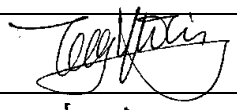
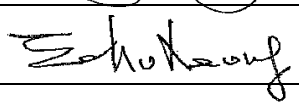
China Harbour Engineering Company Limited

Contract No. HY/2010/02

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

Monthly EM&A Report for April 2014

[05/2014]

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

Version:	Rev. 0	Date:	19 May 2014

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_1935L.14 19 May 2014

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 Mr. Marechal,

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
Hong Kong – Zhuhai – Macao Bridge
Hong Kong Boundary Crossing Facilities – Reclamation Work
Monthly Environmental Monitoring & Audit Report for April 2014

Reference is made to the Environmental Team's submission of the Monthly Environmental Monitoring & Audit Report for April 2014 (letter ref. 60249820/C/RMKY1414051903 dated 19 May 2014) copied to us by E-mail on 19 May 2014.

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/G and Condition 4.4 of EP-354/2009/B (for TM-CLKL Southern Landfall Reclamation only).

ET is again reminded to carefully review the material to be included in the EM&A reports and to ensure all information reported are true, valid and correct before sending to this office for review.

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)

T:\Projects\HYDHZMBEEM00\02_Proj_Mgt\02_Corr\HYDHZMBEEM00_0_1935L.14.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 06 August 2013 (EP-353/2009/G) and 28 January 2014 (EP-354/2009/B) (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 2014. As informed by the Contractor, major activities in the reporting period were:-

Marine-based Works

- Connecting arc cell installation
- Laying geo-textile
- Sand blanket laying
- Sand filling
- Maintenance of silt curtain & silt screen at sea water intake of HKIA
- Stone column installation
- Band drain installation
- Backfill cellular structure
- Geotechnical Instrumentation works
- Construction of temporary seawall
- Portion D Construction of Access to Portion A
- Surcharge laying
- Construction of temporary pier at Portion A
- Precast Yard setup
- Seawall blocks for temporary construction
- Vibro-compaction on surcharge
- Capping Beams structures
- Construction of Conveyors for public fill
- Temporary bridge at Portion D

Land-based Works

- Maintenance of Temporary Marine Access at Works Area WA2Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Geo-textile fabrication at Works Area WA2
- Installed sand bag at Works Area WA2
- 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	5 sessions
1-hour TSP monitoring	5 sessions
Noise monitoring	5 sessions
Impact water quality monitoring	13 sessions
Impact dolphin monitoring	2 surveys
Joint Environmental site inspection	4 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 period.

Breaches of Action and Limit Levels for Water Quality

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

Impact Dolphin Monitoring

A total of two sightings were made, both “opportunistic”. One sighting was made on the 14 April 2014 and one on the 19 April 2014. All sightings were made in NWL and sighting details are summarized and plotted in Appendix K and Figure 5c, respectively.

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

Complaint, Notification of Summons and Successful Prosecution

As informed by the Contractor on 7 May 14, a complaint was received by the Contractor on 17 April 14 concerning sand and dust emission from uncovered barges parking at the sea area off the Tuen Mun Ferry Pier. This complaint is under investigation and will be reported in the reporting month May 2014

As informed by the Contractor, further to the notification of summons received March 2014 due to works carried out on 6 October 13 contrary to conditions of NCO, Cap.400. The Contractor pledged guilty to the charge during the court appearance on 28 April 2014.

The Contractor has established noise control management system on restricted hour works, to prevent future violation of conditions of NCOs, Cap. 400, actions taken include:

- Nominate CNP Supervisors to daily check CNP compliance
- Setup a white board system to present the works, with locations & no. of machineries, needed to be carried out during restricted hours
- Erect CNP markers for demarcation on site
- Provide relevant training to staff

Regular site audit and inspection and monitoring records show no information of recurrence of non-compliance of conditions of NCOs, Cap. 400 in the reporting month.

No notification of summons 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.

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) and August 2013 (EP-353/2009/G). 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) and January 2014 (EP-354/2009/B).

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 6 August 2013 (EP-353/2009/G) and 28 January 2014 (EP-354/2009/B) (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 twenty-sixth 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 2014.

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-based Works

- Connecting arc cell installation
- Laying geo-textile
- Sand blanket laying
- Sand filling
- Maintenance of silt curtain & silt screen at sea water intake of HKIA
- Stone column installation
- Band drain installation
- Backfill cellular structure
- Geotechnical Instrumentation works
- Construction of temporary seawall
- Portion D Construction of Access to Portion A
- Surcharge laying
- Construction of temporary pier at Portion A
- Precast Yard setup
- Seawall blocks for temporary construction
- Vibro-compaction on surcharge
- Capping Beams structures

- Construction of Conveyors for public fill
- Temporary bridge at Portion D

Land-based Works

- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Geo-textile fabrication at Works Area WA2
- Installed sand bag at Works Area WA2
- 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 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.

2.3.3 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
AMS7	Hong Kong SkyCity Marriott Hotel	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 2014 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	77 – 87	374	500
AMS3B	81	77 – 84	368	500
AMS7	81	76 – 86	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	51	29 – 89	176	260
AMS3B	64	32 – 93	167	260
AMS7	67	36 – 86	183	260

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

2.7.3 The event action plan is annexed in Appendix L.

2.7.4 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

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 NMS3A were free field measurements in the reporting month at NMS3A. 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 2014 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	66	65 – 68*	75
NMS3B	67	64 – 70*>	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.
> The measured noise level on 16 April 2014 exceeded the noise level of 65dB(A) during examination period on 16 April 2014 but it is lower than the baseline level. Therefore, baseline correction was carried out and the corrected noise level which solely represent the noise level of Construction works is 63 dB(A) which is lower than the exceedance level of 65dB(A) . As such the EAP was not triggered.

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
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 2014 is provided in Appendix F.

4.7 Results and Observations

4.7.1 In accordance with our observations, IWQM stations IS17 had been enclosed by the perimeter silt curtain of this Contract in the reporting month. As the temporary arrangement of the perimeter silt curtain is now extended to the 3rd Quarter of 2014. Samples were taken outside the perimeter silt curtain and as close to the original impact water quality monitoring stations as possible. The sampling location's coordination (East 814767, North 820391) was recorded.

4.7.2 The alternative locations has been proposed and verified by the ET and the IEC respectively.

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

4.7.4 For impact water quality monitoring, no exceedance was recorded at all monitoring stations in the reporting period.

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.

4.7.5 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

5.2.1 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 78C
Computers (T7000 Tablet, Intel Atom)	Windows 7/MSO 13 Logger
Camera	Nikon D90 300m 2.8D fixed focus Nikon D90 20-400m zoom lens
Laser Rangefinder	Infinitor LRF1000/ Kings 950
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	818270	113.956156	22.303225
10*	813525	824657	113.956065	22.360912
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 2014 is provided in Appendix F.

5.6.2 Two surveys covering both study areas were completed. Survey scheduled on 7 and 8 April 2014, were rescheduled to 14 April 2014 and 19 April 2014 respectively due to forecast of poor weather condition.

5.7 Results and Observations

5.7.1 Dolphin surveys were conducted on 2, 3, 14 and 19 April 2014. A total of 218.0 km of transect line was conducted under favourable conditions. The total length travelled was 220.1km, 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 2014 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	02/04/2014	NWL	0	2.4	**58.3**
	02/04/2014	NWL	1	13.0	
	02/04/2014	NWL	2	35.2	
	02/04/2014	NWL	3	7.7	
	03/04/2014	NWL	1	15	**52.1**
	03/04/2014	NEL	1	34.3	
	03/04/2014	NEL	2	2.8	
2	14/04/2014	NWL	1	1.7	**63.1**
	14/04/2014	NWL	2	24.6	
	14/04/2014	NWL	3	34.7	
	14/04/2014	NWL	4	2.1	
	19/04/2014	NWL	1	3.7	**46.6**
	19/04/2014	NWL	2	6.3	
	19/04/2014	NEL	1	15.4	
	19/04/2014	NEL	2	21.2	
TOTAL in April 2014					**220.1**

*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 2014

Date	Location	No. Sightings "on effort"	No. Sightings "opportunistic"
02/04/2014	NW L	0	0
	NEL	0	0
03/04/2014	NW L	0	0
	NEL	0	0
14/04/2014	NW L	0	1
	NEL	0	0
19/04/2014	NW L	0	1
	NEL	0	0
TOTAL in April 2014		**0**	**2**

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**	**NWL Track**	**NEL Sightings**	**NWL Sightings**	**NEL Encounter Rate**	**NWL Encounter Rate**
2 & 3/04/2014	37.1 km	73.3 km	0	0	0	0
14 & 19/04/2014	36.6 km	71.0 km	0	0	0	0
Encounter Rate of Total Number of Dolphins (ANI)**						
Date	**NEL Track**	**NWL Track**	**NEL Dolphins**	**NWL Dolphins**	**NEL Encounter Rate**	**NWL Encounter Rate**
2 & 3/04/2014	37.1 km	73.3km	0	0	0	0
14 & 19/04/2014	36.6km	71.0km	0	0	0	0

* 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, both "opportunistic". One sighting was made on the 14 April 2014 and one on the 19 April 2014. All sightings were made in NWL and sighting details are summarized and plotted in Appendix K and Figure 5c, respectively.

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

5.7.4 Photo ID analyses for April 2014 is presented in Appendix K.

5.7.5 There were only two resightings in March 2014. HZMB 001 has been sighted six times since Impact Monitoring was initiated in March 2012. HZMB 078 was also seen on the 19 March 2014 and was last seen in January and February 2013. Unfortunately, many of March 2014 sightings were of distant observations and image quality is limited. No new dolphins were identified (Appendix K).

5.7.6 Noteworthy Observation[1]:

5.7.6.1 The southern parts of lines 1 and 2 were affected by the Hong Kong Links Road Project and dredging activities. The northern end of line 1 and the southern ends of lines 11 and 12 were also being affected by active dredging. The HKBCF Project effected lines 11 and 12. Project which do not belongs to this Contract affected the northern end of line 10. The new project noted previously was ongoing at the southern ends of lines 4 and 6. High levels of high speed ferry traffic at the entry to Sky Pier (at the north eastern edge of the Airport platform) made it impossible to successfully complete the southern ends of lines 8 and 9.

5.7.6.2 All areas where visibility is limited is noted in the survey effort log so that it 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 line as possible (as per Figure 4 of this report).

5.7.6.3 Transect lines 11 and 12 were affected by HZMB HKBCF project.

[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.

5.7.6.4 Route travelled shifted slightly to the east at the northern end of transect line 11 due works at HKBCF in April 2014. Survey will be taken as close to transect 11 as possible. According to the review provided by the dolphin specialist in the investigation in Jan 2014, the shift in the transect line will not affect the overall dolphin survey, analysis or dolphin behavior. The dolphin monitoring surveys to be completed as close to the predefined transect line as possible and the abovementioned shifting to be noted in the survey effort log so that it can be accounted for in any subsequent analyses.

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, 4 site inspections were carried out on 3, 10, 17 and 24 April 2014.

6.1.2 Particular observations during the site inspections are described below:

Air Quality

6.1.3 Sand surface was observed at Works Area of Portion A. The Contractor was reminded to provide dust control measures to the sand surface at Works Area of Portion A. The Contractor provided dust control measures to the sand surface at Works Area of Portion A. The Contractor is reminded to provide dust control measures to other sand surface of other area (Reminder)

6.1.4 Sprinkler system and sprinkler timer were observed properly implemented at TKO Fill Bank Area 137. The Contractor was reminded to continue proper implementation of sprinkler system to prevent potential generation of fugitive dust. (Reminder)

6.1.5 Vehicle equipped with watering system was observed implemented on exposed sand. The Contractor was reminded to continue to implement such dust control measures 8 times per day. (Reminder)

Noise

6.1.6 No adverse observation was identified in the reporting month.

Water Quality

6.1.7 Oil drums were observed improperly stored at Works Area of Portion A, temporary rock bund and on barge 天駿3. The Contractor was reminded to provide mitigation measures such as drip trays or bunding to all oil drums. The Contractor cleared the oil drums at Works Area of Portion A , temporary rock bund and on barge 天駿3. (Closed)

6.1.8 Oil drum was observed not closed, the Contractor was reminded that every chemical waste containers should be securely closed, correctly placed and kept clean. The Contractor properly closed chemical waste containers. (Closed)

6.1.9 Idle stone column installation was observed without localised silt curtain at barge AP2. The Contractor was reminded that active stone column installation shall be fullly enclosed by localised silt curtain prior to operation. (Reminder)

6.1.10 Active stone column installation was observed not properly enclosed. The Contractor is reminded that sufficient silt curtain shall be installed to fully enclose the active stone column installation points. The Contractor is provided silt curtain to fully enclose the active stone column installation points. (Closed)

6.1.11 The Contractor was reminded that the chemical waste containers should be kept in good condition and free from damage or any other defects which may impair the performance of the containers (Pending for Contractor's rectification.)

6.1.12 Generators were observed without drip tray at Works Area of Portion A. The Contractor was reminded to provide mitigation measures such as drip trays to generators. The Contractor provided mitigation measures such as drip trays to generators. (Closed).

Chemical and Waste Management

6.1.13 Rubbish was observed at the edge of Works Area at Portion A, temporary Rock Bund and on sea next to the temporary rock bund. The Contractor was reminded to regularly clear the rubbish on site and

keep the site clean and tidy. The Contractor provided rubbish bin, and regularly collect the rubbish on site and keep the site clean and tidy. (Closed)

6.1.14 Water was observed accumulated inside a car tyre, the Contractor was reminded to clear the water accumulated inside car tyre regularly and keep the site clean and tidy. The Contractor cleared the water accumulated inside car tyre regularly and keeps the site clean and tidy. (Closed)

6.1.15 Stone and gravel were observed inside drip tray containing oil drums. The Contractor was reminded to relocate the drip tray with the oil drums to avoid the situation. (Pending for Contractor's rectification.)

Landscape and Visual Impact

6.1.16 No relevant works was carried out in the reporting month.

Others

6.1.17 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, 1,144,891.2 m^3 of fill were imported for the Project use in the reporting period. 1.4 tonnes of chemical waste and 16.9 m^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/G	06/08/2012	N/A	HyD	Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities
		EP-354/2009/B	28/01/2014	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-RW0888-13	27/12/2013	26/06/2014	CHEC	Works Area WA4 in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RS0211-14	11/03/2014	10/09/2014	CHEC	Reclamation Works in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RE1345-13	31/12/2013	30/06/2014	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 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.

6.5 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 period.

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

6.5.4 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 As informed by the Contractor on 7 May 14, a complaint was received by the Contractor on 17 April 14 concerning sand and dust emission from uncovered barges parking at the sea area off the Tuen Mun Ferry Pier. This complaint is under investigation and will be reported in the reporting month May 2014

6.6.3 As informed by the Contractor, further to the notification of summons received March 2014 due to works carried out on 6 October 13 contrary to conditions of NCO, Cap.400. The Contractor pledged guilty to the charge during the court appearance on 28 April 2014.

6.6.3.1 The Contractor has established noise control management system on restricted hour works, to prevent future violation of conditions of NCOs, Cap. 400, actions taken include:

- Nominate CNP Supervisors to daily check CNP compliance
- Setup a white board system to present the works, with locations & no. of machineries, needed to be carried out during restricted hours
- Erect CNP markers for demarcation on site
- Provide relevant training to staff

6.6.3.2 Regular site audit and inspection and monitoring records show no information of recurrence of non-compliance in the reporting month.

6.6.4 No notification of summons 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

7.1 Construction Programme for the Coming Months

7.1.1 As informed by the Contractor, the major works for the Project in April 2014 and May 2014 will be:-

Marine-based Works

- Cellular structure installation
- Connecting arc cell installation
- Laying geo-textile
- Sand blanket laying
- Sand filling
- Maintenance of silt curtain & silt screen at sea water intake of HKIA
- Stone column installation
- Band drain installation
- Backfill cellular structure
- Geotechnical Instrumentation works
- Construction of temporary seawall
- Portion D Construction of Access to Portion A
- Surcharge laying
- Construction of temporary pier at Portion A
- Precast Yard setup
- Seawall blocks for temporary construction
- Vibro-compaction on surcharge
- Capping Beams structures
- Construction of Conveyors for public fill
- Temporary bridge at Portion D
- Access Road for delivery of public fill material from existing road

Land-based Works

- Maintenance works of Site Office at Works Area WA2
- Maintenance works of Public Works Regional Laboratory at Works Area WA3
- Geo-textile fabrication at Works Area WA2
- Installed sand bag at Works Area WA2
- Maintenance of Temporary Marine Access at Works Area WA2

7.2 Key Issues for the Coming Month

7.2.1 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.

7.3 Monitoring Schedule for the Coming Month

7.3.1 The tentative schedule for environmental monitoring in April 2014 is provided in Appendix F.

8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

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

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

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

8.1.4 For impact water quality monitoring, no exceedance was recorded at all monitoring stations in the reporting period.

8.1.5 For Dolphin monitoring, a total of two sightings were made, both “opportunistic”. One sighting was made on the 14 April 2014 and one on the 19 April 2014. All sightings were made in NWL and sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

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

8.1.7 Environmental site inspection was carried out 4 times in April 2014. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

8.1.8 As informed by the Contractor on 7 May 14, a complaint was received by the Contractor on 17 April 14 concerning sand and dust emission from uncovered barges parking at the sea area off the Tuen Mun Ferry Pier. This complaint is under investigation and will be reported in the reporting month May 2014.

8.1.9 As informed by the Contractor, further to the notification of summons received March 2014 due to works carried out on 6 October 13 contrary to conditions of NCO, Cap.400. The Contractor pledged guilty to the charge during the court appearance on 28 April 2014.

8.1.9.1 The Contractor has established noise control management system on restricted hour works, to prevent future violation of conditions of NCOs, Cap. 400, actions taken include:

- Nominate CNP Supervisors to daily check CNP compliance
- Setup a white board system to present the works, with locations & no. of machineries, needed to be carried out during restricted hours
- Erect CNP markers for demarcation on site
- Provide relevant training to staff

8.1.9.2 Regular site audit and inspection and monitoring records show no information of recurrence of non-compliance in the reporting month.

8.1.10 No notification of summons was received in the reporting period.

8.2 Recommendations

8.2.1 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.

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

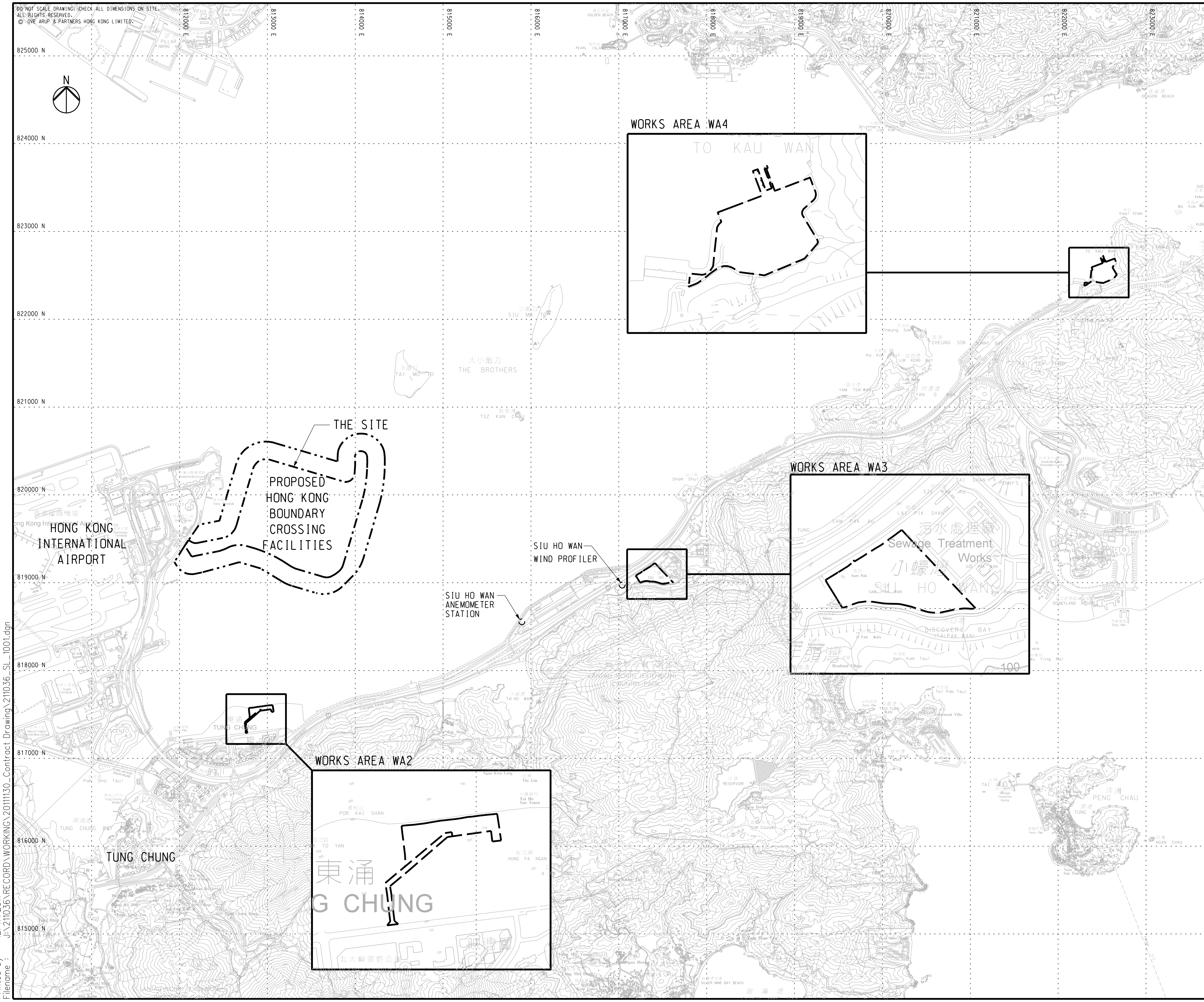
- Regular review and maintenance of silt curtain systems, drainage systems and desilting facilities in order to make sure they are functioning effectively.
- Construction of seawall should be completed as early as possible.
- Regular inspect and review the loading process from barges to avoid splashing 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.

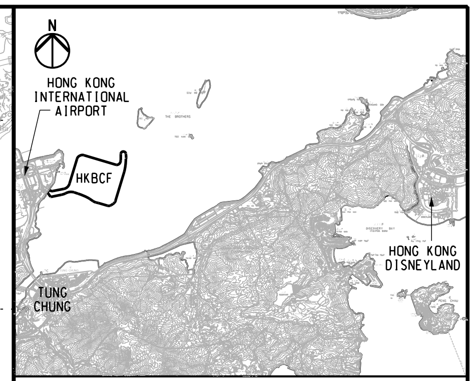
Chemical and Waste Management

- 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.





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

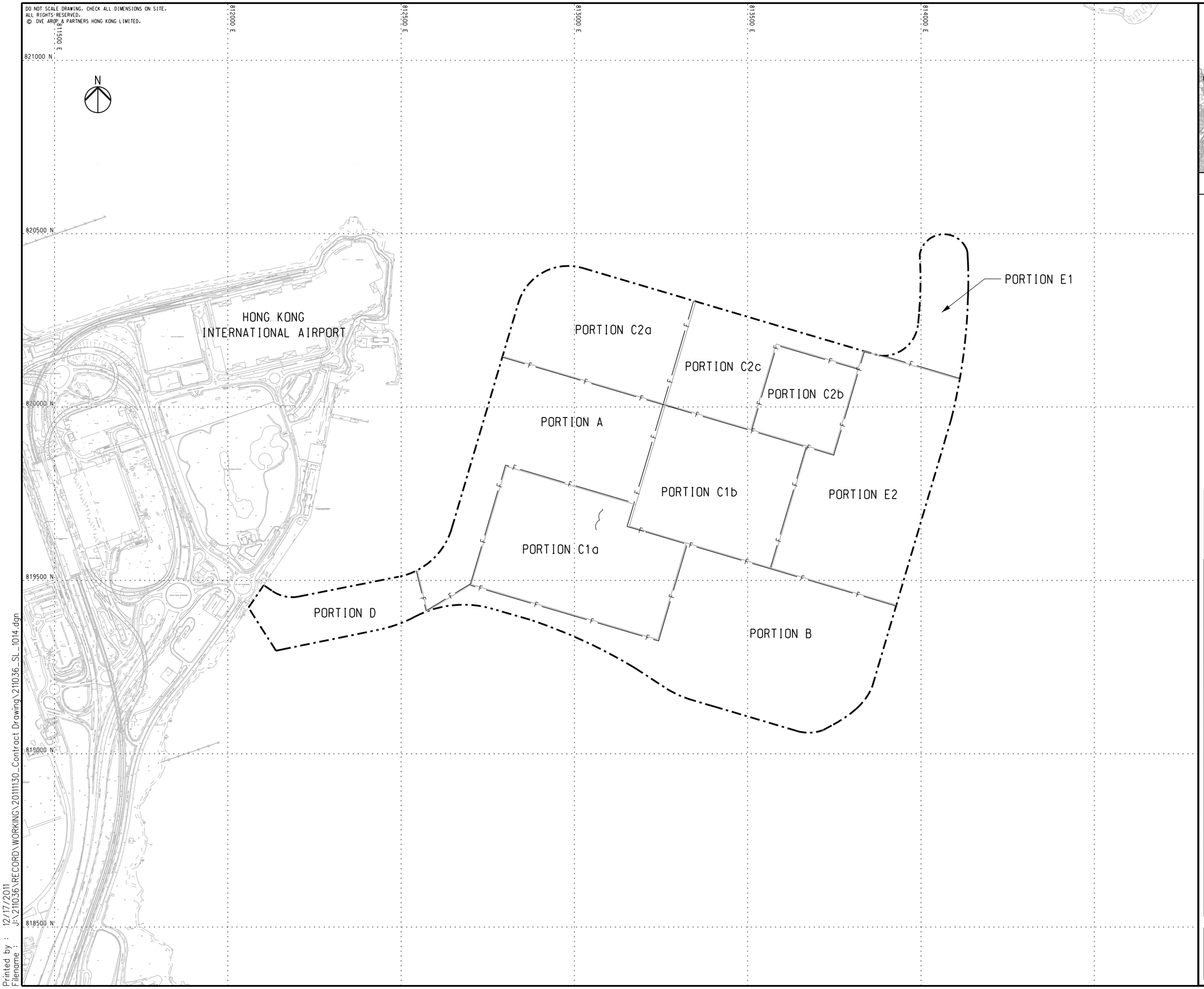
Supported By : Ecosystems Ltd.
EDA Marine Ltd.
Geotechnical Consulting Group (Asia) Ltd.
Hong Kong Cetacean Research Project
InteliBuild Technyx Asia Limited
Tony Gee and Partners LLP

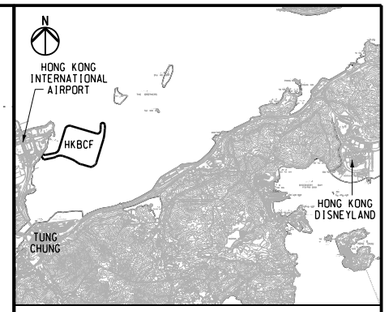
Contract No. and Title:
Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities
- Reclamation Works

Drawing title
KEY PLAN

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

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





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)

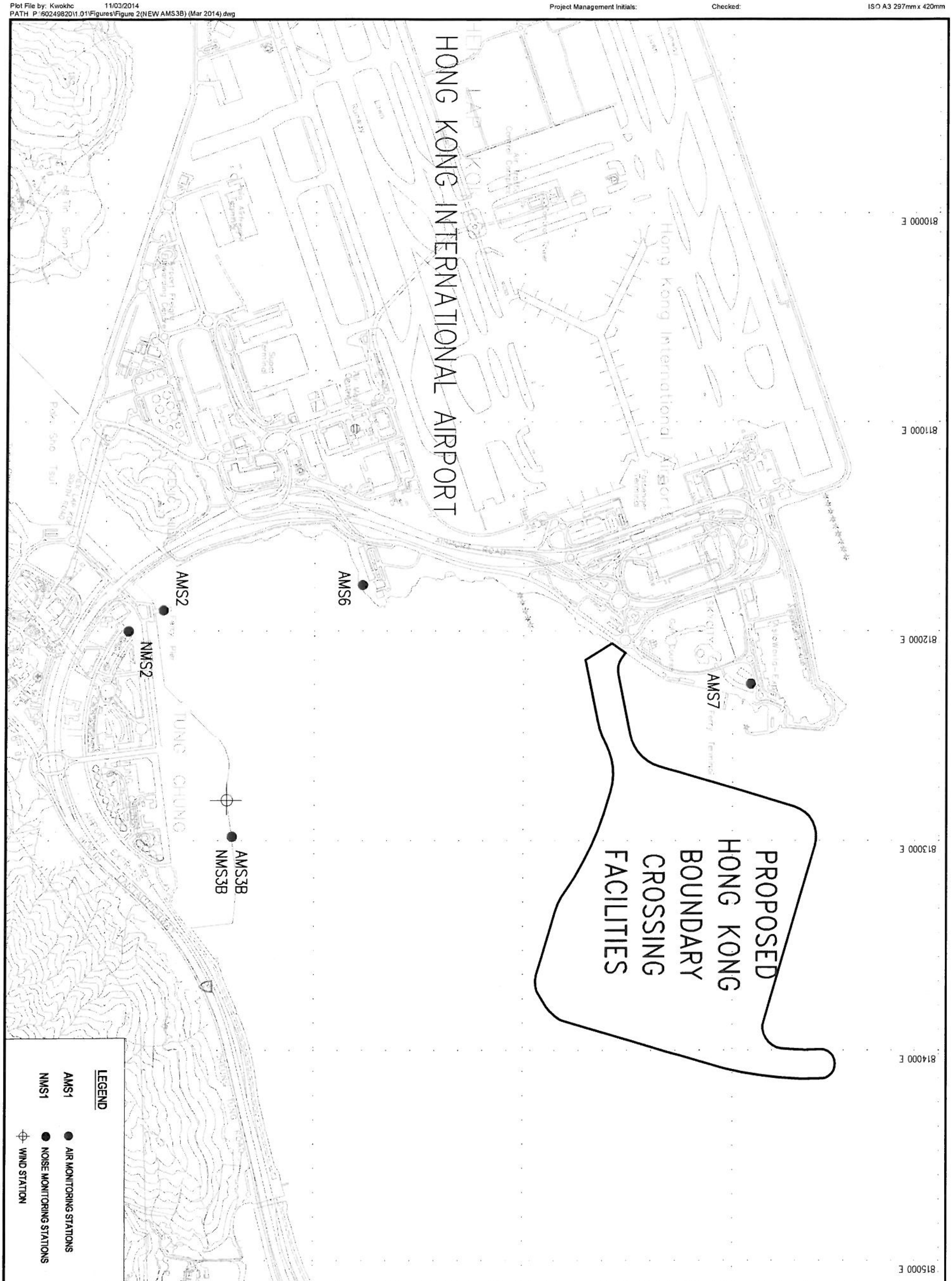
Drawing no.	Rev.
211036/SL/1014	-

Drawn	Date	Checked	Approved
RL	06/10	KKY	DML

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

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

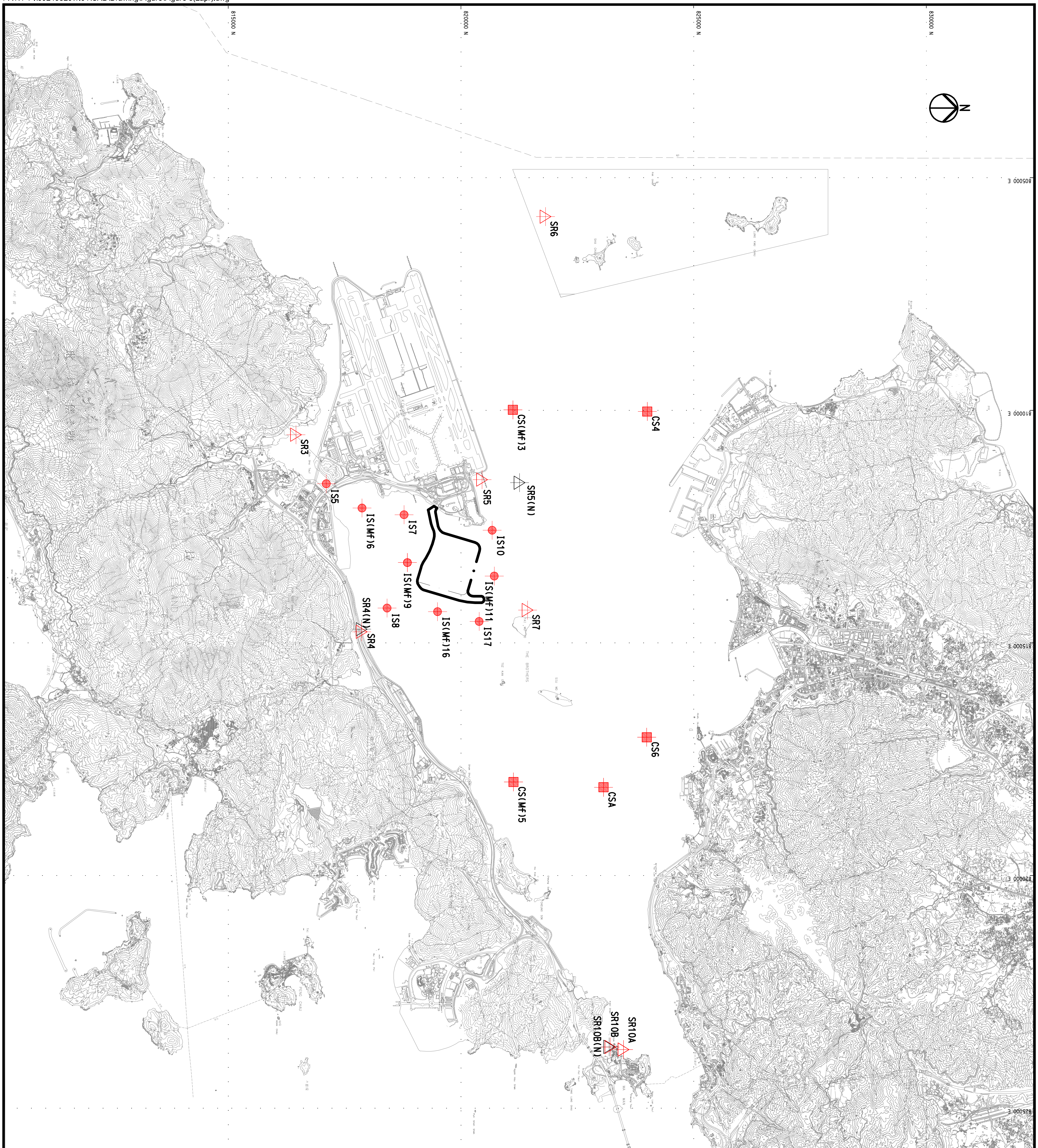


HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: - Date: MARCH 2014

AIR QUALITY AND NOISE MONITORING STATIONS FOR HKBCF

AECOM

Figure 2



LEGEND

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

SETTING OUT SCHEDULE

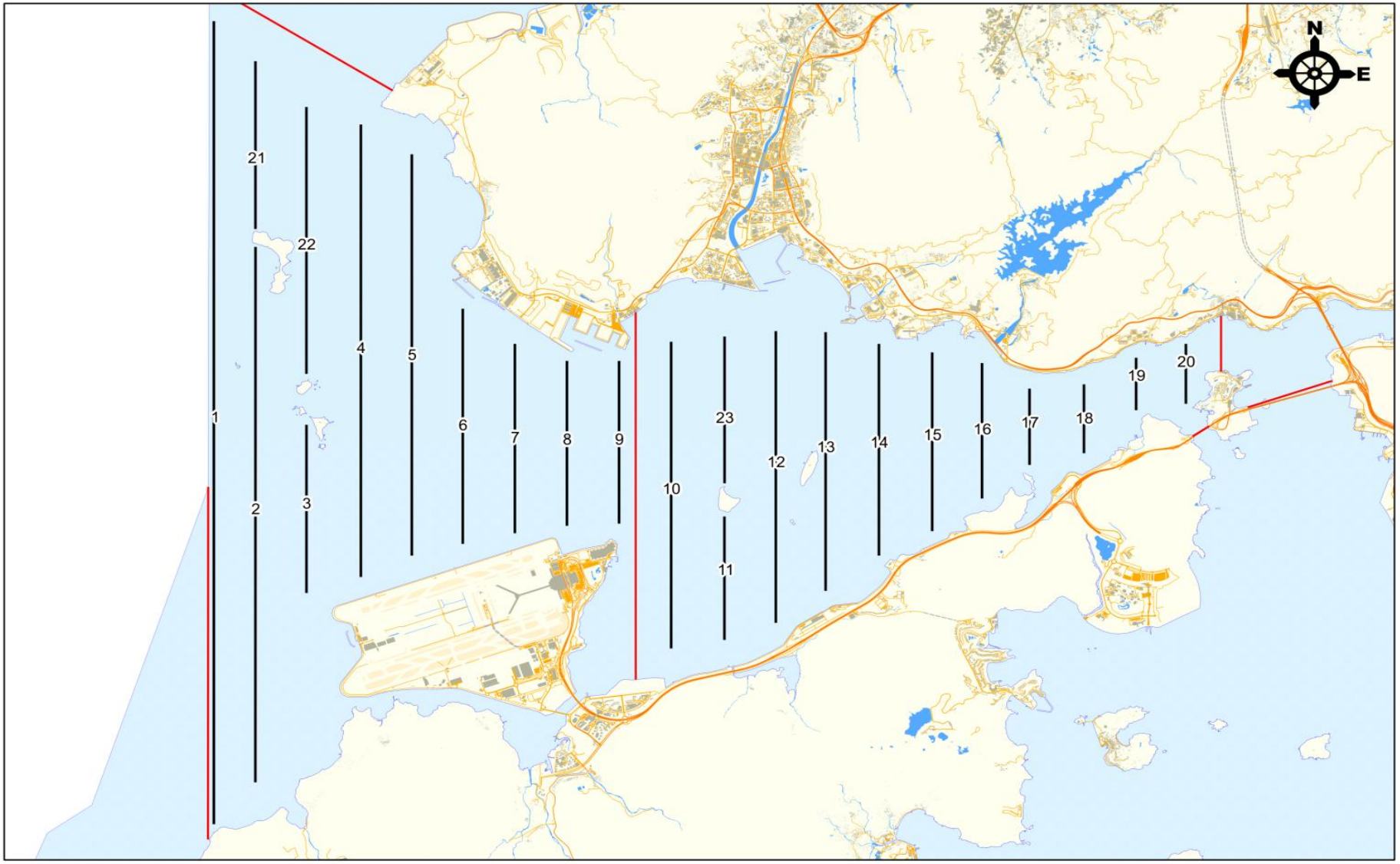
MONITORING STATIONS	CO-ORDINATES EASTING	CO-ORDINATES NORTHING
IS5	811579	817106
IS(Mf)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(Mf)9	813273	818850
IS10	812577	820670
IS(Mf)11	813562	820716
IS(Mf)16	814328	819497
IS17	814539	820391
SR3	810525	816456
SR4(N)	814705	817859
SR5	811489	820455
SR5(N)	811555	821258
SR6	805837	821818
SR7	814293	821431
SR10A	823741	823495
SR10B(N)	823683	823187
CS(Mf)3	809989	821117
CS(Mf)5	817990	821129
CS4	810025	824004
CS6	817028	823992
CSA	818103	823064

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 Date: APR 2012

IMPACT WATER QUALITY MONITORING STATIONS

AECOM

Figure 3



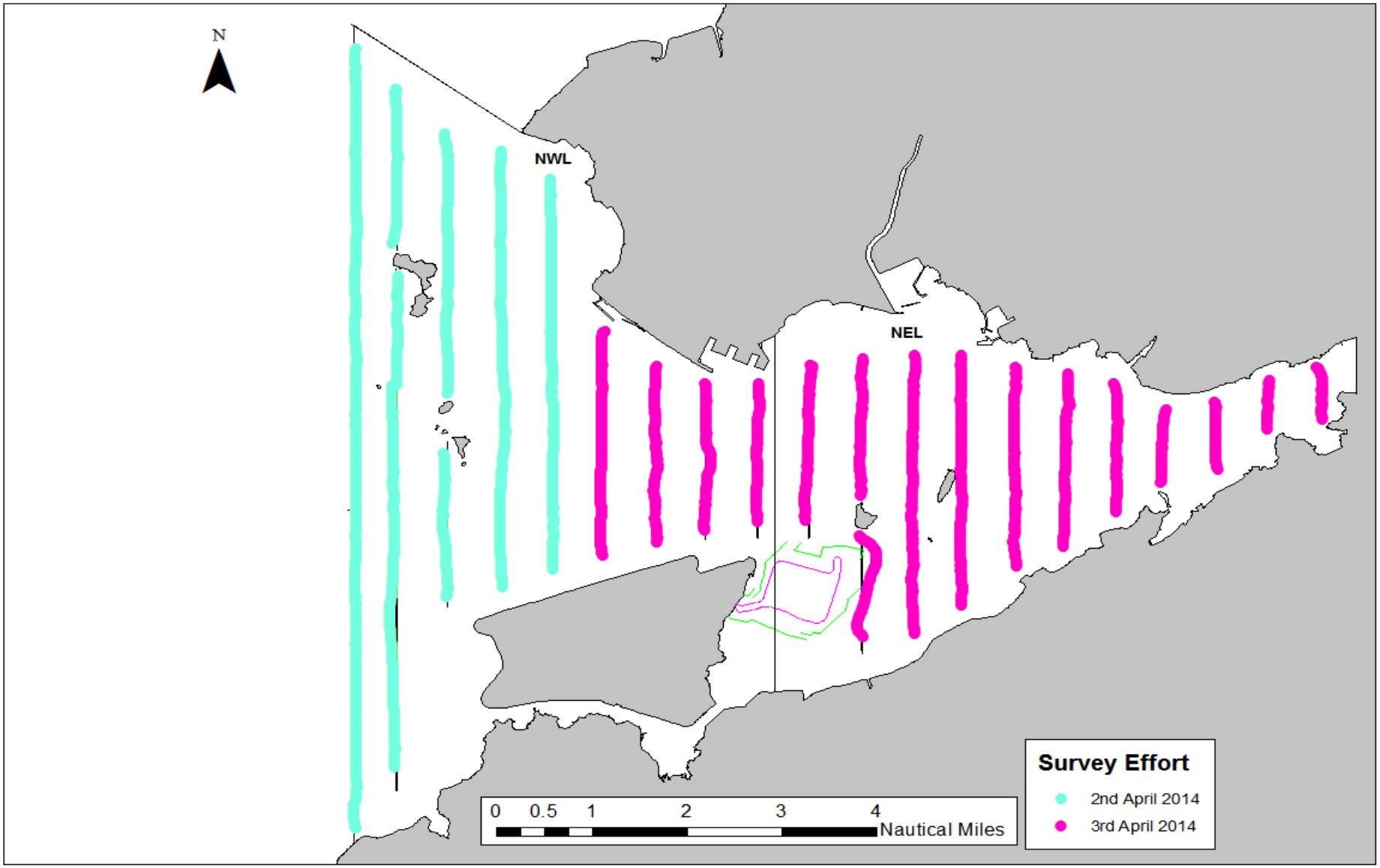
***Remark: Transect 10 is now 3.6km in length due to the HKBCF construction site. The total transect length for both NEL and NWL combined is 111km.**

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

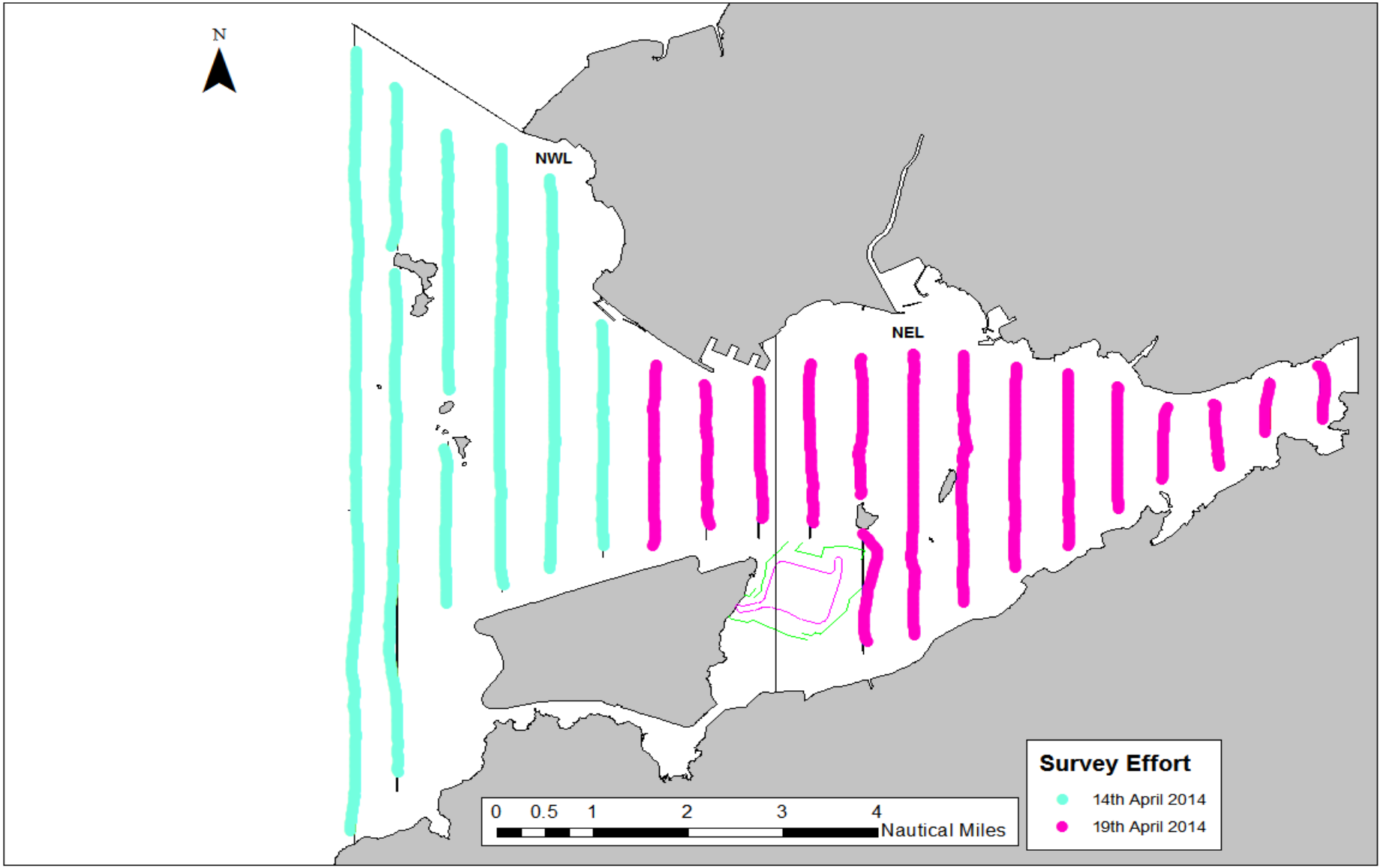
Figure 4



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey Efforts on 2 and 3 April 2014

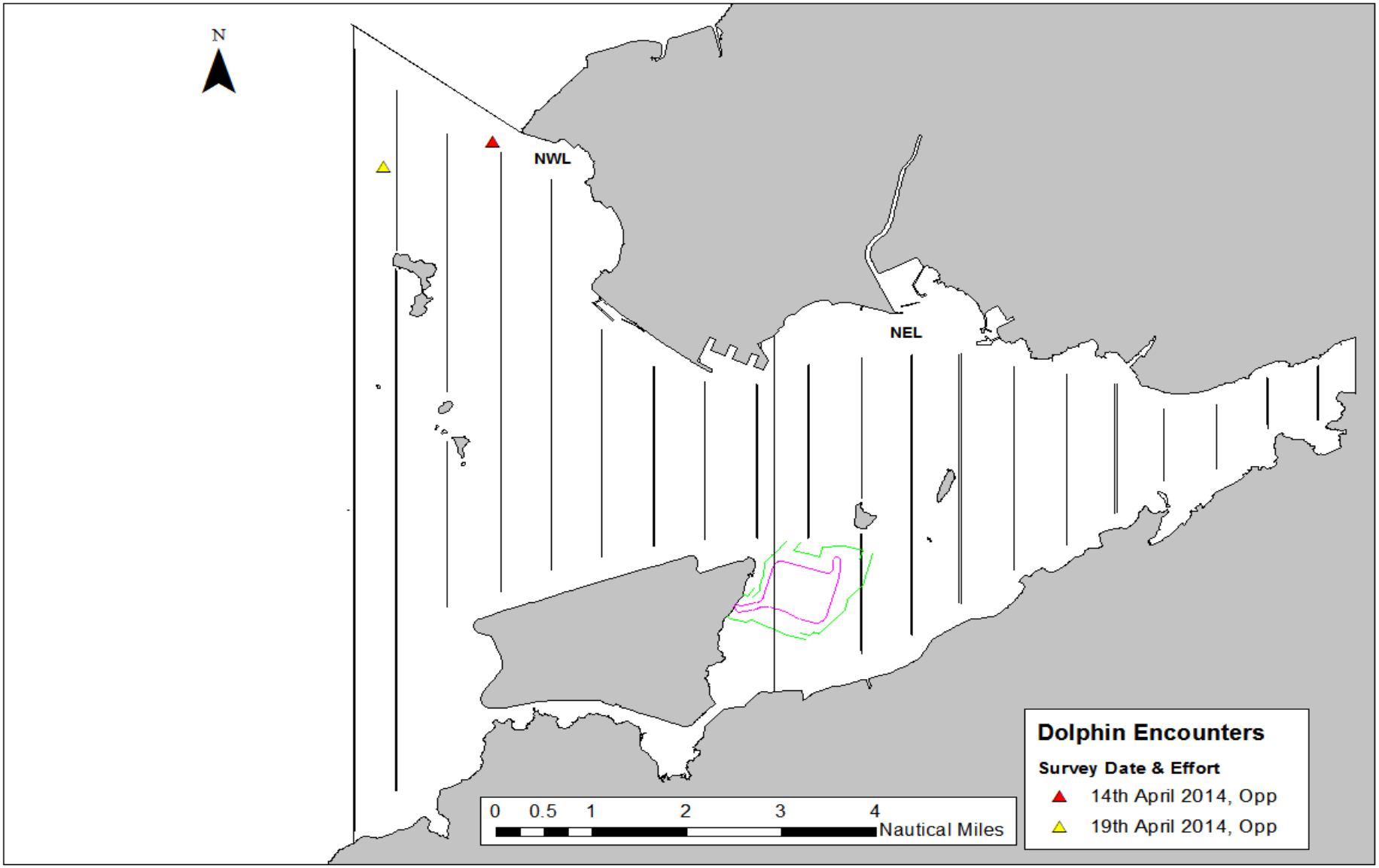
Figure 5a



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey Efforts on 14 and 29 April 2014

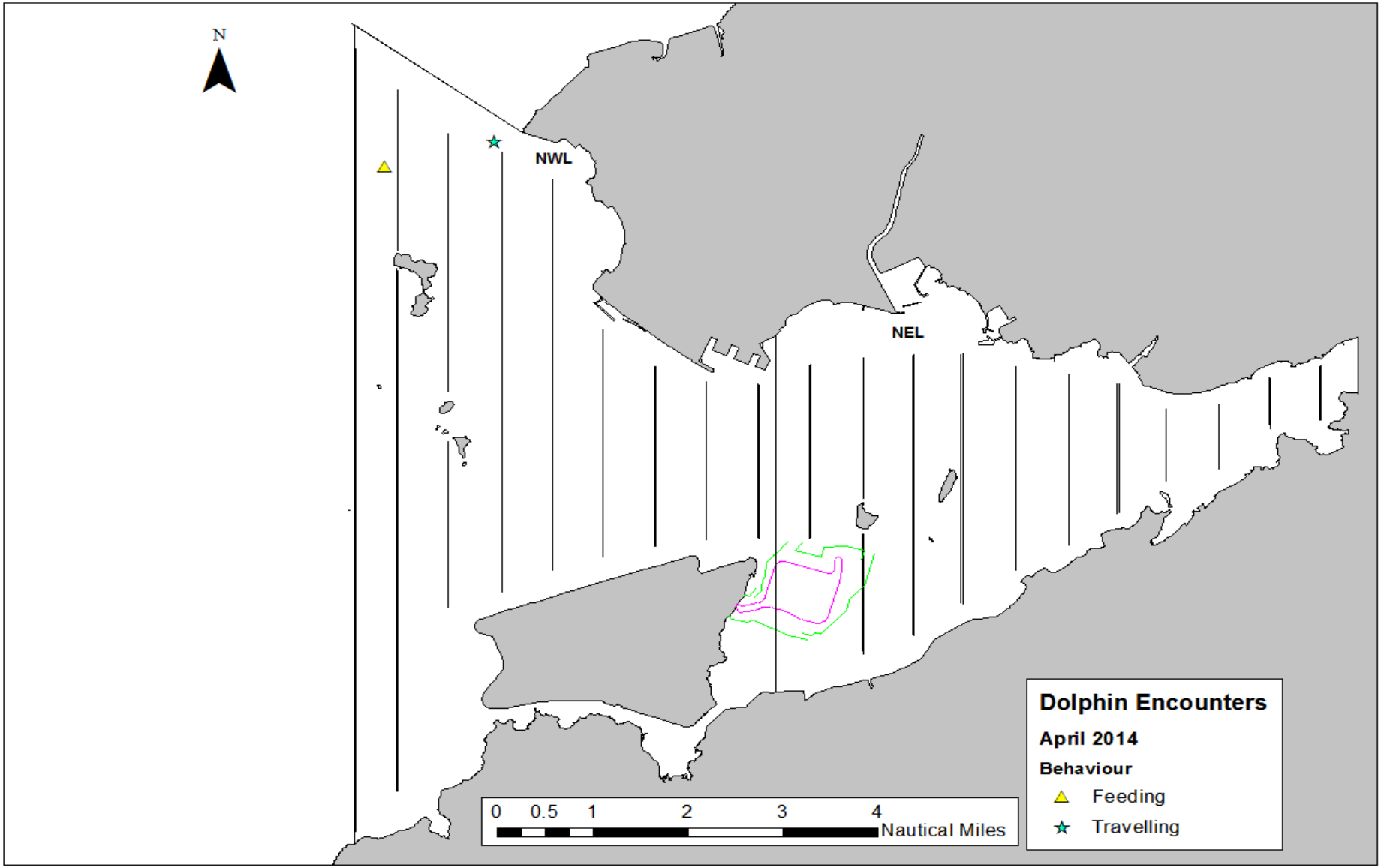
Figure 5b



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey
Sightings in April 2014

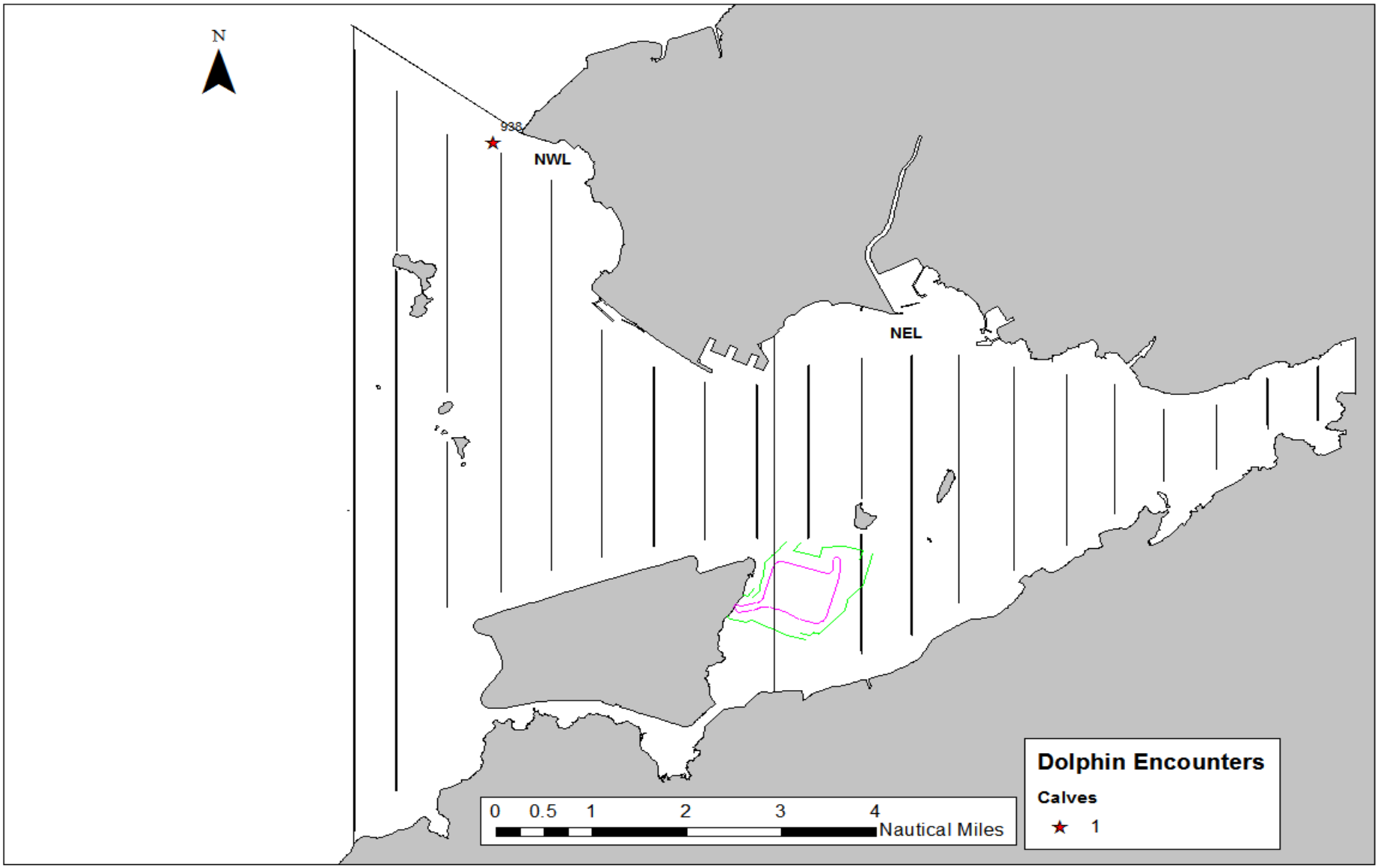
Figure 5c



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey
Behaviour Map in April 2014

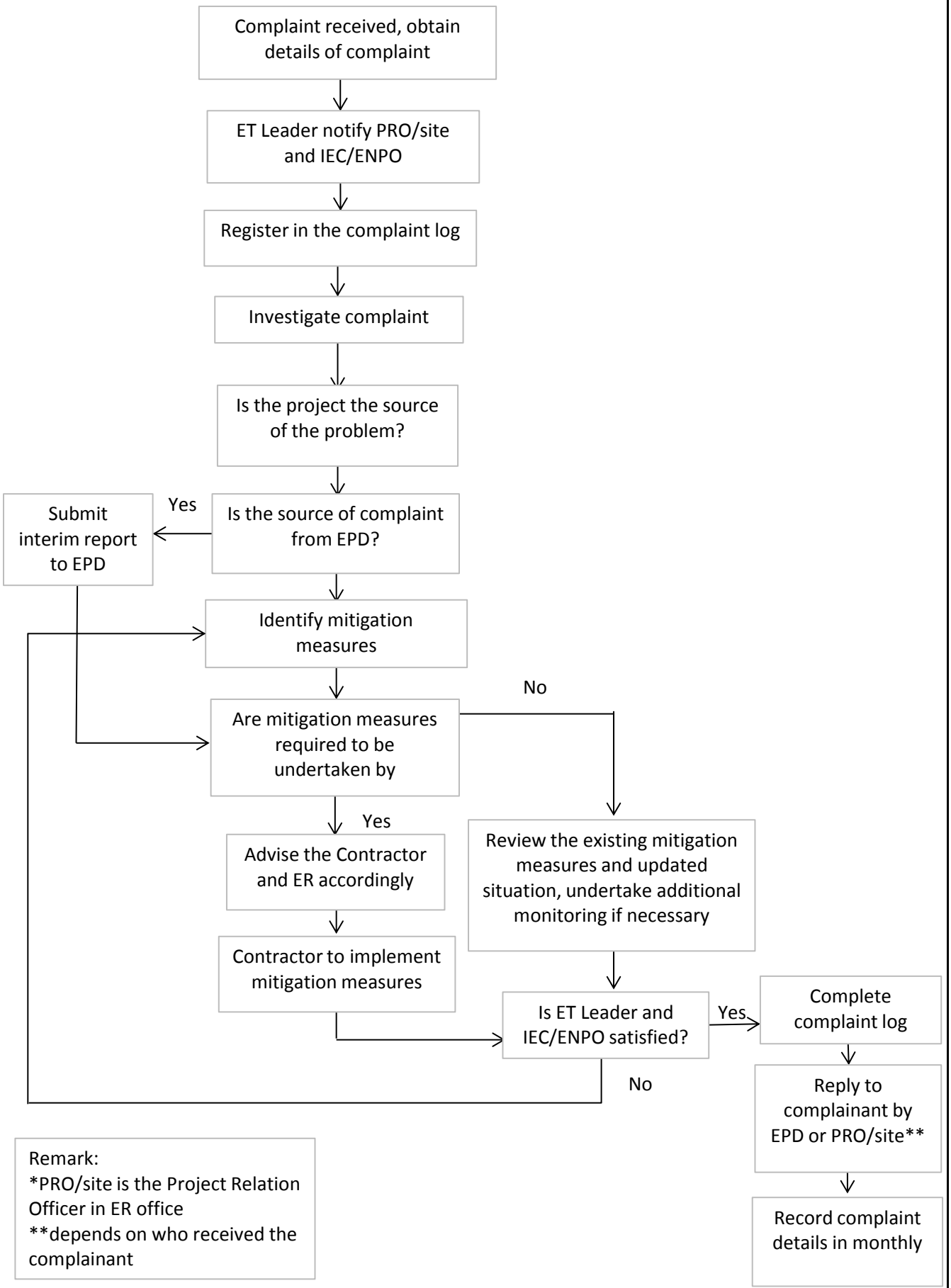
Figure 5d



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey Calf
Map in April 2014

Figure 5e

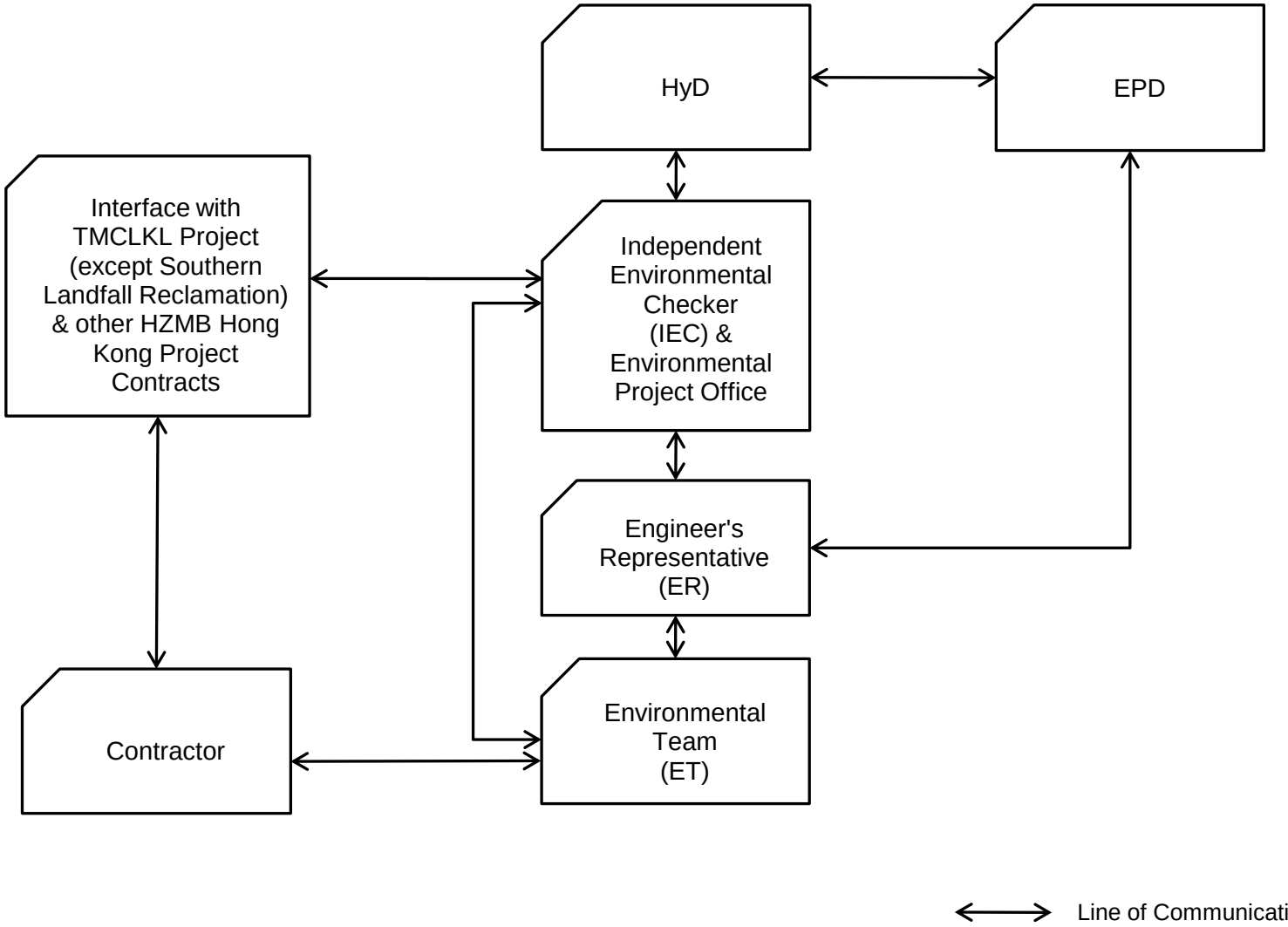


HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Environmental Complaint Handling Procedure

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



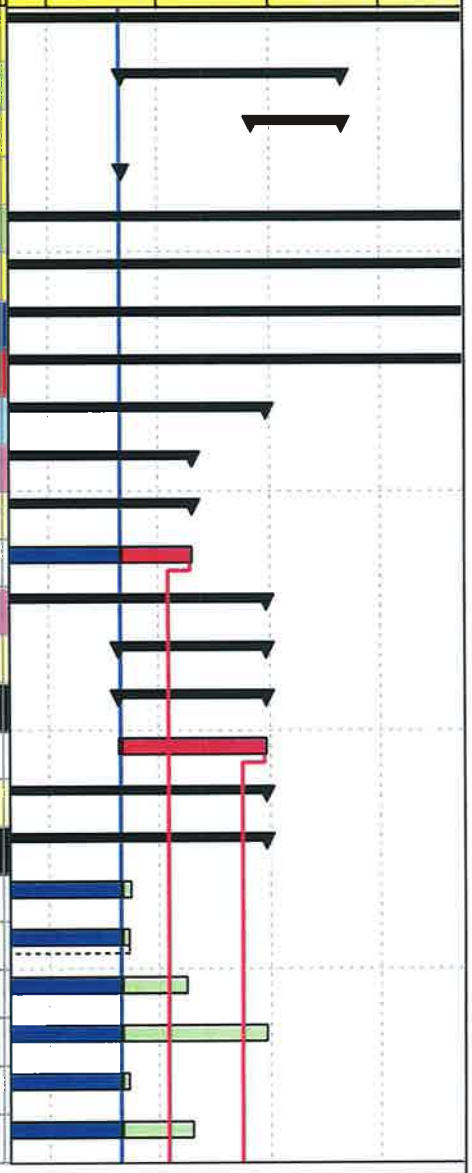
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
--RECLAMATION WORKS
Project No.: 60249820 Date: April 2013

Project Organisation for Environmental Works

AECOM

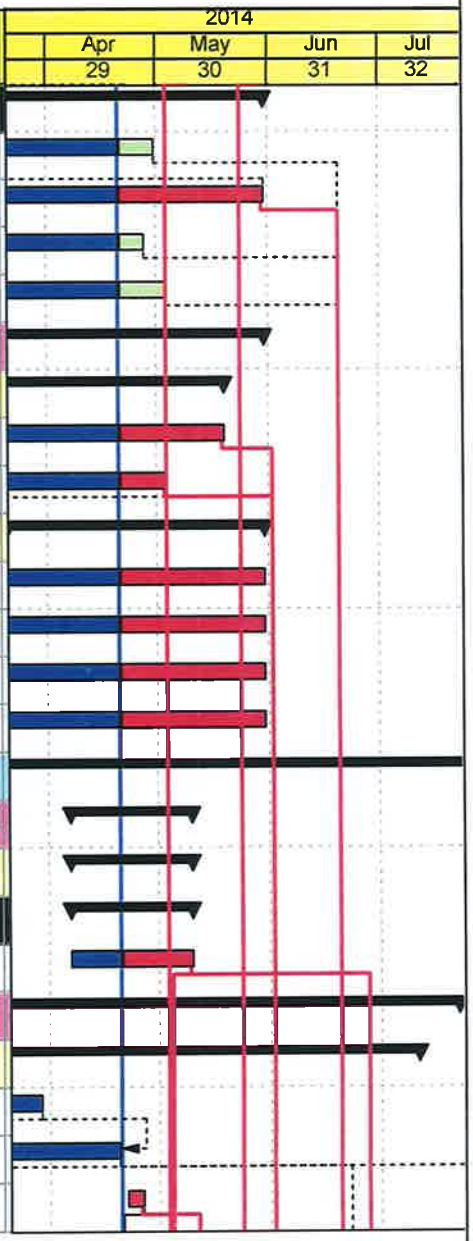
Appendix A

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
29th Monthly Progress Report Status as on 21Apr2014 Ver.4G1		1745	21-May-12 A	28-Feb-17	51
Contract Key Dates		61	21-Apr-14	20-Jun-14	-52
Key Dates for achievement of Stages and completion of Sections		25	26-May-14	20-Jun-14	-52
Vacation of Site		0	21-Apr-14	21-Apr-14	-121
Work Zone, as defined in PS Clause 1.03(6)		477	23-Aug-13 A	02-Mar-15	780
Portion B, C & E		477	23-Aug-13 A	02-Mar-15	780
Portion B, C & E		477	23-Aug-13 A	02-Mar-15	780
Seawall		280	11-Nov-13 A	17-Aug-14	-43
Ground Treatment		229	11-Nov-13 A	30-May-14	17
Stone Columns for Rubble Mound Seawall by Marine Plant		99	11-Nov-13 A	10-May-14	-198
Portion C2a C113 - C117 5Cells 3,258Nos		99	11-Nov-13 A	10-May-14	-198
SC0A-1090	PC2A Stone Columns outermost C113 - C115 5cells 1,614nrs (19nrs/day) FTB17	99	11-Nov-13 A	10-May-14	-198
Stone Columns Outside cellular Structures by Marine Plant		112	22-Jan-14 A	30-May-14	17
Seawall Portion E2 at K053 - C067 2,252nrs		38	20-Apr-14 A	30-May-14	-57
K053 - C067		38	20-Apr-14 A	30-May-14	-57
SCOE2-A010	PE2 Stone Columns K053 - K056 Row 01-11 251nrs (14nrs/day) AP5&AP2	38	20-Apr-14 A	30-May-14	-57
Seawall Portion E1 at C068 - C091 24cells 6,428nrs		112	22-Jan-14 A	30-May-14	17
C068 - C079		112	04-Feb-14 A	30-May-14	17
SCOE1-A060	PE1 Stone Columns C078 - C079 Row 01-11 780nrs (14nrs/day) FTB19	56	04-Feb-14 A	23-Apr-14	42
SCOE1-A010	PE1 Stone Columns C068 - C071 Row 01-11 273nrs (14nrs/day) FTB19	20	11-Feb-14 A	22-Apr-14	53
SCOE1-A050	PE1 Stone Columns C077 - C077 Row 01-11 390nrs (6nrs/day) AP7	65	13-Feb-14 A	08-May-14	38
SCOE1-A030	PE1 Stone Columns C072 - C075 Row 01-11 769nrs (14nrs/day) FTB18	55	14-Feb-14 A	30-May-14	17
SCOE1-A040	PE1 Stone Columns C076 - C076 Row 01-11 385nrs (14nrs/day) FTB20	28	21-Feb-14 A	22-Apr-14	53
SCOE1-A020	PE1 Stone Columns C068 - C078 Row 12-14 325nrs (8nrs/day) FTB16	41	25-Feb-14 A	10-May-14	36

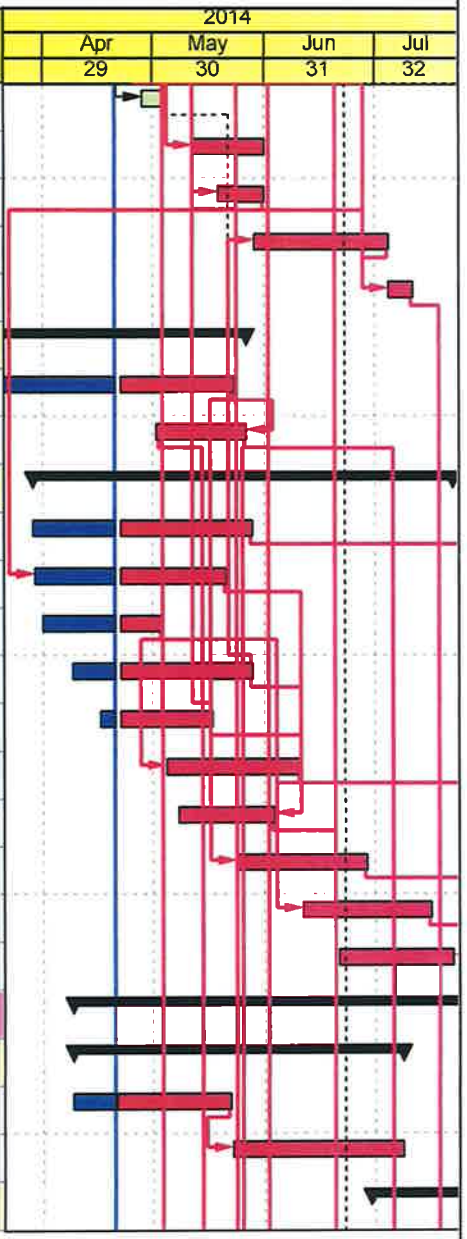


Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
C080 - C091		93	22-Jan-14 A	30-May-14	-15
SCOE1-B020	PE1 Stone Columns C081 - C083 Row 01-11 479nrs (14nrs/day) FTB18	34	22-Jan-14 A	30-Apr-14	13
SCOE1-B060	PE1 Stone Columns C079 - C091 Row 12-14 279nrs (6nrs/day) FTB20	47	04-Feb-14 A	30-May-14	-15
SCOE1-B040	PE1 Stone Columns C085 - C090 Row 01-11 284nrs (18nrs/day) FTB18	16	12-Feb-14 A	27-Apr-14	16
SCOE1-B010	PE1 Stone Columns C080 - C080 Row 01-11 390nrs (14nrs/day) FTB19	28	05-Mar-14 A	03-May-14	10
Stone Columns Inside cells by Land Plant 2,640nrs		108	15-Feb-14 A	30-May-14	-37
Seawall Portion B at K028 - K051 24cells 1,920nrs		79	15-Feb-14 A	19-May-14	-180
SCIB0-080	PB Stone Columns inside cells K047 - K050 267nrs (5nrs/day) LB-AP1	53	15-Feb-14 A	19-May-14	-180
SCIB0-070	PB Stone Columns inside cells K044 - K046 136nrs (5nrs/day) LB-AP3	37	15-Feb-14 A	03-May-14	-166
Seawall Portion E2 at K052 - C060 9cells 720nrs		80	21-Mar-14 A	30-May-14	-37
SCIE2-040	PE2 Stone Columns inside cells K057 - C059 240nrs (3nrs/day) LB-BV1	80	21-Mar-14 A	30-May-14	-37
SCIE2-050	PE2 Stone Columns inside cells C061 - C062 240nrs (3nrs/day) LB-BV2	80	21-Mar-14 A	30-May-14	-37
SCIE2-020	PE2 Stone Columns inside cells K052 - K055 320nrs (5nrs/day) LB-AP2	64	21-Mar-14 A	30-May-14	-37
SCIE2-030	PE2 Stone Columns inside cells K056 - C056 80nrs (3nrs/day) LB-BC1	27	21-Mar-14 A	30-May-14	-37
Cellular Structures		143	03-Mar-14 A	03-Aug-14	-38
Cellular Main Cells 85cells		48	07-Apr-14 A	10-May-14	-96
Full Guide Frames Method 85cells		48	07-Apr-14 A	10-May-14	-96
Portion E1 C078 & C079 & Portion E2 C065 & C066 4cells		48	07-Apr-14 A	10-May-14	-96
CSE2-020	PE2 Cellular Structure C064 & C065 2cells Type_C 6,195m3	48	07-Apr-14 A	10-May-14	-96
Connecting Arcs		104	03-Mar-14 A	22-Jul-14	-21
Portion E2 between K051/K052 to C066/C067 16arcs		89	07-Mar-14 A	11-Jul-14	-12
CAE2-014S	PE2 Connecting Arc K051/K052 - K053/K054 Seaside upper arcs splicing 3nrs (201)	18	07-Mar-14 A	30-Mar-14 A	
CAE2-018	PE2 Final backfill cellular cells & Arcs K051/K052 to C061/C062 Type_C 48,652m3	22	08-Mar-14 A	20-Apr-14 A	
CAE2-022L	PE2 Connecting Arc C062/C063 - C066/C067 Landside lower arcs 5nrs	5	22-Apr-14	26-Apr-14	-68



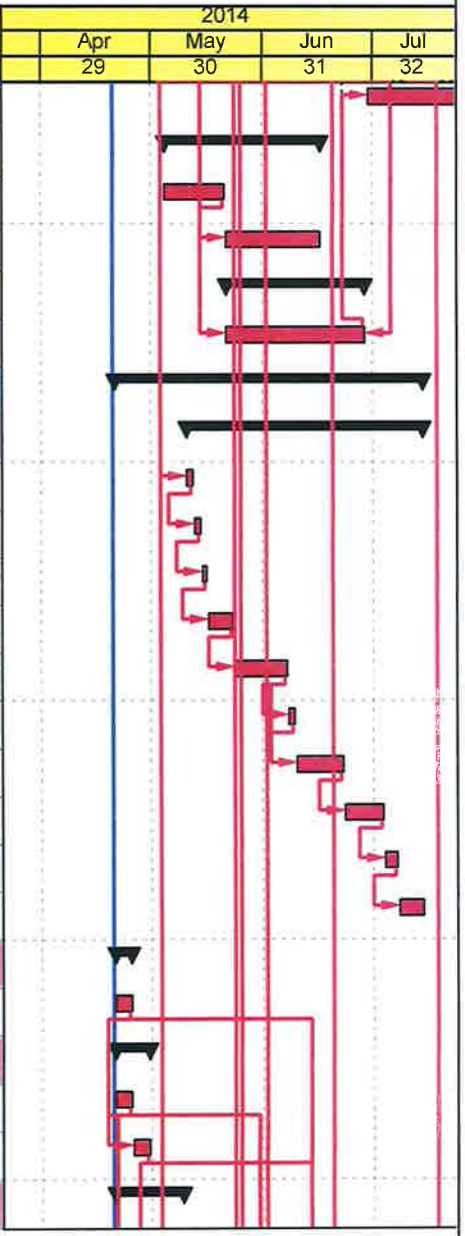
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
CAE2-022S	PE2 Connecting Arc C062/C063 - C066/C067 Seaside lower arcs 5nrs	5	28-Apr-14	03-May-14	8
CAE2-034L	PE2 Connecting Arc C063/C064 - C065/C066 Landside upper arcs splicing 3nrs (HF)	18	12-May-14	31-May-14	-84
CAE2-024L	PE2 Connecting Arc C062/C063 & C066/C067 Landside upper arcs splicing 2nrs (HF)	12	19-May-14	31-May-14	-84
CAE2-024S	PE2 Connecting Arc C062/C063 - C066/C067 Seaside upper arcs splicing 5nrs (205)	30	29-May-14	04-Jul-14	-12
CAE2-028	PE2 Final backfill cellular cells & Arcs C063/C064, C064/C065, C065/C066 & C066/C067 Type_C 12,535m3	6	05-Jul-14	11-Jul-14	-12
Portion C2c between C091/C092 to C102/C103 12arcs		42	03-Mar-14 A	26-May-14	-94
CAC2c-034S	PC2c Connecting Arc C087/C088 - C093/C094 Seaside upper arcs splicing 7nrs (210)	42	03-Mar-14 A	23-May-14	-107
CAC2c-038	PC2c Final backfill cellular cells & Arcs C0087/C088 to C099/C100 Type_C 82,397m3	20	02-May-14	26-May-14	-94
Portion E1 between C073/C074 to C090/C091 18arcs		104	29-Mar-14 A	22-Jul-14	-28
CAE1-044L	PE1 Connecting Arc C067/C068 - C071/C072 Landside upper arcs splicing 5nrs (401)	30	29-Mar-14 A	28-May-14	-81
CAE1-016L	PE1 Connecting Arc C080/C081 - C083/C084 Landside upper arcs splicing 4nrs (HF)	24	30-Mar-14 A	21-May-14	-75
CAE1-032S	PE1 Connecting Arc C067/C068 - C076/C077 Seaside lower arcs 10nrs	10	01-Apr-14 A	03-May-14	-74
CAE1-014S	PE1 Connecting Arc C080/C081 - C086/C087 Seaside upper arcs splicing 7nrs (205)	42	09-Apr-14 A	28-May-14	-17
CAE1-014L	PE1 Connecting Arc C084/C085 - C087/C088 Landside upper arcs splicing 4nrs (HF)	24	17-Apr-14 A	17-May-14	-84
CAE1-034S	PE1 Connecting Arc C072/C73 - C076/C077 Seaside upper arcs splicing 5nrs (WC1)	30	05-May-14	10-Jun-14	-74
CAE1-018	PE1 Final backfill cellular cells & Arcs C080/C081 to C090/C091 Type_C 91,454.5 m3	22	08-May-14	03-Jun-14	-16
CAE1-034L	PE1 Connecting Arc C072/C073 - C076/C077 Landside upper arcs splicing 5nrs (210)	30	24-May-14	28-Jun-14	-107
CAE1-044S	PE1 Connecting Arc C067/C068 - C071/C072 Seaside upper arcs splicing 5nrs (WC1)	30	11-Jun-14	16-Jul-14	-74
CAE1-048	PE1 Final backfill cellular cells & Arcs C077 to C066 Type_C 108,416m3	26	21-Jun-14	22-Jul-14	-28
Capping Beams		98	09-Apr-14 A	03-Aug-14	-86
Portion B between K028 to K040 Capping Beams		74	09-Apr-14 A	08-Jul-14	-188
CB025-00010	PB Capping Beams structure K028 - K040 13cells	52	09-Apr-14 A	22-May-14	-188
CB025-00020	PB Capping Beams structure K041 - K051 11cells	44	23-May-14	08-Jul-14	-188
Portion E2 between K052 to C067 Capping Beams		33	30-Jun-14	03-Aug-14	-86



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

TASK filter: Three Month Rolling.

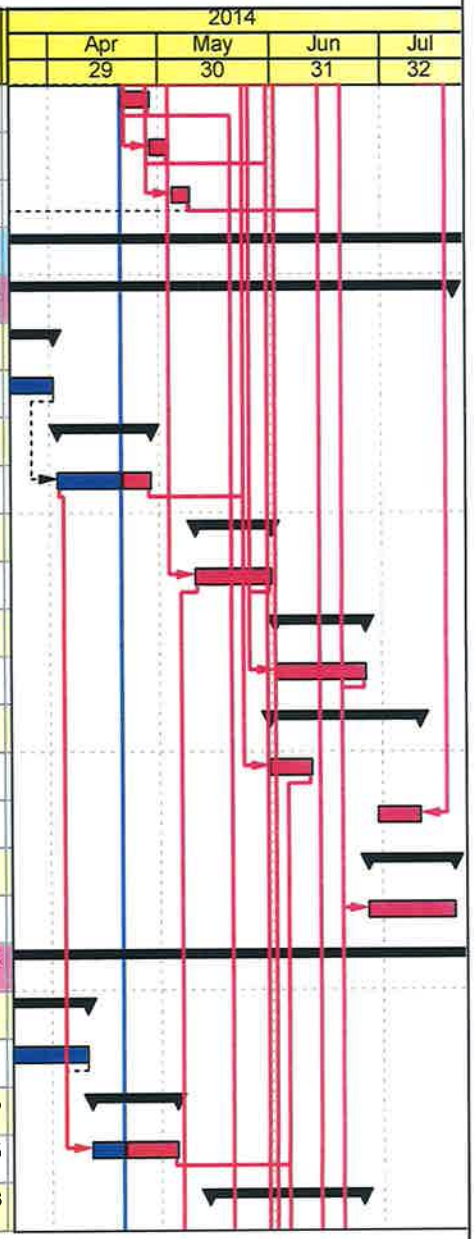
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
CBE2-000	PE2 Capping Beams structure K052 to C062 11cells	33	30-Jun-14	03-Aug-14	-86
Portion C2a between C112 to C103 Capping Beams		40	05-May-14	16-Jun-14	-152
CBC2a-010	PC2a Capping Beams structure C106 to C103 4cells	16	05-May-14*	21-May-14	-152
CBC2a-020	PC2a Capping Beams structure C112 to C107 6cells	24	22-May-14	16-Jun-14	-152
Portion C2c between C102 to C091 Capping Beams		36	22-May-14	28-Jun-14	-86
CBC2c-000	PC2c Capping Beams structure C102 to C091 12cells	36	22-May-14	28-Jun-14	-86
Optimizing Rubble Mound Seawalls		79	21-Apr-14	14-Jul-14	-118
Seawall Portion C2a at C117 - C113		60	11-May-14	14-Jul-14	-118
RFC2a-0010	PC2a at C117 - C113 Geotextile Type 1 above stone blanket 17,800m2	2	11-May-14	12-May-14	-198
RFC2a-0020	PC2a at C117 - C113 sound survey	2	13-May-14	14-May-14	-198
RFC2a-0030	PC2a at C117 - C113 settlement markers install	2	15-May-14	16-May-14	-198
RFC2a-0040	PC2a at C117 - C113 Filter Layer (Cat0 Fill 1m) under the Rubble Mound 23,430m3	6	17-May-14	23-May-14	-198
RFC2a-0050	PC2a at C117 - C113 Rockfill (Cat1) upto -3.0mPD 27,930m3	14	24-May-14	07-Jun-14	-198
RFC2a-0060	PC2a at C117 - C113 Sand Blanket behind upto -4.0mPD	2	08-Jun-14	09-Jun-14	-198
RFC2a-0070	PC2a at C117 - C113 Rockfill (Cat1), filter layer & geotextile +2.5mPD 21,060m3	12	10-Jun-14	22-Jun-14	-198
RFC2a-0080	PC2a at C117 - C113 Rockfill (Cat1) for platform upto +2.5mPD 19,530m3	10	23-Jun-14	03-Jul-14	-198
RFC2a-0090	PC2a at C117 - C113 Rockfill (Cat1 Fill) upto +6.0mPD & geotextile laying 7,980m3	4	04-Jul-14	07-Jul-14	-139
RFC2a-0100	PC2a at C117 - C113 UnderLayer (0mPD 12,600m3	6	08-Jul-14	14-Jul-14	-118
Seawall Portion B at K013 - K017		5	21-Apr-14	25-Apr-14	-149
RFB1-0100	PB at K013 - K017 UnderLayer 0mPD	5	21-Apr-14	25-Apr-14	-149
Seawall Portion B at K018 - K022		10	21-Apr-14	30-Apr-14	-149
RFB2-0090	PB at K018 - K022 Rockfill (Cat1) upto +6.0mPD & geotextile laying 1620m3	5	21-Apr-14	25-Apr-14	-157
RFB2-0100	PB at K018 - K022 UnderLayer 0mPD	5	26-Apr-14	30-Apr-14	-149
Seawall Portion B at K023 - K027		18	21-Apr-14	09-May-14	-152



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

TASK filter: Three Month Rolling.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
RFB3-0080	PB at K023 - K027 Rockfill (Cat1) for platform upto +2.5mPD 4680m3	8	21-Apr-14	28-Apr-14	-202
RFB3-0090	PB at K023 - K027 Rockfill (Cat1) upto +6.0mPD & geotextile laying 1620m3	5	29-Apr-14	03-May-14	-160
RFB3-0100	PB at K023 - K027 UnderLayer 0mPD	5	05-May-14	09-May-14	-152
Conforming Sloping Seawalls		139	24-Feb-14 A	17-Aug-14	-40
Geotextile		113	24-Feb-14 A	20-Jul-14	-14
Seawall Portion B at K028 - K040		26	24-Feb-14 A	02-Apr-14 A	
SGB2-000	PB Geotextile at K028 - K040	26	24-Feb-14 A	02-Apr-14 A	
Seawall Portion B at K041 - K051		22	03-Apr-14 A	28-Apr-14	-27
SGB3-000	PB Geotextile at K041 - K051	22	03-Apr-14 A	28-Apr-14	-27
Seawall Portion C2a at C112 - C103 10cells		20	11-May-14	31-May-14	-127
SGC2a-000	PC2a Geotextile at C112 - C103 10cells	20	11-May-14	31-May-14	-127
Seawall Portion C2c at C102 - C091 12cells		24	02-Jun-14	26-Jun-14	-84
SGC2c-000	PC2c Geotextile at C102 - C091 12cells	24	02-Jun-14	26-Jun-14	-84
Seawall Portion E2 at K052 - C067 16cells		39	31-May-14	11-Jul-14	-6
SGE2-000	PE2 Geotextile at K052 - K062 11cells	11	31-May-14	11-Jun-14	-57
SGE2-010	PE2 Geotextile at K063 - K067 5cells	12	30-Jun-14	11-Jul-14	-6
Seawall Portion E1 at C068 - C090 23cells		22	27-Jun-14	20-Jul-14	-40
SGE1-010	PE1 Geotextile at C090 - C080 11cells	22	27-Jun-14	20-Jul-14	-40
Rockfill		121	03-Mar-14 A	17-Aug-14	-64
Seawall Portion B at K028 - K040		50	03-Mar-14 A	11-Apr-14 A	
RFB1-000	PB Rockfill at K028 - K040 Rockfill 13cells	50	03-Mar-14 A	11-Apr-14 A	
Seawall Portion B at K041 - K051		18	12-Apr-14 A	05-May-14	-115
RFB3-000	PB Rockfill at K041 - K051 Rockfill 11cells	18	12-Apr-14 A	05-May-14	-115
Seawall Portion C2a at C112 - C103 10cells		40	14-May-14	25-Jun-14	-128



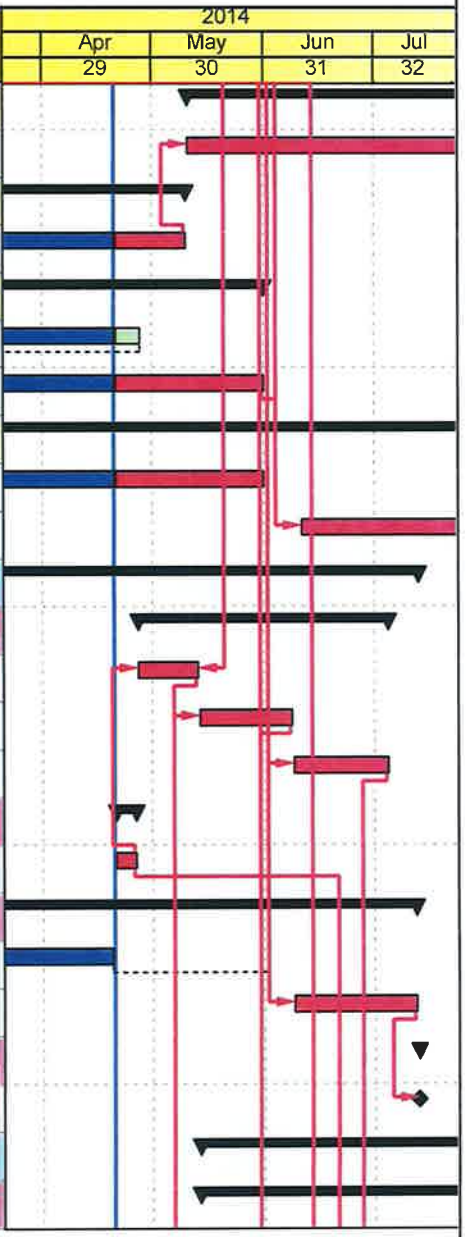
Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

TASK filter: Three Month Rolling.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
RFC2a-000	PC2a Rockfill at C112 - C103 Rockfill 10cells	40	14-May-14*	25-Jun-14	-128
Seawall Portion C2c at C102 - C091 12cells		48	27-Jun-14	17-Aug-14	-84
RFC2c-000	PC2c Rockfill at C102 - C091 12cells	48	27-Jun-14	17-Aug-14	-84
Seawall Portion E2 at K052 - C067 16cells		55	12-Jun-14	09-Aug-14	-57
RFE2-010	PE2 Rockfill at C052 - C062 11cells	55	12-Jun-14	09-Aug-14	-57
Reclamation		283	23-Aug-13 A	08-Sep-14	955
Ground Treatment		283	23-Aug-13 A	08-Sep-14	955
Geotextile		16	08-Mar-14 A	02-May-14	1007
Existing Seabed above -5mPD		16	08-Mar-14 A	02-May-14	1007
Land Portion B		12	08-Mar-14 A	02-May-14	1007
GERB0-020	PB Geotextile for sand blanket at K041 - K051	12	08-Mar-14 A	02-May-14	1007
Land Portion E2 Southern Part		8	20-Mar-14 A	27-Apr-14	1012
GERE2-012	PE2 Geotextile for sand blanket Southern (seabed above -5mPD)	8	20-Mar-14 A	27-Apr-14	1012
Sand Blankets		175	01-Nov-13 A	10-Jun-14	971
Existing Seabed below -5mPD		29	01-Nov-13 A	10-Jun-14	-189
Land Portion E2 Northern Part		29	01-Nov-13 A	10-Jun-14	-189
SABRE2-010	Sand Blankets at PE2 142,000m3 5,000m3/day North	29	01-Nov-13 A	10-Jun-14	-189
Existing Seabed Above -5mPD		99	01-Nov-13 A	09-May-14	1001
Land Portion B		43	01-Nov-13 A	08-May-14	1002
SABRB0-020	Sand Blankets at PB Main K028 - K051 200,550m3 5,000m3/day	40	01-Nov-13 A	08-May-14	1002
SABRB0-030	Sand Blankets at PB Edge K028 - K051 200,550m3 10,000m3/day	20	14-Mar-14 A	05-May-14	-167
Land Portion E2 Southern Part		28	24-Mar-14 A	09-May-14	-17
SABRE2-012	Sand Blankets at PE2 142,000m3 5,000m3/day South	28	24-Mar-14 A	09-May-14	-17
Vertical Band Drains by Marine Plant		236	23-Aug-13 A	08-Sep-14	-88

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

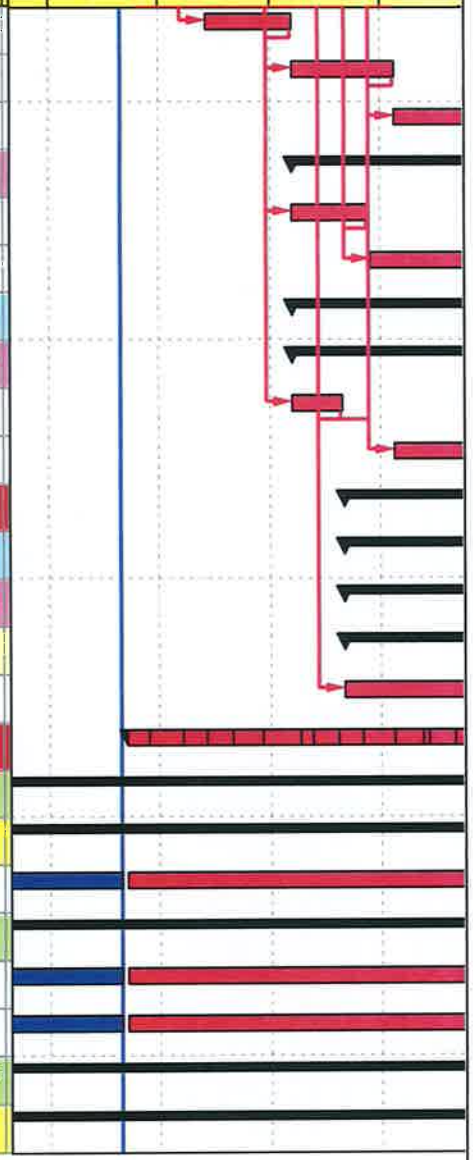
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
Land Portion C2a 115,258nrs		86	11-May-14	11-Aug-14	-234
VBDC2a-020	Vertical Band Drains 64250nrs by marine plant at PC2a (750nrs/day)	86	11-May-14*	11-Aug-14	-234
Land Portion C2c 62,400nrs		30	09-Feb-14 A	10-May-14	-234
VBDC2c-020	Vertical Band Drains 22,208nrs by marine plant at PC2c (750nrs/ady)	30	09-Feb-14 A	10-May-14	-234
Land Portion C2b 62,400nrs		150	23-Aug-13 A	31-May-14	4
VBDC2b-010	Vertical Band Drains 12,896nrs by marine plant at PC2b upto 10Dec2013	42	23-Aug-13 A	27-Apr-14	36
VBDC2b-020	Vertical Band Drains 49,504nrs by marine plant at PC2b (750nrs/day)	66	13-Feb-14 A	31-May-14	-180
Land Portion E2 Northern Part 84,746nrs		229	02-Oct-13 A	08-Sep-14	-189
VBDE2-010	Vertical Band Drains 23,032nrs by marine plant at PE2 upto 5Dec2013	57	02-Oct-13 A	31-May-14	-97
VBDE2-020	Vertical Band Drains 61,714nrs by marine plant at PE2 (750nrs/day)	83	11-Jun-14	08-Sep-14	-189
Marine Fill		114	24-Jan-14 A	13-Jul-14	-82
Land Portion B		64	27-Apr-14	04-Jul-14	-199
MFB1-010	Marine Fill Type A Sand 100% at PB Edge at K013 - K027 473,522m3 30,000m3/day	16	27-Apr-14	13-May-14	-216
MFB2-010	Marine Fill Type A Sand 100% at PB Main at K028 - K051 710,283m3 30,000m3/day	24	14-May-14*	08-Jun-14	-207
MFB3-010	Marine Fill Type A Sand 100% at PB Edge at K028 - K051 710,283m3 30,000m3/day	24	09-Jun-14	04-Jul-14	-199
Land Portion C1a		6	21-Apr-14	26-Apr-14	-216
MFC1a-010	Marine Fill Type A Sand 100% at PC1a 166,355m3 30,000m3/day	6	21-Apr-14	26-Apr-14	-216
Land Portion C1b		106	24-Jan-14 A	12-Jul-14	-207
MFC1b-010	Marine Fill Type A Sand 100% at PC1b west 477,472m3 15,000m3/day	32	24-Jan-14 A	20-Apr-14 A	
MFC1b-030	Marine Fill Type A Sand 100% at PC1b east 477,472m3 15,000m3/day	32	09-Jun-14	12-Jul-14	-207
Land Portion E2		0	13-Jul-14	13-Jul-14	-82
MFE2-005	Start after Marine Fill Type A Sand 100% at PC1b	0	13-Jul-14		-82
Vertical Band Drains by Land Plant		95	14-May-14	23-Aug-14	-216
Land Portion B 258,966nrs		72	14-May-14	30-Jul-14	-199



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

TASK filter: Three Month Rolling.

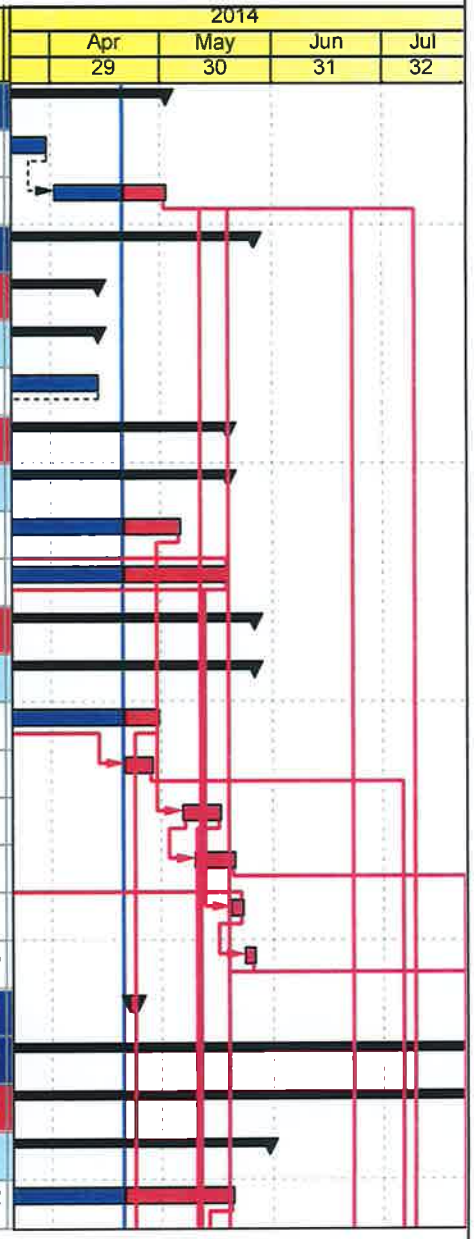
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
VBDB0-010	Vertical Band Drains by land plant at PB Edge K013 - K027 64,742nrs 3,000nrs/day	22	14-May-14	06-Jun-14	-216
VBDB0-030	Vertical Band Drains by land plant at PB Main K028 - K051 76,582nrs 3,000nrs/day	26	07-Jun-14	04-Jul-14	-203
VBDB0-040	Vertical Band Drains by land plant at PB Edge K028 - K051 70,112nrs 3,000nrs/day	24	05-Jul-14	30-Jul-14	-199
Land Portion C1a 139,520nrs		73	07-Jun-14	23-Aug-14	-216
VBDC1a-010	Vertical Band Drains 60,000nrs by land plant at PC1a 3,000nrs/day before PB ready	20	07-Jun-14	27-Jun-14	-216
VBDC1a-020	Vertical Band Drains 79,520nrs by land plant at PC1a 1,500nrs/day	53	28-Jun-14	23-Aug-14	-216
Earthwork Fill		45	07-Jun-14	24-Jul-14	-203
Land Portion B		45	07-Jun-14	24-Jul-14	-203
EFB0-010	Earthwork Fill Type D Sand 100% at PB Edge at K013 - K027 380,683m3 30,000m3/day	13	07-Jun-14	20-Jun-14	-191
EFB0-020	Earthwork Fill Type D Sand 100% at PB Main at K028 - K051 571,024m3 30,000m3/day	19	05-Jul-14	24-Jul-14	-203
Surcharge		60	21-Jun-14	19-Aug-14	-211
Land Portion B		60	21-Jun-14	19-Aug-14	-211
Edge Areas		60	21-Jun-14	19-Aug-14	-211
at K013 - K027		60	21-Jun-14	19-Aug-14	-211
SUEB0-005	Surcharge Period 2mths after earthfill upto +5.5mPD at PB at K013-K027	60	21-Jun-14	19-Aug-14	-211
Geotechnical Instrumentation Works		315	22-Apr-14	02-Mar-15	780
Works Area WA2 (Tung Chung)		1431	21-May-12 A	28-Feb-17	0
Zone A		1431	21-May-12 A	28-Feb-17	0
A1880	Maintenance of Engineer's Accommodation	1433	21-May-12 A	28-Feb-17	0
Works Area TKO Fill Bank		1251	25-Sep-12 A	30-Nov-16	0
WA-TKO-1040	Operate and Maintain Public Fill Sorting Facilities in Zone A, B1 & B2	1253	25-Sep-12 A	30-Nov-16	0
WA-TKO-1050	Maintainance of Site in Zone C	569	25-Sep-12 A	22-Aug-14	0
Portion A		332	20-Dec-13 A	16-Nov-14	-198
Portion A		332	20-Dec-13 A	16-Nov-14	-198



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

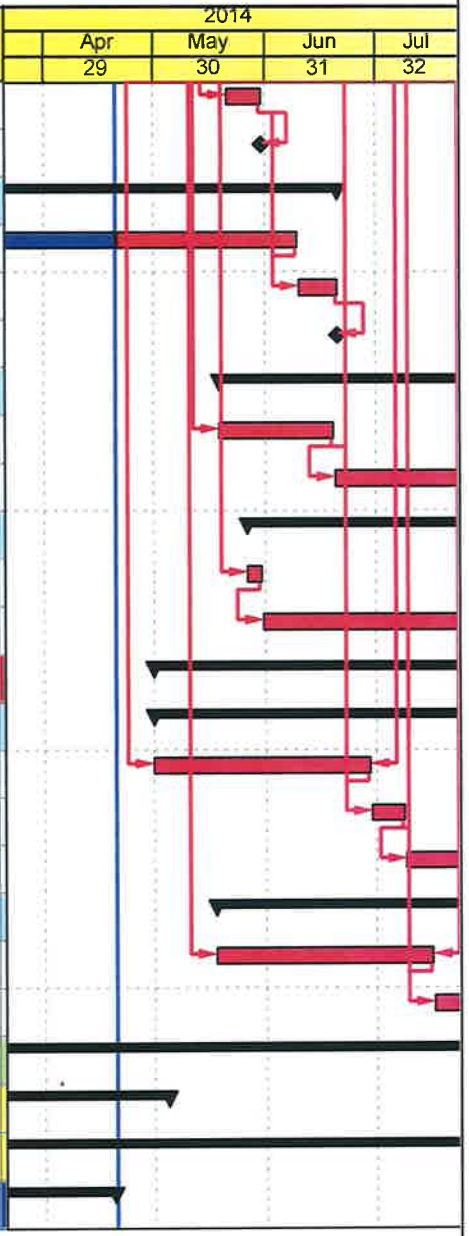
TASK filter: Three Month Rolling.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
Temporary Pier		99	22-Feb-14 A	02-May-14	-192
TP0010	Construction of Temporary Piers	30	22-Feb-14 A	31-Mar-14 A	
TP0020	Construction of Conveyors for public fill	30	02-Apr-14 A	02-May-14	-192
Reclamation		158	20-Dec-13 A	26-May-14	-113
Portion A Marine Fill upto +2.5mPD		9	20-Dec-13 A	14-Apr-14 A	
Land Portion A		9	20-Dec-13 A	14-Apr-14 A	
MFA0-070	Marine Fill Type A Sand 100% at PA Edge Area at C127 - C134 265,005m3 30,000m3/day CLP Substation	9	20-Dec-13 A	14-Apr-14 A	
Portion A Land Band Drain		32	10-Feb-14 A	19-May-14	-168
Land Portion A 233,590nrs		32	10-Feb-14 A	19-May-14	-168
VBDA0-070	Vertical Band Drains 36,915nrs by Land plant at PA Edge Side 3,000nrs/day	12	10-Feb-14 A	06-May-14	-188
VBDA0-060	Vertical Band Drains 66,700nrs by Land plant at PA Stg3 3,000nrs/day w CLP substation	22	28-Feb-14 A	19-May-14	-168
Portion A Earthwork Fill upto +5.5mPD		82	06-Mar-14 A	26-May-14	-113
Land Portion A		82	06-Mar-14 A	26-May-14	-113
EFA0-050	Earthwork Fill Type D Sand 100% at PA at C122 - C126 Edge Area 146,046m3 30,000m3/day	5	06-Mar-14 A	30-Apr-14	-183
EFA0-060	Compaction at PA at C118 - C126 Edge Area	8	21-Apr-14	28-Apr-14	-96
EFA0-090	Earthwork Fill Type D Sand 100% at PA other area 335,949m3 30,000m3/day	11	07-May-14	17-May-14	-188
EFA0-100	Compaction at PA at C127 - C134 other area	12	10-May-14	21-May-14	-108
EFA0-070	Earthwork Fill Type D Sand 100% at PA at C127 - C134 Edge Area 120,000m3 30,000m3/day at CLP area	4	20-May-14	23-May-14	-168
EFA0-080	Compaction at PA at C127 - C134 Edge Area CLP substation	3	24-May-14	26-May-14	-186
Portion A Instrumentation		3	22-Apr-14	24-Apr-14	-43
Portion A Surcharge		266	05-Feb-14 A	16-Nov-14	-198
Main Reclamation Areas		266	05-Feb-14 A	16-Nov-14	-201
PCB East		105	05-Feb-14 A	30-May-14	-31
SURA0-120	Surcharge Period at PA PCB East 3.5mths (8-4.5=3.5mths)	105	05-Feb-14 A	20-May-14	-42



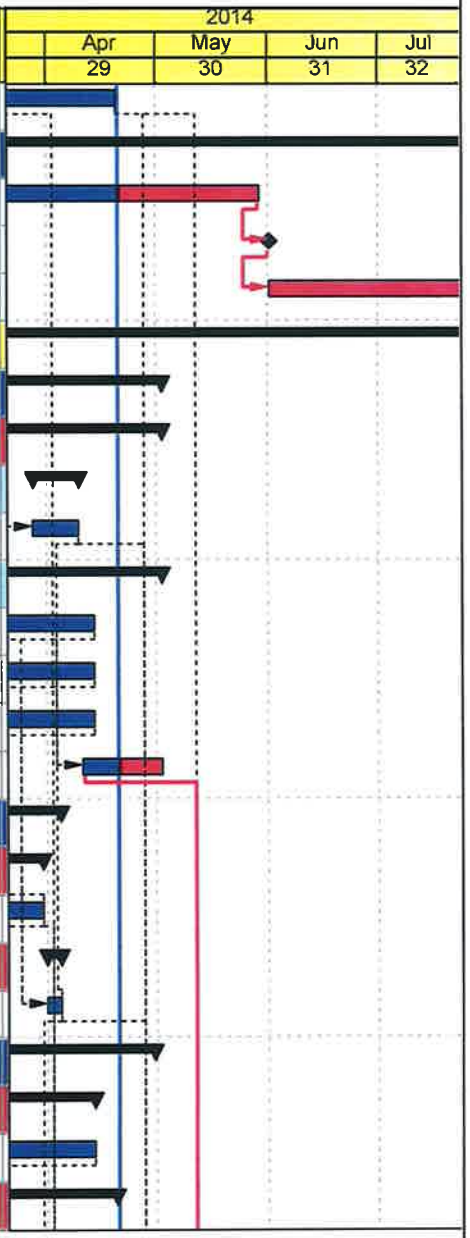
Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
SURA0-130	Sanf Surcharge Removal at PA PCB East 120,388m3 20,000m3/day	10	21-May-14	30-May-14	-39
SURA0-140	Completion of PA PCB East	0		30-May-14	-31
PCB West		117	24-Feb-14 A	20-Jun-14	-52
SURA0-220	Surcharge Period at PA PCB West 3.5mths (8-4.5=3.5mths)	105	24-Feb-14 A	09-Jun-14	-52
SURA0-230	Sand Surcharge Removal at PA PCB West 120,388m3 20,000m3/day	10	10-Jun-14	20-Jun-14	-48
SURA0-240	Completion of PA PCB West	0		20-Jun-14	-52
at C122 - C126 other than PCB Area		182	19-May-14	16-Nov-14	-207
SURA0-410	Surcharge Laying upto +11.5mPD & compaction upto +8.5mPD on Main Area at PA 644,132m3 20,000m3/day	30	19-May-14	19-Jun-14	-188
SURA0-420	Surcharge Period on Main Area at PA 6mth (8-2-1=5mths)	150	20-Jun-14	16-Nov-14	-207
at C127 - C134 for Power Substation Area		154	27-May-14	27-Oct-14	-185
SURA0-310	Surcharge Laying upto +11.5mPD & compaction upto +8.5mPD on Main Area at PA CLP substation 78,090m3 20,000m3/day	4	27-May-14	30-May-14	-168
SURA0-320	Surcharge Period on Main Area at PA CLP substation 6mth (8-2-1=5mths)	150	31-May-14	27-Oct-14	-185
Edge Areas		129	01-May-14	06-Sep-14	-127
at C125 - C119		129	01-May-14	06-Sep-14	-127
SUEA0-055	Pause Period on Edge Area at PA 2mths	60	01-May-14	29-Jun-14	-128
SUEA0-060	Surcharge Laying & compaction upto 8.5mPD on Edge Area at PA 90,469m3 10,000m3/day	9	30-Jun-14	08-Jul-14	-118
SUEA0-070	Surcharge Pause Period on Edge Area at PA 2mths	60	09-Jul-14	06-Sep-14	-127
at C134 - C126		69	18-May-14	25-Jul-14	-134
SUEA0-005	Pause Period on Edge Area at PA 2mths	60	18-May-14	16-Jul-14	-134
SUEA0-010	Surcharge Laying & compaction upto 8.5mPD on Edge Area at PA 90,469m3 10,000m3/day	9	17-Jul-14	25-Jul-14	-124
Portion D		748	11-Dec-12 A	28-Dec-14	844
Submission		510	11-Dec-12 A	04-May-14	1082
Precast Yard for Seawall Blocks & Culverts		468	19-Apr-13 A	30-Jul-14	-102
Concrete Blocks		246	19-Apr-13 A	20-Apr-14 A	



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

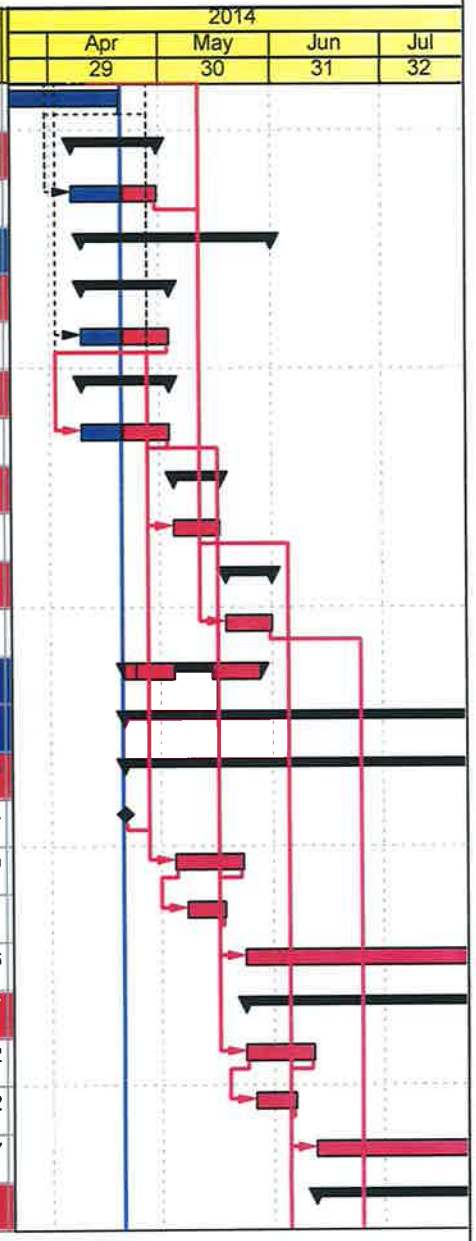
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PD-PY1-0100	Seawall Blocks for Temporary construction 1,190nrs	246	19-Apr-13 A	20-Apr-14 A	
Culverts		132	02-Jan-14 A	30-Jul-14	-102
PD-PY-0100	Precast Yard Setup	60	02-Jan-14 A	29-May-14	-100
PD-PY-0200	Commencement of Preccst Box Culvert	0	01-Jun-14*		-102
PD-PY-0210	Precast C1 6nrs	60	01-Jun-14	30-Jul-14	-102
Site Construction		347	16-Jan-14 A	28-Dec-14	844
Seawall Construction		119	16-Jan-14 A	02-May-14	-76
Temporary Seawall		119	16-Jan-14 A	02-May-14	-76
Temporary Seawall CH5+900 - CH5+800 (100m)		12	28-Mar-14 A	10-Apr-14 A	
PDTS-30060	V2 East1 Temporary Seawal Seawall blocks installation 350nrs	12	28-Mar-14 A	10-Apr-14 A	
Temporary Seawall CH5+800 - CH5+650 (150m)		119	16-Jan-14 A	02-May-14	-76
PDTS-40050	V2 East2 Temporary Seawal Stone Aggregate 45,198m3 2,500m3/day	18	16-Jan-14 A	14-Apr-14 A	
PDTS-40030	S1 East2 Temporary Seawal Rockfill type1 14,600m3	5	21-Jan-14 A	14-Apr-14 A	
PDTS-40040	S1 East2 Temporary Seawal Stone Aggregate 43,527m3 2,500m3/day	18	26-Jan-14 A	14-Apr-14 A	
PDTS-40060	V2 East2 Temporary Seawal Seawall blocks installation 350nrs	12	11-Apr-14 A	02-May-14	-76
Reclamation below +2.5mPD		13	20-Mar-14 A	05-Apr-14 A	
East1 (South CH 225 - 325 & North CH 5900 - 5800)		5	20-Mar-14 A	31-Mar-14 A	
A1635c	PD - Marine Fill Type A sand 100% upto +2.5mPD at East1 43,754m3 10,000m3/day	5	20-Mar-14 A	31-Mar-14 A	
East2 (South CH 325 - 450 & North CH 5800 - 5650)		5	01-Apr-14 A	05-Apr-14 A	
A1635c10	PD - Marine Fill Type A sand 100% upto +2.5mPD at East2 43,754m3 10,000m3/day	5	01-Apr-14 A	05-Apr-14 A	
Vertical Band Drain by Land Base		44	05-Feb-14 A	30-Apr-14	-86
West2 (South CH 100 -225 & North CH6000 - 5900)		12	05-Feb-14 A	14-Apr-14 A	
A2150	PD - Install vertical band drain 6,170nrs at West2 by Land Plant 520nrs/day	12	05-Feb-14 A	14-Apr-14 A	
East1 (North CH 225 - 325 & CH 5900 - 5800)		12	14-Mar-14 A	20-Apr-14 A	



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

TASK filter: Three Month Rolling.

