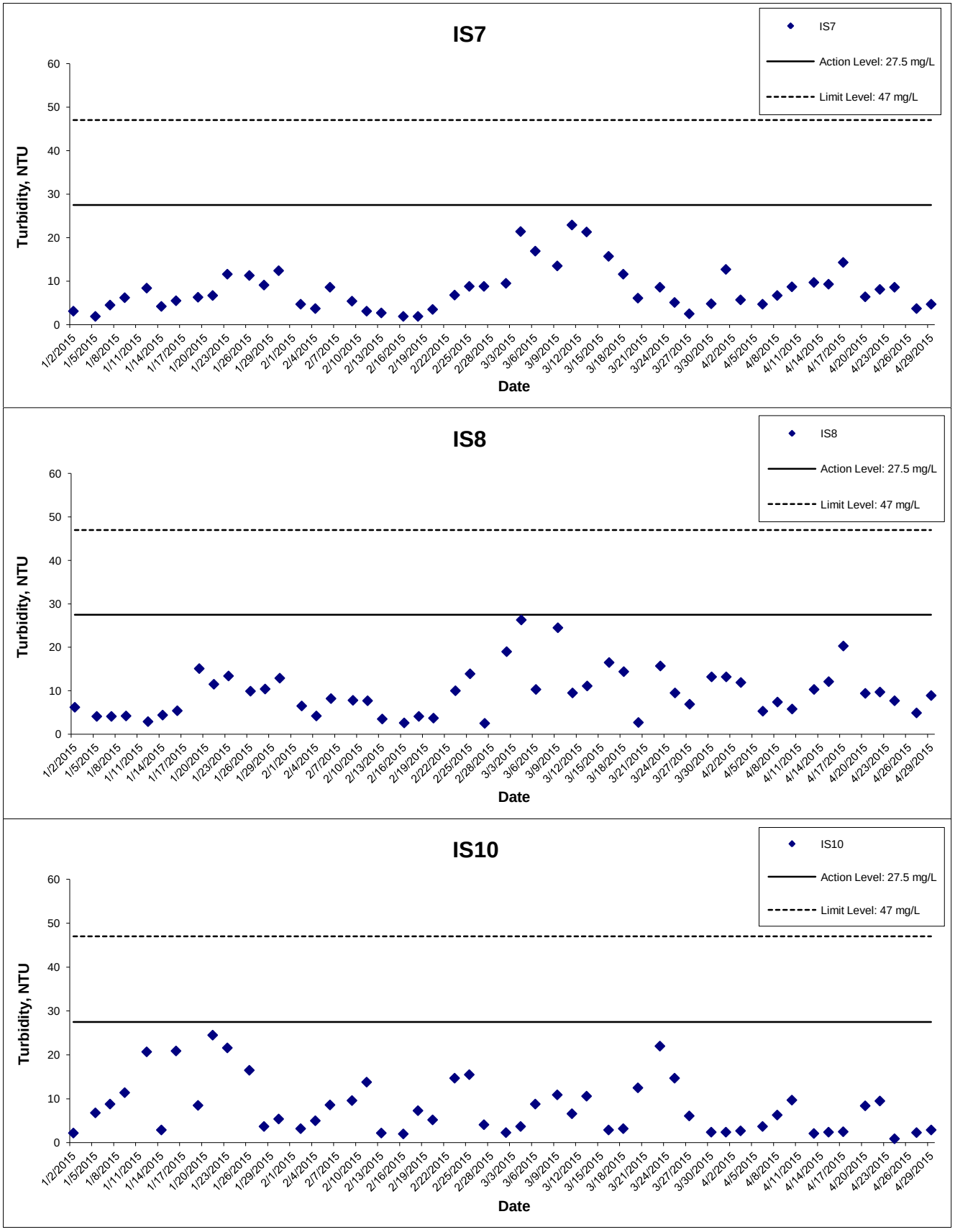






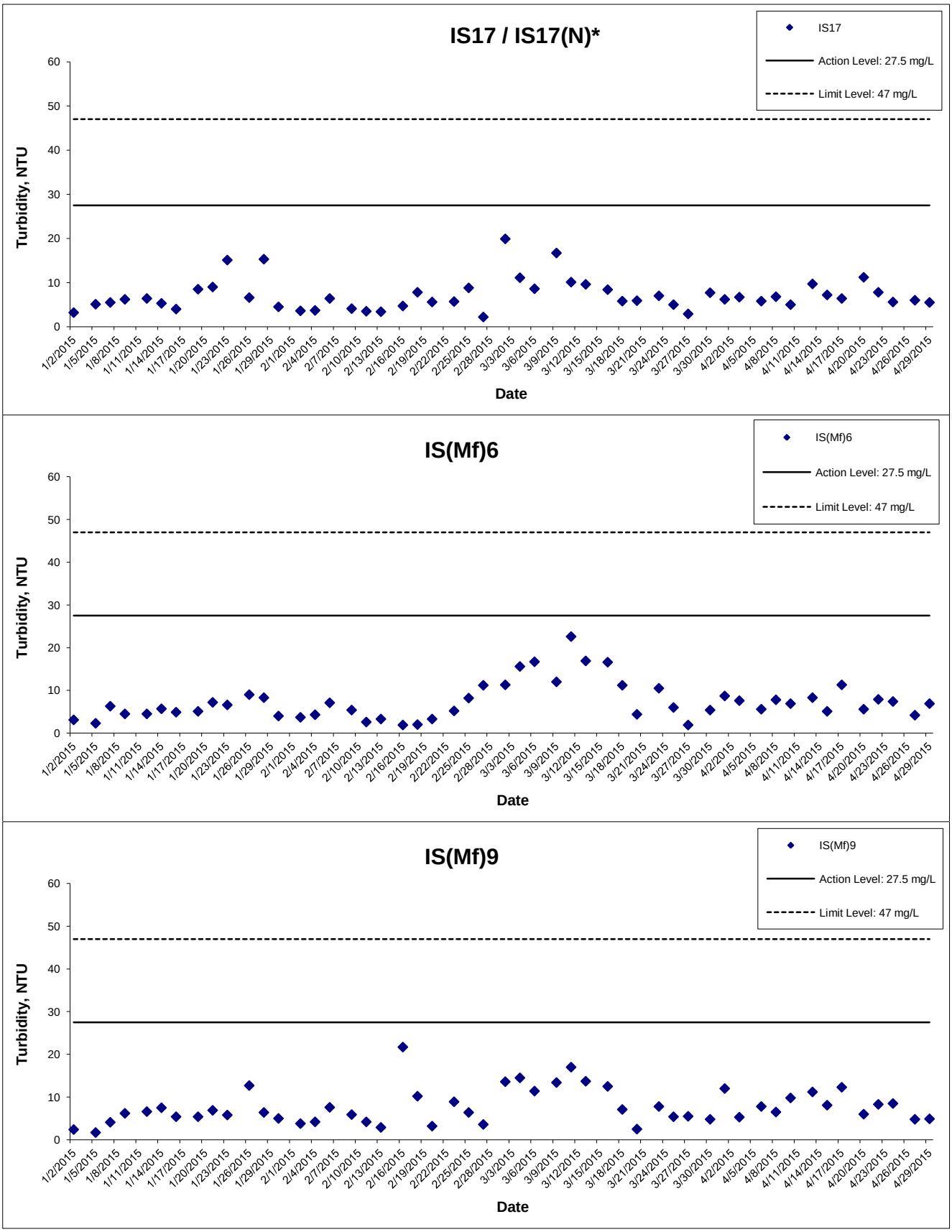
This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Flood Tide



This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Flood Tide



This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

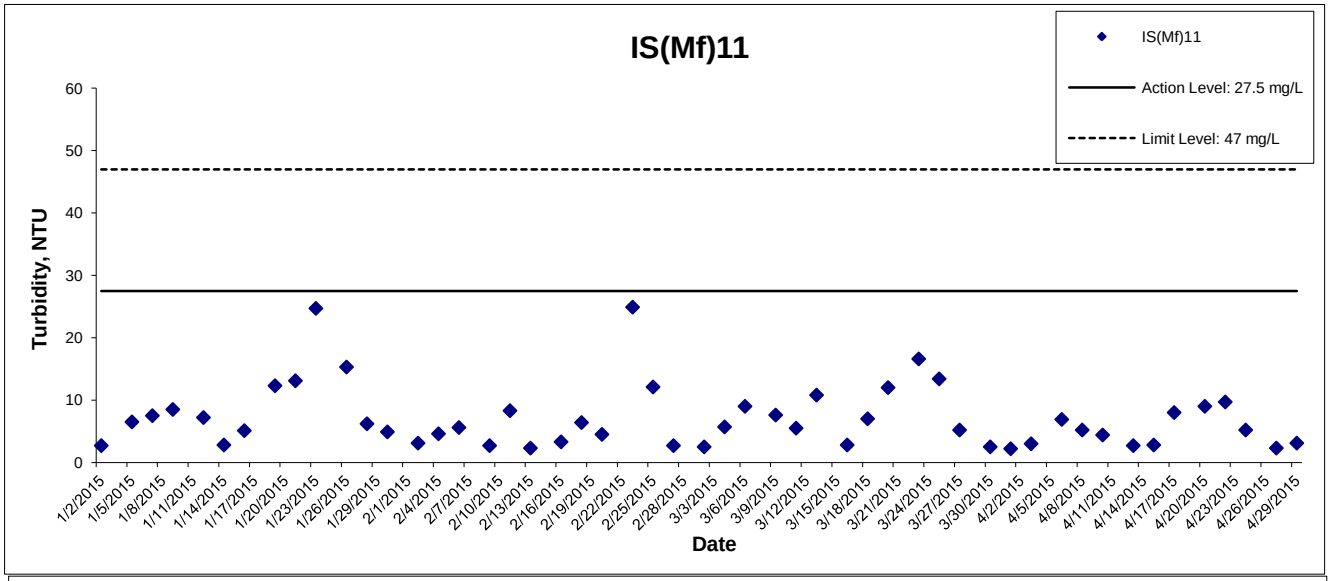
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

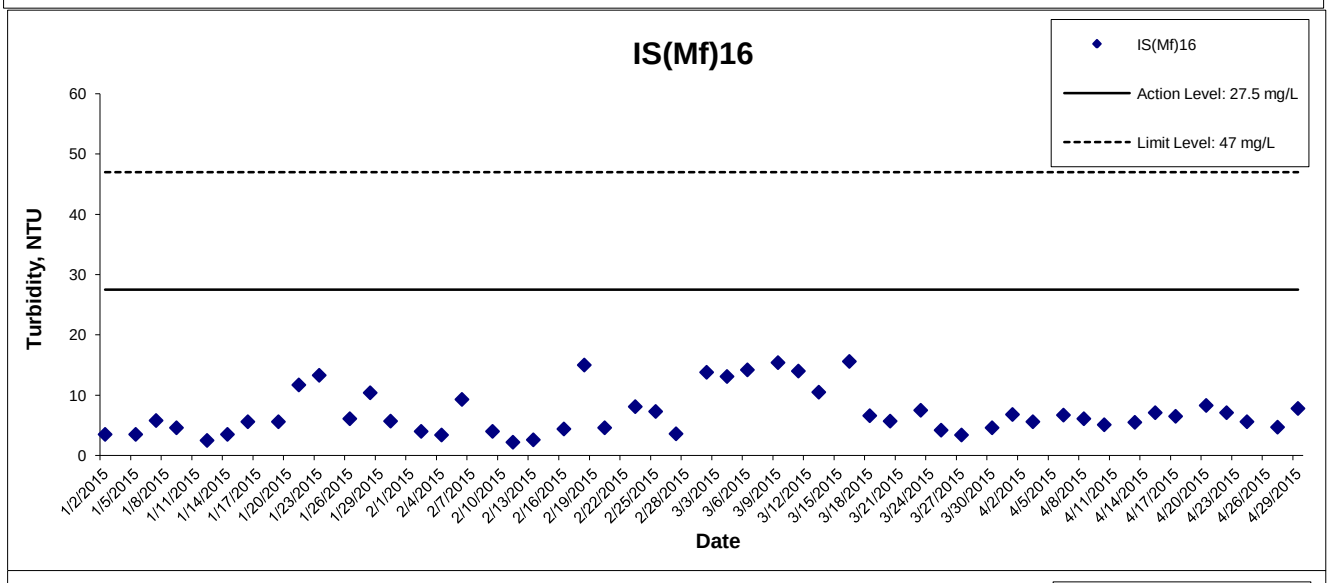
Graphical Presentation of Impact Water Quality Monitoring Results

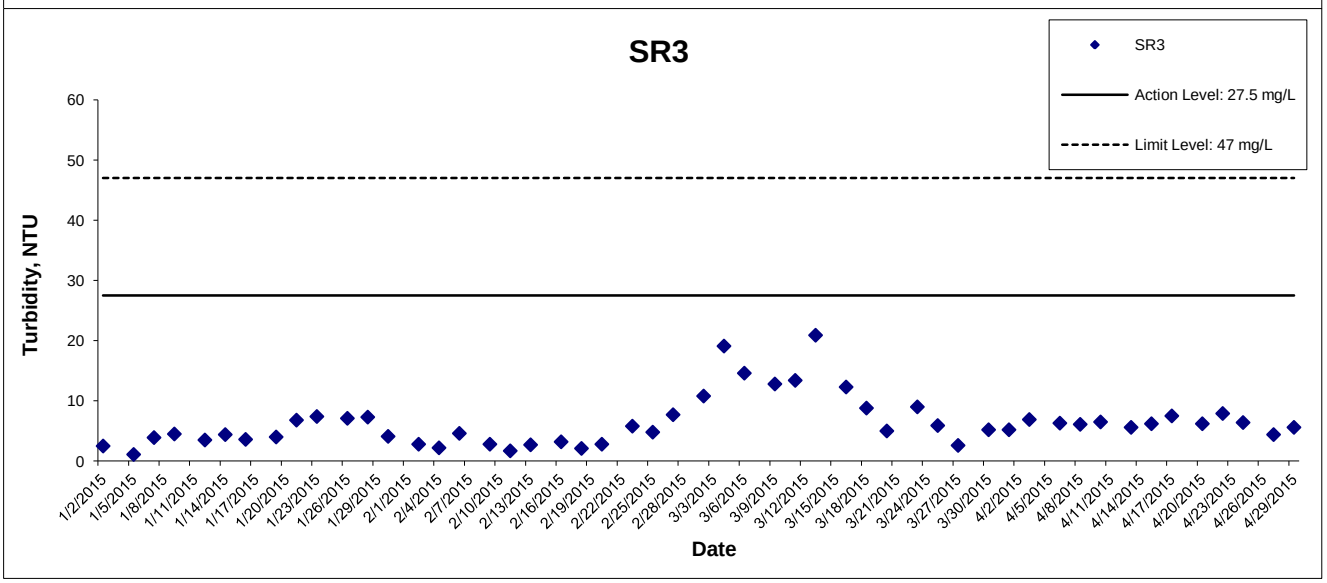
Project No.: 60249820 **Date: May 2015**

