AECOM

China Harbour Engineering Company Limited

Contract No. HY/2010/02

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

Monthly EM&A Report for January 2015

[02/2015]

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By Fax (3698 5999) and By Post

Attention: Mr. Roger Marechal

Dear Sir,

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

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

Reference is made to the Environmental Team's submission of the Monthly Environmental Monitoring & Audit Report for January 2015 (letter ref: 60249820/C/RMKY15021201 dated 12 February 2015) copied to us by E-mail on 12 February 2015.

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

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

Yours sincerely,

Raymond Dai
Independent Environmental Checker

c.c.	HyD	Mr. Matthew Fung	(By Fax: 3188 6614)
	HyD	Mr. Wai-ping Lee	(By Fax: 3188 6614)
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Internal: DY, YH, SL, JM, ENPO Site

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EXECUTIVE SUMMARY

Contract No. HY/2010/02 – Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Work (here below, known as "the Project") mainly comprises reclamation at the northeast of the Hong Kong International Airport of an area of about 130-hectare for the construction of an artificial island for the development of the Hong Kong Boundary Crossing Facilities (HKBCF), and about 19-hectare for the southern landfall of the Tuen Mun - Chek Lap Kok Link (TMCLKL). It is a designated project and is governed by the current permits for the Project, i.e. the amended Environmental Permits (EPs) issued on 19 January 2015 (EP-353/2009/H) and 10 December 2014 (EP-354/2009/C) (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 31 January 2015. As informed by the Contractor, major activities in the reporting period were:-

Marine-base

- Cellular structure installation
- Capping Beams structures
- Conforming sloping seawalls
- Rock filling
- Sand filling
- Public filling
- Band drain installation
- Surcharge laying
- Precast Yard for seawall blocks & culverts
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base

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

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

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

Breaches of Action and Limit Levels for Air Quality

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

Breaches of Action and Limit Levels for Noise

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

Breaches of Action and Limit Levels for Water Quality

For water quality, one (1) action level exceedance was recorded at IS10 and one (1) action level exceedance was recorded at SR5 respectively on 12 January 2015 during flood tide; one (1) action level exceedance was recorded at IS17 on 16 January 2015 during ebb tide; one (1) action level exceedance was recorded at IS17, SR5, SR6 and IS10 respectively, on 21 January 2015 during flood tide; one (1) action level exceedance was recorded at IS(Mf)11, SR10B(N) and SR7 respectively on 23 January 2015 during flood tide. One (1) limit level exceedance was recorded at SR10A and SR6 respectively on 23 January 2015 during flood tide; one (1) action level exceedance was recorded at IS(Mf)11 on 26 January 2015 during flood tide. After investigation, there is no adequate information to conclude the recorded exceedances are related to this Contract.

Impact Dolphin Monitoring

A total of five sightings were made, three “on effort” and two “opportunistic”. Three sightings were recorded on the 3rd and the other two on the 15th of January 2015. A total of 7 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

Behaviour: One group was noted feeding, two groups were noted as travelling and the behavior of two groups could not be determined, the locations of sighting with different behaviour are mapped in Figure 5d.

Complaint, Notification of Summons and Successful Prosecution

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

Reporting Change

There was no reporting change required in the reporting period.

Future Key Issues

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

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

1 INTRODUCTION

1.1 Background

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

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

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

1.1.2 The Project is a designated project and is governed by the current permits for the Project, i.e. the amended EPs issued on 19 January 2015 (EP-353/2009/H) and 10 December 2014 (EP-354/2009/C) (for TMCLKL Southern Landfall Reclamation only).

1.1.3 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.

1.1.4 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).

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

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

1.1.7 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.

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

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

1.2 Scope of Report

1.2.1 This is the thirty-fifth 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 January 2015.

1.3 Project Organization

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

Table 1.1 Contact Information of Key Personnel

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

1.4 Summary of Construction Works

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

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

Marine-base
- Cellular structure installation
- Capping Beams structures
- Conforming sloping seawalls
- Rock filling
- Sand filling
- Public filling
- Band drain installation
- Surcharge laying
- Precast Yard for seawall blocks & culverts
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

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

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

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

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

1.5 Summary of EM&A Programme Requirements

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

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

2 AIR QUALITY MONITORING

2.1 Monitoring Requirements

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

2.2 Monitoring Equipment

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

Table 2.1 Air Quality Monitoring Equipment

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

2.3 Monitoring Locations

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

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

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

2.3.4 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 January 2015 is provided in Appendix F.

2.7 Results and Observations

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

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

	Average (μg/m^3)	Range (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
AMS2	83	81-86	374	500
AMS3B	83	81-86	368	500
AMS7	81	79-85	370	500

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

	Average (μg/m^3)	Range (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
AMS2	79	38-111	176	260
AMS3B	81	31-111	167	260
AMS7	59	23-85	183	260

2.7.2 All 24-Hour TSP and 1-Hour 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-74 & B&K 4231

3.3 Monitoring Locations

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

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

Table 3.2 Locations of Impact Noise Monitoring Stations

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

3.4 Monitoring Parameters, Frequency and Duration

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

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

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

3.5 Monitoring Methodology

3.5.1 Monitoring Procedure

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

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

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

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

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

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

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

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

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

3.5.2 Maintenance and Calibration

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

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

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

3.6 Monitoring Schedule for the Reporting Month

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

3.7 Monitoring Results

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

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

	Average, dB(A), $L_{eq\ (30\ mins)}$	Range, dB(A), $L_{eq\ (30\ mins)}$	Limit Level, dB(A), $L_{eq\ (30\ mins)}$
NMS2	67	66-69*	75
NMS3B	67	65-68*	70/65^

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

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

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

3.7.4 The event action plan is annexed in Appendix L.

4 WATER QUALITY MONITORING

4.1 Monitoring Requirements

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

4.2 Monitoring Equipment

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

Table 4.1 Water Quality Monitoring Equipment

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

4.3 Monitoring Parameters, Frequency and Duration

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

Table 4.2 Impact Water Quality Monitoring Parameters and Frequency

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

4.4 Monitoring Locations

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

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

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

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

Table 4.3 Impact Water Quality Monitoring Stations

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

4.5 Monitoring Methodology

4.5.1 Instrumentation

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

4.5.2 Operating/Analytical Procedures

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

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

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

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

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

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

Table 4.4 Laboratory Analysis for Suspended Solids

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

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

4.5.3 Maintenance and Calibration

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

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

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

4.6 Monitoring Schedule for the Reporting Month

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

4.7 Results and Observations

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

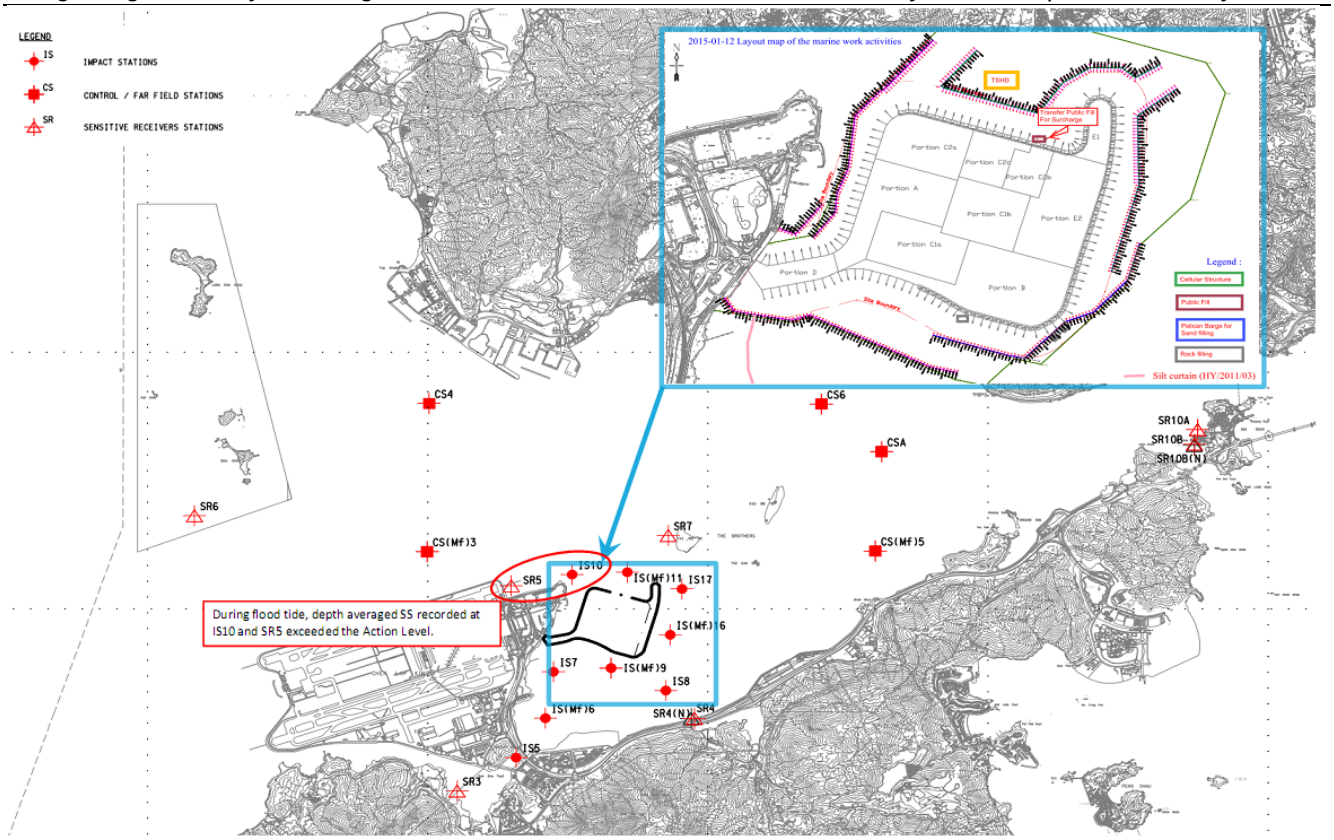
Table 4.5 Summary of Water Quality Exceedances

Station	Exceedance Level	DO (S&M)		DO (Bottom)		Turbidity		SS		Total	
		Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood
IS5	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)6	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS7	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS8	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)9	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS10	Action	0	0	0	0	0	0		**(2) 12 & 21 Jan 15**	0	**2**
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)11	Action	0	0	0	0	0	0	0	**(2) 23 & 26 Jan 15**	0	**2**
	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	**(1) 16 Jan 15**	**(1) 21 Jan 15**	**1**	**1**
	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	**(2) 12 & 21 Jan 15**	0	**2**
	Limit	0	0	0	0	0	0	0	0	0	0
SR6	Action	0	0	0	0	0	0	0	**(1) 21 Jan 15**	0	**1**
	Limit	0	0	0	0	0	0	0	**(1) 23 Jan 15**	0	**1**
SR7	Action	0	0	0	0	0	0	0	**(1) 23 Jan 15**	0	**1**
	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	**(1) 23 Jan 15**	0	**1**
SR10B (N)	Action	0	0	0	0	0	0	0	**(1) 23 Jan 15**	0	**1**
	Limit	0	0	0	0	0	0	0	0	0	0
Total	**Action**	0	0	0	0	0	0	**1**	**10**	**11**	
	Limit	0	0	0	0	0	0	0	**2**	**2**	

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

4.7.2 For water quality, one (1) action level exceedance was recorded at IS10 and one (1) action level exceedance was recorded at SR5 respectively on 12 January 2015 during flood tide.

4.7.2.1 Attached layout map shows active works conducted on 12 January 2015. No marine based construction works such as filling were conducted at northwest part of the HKBCF Reclamation Works.



4.7.2.2 Exceedance recorded at IS10 and SR5 during mid-flood tide are unlikely due to marine based construction activities of the Project because:

4.7.2.3 With reference to the silt curtain checking record, defects was not observed at northwest part of the perimeter silt curtain which are close to the IS10 and SR5.

4.7.2.4 No filling activities was observed in progress and no silt plume was observed to flow from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when monitoring was conducted at IS10 and SR5. (Also see attached for sea condition observed on 12 January 2015 during flood tide.)

4.7.2.5 Photo record which shows the sea condition near Portion C2a, the northwest part of the HKBCF

4.7.2.6 Also, turbidity level recorded at SR5, IS10 and IS(Mf)11 were below the action and limit level. This indicates the turbidity level at area near SR5 and IS10 was not adversely affected.

4.7.2.7 The exceedance was likely due to local effects in the vicinity of SR5 and IS10.

4.7.2.8 After investigation, there is no adequate information to conclude the recorded exceedances are related to this Contract.

4.7.2.9 Action taken under the action plan

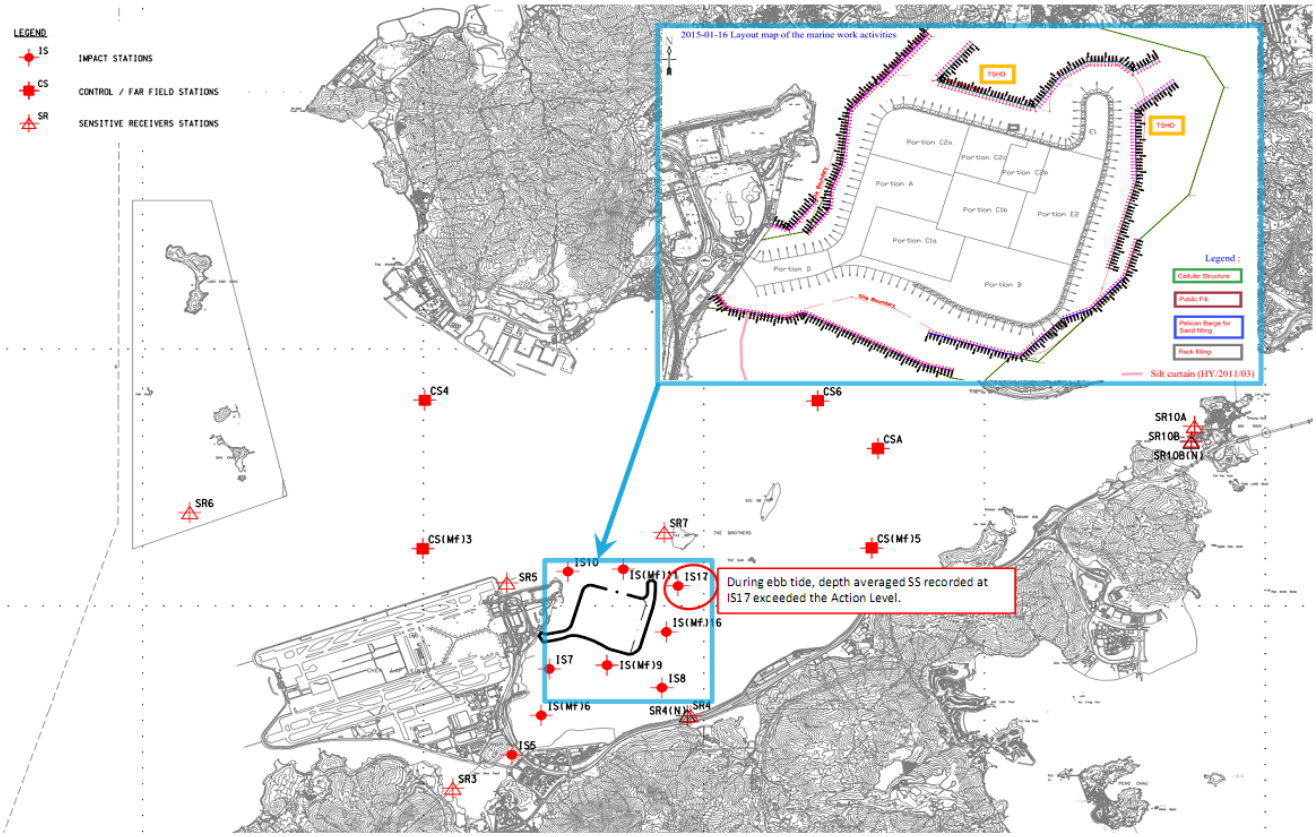
1. Not applicable as SS was not measured in situ;
2. After considering the above mentioned investigation results, it appears that it was unlikely that the SS exceedances were attributed to active construction activities of this Contract;
3. IEC, contractor and ER were informed via email;
4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
5. Since it is considered that the SS exceedance is unlikely to be project related, as such, actions 5-7 under the EAP are not considered applicable.