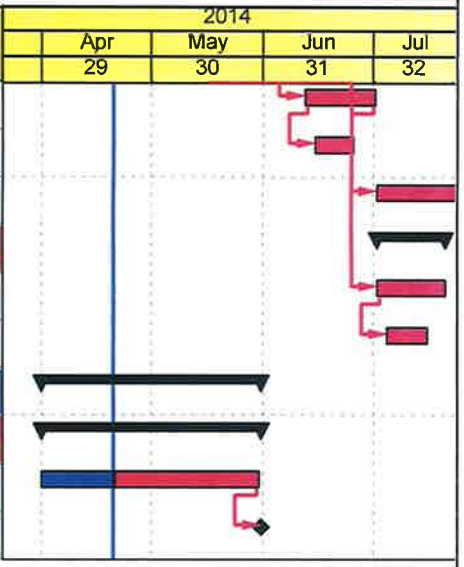
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
A1636	PD - Install vertical band drain 6,170nrs drain at East1 by Land Plant 520nrs/day	12	14-Mar-14 A	20-Apr-14 A	
East2 (North CH 325 - 450 & CH 5800 - 5700)		12	07-Apr-14 A	30-Apr-14	-86
A2160	PD - Install vertical band drain 6,170nrs drain at East2 by Land Plant 520nrs/day	12	07-Apr-14 A	30-Apr-14	-86
Reclamation Above +2.5mPD		39	10-Apr-14 A	31-May-14	-102
West1 (South CH 0 -100 & North CH6136 - 6000)		13	10-Apr-14 A	03-May-14	-159
A1633	PD - Earthwork Fill upto + 5.5 mPD at West1 61,483m3 5,000m3/day	13	10-Apr-14 A	03-May-14	-159
West2 (South CH 100 -225 & North CH6000 - 5900)		13	10-Apr-14 A	03-May-14	-124
A2120	PD - Earthwork Fill upto + 5.5 mPD at West2 61,483m3 5,000m3/day	13	10-Apr-14 A	03-May-14	-124
East1 (North CH 225 - 325 & CH 5900 - 5800)		13	05-May-14	17-May-14	-114
A1665	PD - Earthwork Fill upto + 5.5 mPD at East1 61,483m3 5,000m3/day	13	05-May-14	17-May-14	-114
East2 (North CH 325 - 450 & CH 5800 - 5700)		13	19-May-14	31-May-14	-102
A2170	PD - Earthwork Fill upto + 5.5 mPD at East2 61,483m3 5,000m3/day	13	19-May-14	31-May-14	-102
Instrumentation & Monitoring Requirements		38	21-Apr-14	28-May-14	1058
Surcharge		252	21-Apr-14	28-Dec-14	-151
West1 Portion		213	21-Apr-14	19-Nov-14	-176
A1638	PD - Access Road for delivery of public fill material	0	21-Apr-14*		-163
A1640	PD - Surcharge Laying at West1 88,754m3 5,000m3/day	18	05-May-14	23-May-14	-159
A1650	PD - Surcharge compaction upto 8.5mPD at West1	11	08-May-14	18-May-14	-171
A1660	PD - Surcharge Period at West1 6mths	180	24-May-14	19-Nov-14	-176
West2 Portion		199	24-May-14	08-Dec-14	-157
A2200	PD - Surcharge Laying at West2 88,754m3 5,000m3/day	18	24-May-14	11-Jun-14	-142
A2210	PD - Surcharge compaction upto 8.5mPD at West2	11	27-May-14	06-Jun-14	-152
A2220	PD - Surcharge Period at West2 6mths	180	12-Jun-14	08-Dec-14	-157
East1 Portion		200	12-Jun-14	28-Dec-14	-151



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

TASK filter: Three Month Rolling.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
A1675	PD - Surcharge Laying at East1 88,754m3 5,000m3/day	18	12-Jun-14	01-Jul-14	-137
A1680	PD - Surcharge Compaction upto 8.5mPD at East1	11	15-Jun-14	25-Jun-14	-145
A1685	PD - Surcharge Period at East1 6mths	180	02-Jul-14	28-Dec-14	-151
East2 Portion		19	02-Jul-14	20-Jul-14	-140
A2240	PD - Surcharge Laying at East2 88,754m3 5,000m3/day	18	02-Jul-14	20-Jul-14	-130
A2250	PD - Surcharge Compaction upto 8.5mPD at East2	11	05-Jul-14	15-Jul-14	-135
Access at Portion D		40	01-Apr-14 A	31-May-14	-181
Temporary Access to Portion A		40	01-Apr-14 A	31-May-14	-181
A1080	PD Construction of Access to PA	30	01-Apr-14 A	30-May-14	-181
A1085	PD Provide Access to PA	0	31-May-14		-181



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
AMS3A*	368 μg/m^3	500 μg/m^3
AMS6	360 μg/m^3	500 μg/m^3
AMS7	370 μg/m^3	500 μg/m^3

Remarks: * Action Level set out at AMS3 Ho Yu College 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
AMS3A*	167 μg/m^3	260 μg/m^3
AMS6	173 μg/m^3	260 μg/m^3
AMS7	183 μg/m^3	260 μg/m^3

Remarks: * Action Level set out at AMS3 Ho Yu College 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)
NMS3A		*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:	Cheung Hung Wai
Cal. Date:	11-Feb-14	Next Due Date:	11-May-14
Equipment No.:	A-001-78T	Serial No.	3383

Ambient Condition			
Temperature, Ta (K)	281	Pressure, Pa (mmHg)	765.0

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	**mc x Qstd + bc = [DH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	20-May-14	**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	8.9	3.08	1.57	46.0	47.49
13	7.4	2.81	1.43	41.0	42.33
10	6.2	2.57	1.31	37.0	38.20
7	4.6	2.21	1.13	31.0	32.01
5	2.7	1.70	0.86	23.0	23.75

By Linear Regression of Y on X

Slope , mw = **33.3229** **Intercept, bw =** **-5.1834**

Correlation Coefficient* = **0.9989**

*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)]$^{1/2}$= **36.94**

Remarks: _____

QC Reviewer: _____ Signature: _____ Date: 13-2-14

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:	2-Apr-14	Next Due Date:	2-Jun-14
Equipment No.:	A-001-79T	Serial No.	3384

Ambient Condition			
Temperature, Ta (K)	297	Pressure, Pa (mmHg)	763.2

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-May-14	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Resistance Plate No.	Orifice			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	8.3	2.89	1.47	48.0	48.21
13	6.8	2.62	1.33	43.0	43.18
10	5.2	2.29	1.16	34.0	34.15
7	4.1	2.03	1.03	28.0	28.12
5	2.5	1.59	0.80	19.0	19.08

By Linear Regression of Y on X

Slope , mw = **44.5628** **Intercept, bw =** **-17.2050**

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

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

Therefore, Set Point; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2}$ = **40.55**

Remarks: _____

QC Reviewer: K. H. SHEK Signature: Mike Date: 3. Apr. 14

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Hong Kong SkyCity Marriott Hotel (AMS7)	Operator:	Cheung Hung Wai
Cal. Date:	11-Feb-14	Next Due Date:	11-May-14
Equipment No.:	A-001-80T	Serial No.	3385

Ambient Condition			
Temperature, Ta (K)	281	Pressure, Pa (mmHg)	765.0

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-May-14	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	7.9	2.90	1.48	45.0	46.49
13	6.6	2.65	1.35	41.0	42.36
10	5.2	2.36	1.20	33.0	34.10
7	4.0	2.07	1.05	26.0	26.86
5	3.1	1.82	0.92	20.0	20.66

By Linear Regression of Y on X

Slope , mw = **47.4861** **Intercept, bw =** **-22.8861**

Correlation Coefficient* = **0.9956**

*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; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2} =$ **37.60**

Remarks: _____

QC Reviewer: HY Sum Signature: _____ Date: 13-2-14

TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 20, 2013 Rootsmeter S/N 0438320 Ta (K) - 297
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	1.3900	3.2	2.00
2	NA	NA	1.00	0.9720	6.4	4.00
3	NA	NA	1.00	0.8670	7.9	5.00
4	NA	NA	1.00	0.8270	8.7	5.50
5	NA	NA	1.00	0.6800	12.6	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
0.9884	0.7110	1.4090
0.9842	1.0125	1.9926
0.9821	1.1327	2.2278
0.9811	1.1863	2.3365
0.9759	1.4352	2.8179

Qstd slope (m) = 1.94727
intercept (b) = 0.02332
coefficient (r) = 0.99998

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Va	(x axis) Qa	(y axis)
0.9957	0.7163	0.8889
0.9915	1.0201	1.2570
0.9894	1.1412	1.4054
0.9884	1.1952	1.4740
0.9832	1.4459	1.7777

Qa slope (m) = 1.21935
intercept (b) = 0.01471
coefficient (r) = 0.99998

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*:	*18 May 2013*		

*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	*18-05-13*	*12:30 - 13:30*	*28.1*	*78*	*0.04714*	*1887*	*31.45*
2	*18-05-13*	*13:30 - 14:30*	*28.1*	*78*	*0.04932*	*1970*	*32.83*
3	*18-05-13*	*14:30 - 15:30*	*28.2*	*77*	*0.05156*	*2056*	*34.27*
4	*18-05-13*	*15:30 - 16:30*	*28.1*	*78*	*0.05083*	*2026*	*33.77*

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: *0.9978*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 20 May 2013

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*:	*18 May 2013*		

*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	*18-05-13*	*12:30 - 13:30*	*28.1*	*78*	*0.04714*	*1764*	*29.40*
2	*18-05-13*	*13:30 - 14:30*	*28.1*	*78*	*0.04932*	*1846*	*30.77*
3	*18-05-13*	*14:30 - 15:30*	*28.2*	*77*	*0.05156*	*1935*	*32.25*
4	*18-05-13*	*15:30 - 16:30*	*28.1*	*78*	*0.05083*	*1899*	*31.65*

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: *0.9976*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 20 May 2013

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*:	*18 May 2013*		

*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	*18-05-13*	*12:30 - 13:30*	*28.1*	*78*	*0.04714*	*1885*	*31.42*
2	*18-05-13*	*13:30 - 14:30*	*28.1*	*78*	*0.04932*	*1965*	*32.75*
3	*18-05-13*	*14:30 - 15:30*	*28.2*	*77*	*0.05156*	*2059*	*34.32*
4	*18-05-13*	*15:30 - 16:30*	*28.1*	*78*	*0.05083*	*2024*	*33.73*

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: *0.9973*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: _____ Date: 20 May 2013

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*:	*18 May 2013*		

*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	*18-05-13*	*12:30 - 13:30*	*28.1*	*78*	*0.04714*	*1886*	*31.43*
2	*18-05-13*	*13:30 - 14:30*	*28.1*	*78*	*0.04932*	*1968*	*32.80*
3	*18-05-13*	*14:30 - 15:30*	*28.2*	*77*	*0.05156*	*2061*	*34.35*
4	*18-05-13*	*15:30 - 16:30*	*28.1*	*78*	*0.05083*	*2026*	*33.77*

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: *0.9983*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: _____ Date: 20 May 2013

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*:	*18 May 2013*		

*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	*18-05-13*	*12:15 - 13:15*	*28.1*	*78*	*0.04685*	*1871*	*31.18*
2	*18-05-13*	*13:15 - 14:15*	*28.1*	*78*	*0.04941*	*1979*	*32.98*
3	*18-05-13*	*14:15 - 15:15*	*28.2*	*77*	*0.05127*	*2055*	*34.25*
4	*18-05-13*	*15:15 - 16:15*	*28.1*	*78*	*0.05060*	*2021*	*33.68*

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: *0.9976*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 20 May 2013

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*:	*18 May 2013*		

*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	*18-05-13*	*12:15 - 13:15*	*28.1*	*78*	*0.04685*	*1867*	*31.12*
2	*18-05-13*	*13:15 - 14:15*	*28.1*	*78*	*0.04941*	*1975*	*32.92*
3	*18-05-13*	*14:15 - 15:15*	*28.2*	*77*	*0.05127*	*2048*	*34.13*
4	*18-05-13*	*15:15 - 16:15*	*28.1*	*78*	*0.05060*	*2017*	*33.62*

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: *0.9986*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 20 May 2013

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*:	*18 May 2013*		

*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	*18-05-13*	*12:15 - 13:15*	*28.1*	*78*	*0.04685*	*2005*	*33.42*
2	*18-05-13*	*13:15 - 14:15*	*28.1*	*78*	*0.04941*	*2121*	*35.35*
3	*18-05-13*	*14:15 - 15:15*	*28.2*	*77*	*0.05127*	*2194*	*36.57*
4	*18-05-13*	*15:15 - 16:15*	*28.1*	*78*	*0.05060*	*2167*	*36.12*

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: *0.9987*

Validity of Calibration Record: *17 May 2014*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 20 May 2013

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.: 13CA1107 01-02 **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:	07-Nov-2013

Date of test: 08-Nov-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	17-Apr-2014	SCL
Preamplifier	B&K 2673	2239857	16-Apr-2014	CEPREI
Measuring amplifier	B&K 2610	2346941	24-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI
Digital multi-meter	34401A	US36087050	10-Dec-2013	CEPREI
Audio analyzer	8903B	GB41300350	15-Apr-2014	CEPREI
Universal counter	53132A	MY40003662	15-Apr-2014	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1000 ± 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:** 11-Nov-2013 **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.

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

CERTIFICATE OF CALIBRATION

Certificate No.: 13CA1107 01-01 **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:	07-Nov-2013

Date of test: 08-Nov-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	22-Jun-2014	CIGISMEC
Signal generator	DS 360	33873	15-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI

Ambient conditions

Temperature:	22 ± 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:** 11-Nov-2013 **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.

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.: 14CA0305 06-01 **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.:	2285692 N.009.04	,	2250420
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO. LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	05-Mar-2014

Date of test: 07-Mar-2014

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	22-Jun-2014	CIGISMEC
Signal generator	DS 360	33873	15-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI

Ambient conditions

Temperature:	22 ± 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:** 12-Mar-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.

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1400792
Date of Issue: 10/01/2014
Client: AECOM ASIA COMPANY LIMITED

Equipment Type: YSI Sonde
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 09 January, 2014 Date of next Calibration: 09 April, 2014

Parameters:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	150.5	2.5
6667	6580	-1.3
12890	12650	-1.9
58670	58580	-0.2
	Tolerance Limit (±%)	10.0

Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.80	3.78	-0.02
5.85	5.80	-0.05
7.65	7.61	-0.04
	Tolerance Limit (±mg/L)	0.20

pH Value

Method Ref: APHA 21st Ed. 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.08	0.08
7.0	7.05	0.05
10.0	9.97	-0.03
	Tolerance Limit (±pH unit)	0.20

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0	--
10	9.89	-1.1
20	19.77	-1.2
30	29.50	-1.7
	Tolerance Limit (±%)	10.0

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: HK1400792
Date of Issue: 10/01/2014
Client: AECOM ASIA COMPANY LIMITED

Equipment Type: YSI Sonde
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 09 January, 2014 Date of next Calibration: 09 April, 2014

Parameters:

Temperature

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

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
12.5	12.48	0.0
25.0	24.86	-0.1
36.0	35.85	-0.1
	Tolerance Limit (±°C)	2.0

Turbidity

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0	--
4	4.1	2.5
10	10.4	4.0
20	20.3	1.5
50	49.3	-1.4
100	100.5	0.5
	Tolerance Limit (±%)	10.0

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: HK1404442
Date of Issue: 20/02/2014
Client: AECOM ASIA COMPANY LIMITED

Equipment Type: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 13 February, 2014 Date of next Calibration: 13 May, 2014

Parameters:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	150.5	2.5
6667	6566	-1.5
12890	12650	-1.9
58670	57730	-1.6
	Tolerance Limit (±%)	10.0

Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.40	3.35	-0.05
5.50	5.47	-0.03
7.65	7.62	-0.03
	Tolerance Limit (±mg/L)	0.20

pH Value

Method Ref: APHA 21st Ed. 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.04	0.04
7.0	7.06	0.06
10.0	10.05	0.05
	Tolerance Limit (±pH unit)	0.20

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.02	--
10	9.85	-1.5
20	19.78	-1.1
30	29.54	-1.5
	Tolerance Limit (±%)	10.0

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: HK1404442
Date of Issue: 20/02/2014
Client: AECOM ASIA COMPANY LIMITED

Equipment Type: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 13 February, 2014 Date of next Calibration: 13 May, 2014

Parameters:

Temperature

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

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
14.0	14.06	0.1
26.0	25.88	-0.1
38.5	38.45	0.0
	Tolerance Limit (±°C)	2.0

Turbidity

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	4.0	0.0
10	10.3	3.0
20	20.4	2.0
50	50.5	1.0
100	100.7	0.7
	Tolerance Limit (±%)	10.0

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: HK1404435
Date of Issue: 20/02/2014
Client: AECOM ASIA COMPANY LIMITED

Equipment Type: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 13 February, 2014 Date of next Calibration: 13 May, 2014

Parameters:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	151.0	2.8
6667	6558	-1.6
12890	12670	-1.7
58670	58020	-1.1
	Tolerance Limit (±%)	10.0

Dissolved Oxygen

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.40	3.42	0.02
5.50	5.54	0.04
7.65	7.60	-0.05
	Tolerance Limit (±mg/L)	0.20

pH Value

Method Ref: APHA 21st Ed. 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.02	0.02
7.0	7.05	0.05
10.0	9.97	-0.03
	Tolerance Limit (±pH unit)	0.20

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.03	--
10	9.88	-1.2
20	19.62	-1.9
30	29.50	-1.7
	Tolerance Limit (±%)	10.0

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: HK1404435
Date of Issue: 20/02/2014
Client: AECOM ASIA COMPANY LIMITED

Equipment Type: Sonde Environmental Monitoring System
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 13 February, 2014 Date of next Calibration: 13 May, 2014

Parameters:

Temperature

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

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
14.0	13.92	-0.1
26.0	25.91	-0.1
38.5	38.40	-0.1
	Tolerance Limit (±°C)	2.0

Turbidity

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.9	-2.5
10	9.7	-3.0
20	19.6	-2.0
50	49.3	-1.4
100	99.2	-0.8
	Tolerance Limit (±%)	10.0

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

Hong Kong Boundary Crossing Facilities – Reclamation Works
Impact Monitoring Schedule for April 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Apr	2-Apr	3-Apr	4-Apr	5-Apr
			Mid-Flood 8:14 Mid-Ebb 14:42 Dolphin Monitoring	24-hour TSP 1-hour TSP Noise Dolphin Monitoring	Mid-Flood 9:12 Mid-Ebb 16:03	
6-Apr	7-Apr	8-Apr	9-Apr	10-Apr	11-Apr	12-Apr
	Mid-Flood 10:22 Mid-Ebb 18:40		Mid-Ebb 9:49 Mid-Flood 14:25 24-hour TSP 1-hour TSP Noise		Mid-Ebb 11:05 Mid-Flood 16:45 24-hour TSP 1-hour TSP	
13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr
	Mid-Flood 6:20 Mid-Ebb 12:30 Dolphin Monitoring*		Mid-Flood 7:15 Mid-Ebb 13:35 24-hour TSP 1-hour TSP Noise		Mid-Flood 8:17 Mid-Ebb 14:51	Dolphin Monitoring*
20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr
	Mid-Flood 10:20 Mid-Ebb 17:25	24-hour TSP 1-hour TSP Noise	Mid-Ebb 8:29 Mid-Flood 13:17		Mid-Ebb 10:31 Mid-Flood 16:01	
27-Apr	28-Apr	29-Apr	30-Apr			
	Mid-Flood 6:06 Mid-Ebb 12:29 24-hour TSP 1-hour TSP Noise		Mid-Flood 7:06 Mid-Ebb 13:43			

The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)
*Dolphin monitoring scheduled on 7 and 8 April 14 was rescheduled to 14 and 19 April 14 due to forecast of poor weather condition.

Hong Kong Boundary Crossing Facilities – Reclamation Works
Tentative Impact Monitoring Schedule for May 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-May	2-May	3-May
					Mid-Flood 8:07 Mid-Ebb 15:00 24-hour TSP 1-hour TSP	
4-May	5-May	6-May	7-May	8-May	9-May	10-May
	Mid-Flood 9:38 Mid-Ebb 16:58		Mid-Flood 11:28 Mid-Ebb 18:48 24-hour TSP 1-hour TSP Noise	Dolphin Monitoring	Mid-Ebb 9:43 Mid-Flood 15:05 Dolphin Monitoring	
11-May	12-May	13-May	14-May	15-May	16-May	17-May
	Mid-Ebb 11:30 Mid-Flood 17:53 Dolphin Monitoring 24-hour TSP 1-hour TSP Noise		Mid-Ebb 12:39 Mid-Flood 19:26		Mid-Flood 7:16 Mid-Ebb 13:57	24-hour TSP 1-hour TSP
18-May	19-May	20-May	21-May	22-May	23-May	24-May
	Mid-Flood 9:23 Mid-Ebb 16:19		Mid-Flood 11:34 Mid-Ebb 18:19		Mid-Ebb 9:09 Mid-Flood 14:37 24-hour TSP 1-hour TSP Noise	
25-May	26-May	27-May	28-May	29-May	30-May	
	Mid-Ebb 11:32 Mid-Flood 17:56 Dolphin Monitoring	Dolphin Monitoring	Mid-Ebb 12:48 Mid-Flood 19:40	24-hour TSP 1-hour TSP Noise	Mid-Flood 7:06 Mid-Ebb 14:03	

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)	Actino Level (μg/m^3)	Limit Level (μg/m^3)
3-Apr-14	1st Hour	Rainy	0.6	10:45	79	374	500
3-Apr-14	2nd Hour	Rainy	1.5	11:45	80	374	500
3-Apr-14	3rd Hour	Rainy	0.4	12:45	78	374	500
9-Apr-14	1st Hour	Sunny	0.8	12:12	80	374	500
9-Apr-14	2nd Hour	Sunny	0.2	13:12	82	374	500
9-Apr-14	3rd Hour	Sunny	1.2	14:12	82	374	500
12-Apr-14	1st Hour	Sunny	2.8	11:30	83	374	500
12-Apr-14	2nd Hour	Sunny	0.3	12:30	84	374	500
12-Apr-14	3rd Hour	Sunny	0.2	13:30	81	374	500
16-Apr-14	1st Hour	Cloudy	2.8	11:53	81	374	500
16-Apr-14	2nd Hour	Cloudy	0.3	12:53	81	374	500
16-Apr-14	3rd Hour	Cloudy	0.2	13:53	80	374	500
22-Apr-14	1st Hour	Cloudy	0.1	11:56	77	374	500
22-Apr-14	2nd Hour	Cloudy	0.8	12:56	77	374	500
22-Apr-14	3rd Hour	Cloudy	0.2	13:56	78	374	500
28-Apr-14	1st Hour	Sunny	0.4	10:10	84	374	500
28-Apr-14	2nd Hour	Sunny	0	11:10	86	374	500
28-Apr-14	3rd Hour	Sunny	0	12:10	87	374	500
				Average	81		
				Min	77		
				Max	87		

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)	Actino Level (μg/m^3) ^	Limit Level (μg/m^3)
3-Apr-14	1st Hour	Rainy	0.6	10:35	80	368	500
3-Apr-14	2nd Hour	Rainy	1.5	11:35	82	368	500
3-Apr-14	3rd Hour	Rainy	0.4	12:35	79	368	500
9-Apr-14	1st Hour	Sunny	0.8	11:26	81	368	500
9-Apr-14	2nd Hour	Sunny	0.2	12:26	83	368	500
9-Apr-14	3rd Hour	Sunny	1.2	13:26	84	368	500
12-Apr-14	1st Hour	Sunny	2.8	11:45	82	368	500
12-Apr-14	2nd Hour	Sunny	0.3	12:45	82	368	500
12-Apr-14	3rd Hour	Sunny	0.2	13:45	83	368	500
16-Apr-14	1st Hour	Cloudy	2.8	11:36	79	368	500
16-Apr-14	2nd Hour	Cloudy	0.3	12:36	81	368	500
16-Apr-14	3rd Hour	Cloudy	0.2	13:36	79	368	500
22-Apr-14	1st Hour	Cloudy	0.1	11:44	78	368	500
22-Apr-14	2nd Hour	Cloudy	0.8	12:44	77	368	500
22-Apr-14	3rd Hour	Cloudy	0.2	13:44	78	368	500
28-Apr-14	1st Hour	Sunny	0.4	11:30	81	368	500
28-Apr-14	2nd Hour	Sunny	0	12:30	83	368	500
28-Apr-14	3rd Hour	Sunny	0	13:30	84	368	500
				Average	81		
				Min	77		
				Max	84		

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

1-hour TSP Monitoring Results at Station AMS7 - Hong Kong SkyCity Marriott Hotel

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m^3)	Actino Level (μg/m^3)	Limit Level (μg/m^3)
3-Apr-14	1st Hour	Rainy	0.6	11:02	82	370	500
3-Apr-14	2nd Hour	Rainy	1.5	12:02	77	370	500
3-Apr-14	3rd Hour	Rainy	0.4	13:02	78	370	500
9-Apr-14	1st Hour	Sunny	0.8	10:18	82	370	500
9-Apr-14	2nd Hour	Sunny	0.2	11:18	81	370	500
9-Apr-14	3rd Hour	Sunny	1.2	12:18	84	370	500
12-Apr-14	1st Hour	Sunny	2.8	12:00	83	370	500
12-Apr-14	2nd Hour	Sunny	0.3	13:00	82	370	500
12-Apr-14	3rd Hour	Sunny	0.2	14:00	84	370	500
16-Apr-14	1st Hour	Cloudy	2.8	12:10	79	370	500
16-Apr-14	2nd Hour	Cloudy	0.3	13:10	79	370	500
16-Apr-14	3rd Hour	Cloudy	0.2	14:10	80	370	500
22-Apr-14	1st Hour	Cloudy	0.1	12:11	76	370	500
22-Apr-14	2nd Hour	Cloudy	0.8	13:11	76	370	500
22-Apr-14	3rd Hour	Cloudy	0.2	14:11	76	370	500
28-Apr-14	1st Hour	Sunny	0.4	9:50	84	370	500
28-Apr-14	2nd Hour	Sunny	0	10:50	85	370	500
28-Apr-14	3rd Hour	Sunny	0	11:50	86	370	500
				Average	81		
				Min	76		
				Max	86		

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 ($\mu g/m^3$)
2-Apr-14	16:00	3-Apr-14	16:00	Cloudy	19.6	1013.5	1.33	1.33	1.33	1912.3	2.7129	2.7689	0.0560	3197.84	3221.84	24.00	29	176	260
8-Apr-14	16:00	9-Apr-14	16:00	Sunny	22.3	1014.1	1.33	1.33	1.33	1912.3	2.7177	2.8047	0.0870	3221.84	3245.84	24.00	45	176	260
11-Apr-14	16:00	12-Apr-14	16:00	Sunny	24.1	1012.3	1.33	1.33	1.33	1912.3	2.7241	2.7911	0.0670	3245.84	3269.84	24.00	35	176	260
15-Apr-14	16:00	16-Apr-14	16:00	Cloudy	22.1	1013.3	1.33	1.33	1.33	1912.3	2.7380	2.8281	0.0901	3269.84	3293.84	24.00	47	176	260
22-Apr-14	9:00	23-Apr-14	9:00	Cloudy	24.8	1012.6	1.33	1.33	1.33	1912.3	2.7250	2.8386	0.1136	3293.84	3317.84	24.00	59	176	260
28-Apr-14	9:00	29-Apr-14	9:00	Sunny	25.4	1013.5	1.33	1.33	1.33	1912.3	2.7279	2.8973	0.1694	3317.84	3341.84	24.00	89	176	260
																Average	51		
																Min	29		
																Max	89		

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

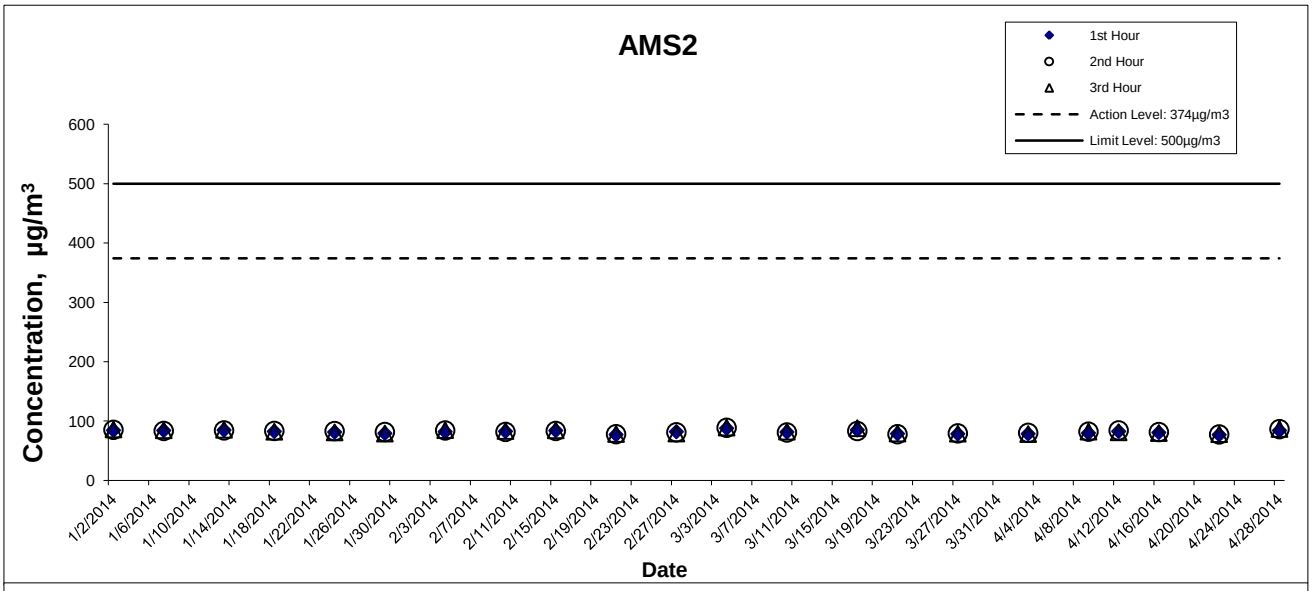
Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
2-Apr-14	16:00	3-Apr-14	16:00	Cloudy	19.6	1013.5	1.33	1.33	1.33	1912.3	2.7100	2.7705	0.0605	3133.80	3157.80	24.00	32	167	260
8-Apr-14	16:00	9-Apr-14	16:00	Sunny	22.3	1014.1	1.33	1.33	1.33	1912.3	2.7299	2.8243	0.0944	3157.80	3181.80	24.00	49	167	260
11-Apr-14	16:00	12-Apr-14	16:00	Sunny	24.1	1012.3	1.33	1.33	1.33	1912.3	2.7262	2.8402	0.1140	3181.80	3205.80	24.00	60	167	260
15-Apr-14	16:00	16-Apr-14	16:00	Cloudy	22.1	1013.3	1.33	1.33	1.33	1912.3	2.7239	2.9014	0.1775	3205.80	3229.80	24.00	93	167	260
22-Apr-14	9:00	23-Apr-14	9:00	Cloudy	24.8	1012.6	1.33	1.33	1.33	1912.3	2.7125	2.8291	0.1166	3229.80	3253.80	24.00	61	167	260
28-Apr-14	9:00	29-Apr-14	9:00	Sunny	25.4	1013.5	1.33	1.33	1.33	1912.3	2.7256	2.9011	0.1755	3253.80	3277.80	24.00	92	167	260
																Average	64		
																Min	32		
																Max	93		

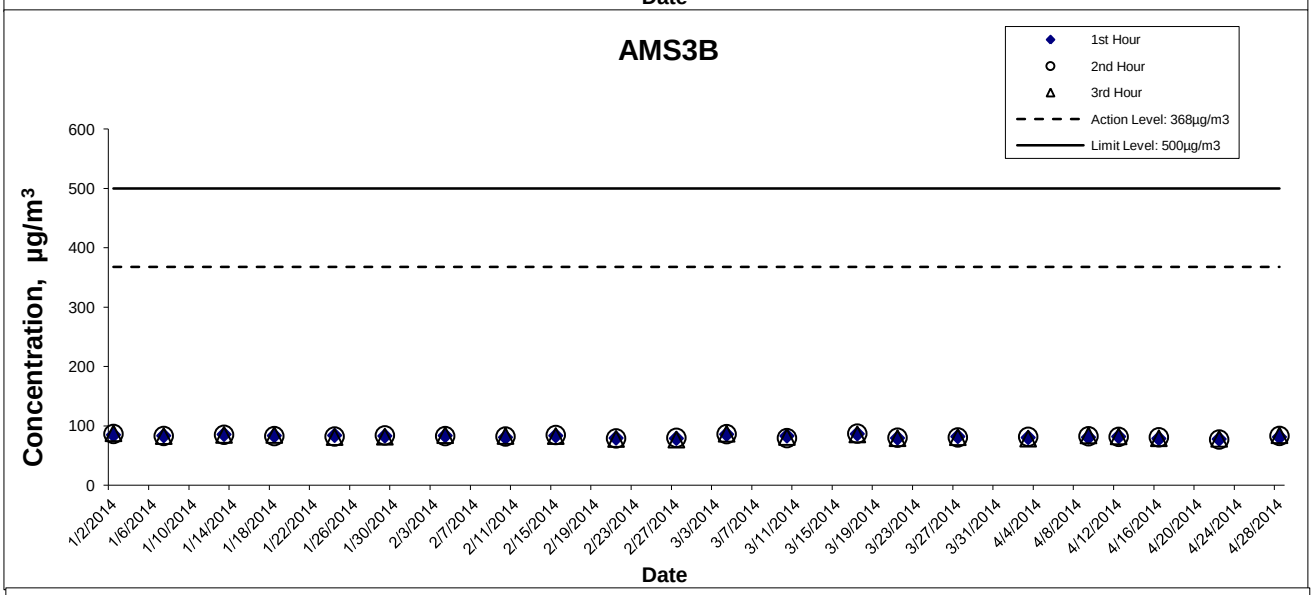
Remarks:
^ Action Level set out at AMS3 Ho Yu College is adopted.

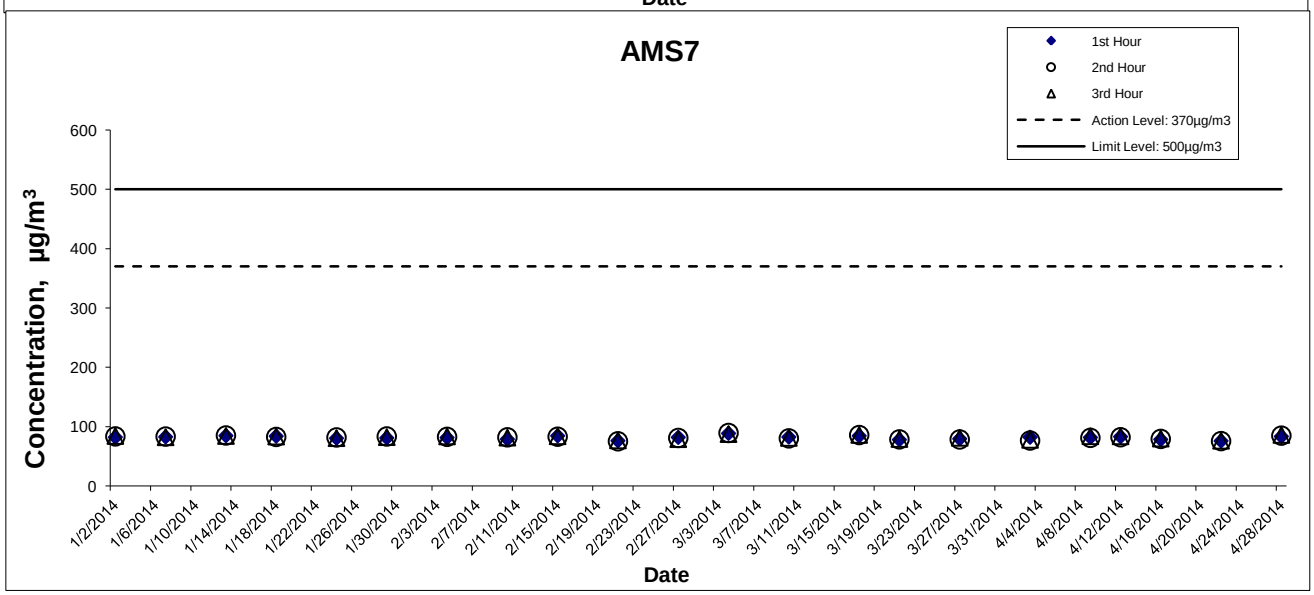
24-hour TSP Monitoring Results at Station AMS7 - Hong Kong SkyCity Marriott Hotel

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 ($\mu g/m^3$)
2-Apr-14	16:00	3-Apr-14	16:00	Cloudy	19.6	1013.5	1.33	1.33	1.33	1916.6	2.7183	2.7867	0.0684	3155.98	3179.98	24.00	36	183	260
8-Apr-14	16:00	9-Apr-14	16:00	Sunny	22.3	1014.1	1.34	1.34	1.34	1925.3	2.7364	2.8387	0.1023	3179.98	3203.98	24.00	53	183	260
11-Apr-14	16:00	12-Apr-14	16:00	Sunny	24.1	1012.3	1.34	1.34	1.34	1925.3	2.7130	2.8148	0.1018	3203.98	3227.98	24.00	53	183	260
15-Apr-14	16:00	16-Apr-14	16:00	Cloudy	22.1	1013.3	1.34	1.34	1.34	1925.3	2.7068	2.8547	0.1479	3227.98	3251.98	24.00	77	183	260
22-Apr-14	9:00	23-Apr-14	9:00	Cloudy	24.8	1012.6	1.34	1.34	1.34	1925.3	2.7142	2.8396	0.1254	3251.98	3275.98	24.00	65	183	260
28-Apr-14	9:00	29-Apr-14	9:00	Sunny	25.4	1013.5	1.34	1.34	1.34	1925.3	2.7168	2.8819	0.1651	3275.98	3299.98	24.00	86	183	260
																Average	67		
																Min	36		
																Max	86		

Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.







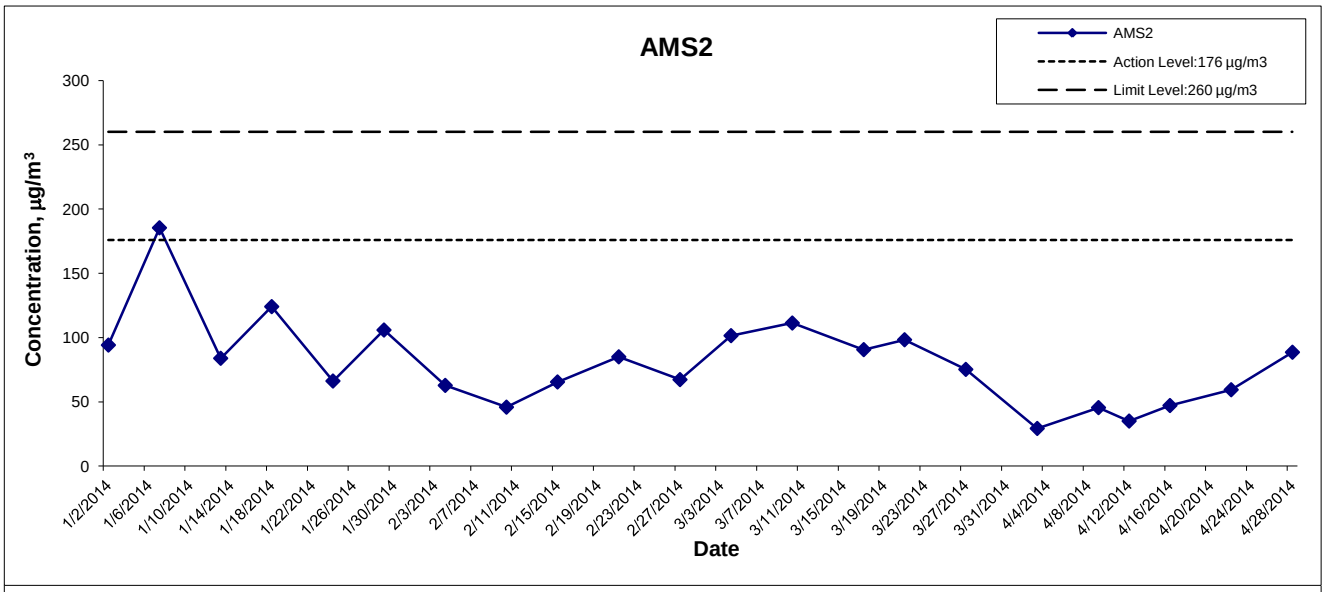
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

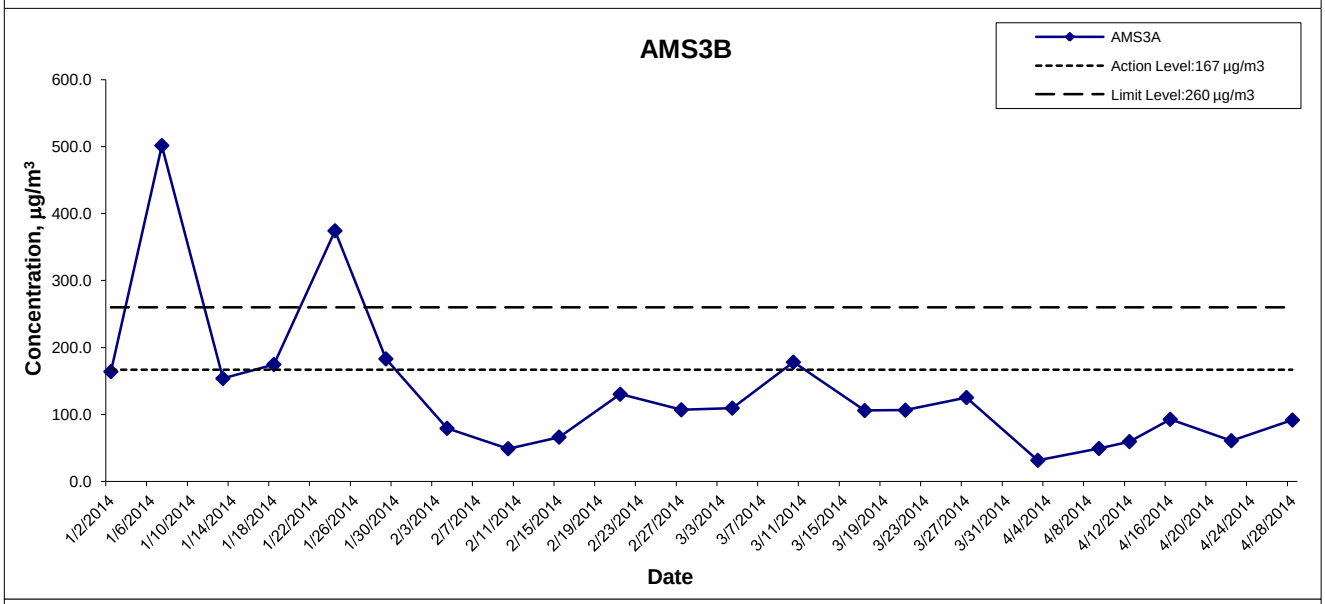
AECOM

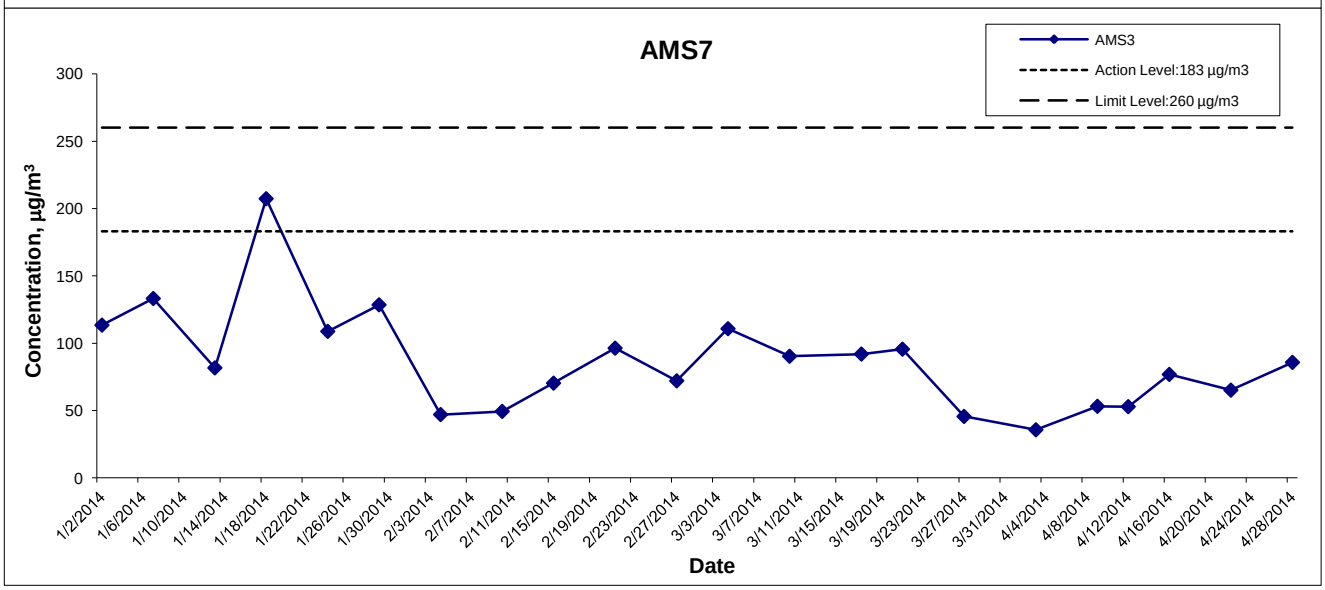
Graphical Presentation of Impact 1-hour TSP Monitoring Results

Project No.: 60249820 **Date: May 2014**

Appendix G







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 2014**

Appendix G

APPENDIX H Meteorological Data for Monitoring Periods on Monitoring Dates in April 2014

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
04/02/14	16:18:24	2.8	135.7
04/02/14	17:18:24	1.9	88.1
04/02/14	18:18:24	0.1	185.0
04/02/14	19:18:24	1.3	143.3
04/02/14	20:18:24	0.9	163.3
04/02/14	21:18:24	1.9	133.3
04/02/14	22:18:24	2.5	96.3
04/02/14	23:18:24	4.7	31.9
04/03/14	00:18:24	2.6	116.9
04/03/14	01:18:24	4.9	38.7
04/03/14	02:18:24	3.7	144.1
04/03/14	03:18:24	4.3	138.1
04/03/14	04:18:24	2.1	138.5
04/03/14	05:18:24	0.3	272.2
04/03/14	06:18:24	0.5	330.1
04/03/14	07:18:24	0.3	150.0
04/03/14	08:18:24	0.1	100.8
04/03/14	09:18:24	0.6	290.8
04/03/14	10:18:24	0.3	203.8
04/03/14	11:18:24	0.6	289.1
04/03/14	12:18:24	1.5	133.2
04/03/14	13:18:24	0.4	136.3
04/03/14	14:18:24	0.6	29.0
04/03/14	15:18:24	0.4	106.8
04/03/14	16:18:24	0.4	6.7
04/08/14	16:18:24	0.6	249.3
04/08/14	17:18:24	0.6	336.5
04/08/14	18:18:24	0.6	69.9
04/08/14	19:18:24	0.7	138.6
04/08/14	20:18:24	0.6	138.5
04/08/14	21:18:24	0.6	262.7
04/08/14	22:18:24	0.7	115.8
04/08/14	23:18:24	0.6	274.4
04/09/14	00:18:24	0.7	337.1
04/09/14	01:18:24	0.5	296.8
04/09/14	02:18:24	0.8	125.4
04/09/14	03:18:24	0.6	257.6
04/09/14	04:18:24	0.5	261.6
04/09/14	05:18:24	0.5	259.1
04/09/14	06:18:24	0.5	268.8
04/09/14	07:18:24	0.6	333.4
04/09/14	08:18:24	0.6	291.0
04/09/14	09:18:24	0.8	113.2
04/09/14	10:18:24	0.6	112.7
04/09/14	11:18:24	0.6	24.7
04/09/14	12:18:24	0.9	113.1
04/09/14	13:18:24	0.8	62.3
04/09/14	14:18:24	0.2	102.3
04/09/14	15:18:24	1.2	95.9
04/09/14	16:18:24	0.0	357.1
04/11/14	16:18:24	2.1	141.8
04/11/14	17:18:24	2.0	122.9
04/11/14	18:18:24	0.4	81.7
04/11/14	19:18:24	0.7	58.9
04/11/14	20:18:24	2.6	124.6
04/11/14	21:18:24	2.6	162.1
04/11/14	22:18:24	1.6	59.5
04/11/14	23:18:24	0.9	131.1
04/12/14	00:18:24	1.5	350.6
04/12/14	01:18:24	0.8	338.8
04/12/14	02:18:24	0.4	98.4
04/12/14	03:18:24	0.8	180.9
04/12/14	04:18:24	0.5	97.4
04/12/14	05:18:24	0.5	295.1
04/12/14	06:18:24	0.4	145.5
04/12/14	07:18:24	0.4	186.7
04/12/14	08:18:24	1.3	177.1
04/12/14	09:18:24	0.4	293.1
04/12/14	10:18:24	1.0	143.7
04/12/14	11:18:24	1.8	70.5
04/12/14	12:18:24	2.8	149.2
04/12/14	13:18:24	0.3	354.0
04/12/14	14:18:24	0.2	46.2
04/12/14	15:18:24	0.0	282.5
04/12/14	16:18:24	0.6	129.1
04/15/14	16:18:24	0.1	96.3
04/15/14	17:18:24	1.4	144.3
04/15/14	18:18:24	4.9	141.6
04/15/14	19:18:24	4.7	150.9
04/15/14	20:18:24	4.3	133.4
04/15/14	21:18:24	4.2	123.9
04/15/14	22:18:24	4.8	129.3
04/15/14	23:18:24	2.6	139.5
04/16/14	00:18:24	0.9	116.3
04/16/14	01:18:24	0.5	108.5
04/16/14	02:18:24	4.9	131.9
04/16/14	03:18:24	4.3	123.7
04/16/14	04:18:24	3.0	128.1
04/16/14	05:18:24	4.7	132.1

APPENDIX H Meteorological Data for Monitoring Periods on Monitoring Dates in April 2014

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
04/16/14	06:18:24	0.4	138.6
04/16/14	07:18:24	2.3	130.9
04/16/14	08:18:24	1.1	129.7
04/16/14	09:18:24	1.4	117.6
04/16/14	10:18:24	3.8	120.2
04/16/14	11:18:24	4.3	124.5
04/16/14	12:18:24	1.1	123.7
04/16/14	13:18:24	0.6	118.2
04/16/14	14:18:24	0.2	40.2
04/16/14	15:18:24	0.4	27.1
04/16/14	16:18:24	1.1	73.3
04/21/14	16:18:24	2.8	135.3
04/21/14	17:18:24	0.1	210.0
04/21/14	18:18:24	0.8	206.7
04/21/14	19:18:24	0.6	218.0
04/21/14	20:18:24	0.0	341.6
04/21/14	21:18:24	0.0	52.8
04/21/14	22:18:24	0.0	214.0
04/21/14	23:18:24	0.0	74.6
04/22/14	00:18:24	0.0	252.1
04/22/14	01:18:24	0.0	272.2
04/22/14	02:18:24	0.0	43.2
04/22/14	03:18:24	0.0	143.9
04/22/14	04:18:24	0.0	116.9
04/22/14	05:18:24	0.0	356.5
04/22/14	06:18:24	0.1	261.9
04/22/14	07:18:24	0.0	132.5
04/22/14	08:18:24	0.0	14.3
04/22/14	09:18:24	0.0	110.8
04/22/14	10:18:24	2.0	126.8
04/22/14	11:18:24	0.2	120.8
04/22/14	12:18:24	0.1	111.3
04/22/14	13:18:24	0.8	77.0
04/22/14	14:18:24	0.2	332.9
04/22/14	15:18:24	0.2	110.8
04/22/14	16:18:24	0.7	133.7
04/28/14	09:18:24	0.4	71.3
04/28/14	10:18:24	0.0	112.5
04/28/14	11:18:24	0.0	50.2
04/28/14	12:18:24	0.0	48.4
04/28/14	13:18:24	-0.1	43.3
04/28/14	14:18:24	0.9	19.8
04/28/14	15:18:24	1.2	-52.6
04/28/14	16:18:24	0.9	311.7
04/28/14	17:18:24	-0.1	166.2
04/28/14	18:18:24	0.6	128.9
04/28/14	19:18:24	-0.1	88.9
04/28/14	20:18:24	-0.1	34.5
04/28/14	21:18:24	0.1	332.7
04/28/14	22:18:24	0.0	286.2
04/28/14	23:18:24	0.0	314.4
04/29/14	00:18:24	0.0	275.5
04/29/14	01:18:24	0.0	314.7
04/29/14	02:18:24	0.0	208.6
04/29/14	03:18:24	0.0	314.5
04/29/14	04:18:24	0.1	285.9
04/29/14	05:18:24	0.0	297.7
04/29/14	06:18:24	0.0	356.9
04/29/14	07:18:24	1.0	122.1
04/29/14	08:18:24	0.7	102.3
04/29/14	09:18:24	0.0	177.5

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				
3-Apr-14	Cloudy	15:10	63	67	66	<5m/s	62.9	75	N
9-Apr-14	Sunny	10:43	62	66	65	<5m/s	62.9	75	N
16-Apr-14	Sunny	10:45	64	71	68	<5m/s	62.9	75	N
22-Apr-14	Cloudy	10:59	64	68	66	<5m/s	62.9	75	N
28-Apr-14	Sunny	10:35	64	70	67	<5m/s	62.9	75	N
		Min	62	66	65				
		Max	64	71	68				
		Average	--	--	66				

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>				
3-Apr-14	Cloudy	11:30	63	67	65	<5m/s	66.3	65	N
9-Apr-14	Sunny	11:29	58	67	64	<5m/s	66.3	65	N
16-Apr-14	Sunny	11:36	59	71	***68*** >	<5m/s	66.3	65	N
22-Apr-14	Cloudy	11:43	62	67	70	<5m/s	66.3	70	N
28-Apr-14	Sunny	11:30	63	68	67	<5m/s	66.3	70	N
		Min	58	67	64				
		Max	63	71	70				
		Average	--	--	67				

Remark:

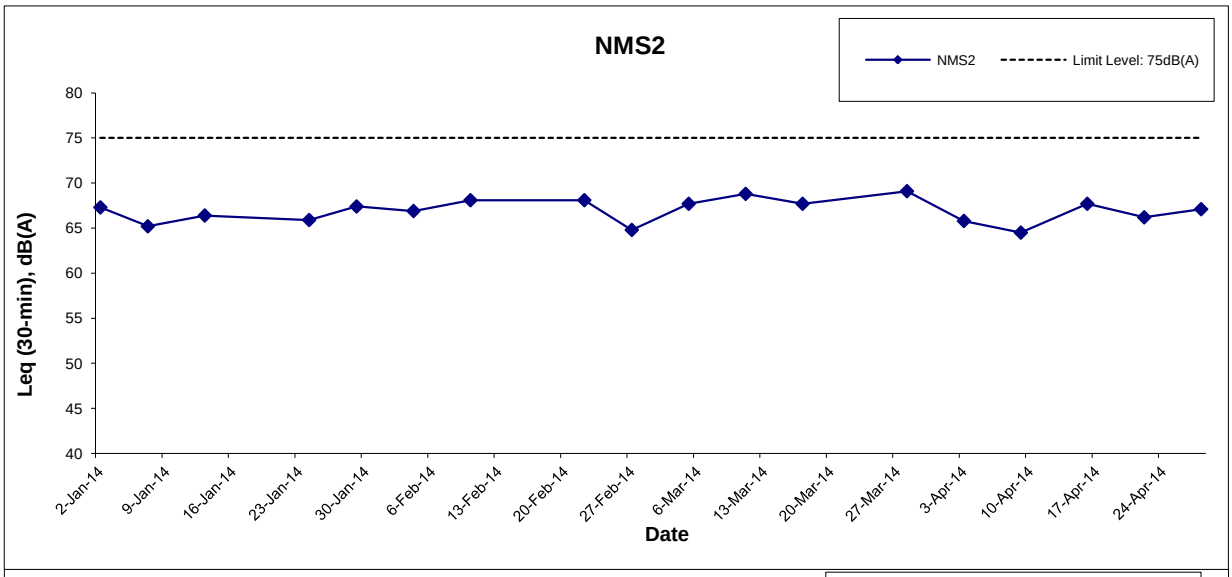
A correction of +3dB(A) was made to the free field measurement.

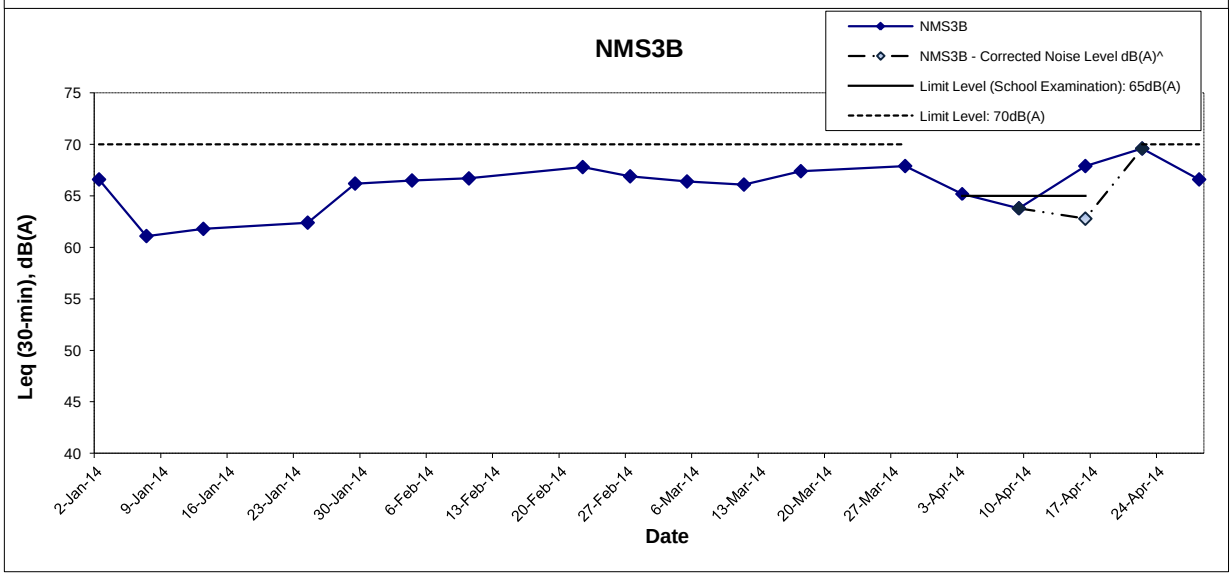
* Façade measurement.

^ 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.

>The measured noise level on 16 April 2014 exceeded the noise level of 65dB(A) during examination period on 16 April 2014 but it is lower than the baseline level. Therefore, baseline correction was carried out and the corrected noise level which solely represent the noise level of Constrcution works is 63 dB(A) which is lower than the exceedance level of 65dB(A) . As such the EAP was not triggered.





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.

^The measured noise level on 16 April 2014 exceeded the noise level of 65dB(A) during examination period on 16 April 2014 but it is lower than the baseline level. Therefore, baseline correction was carried out and the corrected noise level which solely represent the noise level of Constrcution works is 63 dB(A) which is lower than the exceedance level of 65dB(A) . As such the EAP was not triggered.