Appendix J

Turbidity at Mid-Flood Tide

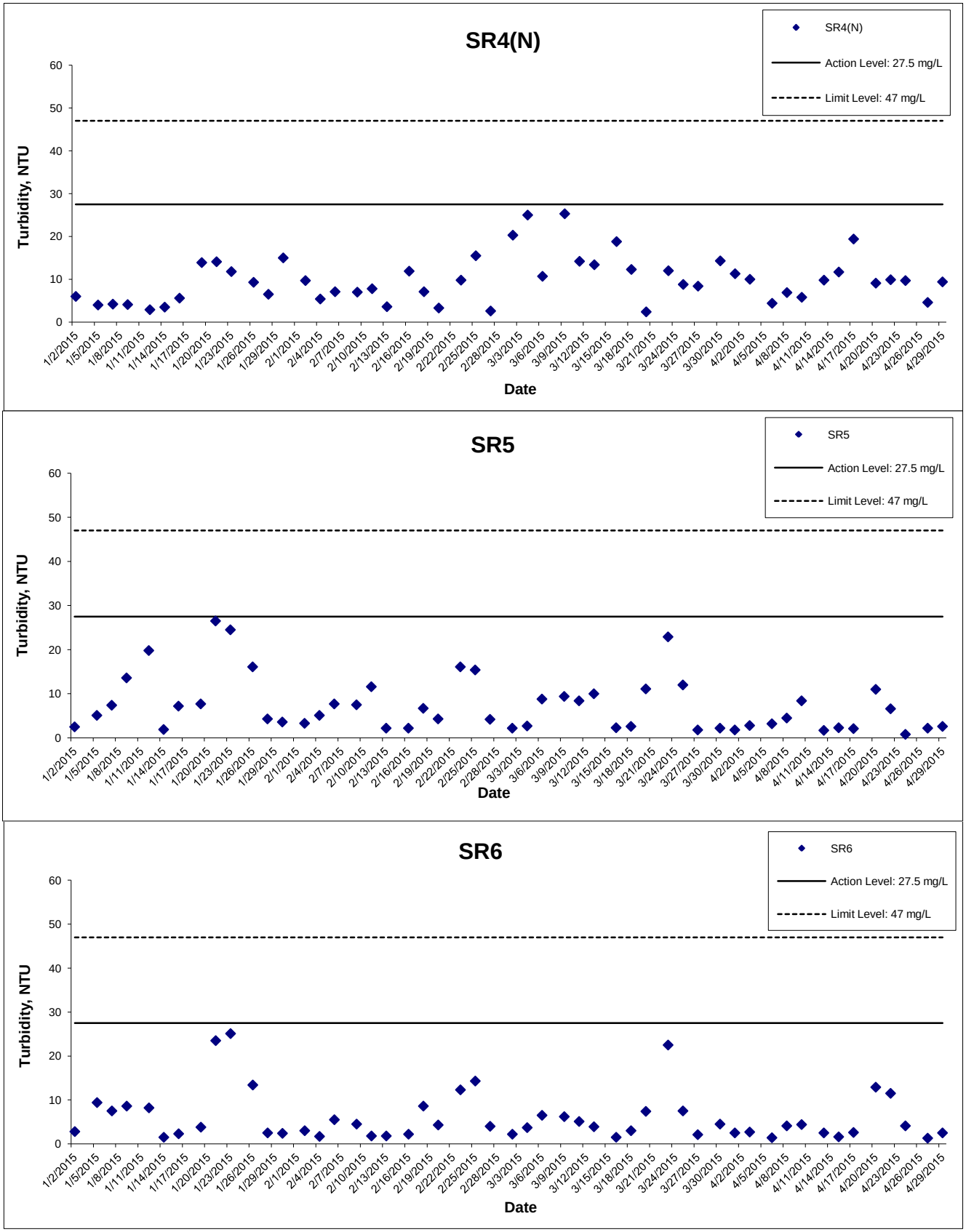






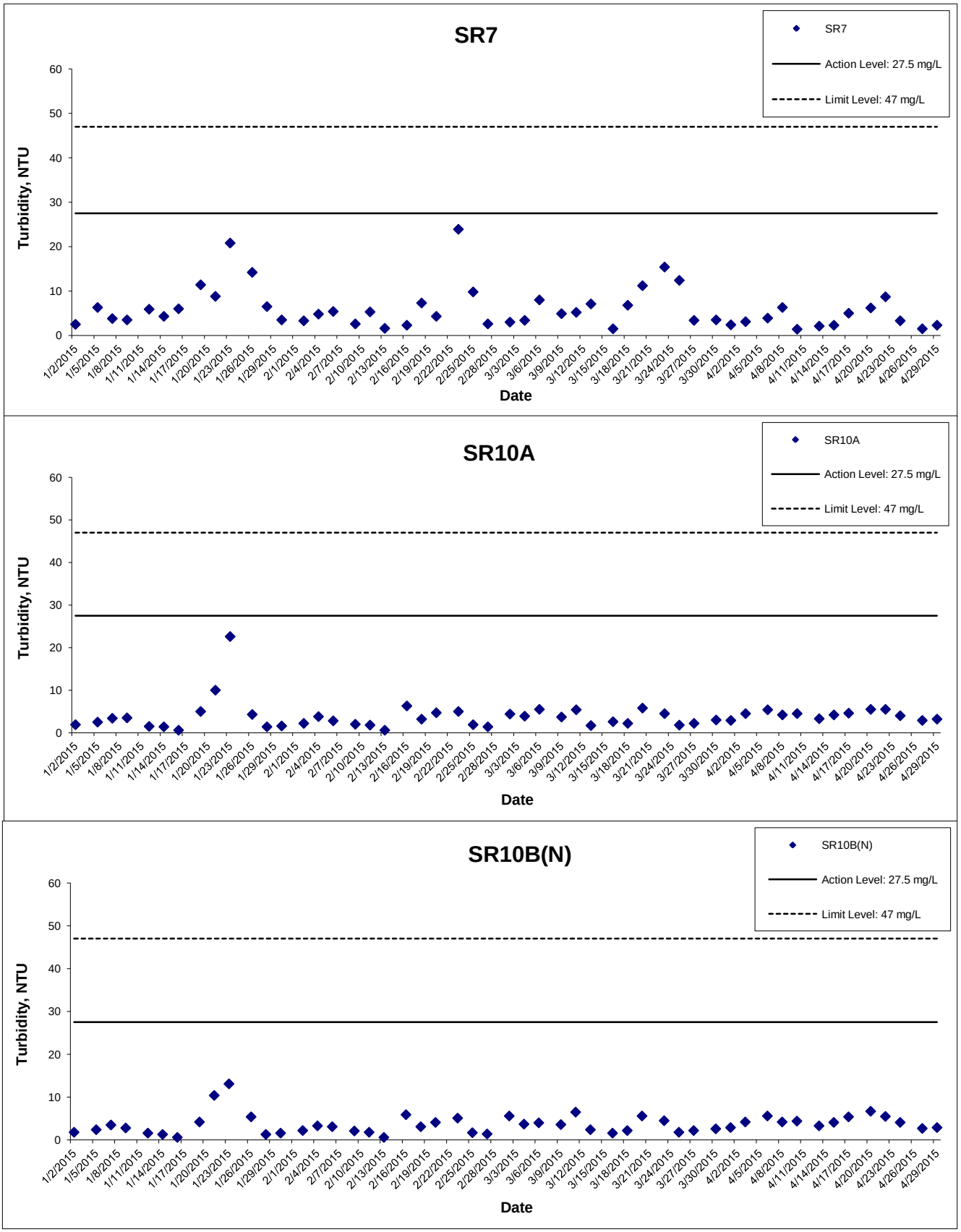
This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Flood Tide



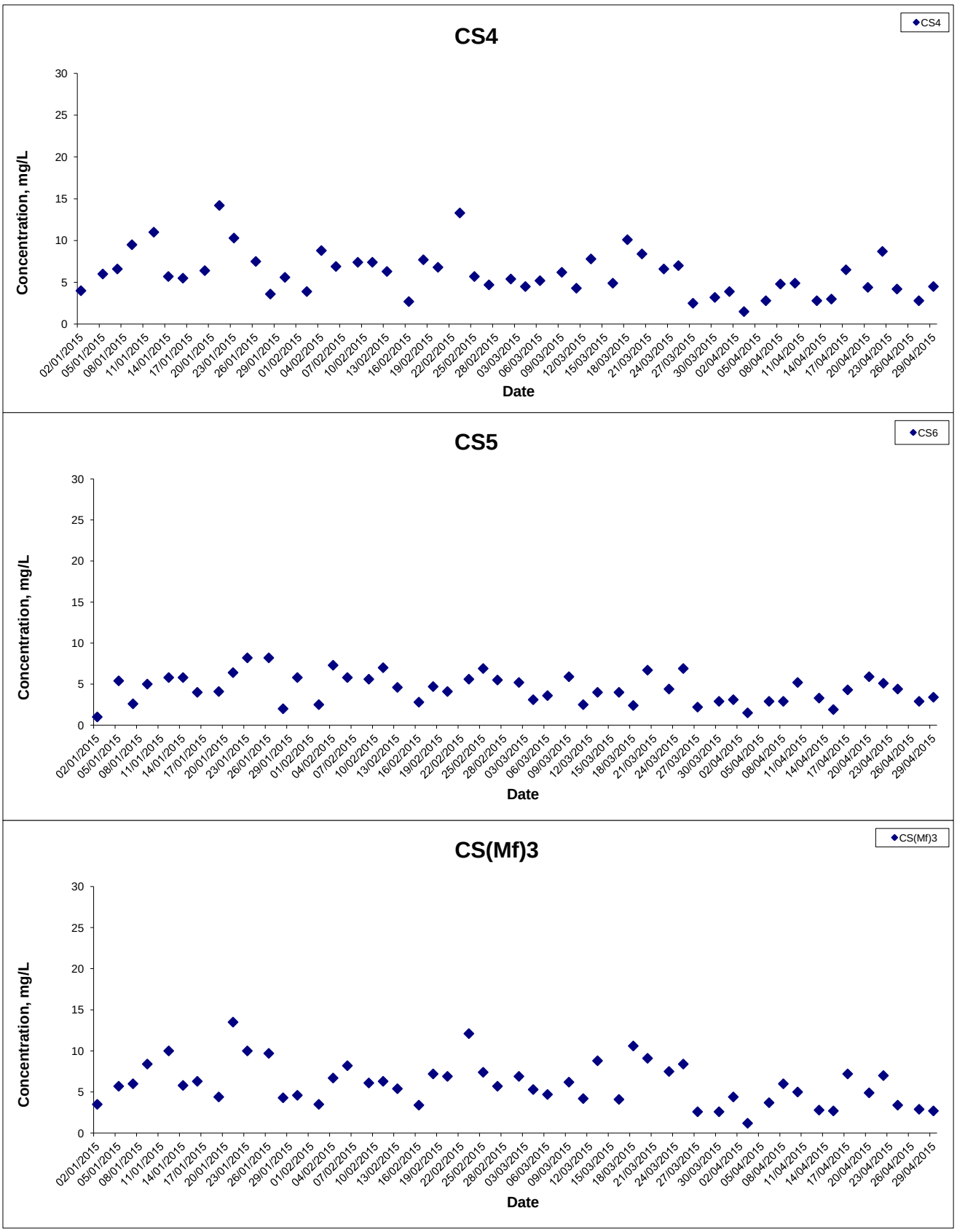
This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Turbidity at Mid-Flood Tide



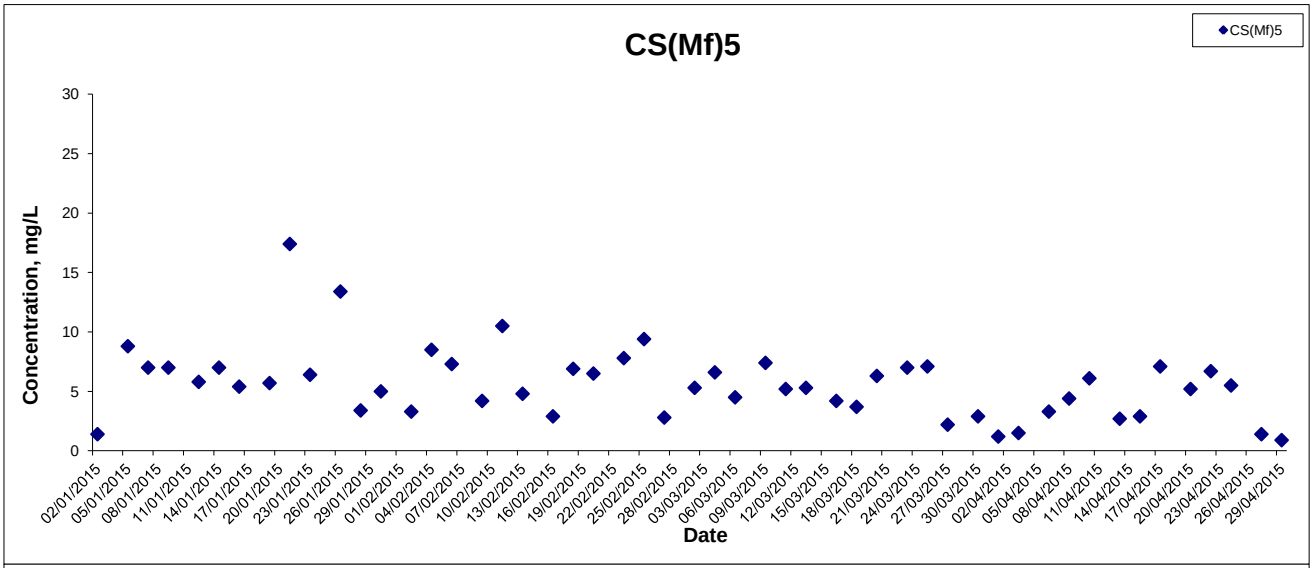
This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