4.7.2.10 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

4.7.2.11 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

4.7.3 For water quality, one (1) action level exceedance was recorded at IS17 on 16 January 2015 during ebb tide.

4.7.3.1 Attached layout map shows active works conducted on 16 January 2015. Marine based construction activities such as rock filling was conducted at north part of the HKBCF Reclamation Works.



4.7.3.2 Exceedance recorded at IS17 during ebb tide is unlikely due to marine based construction activities of the Project because:

4.7.3.3 Turbidity level recorded at IS17, IS(Mf)11, IS(Mf)16, IS(Mf)9, IS7 and IS8 on 16 January 2015 were below the action and limit level. This indicates the turbidity level at area near IS17 were not adversely affected.

4.7.3.4 With refer to the layout map attached, rock filling is the only marine based construction works conducted during ebb tide on 16 January 2015 at portion C2C which realtively far away from IS17, as such, it is unlikely to cause the exceedance of SS at IS17.

4.7.3.5 The location and type of active works conducted were almost the same on 19 January 2015 during ebb tide but no exceedance was recorded at IS17 on 19 January 2015. This indicates that the exceedances at monitoring station IS17 was unlikely to be contributed by active work.

4.7.3.6 In addition, with referred to monitoring record, no sediment plume has been observed to flow from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain during ebb tide on 16 January 2015. (Please refer to photo record taken during ebb tide on 16 January 2015)

4.7.3.7 Photo record which shows the sea condition near Portion E1, the northeast part of the HKBCF reclamation works at ebb tide on 16 January 2015.

4.7.3.8 The exceedance was likely due to local effects in the vicinity of IS17.

4.7.3.9 As such, the exceedance recorded at IS17 is unlikely to be project related.

4.7.3.10 Action taken under the action plan

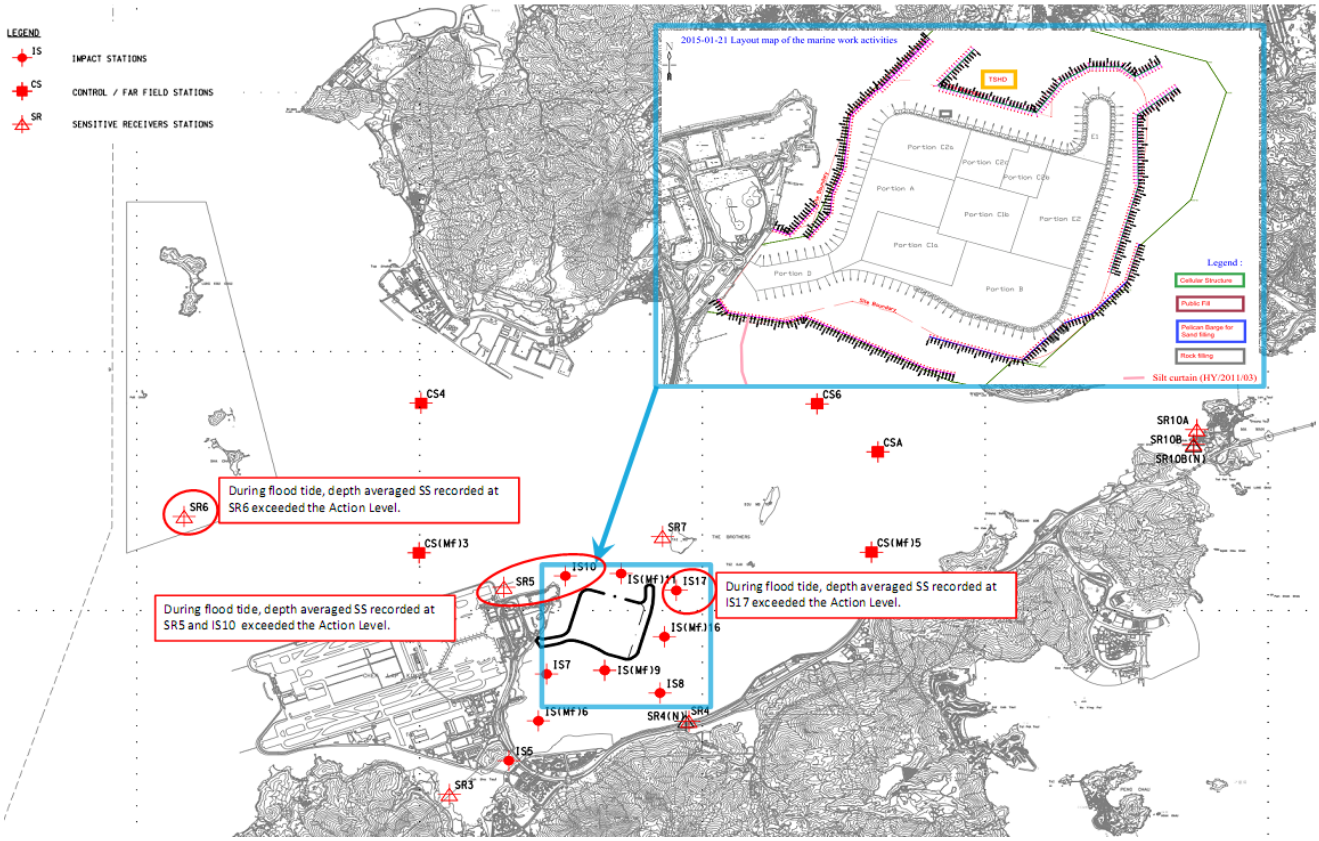
1. Not applicable as SS was not measured in situ;
2. After considering the above mentioned investigation results, it appears that it was unlikely that the SS exceedance was attributed to active construction activities of this Contract;
3. IEC, contractor and ER were informed via email;
4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
5. Since it is considered that the SS exceedance is unlikely to be project related, as such, actions 5-7 under the EAP are not considered applicable.

4.7.3.11 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

4.7.3.12 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

4.7.4 For water quality, one (1) action level exceedance was recorded at IS17, SR5, SR6 and IS10 respectively, on 21 January 2015 during flood tide.

4.7.4.1 Attached layout map shows active works conducted on 21 January 2015. Construction works such as rock filling was conducted near portion C2a of the HKBCF Reclamation Works on 21 January 2015.



4.7.4.2 Exceedances recorded at IS10, SR5 and SR6 during mid-flood tide are unlikely due to marine based construction activities of the Project because:

4.7.4.3 With reference to the silt curtain checking record, defects were not observed at northwest part of the perimeter silt curtain which are close to the IS10 and SR5.

4.7.4.4 Rock filling was conducted near portion C2a during flood tide, but no silt plume was observed to flow from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when monitoring was conducted. (Also see attached photo record for sea condition taken at west side of the HKBCF Reclamation Works on 21 January 2015 during flood tide.)

4.7.4.5 Also, turbidity level recorded at IS10, SR5, SR6 were below the action and limit level. This indicates the turbidity level at area near IS10, SR5, SR6 and IS17 were not adversely affected.

4.7.4.6 The exceedances were likely due to local effects in the vicinity of IS10, SR5 and SR6.

4.7.4.7 Exceedance recorded at IS17 during mid-flood tide is unlikely due to marine based construction activities of the Project because:

4.7.4.8 With reference to the silt curtain checking record, defects were observed at northeast part of the silt curtain.

4.7.4.9 Although rock filling was conducted near portion C2a during flood tide, no silt plume was observed to flow from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when monitoring was conducted. (Also see attached photo record for sea condition on 21 January 2015 during northwest side of the HKBCF Reclamation Works during flood tide.)

4.7.4.10 Photo record which shows the sea condition near at northeast side of HKBCF Reclamation Works at flood tide on 21 January 2015.

4.7.4.11 Photo record which shows the sea condition near at west side of HKBCF Reclamation Works at flood tide on 21 January 2015.

4.7.4.12 Also, turbidity level recorded at IS(Mf)11, IS17 and IS(Mf)16 were below the action and limit level. This indicates the turbidity level at area near IS17 was not adversely affected.

4.7.4.13 The exceedance was likely due to local effects in the vicinity of IS17.

4.7.4.14 After investigation, there is no adequate information to conclude the recorded exceedances are related to this Contract.

4.7.4.15 Action taken under the action plan

1. Not applicable as SS was not measured in situ;

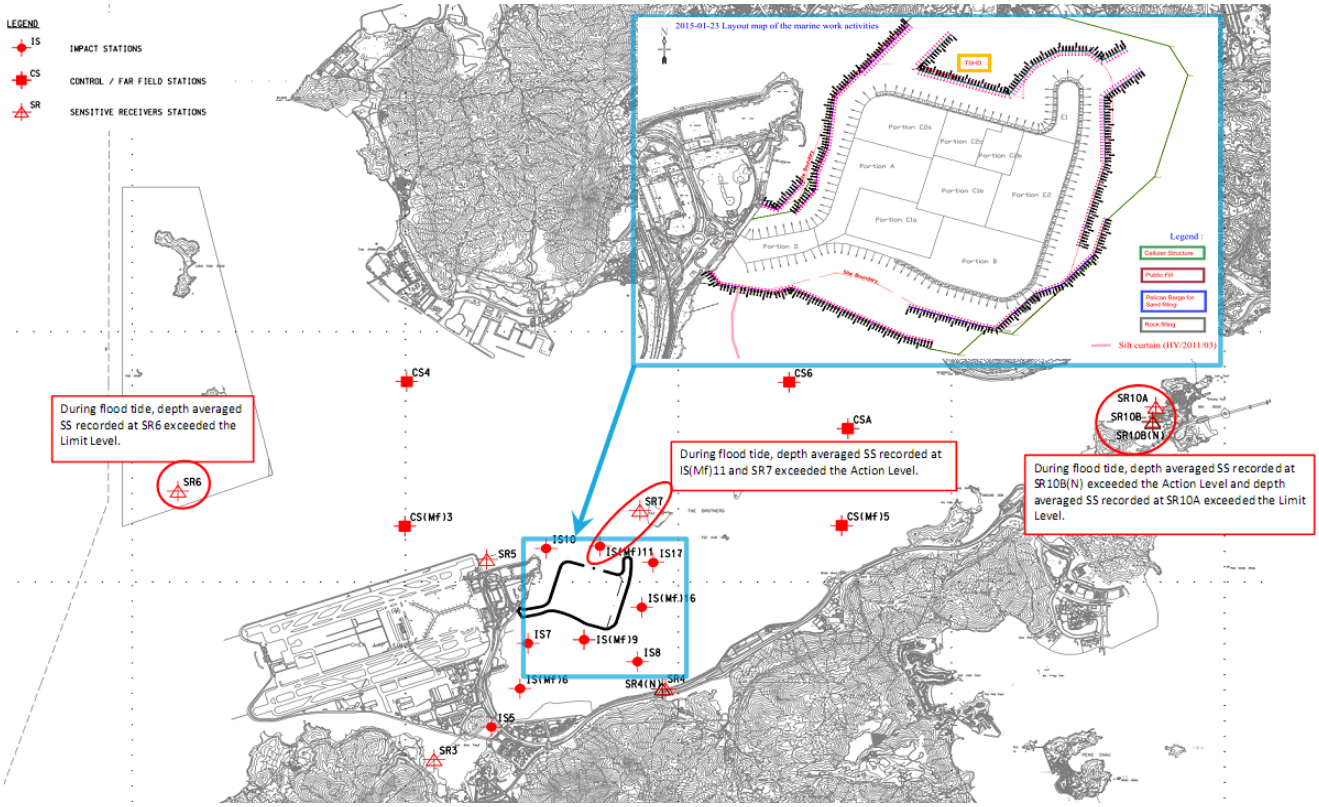
2. After considering the above mentioned investigation results, it appears that it was unlikely that the SS exceedances were attributed to active construction activities of this Contract;
3. IEC, contractor and ER were informed via email;
4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
5. Since it is considered that the SS exceedances are unlikely to be project related, as such, actions 5-7 under the EAP are not considered applicable.

4.7.4.16 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

4.7.4.17 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

4.7.5 For water quality, one (1) action level exceedance was recorded at IS(Mf)11, SR10B(N) and SR7 respectively on 23 January 2015 during flood tide. One (1) limit level exceedance was recorded at SR10A and SR6 respectively on 23 January 2015 during flood tide.

4.7.5.1 Attached layout map shows active works conducted on 23 January 2015. Marine based construction works such rock filling were conducted at southeast part of HKBCF Reclamation Works.



4.7.5.2 Exceedances recorded at SR10A and SR10B(N) during mid-flood tide are unlikely due to marine based construction activities of the Project because:

4.7.5.3 IS17, IS(Mf)16, CS6, CSA and CS(Mf)5 are closer to the active works than monitoring station SR10A and SR10B(N) during flood tide. Depth Averaged Suspended Solids (SS) values (in mg/L) recorded during flood tide on the same day at IS17, IS(Mf)16, CS6, CSA and CS(Mf)5 were below the Action and Limit Level which indicates HKBCF reclamation works is unlikely to contribute to the action level exceedances recorded at SR10A and SR10B(N).

4.7.5.4 The monitoring location of monitoring station SR10B(N) are considered upstream and remote to the active works of this project during flood tide. Therefore it was unlikely that the exceedances recorded at SR10A and SR10B(N) during flood tide was due to HKBCF Reclamation Works.

4.7.5.5 The exceedances were likely due to local effects in the vicinity of SR10A and SR10B(N).

4.7.5.6 Exceedance recorded at SR6 during mid-flood tide is unlikely due to marine based construction activities of the Project because:

4.7.5.7 IS10 and SR5 are downstream and closer to the HKBCF Reclamation Works than monitoring station SR6 during flood tide. Depth Averaged Suspended Solids (SS) values (in mg/L) recorded during flood tide on the same day at IS10 and SR5 were below the Action and Limit Level which indicates HKBCF reclamation works is unlikely to contribute to the action level exceedance recorded at SR6.

4.7.5.8 The monitoring location of monitoring station SR6 are considered remote to the HKBCF Reclamation Works. Therefore it was unlikely that the exceedance recorded at SR6 during flood tide was due to HKBCF Reclamation Works.

4.7.5.9 The exceedance was likely due to local effects in the vicinity of SR6.

4.7.5.10 Exceedances recorded at IS(Mf)11 and SR7 during mid-flood tide are unlikely due to marine based construction activities of the Project because:

4.7.5.11 With reference to the silt curtain checking record, defects were observed at north and northwest part of the perimeter silt curtain which are close IS11.

4.7.5.12 With referred to the attached layout map, marine based construction works such rock filling were conducted at southeast part of the site, however no silt plume was observed to flow from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when monitoring was conducted during flood tide. (Also see attached for sea condition observed on 23 January 2015 during flood tide.)

4.7.5.13 Photo record which shows the sea condition at northeast part of the HKBCF reclamation works during flood tide on 23 January 2015.

4.7.5.14 Photo record which shows the sea condition at east part of the HKBCF reclamation works during flood tide on 23 January 2015.

4.7.5.15 Also, turbidity level recorded at IS(Mf)11, SR7, IS10 and IS17 were below the action and limit level. This indicates the turbidity level at or near IS(Mf)11 and SR7 was not adversely affected.