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*
2-Apr-14	Cloudy	Moderate	14:13	6.2	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	21.3 21.3	21.3	83.6 83.6	83.6	6.7 6.7	6.7	6.7	8.4 8.3	8.4	8.6	6.2 6.3	6.3	7.1
					Middle	3.1	20.2 20.3	20.2	8.0 8.0	8.0	22.1 21.4	21.7	83.9 83.9	83.9	6.7 6.7	6.7		8.8 8.5	8.7		6.8 7.4	7.1	
					Bottom	5.2	20.1 20.1	20.1	7.9 7.9	7.9	26.4 26.0	26.2	83.1 83.1	83.1	6.5 6.5	6.5	6.5	8.9 8.7	8.8		7.7 7.8	7.8	
4-Apr-14	Cloudy	Moderate	15:49	6.5	Surface	1.0	20.7 20.7	20.7	7.9 7.9	7.9	19.7 19.7	19.7	78.5 78.9	78.7	6.3 6.3	6.3	6.4	8.9 8.6	8.8	13.0	6.9 7.6	7.3	7.6
					Middle	3.3	20.5 20.4	20.5	8.0 8.0	8.0	20.2 20.1	20.2	79.0 80.6	79.8	6.3 6.5	6.4		14.1 14.6	14.4		7.0 6.6	6.8	
					Bottom	5.5	20.2 20.1	20.1	8.0 8.0	8.0	24.9 25.3	25.1	78.3 81.1	79.7	6.1 6.4	6.2	6.2	16.3 15.5	15.9		9.2 8.3	8.8	
7-Apr-14	Cloudy	Moderate	18:01	6.5	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.5 26.4	26.5	87.4 87.4	87.4	6.8 6.8	6.8	6.8	2.9 2.8	2.9	3.2	4.6 4.3	4.5	5.2
					Middle	3.3	20.2 20.2	20.2	8.0 8.0	8.0	26.5 26.5	26.5	87.0 86.8	86.9	6.7 6.7	6.7		3.2 3.3	3.3		5.5 5.5	5.5	
					Bottom	5.5	20.2 20.2	20.2	8.0 8.0	8.0	26.7 26.7	26.7	86.9 87.1	87.0	6.7 6.7	6.7	6.7	3.6 3.4	3.5		5.8 5.4	5.6	
9-Apr-14	Sunny	Moderate	10:20	6.6	Surface	1.0	21.0 20.7	20.8	8.1 8.1	8.1	21.0 21.0	21.0	84.9 84.7	84.8	6.8 6.7	6.8	6.8	3.4 3.2	3.3	3.3	5.1 4.4	4.8	4.6
					Middle	3.3	20.5 20.4	20.5	8.1 8.1	8.1	22.7 25.0	23.9	87.2 84.5	85.9	6.9 6.6	6.7		3.2 3.2	3.2		4.3 3.5	3.9	
					Bottom	5.6	20.3 20.3	20.3	8.1 8.1	8.1	27.9 28.2	28.1	87.4 82.9	85.2	6.7 6.4	6.5	6.5	3.3 3.3	3.3		5.4 4.6	5.0	
11-Apr-14	Sunny	Moderate	11:31	6.7	Surface	1.0	21.7 21.3	21.5	8.3 8.2	8.3	23.4 23.9	23.6	99.6 95.1	97.4	7.6 7.3	7.5	7.4	5.0 5.2	5.1	5.9	2.1 3.9	3.0	3.2
					Middle	3.4	20.9 20.7	20.8	8.2 8.2	8.2	26.5 27.7	27.1	94.3 93.2	93.8	7.2 7.1	7.2		6.0 6.6	6.3		3.0 3.5	3.3	
					Bottom	5.7	20.7 20.8	20.7	8.2 8.2	8.2	28.3 28.1	28.2	93.4 95.0	94.2	7.1 7.2	7.2	7.2	6.8 5.9	6.4		2.5 4.0	3.3	
14-Apr-14	Sunny	Moderate	12:58	6.7	Surface	1.0	22.5 22.5	22.5	8.3 8.3	8.3	22.8 22.7	22.8	102.9 102.9	102.9	7.8 7.8	7.8	7.8	7.4 7.3	7.4	10.7	9.4 9.2	9.3	9.3
					Middle	3.4	22.4 22.3	22.4	8.3 8.3	8.3	22.9 23.0	23.0	102.0 100.8	101.4	7.8 7.7	7.7		10.8 11.6	11.2		8.7 8.0	8.4	
					Bottom	5.7	21.8 21.9	21.8	8.3 8.3	8.3	25.9 26.0	25.9	100.3 99.5	99.9	7.6 7.5	7.5	7.5	13.8 13.2	13.5		9.0 11.2	10.1	
16-Apr-14	Sunny	Moderate	13:10	6.4	Surface	1.0	22.3 22.3	22.3	8.3 8.3	8.3	25.1 25.3	25.2	96.4 96.5	96.5	7.3 7.3	7.3	7.3	2.9 3.0	3.0	3.8	3.1 5.0	4.1	5.2
					Middle	3.2	22.3 22.2	22.3	8.3 8.3	8.3	25.6 25.6	25.6	96.3 96.3	96.3	7.2 7.2	7.2		3.6 3.6	3.6		4.5 5.0	4.8	
					Bottom	5.4	22.2 22.2	22.2	8.3 8.3	8.3	25.8 25.9	25.9	96.3 96.3	96.3	7.2 7.2	7.2	7.2	4.6 4.8	4.7		7.3 6.2	6.8	
18-Apr-14	Sunny	Moderate	13:40	6.9	Surface	1.0	23.9 24.1	24.0	8.2 8.2	8.2	23.1 23.1	23.1	90.0 90.9	90.5	6.6 6.7	6.7	6.7	4.4 4.5	4.5	4.6	2.9 3.4	3.2	3.5
					Middle	3.5	22.7 22.9	22.8	8.3 8.3	8.3	25.2 24.7	24.9	89.0 90.0	89.5	6.6 6.7	6.7		4.4 4.6	4.5		3.5 4.0	3.8	
					Bottom	5.9	22.6 22.7	22.7	8.3 8.2	8.3	27.2 27.2	27.2	89.4 88.2	88.8	6.6 6.5	6.6	6.6	4.6 4.7	4.7		4.5 2.7	3.6	
21-Apr-14	Fine	Moderate	16:53	6.3	Surface	1.0	23.7 23.7	23.7	8.2 8.2	8.2	26.0 26.0	26.0	92.5 91.9	92.2	6.8 6.7	6.7	6.7	2.4 2.4	2.4	2.6	3.8 2.6	3.2	3.2
					Middle	3.2	23.7 23.6	23.6	8.2 8.3	8.3	26.0 26.1	26.0	92.1 91.5	91.8	6.7 6.7	6.7		2.5 2.7	2.6		3.0 2.7	2.9	
					Bottom	5.3	23.6 23.6	23.6	8.3 8.2	8.3	26.2 26.0	26.1	91.6 91.9	91.8	6.7 6.7	6.7	6.7	2.9 2.8	2.9		3.0 4.1	3.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	09:04	6.6	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	22.1 22.0	22.1	87.4 88.1	87.8	6.5 6.5	6.5	6.5	4.0 4.1	4.1	4.0	5.4 3.5	4.5	4.2
					Middle	3.3	23.7 23.7	23.7	8.2 8.2	8.2	26.2 25.9	26.1	87.6 89.0	88.3	6.4 6.5	6.4		4.1 3.9	4.0		5.3 3.6	4.5	
					Bottom	5.6	23.5 23.5	23.5	8.2 8.2	8.2	27.4 27.5	27.5	87.3 89.7	88.5	6.3 6.5	6.4	6.4	3.9 4.1	4.0		2.8 4.1	3.5	
25-Apr-14	Sunny	Moderate	11:23	6.9	Surface	1.0	23.5 23.6	23.6	8.2 8.2	8.2	26.6 26.5	26.5	91.9 91.5	91.7	6.7 6.7	6.7	6.7	3.0 3.1	3.1	3.5	7.0 7.9	7.5	7.1
					Middle	3.5	23.4 23.5	23.5	8.2 8.2	8.2	27.1 26.7	26.9	91.5 90.7	91.1	6.7 6.6	6.6		3.2 3.4	3.3		7.5 7.0	7.3	
					Bottom	5.9	23.2 23.4	23.3	8.2 8.2	8.2	28.2 27.6	27.9	89.6 91.4	90.5	6.5 6.7	6.6	6.6	4.2 4.0	4.1		6.6 6.6	6.6	
28-Apr-14	Sunny	Moderate	12:56	6.2	Surface	1.0	24.2 24.4	24.3	8.2 8.2	8.2	25.1 24.4	24.8	94.4 90.0	92.2	6.8 6.6	6.7	6.7	6.3 6.5	6.4	8.8	6.0 5.5	5.8	6.2
					Middle	3.1	24.0 24.0	24.0	8.2 8.2	8.2	26.0 26.2	26.1	92.3 90.2	91.3	6.7 6.5	6.6		8.5 8.3	8.4		6.2 6.3	6.3	
					Bottom	5.2	24.0 23.9	23.9	8.2 8.2	8.2	26.5 27.6	27.1	91.0 89.9	90.5	6.6 6.5	6.5	6.5	12.0 11.1	11.6		6.3 6.6	6.5	
30-Apr-14	Sunny	Moderate	13:22	6.3	Surface	1.0	24.1 24.1	24.1	8.2 8.2	8.2	25.7 25.7	25.7	88.3 88.7	88.5	6.4 6.4	6.4	6.4	4.3 4.5	4.4	5.2	6.7 6.9	6.8	7.0
					Middle	3.2	24.0 24.1	24.0	8.2 8.2	8.2	26.8 26.6	26.7	88.3 88.8	88.6	6.4 6.4	6.4		5.7 5.5	5.6		7.1 5.8	6.5	
					Bottom	5.3	24.0 24.0	24.0	8.2 8.2	8.2	27.0 27.0	27.0	88.6 88.4	88.5	6.4 6.4	6.4	6.4	5.6 5.6	5.6		7.1 8.0	7.6	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:31	6.5	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	24.5 24.5	24.5	81.4 82.4	81.9	6.4 6.5	6.4	6.4	22.4 22.4	22.4	22.3	17.9 18.1	18.0	19.4
					Middle	3.3	20.3 20.3	20.3	7.9 7.9	7.9	24.7 24.7	24.7	81.5 83.0	82.3	6.4 6.5	6.4		22.1 22.1	22.1		17.9 19.5	18.7	
					Bottom	5.5	20.3 20.3	20.3	7.9 7.9	7.9	24.9 24.8	24.8	85.0 82.0	83.5	6.6 6.4	6.5	6.5	22.2 22.6	22.4		22.2 20.5	21.4	
4-Apr-14	Cloudy	Moderate	09:36	6.6	Surface	1.0	20.4 20.4	20.4	8.0 7.9	8.0	18.7 18.3	18.5	80.2 76.2	78.2	6.5 6.2	6.3	6.4	11.7 11.0	11.4	12.0	7.9 7.6	7.8	8.4
					Middle	3.3	20.3 20.2	20.2	8.0 8.1	8.0	20.2 21.1	20.6	77.5 82.0	79.8	6.2 6.6	6.4		11.6 11.8	11.7		7.3 7.7	7.5	
					Bottom	5.6	20.2 20.2	20.2	8.0 8.1	8.0	23.4 23.6	23.5	77.1 79.2	78.2	6.1 6.2	6.2	6.2	12.6 13.2	12.9		9.6 10.4	10.0	
7-Apr-14	Sunny	Moderate	10:49	6.3	Surface	1.0	20.3 20.3	20.3	8.0 8.0	8.0	25.4 25.4	25.4	87.6 85.9	86.8	6.8 6.7	6.8	6.8	3.9 4.2	4.1	5.0	4.0 4.4	4.2	4.0
					Middle	3.2	20.2 20.2	20.2	8.0 8.0	8.0	25.8 26.5	26.2	86.8 85.0	85.9	6.8 6.6	6.7		4.5 4.9	4.7		4.1 3.3	3.7	
					Bottom	5.3	20.1 20.1	20.1	8.0 8.0	8.0	27.3 27.4	27.4	88.2 85.5	86.9	6.8 6.6	6.7	6.7	6.1 6.0	6.1		4.3 4.1	4.2	
9-Apr-14	Sunny	Moderate	13:57	6.5	Surface	1.0	21.1 21.4	21.3	8.0 8.1	8.1	22.1 21.1	21.6	87.3 88.3	87.8	6.8 6.9	6.9	6.8	2.8 2.6	2.7	2.8	3.8 2.0	2.9	3.5
					Middle	3.3	20.3 20.3	20.3	8.0 8.1	8.1	27.2 27.3	27.3	86.8 87.9	87.4	6.7 6.8	6.7		2.7 2.7	2.7		2.3 4.0	3.2	
					Bottom	5.5	20.3 20.2	20.3	8.1 8.0	8.0	28.4 28.6	28.5	86.8 86.3	86.6	6.6 6.6	6.6	6.6	2.9 2.9	2.9		4.8 3.9	4.4	
11-Apr-14	Sunny	Moderate	16:06	6.7	Surface	1.0	22.6 22.6	22.6	8.3 8.3	8.3	22.8 22.9	22.8	105.7 107.8	106.8	8.0 8.2	8.1	7.9	3.4 3.5	3.5	4.9	5.6 3.6	4.6	5.1
					Middle	3.4	21.4 21.2	21.3	8.3 8.3	8.3	25.4 25.8	25.6	100.6 97.8	99.2	7.7 7.5	7.6		4.1 4.6	4.4		5.0 4.1	4.6	
					Bottom	5.7	20.7 20.7	20.7	8.2 8.3	8.3	28.0 28.0	28.0	99.1 103.4	101.3	7.5 7.9	7.7	7.7	6.9 6.8	6.9		5.2 7.0	6.1	
14-Apr-14	Sunny	Moderate	18:18	6.6	Surface	1.0	22.7 22.7	22.7	8.3 8.3	8.3	21.8 21.9	21.9	100.5 99.4	100.0	7.7 7.6	7.6	7.6	3.7 4.0	3.9	5.5	6.6 8.0	7.3	8.1
					Middle	3.3	22.4 22.6	22.5	8.3 8.3	8.3	22.8 21.9	22.3	97.0 99.2	98.1	7.4 7.6	7.5		5.0 4.7	4.9		9.1 9.1	9.1	
					Bottom	5.6	22.3 22.2	22.3	8.3 8.3	8.3	23.3 24.0	23.6	97.7 97.5	97.6	7.4 7.4	7.4	7.4	7.7 7.6	7.7		7.0 8.8	7.9	
16-Apr-14	Sunny	Moderate	07:31	6.5	Surface	1.0	21.9 21.9	21.9	8.3 8.3	8.3	27.1 27.1	27.1	95.1 95.6	95.4	7.1 7.2	7.1	7.1	10.2 10.7	10.5	10.6	7.0 8.1	7.6	7.7
					Middle	3.3	21.9 21.9	21.9	8.3 8.3	8.3	27.2 27.2	27.2	95.9 95.0	95.5	7.2 7.1	7.1		10.5 10.6	10.6		7.9 7.2	7.6	
					Bottom	5.5	21.9 21.9	21.9	8.3 8.3	8.3	27.3 27.3	27.3	95.2 97.2	96.2	7.1 7.3	7.2	7.2	10.6 10.8	10.7		7.5 8.2	7.9	
18-Apr-14	Sunny	Moderate	08:24	7.1	Surface	1.0	22.7 22.6	22.6	8.2 8.2	8.2	25.5 25.7	25.6	90.0 87.4	88.7	6.7 6.5	6.6	6.6	7.0 7.1	7.1	7.2	6.5 7.2	6.9	7.3
					Middle	3.6	22.6 22.6	22.6	8.2 8.2	8.2	26.1 26.1	26.1	87.3 88.3	87.8	6.5 6.6	6.5		7.2 7.0	7.1		6.8 7.2	7.0	
					Bottom	6.1	22.5 22.5	22.5	8.2 8.2	8.2	26.3 26.2	26.3	88.1 87.3	87.7	6.6 6.5	6.5	6.5	7.2 7.5	7.4		8.4 7.7	8.1	
21-Apr-14	Fine	Moderate	10:55	6.5	Surface	1.0	23.5 23.5	23.5	8.2 8.2	8.2	24.8 24.7	24.7	86.2 87.2	86.7	6.4 6.4	6.4	6.4	4.9 4.8	4.9	5.4	3.0 2.7	2.9	3.3
					Middle	3.3	23.3 23.4	23.4	8.2 8.2	8.2	25.6 25.4	25.5	87.3 85.6	86.5	6.4 6.3	6.4		5.6 5.7	5.7		2.9 2.6	2.8	
					Bottom	5.5	23.3 23.1	23.2	8.2 8.2	8.2	26.8 27.6	27.2	85.9 88.8	87.4	6.3 6.5	6.4	6.4	5.6 5.5	5.6		4.4 4.0	4.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	13:05	6.5	Surface	1.0	23.8 23.7	23.8	8.2 8.2	8.2	24.1 23.7	23.9	87.1 86.8	87.0	6.4 6.4	6.4	6.3	4.4 4.4	4.4	5.2	4.6 4.9	4.8	4.5
					Middle	3.3	23.4 23.4	23.4	8.2 8.2	8.2	27.2 27.4	27.3	86.0 85.5	85.8	6.3 6.2	6.2		5.3 5.6	5.5		4.7 4.3	4.5	
					Bottom	5.5	23.4 23.5	23.5	8.2 8.2	8.2	27.7 27.5	27.6	85.8 86.5	86.2	6.2 6.3	6.3	6.3	5.7 5.5	5.6		3.2 5.0	4.1	
25-Apr-14	Sunny	Moderate	15:21	6.9	Surface	1.0	24.1 24.1	24.1	8.2 8.2	8.2	24.5 24.5	24.5	90.6 90.4	90.5	6.6 6.6	6.6	6.6	2.4 2.5	2.5	2.7	4.5 4.4	4.5	5.0
					Middle	3.5	24.0 24.0	24.0	8.2 8.2	8.2	24.7 24.5	24.6	90.6 90.2	90.4	6.6 6.6	6.6		2.6 2.7	2.7		5.2 3.3	4.3	
					Bottom	5.9	24.0 24.0	24.0	8.1 8.2	8.2	25.2 25.8	25.5	90.0 90.4	90.2	6.6 6.6	6.6	6.6	2.9 3.0	3.0		5.9 6.7	6.3	
28-Apr-14	Sunny	Moderate	18:15	6.1	Surface	1.0	24.5 24.5	24.5	8.1 8.1	8.1	23.8 23.9	23.9	87.0 86.8	86.9	6.3 6.3	6.3	6.3	4.3 4.5	4.4	5.2	6.4 6.4	6.4	6.1
					Middle	3.1	24.4 24.4	24.4	8.1 8.1	8.1	24.4 24.3	24.4	86.3 86.3	86.3	6.3 6.3	6.3		5.1 4.6	4.9		7.0 5.4	6.2	
					Bottom	5.1	24.4 24.3	24.4	8.1 8.1	8.1	24.4 24.6	24.5	86.2 86.0	86.1	6.3 6.3	6.3	6.3	6.0 6.3	6.2		5.9 5.7	5.8	
30-Apr-14	Sunny	Moderate	07:15	6.6	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	27.2 27.2	27.2	89.6 87.2	88.4	6.5 6.3	6.4	6.4	8.3 8.2	8.3	8.4	7.5 7.2	7.4	7.0
					Middle	3.3	23.9 23.9	23.9	8.2 8.2	8.2	27.8 27.6	27.7	90.9 87.1	89.0	6.5 6.3	6.4		8.4 8.3	8.4		6.5 7.2	6.9	
					Bottom	5.6	23.9 23.9	23.9	8.2 8.2	8.2	27.9 27.9	27.9	93.7 87.4	90.6	6.7 6.3	6.5	6.5	8.5 8.3	8.4		6.9 6.5	6.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:46	17.0	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	21.3 21.3	21.3	84.2 84.6	84.4	6.7 6.8	6.7	6.7	7.6 7.5	7.6	8.2	6.6 8.0	7.3	7.1
					Middle	8.5	20.0 20.0	20.0	8.0 8.0	8.0	26.6 26.6	26.6	84.4 84.5	84.5	6.6 6.6	6.6		8.5 8.2	8.4		6.3 7.1	6.7	
					Bottom	16.0	20.1 20.0	20.0	7.9 7.9	7.9	26.6 26.6	26.6	83.7 83.4	83.6	6.5 6.5	6.5	6.5	8.5 8.8	8.7		7.2 7.6	7.4	
4-Apr-14	Cloudy	Moderate	15:31	16.6	Surface	1.0	20.7 20.7	20.7	7.9 7.9	7.9	19.7 19.7	19.7	80.3 79.9	80.1	6.4 6.4	6.4	6.4	13.3 13.7	13.5	15.0	7.6 7.4	7.5	7.4
					Middle	8.3	20.0 20.0	20.0	8.1 8.0	8.1	25.9 25.5	25.7	82.2 81.8	82.0	6.4 6.4	6.4		14.9 15.1	15.0		8.3 7.3	7.8	
					Bottom	15.6	20.0 20.0	20.0	8.1 8.0	8.0	26.3 26.3	26.3	81.5 80.8	81.2	6.4 6.3	6.3	6.3	16.2 16.8	16.5		7.2 6.3	6.8	
7-Apr-14	Cloudy	Moderate	17:41	16.3	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.5 26.5	26.5	86.8 86.9	86.9	6.7 6.7	6.7	6.7	3.1 3.2	3.2	4.1	4.5 3.6	4.1	4.3
					Middle	8.2	20.2 20.2	20.2	8.0 8.0	8.0	27.2 27.1	27.2	85.9 85.7	85.8	6.6 6.6	6.6		4.4 4.3	4.4		4.2 4.0	4.1	
					Bottom	15.3	20.2 20.2	20.2	8.0 8.0	8.0	27.7 27.9	27.8	86.5 86.5	86.5	6.7 6.7	6.7	6.7	4.4 4.7	4.6		4.9 4.3	4.6	
9-Apr-14	Sunny	Moderate	10:47	16.7	Surface	1.0	20.6 20.5	20.6	8.1 8.1	8.1	20.5 22.3	21.4	85.5 85.5	85.5	6.8 6.8	6.8	6.7	5.7 5.8	5.8	6.1	5.3 6.0	5.7	5.7
					Middle	8.4	20.1 20.2	20.2	8.1 8.1	8.1	28.4 28.1	28.2	84.4 84.9	84.7	6.5 6.5	6.5		6.1 5.9	6.0		6.2 5.5	5.9	
					Bottom	15.7	20.1 20.3	20.2	8.1 8.1	8.1	28.5 28.0	28.3	84.0 84.5	84.3	6.4 6.5	6.5	6.5	6.5 6.6	6.6		6.1 4.9	5.5	
11-Apr-14	Sunny	Moderate	11:52	16.9	Surface	1.0	21.9 21.7	21.8	8.3 8.3	8.3	23.1 23.3	23.2	102.0 99.9	101.0	7.8 7.7	7.7	7.5	4.4 4.4	4.4	6.1	2.7 2.0	2.4	3.2
					Middle	8.5	20.8 20.8	20.8	8.2 8.2	8.2	27.5 27.6	27.5	94.2 94.1	94.2	7.2 7.2	7.2		6.7 6.7	6.7		3.1 3.6	3.4	
					Bottom	15.9	20.7 20.7	20.7	8.2 8.2	8.2	28.3 28.5	28.4	94.9 97.3	96.1	7.2 7.4	7.3	7.3	7.2 7.0	7.1		4.5 3.0	3.8	
14-Apr-14	Sunny	Moderate	13:21	16.2	Surface	1.0	22.5 22.5	22.5	8.3 8.3	8.3	22.7 22.7	22.7	102.6 103.0	102.8	7.8 7.8	7.8	7.8	6.7 7.0	6.9	10.9	8.5 7.5	8.0	8.4
					Middle	8.1	22.4 22.4	22.4	8.3 8.3	8.3	22.9 22.9	22.9	100.7 101.3	101.0	7.7 7.7	7.7		10.3 10.8	10.6		8.4 8.0	8.2	
					Bottom	15.2	22.0 21.9	21.9	8.3 8.3	8.3	25.8 25.9	25.8	100.7 99.5	100.1	7.6 7.5	7.6	7.6	14.9 15.2	15.1		9.0 9.2	9.1	
16-Apr-14	Sunny	Moderate	12:42	16.3	Surface	1.0	22.3 22.3	22.3	8.3 8.3	8.3	24.9 25.0	25.0	97.4 97.0	97.2	7.3 7.3	7.3	7.3	6.7 6.5	6.6	7.3	3.3 3.6	3.5	4.7
					Middle	8.2	22.2 22.1	22.2	8.3 8.3	8.3	25.7 27.4	26.6	96.8 96.4	96.6	7.3 7.2	7.2		7.2 7.5	7.4		5.6 5.0	5.3	
					Bottom	15.3	21.9 22.1	22.0	8.3 8.3	8.3	28.7 28.2	28.5	96.2 96.4	96.3	7.1 7.2	7.1	7.1	7.7 7.8	7.8		5.4 5.3	5.4	
18-Apr-14	Sunny	Moderate	13:31	17.9	Surface	1.0	23.1 24.0	23.5	8.3 8.2	8.2	23.5 23.1	23.3	89.9 90.1	90.0	6.7 6.7	6.7	6.7	4.5 4.4	4.5	4.5	4.2 4.8	4.5	4.3
					Middle	9.0	22.7 22.7	22.7	8.3 8.3	8.3	25.2 25.2	25.2	89.2 89.3	89.3	6.7 6.7	6.7		4.5 4.5	4.5		4.2 4.1	4.2	
					Bottom	16.9	22.7 22.7	22.7	8.2 8.3	8.3	27.1 27.2	27.1	88.6 88.9	88.8	6.5 6.6	6.6	6.6	4.5 4.7	4.6		3.9 4.4	4.2	
21-Apr-14	Fine	Moderate	16:29	16.5	Surface	1.0	23.7 23.6	23.6	8.3 8.3	8.3	26.0 26.1	26.0	92.1 91.7	91.9	6.7 6.7	6.7	6.7	4.3 4.2	4.3	4.5	4.0 4.0	4.0	3.7
					Middle	8.3	23.1 23.0	23.1	8.3 8.3	8.3	28.4 29.2	28.8	90.3 90.2	90.3	6.6 6.5	6.6		4.5 4.5	4.5		2.7 3.7	3.2	
					Bottom	15.5	23.0 22.9	23.0	8.3 8.3	8.3	29.1 29.2	29.2	90.3 90.5	90.4	6.6 6.6	6.6	6.6	4.7 4.9	4.8		2.8 4.7	3.8	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	09:25	16.0	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	22.1 22.1	22.1	86.9 86.9	86.9	6.4 6.5	6.4	6.3	4.1 4.3	4.2	4.7	5.0 2.9	4.0	4.1
					Middle	8.0	23.4 23.4	23.4	8.2 8.2	8.2	27.8 27.8	27.8	85.7 85.7	85.7	6.2 6.2	6.2		4.7 4.8	4.8		3.9 4.1	4.0	
					Bottom	15.0	23.5 23.3	23.4	8.1 8.2	8.2	28.0 28.2	28.1	85.9 85.3	85.6	6.2 6.2	6.2	6.2	5.0 5.1	5.1		3.9 4.5	4.2	
25-Apr-14	Sunny	Moderate	11:41	18.4	Surface	1.0	23.5 23.6	23.5	8.2 8.2	8.2	26.6 26.5	26.6	91.9 91.8	91.9	6.7 6.7	6.7	6.7	3.0 3.2	3.1	3.4	5.8 6.2	6.0	6.4
					Middle	9.2	23.5 23.5	23.5	8.2 8.2	8.2	26.5 26.9	26.7	91.4 91.7	91.6	6.7 6.7	6.7		3.3 3.2	3.3		5.4 6.6	6.0	
					Bottom	17.4	23.4 23.4	23.4	8.2 8.2	8.2	28.0 27.1	27.6	91.5 91.8	91.7	6.6 6.7	6.7	6.7	3.8 3.5	3.7		7.6 6.7	7.2	
28-Apr-14	Sunny	Moderate	13:16	16.7	Surface	1.0	24.3 24.3	24.3	8.2 8.2	8.2	24.5 24.7	24.6	88.7 89.2	89.0	6.5 6.5	6.5	6.5	7.1 7.3	7.2	9.0	5.8 5.6	5.7	6.6
					Middle	8.4	24.0 23.9	23.9	8.2 8.2	8.2	26.9 27.2	27.0	89.4 89.2	89.3	6.5 6.4	6.4		8.8 9.0	8.9		5.3 6.7	6.0	
					Bottom	15.7	23.8 23.8	23.8	8.2 8.2	8.2	28.0 28.0	28.0	89.0 88.9	89.0	6.4 6.4	6.4	6.4	11.1 10.6	10.9		8.2 7.9	8.1	
30-Apr-14	Sunny	Moderate	12:52	16.1	Surface	1.0	24.1 24.1	24.1	8.2 8.2	8.2	25.7 25.7	25.7	88.8 88.6	88.7	6.4 6.4	6.4	6.4	4.4 4.5	4.5	6.1	4.6 4.0	4.3	4.3
					Middle	8.1	23.9 23.9	23.9	8.3 8.2	8.3	27.5 27.5	27.5	88.0 87.7	87.9	6.3 6.3	6.3		6.9 7.1	7.0		4.2 3.7	4.0	
					Bottom	15.1	23.9 23.9	23.9	8.2 8.2	8.2	28.2 27.6	27.9	88.2 88.1	88.2	6.3 6.3	6.3	6.3	6.7 6.6	6.7		4.7 4.6	4.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	09:00	17.1	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	24.5 24.5	24.5	80.6 80.6	80.6	6.3 6.3	6.3	6.3	22.1 22.4	22.3	23.0	23.3 21.1	22.2	22.5
					Middle	8.6	20.3 20.3	20.3	7.9 7.9	7.9	25.0 24.9	25.0	80.4 80.2	80.3	6.3 6.3	6.3		22.6 22.3	22.5		22.7 21.0	21.9	
					Bottom	16.1	20.3 20.3	20.3	7.9 7.9	7.9	25.0 24.9	25.0	80.2 80.5	80.4	6.3 6.3	6.3	6.3	24.5 24.1	24.3		23.9 23.0	23.5	
4-Apr-14	Cloudy	Moderate	09:56	16.3	Surface	1.0	20.4 20.5	20.4	7.9 7.9	7.9	18.5 18.5	18.5	76.5 74.2	75.4	6.2 6.0	6.1	6.1	9.2 9.8	9.5	10.8	8.5 8.7	8.6	8.1
					Middle	8.2	20.2 20.1	20.2	8.0 7.9	8.0	23.8 23.9	23.9	77.7 77.1	77.4	6.1 6.1	6.1		9.8 9.8	9.8		7.3 8.3	7.8	
					Bottom	15.3	20.1 20.1	20.1	8.0 7.9	7.9	24.0 24.1	24.0	77.3 76.5	76.9	6.1 6.0	6.1	6.1	13.0 13.4	13.2		7.7 8.3	8.0	
7-Apr-14	Sunny	Moderate	11:14	16.2	Surface	1.0	20.3 20.3	20.3	8.0 8.0	8.0	25.4 25.4	25.4	86.2 86.3	86.3	6.7 6.7	6.7	6.6	5.1 5.2	5.2	7.8	5.2 3.8	4.5	4.7
					Middle	8.1	20.1 20.1	20.1	8.0 8.0	8.0	27.8 27.8	27.8	83.4 83.5	83.5	6.4 6.4	6.4		7.3 7.5	7.4		5.2 3.3	4.3	
					Bottom	15.2	20.0 20.0	20.0	8.0 8.0	8.0	28.0 28.0	28.0	83.9 83.8	83.9	6.5 6.5	6.5	6.5	11.2 10.6	10.9		5.5 5.2	5.4	
9-Apr-14	Sunny	Moderate	13:27	17.1	Surface	1.0	21.0 20.8	20.9	8.1 8.1	8.1	20.9 21.3	21.1	86.9 86.6	86.8	6.9 6.9	6.9	6.8	2.1 2.2	2.2	2.4	3.1 3.4	3.3	3.7
					Middle	8.6	20.3 20.2	20.2	8.1 8.1	8.1	28.4 28.5	28.5	86.7 85.5	86.1	6.6 6.5	6.6		2.5 2.5	2.5		5.1 3.4	4.3	
					Bottom	16.1	20.2 20.3	20.3	8.1 8.1	8.1	28.6 28.6	28.6	86.1 84.6	85.4	6.6 6.5	6.5	6.5	2.5 2.5	2.5		3.3 3.5	3.4	
11-Apr-14	Sunny	Moderate	15:47	16.6	Surface	1.0	22.6 22.6	22.6	8.3 8.3	8.3	23.0 23.0	23.0	102.8 107.9	105.4	7.8 8.2	8.0	7.6	4.3 4.0	4.2	6.1	4.9 4.0	4.5	4.4
					Middle	8.3	20.6 20.7	20.7	8.2 8.3	8.3	28.2 27.6	27.9	94.3 94.5	94.4	7.2 7.2	7.2		6.9 7.0	7.0		5.2 4.0	4.6	
					Bottom	15.6	20.5 20.6	20.6	8.2 8.2	8.2	28.7 28.5	28.6	97.6 96.9	97.3	7.4 7.4	7.4	7.4	7.1 6.8	7.0		4.4 3.9	4.2	
14-Apr-14	Sunny	Moderate	17:58	15.8	Surface	1.0	22.7 22.7	22.7	8.3 8.3	8.3	21.8 21.8	21.8	100.6 100.5	100.6	7.7 7.7	7.7	7.6	3.9 3.7	3.8	6.3	8.2 8.2	8.2	7.8
					Middle	7.9	22.1 22.2	22.1	8.3 8.3	8.3	24.6 24.2	24.4	97.5 97.6	97.6	7.4 7.4	7.4		7.5 7.4	7.5		7.4 8.2	7.8	
					Bottom	14.8	22.1 22.1	22.1	8.3 8.3	8.3	24.8 24.4	24.6	97.8 97.8	97.8	7.4 7.4	7.4	7.4	7.8 7.2	7.5		7.4 7.5	7.5	
16-Apr-14	Sunny	Moderate	07:55	16.5	Surface	1.0	21.9 21.9	21.9	8.3 8.3	8.3	27.1 27.1	27.1	94.6 94.4	94.5	7.1 7.1	7.1	7.1	13.6 13.1	13.4	13.4	9.7 9.7	9.7	9.5
					Middle	8.3	21.9 21.9	21.9	8.3 8.3	8.3	27.4 27.5	27.5	94.1 93.8	94.0	7.0 7.0	7.0		13.5 13.2	13.4		9.2 9.0	9.1	
					Bottom	15.5	21.9 21.9	21.9	8.3 8.3	8.3	27.5 27.5	27.5	94.1 92.9	93.5	7.0 6.9	7.0	7.0	13.3 13.4	13.4		9.4 10.0	9.7	
18-Apr-14	Sunny	Moderate	08:32	18.1	Surface	1.0	22.6 22.7	22.7	8.2 8.2	8.2	25.8 25.3	25.6	86.9 87.1	87.0	6.5 6.5	6.5	6.5	7.1 7.2	7.2	7.3	7.3 6.6	7.0	7.9
					Middle	9.1	22.5 22.6	22.6	8.2 8.2	8.2	26.2 26.1	26.1	86.8 86.7	86.8	6.5 6.5	6.5		7.1 7.4	7.3		6.8 7.5	7.2	
					Bottom	17.1	22.6 22.5	22.6	8.2 8.2	8.2	26.2 26.3	26.2	86.7 86.7	86.7	6.5 6.5	6.5	6.5	7.4 7.2	7.3		9.0 10.2	9.6	
21-Apr-14	Fine	Moderate	11:22	16.6	Surface	1.0	23.5 23.5	23.5	8.2 8.2	8.2	24.9 24.9	24.9	84.9 84.6	84.8	6.3 6.2	6.3	6.2	8.2 8.2	8.2	8.4	3.5 3.2	3.4	3.8
					Middle	8.3	23.0 23.0	23.0	8.2 8.2	8.2	28.2 28.1	28.2	83.2 83.3	83.3	6.1 6.1	6.1		8.4 8.5	8.5		3.7 3.0	3.4	
					Bottom	15.6	22.9 23.2	23.0	8.2 8.2	8.2	28.5 28.3	28.4	84.2 84.4	84.3	6.1 6.1	6.1	6.1	8.3 8.6	8.5		3.7 5.5	4.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:45	16.1	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	23.8 23.6	23.7	87.7 87.5	87.6	6.5 6.5	6.5	6.4	3.8 3.8	3.8	5.0	4.3 3.9	4.1	4.0
					Middle	8.1	23.4 23.4	23.4	8.2 8.2	8.2	27.5 27.6	27.6	84.9 84.6	84.8	6.2 6.1	6.2		5.2 5.5	5.4		3.5 3.1	3.3	
					Bottom	15.1	23.4 23.4	23.4	8.2 8.2	8.2	27.6 27.7	27.7	84.6 84.7	84.7	6.1 6.2	6.1	6.1	5.7 5.6	5.7		4.8 4.3	4.6	
25-Apr-14	Sunny	Moderate	15:10	18.3	Surface	1.0	24.1 24.0	24.0	8.2 8.2	8.2	24.7 24.8	24.8	90.0 90.0	90.0	6.6 6.6	6.6	6.6	5.8 6.0	5.9	6.2	8.3 7.3	7.8	8.4
					Middle	9.2	23.8 23.7	23.8	8.2 8.2	8.2	25.1 25.2	25.2	89.5 89.4	89.5	6.6 6.6	6.6		6.2 6.3	6.3		9.2 8.4	8.8	
					Bottom	17.3	23.5 23.5	23.5	8.2 8.2	8.2	28.4 27.9	28.2	88.9 89.0	89.0	6.4 6.4	6.4	6.4	6.4 6.6	6.5		8.3 8.7	8.5	
28-Apr-14	Sunny	Moderate	17:53	16.2	Surface	1.0	24.5 24.5	24.5	8.1 8.1	8.1	24.0 24.0	24.0	86.3 86.9	86.6	6.3 6.3	6.3	6.3	6.2 6.0	6.1	7.4	6.0 5.0	5.5	5.9
					Middle	8.1	24.3 24.3	24.3	8.1 8.1	8.1	24.8 24.8	24.8	85.2 85.5	85.4	6.2 6.2	6.2		8.3 7.8	8.1		6.0 5.2	5.6	
					Bottom	15.2	24.3 24.2	24.3	8.1 8.1	8.1	24.8 24.8	24.8	85.6 85.3	85.5	6.2 6.2	6.2	6.2	8.0 8.1	8.1		7.0 5.9	6.5	
30-Apr-14	Sunny	Moderate	07:40	16.7	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	26.9 26.8	26.9	86.5 86.3	86.4	6.2 6.2	6.2	6.2	10.5 10.5	10.5	10.6	8.4 9.2	8.8	8.8
					Middle	8.4	23.9 23.9	23.9	8.2 8.2	8.2	28.0 28.0	28.0	86.1 85.7	85.9	6.2 6.2	6.2		10.7 10.6	10.7		8.3 8.9	8.6	
					Bottom	15.7	23.9 23.9	23.9	8.2 8.2	8.2	28.0 27.9	28.0	86.4 86.1	86.3	6.2 6.2	6.2	6.2	10.5 10.7	10.6		9.1 8.9	9.0	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:35	13.2	Surface	1.0	20.3 20.3	20.3	7.8 7.9	7.9	23.8 23.5	23.7	84.6 83.7	84.2	6.7 6.6	6.6	6.6	10.0 10.6	10.3	12.1	7.7 8.5	8.1	8.5
					Middle	6.6	20.0 20.0	20.0	7.9 7.9	7.9	26.1 26.3	26.2	85.0 83.3	84.2	6.6 6.5	6.6		12.2 13.2	12.7		8.1 8.1	8.1	
					Bottom	12.2	20.0 20.0	20.0	7.9 7.9	7.9	26.7 26.7	26.7	83.5 87.0	85.3	6.5 6.8	6.6		13.4 13.1	13.3		9.7 8.9	9.3	
4-Apr-14	Cloudy	Moderate	16:06	13.5	Surface	1.0	20.4 20.5	20.4	7.8 7.8	7.8	22.6 22.0	22.3	81.2 81.5	81.4	6.4 6.5	6.4	6.4	7.4 7.2	7.3	7.6	8.6 8.7	8.7	9.1
					Middle	6.8	20.1 20.1	20.1	7.8 7.8	7.8	23.5 23.4	23.4	80.9 81.1	81.0	6.4 6.4	6.4		7.6 7.6	7.6		9.2 9.5	9.4	
					Bottom	12.5	20.1 20.0	20.1	7.8 7.8	7.8	26.4 25.3	25.9	80.2 80.6	80.4	6.2 6.3	6.3	6.3	7.8 7.9	7.9		8.5 9.7	9.1	
7-Apr-14	Cloudy	Moderate	18:50	12.2	Surface	1.0	20.2 20.2	20.2	8.1 8.1	8.1	26.4 26.4	26.4	89.6 91.5	90.6	6.9 7.1	7.0	7.0	2.5 2.5	2.5	2.6	5.8 6.1	6.0	5.8
					Middle	6.1	19.8 20.0	19.9	8.1 8.1	8.1	29.5 29.4	29.5	91.6 91.0	91.3	7.0 7.1	7.0		2.5 2.7	2.6		6.2 5.0	5.6	
					Bottom	11.2	19.7 19.7	19.7	8.1 8.1	8.1	31.2 31.3	31.3	89.8 91.6	90.7	6.8 7.0	6.9	6.9	2.6 2.6	2.6		5.9 5.8	5.9	
9-Apr-14	Sunny	Moderate	09:20	13.3	Surface	1.0	20.4 20.3	20.3	7.9 7.8	7.9	26.4 24.7	25.5	91.5 92.3	91.9	7.1 7.2	7.1	7.1	1.8 1.8	1.8	2.0	3.1 3.3	3.2	3.3
					Middle	6.7	19.9 19.9	19.9	7.9 7.8	7.8	30.2 30.2	30.2	90.9 91.7	91.3	6.9 7.0	7.0		1.8 1.9	1.9		3.5 2.4	3.0	
					Bottom	12.3	19.8 19.8	19.8	7.9 7.8	7.8	30.8 30.8	30.8	90.7 92.0	91.4	6.9 7.0	7.0	7.0	2.2 2.1	2.2		3.8 3.6	3.7	
11-Apr-14	Sunny	Moderate	10:28	12.2	Surface	1.0	20.9 20.7	20.8	7.5 7.5	7.5	28.2 28.3	28.2	95.4 95.3	95.4	7.2 7.2	7.2	7.2	1.8 1.9	1.9	2.1	3.6 4.0	3.8	3.5
					Middle	6.1	20.1 20.1	20.1	7.6 7.6	7.6	30.9 30.8	30.8	93.4 93.1	93.3	7.1 7.0	7.1		2.1 2.2	2.2		4.2 2.5	3.4	
					Bottom	11.2	20.1 20.1	20.1	7.6 7.5	7.6	31.2 31.2	31.2	93.3 92.7	93.0	7.1 7.0	7.0	7.0	2.2 2.1	2.2		3.2 3.1	3.2	
14-Apr-14	Sunny	Moderate	12:12	12.5	Surface	1.0	22.2 22.4	22.3	8.3 8.3	8.3	24.7 24.7	24.7	105.7 108.2	107.0	8.0 8.1	8.1	7.8	4.2 4.4	4.3	4.4	8.9 9.1	9.0	8.9
					Middle	6.3	21.5 21.5	21.5	8.2 8.2	8.2	28.7 28.1	28.4	99.0 101.5	100.3	7.4 7.6	7.5		4.4 4.4	4.4		9.2 8.8	9.0	
					Bottom	11.5	21.2 21.3	21.3	8.2 8.2	8.2	29.7 29.5	29.6	98.6 104.5	101.6	7.4 7.8	7.6	7.6	4.3 4.5	4.4		7.9 9.6	8.8	
16-Apr-14	Sunny	Moderate	13:29	13.1	Surface	1.0	22.0 22.1	22.0	8.2 8.2	8.2	27.1 27.0	27.0	97.4 97.1	97.3	7.3 7.3	7.3	7.3	5.0 4.6	4.8	5.0	6.4 6.9	6.7	7.0
					Middle	6.6	21.7 21.7	21.7	8.2 8.2	8.2	28.2 28.3	28.3	96.2 96.9	96.6	7.2 7.2	7.2		4.9 5.3	5.1		6.8 6.1	6.5	
					Bottom	12.1	21.8 21.7	21.8	8.2 8.2	8.2	28.1 28.3	28.2	96.4 97.7	97.1	7.2 7.3	7.2	7.2	4.9 5.2	5.1		8.2 7.5	7.9	
18-Apr-14	Sunny	Moderate	14:46	12.8	Surface	1.0	22.8 23.0	22.9	8.0 8.0	8.0	26.6 25.9	26.2	88.8 89.7	89.3	6.6 6.6	6.6	6.6	6.4 6.3	6.4	6.3	8.0 8.4	8.2	7.6
					Middle	6.4	22.5 22.5	22.5	8.0 8.0	8.0	27.4 27.4	27.4	88.8 87.9	88.4	6.6 6.5	6.5		6.2 6.2	6.2		7.4 6.7	7.1	
					Bottom	11.8	22.4 22.5	22.4	8.0 8.0	8.0	27.7 27.7	27.7	89.4 87.9	88.7	6.6 6.5	6.5	6.5	6.1 6.3	6.2		7.2 7.6	7.4	
21-Apr-14	Fine	Moderate	16:55	13.1	Surface	1.0	23.9 24.0	24.0	8.3 8.3	8.3	26.0 25.7	25.9	91.2 93.7	92.5	6.6 6.8	6.7	6.6	2.8 2.9	2.9	3.0	4.6 4.5	4.6	3.9
					Middle	6.6	22.6 22.6	22.6	8.4 8.4	8.4	30.6 30.9	30.7	89.8 89.1	89.5	6.5 6.5	6.5		3.0 3.1	3.1		4.1 3.8	4.0	
					Bottom	12.1	22.5 22.5	22.5	8.3 8.4	8.4	31.3 31.3	31.3	89.6 88.7	89.2	6.5 6.4	6.4	6.4	3.0 3.1	3.1		2.8 3.2	3.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:03	12.2	Surface	1.0	23.4 23.5	23.4	8.2 8.2	8.2	26.8 27.0	26.9	92.4 93.0	92.7	6.7 6.8	6.8	6.7	1.9 1.8	1.9	1.9	3.5 3.1	3.3	3.6
					Middle	6.1	22.9 23.0	22.9	8.2 8.2	8.2	30.7 30.0	30.3	92.7 91.3	92.0	6.7 6.6	6.6		1.9 1.8	1.9		3.8 3.8	3.8	
					Bottom	11.2	22.9 22.9	22.9	8.2 8.2	8.2	30.7 30.8	30.7	91.0 93.8	92.4	6.6 6.8	6.7	6.7	1.9 1.9	1.9		4.6 3.0	3.8	
25-Apr-14	Sunny	Moderate	10:19	12.8	Surface	1.0	23.0 23.0	23.0	8.3 8.3	8.3	30.1 30.2	30.2	90.7 90.1	90.4	6.5 6.5	6.5	6.5	2.1 2.1	2.1	2.1	4.6 4.3	4.5	5.5
					Middle	6.4	22.7 22.7	22.7	8.3 8.3	8.3	31.6 31.5	31.5	89.3 89.3	89.3	6.4 6.4	6.4		2.1 2.0	2.1		5.1 6.1	5.6	
					Bottom	11.8	22.8 22.7	22.8	8.3 8.2	8.3	31.7 31.6	31.6	89.6 89.9	89.8	6.4 6.5	6.4	6.4	2.1 2.1	2.1		6.5 6.5	6.5	
28-Apr-14	Sunny	Moderate	12:13	12.4	Surface	1.0	23.9 24.2	24.0	8.1 8.1	8.1	28.1 26.8	27.4	87.6 88.8	88.2	6.3 6.4	6.3	6.3	3.6 3.7	3.7	3.6	4.9 5.1	5.0	5.2
					Middle	6.2	23.7 23.8	23.7	8.1 8.1	8.1	28.5 28.5	28.5	87.3 87.0	87.2	6.3 6.3	6.3		3.5 3.5	3.5		4.6 4.4	4.5	
					Bottom	11.4	23.7 23.4	23.5	8.1 8.1	8.1	29.5 30.5	30.0	87.0 86.0	86.5	6.2 6.2	6.2	6.2	3.5 3.5	3.5		6.4 6.0	6.2	
30-Apr-14	Sunny	Moderate	13:42	13.2	Surface	1.0	24.0 23.9	23.9	8.3 8.4	8.4	27.8 28.3	28.1	88.0 86.3	87.2	6.3 6.2	6.2	6.2	5.1 5.0	5.1	5.3	6.5 6.0	6.3	6.2
					Middle	6.6	23.8 23.8	23.8	8.4 8.4	8.4	28.9 29.0	28.9	87.5 86.0	86.8	6.3 6.2	6.2		5.3 5.2	5.3		7.1 5.3	6.2	
					Bottom	12.2	23.7 23.8	23.8	8.4 8.4	8.4	29.6 29.7	29.7	86.1 85.5	85.8	6.2 6.1	6.1	6.1	5.6 5.5	5.6		6.1 6.1	6.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:06	13.4	Surface	1.0	20.2 20.1	20.2	7.9 7.9	7.9	25.3 25.3	25.3	84.9 86.2	85.6	6.6 6.7	6.7	6.7	6.9 7.1	7.0	7.9	8.4 7.9	8.2	8.3
					Middle	6.7	19.8 19.8	19.8	7.9 7.9	7.9	28.0 27.9	28.0	87.9 84.7	86.3	6.8 6.6	6.7		8.5 9.0	8.8		8.2 7.7	8.0	
					Bottom	12.4	19.9 19.8	19.8	7.9 7.9	7.9	27.9 28.1	28.0	84.4 90.5	87.5	6.5 7.0	6.8	6.8	7.7 8.1	7.9		9.4 7.7	8.6	
4-Apr-14	Cloudy	Moderate	08:34	13.6	Surface	1.0	20.2 20.1	20.1	7.8 7.9	7.9	22.2 22.3	22.2	80.6 81.0	80.8	6.4 6.5	6.4	6.4	4.2 4.1	4.2	4.4	6.2 4.1	5.2	5.2
					Middle	6.8	20.0 20.1	20.1	7.9 7.8	7.9	23.9 23.8	23.9	80.9 80.9	80.9	6.4 6.4	6.4		4.5 4.4	4.5		4.5 4.1	4.3	
					Bottom	12.6	20.1 20.0	20.0	7.8 7.9	7.8	23.9 25.2	24.6	81.6 80.3	81.0	6.4 6.3	6.4	6.4	4.6 4.6	4.6		7.2 5.1	6.2	
7-Apr-14	Sunny	Moderate	09:56	12.9	Surface	1.0	20.1 20.1	20.1	8.1 8.1	8.1	25.5 25.6	25.6	89.8 90.2	90.0	7.0 7.1	7.0	7.0	1.8 1.8	1.8	1.8	6.0 4.3	5.2	5.6
					Middle	6.5	19.8 19.8	19.8	8.1 8.1	8.1	28.7 28.8	28.8	90.1 89.7	89.9	6.9 6.9	6.9		1.8 1.8	1.8		5.3 5.0	5.2	
					Bottom	11.9	19.8 19.7	19.8	8.1 8.1	8.1	30.3 30.7	30.5	90.7 89.2	90.0	6.9 6.8	6.9	6.9	1.8 1.7	1.8		6.8 5.7	6.3	
9-Apr-14	Sunny	Moderate	14:33	13.5	Surface	1.0	20.5 20.7	20.6	7.8 7.8	7.8	23.9 22.0	22.9	92.8 94.2	93.5	7.3 7.4	7.3	7.2	2.5 2.7	2.6	2.8	3.3 5.5	4.4	4.4
					Middle	6.8	20.0 20.0	20.0	7.8 7.8	7.8	29.3 29.5	29.4	91.4 91.3	91.4	7.0 7.0	7.0		2.2 2.3	2.3		5.1 4.3	4.7	
					Bottom	12.5	19.9 19.9	19.9	7.8 7.8	7.8	30.0 30.2	30.1	91.4 91.4	91.4	7.0 7.0	7.0	7.0	3.4 3.3	3.4		4.7 3.7	4.2	
11-Apr-14	Sunny	Moderate	16:51	13.0	Surface	1.0	21.3 21.1	21.2	8.1 8.1	8.1	26.7 27.1	26.9	101.8 102.2	102.0	7.7 7.8	7.7	7.5	1.9 1.9	1.9	2.5	4.0 2.1	3.1	3.4
					Middle	6.5	20.6 20.4	20.5	8.1 8.1	8.1	28.9 29.1	29.0	95.9 95.7	95.8	7.3 7.3	7.3		2.6 2.7	2.7		3.8 3.0	3.4	
					Bottom	12.0	20.1 20.1	20.1	8.1 8.1	8.1	31.4 31.4	31.4	96.8 97.6	97.2	7.3 7.4	7.3	7.3	2.9 2.8	2.9		3.7 3.8	3.8	
14-Apr-14	Sunny	Moderate	18:41	12.9	Surface	1.0	22.1 22.1	22.1	8.3 8.3	8.3	25.2 25.8	25.5	105.9 109.0	107.5	8.0 8.2	8.1	7.9	4.1 3.9	4.0	4.0	2.9 4.5	3.7	4.2
					Middle	6.5	21.7 21.7	21.7	8.3 8.2	8.3	27.2 27.2	27.2	102.3 101.3	101.8	7.7 7.6	7.6		4.1 3.8	4.0		4.5 4.6	4.6	
					Bottom	11.9	21.5 21.4	21.5	8.2 8.2	8.2	29.0 28.9	28.9	104.0 101.6	102.8	7.8 7.6	7.7	7.7	4.1 4.0	4.1		3.7 5.1	4.4	
16-Apr-14	Sunny	Moderate	06:43	13.3	Surface	1.0	21.8 21.8	21.8	8.3 8.3	8.3	26.9 27.0	26.9	99.0 99.2	99.1	7.4 7.4	7.4	7.4	3.0 3.0	3.0	4.3	3.2 3.4	3.3	3.4
					Middle	6.7	21.5 21.5	21.5	8.3 8.3	8.3	29.5 29.5	29.5	98.3 98.6	98.5	7.3 7.3	7.3		4.4 4.7	4.6		2.5 3.9	3.2	
					Bottom	12.3	21.6 21.5	21.6	8.3 8.2	8.3	29.4 29.7	29.6	98.3 99.0	98.7	7.3 7.4	7.3	7.3	5.2 5.1	5.2		3.4 3.7	3.6	
18-Apr-14	Sunny	Moderate	08:04	12.8	Surface	1.0	22.5 22.6	22.5	8.2 8.2	8.2	25.4 25.3	25.4	91.1 91.0	91.1	6.8 6.8	6.8	6.8	4.8 4.9	4.9	6.8	3.7 3.7	3.7	3.9
					Middle	6.4	22.3 22.1	22.2	8.2 8.2	8.2	27.4 27.6	27.5	90.9 90.4	90.7	6.7 6.7	6.7		7.8 7.6	7.7		3.9 4.8	4.4	
					Bottom	11.8	22.0 22.2	22.1	8.2 8.2	8.2	29.4 29.1	29.3	91.5 89.6	90.6	6.8 6.6	6.7	6.7	7.8 7.7	7.8		3.7 3.2	3.5	
21-Apr-14	Fine	Moderate	09:35	12.9	Surface	1.0	23.7 23.3	23.5	8.2 8.2	8.2	24.0 24.1	24.1	90.7 89.2	90.0	6.7 6.6	6.7	6.6	2.4 2.4	2.4	2.5	2.8 4.9	3.9	3.8
					Middle	6.5	22.7 22.6	22.6	8.3 8.3	8.3	29.2 30.0	29.6	88.1 90.2	89.2	6.4 6.6	6.5		2.6 2.5	2.6		3.7 3.9	3.8	
					Bottom	11.9	22.6 22.5	22.6	8.2 8.3	8.3	30.6 30.5	30.5	87.6 89.3	88.5	6.4 6.5	6.4	6.4	2.6 2.5	2.6		4.8 2.7	3.8	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	13:19	12.7	Surface	1.0	23.3 23.3	23.3	8.3 8.3	8.3	28.4 28.4	28.4	94.2 93.8	94.0	6.8 6.8	6.8	6.8	2.1 2.2	2.2	2.2	2.6 2.3	2.5	3.3
					Middle	6.4	22.9 22.9	22.9	8.3 8.3	8.3	29.7 29.7	29.7	91.6 92.4	92.0	6.6 6.7	6.7		2.2 2.2	2.2		2.8 3.2	3.0	
					Bottom	11.7	22.8 22.9	22.8	8.3 8.3	8.3	31.3 30.9	31.1	91.7 93.3	92.5	6.6 6.7	6.7	6.7	2.1 2.3	2.2		3.8 5.1	4.5	
25-Apr-14	Sunny	Moderate	15:58	13.0	Surface	1.0	23.3 23.4	23.4	8.2 8.2	8.2	29.3 28.8	29.1	91.5 93.2	92.4	6.6 6.7	6.7	6.6	3.5 3.6	3.6	3.6	2.9 4.0	3.5	4.1
					Middle	6.5	23.0 23.0	23.0	8.2 8.2	8.2	30.5 30.6	30.5	89.3 90.0	89.7	6.4 6.5	6.5		3.5 3.7	3.6		4.2 3.1	3.7	
					Bottom	12.0	23.0 22.9	22.9	8.2 8.2	8.2	31.8 31.9	31.8	90.8 90.9	90.9	6.5 6.5	6.5	6.5	3.4 3.5	3.5		4.7 5.3	5.0	
28-Apr-14	Sunny	Moderate	18:57	13.2	Surface	1.0	24.4 24.3	24.3	8.2 8.2	8.2	26.6 26.6	26.6	90.5 89.3	89.9	6.5 6.4	6.5	6.4	4.1 4.2	4.2	5.0	2.7 3.1	2.9	3.6
					Middle	6.6	23.8 23.6	23.7	8.2 8.2	8.2	28.6 28.7	28.7	87.7 86.5	87.1	6.3 6.2	6.3		5.4 5.3	5.4		3.5 4.1	3.8	
					Bottom	12.2	23.6 23.5	23.5	8.2 8.2	8.2	30.2 30.5	30.4	89.1 87.0	88.1	6.4 6.2	6.3	6.3	5.5 5.4	5.5		3.5 4.4	4.0	
30-Apr-14	Sunny	Moderate	06:12	13.2	Surface	1.0	23.8 23.8	23.8	8.3 8.3	8.3	28.4 28.2	28.3	87.8 91.5	89.7	6.3 6.5	6.4	6.4	2.6 2.8	2.7	2.9	6.1 6.7	6.4	5.9
					Middle	6.6	23.6 23.6	23.6	8.3 8.3	8.3	30.0 30.1	30.0	89.4 87.1	88.3	6.4 6.2	6.3		2.8 2.7	2.8		5.7 5.6	5.7	
					Bottom	12.2	23.6 23.6	23.6	8.3 8.3	8.3	30.2 30.2	30.2	86.8 89.1	88.0	6.2 6.4	6.3	6.3	3.1 3.0	3.1		5.6 5.3	5.5	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	15:31	10.0	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	24.2 24.2	24.2	85.3 85.0	85.2	6.7 6.7	6.7	6.7	5.2 5.2	5.2	5.3	7.2 7.9	7.6	8.1
					Middle	5.0	19.9 19.9	19.9	7.9 7.9	7.9	26.6 26.7	26.7	86.6 84.8	85.7	6.7 6.6	6.7		5.4 5.4	5.4		7.0 8.0	7.5	
					Bottom	9.0	19.5 20.0	19.8	7.9 7.9	7.9	29.9 29.3	29.6	85.9 84.0	85.0	6.6 6.4	6.5	6.5	5.2 5.5	5.4		9.0 9.3	9.2	
4-Apr-14	Cloudy	Moderate	17:05	10.2	Surface	1.0	20.7 20.6	20.6	8.0 8.0	8.0	21.5 21.7	21.6	81.9 82.5	82.2	6.5 6.5	6.5	6.5	4.5 4.7	4.6	5.1	3.3 4.1	3.7	4.1
					Middle	5.1	20.0 20.0	20.0	8.1 8.0	8.1	25.2 25.2	25.2	82.4 81.2	81.8	6.5 6.4	6.4		5.8 5.3	5.6		5.2 3.3	4.3	
					Bottom	9.2	20.1 20.1	20.1	8.0 8.0	8.0	28.1 27.7	27.9	82.4 80.8	81.6	6.3 6.2	6.3	6.3	5.0 4.9	5.0		4.4 4.2	4.3	
7-Apr-14	Cloudy	Moderate	19:17	9.7	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.5 26.5	26.5	89.9 90.5	90.2	7.0 7.0	7.0	7.0	2.2 2.4	2.3	2.0	3.5 2.9	3.2	3.7
					Middle	4.9	19.9 20.0	20.0	8.0 8.0	8.0	27.5 27.8	27.6	89.7 90.7	90.2	6.9 7.0	7.0		1.7 1.6	1.7		5.0 3.3	4.2	
					Bottom	8.7	19.8 19.8	19.8	8.0 8.0	8.0	30.4 30.5	30.4	89.4 91.7	90.6	6.8 7.0	6.9	6.9	1.9 1.8	1.9		3.8 3.7	3.8	
9-Apr-14	Sunny	Moderate	09:00	9.4	Surface	1.0	20.3 20.3	20.3	8.1 8.1	8.1	25.7 25.8	25.8	89.8 89.7	89.8	7.0 7.0	7.0	6.9	1.9 1.9	1.9	2.0	4.8 4.8	4.8	5.2
					Middle	4.7	19.9 19.9	19.9	8.1 8.0	8.1	30.6 30.5	30.5	89.0 88.9	89.0	6.8 6.8	6.8		1.9 2.0	2.0		4.6 5.5	5.1	
					Bottom	8.4	19.8 19.8	19.8	8.1 8.0	8.0	31.4 31.5	31.4	88.5 88.6	88.6	6.7 6.7	6.7	6.7	2.2 2.1	2.2		6.2 5.1	5.7	
11-Apr-14	Sunny	Moderate	10:13	9.7	Surface	1.0	21.1 21.7	21.4	8.2 8.3	8.3	26.4 26.0	26.2	97.1 101.6	99.4	7.4 7.7	7.6	7.4	2.2 2.3	2.3	1.8	5.0 4.9	5.0	5.2
					Middle	4.9	20.8 20.6	20.7	8.2 8.2	8.2	28.0 28.3	28.2	94.9 94.8	94.9	7.2 7.2	7.2		1.6 1.6	1.6		4.1 4.3	4.2	
					Bottom	8.7	20.3 20.3	20.3	8.2 8.2	8.2	30.2 30.5	30.4	96.3 92.0	94.2	7.3 7.0	7.1	7.1	1.6 1.4	1.5		6.3 6.2	6.3	
14-Apr-14	Sunny	Moderate	11:40	9.5	Surface	1.0	22.8 22.9	22.8	8.4 8.4	8.4	23.0 22.7	22.8	111.2 112.4	111.8	8.4 8.5	8.4	8.0	3.6 3.5	3.6	3.6	5.1 5.6	5.4	6.4
					Middle	4.8	21.6 21.7	21.6	8.3 8.3	8.3	27.3 27.2	27.3	100.3 101.3	100.8	7.5 7.6	7.6		3.2 2.9	3.1		6.9 7.5	7.2	
					Bottom	8.5	21.5 21.3	21.4	8.3 8.3	8.3	29.0 29.1	29.1	104.7 103.0	103.9	7.8 7.7	7.8	7.8	3.9 4.0	4.0		6.6 6.4	6.5	
16-Apr-14	Sunny	Moderate	14:31	10.2	Surface	1.0	22.0 22.1	22.1	8.3 8.3	8.3	26.8 26.8	26.8	97.6 97.5	97.6	7.3 7.3	7.3	7.3	1.6 1.6	1.6	1.7	3.1 2.3	2.7	2.8
					Middle	5.1	21.8 21.7	21.7	8.3 8.3	8.3	28.6 28.9	28.7	96.8 96.8	96.8	7.2 7.2	7.2		1.7 1.6	1.7		3.0 2.8	2.9	
					Bottom	9.2	21.7 21.6	21.7	8.3 8.3	8.3	29.1 29.7	29.4	96.6 96.4	96.5	7.2 7.2	7.2	7.2	1.7 1.7	1.7		2.7 2.8	2.8	
18-Apr-14	Sunny	Moderate	14:48	10.1	Surface	1.0	23.9 23.7	23.8	8.2 8.2	8.2	24.6 24.7	24.6	91.0 91.2	91.1	6.7 6.7	6.7	6.7	2.0 2.1	2.1	2.2	5.7 5.1	5.4	6.2
					Middle	5.1	23.1 23.4	23.2	8.3 8.2	8.2	26.2 25.9	26.1	90.8 90.4	90.6	6.7 6.6	6.6		2.2 2.1	2.2		6.5 5.3	5.9	
					Bottom	9.1	22.7 22.6	22.6	8.2 8.3	8.2	27.2 27.3	27.2	89.3 90.0	89.7	6.6 6.7	6.6	6.6	2.1 2.2	2.2		6.4 8.0	7.2	
21-Apr-14	Fine	Moderate	18:11	10.2	Surface	1.0	23.2 23.8	23.5	8.3 8.3	8.3	25.8 25.3	25.6	90.7 93.3	92.0	6.7 6.8	6.8	6.7	2.1 2.1	2.1	2.2	4.1 4.5	4.3	4.6
					Middle	5.1	22.8 22.9	22.8	8.3 8.3	8.3	28.8 28.9	28.8	90.4 90.5	90.5	6.6 6.6	6.6		2.2 2.2	2.2		5.1 5.4	5.3	
					Bottom	9.2	22.6 22.6	22.6	8.3 8.3	8.3	30.9 30.7	30.8	92.4 90.3	91.4	6.7 6.5	6.6	6.6	2.3 2.2	2.3		4.4 3.8	4.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	07:35	9.8	Surface	1.0	23.4 23.4	23.4	8.2 8.2	8.2	27.7 27.6	27.6	89.5 89.9	89.7	6.5 6.5	6.5	6.5	1.9 1.9	1.9	1.6	4.5 3.6	4.1	3.8
					Middle	4.9	23.0 23.3	23.1	8.2 8.2	8.2	29.9 28.8	29.4	88.3 89.1	88.7	6.4 6.5	6.4		1.4 1.4	1.4		4.2 3.1	3.7	
					Bottom	8.8	22.9 23.0	23.0	8.2 8.2	8.2	30.7 30.6	30.7	88.4 88.5	88.5	6.4 6.4	6.4	6.4	1.4 1.3	1.4		3.8 3.1	3.5	
25-Apr-14	Sunny	Moderate	10:00	10.1	Surface	1.0	23.0 23.0	23.0	8.2 8.2	8.2	30.8 30.9	30.8	90.6 90.5	90.6	6.5 6.5	6.5	6.5	2.0 2.1	2.1	2.1	3.2 2.9	3.1	3.0
					Middle	5.1	22.8 22.9	22.9	8.2 8.3	8.3	31.4 31.2	31.3	89.5 89.7	89.6	6.4 6.4	6.4		2.1 2.1	2.1		2.7 2.9	2.8	
					Bottom	9.1	22.7 22.7	22.7	8.2 8.2	8.2	31.9 31.9	31.9	89.3 89.3	89.3	6.4 6.4	6.4	6.4	2.2 2.2	2.2		3.0 3.4	3.2	
28-Apr-14	Sunny	Moderate	11:35	10.1	Surface	1.0	24.1 24.0	24.0	8.2 8.2	8.2	28.2 28.3	28.3	89.7 89.9	89.8	6.4 6.4	6.4	6.4	2.0 2.1	2.1	1.4	3.7 2.2	3.0	3.2
					Middle	5.1	23.4 23.5	23.4	8.2 8.2	8.2	30.7 30.3	30.5	87.5 87.8	87.7	6.3 6.3	6.3		1.0 1.1	1.1		2.7 2.1	2.4	
					Bottom	9.1	23.2 23.2	23.2	8.2 8.2	8.2	31.5 31.5	31.5	87.4 87.2	87.3	6.2 6.2	6.2	6.2	1.1 0.9	1.0		4.6 4.0	4.3	
30-Apr-14	Sunny	Moderate	14:31	10.0	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	27.3 27.3	27.3	87.9 88.5	88.2	6.3 6.4	6.4	6.4	2.2 2.3	2.3	2.3	4.1 6.2	5.2	5.3
					Middle	5.0	23.8 23.8	23.8	8.2 8.2	8.2	29.1 29.2	29.2	88.7 87.4	88.1	6.3 6.3	6.3		2.2 2.4	2.3		4.0 5.7	4.9	
					Bottom	9.0	23.7 23.8	23.8	8.2 8.2	8.2	29.9 29.8	29.9	89.5 87.7	88.6	6.4 6.3	6.3	6.3	2.2 2.2	2.2		6.0 5.6	5.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	07:19	10.3	Surface	1.0	20.2 20.2	20.2	7.9 7.9	7.9	24.4 25.3	24.8	83.0 82.7	82.9	6.5 6.5	6.5	6.5	5.5 5.3	5.4	5.4	9.7 10.1	9.9	10.4
					Middle	5.2	20.1 20.1	20.1	7.9 7.9	7.9	26.3 26.4	26.3	82.9 82.4	82.7	6.5 6.4	6.4		5.3 5.6	5.5		9.5 11.5	10.5	
					Bottom	9.3	20.1 19.9	20.0	7.9 7.9	7.9	26.4 27.8	27.1	82.3 82.3	82.3	6.4 6.4	6.4	6.4	5.5 5.2	5.4		11.4 10.3	10.9	
4-Apr-14	Cloudy	Moderate	08:17	10.4	Surface	1.0	20.3 20.2	20.3	8.0 8.0	8.0	21.5 21.8	21.6	80.2 80.6	80.4	6.4 6.4	6.4	6.4	4.4 4.2	4.3	3.8	9.5 9.6	9.6	9.7
					Middle	5.2	20.0 20.0	20.0	8.0 8.0	8.0	25.4 25.4	25.4	81.5 81.4	81.5	6.4 6.4	6.4		3.6 3.6	3.6		9.9 9.2	9.6	
					Bottom	9.4	19.8 19.9	19.9	8.0 8.0	8.0	27.2 27.2	27.2	80.6 80.4	80.5	6.3 6.3	6.3	6.3	3.3 3.4	3.4		9.2 10.6	9.9	
7-Apr-14	Sunny	Moderate	09:32	10.2	Surface	1.0	20.1 20.0	20.1	8.0 8.0	8.0	25.8 25.8	25.8	88.5 88.6	88.6	6.9 6.9	6.9	6.9	3.0 2.9	3.0	2.4	4.4 4.5	4.5	4.6
					Middle	5.1	19.9 19.9	19.9	8.0 8.0	8.0	28.7 28.5	28.6	88.4 88.1	88.3	6.8 6.8	6.8		2.6 2.5	2.6		4.1 4.4	4.3	
					Bottom	9.2	19.8 19.8	19.8	8.0 8.0	8.0	30.2 30.3	30.3	88.0 88.1	88.1	6.7 6.7	6.7	6.7	1.7 1.7	1.7		5.1 4.8	5.0	
9-Apr-14	Sunny	Moderate	15:11	10.0	Surface	1.0	21.1 21.2	21.2	8.0 8.0	8.0	23.8 23.7	23.8	91.3 91.3	91.3	7.1 7.1	7.1	7.0	1.5 1.6	1.6	1.7	5.1 3.4	4.3	3.8
					Middle	5.0	20.2 20.1	20.2	8.0 8.0	8.0	26.7 26.9	26.8	89.5 88.8	89.2	6.9 6.9	6.9		1.6 1.7	1.7		3.6 3.5	3.6	
					Bottom	9.0	19.8 20.3	20.0	8.0 8.0	8.0	31.5 31.2	31.4	88.0 89.3	88.7	6.7 6.7	6.7	6.7	1.7 1.7	1.7		4.1 3.0	3.6	
11-Apr-14	Sunny	Moderate	17:22	10.0	Surface	1.0	22.0 21.9	21.9	8.4 8.4	8.4	26.2 26.3	26.3	115.5 109.9	112.7	8.7 8.3	8.5	8.1	2.0 2.1	2.1	2.8	4.0 2.5	3.3	3.6
					Middle	5.0	21.3 21.1	21.2	8.3 8.3	8.3	27.2 27.5	27.4	103.2 99.7	101.5	7.8 7.6	7.7		2.7 3.0	2.9		3.2 3.5	3.4	
					Bottom	9.0	20.4 20.4	20.4	8.3 8.3	8.3	30.1 30.0	30.1	100.5 96.6	98.6	7.6 7.3	7.4	7.4	3.4 3.3	3.4		4.4 3.8	4.1	
14-Apr-14	Sunny	Moderate	19:42	10.2	Surface	1.0	22.2 22.1	22.1	8.4 8.4	8.4	24.9 25.0	25.0	102.9 102.0	102.5	7.8 7.7	7.7	7.6	2.0 2.0	2.0	1.8	7.3 7.8	7.6	7.7
					Middle	5.1	21.6 21.6	21.6	8.4 8.3	8.4	27.6 27.7	27.6	99.4 100.0	99.7	7.5 7.5	7.5		1.3 1.5	1.4		7.0 7.3	7.2	
					Bottom	9.2	21.4 21.3	21.3	8.3 8.4	8.4	29.3 29.4	29.4	101.3 98.8	100.1	7.6 7.4	7.5	7.5	2.1 2.0	2.1		8.7 8.1	8.4	
16-Apr-14	Sunny	Moderate	06:20	10.4	Surface	1.0	21.9 22.0	21.9	8.3 8.3	8.3	27.3 27.4	27.4	97.6 97.7	97.7	7.3 7.3	7.3	7.3	1.5 1.5	1.5	1.6	4.2 4.4	4.3	4.2
					Middle	5.2	21.7 21.7	21.7	8.3 8.3	8.3	28.4 28.4	28.4	97.1 97.0	97.1	7.2 7.2	7.2		1.7 1.6	1.7		3.5 3.9	3.7	
					Bottom	9.4	21.7 21.7	21.7	8.3 8.3	8.3	28.6 28.6	28.6	96.7 96.9	96.8	7.2 7.2	7.2	7.2	1.7 1.7	1.7		3.6 5.4	4.5	
18-Apr-14	Sunny	Moderate	07:32	10.1	Surface	1.0	22.4 22.6	22.5	8.3 8.2	8.3	26.8 25.9	26.3	88.7 88.5	88.6	6.6 6.6	6.6	6.6	1.7 1.8	1.8	1.9	3.8 4.6	4.2	4.1
					Middle	5.1	22.3 22.5	22.4	8.3 8.2	8.3	27.6 26.7	27.2	88.5 88.4	88.5	6.6 6.6	6.6		1.9 2.0	2.0		3.8 2.7	3.3	
					Bottom	9.1	22.4 22.4	22.4	8.2 8.2	8.2	27.5 27.0	27.3	88.0 88.3	88.2	6.5 6.6	6.5	6.5	1.9 2.0	2.0		5.6 3.8	4.7	
21-Apr-14	Fine	Moderate	09:40	10.2	Surface	1.0	23.6 23.5	23.6	8.2 8.2	8.2	24.6 24.7	24.6	87.6 87.3	87.5	6.5 6.4	6.4	6.4	1.5 1.5	1.5	1.6	3.0 4.1	3.6	3.5
					Middle	5.1	23.3 23.3	23.3	8.2 8.2	8.2	26.4 26.4	26.4	86.6 86.7	86.7	6.4 6.4	6.4		1.6 1.5	1.6		2.9 2.6	2.8	
					Bottom	9.2	22.7 23.0	22.9	8.2 8.2	8.2	29.7 29.5	29.6	86.7 86.2	86.5	6.3 6.2	6.3	6.3	1.7 1.7	1.7		3.4 4.7	4.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	14:32	10.0	Surface	1.0	23.2 23.2	23.2	8.3 8.3	8.3	28.9 28.9	28.9	90.9 91.4	91.2	6.6 6.6	6.6	6.6	1.5 1.5	1.5	1.6	4.2 3.7	4.0	3.5
					Middle	5.0	23.0 23.1	23.1	8.3 8.3	8.3	29.6 29.4	29.5	89.2 89.9	89.6	6.5 6.5	6.5		1.5 1.3	1.4		3.0 2.7	2.9	
					Bottom	9.0	22.7 22.8	22.8	8.3 8.3	8.3	31.8 31.8	31.8	89.6 89.7	89.7	6.4 6.4	6.4	6.4	2.0 1.9	2.0		2.6 4.4	3.5	
25-Apr-14	Sunny	Moderate	16:36	10.1	Surface	1.0	23.1 22.9	23.0	8.2 8.2	8.2	30.2 31.2	30.7	90.8 90.2	90.5	6.5 6.5	6.5	6.5	2.1 2.1	2.1	2.2	3.0 3.3	3.2	3.4
					Middle	5.1	22.8 22.8	22.8	8.2 8.2	8.2	31.6 31.6	31.6	89.4 89.5	89.5	6.4 6.4	6.4		2.2 2.2	2.2		3.1 3.4	3.3	
					Bottom	9.1	22.8 22.8	22.8	8.2 8.2	8.2	31.9 31.9	31.9	89.5 89.6	89.6	6.4 6.4	6.4	6.4	2.4 2.3	2.4		3.4 3.7	3.6	
28-Apr-14	Sunny	Moderate	19:33	10.3	Surface	1.0	24.2 24.1	24.2	8.2 8.2	8.2	26.6 26.8	26.7	89.7 90.2	90.0	6.5 6.5	6.5	6.5	3.9 3.9	3.9	3.8	7.0 6.9	7.0	6.3
					Middle	5.2	24.0 24.0	24.0	8.2 8.2	8.2	27.6 27.3	27.5	90.0 88.7	89.4	6.5 6.4	6.4		3.7 3.8	3.8		5.7 5.2	5.5	
					Bottom	9.3	23.9 24.0	23.9	8.2 8.2	8.2	28.1 27.9	28.0	90.9 89.1	90.0	6.5 6.4	6.5	6.5	3.5 3.9	3.7		7.0 5.7	6.4	
30-Apr-14	Sunny	Moderate	06:10	10.0	Surface	1.0	23.9 23.9	23.9	8.2 8.1	8.2	27.8 27.7	27.8	87.4 87.5	87.5	6.3 6.3	6.3	6.3	2.3 2.3	2.3	2.2	5.2 3.8	4.5	5.1
					Middle	5.0	23.9 23.9	23.9	8.1 8.2	8.2	28.1 28.2	28.2	87.2 87.1	87.2	6.3 6.3	6.3		2.1 2.2	2.2		5.4 5.3	5.4	
					Bottom	9.0	23.9 23.9	23.9	8.1 8.1	8.1	28.3 28.2	28.3	87.1 87.1	87.1	6.3 6.3	6.3	6.3	2.2 2.2	2.2		6.1 4.6	5.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	15:40	34.2	Surface	1.0	20.3 20.4	20.3	7.9 8.0	8.0	24.3 24.1	24.2	85.6 85.9	85.8	6.7 6.7	6.7	6.7	4.8 4.7	4.8	4.7	7.7 7.9	7.8	7.8
					Middle	17.1	19.6 19.5	19.6	8.0 8.0	8.0	29.6 29.8	29.7	85.6 85.6	85.6	6.6 6.6	6.6		4.7 4.5	4.6		7.1 8.6	7.9	
					Bottom	33.2	19.5 19.5	19.5	8.0 8.0	8.0	30.5 30.4	30.5	83.9 84.0	84.0	6.4 6.4	6.4		4.9 4.7	4.8		6.9 8.2	7.6	
4-Apr-14	Cloudy	Moderate	17:22	35.1	Surface	1.0	20.9 20.5	20.7	8.0 8.0	8.0	21.3 22.1	21.7	83.1 83.5	83.3	6.6 6.6	6.6	6.5	3.8 3.7	3.8	3.4	3.6 3.1	3.4	3.7
					Middle	17.6	19.8 19.7	19.7	8.1 8.1	8.1	28.1 28.6	28.3	83.4 83.3	83.4	6.5 6.4	6.4		3.1 3.5	3.3		4.0 3.3	3.7	
					Bottom	34.1	19.7 19.7	19.7	8.1 8.1	8.1	28.5 28.6	28.6	83.2 82.5	82.9	6.4 6.4	6.4	6.4	3.0 3.2	3.1		4.5 3.3	3.9	
7-Apr-14	Cloudy	Moderate	19:34	34.8	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.4 26.4	26.4	90.4 90.3	90.4	7.0 7.0	7.0	6.9	2.3 2.3	2.3	1.8	5.0 5.6	5.3	5.5
					Middle	17.4	19.7 19.7	19.7	8.0 8.0	8.0	30.9 31.0	31.0	89.3 89.7	89.5	6.8 6.8	6.8		1.6 1.5	1.6		4.9 6.0	5.5	
					Bottom	33.8	19.7 19.7	19.7	8.0 8.0	8.0	31.1 31.3	31.2	89.1 89.6	89.4	6.8 6.8	6.8	6.8	1.6 1.4	1.5		5.1 6.2	5.7	
9-Apr-14	Sunny	Moderate	08:54	34.7	Surface	1.0	20.4 20.3	20.4	8.1 8.1	8.1	25.9 26.1	26.0	90.0 90.3	90.2	7.0 7.0	7.0	6.9	2.1 2.1	2.1	2.1	3.3 5.0	4.2	4.4
					Middle	17.4	19.8 19.8	19.8	8.1 8.1	8.1	31.3 31.5	31.4	89.4 90.1	89.8	6.8 6.8	6.8		2.1 2.1	2.1		4.6 3.6	4.1	
					Bottom	33.7	19.7 19.7	19.7	8.1 8.1	8.1	32.4 32.4	32.4	90.7 89.1	89.9	6.9 6.7	6.8	6.8	2.1 2.2	2.2		5.3 4.2	4.8	
11-Apr-14	Sunny	Moderate	09:56	34.4	Surface	1.0	21.4 21.1	21.3	8.3 8.3	8.3	26.3 26.4	26.3	99.2 96.7	98.0	7.5 7.4	7.5	7.2	1.8 1.6	1.7	1.4	2.8 3.8	3.3	3.7
					Middle	17.2	20.2 20.2	20.2	8.2 8.2	8.2	30.8 31.0	30.9	90.9 92.2	91.6	6.9 7.0	6.9		1.2 1.3	1.3		3.4 4.6	4.0	
					Bottom	33.4	20.1 20.1	20.1	8.2 8.2	8.2	31.7 31.7	31.7	90.6 93.3	92.0	6.8 7.0	6.9	6.9	1.1 1.2	1.2		4.0 3.3	3.7	
14-Apr-14	Sunny	Moderate	11:25	35.5	Surface	1.0	22.9 22.7	22.8	8.4 8.4	8.4	22.7 23.2	23.0	111.1 111.9	111.5	8.4 8.4	8.4	7.9	3.3 3.0	3.2	3.9	7.3 7.4	7.4	7.7
					Middle	17.8	21.6 21.4	21.5	8.3 8.3	8.3	28.0 28.4	28.2	97.7 98.6	98.2	7.3 7.4	7.4		3.5 3.7	3.6		8.1 7.6	7.9	
					Bottom	34.5	21.3 21.4	21.4	8.3 8.3	8.3	29.3 28.9	29.1	100.1 97.4	98.8	7.5 7.3	7.4	7.4	4.7 5.0	4.9		7.8 7.9	7.9	
16-Apr-14	Sunny	Moderate	14:41	34.2	Surface	1.0	22.0 22.0	22.0	8.3 8.3	8.3	27.0 26.9	26.9	97.4 97.5	97.5	7.3 7.3	7.3	7.2	1.5 1.4	1.5	1.5	3.2 2.9	3.1	3.4
					Middle	17.1	21.7 21.5	21.6	8.3 8.3	8.3	29.4 30.2	29.8	96.4 95.8	96.1	7.1 7.1	7.1		1.5 1.4	1.5		2.6 2.2	2.4	
					Bottom	33.2	21.4 21.5	21.4	8.3 8.3	8.3	31.3 31.1	31.2	95.5 95.7	95.6	7.0 7.1	7.0	7.0	1.6 1.6	1.6		4.9 4.6	4.8	
18-Apr-14	Sunny	Moderate	15:10	36.2	Surface	1.0	23.0 23.0	23.0	8.2 8.2	8.2	25.1 25.1	25.1	90.3 90.3	90.3	6.7 6.7	6.7	6.7	2.1 2.0	2.1	2.2	4.7 5.8	5.3	5.2
					Middle	18.1	22.9 22.6	22.7	8.2 8.2	8.2	26.9 27.3	27.1	89.7 89.1	89.4	6.6 6.6	6.6		2.0 2.2	2.1		4.6 5.7	5.2	
					Bottom	35.2	22.6 23.1	22.8	8.2 8.2	8.2	27.7 26.9	27.3	88.7 89.6	89.2	6.5 6.6	6.6	6.6	2.3 2.2	2.3		5.7 4.7	5.2	
21-Apr-14	Fine	Moderate	18:22	34.8	Surface	1.0	23.8 23.8	23.8	8.3 8.3	8.3	25.5 25.4	25.5	93.9 93.8	93.9	6.9 6.9	6.9	6.8	1.8 1.8	1.8	1.8	3.5 4.6	4.1	4.3
					Middle	17.4	22.6 22.5	22.5	8.3 8.3	8.3	31.1 31.5	31.3	90.7 90.6	90.7	6.6 6.5	6.6		1.8 1.8	1.8		4.6 4.7	4.7	
					Bottom	33.8	22.5 22.5	22.5	8.3 8.3	8.3	31.5 31.7	31.6	91.1 90.8	91.0	6.6 6.6	6.6	6.6	1.9 1.9	1.9		3.7 4.2	4.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	07:21	35.2	Surface	1.0	23.4 23.4	23.4	8.2 8.2	8.2	27.6 27.6	27.6	89.9 90.0	90.0	6.5 6.5	6.5	6.5	2.0 2.0	2.0	1.5	5.3 5.1	5.2	4.1
					Middle	17.6	22.8 22.8	22.8	8.2 8.2	8.2	31.3 31.5	31.4	88.7 88.2	88.5	6.4 6.3	6.4		1.1 1.2	1.2		3.2 4.6	3.9	
					Bottom	34.2	22.8 22.8	22.8	8.2 8.2	8.2	31.6 31.7	31.7	89.2 88.3	88.8	6.4 6.3	6.4	6.4	1.1 1.3	1.2		2.9 3.3	3.1	
25-Apr-14	Sunny	Moderate	09:47	35.0	Surface	1.0	23.0 23.0	23.0	8.2 8.2	8.2	31.0 30.9	30.9	90.0 90.2	90.1	6.5 6.5	6.5	6.5	2.1 2.0	2.1	2.2	4.0 3.0	3.5	4.1
					Middle	17.5	22.9 22.8	22.9	8.2 8.2	8.2	31.1 31.6	31.3	89.6 89.3	89.5	6.4 6.4	6.4		2.2 2.1	2.2		3.4 4.0	3.7	
					Bottom	34.0	22.7 22.7	22.7	8.2 8.2	8.2	32.2 32.0	32.1	89.1 89.1	89.1	6.4 6.4	6.4	6.4	2.2 2.2	2.2		5.4 4.7	5.1	
28-Apr-14	Sunny	Moderate	11:23	34.5	Surface	1.0	23.9 24.0	24.0	8.2 8.2	8.2	28.7 28.3	28.5	89.4 90.6	90.0	6.4 6.5	6.4	6.3	1.8 1.9	1.9	1.6	4.9 4.4	4.7	4.2
					Middle	17.3	23.2 23.2	23.2	8.2 8.2	8.2	31.6 31.7	31.6	86.8 88.2	87.5	6.2 6.3	6.2		1.8 1.7	1.8		3.7 3.9	3.8	
					Bottom	33.5	23.2 23.2	23.2	8.2 8.2	8.2	31.7 31.8	31.8	87.9 89.6	88.8	6.3 6.4	6.3	6.3	1.2 1.0	1.1		4.3 3.6	4.0	
30-Apr-14	Sunny	Moderate	14:41	35.1	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	27.3 27.3	27.3	87.5 87.6	87.6	6.3 6.3	6.3	6.3	2.1 2.1	2.1	2.2	4.2 3.1	3.7	4.4
					Middle	17.6	23.7 23.5	23.6	8.3 8.3	8.3	30.0 31.1	30.6	86.6 86.2	86.4	6.2 6.1	6.2		2.2 2.2	2.2		3.8 4.9	4.4	
					Bottom	34.1	23.5 23.5	23.5	8.3 8.2	8.3	31.4 31.4	31.4	86.2 86.2	86.2	6.1 6.1	6.1	6.1	2.1 2.2	2.2		3.8 6.1	5.0	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	07:10	34.9	Surface	1.0	20.2 20.3	20.3	7.9 7.9	7.9	24.3 24.4	24.3	83.6 83.0	83.3	6.6 6.5	6.5	6.5	5.8 5.7	5.8	5.8	8.4 9.3	8.9	8.7
					Middle	17.5	19.9 20.2	20.0	7.9 7.9	7.9	28.2 25.9	27.1	83.1 83.4	83.3	6.4 6.5	6.5		5.5 5.8	5.7		8.2 7.7	8.0	
					Bottom	33.9	19.9 20.2	20.0	7.9 7.8	7.9	28.7 26.0	27.3	82.0 84.8	83.4	6.3 6.6	6.5	6.5	5.7 6.0	5.9		9.3 8.9	9.1	
4-Apr-14	Cloudy	Moderate	08:03	35.5	Surface	1.0	20.3 20.3	20.3	8.0 8.0	8.0	21.5 22.2	21.8	81.1 80.9	81.0	6.5 6.4	6.4	6.4	4.5 4.4	4.5	4.5	5.4 4.5	5.0	6.8
					Middle	17.8	19.7 19.7	19.7	8.1 8.1	8.1	28.1 28.1	28.1	82.3 83.9	83.1	6.4 6.5	6.4		3.6 3.8	3.7		6.9 6.3	6.6	
					Bottom	34.5	19.7 19.7	19.7	8.0 8.1	8.1	28.4 28.9	28.7	81.2 84.0	82.6	6.3 6.5	6.4	6.4	5.5 5.3	5.4		8.5 8.8	8.7	
7-Apr-14	Sunny	Moderate	09:20	35.3	Surface	1.0	20.1 20.1	20.1	8.0 8.0	8.0	25.8 25.8	25.8	89.0 89.1	89.1	7.0 7.0	7.0	6.9	1.8 1.6	1.7	1.5	3.8 3.4	3.6	4.5
					Middle	17.7	19.8 19.7	19.8	8.0 8.0	8.0	30.6 30.8	30.7	88.8 89.5	89.2	6.8 6.8	6.8		1.4 1.3	1.4		5.2 3.6	4.4	
					Bottom	34.3	19.7 19.7	19.7	8.0 8.0	8.0	30.8 31.0	30.9	88.6 89.7	89.2	6.8 6.8	6.8	6.8	1.3 1.2	1.3		4.6 6.5	5.6	
9-Apr-14	Sunny	Moderate	15:19	34.7	Surface	1.0	21.2 21.1	21.1	8.0 8.0	8.0	23.3 23.3	23.3	91.6 91.3	91.5	7.1 7.1	7.1	6.9	1.6 1.7	1.7	1.7	3.8 3.9	3.9	3.3
					Middle	17.4	19.8 19.8	19.8	8.0 8.0	8.0	31.6 31.9	31.7	88.6 88.9	88.8	6.7 6.7	6.7		1.6 1.6	1.6		2.5 2.4	2.5	
					Bottom	33.7	19.7 19.8	19.8	8.0 8.0	8.0	32.1 32.0	32.1	88.7 88.7	88.7	6.7 6.7	6.7	6.7	1.8 1.9	1.9		3.5 3.6	3.6	
11-Apr-14	Sunny	Moderate	17:38	34.8	Surface	1.0	22.0 22.0	22.0	8.4 8.4	8.4	26.2 26.2	26.2	112.1 114.6	113.4	8.4 8.6	8.5	7.9	1.6 1.8	1.7	1.5	3.1 4.4	3.8	4.1
					Middle	17.4	20.3 20.3	20.3	8.3 8.3	8.3	30.8 30.7	30.7	96.1 94.0	95.1	7.3 7.1	7.2		1.4 1.5	1.5		3.7 4.0	3.9	
					Bottom	33.8	20.1 20.1	20.1	8.3 8.3	8.3	31.7 31.5	31.6	95.3 99.1	97.2	7.2 7.5	7.3	7.3	1.2 1.2	1.2		4.1 5.1	4.6	
14-Apr-14	Sunny	Moderate	19:59	35.1	Surface	1.0	22.3 22.3	22.3	8.4 8.4	8.4	24.6 24.7	24.7	110.2 106.0	108.1	8.3 8.0	8.1	7.8	2.5 2.3	2.4	2.9	6.2 5.6	5.9	6.0
					Middle	17.6	22.0 21.3	21.6	8.3 8.3	8.3	25.9 29.6	27.7	99.5 97.9	98.7	7.5 7.3	7.4		3.1 2.7	2.9		4.6 5.5	5.1	
					Bottom	34.1	21.8 21.2	21.5	8.3 8.3	8.3	26.6 30.3	28.5	99.6 97.9	98.8	7.5 7.3	7.4	7.4	3.4 3.3	3.4		6.6 7.2	6.9	
16-Apr-14	Sunny	Moderate	06:12	35.9	Surface	1.0	22.0 22.0	22.0	8.3 8.3	8.3	27.1 27.2	27.2	97.5 97.5	97.5	7.3 7.3	7.3	7.3	1.5 1.5	1.5	1.6	4.4 3.9	4.2	4.5
					Middle	18.0	21.7 21.8	21.8	8.3 8.3	8.3	28.5 27.9	28.2	96.7 96.8	96.8	7.2 7.2	7.2		1.6 1.6	1.6		4.7 4.0	4.4	
					Bottom	34.9	21.8 21.8	21.8	8.3 8.3	8.3	28.0 28.4	28.2	96.6 96.5	96.6	7.2 7.2	7.2	7.2	1.6 1.6	1.6		5.5 4.4	5.0	
18-Apr-14	Sunny	Moderate	07:09	36.2	Surface	1.0	22.5 22.5	22.5	8.3 8.3	8.3	26.6 26.1	26.3	89.0 89.1	89.1	6.6 6.6	6.6	6.6	1.5 1.6	1.6	1.6	2.7 3.8	3.3	3.5
					Middle	18.1	22.4 22.3	22.4	8.3 8.3	8.3	27.3 27.5	27.4	88.9 89.0	89.0	6.6 6.6	6.6		1.5 1.6	1.6		2.8 3.0	2.9	
					Bottom	35.2	22.2 22.3	22.3	8.3 8.3	8.3	28.7 27.6	28.1	88.5 88.9	88.7	6.5 6.6	6.6	6.6	1.6 1.5	1.6		4.4 4.0	4.2	
21-Apr-14	Fine	Moderate	09:31	35.2	Surface	1.0	23.5 23.5	23.5	8.2 8.2	8.2	24.8 25.0	24.9	88.2 87.8	88.0	6.5 6.5	6.5	6.4	1.6 1.7	1.7	1.7	3.2 3.5	3.4	3.6
					Middle	17.6	22.7 22.8	22.7	8.2 8.2	8.2	29.8 29.5	29.6	86.9 87.2	87.1	6.3 6.3	6.3		1.6 1.6	1.6		2.8 3.9	3.4	
					Bottom	34.2	22.7 22.8	22.7	8.2 8.2	8.2	30.2 29.6	29.9	86.3 87.4	86.9	6.3 6.4	6.3	6.3	1.7 1.6	1.7		4.5 3.5	4.0	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	14:45	35.6	Surface	1.0	23.2 23.2	23.2	8.3 8.3	8.3	28.8 28.8	28.8	90.3 89.6	90.0	6.5 6.5	6.5	6.4	1.4 1.3	1.4	1.2	3.1 2.8	3.0	3.4
					Middle	17.8	22.7 22.7	22.7	8.3 8.3	8.3	32.0 32.0	32.0	87.6 87.5	87.6	6.3 6.3	6.3		1.1 1.1	1.1		3.3 4.5	3.9	
					Bottom	34.6	22.7 22.7	22.7	8.3 8.3	8.3	32.2 32.1	32.2	87.4 88.1	87.8	6.3 6.3	6.3	6.3	1.1 1.1	1.1		3.3 3.0	3.2	
25-Apr-14	Sunny	Moderate	16:50	36.5	Surface	1.0	22.9 22.8	22.8	8.3 8.3	8.3	31.5 31.6	31.6	89.0 89.0	89.0	6.4 6.4	6.4	6.4	1.9 1.9	1.9	2.1	3.2 4.3	3.8	4.9
					Middle	18.3	22.8 22.8	22.8	8.3 8.3	8.3	31.8 31.8	31.8	88.5 88.6	88.6	6.3 6.4	6.3		2.0 2.1	2.1		4.8 5.3	5.1	
					Bottom	35.5	22.7 22.7	22.7	8.3 8.3	8.3	32.2 32.2	32.2	88.4 88.0	88.2	6.3 6.3	6.3	6.3	2.2 2.1	2.2		5.6 5.8	5.7	
28-Apr-14	Sunny	Moderate	19:46	34.9	Surface	1.0	24.3 24.3	24.3	8.2 8.2	8.2	26.4 26.4	26.4	89.4 88.9	89.2	6.4 6.4	6.4	6.3	4.1 3.9	4.0	3.6	4.8 4.3	4.6	6.1
					Middle	17.5	23.8 23.7	23.8	8.2 8.2	8.2	28.4 29.0	28.7	86.4 86.0	86.2	6.2 6.2	6.2		3.3 3.4	3.4		6.5 6.0	6.3	
					Bottom	33.9	23.7 23.8	23.7	8.2 8.2	8.2	29.4 28.8	29.1	86.3 87.4	86.9	6.2 6.3	6.2	6.2	3.2 3.4	3.3		7.1 7.7	7.4	
30-Apr-14	Sunny	Moderate	06:03	34.4	Surface	1.0	23.9 23.9	23.9	8.1 8.1	8.1	27.7 27.7	27.7	87.6 87.8	87.7	6.3 6.3	6.3	6.3	2.3 2.3	2.3	2.2	5.2 5.9	5.6	5.4
					Middle	17.2	23.9 23.9	23.9	8.1 8.1	8.1	28.2 28.2	28.2	87.2 87.0	87.1	6.3 6.2	6.3		2.1 2.1	2.1		4.9 5.9	5.4	
					Bottom	33.4	23.9 23.9	23.9	8.1 8.1	8.1	28.5 28.3	28.4	86.8 88.5	87.7	6.2 6.4	6.3	6.3	2.2 2.1	2.2		5.9 4.5	5.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:31	3.3	Surface	1.0	20.5 20.5	20.5	7.8 7.7	7.8	22.9 22.8	22.8	87.3 88.9	88.1	6.9 7.0	6.9	6.9	5.6 5.4	5.5	5.6	8.6 9.2	8.9	8.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	20.5 20.5	20.5	7.7 7.8	7.7	22.9 23.1	23.0	90.0 87.8	88.9	7.1 6.9	7.0	7.0	5.5 5.9	5.7		7.3 8.8	8.1	
4-Apr-14	Cloudy	Moderate	15:03	3.4	Surface	1.0	21.0 21.0	21.0	7.7 7.7	7.7	19.9 19.9	19.9	82.8 83.0	82.9	6.6 6.6	6.6	6.6	6.7 6.9	6.8	6.9	8.3 8.7	8.5	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	21.0 21.0	21.0	7.7 7.7	7.7	19.9 19.9	19.9	82.8 83.4	83.1	6.6 6.6	6.6	6.6	6.9 7.0	7.0		8.2 9.2	8.7	
7-Apr-14	Cloudy	Moderate	17:46	3.3	Surface	1.0	20.5 20.5	20.5	8.1 8.1	8.1	23.7 23.7	23.7	97.2 97.7	97.5	7.6 7.7	7.6	7.6	4.0 3.9	4.0	4.0	4.8 6.7	5.8	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	20.5 20.5	20.5	8.1 8.1	8.1	23.9 23.8	23.9	99.3 97.5	98.4	7.8 7.6	7.7	7.7	3.9 4.0	4.0		5.0 6.1	5.6	
9-Apr-14	Sunny	Moderate	10:50	3.2	Surface	1.0	20.6 20.6	20.6	7.9 7.8	7.9	24.0 23.8	23.9	94.2 92.3	93.3	7.4 7.2	7.3	7.3	5.5 5.2	5.4	5.6	8.7 9.2	9.0	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	20.5 20.6	20.5	7.8 7.9	7.8	24.6 25.0	24.8	95.7 93.0	94.4	7.5 7.2	7.3	7.3	6.0 5.6	5.8		7.2 7.7	7.5	
11-Apr-14	Sunny	Moderate	12:03	3.1	Surface	1.0	22.5 22.3	22.4	8.3 8.3	8.3	24.2 24.4	24.3	123.6 124.0	123.8	9.3 9.4	9.3	9.3	5.9 5.7	5.8	6.3	6.4 6.1	6.3	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	21.9 22.1	22.0	8.1 8.2	8.2	25.5 24.8	25.1	123.3 123.3	123.3	9.3 9.3	9.3	9.3	6.7 6.6	6.7		7.1 6.1	6.6	
14-Apr-14	Sunny	Moderate	13:18	3.1	Surface	1.0	23.5 23.5	23.5	8.5 8.5	8.5	22.5 22.5	22.5	147.5 149.6	148.6	11.0 11.2	11.1	11.1	8.6 8.4	8.5	8.7	11.0 11.2	11.1	11.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	23.5 23.5	23.5	8.5 8.5	8.5	22.6 22.6	22.6	149.5 143.4	146.5	11.2 10.7	10.9	10.9	8.9 8.8	8.9		11.9 11.6	11.8	
16-Apr-14	Sunny	Moderate	12:28	3.2	Surface	1.0	22.3 22.3	22.3	8.3 8.4	8.3	26.0 26.0	26.0	98.8 98.8	98.8	7.4 7.4	7.4	7.4	5.6 5.8	5.7	6.9	6.7 6.4	6.6	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.3 22.3	22.3	8.3 8.3	8.3	26.1 26.1	26.1	99.0 98.7	98.9	7.4 7.4	7.4	7.4	8.1 8.0	8.1		7.0 5.5	6.3	
18-Apr-14	Sunny	Moderate	13:46	3.2	Surface	1.0	23.9 23.8	23.8	8.0 8.0	8.0	24.5 24.5	24.5	91.8 90.9	91.4	6.7 6.7	6.7	6.7	4.6 4.7	4.7	4.7	4.2 4.3	4.3	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.2 23.6	23.4	7.9 8.0	7.9	26.1 25.3	25.7	90.7 91.3	91.0	6.7 6.7	6.7	6.7	4.6 4.5	4.6		3.3 2.6	3.0	
21-Apr-14	Fine	Moderate	15:54	3.6	Surface	1.0	24.2 24.3	24.2	8.4 8.4	8.4	24.7 24.6	24.7	104.4 102.2	103.3	7.6 7.4	7.5	7.5	5.3 5.4	5.4	5.4	4.8 6.3	5.6	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	24.1 24.3	24.2	8.4 8.4	8.4	24.7 24.7	24.7	100.1 104.2	102.2	7.3 7.6	7.4	7.4	5.4 5.3	5.4		5.1 6.3	5.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	09:02	3.1	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	24.6 24.5	24.6	96.0 94.3	95.2	7.0 6.9	7.0	7.0	5.3 5.2	5.3	5.5	3.1 5.1	4.1	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	24.0 24.0	24.0	8.2 8.2	8.2	24.8 26.0	25.4	98.1 95.0	96.6	7.2 6.9	7.0	7.0	5.7 5.6	5.7		3.5 3.5	3.5	
25-Apr-14	Sunny	Moderate	11:40	3.2	Surface	1.0	23.7 23.7	23.7	8.2 8.1	8.2	27.3 27.3	27.3	95.5 95.5	95.5	6.9 6.9	6.9	6.9	9.4 9.6	9.5	9.6	8.0 8.5	8.3	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.7 23.6	23.7	8.2 8.1	8.1	27.3 27.4	27.4	95.4 96.0	95.7	6.9 7.0	6.9	6.9	9.4 9.7	9.6		7.7 7.3	7.5	
28-Apr-14	Sunny	Moderate	13:21	3.2	Surface	1.0	25.0 24.9	25.0	8.2 8.2	8.2	27.1 26.9	27.0	94.5 94.0	94.3	6.7 6.7	6.7	6.7	5.6 5.8	5.7	5.8	2.3 3.8	3.1	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.7 24.8	24.7	8.1 8.2	8.1	27.2 27.2	27.2	95.2 93.7	94.5	6.8 6.7	6.7	6.7	5.7 5.8	5.8		3.4 2.7	3.1	
30-Apr-14	Sunny	Moderate	12:45	3.4	Surface	1.0	24.2 24.2	24.2	8.3 8.3	8.3	28.1 28.1	28.1	94.3 89.5	91.9	6.7 6.4	6.6	6.6	6.9 7.0	7.0	7.1	5.2 6.5	5.9	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.2 24.1	24.1	8.3 8.3	8.3	28.1 28.2	28.1	88.8 90.9	89.9	6.3 6.5	6.4	6.4	7.0 7.2	7.1		6.9 5.4	6.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	09:08	3.2	Surface	1.0	20.4 20.4	20.4	7.9 7.9	7.9	22.8 22.9	22.8	86.4 88.8	87.6	6.8 7.0	6.9	6.9	7.7 7.9	7.8	8.0	6.8 6.2	6.5	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	20.4 20.4	20.4	7.9 7.9	7.9	23.2 23.3	23.3	87.4 91.3	89.4	6.9 7.2	7.0	7.0	8.1 8.3	8.2		6.8 6.0	6.4	
4-Apr-14	Cloudy	Moderate	09:36	3.5	Surface	1.0	20.4 20.4	20.4	7.7 7.7	7.7	19.4 19.5	19.5	77.9 77.5	77.7	6.3 6.2	6.3	6.3	5.6 5.7	5.7	5.7	4.7 4.2	4.5	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	20.4 20.4	20.4	7.7 7.7	7.7	19.6 19.5	19.5	78.2 77.5	77.9	6.3 6.2	6.3	6.3	5.7 5.7	5.7		5.0 6.2	5.6	
7-Apr-14	Sunny	Moderate	10:56	3.3	Surface	1.0	20.3 20.3	20.3	8.1 8.1	8.1	23.2 23.2	23.2	92.9 92.1	92.5	7.3 7.3	7.3	7.3	5.4 5.5	5.5	5.5	6.9 8.0	7.5	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	20.2 20.3	20.3	8.1 8.1	8.1	23.6 23.4	23.5	93.8 92.4	93.1	7.4 7.3	7.3	7.3	5.5 5.3	5.4		7.9 6.0	7.0	
9-Apr-14	Sunny	Moderate	13:25	3.2	Surface	1.0	21.2 21.5	21.3	7.9 7.9	7.9	23.8 23.6	23.7	92.7 94.6	93.7	7.2 7.3	7.2	7.2	6.0 5.9	6.0	6.8	5.8 6.1	6.0	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	20.9 20.9	20.9	7.9 7.9	7.9	25.9 25.5	25.7	91.5 92.7	92.1	7.0 7.1	7.1	7.1	7.8 7.1	7.5		5.2 5.8	5.5	
11-Apr-14	Sunny	Moderate	15:47	3.2	Surface	1.0	23.1 23.1	23.1	8.3 8.3	8.3	24.5 24.6	24.5	125.4 132.6	129.0	9.3 9.9	9.6	9.6	5.8 5.7	5.8	5.8	5.7 6.6	6.2	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.3 21.9	22.1	8.2 8.1	8.2	25.2 25.6	25.4	129.6 125.2	127.4	9.7 9.3	9.5	9.5	5.7 5.8	5.8		8.2 6.8	7.5	
14-Apr-14	Sunny	Moderate	17:34	3.0	Surface	1.0	23.5 23.5	23.5	8.6 8.6	8.6	23.6 23.6	23.6	149.6 151.6	150.6	11.1 11.3	11.2	11.2	12.3 12.4	12.4	12.5	14.0 14.8	14.4	14.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	23.5 23.5	23.5	8.6 8.6	8.6	23.6 23.6	23.6	151.1 146.3	148.7	11.2 10.9	11.1	11.1	12.5 12.7	12.6		14.9 14.8	14.9	
16-Apr-14	Sunny	Moderate	07:43	3.3	Surface	1.0	22.2 22.2	22.2	8.4 8.4	8.4	25.8 25.8	25.8	101.4 101.4	101.4	7.6 7.6	7.6	7.6	3.0 3.2	3.1	3.0	6.2 4.7	5.5	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.0 22.2	22.1	8.4 8.4	8.4	25.9 25.8	25.8	101.2 101.3	101.3	7.6 7.6	7.6	7.6	2.8 3.0	2.9		7.0 5.9	6.5	
18-Apr-14	Sunny	Moderate	09:00	3.2	Surface	1.0	23.1 23.1	23.1	8.1 8.2	8.2	25.9 25.9	25.9	91.8 90.9	91.4	6.8 6.7	6.7	6.7	6.2 6.4	6.3	6.4	2.8 4.1	3.5	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.0 23.0	23.0	8.1 8.2	8.1	26.0 26.0	26.0	93.3 90.8	92.1	6.9 6.7	6.8	6.8	6.4 6.6	6.5		3.7 4.7	4.2	
21-Apr-14	Fine	Moderate	10:31	3.3	Surface	1.0	23.9 24.0	24.0	8.2 8.2	8.2	24.1 24.1	24.1	92.3 95.1	93.7	6.8 7.0	6.9	6.9	9.2 9.4	9.3	9.4	9.8 9.9	9.9	9.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	23.9 23.9	23.9	8.2 8.2	8.2	24.3 24.3	24.3	91.8 93.0	92.4	6.7 6.8	6.8	6.8	9.3 9.4	9.4		9.1 9.8	9.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:08	3.1	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	24.7 24.7	24.7	98.8 99.3	99.1	7.2 7.3	7.2	7.2	2.4 2.4	2.4	2.5	3.6 2.9	3.3	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	24.0 24.0	24.0	8.2 8.1	8.2	24.7 24.7	24.7	98.8 100.5	99.7	7.2 7.4	7.3	7.3	2.6 2.5	2.6		3.9 3.1	3.5	
25-Apr-14	Sunny	Moderate	14:55	3.1	Surface	1.0	24.1 24.1	24.1	8.1 8.1	8.1	28.4 28.4	28.4	98.7 98.3	98.5	7.1 7.0	7.0	7.0	12.4 12.2	12.3	12.3	7.0 6.5	6.8	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	24.1 24.1	24.1	8.1 8.1	8.1	28.5 28.4	28.5	98.4 98.0	98.2	7.0 7.0	7.0	7.0	12.1 12.4	12.3		8.7 9.1	8.9	
28-Apr-14	Sunny	Moderate	17:46	2.9	Surface	1.0	25.0 24.9	24.9	8.2 8.2	8.2	27.5 27.7	27.6	93.5 92.7	93.1	6.6 6.6	6.6	6.6	8.5 8.2	8.4	8.4	5.9 5.7	5.8	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	1.9	24.9 24.8	24.8	8.2 8.1	8.2	27.7 27.8	27.8	92.2 94.1	93.2	6.5 6.7	6.6	6.6	8.4 8.2	8.3		6.0 7.0	6.5	
30-Apr-14	Sunny	Moderate	07:10	3.3	Surface	1.0	24.2 24.2	24.2	8.3 8.3	8.3	27.3 27.3	27.3	98.2 93.1	95.7	7.1 6.7	6.9	6.9	5.7 5.7	5.7	5.8	5.5 6.5	6.0	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	24.2 24.1	24.2	8.3 8.3	8.3	27.3 27.3	27.3	92.0 94.3	93.2	6.6 6.8	6.7	6.7	5.9 5.8	5.9		4.9 5.9	5.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:44	3.4	Surface	1.0	20.5 20.5	20.5	7.8 7.8	7.8	23.3 23.3	23.3	91.3 88.5	89.9	7.2 7.0	7.1	7.1	7.0 6.5	6.8	7.0	9.0 9.5	9.3	10.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	20.5 20.4	20.4	7.8 7.7	7.7	23.3 23.4	23.3	89.3 94.6	92.0	7.0 7.4	7.2	7.2	6.9 7.5	7.2		11.6 10.3	11.0	
4-Apr-14	Cloudy	Moderate	15:15	3.5	Surface	1.0	20.7 20.9	20.8	7.7 7.7	7.7	20.1 20.0	20.1	79.6 80.9	80.3	6.3 6.4	6.4	6.4	6.2 5.9	6.1	6.3	5.5 5.6	5.6	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	20.6 20.8	20.7	7.6 7.7	7.7	20.2 20.1	20.2	79.3 80.7	80.0	6.3 6.4	6.4	6.4	6.6 6.3	6.5		6.2 6.6	6.4	
7-Apr-14	Cloudy	Moderate	18:01	3.8	Surface	1.0	20.3 20.3	20.3	8.1 8.1	8.1	23.8 23.7	23.8	89.2 89.9	89.6	7.0 7.1	7.0	7.0	8.9 9.1	9.0	9.0	12.2 12.8	12.5	13.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	20.2 20.4	20.3	8.1 8.1	8.1	26.1 25.1	25.6	90.1 89.9	90.0	7.0 7.0	7.0	7.0	8.9 8.9	8.9		14.2 16.3	15.3	
9-Apr-14	Sunny	Moderate	10:38	3.6	Surface	1.0	20.6 20.6	20.6	7.8 7.8	7.8	23.8 23.6	23.7	93.0 93.5	93.3	7.3 7.3	7.3	7.3	9.4 9.0	9.2	9.3	5.6 5.3	5.5	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	20.6 20.4	20.5	7.8 7.8	7.8	23.9 24.8	24.4	93.1 94.5	93.8	7.3 7.4	7.3	7.3	9.5 9.3	9.4		4.8 4.9	4.9	
11-Apr-14	Sunny	Moderate	11:21	3.8	Surface	1.0	21.6 21.7	21.7	8.2 8.2	8.2	25.4 25.4	25.4	97.8 102.2	100.0	7.4 7.8	7.6	7.6	7.4 7.5	7.5	7.6	8.9 8.8	8.9	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	21.2 20.9	21.0	8.1 8.0	8.1	26.8 27.1	27.0	99.9 97.5	98.7	7.6 7.4	7.5	7.5	7.6 7.5	7.6		11.3 10.1	10.7	
14-Apr-14	Sunny	Moderate	13:04	3.7	Surface	1.0	23.4 23.4	23.4	8.5 8.5	8.5	22.1 22.2	22.2	138.9 145.1	142.0	10.4 10.9	10.7	10.7	8.4 8.6	8.5	9.2	9.8 9.6	9.7	9.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.4 23.4	23.4	8.5 8.5	8.5	22.3 22.3	22.3	142.3 132.6	137.5	10.7 9.9	10.3	10.3	9.9 9.9	9.9		9.9 8.2	9.1	
16-Apr-14	Sunny	Moderate	12:42	3.4	Surface	1.0	22.2 22.2	22.2	8.3 8.3	8.3	25.8 25.8	25.8	101.7 100.7	101.2	7.6 7.6	7.6	7.6	3.2 3.4	3.3	4.5	3.5 2.5	3.0	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	22.2 22.1	22.1	8.3 8.3	8.3	25.8 26.0	25.9	101.3 100.0	100.7	7.6 7.5	7.6	7.6	5.5 5.7	5.6		3.0 3.0	3.0	
18-Apr-14	Sunny	Moderate	13:58	3.7	Surface	1.0	23.3 23.4	23.4	7.9 8.0	8.0	25.0 24.9	25.0	93.0 92.5	92.8	6.9 6.8	6.8	6.8	3.4 3.3	3.4	3.4	4.8 3.5	4.2	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.3 23.1	23.2	7.9 7.9	7.9	25.1 25.3	25.2	92.5 93.3	92.9	6.8 6.9	6.9	6.9	3.5 3.3	3.4		4.8 4.7	4.8	
21-Apr-14	Fine	Moderate	16:07	3.4	Surface	1.0	24.1 24.0	24.1	8.3 8.3	8.3	24.4 24.5	24.5	100.1 100.8	100.5	7.3 7.4	7.3	7.3	6.1 6.2	6.2	6.2	7.6 7.4	7.5	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.1 23.9	24.0	8.3 8.3	8.3	24.5 24.6	24.5	100.5 98.9	99.7	7.4 7.2	7.3	7.3	6.1 6.2	6.2		6.5 7.8	7.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:48	3.6	Surface	1.0	24.0 24.0	24.0	8.1 8.2	8.2	25.0 25.0	25.0	96.2 93.7	95.0	7.0 6.8	6.9	6.9	8.5 8.7	8.6	8.7	5.2 3.8	4.5	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	24.0 24.0	24.0	8.1 8.1	8.1	25.0 25.2	25.1	97.8 95.3	96.6	7.1 6.9	7.0	7.0	8.8 8.8	8.8		4.6 4.7	4.7	
25-Apr-14	Sunny	Moderate	11:28	3.6	Surface	1.0	23.4 23.5	23.5	8.2 8.2	8.2	28.1 28.1	28.1	93.3 92.8	93.1	6.8 6.7	6.7	6.7	8.3 8.2	8.3	8.5	7.3 6.9	7.1	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.5 23.4	23.4	8.1 8.2	8.2	28.1 28.1	28.1	94.2 93.0	93.6	6.8 6.7	6.8	6.8	8.5 8.7	8.6		6.4 7.3	6.9	
28-Apr-14	Sunny	Moderate	13:07	3.7	Surface	1.0	24.8 24.7	24.8	8.2 8.1	8.2	26.4 26.4	26.4	95.3 95.2	95.3	6.8 6.8	6.8	6.8	4.1 4.1	4.1	4.1	5.1 3.7	4.4	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	24.6 24.7	24.6	8.1 8.1	8.1	27.0 26.9	27.0	96.1 95.4	95.8	6.9 6.8	6.8	6.8	4.1 3.9	4.0		3.4 3.3	3.4	
30-Apr-14	Sunny	Moderate	12:57	3.4	Surface	1.0	24.5 24.4	24.4	8.3 8.3	8.3	27.7 27.8	27.7	94.6 97.3	96.0	6.8 7.0	6.9	6.9	4.0 4.0	4.0	4.1	6.3 5.6	6.0	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.2 24.4	24.3	8.3 8.3	8.3	27.8 27.7	27.8	95.3 93.8	94.6	6.8 6.7	6.8	6.8	4.2 4.1	4.2		6.5 6.3	6.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:54	3.3	Surface	1.0	20.4 20.4	20.4	7.8 7.8	7.8	23.5 23.7	23.6	86.8 90.9	88.9	6.8 7.1	7.0	7.0	11.5 12.4	12.0	12.4	10.8 10.6	10.7	10.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	20.4 20.4	20.4	7.8 7.8	7.8	24.1 23.9	24.0	88.5 87.8	88.2	6.9 6.9	6.9	6.9	13.2 12.2	12.7		11.0 10.9	11.0	
4-Apr-14	Cloudy	Moderate	09:25	3.5	Surface	1.0	20.3 20.3	20.3	7.8 7.8	7.8	20.6 20.4	20.5	79.5 79.7	79.6	6.4 6.4	6.4	6.4	7.6 7.9	7.8	8.0	8.1 7.8	8.0	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	20.3 20.3	20.3	7.8 7.8	7.8	20.6 20.6	20.6	79.5 79.8	79.7	6.4 6.4	6.4	6.4	8.1 8.0	8.1		7.3 7.9	7.6	
7-Apr-14	Sunny	Moderate	10:43	3.6	Surface	1.0	20.2 20.2	20.2	8.1 8.1	8.1	22.8 22.8	22.8	89.3 88.6	89.0	7.1 7.0	7.1	7.1	13.5 13.6	13.6	13.7	18.2 19.7	19.0	19.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	20.1 20.2	20.2	8.1 8.1	8.1	23.0 23.0	23.0	90.5 89.1	89.8	7.2 7.1	7.1	7.1	13.8 13.7	13.8		19.8 18.2	19.0	
9-Apr-14	Sunny	Moderate	13:40	3.4	Surface	1.0	21.2 21.1	21.1	7.8 7.9	7.8	24.1 24.4	24.3	96.2 95.7	96.0	7.4 7.4	7.4	7.4	6.8 7.0	6.9	6.9	7.9 6.9	7.4	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	21.3 21.1	21.2	7.8 7.8	7.8	24.1 24.4	24.2	96.2 95.6	95.9	7.4 7.4	7.4	7.4	7.2 6.5	6.9		7.2 6.8	7.0	
11-Apr-14	Sunny	Moderate	15:59	3.7	Surface	1.0	22.6 22.3	22.4	8.2 8.2	8.2	25.8 26.0	25.9	123.8 120.6	122.2	9.2 9.0	9.1	9.1	8.5 8.2	8.4	8.6	6.4 7.2	6.8	8.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	21.9 21.9	21.9	8.1 8.1	8.1	26.3 26.3	26.3	120.8 114.3	117.6	9.1 8.6	8.8	8.8	8.7 8.8	8.8		10.0 9.8	9.9	
14-Apr-14	Sunny	Moderate	17:49	3.6	Surface	1.0	23.4 23.4	23.4	8.6 8.6	8.6	23.2 23.2	23.2	148.9 151.6	150.3	11.1 11.3	11.2	11.2	7.6 8.1	7.9	8.2	10.7 10.5	10.6	11.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.4 23.4	23.4	8.6 8.6	8.6	23.2 23.2	23.2	144.2 150.3	147.3	10.8 11.2	11.0	11.0	8.3 8.4	8.4		11.6 11.6	11.6	
16-Apr-14	Sunny	Moderate	07:30	3.5	Surface	1.0	22.1 22.1	22.1	8.3 8.4	8.4	26.1 26.0	26.1	101.7 102.1	101.9	7.6 7.7	7.7	7.7	4.2 4.1	4.2	4.1	7.9 7.8	7.9	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	22.1 22.0	22.1	8.4 8.3	8.3	26.1 26.1	26.1	101.9 101.4	101.7	7.7 7.6	7.6	7.6	3.9 4.1	4.0		8.0 8.1	8.1	
18-Apr-14	Sunny	Moderate	08:48	3.7	Surface	1.0	22.8 22.8	22.8	8.1 8.1	8.1	25.2 25.2	25.2	91.5 90.5	91.0	6.8 6.7	6.8	6.8	8.8 9.1	9.0	9.0	8.1 8.4	8.3	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.8 22.8	22.8	8.1 8.1	8.1	25.7 25.4	25.6	93.0 90.8	91.9	6.9 6.8	6.8	6.8	8.9 8.9	8.9		9.6 10.2	9.9	
21-Apr-14	Fine	Moderate	10:19	3.5	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	24.2 24.2	24.2	95.5 99.7	97.6	7.0 7.4	7.2	7.2	5.6 5.7	5.7	5.7	6.9 6.9	6.9	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.5 23.8	23.7	8.2 8.2	8.2	24.7 24.3	24.5	96.7 94.6	95.7	7.1 7.0	7.0	7.0	5.8 5.6	5.7		7.2 7.2	7.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:21	3.7	Surface	1.0	23.9 23.9	23.9	8.2 8.2	8.2	25.5 25.5	25.5	95.9 96.4	96.2	7.0 7.0	7.0	7.0	3.2 3.2	3.2	3.3	3.4 5.0	4.2	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.9 23.9	23.9	8.1 8.2	8.2	25.6 25.6	25.6	96.9 96.0	96.5	7.1 7.0	7.0	7.0	3.4 3.3	3.4		5.6 6.4	6.0	
25-Apr-14	Sunny	Moderate	15:09	3.6	Surface	1.0	23.9 23.8	23.8	8.1 8.1	8.1	28.5 28.5	28.5	93.6 92.8	93.2	6.7 6.7	6.7	6.7	9.1 9.6	9.4	9.3	6.9 7.5	7.2	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.8 23.9	23.8	8.1 8.1	8.1	28.5 28.5	28.5	93.0 94.1	93.6	6.7 6.8	6.7	6.7	9.1 9.2	9.2		7.8 7.6	7.7	
28-Apr-14	Sunny	Moderate	18:02	3.4	Surface	1.0	24.7 24.7	24.7	8.2 8.2	8.2	27.7 27.7	27.7	92.4 92.8	92.6	6.6 6.6	6.6	6.6	7.5 7.5	7.5	7.6	8.0 9.3	8.7	8.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.7 24.6	24.6	8.2 8.2	8.2	27.8 27.8	27.8	92.5 94.0	93.3	6.6 6.7	6.6	6.6	7.4 7.7	7.6		8.8 9.0	8.9	
30-Apr-14	Sunny	Moderate	06:57	3.6	Surface	1.0	24.1 24.1	24.1	8.3 8.3	8.3	27.2 27.2	27.2	90.6 94.5	92.6	6.5 6.8	6.7	6.7	4.5 4.4	4.5	4.6	5.9 5.7	5.8	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	24.1 24.1	24.1	8.3 8.3	8.3	27.3 27.3	27.3	90.2 91.2	90.7	6.5 6.6	6.5	6.5	4.6 4.7	4.7		5.8 5.9	5.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:34	10.3	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	21.9 21.9	21.9	84.1 84.0	84.1	6.7 6.7	6.7	6.7	8.1 8.3	8.2	8.6	7.2 8.0	7.6	7.6
					Middle	5.2	20.1 20.1	20.1	8.0 8.0	8.0	24.4 22.8	23.6	84.0 83.8	83.9	6.6 6.7	6.6		8.5 8.7	8.6		6.9 6.4	6.7	
					Bottom	9.3	20.0 20.0	20.0	8.0 8.0	8.0	26.0 26.3	26.2	83.5 83.7	83.6	6.5 6.5	6.5	6.5	8.8 8.9	8.9		8.1 8.7	8.4	
4-Apr-14	Cloudy	Moderate	16:12	10.1	Surface	1.0	20.6 20.6	20.6	8.0 7.9	8.0	20.7 20.7	20.7	80.0 80.0	80.0	6.4 6.4	6.4	6.4	8.2 8.4	8.3	9.6	9.0 7.3	8.2	10.3
					Middle	5.1	20.3 20.3	20.3	8.0 8.0	8.0	23.3 23.2	23.2	79.9 79.5	79.7	6.3 6.3	6.3		11.0 10.4	10.7		11.0 11.4	11.2	
					Bottom	9.1	20.3 20.4	20.3	8.0 8.0	8.0	23.8 23.2	23.5	79.5 79.3	79.4	6.3 6.2	6.2	6.2	9.8 9.6	9.7		11.6 11.1	11.4	
7-Apr-14	Cloudy	Moderate	18:27	9.9	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.7 26.7	26.7	85.6 85.9	85.8	6.6 6.7	6.6	6.6	4.1 3.9	4.0	4.4	3.1 3.7	3.4	4.0
					Middle	5.0	20.2 20.2	20.2	8.0 8.0	8.0	27.2 27.2	27.2	85.4 85.2	85.3	6.6 6.6	6.6		4.6 4.6	4.6		5.4 4.3	4.9	
					Bottom	8.9	20.2 20.2	20.2	8.0 8.0	8.0	27.2 27.2	27.2	85.7 85.5	85.6	6.6 6.6	6.6	6.6	4.3 4.7	4.5		3.1 4.5	3.8	
9-Apr-14	Sunny	Moderate	09:58	10.5	Surface	1.0	20.6 20.6	20.6	8.1 8.1	8.1	22.0 21.7	21.9	84.7 84.3	84.5	6.7 6.7	6.7	6.6	3.3 3.3	3.3	4.0	4.8 4.1	4.5	4.4
					Middle	5.3	20.2 20.2	20.2	8.1 8.1	8.1	28.2 27.7	27.9	83.8 85.0	84.4	6.4 6.6	6.5		4.2 4.4	4.3		4.5 5.3	4.9	
					Bottom	9.5	20.1 20.1	20.1	8.1 8.1	8.1	29.1 28.9	29.0	85.4 83.3	84.4	6.5 6.4	6.5	6.5	4.4 4.3	4.4		4.1 3.3	3.7	
11-Apr-14	Sunny	Moderate	11:07	10.5	Surface	1.0	21.4 21.6	21.5	8.3 8.3	8.3	23.9 23.3	23.6	99.6 100.5	100.1	7.7 7.7	7.7	7.5	3.5 3.2	3.4	4.2	3.0 2.1	2.6	2.7
					Middle	5.3	20.9 20.8	20.9	8.2 8.2	8.2	26.4 27.3	26.8	94.4 95.1	94.8	7.2 7.3	7.2		3.9 4.0	4.0		2.8 2.8	2.8	
					Bottom	9.5	20.8 20.8	20.8	8.2 8.2	8.2	27.6 27.5	27.5	96.0 93.3	94.7	7.3 7.1	7.2	7.2	5.0 5.2	5.1		2.1 3.1	2.6	
14-Apr-14	Sunny	Moderate	12:37	9.6	Surface	1.0	22.7 22.7	22.7	8.4 8.4	8.4	22.9 22.9	22.9	107.6 108.5	108.1	8.1 8.2	8.2	7.9	8.0 7.2	7.6	10.3	9.2 11.0	10.1	10.7
					Middle	4.8	22.1 21.9	22.0	8.3 8.3	8.3	25.0 25.7	25.4	100.9 98.1	99.5	7.6 7.4	7.5		10.7 10.8	10.8		11.0 10.6	10.8	
					Bottom	8.6	21.9 21.9	21.9	8.3 8.3	8.3	25.7 25.8	25.8	101.3 98.2	99.8	7.7 7.4	7.5	7.5	13.0 12.2	12.6		11.3 10.8	11.1	
16-Apr-14	Sunny	Moderate	13:31	10.5	Surface	1.0	22.1 22.2	22.2	8.3 8.3	8.3	26.2 26.1	26.1	95.7 95.8	95.8	7.2 7.2	7.2	7.2	9.3 9.3	9.3	9.5	6.7 6.2	6.5	7.0
					Middle	5.3	21.9 21.9	21.9	8.3 8.3	8.3	27.8 27.7	27.7	95.3 95.1	95.2	7.1 7.1	7.1		9.5 9.5	9.5		7.6 7.1	7.4	
					Bottom	9.5	21.9 21.9	21.9	8.3 8.3	8.3	28.0 27.8	27.9	94.9 95.0	95.0	7.1 7.1	7.1	7.1	9.7 9.6	9.7		8.0 6.0	7.0	
18-Apr-14	Sunny	Moderate	13:56	11.0	Surface	1.0	23.6 23.5	23.5	8.2 8.2	8.2	23.3 23.5	23.4	88.2 88.6	88.4	6.6 6.6	6.6	6.6	3.3 3.3	3.3	3.4	4.1 4.8	4.5	5.0
					Middle	5.5	23.5 23.1	23.3	8.2 8.2	8.2	23.5 23.7	23.6	88.2 88.4	88.3	6.5 6.6	6.6		3.3 3.3	3.3		4.7 4.9	4.8	
					Bottom	10.0	23.5 23.1	23.3	8.2 8.2	8.2	25.6 26.4	26.0	87.8 87.5	87.7	6.4 6.4	6.4	6.4	3.6 3.4	3.5		5.6 5.5	5.6	
21-Apr-14	Fine	Moderate	17:15	10.6	Surface	1.0	23.5 23.6	23.6	8.2 8.2	8.2	26.5 26.4	26.5	88.2 88.5	88.4	6.4 6.5	6.5	6.5	4.6 4.8	4.7	5.3	5.5 5.5	5.5	5.8
					Middle	5.3	23.2 23.2	23.2	8.3 8.3	8.3	27.3 27.3	27.3	87.7 87.8	87.8	6.4 6.4	6.4		5.3 5.5	5.4		6.3 6.2	6.3	
					Bottom	9.6	23.1 23.1	23.1	8.2 8.3	8.3	28.1 28.1	28.1	88.1 87.5	87.8	6.4 6.4	6.4	6.4	5.6 5.7	5.7		5.5 5.7	5.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:35	9.6	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	22.5 22.7	22.6	84.6 85.8	85.2	6.3 6.3	6.3	6.3	4.2 4.1	4.2	4.0	3.5 3.4	3.5	3.7
					Middle	4.8	23.5 23.7	23.6	8.2 8.2	8.2	27.4 27.0	27.2	86.9 85.9	86.4	6.3 6.2	6.3		3.8 3.7	3.8		2.5 3.9	3.2	
					Bottom	8.6	23.3 23.4	23.3	8.2 8.2	8.2	28.1 27.8	28.0	87.1 85.7	86.4	6.3 6.2	6.3	6.3	4.1 4.0	4.1		4.9 3.6	4.3	
25-Apr-14	Sunny	Moderate	11:01	10.6	Surface	1.0	23.4 23.4	23.4	8.2 8.2	8.2	28.0 27.9	27.9	90.4 90.6	90.5	6.6 6.6	6.6	6.6	3.6 3.5	3.6	4.2	4.5 4.6	4.6	5.3
					Middle	5.3	23.3 23.3	23.3	8.2 8.2	8.2	28.4 28.2	28.3	89.2 89.4	89.3	6.5 6.5	6.5		4.1 3.9	4.0		5.4 5.4	5.4	
					Bottom	9.6	23.1 23.1	23.1	8.1 8.2	8.2	29.5 29.4	29.5	88.4 88.5	88.5	6.4 6.4	6.4	6.4	5.0 4.8	4.9		5.2 6.7	6.0	
28-Apr-14	Sunny	Moderate	12:29	10.1	Surface	1.0	24.3 24.3	24.3	8.2 8.2	8.2	24.8 24.9	24.9	90.3 90.8	90.6	6.6 6.6	6.6	6.5	8.1 8.9	8.5	9.6	6.5 5.8	6.2	6.1
					Middle	5.1	24.0 23.9	24.0	8.2 8.2	8.2	26.8 27.0	26.9	88.0 89.9	89.0	6.4 6.5	6.4		10.6 10.2	10.4		5.9 6.8	6.4	
					Bottom	9.1	23.9 23.9	23.9	8.2 8.2	8.2	26.9 27.1	27.0	88.5 91.3	89.9	6.4 6.6	6.5	6.5	9.9 9.8	9.9		6.1 5.1	5.6	
30-Apr-14	Sunny	Moderate	13:43	10.4	Surface	1.0	24.2 24.2	24.2	8.2 8.2	8.2	25.1 25.1	25.1	87.6 87.7	87.7	6.4 6.4	6.4	6.4	7.1 7.1	7.1	7.5	4.6 4.8	4.7	4.6
					Middle	5.2	24.1 24.0	24.0	8.2 8.2	8.2	25.9 26.5	26.2	86.9 86.9	86.9	6.3 6.3	6.3		7.3 7.7	7.5		4.1 4.7	4.4	
					Bottom	9.4	24.0 23.8	23.9	8.2 8.2	8.2	28.0 28.1	28.0	87.0 86.7	86.9	6.3 6.2	6.2	6.2	7.8 7.8	7.8		4.0 5.4	4.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:10	10.6	Surface	1.0	20.3 20.4	20.4	7.9 7.9	7.9	23.8 23.9	23.9	81.4 82.4	81.9	6.4 6.5	6.4	6.4	14.3 14.6	14.5	15.5	14.5 13.4	14.0	16.0
					Middle	5.3	20.3 20.3	20.3	7.9 7.9	7.9	25.0 24.3	24.7	82.9 81.2	82.1	6.5 6.4	6.4		15.7 15.6	15.7		14.0 15.7	14.9	
					Bottom	9.6	20.3 20.2	20.3	7.9 7.9	7.9	25.4 25.8	25.6	81.3 83.7	82.5	6.3 6.5	6.4	6.4	16.1 16.2	16.2		18.8 19.2	19.0	
4-Apr-14	Cloudy	Moderate	09:11	10.3	Surface	1.0	20.3 20.4	20.4	7.9 7.9	7.9	19.9 19.0	19.4	76.9 74.6	75.8	6.2 6.0	6.1	6.1	11.9 11.2	11.6	14.7	8.4 8.6	8.5	9.1
					Middle	5.2	20.0 20.0	20.0	8.0 8.0	8.0	24.7 24.7	24.7	77.3 78.8	78.1	6.1 6.2	6.1		15.4 15.6	15.5		9.1 8.3	8.7	
					Bottom	9.3	20.0 20.0	20.0	8.0 7.9	8.0	24.7 24.7	24.7	78.3 75.8	77.1	6.2 6.0	6.1	6.1	16.8 17.0	16.9		9.6 10.5	10.1	
7-Apr-14	Sunny	Moderate	10:23	9.6	Surface	1.0	20.3 20.3	20.3	8.0 8.0	8.0	25.7 25.7	25.7	85.6 86.1	85.9	6.7 6.7	6.7	6.6	4.2 4.5	4.4	6.1	4.1 5.3	4.7	4.9
					Middle	4.8	20.0 20.0	20.0	8.0 8.0	8.0	27.5 27.5	27.5	85.4 83.8	84.6	6.6 6.5	6.5		6.8 6.7	6.8		4.6 4.3	4.5	
					Bottom	8.6	20.0 20.0	20.0	8.0 8.0	8.0	28.1 27.7	27.9	84.1 87.6	85.9	6.5 6.8	6.6	6.6	7.1 6.9	7.0		4.8 6.4	5.6	
9-Apr-14	Sunny	Moderate	14:18	10.7	Surface	1.0	20.6 21.0	20.8	8.1 8.1	8.1	21.7 21.1	21.4	85.4 85.6	85.5	6.8 6.7	6.7	6.6	4.5 4.5	4.5	5.2	4.2 3.5	3.9	3.9
					Middle	5.4	20.1 20.1	20.1	8.0 8.1	8.1	28.6 28.8	28.7	83.6 83.4	83.5	6.4 6.4	6.4		5.5 5.4	5.5		3.8 3.3	3.6	
					Bottom	9.7	20.0 20.0	20.0	8.0 8.1	8.0	29.3 29.4	29.3	83.5 83.1	83.3	6.4 6.4	6.4	6.4	5.3 5.6	5.5		3.8 4.5	4.2	
11-Apr-14	Sunny	Moderate	16:32	10.4	Surface	1.0	21.8 21.8	21.8	8.3 8.3	8.3	24.5 24.5	24.5	103.1 103.3	103.2	7.9 7.9	7.9	7.6	3.7 3.8	3.8	4.9	3.0 3.3	3.2	4.1
					Middle	5.2	20.8 20.8	20.8	8.2 8.2	8.2	27.5 27.5	27.5	96.5 94.9	95.7	7.4 7.2	7.3		5.9 6.0	6.0		3.2 4.6	3.9	
					Bottom	9.4	20.8 20.6	20.7	8.2 8.2	8.2	28.2 28.2	28.2	101.0 96.8	98.9	7.7 7.4	7.5	7.5	4.7 5.1	4.9		4.2 5.9	5.1	
14-Apr-14	Sunny	Moderate	18:45	9.8	Surface	1.0	22.7 22.8	22.8	8.4 8.4	8.4	22.4 22.4	22.4	109.6 110.3	110.0	8.3 8.4	8.3	8.2	4.7 4.8	4.8	6.9	8.9 8.8	8.9	8.7
					Middle	4.9	22.4 22.3	22.3	8.4 8.4	8.4	24.2 24.3	24.3	106.2 106.4	106.3	8.0 8.0	8.0		7.2 6.9	7.1		7.0 8.5	7.8	
					Bottom	8.8	22.3 22.3	22.3	8.4 8.4	8.4	24.4 24.4	24.4	108.2 109.0	108.6	8.2 8.2	8.2	8.2	9.0 8.8	8.9		9.8 8.7	9.3	
16-Apr-14	Sunny	Moderate	07:09	10.6	Surface	1.0	22.0 21.9	21.9	8.3 8.3	8.3	26.3 26.3	26.3	96.5 96.2	96.4	7.3 7.2	7.2	7.2	9.9 9.5	9.7	9.8	5.8 5.8	5.8	5.9
					Middle	5.3	21.9 21.9	21.9	8.3 8.3	8.3	27.1 27.2	27.1	96.5 95.8	96.2	7.2 7.2	7.2		9.9 9.6	9.8		4.8 5.3	5.1	
					Bottom	9.6	21.8 21.8	21.8	8.3 8.3	8.3	27.6 27.5	27.5	95.6 96.7	96.2	7.1 7.2	7.2	7.2	9.8 9.8	9.8		6.4 6.9	6.7	
18-Apr-14	Sunny	Moderate	08:03	11.1	Surface	1.0	22.8 22.8	22.8	8.2 8.2	8.2	24.5 24.4	24.4	86.7 88.7	87.7	6.5 6.6	6.5	6.5	6.9 6.9	6.9	7.0	7.6 7.9	7.8	8.1
					Middle	5.6	22.5 22.5	22.5	8.2 8.2	8.2	26.1 26.1	26.1	87.8 86.5	87.2	6.5 6.4	6.5		7.0 7.0	7.0		6.8 8.1	7.5	
					Bottom	10.1	22.6 22.5	22.5	8.2 8.2	8.2	26.1 26.4	26.3	86.5 87.2	86.9	6.4 6.5	6.5	6.5	7.0 7.1	7.1		8.1 9.8	9.0	
21-Apr-14	Fine	Moderate	10:33	10.7	Surface	1.0	23.6 23.6	23.6	8.2 8.2	8.2	24.0 23.9	23.9	87.4 86.6	87.0	6.5 6.4	6.4	6.4	7.6 7.8	7.7	7.7	8.6 7.5	8.1	9.1
					Middle	5.4	23.1 23.1	23.1	8.2 8.2	8.2	27.4 27.4	27.4	85.6 86.8	86.2	6.3 6.3	6.3		7.6 7.6	7.6		9.4 9.9	9.7	
					Bottom	9.7	23.2 23.0	23.1	8.2 8.2	8.2	27.5 28.0	27.7	86.4 88.9	87.7	6.3 6.5	6.4	6.4	7.9 7.8	7.9		10.2 8.5	9.4	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	13:33	9.8	Surface	1.0	23.7 23.8	23.8	8.2 8.2	8.2	24.7 24.8	24.7	85.9 86.1	86.0	6.3 6.3	6.3	6.2	4.0 4.0	4.0	4.0	4.5 3.5	4.0	3.9
					Middle	4.9	23.3 23.3	23.3	8.2 8.2	8.2	28.2 28.2	28.2	84.8 84.7	84.8	6.2 6.1	6.1		4.6 4.2	4.4		2.8 4.4	3.6	
					Bottom	8.8	23.2 23.4	23.3	8.2 8.2	8.2	28.7 28.6	28.6	84.9 85.4	85.2	6.2 6.2	6.2	6.2	3.8 3.5	3.7		3.8 4.3	4.1	
25-Apr-14	Sunny	Moderate	15:44	11.3	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	27.1 27.2	27.1	90.6 90.5	90.6	6.6 6.6	6.6	6.5	3.5 3.7	3.6	4.3	4.5 4.5	4.5	4.3
					Middle	5.7	23.4 23.4	23.4	8.2 8.2	8.2	28.6 28.5	28.5	89.2 89.1	89.2	6.4 6.4	6.4		4.1 4.3	4.2		3.0 4.6	3.8	
					Bottom	10.3	23.2 23.2	23.2	8.2 8.2	8.2	29.4 29.4	29.4	88.7 88.7	88.7	6.4 6.4	6.4	6.4	5.2 5.1	5.2		5.3 4.1	4.7	
28-Apr-14	Sunny	Moderate	18:40	10.3	Surface	1.0	24.6 24.6	24.6	8.1 8.1	8.1	23.7 23.8	23.7	88.4 88.4	88.4	6.4 6.4	6.4	6.4	5.9 6.0	6.0	6.4	3.5 3.5	3.5	4.8
					Middle	5.2	24.4 24.4	24.4	8.2 8.2	8.2	25.2 25.0	25.1	87.6 87.7	87.7	6.4 6.4	6.4		6.1 6.0	6.1		5.1 4.4	4.8	
					Bottom	9.3	24.3 24.3	24.3	8.1 8.1	8.1	25.4 25.3	25.4	87.6 87.5	87.6	6.3 6.3	6.3	6.3	7.3 6.7	7.0		6.2 6.0	6.1	
30-Apr-14	Sunny	Moderate	06:53	10.8	Surface	1.0	24.0 24.0	24.0	8.1 8.2	8.2	26.7 26.7	26.7	86.8 87.6	87.2	6.3 6.3	6.3	6.3	11.5 11.7	11.6	11.9	7.5 6.5	7.0	7.2
					Middle	5.4	24.0 24.0	24.0	8.2 8.2	8.2	27.9 27.9	27.9	87.9 86.5	87.2	6.3 6.2	6.3		11.6 11.5	11.6		7.6 7.2	7.4	
					Bottom	9.8	24.0 23.9	24.0	8.1 8.2	8.2	27.9 27.9	27.9	86.8 90.4	88.6	6.2 6.5	6.4	6.4	12.5 12.2	12.4		7.8 6.4	7.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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 (^{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*
2-Apr-14	Cloudy	Moderate	14:45	10.2	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	23.1 22.6	22.8	84.2 85.1	84.7	6.7 6.7	6.7	6.7	7.8 7.8	7.8	8.3	7.8 7.7	7.8	7.7
					Middle	5.1	20.1 20.1	20.1	7.9 7.9	7.9	25.8 25.6	25.7	83.8 85.1	84.5	6.5 6.6	6.6		8.5 8.5	8.5		8.2 7.5	7.9	
					Bottom	9.2	19.9 20.0	20.0	7.8 7.9	7.9	27.3 28.1	27.7	86.6 83.7	85.2	6.7 6.5	6.6	6.6	8.6 8.6	8.6		7.5 7.0	7.3	
4-Apr-14	Cloudy	Moderate	16:23	9.6	Surface	1.0	20.7 20.5	20.6	8.0 8.1	8.0	20.9 21.1	21.0	79.9 81.6	80.8	6.3 6.5	6.4	6.4	11.1 11.4	11.3	12.1	12.4 11.4	11.9	11.5
					Middle	4.8	20.1 20.1	20.1	8.1 8.0	8.1	24.3 24.1	24.2	82.1 79.7	80.9	6.5 6.3	6.4		12.5 13.0	12.8		12.0 10.7	11.4	
					Bottom	8.6	20.0 20.1	20.1	8.2 8.1	8.1	25.1 24.8	25.0	83.8 80.0	81.9	6.6 6.3	6.4	6.4	11.9 12.3	12.1		11.5 10.9	11.2	
7-Apr-14	Cloudy	Moderate	18:34	10.1	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.3 26.3	26.3	86.2 87.7	87.0	6.7 6.8	6.7	6.7	5.0 5.4	5.2	6.5	4.5 4.4	4.5	4.0
					Middle	5.1	20.1 20.1	20.1	8.0 8.0	8.0	28.1 28.2	28.2	85.3 88.4	86.9	6.6 6.8	6.7		6.9 7.0	7.0		4.2 4.0	4.1	
					Bottom	9.1	20.0 20.1	20.1	8.0 8.0	8.0	28.5 28.5	28.5	86.1 91.0	88.6	6.6 7.0	6.8	6.8	7.2 7.5	7.4		3.6 3.1	3.4	
9-Apr-14	Sunny	Moderate	09:48	10.6	Surface	1.0	20.6 20.7	20.7	8.1 8.0	8.1	19.4 20.0	19.7	84.0 84.0	84.0	6.7 6.7	6.7	6.6	4.1 4.2	4.2	4.5	4.3 4.4	4.4	5.0
					Middle	5.3	20.1 20.1	20.1	8.0 8.1	8.1	28.2 28.7	28.4	83.7 83.2	83.5	6.4 6.4	6.4		4.6 4.6	4.6		5.5 5.2	5.4	
					Bottom	9.6	20.0 20.1	20.0	8.0 8.1	8.0	29.7 29.5	29.6	82.9 82.2	82.6	6.3 6.3	6.3	6.3	4.7 4.7	4.7		5.6 4.5	5.1	
11-Apr-14	Sunny	Moderate	10:54	10.2	Surface	1.0	21.1 21.3	21.2	8.2 8.2	8.2	23.9 24.1	24.0	95.2 95.4	95.3	7.4 7.4	7.4	7.3	4.5 4.3	4.4	4.4	3.2 4.4	3.8	3.3
					Middle	5.1	20.5 20.5	20.5	8.2 8.2	8.2	28.6 28.7	28.7	93.8 92.2	93.0	7.1 7.0	7.1		5.4 5.2	5.3		3.7 2.6	3.2	
					Bottom	9.2	20.6 20.6	20.6	8.2 8.2	8.2	28.6 28.6	28.6	98.2 94.8	96.5	7.5 7.2	7.3	7.3	3.3 3.4	3.4		3.2 2.8	3.0	
14-Apr-14	Sunny	Moderate	12:25	10.0	Surface	1.0	22.7 22.8	22.8	8.4 8.4	8.4	22.8 22.9	22.8	107.7 107.1	107.4	8.1 8.1	8.1	7.8	5.9 6.1	6.0	8.0	8.4 8.5	8.5	8.8
					Middle	5.0	21.9 22.2	22.1	8.3 8.3	8.3	25.4 24.7	25.0	98.7 100.5	99.6	7.5 7.6	7.5		9.6 9.1	9.4		8.6 8.4	8.5	
					Bottom	9.0	21.8 21.8	21.8	8.3 8.3	8.3	25.9 26.1	26.0	99.9 102.4	101.2	7.5 7.7	7.6	7.6	8.8 8.5	8.7		10.2 8.8	9.5	
16-Apr-14	Sunny	Moderate	13:40	10.4	Surface	1.0	22.1 22.0	22.0	8.3 8.3	8.3	26.2 26.5	26.3	95.8 95.5	95.7	7.2 7.2	7.2	7.2	9.2 9.3	9.3	9.4	7.9 7.7	7.8	8.7
					Middle	5.2	21.9 21.8	21.8	8.3 8.3	8.3	27.8 28.1	27.9	95.4 94.9	95.2	7.1 7.1	7.1		9.6 9.4	9.5		8.2 7.5	7.9	
					Bottom	9.4	21.8 21.8	21.8	8.3 8.3	8.3	28.3 28.3	28.3	95.7 94.8	95.3	7.1 7.1	7.1	7.1	9.5 9.5	9.5		10.5 10.0	10.3	
18-Apr-14	Sunny	Moderate	14:06	11.1	Surface	1.0	24.0 23.9	23.9	8.2 8.2	8.2	23.2 23.3	23.2	89.5 89.6	89.6	6.6 6.6	6.6	6.6	3.2 3.1	3.2	3.4	2.3 2.8	2.6	3.5
					Middle	5.6	22.9 22.7	22.8	8.2 8.2	8.2	25.3 26.1	25.7	89.5 89.2	89.4	6.6 6.6	6.6		3.3 3.4	3.4		5.2 3.1	4.2	
					Bottom	10.1	22.8 22.7	22.8	8.2 8.2	8.2	26.4 26.2	26.3	88.3 89.0	88.7	6.6 6.6	6.6	6.6	3.5 3.6	3.6		3.1 4.3	3.7	
21-Apr-14	Fine	Moderate	17:25	10.4	Surface	1.0	23.3 23.2	23.3	8.2 8.3	8.3	26.5 26.7	26.6	87.6 85.9	86.8	6.4 6.3	6.4	6.4	5.2 5.5	5.4	5.4	6.2 5.1	5.7	4.8
					Middle	5.2	22.9 22.9	22.9	8.2 8.2	8.2	28.5 28.3	28.4	87.8 85.7	86.8	6.4 6.3	6.3		5.3 5.5	5.4		4.5 4.8	4.7	
					Bottom	9.4	22.9 22.9	22.9	8.2 8.2	8.2	28.8 29.4	29.1	89.4 85.9	87.7	6.5 6.2	6.4	6.4	5.4 5.2	5.3		4.0 3.7	3.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:20	9.9	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	22.5 22.4	22.4	87.5 87.4	87.5	6.5 6.5	6.5	6.4	4.5 4.8	4.7	6.1	2.7 3.6	3.2	3.0
					Middle	5.0	23.3 23.2	23.3	8.2 8.2	8.2	28.2 28.5	28.4	86.0 85.9	86.0	6.2 6.2	6.2		6.7 6.6	6.7		3.2 2.1	2.7	
					Bottom	8.9	23.2 23.3	23.2	8.2 8.2	8.2	28.9 28.5	28.7	85.8 86.1	86.0	6.2 6.2	6.2	6.2	6.7 7.0	6.9		2.5 3.9	3.2	
25-Apr-14	Sunny	Moderate	10:51	10.6	Surface	1.0	23.3 23.3	23.3	8.2 8.2	8.2	28.2 28.2	28.2	90.0 90.2	90.1	6.5 6.5	6.5	6.5	3.5 3.4	3.5	3.5	6.2 6.2	6.2	6.0
					Middle	5.3	23.3 23.3	23.3	8.2 8.2	8.2	28.2 28.2	28.2	89.2 89.5	89.4	6.5 6.5	6.5		3.5 3.5	3.5		5.7 4.6	5.2	
					Bottom	9.6	23.0 23.0	23.0	8.2 8.2	8.2	29.7 29.7	29.7	88.4 88.4	88.4	6.4 6.4	6.4	6.4	3.5 3.5	3.5		6.2 6.7	6.5	
28-Apr-14	Sunny	Moderate	12:18	10.2	Surface	1.0	24.3 24.4	24.3	8.2 8.2	8.2	24.6 24.6	24.6	88.3 89.3	88.8	6.4 6.5	6.5	6.4	5.6 5.2	5.4	6.4	5.5 5.0	5.3	5.3
					Middle	5.1	23.8 23.8	23.8	8.2 8.2	8.2	27.5 27.5	27.5	87.1 86.3	86.7	6.3 6.2	6.3		7.1 7.3	7.2		6.1 4.9	5.5	
					Bottom	9.2	23.8 23.9	23.9	8.2 8.2	8.2	27.7 27.7	27.7	88.2 87.0	87.6	6.4 6.3	6.3	6.3	6.7 6.5	6.6		4.0 5.9	5.0	
30-Apr-14	Sunny	Moderate	13:52	10.1	Surface	1.0	24.1 24.0	24.0	8.2 8.2	8.2	26.3 27.0	26.7	87.8 88.2	88.0	6.4 6.4	6.4	6.4	8.2 8.2	8.2	8.4	3.7 5.3	4.5	5.6
					Middle	5.1	23.8 23.8	23.8	8.2 8.2	8.2	28.3 28.4	28.4	86.5 87.8	87.2	6.2 6.3	6.3		8.3 8.5	8.4		5.6 6.8	6.2	
					Bottom	9.1	23.7 23.7	23.7	8.2 8.2	8.2	30.1 30.1	30.1	86.5 89.2	87.9	6.2 6.4	6.3	6.3	8.6 8.4	8.5		5.9 6.4	6.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	07:58	10.5	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	24.1 24.2	24.1	81.3 81.0	81.2	6.4 6.4	6.4	6.4	15.1 15.3	15.2	15.5	11.2 12.2	11.7	12.2
					Middle	5.3	20.3 20.3	20.3	7.9 7.9	7.9	24.5 24.5	24.5	81.3 80.8	81.1	6.4 6.3	6.3		15.2 15.6	15.4		12.8 12.0	12.4	
					Bottom	9.5	20.1 20.2	20.2	7.9 7.9	7.9	26.5 26.3	26.4	81.0 80.6	80.8	6.3 6.3	6.3	6.3	15.8 15.7	15.8		12.9 11.8	12.4	
4-Apr-14	Cloudy	Moderate	09:01	10.3	Surface	1.0	20.4 20.3	20.4	7.9 7.9	7.9	20.7 21.4	21.1	77.5 78.3	77.9	6.2 6.2	6.2	6.2	10.5 11.1	10.8	13.1	7.7 8.8	8.3	8.5
					Middle	5.2	20.3 20.3	20.3	8.0 7.9	8.0	22.4 22.3	22.4	78.5 77.8	78.2	6.2 6.2	6.2		14.7 13.8	14.3		8.2 9.3	8.8	
					Bottom	9.3	20.3 20.2	20.2	7.9 8.0	8.0	22.3 22.9	22.6	77.7 78.5	78.1	6.2 6.2	6.2	6.2	14.0 14.4	14.2		8.6 7.9	8.3	
7-Apr-14	Sunny	Moderate	10:12	10.0	Surface	1.0	20.1 20.1	20.1	8.0 8.0	8.0	25.9 25.9	25.9	86.2 86.0	86.1	6.7 6.7	6.7	6.7	4.3 4.7	4.5	4.4	4.9 5.7	5.3	7.0
					Middle	5.0	20.0 20.0	20.0	8.0 8.0	8.0	26.3 26.6	26.5	85.0 85.2	85.1	6.6 6.6	6.6		4.5 4.1	4.3		6.9 8.0	7.5	
					Bottom	9.0	20.0 20.0	20.0	8.0 8.0	8.0	26.6 27.6	27.1	85.0 85.8	85.4	6.6 6.6	6.6	6.6	4.4 4.2	4.3		8.5 8.1	8.3	
9-Apr-14	Sunny	Moderate	14:28	10.4	Surface	1.0	20.6 20.8	20.7	8.1 8.1	8.1	22.1 22.2	22.2	86.7 86.6	86.7	6.8 6.8	6.8	6.7	2.8 2.8	2.8	3.4	4.0 3.9	4.0	3.8
					Middle	5.2	20.1 20.1	20.1	8.1 8.0	8.1	28.7 28.7	28.7	85.0 85.7	85.4	6.5 6.6	6.5		3.6 3.6	3.6		3.8 3.1	3.5	
					Bottom	9.4	20.1 19.9	20.0	8.0 8.1	8.1	30.1 30.2	30.1	85.2 86.2	85.7	6.5 6.6	6.5	6.5	3.7 3.6	3.7		4.8 3.0	3.9	
11-Apr-14	Sunny	Moderate	16:41	10.3	Surface	1.0	21.7 21.9	21.8	8.3 8.3	8.3	24.6 24.3	24.5	100.8 106.0	103.4	7.7 8.1	7.9	7.6	4.0 3.7	3.9	5.4	4.7 5.1	4.9	4.9
					Middle	5.2	21.0 20.9	20.9	8.2 8.2	8.2	27.6 27.8	27.7	94.8 95.6	95.2	7.2 7.3	7.2		6.5 6.3	6.4		4.8 5.3	5.1	
					Bottom	9.3	20.8 20.7	20.8	8.2 8.2	8.2	28.2 28.2	28.2	94.7 97.3	96.0	7.2 7.4	7.3	7.3	6.0 5.6	5.8		4.2 5.1	4.7	
14-Apr-14	Sunny	Moderate	18:56	10.3	Surface	1.0	22.8 22.7	22.7	8.5 8.5	8.5	23.8 23.8	23.8	117.0 114.4	115.7	8.8 8.6	8.7	8.3	7.9 7.4	7.7	9.3	13.4 13.4	13.4	13.5
					Middle	5.2	22.2 22.1	22.1	8.4 8.4	8.4	24.6 25.0	24.8	107.4 99.5	103.5	8.1 7.5	7.8		9.4 9.9	9.7		13.1 13.6	13.4	
					Bottom	9.3	22.0 21.7	21.9	8.4 8.3	8.3	25.9 26.3	26.1	110.1 97.3	103.7	8.3 7.3	7.8	7.8	10.0 10.7	10.4		13.8 13.4	13.6	
16-Apr-14	Sunny	Moderate	07:00	10.6	Surface	1.0	22.0 22.0	22.0	8.3 8.3	8.3	26.6 26.5	26.6	95.2 95.2	95.2	7.1 7.1	7.1	7.1	4.5 4.5	4.5	4.6	5.0 4.8	4.9	4.6
					Middle	5.3	21.9 21.9	21.9	8.3 8.3	8.3	27.2 27.3	27.2	94.8 94.9	94.9	7.1 7.1	7.1		4.6 4.6	4.6		3.2 3.3	3.3	
					Bottom	9.6	21.8 21.8	21.8	8.3 8.3	8.3	28.1 28.0	28.1	94.5 94.4	94.5	7.1 7.0	7.0	7.0	4.7 4.7	4.7		5.6 5.8	5.7	
18-Apr-14	Sunny	Moderate	07:56	11.3	Surface	1.0	22.7 22.7	22.7	8.2 8.2	8.2	25.1 25.2	25.2	86.7 86.7	86.7	6.5 6.5	6.5	6.5	6.0 6.8	6.4	6.5	8.0 8.2	8.1	9.5
					Middle	5.7	22.7 22.7	22.7	8.2 8.2	8.2	25.4 25.3	25.3	86.7 86.5	86.6	6.5 6.5	6.5		6.9 6.1	6.5		9.7 9.9	9.8	
					Bottom	10.3	22.7 22.6	22.7	8.2 8.2	8.2	25.7 25.7	25.7	86.5 86.5	86.5	6.4 6.4	6.4	6.4	6.9 6.2	6.6		10.6 10.5	10.6	
21-Apr-14	Fine	Moderate	10:25	10.4	Surface	1.0	23.4 23.3	23.4	8.2 8.2	8.2	24.8 24.9	24.8	86.2 86.3	86.3	6.4 6.4	6.4	6.4	6.3 5.9	6.1	5.9	6.9 5.1	6.0	6.3
					Middle	5.2	23.0 23.0	23.0	8.2 8.2	8.2	27.8 27.8	27.8	85.7 85.4	85.6	6.3 6.2	6.3		5.4 5.7	5.6		7.2 6.3	6.8	
					Bottom	9.4	23.1 23.0	23.1	8.2 8.2	8.2	28.3 28.4	28.4	85.4 85.6	85.5	6.2 6.2	6.2	6.2	5.8 5.9	5.9		5.7 6.5	6.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	13:43	10.3	Surface	1.0	23.7 23.7	23.7	8.2 8.2	8.2	25.5 25.4	25.4	90.1 89.8	90.0	6.6 6.6	6.6	6.6	4.4 4.2	4.3	4.6	4.0 4.0	4.0	4.5
					Middle	5.2	23.5 23.4	23.5	8.2 8.2	8.2	27.3 27.3	27.3	89.5 88.0	88.8	6.5 6.4	6.5		4.8 4.7	4.8		4.8 3.6	4.2	
					Bottom	9.3	23.4 23.4	23.4	8.2 8.2	8.2	27.5 27.4	27.5	88.3 91.1	89.7	6.4 6.6	6.5	6.5	4.7 4.8	4.8		5.4 5.3	5.4	
25-Apr-14	Sunny	Moderate	15:58	11.3	Surface	1.0	23.5 23.4	23.5	8.2 8.2	8.2	29.0 29.2	29.1	90.6 90.6	90.6	6.5 6.5	6.5	6.5	3.9 4.0	4.0	5.1	5.8 5.6	5.7	6.6
					Middle	5.7	23.3 23.3	23.3	8.2 8.2	8.2	29.4 29.4	29.4	89.5 89.4	89.5	6.4 6.4	6.4		5.1 4.9	5.0		6.9 6.4	6.7	
					Bottom	10.3	23.1 23.0	23.0	8.2 8.2	8.2	29.8 30.5	30.2	88.5 88.1	88.3	6.4 6.3	6.4	6.4	6.0 6.4	6.2		6.7 7.9	7.3	
28-Apr-14	Sunny	Moderate	18:50	9.9	Surface	1.0	24.4 24.5	24.4	8.2 8.2	8.2	25.0 24.9	25.0	89.4 89.7	89.6	6.5 6.5	6.5	6.5	4.7 4.5	4.6	6.0	3.5 5.3	4.4	4.6
					Middle	5.0	24.6 24.6	24.6	8.2 8.2	8.2	26.8 26.7	26.8	90.4 90.9	90.7	6.5 6.5	6.5		6.6 6.3	6.5		5.0 4.7	4.9	
					Bottom	8.9	24.6 24.6	24.6	8.2 8.2	8.2	26.9 27.1	27.0	90.0 91.6	90.8	6.4 6.5	6.5	6.5	7.0 6.6	6.8		4.7 4.5	4.6	
30-Apr-14	Sunny	Moderate	06:44	10.6	Surface	1.0	23.9 23.9	23.9	8.2 8.2	8.2	27.8 27.9	27.9	86.0 86.2	86.1	6.2 6.2	6.2	6.2	10.2 10.5	10.4	11.3	4.5 4.7	4.6	4.2
					Middle	5.3	23.9 23.9	23.9	8.2 8.2	8.2	28.2 28.2	28.2	85.8 85.7	85.8	6.2 6.2	6.2		11.8 11.5	11.7		4.6 3.5	4.1	
					Bottom	9.6	23.9 23.9	23.9	8.2 8.2	8.2	28.1 28.2	28.2	85.9 86.1	86.0	6.2 6.2	6.2	6.2	11.7 11.7	11.7		3.6 3.9	3.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:13	6.3	Surface	1.0	20.4 20.5	20.5	7.8 7.8	7.8	23.5 23.5	23.5	85.7 85.0	85.4	6.7 6.7	6.7	6.7	8.5 8.5	8.5	9.0	9.0 9.3	9.2	9.5
					Middle	3.2	20.3 20.3	20.3	7.8 7.8	7.8	24.2 24.4	24.3	85.6 84.2	84.9	6.7 6.6	6.7		9.6 9.6	9.6		9.4 8.4	8.9	
					Bottom	5.3	20.2 20.3	20.2	7.8 7.8	7.8	25.0 25.1	25.1	89.8 84.8	87.3	7.0 6.6	6.8	6.8	8.8 9.1	9.0		10.5 10.1	10.3	
4-Apr-14	Cloudy	Moderate	15:44	6.8	Surface	1.0	20.6 20.3	20.4	7.8 7.8	7.8	20.6 21.6	21.1	83.0 82.6	82.8	6.6 6.6	6.6	6.6	7.7 7.8	7.8	8.0	7.8 7.2	7.5	8.1
					Middle	3.4	20.1 20.3	20.2	7.8 7.8	7.8	23.5 22.7	23.1	82.3 82.6	82.5	6.5 6.5	6.5		7.9 7.8	7.9		7.6 9.2	8.4	
					Bottom	5.8	20.4 20.0	20.2	7.8 7.8	7.8	25.3 25.4	25.4	82.4 82.5	82.5	6.4 6.5	6.4	6.4	8.3 8.1	8.2		7.6 9.2	8.4	
7-Apr-14	Cloudy	Moderate	18:23	6.2	Surface	1.0	20.1 20.1	20.1	8.1 8.1	8.1	26.7 25.2	26.0	91.3 90.2	90.8	7.1 7.1	7.1	7.1	8.5 8.3	8.4	8.7	5.0 4.3	4.7	6.4
					Middle	3.1	20.0 20.0	20.0	8.1 8.1	8.1	27.5 26.0	26.8	89.0 91.9	90.5	6.9 7.2	7.0		8.6 8.8	8.7		7.0 6.4	6.7	
					Bottom	5.2	20.0 19.9	20.0	8.1 8.1	8.1	28.7 28.8	28.7	94.3 89.5	91.9	7.2 6.9	7.1	7.1	8.9 9.1	9.0		8.1 7.7	7.9	
9-Apr-14	Sunny	Moderate	10:12	6.2	Surface	1.0	20.6 20.5	20.6	7.8 7.8	7.8	23.4 23.9	23.7	89.8 89.9	89.9	7.0 7.0	7.0	6.9	6.2 6.6	6.4	7.9	4.9 5.3	5.1	5.8
					Middle	3.1	20.3 20.3	20.3	7.8 7.8	7.8	26.0 26.3	26.2	87.9 88.7	88.3	6.8 6.9	6.8		8.5 8.3	8.4		6.4 6.2	6.3	
					Bottom	5.2	20.0 20.0	20.0	7.7 7.8	7.8	29.1 29.1	29.1	86.9 86.1	86.5	6.7 6.6	6.6	6.6	9.0 8.9	9.0		6.1 5.8	6.0	
11-Apr-14	Sunny	Moderate	10:56	6.3	Surface	1.0	21.6 21.5	21.6	8.1 8.1	8.1	26.6 26.7	26.7	99.8 100.6	100.2	7.5 7.6	7.6	7.5	4.6 4.5	4.6	4.6	5.6 5.2	5.4	6.0
					Middle	3.2	20.9 21.1	21.0	8.1 8.1	8.1	27.4 27.3	27.4	94.5 98.5	96.5	7.2 7.5	7.3		4.5 4.6	4.6		5.7 6.1	5.9	
					Bottom	5.3	20.4 21.1	20.8	8.0 8.1	8.0	29.0 28.3	28.7	94.6 99.4	97.0	7.2 7.5	7.3	7.3	4.5 4.5	4.5		6.4 6.8	6.6	
14-Apr-14	Sunny	Moderate	12:40	6.2	Surface	1.0	23.3 23.3	23.3	8.5 8.5	8.5	22.6 22.6	22.6	132.7 124.5	128.6	9.9 9.3	9.6	9.4	6.1 6.1	6.1	5.7	12.1 12.0	12.1	12.9
					Middle	3.1	23.2 23.2	23.2	8.4 8.4	8.4	22.7 22.6	22.7	122.2 122.4	122.3	9.2 9.1	9.2		5.5 5.4	5.5		12.3 12.6	12.5	
					Bottom	5.2	21.7 22.1	21.9	8.2 8.3	8.2	27.2 27.0	27.1	109.3 111.1	110.2	8.2 8.3	8.3	8.3	5.5 5.4	5.5		14.6 13.6	14.1	
16-Apr-14	Sunny	Moderate	13:08	6.3	Surface	1.0	22.1 22.1	22.1	8.3 8.3	8.3	26.3 26.2	26.3	99.0 99.2	99.1	7.4 7.4	7.4	7.4	4.4 4.3	4.4	4.0	3.1 4.4	3.8	4.2
					Middle	3.2	21.9 22.0	21.9	8.3 8.3	8.3	27.2 26.7	27.0	97.9 98.4	98.2	7.3 7.4	7.4		3.9 4.0	4.0		5.1 5.3	5.2	
					Bottom	5.3	21.8 21.9	21.8	8.3 8.3	8.3	27.8 27.8	27.8	98.0 98.5	98.3	7.3 7.4	7.3	7.3	3.4 3.6	3.5		3.3 3.8	3.6	
18-Apr-14	Sunny	Moderate	14:20	6.3	Surface	1.0	23.5 23.6	23.6	8.0 8.0	8.0	25.5 25.4	25.4	91.5 90.6	91.1	6.7 6.6	6.7	6.7	7.5 7.4	7.5	7.6	4.7 5.9	5.3	5.5
					Middle	3.2	22.8 22.9	22.9	8.0 8.0	8.0	26.1 26.1	26.1	89.5 90.9	90.2	6.6 6.7	6.7		7.4 7.7	7.6		4.2 5.9	5.1	
					Bottom	5.3	22.7 22.9	22.8	8.0 8.0	8.0	27.0 26.9	27.0	91.8 89.5	90.7	6.8 6.6	6.7	6.7	7.4 7.8	7.6		5.1 7.3	6.2	
21-Apr-14	Fine	Moderate	16:31	7.2	Surface	1.0	23.7 23.6	23.7	8.3 8.3	8.3	25.0 25.4	25.2	92.0 91.7	91.9	6.8 6.7	6.7	6.7	5.6 5.5	5.6	5.6	8.5 7.2	7.9	8.1
					Middle	3.6	23.1 23.0	23.0	8.3 8.3	8.3	27.0 27.9	27.4	90.2 91.6	90.9	6.6 6.7	6.6		5.7 5.5	5.6		8.2 8.6	8.4	
					Bottom	6.2	23.0 22.8	22.9	8.3 8.3	8.3	29.3 29.3	29.3	90.5 89.6	90.1	6.6 6.6	6.6	6.6	5.6 5.7	5.7		7.9 8.3	8.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:26	6.2	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	25.4 25.4	25.4	94.0 93.0	93.5	6.9 6.8	6.8	6.8	2.5 2.5	2.5	2.6	5.5 4.9	5.2	4.8
					Middle	3.1	23.6 23.7	23.7	8.1 8.2	8.2	25.6 25.6	25.6	93.2 92.2	92.7	6.8 6.7	6.8		2.7 2.5	2.6		4.2 5.6	4.9	
					Bottom	5.2	23.4 23.2	23.3	8.2 8.1	8.1	28.1 28.9	28.5	92.0 94.6	93.3	6.7 6.8	6.8	6.8	2.6 2.6	2.6		4.6 4.0	4.3	
25-Apr-14	Sunny	Moderate	11:03	6.4	Surface	1.0	23.3 23.3	23.3	8.2 8.2	8.2	28.8 28.8	28.8	92.0 90.7	91.4	6.7 6.6	6.6	6.6	4.6 4.5	4.6	4.6	6.3 7.5	6.9	6.6
					Middle	3.2	23.0 23.0	23.0	8.2 8.2	8.2	29.9 29.9	29.9	90.3 92.3	91.3	6.5 6.7	6.6		4.7 4.4	4.6		6.4 6.1	6.3	
					Bottom	5.4	23.1 23.1	23.1	8.1 8.2	8.2	30.2 30.2	30.2	94.4 90.7	92.6	6.8 6.5	6.7	6.7	4.5 4.5	4.5		7.1 6.2	6.7	
28-Apr-14	Sunny	Moderate	12:44	6.2	Surface	1.0	24.2 24.1	24.1	8.1 8.2	8.2	27.2 27.5	27.4	90.5 89.1	89.8	6.5 6.4	6.5	6.5	3.6 3.5	3.6	3.6	5.4 4.9	5.2	5.0
					Middle	3.1	23.9 23.9	23.9	8.1 8.2	8.1	27.8 28.0	27.9	90.5 88.9	89.7	6.5 6.4	6.5		3.5 3.5	3.5		4.1 3.5	3.8	
					Bottom	5.2	23.9 23.8	23.8	8.1 8.1	8.1	28.2 28.6	28.4	89.2 92.3	90.8	6.4 6.6	6.5	6.5	3.6 3.5	3.6		5.6 6.1	5.9	
30-Apr-14	Sunny	Moderate	13:20	6.9	Surface	1.0	24.2 24.2	24.2	8.3 8.3	8.3	27.7 27.7	27.7	88.8 92.0	90.4	6.4 6.6	6.5	6.5	5.4 5.2	5.3	5.6	5.2 6.6	5.9	5.8
					Middle	3.5	24.0 23.9	24.0	8.3 8.3	8.3	28.3 28.5	28.4	88.8 90.4	89.6	6.3 6.5	6.4		5.6 5.4	5.5		4.7 6.6	5.7	
					Bottom	5.9	23.8 24.0	23.9	8.3 8.3	8.3	29.1 28.7	28.9	90.0 88.2	89.1	6.4 6.3	6.4	6.4	5.7 6.0	5.9		5.7 5.9	5.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:28	6.2	Surface	1.0	20.4 20.4	20.4	7.8 7.8	7.8	22.6 22.9	22.7	85.8 82.0	83.9	6.8 6.5	6.6	6.7	9.4 9.7	9.6	10.0	7.0 8.5	7.8	8.1
					Middle	3.1	20.4 20.4	20.4	7.8 7.8	7.8	23.5 23.6	23.5	82.6 88.5	85.6	6.5 7.0	6.7		11.1 10.2	10.7		9.2 7.8	8.5	
					Bottom	5.2	20.4 20.3	20.4	7.8 7.8	7.8	23.6 23.7	23.6	83.1 84.5	83.8	6.5 6.6	6.6	6.6	10.0 9.2	9.6		7.6 8.4	8.0	
4-Apr-14	Cloudy	Moderate	08:57	6.8	Surface	1.0	20.4 20.3	20.3	7.8 7.8	7.8	19.2 20.6	19.9	79.5 78.1	78.8	6.4 6.3	6.3	6.4	8.1 7.9	8.0	9.4	7.6 7.7	7.7	7.4
					Middle	3.4	20.3 20.3	20.3	7.8 7.8	7.8	21.2 20.8	21.0	78.3 80.7	79.5	6.3 6.5	6.4		9.8 10.0	9.9		6.8 7.7	7.3	
					Bottom	5.8	20.3 20.3	20.3	7.8 7.8	7.8	23.1 23.1	23.1	77.5 81.0	79.3	6.1 6.4	6.3	6.3	10.2 10.5	10.4		7.3 6.9	7.1	
7-Apr-14	Sunny	Moderate	10:20	6.4	Surface	1.0	20.0 20.0	20.0	8.1 8.1	8.1	24.2 24.2	24.2	89.2 88.4	88.8	7.0 7.0	7.0	7.0	4.7 4.7	4.7	4.7	9.9 8.2	9.1	8.6
					Middle	3.2	20.0 20.0	20.0	8.1 8.1	8.1	24.4 24.7	24.5	88.0 89.6	88.8	6.9 7.0	7.0		4.7 4.8	4.8		9.1 7.6	8.4	
					Bottom	5.4	20.0 20.0	20.0	8.1 8.1	8.1	27.2 27.3	27.3	89.0 92.6	90.8	6.9 7.2	7.0	7.0	4.7 4.7	4.7		9.0 7.6	8.3	
9-Apr-14	Sunny	Moderate	14:09	6.6	Surface	1.0	21.3 21.2	21.2	7.8 7.8	7.8	23.5 23.5	23.5	95.2 94.8	95.0	7.4 7.3	7.4	7.3	6.6 6.2	6.4	7.7	6.1 4.6	5.4	5.7
					Middle	3.3	20.7 20.7	20.7	7.8 7.8	7.8	24.8 24.8	24.8	92.1 91.5	91.8	7.2 7.1	7.1		7.9 7.9	7.9		6.0 6.1	6.1	
					Bottom	5.6	20.1 20.2	20.1	7.8 7.8	7.8	28.9 28.7	28.8	90.7 92.6	91.7	6.9 7.1	7.0	7.0	8.9 8.6	8.8		5.9 5.4	5.7	
11-Apr-14	Sunny	Moderate	16:22	6.4	Surface	1.0	22.0 22.1	22.0	8.1 8.2	8.2	26.1 26.0	26.1	108.8 114.0	111.4	8.2 8.6	8.4	8.3	5.5 5.3	5.4	5.7	6.1 5.8	6.0	6.9
					Middle	3.2	21.6 21.5	21.5	8.1 8.1	8.1	26.7 26.8	26.7	108.8 104.3	106.6	8.2 7.9	8.1		6.0 5.7	5.9		8.1 6.2	7.2	
					Bottom	5.4	21.7 20.9	21.3	8.1 8.1	8.1	26.7 27.7	27.2	106.6 111.8	109.2	8.0 8.5	8.3	8.3	5.8 5.8	5.8		7.8 7.0	7.4	
14-Apr-14	Sunny	Moderate	18:12	6.4	Surface	1.0	22.7 22.8	22.7	8.4 8.4	8.4	24.3 24.2	24.3	125.4 129.2	127.3	9.4 9.7	9.5	9.4	12.0 12.1	12.1	12.4	10.2 9.7	10.0	11.4
					Middle	3.2	22.7 22.6	22.6	8.4 8.3	8.4	24.4 24.7	24.5	125.7 123.0	124.4	9.4 9.2	9.3		12.6 12.6	12.6		10.4 10.7	10.6	
					Bottom	5.4	22.7 22.4	22.5	8.4 8.3	8.3	24.6 25.3	24.9	116.1 115.5	115.8	8.7 8.7	8.7	8.7	12.4 12.5	12.5		13.1 14.1	13.6	
16-Apr-14	Sunny	Moderate	07:05	6.5	Surface	1.0	22.0 21.9	22.0	8.3 8.3	8.3	25.8 26.3	26.0	97.4 97.9	97.7	7.3 7.4	7.3	7.3	3.1 3.0	3.1	3.7	5.7 4.6	5.2	5.5
					Middle	3.3	21.9 21.9	21.9	8.3 8.3	8.3	26.6 26.5	26.6	97.9 97.5	97.7	7.4 7.3	7.3		4.1 3.7	3.9		6.3 4.4	5.4	
					Bottom	5.5	21.9 21.9	21.9	8.3 8.3	8.3	26.6 26.5	26.6	98.2 97.3	97.8	7.4 7.3	7.3	7.3	4.2 3.8	4.0		6.8 5.1	6.0	
18-Apr-14	Sunny	Moderate	08:26	6.3	Surface	1.0	22.8 22.8	22.8	8.1 8.1	8.1	24.4 24.2	24.3	87.9 88.4	88.2	6.6 6.6	6.6	6.6	6.4 6.5	6.5	6.6	4.4 3.8	4.1	4.2
					Middle	3.2	22.7 22.7	22.7	8.1 8.1	8.1	25.1 25.1	25.1	87.8 88.8	88.3	6.6 6.6	6.6		6.6 6.5	6.6		4.7 4.7	4.7	
					Bottom	5.3	22.7 22.7	22.7	8.1 8.1	8.1	25.2 25.1	25.1	89.6 87.8	88.7	6.7 6.6	6.6	6.6	6.7 6.8	6.8		3.7 3.8	3.8	
21-Apr-14	Fine	Moderate	09:56	6.6	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	23.0 23.5	23.3	94.4 89.6	92.0	6.9 6.6	6.8	6.7	4.6 4.5	4.6	4.7	4.0 4.4	4.2	4.9
					Middle	3.3	23.7 23.7	23.7	8.2 8.2	8.2	23.8 24.2	24.0	90.9 89.4	90.2	6.7 6.6	6.6		4.6 4.6	4.6		4.6 4.4	4.5	
					Bottom	5.6	23.5 23.7	23.6	8.2 8.2	8.2	25.5 25.6	25.5	90.4 89.0	89.7	6.7 6.5	6.6	6.6	4.8 4.7	4.8		6.3 5.9	6.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:44	6.4	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	25.4 25.0	25.2	95.1 94.7	94.9	7.0 6.9	6.9	6.9	5.5 5.4	5.5	5.8	3.8 5.0	4.4	4.6
					Middle	3.2	23.8 23.8	23.8	8.2 8.2	8.2	25.7 26.3	26.0	95.5 94.4	95.0	7.0 6.9	6.9		5.7 5.5	5.6		5.0 4.8	4.9	
					Bottom	5.4	23.8 23.8	23.8	8.2 8.2	8.2	26.5 26.3	26.4	94.5 96.9	95.7	6.9 7.1	7.0	7.0	6.4 6.2	6.3		4.0 5.2	4.6	
25-Apr-14	Sunny	Moderate	15:33	6.5	Surface	1.0	23.7 23.7	23.7	8.2 8.1	8.2	28.9 28.8	28.9	93.9 94.6	94.3	6.7 6.8	6.8	6.8	4.5 4.7	4.6	4.6	3.3 4.2	3.8	4.3
					Middle	3.3	23.4 23.5	23.5	8.1 8.2	8.1	29.6 29.4	29.5	92.4 93.2	92.8	6.6 6.7	6.7		4.6 4.5	4.6		3.5 5.2	4.4	
					Bottom	5.5	23.2 23.6	23.4	8.1 8.2	8.1	29.9 29.4	29.6	93.2 93.9	93.6	6.7 6.7	6.7	6.7	4.6 4.5	4.6		4.5 4.9	4.7	
28-Apr-14	Sunny	Moderate	18:24	6.3	Surface	1.0	24.8 24.8	24.8	8.2 8.2	8.2	26.6 26.7	26.6	95.4 94.9	95.2	6.8 6.8	6.8	6.8	4.7 4.6	4.7	4.6	4.7 5.6	5.2	5.5
					Middle	3.2	24.8 24.7	24.8	8.2 8.2	8.2	27.0 26.7	26.9	94.3 94.8	94.6	6.7 6.8	6.7		4.5 4.7	4.6		5.1 5.5	5.3	
					Bottom	5.3	24.5 24.6	24.6	8.2 8.2	8.2	27.7 27.6	27.7	96.1 94.6	95.4	6.8 6.7	6.8	6.8	4.5 4.7	4.6		5.7 6.4	6.1	
30-Apr-14	Sunny	Moderate	06:35	7.2	Surface	1.0	24.0 24.0	24.0	8.3 8.3	8.3	26.2 26.4	26.3	88.7 91.5	90.1	6.4 6.6	6.5	6.5	4.0 4.1	4.1	4.2	5.4 5.9	5.7	5.6
					Middle	3.6	24.0 24.0	24.0	8.3 8.3	8.3	27.2 27.2	27.2	88.2 89.4	88.8	6.4 6.5	6.4		4.1 4.2	4.2		5.6 5.9	5.8	
					Bottom	6.2	24.0 24.0	24.0	8.3 8.3	8.3	27.5 27.2	27.3	89.2 88.2	88.7	6.5 6.4	6.4	6.4	4.4 4.4	4.4		5.2 5.5	5.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:20	9.0	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	24.8 24.7	24.7	85.9 86.0	86.0	6.7 6.7	6.7	6.7	18.0 18.1	18.1	18.8	18.1 18.1	18.1	17.8
					Middle	4.5	20.2 20.2	20.2	7.9 7.8	7.9	24.8 24.9	24.9	85.5 85.8	85.7	6.7 6.7	6.7		19.4 18.9	19.2		17.7 18.3	18.0	
					Bottom	8.0	20.2 20.2	20.2	7.9 7.8	7.8	24.9 25.0	24.9	85.6 85.9	85.8	6.7 6.7	6.7	6.7	19.1 19.2	19.2		17.2 17.5	17.4	
4-Apr-14	Cloudy	Moderate	14:55	9.4	Surface	1.0	20.7 20.7	20.7	7.7 7.8	7.8	22.2 22.0	22.1	85.0 85.0	85.0	6.7 6.7	6.7	6.7	13.5 13.6	13.6	15.7	6.8 7.5	7.2	8.1
					Middle	4.7	20.4 20.4	20.4	7.8 7.8	7.8	22.5 22.5	22.5	84.6 84.6	84.6	6.7 6.7	6.7		16.6 16.5	16.6		8.6 7.5	8.1	
					Bottom	8.4	20.4 20.6	20.5	7.7 7.8	7.8	24.4 24.9	24.7	84.4 84.2	84.3	6.6 6.5	6.6	6.6	16.8 16.8	16.8		9.2 8.7	9.0	
7-Apr-14	Cloudy	Moderate	17:39	8.4	Surface	1.0	20.3 20.3	20.3	8.1 8.1	8.1	24.3 24.2	24.3	92.0 92.5	92.3	7.2 7.3	7.2	7.1	6.8 7.1	7.0	7.8	7.2 6.2	6.7	6.2
					Middle	4.2	20.2 20.2	20.2	8.1 8.1	8.1	29.3 29.3	29.3	92.0 91.8	91.9	7.0 7.0	7.0		8.1 8.2	8.2		6.8 6.6	6.7	
					Bottom	7.4	20.2 20.2	20.2	8.1 8.1	8.1	31.1 31.0	31.1	92.5 92.0	92.3	7.0 6.9	7.0	7.0	8.2 8.1	8.2		5.5 4.7	5.1	
9-Apr-14	Sunny	Moderate	11:00	8.4	Surface	1.0	20.5 20.4	20.5	7.9 7.9	7.9	24.1 24.3	24.2	88.6 89.6	89.1	6.9 7.0	7.0	6.9	8.0 7.2	7.6	8.7	5.3 4.9	5.1	6.8
					Middle	4.2	20.2 20.2	20.2	7.8 7.8	7.8	29.1 27.7	28.4	87.9 89.8	88.9	6.7 6.9	6.8		9.7 9.8	9.8		8.0 7.7	7.9	
					Bottom	7.4	20.3 20.3	20.3	7.9 7.8	7.9	29.4 29.3	29.4	88.6 91.7	90.2	6.7 7.0	6.9	6.9	8.6 8.8	8.7		6.4 8.2	7.3	
11-Apr-14	Sunny	Moderate	12:23	8.3	Surface	1.0	21.3 21.2	21.2	8.2 8.1	8.2	25.6 25.7	25.6	97.5 97.1	97.3	7.5 7.4	7.4	7.4	5.3 5.3	5.3	5.6	6.6 6.2	6.4	6.0
					Middle	4.2	20.9 20.9	20.9	8.1 8.1	8.1	27.5 27.8	27.7	96.1 95.8	96.0	7.3 7.3	7.3		5.8 5.8	5.8		6.9 5.2	6.1	
					Bottom	7.3	20.9 20.9	20.9	8.1 8.1	8.1	28.2 28.2	28.2	96.9 97.7	97.3	7.3 7.4	7.4	7.4	5.7 5.8	5.8		5.7 5.0	5.4	
14-Apr-14	Sunny	Moderate	13:26	8.2	Surface	1.0	23.0 23.1	23.1	8.5 8.5	8.5	23.4 23.4	23.4	121.5 123.6	122.6	9.1 9.3	9.2	8.7	12.8 12.2	12.5	12.5	10.4 11.4	10.9	10.7
					Middle	4.1	22.9 21.9	22.4	8.4 8.3	8.4	23.6 25.9	24.8	108.7 106.9	107.8	8.2 8.1	8.1		12.3 12.5	12.4		11.0 10.1	10.6	
					Bottom	7.2	21.5 21.5	21.5	8.3 8.3	8.3	28.0 28.0	28.0	105.9 107.3	106.6	7.9 8.1	8.0	8.0	12.5 12.6	12.6		10.7 10.6	10.7	
16-Apr-14	Sunny	Moderate	12:18	8.7	Surface	1.0	22.2 22.2	22.2	8.3 8.3	8.3	26.5 26.6	26.6	98.4 98.3	98.4	7.4 7.3	7.3	7.3	9.6 9.0	9.3	10.7	5.0 5.6	5.3	5.6
					Middle	4.4	22.2 22.1	22.2	8.3 8.3	8.3	26.6 26.7	26.6	98.0 98.0	98.0	7.3 7.3	7.3		12.5 12.0	12.3		5.9 6.0	6.0	
					Bottom	7.7	22.1 22.2	22.2	8.3 8.3	8.3	26.7 26.6	26.6	98.0 98.1	98.1	7.3 7.3	7.3	7.3	10.2 10.8	10.5		4.9 6.2	5.6	
18-Apr-14	Sunny	Moderate	13:39	8.5	Surface	1.0	23.0 23.1	23.1	8.0 8.0	8.0	26.3 26.3	26.3	90.2 90.1	90.2	6.7 6.6	6.6	6.6	9.2 9.3	9.3	9.5	10.1 11.2	10.7	12.1
					Middle	4.3	23.0 23.0	23.0	8.0 8.0	8.0	26.3 26.3	26.3	89.7 90.0	89.9	6.6 6.6	6.6		9.3 9.4	9.4		12.7 12.7	12.7	
					Bottom	7.5	23.0 23.0	23.0	8.0 7.9	8.0	26.3 26.3	26.3	89.9 90.0	90.0	6.6 6.6	6.6	6.6	9.8 9.9	9.9		12.7 13.1	12.9	
21-Apr-14	Fine	Moderate	15:47	9.0	Surface	1.0	23.9 23.9	23.9	8.1 8.1	8.1	25.7 25.8	25.8	94.6 94.3	94.5	6.9 6.9	6.9	6.9	5.4 5.6	5.5	5.6	7.4 5.3	6.4	7.3
					Middle	4.5	23.1 23.1	23.1	8.1 8.2	8.1	29.0 29.1	29.0	93.6 93.5	93.6	6.8 6.8	6.8		5.6 5.6	5.6		6.8 8.2	7.5	
					Bottom	8.0	23.1 23.3	23.2	8.1 8.1	8.1	29.1 29.0	29.0	92.3 92.1	92.2	6.7 6.7	6.7	6.7	5.8 5.8	5.8		8.1 7.6	7.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	09:09	8.3	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	26.1 26.1	26.1	93.7 93.7	93.7	6.8 6.8	6.8	6.8	4.5 4.6	4.6	4.6	3.7 3.2	3.5	4.1
					Middle	4.2	23.9 23.9	23.9	8.2 8.2	8.2	26.4 26.4	26.4	92.8 92.6	92.7	6.7 6.7	6.7		4.5 4.6	4.6		3.9 3.9	3.9	
					Bottom	7.3	23.9 23.9	23.9	8.1 8.2	8.2	26.8 26.6	26.7	93.6 93.7	93.7	6.8 6.8	6.8	6.8	4.5 4.5	4.5		4.2 5.5	4.9	
25-Apr-14	Sunny	Moderate	11:47	8.2	Surface	1.0	23.5 23.5	23.5	8.2 8.2	8.2	27.9 28.1	28.0	92.6 92.6	92.6	6.7 6.7	6.7	6.7	7.3 7.1	7.2	7.3	5.0 5.4	5.2	6.0
					Middle	4.1	23.4 23.4	23.4	8.2 8.2	8.2	28.2 28.2	28.2	92.1 92.5	92.3	6.7 6.7	6.7		7.5 7.3	7.4		5.9 7.0	6.5	
					Bottom	7.2	23.4 23.3	23.4	8.2 8.1	8.2	28.2 28.4	28.3	92.4 92.9	92.7	6.7 6.7	6.7	6.7	7.2 7.4	7.3		5.8 7.0	6.4	
28-Apr-14	Sunny	Moderate	13:29	8.5	Surface	1.0	24.4 24.3	24.3	8.2 8.2	8.2	27.2 27.2	27.2	93.9 93.3	93.6	6.7 6.7	6.7	6.7	7.9 7.7	7.8	8.1	6.7 7.1	6.9	7.1
					Middle	4.3	24.3 24.3	24.3	8.2 8.2	8.2	27.3 27.3	27.3	93.8 93.0	93.4	6.7 6.7	6.7		8.1 8.2	8.2		8.1 6.9	7.5	
					Bottom	7.5	24.3 24.2	24.2	8.2 8.2	8.2	27.3 27.4	27.4	93.1 94.4	93.8	6.7 6.8	6.7	6.7	8.4 8.3	8.4		6.1 7.5	6.8	
30-Apr-14	Sunny	Moderate	12:39	9.2	Surface	1.0	24.0 24.0	24.0	8.4 8.4	8.4	28.1 28.2	28.1	89.7 90.0	89.9	6.4 6.5	6.4	6.4	7.5 7.5	7.5	7.8	6.1 6.1	6.1	5.7
					Middle	4.6	24.0 24.0	24.0	8.4 8.4	8.4	28.2 28.2	28.2	90.0 89.5	89.8	6.5 6.4	6.4		7.8 7.8	7.8		4.9 4.2	4.6	
					Bottom	8.2	24.0 24.0	24.0	8.3 8.4	8.4	28.2 28.2	28.2	89.8 89.5	89.7	6.4 6.4	6.4	6.4	8.0 7.9	8.0		7.1 5.4	6.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	09:18	8.7	Surface	1.0	20.4 20.4	20.4	7.9 7.9	7.9	24.4 24.3	24.4	86.1 86.9	86.5	6.7 6.8	6.8	6.8	9.6 9.3	9.5	9.5	10.5 9.0	9.8	10.4
					Middle	4.4	20.4 20.4	20.4	7.9 7.9	7.9	24.6 24.6	24.6	87.1 85.9	86.5	6.8 6.7	6.8		9.4 9.6	9.5		10.7 10.7	10.7	
					Bottom	7.7	20.4 20.4	20.4	7.9 7.9	7.9	24.6 24.6	24.6	86.3 88.7	87.5	6.7 6.9	6.8	6.8	9.2 10.0	9.6		10.3 11.3	10.8	
4-Apr-14	Cloudy	Moderate	09:42	9.3	Surface	1.0	20.4 20.4	20.4	7.8 7.8	7.8	20.6 20.7	20.7	80.4 79.8	80.1	6.4 6.4	6.4	6.4	9.2 9.0	9.1	9.5	11.7 13.1	12.4	12.3
					Middle	4.7	20.4 20.4	20.4	7.8 7.8	7.8	20.8 20.8	20.8	79.9 80.7	80.3	6.4 6.5	6.4		9.3 9.6	9.5		13.1 12.7	12.9	
					Bottom	8.3	20.4 20.4	20.4	7.8 7.8	7.8	21.5 21.1	21.3	81.0 79.7	80.4	6.5 6.4	6.4	6.4	9.8 9.7	9.8		12.6 10.7	11.7	
7-Apr-14	Sunny	Moderate	11:02	8.6	Surface	1.0	20.2 20.2	20.2	8.1 8.1	8.1	23.0 22.8	22.9	89.0 89.2	89.1	7.0 7.1	7.1	7.0	7.6 7.5	7.6	7.7	14.8 14.9	14.9	15.7
					Middle	4.3	20.1 20.2	20.2	8.1 8.1	8.1	27.2 25.8	26.5	88.6 88.1	88.4	6.8 6.9	6.9		7.9 7.7	7.8		16.1 14.4	15.3	
					Bottom	7.6	20.1 20.1	20.1	8.1 8.1	8.1	28.6 28.7	28.6	88.2 89.5	88.9	6.8 6.9	6.8	6.8	7.8 7.7	7.8		17.0 16.7	16.9	
9-Apr-14	Sunny	Moderate	13:14	8.3	Surface	1.0	21.0 21.1	21.1	7.9 7.9	7.9	24.3 24.3	24.3	90.3 90.5	90.4	7.0 7.0	7.0	6.9	6.2 5.8	6.0	6.1	6.2 6.6	6.4	5.8
					Middle	4.2	20.3 20.3	20.3	7.9 7.9	7.9	28.3 28.2	28.2	88.1 88.5	88.3	6.7 6.8	6.8		5.8 6.6	6.2		6.0 4.7	5.4	
					Bottom	7.3	20.3 20.2	20.3	7.9 7.9	7.9	28.8 29.0	28.9	88.9 88.2	88.6	6.8 6.7	6.8	6.8	6.2 5.8	6.0		6.2 5.0	5.6	
11-Apr-14	Sunny	Moderate	15:39	8.7	Surface	1.0	21.9 21.6	21.7	8.1 8.1	8.1	25.5 25.8	25.7	100.9 100.1	100.5	7.6 7.6	7.6	7.5	5.0 5.1	5.1	5.0	8.3 9.0	8.7	8.9
					Middle	4.4	21.0 21.0	21.0	8.0 8.0	8.0	27.9 27.9	27.9	99.0 96.8	97.9	7.5 7.3	7.4		5.0 4.8	4.9		8.0 8.9	8.5	
					Bottom	7.7	21.0 21.2	21.1	8.0 8.0	8.0	28.3 28.0	28.2	104.2 103.4	103.8	7.9 7.8	7.8	7.8	5.0 4.9	5.0		9.2 9.7	9.5	
14-Apr-14	Sunny	Moderate	17:29	8.8	Surface	1.0	23.4 23.4	23.4	8.6 8.6	8.6	23.2 23.2	23.2	150.7 148.4	149.6	11.2 11.1	11.1	11.0	13.5 13.2	13.4	13.3	10.1 11.6	10.9	11.1
					Middle	4.4	23.3 23.4	23.3	8.5 8.5	8.5	23.3 23.3	23.3	143.9 145.4	144.7	10.7 10.8	10.8		13.1 13.2	13.2		11.4 11.9	11.7	
					Bottom	7.8	23.2 23.2	23.2	8.5 8.5	8.5	24.1 25.4	24.7	148.6 149.6	149.1	11.1 11.0	11.0	11.0	13.1 13.2	13.2		10.6 10.5	10.6	
16-Apr-14	Sunny	Moderate	07:53	8.7	Surface	1.0	22.2 22.2	22.2	8.4 8.4	8.4	25.8 25.8	25.8	100.6 100.8	100.7	7.6 7.6	7.6	7.6	4.1 4.0	4.1	4.0	5.2 6.2	5.7	5.9
					Middle	4.4	22.1 22.1	22.1	8.3 8.4	8.4	26.0 26.1	26.1	100.4 100.2	100.3	7.5 7.5	7.5		4.0 3.9	4.0		5.8 5.0	5.4	
					Bottom	7.7	22.1 22.1	22.1	8.3 8.4	8.3	26.1 26.1	26.1	100.6 100.4	100.5	7.5 7.5	7.5	7.5	4.1 3.9	4.0		6.9 6.4	6.7	
18-Apr-14	Sunny	Moderate	09:07	8.8	Surface	1.0	22.9 22.9	22.9	8.2 8.2	8.2	25.9 25.8	25.8	90.0 90.0	90.0	6.7 6.7	6.7	6.7	5.1 5.5	5.3	5.4	5.1 6.0	5.6	6.7
					Middle	4.4	22.9 22.9	22.9	8.1 8.2	8.2	25.9 25.9	25.9	89.9 89.6	89.8	6.7 6.6	6.6		5.5 5.4	5.5		5.9 7.1	6.5	
					Bottom	7.8	22.9 23.0	22.9	8.2 8.1	8.2	25.9 26.0	25.9	90.1 91.2	90.7	6.7 6.8	6.7	6.7	5.5 5.4	5.5		8.9 6.9	7.9	
21-Apr-14	Fine	Moderate	10:37	9.2	Surface	1.0	23.9 23.9	23.9	8.2 8.2	8.2	24.2 24.3	24.3	92.2 90.2	91.2	6.7 6.6	6.7	6.7	7.4 7.3	7.4	7.6	8.6 7.9	8.3	9.3
					Middle	4.6	23.8 23.7	23.8	8.2 8.2	8.2	24.4 24.4	24.4	90.0 91.5	90.8	6.6 6.7	6.6		7.6 7.5	7.6		8.4 10.0	9.2	
					Bottom	8.2	23.5 23.8	23.6	8.2 8.2	8.2	26.5 26.0	26.3	88.6 88.4	88.5	6.5 6.5	6.5	6.5	7.8 7.6	7.7		9.8 11.2	10.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:01	8.4	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	25.4 25.4	25.4	91.4 91.5	91.5	6.7 6.7	6.7	6.6	3.9 3.8	3.9	3.8	3.0 3.4	3.2	3.6
					Middle	4.2	23.9 23.9	23.9	8.2 8.2	8.2	26.7 26.6	26.7	90.1 90.0	90.1	6.5 6.5	6.5		3.7 3.9	3.8		3.0 4.4	3.7	
					Bottom	7.4	23.9 23.9	23.9	8.2 8.1	8.1	27.0 27.0	27.0	91.5 91.9	91.7	6.6 6.7	6.6	6.6	3.7 3.8	3.8		3.2 4.6	3.9	
25-Apr-14	Sunny	Moderate	14:49	8.8	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	27.8 27.9	27.9	95.5 95.0	95.3	6.9 6.8	6.8	6.8	8.5 8.8	8.7	8.7	5.5 6.9	6.2	7.6
					Middle	4.4	23.9 23.9	23.9	8.1 8.1	8.1	28.1 28.1	28.1	94.9 94.6	94.8	6.8 6.8	6.8		9.0 8.6	8.8		7.6 8.2	7.9	
					Bottom	7.8	23.9 23.9	23.9	8.1 8.1	8.1	28.0 28.1	28.1	95.1 94.7	94.9	6.8 6.8	6.8	6.8	8.5 8.8	8.7		7.3 9.8	8.6	
28-Apr-14	Sunny	Moderate	17:39	8.4	Surface	1.0	25.0 24.9	25.0	8.2 8.2	8.2	27.3 27.4	27.4	94.5 92.9	93.7	6.7 6.6	6.6	6.6	7.6 7.5	7.6	8.7	6.1 5.2	5.7	6.0
					Middle	4.2	24.7 24.7	24.7	8.2 8.2	8.2	27.7 27.8	27.7	92.2 92.4	92.3	6.5 6.6	6.5		9.1 9.2	9.2		4.3 6.0	5.2	
					Bottom	7.4	24.7 24.7	24.7	8.2 8.2	8.2	27.7 27.8	27.7	93.4 93.8	93.6	6.6 6.7	6.6	6.6	9.5 9.3	9.4		6.6 7.3	7.0	
30-Apr-14	Sunny	Moderate	07:17	9.0	Surface	1.0	24.2 24.2	24.2	8.3 8.3	8.3	27.2 27.2	27.2	91.0 88.1	89.6	6.5 6.3	6.4	6.4	4.9 4.9	4.9	5.0	5.9 6.1	6.0	6.2
					Middle	4.5	24.2 24.2	24.2	8.3 8.3	8.3	27.3 27.3	27.3	87.9 89.6	88.8	6.3 6.4	6.4		5.0 5.0	5.0		5.2 5.6	5.4	
					Bottom	8.0	24.2 24.2	24.2	8.3 8.3	8.3	27.3 27.3	27.3	87.8 89.1	88.5	6.3 6.4	6.4	6.4	5.2 5.0	5.1		7.0 7.4	7.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:37	3.3	Surface	1.0	20.5 20.5	20.5	7.8 7.7	7.7	23.1 23.1	23.1	87.5 92.0	89.8	6.9 7.2	7.1	7.1	8.0 8.3	8.2	9.2	6.8 5.6	6.2	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	20.5 20.5	20.5	7.6 7.7	7.7	23.1 23.2	23.2	94.5 88.7	91.6	7.4 7.0	7.2	7.2	10.5 9.8	10.2		5.6 7.4	6.5	
4-Apr-14	Cloudy	Moderate	15:09	3.5	Surface	1.0	21.0 21.0	21.0	7.7 7.7	7.7	19.9 19.9	19.9	82.8 82.9	82.9	6.6 6.6	6.6	6.6	5.6 5.8	5.7	5.8	5.9 6.0	6.0	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	21.0 21.0	21.0	7.7 7.7	7.7	20.1 20.0	20.0	83.0 82.7	82.9	6.6 6.6	6.6	6.6	5.9 5.8	5.9		4.9 6.4	5.7	
7-Apr-14	Cloudy	Moderate	17:53	3.2	Surface	1.0	20.3 20.3	20.3	8.1 8.1	8.1	22.8 22.8	22.8	94.2 96.0	95.1	7.5 7.6	7.5	7.5	6.4 6.4	6.4	6.4	6.2 6.3	6.3	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	20.3 20.3	20.3	8.1 8.1	8.1	23.1 22.9	23.0	99.6 94.9	97.3	7.9 7.5	7.7	7.7	6.0 6.5	6.3		8.8 9.5	9.2	
9-Apr-14	Sunny	Moderate	10:44	3.2	Surface	1.0	20.5 20.5	20.5	7.9 7.9	7.9	24.1 23.8	24.0	95.2 92.9	94.1	7.4 7.3	7.4	7.4	10.0 9.6	9.8	10.4	5.2 5.8	5.5	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	20.5 20.5	20.5	7.9 7.9	7.9	24.5 24.6	24.5	96.4 93.5	95.0	7.5 7.3	7.4	7.4	11.3 10.5	10.9		6.8 8.1	7.5	
11-Apr-14	Sunny	Moderate	11:54	3.6	Surface	1.0	22.0 21.9	22.0	8.2 8.2	8.2	24.9 24.8	24.8	107.1 107.0	107.1	8.1 8.1	8.1	8.1	10.2 10.5	10.4	10.6	5.2 6.3	5.8	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	21.8 21.4	21.6	8.1 8.1	8.1	25.5 26.5	26.0	106.5 110.5	108.5	8.1 8.4	8.2	8.2	10.9 10.6	10.8		7.3 7.7	7.5	
14-Apr-14	Sunny	Moderate	13:12	3.2	Surface	1.0	23.5 23.5	23.5	8.5 8.5	8.5	22.0 22.0	22.0	154.1 152.6	153.4	11.5 11.4	11.5	11.5	3.8 4.0	3.9	3.9	8.0 7.3	7.7	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.5 23.5	23.5	8.5 8.5	8.5	22.0 22.0	22.0	150.8 153.2	152.0	11.3 11.5	11.4	11.4	3.9 3.8	3.9		7.8 6.4	7.1	
16-Apr-14	Sunny	Moderate	12:35	3.2	Surface	1.0	22.3 22.3	22.3	8.4 8.4	8.4	25.7 25.7	25.7	102.5 103.1	102.8	7.7 7.7	7.7	7.7	2.6 2.5	2.6	2.6	3.4 3.6	3.5	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.3 22.3	22.3	8.4 8.4	8.4	25.8 25.8	25.8	102.7 101.4	102.1	7.7 7.6	7.6	7.6	2.6 2.6	2.6		3.6 3.6	3.6	
18-Apr-14	Sunny	Moderate	13:51	3.1	Surface	1.0	24.6 24.2	24.4	7.9 7.9	7.9	24.3 24.7	24.5	93.9 92.7	93.3	6.8 6.8	6.8	6.8	5.7 5.5	5.6	5.8	4.9 4.0	4.5	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	23.5 24.0	23.7	7.9 7.9	7.9	25.5 25.1	25.3	94.6 92.5	93.6	6.9 6.8	6.8	6.8	5.9 5.9	5.9		4.6 4.0	4.3	
21-Apr-14	Fine	Moderate	16:00	3.5	Surface	1.0	24.2 24.1	24.2	8.4 8.4	8.4	24.4 24.4	24.4	103.6 102.8	103.2	7.6 7.5	7.5	7.5	4.8 4.6	4.7	4.8	6.3 6.3	6.3	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.2 24.0	24.1	8.4 8.3	8.4	24.4 24.5	24.5	103.2 100.1	101.7	7.5 7.3	7.4	7.4	4.8 4.7	4.8		4.7 5.1	4.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:55	3.1	Surface	1.0	24.0 24.0	24.0	8.1 8.2	8.1	24.4 24.4	24.4	94.9 94.3	94.6	6.9 6.9	6.9	6.9	2.3 2.3	2.3	2.3	5.0 5.2	5.1	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	24.0 24.0	24.0	8.1 8.1	8.1	24.5 24.5	24.5	94.5 96.2	95.4	6.9 7.0	7.0	7.0	2.2 2.3	2.3		4.9 4.7	4.8	
25-Apr-14	Sunny	Moderate	11:33	3.1	Surface	1.0	23.6 23.6	23.6	8.2 8.2	8.2	27.5 27.5	27.5	95.4 95.8	95.6	6.9 6.9	6.9	6.9	5.5 5.8	5.7	5.7	9.2 8.5	8.9	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	23.6 23.6	23.6	8.2 8.2	8.2	27.5 27.5	27.5	95.5 95.8	95.7	6.9 6.9	6.9	6.9	5.6 5.7	5.7		8.0 8.6	8.3	
28-Apr-14	Sunny	Moderate	13:14	3.4	Surface	1.0	24.8 24.8	24.8	8.2 8.1	8.1	26.1 26.0	26.0	93.0 90.8	91.9	6.7 6.5	6.6	6.6	5.7 5.6	5.7	5.8	3.8 3.7	3.8	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.6 24.5	24.6	8.1 8.1	8.1	27.4 27.6	27.5	92.0 91.7	91.9	6.6 6.5	6.5	6.5	5.7 5.8	5.8		3.3 2.3	2.8	
30-Apr-14	Sunny	Moderate	12:51	3.4	Surface	1.0	24.5 24.4	24.5	8.3 8.3	8.3	27.8 27.8	27.8	96.0 97.6	96.8	6.8 7.0	6.9	6.9	3.3 3.4	3.4	3.4	4.7 4.6	4.7	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.5 24.4	24.4	8.3 8.3	8.3	27.8 27.9	27.9	95.6 96.4	96.0	6.8 6.9	6.8	6.8	3.3 3.4	3.4		5.8 6.8	6.3	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	09:01	3.3	Surface	1.0	20.4 20.4	20.4	7.9 7.9	7.9	23.5 23.4	23.5	90.3 86.7	88.5	7.1 6.8	7.0	7.0	8.9 8.1	8.5	8.9	8.3 8.1	8.2	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	20.3 20.4	20.4	7.9 7.9	7.9	23.8 23.8	23.8	93.9 87.5	90.7	7.4 6.9	7.1	7.1	9.5 9.0	9.3		7.8 7.1	7.5	
4-Apr-14	Cloudy	Moderate	09:31	3.4	Surface	1.0	20.3 20.3	20.3	7.8 7.8	7.8	20.2 20.2	20.2	80.0 80.7	80.4	6.4 6.5	6.5	6.5	5.2 5.1	5.2	5.3	6.0 6.6	6.3	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	20.4 20.3	20.3	7.8 7.8	7.8	20.1 20.4	20.3	80.1 80.7	80.4	6.4 6.5	6.5	6.5	5.2 5.4	5.3		6.4 4.5	5.5	
7-Apr-14	Sunny	Moderate	10:50	3.2	Surface	1.0	20.2 20.2	20.2	8.1 8.1	8.1	22.7 22.7	22.7	90.8 91.7	91.3	7.2 7.3	7.2	7.2	9.1 9.0	9.1	9.1	12.7 12.5	12.6	13.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	20.2 20.2	20.2	8.1 8.1	8.1	22.7 22.7	22.7	91.1 93.5	92.3	7.2 7.4	7.3	7.3	9.1 8.9	9.0		14.3 12.6	13.5	
9-Apr-14	Sunny	Moderate	13:31	3.4	Surface	1.0	20.8 20.9	20.8	7.8 7.9	7.9	23.9 23.9	23.9	89.6 91.7	90.7	7.0 7.1	7.1	7.1	8.8 8.7	8.8	9.5	5.5 3.3	4.4	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	20.8 20.6	20.7	7.9 7.8	7.8	25.2 25.4	25.3	90.4 91.8	91.1	7.0 7.1	7.1	7.1	9.8 10.3	10.1		6.0 6.8	6.4	
11-Apr-14	Sunny	Moderate	15:52	3.2	Surface	1.0	23.1 23.1	23.1	8.3 8.3	8.3	25.1 24.9	25.0	137.7 143.9	140.8	10.2 10.7	10.4	10.4	7.1 7.4	7.3	7.8	4.9 6.7	5.8	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.3 23.0	22.7	8.2 8.3	8.2	25.7 25.2	25.5	137.4 141.0	139.2	10.2 10.5	10.3	10.3	8.3 8.2	8.3		7.8 6.5	7.2	
14-Apr-14	Sunny	Moderate	17:41	3.2	Surface	1.0	23.5 23.5	23.5	8.6 8.6	8.6	22.7 22.7	22.7	150.7 155.0	152.9	11.3 11.6	11.4	11.4	10.5 10.4	10.5	10.6	12.2 10.7	11.5	11.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	23.5 23.5	23.5	8.6 8.6	8.6	22.8 22.9	22.9	153.6 145.4	149.5	11.5 10.8	11.2	11.2	10.6 10.6	10.6		12.1 12.4	12.3	
16-Apr-14	Sunny	Moderate	07:37	3.3	Surface	1.0	22.1 22.2	22.2	8.4 8.4	8.4	25.5 25.4	25.5	103.2 104.6	103.9	7.8 7.9	7.8	7.8	4.8 4.4	4.6	4.6	3.9 3.7	3.8	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	22.1 22.0	22.1	8.4 8.4	8.4	25.6 25.7	25.6	103.9 102.1	103.0	7.8 7.7	7.8	7.8	4.6 4.5	4.6		5.8 6.2	6.0	
18-Apr-14	Sunny	Moderate	08:54	3.2	Surface	1.0	22.9 22.9	22.9	8.2 8.1	8.1	25.4 25.3	25.4	91.0 91.9	91.5	6.8 6.8	6.8	6.8	4.2 4.3	4.3	4.4	5.2 5.0	5.1	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	22.9 22.9	22.9	8.1 8.1	8.1	25.5 25.7	25.6	94.2 91.2	92.7	7.0 6.8	6.9	6.9	4.3 4.4	4.4		5.1 3.8	4.5	
21-Apr-14	Fine	Moderate	10:24	3.7	Surface	1.0	23.9 23.9	23.9	8.3 8.3	8.3	24.6 24.6	24.6	100.1 99.0	99.6	7.3 7.3	7.3	7.3	5.1 5.1	5.1	5.2	3.8 4.3	4.1	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.8 23.9	23.9	8.3 8.3	8.3	24.7 24.6	24.7	99.2 98.7	99.0	7.3 7.2	7.2	7.2	5.2 5.1	5.2		4.1 3.1	3.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:16	3.2	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	24.6 24.4	24.5	94.6 97.1	95.9	6.9 7.1	7.0	7.0	2.2 2.2	2.2	2.3	2.9 3.3	3.1	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.0 24.0	24.0	8.1 8.1	8.1	24.5 25.0	24.8	97.6 94.7	96.2	7.1 6.9	7.0	7.0	2.3 2.4	2.4		3.7 4.2	4.0	
25-Apr-14	Sunny	Moderate	15:02	3.2	Surface	1.0	24.1 24.1	24.1	8.1 8.1	8.1	28.4 28.4	28.4	95.8 95.6	95.7	6.9 6.8	6.8	6.8	10.4 9.7	10.1	10.2	7.3 8.0	7.7	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	24.0 24.1	24.0	8.1 8.1	8.1	28.4 28.4	28.4	96.3 95.6	96.0	6.9 6.8	6.9	6.9	10.4 10.2	10.3		7.9 7.6	7.8	
28-Apr-14	Sunny	Moderate	17:54	3.0	Surface	1.0	25.0 24.9	25.0	8.2 8.2	8.2	27.6 27.6	27.6	92.4 90.4	91.4	6.5 6.4	6.5	6.5	10.1 10.2	10.2	10.3	7.3 6.7	7.0	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	24.8 24.9	24.8	8.1 8.2	8.2	28.0 27.8	27.9	90.1 91.9	91.0	6.4 6.5	6.4	6.4	10.3 10.3	10.3		7.8 6.7	7.3	
30-Apr-14	Sunny	Moderate	07:03	3.5	Surface	1.0	24.1 24.2	24.2	8.3 8.3	8.3	27.2 27.2	27.2	98.9 94.8	96.9	7.1 6.8	7.0	7.0	4.6 4.6	4.6	4.8	5.5 6.5	6.0	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.0 24.2	24.1	8.3 8.3	8.3	27.3 27.2	27.3	96.3 93.0	94.7	6.9 6.7	6.8	6.8	4.9 4.8	4.9		6.5 7.2	6.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:05	3.5	Surface	1.0	20.5 20.5	20.5	7.7 7.7	7.7	23.3 23.3	23.3	86.2 89.1	87.7	6.8 7.0	6.9	6.9	7.6 7.4	7.5	7.7	9.6 8.7	9.2	9.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	20.5 20.5	20.5	7.6 7.7	7.7	23.4 23.3	23.4	91.3 87.3	89.3	7.2 6.9	7.0	7.0	7.9 7.8	7.9		9.4 10.2	9.8	
4-Apr-14	Cloudy	Moderate	15:34	3.5	Surface	1.0	20.9 20.9	20.9	7.7 7.7	7.7	20.6 20.6	20.6	82.8 82.7	82.8	6.6 6.6	6.6	6.6	5.9 6.0	6.0	6.1	8.4 8.0	8.2	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	20.9 20.9	20.9	7.7 7.7	7.7	20.6 20.6	20.6	82.5 82.6	82.6	6.5 6.5	6.5	6.5	6.1 6.0	6.1		8.6 9.3	9.0	
7-Apr-14	Cloudy	Moderate	18:17	3.8	Surface	1.0	20.4 20.4	20.4	8.1 8.1	8.1	24.0 24.3	24.2	89.0 90.7	89.9	7.0 7.1	7.0	7.0	5.5 5.4	5.5	5.7	6.5 6.1	6.3	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	20.3 20.4	20.4	8.1 8.1	8.1	25.1 25.6	25.4	92.8 90.2	91.5	7.2 7.0	7.1	7.1	5.7 5.9	5.8		6.6 6.6	6.6	
9-Apr-14	Sunny	Moderate	10:20	3.7	Surface	1.0	20.7 20.6	20.7	7.8 7.8	7.8	24.1 24.5	24.3	93.1 93.5	93.3	7.2 7.3	7.3	7.3	4.6 4.8	4.7	5.0	3.6 4.0	3.8	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	20.4 20.5	20.4	7.8 7.8	7.8	25.6 25.3	25.4	92.0 93.1	92.6	7.1 7.2	7.2	7.2	5.1 5.4	5.3		2.6 2.6	2.6	
11-Apr-14	Sunny	Moderate	11:05	3.9	Surface	1.0	21.3 21.4	21.3	8.1 8.1	8.1	26.2 26.1	26.1	100.6 97.5	99.1	7.7 7.4	7.5	7.5	3.6 3.7	3.7	3.8	5.1 6.1	5.6	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	20.9 21.1	21.0	8.0 8.1	8.0	27.1 26.7	26.9	93.9 98.4	96.2	7.2 7.5	7.3	7.3	3.9 3.8	3.9		5.9 6.8	6.4	
14-Apr-14	Sunny	Moderate	12:48	3.8	Surface	1.0	23.2 23.2	23.2	8.4 8.4	8.4	22.3 22.4	22.3	133.3 128.0	130.7	10.0 9.6	9.8	9.8	4.5 4.5	4.5	4.6	8.6 9.0	8.8	9.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.1 23.1	23.1	8.4 8.4	8.4	22.5 22.6	22.6	123.0 131.2	127.1	9.2 9.9	9.6	9.6	4.5 4.6	4.6		9.4 8.8	9.1	
16-Apr-14	Sunny	Moderate	12:59	3.7	Surface	1.0	22.2 22.2	22.2	8.3 8.3	8.3	25.9 25.9	25.9	99.1 99.0	99.1	7.4 7.4	7.4	7.4	2.2 2.2	2.2	2.3	3.8 4.4	4.1	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.2 22.2	22.2	8.3 8.3	8.3	25.9 25.9	25.9	99.0 99.2	99.1	7.4 7.4	7.4	7.4	2.2 2.4	2.3		3.0 2.6	2.8	
18-Apr-14	Sunny	Moderate	14:13	3.9	Surface	1.0	23.2 23.2	23.2	8.0 8.0	8.0	24.3 24.3	24.3	90.1 90.2	90.2	6.7 6.7	6.7	6.7	4.8 4.8	4.8	4.8	4.6 4.3	4.5	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.1 23.2	23.2	8.0 8.0	8.0	25.9 25.9	25.9	90.5 90.2	90.4	6.7 6.6	6.7	6.7	4.7 4.7	4.7		3.5 4.0	3.8	
21-Apr-14	Fine	Moderate	16:23	3.4	Surface	1.0	24.0 24.0	24.0	8.3 8.3	8.3	24.7 24.8	24.8	95.5 95.3	95.4	7.0 6.9	7.0	7.0	5.4 5.3	5.4	5.5	4.9 4.5	4.7	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.0 23.9	24.0	8.3 8.2	8.3	24.8 25.7	25.2	95.2 93.8	94.5	7.0 6.9	6.9	6.9	5.6 5.5	5.6		5.0 6.1	5.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:33	4.0	Surface	1.0	23.9 23.9	23.9	8.2 8.1	8.2	25.5 25.6	25.6	92.3 92.3	92.3	6.7 6.7	6.7	6.7	4.3 4.3	4.3	4.3	5.5 5.1	5.3	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.9 23.7	23.8	8.1 8.1	8.1	25.8 26.9	26.4	92.5 94.8	93.7	6.7 6.9	6.8	6.8	4.2 4.2	4.2		4.7 4.7	4.7	
25-Apr-14	Sunny	Moderate	11:11	4.1	Surface	1.0	23.3 23.3	23.3	8.2 8.2	8.2	28.8 28.8	28.8	93.2 93.9	93.6	6.7 6.8	6.8	6.8	7.5 7.9	7.7	8.6	8.0 8.7	8.4	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	23.3 23.3	23.3	8.2 8.1	8.1	28.8 28.9	28.8	93.5 95.6	94.6	6.8 6.9	6.8	6.8	9.5 9.3	9.4		8.6 7.1	7.9	
28-Apr-14	Sunny	Moderate	12:51	3.9	Surface	1.0	24.9 24.9	24.9	8.2 8.1	8.2	25.9 25.8	25.9	93.3 93.7	93.5	6.7 6.7	6.7	6.7	4.7 4.8	4.8	5.1	5.7 4.8	5.3	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	24.6 24.5	24.6	8.1 8.1	8.1	27.3 27.3	27.3	93.2 93.7	93.5	6.6 6.7	6.7	6.7	5.3 5.2	5.3		5.7 4.7	5.2	
30-Apr-14	Sunny	Moderate	13:12	3.5	Surface	1.0	24.3 24.2	24.3	8.3 8.3	8.3	27.4 27.6	27.5	92.9 97.3	95.1	6.7 7.0	6.8	6.8	5.2 5.3	5.3	5.5	5.0 5.4	5.2	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.3 24.1	24.2	8.3 8.3	8.3	27.5 27.8	27.7	92.4 93.6	93.0	6.6 6.7	6.7	6.7	5.6 5.5	5.6		4.8 4.3	4.6	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:35	3.7	Surface	1.0	20.4 20.4	20.4	7.8 7.8	7.8	22.7 22.7	22.7	88.1 82.3	85.2	7.0 6.5	6.7	6.7	9.3 10.1	9.7	10.3	6.0 7.2	6.6	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	20.3 20.4	20.3	7.8 7.8	7.8	23.5 23.6	23.6	85.5 84.9	85.2	6.7 6.7	6.7	6.7	10.5 11.2	10.9		7.1 8.3	7.7	
4-Apr-14	Cloudy	Moderate	09:05	3.6	Surface	1.0	20.4 20.4	20.4	7.7 7.7	7.7	18.6 18.8	18.7	76.0 74.7	75.4	6.2 6.0	6.1	6.1	7.7 7.9	7.8	8.0	6.8 6.1	6.5	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	20.4 20.4	20.4	7.7 7.7	7.7	20.1 20.2	20.2	75.1 76.6	75.9	6.0 6.1	6.1	6.1	8.1 8.2	8.2		8.0 5.7	6.9	
7-Apr-14	Sunny	Moderate	10:30	4.2	Surface	1.0	20.2 20.2	20.2	8.1 8.1	8.1	25.7 25.8	25.7	87.9 84.4	86.2	6.9 6.6	6.7	6.7	8.7 8.7	8.7	8.8	7.8 6.5	7.2	8.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.2 20.2	20.2	8.1 8.1	8.1	25.6 25.8	25.7	92.1 85.7	88.9	7.2 6.7	6.9	6.9	9.1 8.7	8.9		9.7 9.8	9.8	
9-Apr-14	Sunny	Moderate	14:00	3.7	Surface	1.0	21.4 21.7	21.6	7.8 7.8	7.8	23.8 23.5	23.6	102.1 102.3	102.2	7.9 7.9	7.9	7.9	4.1 3.9	4.0	4.1	5.2 4.9	5.1	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	21.7 21.1	21.4	7.8 7.8	7.8	23.7 24.2	24.0	101.4 100.7	101.1	7.8 7.8	7.8	7.8	4.0 4.1	4.1		5.1 4.6	4.9	
11-Apr-14	Sunny	Moderate	16:15	4.2	Surface	1.0	21.8 21.8	21.8	8.1 8.1	8.1	26.3 26.3	26.3	110.4 113.5	112.0	8.3 8.6	8.4	8.4	6.7 7.0	6.9	6.9	8.8 7.1	8.0	9.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	21.2 21.8	21.5	8.0 8.1	8.1	26.9 26.3	26.6	106.1 111.7	108.9	8.1 8.4	8.2	8.2	6.8 6.9	6.9		10.1 9.7	9.9	
14-Apr-14	Sunny	Moderate	18:05	3.8	Surface	1.0	23.0 23.1	23.1	8.5 8.5	8.5	23.5 23.4	23.5	133.6 129.3	131.5	10.0 9.7	9.8	9.8	13.3 13.1	13.2	14.5	9.7 9.3	9.5	9.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	22.5 23.0	22.7	8.3 8.4	8.4	25.0 24.8	24.9	129.0 133.8	131.4	9.7 10.0	9.8	9.8	15.6 15.8	15.7		8.8 10.6	9.7	
16-Apr-14	Sunny	Moderate	07:11	3.6	Surface	1.0	22.0 22.0	22.0	8.2 8.3	8.3	25.1 25.6	25.3	97.3 96.6	97.0	7.4 7.3	7.3	7.3	2.8 3.2	3.0	3.2	4.3 3.7	4.0	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	21.9 21.9	21.9	8.3 8.3	8.3	26.3 26.5	26.4	97.9 96.5	97.2	7.4 7.2	7.3	7.3	3.5 3.2	3.4		6.8 6.2	6.5	
18-Apr-14	Sunny	Moderate	08:32	4.3	Surface	1.0	22.8 22.8	22.8	8.1 8.1	8.1	24.1 23.9	24.0	88.5 90.1	89.3	6.6 6.8	6.7	6.7	5.0 5.2	5.1	5.1	3.8 4.8	4.3	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	22.8 22.8	22.8	8.1 8.1	8.1	24.3 24.5	24.4	89.2 92.6	90.9	6.7 6.9	6.8	6.8	5.1 5.1	5.1		3.0 3.2	3.1	
21-Apr-14	Fine	Moderate	10:04	3.5	Surface	1.0	23.7 23.7	23.7	8.2 8.2	8.2	24.0 24.0	24.0	92.2 96.6	94.4	6.8 7.1	7.0	7.0	5.4 5.3	5.4	5.4	6.9 6.0	6.5	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.7 23.6	23.7	8.2 8.2	8.2	24.0 24.2	24.1	91.5 93.4	92.5	6.8 6.9	6.8	6.8	5.4 5.4	5.4		5.1 5.2	5.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:36	4.3	Surface	1.0	23.9 23.9	23.9	8.1 8.2	8.2	25.9 25.9	25.9	96.5 95.6	96.1	7.0 7.0	7.0	7.0	3.4 3.4	3.4	3.4	4.4 4.9	4.7	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	23.9 23.9	23.9	8.2 8.1	8.1	26.0 26.0	26.0	96.2 97.3	96.8	7.0 7.1	7.0	7.0	3.5 3.3	3.4		4.7 5.8	5.3	
25-Apr-14	Sunny	Moderate	15:26	4.0	Surface	1.0	23.6 23.8	23.7	8.1 8.1	8.1	29.1 29.0	29.0	93.9 95.0	94.5	6.7 6.8	6.8	6.8	5.6 5.7	5.7	5.7	4.4 4.1	4.3	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.6 23.6	23.6	8.1 8.1	8.1	29.4 29.2	29.3	96.1 94.5	95.3	6.9 6.8	6.8	6.8	5.7 5.6	5.7		6.8 6.9	6.9	
28-Apr-14	Sunny	Moderate	18:18	3.9	Surface	1.0	25.3 25.2	25.2	8.2 8.2	8.2	26.7 26.7	26.7	95.7 95.5	95.6	6.8 6.8	6.8	6.8	5.0 5.1	5.1	5.2	5.8 5.7	5.8	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	24.9 24.6	24.8	8.2 8.1	8.2	27.2 27.6	27.4	95.4 95.5	95.5	6.8 6.8	6.8	6.8	5.3 5.3	5.3		7.5 6.9	7.2	
30-Apr-14	Sunny	Moderate	06:42	3.3	Surface	1.0	24.0 24.0	24.0	8.3 8.3	8.3	26.6 26.6	26.6	90.9 95.0	93.0	6.6 6.9	6.7	6.7	4.2 4.2	4.2	4.4	3.8 2.6	3.2	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	24.0 24.0	24.0	8.3 8.3	8.3	26.8 26.8	26.8	92.6 89.9	91.3	6.7 6.5	6.6	6.6	4.4 4.5	4.5		3.5 4.8	4.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:20	11.1	Surface	1.0	20.4 20.4	20.4	7.8 7.8	7.8	23.4 23.3	23.3	85.5 84.9	85.2	6.7 6.7	6.7	6.7	11.1 10.6	10.9	13.5	8.9 8.5	8.7	8.7
					Middle	5.6	20.1 20.3	20.2	7.9 7.8	7.8	25.8 24.5	25.2	83.1 86.3	84.7	6.5 6.8	6.6		15.2 13.7	14.5		9.8 8.0	8.9	
					Bottom	10.1	20.1 20.1	20.1	7.8 7.9	7.8	25.7 26.1	25.9	88.9 83.8	86.4	6.9 6.5	6.7	6.7	14.7 15.4	15.1		9.3 7.8	8.6	
4-Apr-14	Cloudy	Moderate	15:51	10.8	Surface	1.0	20.7 20.7	20.7	7.8 7.8	7.8	21.2 21.7	21.5	83.5 83.2	83.4	6.6 6.6	6.6	6.6	9.1 9.2	9.2	9.3	10.7 10.5	10.6	10.1
					Middle	5.4	20.5 20.5	20.5	7.8 7.8	7.8	22.1 21.7	21.9	83.0 83.0	83.0	6.6 6.6	6.6		9.3 9.3	9.3		10.2 9.5	9.9	
					Bottom	9.8	20.4 20.6	20.5	7.8 7.8	7.8	23.1 22.9	23.0	83.0 83.1	83.1	6.5 6.5	6.5	6.5	9.5 9.4	9.5		9.8 9.7	9.8	
7-Apr-14	Cloudy	Moderate	18:31	9.9	Surface	1.0	20.1 20.0	20.1	8.1 8.1	8.1	26.7 27.1	26.9	87.1 87.7	87.4	6.8 6.8	6.8	6.8	6.5 6.5	6.5	6.5	8.3 9.1	8.7	8.6
					Middle	5.0	19.9 19.9	19.9	8.1 8.1	8.1	29.0 29.1	29.1	86.6 88.2	87.4	6.6 6.8	6.7		6.4 6.2	6.3		8.3 8.3	8.3	
					Bottom	8.9	19.9 19.8	19.8	8.1 8.1	8.1	29.8 30.1	30.0	86.5 89.7	88.1	6.6 6.9	6.7	6.7	7.0 6.5	6.8		9.6 7.9	8.8	
9-Apr-14	Sunny	Moderate	10:00	10.8	Surface	1.0	20.5 20.6	20.6	7.8 7.7	7.8	21.7 20.5	21.1	86.2 86.0	86.1	6.8 6.9	6.8	6.8	5.5 5.6	5.6	4.4	4.7 4.8	4.8	5.8
					Middle	5.4	20.0 20.0	20.0	7.7 7.8	7.8	29.0 28.9	28.9	87.8 87.2	87.5	6.7 6.7	6.7		3.5 3.3	3.4		5.4 4.6	5.0	
					Bottom	9.8	19.8 19.8	19.8	7.8 7.7	7.8	30.3 30.6	30.4	86.6 87.8	87.2	6.6 6.7	6.7	6.7	4.0 4.2	4.1		5.6 9.6	7.6	
11-Apr-14	Sunny	Moderate	10:50	10.4	Surface	1.0	21.3 21.0	21.2	8.1 8.1	8.1	24.8 25.3	25.1	94.9 92.6	93.8	7.3 7.1	7.2	7.1	6.4 6.8	6.6	8.0	5.6 5.2	5.4	6.6
					Middle	5.2	20.3 20.2	20.3	8.0 8.0	8.0	29.4 29.6	29.5	90.7 91.4	91.1	6.9 7.0	6.9		8.6 8.8	8.7		5.2 5.9	5.6	
					Bottom	9.4	20.4 20.3	20.4	8.0 8.0	8.0	29.7 29.8	29.8	93.4 94.1	93.8	7.1 7.1	7.1	7.1	8.6 8.9	8.8		8.7 8.7	8.7	
14-Apr-14	Sunny	Moderate	12:34	10.0	Surface	1.0	22.8 22.6	22.7	8.4 8.3	8.3	23.2 23.4	23.3	116.5 110.3	113.4	8.8 8.3	8.6	8.3	8.3 8.4	8.4	8.5	9.8 9.4	9.6	9.8
					Middle	5.0	22.2 21.7	22.0	8.3 8.2	8.2	24.7 25.5	25.1	106.9 101.2	104.1	8.1 7.7	7.9		8.5 8.5	8.5		9.3 9.6	9.5	
					Bottom	9.0	21.5 21.6	21.5	8.2 8.2	8.2	28.4 28.4	28.4	102.4 107.7	105.1	7.7 8.1	7.9	7.9	8.4 8.5	8.5		10.2 10.1	10.2	
16-Apr-14	Sunny	Moderate	13:14	11.0	Surface	1.0	22.0 22.1	22.1	8.3 8.3	8.3	26.9 26.5	26.7	98.1 98.5	98.3	7.3 7.4	7.4	7.4	7.7 7.0	7.4	7.2	4.2 3.8	4.0	6.1
					Middle	5.5	21.9 21.9	21.9	8.3 8.3	8.3	27.2 27.2	27.2	98.0 97.4	97.7	7.3 7.3	7.3		7.2 7.6	7.4		6.1 6.5	6.3	
					Bottom	10.0	21.9 21.9	21.9	8.3 8.3	8.3	27.3 27.2	27.3	97.5 98.5	98.0	7.3 7.4	7.3	7.3	6.9 6.7	6.8		7.9 7.8	7.9	
18-Apr-14	Sunny	Moderate	14:27	10.6	Surface	1.0	23.0 23.1	23.1	8.0 8.0	8.0	26.0 25.8	25.9	89.4 90.0	89.7	6.6 6.6	6.6	6.6	6.2 6.3	6.3	6.3	10.5 10.1	10.3	10.5
					Middle	5.3	22.5 22.7	22.6	8.0 8.0	8.0	27.1 26.4	26.8	88.7 90.1	89.4	6.6 6.7	6.6		6.3 6.5	6.4		10.2 10.6	10.4	
					Bottom	9.6	22.5 22.4	22.4	8.0 8.0	8.0	28.7 28.7	28.7	88.0 90.0	89.0	6.5 6.6	6.5	6.5	6.5 6.0	6.3		10.4 11.0	10.7	
21-Apr-14	Fine	Moderate	16:37	10.8	Surface	1.0	23.6 23.8	23.7	8.3 8.3	8.3	25.1 24.9	25.0	90.1 93.2	91.7	6.6 6.8	6.7	6.6	5.4 5.2	5.3	5.5	4.8 4.4	4.6	5.1
					Middle	5.4	23.1 22.9	23.0	8.3 8.3	8.3	28.0 29.4	28.7	90.2 88.1	89.2	6.5 6.4	6.5		5.5 5.5	5.5		5.0 4.8	4.9	
					Bottom	9.8	22.6 23.0	22.8	8.3 8.3	8.3	30.3 30.4	30.4	86.7 89.4	88.1	6.3 6.5	6.4	6.4	5.5 5.8	5.7		5.3 6.2	5.8	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:21	10.4	Surface	1.0	23.8 23.5	23.7	8.2 8.2	8.2	24.1 25.2	24.6	90.7 90.7	90.7	6.7 6.7	6.7	6.6	2.4 2.5	2.5	2.4	4.1 4.1	4.1	4.6
					Middle	5.2	23.1 23.1	23.1	8.2 8.2	8.2	28.7 28.8	28.8	88.6 90.2	89.4	6.4 6.6	6.5		2.3 2.4	2.4		4.6 4.7	4.7	
					Bottom	9.4	23.2 22.9	23.1	8.2 8.2	8.2	30.0 30.3	30.1	89.7 91.9	90.8	6.5 6.6	6.5	6.5	2.3 2.3	2.3		4.7 5.4	5.1	
25-Apr-14	Sunny	Moderate	10:54	10.3	Surface	1.0	23.1 23.1	23.1	8.2 8.2	8.2	29.8 29.8	29.8	89.8 89.5	89.7	6.5 6.5	6.5	6.5	7.1 7.6	7.4	8.9	6.9 7.4	7.2	6.9
					Middle	5.2	23.0 23.0	23.0	8.2 8.2	8.2	30.2 30.2	30.2	88.4 88.7	88.6	6.4 6.4	6.4		9.5 9.5	9.5		6.0 6.4	6.2	
					Bottom	9.3	22.8 22.8	22.8	8.2 8.2	8.2	30.9 31.0	31.0	88.1 88.0	88.1	6.3 6.3	6.3	6.3	9.9 9.7	9.8		7.9 6.9	7.4	
28-Apr-14	Sunny	Moderate	12:38	10.1	Surface	1.0	24.0 24.2	24.1	8.1 8.1	8.1	26.6 26.3	26.5	87.8 89.4	88.6	6.4 6.5	6.4	6.4	8.9 8.8	8.9	8.8	5.5 5.8	5.7	6.8
					Middle	5.1	23.7 23.8	23.7	8.1 8.1	8.1	28.6 27.8	28.2	87.1 89.0	88.1	6.3 6.4	6.3		8.8 8.8	8.8		6.8 5.9	6.4	
					Bottom	9.1	23.6 23.6	23.6	8.1 8.1	8.1	29.3 29.3	29.3	87.5 90.6	89.1	6.3 6.5	6.4	6.4	8.7 8.9	8.8		8.6 7.8	8.2	
30-Apr-14	Sunny	Moderate	13:27	11.1	Surface	1.0	24.2 24.2	24.2	8.4 8.4	8.4	27.9 28.0	27.9	89.9 88.2	89.1	6.4 6.3	6.4	6.3	7.2 7.0	7.1	7.4	7.1 7.3	7.2	7.4
					Middle	5.6	23.9 23.9	23.9	8.4 8.4	8.4	28.3 28.4	28.4	86.8 86.7	86.8	6.2 6.2	6.2		7.5 7.4	7.5		7.3 6.9	7.1	
					Bottom	10.1	23.7 23.7	23.7	8.4 8.4	8.4	29.9 29.7	29.8	86.3 86.4	86.4	6.2 6.2	6.2	6.2	7.4 7.6	7.5		7.3 8.2	7.8	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:22	11.3	Surface	1.0	20.3 20.3	20.3	7.8 7.8	7.8	22.5 22.5	22.5	83.0 81.6	82.3	6.6 6.5	6.5	6.6	6.5 6.3	6.4	6.3	9.4 9.7	9.6	9.2
					Middle	5.7	20.3 20.3	20.3	7.8 7.8	7.8	24.2 24.1	24.2	85.0 81.9	83.5	6.7 6.4	6.6		6.2 6.1	6.2		8.8 9.0	8.9	
					Bottom	10.3	20.3 20.3	20.3	7.8 7.8	7.8	24.5 24.2	24.4	88.2 81.9	85.1	6.9 6.4	6.7	6.7	6.5 6.2	6.4		9.8 8.3	9.1	
4-Apr-14	Cloudy	Moderate	08:50	10.7	Surface	1.0	20.2 20.3	20.2	7.8 7.8	7.8	20.5 20.3	20.4	78.5 79.6	79.1	6.3 6.4	6.3	6.3	5.7 5.6	5.7	5.7	5.9 5.7	5.8	6.9
					Middle	5.4	20.1 20.1	20.1	7.8 7.8	7.8	23.1 21.3	22.2	78.3 80.7	79.5	6.2 6.5	6.3		5.7 5.7	5.7		7.2 8.6	7.9	
					Bottom	9.7	20.1 20.2	20.2	7.8 7.8	7.8	24.1 24.0	24.0	80.8 77.5	79.2	6.4 6.1	6.2	6.2	5.8 5.7	5.8		6.8 6.9	6.9	
7-Apr-14	Sunny	Moderate	10:15	10.5	Surface	1.0	20.1 20.1	20.1	8.1 8.1	8.1	24.9 25.0	24.9	87.9 89.4	88.7	6.9 7.0	7.0	7.0	3.8 4.0	3.9	4.4	5.4 6.5	6.0	7.2
					Middle	5.3	19.9 19.9	19.9	8.1 8.1	8.1	28.6 28.4	28.5	88.1 90.6	89.4	6.8 7.0	6.9		4.6 4.6	4.6		7.4 6.7	7.1	
					Bottom	9.5	19.9 19.8	19.8	8.1 8.1	8.1	29.3 29.8	29.6	87.9 91.4	89.7	6.7 7.0	6.9	6.9	4.8 4.7	4.8		8.8 7.9	8.4	
9-Apr-14	Sunny	Moderate	14:16	10.9	Surface	1.0	20.9 20.5	20.7	7.8 7.8	7.8	24.1 24.8	24.5	90.8 89.6	90.2	7.1 7.0	7.0	6.9	5.1 4.9	5.0	4.5	4.0 4.2	4.1	4.6
					Middle	5.5	20.0 20.0	20.0	7.7 7.8	7.8	29.2 29.2	29.2	88.4 87.7	88.1	6.8 6.7	6.7		4.2 4.4	4.3		4.1 5.4	4.8	
					Bottom	9.9	20.0 20.0	20.0	7.7 7.8	7.7	29.4 29.4	29.4	89.4 89.5	89.5	6.8 6.9	6.8	6.8	4.3 4.0	4.2		3.9 5.7	4.8	
11-Apr-14	Sunny	Moderate	16:30	10.6	Surface	1.0	21.5 21.7	21.6	8.1 8.1	8.1	26.7 26.2	26.4	101.6 103.3	102.5	7.7 7.8	7.7	7.6	3.4 3.5	3.5	3.7	5.6 5.9	5.8	6.2
					Middle	5.3	20.7 20.6	20.7	8.0 8.0	8.0	27.8 28.5	28.1	96.1 98.0	97.1	7.3 7.5	7.4		3.8 3.7	3.8		6.4 5.3	5.9	
					Bottom	9.6	20.6 20.6	20.6	8.0 8.0	8.0	29.1 30.0	29.5	98.5 102.4	100.5	7.5 7.7	7.6	7.6	3.9 3.8	3.9		7.4 6.5	7.0	
14-Apr-14	Sunny	Moderate	18:20	10.3	Surface	1.0	22.5 22.5	22.5	8.4 8.4	8.4	24.5 24.4	24.5	116.9 114.3	115.6	8.8 8.6	8.7	8.4	7.5 7.1	7.3	7.5	6.9 6.9	6.9	8.7
					Middle	5.2	22.1 21.9	22.0	8.3 8.3	8.3	25.8 26.1	26.0	104.9 106.8	105.9	7.9 8.0	8.0		7.5 7.7	7.6		9.6 10.0	9.8	
					Bottom	9.3	21.9 21.7	21.8	8.3 8.2	8.3	27.2 27.3	27.3	111.9 107.2	109.6	8.4 8.0	8.2	8.2	7.4 7.6	7.5		9.4 9.6	9.5	
16-Apr-14	Sunny	Moderate	06:58	11.2	Surface	1.0	22.0 21.9	22.0	8.3 8.3	8.3	26.0 26.3	26.2	98.1 98.7	98.4	7.4 7.4	7.4	7.4	2.1 2.1	2.1	2.1	4.2 3.2	3.7	3.7
					Middle	5.6	21.9 21.9	21.9	8.3 8.3	8.3	27.1 27.0	27.0	98.6 98.1	98.4	7.4 7.4	7.4		2.2 2.0	2.1		4.2 3.2	3.7	
					Bottom	10.2	21.9 21.8	21.9	8.3 8.2	8.3	27.0 27.3	27.2	98.0 98.9	98.5	7.3 7.4	7.4	7.4	2.1 2.3	2.2		4.3 3.0	3.7	
18-Apr-14	Sunny	Moderate	08:19	10.7	Surface	1.0	22.8 22.7	22.7	8.1 8.1	8.1	24.1 23.7	23.9	89.0 90.3	89.7	6.7 6.8	6.7	6.7	10.1 10.3	10.2	10.3	6.0 5.9	6.0	6.1
					Middle	5.4	22.4 22.3	22.4	8.1 8.2	8.2	26.2 27.0	26.6	90.3 88.5	89.4	6.7 6.6	6.7		10.3 10.4	10.4		5.5 6.6	6.1	
					Bottom	9.7	22.3 22.5	22.4	8.1 8.1	8.1	27.3 27.1	27.2	91.4 88.4	89.9	6.8 6.6	6.7	6.7	10.1 10.4	10.3		5.9 6.6	6.3	
21-Apr-14	Fine	Moderate	09:49	11.0	Surface	1.0	23.6 23.6	23.6	8.2 8.2	8.2	24.4 24.6	24.5	90.3 87.4	88.9	6.6 6.4	6.5	6.5	4.4 4.2	4.3	4.5	4.6 5.6	5.1	4.7
					Middle	5.5	22.9 22.9	22.9	8.2 8.2	8.2	27.1 27.7	27.4	88.8 86.2	87.5	6.5 6.3	6.4		4.6 4.2	4.4		5.2 4.5	4.9	
					Bottom	10.0	22.8 22.8	22.8	8.2 8.2	8.2	29.2 29.1	29.2	85.6 87.8	86.7	6.2 6.5	6.4	6.4	4.8 4.8	4.8		3.5 4.6	4.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:51	10.5	Surface	1.0	23.6 23.7	23.7	8.2 8.2	8.2	25.1 25.2	25.2	91.4 91.3	91.4	6.7 6.7	6.7	6.7	3.0 2.9	3.0	3.3	3.0 2.9	3.0	3.1
					Middle	5.3	23.1 23.2	23.1	8.2 8.2	8.2	28.5 28.1	28.3	89.8 91.0	90.4	6.5 6.6	6.6		3.4 3.2	3.3		2.8 2.7	2.8	
					Bottom	9.5	22.9 23.1	23.0	8.2 8.2	8.2	30.3 30.2	30.2	92.4 90.1	91.3	6.7 6.5	6.6	6.6	3.4 3.5	3.5		3.3 3.9	3.6	
25-Apr-14	Sunny	Moderate	15:40	10.5	Surface	1.0	23.4 23.4	23.4	8.2 8.2	8.2	29.0 28.8	28.9	89.7 90.2	90.0	6.5 6.5	6.5	6.5	5.1 5.5	5.3	5.5	3.8 3.9	3.9	4.0
					Middle	5.3	23.0 22.9	22.9	8.2 8.1	8.2	30.6 30.7	30.7	88.5 88.8	88.7	6.4 6.4	6.4		5.5 5.5	5.5		3.9 4.5	4.2	
					Bottom	9.5	23.0 22.9	23.0	8.2 8.1	8.1	30.8 31.0	30.9	89.5 90.2	89.9	6.4 6.5	6.5	6.5	5.5 5.6	5.6		4.2 3.7	4.0	
28-Apr-14	Sunny	Moderate	18:32	10.3	Surface	1.0	24.4 24.3	24.3	8.2 8.2	8.2	26.4 26.4	26.4	89.5 88.9	89.2	6.4 6.4	6.4	6.4	9.3 9.7	9.5	10.1	4.6 5.5	5.1	5.1
					Middle	5.2	23.9 24.1	24.0	8.2 8.2	8.2	27.3 27.3	27.3	87.6 87.5	87.6	6.3 6.3	6.3		10.6 10.1	10.4		5.2 5.2	5.2	
					Bottom	9.3	23.7 23.9	23.8	8.2 8.2	8.2	29.2 29.3	29.2	87.2 88.2	87.7	6.2 6.3	6.3	6.3	10.2 10.4	10.3		5.1 4.9	5.0	
30-Apr-14	Sunny	Moderate	06:29	11.2	Surface	1.0	23.9 23.9	23.9	8.3 8.3	8.3	26.9 26.7	26.8	87.5 89.9	88.7	6.3 6.5	6.4	6.4	3.4 3.5	3.5	3.7	5.6 5.3	5.5	5.6
					Middle	5.6	23.8 23.8	23.8	8.3 8.3	8.3	27.5 27.5	27.5	89.3 86.5	87.9	6.4 6.2	6.3		3.6 3.5	3.6		4.8 5.0	4.9	
					Bottom	10.2	23.7 23.8	23.7	8.3 8.2	8.3	29.3 29.3	29.3	86.3 88.3	87.3	6.2 6.4	6.3	6.3	3.9 4.0	4.0		6.5 6.2	6.4	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:05	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	14.7	-	-	17.0
					Middle	0.8	20.3	20.3	7.7	7.7	24.8	24.8	91.2	90.4	7.1	7.1		14.1	14.7		16.5	17.0	
							20.3		7.7		24.8		89.5		7.0			15.3			17.5		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
4-Apr-14	Cloudy	Moderate	14:46	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	7.2	-	-	11.3
					Middle	0.7	20.9	20.9	7.7	7.7	22.0	22.0	86.3	86.4	6.8	6.8		7.2	7.2		11.9	11.3	
							20.9		7.7		22.0		86.4		6.8			7.2			10.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
7-Apr-14	Cloudy	Moderate	17:31	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.5	-	-	4.9	-	-	5.2
					Middle	0.7	20.4	20.4	8.1	8.1	24.2	24.2	96.7	96.1	7.6	7.5		4.9	4.9		5.2	5.2	
							20.4		8.1		24.2		95.4		7.5			4.9			5.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
9-Apr-14	Sunny	Moderate	11:13	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	5.2	-	-	5.6
					Middle	0.8	20.6	20.7	7.8	7.8	24.0	23.9	90.7	90.7	7.1	7.1		5.5	5.2		5.5	5.6	
							20.7		7.8		23.9		90.7		7.1			4.9			5.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
11-Apr-14	Sunny	Moderate	12:30	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	7.8	-	-	3.8	-	-	4.7
					Middle	0.6	21.3	21.4	8.1	8.1	25.5	25.5	101.4	101.9	7.7	7.8		3.7	3.8		5.0	4.7	
							21.5		8.2		25.4		102.3		7.8			3.8			4.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
14-Apr-14	Sunny	Moderate	13:33	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	10.2	-	-	8.1	-	-	11.8
					Middle	0.8	23.1	23.1	8.4	8.5	23.3	23.3	136.0	136.5	10.2	10.2		8.1	8.1		12.2	11.8	
							23.1		8.5		23.3		136.9		10.2			8.0			11.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
16-Apr-14	Sunny	Moderate	12:01	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	7.3	-	-	5.5	-	-	8.0
					Middle	0.9	22.2	22.2	8.3	8.3	26.5	26.6	98.1	98.3	7.3	7.3		5.5	5.5		7.4	8.0	
							22.2		8.3		26.6		98.4		7.4			5.5			8.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
18-Apr-14	Sunny	Moderate	13:31	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.6	-	-	7.4	-	-	13.1
					Middle	0.8	23.1	23.1	8.0	8.0	26.1	26.1	90.1	89.8	6.6	6.6		7.5	7.4		12.6	13.1	
							23.1		8.0		26.1		89.4		6.6			7.2			13.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
21-Apr-14	Fine	Moderate	15:40	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.0	-	-	5.7	-	-	6.3
					Middle	0.8	24.0	24.0	8.1	8.1	25.8	25.7	97.1	96.7	7.1	7.0		5.8	5.7		5.7	6.3	
							23.9		8.1		25.7		96.3		7.0			5.6			6.8		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	09:15	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	2.6	-	-	4.1
					Middle	0.7	24.0	24.0	8.2	8.2	26.1	26.1	94.8	94.8	6.9	6.9		2.6	2.6		4.5	4.1	
							24.0		8.1		26.1		94.7		6.9			2.5			3.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
25-Apr-14	Sunny	Moderate	11:52	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	4.8	-	-	7.5
					Middle	0.7	23.5	23.6	8.2	8.2	27.9	27.9	93.6	93.6	6.8	6.8		4.8	4.8		7.0	7.5	
							23.6		8.2		27.9		93.7		6.8			4.9			7.9		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
28-Apr-14	Sunny	Moderate	13:37	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-	7.3	-	-	7.9
					Middle	0.8	24.4	24.4	8.2	8.2	27.2	27.2	93.9	93.9	6.7	6.7		7.2	7.3		8.3	7.9	
							24.4		8.2		27.2		93.9		6.7			7.3			7.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
30-Apr-14	Sunny	Moderate	12:30	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-	8.0	-	-	7.8
					Middle	0.7	24.0	24.0	8.4	8.4	28.1	28.0	92.8	93.4	6.7	6.7		7.9	8.0		7.3	7.8	
							24.0		8.4		28.0		94.0		6.7			8.0			8.3		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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 (^{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*
2-Apr-14	Rainy	Moderate	09:30	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-	9.6	-	-	11.2
					Middle	0.8	20.4 20.4	20.4	7.8 7.9	7.9	24.3 24.3	24.3	86.1 86.2	86.2	6.7 6.7	6.7		9.9 9.3	9.6		10.8 11.5	11.2	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
4-Apr-14	Cloudy	Moderate	09:52	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-	8.0	-	-	11.1
					Middle	0.7	20.4 20.4	20.4	7.7 7.7	7.7	20.3 20.3	20.3	79.1 79.1	79.1	6.3 6.3	6.3		8.0 8.0	8.0		11.0 11.1	11.1	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
7-Apr-14	Sunny	Moderate	11:11	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-	5.4	-	-	17.5
					Middle	0.6	20.2 20.2	20.2	8.2 8.1	8.2	22.9 22.9	22.9	91.0 91.2	91.1	7.2 7.2	7.2		5.4 5.4	5.4		18.1 16.8	17.5	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
9-Apr-14	Sunny	Moderate	12:55	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	5.5	-	-	7.3
					Middle	0.8	21.2 21.2	21.2	7.9 7.9	7.9	24.3 24.4	24.3	92.2 91.9	92.1	7.1 7.1	7.1		5.4 5.5	5.5		6.6 7.9	7.3	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
11-Apr-14	Sunny	Moderate	15:31	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	9.1	-	-	5.2	-	-	7.6
					Middle	0.6	22.4 22.4	22.4	8.2 8.2	8.2	25.2 25.2	25.2	121.1 121.5	121.3	9.1 9.1	9.1		5.2 5.2	5.2		7.4 7.8	7.6	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
14-Apr-14	Sunny	Moderate	17:21	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	10.7	-	-	9.6	-	-	14.5
					Middle	0.7	23.4 23.5	23.4	8.6 8.6	8.6	23.3 23.0	23.2	147.1 140.8	144.0	11.0 10.5	10.7		9.6 9.5	9.6		13.5 15.5	14.5	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
16-Apr-14	Sunny	Moderate	08:11	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.6	-	-	3.0	-	-	5.8
					Middle	0.8	22.2 22.2	22.2	8.4 8.3	8.3	25.7 25.7	25.7	101.3 101.2	101.3	7.6 7.6	7.6		3.0 2.9	3.0		6.5 5.1	5.8	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
18-Apr-14	Sunny	Moderate	09:16	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.6	-	-	6.7	-	-	6.8
					Middle	0.8	22.9 22.9	22.9	8.2 8.2	8.2	25.9 25.9	25.9	89.6 89.6	89.6	6.6 6.6	6.6		6.8 6.6	6.7		6.4 7.2	6.8	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
21-Apr-14	Fine	Moderate	10:44	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	6.9	-	-	10.7
					Middle	0.8	24.0 24.0	24.0	8.2 8.2	8.2	24.3 24.3	24.3	92.4 92.5	92.5	6.8 6.8	6.8		6.9 6.9	6.9		11.1 10.3	10.7	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	11:53	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	2.6	-	-	5.1
					Middle	0.7	24.0 24.0	24.0	8.2 8.1	8.2	25.6 25.5	25.6	97.1 98.9	98.0	7.1 7.2	7.1		2.6 2.5	2.6		3.8 6.3	5.1	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
25-Apr-14	Sunny	Moderate	14:41	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	8.2	-	-	8.8
					Middle	0.7	24.1 24.1	24.1	8.1 8.1	8.1	27.8 27.8	27.8	94.9 95.7	95.3	6.8 6.9	6.8		8.3 8.1	8.2		8.6 9.0	8.8	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
28-Apr-14	Sunny	Moderate	17:31	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	7.1	-	-	3.4	-	-	7.0
					Middle	0.6	25.2 25.2	25.2	8.2 8.2	8.2	27.1 27.0	27.1	99.9 99.8	99.9	7.1 7.1	7.1		3.4 3.3	3.4		7.0 6.9	7.0	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
30-Apr-14	Sunny	Moderate	07:25	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-	5.0	-	-	6.7
					Middle	0.8	24.2 24.2	24.2	8.3 8.3	8.3	27.2 27.2	27.2	88.9 89.0	89.0	6.4 6.4	6.4		4.9 5.0	5.0		5.7 7.7	6.7	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:58	3.5	Surface	1.0	20.4 20.4	20.4	7.7 7.6	7.6	19.2 18.7	19.0	83.1 87.8	85.5	6.7 7.1	6.9	6.9	6.3 6.0	6.2	6.4	6.7 7.1	6.9	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	20.4 20.4	20.4	7.6 7.4	7.5	22.9 23.1	23.0	85.7 85.6	85.7	6.8 6.7	6.7	6.7	6.3 6.9	6.6		7.9 8.1	8.0	
4-Apr-14	Cloudy	Moderate	15:24	3.6	Surface	1.0	20.9 20.9	20.9	7.7 7.7	7.7	20.5 20.6	20.6	83.8 83.3	83.6	6.6 6.6	6.6	6.6	6.2 6.1	6.2	6.3	5.6 6.9	6.3	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	20.9 20.9	20.9	7.7 7.7	7.7	20.7 20.6	20.6	84.1 83.4	83.8	6.7 6.6	6.6	6.6	6.3 6.2	6.3		7.0 7.4	7.2	
7-Apr-14	Cloudy	Moderate	18:12	3.8	Surface	1.0	20.6 20.6	20.6	8.1 8.1	8.1	22.4 22.1	22.3	87.6 89.0	88.3	6.9 7.0	7.0	7.0	4.1 4.2	4.2	4.4	3.9 5.4	4.7	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	20.3 20.5	20.4	8.1 8.1	8.1	25.6 25.4	25.5	90.6 88.3	89.5	7.0 6.9	6.9	6.9	4.5 4.4	4.5		5.3 7.0	6.2	
9-Apr-14	Sunny	Moderate	10:26	3.6	Surface	1.0	20.5 20.5	20.5	7.8 7.8	7.8	23.5 23.4	23.4	89.4 87.4	88.4	7.0 6.9	6.9	6.9	4.1 3.7	3.9	4.1	3.1 4.2	3.7	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	20.4 20.5	20.4	7.8 7.8	7.8	25.2 25.1	25.1	92.1 88.3	90.2	7.2 6.9	7.0	7.0	4.4 4.1	4.3		4.5 3.2	3.9	
11-Apr-14	Sunny	Moderate	11:10	3.8	Surface	1.0	21.1 20.9	21.0	8.0 8.0	8.0	25.8 26.7	26.3	92.1 90.6	91.4	7.1 6.9	7.0	7.0	3.5 3.4	3.5	3.5	3.7 5.2	4.5	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	20.9 20.8	20.9	8.0 8.0	8.0	27.2 27.2	27.2	91.1 93.7	92.4	6.9 7.2	7.0	7.0	3.5 3.5	3.5		3.1 5.1	4.1	
14-Apr-14	Sunny	Moderate	12:54	3.6	Surface	1.0	23.6 23.7	23.7	8.4 8.4	8.4	21.9 21.8	21.8	128.1 131.1	129.6	9.6 9.8	9.7	9.7	4.6 4.3	4.5	4.6	7.0 6.6	6.8	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.5 23.5	23.5	8.4 8.4	8.4	21.9 21.9	21.9	129.3 122.6	126.0	9.7 9.2	9.4	9.4	4.5 4.6	4.6		6.6 6.2	6.4	
16-Apr-14	Sunny	Moderate	12:52	3.6	Surface	1.0	22.2 22.2	22.2	8.3 8.3	8.3	25.9 25.9	25.9	97.6 96.3	97.0	7.3 7.2	7.3	7.3	2.8 3.0	2.9	3.0	2.7 2.5	2.6	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	22.2 22.2	22.2	8.3 8.3	8.3	25.9 25.9	25.9	96.6 98.5	97.6	7.2 7.4	7.3	7.3	2.9 3.0	3.0		4.2 3.6	3.9	
18-Apr-14	Sunny	Moderate	14:07	3.6	Surface	1.0	23.3 23.3	23.3	7.9 7.9	7.9	24.7 24.7	24.7	88.4 87.2	87.8	6.5 6.5	6.5	6.5	4.7 4.7	4.7	4.8	3.8 3.8	3.8	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	23.2 23.2	23.2	7.9 7.9	7.9	25.1 25.2	25.2	87.3 90.0	88.7	6.5 6.7	6.6	6.6	4.8 4.7	4.8		4.0 3.9	4.0	
21-Apr-14	Fine	Moderate	16:17	3.4	Surface	1.0	24.8 24.7	24.7	8.3 8.3	8.3	23.9 24.0	24.0	104.5 106.8	105.7	7.6 7.7	7.7	7.7	3.6 3.8	3.7	3.8	4.0 3.1	3.6	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	24.7 24.3	24.5	8.3 8.3	8.3	24.1 24.4	24.3	105.9 101.0	103.5	7.7 7.4	7.5	7.5	3.8 3.7	3.8		3.8 3.9	3.9	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:38	3.8	Surface	1.0	23.9 23.9	23.9	8.1 8.1	8.1	24.6 24.5	24.5	86.7 89.6	88.2	6.4 6.6	6.5	6.5	3.5 3.5	3.5	3.6	6.1 4.4	5.3	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	23.8 23.8	23.8	8.1 8.1	8.1	26.1 26.1	26.1	93.9 87.7	90.8	6.8 6.4	6.6	6.6	3.6 3.6	3.6		5.2 5.5	5.4	
25-Apr-14	Sunny	Moderate	11:18	3.7	Surface	1.0	23.3 23.3	23.3	8.1 8.1	8.1	27.9 27.9	27.9	90.9 92.3	91.6	6.6 6.7	6.7	6.7	4.0 3.9	4.0	3.9	5.3 5.0	5.2	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.3 23.3	23.3	8.1 8.1	8.1	28.0 28.0	28.0	93.6 91.4	92.5	6.8 6.6	6.7	6.7	3.8 3.7	3.8		5.3 5.9	5.6	
28-Apr-14	Sunny	Moderate	12:57	3.7	Surface	1.0	25.1 25.1	25.1	8.1 8.1	8.1	25.6 25.6	25.6	91.7 93.1	92.4	6.5 6.6	6.6	6.6	4.7 4.9	4.8	4.9	5.0 3.7	4.4	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	25.1 25.1	25.1	8.1 8.1	8.1	25.6 25.6	25.6	94.8 92.3	93.6	6.8 6.6	6.7	6.7	4.8 4.9	4.9		5.7 5.9	5.8	
30-Apr-14	Sunny	Moderate	13:07	3.3	Surface	1.0	24.3 24.3	24.3	8.2 8.2	8.2	27.0 27.2	27.1	89.2 94.8	92.0	6.4 6.8	6.6	6.6	3.3 3.3	3.3	3.5	4.9 3.4	4.2	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	24.2 24.3	24.2	8.3 8.2	8.3	27.3 27.2	27.2	89.9 88.4	89.2	6.4 6.3	6.4	6.4	3.5 3.6	3.6		5.3 4.4	4.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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 (^{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*
2-Apr-14	Rainy	Moderate	08:43	3.9	Surface	1.0	20.4 20.4	20.4	7.8 7.8	7.8	21.8 21.9	21.9	80.0 79.7	79.9	6.4 6.3	6.3	6.3	8.3 8.6	8.5	9.6	4.6 5.7	5.2	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	20.4 20.4	20.4	7.8 7.8	7.8	23.4 23.6	23.5	80.0 79.8	79.9	6.3 6.3	6.3		10.1 11.0	10.6		6.1 5.2	5.7	
4-Apr-14	Cloudy	Moderate	09:16	3.6	Surface	1.0	20.5 20.5	20.5	7.7 7.7	7.7	18.2 18.7	18.4	72.5 72.8	72.7	5.9 5.9	5.9	5.9	7.2 7.1	7.2	7.4	6.4 6.7	6.6	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	20.5 20.5	20.5	7.7 7.7	7.7	18.5 18.5	18.5	72.8 72.6	72.7	5.9 5.9	5.9	5.9	7.5 7.4	7.5		6.8 5.1	6.0	
7-Apr-14	Sunny	Moderate	10:36	3.8	Surface	1.0	20.3 20.2	20.2	8.1 8.1	8.1	24.2 24.2	24.2	86.1 88.5	87.3	6.8 6.9	6.8	6.8	5.4 5.7	5.6	5.6	12.0 11.2	11.6	12.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	20.2 20.2	20.2	8.1 8.1	8.1	24.5 25.4	24.9	86.4 92.0	89.2	6.8 7.2	7.0	7.0	5.7 5.5	5.6		13.5 12.2	12.9	
9-Apr-14	Sunny	Moderate	13:52	3.5	Surface	1.0	21.5 21.4	21.4	7.8 7.8	7.8	23.5 23.6	23.6	101.0 97.5	99.3	7.8 7.5	7.6	7.6	4.2 4.4	4.3	4.4	3.5 3.4	3.5	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	21.1 20.6	20.9	7.8 7.8	7.8	24.1 25.3	24.7	98.5 95.3	96.9	7.6 7.4	7.5	7.5	4.5 4.5	4.5		4.4 6.1	5.3	
11-Apr-14	Sunny	Moderate	16:10	3.7	Surface	1.0	21.7 21.5	21.6	8.1 8.0	8.1	26.6 26.7	26.7	106.3 105.5	105.9	8.0 8.0	8.0	8.0	6.6 6.5	6.6	6.6	10.0 8.3	9.2	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	21.5 21.7	21.6	8.0 8.1	8.1	26.8 26.6	26.7	106.0 105.4	105.7	8.0 7.9	8.0	8.0	6.5 6.5	6.5		10.1 8.0	9.1	
14-Apr-14	Sunny	Moderate	17:59	3.7	Surface	1.0	23.1 23.1	23.1	8.5 8.5	8.5	23.5 23.6	23.6	129.3 139.3	134.3	9.7 10.4	10.0	10.0	9.4 9.5	9.5	9.7	10.9 10.6	10.8	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	22.8 23.1	22.9	8.4 8.5	8.4	24.4 23.6	24.0	129.1 136.5	132.8	9.7 10.2	9.9	9.9	9.6 9.9	9.8		10.7 11.4	11.1	
16-Apr-14	Sunny	Moderate	07:21	3.6	Surface	1.0	22.0 22.0	22.0	8.3 8.2	8.2	26.0 26.0	26.0	96.6 96.5	96.6	7.3 7.3	7.3	7.3	2.8 2.7	2.8	3.0	3.5 5.4	4.5	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	21.9 21.9	21.9	8.2 8.3	8.2	26.4 26.5	26.5	96.3 96.3	96.3	7.2 7.2	7.2	7.2	3.1 3.3	3.2		4.2 5.6	4.9	
18-Apr-14	Sunny	Moderate	08:38	3.6	Surface	1.0	22.9 22.9	22.9	8.1 8.1	8.1	23.6 23.7	23.7	88.4 89.9	89.2	6.6 6.7	6.7	6.7	6.1 6.3	6.2	6.2	5.1 5.0	5.1	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	22.9 22.9	22.9	8.1 8.1	8.1	23.8 23.8	23.8	88.6 94.0	91.3	6.7 7.1	6.9	6.9	6.2 6.1	6.2		7.1 4.9	6.0	
21-Apr-14	Fine	Moderate	10:09	3.5	Surface	1.0	23.6 23.7	23.7	8.1 8.1	8.1	24.6 24.6	24.6	89.1 84.9	87.0	6.6 6.3	6.4	6.4	5.6 5.5	5.6	5.6	6.0 4.8	5.4	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	23.7 23.6	23.6	8.1 8.2	8.2	24.6 25.2	24.9	84.5 85.9	85.2	6.2 6.3	6.3	6.3	5.6 5.6	5.6		6.2 4.7	5.5	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:31	3.7	Surface	1.0	23.8 23.8	23.8	8.1 8.1	8.1	26.6 26.6	26.6	82.8 85.6	84.2	6.0 6.2	6.1	6.1	10.4 10.2	10.3	10.4	6.8 6.2	6.5	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.8 23.7	23.8	8.1 8.0	8.1	26.7 26.7	26.7	84.3 90.7	87.5	6.1 6.6	6.4	6.4	10.4 10.4	10.4		6.8 6.2	6.5	
25-Apr-14	Sunny	Moderate	15:17	3.7	Surface	1.0	23.2 23.2	23.2	8.1 8.1	8.1	30.0 30.0	30.0	84.6 84.3	84.5	6.1 6.1	6.1	6.1	18.4 18.7	18.6	18.7	7.2 6.6	6.9	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	23.2 23.2	23.2	8.1 8.1	8.1	30.0 30.0	30.0	85.2 84.4	84.8	6.1 6.1	6.1	6.1	18.9 18.4	18.7		6.3 6.2	6.3	
28-Apr-14	Sunny	Moderate	18:11	3.7	Surface	1.0	25.2 24.9	25.1	8.2 8.2	8.2	26.7 27.0	26.9	94.3 93.2	93.8	6.7 6.6	6.6	6.6	8.3 8.5	8.4	8.5	5.0 4.9	5.0	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	24.7 24.4	24.6	8.2 8.1	8.1	27.4 27.7	27.5	92.6 94.2	93.4	6.6 6.7	6.7	6.7	8.5 8.4	8.5		5.1 6.8	6.0	
30-Apr-14	Sunny	Moderate	06:49	3.5	Surface	1.0	24.0 24.0	24.0	8.3 8.2	8.2	26.4 26.6	26.5	87.7 87.1	87.4	6.4 6.3	6.3	6.3	4.1 3.8	4.0	4.1	5.9 4.0	5.0	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	24.0 24.0	24.0	8.2 8.2	8.2	26.6 27.0	26.8	87.3 86.9	87.1	6.3 6.3	6.3	6.3	4.1 4.0	4.1		6.7 5.6	6.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:24	4.8	Surface	1.0	20.3 20.3	20.3	7.8 7.8	7.8	21.9 21.9	21.9	85.8 85.0	85.4	6.8 6.8	6.8	6.8	6.4 6.3	6.4	6.5	8.2 7.5	7.9	8.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	20.3 20.3	20.3	7.8 7.7	7.8	21.9 22.0	21.9	85.4 86.9	86.2	6.8 6.9	6.8	6.8	6.4 6.5	6.5		9.4 9.4	9.4	
4-Apr-14	Cloudy	Moderate	16:03	5.4	Surface	1.0	20.7 20.6	20.7	8.0 8.1	8.0	20.5 20.6	20.6	80.4 82.4	81.4	6.4 6.6	6.5	6.5	7.5 7.9	7.7	8.4	6.4 6.7	6.6	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	20.5 20.5	20.5	8.2 8.0	8.1	22.1 22.2	22.1	84.5 80.4	82.5	6.7 6.4	6.5	6.5	9.0 8.9	9.0		7.0 6.4	6.7	
7-Apr-14	Cloudy	Moderate	18:16	5.3	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.7 26.6	26.7	86.2 86.4	86.3	6.7 6.7	6.7	6.7	4.1 4.5	4.3	4.7	3.1 4.0	3.6	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	20.2 20.2	20.2	8.0 8.0	8.0	27.3 27.2	27.3	86.0 86.2	86.1	6.6 6.7	6.6	6.6	5.0 4.9	5.0		4.8 4.1	4.5	
9-Apr-14	Sunny	Moderate	10:10	4.8	Surface	1.0	20.7 20.6	20.7	8.0 8.0	8.0	21.5 21.9	21.7	83.7 83.4	83.6	6.6 6.6	6.6	6.6	2.6 2.6	2.6	2.6	5.1 4.4	4.8	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	20.5 20.6	20.6	8.0 8.0	8.0	23.5 23.5	23.5	83.2 83.0	83.1	6.5 6.5	6.5	6.5	2.5 2.6	2.6		4.0 5.1	4.6	
11-Apr-14	Sunny	Moderate	11:18	5.2	Surface	1.0	21.4 21.5	21.5	8.3 8.3	8.3	23.8 23.6	23.7	101.4 102.3	101.9	7.8 7.9	7.8	7.8	3.8 3.8	3.8	4.2	2.4 3.6	3.0	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	20.9 20.8	20.9	8.2 8.2	8.2	27.4 27.6	27.5	100.6 99.6	100.1	7.7 7.6	7.6	7.6	4.7 4.5	4.6		3.5 3.8	3.7	
14-Apr-14	Sunny	Moderate	12:46	4.7	Surface	1.0	22.5 22.6	22.6	8.4 8.4	8.4	23.1 23.0	23.0	107.5 108.9	108.2	8.1 8.2	8.2	8.2	8.2 7.7	8.0	8.7	8.4 7.8	8.1	8.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	22.3 22.3	22.3	8.3 8.3	8.3	24.4 24.4	24.4	106.7 107.1	106.9	8.1 8.1	8.1	8.1	9.3 9.3	9.3		8.5 9.3	8.9	
16-Apr-14	Sunny	Moderate	13:20	5.2	Surface	1.0	22.1 22.2	22.2	8.3 8.3	8.3	26.3 26.0	26.2	96.4 95.9	96.2	7.2 7.2	7.2	7.2	5.6 5.6	5.6	5.7	6.1 6.6	6.4	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.9 22.0	21.9	8.3 8.3	8.3	27.6 27.3	27.4	96.5 95.6	96.1	7.2 7.1	7.2	7.2	5.7 5.8	5.8		7.0 6.9	7.0	
18-Apr-14	Sunny	Moderate	13:47	4.6	Surface	1.0	23.7 23.6	23.7	8.2 8.2	8.2	23.2 23.4	23.3	89.3 90.9	90.1	6.6 6.7	6.7	6.7	3.0 3.2	3.1	3.2	5.4 4.5	5.0	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	23.7 23.7	23.7	8.2 8.2	8.2	23.3 23.3	23.3	89.1 89.9	89.5	6.6 6.7	6.6	6.6	3.1 3.2	3.2		5.7 4.7	5.2	
21-Apr-14	Fine	Moderate	17:03	4.9	Surface	1.0	23.7 23.7	23.7	8.2 8.2	8.2	26.2 26.2	26.2	91.1 92.4	91.8	6.6 6.7	6.7	6.7	4.2 4.5	4.4	4.4	4.0 3.1	3.6	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	23.7 23.7	23.7	8.2 8.2	8.2	26.2 26.3	26.3	91.6 93.9	92.8	6.7 6.8	6.8	6.8	4.3 4.3	4.3		3.0 3.5	3.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:47	4.7	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	22.3 22.3	22.3	85.9 85.8	85.9	6.4 6.4	6.4	6.4	3.9 3.8	3.9	3.9	3.6 4.7	4.2	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	23.8 23.8	23.8	8.1 8.1	8.1	25.7 25.6	25.6	86.0 86.2	86.1	6.3 6.3	6.3	6.3	3.7 4.0	3.9		4.9 5.1	5.0	
25-Apr-14	Sunny	Moderate	11:14	5.6	Surface	1.0	23.5 23.4	23.5	8.2 8.2	8.2	27.7 27.7	27.7	91.9 91.8	91.9	6.7 6.7	6.7	6.7	3.1 3.1	3.1	3.2	5.3 4.6	5.0	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	23.5 23.4	23.4	8.2 8.2	8.2	27.7 27.9	27.8	91.7 91.6	91.7	6.7 6.6	6.6	6.6	3.2 3.3	3.3		4.8 4.7	4.8	
28-Apr-14	Sunny	Moderate	12:40	4.7	Surface	1.0	24.3 24.3	24.3	8.2 8.2	8.2	24.9 24.9	24.9	89.7 89.2	89.5	6.5 6.5	6.5	6.5	5.9 6.3	6.1	7.2	6.7 5.7	6.2	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	24.2 24.1	24.2	8.2 8.2	8.2	26.2 26.2	26.2	89.0 88.5	88.8	6.4 6.4	6.4	6.4	8.2 8.1	8.2		6.6 5.9	6.3	
30-Apr-14	Sunny	Moderate	13:31	4.8	Surface	1.0	24.2 24.2	24.2	8.2 8.2	8.2	25.3 25.4	25.4	89.8 89.0	89.4	6.5 6.5	6.5	6.5	3.2 3.3	3.3	3.3	4.8 5.8	5.3	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	24.1 24.1	24.1	8.2 8.2	8.2	25.8 25.9	25.8	89.2 90.8	90.0	6.5 6.6	6.5	6.5	3.3 3.3	3.3		4.5 5.7	5.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	08:19	4.7	Surface	1.0	20.3 20.4	20.4	7.9 7.9	7.9	23.9 23.8	23.8	80.8 80.9	80.9	6.3 6.4	6.3	6.3	14.7 14.8	14.8	14.9	12.2 14.3	13.3	13.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	20.3 20.4	20.4	7.9 7.9	7.9	23.9 24.2	24.0	80.9 80.9	80.9	6.4 6.3	6.3	6.3	15.1 14.6	14.9		14.1 13.7	13.9	
4-Apr-14	Cloudy	Moderate	09:22	5.2	Surface	1.0	20.4 20.3	20.3	7.9 7.9	7.9	18.9 19.2	19.1	76.1 76.7	76.4	6.2 6.2	6.2	6.2	10.7 10.5	10.6	12.5	8.6 9.0	8.8	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	20.1 20.1	20.1	7.9 7.9	7.9	24.6 24.4	24.5	75.8 75.9	75.9	6.0 6.0	6.0	6.0	13.8 14.9	14.4		9.1 9.9	9.5	
7-Apr-14	Sunny	Moderate	10:34	5.2	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	25.4 25.3	25.4	85.2 85.5	85.4	6.6 6.7	6.7	6.7	6.6 7.0	6.8	6.4	3.1 5.0	4.1	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	20.2 20.1	20.2	8.0 8.0	8.0	26.4 26.8	26.6	85.5 84.9	85.2	6.6 6.6	6.6	6.6	6.1 5.6	5.9		3.5 5.0	4.3	
9-Apr-14	Sunny	Moderate	14:07	4.9	Surface	1.0	20.7 20.6	20.7	8.1 8.1	8.1	22.3 23.7	23.0	87.6 88.0	87.8	6.9 6.9	6.9	6.9	3.5 3.3	3.4	3.4	2.7 3.9	3.3	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	20.3 20.4	20.4	8.1 8.1	8.1	27.9 27.4	27.6	88.2 87.0	87.6	6.8 6.7	6.7	6.7	3.3 3.2	3.3		4.6 3.2	3.9	
11-Apr-14	Sunny	Moderate	16:21	5.0	Surface	1.0	21.7 21.5	21.6	8.3 8.3	8.3	24.7 24.9	24.8	99.9 102.9	101.4	7.6 7.9	7.7	7.7	4.6 4.3	4.5	5.9	4.3 4.0	4.2	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	20.9 21.3	21.1	8.2 8.3	8.3	26.4 26.3	26.4	94.2 101.8	98.0	7.2 7.7	7.5	7.5	7.3 7.0	7.2		3.1 4.5	3.8	
14-Apr-14	Sunny	Moderate	18:33	4.6	Surface	1.0	22.7 22.8	22.7	8.4 8.4	8.4	22.6 22.4	22.5	110.6 111.1	110.9	8.4 8.4	8.4	8.4	4.1 4.3	4.2	4.4	7.4 8.6	8.0	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	22.5 22.6	22.6	8.4 8.4	8.4	23.9 23.0	23.5	109.8 108.0	108.9	8.3 8.2	8.2	8.2	4.7 4.5	4.6		8.3 8.1	8.2	
16-Apr-14	Sunny	Moderate	07:21	5.2	Surface	1.0	21.9 21.9	21.9	8.3 8.3	8.3	26.7 26.5	26.6	96.1 96.0	96.1	7.2 7.2	7.2	7.2	7.3 7.5	7.4	7.7	7.3 6.9	7.1	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.9 21.9	21.9	8.3 8.3	8.3	26.7 26.8	26.8	95.9 95.9	95.9	7.2 7.2	7.2	7.2	8.0 7.8	7.9		5.0 7.1	6.1	
18-Apr-14	Sunny	Moderate	08:12	5.1	Surface	1.0	22.7 22.6	22.7	8.2 8.2	8.2	24.2 24.4	24.3	86.4 86.4	86.4	6.5 6.5	6.5	6.5	6.9 7.0	7.0	7.2	6.2 6.5	6.4	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.6 22.6	22.6	8.2 8.2	8.2	25.7 25.8	25.8	86.1 86.1	86.1	6.4 6.4	6.4	6.4	7.0 7.5	7.3		7.5 8.3	7.9	
21-Apr-14	Fine	Moderate	10:45	5.2	Surface	1.0	23.4 23.6	23.5	8.2 8.2	8.2	24.0 23.9	24.0	86.1 86.1	86.1	6.4 6.4	6.4	6.4	7.6 7.5	7.6	7.7	9.9 9.2	9.6	9.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	23.4 23.1	23.3	8.2 8.2	8.2	27.1 27.3	27.2	85.9 85.1	85.5	6.3 6.2	6.2	6.2	7.7 7.8	7.8		9.9 8.7	9.3	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	13:20	4.8	Surface	1.0	23.7 23.7	23.7	8.2 8.2	8.2	25.0 25.0	25.0	90.7 88.8	89.8	6.7 6.5	6.6	6.6	3.8 3.7	3.8	3.8	3.4 4.5	4.0	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	23.7 23.5	23.6	8.2 8.2	8.2	27.1 27.2	27.2	89.3 93.1	91.2	6.5 6.8	6.6	6.6	3.7 3.6	3.7		3.6 3.6	3.6	
25-Apr-14	Sunny	Moderate	15:32	5.5	Surface	1.0	23.5 23.4	23.5	8.2 8.2	8.2	28.1 28.3	28.2	90.5 90.0	90.3	6.5 6.5	6.5	6.5	3.8 3.9	3.9	4.1	3.2 4.3	3.8	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	23.4 23.3	23.4	8.2 8.1	8.2	28.5 29.0	28.7	90.2 89.6	89.9	6.5 6.5	6.5	6.5	4.1 4.4	4.3		4.4 4.7	4.6	
28-Apr-14	Sunny	Moderate	18:29	4.4	Surface	1.0	24.6 24.6	24.6	8.1 8.1	8.1	23.9 23.8	23.8	89.3 91.2	90.3	6.5 6.6	6.6	6.6	3.9 4.3	4.1	4.7	2.5 2.4	2.5	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	24.5 24.5	24.5	8.1 8.1	8.1	24.2 24.3	24.3	89.5 93.0	91.3	6.5 6.8	6.6	6.6	5.0 5.3	5.2		3.6 4.6	4.1	
30-Apr-14	Sunny	Moderate	07:04	5.0	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	26.8 26.8	26.8	86.0 86.1	86.1	6.2 6.2	6.2	6.2	5.6 5.7	5.7	5.8	6.8 6.9	6.9	7.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	24.0 24.0	24.0	8.2 8.1	8.2	26.9 26.8	26.9	85.9 85.9	85.9	6.2 6.2	6.2	6.2	5.6 6.0	5.8		8.1 8.3	8.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	13:28	4.1	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	21.3 21.4	21.3	83.4 83.7	83.6	6.7 6.7	6.7	6.7	5.6 5.7	5.7	6.6	5.9 6.0	6.0	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.2 20.2	20.2	7.9 7.9	7.9	25.1 23.0	24.0	83.1 83.2	83.2	6.5 6.6	6.5	6.5	7.5 7.3	7.4		6.3 6.0	6.2	
4-Apr-14	Cloudy	Moderate	15:09	4.4	Surface	1.0	20.7 20.7	20.7	8.0 7.9	7.9	19.7 19.7	19.7	79.2 78.9	79.1	6.3 6.3	6.3	6.3	8.9 8.2	8.6	11.3	7.9 7.0	7.5	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	20.2 20.2	20.2	8.0 8.0	8.0	24.3 24.2	24.2	78.7 78.8	78.8	6.2 6.2	6.2	6.2	13.8 14.1	14.0		7.8 6.9	7.4	
7-Apr-14	Cloudy	Moderate	17:17	4.3	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.6 26.6	26.6	88.1 88.1	88.1	6.8 6.8	6.8	6.8	2.6 2.8	2.7	2.8	4.4 4.3	4.4	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.2 20.2	20.2	8.0 8.0	8.0	26.6 26.6	26.6	88.0 88.0	88.0	6.8 6.8	6.8	6.8	2.7 2.8	2.8		3.9 3.4	3.7	
9-Apr-14	Sunny	Moderate	11:05	4.1	Surface	1.0	20.8 20.8	20.8	8.1 8.1	8.1	20.2 21.0	20.6	82.3 82.4	82.4	6.6 6.5	6.5	6.5	2.8 2.8	2.8	2.8	6.3 5.7	6.0	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.7 20.6	20.7	8.1 8.1	8.1	23.8 22.9	23.3	81.7 81.7	81.7	6.4 6.4	6.4	6.4	2.6 2.8	2.7		5.3 7.4	6.4	
11-Apr-14	Sunny	Moderate	12:14	4.3	Surface	1.0	22.1 22.0	22.1	8.3 8.3	8.3	22.8 22.8	22.8	107.4 102.5	105.0	8.2 7.9	8.0	8.0	3.4 3.7	3.6	3.8	2.7 3.0	2.9	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	21.6 21.2	21.4	8.2 8.2	8.2	24.5 25.0	24.8	103.8 95.2	99.5	7.9 7.3	7.6	7.6	3.8 4.1	4.0		4.0 3.6	3.8	
14-Apr-14	Sunny	Moderate	13:45	4.0	Surface	1.0	22.5 22.5	22.5	8.3 8.3	8.3	22.6 22.7	22.7	103.4 102.4	102.9	7.9 7.8	7.8	7.8	5.1 5.4	5.3	5.4	7.9 7.6	7.8	9.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	22.5 22.5	22.5	8.3 8.3	8.3	22.8 22.7	22.7	100.8 102.8	101.8	7.7 7.8	7.7	7.7	5.4 5.3	5.4		10.7 11.2	11.0	
16-Apr-14	Sunny	Moderate	12:22	4.2	Surface	1.0	22.3 22.3	22.3	8.3 8.3	8.3	25.2 25.0	25.1	96.8 97.0	96.9	7.3 7.3	7.3	7.3	2.1 2.1	2.1	2.2	5.3 3.4	4.4	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	22.3 22.3	22.3	8.3 8.3	8.3	25.2 25.5	25.4	96.9 96.9	96.9	7.3 7.3	7.3	7.3	2.1 2.2	2.2		3.7 4.4	4.1	
18-Apr-14	Sunny	Moderate	13:19	5.4	Surface	1.0	24.0 24.1	24.0	8.2 8.2	8.2	23.2 23.1	23.2	90.5 90.1	90.3	6.7 6.7	6.7	6.7	4.4 4.3	4.4	4.5	3.9 3.0	3.5	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	23.0 22.8	22.9	8.2 8.2	8.2	25.6 26.7	26.1	90.0 88.4	89.2	6.6 6.5	6.6	6.6	4.6 4.6	4.6		3.4 3.6	3.5	
21-Apr-14	Fine	Moderate	16:09	4.3	Surface	1.0	23.6 23.6	23.6	8.3 8.3	8.3	26.0 26.1	26.1	91.9 91.7	91.8	6.7 6.7	6.7	6.7	2.3 2.3	2.3	2.4	2.7 2.2	2.5	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	23.6 23.6	23.6	8.3 8.3	8.3	26.0 26.1	26.1	91.7 91.2	91.5	6.7 6.7	6.7	6.7	2.3 2.4	2.4		3.4 3.7	3.6	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	09:48	3.8	Surface	1.0	24.0 24.0	24.0	8.1 8.1	8.1	22.0 22.0	22.0	87.1 87.1	87.1	6.5 6.5	6.5	6.5	4.0 4.0	4.0	3.9	3.2 5.0	4.1	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.0 23.8	23.9	8.1 8.2	8.2	22.5 23.4	23.0	86.9 86.8	86.9	6.4 6.4	6.4	6.4	4.0 3.5	3.8		4.2 4.7	4.5	
25-Apr-14	Sunny	Moderate	11:56	5.5	Surface	1.0	23.6 23.6	23.6	8.2 8.2	8.2	26.4 26.4	26.4	93.0 92.8	92.9	6.8 6.8	6.8	6.8	2.8 2.9	2.9	3.0	5.1 5.8	5.5	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	23.6 23.6	23.6	8.2 8.2	8.2	26.7 26.6	26.7	92.9 92.8	92.9	6.8 6.8	6.8	6.8	3.0 3.1	3.1		6.4 7.3	6.9	
28-Apr-14	Sunny	Moderate	13:38	3.8	Surface	1.0	24.2 24.3	24.2	8.2 8.2	8.2	24.8 24.7	24.7	87.9 88.0	88.0	6.4 6.4	6.4	6.4	5.2 5.3	5.3	5.5	6.0 6.2	6.1	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.1 24.1	24.1	8.2 8.2	8.2	25.6 25.6	25.6	88.7 87.7	88.2	6.4 6.4	6.4	6.4	6.0 5.4	5.7		8.7 7.8	8.3	
30-Apr-14	Sunny	Moderate	12:32	4.2	Surface	1.0	24.1 24.1	24.1	8.2 8.2	8.2	25.7 25.8	25.7	89.3 89.0	89.2	6.5 6.5	6.5	6.5	3.4 3.5	3.5	3.6	7.0 7.2	7.1	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	24.1 24.0	24.1	8.2 8.3	8.3	25.8 26.0	25.9	89.1 88.8	89.0	6.5 6.4	6.4	6.4	3.8 3.6	3.7		7.5 6.5	7.0	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	09:19	4.2	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	24.5 24.5	24.5	80.5 80.5	80.5	6.3 6.3	6.3	6.3	20.0 20.1	20.1	20.3	20.1 19.8	20.0	20.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.3 20.3	20.3	7.9 7.9	7.9	24.7 24.8	24.8	80.4 80.3	80.4	6.3 6.3	6.3	6.3	20.5 20.3	20.4		19.1 21.3	20.2	
4-Apr-14	Cloudy	Moderate	10:17	4.3	Surface	1.0	20.4 20.4	20.4	7.9 7.9	7.9	18.6 18.7	18.7	74.0 74.5	74.3	6.0 6.0	6.0	6.0	9.1 9.8	9.5	11.7	6.2 6.6	6.4	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.2 20.3	20.2	7.9 7.8	7.9	23.2 23.0	23.1	74.4 73.7	74.1	5.9 5.8	5.9	5.9	14.5 13.2	13.9		7.5 7.5	7.5	
7-Apr-14	Sunny	Moderate	11:37	4.4	Surface	1.0	20.3 20.3	20.3	8.0 8.0	8.0	25.4 25.4	25.4	86.1 86.1	86.1	6.7 6.7	6.7	6.7	3.9 3.8	3.9	4.0	4.8 2.9	3.9	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	20.2 20.2	20.2	8.0 8.0	8.0	26.6 26.8	26.7	86.0 85.8	85.9	6.7 6.6	6.7	6.7	3.9 4.3	4.1		4.3 3.0	3.7	
9-Apr-14	Sunny	Moderate	13:07	4.1	Surface	1.0	21.8 21.1	21.4	8.1 8.1	8.1	18.6 19.7	19.2	86.0 87.0	86.5	6.8 6.9	6.8	6.8	2.3 2.2	2.3	2.3	4.7 4.6	4.7	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	21.2 20.5	20.9	8.1 8.1	8.1	21.1 22.4	21.8	85.7 86.1	85.9	6.7 6.8	6.8	6.8	2.3 2.2	2.3		4.9 6.6	5.8	
11-Apr-14	Sunny	Moderate	15:26	4.4	Surface	1.0	22.5 22.5	22.5	8.3 8.3	8.3	22.8 22.9	22.9	112.9 113.1	113.0	8.6 8.6	8.6	8.6	2.7 2.7	2.7	2.8	4.5 3.5	4.0	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	22.0 22.0	22.0	8.3 8.3	8.3	24.9 24.6	24.8	111.9 111.8	111.9	8.5 8.5	8.5	8.5	2.9 2.8	2.9		5.8 4.5	5.2	
14-Apr-14	Sunny	Moderate	17:32	4.2	Surface	1.0	22.7 22.7	22.7	8.3 8.3	8.3	21.8 21.9	21.9	100.5 100.8	100.7	7.6 7.7	7.7	7.7	3.4 3.4	3.4	3.5	7.8 7.4	7.6	7.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	22.7 22.6	22.7	8.3 8.3	8.3	21.9 22.1	22.0	100.5 100.4	100.5	7.7 7.6	7.6	7.6	3.6 3.5	3.6		7.4 8.0	7.7	
16-Apr-14	Sunny	Moderate	08:12	4.4	Surface	1.0	21.9 21.9	21.9	8.3 8.3	8.3	27.1 27.1	27.1	94.8 94.7	94.8	7.1 7.1	7.1	7.1	8.7 8.6	8.7	8.8	6.8 7.8	7.3	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	21.9 21.9	21.9	8.3 8.3	8.3	27.3 27.2	27.2	94.7 94.7	94.7	7.1 7.1	7.1	7.1	8.8 8.7	8.8		6.7 5.9	6.3	
18-Apr-14	Sunny	Moderate	08:45	5.1	Surface	1.0	22.7 22.7	22.7	8.2 8.2	8.2	25.4 25.4	25.4	86.8 86.8	86.8	6.5 6.5	6.5	6.5	7.1 7.3	7.2	7.2	9.7 9.5	9.6	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.6 22.6	22.6	8.2 8.2	8.2	25.9 26.2	26.1	86.6 86.4	86.5	6.4 6.4	6.4	6.4	7.1 7.3	7.2		9.2 8.4	8.8	
21-Apr-14	Fine	Moderate	11:43	4.1	Surface	1.0	23.6 23.6	23.6	8.2 8.2	8.2	24.7 24.7	24.7	85.9 85.4	85.7	6.3 6.3	6.3	6.3	3.6 3.5	3.6	3.6	4.6 4.1	4.4	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	23.5 23.2	23.4	8.2 8.2	8.2	25.3 26.4	25.9	85.6 84.5	85.1	6.3 6.2	6.3	6.3	3.5 3.5	3.5		5.0 5.3	5.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	12:20	4.0	Surface	1.0	23.8 23.7	23.7	8.2 8.2	8.2	24.2 24.1	24.1	87.3 87.1	87.2	6.4 6.4	6.4	6.4	3.6 4.1	3.9	4.1	4.7 4.1	4.4	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	23.5 23.5	23.5	8.2 8.2	8.2	26.9 27.0	27.0	86.7 86.8	86.8	6.3 6.3	6.3	6.3	4.4 4.2	4.3		5.3 6.5	5.9	
25-Apr-14	Sunny	Moderate	14:52	5.5	Surface	1.0	24.1 24.2	24.2	8.1 8.1	8.1	24.6 24.5	24.6	90.3 90.4	90.4	6.6 6.6	6.6	6.6	6.1 5.9	6.0	6.2	6.6 7.1	6.9	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	24.2 24.2	24.2	8.1 8.1	8.1	24.5 24.6	24.6	90.4 90.3	90.4	6.6 6.6	6.6	6.6	6.0 6.5	6.3		6.4 5.8	6.1	
28-Apr-14	Sunny	Moderate	17:31	4.0	Surface	1.0	24.6 24.6	24.6	8.1 8.1	8.1	23.7 23.6	23.6	87.4 87.6	87.5	6.4 6.4	6.4	6.4	4.1 4.0	4.1	4.3	5.4 6.2	5.8	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	24.4 24.5	24.5	8.1 8.1	8.1	24.2 24.2	24.2	87.1 87.1	87.1	6.3 6.3	6.3	6.3	4.8 4.2	4.5		6.3 8.1	7.2	
30-Apr-14	Sunny	Moderate	08:00	4.3	Surface	1.0	24.0 24.0	24.0	8.2 8.2	8.2	26.8 26.9	26.9	86.5 86.5	86.5	6.2 6.2	6.2	6.2	6.6 6.5	6.6	6.7	8.4 7.3	7.9	7.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	24.0 23.9	23.9	8.2 8.2	8.2	27.5 27.8	27.6	86.4 86.4	86.4	6.2 6.2	6.2	6.2	6.9 6.7	6.8		7.7 6.7	7.2	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Cloudy	Moderate	14:53	4.3	Surface	1.0	20.3 20.3	20.3	7.9 7.9	7.9	22.9 23.0	22.9	83.1 83.2	83.2	6.6 6.6	6.6	6.6	7.5 8.0	7.8	7.8	7.2 8.3	7.8	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.3 20.3	20.3	7.9 7.9	7.9	24.5 23.7	24.1	83.2 82.8	83.0	6.5 6.5	6.5	6.5	7.9 7.7	7.8		9.5 9.1	9.3	
4-Apr-14	Cloudy	Moderate	16:30	4.3	Surface	1.0	20.6 20.6	20.6	8.0 8.0	8.0	20.7 20.7	20.7	79.3 79.5	79.4	6.3 6.3	6.3	6.3	10.8 11.8	11.3	13.8	6.4 6.8	6.6	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.2 20.2	20.2	8.0 8.0	8.0	23.8 23.8	23.8	78.7 79.1	78.9	6.2 6.2	6.2	6.2	17.0 15.6	16.3		8.3 8.1	8.2	
7-Apr-14	Cloudy	Moderate	18:43	4.1	Surface	1.0	20.2 20.2	20.2	8.0 8.0	8.0	26.3 26.2	26.2	86.5 86.7	86.6	6.7 6.7	6.7	6.7	3.9 3.7	3.8	4.0	5.5 4.8	5.2	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.1 20.1	20.1	8.0 8.0	8.0	27.4 27.4	27.4	86.4 86.1	86.3	6.7 6.7	6.7	6.7	4.0 4.2	4.1		6.3 4.9	5.6	
9-Apr-14	Sunny	Moderate	09:39	4.2	Surface	1.0	20.7 20.7	20.7	8.1 8.1	8.1	20.2 20.1	20.1	86.1 84.3	85.2	6.9 6.7	6.8	6.8	3.0 3.2	3.1	3.2	5.4 4.9	5.2	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.6 20.7	20.6	8.1 8.1	8.1	22.2 23.0	22.6	88.2 84.5	86.4	7.0 6.6	6.8	6.8	3.3 3.1	3.2		5.1 5.5	5.3	
11-Apr-14	Sunny	Moderate	10:45	4.2	Surface	1.0	21.4 21.6	21.5	8.3 8.3	8.3	23.6 23.4	23.5	98.6 100.7	99.7	7.6 7.7	7.7	7.7	3.4 3.1	3.3	3.2	4.8 5.1	5.0	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	21.0 20.8	20.9	8.2 8.2	8.2	27.1 27.3	27.2	98.8 97.1	98.0	7.5 7.4	7.5	7.5	3.1 3.1	3.1		5.9 5.5	5.7	
14-Apr-14	Sunny	Moderate	12:16	4.1	Surface	1.0	22.8 22.8	22.8	8.4 8.4	8.4	22.9 22.9	22.9	112.3 113.3	112.8	8.5 8.6	8.5	8.5	4.4 4.3	4.4	4.5	9.3 9.4	9.4	8.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	22.7 22.7	22.7	8.4 8.4	8.4	23.1 23.2	23.1	112.8 109.7	111.3	8.5 8.3	8.4	8.4	4.4 4.6	4.5		7.8 8.4	8.1	
16-Apr-14	Sunny	Moderate	13:48	4.1	Surface	1.0	22.1 22.2	22.1	8.3 8.3	8.3	26.1 26.1	26.1	95.6 95.7	95.7	7.2 7.2	7.2	7.2	4.8 4.8	4.8	4.7	6.6 6.3	6.5	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	21.9 22.0	22.0	8.3 8.3	8.3	27.6 27.2	27.4	95.2 95.3	95.3	7.1 7.1	7.1	7.1	4.7 4.5	4.6		6.5 5.5	6.0	
18-Apr-14	Sunny	Moderate	14:22	4.3	Surface	1.0	24.0 23.2	23.6	8.2 8.2	8.2	23.2 23.7	23.5	89.5 88.8	89.2	6.6 6.6	6.6	6.6	3.1 3.3	3.2	3.4	3.1 4.3	3.7	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	22.8 23.5	23.2	8.2 8.2	8.2	25.1 25.2	25.1	87.9 88.4	88.2	6.6 6.5	6.5	6.5	3.6 3.4	3.5		2.6 3.6	3.1	
21-Apr-14	Fine	Moderate	17:31	4.2	Surface	1.0	23.5 23.4	23.5	8.2 8.2	8.2	26.4 26.7	26.6	88.1 87.4	87.8	6.4 6.4	6.4	6.4	5.4 5.4	5.4	5.5	5.4 5.3	5.4	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.3 23.1	23.2	8.2 8.2	8.2	27.3 27.5	27.4	87.7 87.6	87.7	6.4 6.4	6.4	6.4	5.5 5.4	5.5		6.1 4.7	5.4	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	08:10	3.9	Surface	1.0	23.9 23.9	23.9	8.2 8.2	8.2	22.7 22.9	22.8	93.9 90.1	92.0	7.0 6.7	6.8	6.8	3.9 3.7	3.8	3.7	4.0 5.0	4.5	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.7 23.8	23.7	8.2 8.2	8.2	26.0 25.7	25.9	96.5 90.7	93.6	7.0 6.6	6.8	6.8	3.6 3.5	3.6		3.9 4.7	4.3	
25-Apr-14	Sunny	Moderate	10:41	5.1	Surface	1.0	23.3 23.3	23.3	8.2 8.1	8.2	28.3 28.3	28.3	90.4 90.0	90.2	6.6 6.5	6.5	6.5	3.5 3.5	3.5	3.6	4.6 6.1	5.4	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	23.2 23.3	23.3	8.1 8.2	8.1	28.6 28.3	28.5	89.6 90.3	90.0	6.5 6.5	6.5	6.5	3.6 3.5	3.6		6.0 6.6	6.3	
28-Apr-14	Sunny	Moderate	12:10	3.8	Surface	1.0	24.4 24.3	24.4	8.2 8.2	8.2	24.5 24.6	24.6	93.4 91.9	92.7	6.8 6.7	6.7	6.7	5.1 5.2	5.2	5.4	3.6 3.8	3.7	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.0 24.2	24.1	8.2 8.2	8.2	26.7 26.7	26.7	94.2 92.3	93.3	6.8 6.6	6.7	6.7	5.6 5.5	5.6		3.1 4.1	3.6	
30-Apr-14	Sunny	Moderate	14:01	4.1	Surface	1.0	24.1 24.1	24.1	8.2 8.2	8.2	25.7 25.9	25.8	89.0 88.8	88.9	6.5 6.4	6.4	6.4	4.2 4.4	4.3	4.5	3.7 3.3	3.5	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	23.9 24.1	24.0	8.2 8.2	8.2	27.7 27.5	27.6	88.3 88.8	88.6	6.4 6.4	6.4	6.4	4.6 4.6	4.6		3.4 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.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	07:50	4.1	Surface	1.0	20.3 20.3	20.3	7.7 7.8	7.8	24.8 24.6	24.7	84.0 82.2	83.1	6.6 6.4	6.5	6.5	13.5 12.7	13.1	13.2	14.3 14.6	14.5	14.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	20.3 20.2	20.3	7.8 7.7	7.7	24.9 25.2	25.0	82.8 85.8	84.3	6.5 6.7	6.6	6.6	13.3 13.1	13.2		14.9 13.4	14.2	
4-Apr-14	Cloudy	Moderate	08:49	4.3	Surface	1.0	20.4 20.3	20.4	8.0 8.2	8.1	21.2 20.6	20.9	81.7 86.6	84.2	6.5 6.9	6.7	6.7	6.8 6.8	6.8	6.8	7.2 6.1	6.7	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	20.4 20.3	20.4	8.3 8.1	8.2	22.0 22.1	22.0	83.3 83.9	83.6	6.6 6.7	6.6	6.6	6.7 6.6	6.7		7.4 6.8	7.1	
7-Apr-14	Sunny	Moderate	10:04	4.2	Surface	1.0	20.1 20.1	20.1	8.0 8.0	8.0	25.9 25.9	25.9	87.4 88.6	88.0	6.8 6.9	6.9	6.9	4.5 4.3	4.4	4.4	6.7 5.7	6.2	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.1 20.1	20.1	8.0 8.0	8.0	26.0 26.1	26.0	87.7 89.9	88.8	6.8 7.0	6.9	6.9	4.3 4.4	4.4		7.9 8.2	8.1	
9-Apr-14	Sunny	Moderate	14:37	4.2	Surface	1.0	20.8 20.8	20.8	8.0 8.0	8.0	22.6 22.5	22.5	87.1 87.3	87.2	6.8 6.9	6.8	6.8	1.9 1.8	1.9	1.9	3.9 5.0	4.5	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	20.4 20.5	20.5	7.9 8.0	8.0	25.7 25.5	25.6	86.7 86.5	86.6	6.7 6.7	6.7	6.7	1.8 1.7	1.8		5.4 4.6	5.0	
11-Apr-14	Sunny	Moderate	16:47	4.4	Surface	1.0	21.3 21.6	21.5	8.3 8.3	8.3	25.2 25.3	25.3	105.1 107.8	106.5	8.0 8.2	8.1	8.1	4.1 3.9	4.0	4.8	4.5 3.9	4.2	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	21.3 21.3	21.3	8.3 8.3	8.3	26.3 26.3	26.3	105.4 104.9	105.2	8.0 8.0	8.0	8.0	5.7 5.4	5.6		3.7 3.5	3.6	
14-Apr-14	Sunny	Moderate	19:05	4.5	Surface	1.0	22.8 22.8	22.8	8.5 8.5	8.5	23.8 23.7	23.8	117.4 123.3	120.4	8.8 9.3	9.0	9.0	6.8 7.2	7.0	7.0	9.9 9.6	9.8	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	22.7 22.5	22.6	8.5 8.4	8.5	23.8 24.1	24.0	121.5 112.3	116.9	9.1 8.5	8.8	8.8	7.0 6.7	6.9		11.6 12.7	12.2	
16-Apr-14	Sunny	Moderate	06:49	4.3	Surface	1.0	22.0 22.0	22.0	8.3 8.3	8.3	26.2 26.1	26.1	95.6 96.5	96.1	7.2 7.2	7.2	7.2	1.9 1.8	1.9	1.9	3.8 4.4	4.1	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	22.0 22.0	22.0	8.3 8.3	8.3	26.3 26.6	26.5	95.7 97.4	96.6	7.2 7.3	7.2	7.2	1.8 1.8	1.8		3.6 4.3	4.0	
18-Apr-14	Sunny	Moderate	07:46	5.1	Surface	1.0	22.7 22.7	22.7	8.2 8.2	8.2	25.6 25.5	25.6	86.9 87.0	87.0	6.5 6.5	6.5	6.5	6.0 6.2	6.1	6.2	7.5 6.5	7.0	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.6 22.7	22.6	8.2 8.2	8.2	25.7 25.6	25.7	86.9 86.9	86.9	6.5 6.5	6.5	6.5	6.2 6.3	6.3		9.0 8.4	8.7	
21-Apr-14	Fine	Moderate	10:16	4.5	Surface	1.0	23.5 23.4	23.5	8.2 8.2	8.2	24.8 24.8	24.8	90.2 87.7	89.0	6.7 6.5	6.6	6.6	3.0 3.1	3.1	3.1	5.1 5.7	5.4	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	23.3 23.4	23.4	8.2 8.2	8.2	26.0 25.9	26.0	93.0 88.7	90.9	6.8 6.5	6.7	6.7	2.9 3.0	3.0		4.9 4.4	4.7	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	13:52	3.9	Surface	1.0	23.7 23.7	23.7	8.2 8.2	8.2	25.5 25.5	25.5	90.2 89.8	90.0	6.6 6.6	6.6	6.6	4.2 4.4	4.3	4.5	5.1 4.1	4.6	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	23.7 23.5	23.6	8.2 8.2	8.2	25.9 26.6	26.2	90.0 89.0	89.5	6.6 6.5	6.5	6.5	4.4 4.8	4.6		4.6 5.6	5.1	
25-Apr-14	Sunny	Moderate	16:04	5.6	Surface	1.0	23.5 23.5	23.5	8.2 8.2	8.2	29.1 29.1	29.1	92.2 92.0	92.1	6.6 6.6	6.6	6.6	3.3 3.3	3.3	3.4	5.8 5.7	5.8	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	23.3 23.3	23.3	8.2 8.2	8.2	29.5 29.5	29.5	91.6 91.8	91.7	6.6 6.6	6.6	6.6	3.4 3.5	3.5		5.9 7.3	6.6	
28-Apr-14	Sunny	Moderate	18:58	4.1	Surface	1.0	24.5 24.5	24.5	8.2 8.2	8.2	24.7 24.9	24.8	89.7 89.7	89.7	6.5 6.5	6.5	6.5	4.0 4.3	4.2	4.6	4.7 5.2	5.0	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	24.5 24.5	24.5	8.2 8.2	8.2	26.1 26.2	26.2	89.5 89.7	89.6	6.4 6.4	6.4	6.4	5.0 4.8	4.9		4.9 5.4	5.2	
30-Apr-14	Sunny	Moderate	06:35	4.2	Surface	1.0	23.9 23.9	23.9	8.2 8.2	8.2	27.9 28.0	27.9	88.8 87.1	88.0	6.4 6.3	6.3	6.3	11.2 11.5	11.4	11.4	5.8 5.4	5.6	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	23.9 23.9	23.9	8.2 8.2	8.2	28.0 28.1	28.0	90.8 87.4	89.1	6.5 6.3	6.4	6.4	11.2 11.4	11.3		5.8 6.3	6.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10A - 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*
2-Apr-14	Cloudy	Moderate	15:00	6.6	Surface	1.0	20.2 20.2	20.2	7.9 7.9	7.9	24.8 24.5	24.7	86.7 88.2	87.5	6.8 6.9	6.9	6.9	5.2 5.6	5.4	4.9	6.2 5.1	5.7	6.7
					Middle	3.3	19.9 20.0	20.0	7.9 7.9	7.9	26.6 26.3	26.5	88.9 86.5	87.7	6.9 6.7	6.8		4.7 4.6	4.7		5.9 8.1	7.0	
					Bottom	5.6	19.9 19.9	19.9	7.9 7.9	7.9	27.2 27.1	27.1	90.1 86.5	88.3	7.0 6.7	6.9	6.9	4.7 4.7	4.7		7.0 7.5	7.3	
4-Apr-14	Cloudy	Moderate	16:30	6.5	Surface	1.0	20.4 20.5	20.5	7.9 7.9	7.9	23.5 24.0	23.7	86.2 85.5	85.9	6.8 6.7	6.7	6.7	3.2 3.2	3.2	3.3	5.4 6.4	5.9	4.8
					Middle	3.3	20.3 20.3	20.3	7.9 7.9	7.9	25.4 25.4	25.4	86.2 85.4	85.8	6.7 6.7	6.7		3.2 3.3	3.3		4.2 4.2	4.2	
					Bottom	5.5	20.3 20.4	20.3	7.9 7.9	7.9	25.9 25.5	25.7	86.2 85.2	85.7	6.7 6.6	6.7	6.7	3.3 3.4	3.4		4.5 4.2	4.4	
7-Apr-14	Cloudy	Moderate	19:21	6.4	Surface	1.0	20.0 20.1	20.0	8.1 8.1	8.1	28.5 28.2	28.3	94.0 94.9	94.5	7.2 7.3	7.3	7.3	2.5 2.4	2.5	2.5	3.0 3.9	3.5	4.2
					Middle	3.2	19.9 20.0	19.9	8.1 8.1	8.1	28.8 29.0	28.9	93.9 95.8	94.9	7.2 7.4	7.3		2.5 2.4	2.5		3.4 5.3	4.4	
					Bottom	5.4	19.9 19.9	19.9	8.1 8.1	8.1	30.3 30.3	30.3	94.0 96.4	95.2	7.2 7.4	7.3	7.3	2.6 2.5	2.6		5.1 4.2	4.7	
9-Apr-14	Sunny	Moderate	08:47	6.6	Surface	1.0	20.1 20.1	20.1	7.9 7.8	7.9	28.4 28.4	28.4	91.4 91.6	91.5	7.0 7.0	7.0	7.0	1.4 1.5	1.5	1.6	6.3 6.0	6.2	6.5
					Middle	3.3	20.0 20.0	20.0	7.9 7.8	7.8	28.7 28.8	28.7	91.4 90.9	91.2	7.0 7.0	7.0		1.5 1.5	1.5		5.1 7.2	6.2	
					Bottom	5.6	19.9 19.8	19.9	7.8 7.9	7.8	30.7 30.7	30.7	91.0 92.1	91.6	6.9 7.0	7.0	7.0	1.7 1.7	1.7		7.8 6.3	7.1	
11-Apr-14	Sunny	Moderate	09:51	6.5	Surface	1.0	20.2 20.1	20.2	8.2 8.2	8.2	30.7 30.9	30.8	95.0 94.4	94.7	7.2 7.1	7.2	7.2	1.6 1.5	1.6	1.6	2.8 2.8	2.8	3.2
					Middle	3.3	20.1 20.2	20.1	8.2 8.2	8.2	31.2 30.8	31.0	94.2 94.6	94.4	7.1 7.2	7.1		1.5 1.6	1.6		2.4 2.6	2.5	
					Bottom	5.5	20.1 20.0	20.1	8.2 8.1	8.2	31.2 31.5	31.3	94.6 94.5	94.6	7.1 7.1	7.1	7.1	1.6 1.5	1.6		4.3 4.4	4.4	
14-Apr-14	Sunny	Moderate	11:35	6.4	Surface	1.0	21.4 21.4	21.4	8.2 8.2	8.2	29.3 29.2	29.3	103.2 103.7	103.5	7.7 7.7	7.7	7.7	2.4 2.2	2.3	2.7	3.3 3.6	3.5	4.4
					Middle	3.2	21.3 21.4	21.3	8.2 8.2	8.2	29.7 29.3	29.5	102.6 103.4	103.0	7.7 7.7	7.7		2.7 2.5	2.6		4.4 5.4	4.9	
					Bottom	5.4	21.4 21.3	21.3	8.2 8.1	8.2	29.3 29.8	29.5	103.3 103.0	103.2	7.7 7.7	7.7	7.7	3.1 3.2	3.2		5.0 4.6	4.8	
16-Apr-14	Sunny	Moderate	13:55	6.3	Surface	1.0	22.0 22.0	22.0	8.3 8.3	8.3	27.4 27.6	27.5	100.0 99.8	99.9	7.5 7.4	7.4	7.4	2.0 2.0	2.0	2.3	3.8 2.9	3.4	3.5
					Middle	3.2	21.9 21.9	21.9	8.3 8.3	8.3	28.1 28.2	28.2	99.3 99.5	99.4	7.4 7.4	7.4		2.2 2.1	2.2		3.1 2.7	2.9	
					Bottom	5.3	21.8 21.8	21.8	8.2 8.3	8.3	28.7 28.5	28.6	98.9 99.3	99.1	7.4 7.4	7.4	7.4	2.7 2.6	2.7		3.9 4.2	4.1	
18-Apr-14	Sunny	Moderate	15:27	6.3	Surface	1.0	23.0 23.2	23.1	8.0 8.0	8.0	26.9 26.6	26.8	92.5 92.1	92.3	6.8 6.8	6.8	6.8	2.6 2.5	2.6	2.5	7.6 7.6	7.6	7.6
					Middle	3.2	22.9 23.0	23.0	8.0 8.0	8.0	27.2 27.2	27.2	92.1 92.8	92.5	6.8 6.8	6.8		2.4 2.6	2.5		7.2 7.7	7.5	
					Bottom	5.3	22.9 23.0	22.9	8.0 8.0	8.0	27.5 27.2	27.3	93.2 92.0	92.6	6.8 6.8	6.8	6.8	2.6 2.4	2.5		7.9 7.7	7.8	
21-Apr-14	Fine	Moderate	17:19	6.0	Surface	1.0	23.4 23.3	23.4	8.4 8.4	8.4	28.1 27.7	27.9	97.3 97.2	97.3	7.0 7.1	7.1	7.1	1.8 1.7	1.8	2.0	2.8 3.6	3.2	3.1
					Middle	3.0	23.1 23.1	23.1	8.4 8.4	8.4	29.3 29.2	29.3	96.6 96.9	96.8	7.0 7.0	7.0		2.0 2.0	2.0		3.1 3.5	3.3	
					Bottom	5.0	23.1 23.1	23.1	8.4 8.4	8.4	29.3 29.4	29.3	96.3 96.2	96.3	7.0 7.0	7.0	7.0	2.1 2.0	2.1		2.5 3.0	2.8	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10A - 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*
23-Apr-14	Sunny	Moderate	07:30	6.5	Surface	1.0	22.9 22.9	22.9	8.3 8.3	8.3	30.5 30.5	30.5	90.5 90.8	90.7	6.5 6.6	6.5	6.5	1.8 1.8	1.8	1.8	5.6 5.4	5.5	4.9
					Middle	3.3	22.8 22.8	22.8	8.3 8.3	8.3	30.6 30.6	30.6	90.9 90.6	90.8	6.6 6.5	6.5		1.8 1.8	1.8		4.6 4.8	4.7	
					Bottom	5.5	22.8 22.8	22.8	8.2 8.3	8.3	30.7 30.8	30.7	91.5 90.5	91.0	6.6 6.5	6.6	6.6	1.8 1.8	1.8		4.2 4.5	4.4	
25-Apr-14	Sunny	Moderate	09:43	6.4	Surface	1.0	22.7 22.7	22.7	8.2 8.2	8.2	31.7 31.8	31.8	89.9 89.4	89.7	6.5 6.4	6.4	6.5	1.8 1.8	1.8	1.7	3.4 3.7	3.6	3.1
					Middle	3.2	22.7 22.7	22.7	8.2 8.2	8.2	31.7 31.9	31.8	90.2 89.6	89.9	6.5 6.4	6.5		1.7 1.7	1.7		3.6 2.1	2.9	
					Bottom	5.4	22.7 22.7	22.7	8.2 8.2	8.2	31.8 31.8	31.8	89.6 90.8	90.2	6.4 6.5	6.5	6.5	1.7 1.7	1.7		3.3 2.1	2.7	
28-Apr-14	Sunny	Moderate	11:35	6.4	Surface	1.0	23.5 23.5	23.5	8.3 8.3	8.3	30.4 30.3	30.3	89.3 90.0	89.7	6.4 6.4	6.4	6.4	1.6 1.6	1.6	1.6	3.3 3.8	3.6	3.9
					Middle	3.2	23.5 23.4	23.5	8.2 8.3	8.3	30.4 30.5	30.5	89.9 89.1	89.5	6.4 6.4	6.4		1.6 1.6	1.6		3.8 4.4	4.1	
					Bottom	5.4	23.4 23.5	23.4	8.3 8.2	8.2	30.6 30.5	30.5	89.3 90.5	89.9	6.4 6.5	6.4	6.4	1.6 1.6	1.6		3.6 4.6	4.1	
30-Apr-14	Sunny	Moderate	14:08	6.6	Surface	1.0	24.1 24.1	24.1	8.4 8.3	8.3	28.0 27.9	28.0	91.8 93.7	92.8	6.6 6.7	6.6	6.6	2.3 2.2	2.3	2.4	4.0 4.1	4.1	6.0
					Middle	3.3	24.1 24.1	24.1	8.4 8.3	8.3	28.4 28.1	28.3	91.6 93.0	92.3	6.6 6.7	6.6		2.4 2.3	2.4		6.7 7.3	7.0	
					Bottom	5.6	24.0 24.1	24.1	8.2 8.3	8.3	28.5 28.2	28.4	92.5 91.5	92.0	6.6 6.5	6.6	6.6	2.5 2.6	2.6		7.6 6.1	6.9	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10A - 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*
2-Apr-14	Rainy	Moderate	07:36	6.6	Surface	1.0	20.0 20.0	20.0	7.9 7.9	7.9	26.6 26.5	26.6	85.3 85.6	85.5	6.6 6.7	6.7	6.7	6.2 6.1	6.2	7.0	8.2 6.2	7.2	7.6
					Middle	3.3	19.9 19.9	19.9	7.9 7.9	7.9	27.2 27.1	27.1	85.2 86.7	86.0	6.6 6.7	6.7		7.0 6.8	6.9		7.7 7.5	7.6	
					Bottom	5.6	19.8 19.7	19.8	7.9 7.9	7.9	27.7 28.2	28.0	85.0 89.0	87.0	6.6 6.9	6.7	6.7	7.7 8.0	7.9		9.2 6.8	8.0	
4-Apr-14	Cloudy	Moderate	08:09	6.6	Surface	1.0	20.2 20.2	20.2	7.8 7.8	7.8	21.1 21.1	21.1	79.5 82.1	80.8	6.4 6.5	6.4	6.4	4.5 4.6	4.6	4.7	6.7 6.9	6.8	7.4
					Middle	3.3	20.2 20.2	20.2	7.8 7.8	7.8	21.9 21.3	21.6	80.6 79.4	80.0	6.4 6.3	6.4		4.7 4.7	4.7		6.1 8.2	7.2	
					Bottom	5.6	20.1 20.2	20.2	7.8 7.8	7.8	23.0 22.7	22.8	80.1 79.3	79.7	6.4 6.3	6.4	6.4	4.8 4.9	4.9		8.1 8.5	8.3	
7-Apr-14	Sunny	Moderate	09:27	6.6	Surface	1.0	19.8 19.8	19.8	8.1 8.1	8.1	28.9 29.0	28.9	91.9 91.4	91.7	7.1 7.0	7.1	7.1	1.8 1.7	1.8	1.8	3.2 2.7	3.0	3.1
					Middle	3.3	19.8 19.8	19.8	8.1 8.1	8.1	29.1 29.1	29.1	92.1 91.4	91.8	7.1 7.0	7.1		1.7 1.7	1.7		2.4 2.3	2.4	
					Bottom	5.6	19.8 19.8	19.8	8.2 8.1	8.2	29.6 29.4	29.5	91.3 92.8	92.1	7.0 7.1	7.1	7.1	1.8 1.7	1.8		3.3 4.2	3.8	
9-Apr-14	Sunny	Moderate	15:03	6.8	Surface	1.0	21.0 20.7	20.8	7.8 7.8	7.8	24.9 25.9	25.4	98.1 96.5	97.3	7.6 7.4	7.5	7.4	1.8 1.6	1.7	1.6	3.8 3.5	3.7	2.9
					Middle	3.4	20.2 20.2	20.2	7.8 7.8	7.8	28.2 28.6	28.4	94.9 94.5	94.7	7.3 7.2	7.3		1.5 1.7	1.6		2.7 2.2	2.5	
					Bottom	5.8	20.2 20.2	20.2	7.8 7.7	7.8	28.9 28.8	28.9	94.7 95.1	94.9	7.2 7.3	7.3	7.3	1.6 1.5	1.6		2.0 3.1	2.6	
11-Apr-14	Sunny	Moderate	17:24	6.5	Surface	1.0	21.2 21.3	21.3	8.2 8.1	8.2	28.3 28.3	28.3	103.5 102.6	103.1	7.8 7.7	7.7	7.6	1.4 1.4	1.4	1.5	4.2 4.6	4.4	4.5
					Middle	3.3	20.6 20.5	20.6	8.1 8.1	8.1	30.0 30.2	30.1	101.0 98.4	99.7	7.6 7.4	7.5		1.5 1.5	1.5		4.9 3.1	4.0	
					Bottom	5.5	20.4 20.6	20.5	8.1 8.1	8.1	30.7 30.5	30.6	98.9 102.5	100.7	7.5 7.7	7.6	7.6	1.7 1.6	1.7		5.9 4.5	5.2	
14-Apr-14	Sunny	Moderate	19:20	6.6	Surface	1.0	22.2 22.0	22.1	8.3 8.3	8.3	26.1 26.3	26.2	111.6 110.1	110.9	8.4 8.3	8.3	8.2	2.8 2.8	2.8	3.1	3.4 3.8	3.6	4.3
					Middle	3.3	21.8 21.6	21.7	8.3 8.3	8.3	27.6 27.2	27.4	107.3 109.0	108.2	8.0 8.2	8.1		3.2 3.2	3.2		3.8 5.2	4.5	
					Bottom	5.6	21.8 21.6	21.7	8.3 8.3	8.3	29.3 29.1	29.2	110.4 107.2	108.8	8.2 8.0	8.1	8.1	3.1 3.3	3.2		5.4 4.3	4.9	
16-Apr-14	Sunny	Moderate	06:15	6.4	Surface	1.0	21.7 21.6	21.6	8.3 8.3	8.3	28.5 28.8	28.6	99.0 98.9	99.0	7.4 7.4	7.4	7.4	1.8 2.0	1.9	2.0	3.4 4.8	4.1	4.5
					Middle	3.2	21.5 21.5	21.5	8.2 8.3	8.3	29.4 29.5	29.4	98.8 98.7	98.8	7.3 7.3	7.3		2.0 2.0	2.0		4.7 4.7	4.7	
					Bottom	5.4	21.5 21.5	21.5	8.3 8.2	8.2	29.6 29.7	29.6	98.5 98.6	98.6	7.3 7.3	7.3	7.3	2.0 2.2	2.1		4.1 5.2	4.7	
18-Apr-14	Sunny	Moderate	07:38	6.5	Surface	1.0	22.5 22.5	22.5	8.2 8.2	8.2	25.5 25.5	25.5	91.5 90.7	91.1	6.8 6.8	6.8	6.8	2.4 2.4	2.4	2.4	5.1 4.5	4.8	4.1
					Middle	3.3	22.3 22.2	22.2	8.2 8.2	8.2	27.6 27.7	27.7	90.5 91.5	91.0	6.7 6.8	6.8		2.3 2.4	2.4		3.9 3.3	3.6	
					Bottom	5.5	22.2 22.4	22.3	8.2 8.1	8.2	28.0 27.8	27.9	91.7 90.4	91.1	6.8 6.7	6.7	6.7	2.4 2.4	2.4		3.4 4.4	3.9	
21-Apr-14	Fine	Moderate	09:06	6.0	Surface	1.0	23.3 23.4	23.4	8.1 8.1	8.1	25.6 25.7	25.6	89.1 94.4	91.8	6.6 6.9	6.7	6.7	1.6 1.7	1.7	1.7	4.4 3.7	4.1	4.3
					Middle	3.0	23.0 22.9	23.0	8.2 8.2	8.2	28.1 28.2	28.2	89.1 91.8	90.5	6.5 6.7	6.6		1.6 1.7	1.7		5.0 3.8	4.4	
					Bottom	5.0	22.9 23.1	23.0	8.2 8.1	8.2	28.6 28.3	28.4	90.8 88.8	89.8	6.7 6.5	6.6	6.6	1.7 1.7	1.7		4.4 4.4	4.4	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR10A - 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*
23-Apr-14	Sunny	Moderate	13:51	6.5	Surface	1.0	22.9 22.9	22.9	8.3 8.3	8.3	30.6 30.6	30.6	92.8 93.9	93.4	6.7 6.8	6.7	6.7	1.7 1.6	1.7	1.7	2.4 2.5	2.5	2.8
					Middle	3.3	22.8 22.9	22.9	8.3 8.3	8.3	31.1 31.0	31.0	94.2 92.9	93.6	6.8 6.7	6.7		1.7 1.7	1.7		2.5 2.6	2.6	
					Bottom	5.5	22.9 22.8	22.9	8.3 8.3	8.3	30.9 31.1	31.0	93.2 95.7	94.5	6.7 6.9	6.8	6.8	1.8 1.7	1.8		4.3 2.0	3.2	
25-Apr-14	Sunny	Moderate	16:38	6.6	Surface	1.0	23.0 23.0	23.0	8.2 8.2	8.2	31.7 31.6	31.7	92.3 92.1	92.2	6.6 6.6	6.6	6.6	1.8 1.7	1.8	1.8	4.2 4.4	4.3	4.1
					Middle	3.3	22.9 22.9	22.9	8.2 8.2	8.2	32.1 32.1	32.1	91.4 92.2	91.8	6.5 6.6	6.6		1.8 1.7	1.8		3.6 3.3	3.5	
					Bottom	5.6	22.9 22.9	22.9	8.1 8.2	8.2	32.1 32.0	32.1	93.3 91.9	92.6	6.7 6.6	6.6	6.6	1.8 1.8	1.8		4.9 4.2	4.6	
28-Apr-14	Sunny	Moderate	19:31	6.6	Surface	1.0	23.8 23.8	23.8	8.2 8.2	8.2	28.8 29.1	29.0	89.4 89.2	89.3	6.4 6.4	6.4	6.4	2.5 2.6	2.6	2.6	4.0 2.7	3.4	3.7
					Middle	3.3	23.7 23.7	23.7	8.2 8.2	8.2	29.8 29.9	29.9	89.4 88.7	89.1	6.4 6.3	6.4		2.5 2.6	2.6		4.2 3.3	3.8	
					Bottom	5.6	23.6 23.7	23.7	8.2 8.2	8.2	30.1 29.8	30.0	90.2 88.9	89.6	6.4 6.3	6.4	6.4	2.5 2.5	2.5		3.2 4.5	3.9	
30-Apr-14	Sunny	Moderate	05:43	6.3	Surface	1.0	23.7 23.6	23.6	8.3 8.3	8.3	28.9 29.7	29.3	97.2 89.0	93.1	7.0 6.4	6.7	6.6	2.6 2.5	2.6	2.7	2.8 3.7	3.3	4.2
					Middle	3.2	23.6 23.6	23.6	8.3 8.3	8.3	29.8 29.8	29.8	93.6 88.7	91.2	6.7 6.3	6.5		2.8 2.6	2.7		4.4 4.7	4.6	
					Bottom	5.3	23.6 23.6	23.6	8.3 8.3	8.3	29.8 29.8	29.8	91.3 88.6	90.0	6.6 6.3	6.4	6.4	2.8 2.6	2.7		3.8 5.6	4.7	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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 (^{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*
2-Apr-14	Cloudy	Moderate	15:17	5.0	Surface	1.0	20.2 20.1	20.2	7.9 7.9	7.9	24.6 24.9	24.8	86.5 86.3	86.4	6.8 6.8	6.8	6.8	4.8 4.8	4.8	4.7	9.1 8.5	8.8	8.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	20.0 19.9	20.0	7.9 7.9	7.9	26.8 26.9	26.8	85.9 85.9	85.9	6.7 6.7	6.7	6.7	4.6 4.4	4.5		8.9 8.5	8.7	
4-Apr-14	Cloudy	Moderate	16:40	5.5	Surface	1.0	20.4 20.4	20.4	7.9 7.9	7.9	24.2 23.7	23.9	85.6 85.3	85.5	6.7 6.7	6.7	6.7	3.7 3.5	3.6	3.7	4.2 5.6	4.9	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	20.4 20.3	20.4	7.9 7.8	7.9	25.3 25.4	25.4	85.2 85.1	85.2	6.6 6.6	6.6	6.6	3.6 3.8	3.7		4.7 6.3	5.5	
7-Apr-14	Cloudy	Moderate	19:31	4.8	Surface	1.0	20.0 20.0	20.0	8.1 8.1	8.1	28.1 28.2	28.2	93.2 93.4	93.3	7.2 7.2	7.2	7.2	1.9 1.9	1.9	1.9	5.7 4.3	5.0	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	19.9 20.0	20.0	8.1 8.1	8.1	29.9 30.1	30.0	93.0 92.9	93.0	7.1 7.1	7.1	7.1	1.9 1.9	1.9		5.7 4.3	5.0	
9-Apr-14	Sunny	Moderate	08:33	5.2	Surface	1.0	20.0 20.0	20.0	7.9 7.9	7.9	28.5 28.4	28.4	91.2 91.4	91.3	7.0 7.0	7.0	7.0	1.6 1.6	1.6	1.8	2.4 4.1	3.3	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	20.0 19.9	20.0	7.9 7.9	7.9	28.9 29.4	29.1	91.2 91.5	91.4	7.0 7.0	7.0	7.0	1.8 1.9	1.9		4.6 5.6	5.1	
11-Apr-14	Sunny	Moderate	09:46	5.0	Surface	1.0	20.2 20.2	20.2	8.2 8.2	8.2	30.8 30.9	30.8	94.4 94.1	94.3	7.1 7.1	7.1	7.1	1.5 1.5	1.5	1.5	3.4 2.5	3.0	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	20.2 20.2	20.2	8.2 8.2	8.2	30.9 30.8	30.8	93.9 94.1	94.0	7.1 7.1	7.1	7.1	1.5 1.5	1.5		3.0 2.7	2.9	
14-Apr-14	Sunny	Moderate	11:26	5.0	Surface	1.0	21.4 21.4	21.4	8.2 8.2	8.2	29.2 29.1	29.2	102.8 101.9	102.4	7.7 7.6	7.6	7.6	2.1 2.2	2.2	2.2	3.5 4.2	3.9	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	21.4 21.4	21.4	8.2 8.2	8.2	29.2 29.1	29.2	102.4 100.4	101.4	7.7 7.5	7.6	7.6	2.0 2.2	2.1		5.0 3.8	4.4	
16-Apr-14	Sunny	Moderate	14:12	5.2	Surface	1.0	21.9 22.0	22.0	8.3 8.3	8.3	27.7 27.3	27.5	99.6 99.7	99.7	7.4 7.4	7.4	7.4	2.2 2.3	2.3	2.2	3.9 4.5	4.2	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.8 21.8	21.8	8.3 8.3	8.3	28.4 29.0	28.7	99.3 99.0	99.2	7.4 7.4	7.4	7.4	2.0 1.9	2.0		2.8 2.8	2.8	
18-Apr-14	Sunny	Moderate	15:36	4.7	Surface	1.0	23.0 23.0	23.0	8.0 8.0	8.0	26.8 26.9	26.8	92.1 92.2	92.2	6.8 6.8	6.8	6.8	2.5 2.6	2.6	2.6	6.0 6.7	6.4	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	22.9 23.0	23.0	8.0 8.0	8.0	27.3 27.2	27.3	91.7 91.8	91.8	6.7 6.7	6.7	6.7	2.6 2.4	2.5		5.4 7.1	6.3	
21-Apr-14	Fine	Moderate	17:31	4.7	Surface	1.0	23.6 23.1	23.4	8.4 8.3	8.3	27.5 28.3	27.9	98.5 96.9	97.7	7.1 7.0	7.1	7.1	1.8 1.6	1.7	1.8	2.8 2.9	2.9	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	23.0 23.3	23.1	8.3 8.3	8.3	29.4 29.2	29.3	96.8 97.0	96.9	7.0 7.0	7.0	7.0	1.7 1.8	1.8		3.5 2.6	3.1	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
23-Apr-14	Sunny	Moderate	07:25	4.7	Surface	1.0	22.9 22.9	22.9	8.3 8.3	8.3	30.2 30.5	30.4	91.8 90.7	91.3	6.6 6.5	6.6	6.6	1.8 1.8	1.8	1.9	5.1 5.1	5.1	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	22.9 22.9	22.9	8.3 8.3	8.3	30.5 30.5	30.5	90.8 93.3	92.1	6.6 6.7	6.6	6.6	1.9 1.9	1.9		5.6 4.0	4.8	
25-Apr-14	Sunny	Moderate	09:38	5.1	Surface	1.0	22.7 22.7	22.7	8.2 8.2	8.2	31.9 31.8	31.8	89.9 91.0	90.5	6.5 6.5	6.5	6.5	1.8 1.8	1.8	1.8	4.4 3.3	3.9	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.7 22.7	22.7	8.2 8.2	8.2	31.8 31.7	31.8	90.2 92.8	91.5	6.5 6.7	6.6	6.6	1.8 1.8	1.8		4.4 4.7	4.6	
28-Apr-14	Sunny	Moderate	11:29	5.2	Surface	1.0	23.5 23.5	23.5	8.2 8.2	8.2	30.3 30.3	30.3	89.6 89.2	89.4	6.4 6.4	6.4	6.4	2.2 2.2	2.2	2.2	6.1 6.2	6.2	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	23.5 23.5	23.5	8.2 8.1	8.2	30.3 30.3	30.3	89.2 90.2	89.7	6.4 6.4	6.4	6.4	2.1 2.2	2.2		4.6 5.9	5.3	
30-Apr-14	Sunny	Moderate	14:17	5.1	Surface	1.0	24.1 24.1	24.1	8.4 8.4	8.4	28.0 28.0	28.0	98.7 93.5	96.1	7.1 6.7	6.9	6.9	2.6 2.6	2.6	2.7	5.1 6.9	6.0	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	24.0 24.1	24.1	8.4 8.4	8.4	28.1 28.1	28.1	94.6 92.4	93.5	6.8 6.6	6.7	6.7	2.7 2.6	2.7		4.7 5.5	5.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