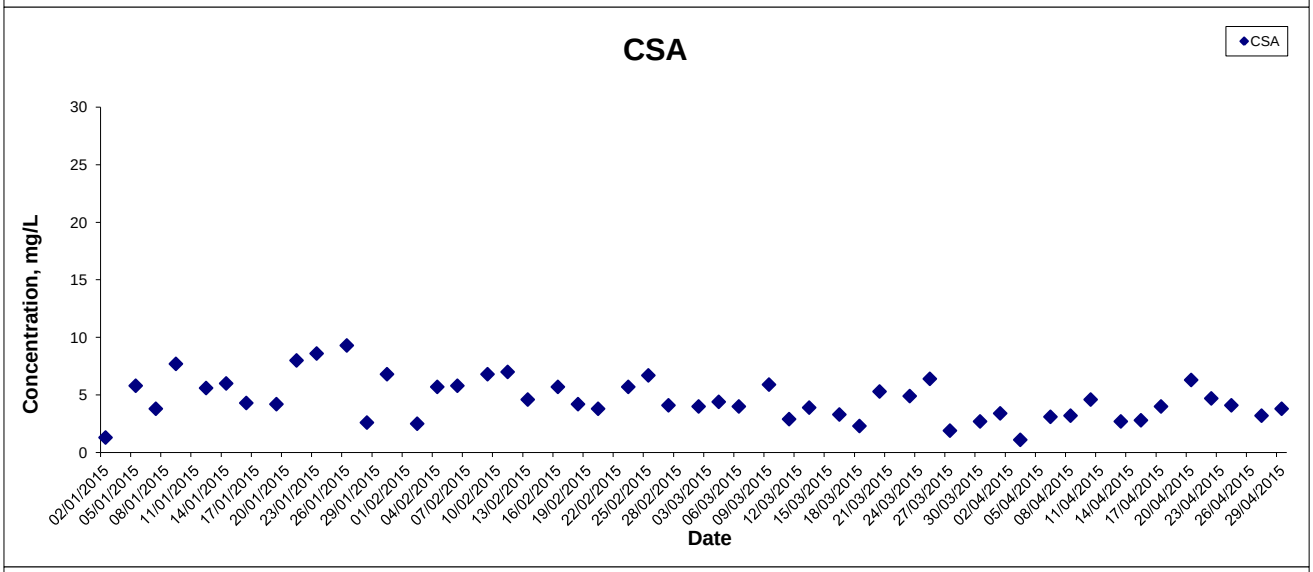
Suspended Solids at Mid-Ebb Tide

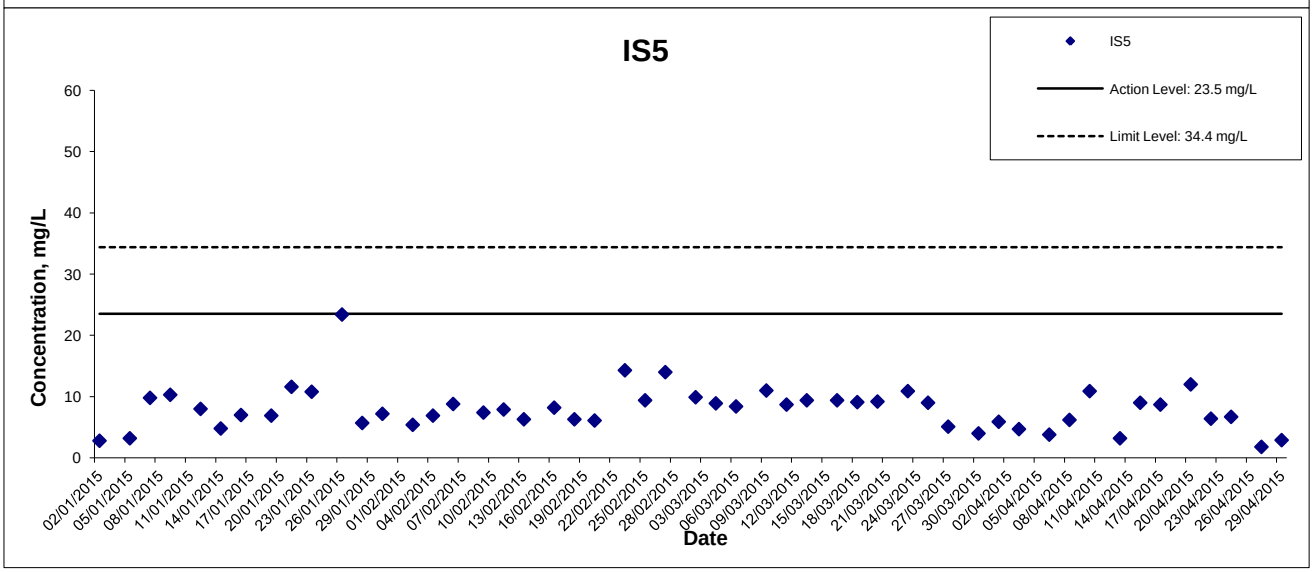


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Suspended Solids at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

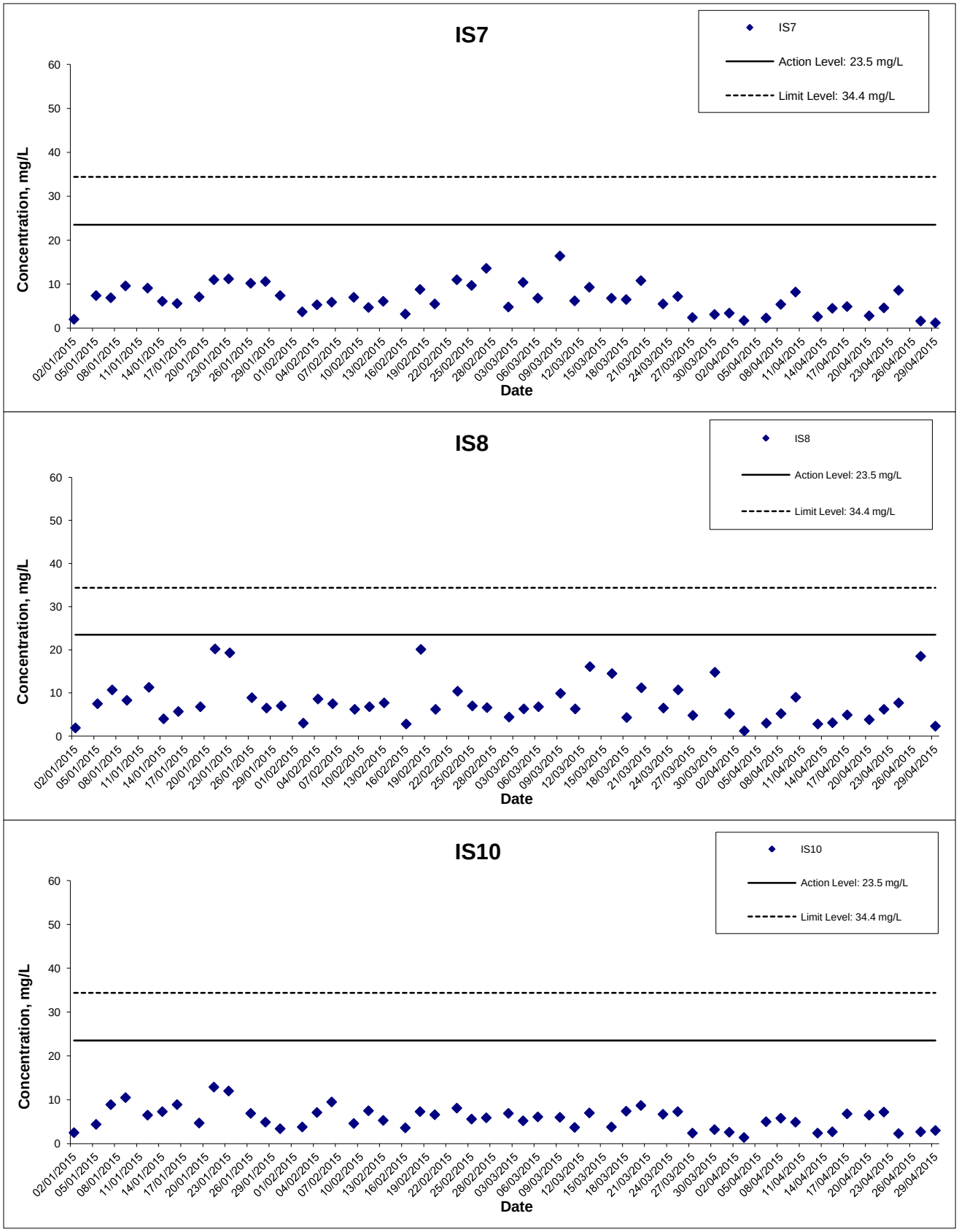
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Ebb Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

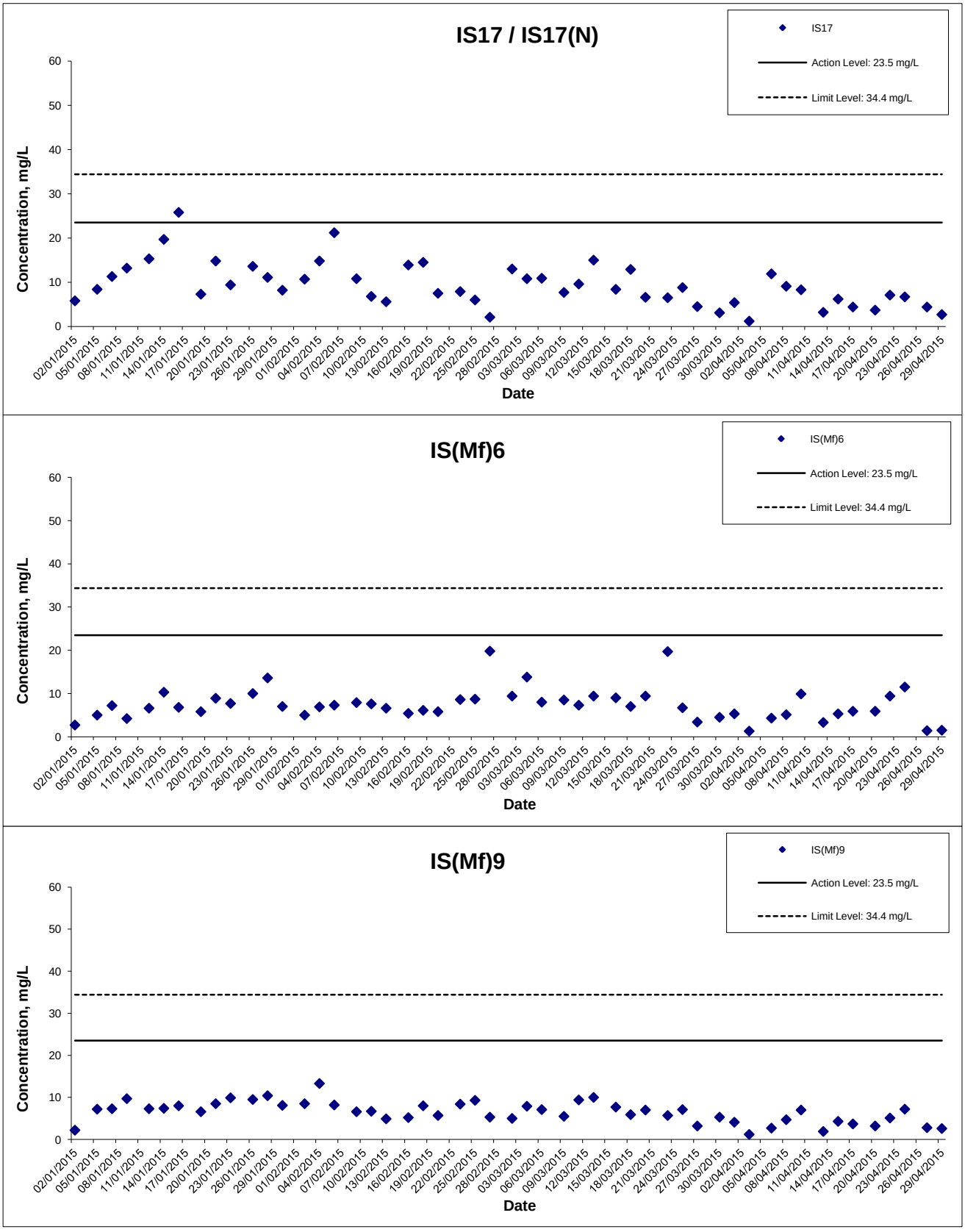
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