4.7.5.16 The exceedances were likely due to local effects in the vicinity of IS(Mf)11 and SR7.

4.7.5.17 After investigation, there is no adequate information to conclude the recorded exceedances are related to this Contract.

4.7.5.18 Action taken under the action plan

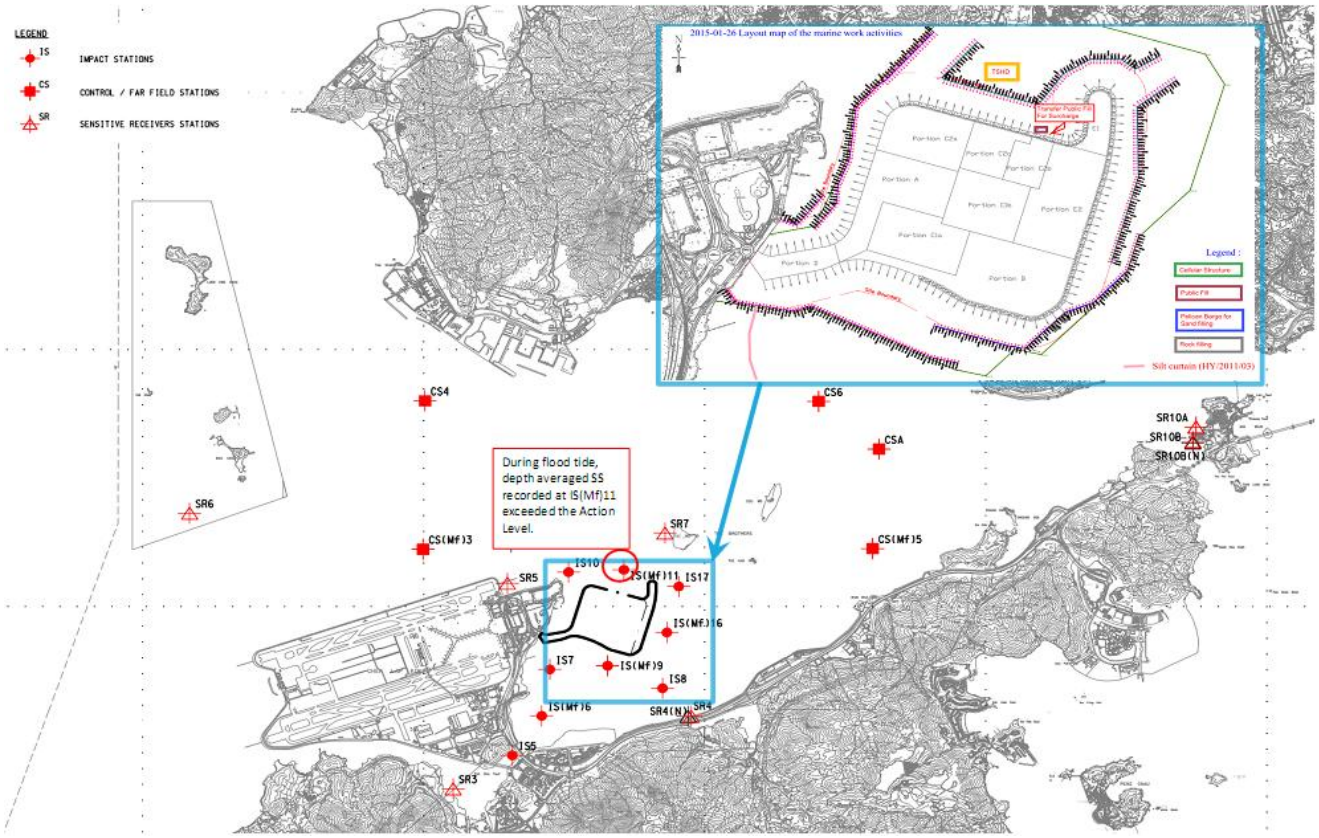
1. Not applicable as SS was not measured in situ;
2. After considering the above mentioned investigation results, it appears that it was unlikely that the SS exceedances were attributed to active construction activities of this Contract;
3. IEC, contractor and ER were informed via email;
4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
5. Since it is considered that the SS exceedances are unlikely to be project related, as such, actions 5-7 under the EAP are not considered applicable.

4.7.5.19 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

4.7.5.20 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

4.7.6 For water quality, one (1) action level exceedance was recorded at IS(Mf)11 on 26 January 2015 during flood tide.

4.7.6.1 Attached layout map shows active works conducted on 26 January 2015. No marine based construction works such as marine filling were conducted at the HKBCF Reclamation Works.



4.7.6.2 Exceedance recorded at IS(Mf)11 during mid-flood tide are unlikely due to marine based construction activities of the Project because:

4.7.6.3 With reference to the silt curtain checking record, defect was observed at north part of the perimeter silt curtain which are close to the IS(Mf)11.

4.7.6.4 No filling activities was observed in progress and no silt plume was observed to flow from the inside of the perimeter silt curtain to the outside of the perimeter silt curtain when monitoring was conducted at IS(Mf)11. (Also see attached for sea condition observed on 26 January 2015 during flood tide.

4.7.6.5 Photo record which shows the sea condition at north part of the HKBCF reclamation works during flood tide on 26 January 2015.

4.7.6.6 Also turbidity level recorded at IS(Mf)11, IS10, IS17 and SR7 were below the action and limit level. In addition, SS results at IS10, IS17 and SR7 were below the action and limit level. This indicates the turbidity and SS level at area near IS(Mf)11 were not adversely affected.

4.7.6.7 The exceedance was likely due to local effects in the vicinity of IS(Mf)11.

4.7.6.8 After investigation, there is no adequate information to conclude the recorded exceedance is related to this Contract.

4.7.6.9 Action taken under the action plan

1. Not applicable as SS was not measured in situ;
2. After considering the above mentioned investigation results, it appears that it was unlikely that the SS exceedance was attributed to active construction activities of this Contract;
3. IEC, contractor and ER were informed via email;
4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
5. Since it is considered that the SS exceedance is unlikely to be project related, as such, actions 5-7 under the EAP are not considered applicable.

4.7.6.10 Nevertheless, the Contractor was reminded to ensure provision of ongoing maintenance to the silt curtains and to carry out maintenance work once defects were found.

4.7.6.11 Maintenance work of the silt curtain was carried out by the Contractor on a daily basis except Sunday and public holiday.

4.7.7 The event action plan is annexed in Appendix L.

5 DOLPHIN MONITORING

5.1 Monitoring Requirements

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

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

5.2 Monitoring Equipment

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

Table 5.1 Dolphin Monitoring Equipment

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

5.3 Monitoring Frequency and Conditions

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

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

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

5.4 Monitoring Methodology and Location

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

5.4.2 Northeast Lantau survey area; and

5.4.3 Northwest Lantau survey area.

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

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

	HK Grid System		Long Lat in WGS84	
ID	X	Y	Long	Lat
1	804671	814577	113.870308	22.269741
1	804671	831404	113.869975	22.421696
2	805475	815457	113.878087	22.277704
2	805477	826654	113.877896	22.378814
3	806464	819435	113.887615	22.313643
3	806464	822911	113.887550	22.345030
4	807518	819771	113.897833	22.316697
4	807518	829230	113.897663	22.402113
5	808504	820220	113.907397	22.320761
5	808504	828602	113.907252	22.396462
6	809490	820466	113.916965	22.323003
6	809490	825352	113.916884	22.367128
7	810499	820690	113.926752	22.325043
7	810499	824613	113.926688	22.360464
8	811508	820847	113.936539	22.326475
8	811508	824254	113.936486	22.357241
9	812516	820892	113.946329	22.326894
9	812516	824254	113.946279	22.357255
10*	813525	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 January 2015 is provided in Appendix F.

5.6.2 Two surveys covering both study areas were completed.

5.7 Results and Observations

5.7.1 Dolphin surveys were conducted on 2, 3, 15 and 16 January 2015. A total of 219.4 km of transect line was conducted all of which during Beaufort Sea State 3 or better (favourable water conditions). Please note that that some lines were shortened due to works and/or shipping traffic.

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

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

Survey	Date	Area	Beaufort	Effort (km)	Total Distance Travelled (km)
1	01/02/2015	NWL	1	9.9	46.5
	01/02/2015	NEL	1	26.8	
	01/02/2015	NEL	2	9.8	
	01/03/2015	NWL	1	29.7	62.6
	01/03/2015	NWL	2	32.9	
2	01/15/2015	NWL	1	14	58
	01/15/2015	NWL	2	40.6	
	01/15/2015	NWL	3	3.4	
	01/16/2015	NWL	1	9.6	52.3
	01/16/2015	NWL	2	5.5	
	01/16/2015	NEL	1	16.1	
	01/16/2015	NEL	2	21.1	
TOTAL in January 2015					**219.4**

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

Table 5.4 Impact Dolphin Monitoring Survey Details January 2015

Date	Location	No. Sightings "on effort"	No. Sightings "opportunistic"
01/02/2015	NWL	0	0
	NEL	0	0
01/03/2015	NWL	1	2
	NEL	0	0
01/15/2015	NWL	2	0
	NEL	0	0
01/16/2015	NWL	0	0
	NEL	0	0
TOTAL in January 2015		3	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 (km)**	**NWL Track (km)**	**NEL Sightings**	**NWL Sightings**	**NEL Encounter Rate**	**NWL Encounter Rate**
2 & 3/01/2015	36.6	72.5	0	1	0.0	1.4
15 & 16/01/2015	37.2	73.1	0	2	0.0	2.7
Encounter Rate of Total Number of Dolphins (ANI)**						
Date	**NEL Track (km)**	**NWL Track (km)**	**NEL Dolphins**	**NWL Dolphins**	**NEL Encounter Rate**	**NWL Encounter Rate**
2 & 3/01/2015	36.6	72.5	0	1	0.0	1.4
15 & 16/01/2015	37.2	73.1	0	3	0.0	4.1

* 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 five sightings were made, three “on effort” and two “opportunistic”. Three sightings were recorded on the 3rd and the other two on the 15th of January 2015. A total of 7 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

5.7.3 Behaviour: One group was noted feeding, two groups were noted as travelling and the behavior of two groups could not be determined, the locations of sighting with different behaviour are mapped in Figure 5d.

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

5.7.5 There were three re-sightings in December 2014 HZMB 022; 023; 098 (and the off spring of 098, however, this individual does not have an ID number due to being insufficiently marked). No new individuals were added to the catalogue. HZMB 022 and HZMB 023 are a mother and offspring pair. They were first sighted in July 2012 and have been seen throughout 2013 and 2014. HZMB 022 (offspring) has been seen ten times and HZMB 023 (mother) has been seen eight times, as of December 2014. The HZMB 022 has been seen twice only without being in close proximity to its mother. The gender of this individual (HZMB 022) is unknown. All sightings of HZMB 022 and HZMB 023 have been made in NWL. HZMB 098 has been seen seven times during impact monitoring, initially in May 2013 and last seen in August 2014 and, again, always in NWL. HZMB 098 has been associated with a calf since March 2013 and a young dolphin (still grey in coloration) is still closely associated with her. (Also refer to Annex I of Appendix K).

5.7.6 Noteworthy Observation[1]:

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

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

5.7.6.2 The HKBCF and adjoining "Southern Landfall" Projects effected lines 11. The view of the area was partially blocked by the working vessels and in water structures. As the working vessels will move as construction progresses, e.g., his month line 12 was clear of obstruction compared to last month, this project will cause temporary effects to survey protocol and survey data collection. In time, the fixed structures will affect all survey protocols and dolphin ecology in the long term.

5.7.6.3 The northern end of line 10 was affected by works which do not belong to the HKBCF Project; in particular, the view of the area was partially blocked by working vessels and a busy anchorage. The in water works of this project appear to have decreased as the reclamation has been completed. Due to its permanency, the reclamation will continuously affect all survey protocols and dolphin ecology.

5.7.6.4 It was observed that lines 10 and 12 were affected by construction activity near HKBCF Reclamation Works. however, as the vessels will move during throughout the duration of HKBCF impact monitoring, they will temporarily affect survey data collection, dolphin movement, dolphin habitat use and dolphin behaviour.

5.7.6.5 New projects were ongoing at the southern ends of lines 3, 4, 5 and 6. These works partially blocked some of the survey view. There was no apparent fixed structure associated with this activity, only platforms and servicing vessels. As it is not known what activity was being conducted, the effect that this project may have specifically on dolphins is not known

5.7.6.6 A shipping hazard (a sunken ship) was observed at line 3

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

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

5.7.6.9 A review of survey conditions was conducted. The works at lines 1 and 2 are progressing and permanent in water structures are in place. Given that these lines are now truncated due to these structures, it is advised that the start/end points of these lines be revised to reflect the new navigation required. A draft proposal of alternation of transect lines 1 and 2 was submitted to IEC/ENPO on 23 January 2015 and it is under ENPO's review at time this report was submitted and it will be subsequently submitted to EPD for their review and approval.

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 2, 8, 15, 22 and 29 January 2015.

6.1.2 Particular observations during the site inspections are described below:

Air Quality

6.1.3 A material storage tank of an idle grout production facility was observed not fully enclosed. Please be advised that the material storage tanks of a grout production facility should be fully covered / enclosed. The Contractor enclosed the grout production facility (Closed).

6.1.4 Recycle glass cullet for earthwork was observed stored on Portion C2a with and it is fully covered with tarpaulin or impervious sheets. The Contractor was reminded to continue to provide effective dust suppression measures. (Reminder)

Noise

6.1.5 In general, please provide acoustic decoupling measures to air compressors and other noisy equipment when they are mounted on construction vessels. (Reminder)

Water Quality

6.1.6 No adverse observation was identified in the reporting month.

Chemical and Waste Management

6.1.7 Oil drums were observed without drip tray at Portion C1a. The Contractor was reminded to provide drip tray to all oil drums. The Contractor provide drip tray to oil drums. (Closed)

6.1.8 Water and oil mixture was observed accumulated in the drip tray on barge SHE7. The Contractor was reminded to clear the water and oil mixture regularly to prevent overflow and runoff. (Reminder)

6.1.9 Water and oil mixture was observed full at one side of the drip tray on barge SHE7. The Contractor was advised to clear the water inside trip tray. The Contractor cleared the water inside trip tray. (Closed)

6.1.10 A gap was observed within the frame of the drip tray on barge SHE7. The Contractor was reminded to provide rectification and ensure no gap within the frame f drip tray. The Contractor provided rectification and ensures no gap within the frame of drip tray. (Closed)

6.1.11 It was observed that a generator was not put inside a drip tray. The Contractor was reminded to provide mitigation measures such as to put all generator inside drip tray. The Contractor provided mitigation measures such as to put all generator inside drip tray. (Closed)

6.1.12 General refuse were observed at Portion A, D, B, E1, C2a and other areas. The Contractor was reminded to regularly collect the and dispose general refuse properly to keep the site clean and tidy. The Contractor cleared the general refuse and kept the site clean and tidy. (Closed)

6.1.13 Sand and equipment materials deposited inside the drip tray was observed at Portion C2A. The Contractor was reminded to clear the deposited sand and store the equipment materials properly. Contractor cleared the deposited materials and provided drip tray to the mechanical equipment. (Closed)

Landscape and Visual Impact

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

Others

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

6.2 Advice on the Solid and Liquid Waste Management Status

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

6.2.2 As advised by the Contractor, 1,774,784.5m^3 of fill were imported for the Project use in the reporting period. 420kg of paper/cardboard packaging, 4000kg plastics, 2400kg of chemical waste and 45.5m^3 of general refuse were generated and disposed of in the reporting period. Monthly summary of waste flow table is detailed in Appendix M.