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*
2-Apr-14	Rainy	Moderate	07:20	5.2	Surface	1.0	19.6 19.6	19.6	7.9 7.9	7.9	29.0 29.0	29.0	91.2 88.6	89.9	7.0 6.8	6.9	6.9	6.5 6.9	6.7	6.6	9.5 9.6	9.6	9.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	19.6 19.6	19.6	7.9 7.9	7.9	29.0 29.0	29.0	89.0 93.1	91.1	6.9 7.2	7.0	7.0	6.6 6.3	6.5		9.6 9.0	9.3	
4-Apr-14	Cloudy	Moderate	07:59	5.4	Surface	1.0	19.5 19.5	19.5	8.0 8.0	8.0	29.3 29.3	29.3	88.1 88.4	88.3	6.8 6.8	6.8	6.8	3.8 4.0	3.9	4.1	5.2 5.3	5.3	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	19.5 19.5	19.5	8.0 8.0	8.0	29.8 29.6	29.7	88.5 88.0	88.3	6.8 6.8	6.8	6.8	4.2 4.1	4.2		5.5 5.8	5.7	
7-Apr-14	Sunny	Moderate	09:22	5.4	Surface	1.0	19.7 19.7	19.7	8.1 8.1	8.1	30.0 30.0	30.0	91.5 91.8	91.7	7.0 7.0	7.0	7.0	1.9 1.9	1.9	1.9	5.0 3.9	4.5	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	19.7 19.7	19.7	8.1 8.1	8.1	30.3 30.1	30.2	92.2 91.5	91.9	7.1 7.0	7.0	7.0	1.9 1.8	1.9		3.6 5.3	4.5	
9-Apr-14	Sunny	Moderate	15:18	5.6	Surface	1.0	20.9 20.8	20.8	7.7 7.7	7.7	25.0 25.8	25.4	97.8 96.3	97.1	7.6 7.4	7.5	7.5	1.9 1.8	1.9	1.8	2.5 2.2	2.4	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	20.3 20.1	20.2	7.7 7.7	7.7	28.6 29.2	28.9	95.8 93.9	94.9	7.3 7.2	7.3	7.3	1.7 1.5	1.6		2.3 4.2	3.3	
11-Apr-14	Sunny	Moderate	17:31	5.4	Surface	1.0	21.5 21.2	21.3	8.2 8.2	8.2	28.1 28.4	28.3	108.2 105.2	106.7	8.1 7.9	8.0	8.0	1.3 1.4	1.4	1.4	3.5 2.6	3.1	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	20.9 20.6	20.8	8.1 8.1	8.1	30.0 30.2	30.1	105.1 105.1	105.1	7.9 7.9	7.9	7.9	1.4 1.4	1.4		3.3 2.9	3.1	
14-Apr-14	Sunny	Moderate	19:30	5.2	Surface	1.0	21.7 21.7	21.7	8.3 8.3	8.3	27.0 27.4	27.2	108.9 108.3	108.6	8.2 8.1	8.2	8.2	2.5 2.5	2.5	2.6	3.8 3.9	3.9	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.5 21.6	21.6	8.3 8.3	8.3	29.0 29.0	29.0	109.1 108.9	109.0	8.1 8.1	8.1	8.1	2.5 2.6	2.6		6.0 4.3	5.2	
16-Apr-14	Sunny	Moderate	05:59	5.2	Surface	1.0	21.6 21.6	21.6	8.2 8.2	8.2	28.9 28.7	28.8	98.9 99.1	99.0	7.4 7.4	7.4	7.4	1.9 2.0	2.0	2.0	6.8 5.8	6.3	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.5 21.6	21.6	8.2 8.2	8.2	29.1 29.2	29.1	99.0 98.8	98.9	7.4 7.4	7.4	7.4	1.8 1.9	1.9		5.1 5.4	5.3	
18-Apr-14	Sunny	Moderate	07:33	5.2	Surface	1.0	21.8 21.8	21.8	8.2 8.2	8.2	30.2 30.2	30.2	92.7 92.2	92.5	6.8 6.8	6.8	6.8	2.6 2.5	2.6	2.6	5.5 5.1	5.3	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	21.8 21.8	21.8	8.2 8.2	8.2	30.1 30.2	30.2	93.5 92.3	92.9	6.9 6.8	6.8	6.8	2.6 2.5	2.6		5.2 5.8	5.5	
21-Apr-14	Fine	Moderate	09:02	5.0	Surface	1.0	22.6 22.5	22.6	8.2 8.2	8.2	30.4 30.5	30.4	92.7 94.1	93.4	6.7 6.8	6.8	6.8	1.7 1.7	1.7	1.7	2.8 2.2	2.5	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	22.5 22.6	22.6	8.1 8.2	8.2	30.7 30.3	30.5	93.3 91.9	92.6	6.8 6.7	6.7	6.7	1.7 1.7	1.7		2.1 4.2	3.2	