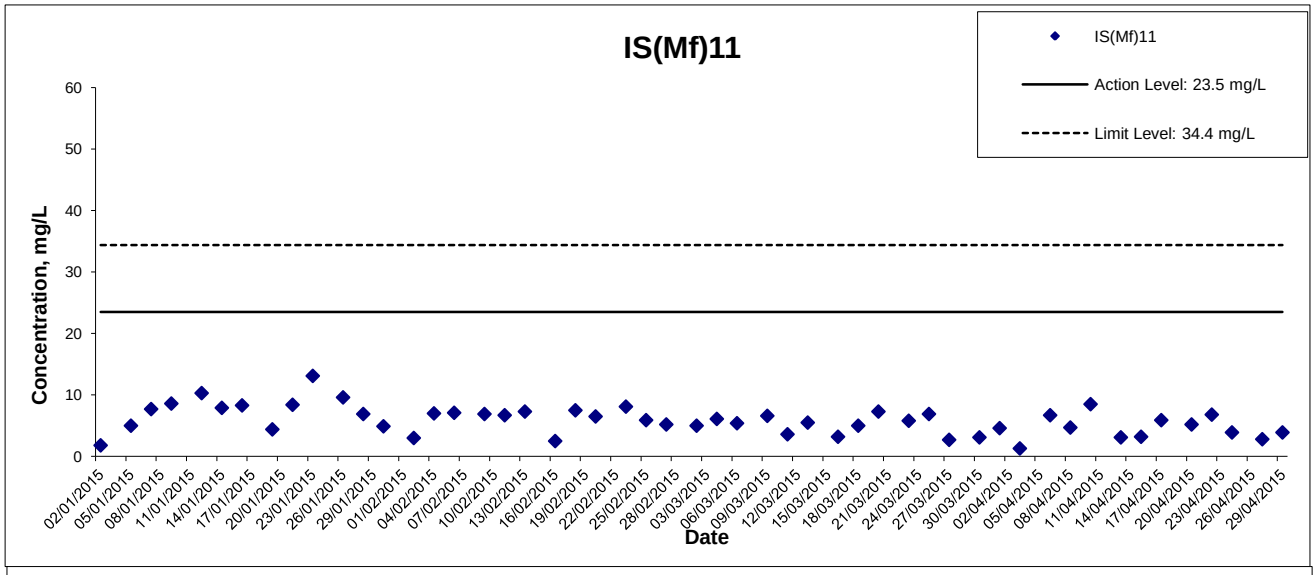
Appendix J

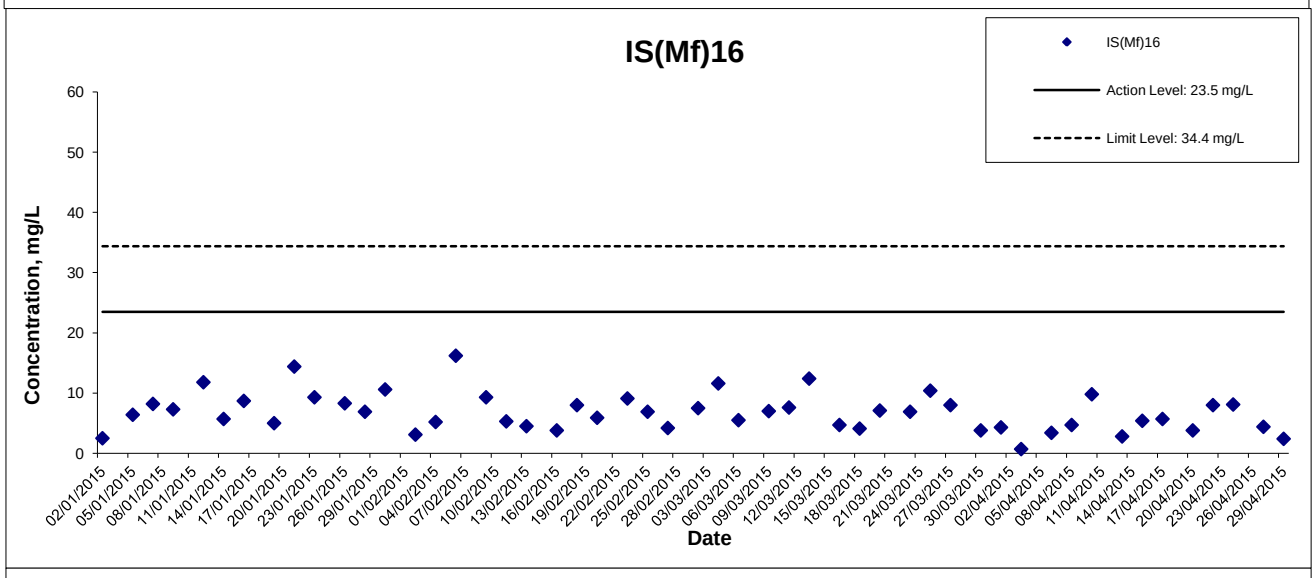
Suspended Solids at Mid-Ebb Tide

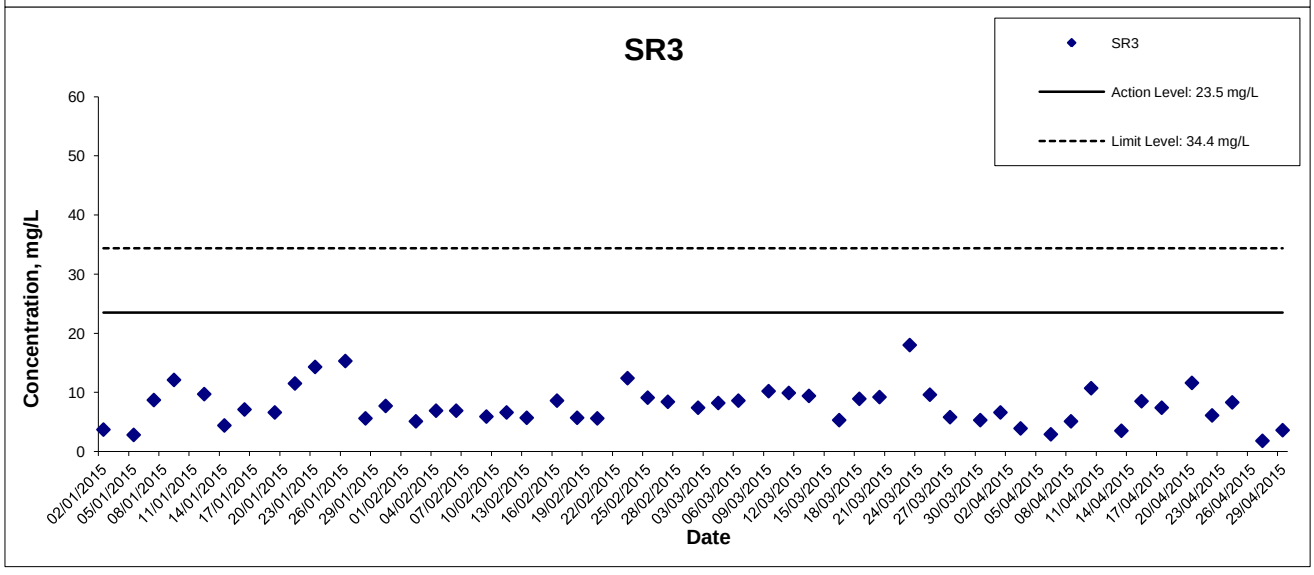


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Suspended Solids at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

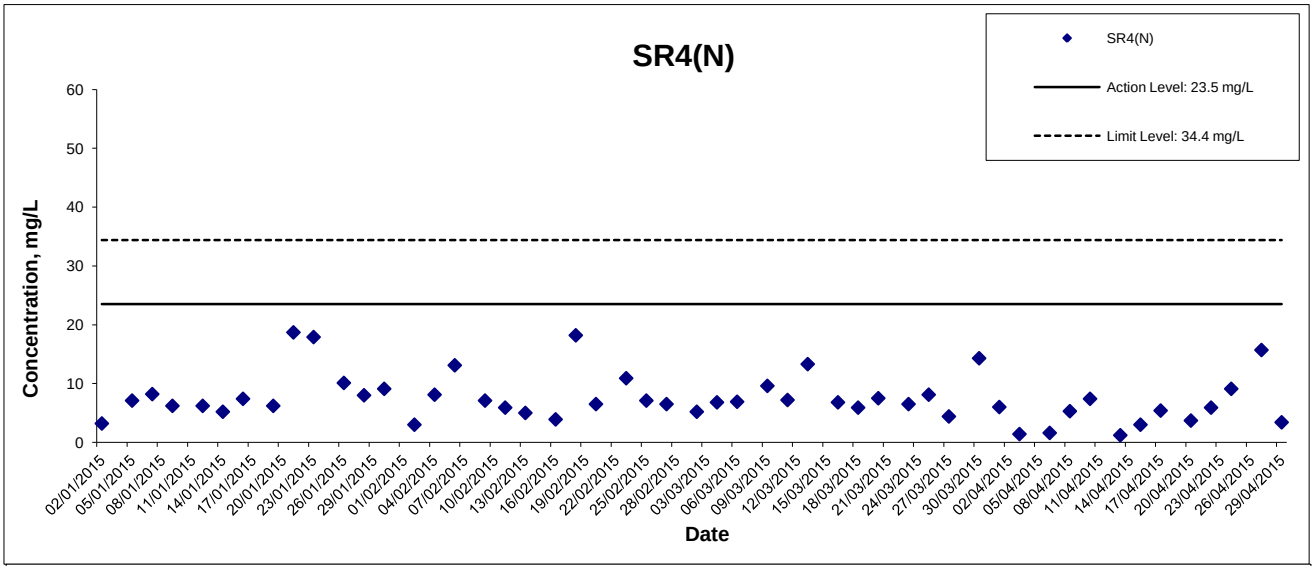
AECOM

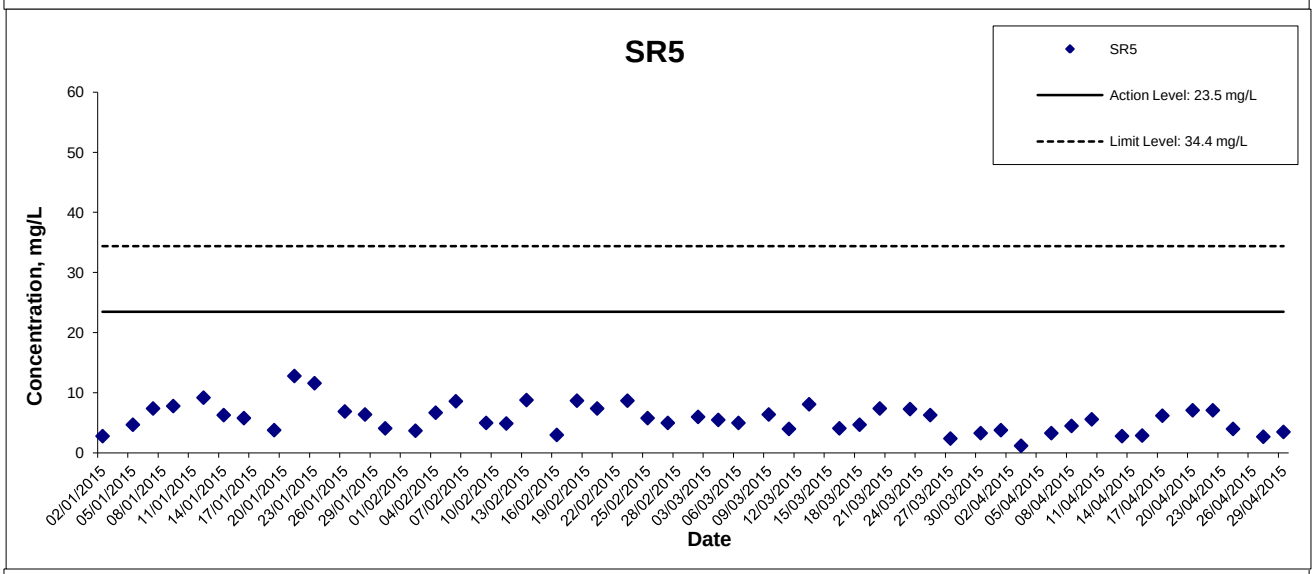
Graphical Presentation of Impact Water Quality Monitoring Results

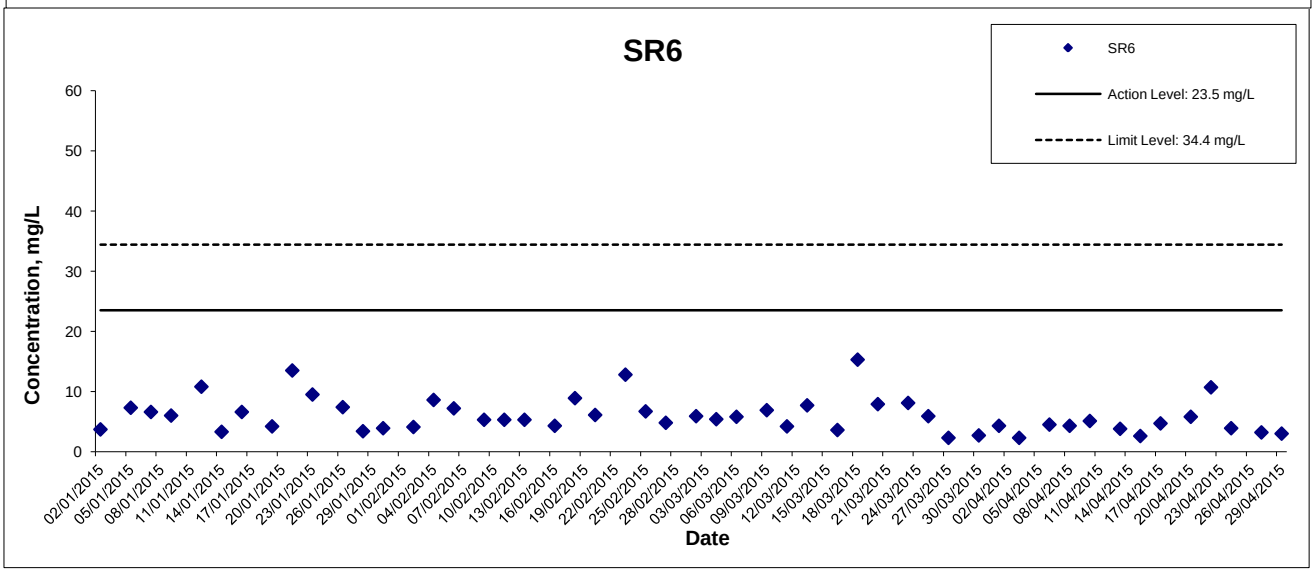
Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Ebb Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

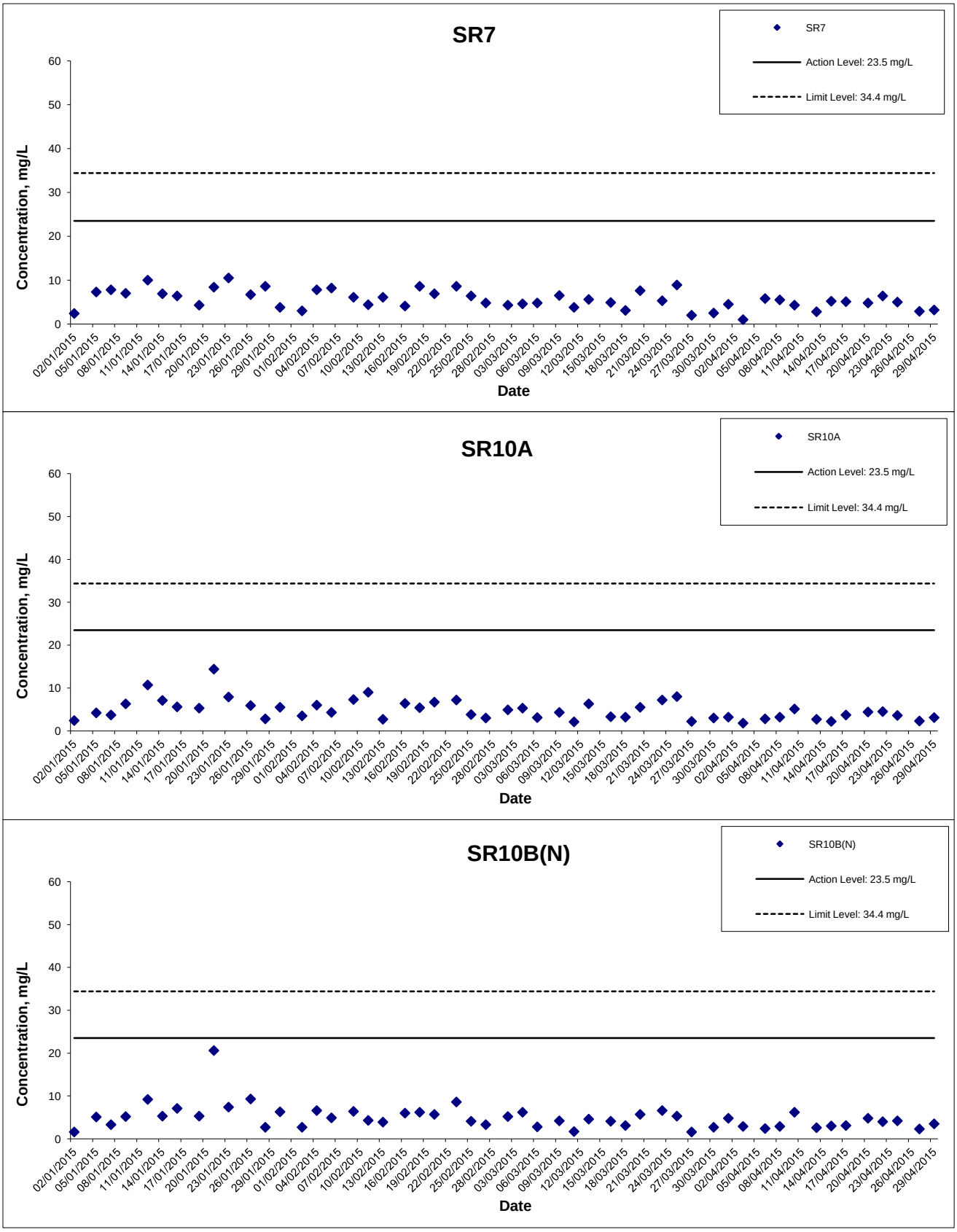
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Ebb Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

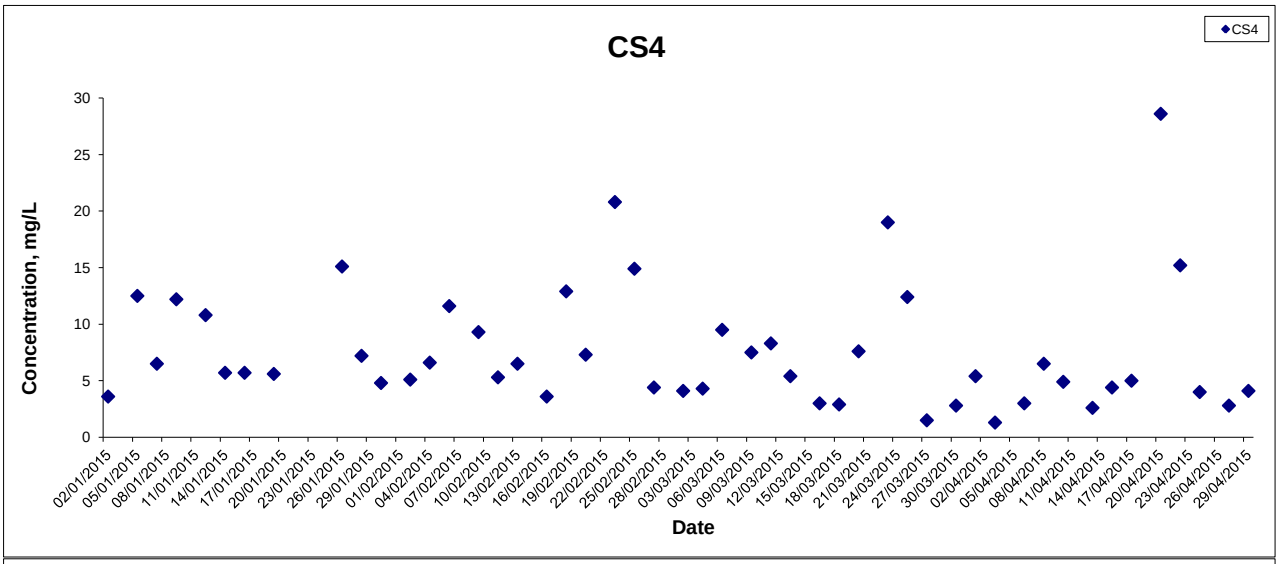
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