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

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

6.3 Environmental Licenses and Permits

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

Table 6.1 Summary of Environmental Licensing and Permit Status

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
EIAO	Environmental Permit	EP-353/2009/H	19/01/2015	N/A	HyD	Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities
		EP-354/2009/C	10/12/2014	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-RS0049-15	17/12/2014	16/02/2015	CHEC	Reclamation Works in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RE1405-14	22/12/2014	21/06/2015	CHEC	Section of TKO Fill Bank under Contract HY/2010/02

6.4 Implementation Status of Environmental Mitigation Measures

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

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

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

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

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

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

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

6.5 Summary of Exceedances of the Environmental Quality Performance Limit

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

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

6.5.3 For water quality, one (1) action level exceedance was recorded at IS10 and one (1) action level exceedance was recorded at SR5 respectively on 12 January 2015 during flood tide; one (1) action level exceedance was recorded at IS17 on 16 January 2015 during ebb tide; one (1) action level exceedance was recorded at IS17, SR5, SR6 and IS10 respectively, on 21 January 2015 during flood tide; one (1) action level exceedance was recorded at IS(Mf)11, SR10B(N) and SR7 respectively on 23 January 2015 during flood tide. One (1) limit level exceedance was recorded at SR10A and SR6 respectively on 23 January 2015 during flood tide; one (1) action level exceedance was recorded at IS(Mf)11 on 26 January 2015 during flood tide. After investigation, there is no adequate information to conclude the recorded exceedances are related to this Contract.

6.5.4 A total of five sightings were made, three “on effort” and two “opportunistic”. Three sightings were recorded on the 3rd and the other two on the 15th of January 2015. A total of 7 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

6.5.5 Behaviour: One group was noted feeding, two groups were noted as travelling and the behavior of two groups could not be determined, the locations of sighting with different behaviour are mapped in Figure 5d.

6.5.6 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 No environmental complaint has been received in the reporting month.

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

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

7 FUTURE KEY ISSUES

7.2 Construction Programme for the Coming Months

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

Marine-base

- Cellular structure installation and backfilling
- Capping Beams structures
- Conforming sloping seawalls
- Rock filling
- Sand filling
- Public filling
- Surcharge remove & laying
- Geotechnical Instrumentation works
- Precast Yard for seawall blocks & culverts
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base

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

*Construction activities in February and March 2015 will be changed subject to works progress.

7.3 Key Issues for the Coming Month

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

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

7.4 Monitoring Schedule for the Coming Month

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

8 CONCLUSIONS AND RECOMMENDATIONS

8.2 Conclusions

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

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

8.2.3 For water quality, one (1) action level exceedance was recorded at IS10 and one (1) action level exceedance was recorded at SR5 respectively on 12 January 2015 during flood tide; one (1) action level exceedance was recorded at IS17 on 16 January 2015 during ebb tide; one (1) action level exceedance was recorded at IS17, SR5, SR6 and IS10 respectively, on 21 January 2015 during flood tide; one (1) action level exceedance was recorded at IS(Mf)11, SR10B(N) and SR7 respectively on 23 January 2015 during flood tide. One (1) limit level exceedance was recorded at SR10A and SR6 respectively on 23 January 2015 during flood tide; one (1) action level exceedance was recorded at IS(Mf)11 on 26 January 2015 during flood tide. After investigation, there is no adequate information to conclude the recorded exceedances are related to this Contract.

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

6.1.1 A total of five sightings were made, three “on effort” and two “opportunistic”. Three sightings were recorded on the 3rd and the other two on the 15th of January 2015. A total of 7 individuals were sighted from the two impact dolphin surveys in the reporting period. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively.

6.1.2 Behaviour: One group was noted feeding, two groups were noted as travelling and the behavior of two groups could not be determined, the locations of sighting with different behaviour are mapped in Figure 5d.

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

8.2.6 No complaint, notification summons and successful prosecution was received in the reporting period.

8.3 Recommendations

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

Air Quality Impact

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

Construction Noise Impact

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

Water Quality Impact

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

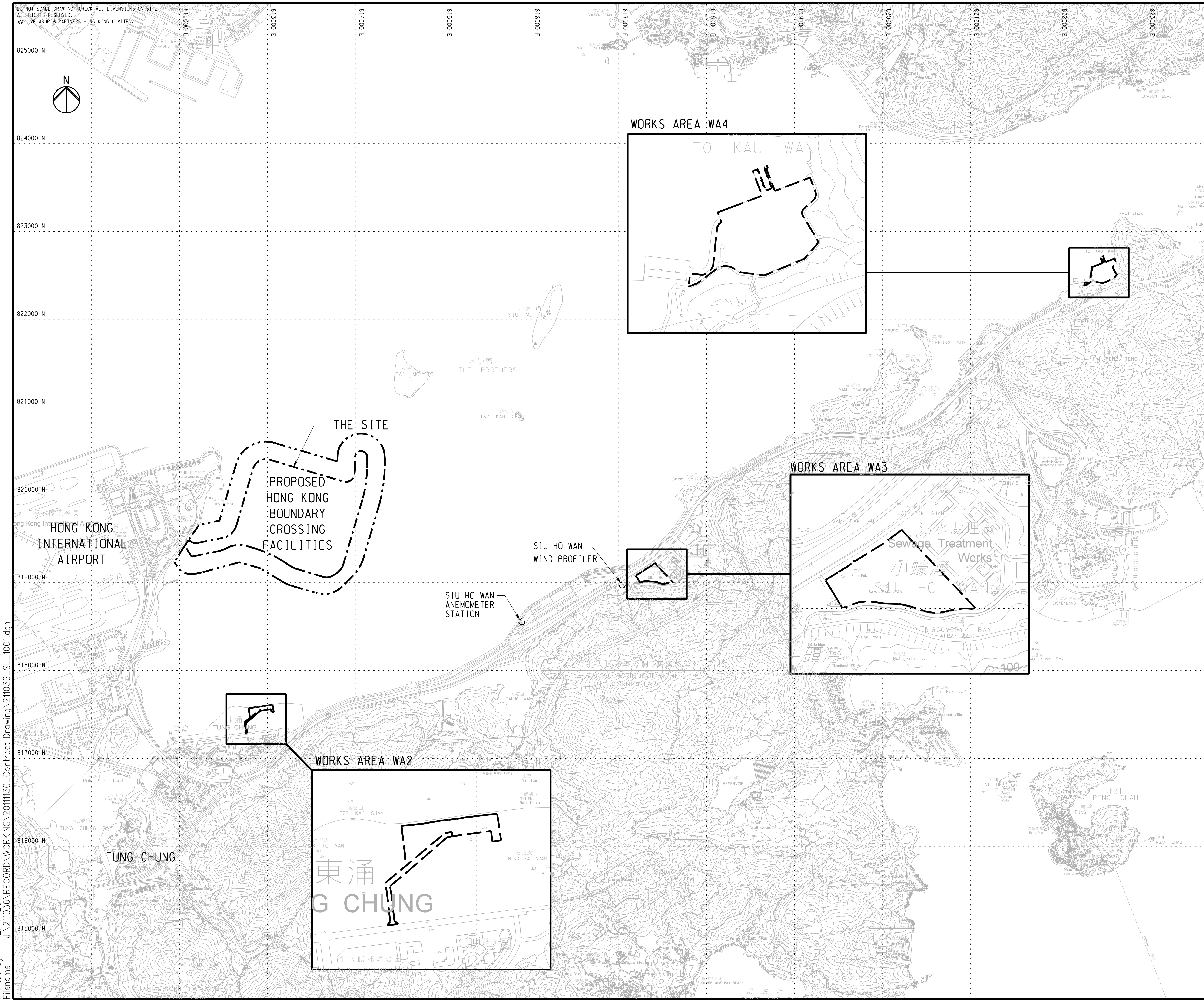
Chemical and Waste Management

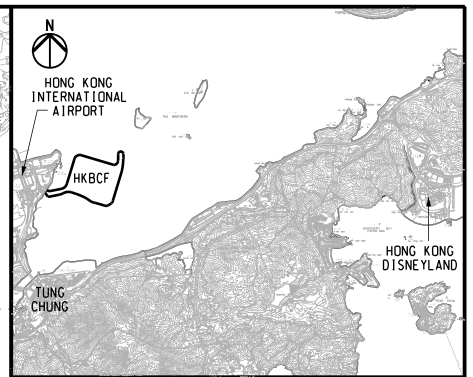
- All types of wastes, both on land and floating in the sea, should be collected and sorted properly and disposed of timely and properly. They should be properly stored in designated areas within works areas temporarily.
- All chemical containers, batteries and oil drums should be properly stored and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

Landscape and Visual Impact

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

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.





KEY PLAN

NOTES

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

LEGEND

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

Rev	Description	By	Date
-	FOR CONSTRUCTION	HYJL	11/11

Consultant

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

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

Contract No. and Title:

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

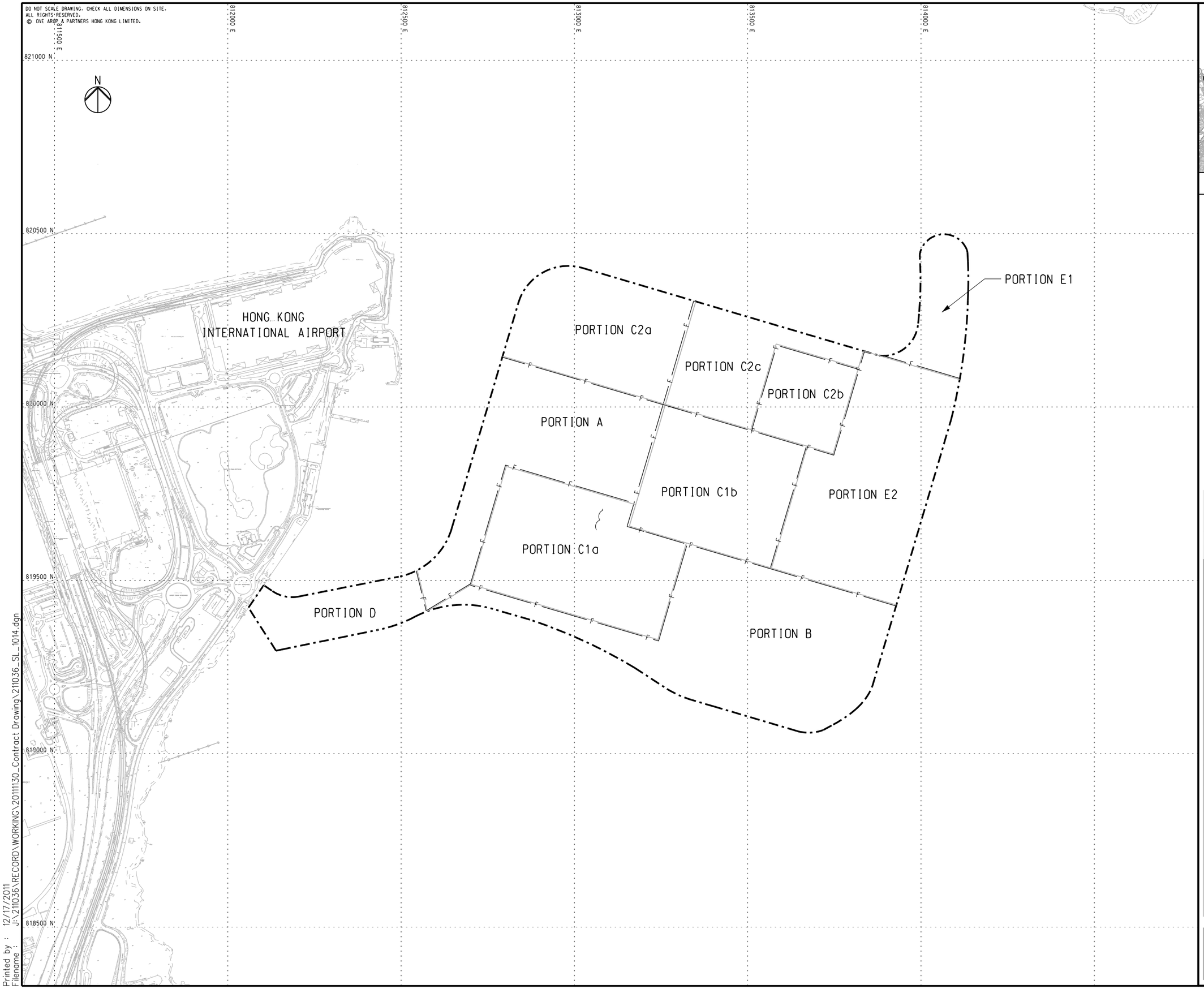
Drawing title

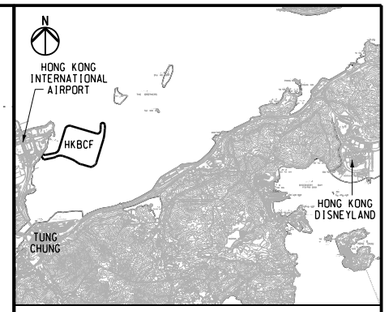
KEY PLAN

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

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
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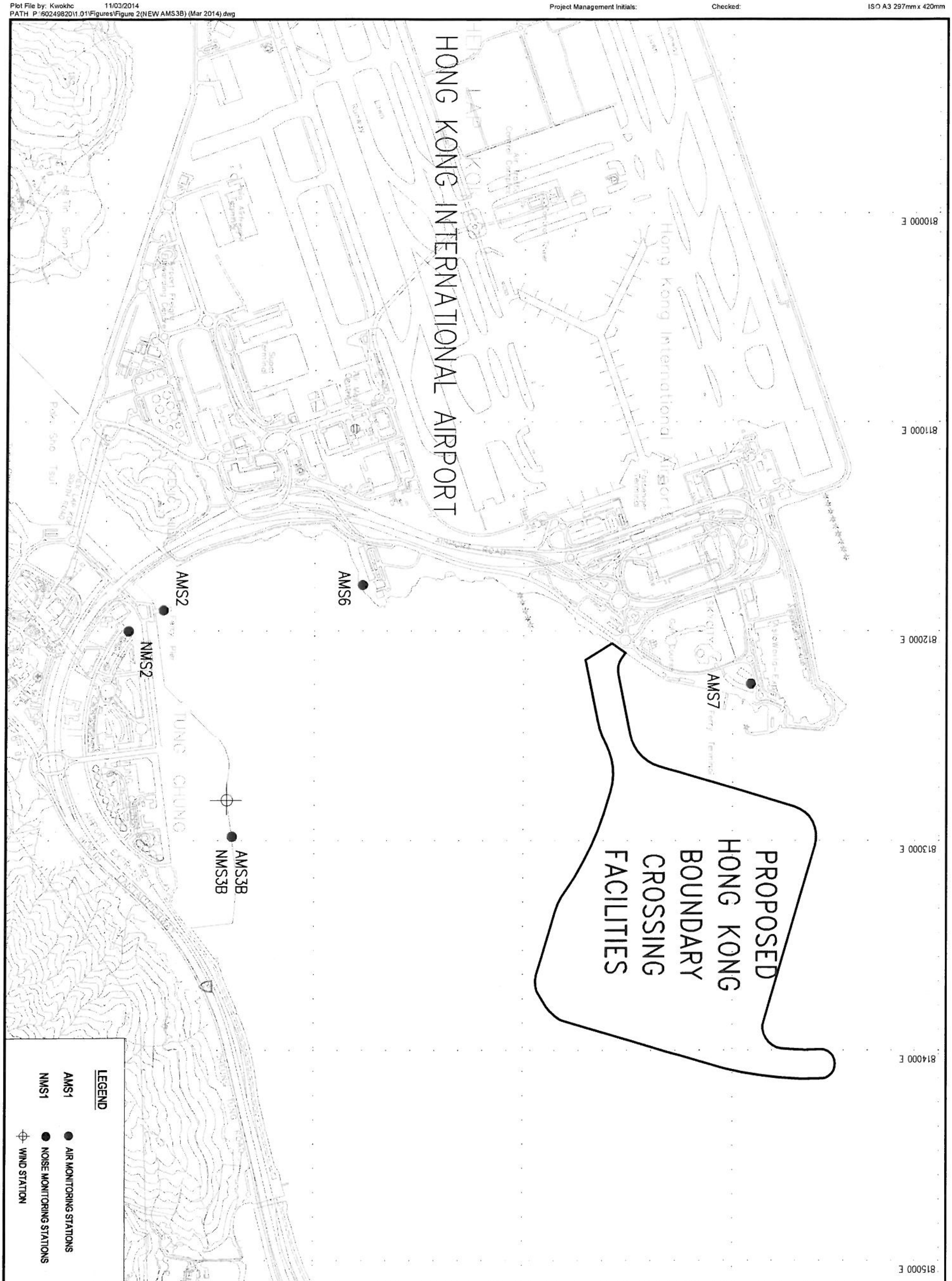