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

Appendix J - Marine Water Quality Monitoring Results

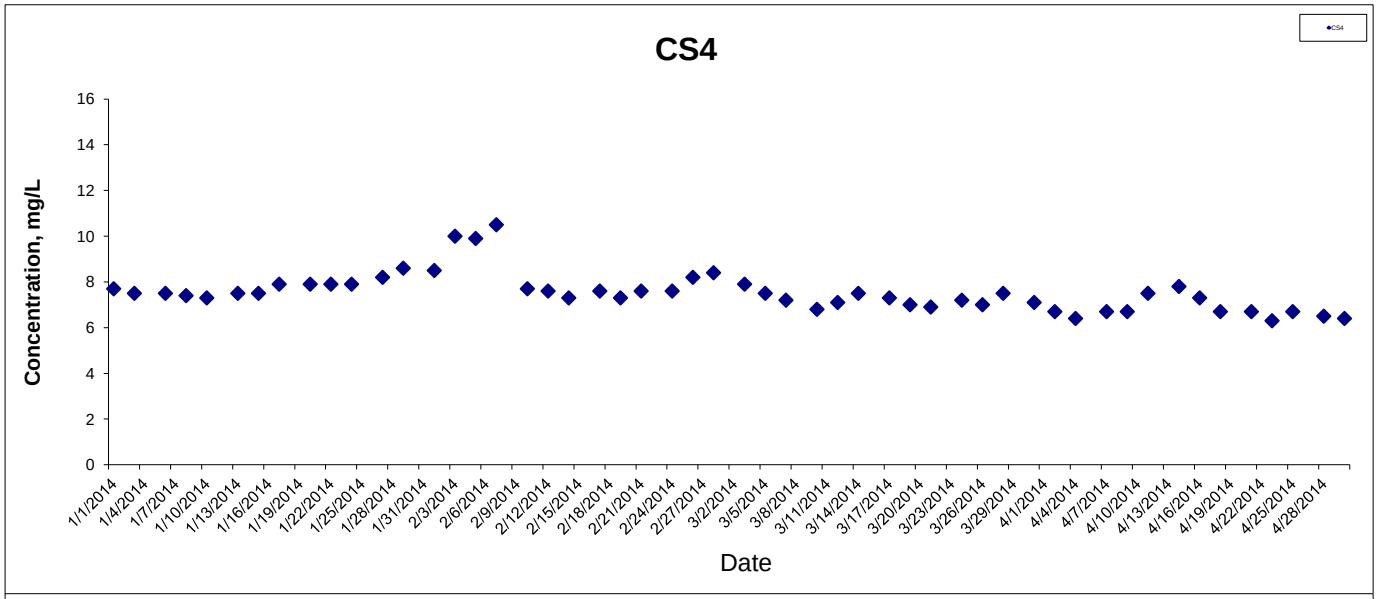
Water Quality Monitoring Results at SR10B(N) - Mid-FloodTide

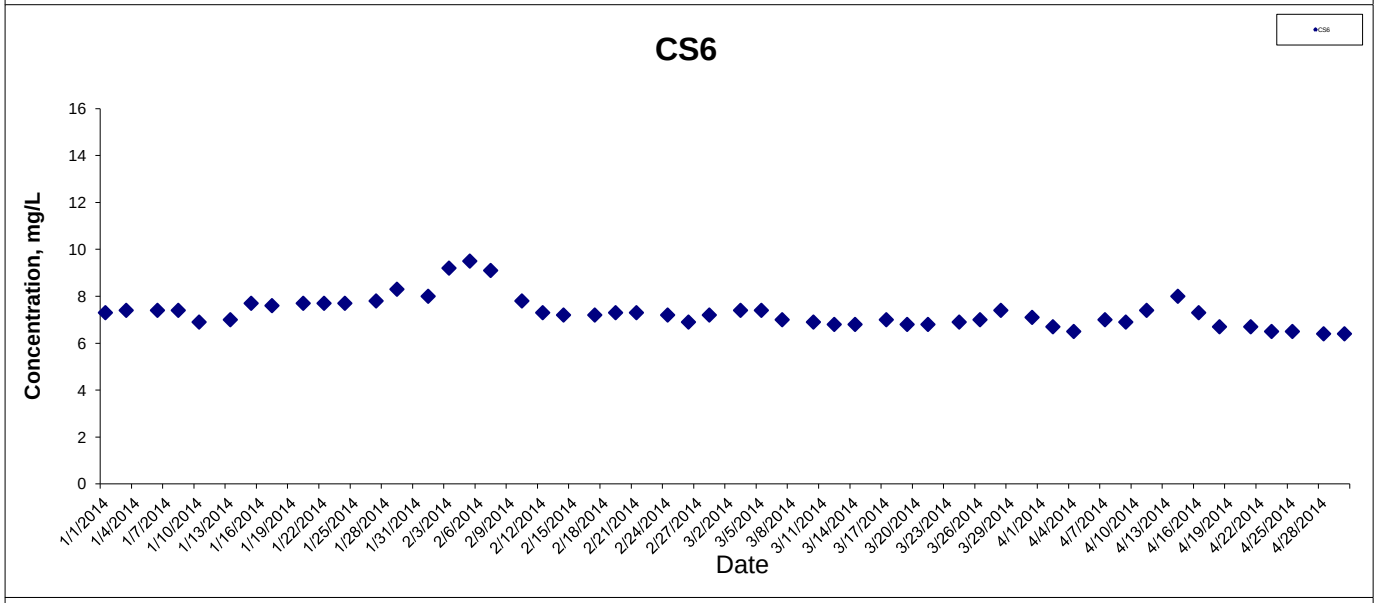
Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Apr-14	Sunny	Moderate	14:00	5.2	Surface	1.0	23.0 22.9	22.9	8.3 8.3	8.3	30.2 30.7	30.5	92.5 92.7	92.6	6.7 6.7	6.7	6.7	1.7 1.6	1.7	1.7	3.2 2.6	2.9	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	23.0 22.9	22.9	8.3 8.2	8.3	30.5 31.0	30.7	92.6 92.6	92.6	6.7 6.7	6.7	6.7	1.7 1.6	1.7		3.8 3.8	3.8	
25-Apr-14	Sunny	Moderate	16:50	5.1	Surface	1.0	22.9 23.1	23.0	8.2 8.2	8.2	31.9 31.4	31.7	91.4 92.9	92.2	6.5 6.6	6.6	6.6	1.9 1.8	1.9	1.9	4.0 3.0	3.5	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	22.9 22.9	22.9	8.2 8.2	8.2	32.1 32.0	32.1	91.5 92.7	92.1	6.5 6.6	6.6	6.6	1.8 1.8	1.8		4.0 4.5	4.3	
28-Apr-14	Sunny	Moderate	19:39	5.2	Surface	1.0	23.8 23.7	23.7	8.2 8.3	8.2	29.2 29.6	29.4	88.8 88.6	88.7	6.4 6.3	6.3	6.3	2.7 2.8	2.8	2.7	3.8 3.6	3.7	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	23.6 23.7	23.6	8.2 8.2	8.2	30.3 30.0	30.2	88.5 88.5	88.5	6.3 6.3	6.3	6.3	2.6 2.5	2.6		4.3 2.7	3.5	
30-Apr-14	Sunny	Moderate	05:38	4.9	Surface	1.0	23.5 23.5	23.5	8.3 8.3	8.3	30.5 30.4	30.4	89.9 96.2	93.1	6.4 6.9	6.7	6.7	2.8 3.0	2.9	3.0	6.4 4.8	5.6	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	23.5 23.5	23.5	8.2 8.3	8.2	30.1 30.4	30.3	90.7 89.1	89.9	6.5 6.4	6.4	6.4	3.1 3.0	3.1		4.7 6.2	5.5	

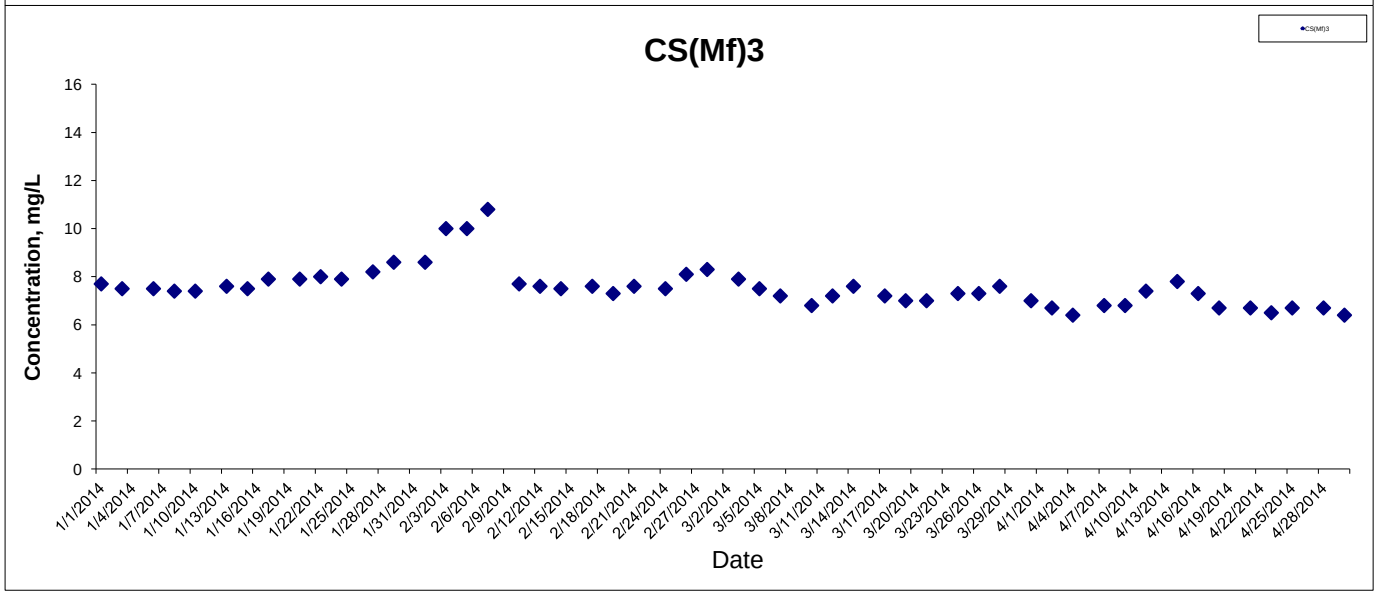
Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** Cancelled due to Thunderstorm Warning and safety concern.

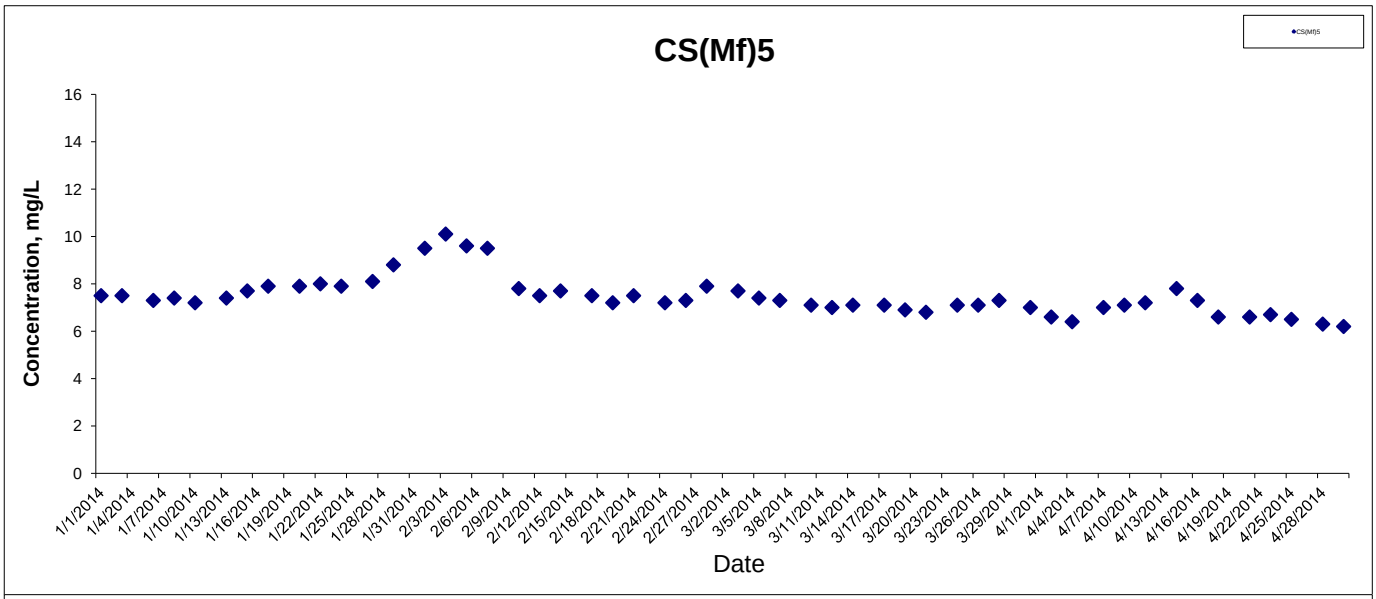
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

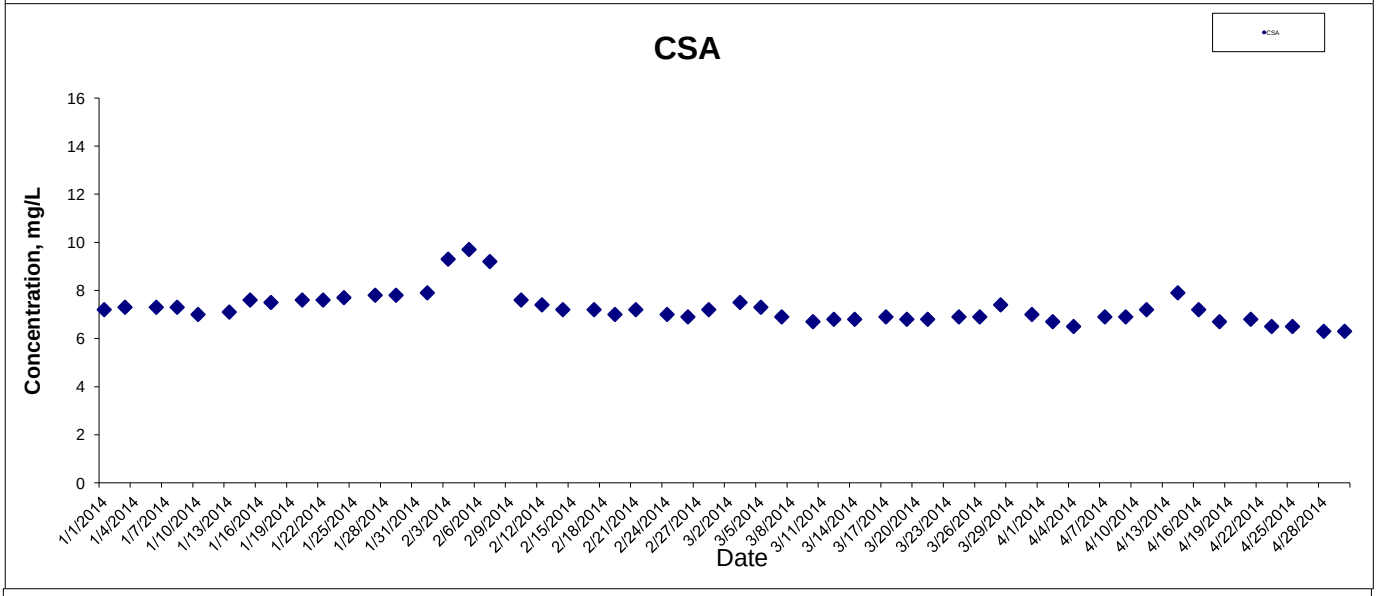


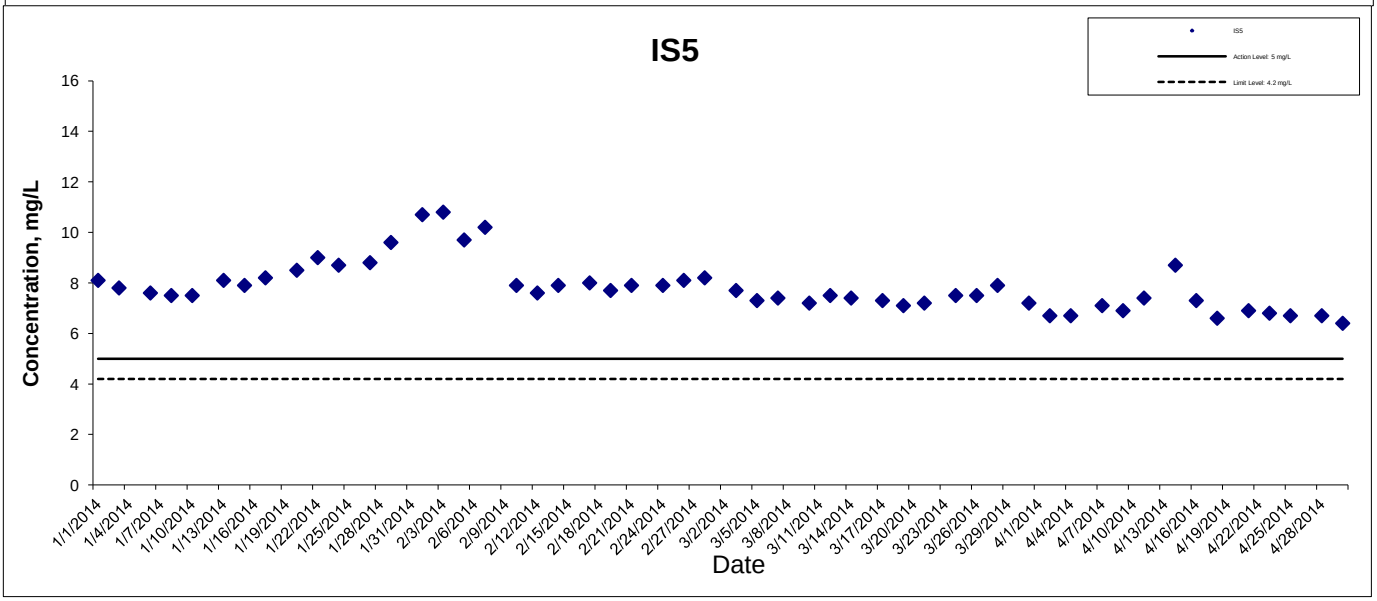




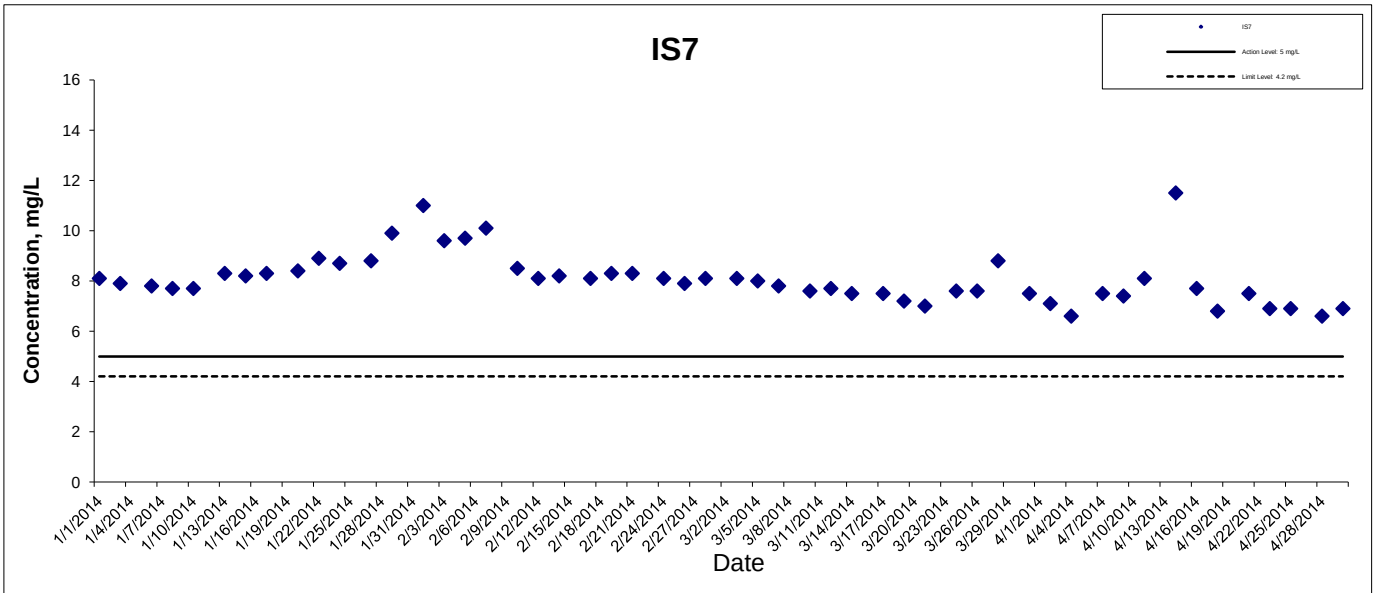
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

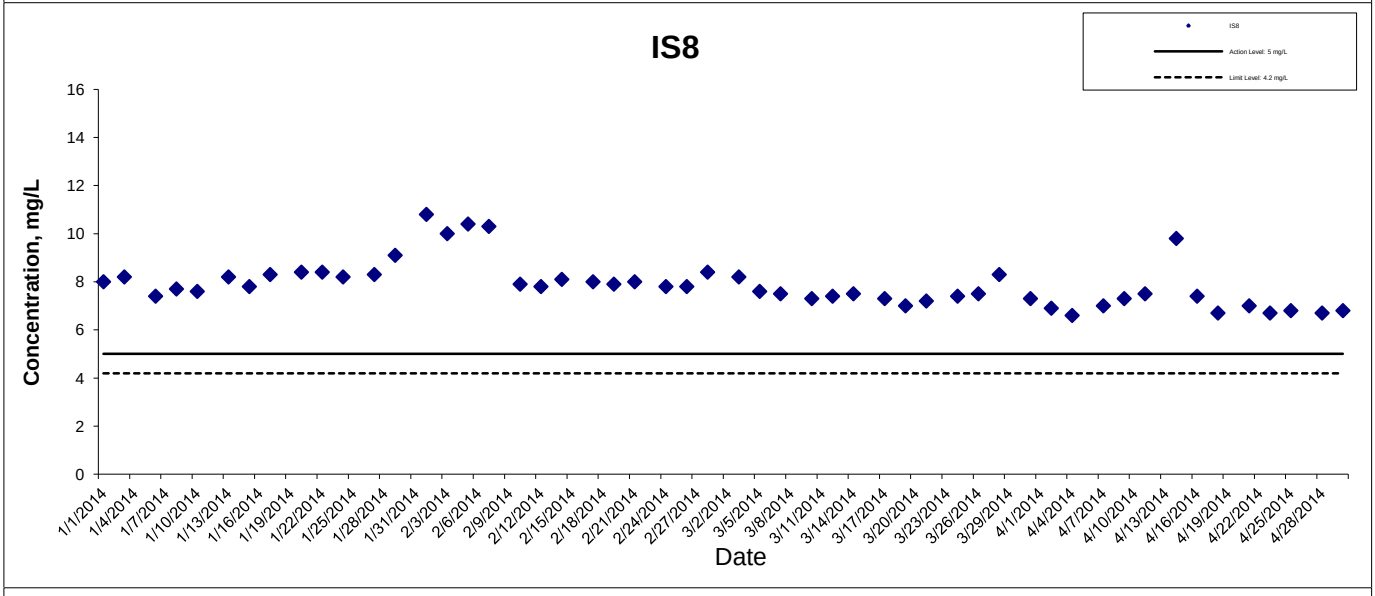


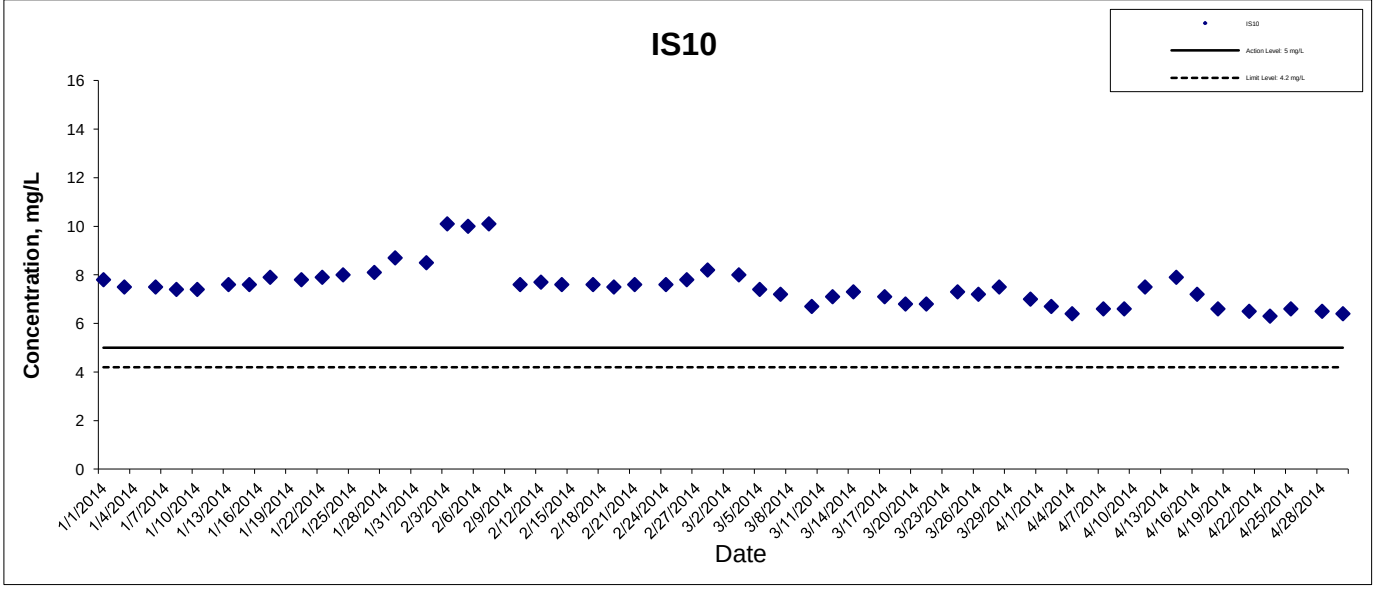




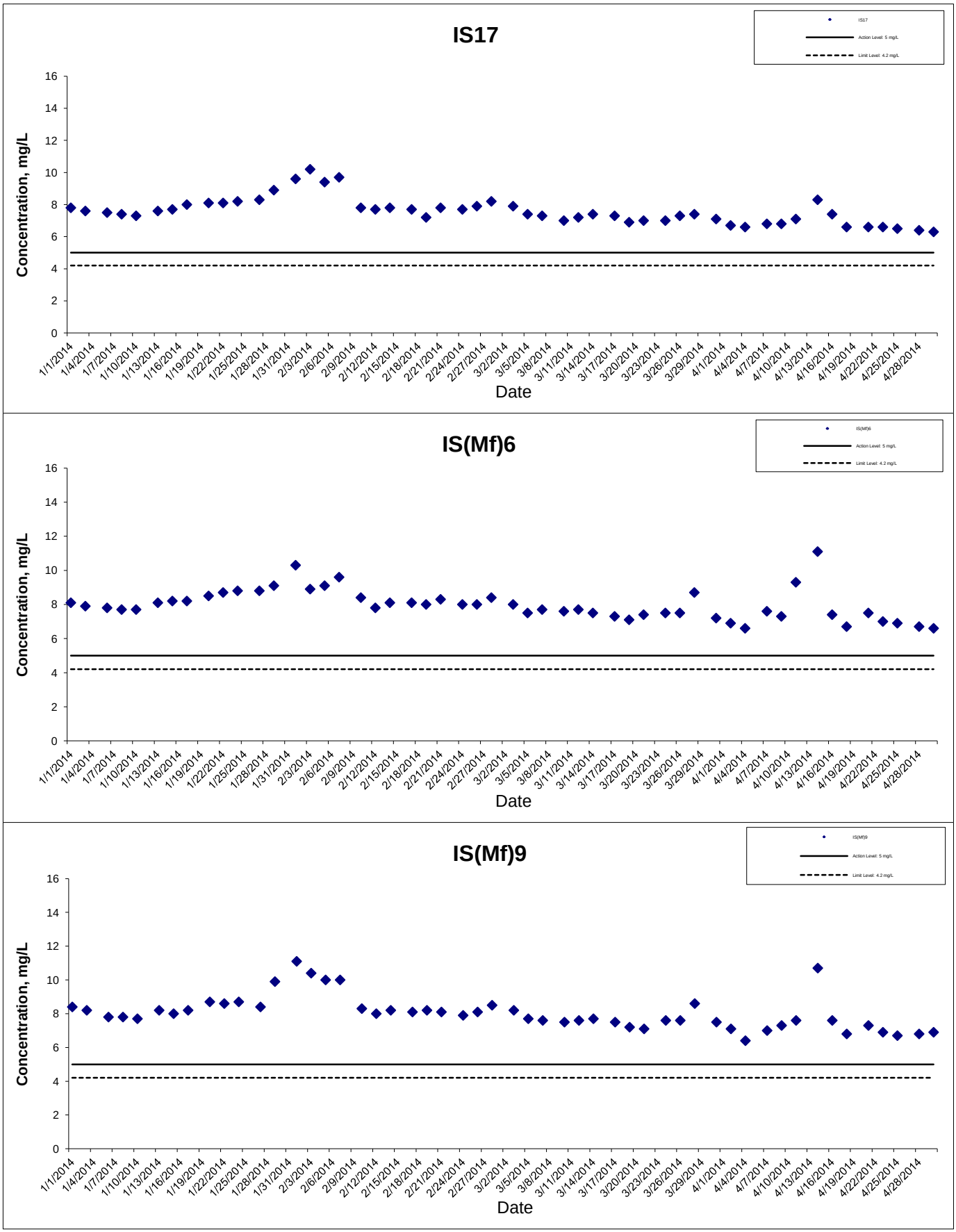
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide







Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

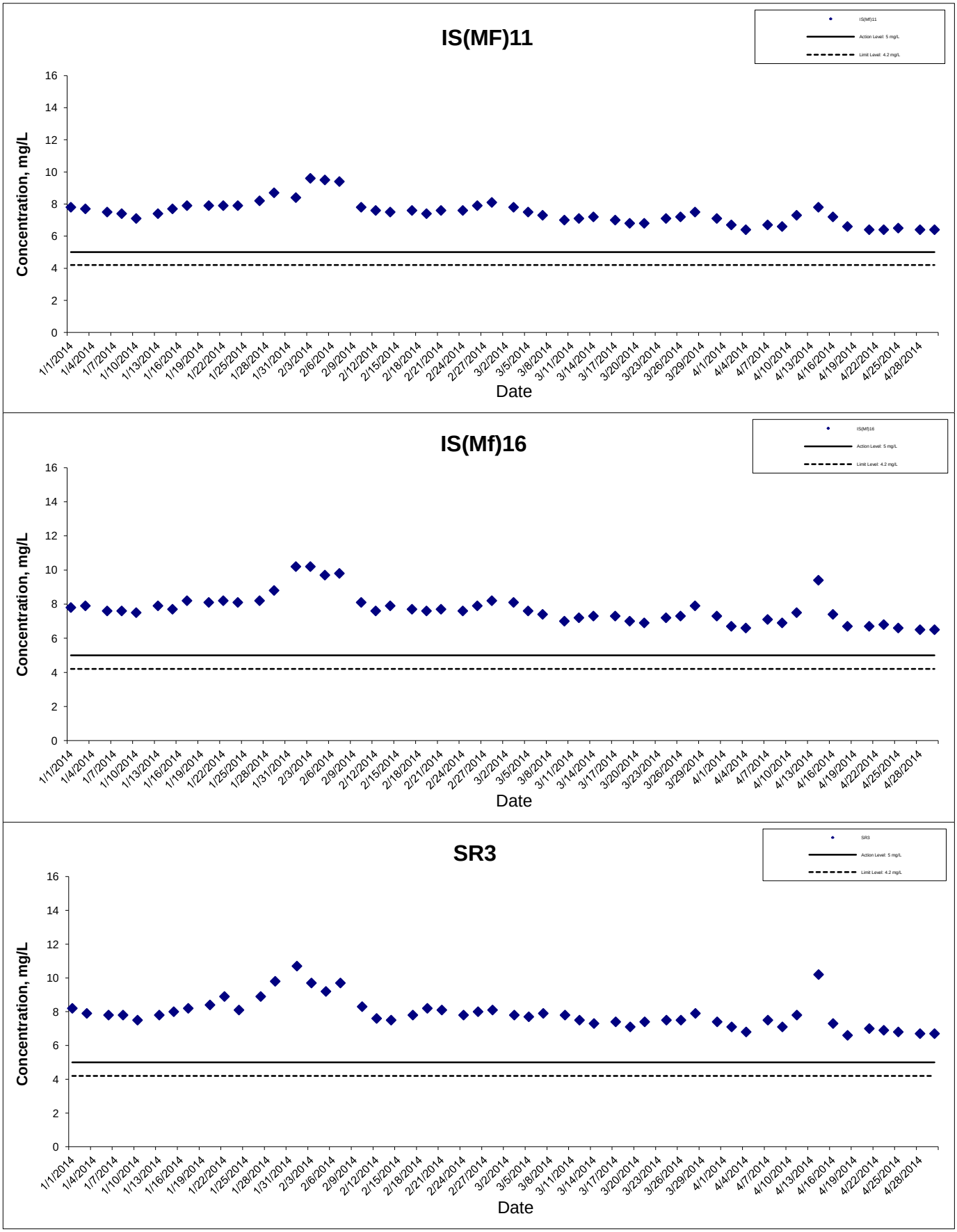


HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

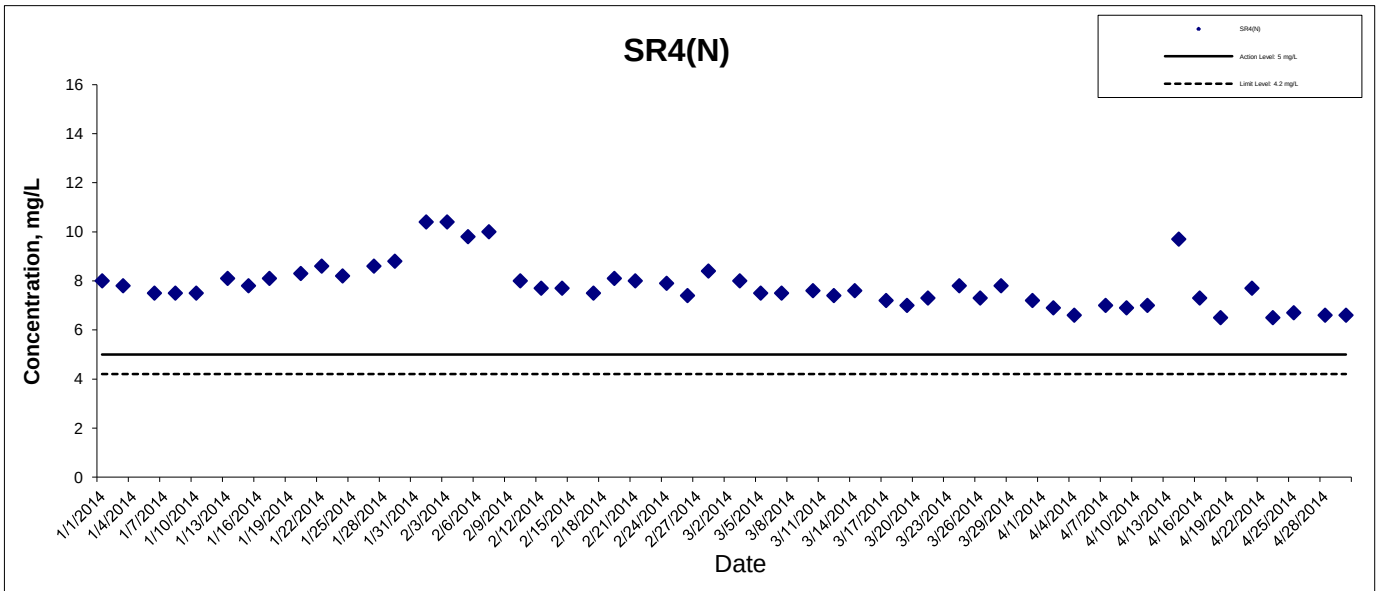
Graphical Presentation of Impact Water Quality Monitoring Results

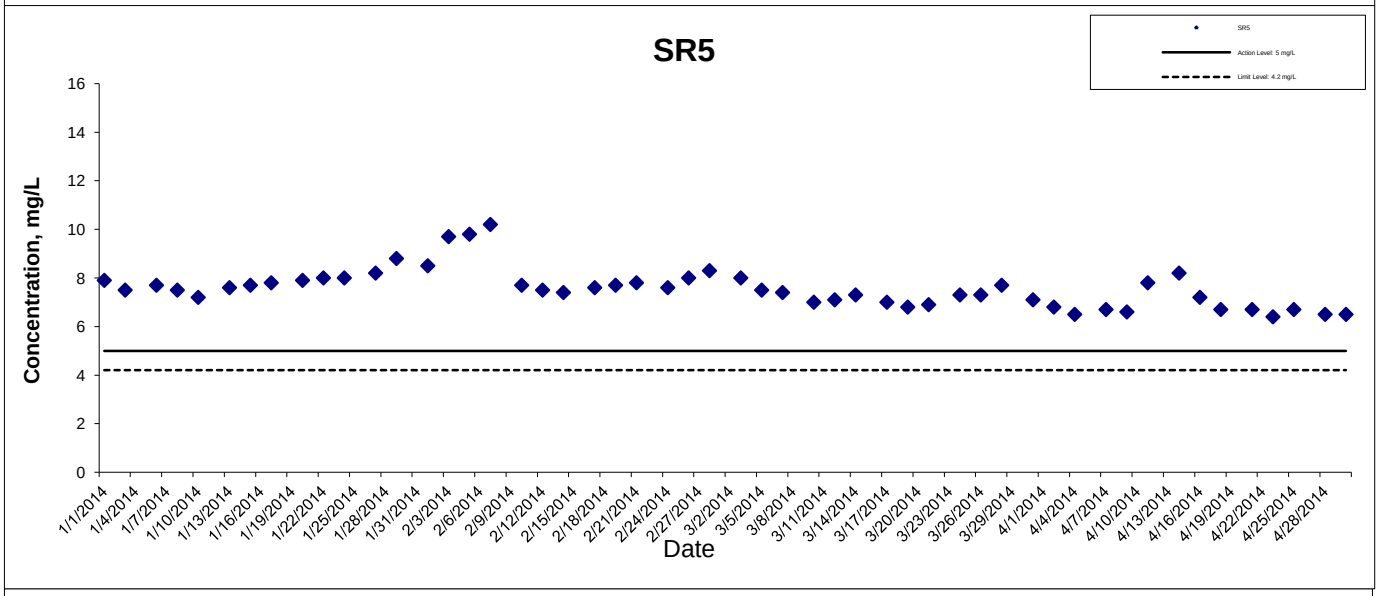
Project No.: 60249820 **Date: May 2014** **Appendix J**

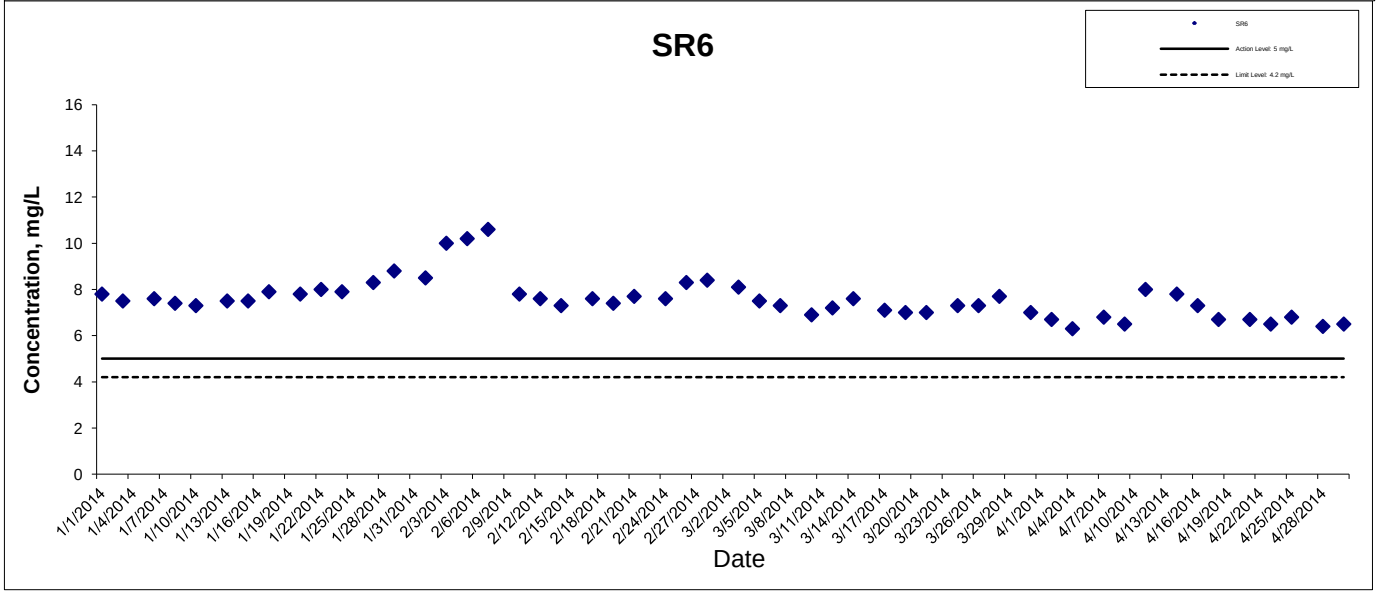
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



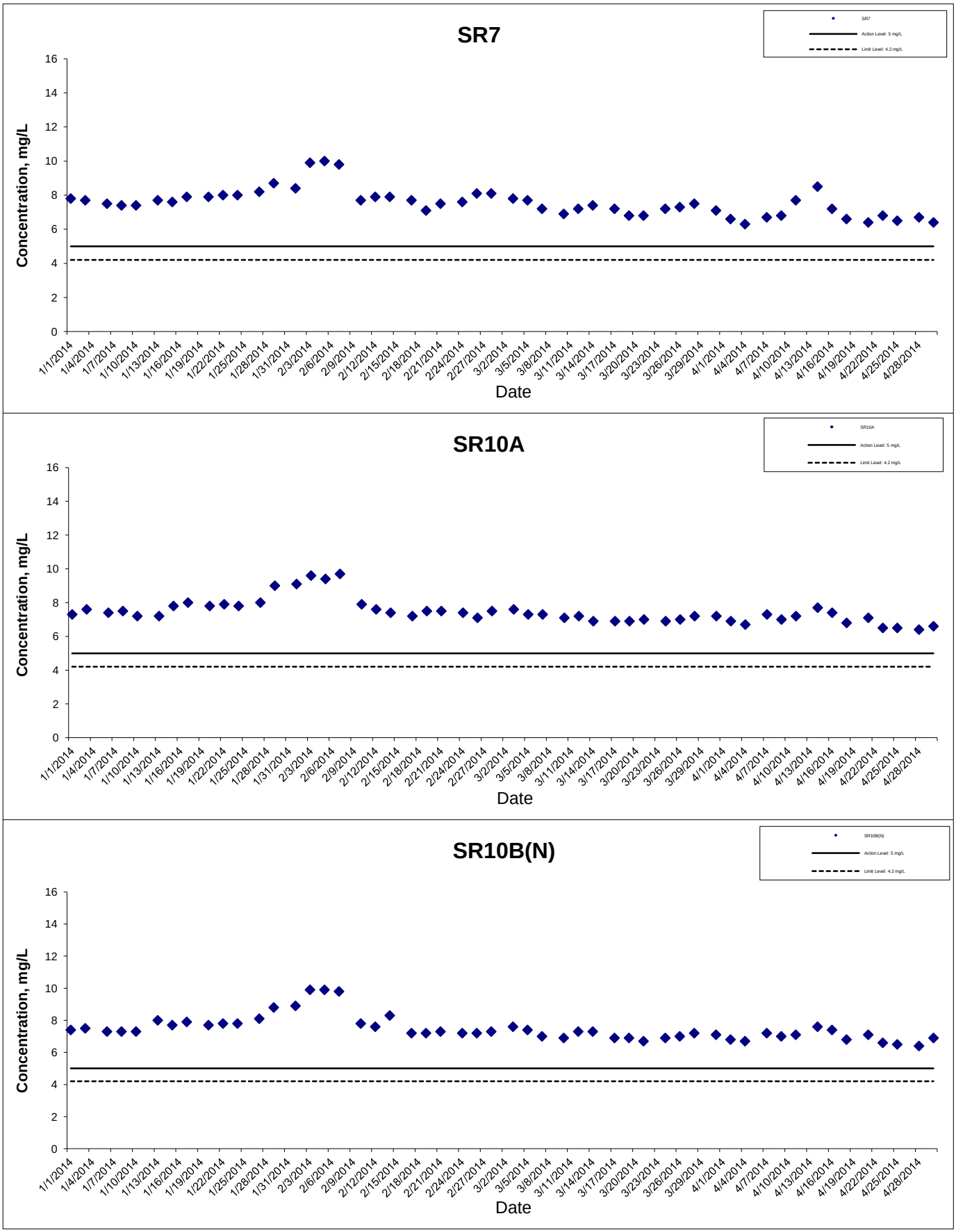
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



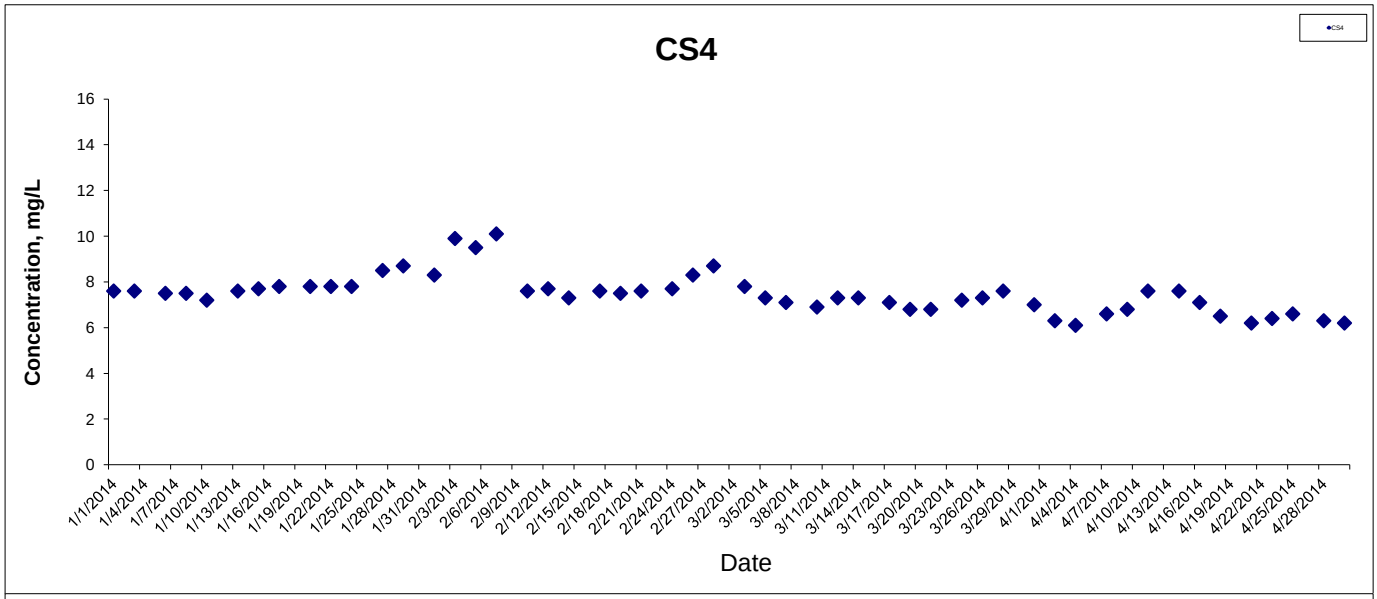


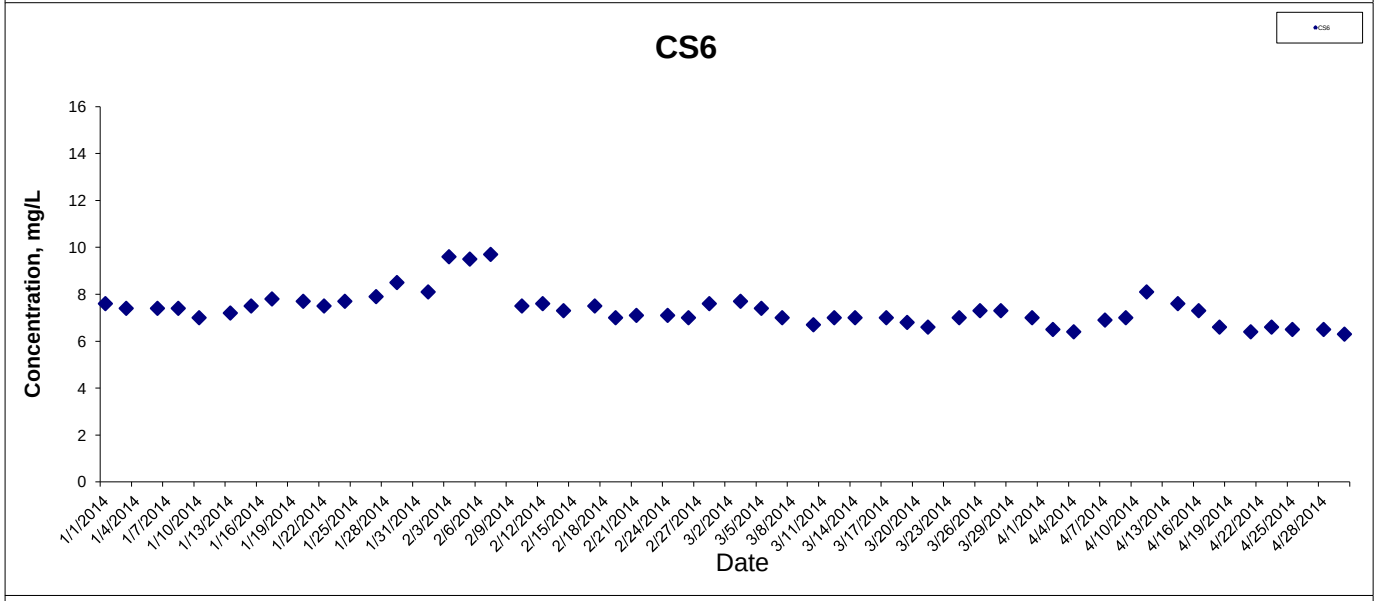


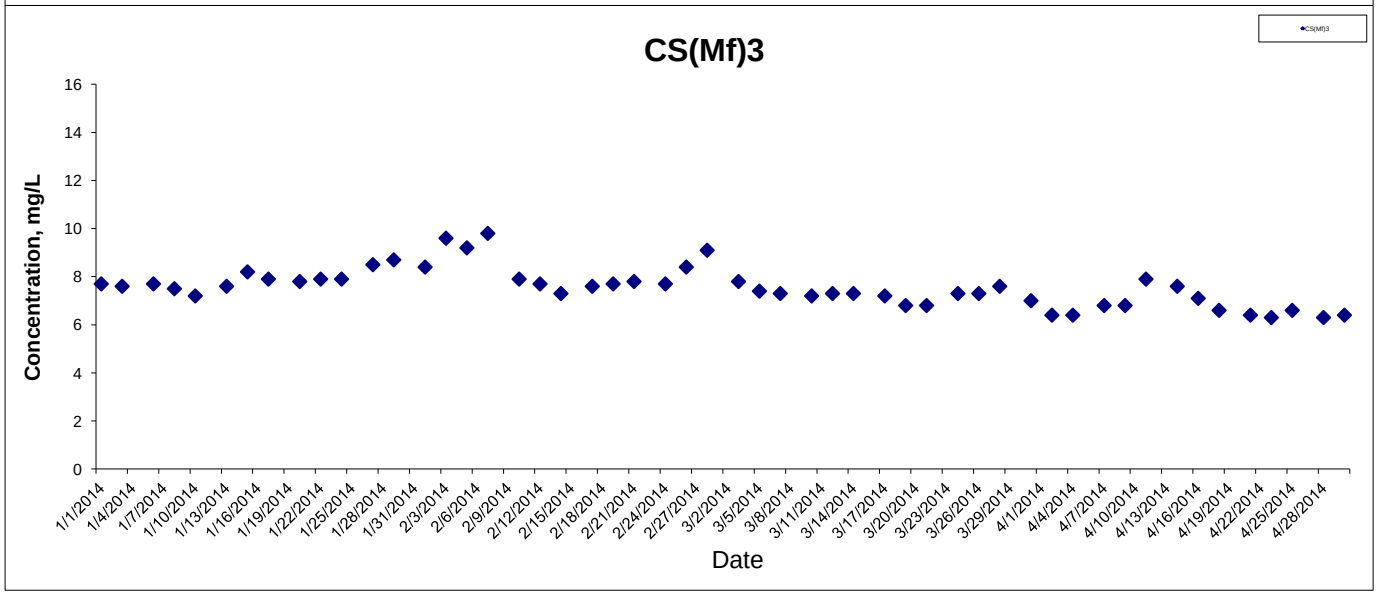
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



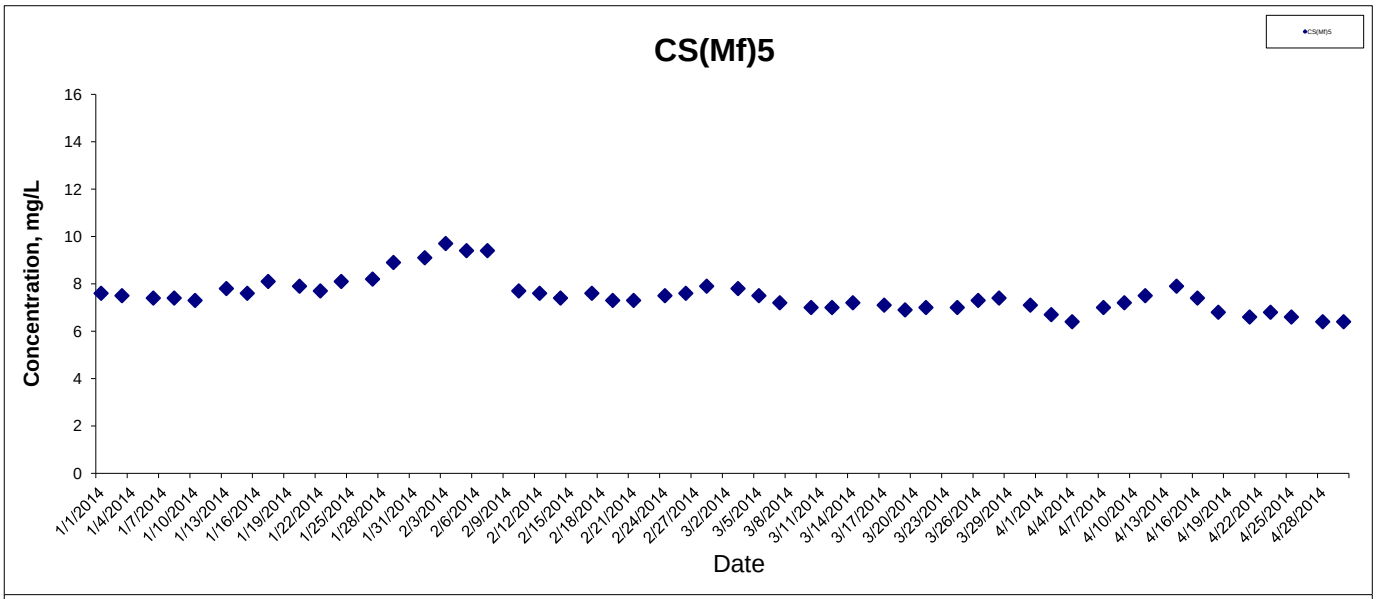
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

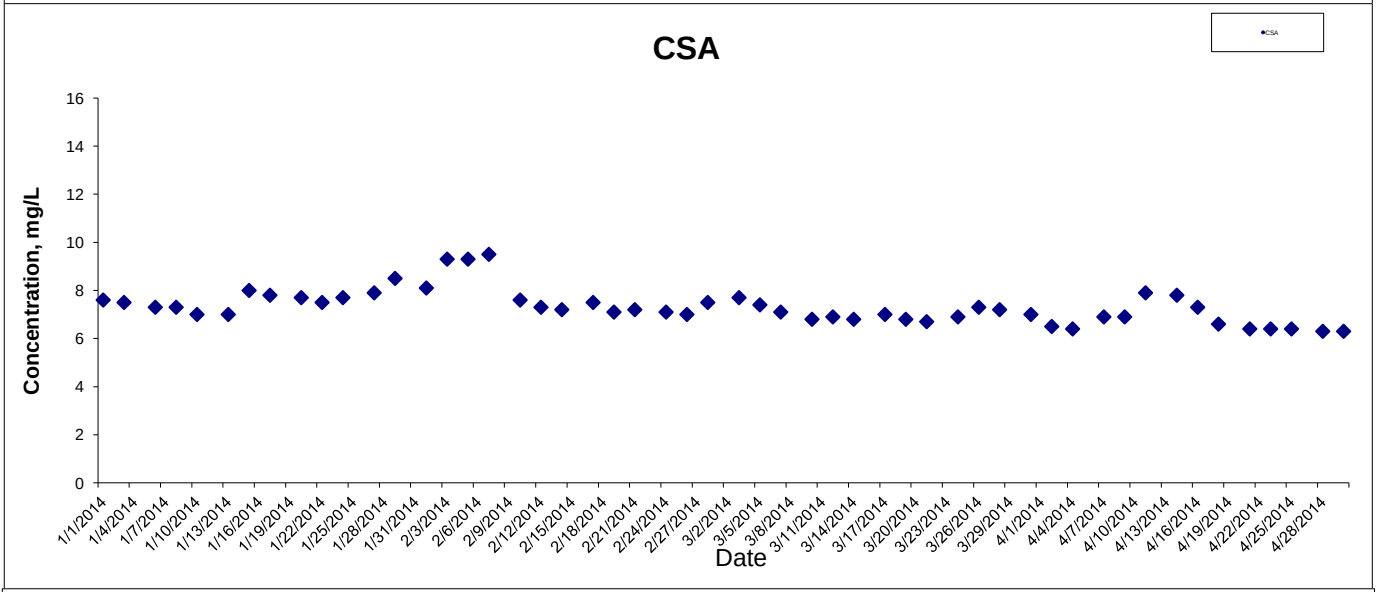


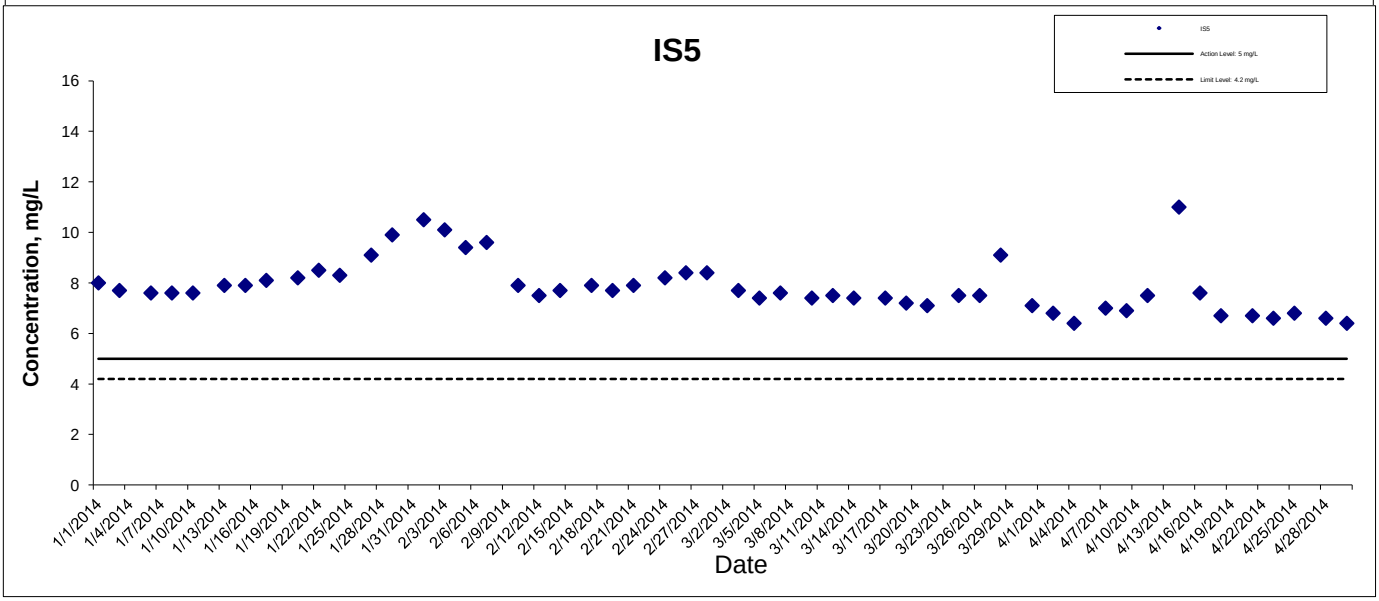




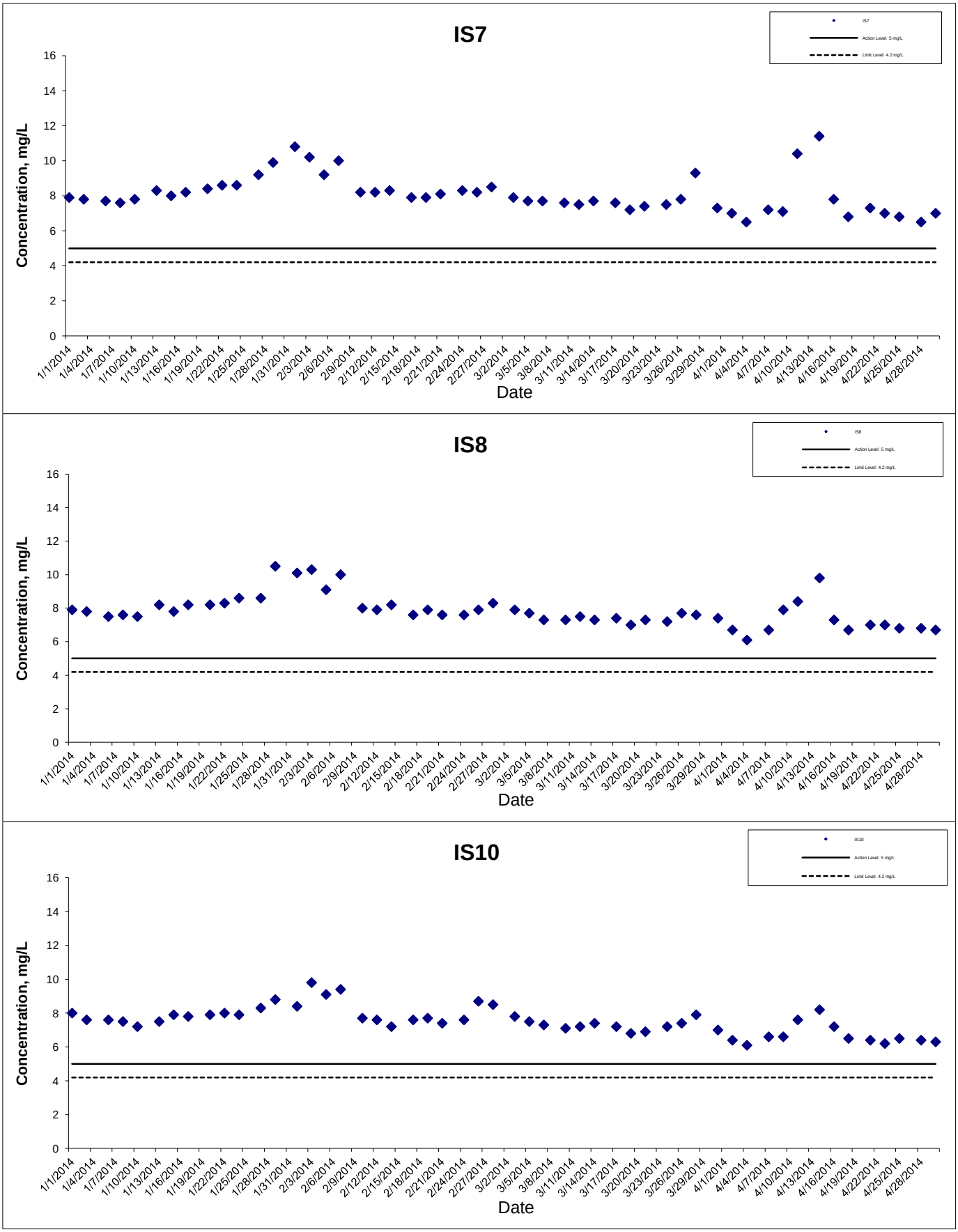
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



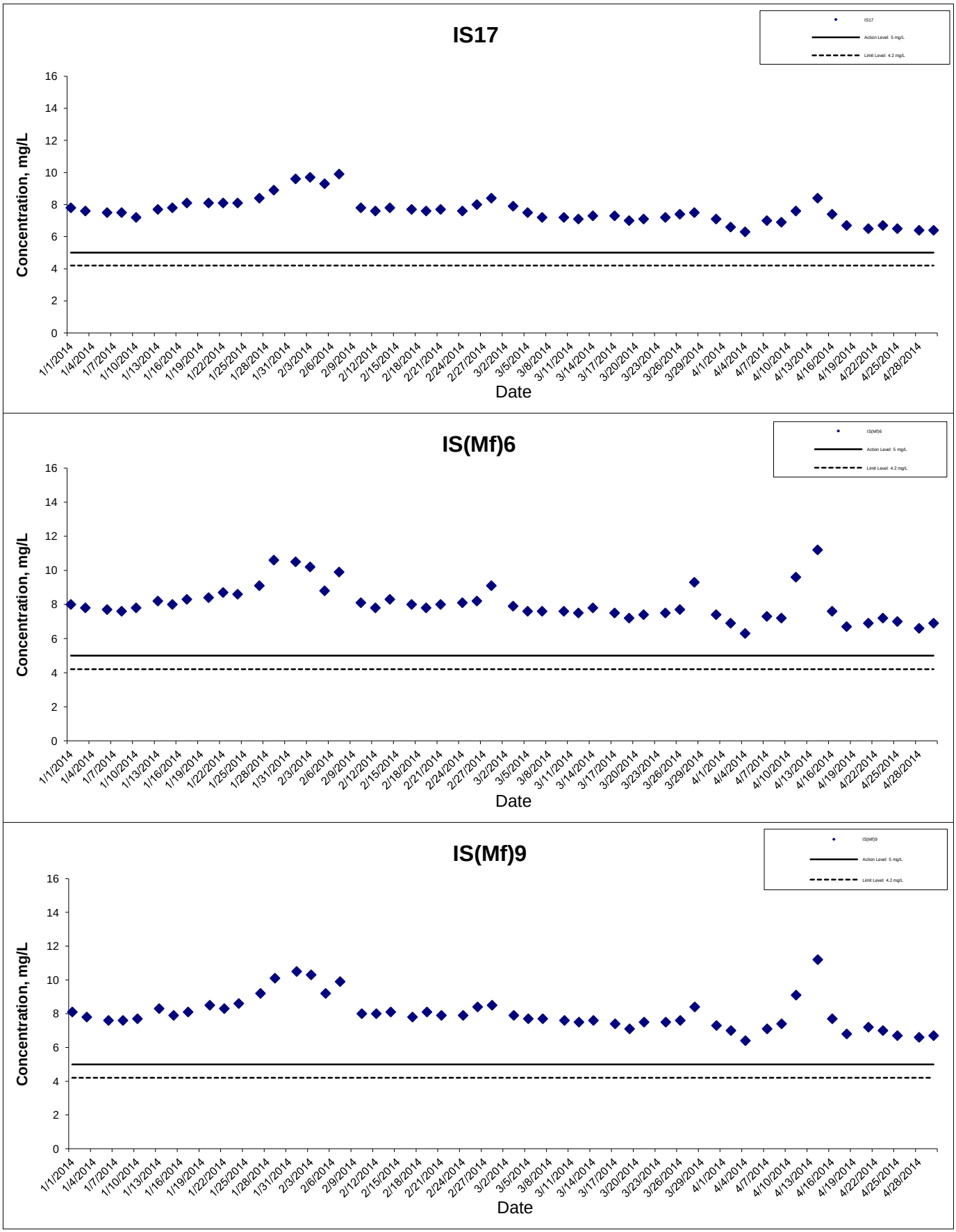




Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

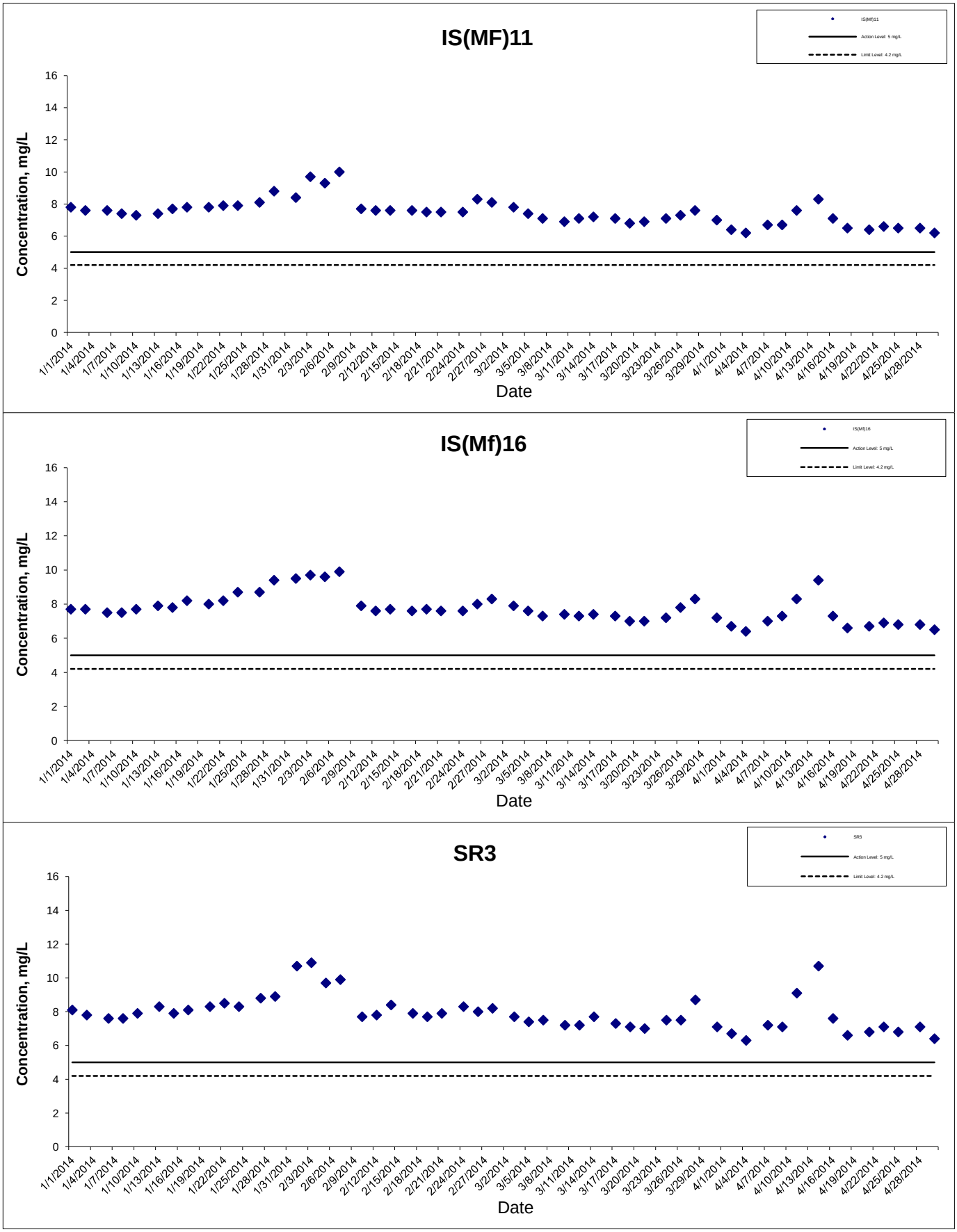


HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

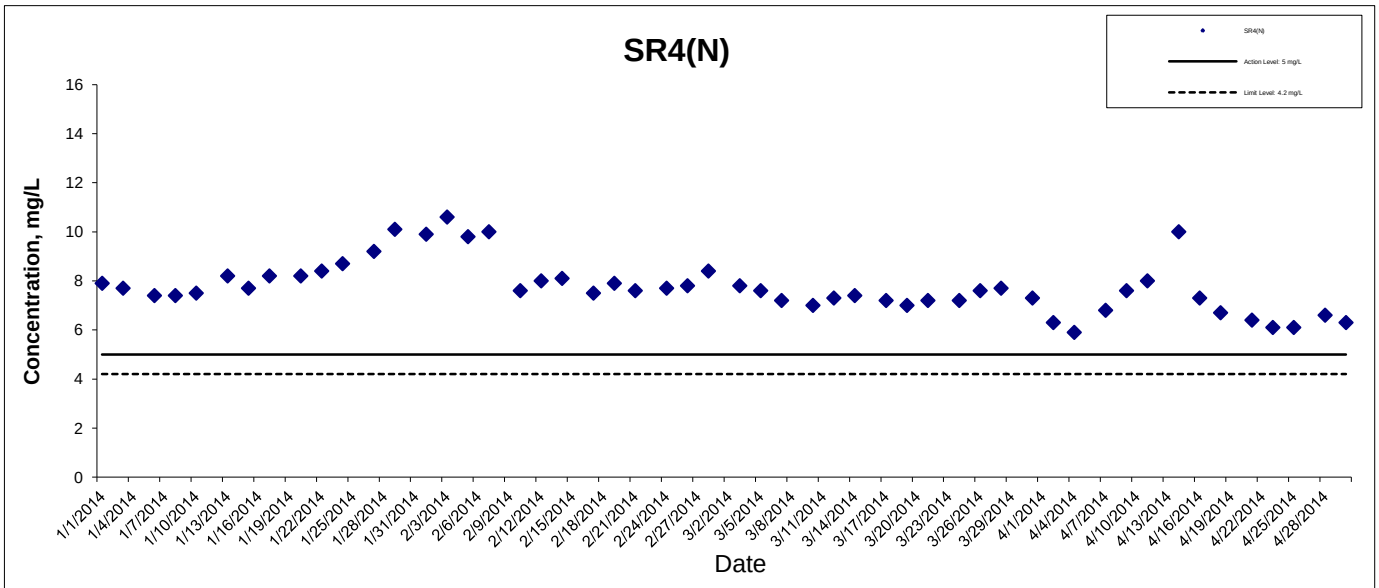
Graphical Presentation of Impact Water Quality Monitoring Results

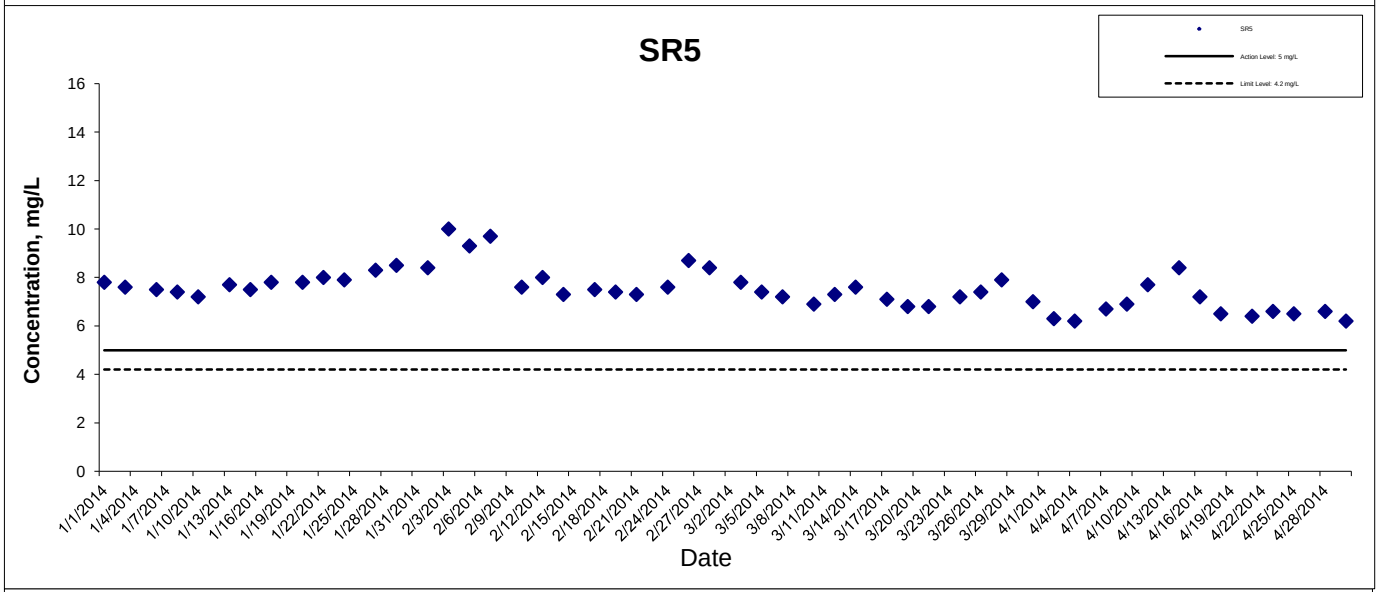
Project No.: 60249820 **Date: May 2014** **Appendix J**