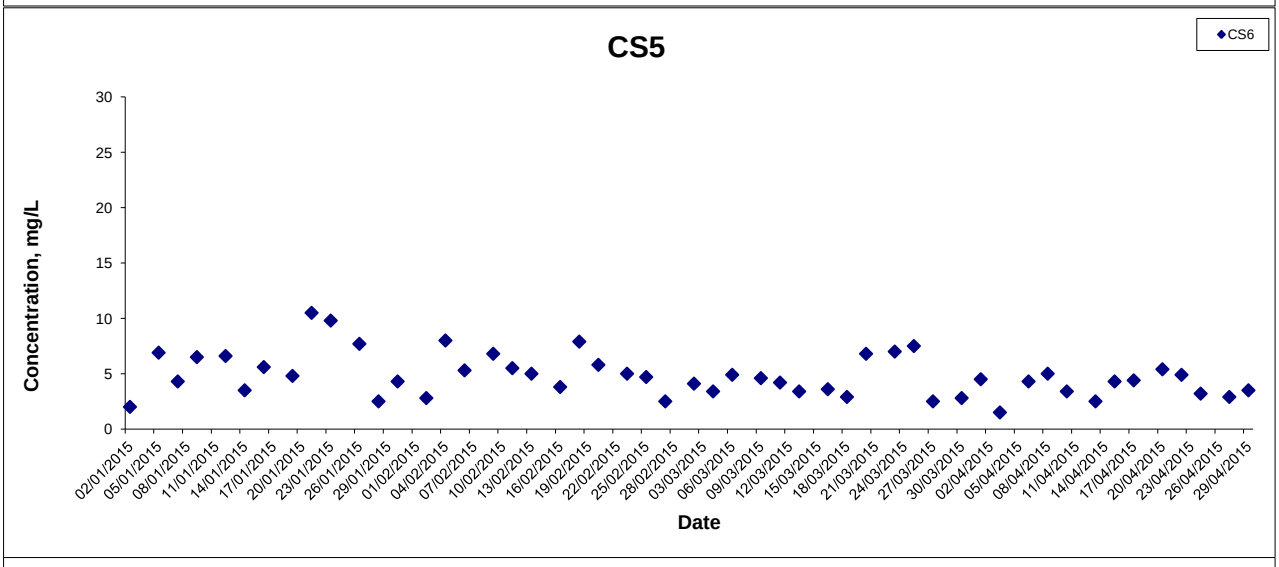
Graphical Presentation of Impact Water Quality Monitoring Results

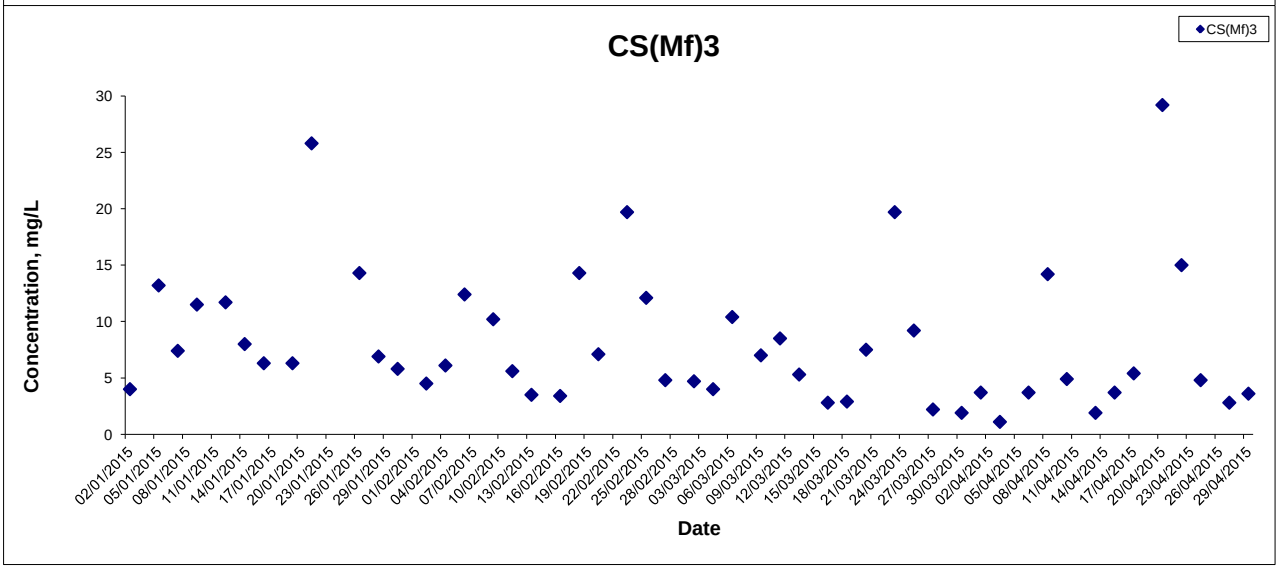
Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Flood Tide







This Drawing has been prepared for the use of AECOM's client. It Dec not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

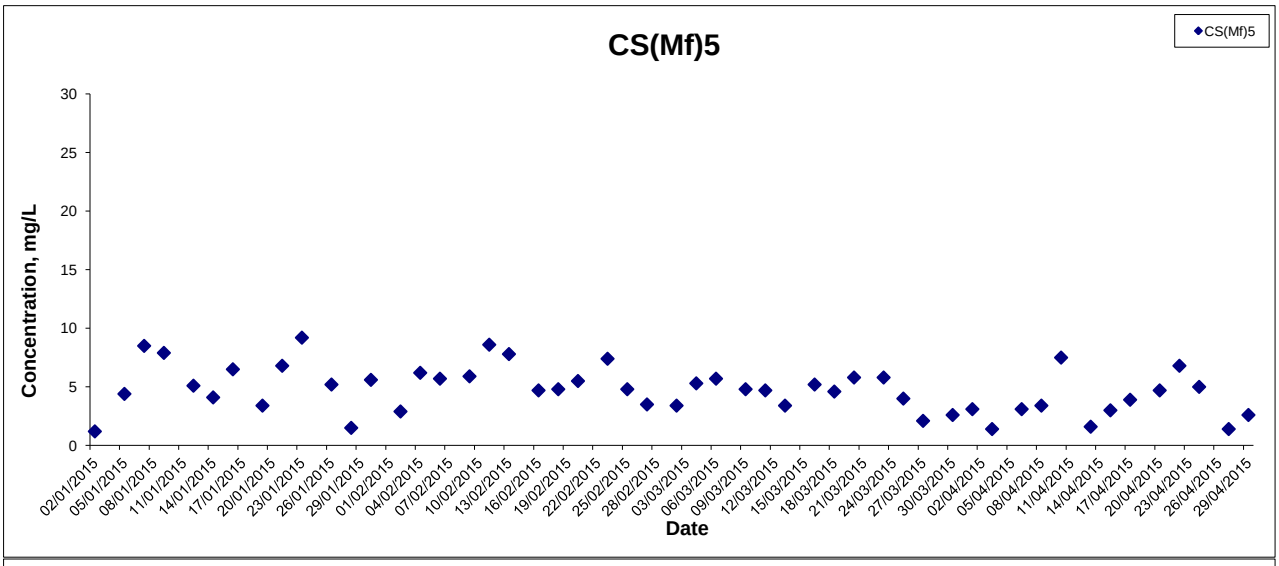
AECOM

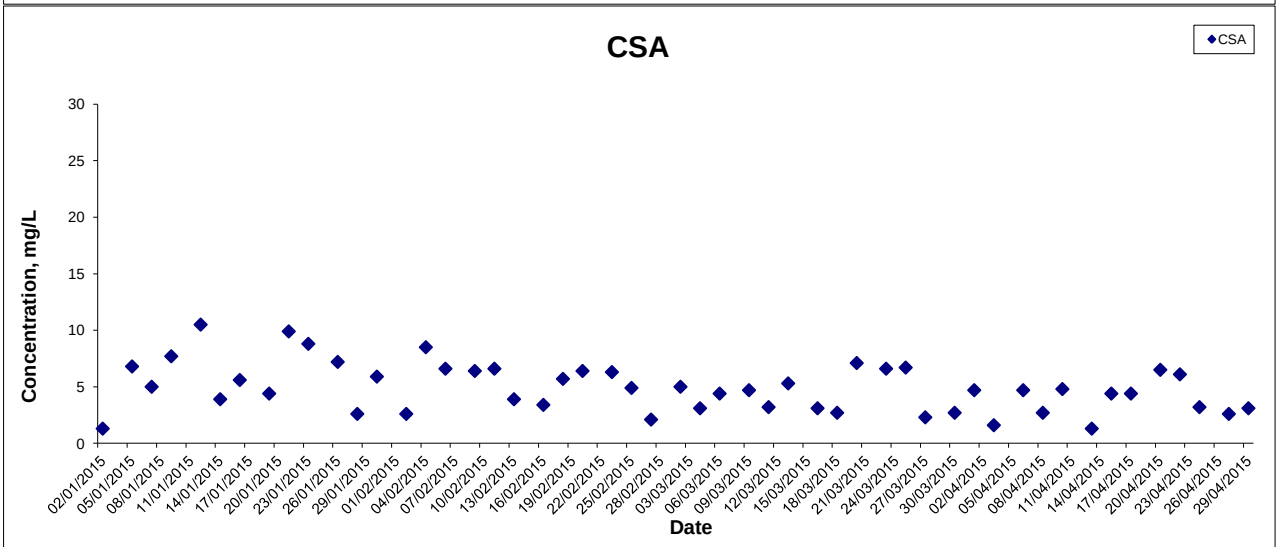
Graphical Presentation of Impact Water Quality Monitoring Results

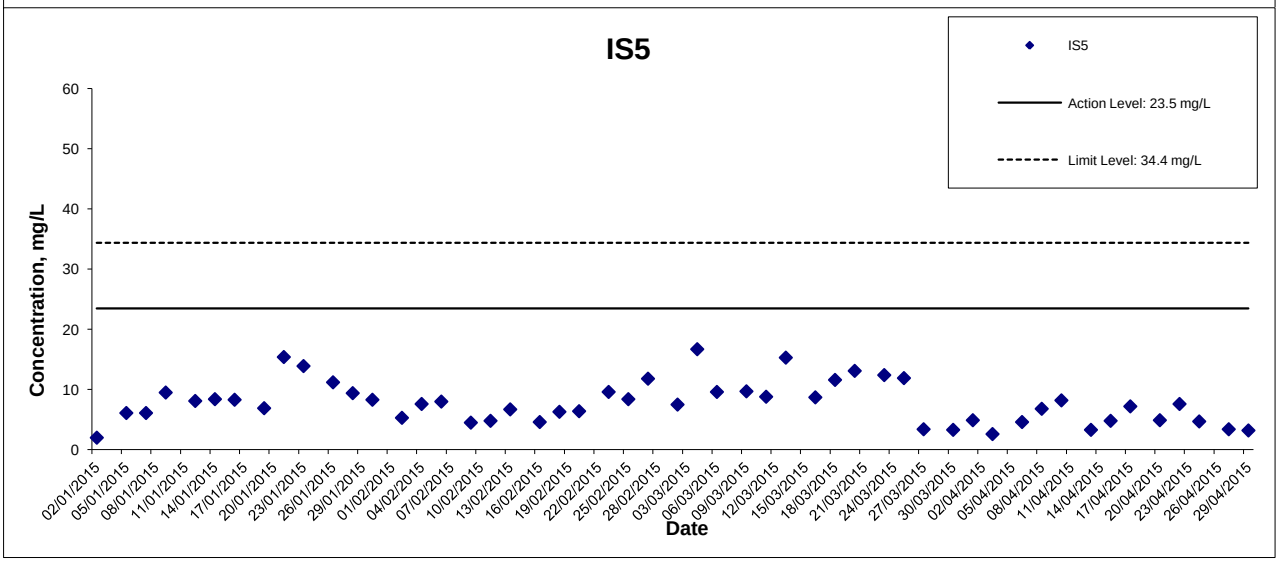
Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Flood Tide

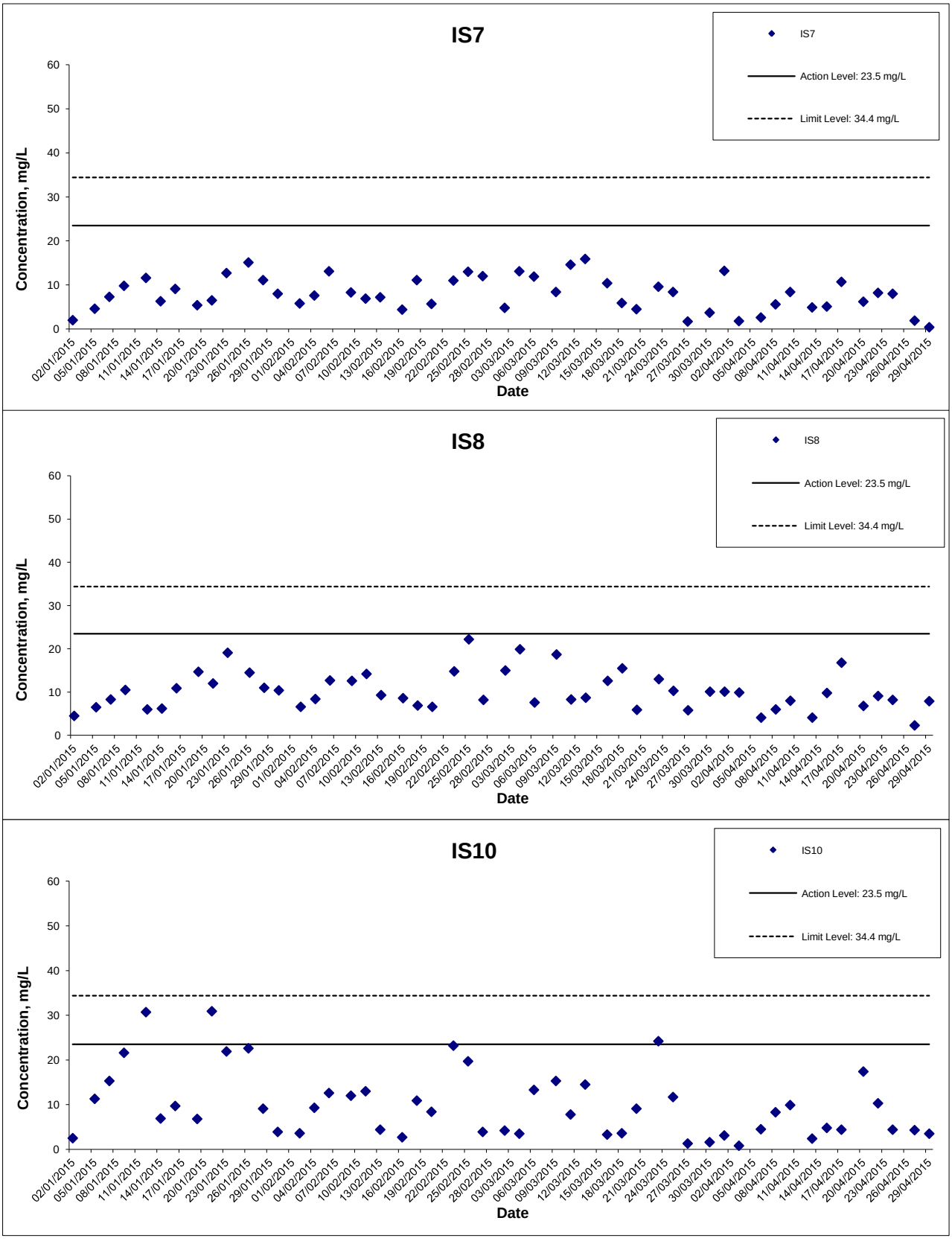






This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Suspended Solids at Mid-Flood Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