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: - Date: MARCH 2014

AIR QUALITY AND NOISE MONITORING STATIONS FOR HKBCF

AECOM

Figure 2

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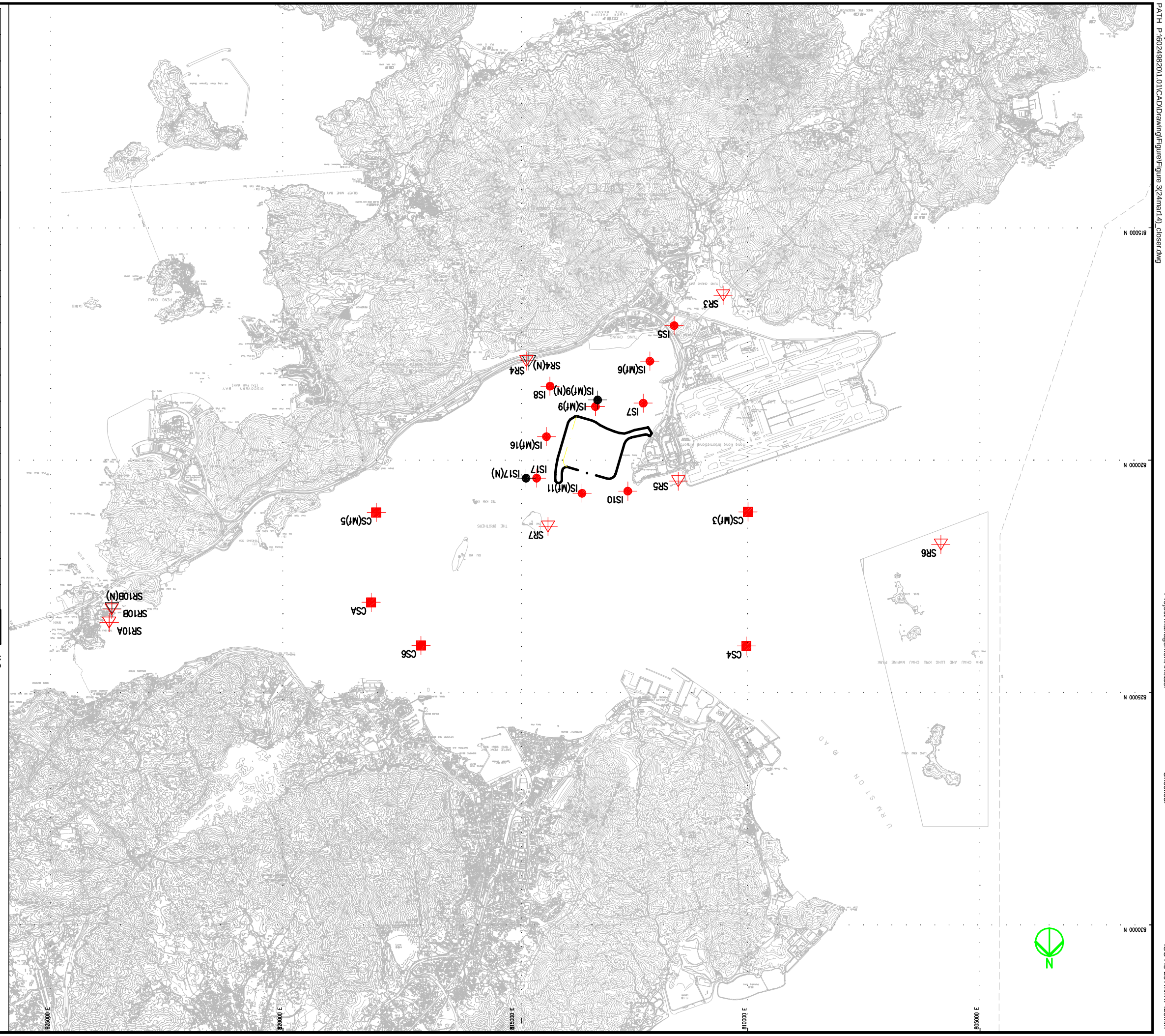


SETTING OUT SCHEDULE

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

LEGEND

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

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

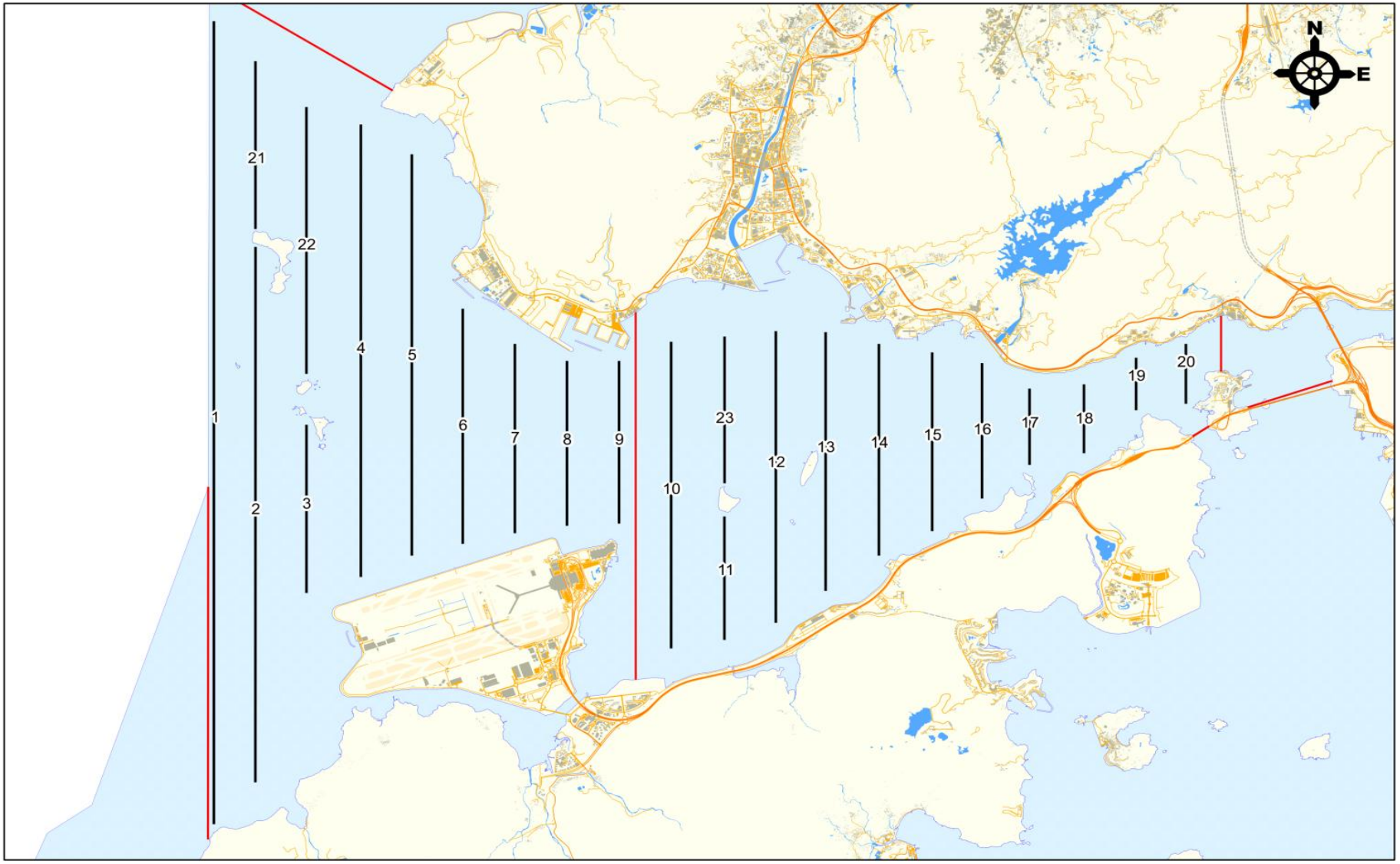
Project No.: -

Date: MAR 2014

WATER QUALITY MONITORING STATION

AECOM

Figure 3



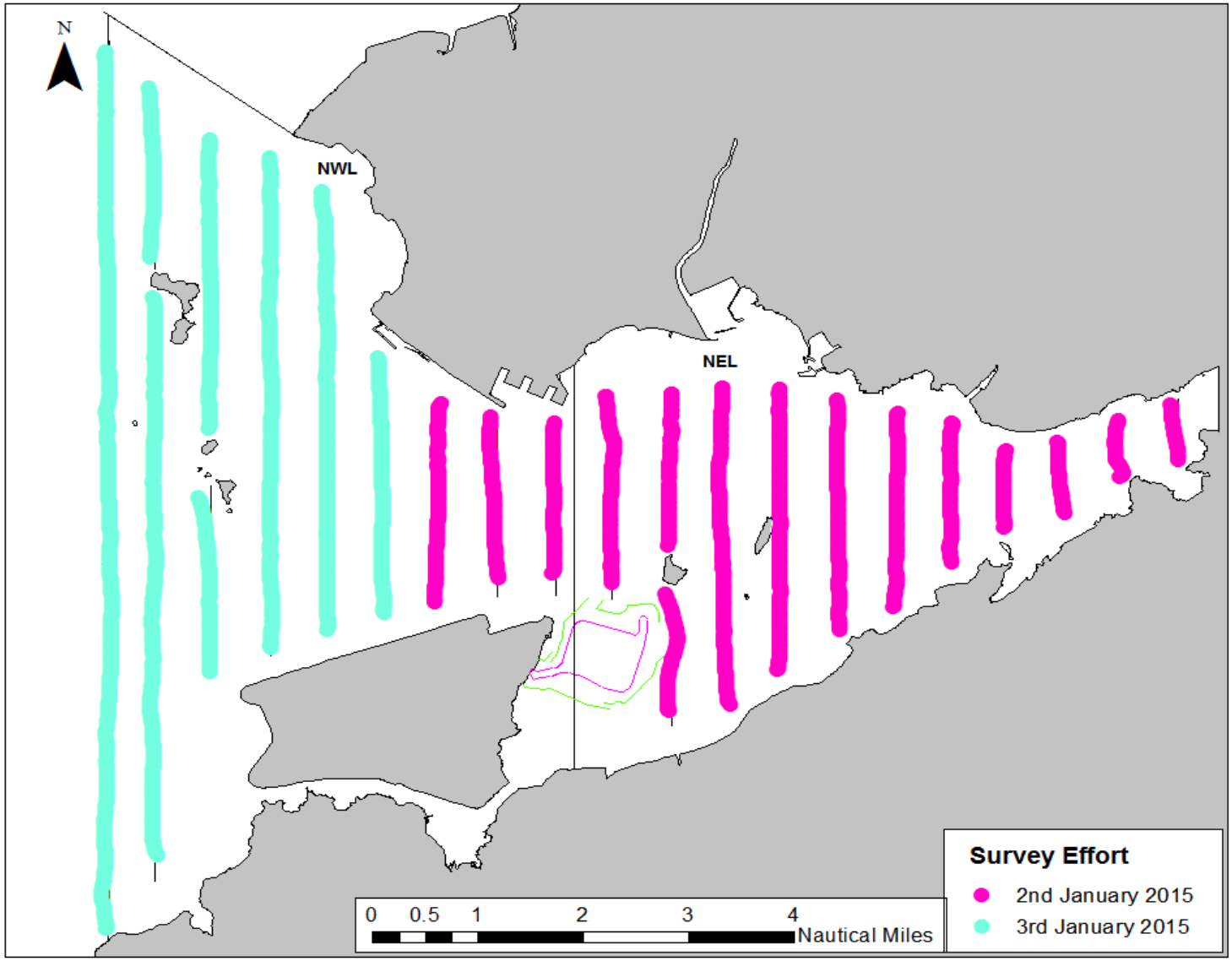
***Remark: Transect 10 is now 3.6km in length due to the HKBCF construction site. The total transect length for both NEL and NWL combined is 111km.**