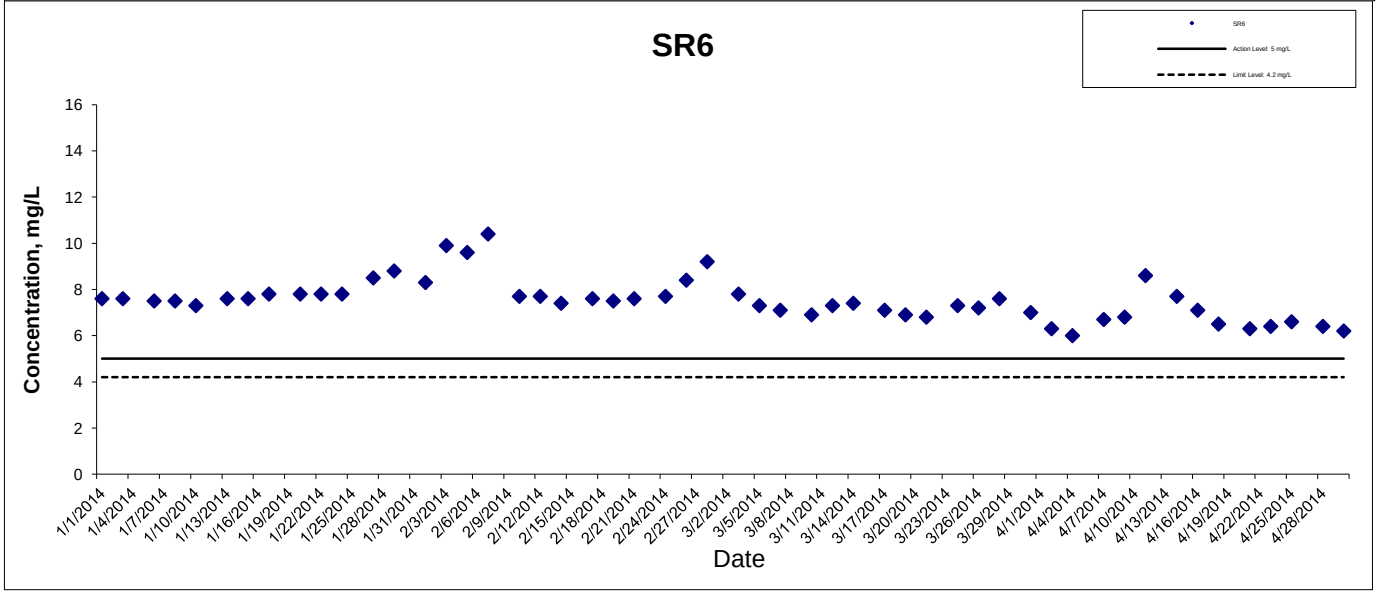
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



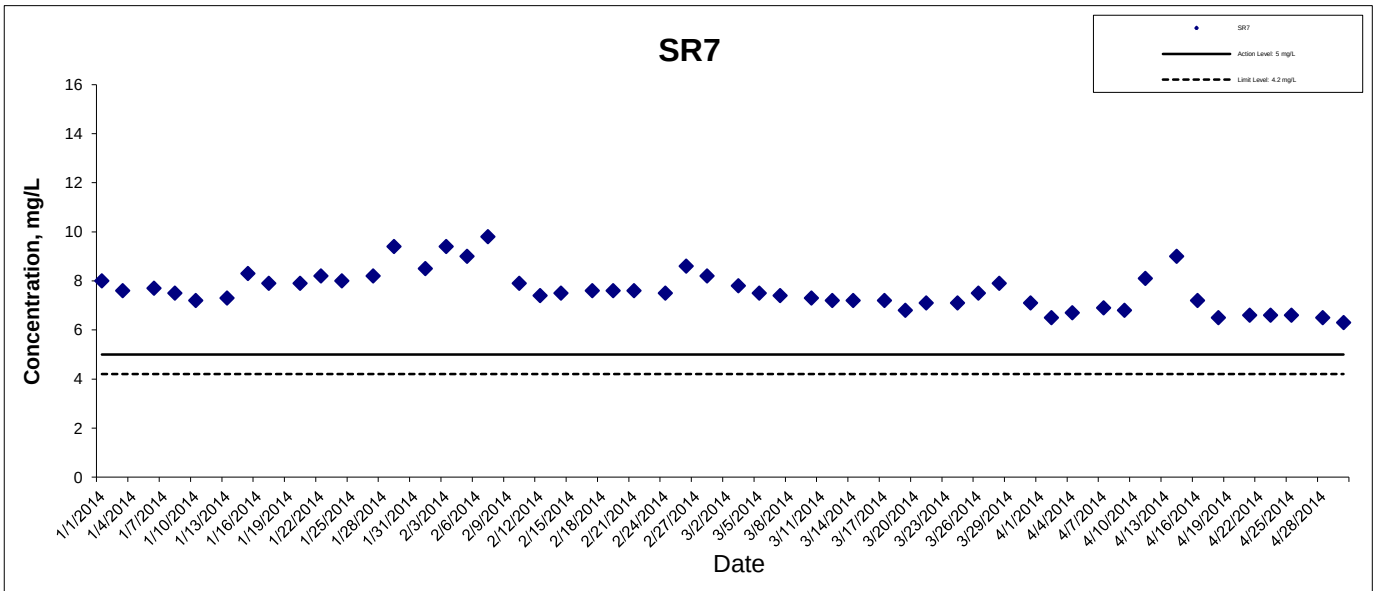
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

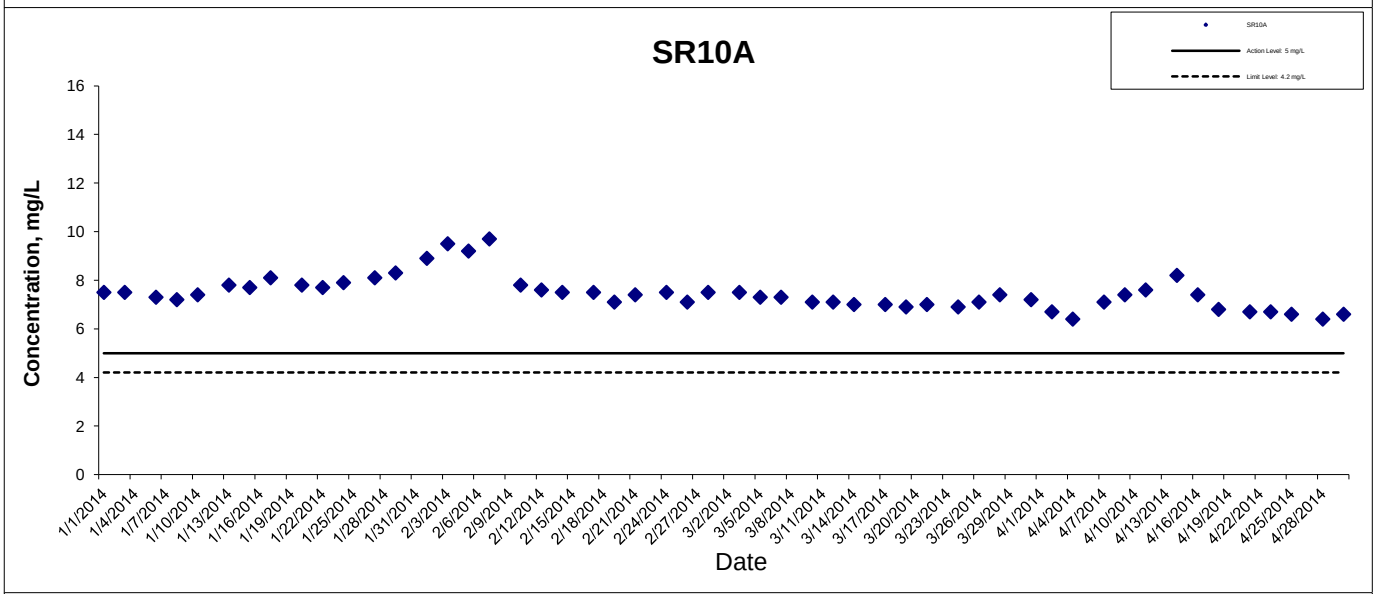


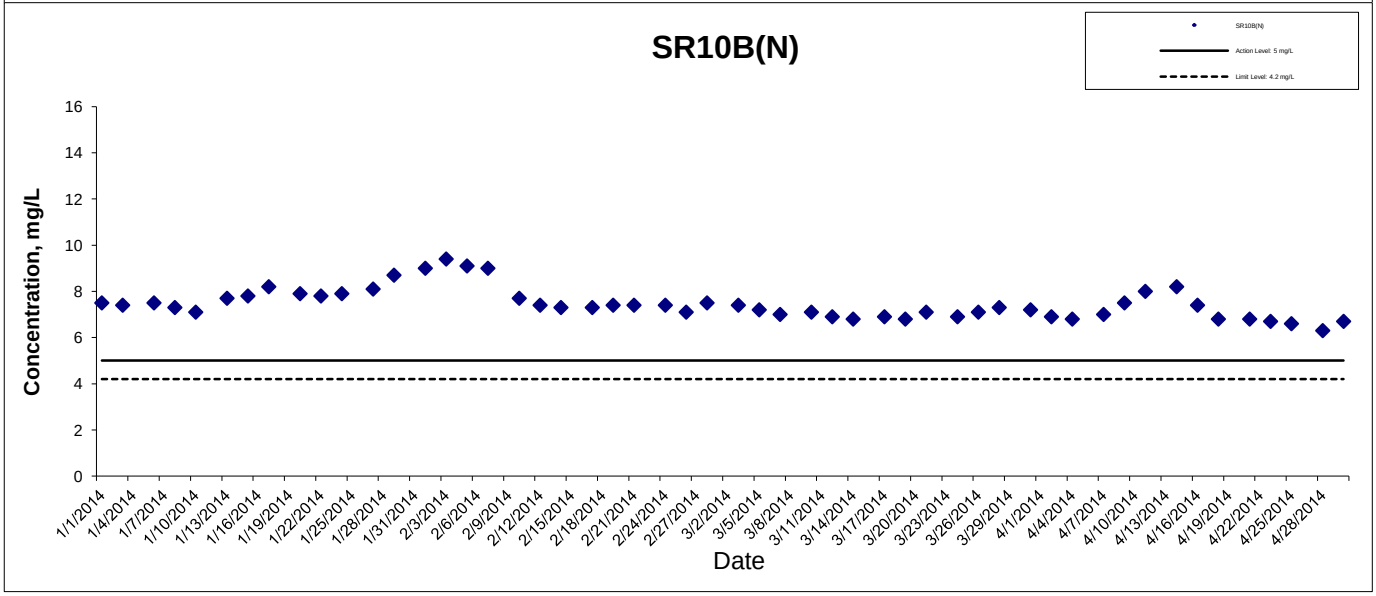




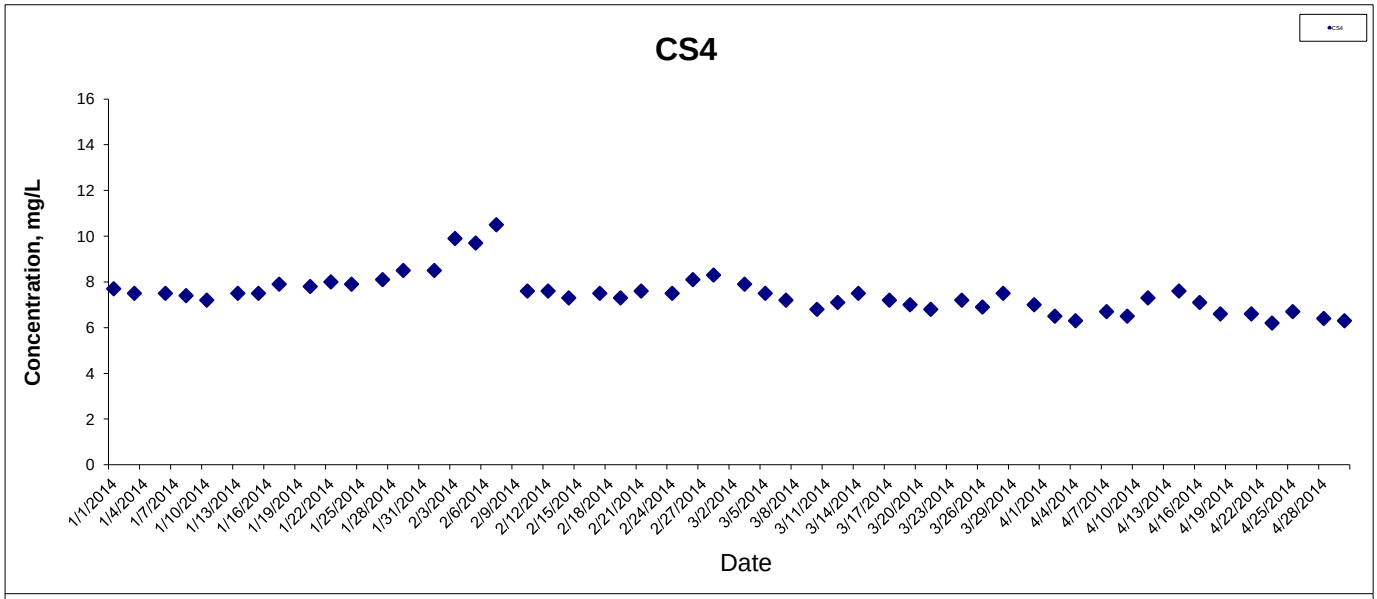
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide

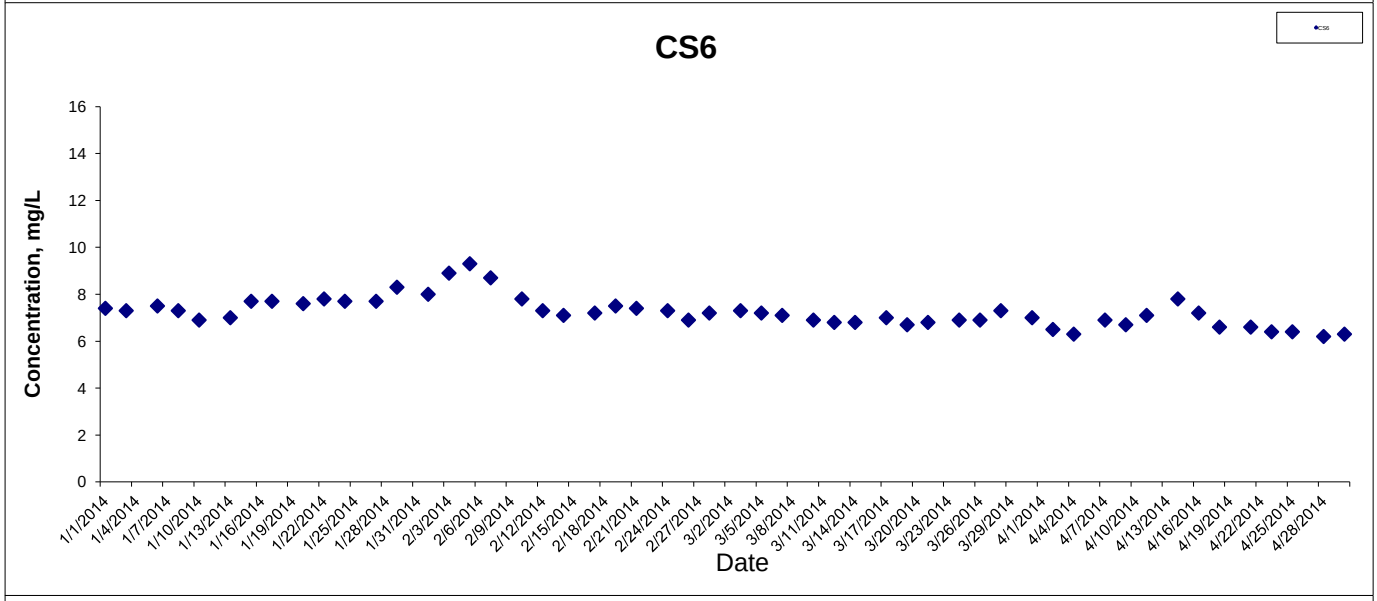


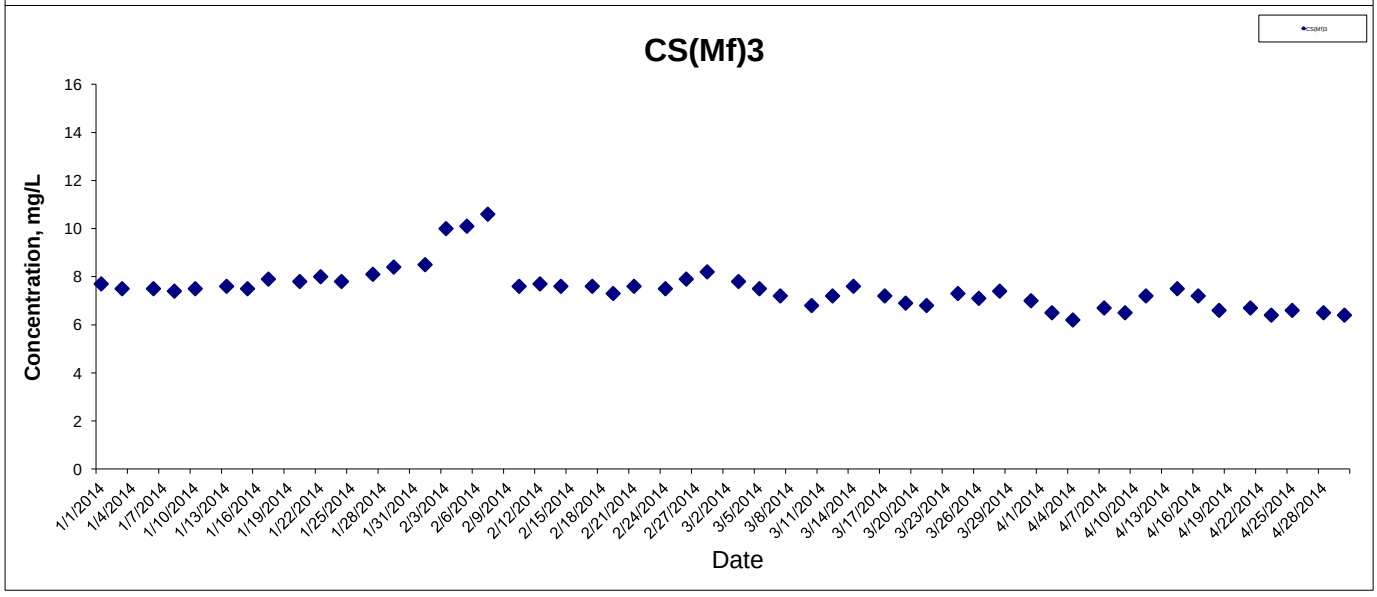




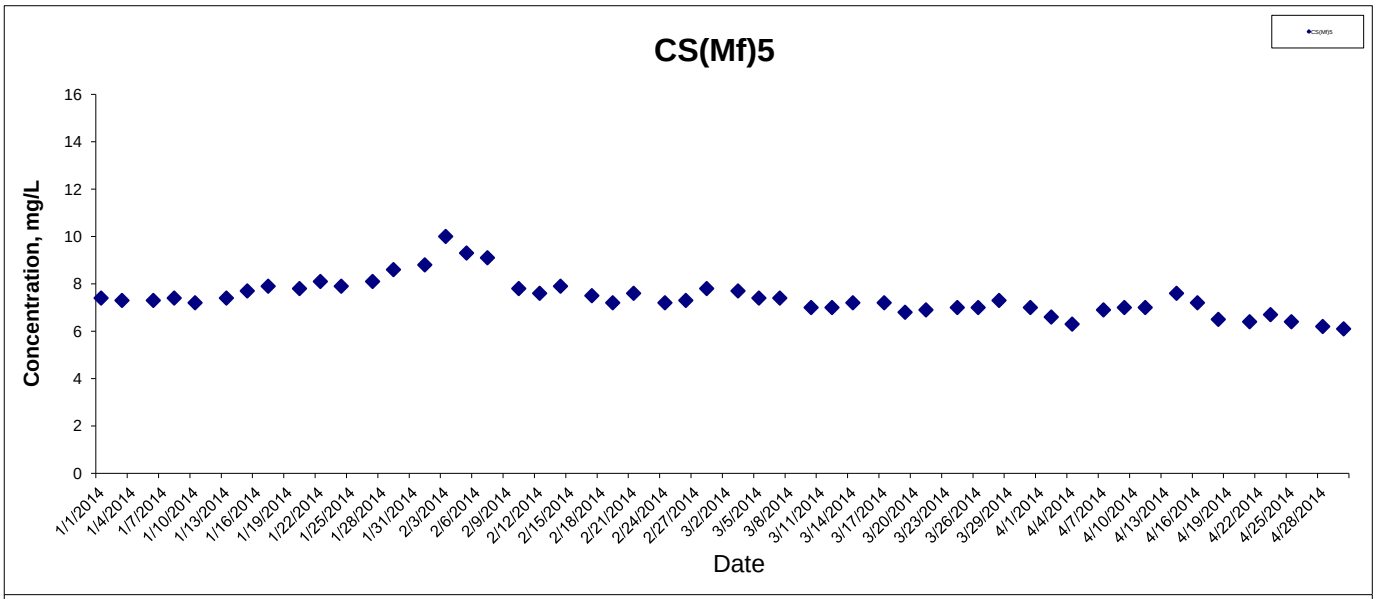
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

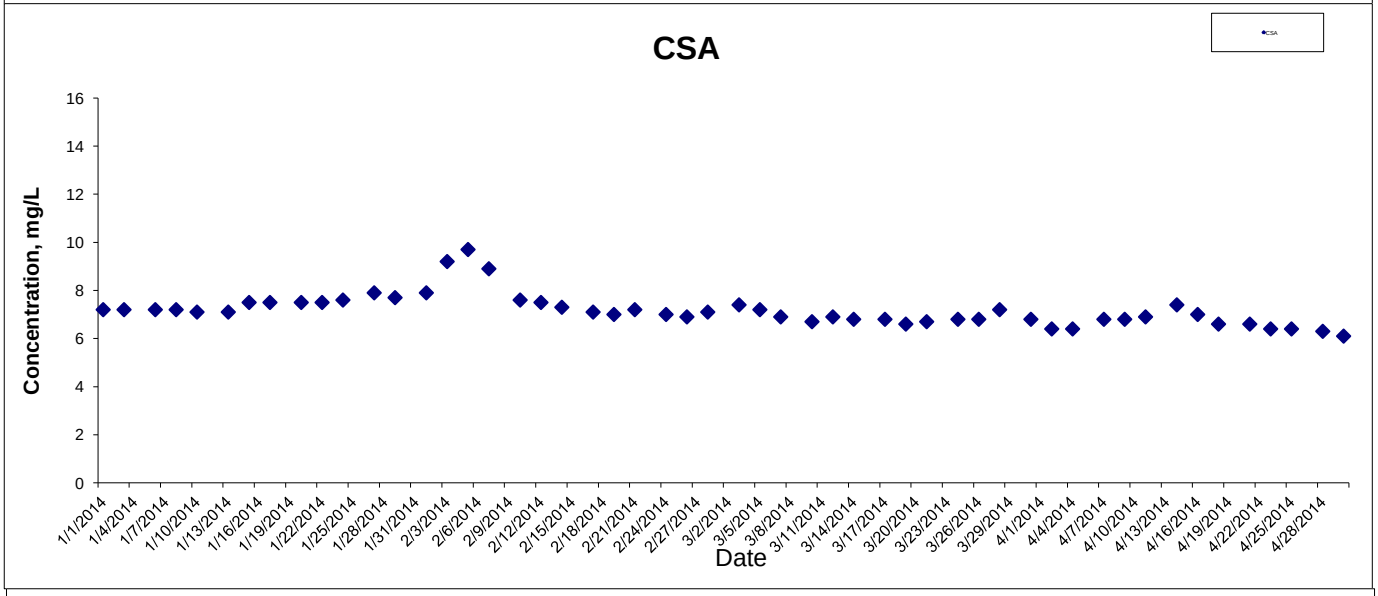


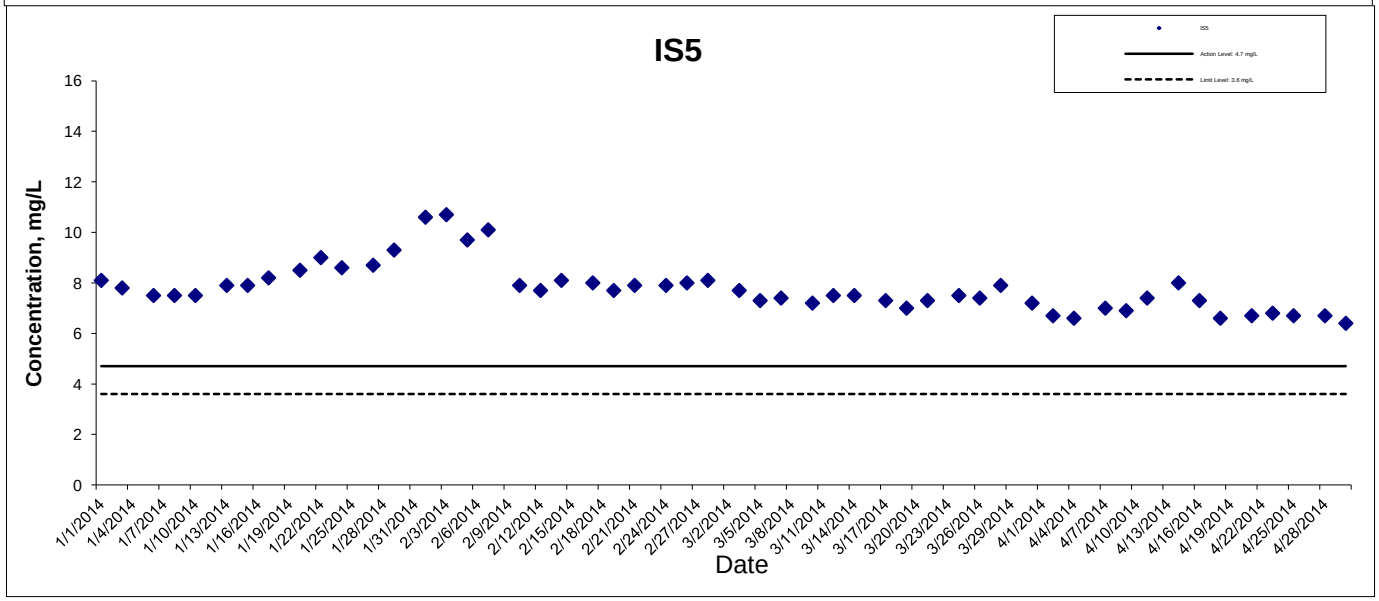




Dissolved Oxygen (Bottom) at Mid-Ebb Tide







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

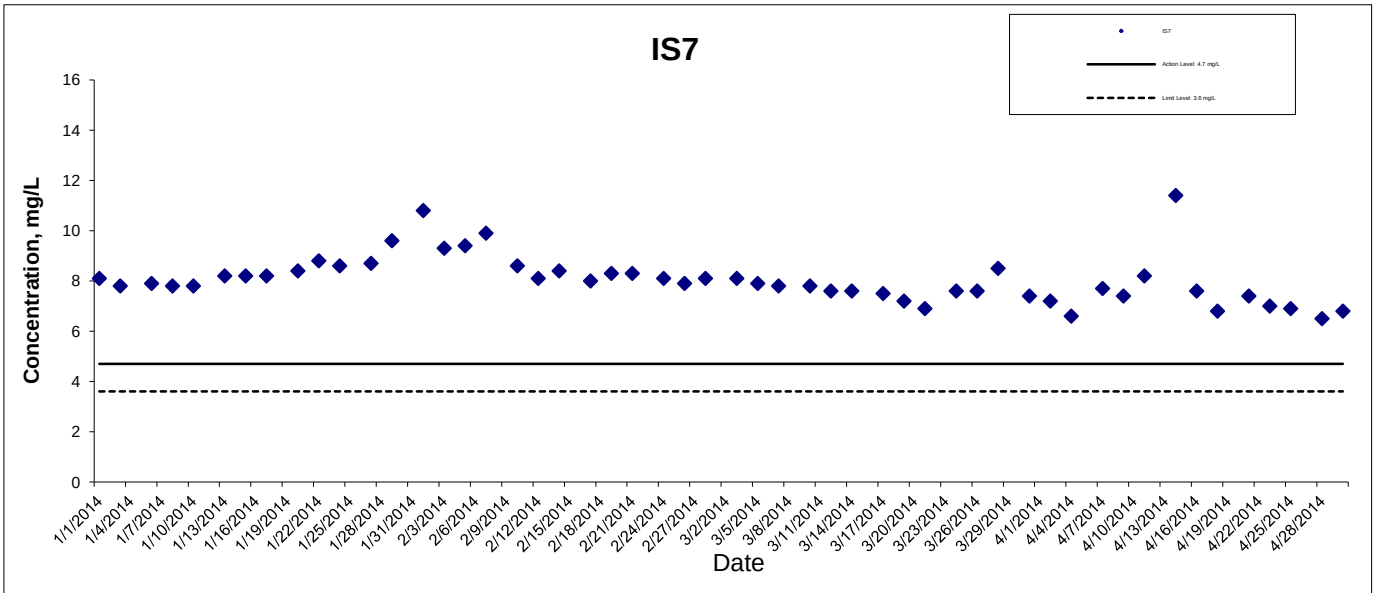
AECOM

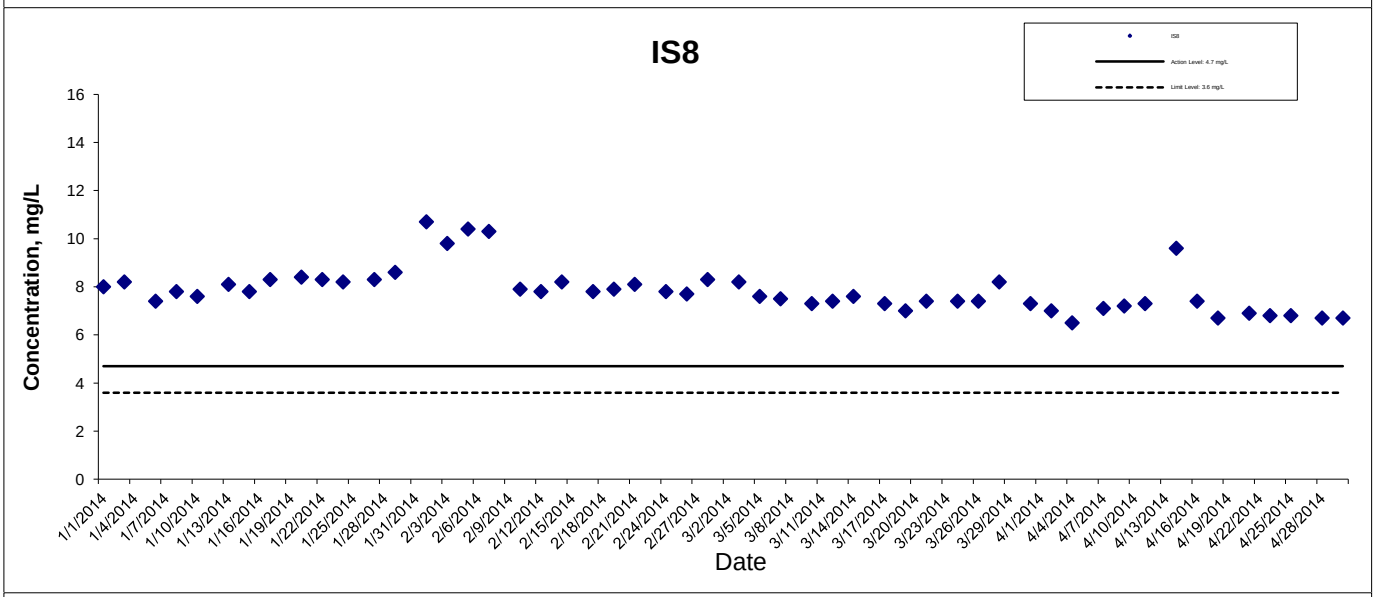
Graphical Presentation of Impact Water Quality Monitoring Results

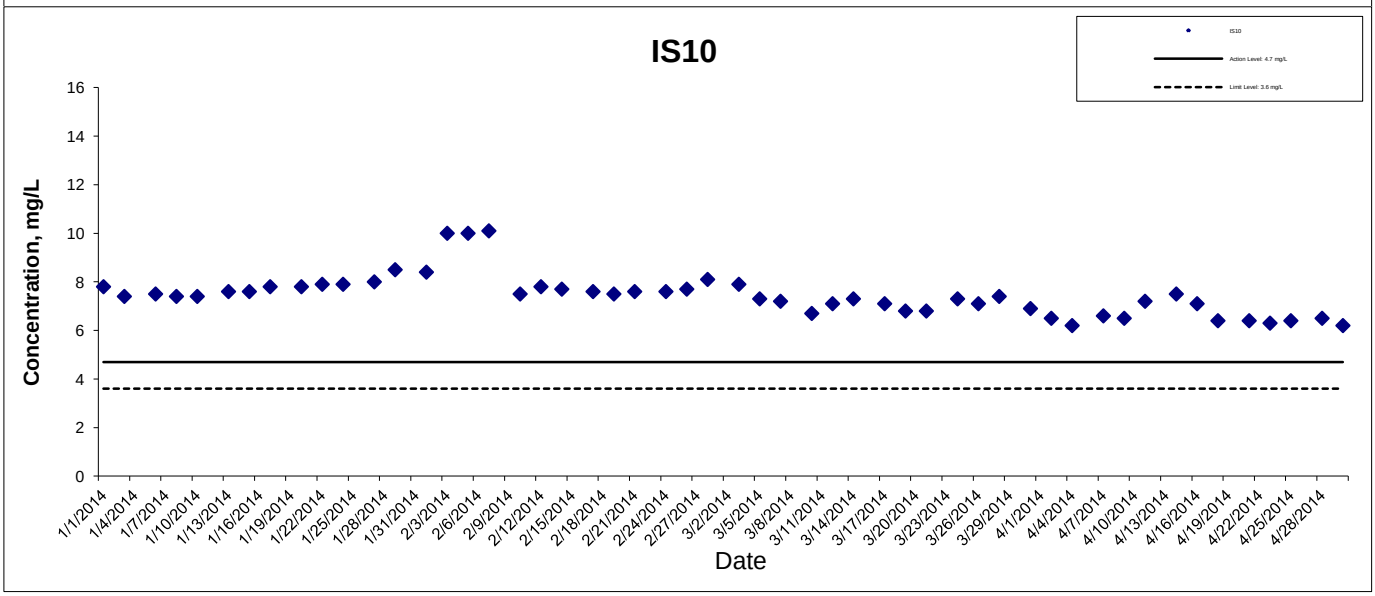
Project No.: 60249820 **Date: May 2014**

Appendix J

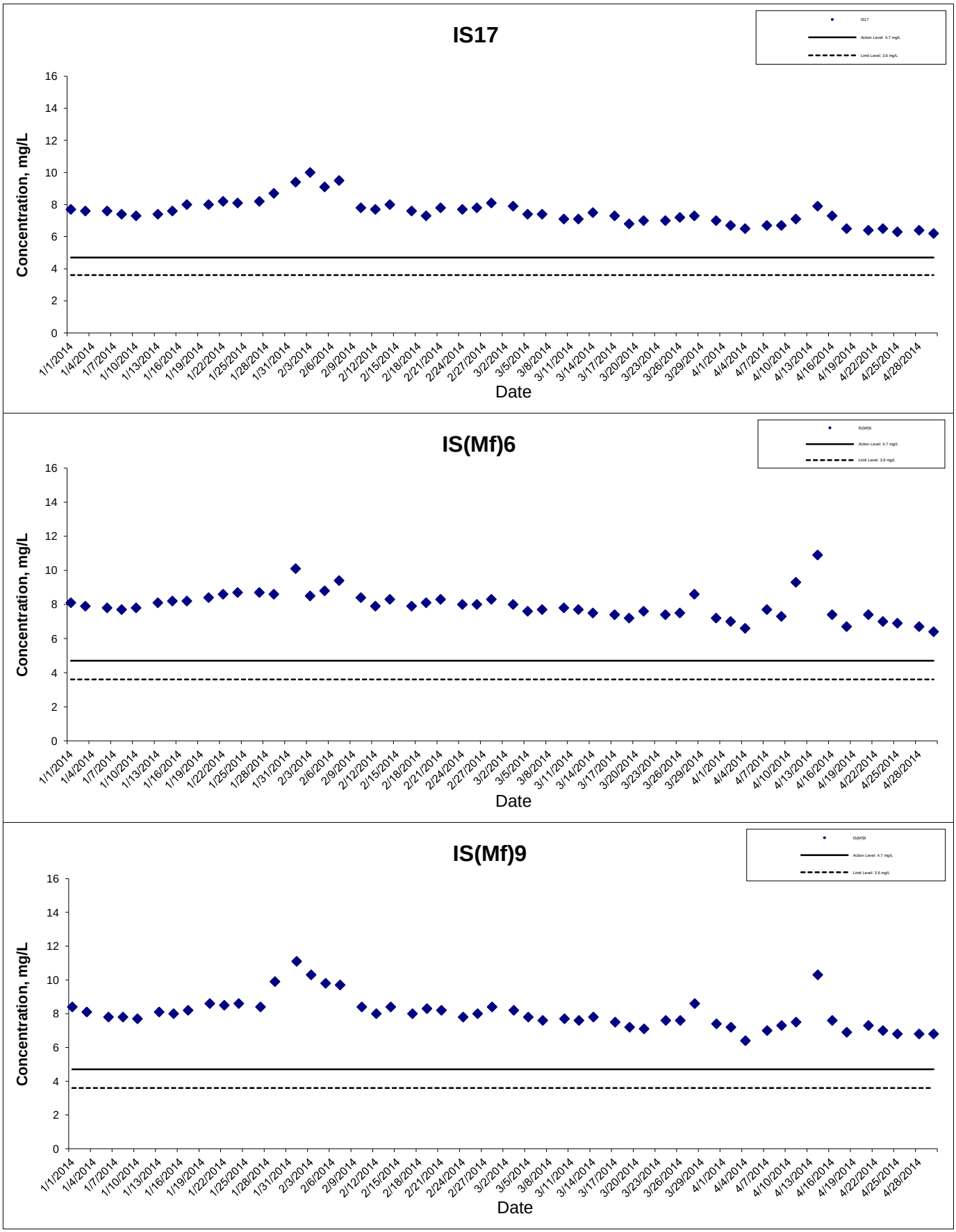
Dissolved Oxygen (Bottom) at Mid-Ebb Tide



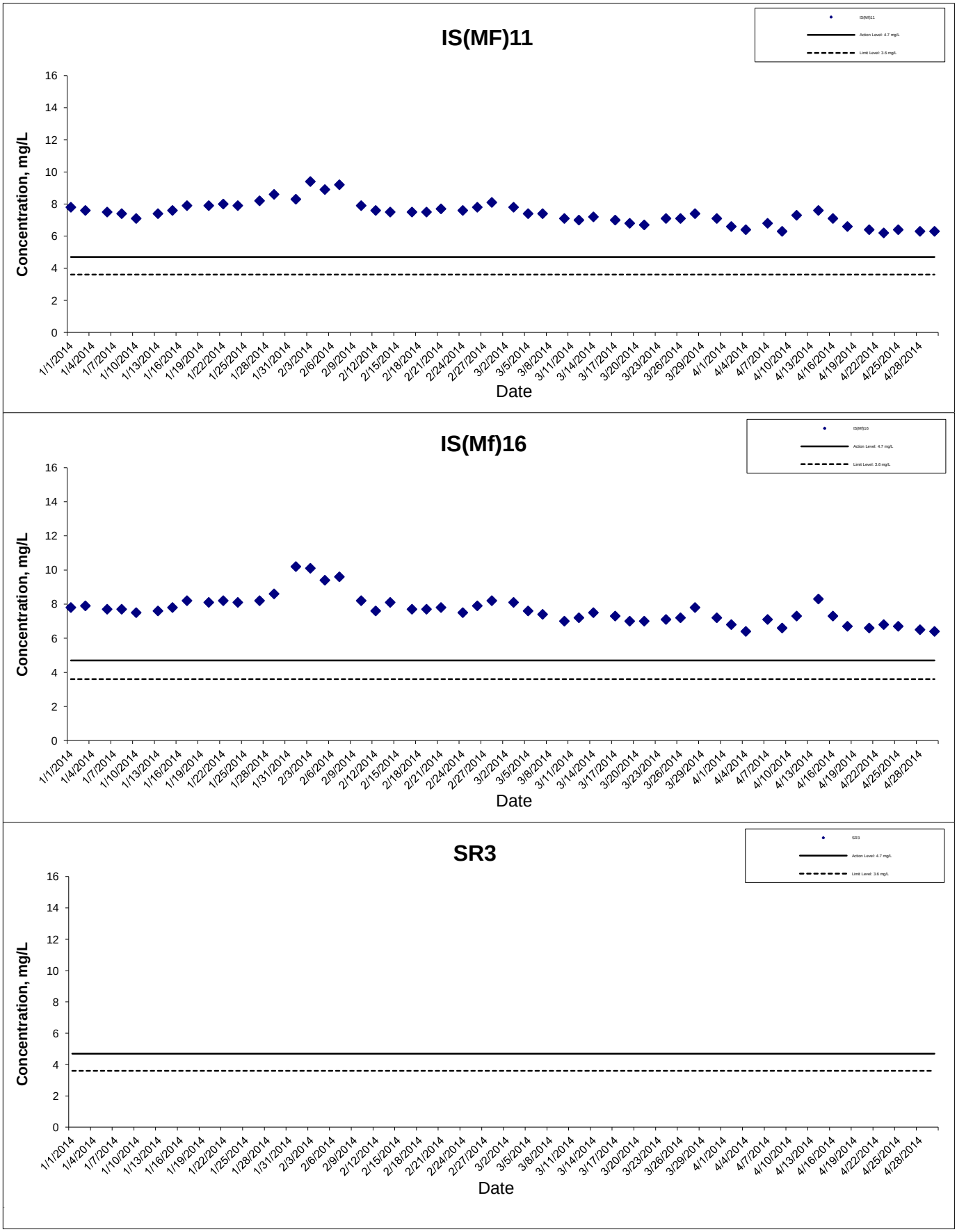




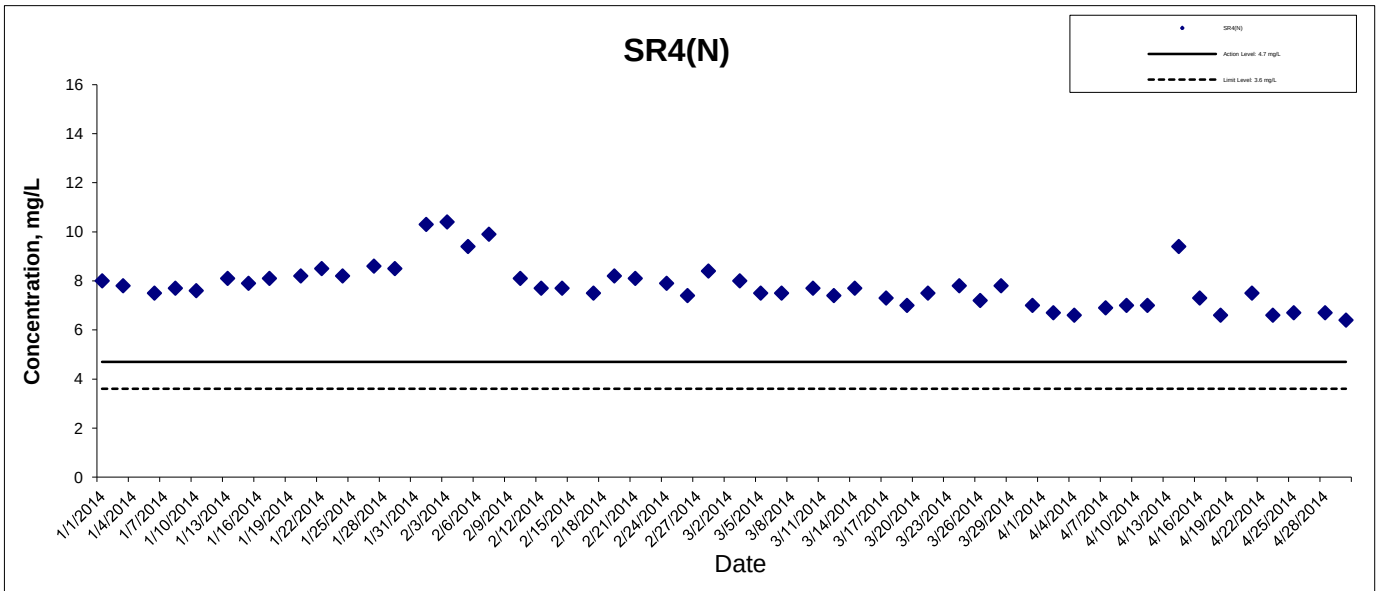
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

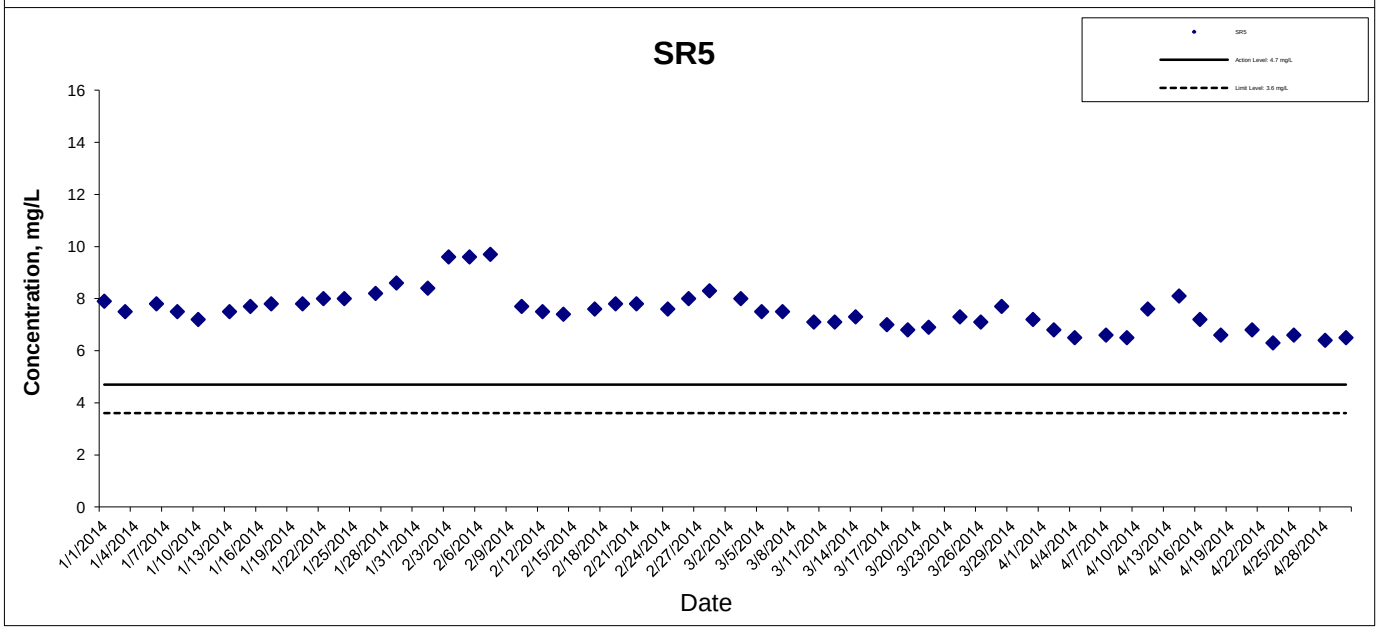


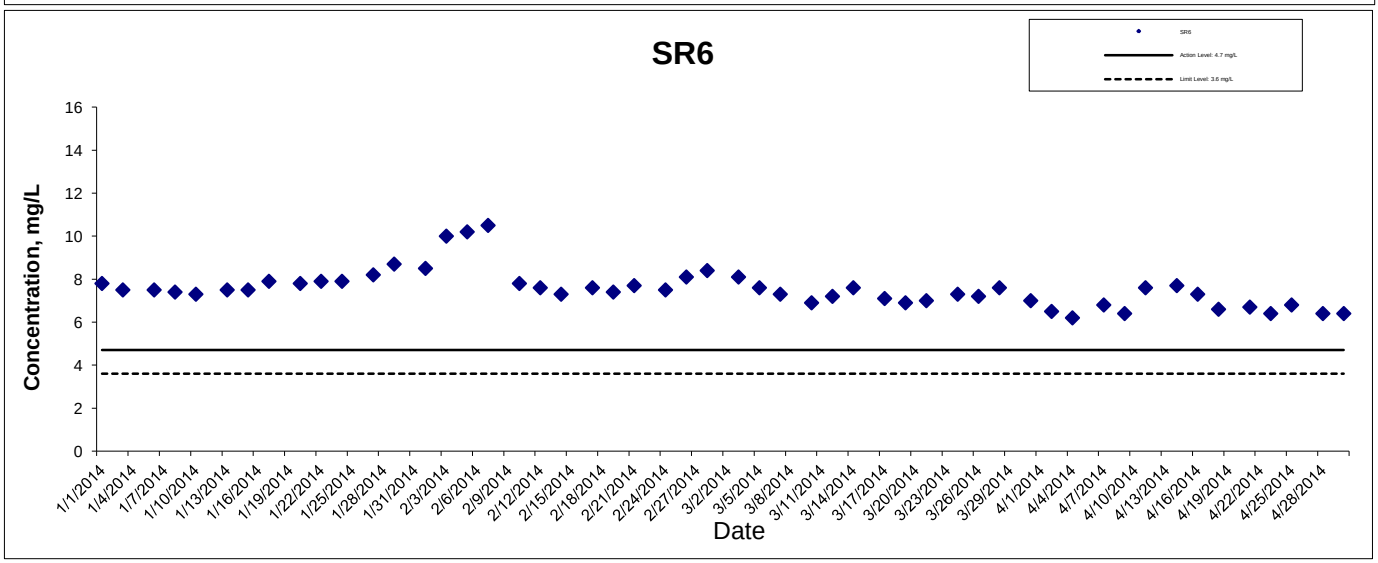
Dissolved Oxygen (Bottom) at Mid-Ebb Tide



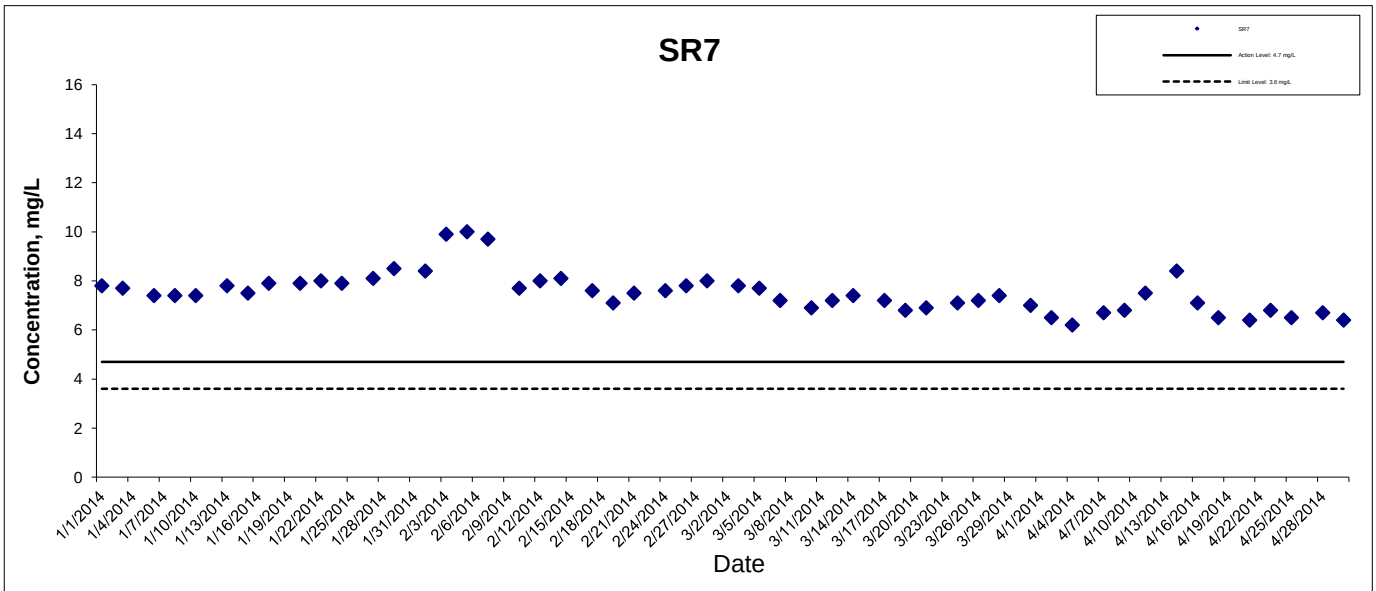
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

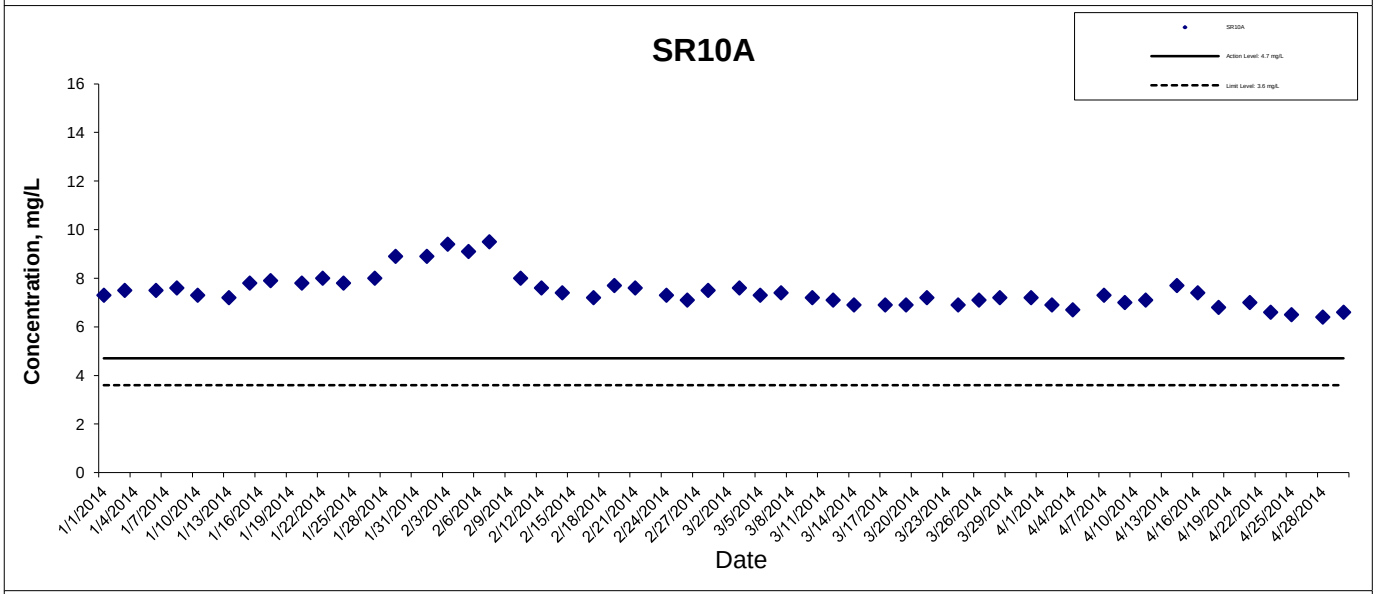


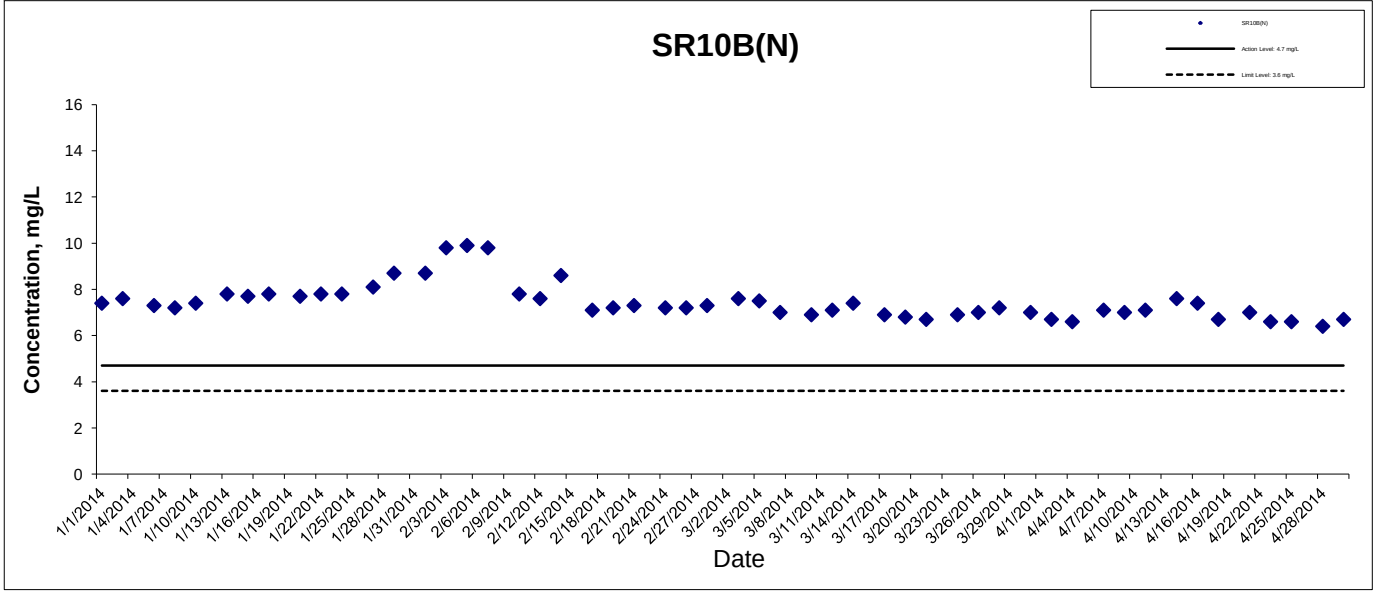




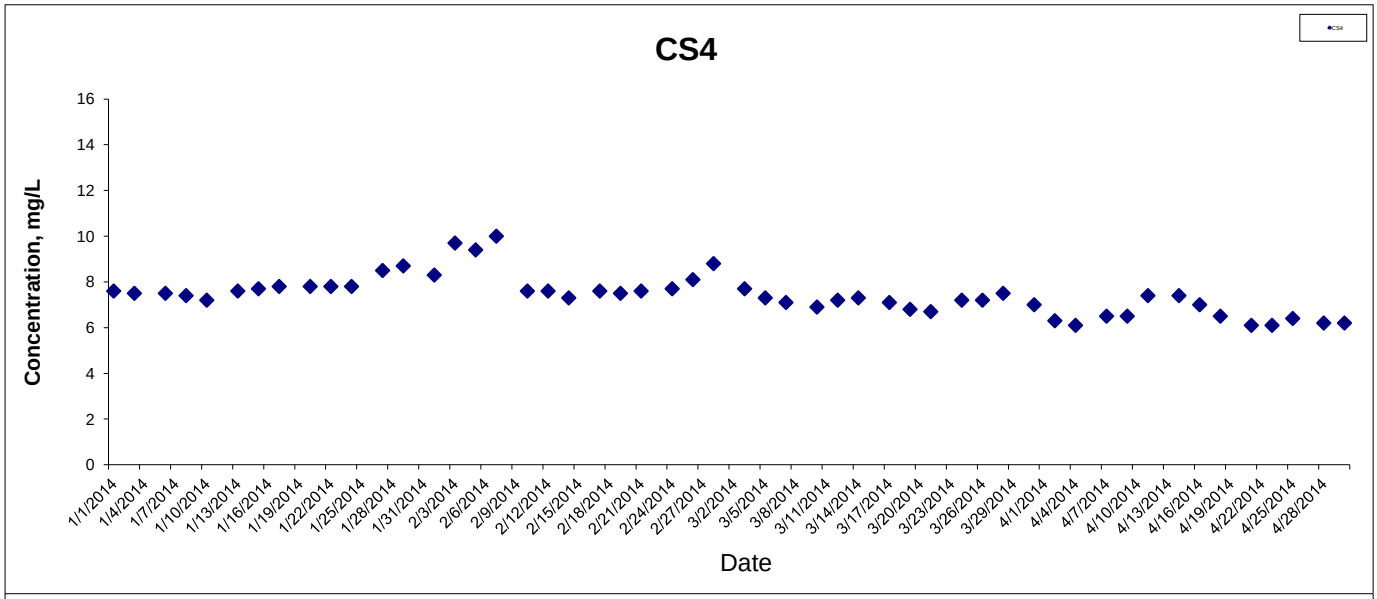
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

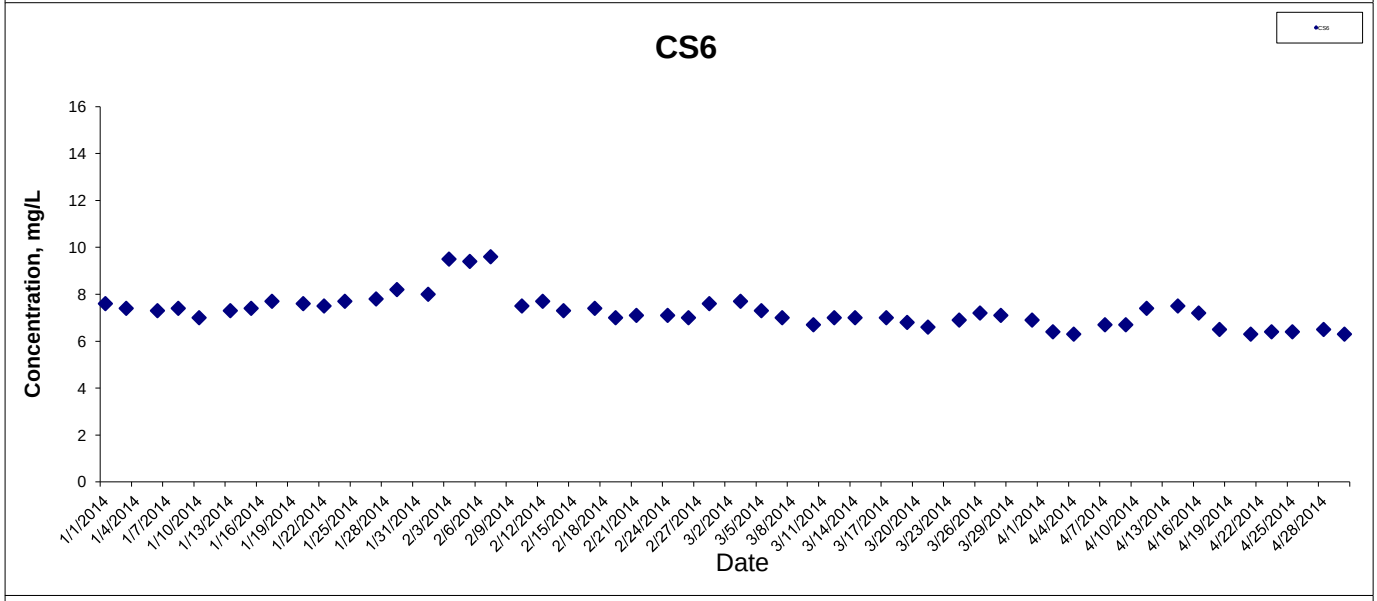


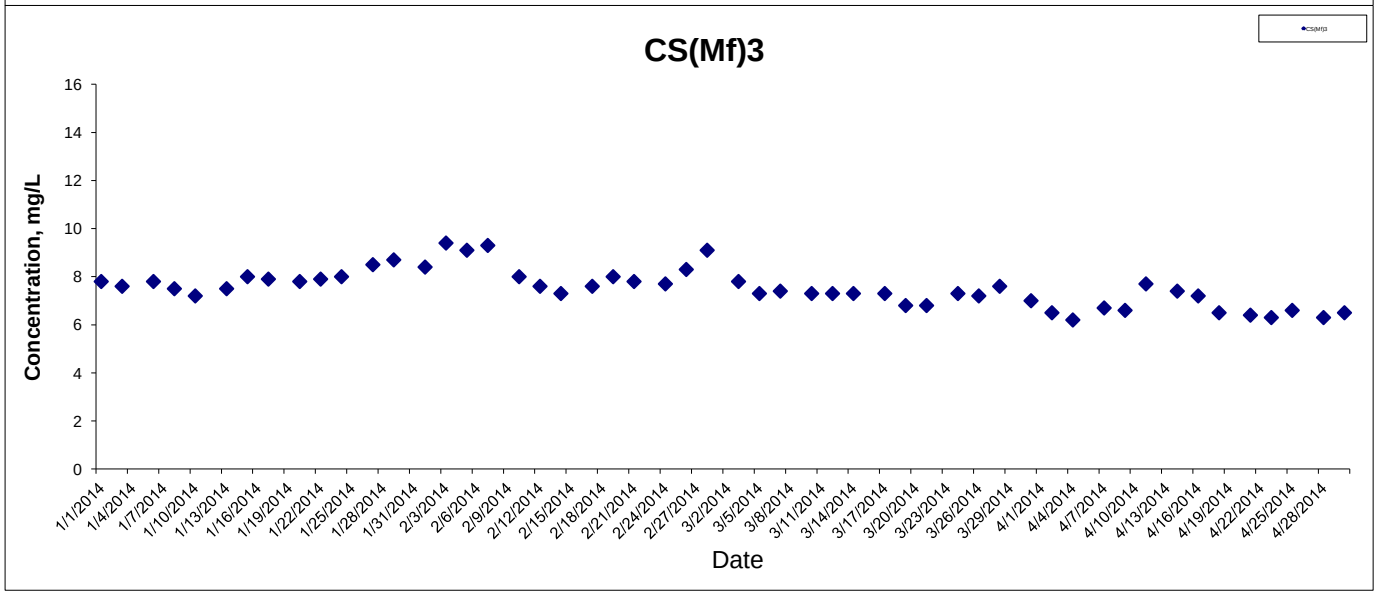




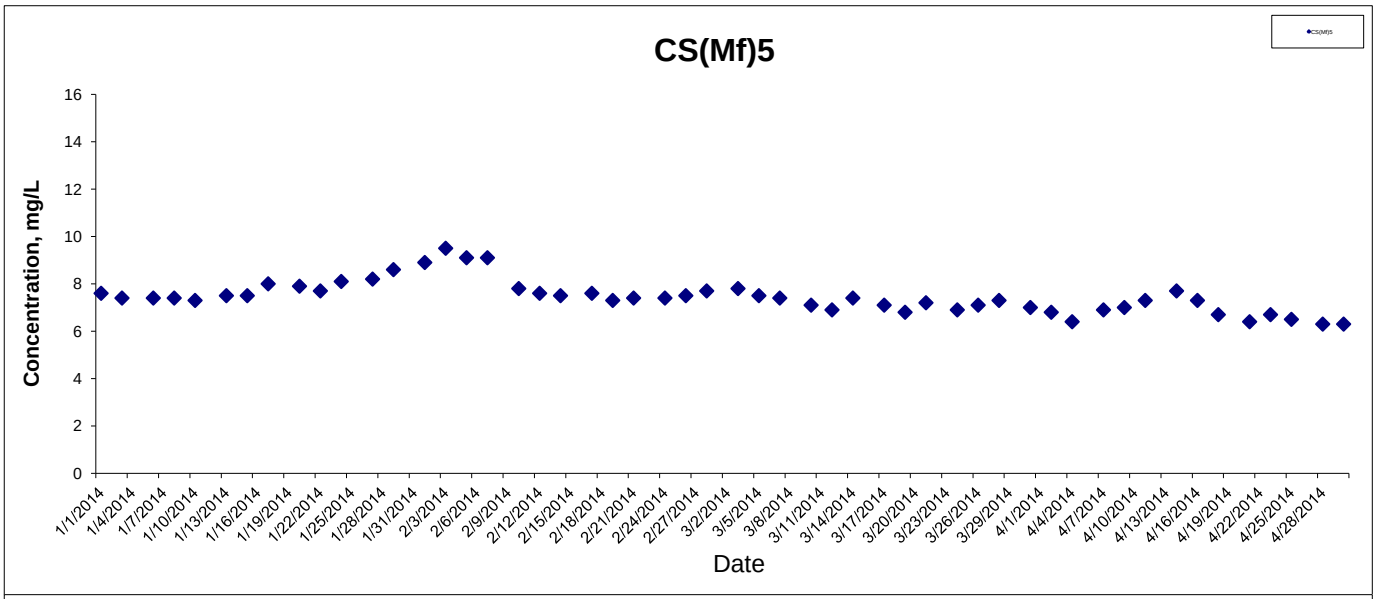
Dissolved Oxygen (Bottom) at Mid-Flood Tide

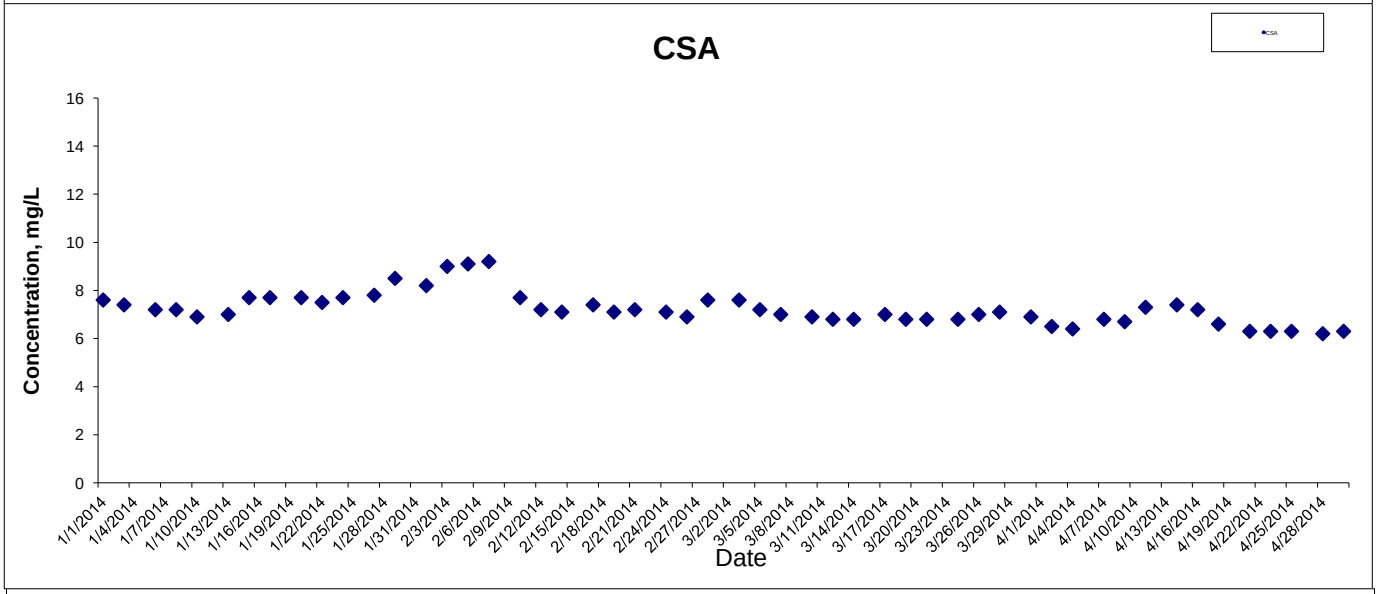


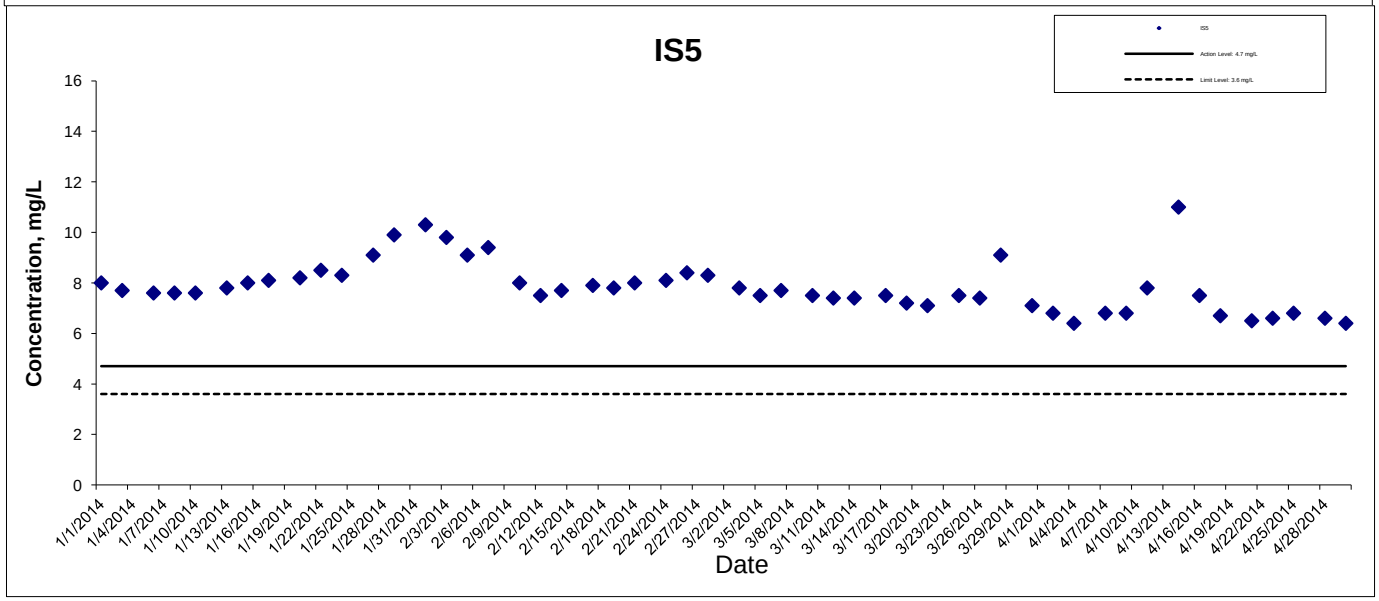




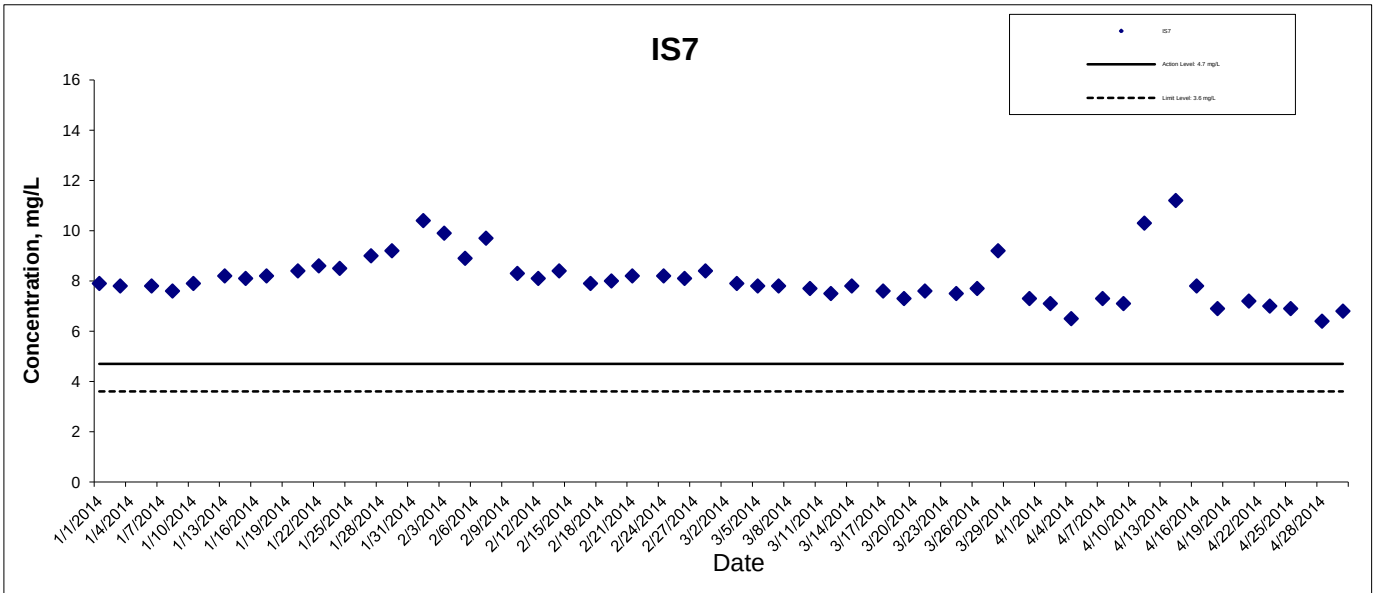
Dissolved Oxygen (Bottom) at Mid-Flood Tide

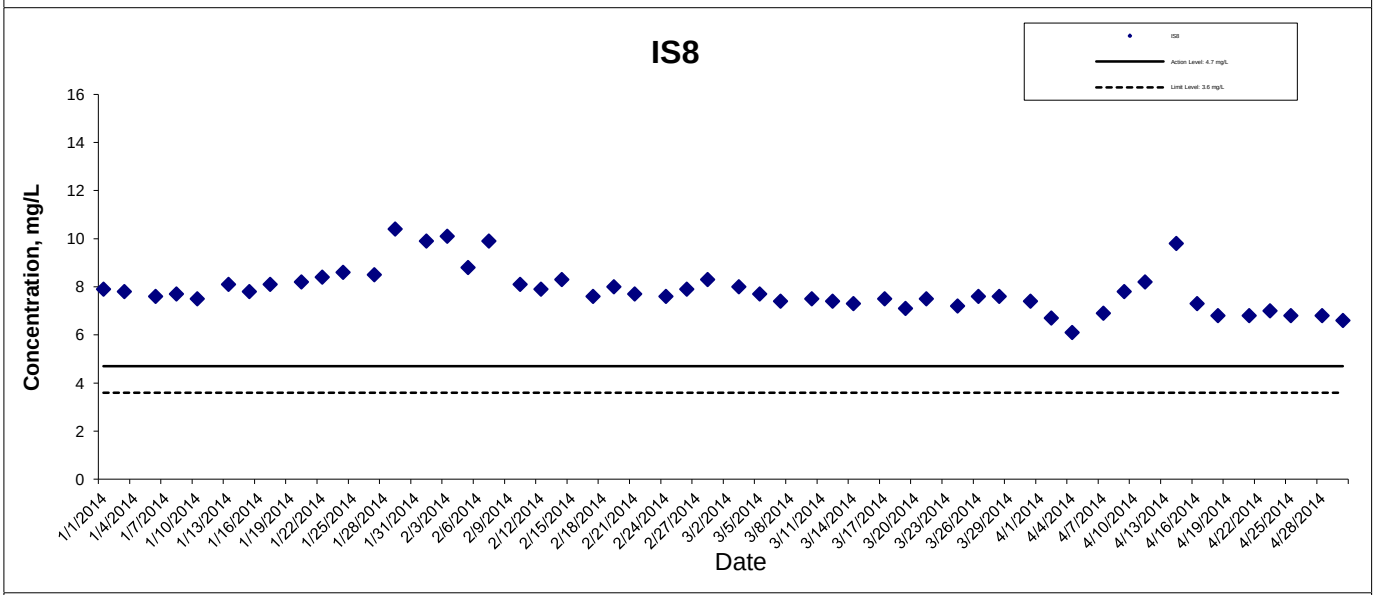


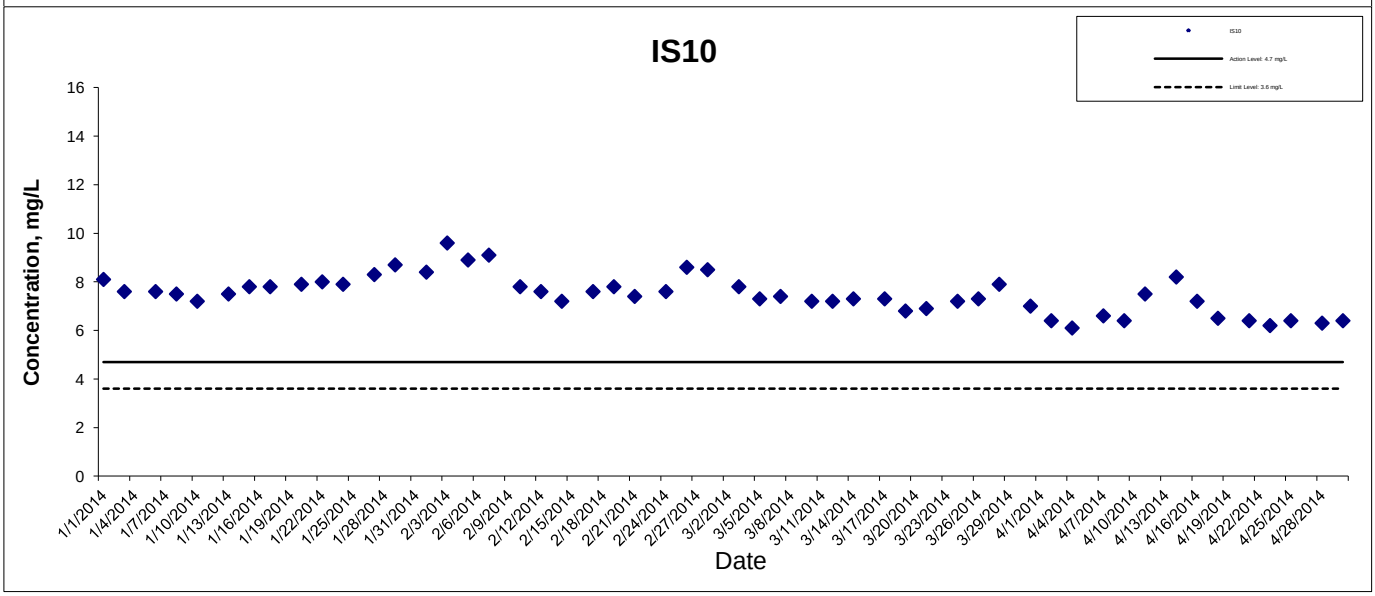




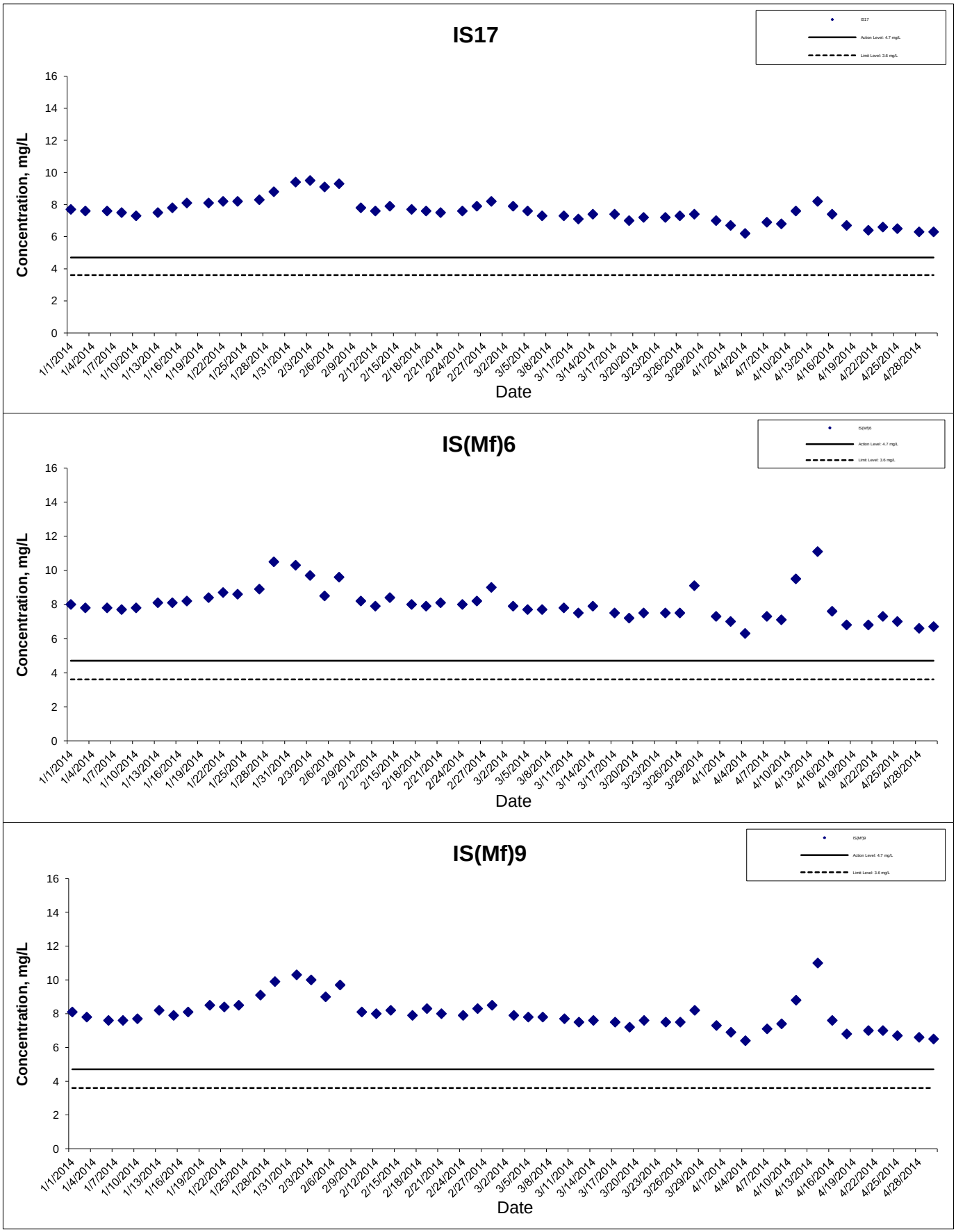
Dissolved Oxygen (Bottom) at Mid-Flood Tide



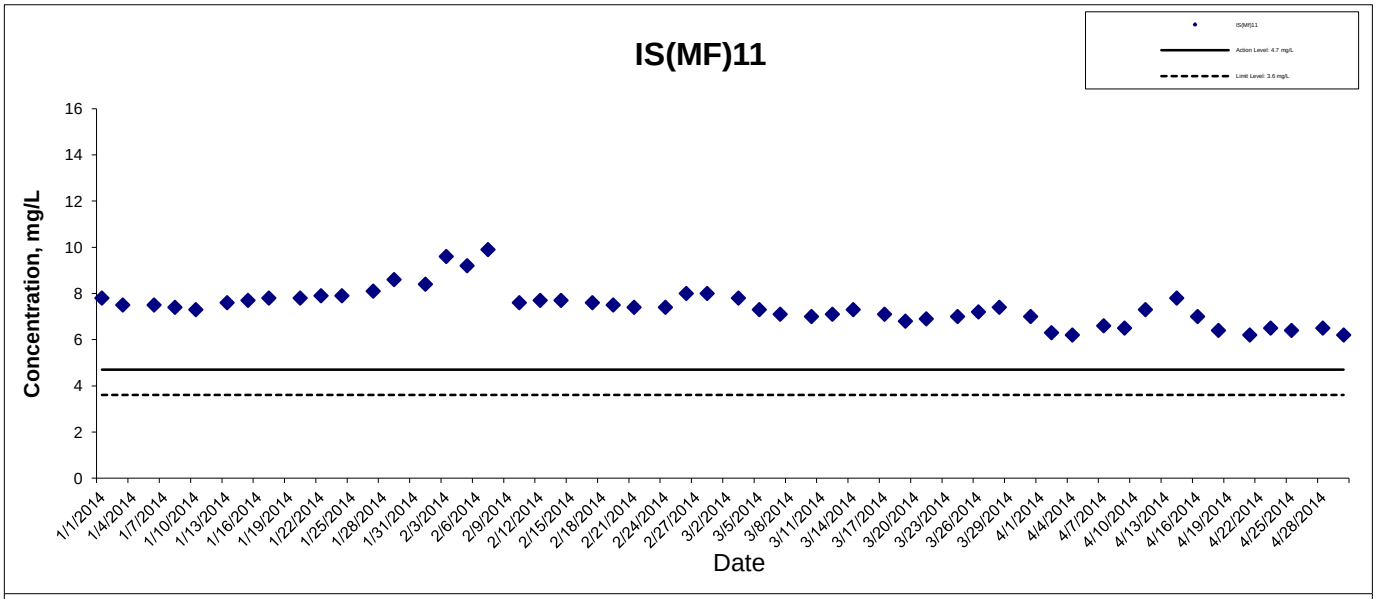


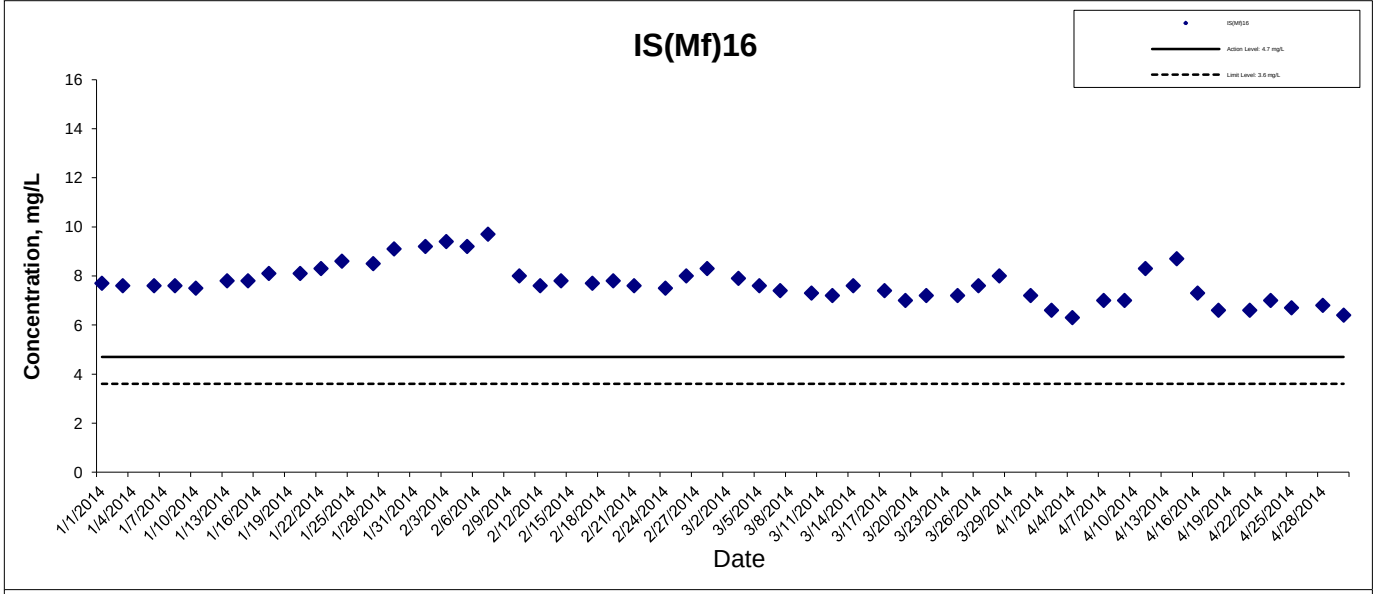


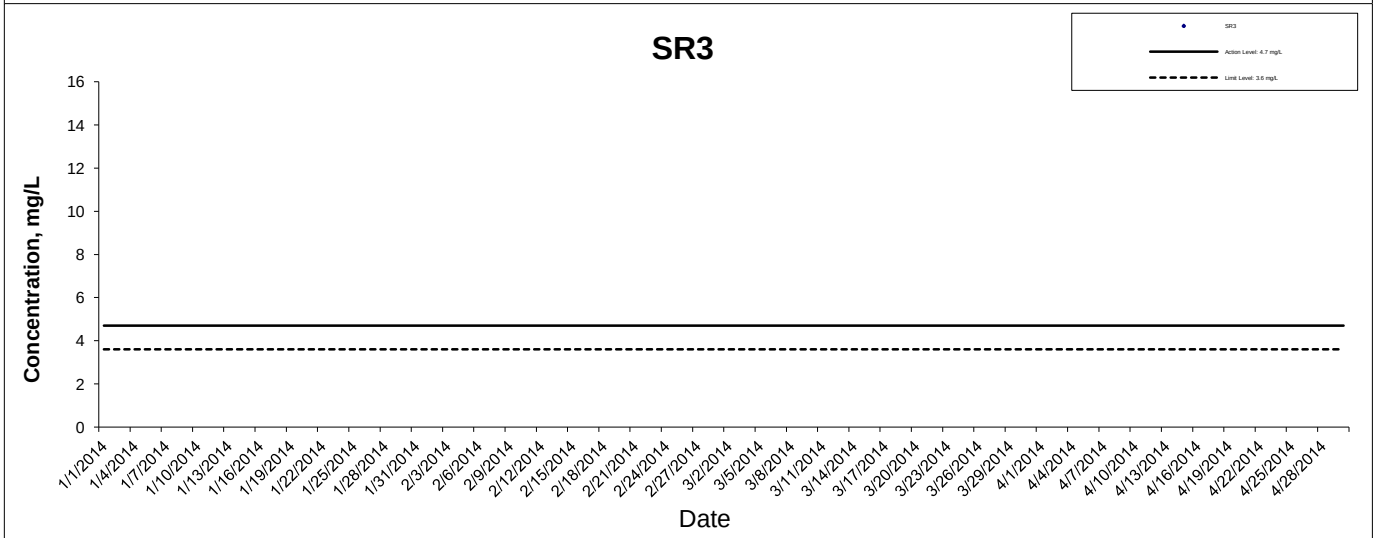
Dissolved Oxygen (Bottom) at Mid-Flood Tide



Dissolved Oxygen (Bottom) at Mid-Flood Tide

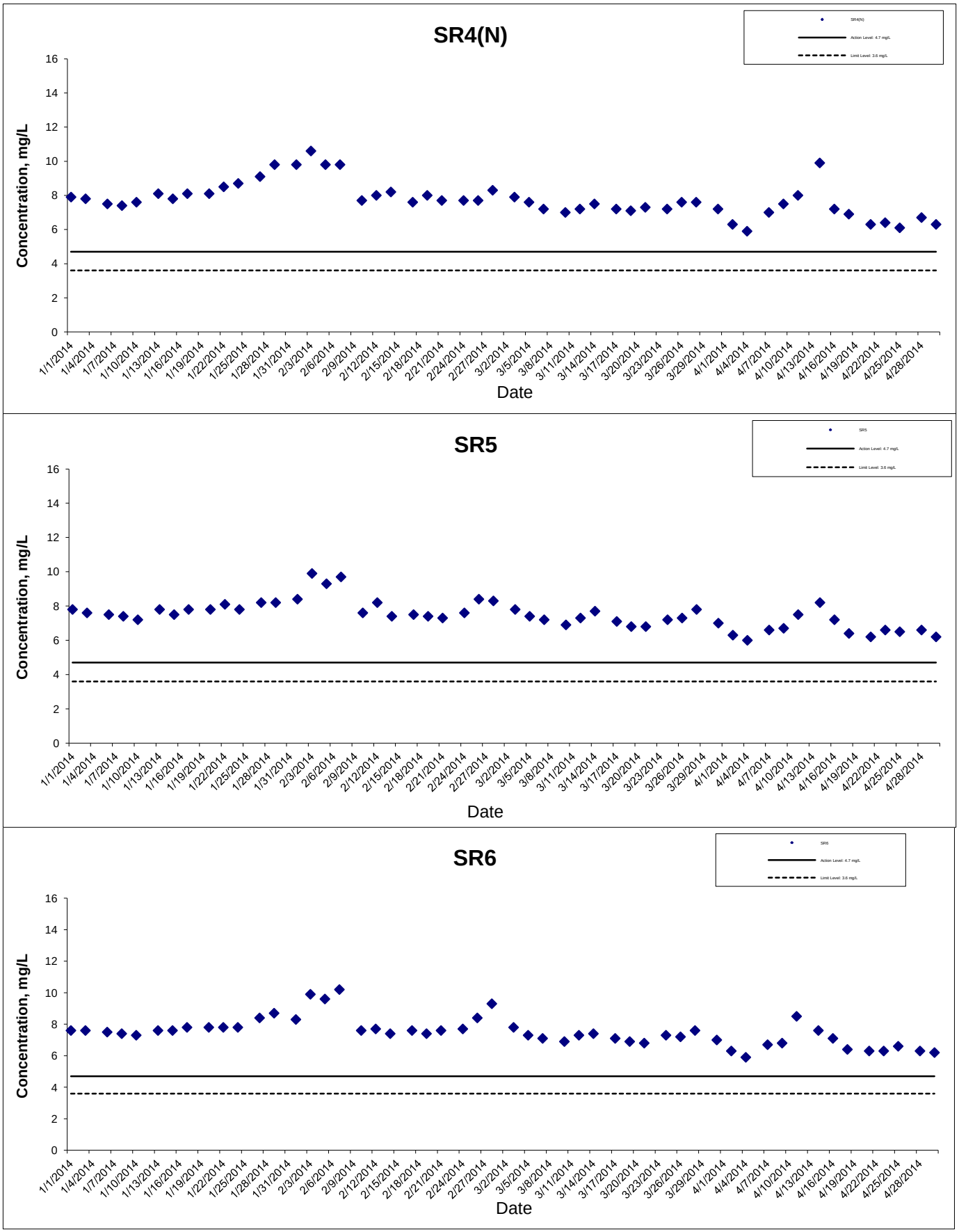






As the measured water depths were less than 3 m during all monitoring days, water samples are collected at mid-depth only .

Dissolved Oxygen (Bottom) at Mid-Flood Tide

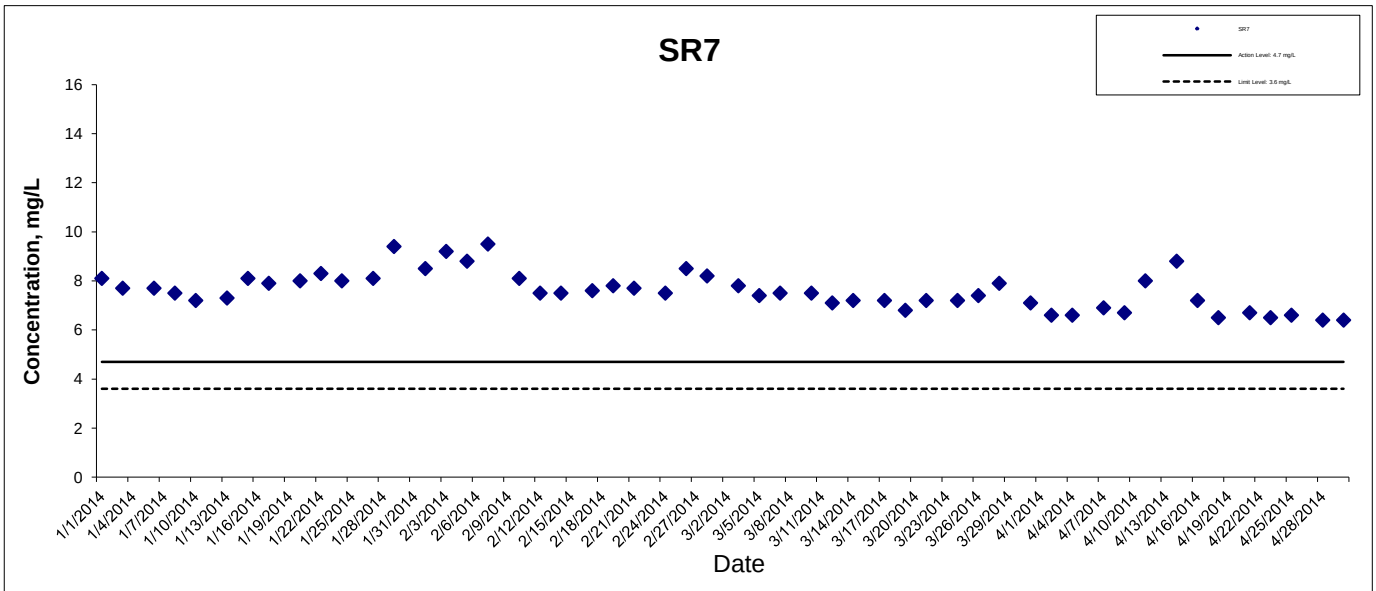


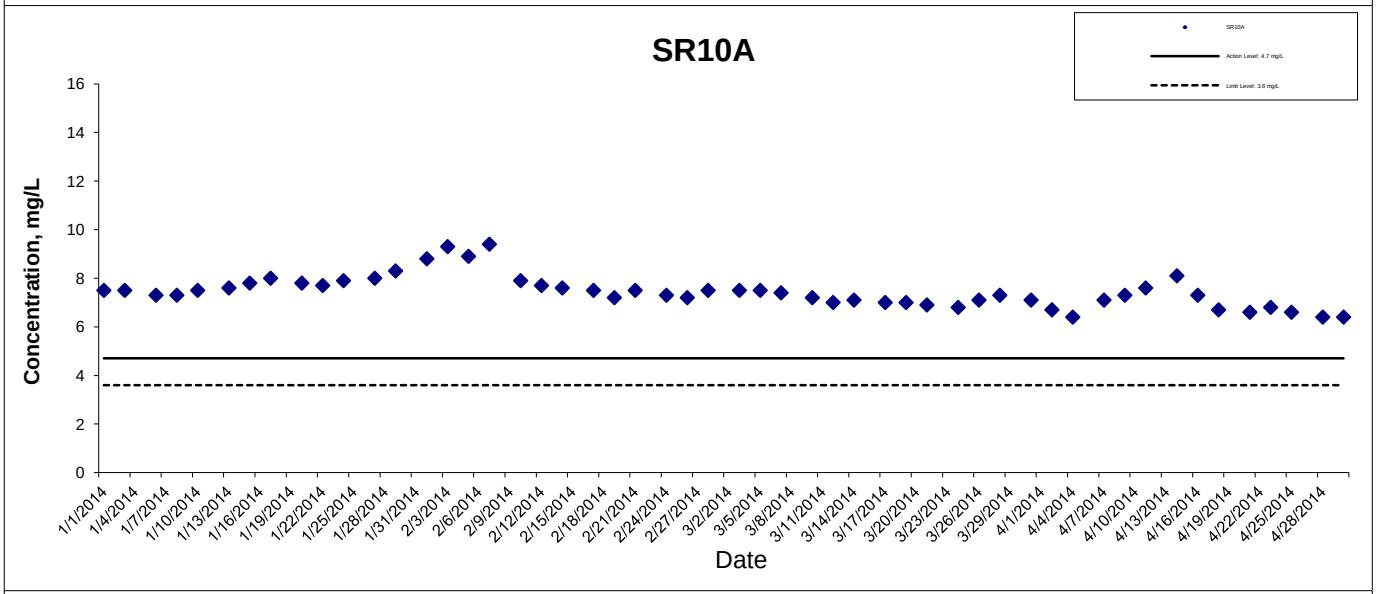
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

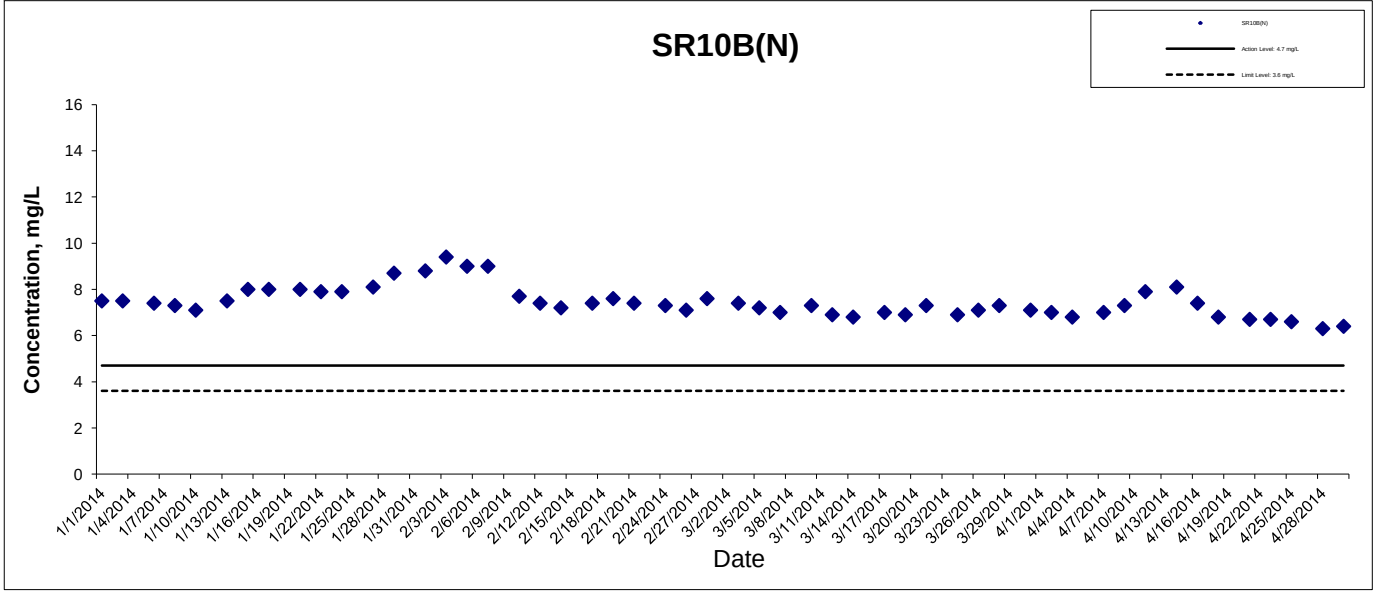
Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2014** **Appendix J**

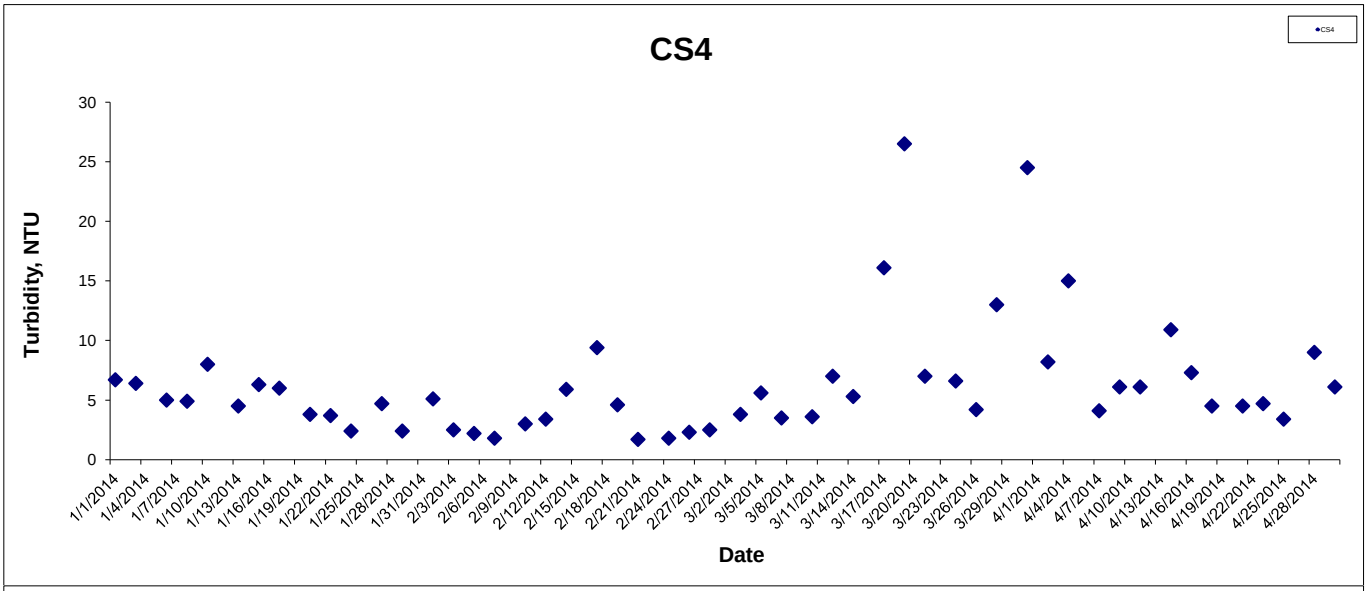
Dissolved Oxygen (Bottom) at Mid-Flood Tide