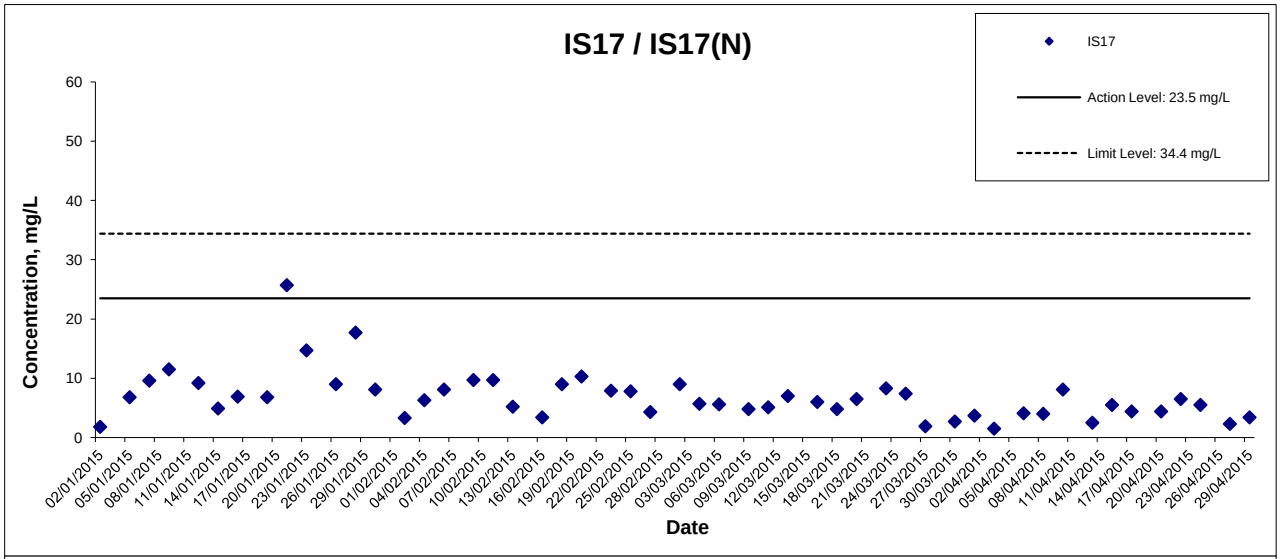
AECOM

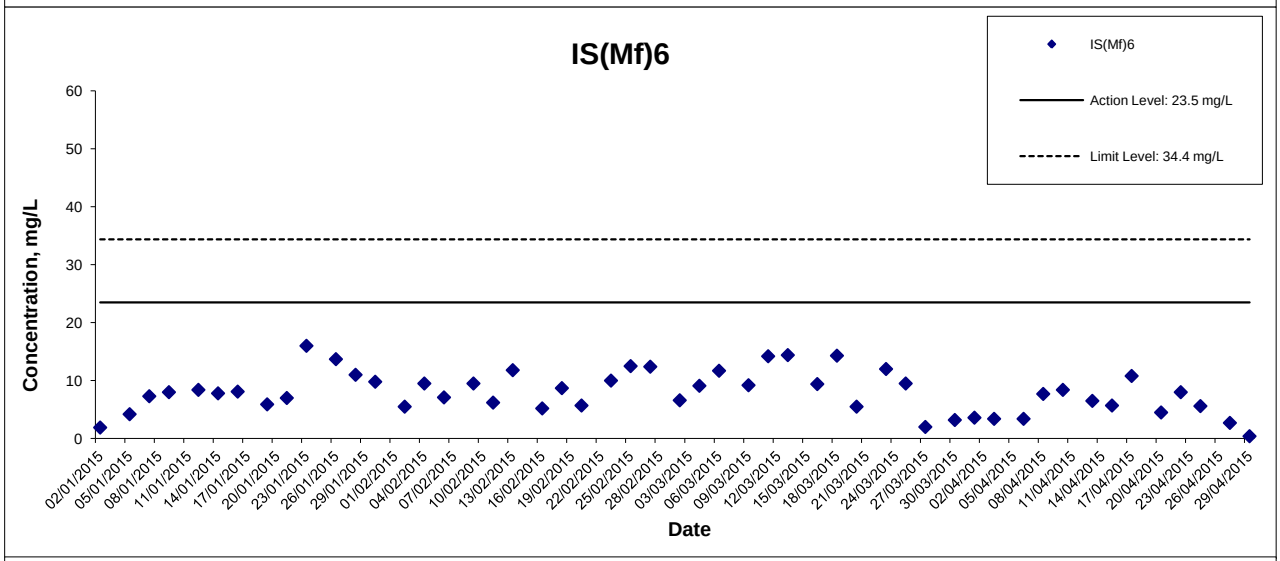
Graphical Presentation of Impact Water Quality Monitoring Results

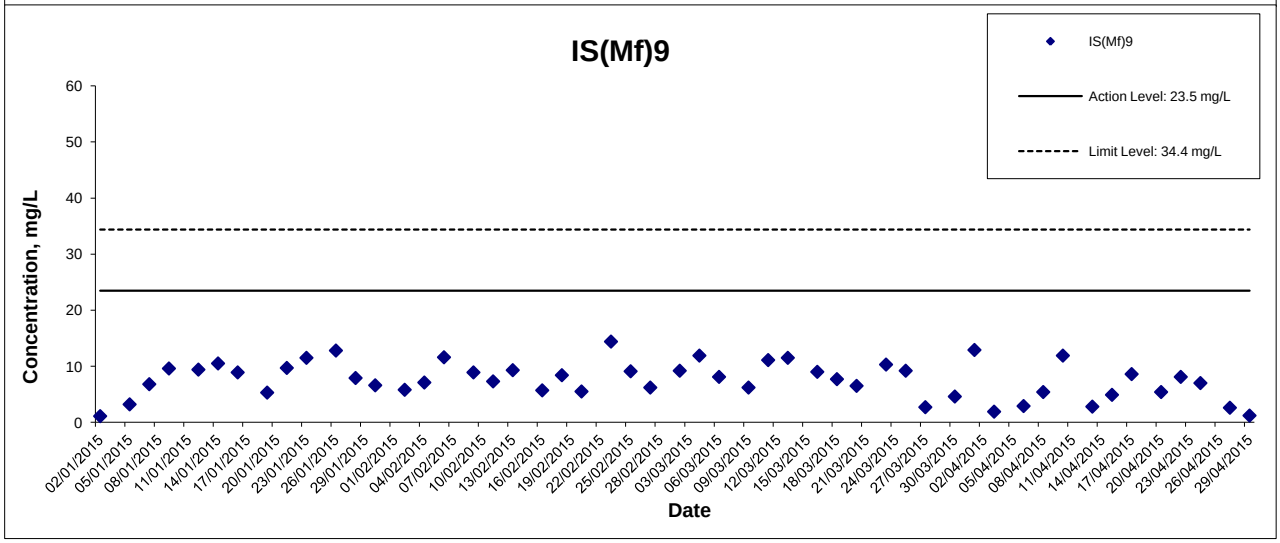
Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Flood Tide

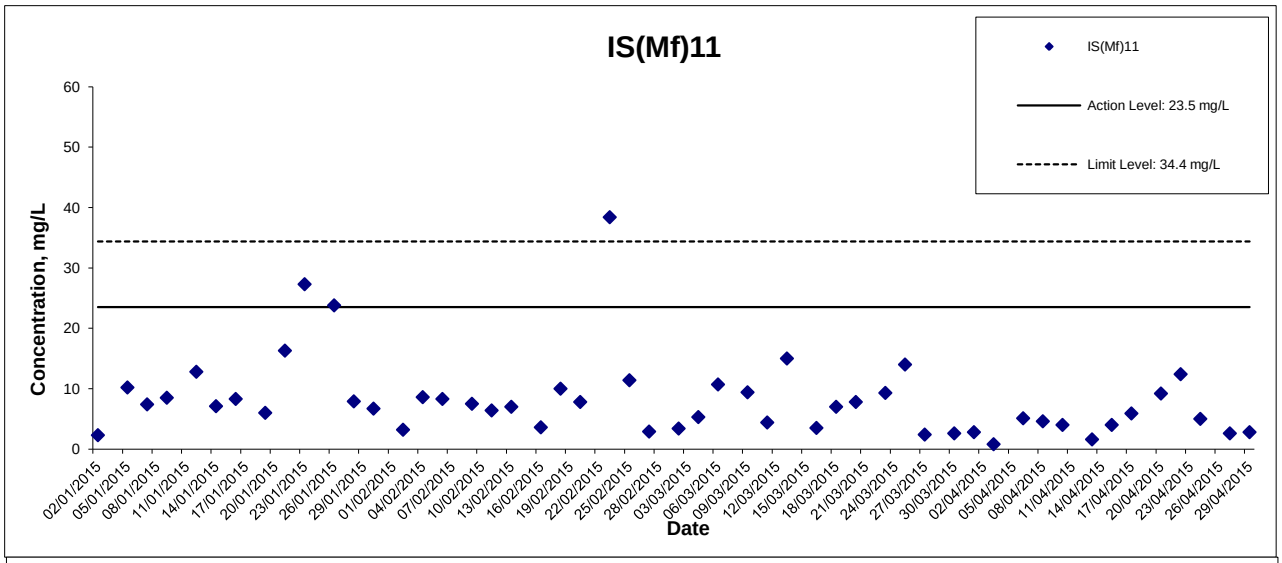


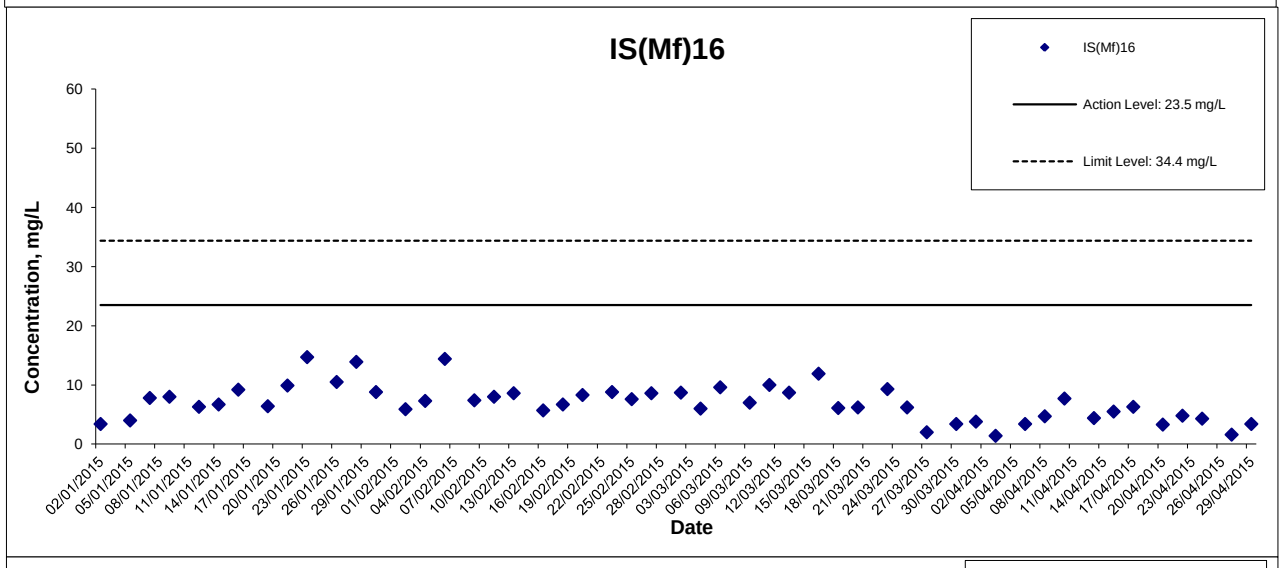


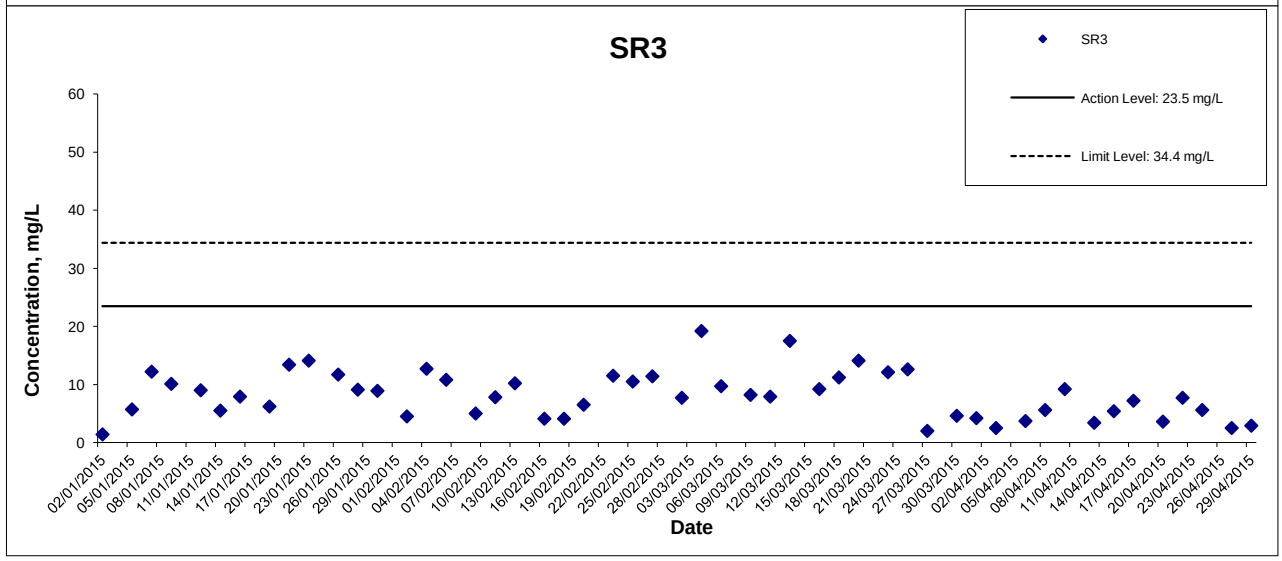


This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Suspended Solids at Mid-Flood Tide