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

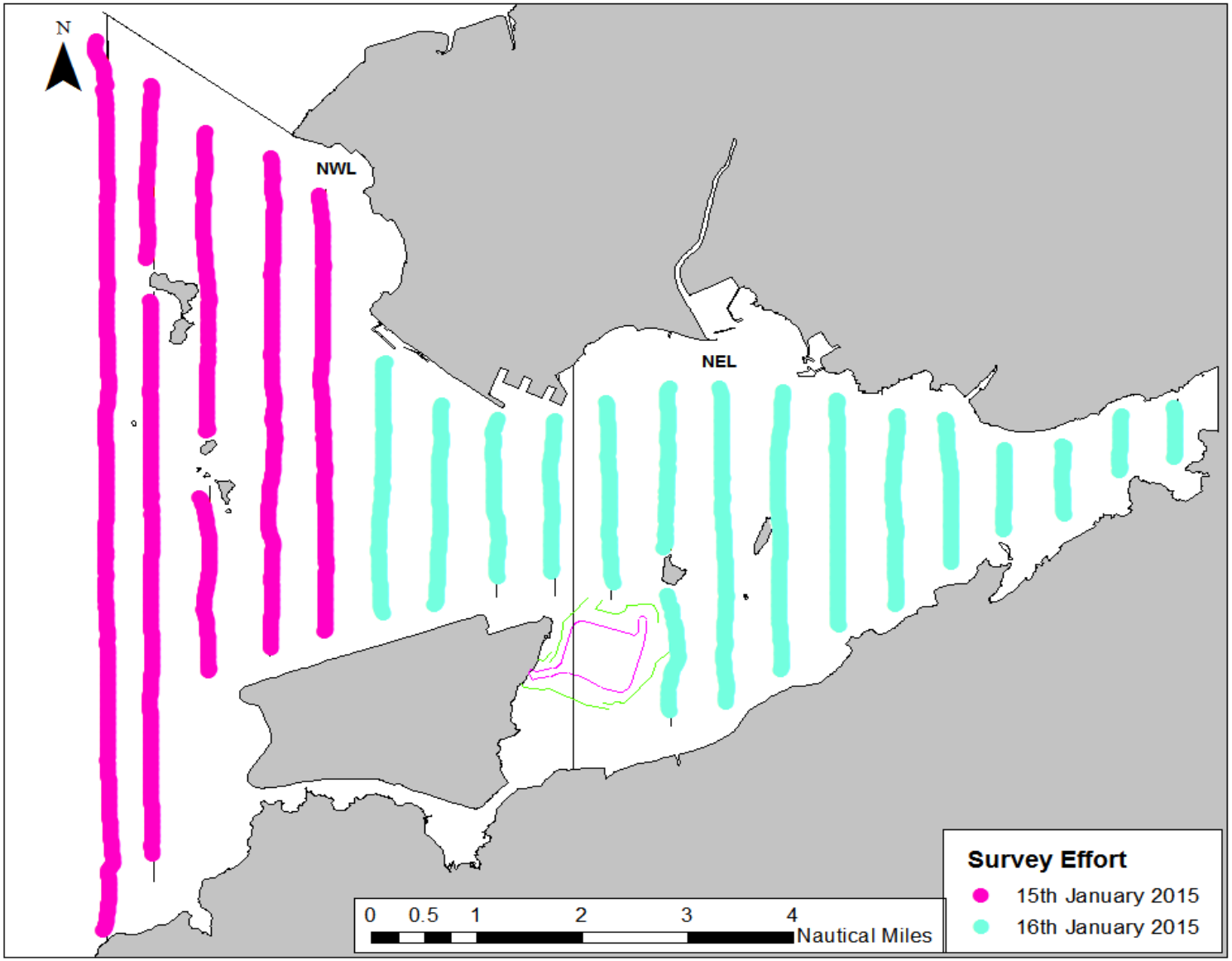
Figure 4



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

Impact Dolphin Monitoring Survey Efforts on 2 and 3 January 2015

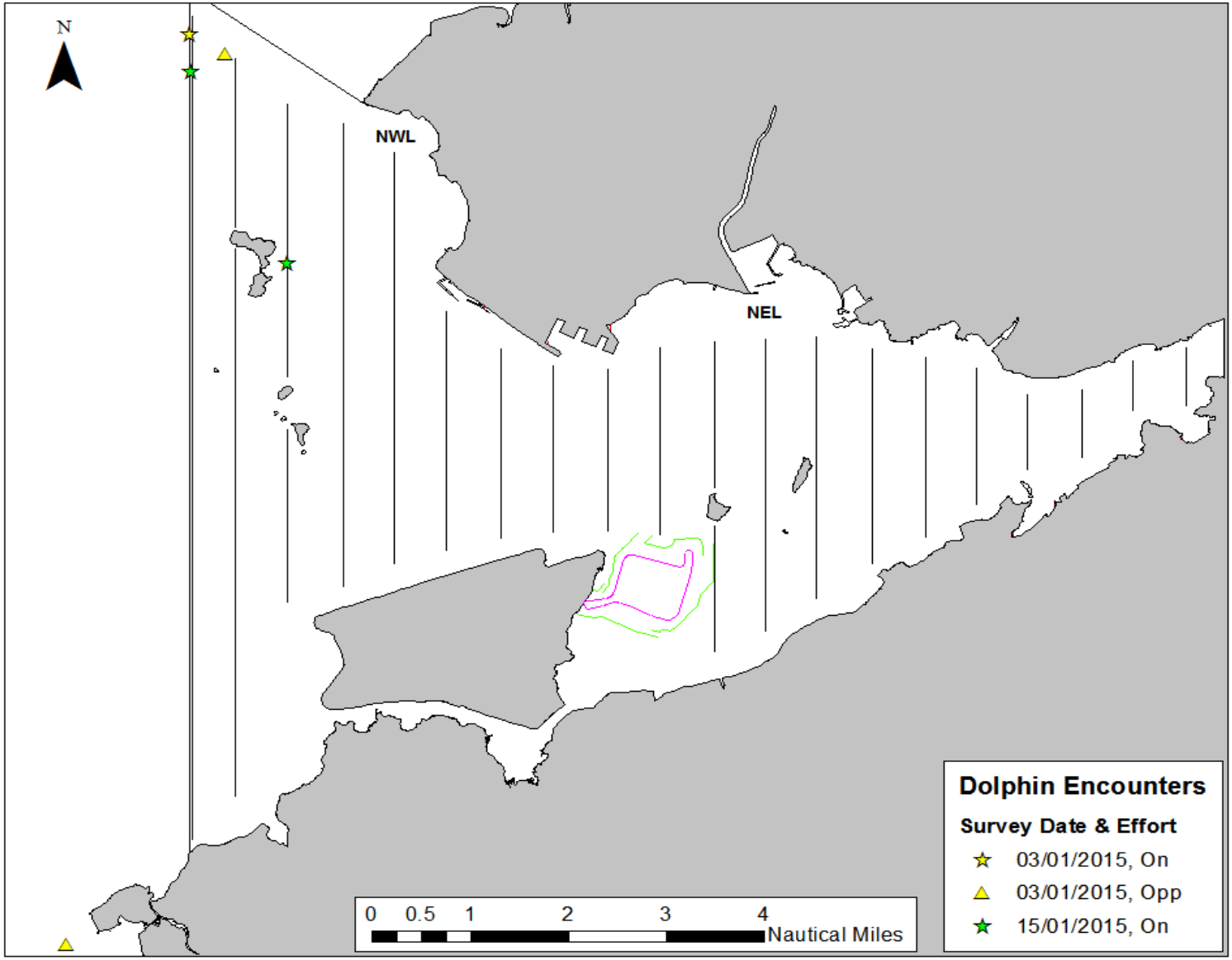
Figure 5a



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

Impact Dolphin Monitoring Survey Efforts
on 15 and 16 January 2015

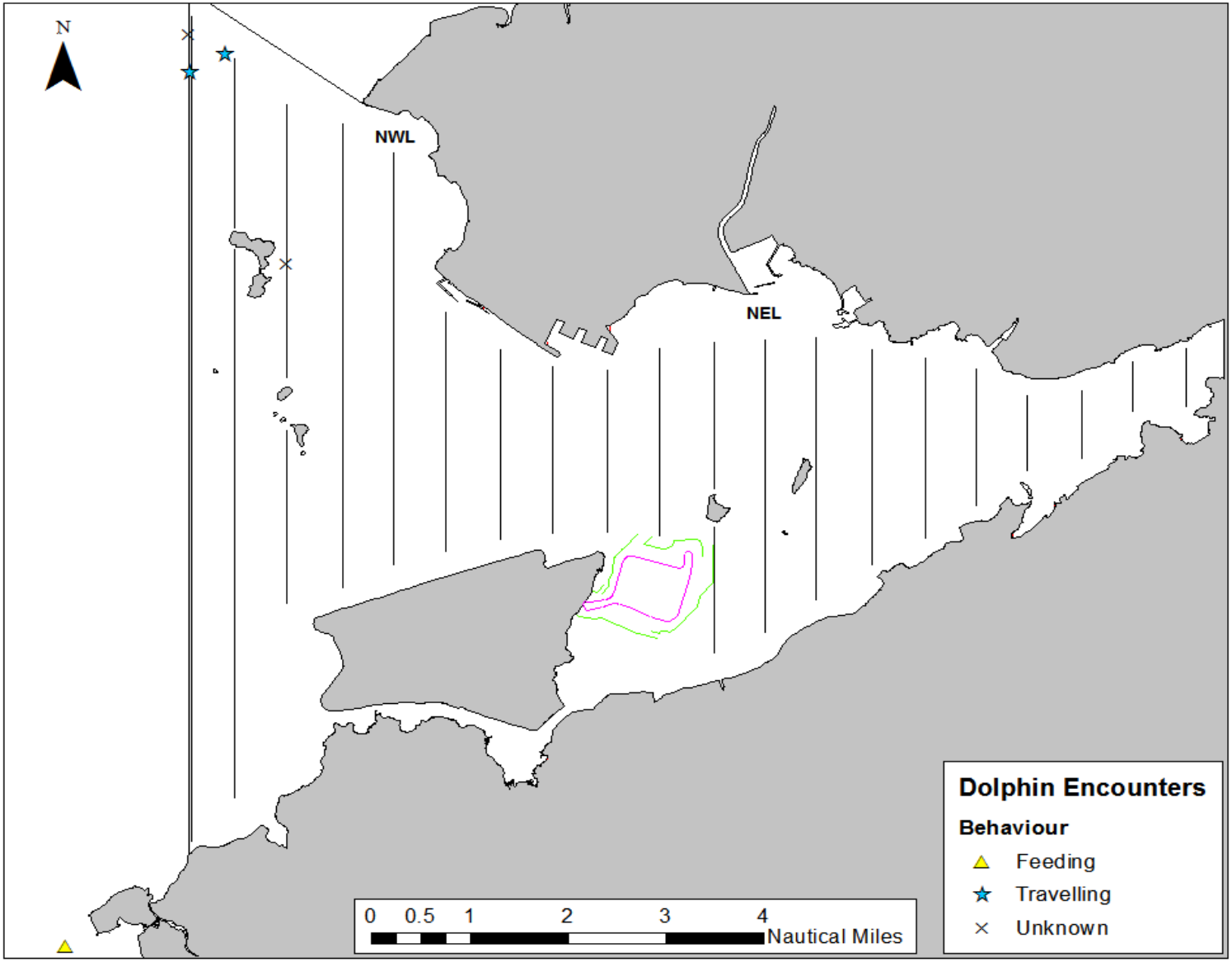
Figure 5b



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

Impact Dolphin Monitoring Survey
Sightings in January 2015

Figure 5c



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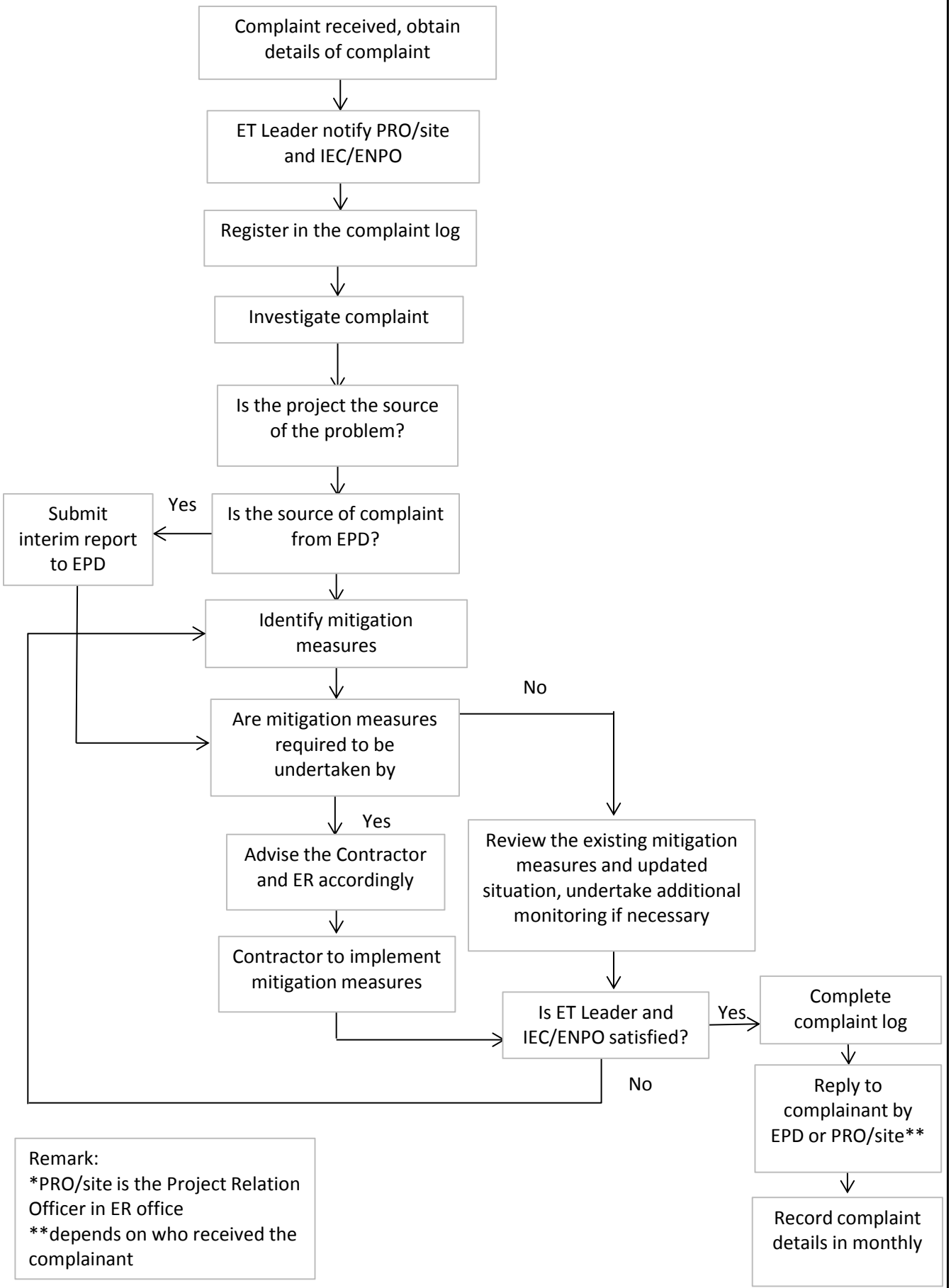
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: 60249820 **Date: February 2015**

Impact Dolphin Monitoring Survey
Behaviour Map in January 2015

Figure 5d

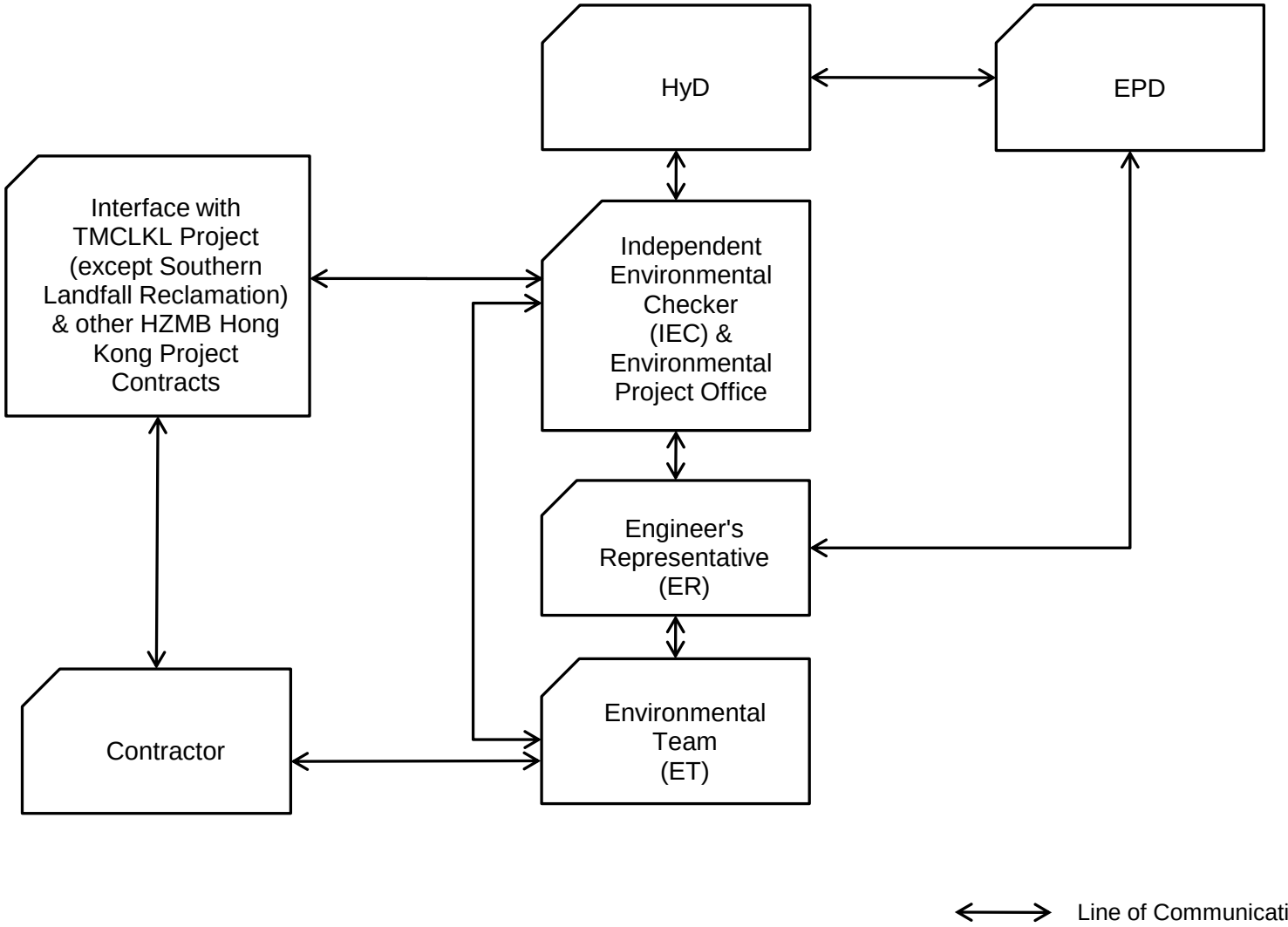


HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Environmental Complaint Handling Procedure