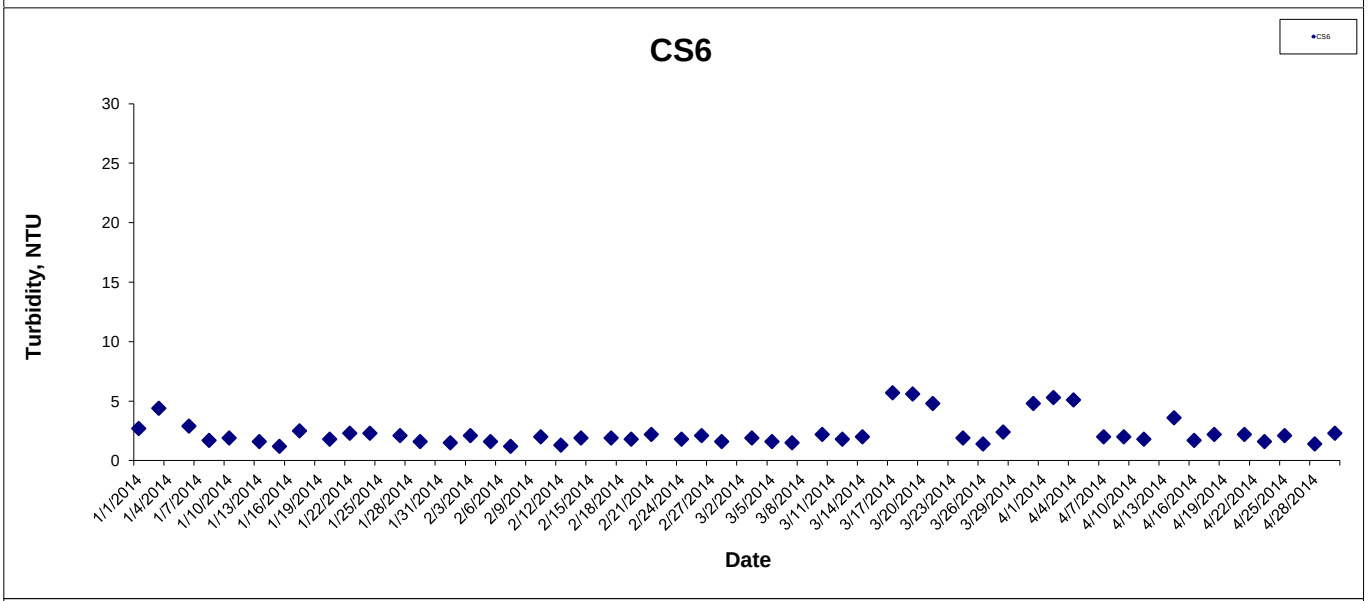


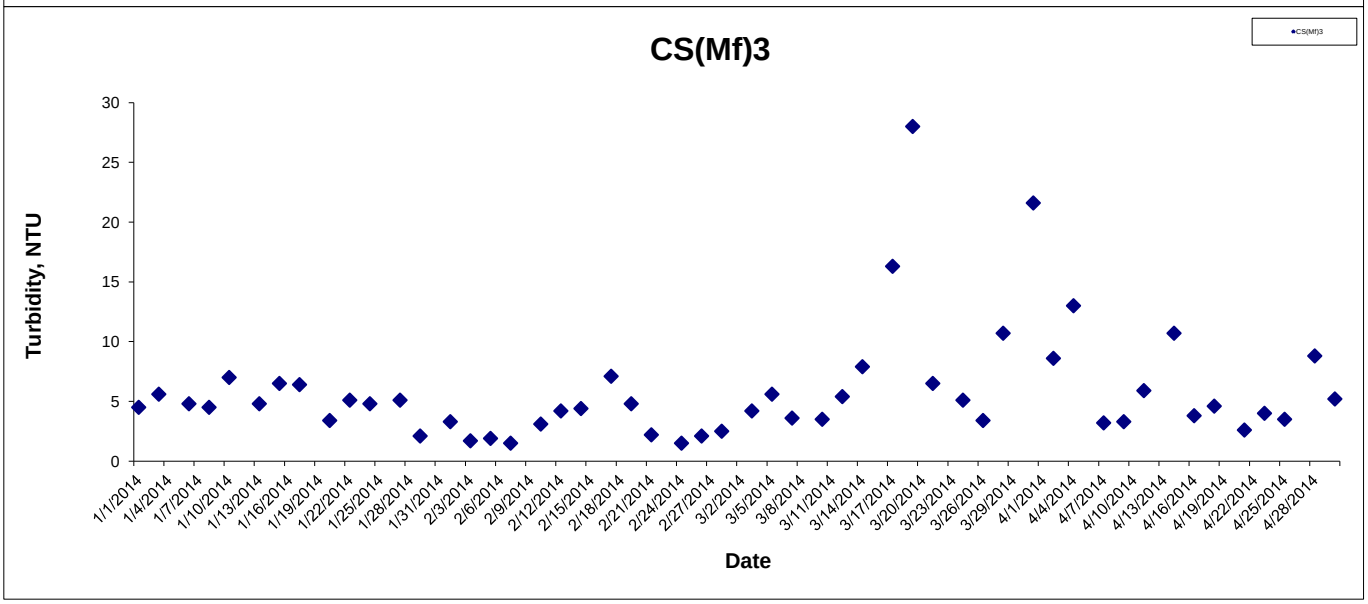




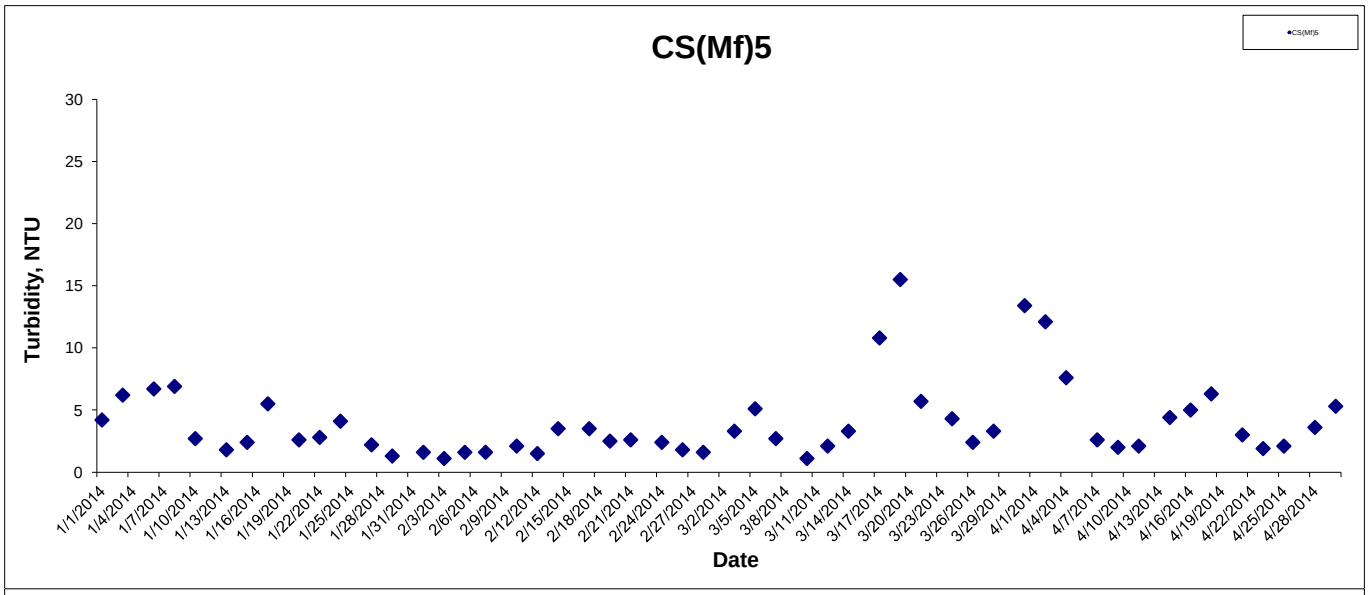
Turbidity at Mid-Ebb Tide

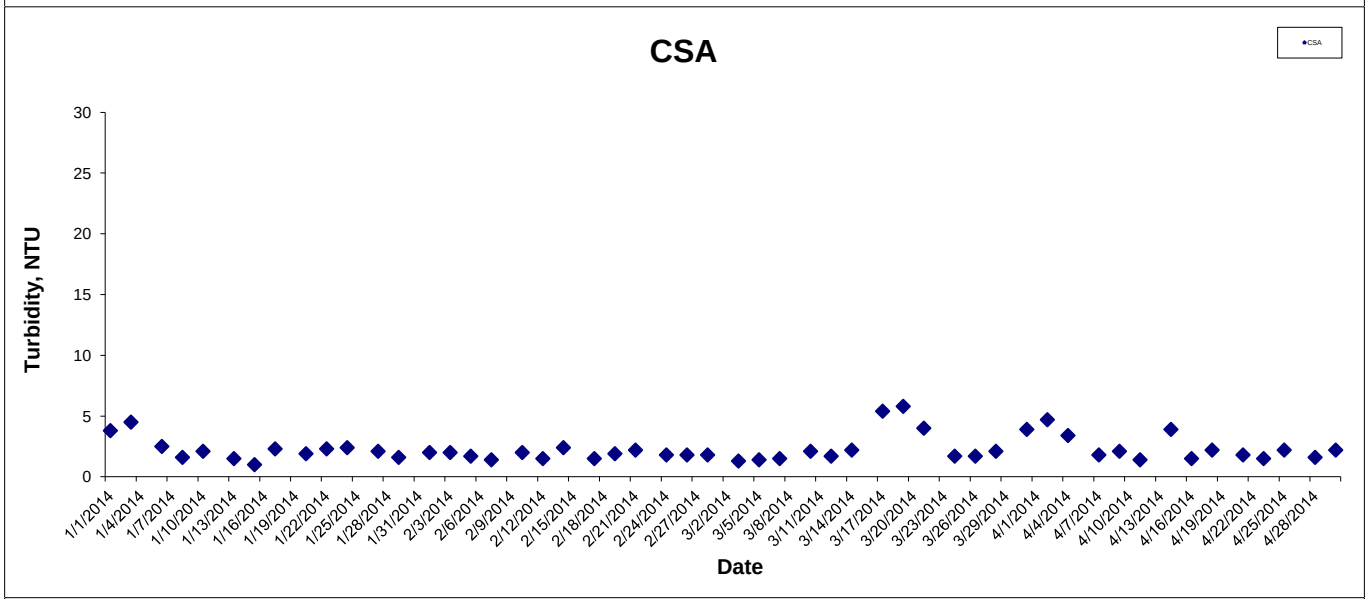


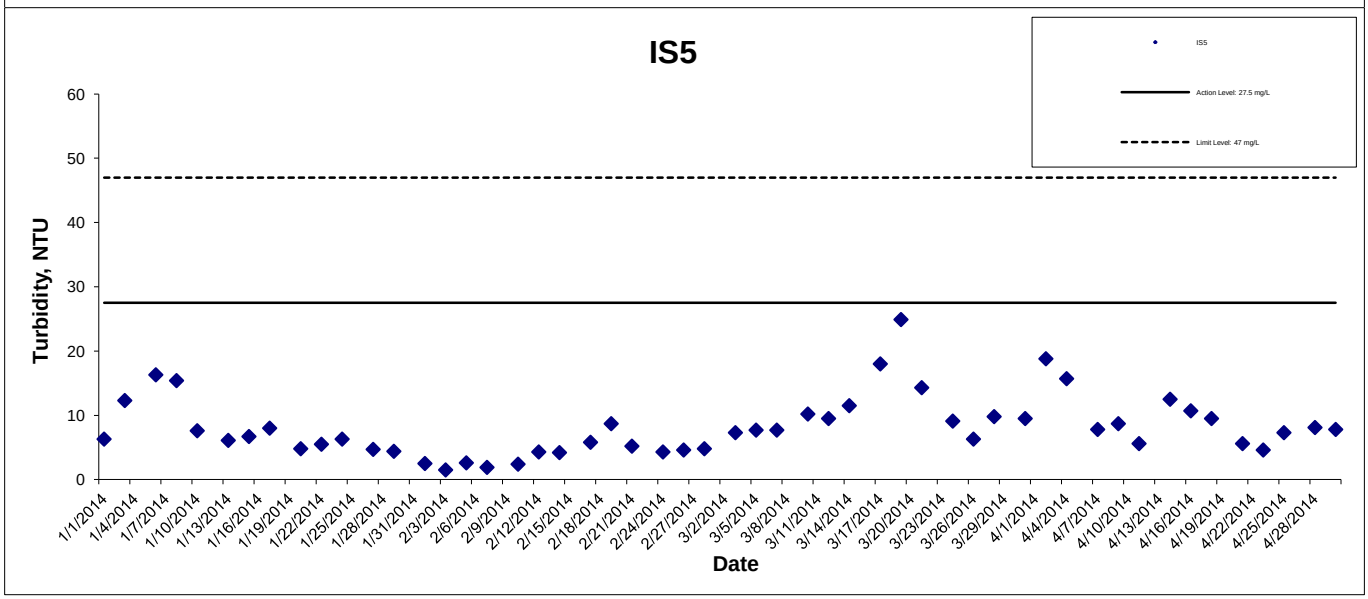




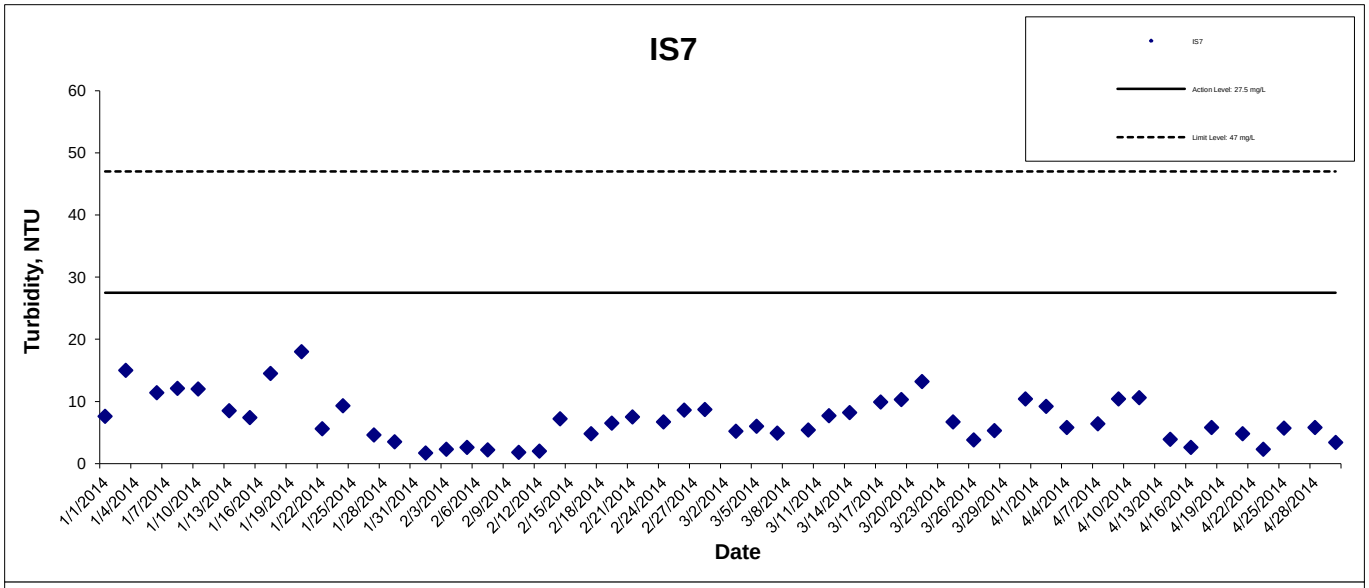
Turbidity at Mid-Ebb Tide

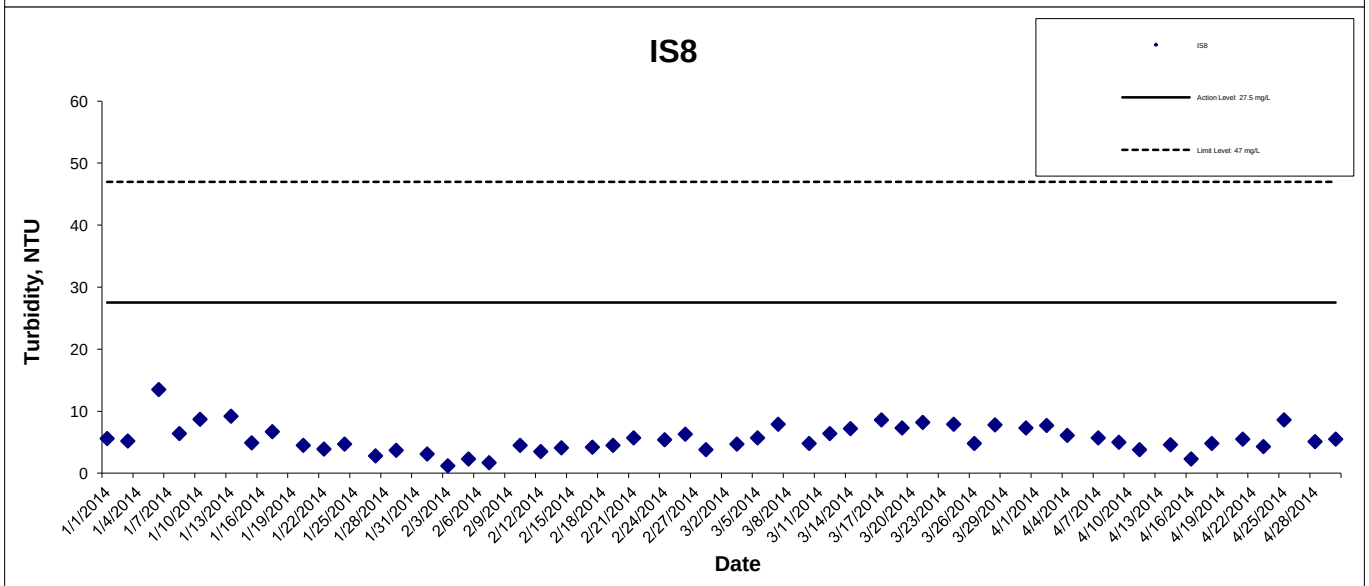


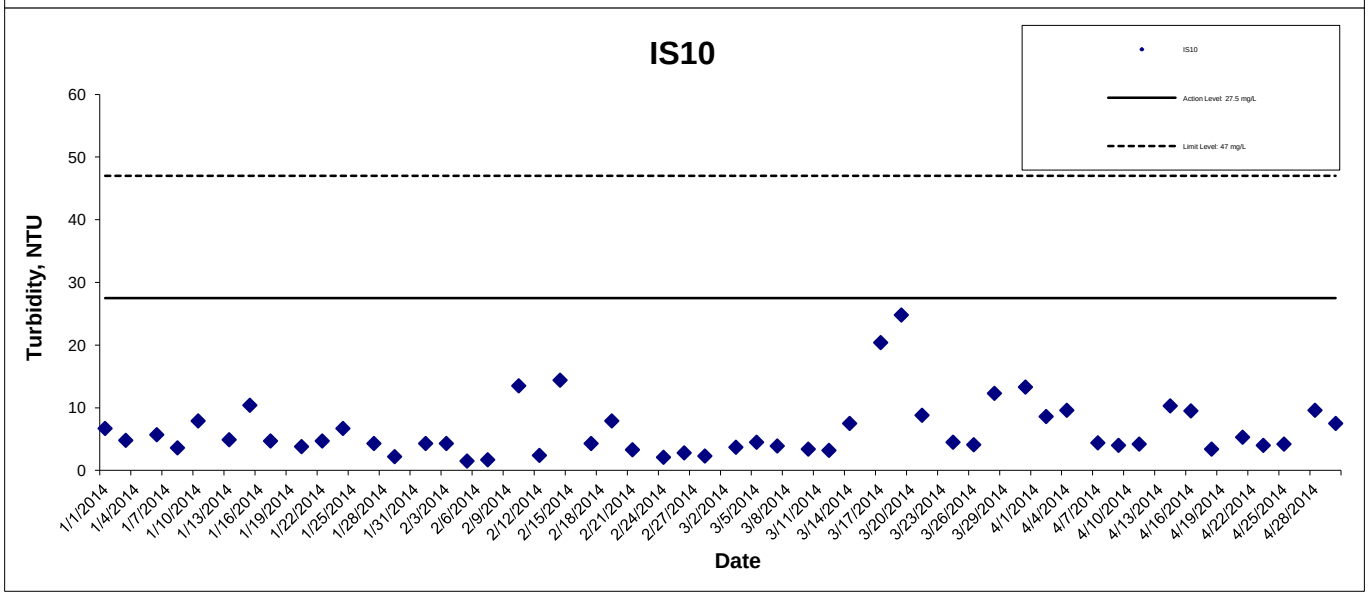




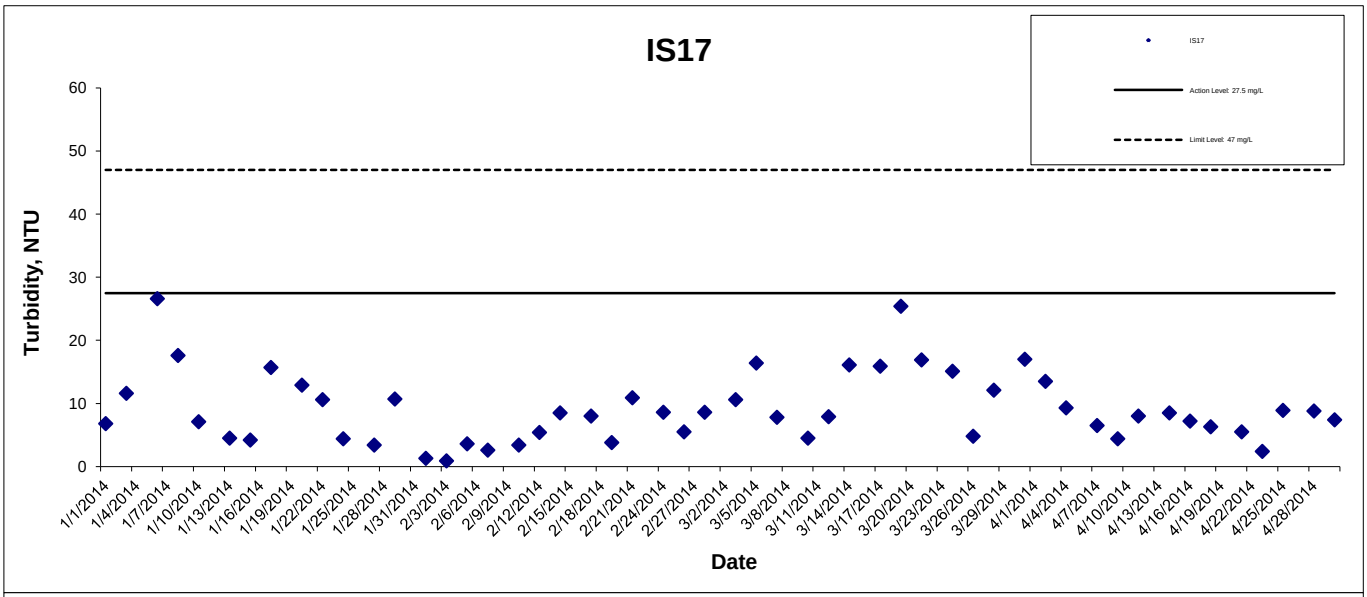
Turbidity at Mid-Ebb Tide

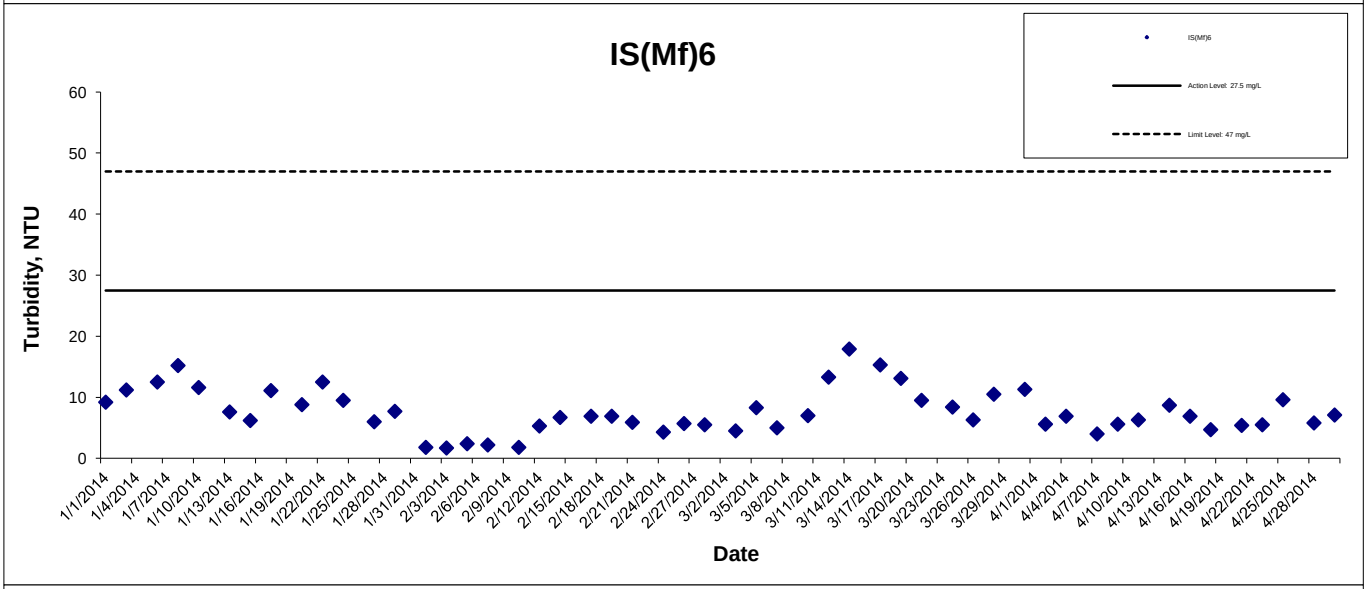


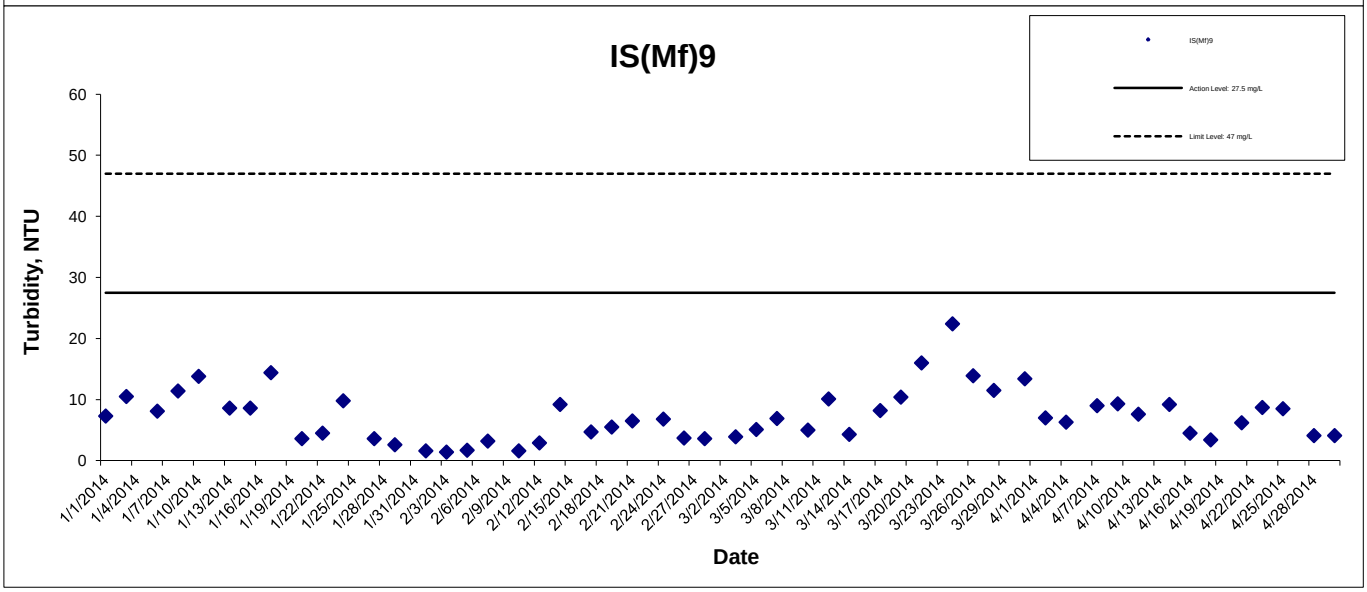




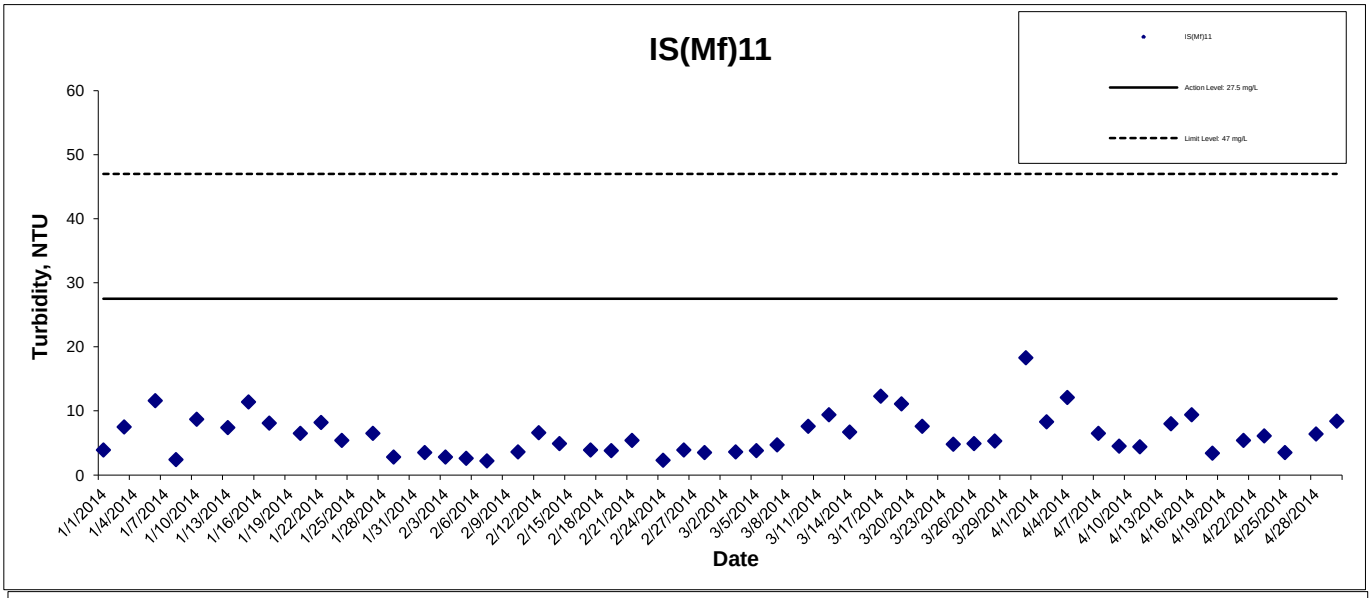
Turbidity at Mid-Ebb Tide

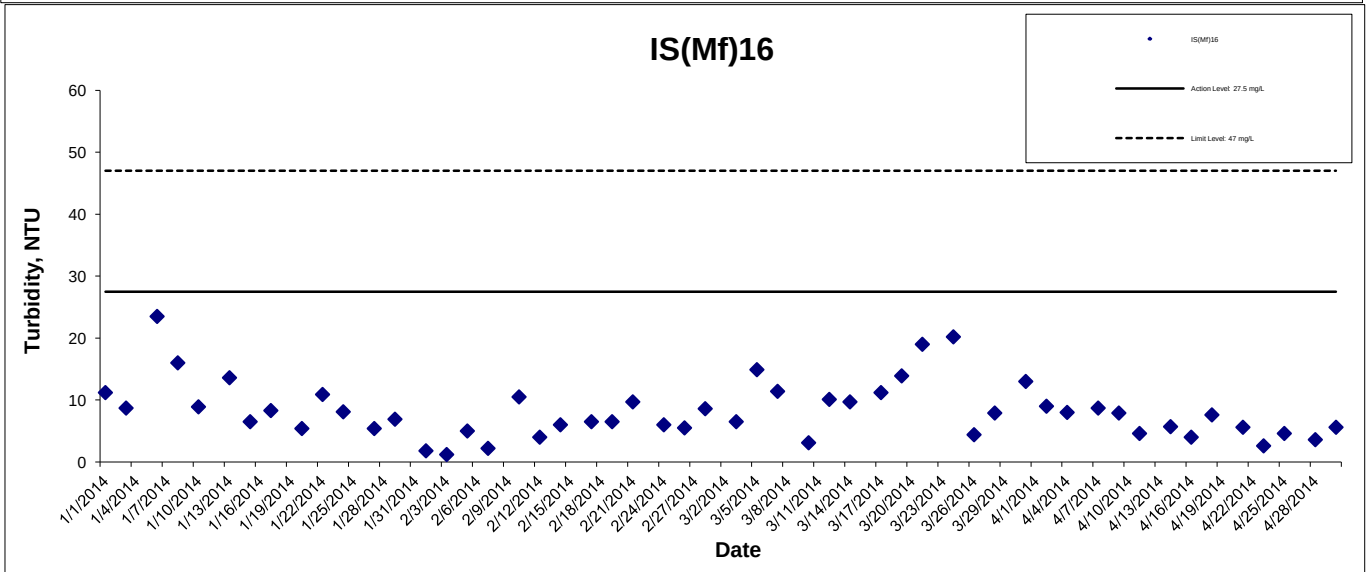


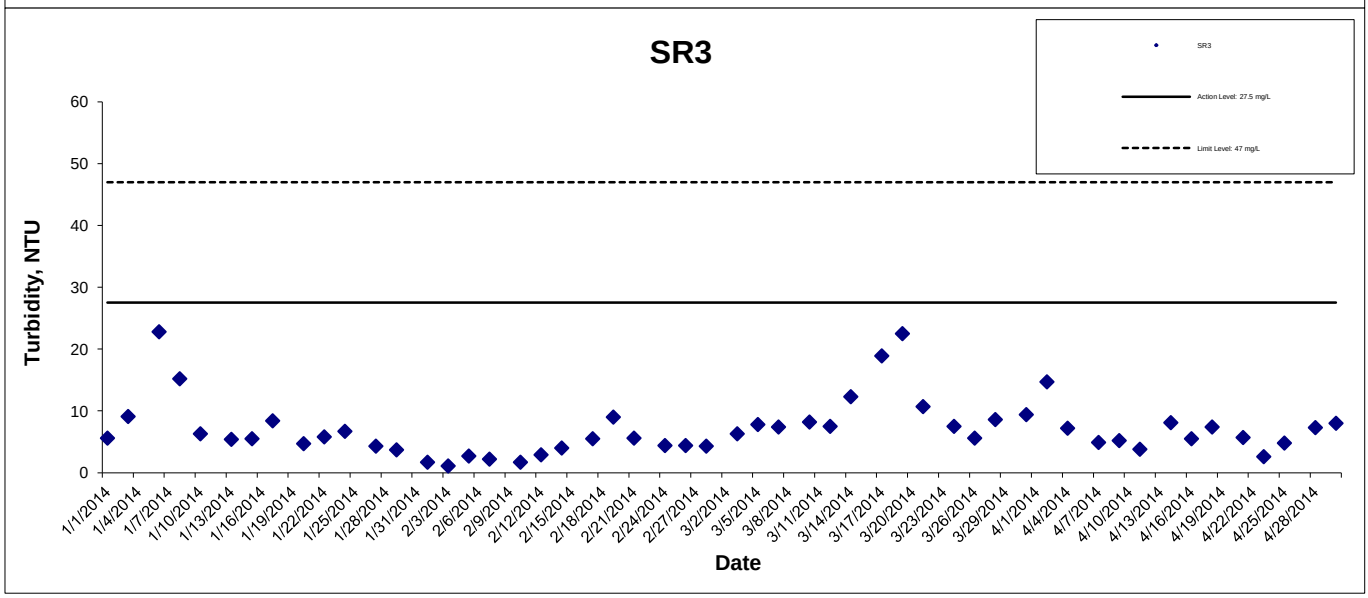




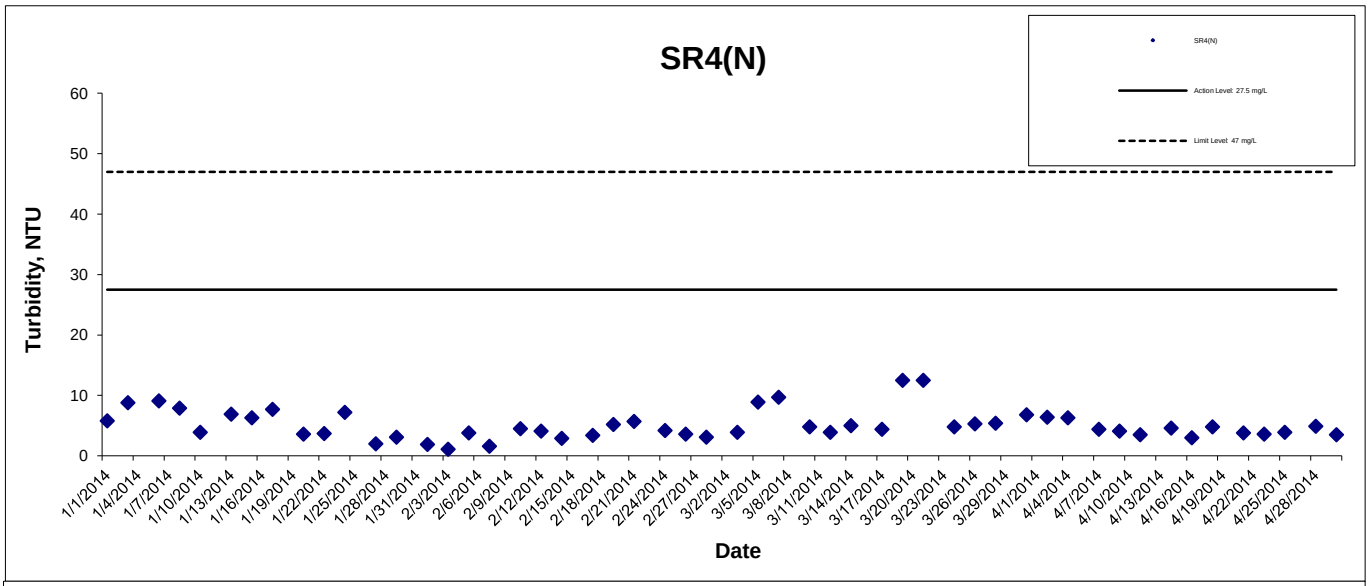
Turbidity at Mid-Ebb Tide

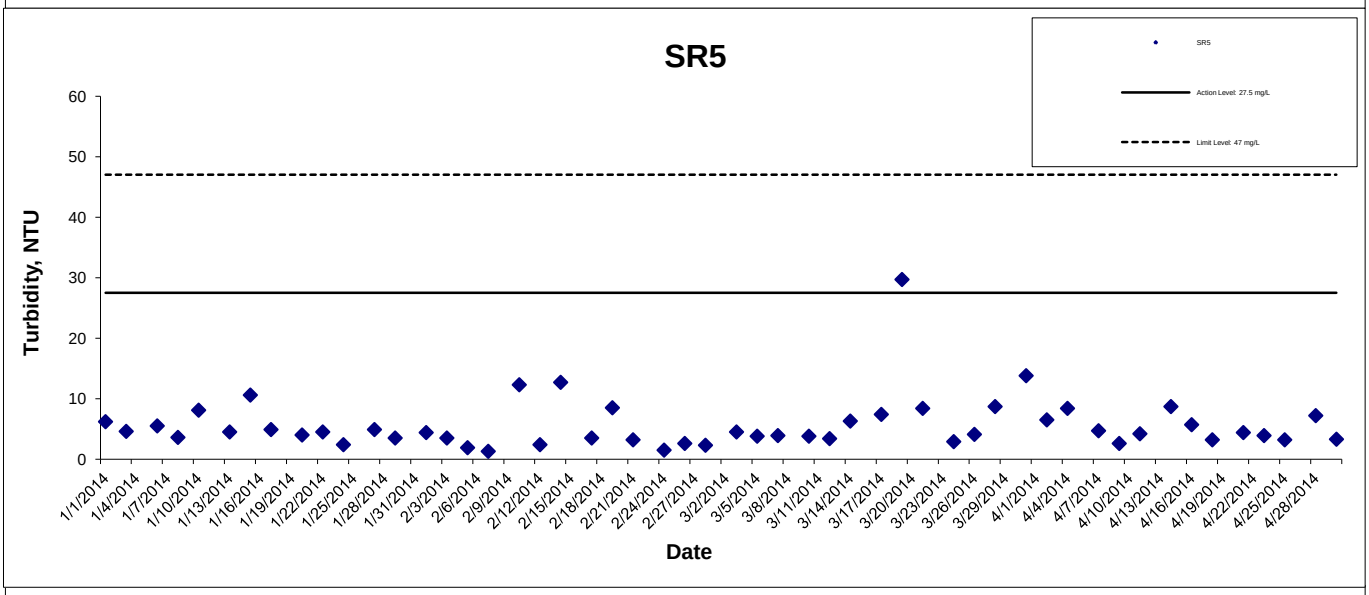


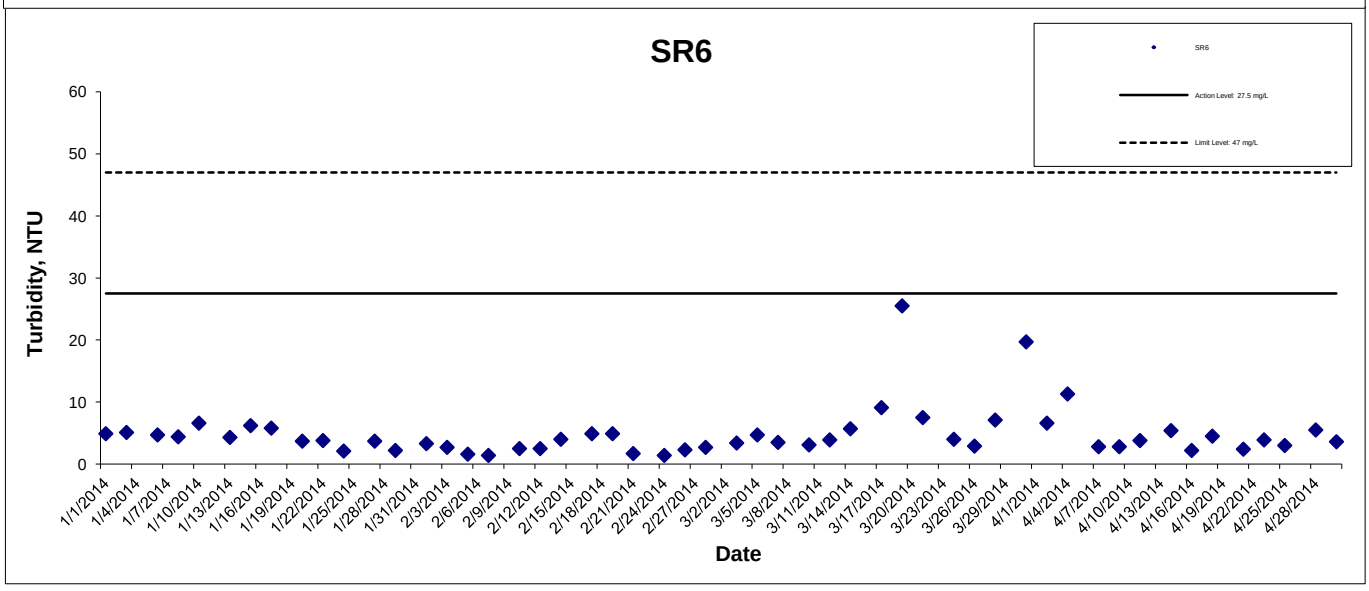




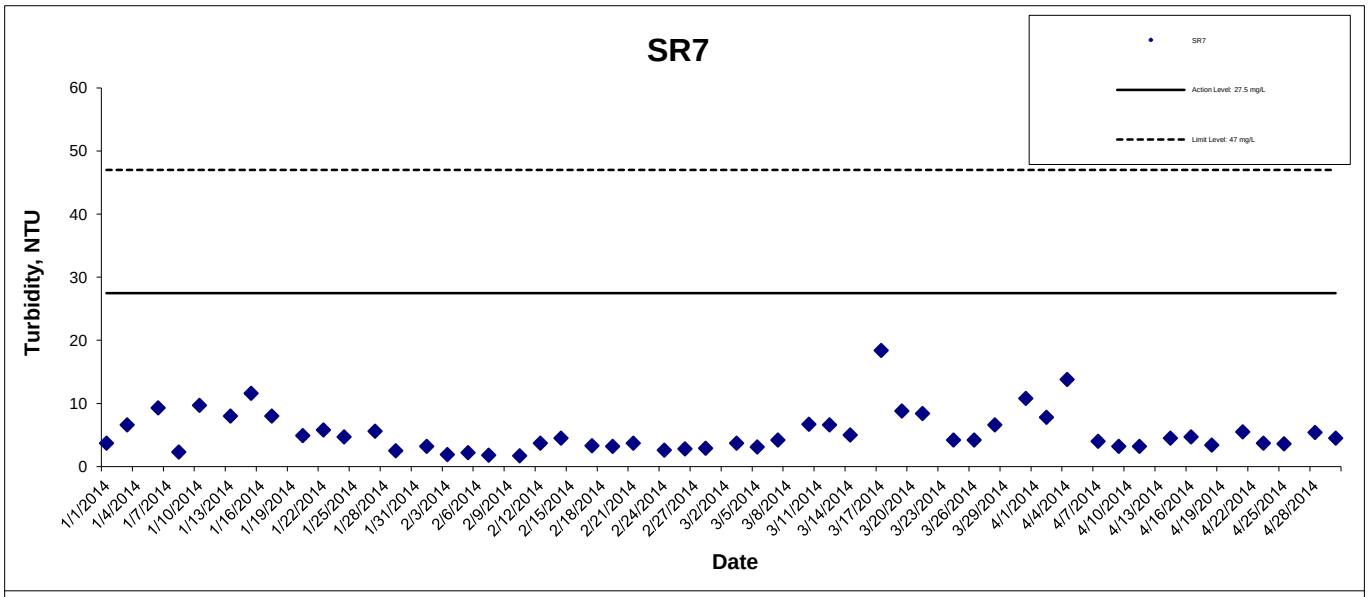
Turbidity at Mid-Ebb Tide

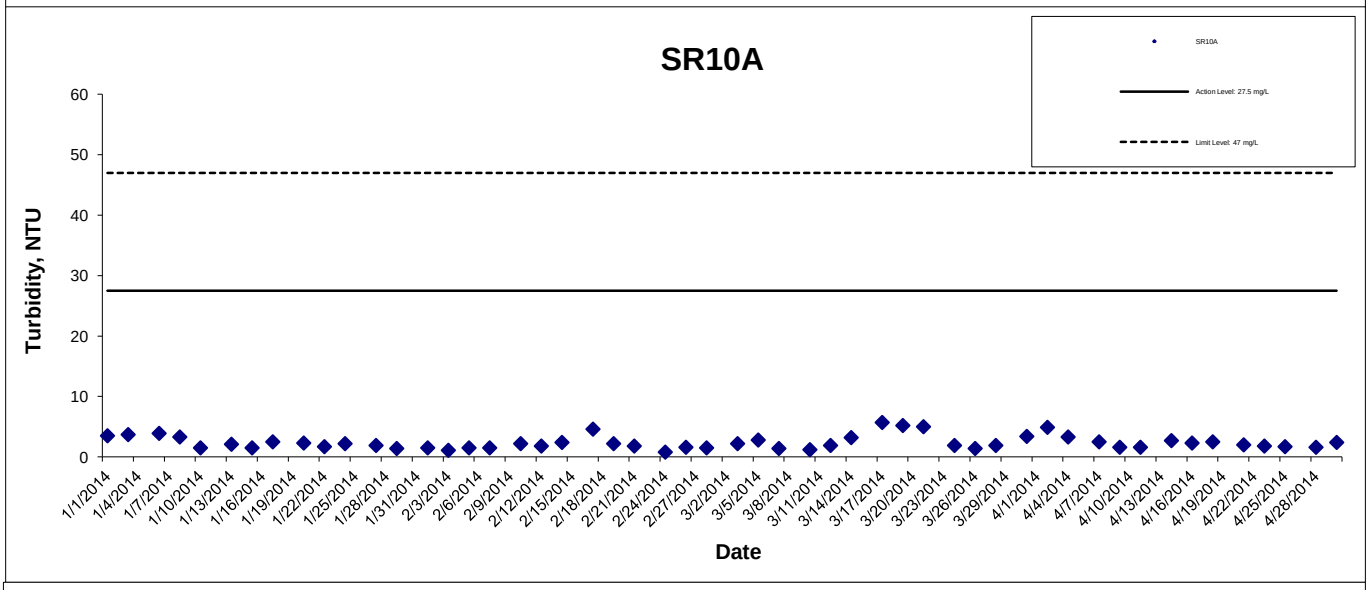


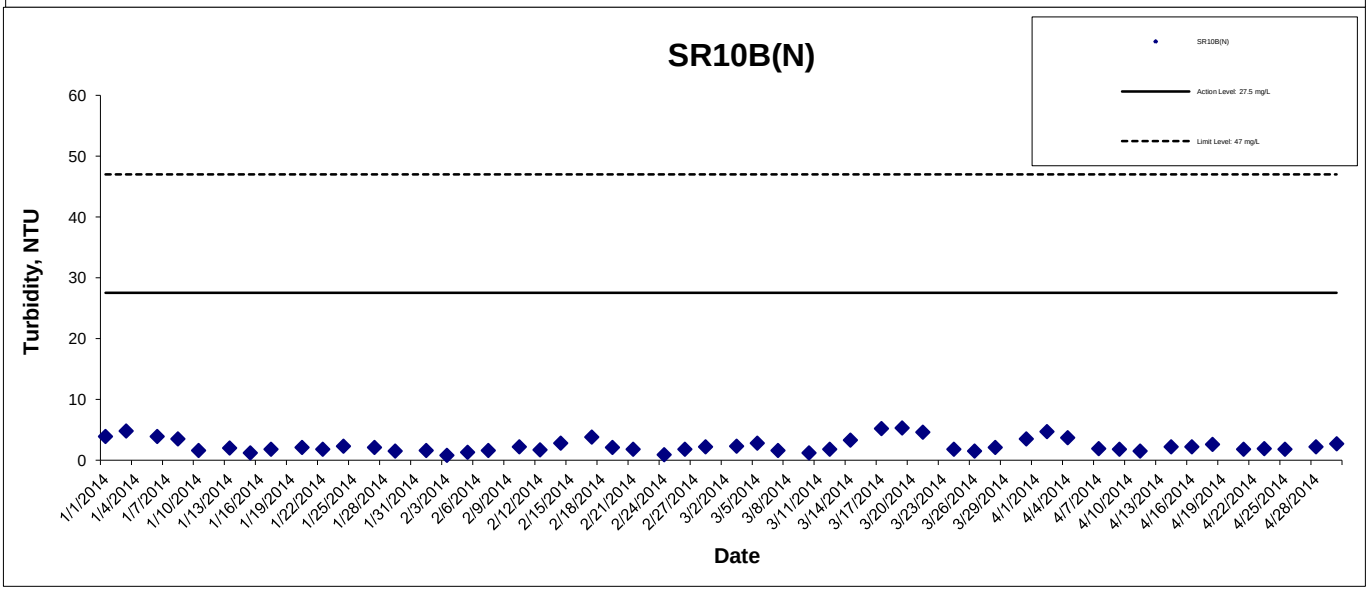




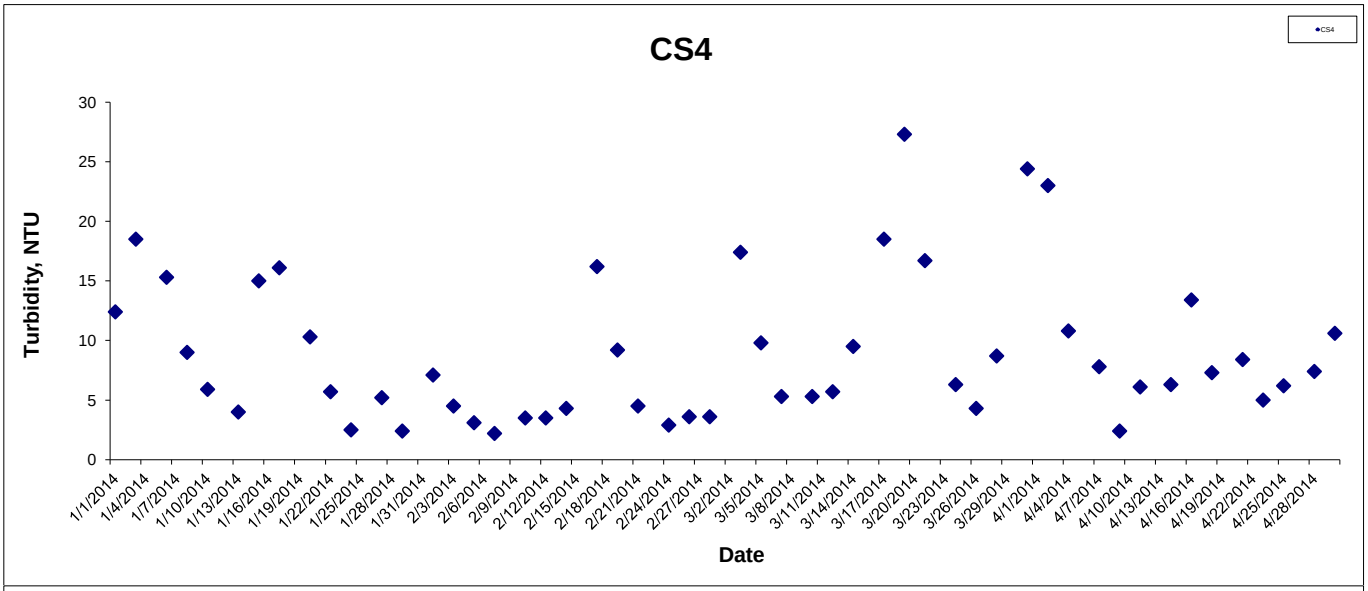
Turbidity at Mid-Ebb Tide

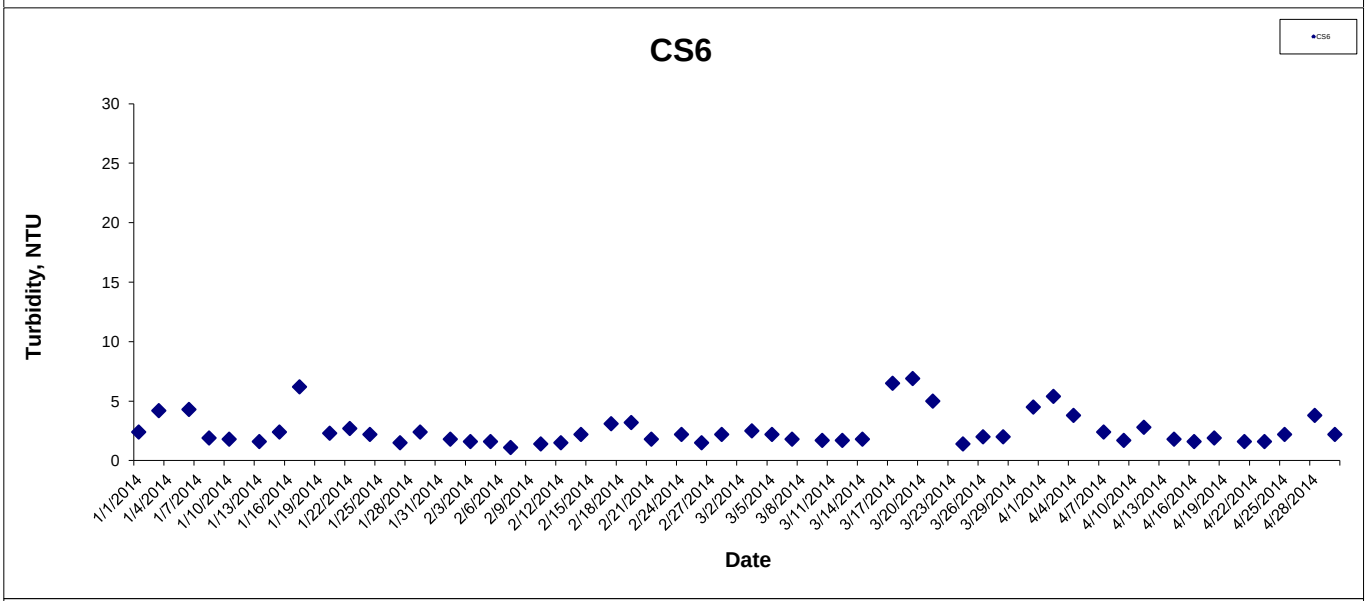


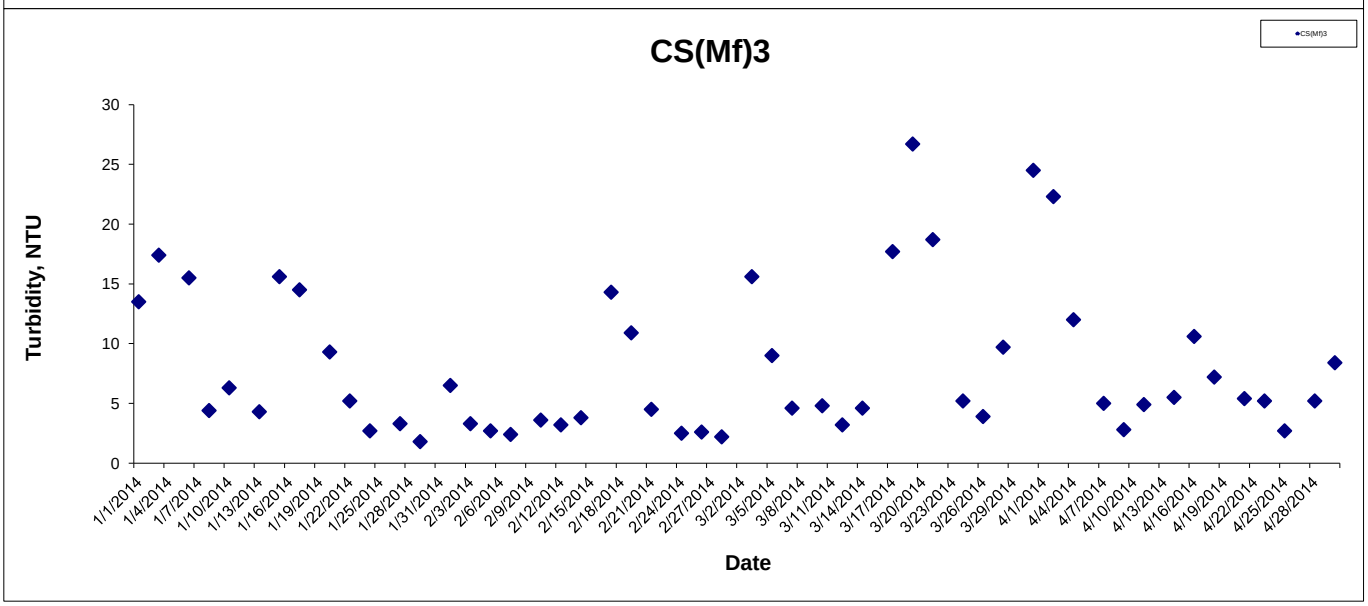




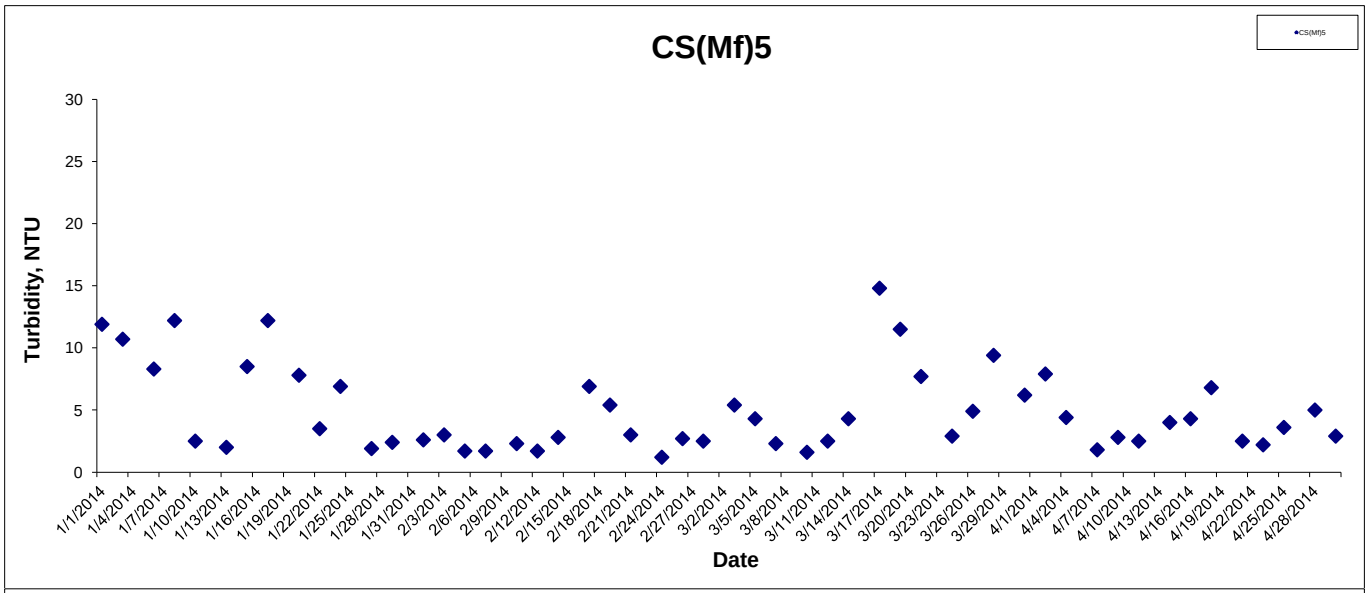
Turbidity at Mid-Flood Tide

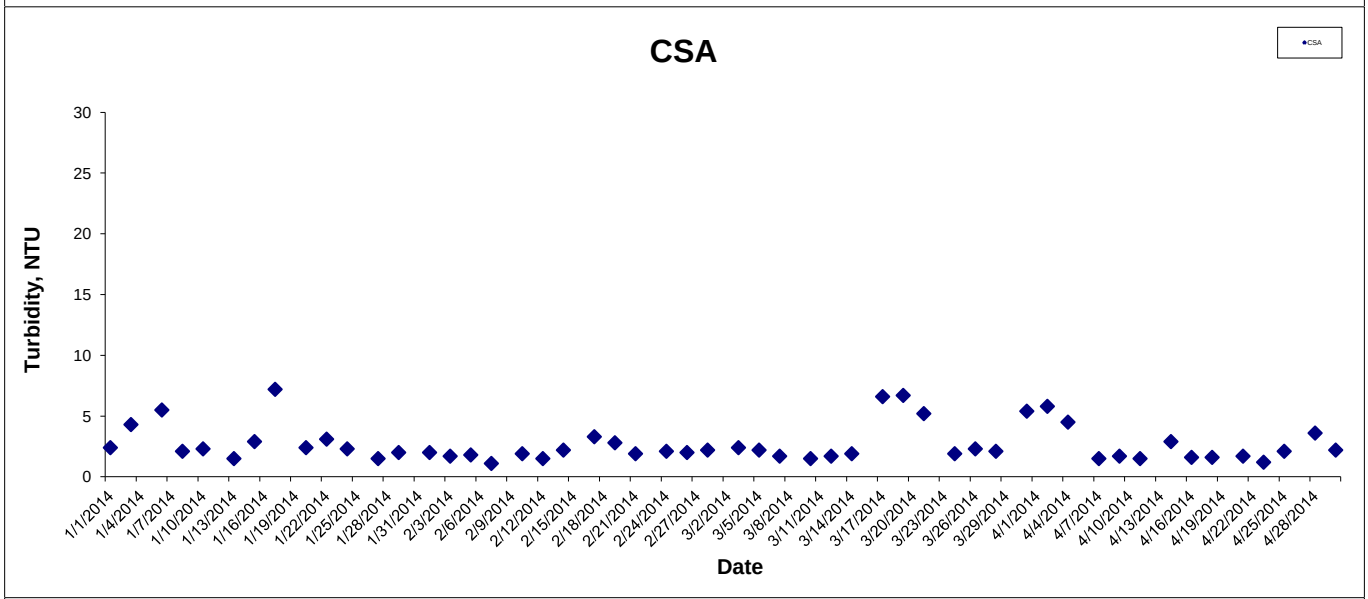


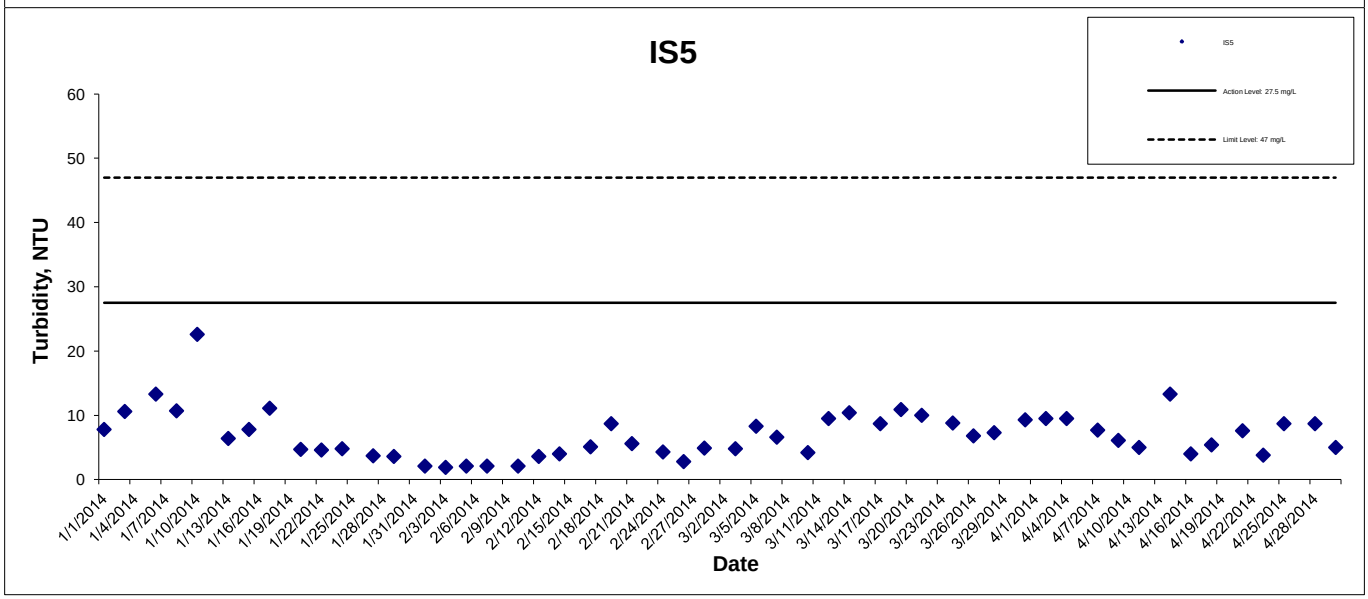




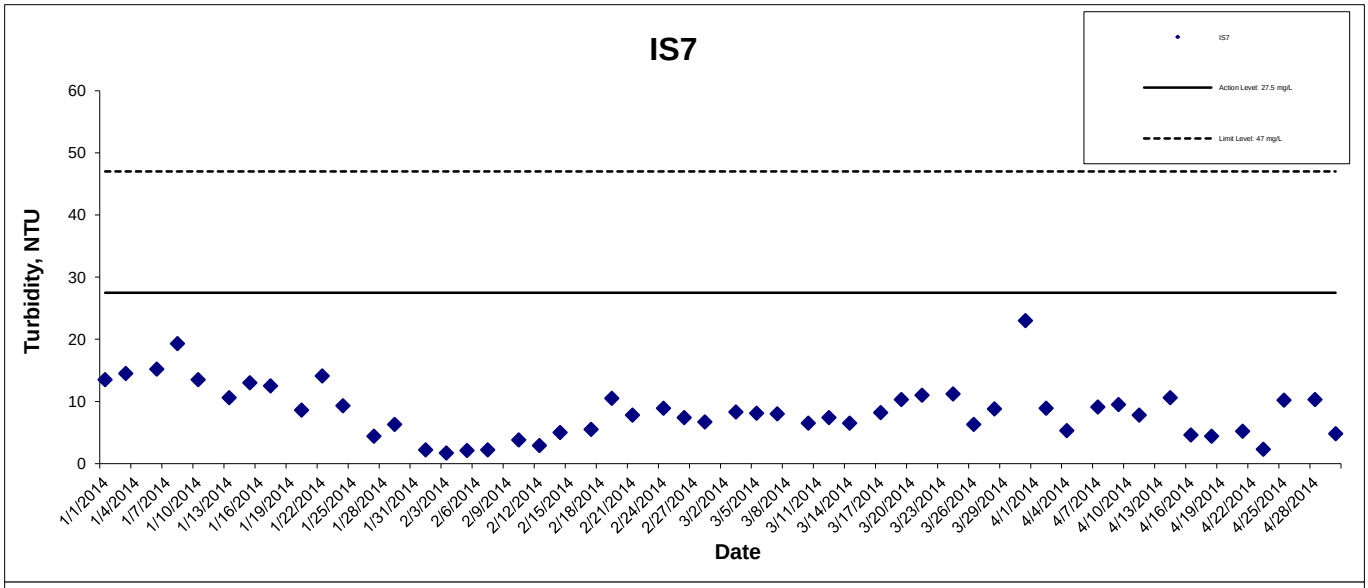
Turbidity at Mid-Flood Tide

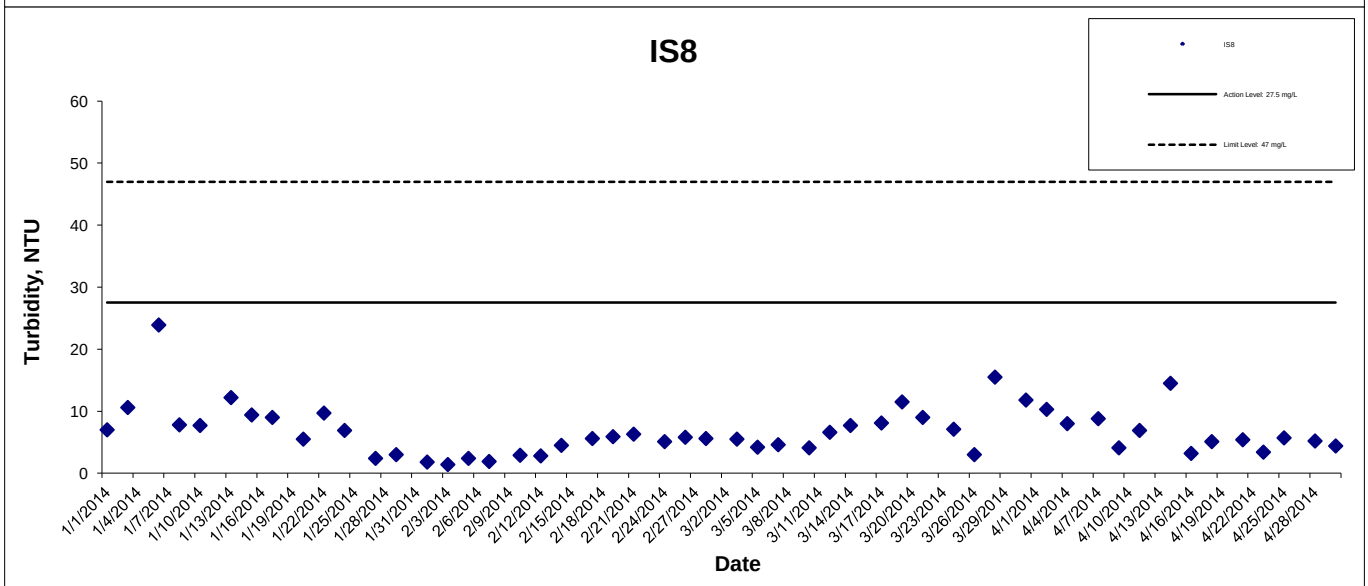


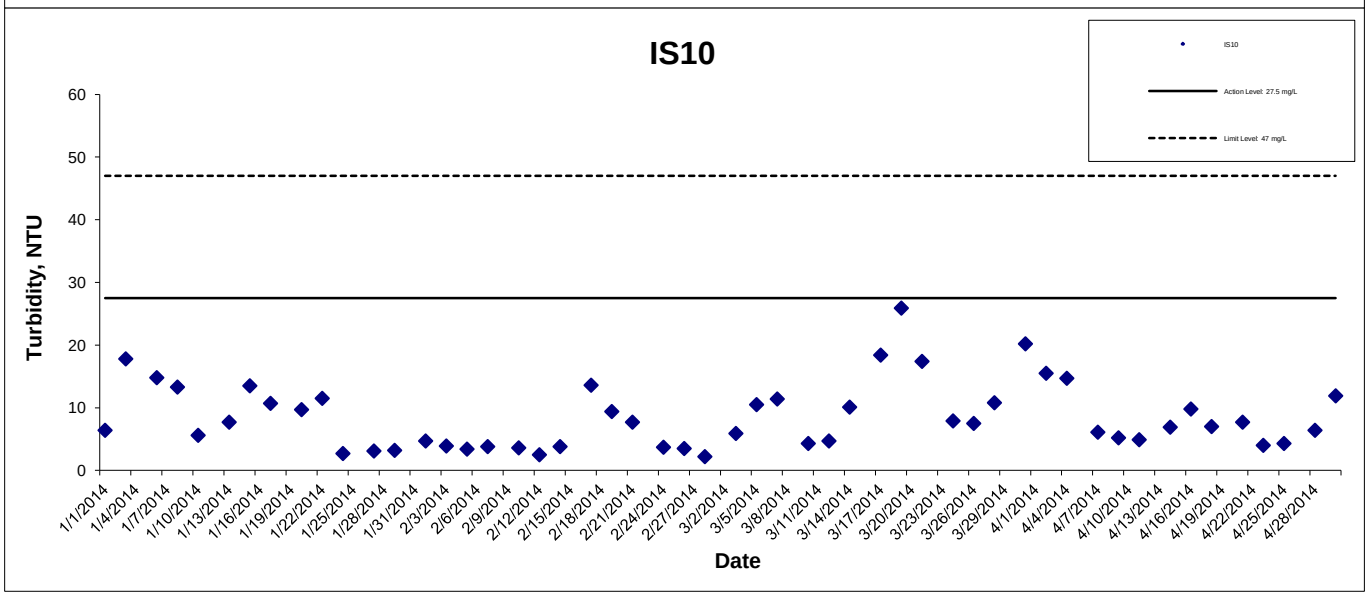




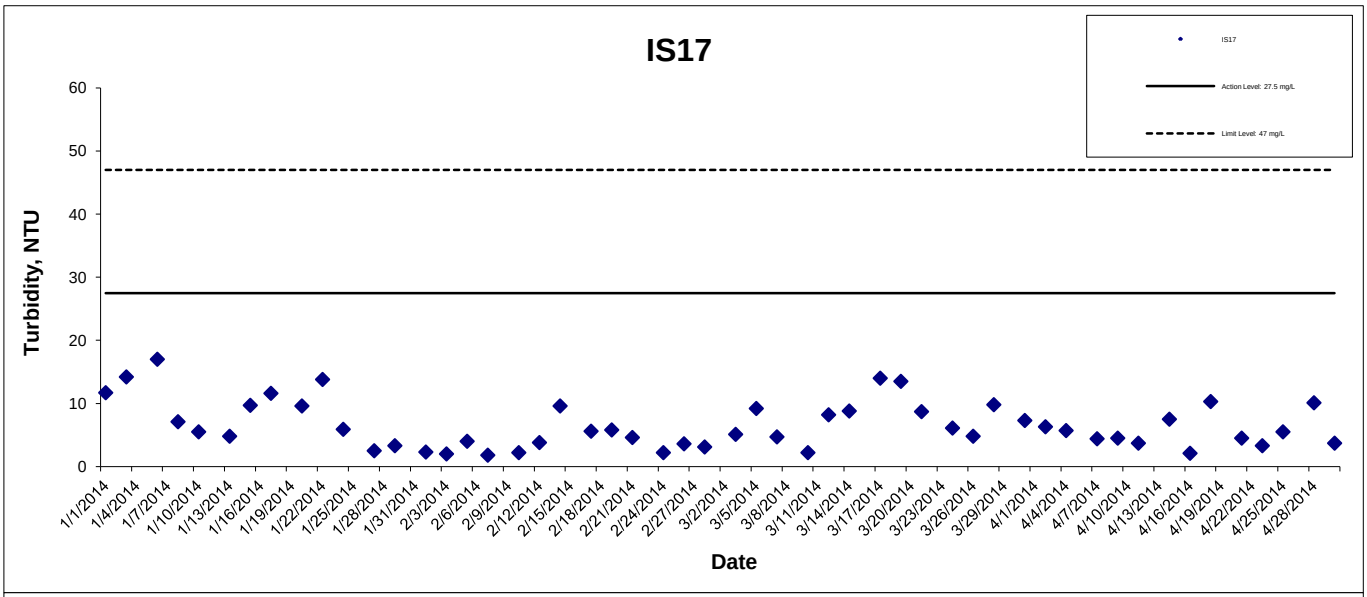
Turbidity at Mid-Flood Tide

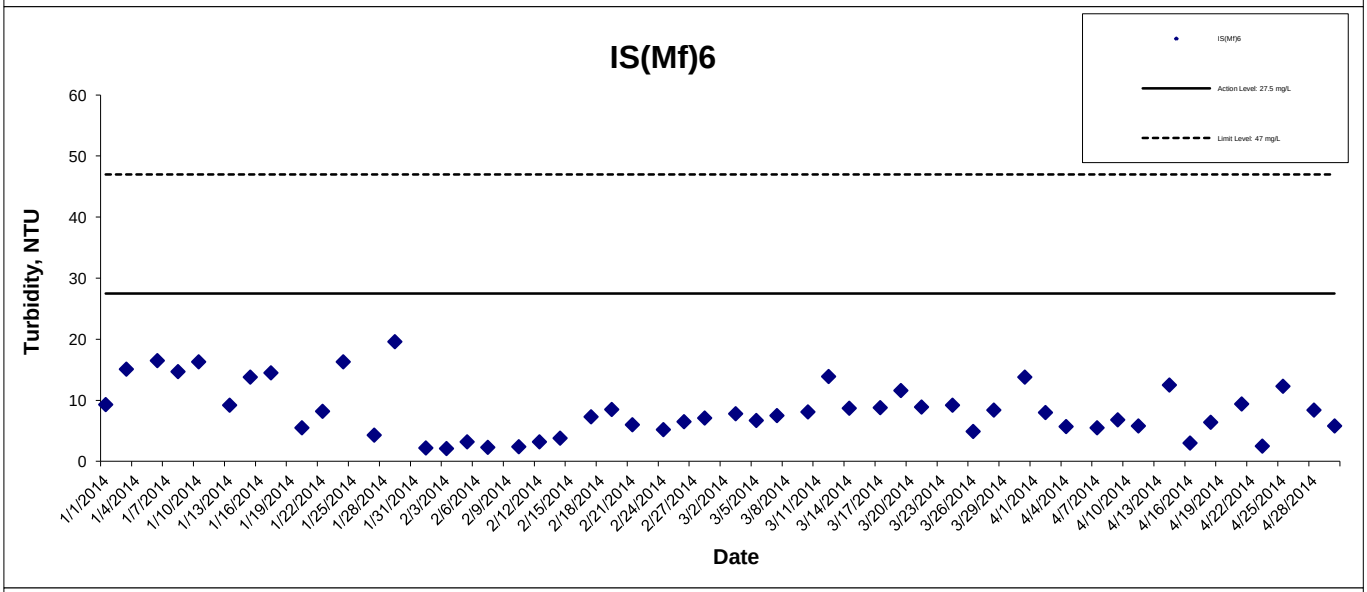


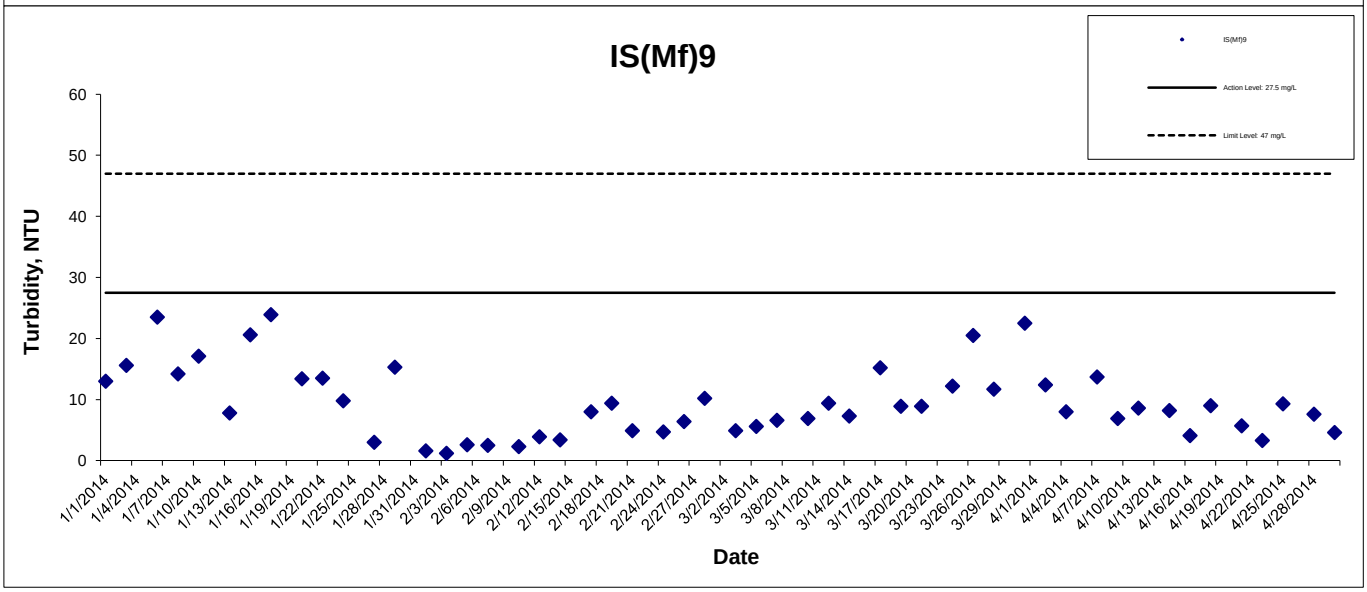




Turbidity at Mid-Flood Tide





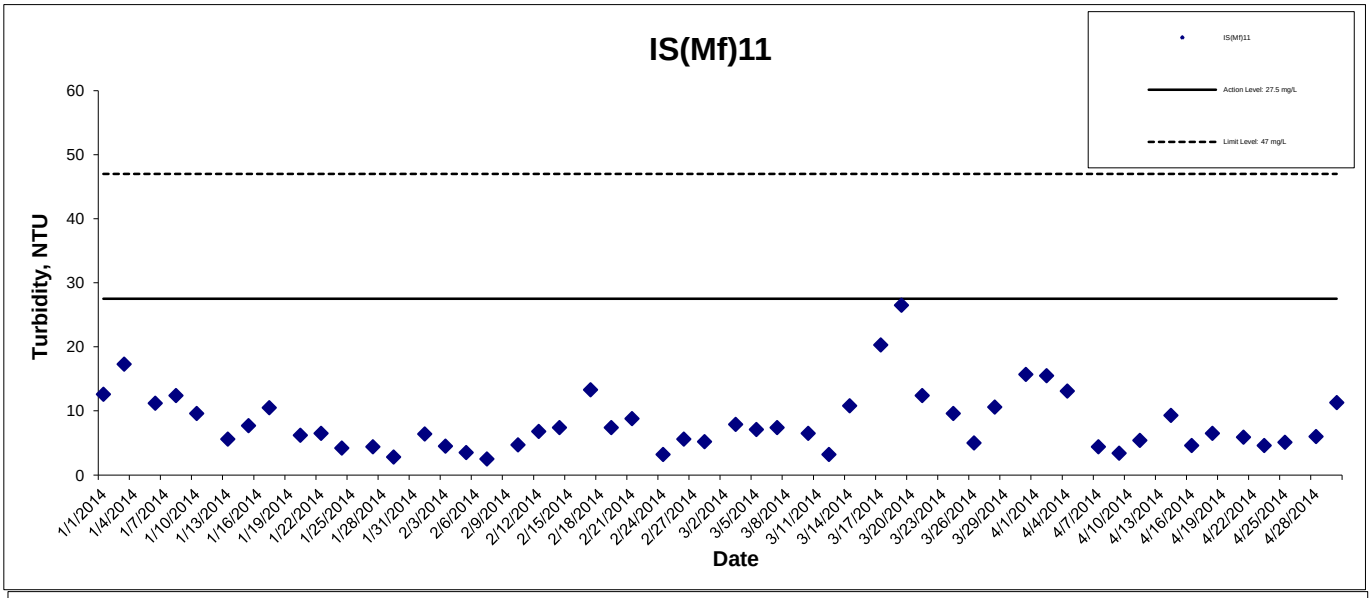


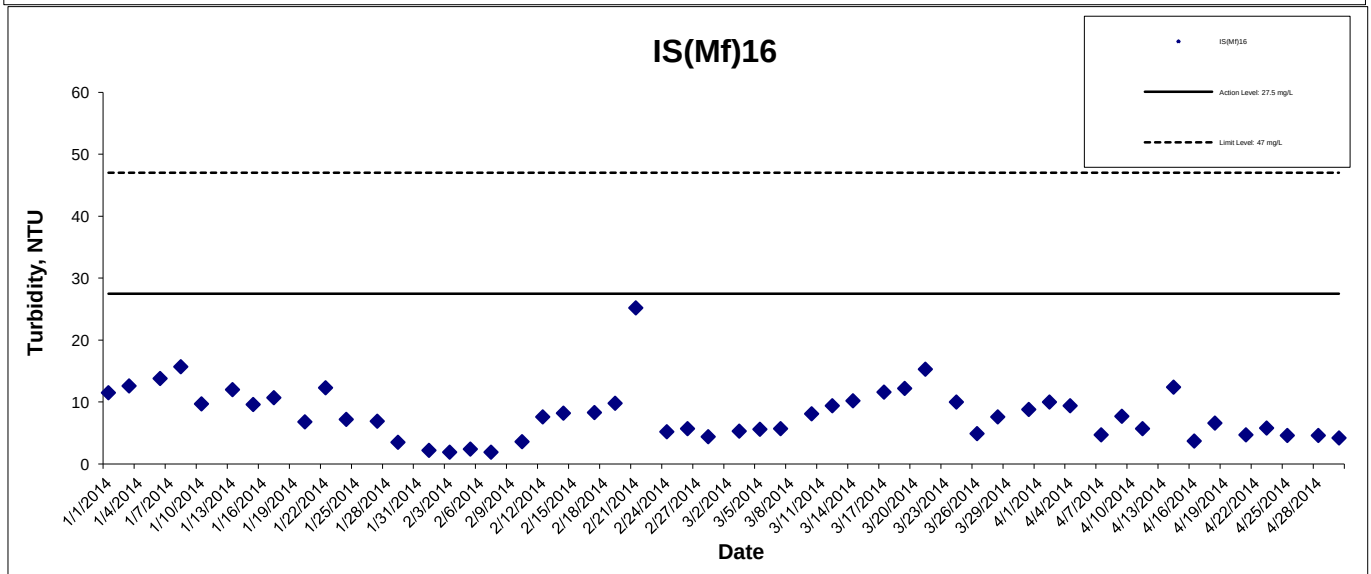
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

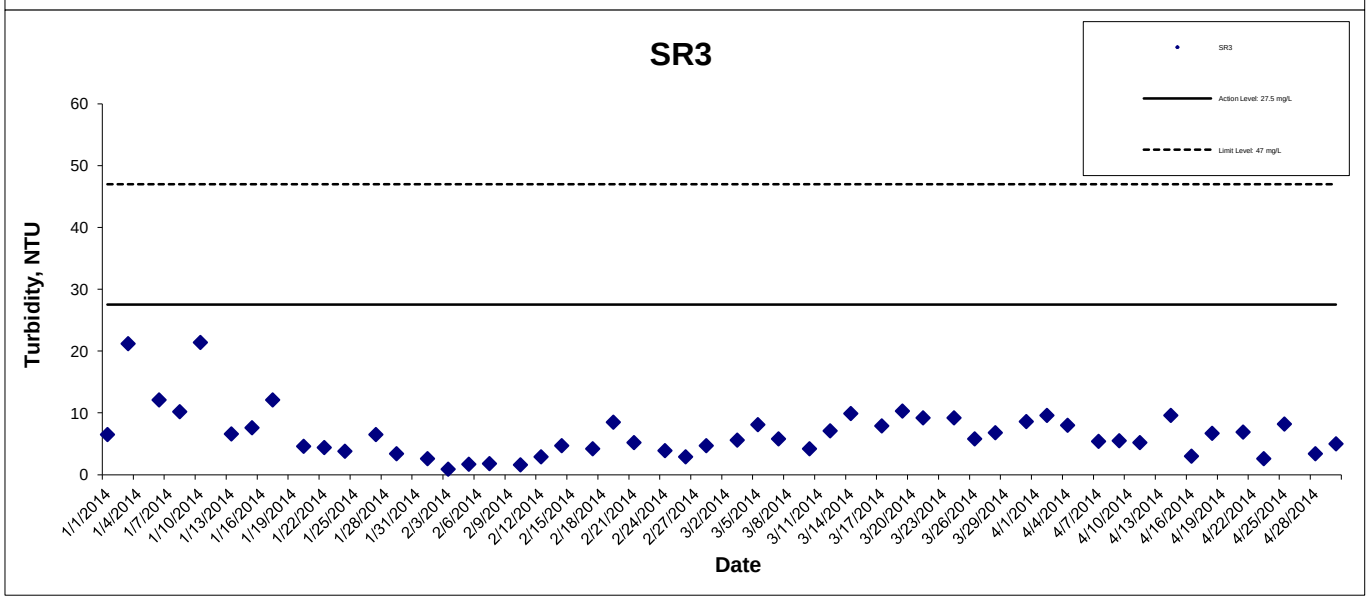
Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2014** **Appendix J**

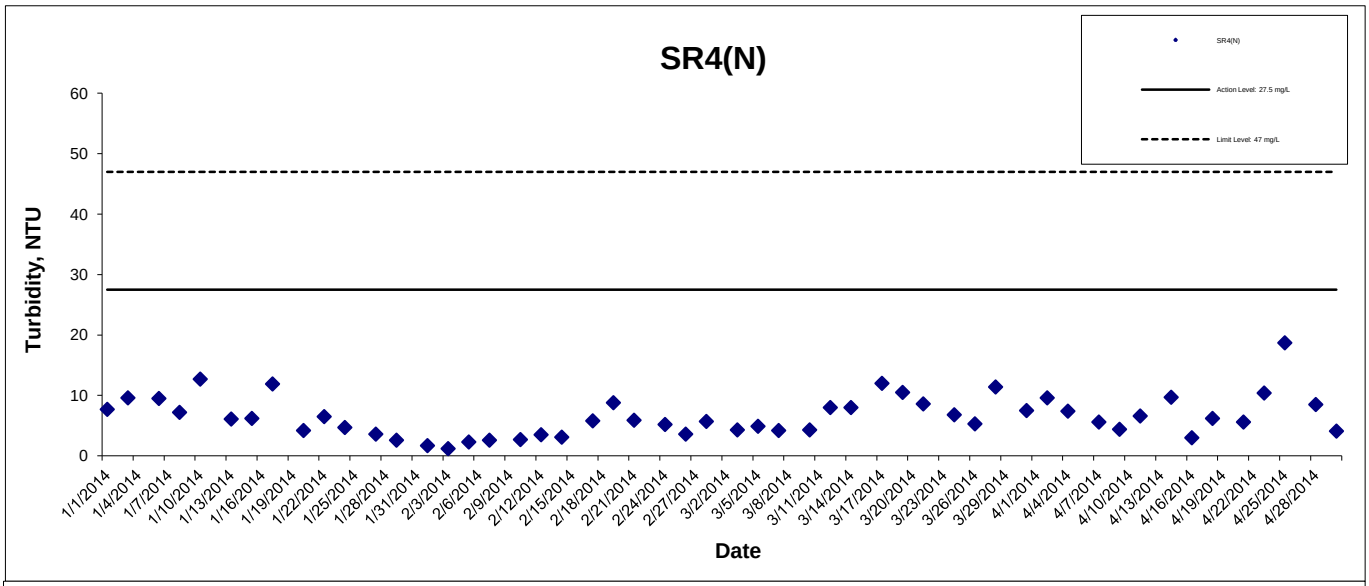
Turbidity at Mid-Flood Tide

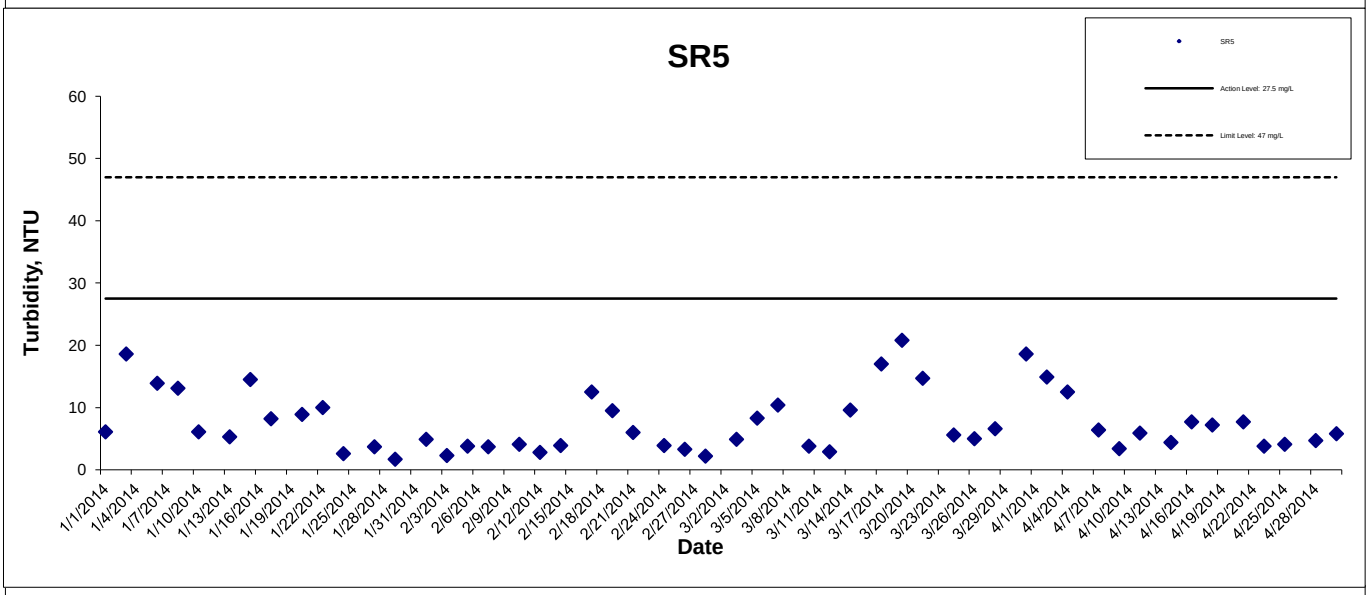


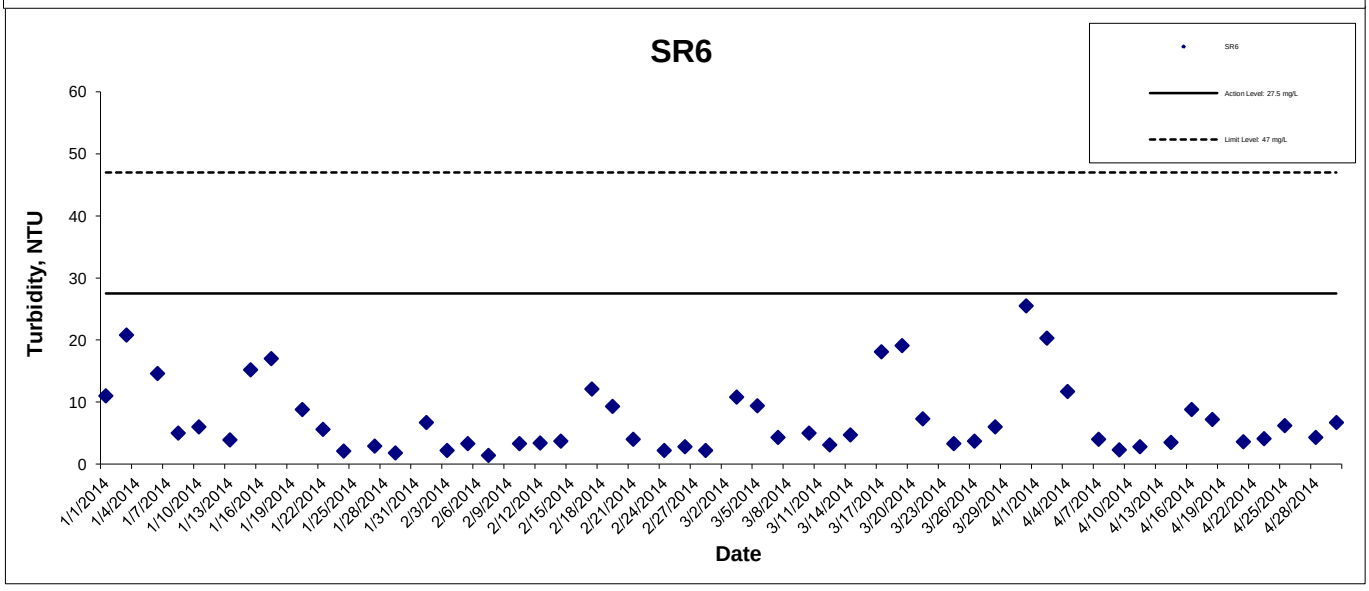




Turbidity at Mid-Flood Tide







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

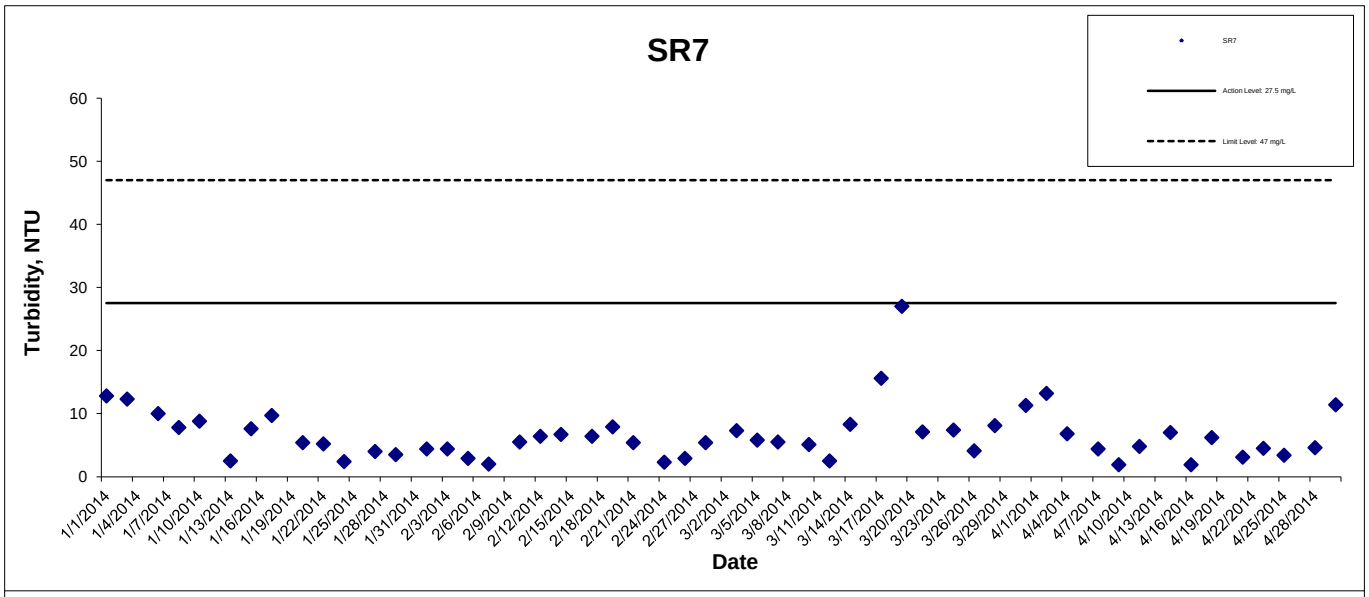
AECOM

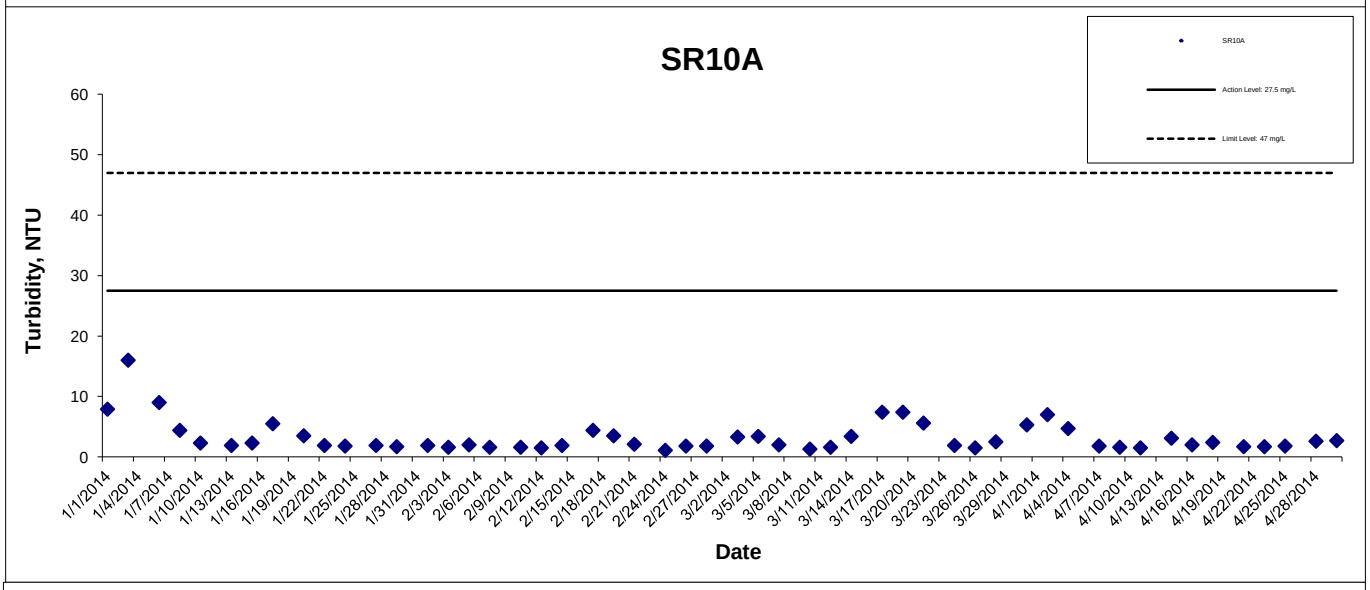
Graphical Presentation of Impact Water Quality Monitoring Results

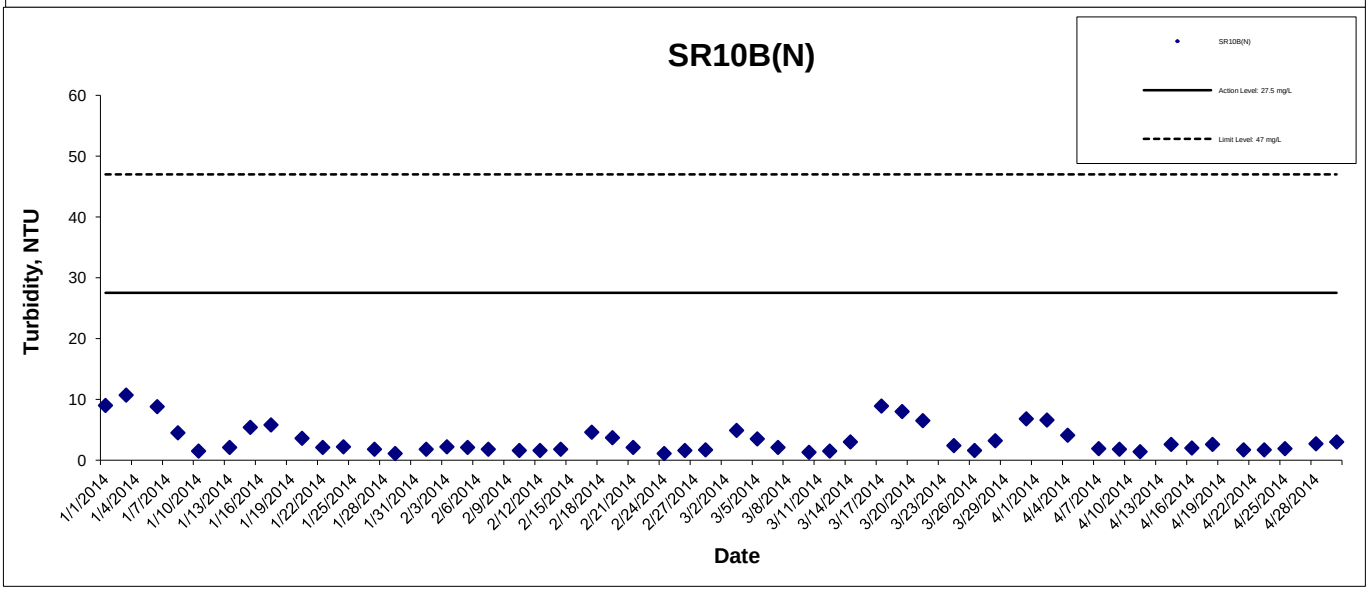
Project No.: 60249820 Date: May 2014

Appendix J

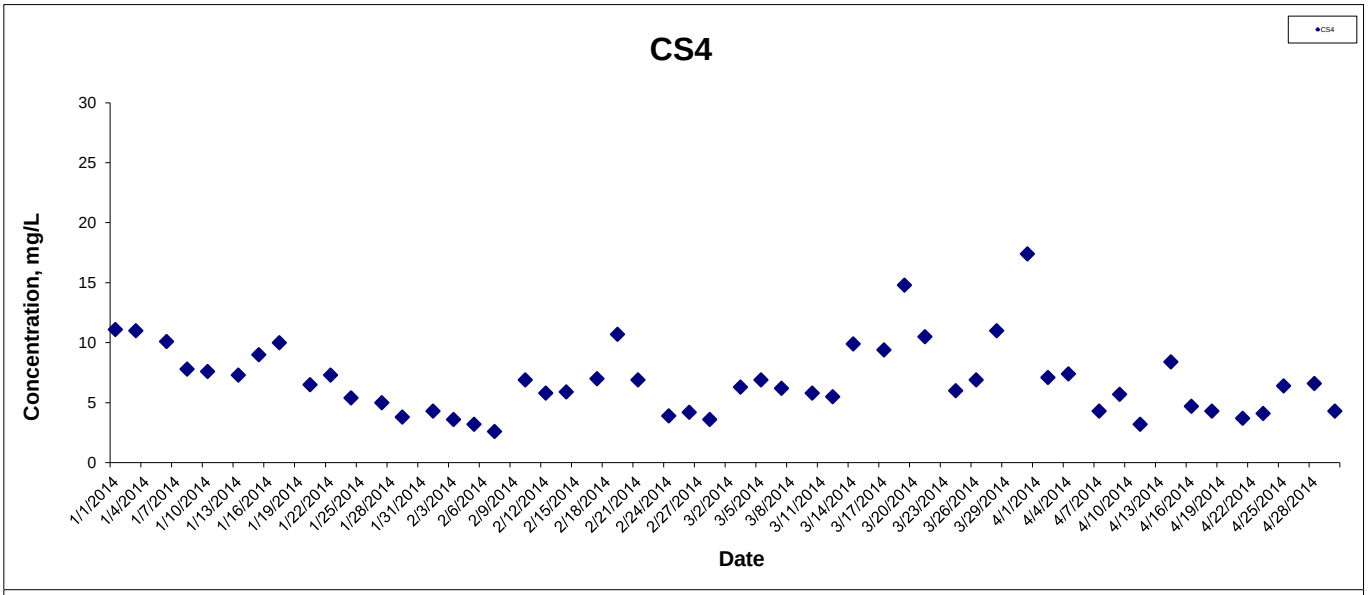
Turbidity at Mid-Flood Tide

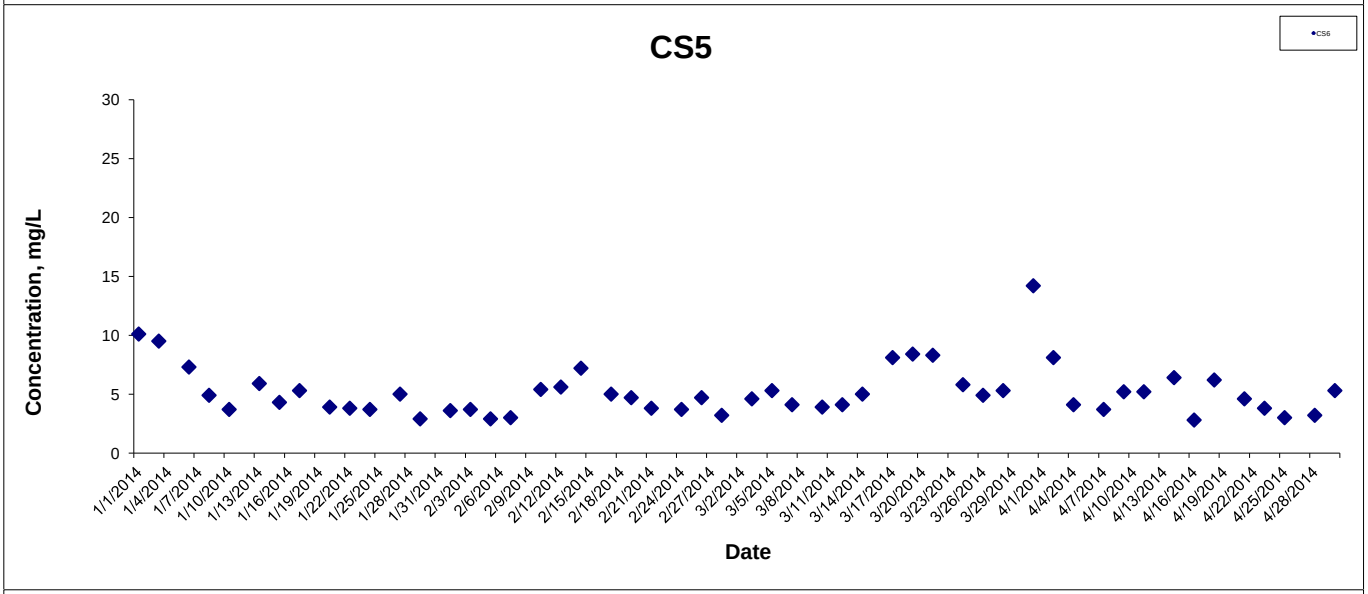


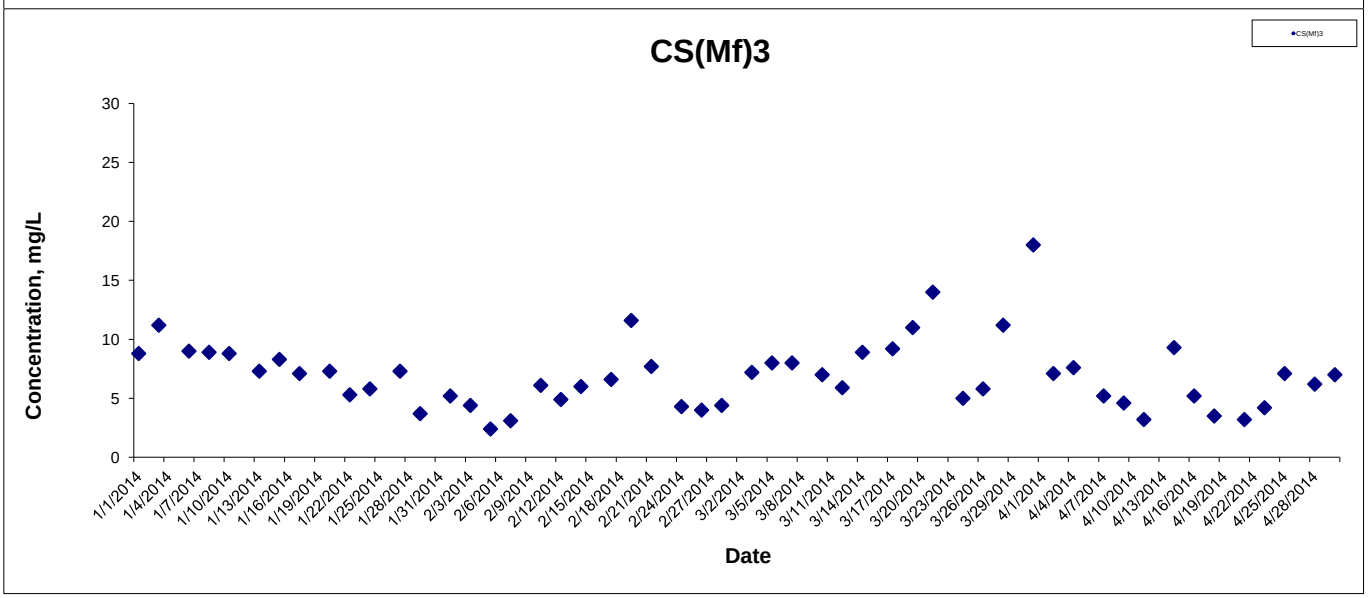




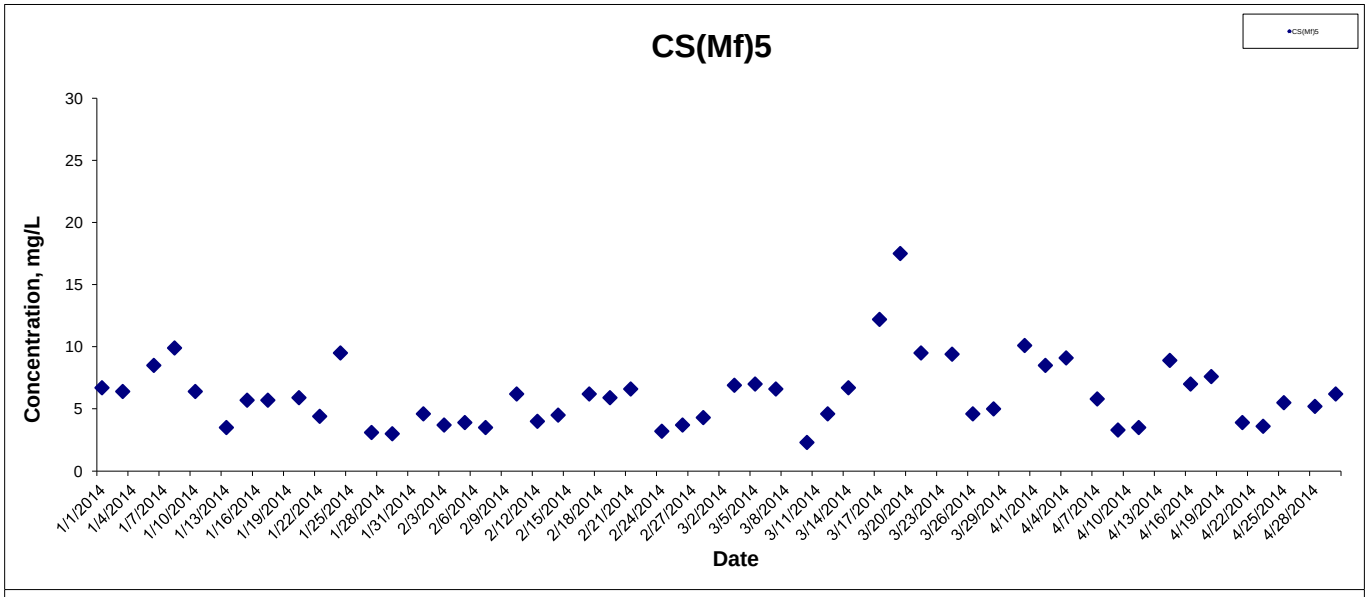
Suspended Solids at Mid-Ebb Tide

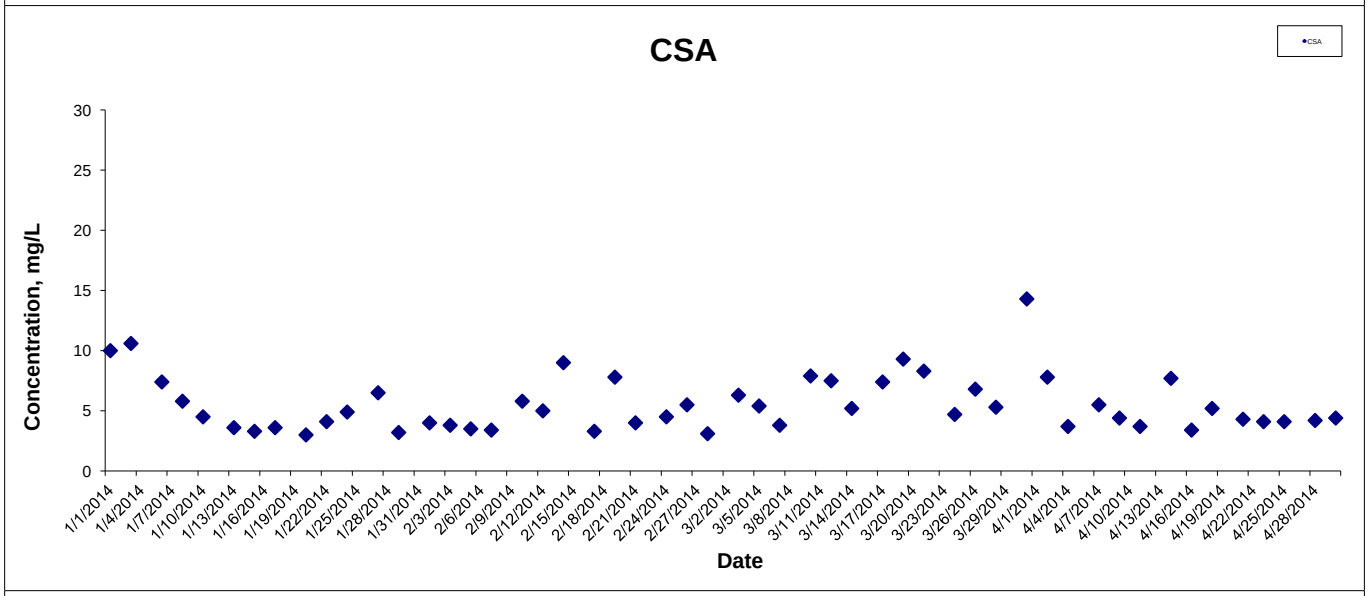


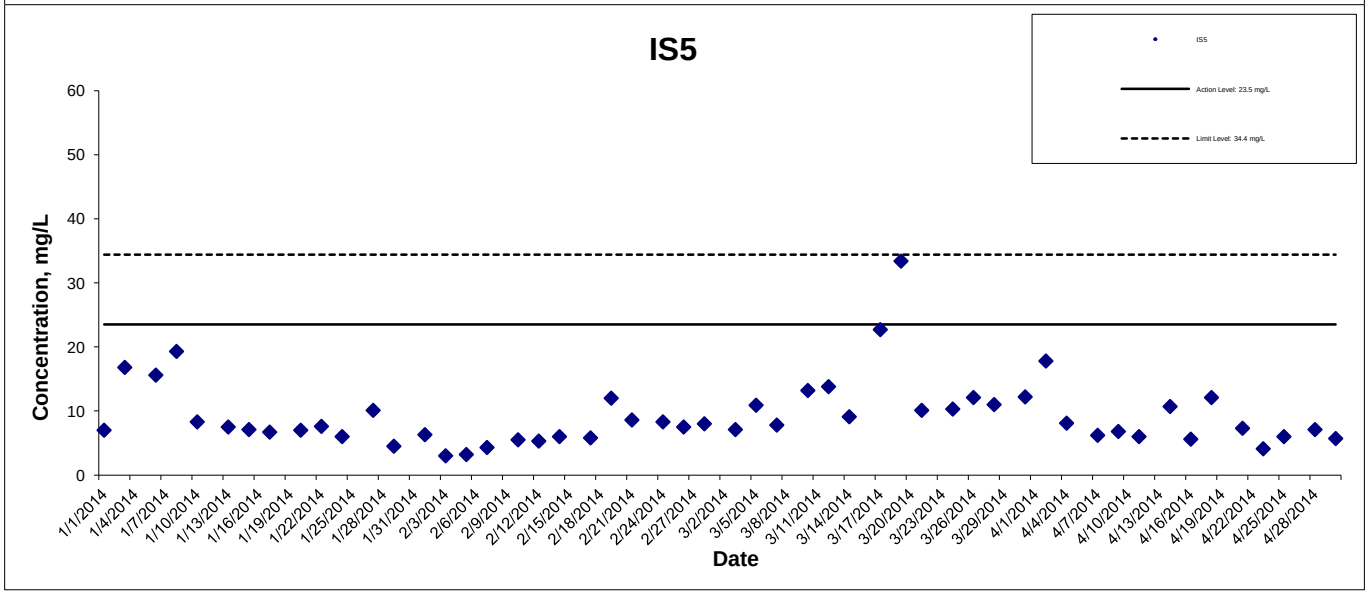




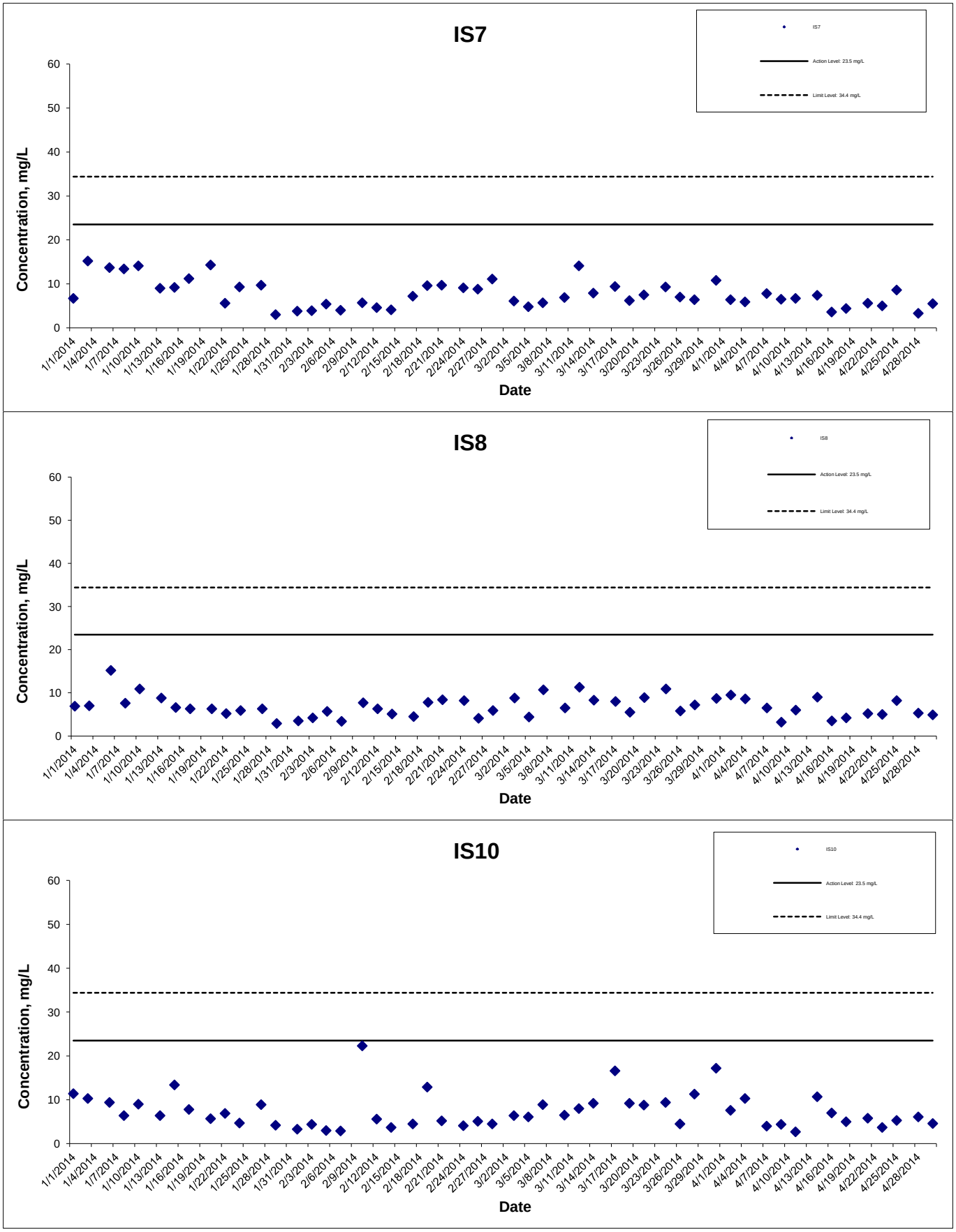
Suspended Solids at Mid-Ebb Tide







Suspended Solids at Mid-Ebb Tide



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

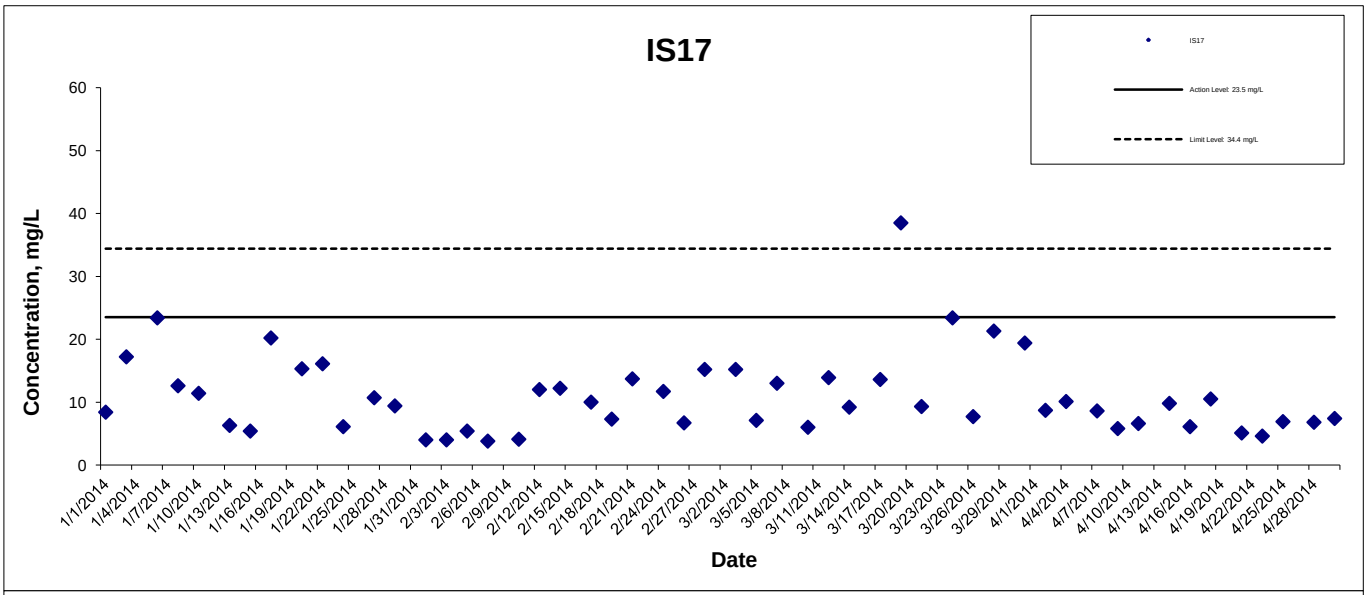
AECOM

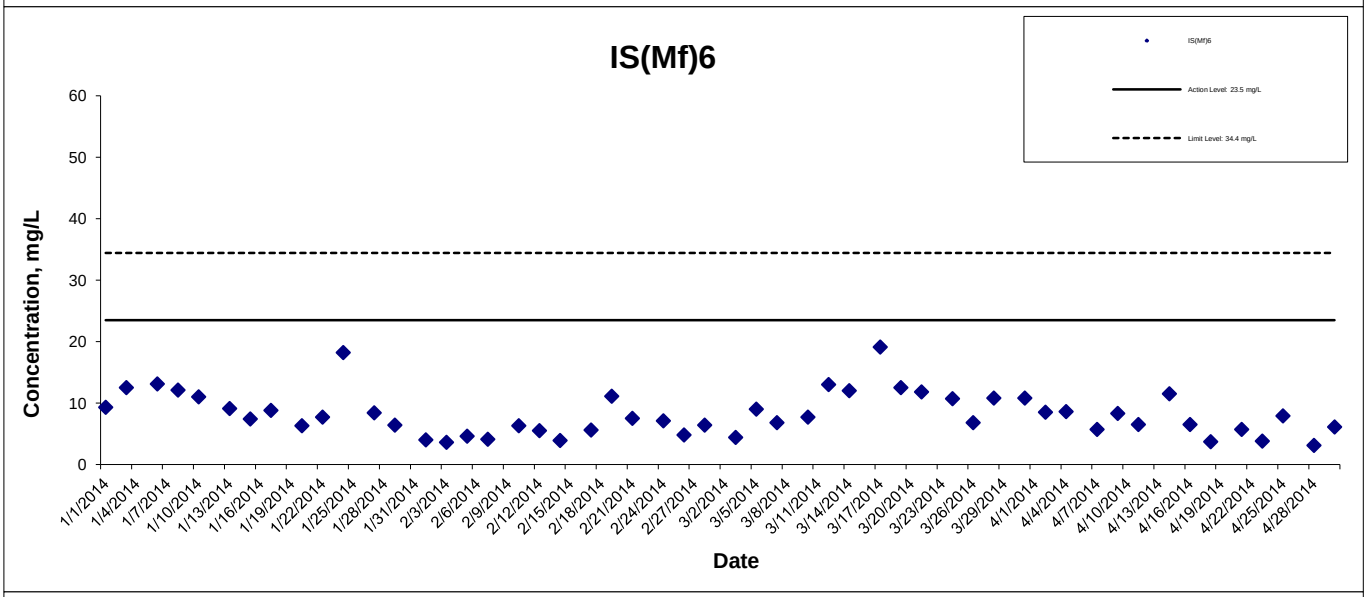
Graphical Presentation of Impact Water Quality Monitoring Results

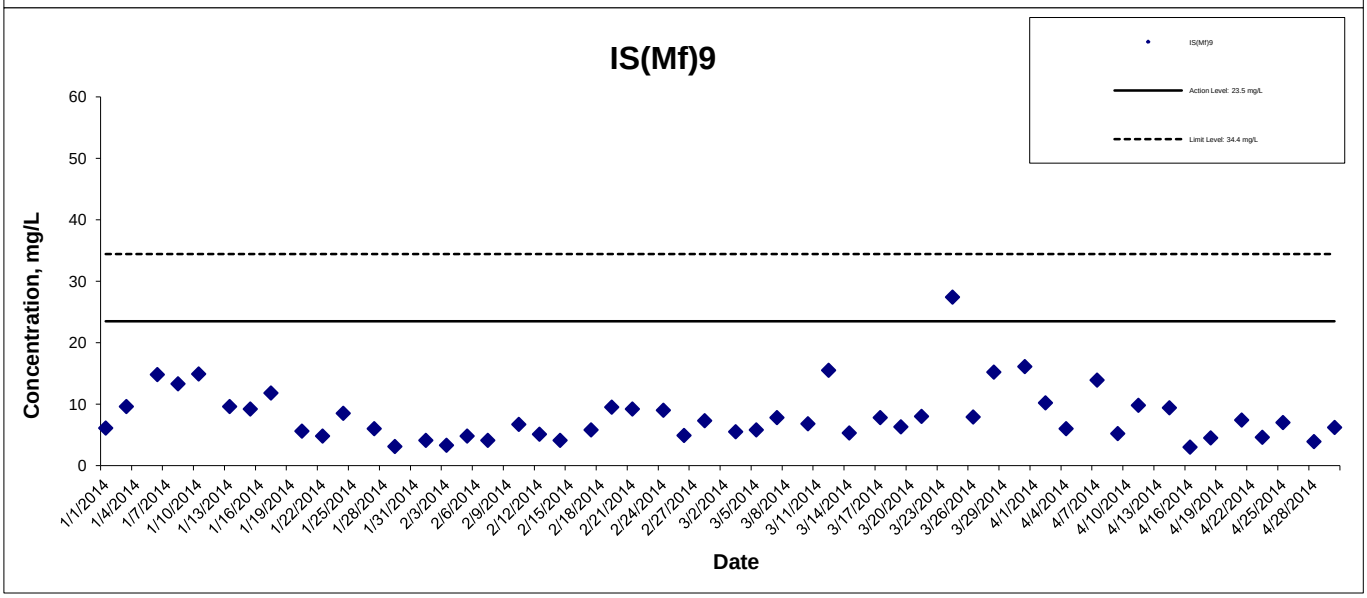
Project No.: 60249820 **Date: May 2014**