This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

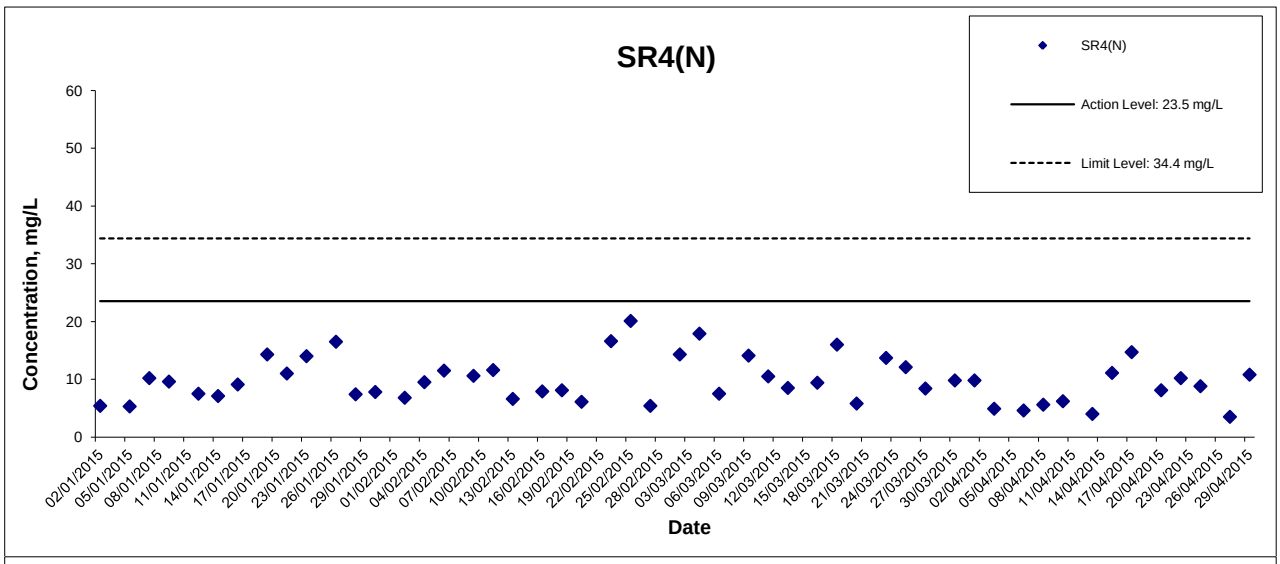
AECOM

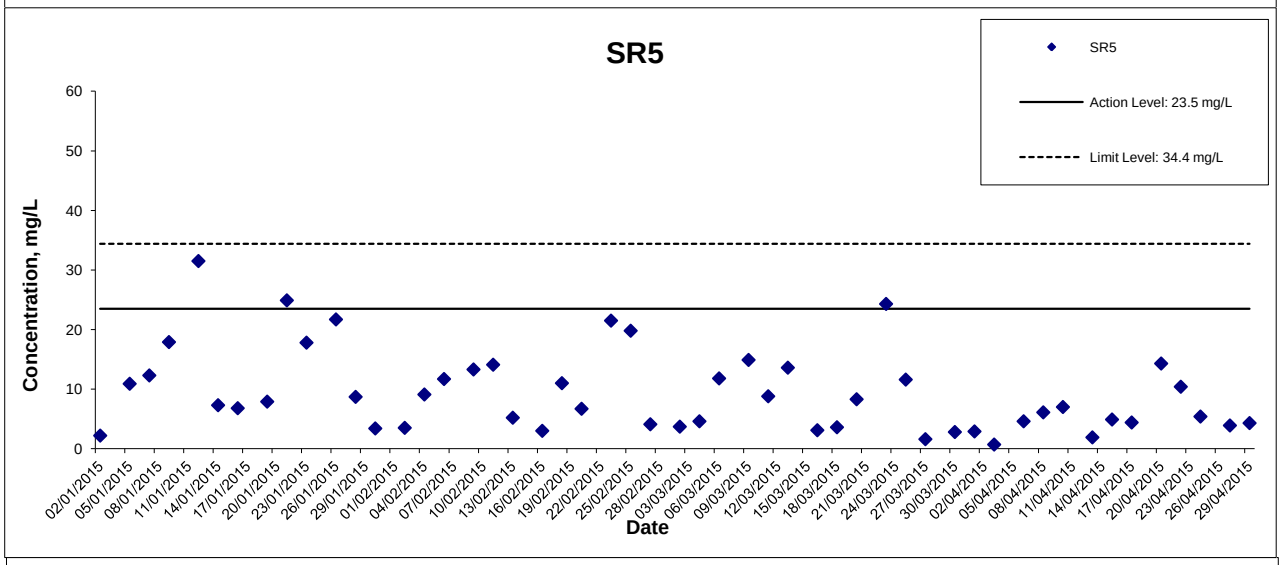
Graphical Presentation of Impact Water Quality Monitoring Results

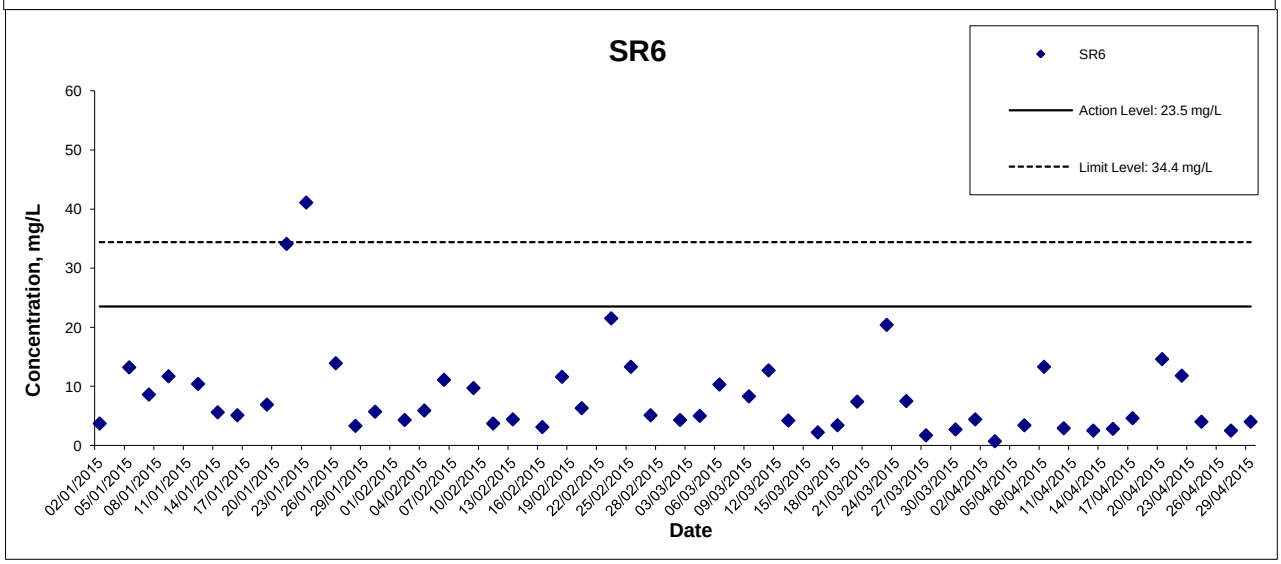
Project No.: 60249820 **Date: May 2015**

Appendix J

Suspended Solids at Mid-Flood Tide

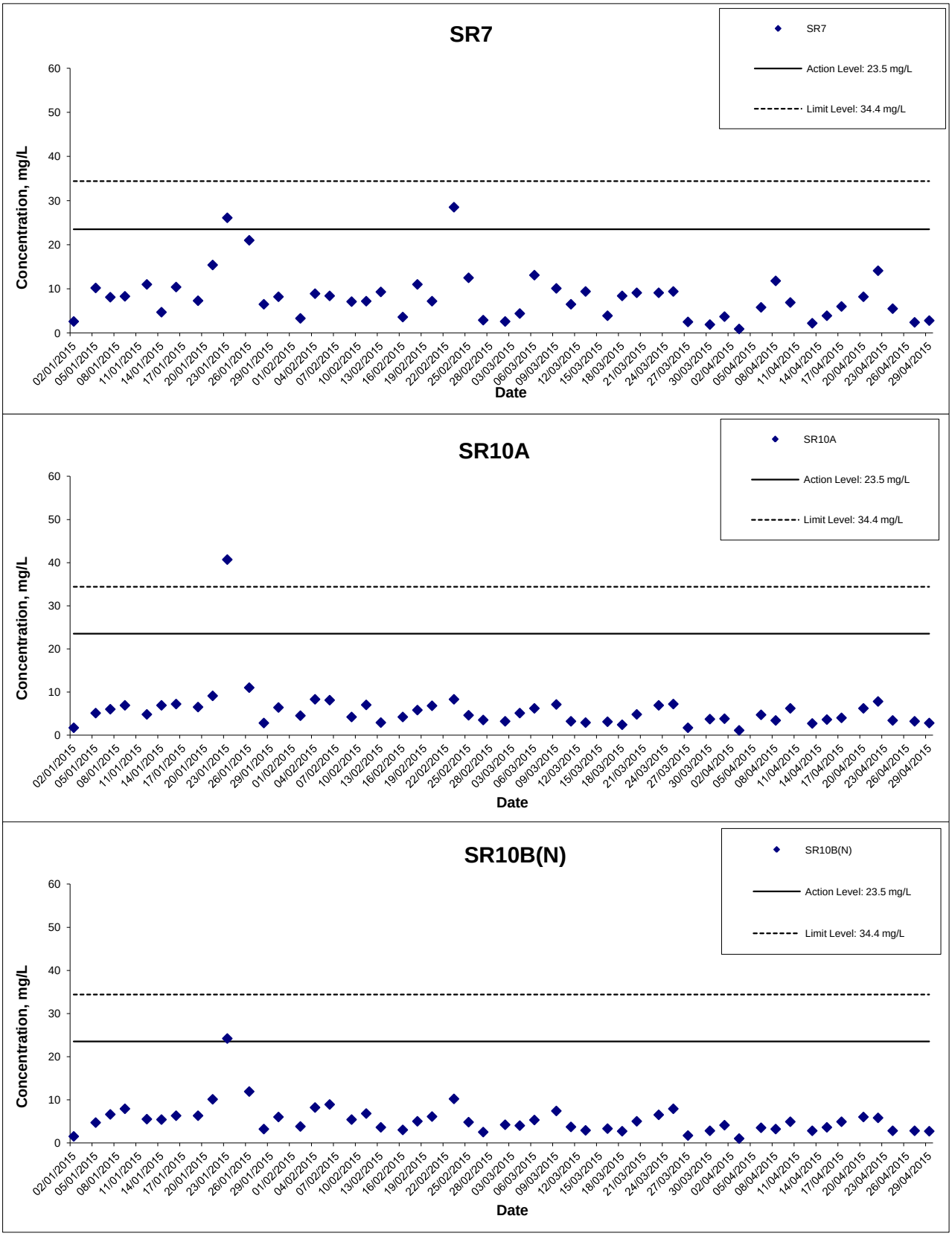






This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Suspended Solids at Mid-Flood Tide



This Drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent.

Appendix K Impact Dolphin Monitoring Survey Sighting Summary

Table 1 Impact Dolphin Monitoring Survey Sighting Table

Project	Contract	Date	Sighting No.	Time	Group Size	Area	Beaufort	PSD	Effort	Type	Northing	Easting	Season	Boat Association
HKBCF	HY/2010/02	20 April 2015	1097	13:00	5	NWL	1	524.8472	On	Impact	829206.1	806450.8	Spring	No
HKBCF	HY/2010/02	28 April 2015	1100	11:14	5	NWL	2	128.5751	On	Impact	830402.8	805505.9	Spring	No

KEY:

Sighting Opp Opportunistic
On On effort
PSD Perpendicular Sighting Distance
Group Size Represents best estimate for group encountered
NEL North East Lantau
NWL North West Lantau
PS = Purse Seine trawler (active)
HT = Hang Trawler (not active but sorting fish and cleaning nets)

Annex I

March 2015
Photo Identification Information

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 128		2015/01/03	1056	NWL
HZMB 127		2015/01/03	1056	NWL
HZMB 126		2015/02/23	1068	NWL
		2015/01/03	1054	NWL
HZMB 125		2014/10/13	1019	NWL
HZMB 124		2014/09/22	1005	NWL
HZMB 123		2014/08/25	998	NWL
HZMB 122		2014/08/04	989	NWL
HZMB 121		2014/07/14	968	NWL
HZMB 120		2014/05/31	951	NWL
HZMB 119		2014/04/19	940	NWL
HZMB 118		2014/01/06	890	NWL
HZMB 117		2014/06/17	964	NWL
		2014/01/06	888	NWL
HZMB 116		2014/08/25	999	NWL
HZMB 115		2014/07/14	972	NWL
		2014/07/14	971	NWL
		2013/12/26	879	NWL
		2013/12/26	879	NWL
HZMB 114		2013/10/24	827	NWL
HZMB 113		2013/10/24	827	NWL
HZMB 112		2013/10/15	815	NWL
HZMB 111		2013/10/15	815	NWL
HZMB 110		2013/10/15	812	NWL
HZMB 108		2013/08/30	780	NEL
HZMB 107		2014/10/13	1019	NWL
HZMB 106		2013/08/21	770	NWL
		2013/08/21	769	NWL
HZMB 105		2014/05/31	951	NWL
		2013/07/08	711	NWL
HZMB 104		2013/07/08	711	NWL
HZMB 103		2013/07/08	711	NWL
HZMB 102		2013/07/08	706	NWL
HZMB 101		2013/07/08	706	NWL
HZMB 100		2013/07/08	706	NWL
HZMB 099		2013/06/13	681	NWL
		2013/06/13	680	NWL
HZMB 098	NL104	2015/02/23	1077	NWL
		2014/12/18	1044	NWL

		2014/08/04	992	NWL
		2014/01/06	888	NWL
		2013/11/02	849	NWL
		2013/11/02	845	NWL
		2013/10/24	831	NWL
		2013/07/08	711	NWL
		2013/05/24	659	NWL
HZMB 097		2013/05/09	647	NWL
HZMB 096		2013/04/01	621	NWL
HZMB 095		2013/08/30	780	NEL
		2013/06/25	697	NWL
		2013/06/13	682	NWL
		2013/04/01	621	NWL
HZMB 094		2014/10/13	1019	NWL
		2014/05/31	954	NWL
		2014/02/17	910	NWL
		2013/06/26	703	NWL
		2013/06/25	698	NWL
		2013/03/18	601	NWL
HZMB 093		2013/05/24	657	NWL
		2013/02/21	587	NWL
HZMB 092		2013/02/21	589	NWL
		2013/02/15	581	NWL
HZMB 091		2013/02/15	579	NWL
HZMB 090		2013/06/25	697	NWL
		2013/06/13	682	NWL
		2013/02/15	579	NWL
HZMB 089		2013/02/15	579	NWL
HZMB 088		2013/02/15	579	NWL
HZMB 087		2013/02/15	579	NWL
HZMB 086	NL242	2015/03/19	1086	NWL
		2013/05/09	642	NWL
		2013/02/15	579	NWL
		2011/10/10	Baseline	NWL
HZMB 085		2014/10/13	1019	NWL
		2014/05/31	954	NWL
HZMB 084		2013/06/26	703	NWL
		2013/02/15	579	NWL
		2013/02/14	575	NWL
HZMB 083	NL136	2013/12/19	863	NWL
		2013/03/28	607	NWL
		2013/02/15	579	NWL