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



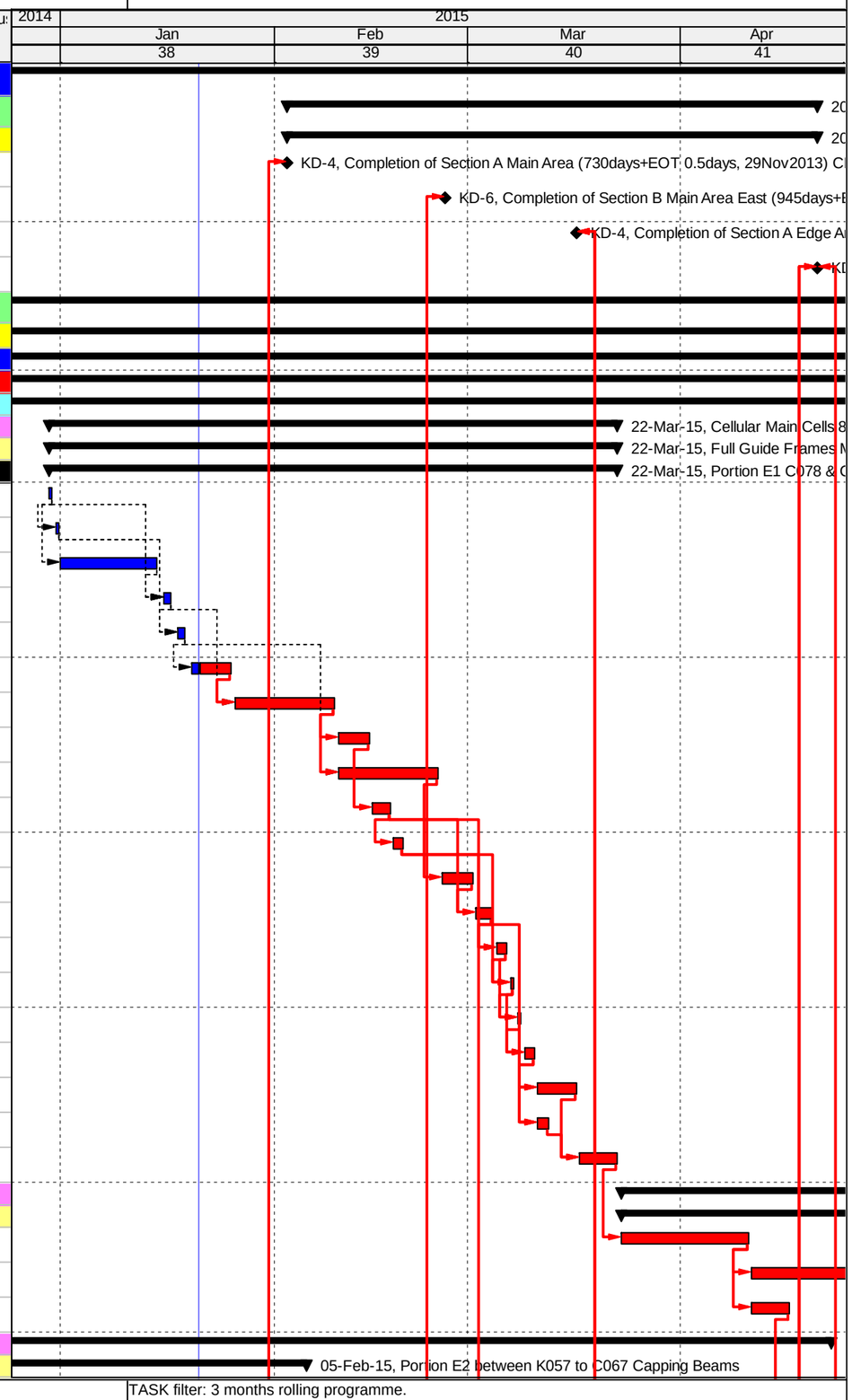
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
--RECLAMATION WORKS
Project No.: 60249820 Date: April 2013

Project Organisation for Environmental Works

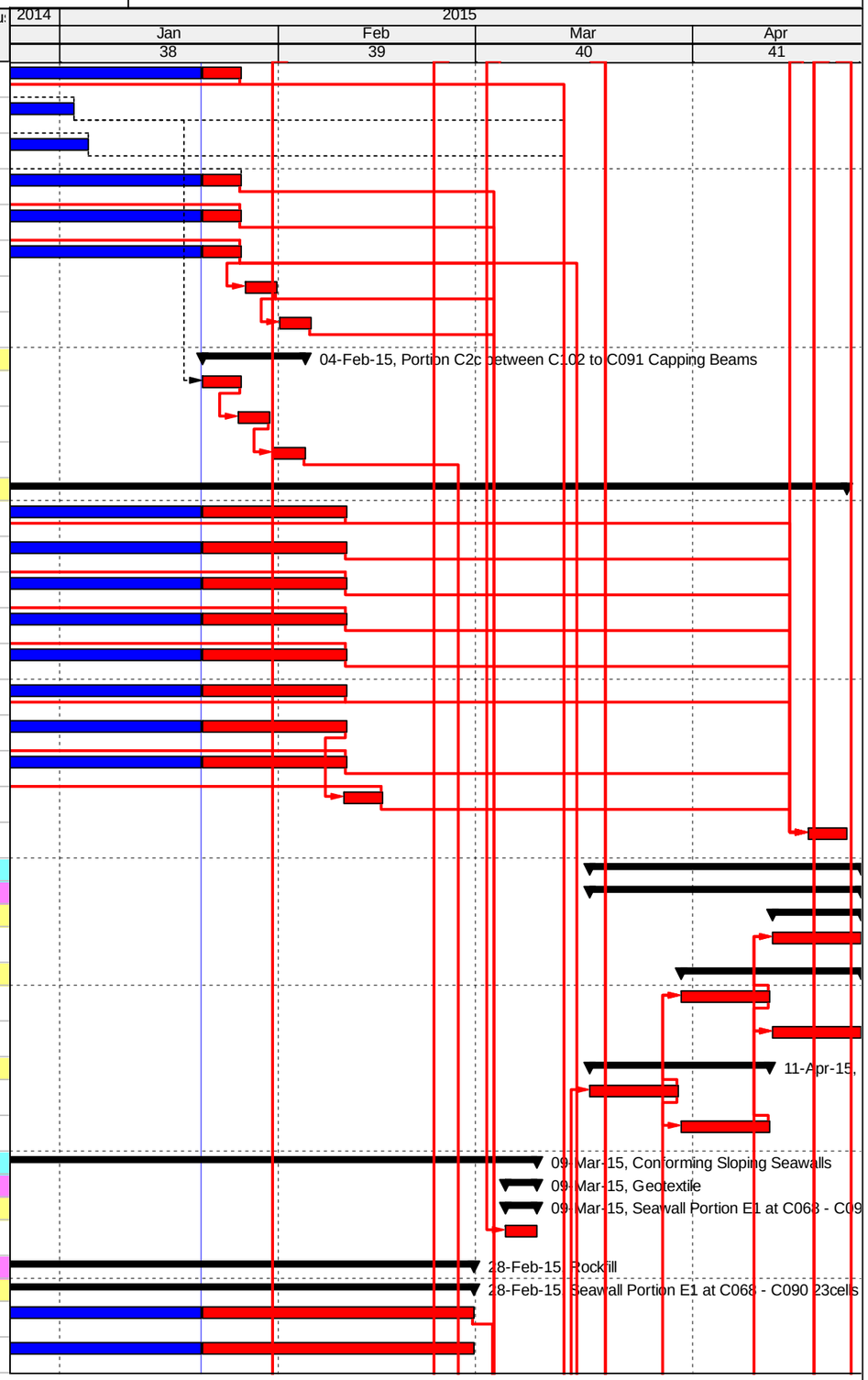
AECOM

Appendix A

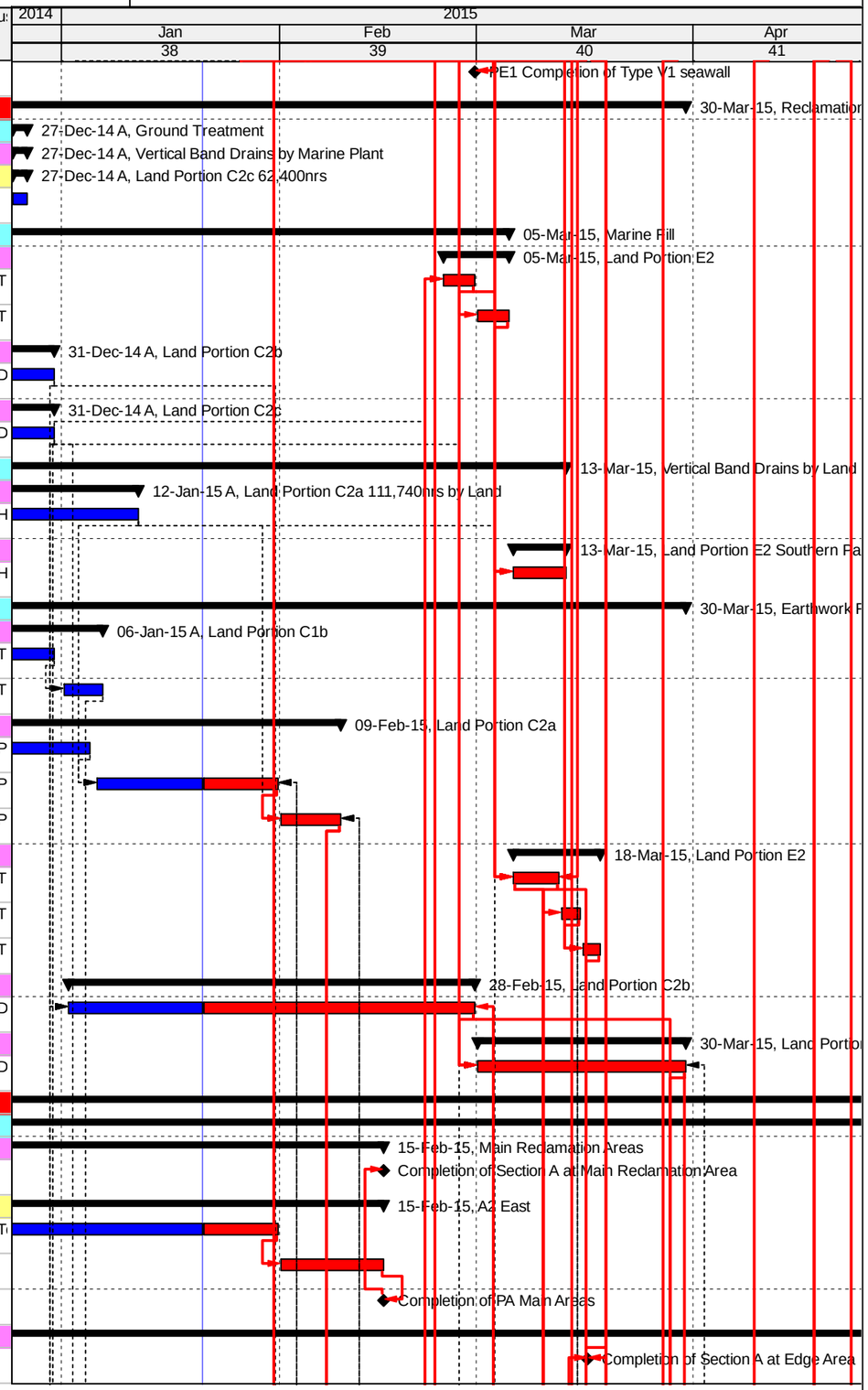
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
38th Monthly Progress Report Status as on 21Jan2015 Ver.5h5		1745	21-May-12 A	28-Feb-17	0
Contract Key Dates		77	02-Feb-15	20-Apr-15	-171
Key Dates for achievement of Stages and completion of Sections		77	02-Feb-15	20-Apr-15	-171
G1060	KD-4, Completion of Section A Main Area (730days+EOT 0.5days, 29Nov2013) CLP Substation 28 Apr2014	0		02-Feb-15*	-280
G1080	KD-6, Completion of Section B Main Area East (945days+EOT 1.5days, 03Jul2014) 31Oct2014	0		25-Feb-15*	-117
G1065	KD-4, Completion of Section A Edge Area (730days+EOT 0.5days, 29Nov2013) 25 Oct2014	0		16-Mar-15*	-142
G1081	KD-6, Completion of Section B Main Area West (945days+EOT 1.5days, 03Jul2014) 31Oct2014	0		20-Apr-15*	-171
Work Zone, as defined in PS Clause 1.03(6)		525	02-Apr-14 A	08-Sep-15	-50
Portion A, B, C & E		497	02-Apr-14 A	11-Aug-15	-22
Portion A, B, C & E		497	02-Apr-14 A	11-Aug-15	-22
Seawall		165	15-Nov-14 A	28-Apr-15	-168
Cellular Structures		165	15-Nov-14 A	28-Apr-15	-168
Cellular Main Cells 85cells		83	30-Dec-14 A	22-Mar-15	-203
Full Guide Frames Method 85cells		83	30-Dec-14 A	22-Mar-15	-203
Portion E1 C078 & C079 & Portion E2 C065 & C066 4cells		83	30-Dec-14 A	22-Mar-15	-203
CSE1-040-0030	PE1 C078 Temp Guide Frame Installation	1	30-Dec-14 A	30-Dec-14 A	
CSE1-040-1030	PE1 C079 Temp Guide Frame Installation	1	31-Dec-14 A	31-Dec-14 A	
CSE1-040-0032	PE1 C078 Crane Installation ICE certification	15	01-Jan-15 A	15-Jan-15 A	
CSE1-040-0040	PE1 C078 Crane Installation	2	16-Jan-15 A	17-Jan-15 A	
CSE1-040-1040	PE1 C079 Crane Installation	2	18-Jan-15 A	19-Jan-15 A	
CSE1-040-0042	PE1 C078 Sheetpiles Collection safety measures	6	20-Jan-15 A	25-Jan-15	-203
CSE1-040-0050	PE1 C078 Sheetpiles Collection	15	26-Jan-15	09-Feb-15	-203
CSE1-040-0060	PE1 C078 Sheetpiles Driving	5	10-Feb-15	14-Feb-15	-191
CSE1-040-1050	PE1 C079 Sheetpiles Collection	15	10-Feb-15	24-Feb-15	-203
CSE1-040-0070	PE1 C078 Backfill inside cell stg1 3,200m3	3	15-Feb-15	17-Feb-15	-191
CSE1-040-0080	PE1 C078 Removal of Crane and Temp Guide Frame	2	18-Feb-15	19-Feb-15	-190
CSE1-040-1060	PE1 C079 Sheetpiles Driving	5	25-Feb-15	01-Mar-15	-203
CSE1-040-1070	PE1 C079 Backfill inside cell stg1 3,200m3	3	02-Mar-15	04-Mar-15	-203
CSE1-040-1080	PE1 C079 Removal of Crane & Temp Guide Frame	2	05-Mar-15	06-Mar-15	-203
CSE1-040-0090	PE1 C078 Removal of underwater guard ring	1	07-Mar-15	07-Mar-15	-203
CSE1-040-1090	PE1 C079 Removal of underwater guard ring	1	08-Mar-15	08-Mar-15	-203
CSE1-040-0100	PE1 C078 Removal of Temp Piles	2	09-Mar-15	10-Mar-15	-203
CSE1-040-0110	PE1 C078 Backfill inside cell stg2 5,752m3	6	11-Mar-15	16-Mar-15	-203
CSE1-040-1100	PE1 C079 Removal of Temp Piles	2	11-Mar-15	12-Mar-15	-199
CSE1-040-1110	PE1 C079 Backfill inside cell stg2 6,134m3	6	17-Mar-15	22-Mar-15	-203
Connecting Arcs		30	23-Mar-15	28-Apr-15	-157
Portion E1 between C067/C068 to C072/C073 6arcs		30	23-Mar-15	28-Apr-15	-157
CAE1-022	PE1 Connecting Arc C077/C078	15	23-Mar-15	10-Apr-15	-167
CAE1-024	PE1 Connecting Arc C078/C079	15	11-Apr-15	28-Apr-15	-167
CAE1-028a	PE1 Final backfill cellular cells & Arcs C077/C078 Type_C 4,882m3	5	11-Apr-15	16-Apr-15	-147
Capping Beams		143	15-Nov-14 A	22-Apr-15	-146
Portion E2 between K057 to C067 Capping Beams		74	19-Nov-14 A	05-Feb-15	-107