Appendix J

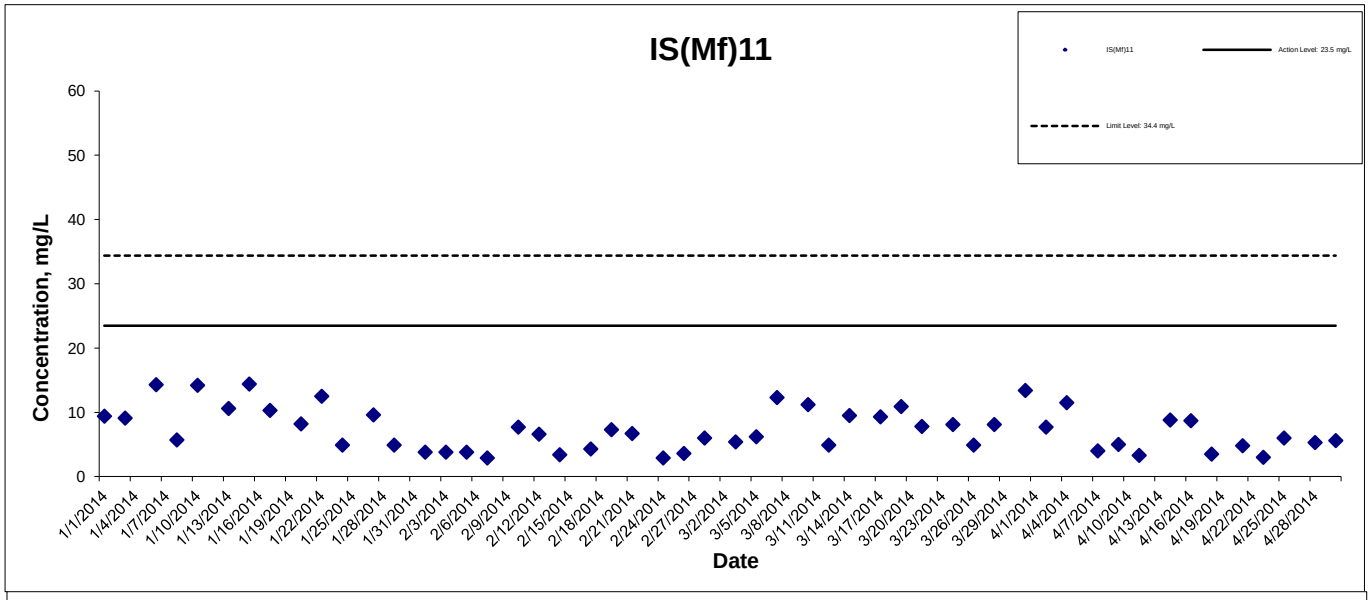
Suspended Solids at Mid-Ebb Tide

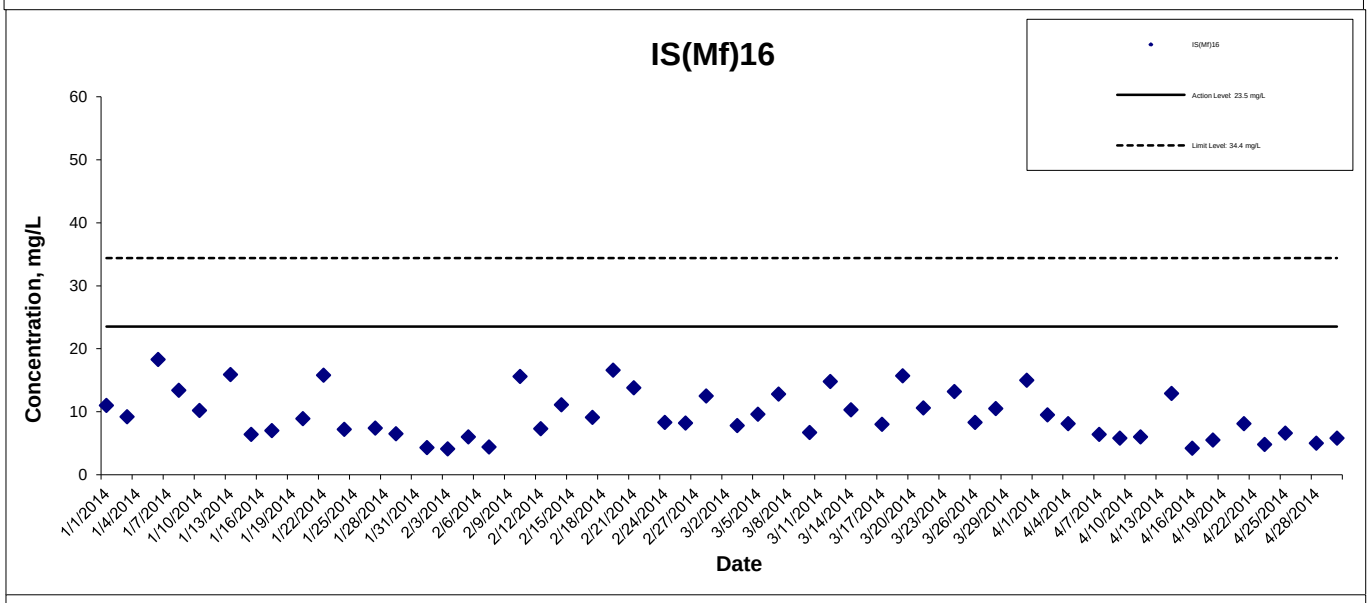


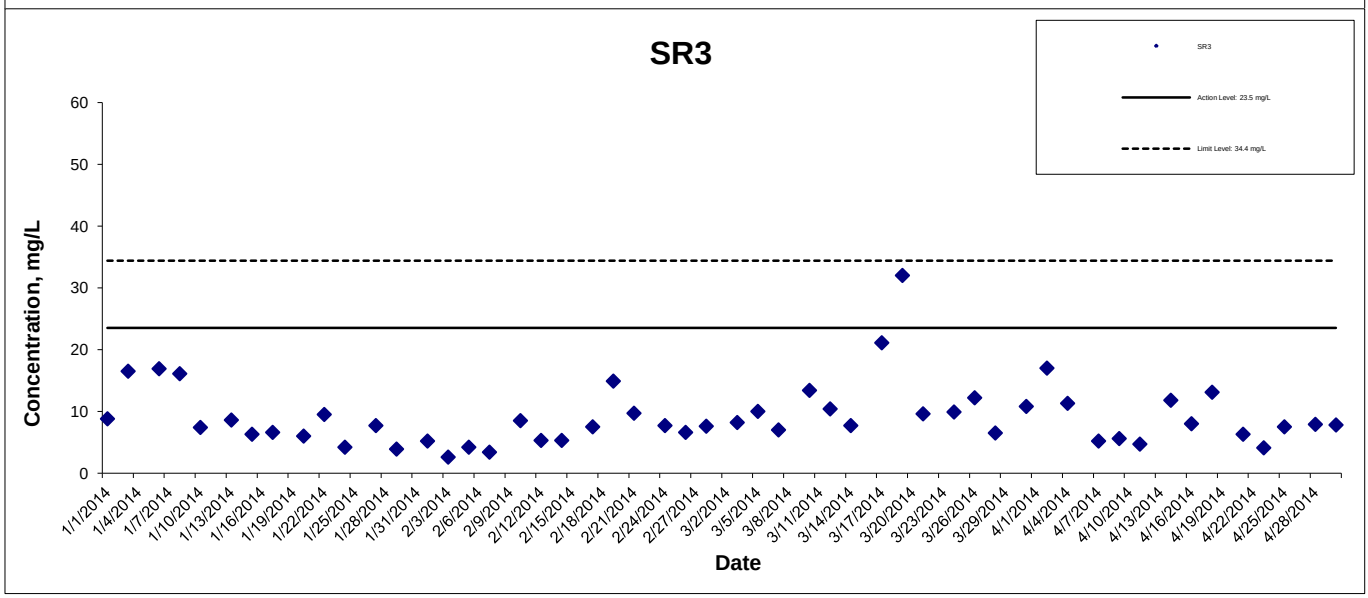




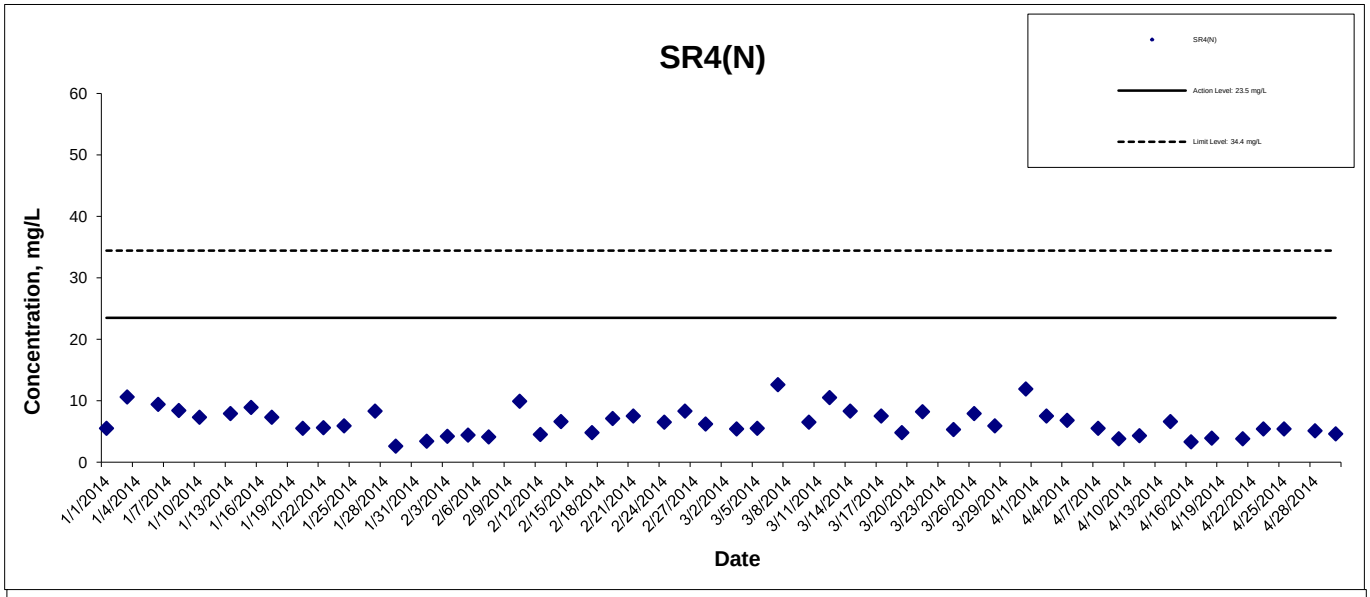
Suspended Solids at Mid-Ebb Tide

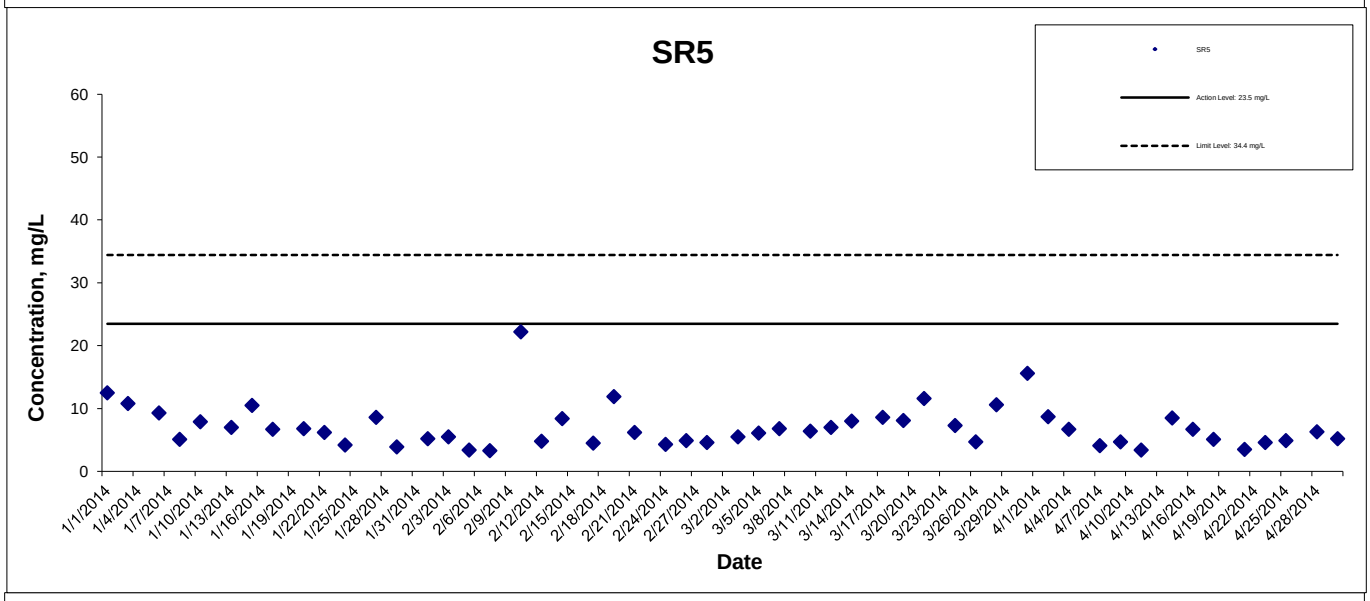


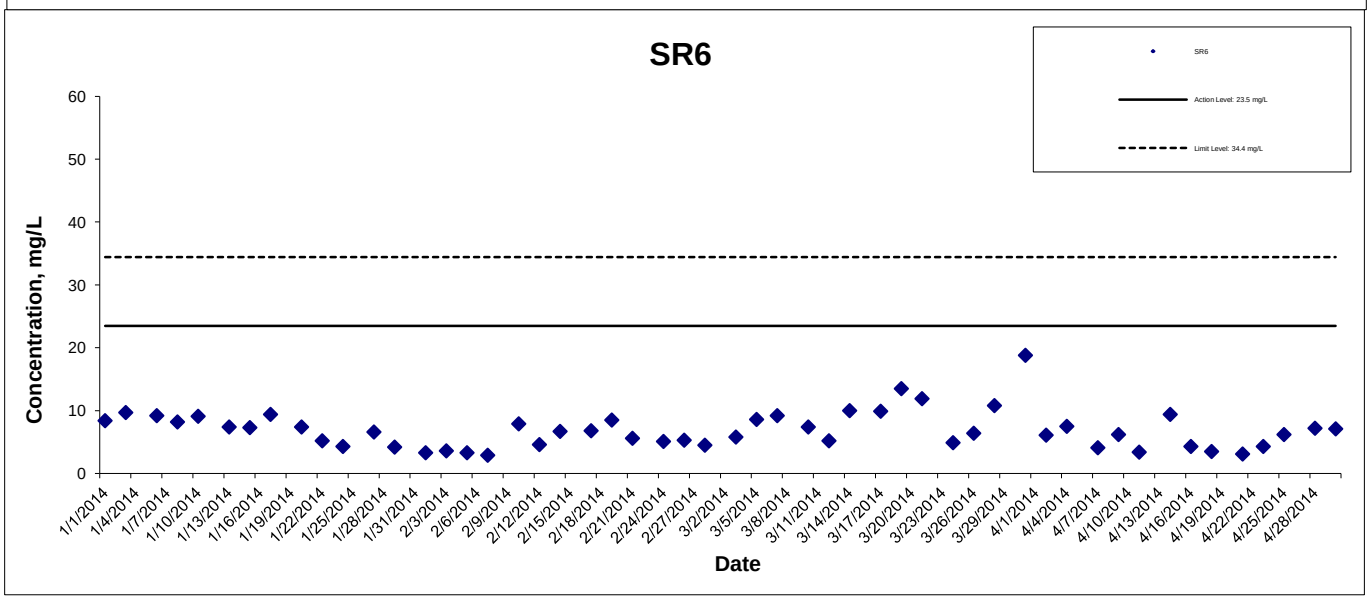




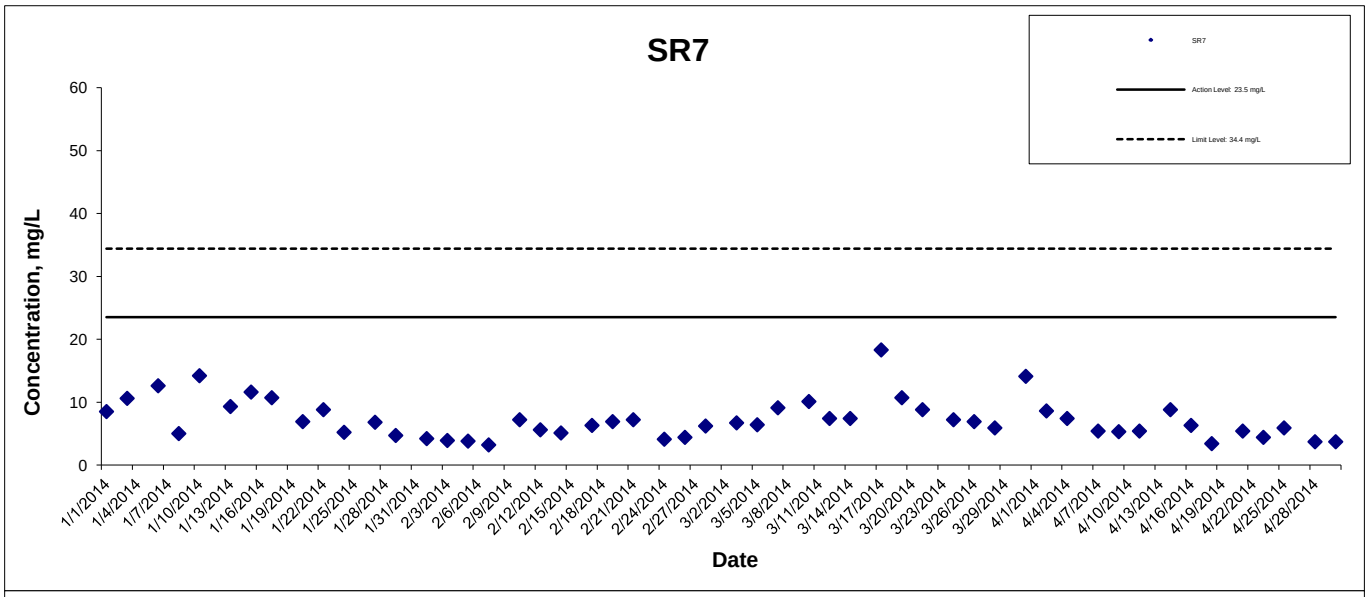
Suspended Solids at Mid-Ebb Tide

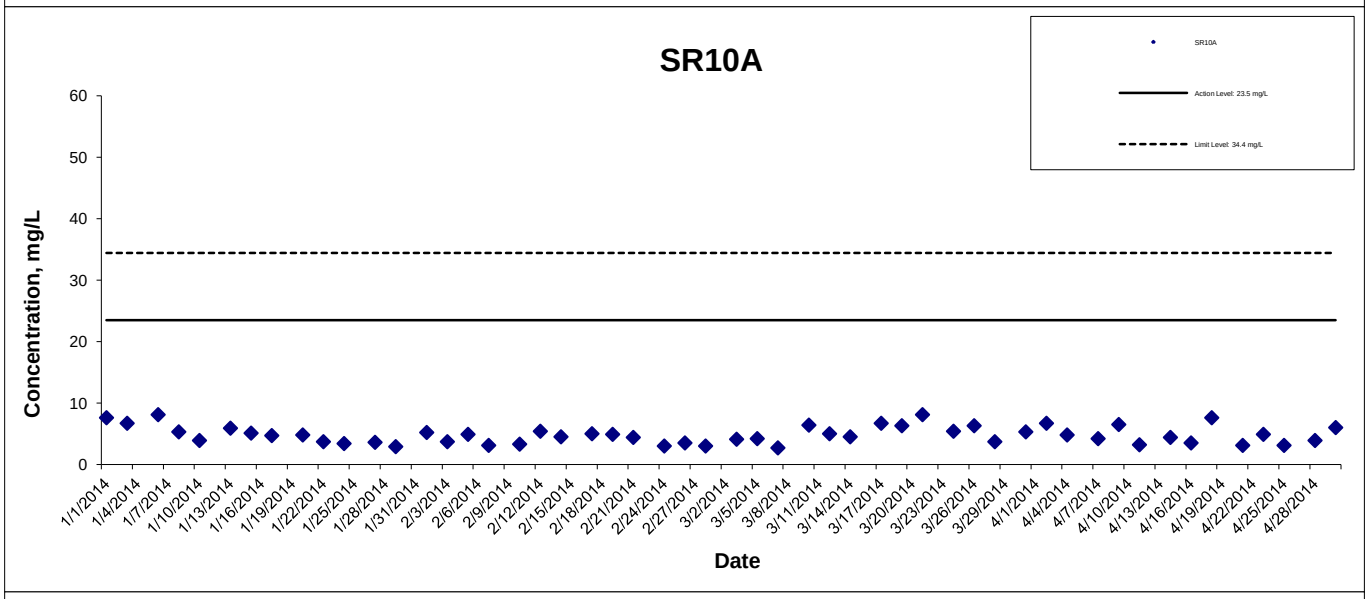


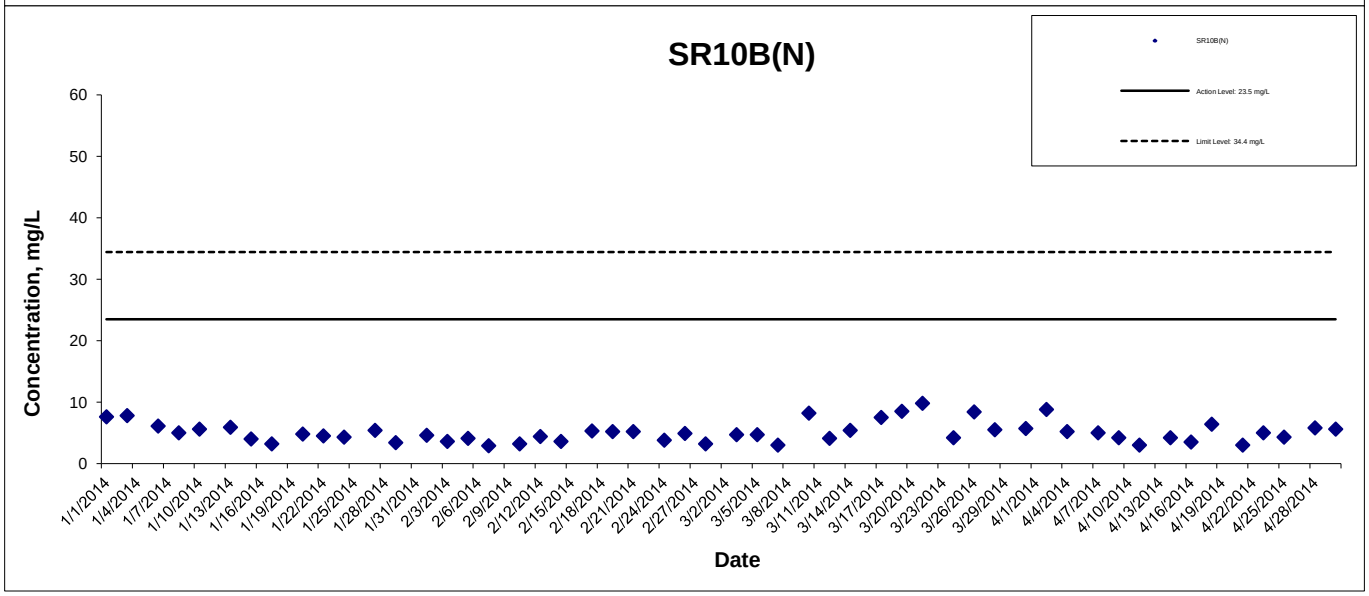




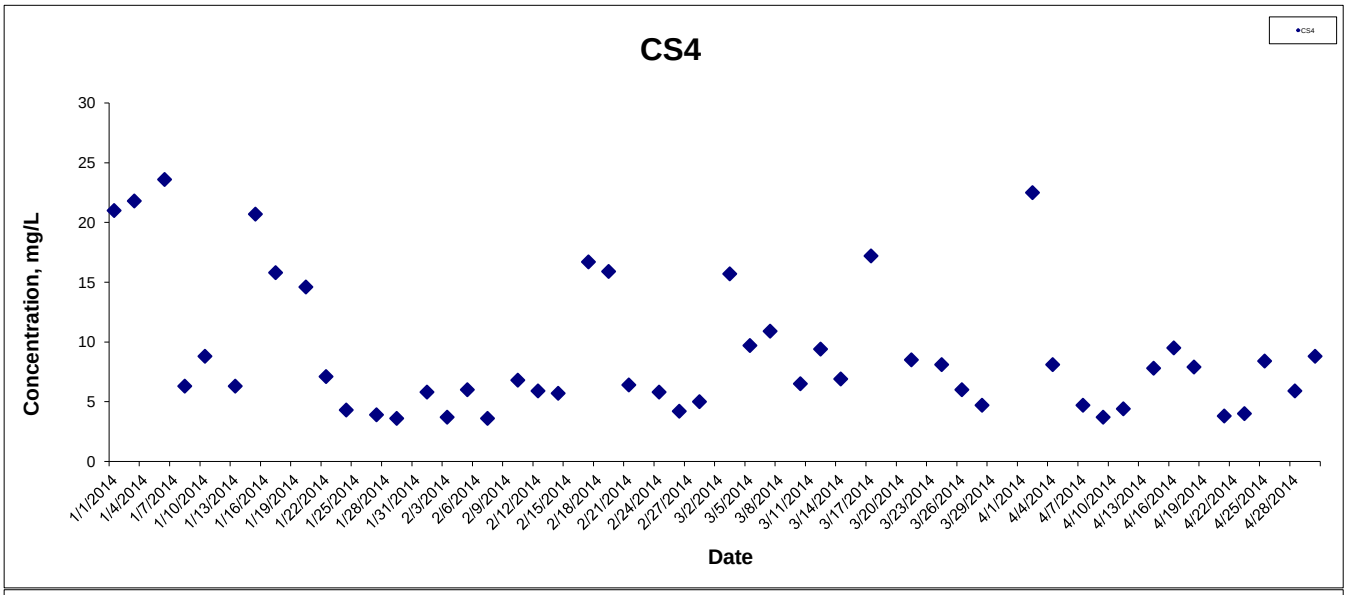
Suspended Solids at Mid-Ebb Tide

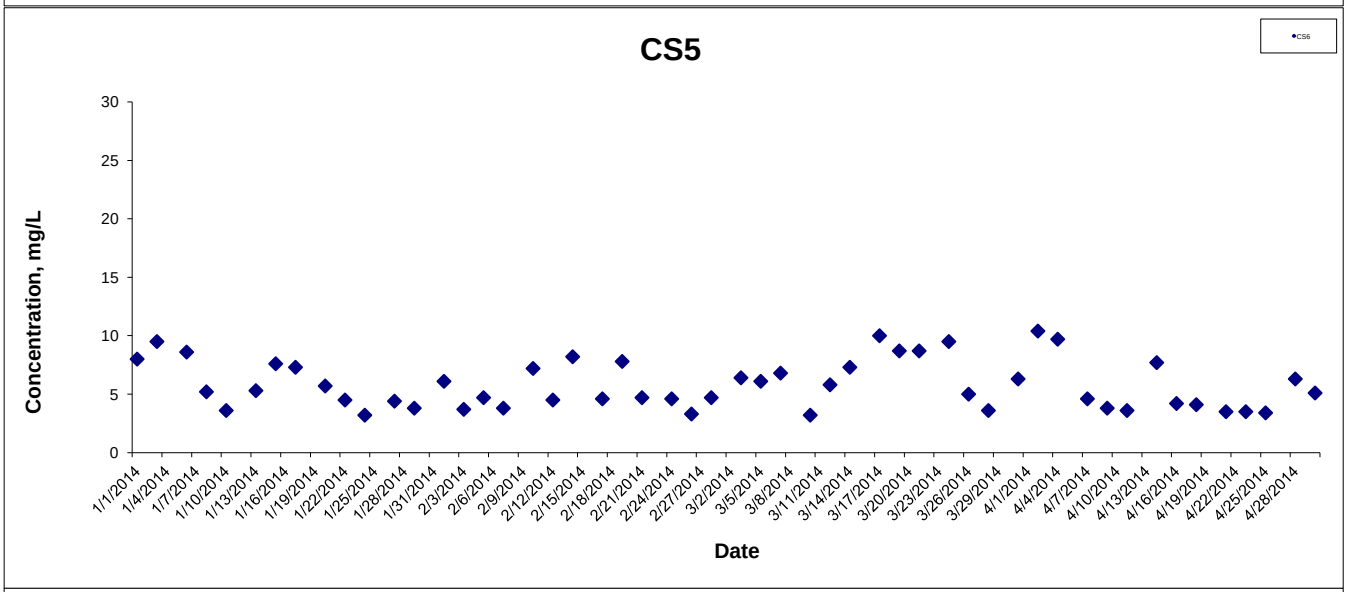


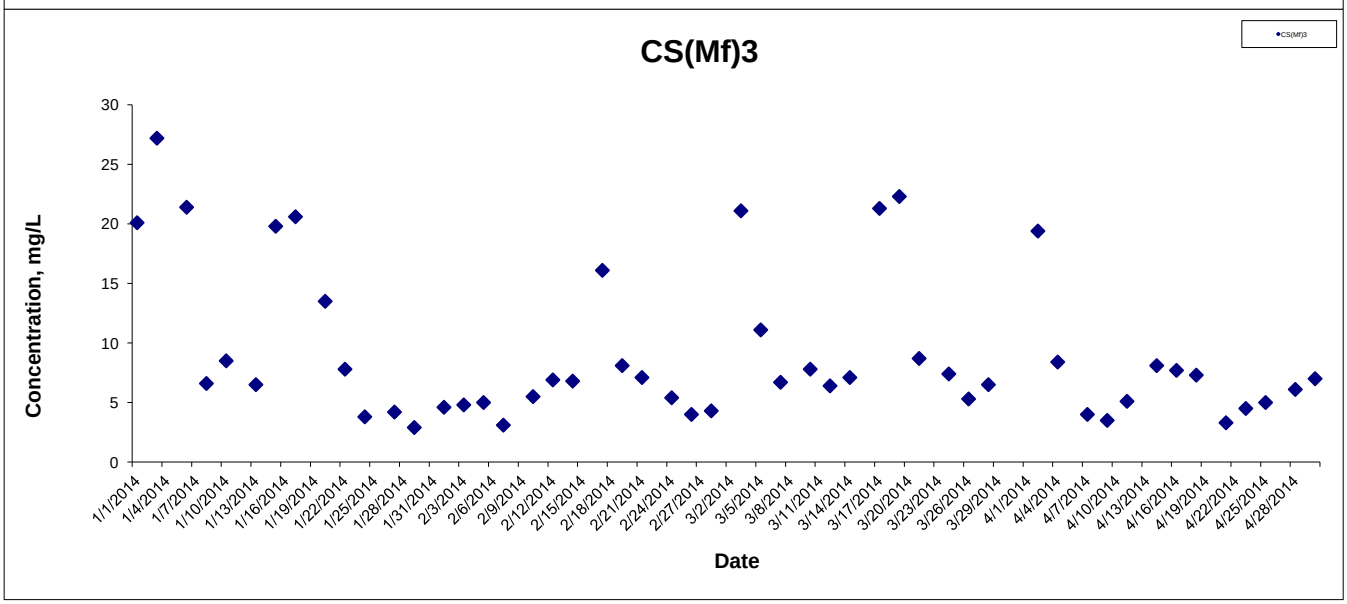




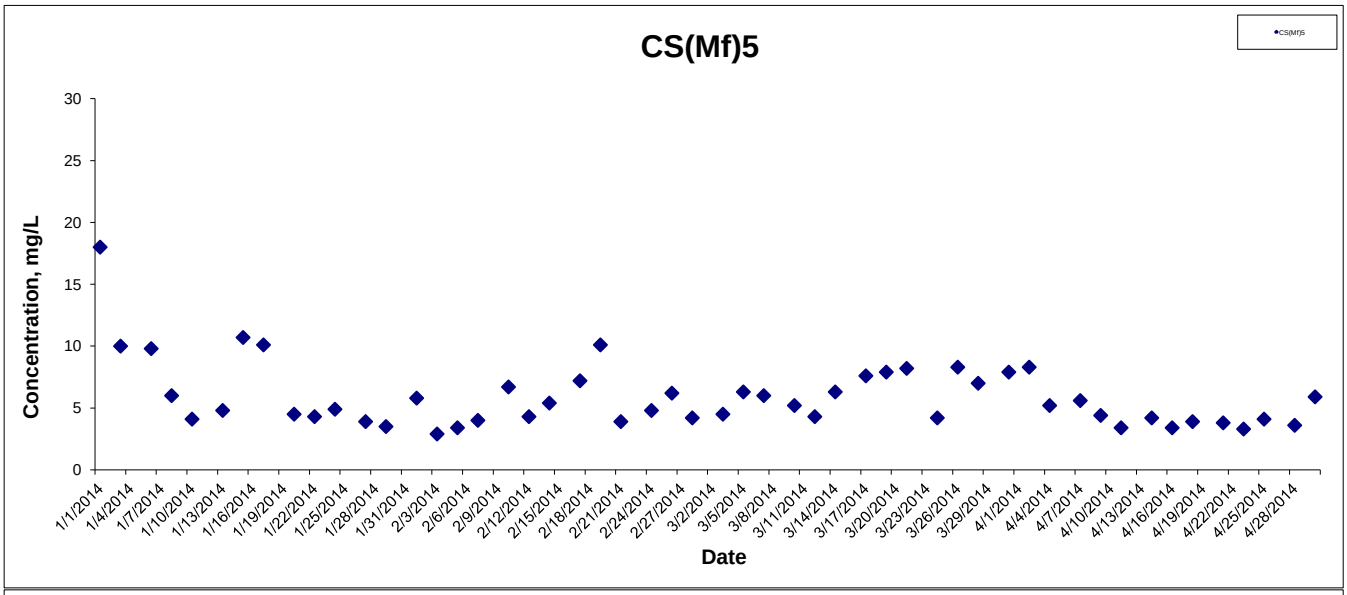
Suspended Solids at Mid-Flood Tide

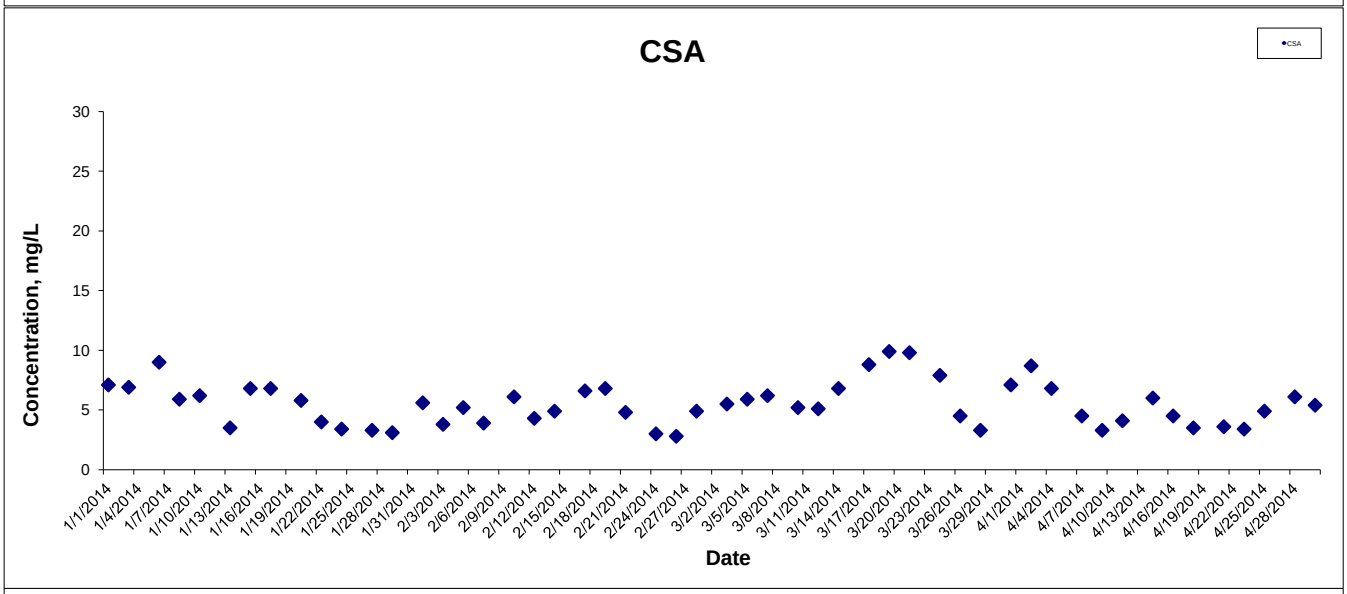


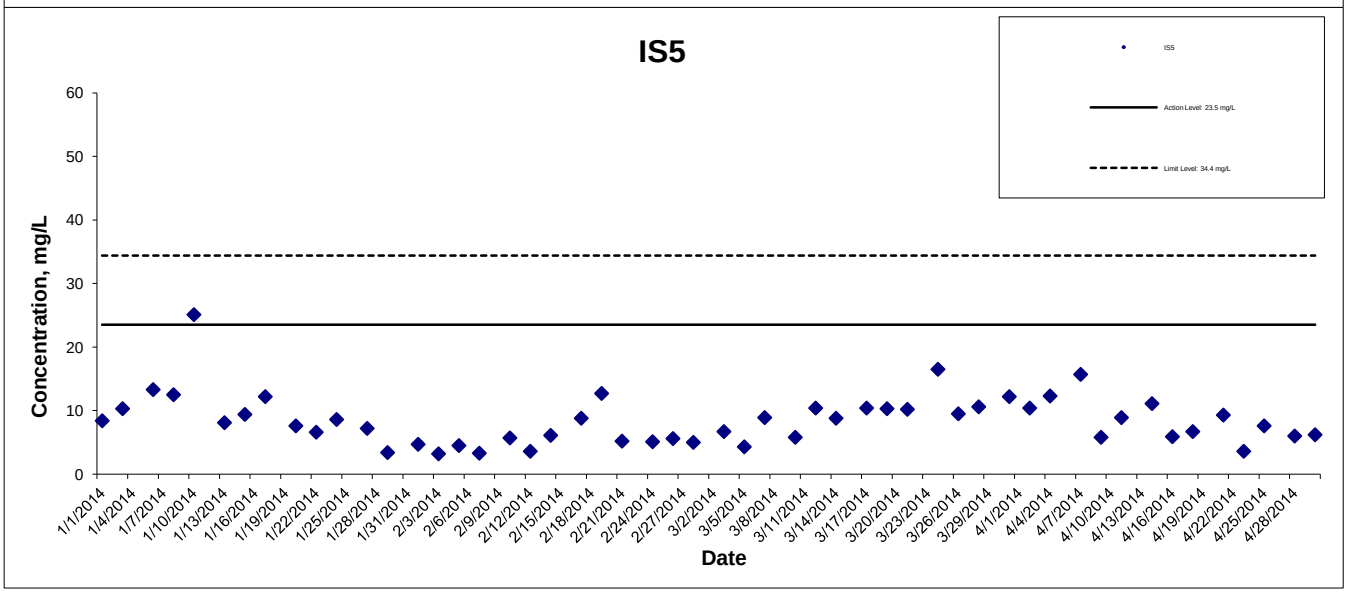




Suspended Solids at Mid-Flood Tide







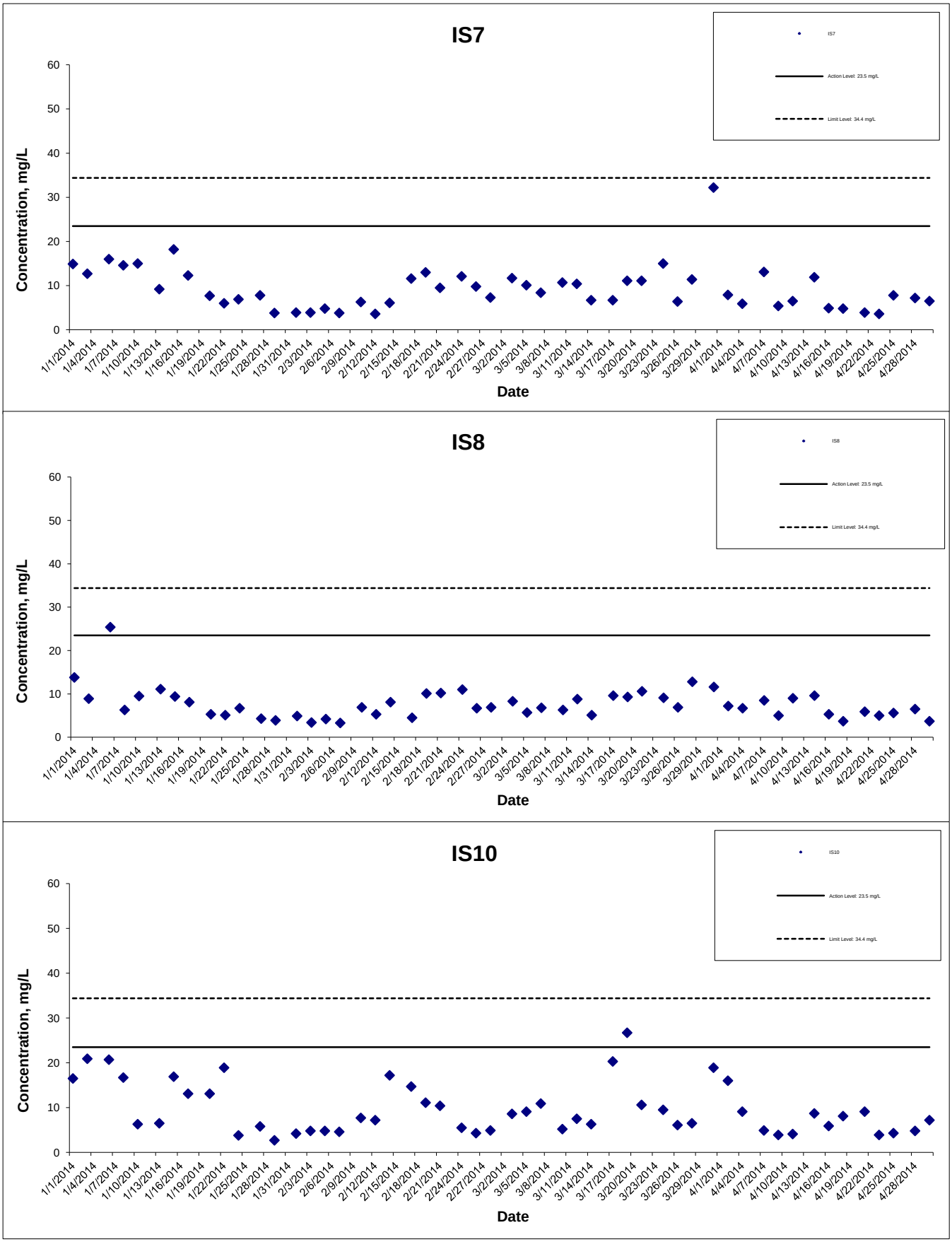
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

Project No.: 60249820 **Date: May 2014**

Appendix J

Suspended Solids at Mid-Flood Tide



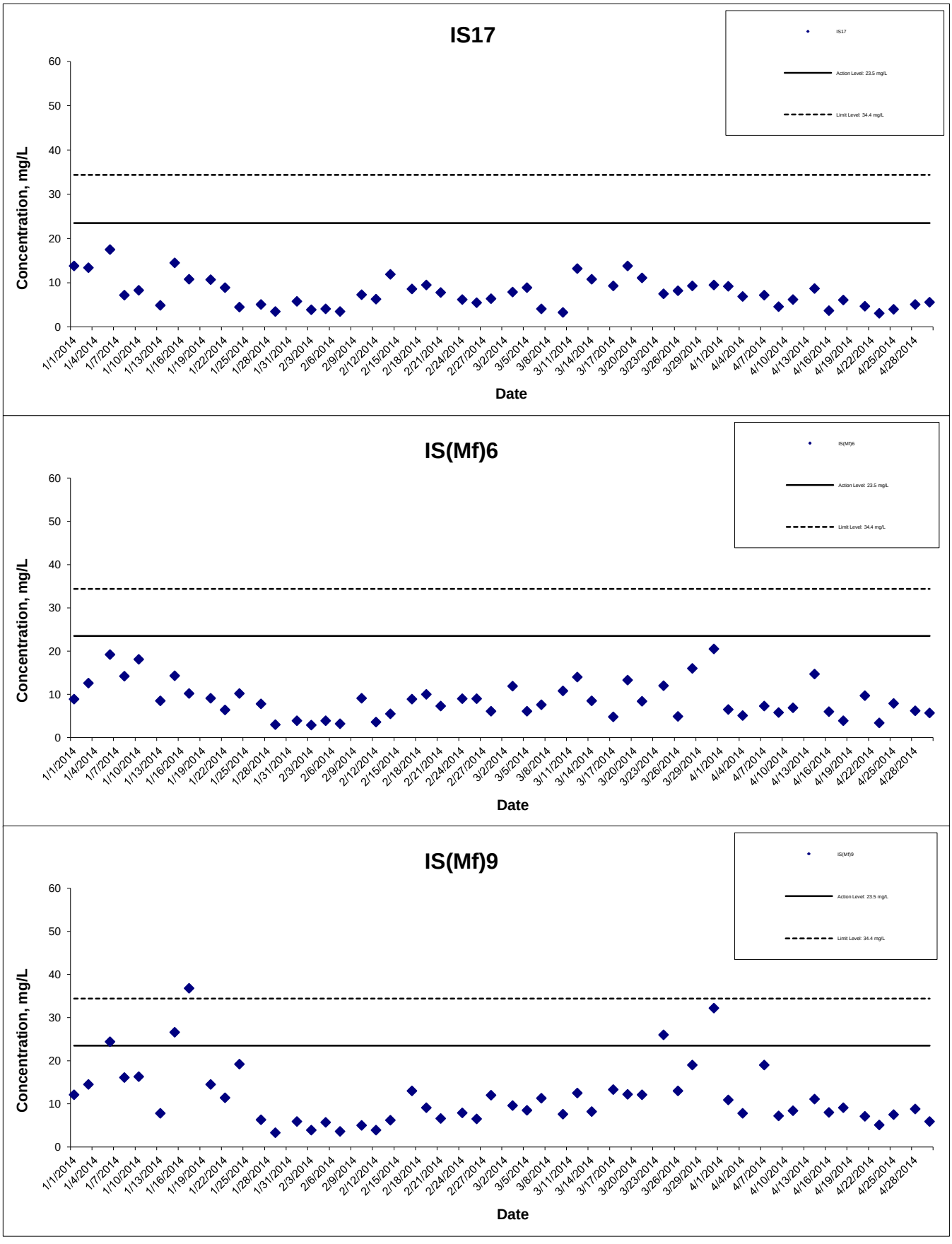
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

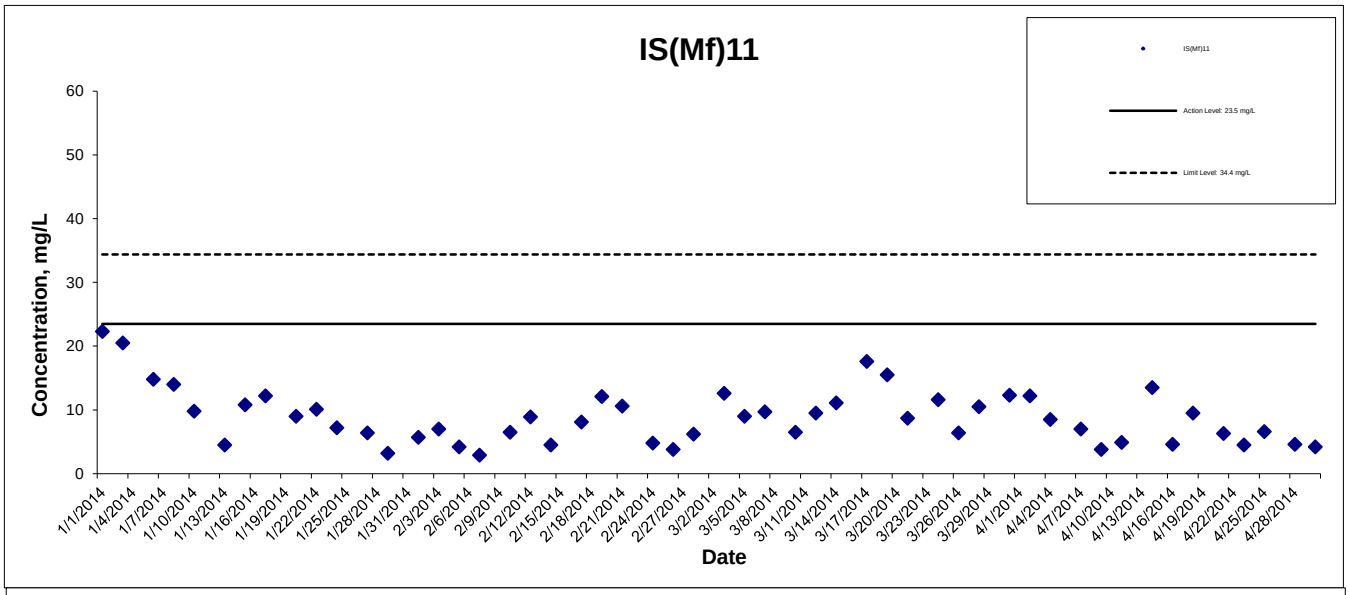
Project No.: 60249820 **Date: May 2014**

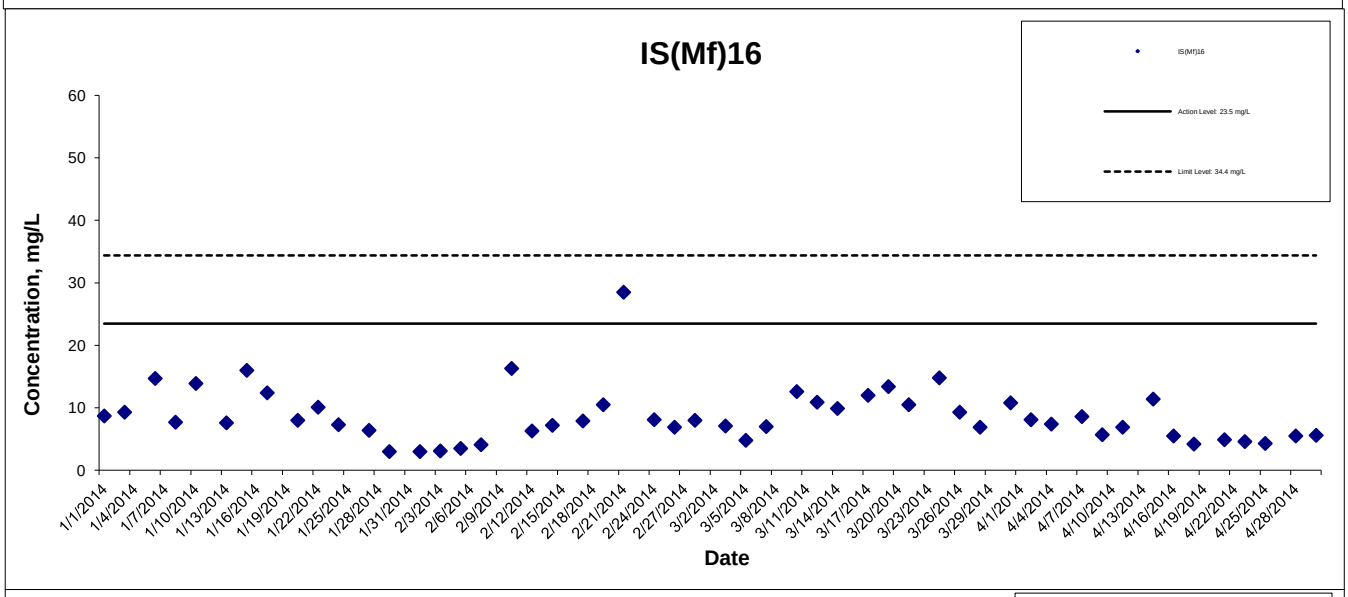
Appendix J

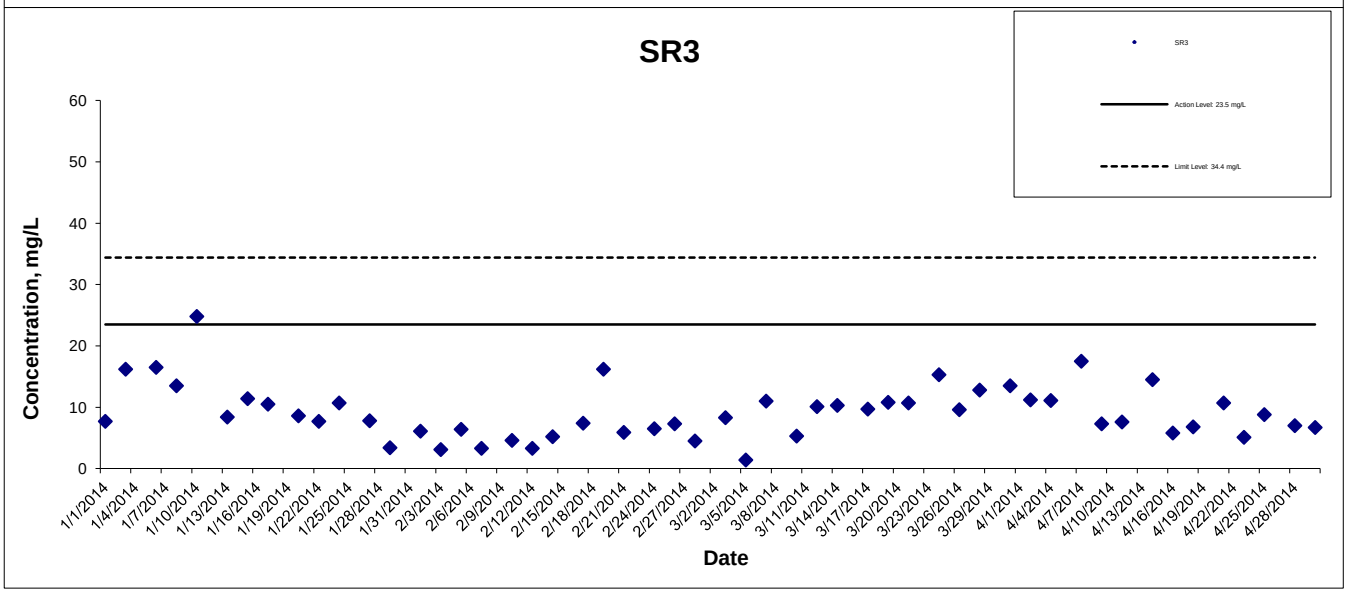
Suspended Solids at Mid-Flood Tide



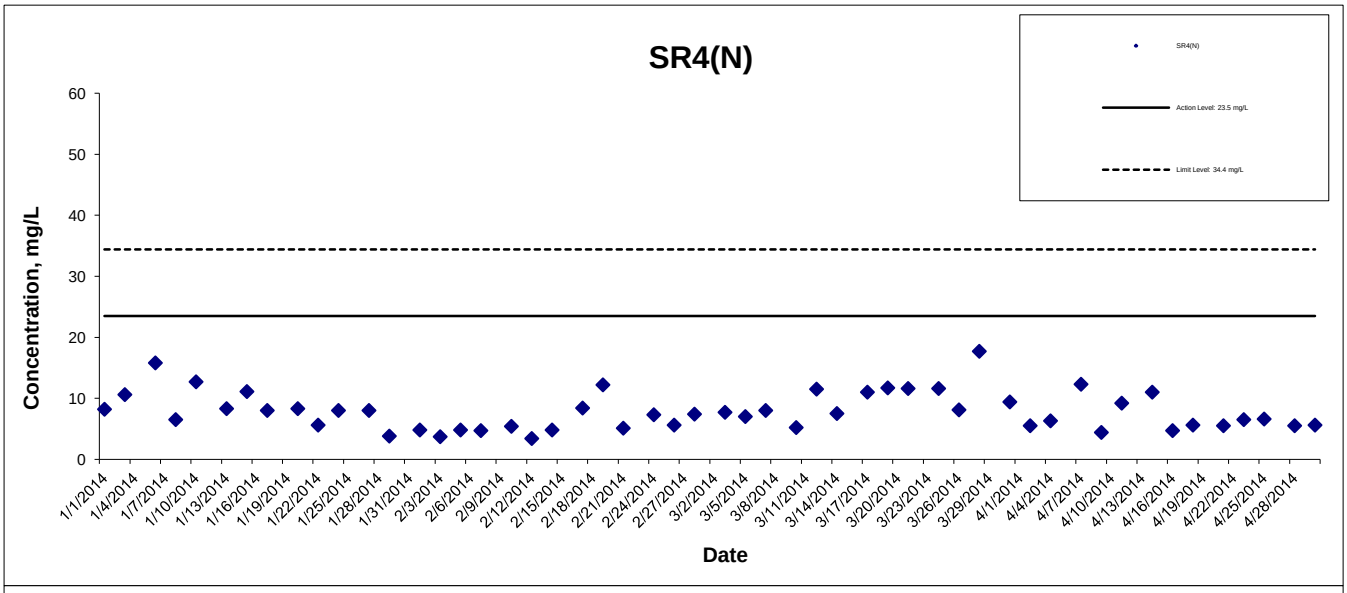
Suspended Solids at Mid-Flood Tide

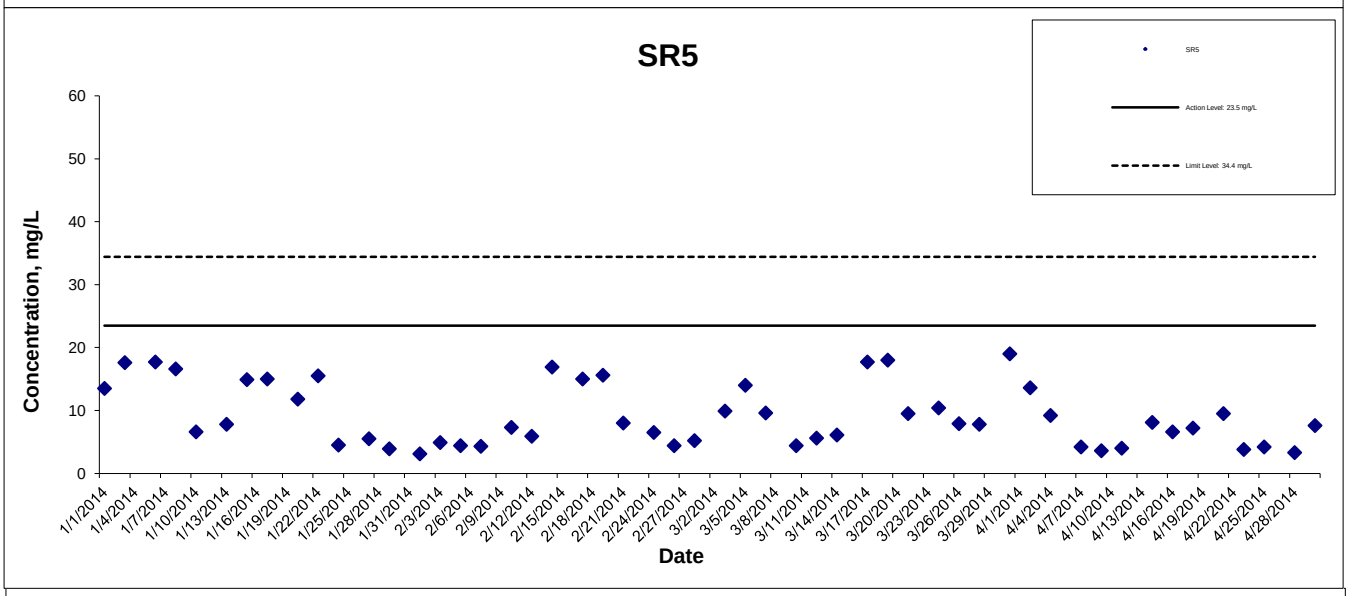


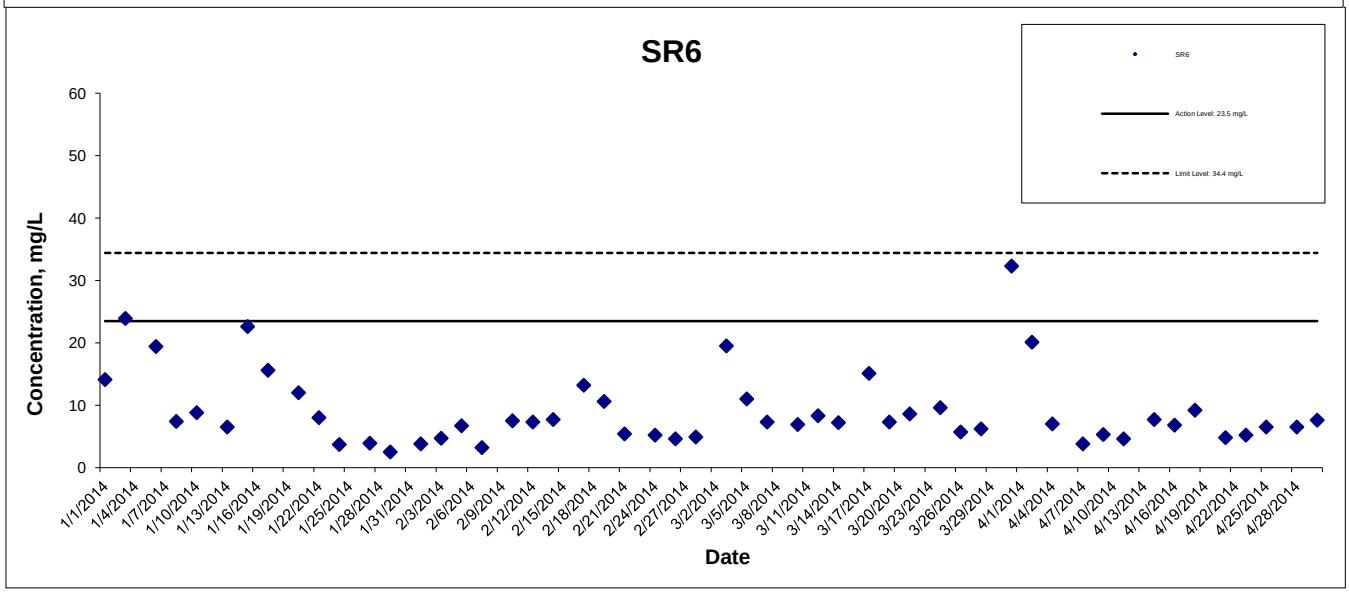




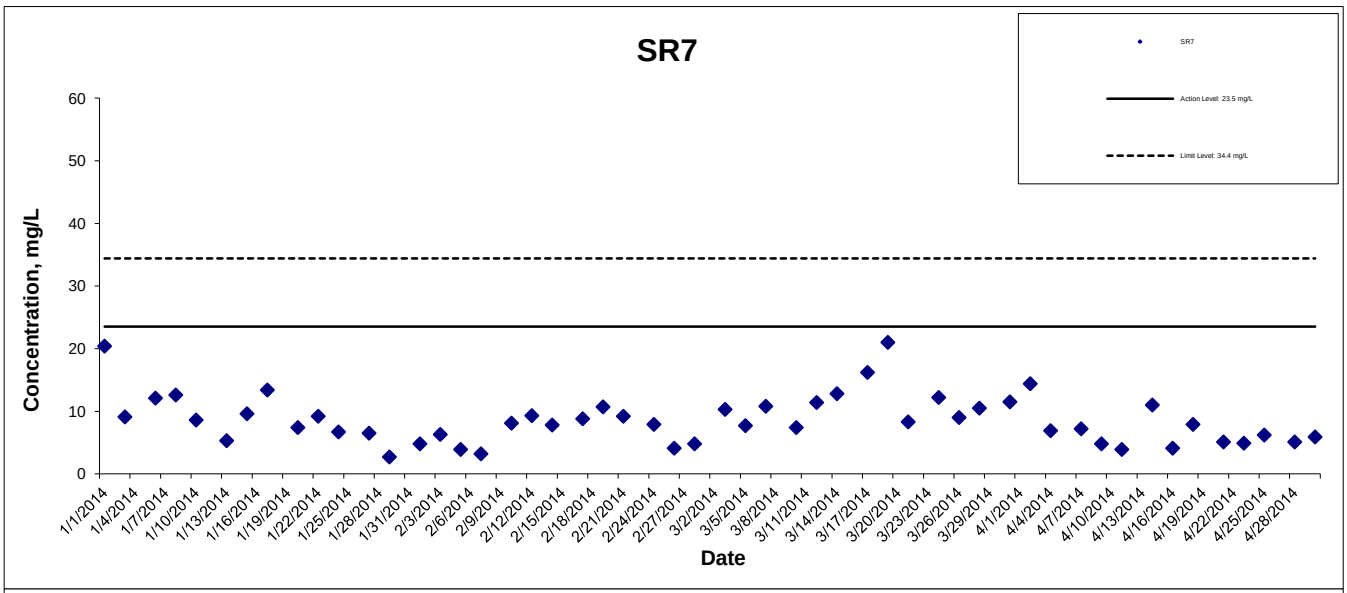
Suspended Solids at Mid-Flood Tide

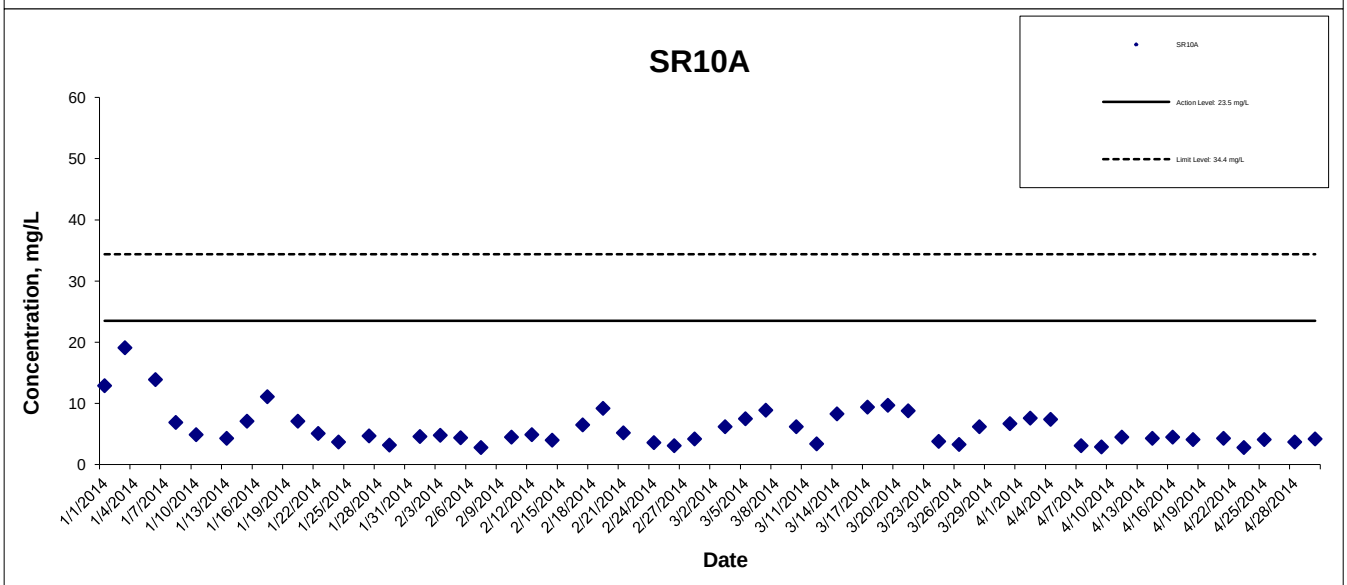


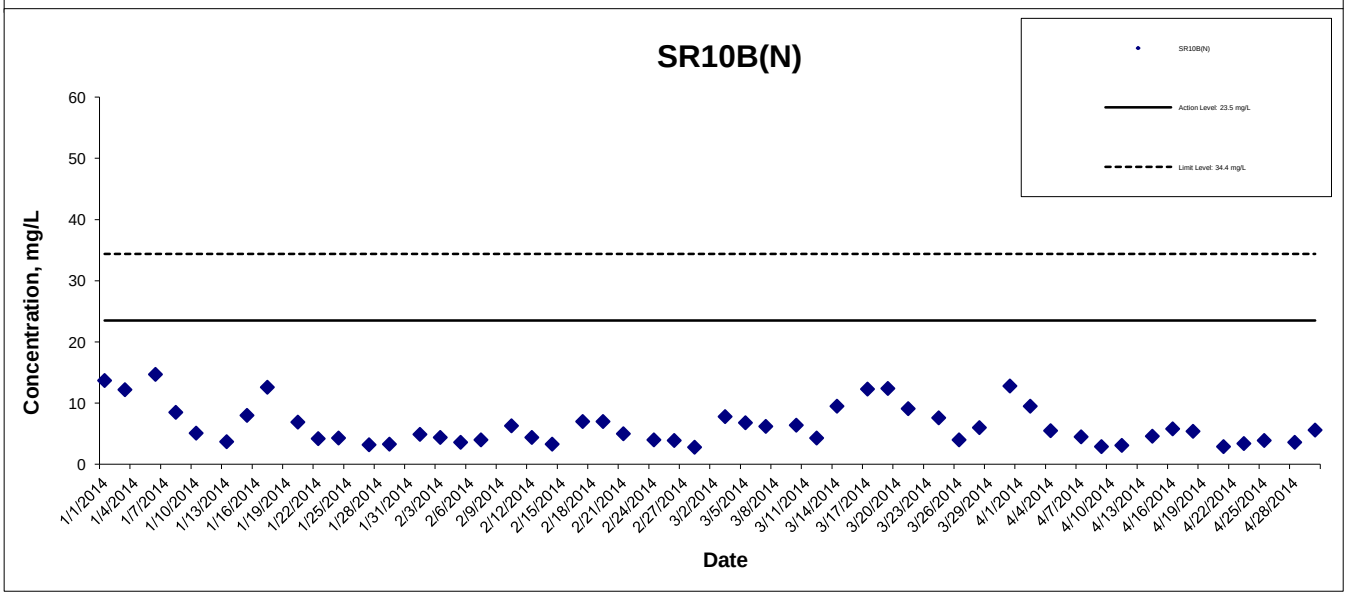




Suspended Solids at Mid-Flood Tide







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	14-Apr-14	938	13:33	4	NWL	2	N/A	Opp	Impact	829450	807368	Spring	No
HKBCF	HY/2010/02	19-Apr-14	940	10:49	2	NWL	2	N/A	Opp	Impact	828912	805245	Spring	No

KEY:

Sighting	Opp Opportunistic On On effort		
PSD	Perpendicular Sighting Distance	NEL	North East Lantau
Group Size	Represents best estimate for group encountered	NWL	North West Lantau

March 2014
Photo Identification Information

Table 2. Sightings of Individually Identified Chinese White Dolphin (*Sousa chinensis*) between March 2012 – March 2014

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 118		2014-01-06	890	NWL
HZMB 117		2014-01-06	888	NWL
HZMB 116		2013-12-26	879	NWL
HZMB 115		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
HZMB111		2013-10-15	815	NWL
HZMB 110		2013-10-15	812	NWL
HZMB 108		2013-08-30	780	NEL
HZMB 107		2013-08-21	770	NWL
HZMB 106		2013-08-21	769	NWL
HZMB 105		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	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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 095		2013-08-30	780	NEL
		2013-06-25	697	NWL
		2013-06-13	682	NWL
		2013-04-01	621	NWL
HZMB 094		2014-02-17	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	2013-05-09	642	NWL
		2013-02-15	579	NWL
		2011-10-10	Baseline	NWL
HZMB 085		2013-06-26	703	NWL
		2013-02-15	579	NWL
HZMB 084		2013-02-14	575	NWL

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
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		2013-02-21	587	NWL
		2013-02-15	579	NWL
		2013-01-28	563	NWL
HZMB 081		2013-01-28	2559	NWL
		2013-01-28	557	NWL
HZMB 080		2013-01-28	556	NWL
HZMB 079		2013-01-28	556	NWL
HZMB 078		2014-03-19	924	NWL
		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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
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		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		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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 055		2012-09-04	425	NWL
HZMB 054	CH34	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	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		2014-01-10	900	NWL
		2014-01-06	888	NWL
		2013-02-15	579	NWL

		2012-09-04	421	NWL
Identification Number	**Baseline Identification Number**	**Date (YYYY-MM-DD)**	**Sighting Number**	**Area Sighted**
HZMB 049		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	2014-02-17	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	2014-02-17	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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
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		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		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		2014-01-06	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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 022		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 2011-11-01 2011-11-01	Baseline Baseline Baseline	NEL NEL NEL
HZMB 013		2012-05-28	281	NWL

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
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		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		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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 003	NL179	2014-10-15	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	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	2014-03-19	922	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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
	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 001 2014-03-19_09-02-24

HZMB 001 LL 2014-03-19_17-11-34

HZMB 078 2014-03-19_09-49-55

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 / 2014 (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-14	0.0000	0.0000	0.0000	0.0000	0.0000	1158.9828	0.0000	0.1680	0.0000	2.0000	0.0325
Feb-14	0.0000	0.0000	0.0000	0.0000	0.0000	1064.5957	0.0000	0.2520	0.0000	0.0000	0.0520
Mar-14	0.0000	0.0000	0.0000	0.0000	0.0000	1111.9982	0.0000	0.0000	0.0000	1.4000	0.1690
Apr-14	0.0000	0.0000	0.0000	0.0000	0.0000	1294.8080	0.0000	0.0000	0.0000	0.0000	0.0845
May-14											
Jun-14											
Sub-total	0.0000	0.0000	0.0000	0.0000	0.0000	4630.3847	0.0000	0.4200	0.0000	3.4000	0.3380
Jul-14											
Aug-14											
Sep-14											
Oct-14											
Nov-14											
Dec-14											
Total	0.0000	0.0000	0.0000	0.0000	0.0000	4630.3847	0.0000	0.4200	0.0000	3.4000	0.3380

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	-	1
	Limit	-	1
Dolphin Monitoring	Action	-	-
	Limit	-	-

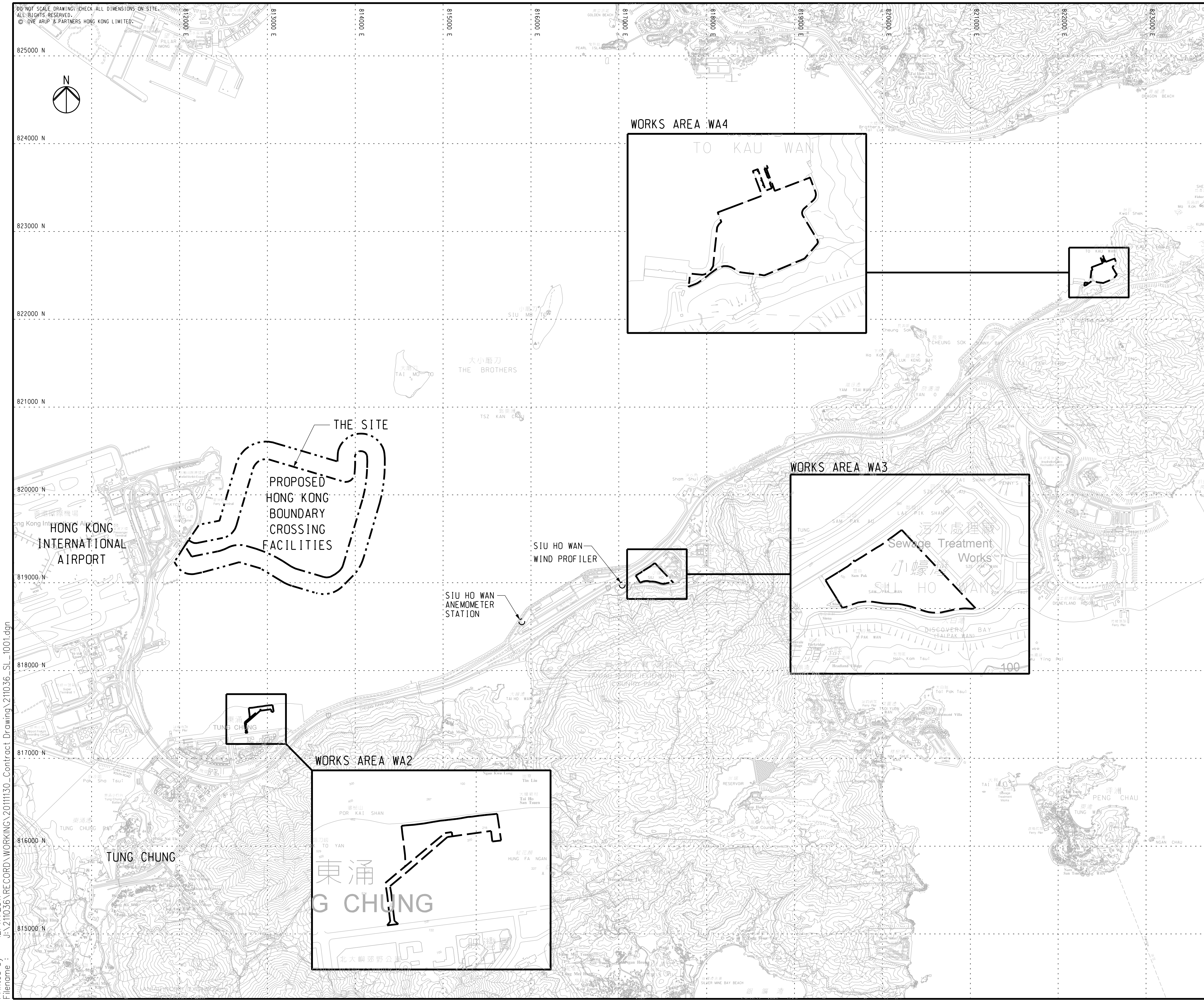
Remarks: Exceedances which are not project-related are not presented in this table.

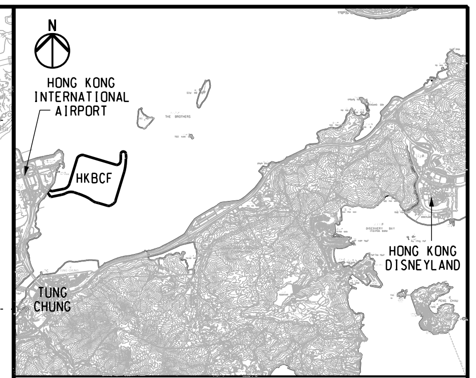
Cumulative statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. received in this month	Total no. received since project commencement
Environmental complaints	-	-	-	-	18
Notification of summons	-	-	-	-	2
Successful Prosecutions	28 April 2014	In relation to the notification of summons received March 2014 due to works carried out on 6 October 13 contrary to conditions of NCO, Cap.400. The Contractor pledged guilty to the charge	-	1	2

		during the court appearance on 28 April 2014.			

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.





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

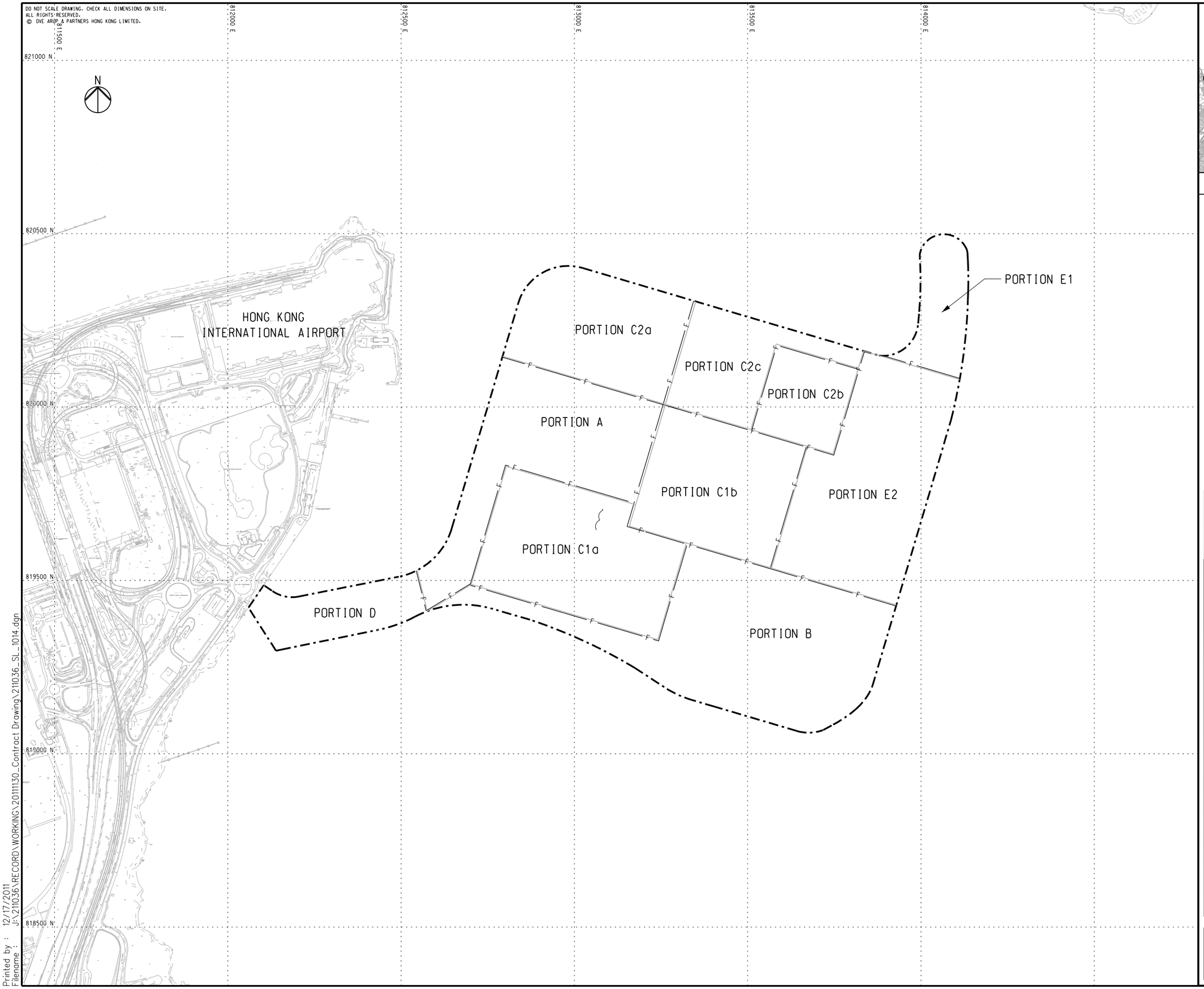
Drawing no. 211036/SL/1001 Rev. -

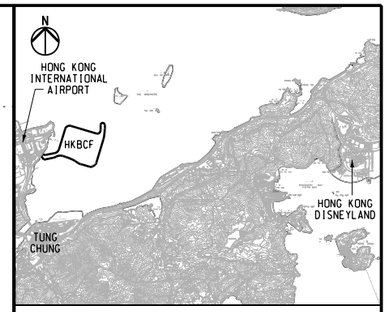
Drawn	Date	Checked	Approved
RL	11/09	KKY	DML

Scale 1:20000 @A1 1:40000 @A3
Status WORKING

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_1001.dgn





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

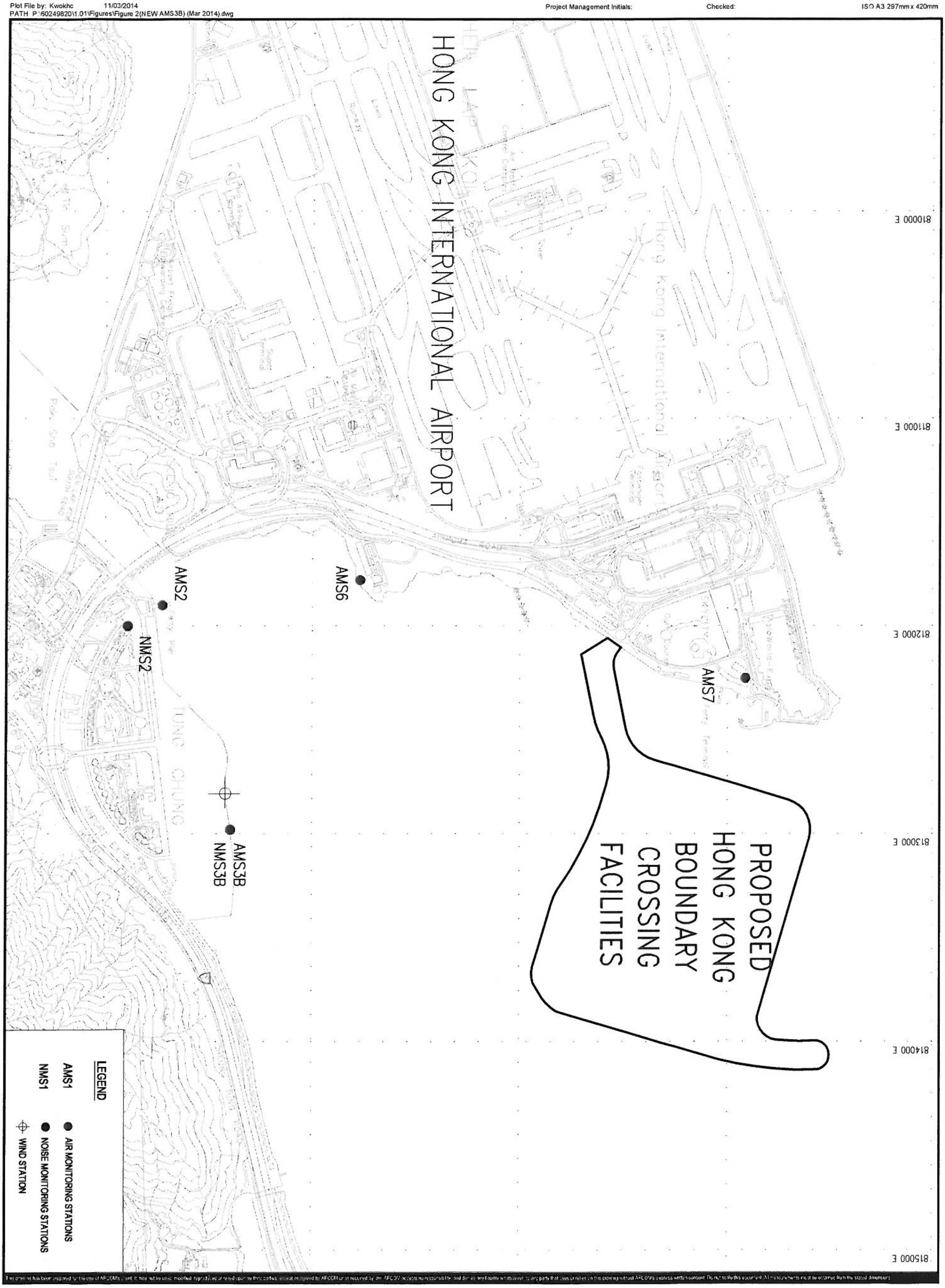
Scale 1:5000 @A1 1:10000 @A3
Status WORKING

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

Plot File by: Kwokhc 11/03/2014
PATH P:\60249820\1.01\Figures\Figure 2(NEW AMS3B) (Mar 2014).dwg

Project Management Initials: Checked: ISO A3 297mm x 420mm

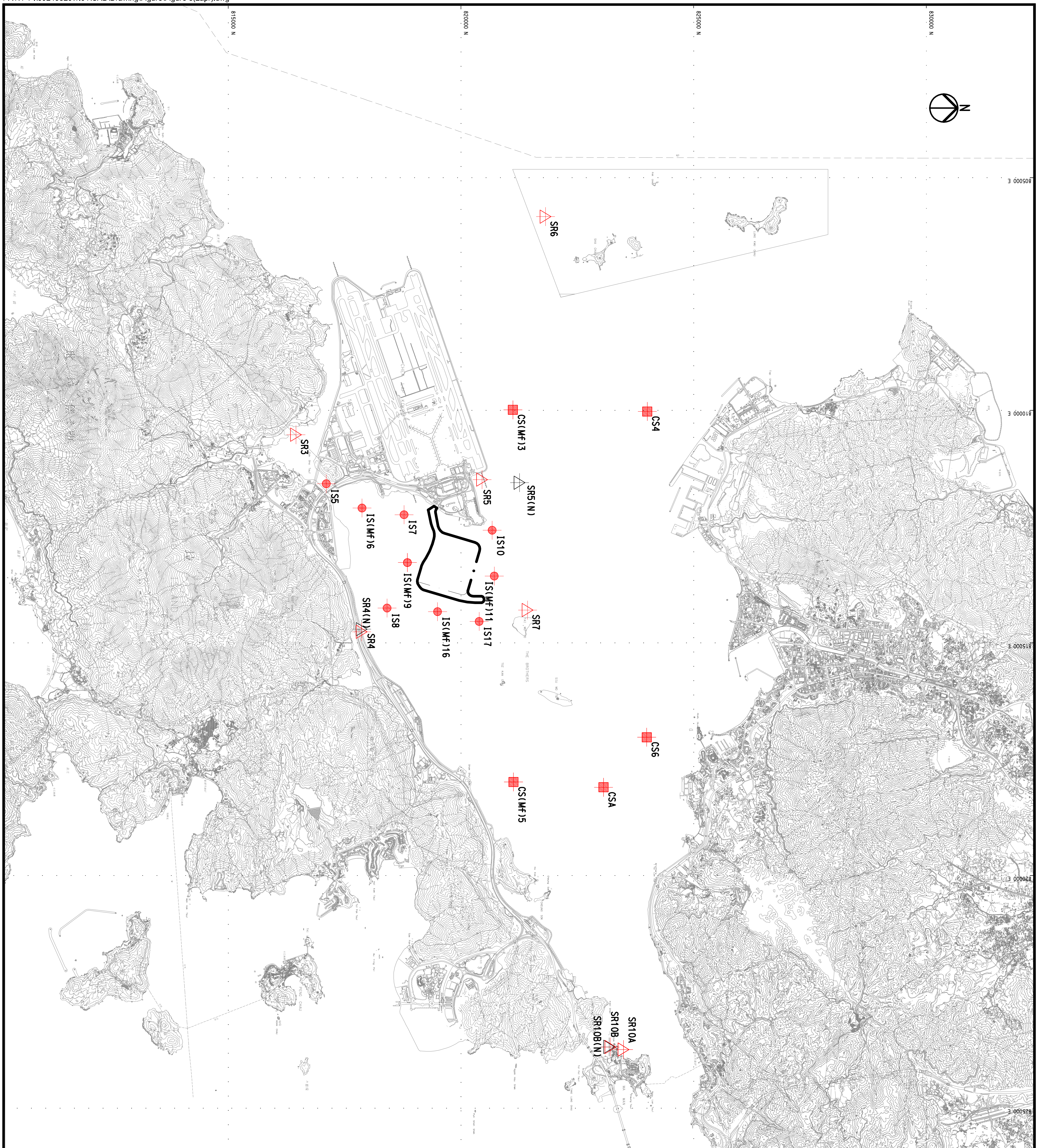


HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: - Date: MARCH 2014

AIR QUALITY AND NOISE MONITORING STATIONS FOR HKBCF

AECOM

Figure 2



SETTING OUT SCHEDULE

MONITORING STATIONS	CO-ORDINATES	
	EASTING	NORTHING
IS5	811579	817106
IS(Mf)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(Mf)9	813273	818850
IS10	812577	820670
IS(Mf)11	813562	820716
IS(Mf)16	814328	819497
IS17	814539	820391
SR3	810525	816456
SR4(N)	814705	817859
SR5	811489	820455
SR5(N)	811555	821258
SR6	805837	821818
SR7	814293	821431
SR10A	823741	823495
SR10B(N)	823683	823187
CS(Mf)3	809989	821117
CS(Mf)5	817990	821129
CS4	810025	824004
CS6	817028	823992
CSA	818103	823064

LEGEND

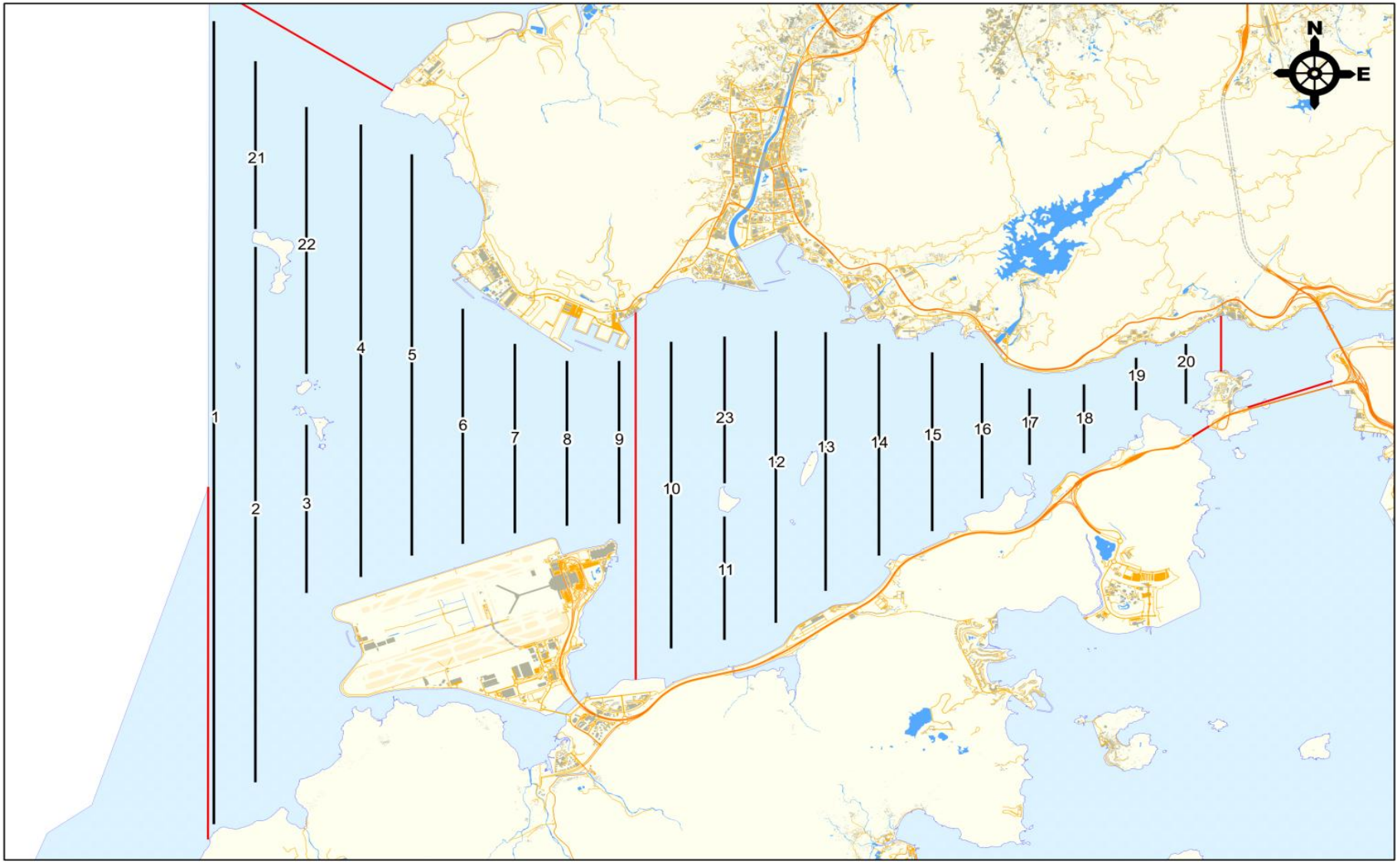
- IS — IMPACT STATIONS
- CS — CONTROL / FAR FIELD STATIONS
- SR — SENSITIVE RECEIVERS STATIONS
- SR — SENSITIVE RECEIVERS STATIONS (RELOCATED)

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 Date: APR 2012

IMPACT WATER QUALITY MONITORING STATIONS

AECOM

Figure 3



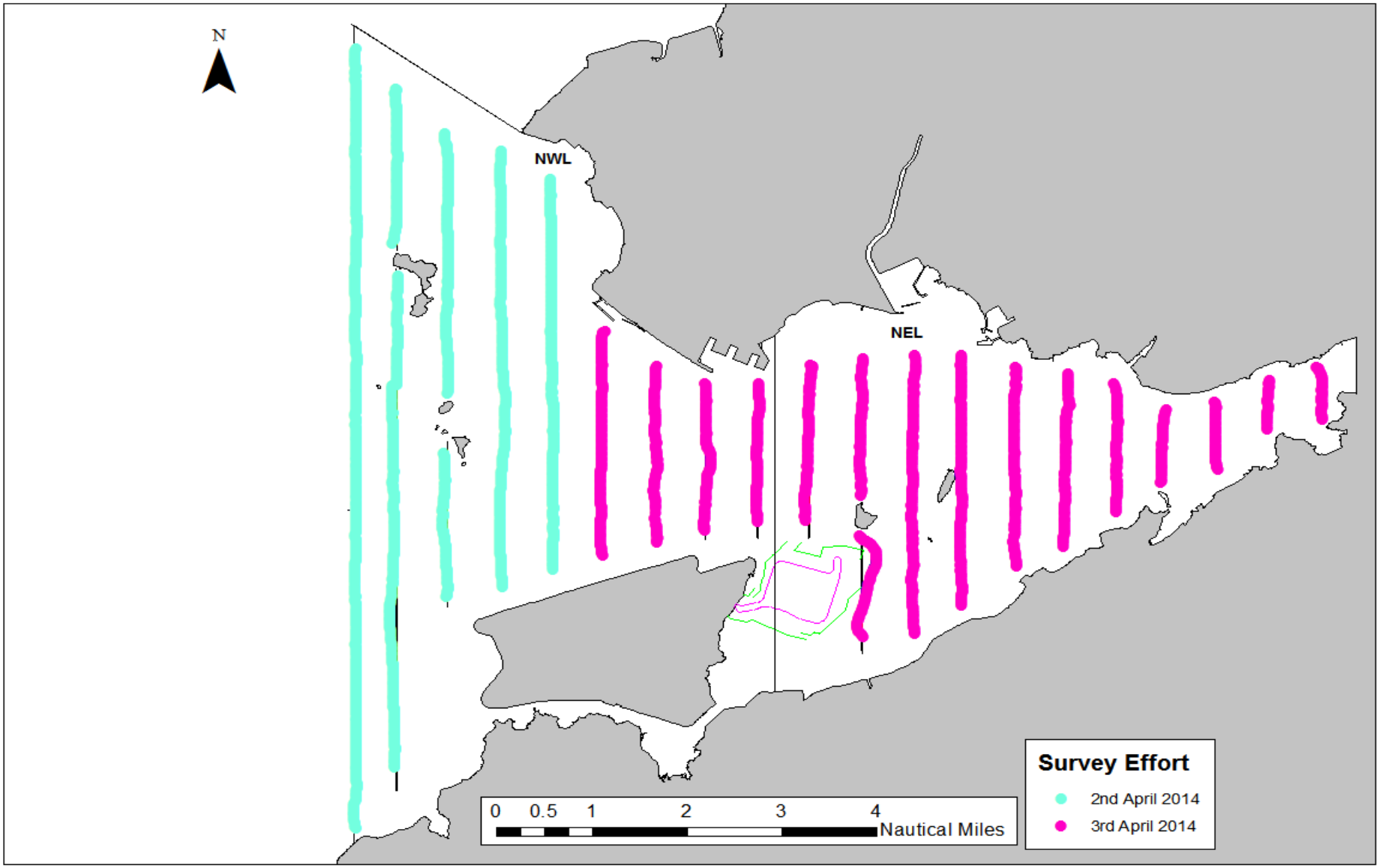
***Remark: Transect 10 is now 3.6km in length due to the HKBCF construction site. The total transect length for both NEL and NWL combined is 111km.**

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

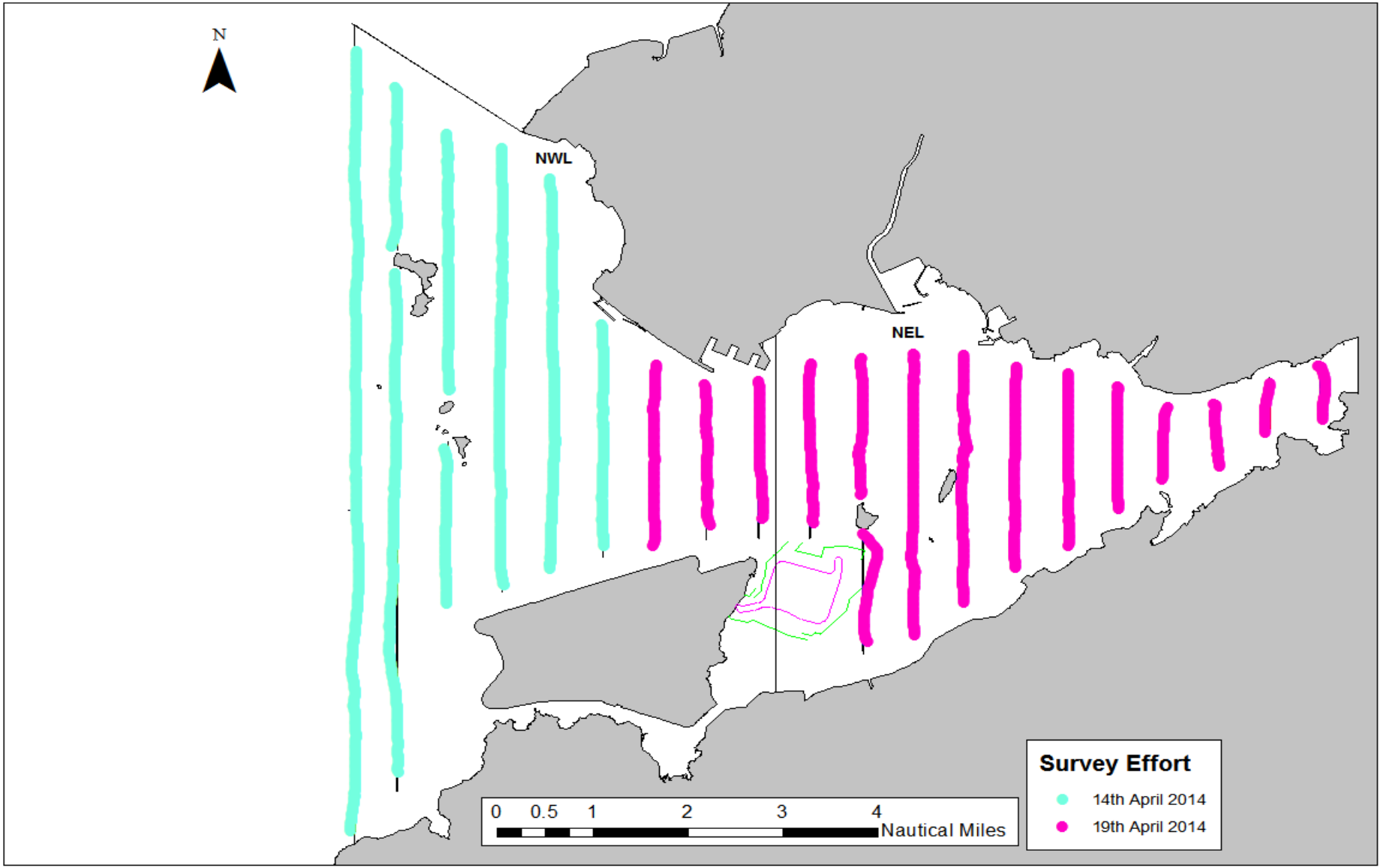
Figure 4



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey Efforts on 2 and 3 April 2014

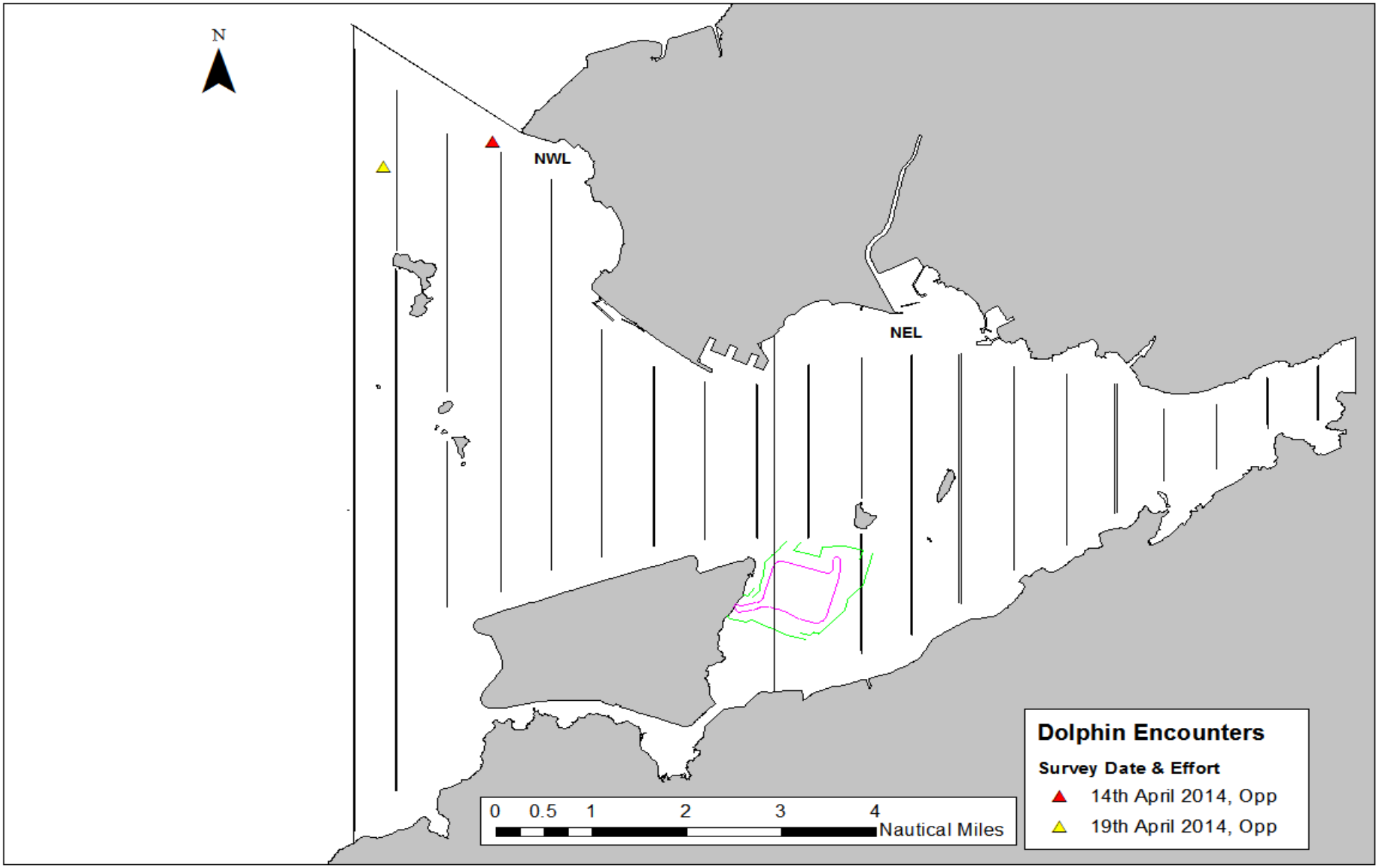
Figure 5a



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey Efforts on 14 and 29 April 2014

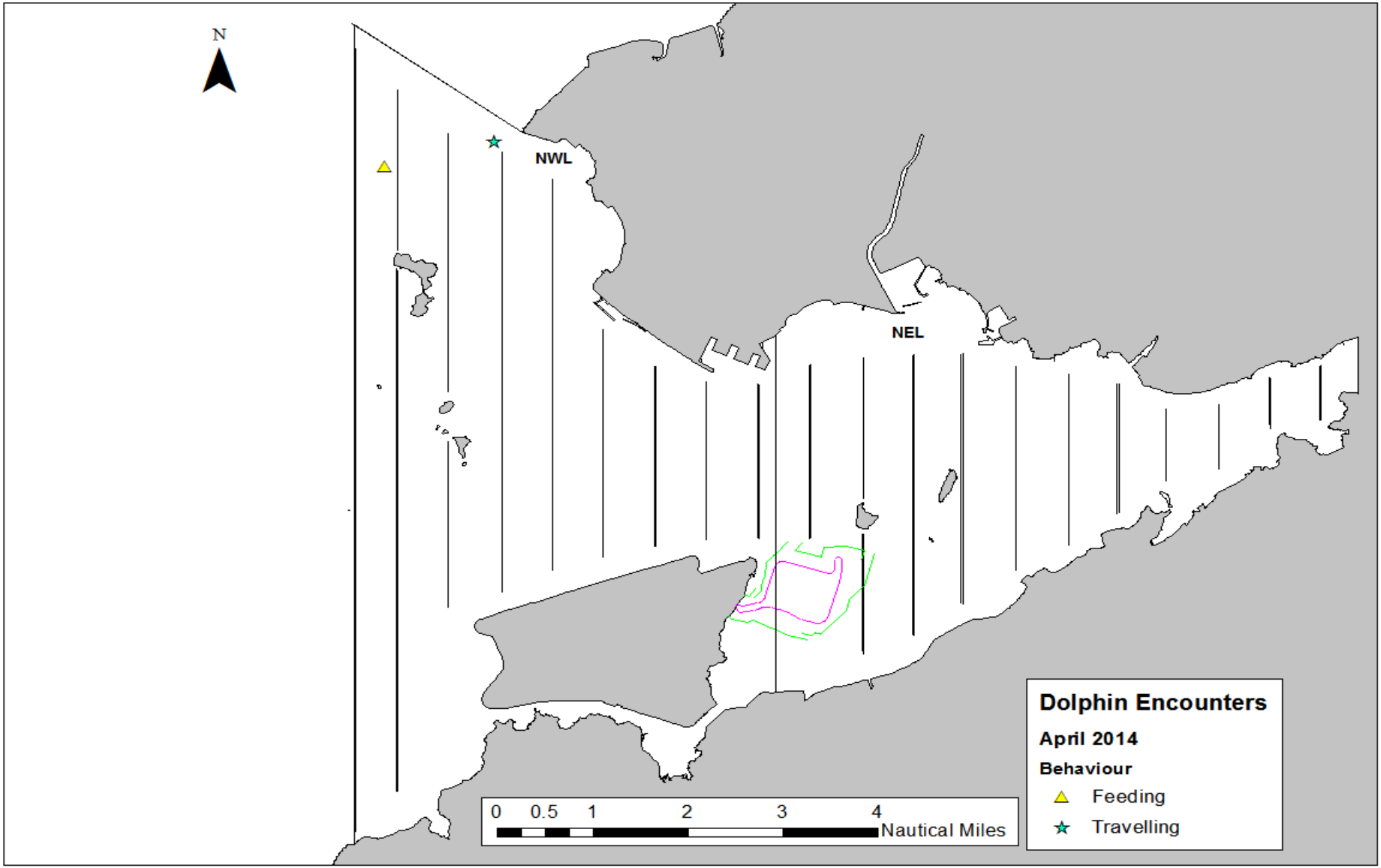
Figure 5b



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey
Sightings in April 2014

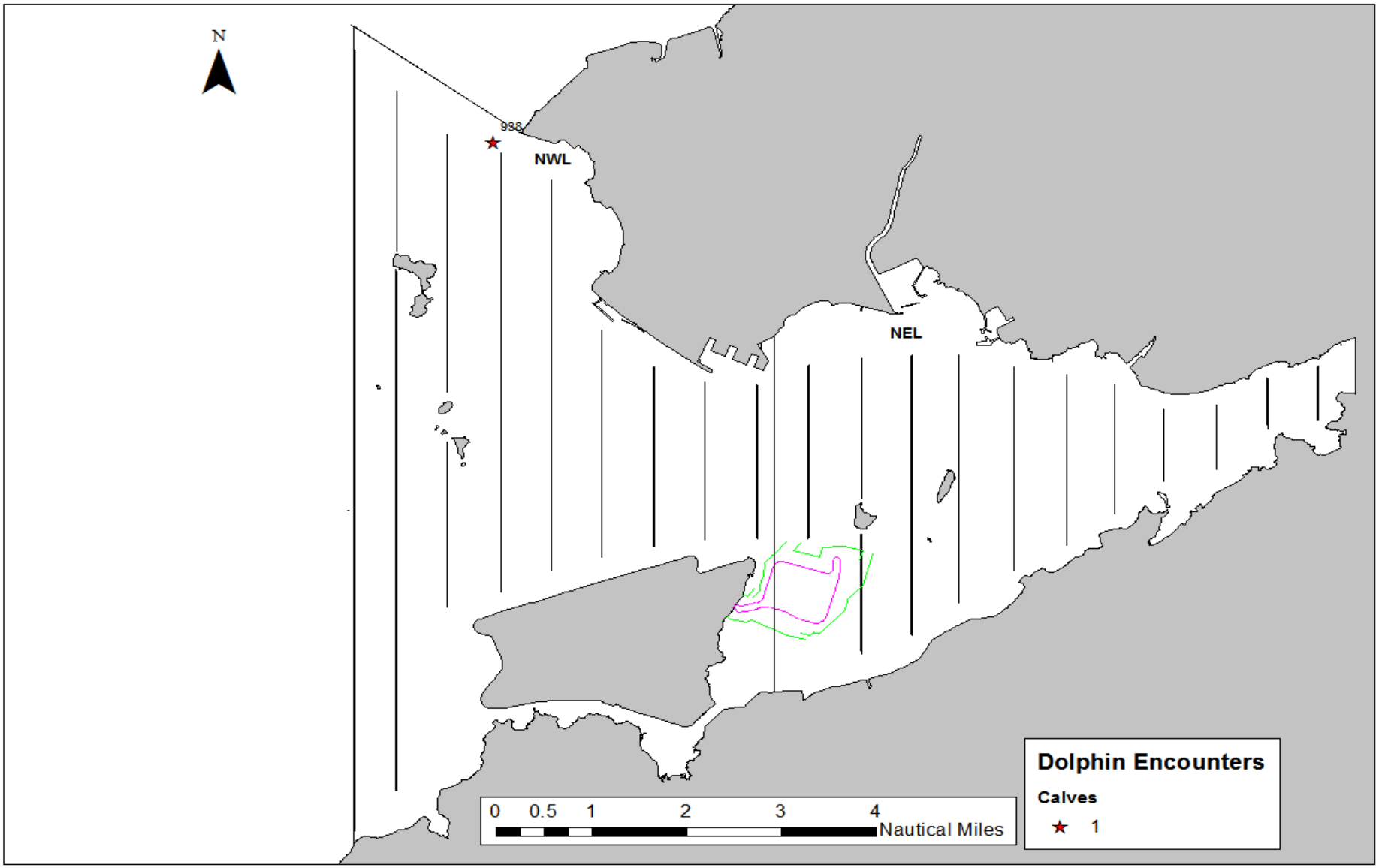
Figure 5c



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey
Behaviour Map in April 2014

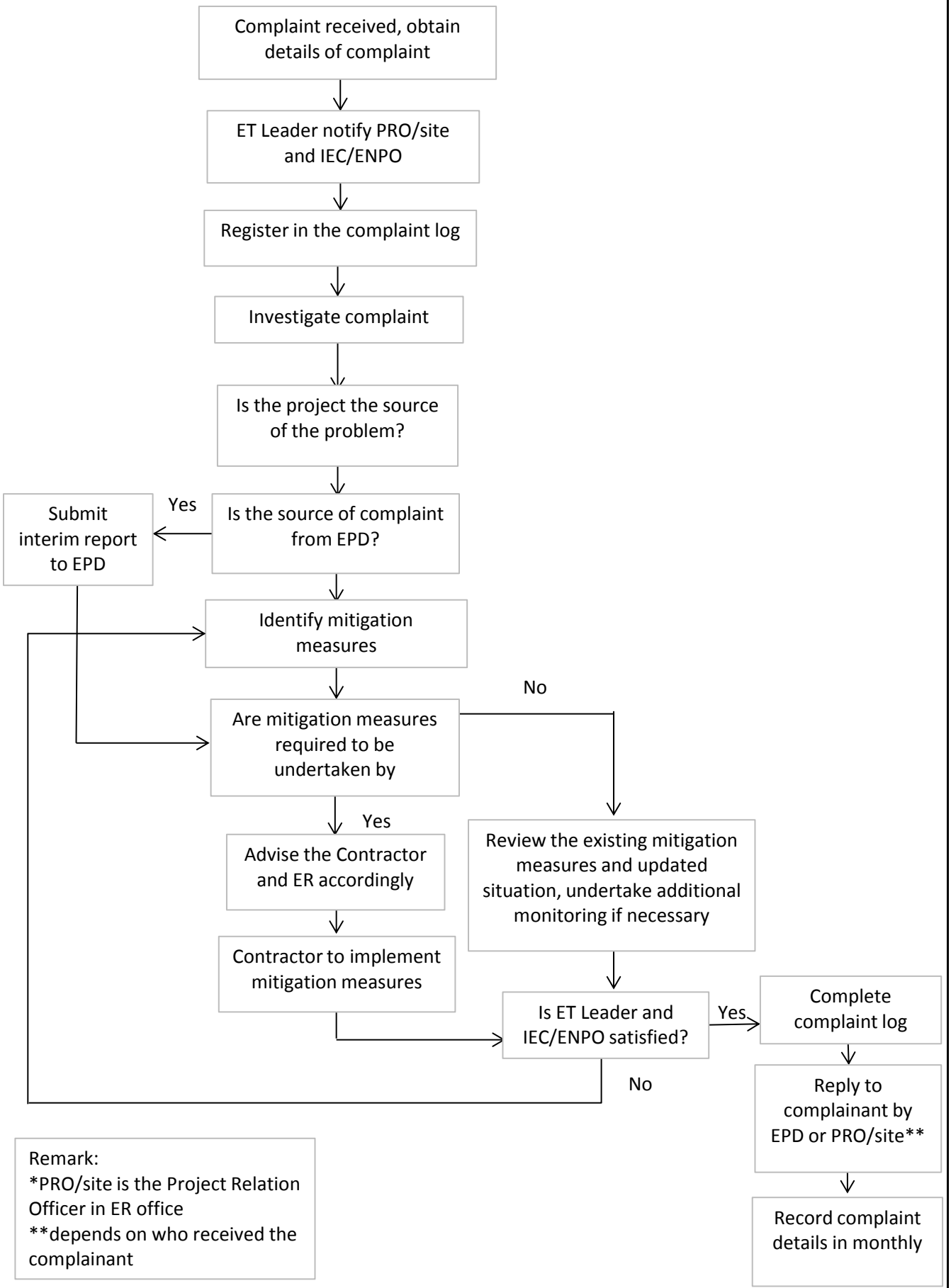
Figure 5d



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: May 2014**

Impact Dolphin Monitoring Survey Calf
Map in April 2014

Figure 5e



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**