		2013/01/28	568	NWL
		2012/01/28	564	NWL
HZMB 082		2014/10/20	1024	NWL
		2013/02/21	587	NWL
		2013/02/15	579	NWL
		2013/01/28	563	NWL
HZMB 081		2013/01/28	559	NWL
		2013/01/28	557	NWL
HZMB 080		2013/01/28	556	NWL
HZMB 079		2013/01/28	556	NWL
HZMB 078		2013/02/15	579	NWL
		2013/01/08	552	NWL
HZMB 077		2013/12/26	878	NWL
		2013/07/08	706	NWL
		2012/12/11	541	NWL
HZMB 076		2013/07/08	706	NWL
		2012/12/11	541	NWL
HZMB 075		2012/12/06	525	NEL
HZMB 074		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/21	594	NEL
		2012/12/10	529	NEL
		2012/12/06	525	NEL
HZMB 073		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/21	594	NEL
		2012/12/10	529	NEL
		2012/12/06	525	NEL
HZMB 072		2012/10/24	476	NWL
HZMB 071		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 070		2012/10/24	476	NWL
HZMB 069		2013/08/21	774	NWL
		2013/07/08	711	NWL
		2012/10/24	476	NWL
HZMB 068		2014/10/20	1025	NWL
		2013/11/01	839	NWL
		2012/10/24	476	NWL
HZMB 067		2012/10/24	475	NWL
HZMB 066	NL93	2013/01/28	559	NWL

		2012/12/11	537	NWL
		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 064		2015/03/19	1086	NWL
		2014/06/17	964	NWL
		2013/05/09	647	NWL
		2013/01/28	561	NWL
		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 063		2013/05/09	647	NWL
		2012/10/12	466	NWL
HZMB 062		2012/12/06	525	NEL
		2012/10/11	457	NWL
HZMB 060		2012/09/18	447	NWL
HZMB 059		2013/02/21	591	NWL
		2012/09/18	445	NWL
HZMB 057		2012/09/18	440	NWL
HZMB 056		2012/09/18	442	NWL
		2012/09/05	433	NEL
HZMB 055		2012/09/04	425	NWL
HZMB 054	CH34	2015/01/15	1062	NWL
		2014/05/31	953	NWL
		2014/01/06	888	NWL
		2013/11/07	854	NWL
		2013/11/02	845	NWL
		2013/10/24	831	NWL
		2013/08/30	780	NEL
		2013/07/08	711	NWL
		2013/09/18	448	NWL
		2012/09/05	432	NEL
		2011/11/07	Baseline	NWL
		2011/11/05	Baseline	NWL
		2011/11/02	Baseline	NWL
		2011/11/01	Baseline	NEL
		2011/11/01	Baseline	NEL
		2011/10/28	Baseline	NWL
		2011/10/06	Baseline	NWL
HZMB 053		2012/09/04	425	NWL
HZMB 052		2012/09/04	423	NWL
HZMB 051	NL213	2014/08/04	989	NWL
		2013/05/09	644	NWL
		2013/04/01	622	NWL

		2013/02/15	582	NWL
		2013/02/15	581	NWL
		2013/01/28	559	NWL
		2013/01/28	556	NWL
		2012/09/04	422	NWL
HZMB 050		2014/07/14	971	NWL
		2014/01/10	900	NWL
		2014/01/06	888	NWL
		2013/02/15	579	NWL
		2012/09/04	421	NWL
HZMB 049		2014/07/29	982	NWL
		2012/09/03	419	NWL
HZMB 048		2012/09/03	419	NWL
HZMB 047		2012/09/03	412	NWL
HZMB 046		2012/09/03	412	NWL
HZMB 045		2014/02/17	910	NWL
		2013/06/13	682	NWL
		2013/02/15	579	NWL
		2012/11/01	495	NWL
HZMB 044	NL98	2014/10/13	1019	NWL
		2014/02/17	910	NWL
		2013/12/19	864	NWL
		2013/11/02	845	NWL
		2013/11/01	842	NWL
		2013/10/15	819	NWL
		2013/05/09	648	NWL
		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/15	579	NWL
		2012/11/01	495	NWL
HZMB 043		2012/09/03	407	NWL
HZMB 042	NL260	2013/12/19	863	NWL
		2012/11/01	495	NWL
		2011/11/07	Baseline	NWL
HZMB 041	NL24	2014/06/05	960	NEL
		2014/02/17	910	NWL
		2013/11/02	845	NWL
		2013/05/09	648	NWL
		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL

		2013/02/15	579	NWL
		2012/11/01	495	NWL
		2011/11/06	Baseline	NEL
		2011/11/05	Baseline	NWL
		2011/11/05	Baseline	NWL
		2011/10/10	Baseline	NWL
HZMB 040		2014/02/17	910	NWL
		2014/01/06	893	NWL
		2013/10/15	821	NWL
		2013/07/08	714	NWL
		2013/07/08	711	NWL
		2013/02/21	589	NWL
		2012/11/01	493	NWL
HZMB 038		2012/11/01	490	NWL
HZMB 037		2012/11/01	490	NWL
HZMB 036		2012/09/03	407	NWL
		2012/11/01	490	NWL
HZMB 035		2013/02/15	579	NWL
		2012/11/01	490	NWL
HZMB 034		2012/11/01	493	NWL
HZMB 028		2014/11/17	1035	NWL
		2013/04/01	625	NWL
		2012/08/06	373	NWL
HZMB 027		2013/12/19	863	NWL
		2013/02/15	579	NWL
		2013/01/28	568	NWL
		2013/01/28	564	NWL
		2012/06/14	299	NWL
HZMB 026		2014/10/13	1018	NWL
		2013/06/25	697	NWL
		2013/05/09	642	NWL
		2013/01/28	561	NWL
		2012/06/13	295	NEL
HZMB 025		2013/02/22	596	NEL
		2013/02/21	591	NWL
		2012/12/06	525	NEL
		2012/10/11	457	NWL
		2012/06/13	295	NEL
HZMB 024		2013/03/18	601	NWL
		2012/06/13	295	NEL
HZMB 023		2014/12/18	1044	NWL
		2014/11/17	1035	NWL

		2014/01/06	888	NWL
		2013/07/08	715	NWL
		2013/07/08	711	NWL
		2013/04/01	619	NWL
		2013/02/21	589	NWL
		2013/02/15	579	NWL
		2012/07/10	330	NWL
HZMB 022		2014/12/18	1044	NWL
		2014/11/17	1035	NWL
		2014/08/04	991	NWL
		2014/01/06	888	NWL
		2013/10/24	827	NWL
		2013/07/08	715	NWL
		2013/07/08	711	NWL
		2013/04/01	619	NWL
		2013/02/21	589	NWL
		2013/02/15	579	NWL
		2012/07/10	330	NWL
HZMB 021	NL37	2012/07/10	330	NWL
		2011/09/16	Baseline	NWL
HZMB 020		2012/07/10	330	NWL
HZMB 019		2012/07/10	330	NWL
HZMB 018		2014/02/17	910	NWL
		2013/05/09	647	NWL
		2013/02/21	594	NEL
		2012/12/10	529	NEL
		2012/07/10	330	NWL
HZMB 017		2012/07/10	330	NWL
HZMB 016		2013/07/08	706	NWL
		2012/12/11	539	NWL
		2012/09/18	446	NWL
		2012/09/04	421	NWL
		2012/07/10	330	NWL
HZMB 015		2012/07/10	330	NEL
HZMB 014	NL176	2013/12/26	880	NWL
		2012/08/06	373	NWL
		2012/06/13	295	NEL
		2011/11/06	Baseline	NEL
		2011/11/01	Baseline	NEL
		2011/11/01	Baseline	NEL
HZMB 013		2012/05/28	281	NWL
HZMB 012		2012/05/28	281	NWL

HZMB 011	EL01	2013/02/22	597	NEL
		2013/02/21	592	NEL
		2013/02/14	572	NEL
		2012/11/06	517	NEL
		2012/09/19	452	NWL
		2012/03/31	261	NEL
		2011/11/02	Baseline	NWL
		2011/11/01	Baseline	NEL
HZMB 009		2015/03/19	1084	NWL
		2012/05/28	281	NWL
HZMB 008		2012/05/28	281	NWL
HZMB 007	NL246	2012/12/10	529	NEL
HZMB 006		2013/02/21	594	NEL
		2012/12/11	539	NWL
		2012/11/01	495	NWL
		2012/03/29	250	NWL
HZMB 005		2015/02/09	1070	NWL
		2015/02/09	1069	NWL
		2013/11/09	860	NWL
		2013/11/07	858	NWL
		2013/10/15	813	NWL
		2012/12/10	532	NWL
		2012/08/06	374	NWL
		2012/05/28	287	NWL
HZMB 004		2012/09/04	421	NWL
		2012/03/31	262	NWL
HZMB 003	NL179	2013/10/15	812	NWL
		2013/06/25	697	NWL
		2012/12/10	529	NEL
		2012/03/31	261	NWL
		2011/11/06	Baseline	NEL
		2011/09/16	Baseline	NWL
HZMB 002	WL111	2014/05/31	951	NWL
		2013/12/26	878	NWL
		2013/12/19	863	NWL
		2013/11/01	839	NWL
		2013/10/15	819	NWL
		2013/09/24	798	NWL
		2013/02/14	573	NWL
		2012/12/11	536	NWL
		2012/12/11	535	NWL
		2012/10/12	466	NWL

		2012/10/24	475	NWL
		2012/05/28	281	NWL
		2012/03/29	250	NWL
HZMB 001	WL46	2014/08/25	997	NWL
		2013/08/21	771	NWL
		2013/06/13	681	NWL
		2013/04/01	617	NWL
		2013/02/14	573	NWL
		2012/03/29	250	NWL
	CH98	2011/11/02	Baseline	NWL
	NL11	2011/11/02	Baseline	NWL
		2011/11/07	Baseline	NWL
	NL12	2011/11/02	Baseline	NWL
	NL33	2011/09/23	Baseline	NWL
		2011/11/01	Baseline	NEL
		2011/11/05	Baseline	NWL
		2011/11/07	Baseline	NWL
	NL37	2011/09/16	Baseline	NWL
	NL46	2011/10/28	Baseline	NWL

HZMB 009 2015-03-19-09-35-46_01 MED

HZMB 064 2015-03-19-11-32-03_01 MED

HZMB 086 2015-03-19-11-35-09_01 MED

Appendix L – Event Action Plan

Event / Action Plan for Air Quality

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit Level				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Construction Noise

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action Level	1. Notify IEC and Contractor; 2. Identify source, investigate the causes of exceedance and propose remedial measures; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER, EPD and Contractor; 2. Identify source; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Water Quality

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action level being exceeded by one sampling day	1. Repeat *in situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and ER; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Repeat measurement on next day of exceedance to confirm findings.	1. Check monitoring data submitted by ET and Contractor's working methods; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of non-compliance in writing; 2. Discuss with IEC on the proposed mitigation measures; 3. Make agreement on mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER; 5. Implement the agreed mitigation measures. 6. Amend working methods if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action level being exceeded by two or more consecutive sampling days	1. Repeat *in situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and ER; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Action level; 8. Repeat measurement on next day of exceedance to confirm findings.	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of non-compliance in writing; 2. Discuss with IEC on the proposed mitigation measures; 3. Make agreement on mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER within 3 working days of notification; 5. Implement the agreed mitigation measures; 6. Amend working methods if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit level being exceeded by one sampling day	1. Repeat *in-situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level.	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to critically review the working methods; 4. Ensure mitigation measures are properly implemented; 5. Assess the effectiveness of the implemented mitigation measures.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER; 5. Implement the agreed mitigation measures; 6. Amend working methods if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit level being exceeded by two or more consecutive sampling days	1. Repeat *in-situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to critically review the working methods; 4. Make agreement on the mitigation measures to be implemented; 5. Ensure mitigation measures are properly implemented; 6. Assess the effectiveness of the implemented mitigation measures; 7. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Take immediate action to avoid further exceedance; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER; 6. Implement the agreed mitigation measures; 7. Resubmit proposals of mitigation measures if problem still not under control; 8. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Event / Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	ER / SOR	Contractor
Action Level	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor; 5. Check monitoring data. 6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and finding with the ET and the Contractor.	1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented.	1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR; 3. Implement the agreed measures.
Limit Level	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor of findings; 5. Check monitoring data;	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor; 3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures. 4. Review proposals for additional monitoring and any other mitigation measures submitted	1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures. 2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any other mitigation measures.	1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures. 3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary. 4. Implement the agreed additional dolphin monitoring

	6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary. 7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.	by ET and Contractor and advise ER/SOR of the results and findings accordingly. 5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.	3. Supervise the implementation of additional monitoring and/or any other mitigation measures.	and/or any other mitigation measures.

China Harbour Engineering Company Limited

Monthly Summary Waste Flow Table for April / 2015 (year)

Project : Hong Kong – Zhuhai – Macao Bridge, Hong Kong Boundary Crossing Facilities – Reclamation Works Contract No.: HY/2010/02

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste (see Note 4)	Others, e.g. general refuse (see Note 3)
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan-15	0.0000	0.0000	0.0000	0.0000	0.0000	1774.7845	0.0000	0.4200	4.0000	2.4000	0.0455
Feb-15	0.0000	0.0000	0.0000	0.0000	0.0000	1120.6675	0.0000	0.1400	0.0000	0.0000	0.0390
Mar-15	0.0000	0.0000	0.0000	0.0000	0.0000	390.8735	0.0040	0.3340	0.0020	0.0000	0.0390
Apr-15	0.0000	0.0000	0.0000	0.0000	0.0000	251.3183	0.0000	0.1400	0.0000	0.0000	0.0390
May-15											
Jun-15											
Sub-total	0.0000	0.0000	0.0000	0.0000	0.0000	3537.6438	0.0040	1.0340	4.0020	2.4000	0.1625
Jul-15											
Aug-15											
Sep-15											
Oct-15											
Nov-15											
Dec-15											
Total	0.0000	0.0000	0.0000	0.0000	0.0000	3537.6438	0.0040	1.0340	4.0020	2.4000	0.1625

Notes: (1) Broken concrete for recycling into aggregates.

(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.

(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

(4) Chemical waste refer to spent “battery” and “oil with water”.

Appendix N
Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics on Exceedances

		Total no. recorded in this month	Total no. recorded since project commencement
1-Hour TSP	Action	-	-
	Limit	-	-
24-Hour TSP	Action	-	-
	Limit	-	-
Noise	Action	-	-
	Limit	-	-
Water Quality	Action	-	2
	Limit	-	3
Dolphin Monitoring	Action	-	-
	Limit	-	-

Remarks: Exceedances which are not project-related are not presented in this table.

Cumulative statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. received in this month	Total no. received since project commencement
Environmental complaints	15 April 2015	Environmental Protection Department (EPD) referred a noise complaint to this project on 10 April 2015 and ENPO forwarded the noise complaint to Environmental Team on 15 April 2015. The complaint involves a complainant, who is resident of Caribbean Coast, Tung Chung and he was disturbed by noise from construction activities of the	Closed	1	29

		HZMB Project during weekends and holidays. After investigation, there is no adequate information to conclude the observed noise nuisance is related to this Contract.			
Notification of summons	-	-	-	-	2
Successful Prosecutions	-	-	-	-	2