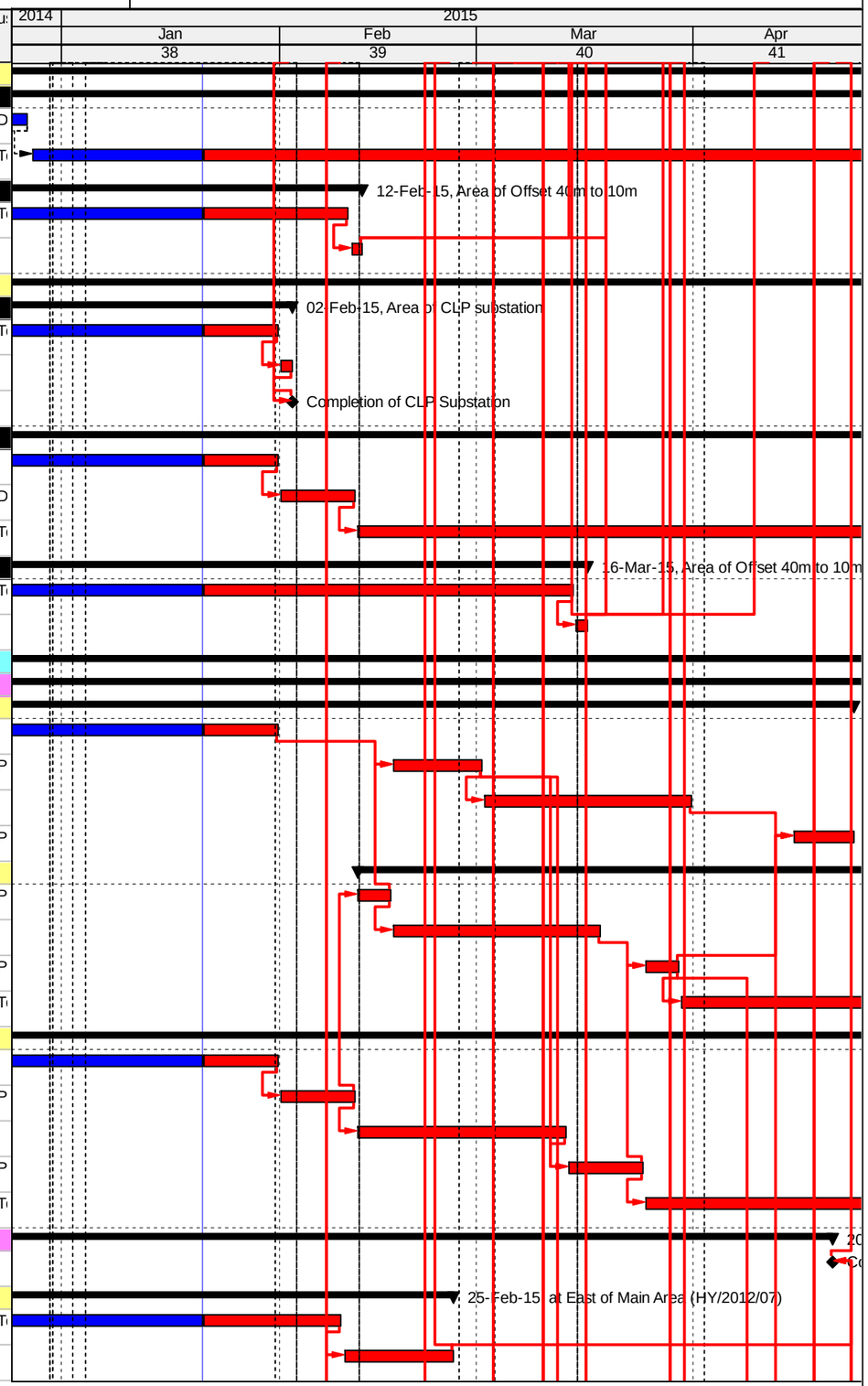
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
CBE2-010-030	PE2 Capping Beams structure C067	64	19-Nov-14 A	26-Jan-15	-97
CBE2-010-020	PE2 Capping Beams structure C066	42	20-Nov-14 A	03-Jan-15 A	
CBE2-010-010	PE2 Capping Beams structure C065	30	05-Dec-14 A	05-Jan-15 A	
CBE2-005-020	PE2 Capping Beams structure K064	43	11-Dec-14 A	26-Jan-15	-106
CBE2-005-010	PE2 Capping Beams structure K063	42	12-Dec-14 A	26-Jan-15	-106
CBE2-000-060	PE2 Capping Beams structure K062	36	19-Dec-14 A	26-Jan-15	-116
CBE2-000-050	PE2 Capping Beams structure K061	5	27-Jan-15	31-Jan-15	-116
CBE2-000-040	PE2 Capping Beams structure K060	5	01-Feb-15*	05-Feb-15	-116
Portion C2c between C102 to C091 Capping Beams		14	21-Jan-15	04-Feb-15	-79
CBC2c-000-010	PC2c Capping Beams structure C102	5	21-Jan-15	26-Jan-15	-79
CBC2c-000-020	PC2c Capping Beams structure C101	5	26-Jan-15	30-Jan-15	-79
CBC2c-000-040	PC2c Capping Beams structure C099	5	31-Jan-15	04-Feb-15	-79
Portion E1 between C090 to C074 Capping Beams		143	15-Nov-14 A	22-Apr-15	-163
CBE1-030-020	PE1 Capping Beams structure C069	81	15-Nov-14 A	10-Feb-15	-106
CBE1-030-090	PE1 Capping Beams structure C076	79	18-Nov-14 A	10-Feb-15	-105
CBE1-030-080	PE1 Capping Beams structure C075	78	19-Nov-14 A	10-Feb-15	-106
CBE1-030-070	PE1 Capping Beams structure C074	76	21-Nov-14 A	10-Feb-15	-106
CBE1-030-010	PE1 Capping Beams structure C068	75	22-Nov-14 A	10-Feb-15	-106
CBE1-030-030	PE1 Capping Beams structure C070	71	26-Nov-14 A	10-Feb-15	-106
CBE1-030-050	PE1 Capping Beams structure C072	69	28-Nov-14 A	10-Feb-15	-111
CBE1-030-040	PE1 Capping Beams structure C071	68	29-Nov-14 A	10-Feb-15	-106
CBE1-030-060	PE1 Capping Beams structure C073	6	10-Feb-15	15-Feb-15	-111
CBE1-030-100	PE1 Capping Beams structure C077	5	17-Apr-15	22-Apr-15	-163
Optimizing Rubble Mound Seawalls		36	17-Mar-15	24-Apr-15	-200
Optimizing Portion A at C118 - C134		36	17-Mar-15	24-Apr-15	-200
Seawall Portion A at C125 - C128, Ch5+400 to 5+220		12	12-Apr-15	24-Apr-15	-200
RFA3-0110	PA at C125 - C128 Removal of temporary rockfill	12	12-Apr-15	24-Apr-15	-200
Seawall Portion A at C129 - C131, Ch5+550 to 5+400		24	30-Mar-15	24-Apr-15	-200
RFA4-0110	PA at C129 - C131 Removal of temporary rockfill	12	30-Mar-15	11-Apr-15	-200
RFA4-0120	PA at C129 - C131 Rock Armour	12	12-Apr-15	24-Apr-15	-200
Seawall Portion A at C132 - C134, Ch5+700 to 5+550		24	17-Mar-15	11-Apr-15	-200
RFA5-0110	PA at C132 - C134 Removal of temporary rockfill	12	17-Mar-15	29-Mar-15	-200
RFA5-0120	PA at C132 - C134 Rock Armour	12	30-Mar-15	11-Apr-15	-200
Conforming Sloping Seawalls		99	01-Dec-14 A	09-Mar-15	-118
Geotextile		4	05-Mar-15	09-Mar-15	-110
Seawall Portion E1 at C068 - C090 23cells		4	05-Mar-15	09-Mar-15	-110
SGE1-020	PE1 Geotextile at C080 - C077 4cells	4	05-Mar-15	09-Mar-15	-110
Rockfill		90	01-Dec-14 A	28-Feb-15	-109
Seawall Portion E1 at C068 - C090 23cells		90	01-Dec-14 A	28-Feb-15	-109
RFE1-030	PE1 Rockfill at C077 - C068 10cells	80	01-Dec-14 A	28-Feb-15	-97
RFE1-010	PE1 Rockfill at C090 - C080 11cells	80	01-Dec-14 A	28-Feb-15	-97



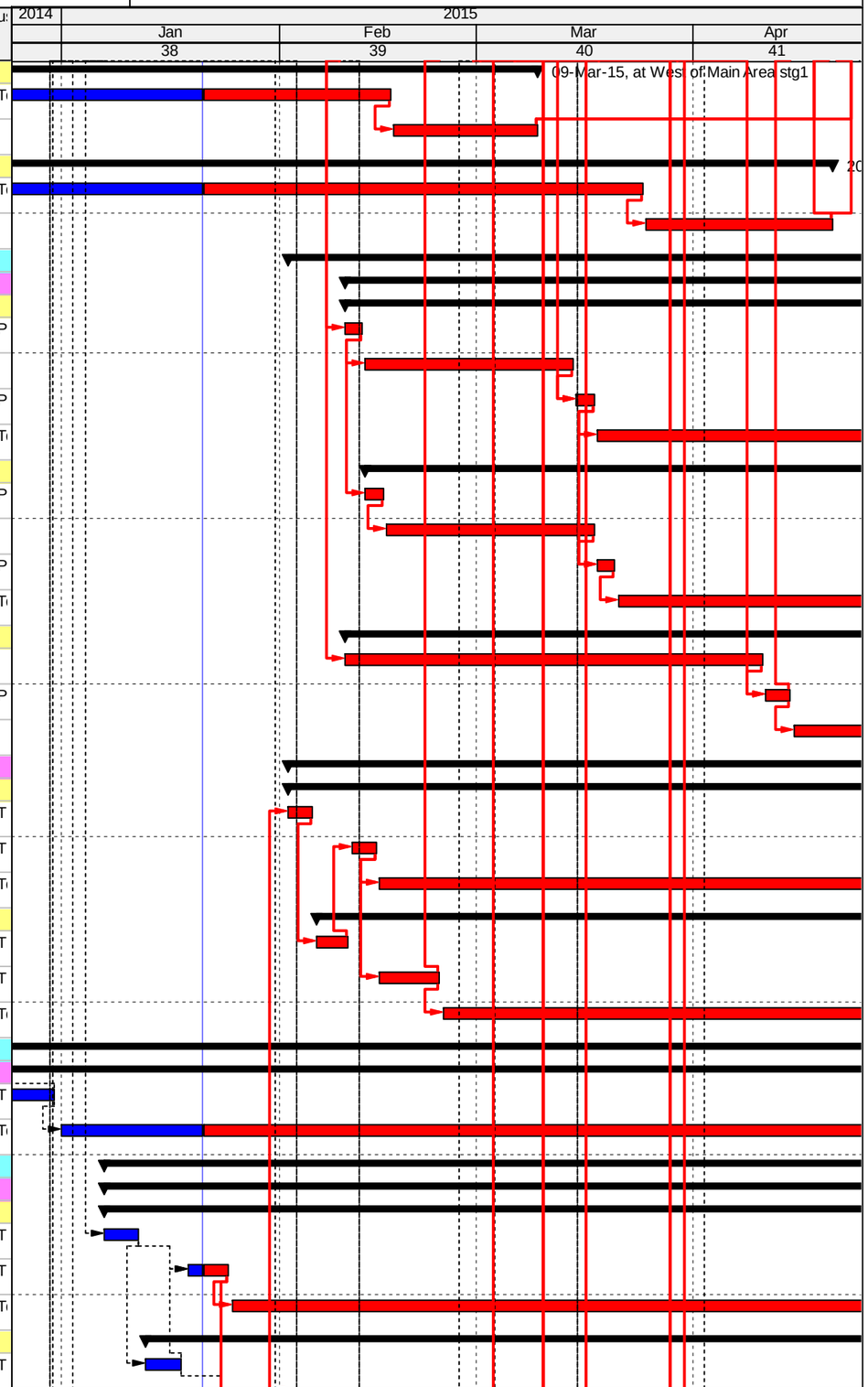
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	u:
RFE1-099	PE1 Completion of Type V1 seawall	0		28-Feb-15	-109	
Reclamation		232	11-Aug-14 A	30-Mar-15	-109	
Ground Treatment		2	25-Dec-14 A	27-Dec-14 A		
Vertical Band Drains by Marine Plant		2	25-Dec-14 A	27-Dec-14 A		
Land Portion C2c 62,400nrs		2	25-Dec-14 A	27-Dec-14 A		
VBDC2c-030	Vertical Band Drains 817nrs by Land plant at PC2c	3	25-Dec-14 A	27-Dec-14 A		
Marine Fill		189	11-Aug-14 A	05-Mar-15	-138	
Land Portion E2		10	24-Feb-15	05-Mar-15	-138	
MFE2-020	PE2 North-W Marine Sand Fill upto +2.5mPD 259,312m3 60,000m3/day by TSHD	5	24-Feb-15	28-Feb-15	-138	T
MFE2-040	PE2 North-E Marine Sand Fill upto +2.5mPD 257,093m3 60,000m3/day by TSHD	5	01-Mar-15	05-Mar-15	-138	T
Land Portion C2b		132	11-Aug-14 A	31-Dec-14 A		
MFC2b-010	PC2b Marine Fill Type A Public fill 100% 166,636m3 4,000m3/day	133	11-Aug-14 A	31-Dec-14 A		D
Land Portion C2c		84	01-Oct-14 A	31-Dec-14 A		
MFC2c-020	PC2c Marine Fill Type A Public fill 100% 185,589m3 4,000m3/day	85	01-Oct-14 A	31-Dec-14 A		D
Vertical Band Drains by Land Plant		102	02-Dec-14 A	13-Mar-15	-151	
Land Portion C2a 111,740nrs by Land		40	02-Dec-14 A	12-Jan-15 A		
VBDC2a-040	Vertical Band Drains outstanding 8,000nrs by land plant at PC2a West 300nrs/day (6HP)	41	02-Dec-14 A	12-Jan-15 A		H
Land Portion E2 Southern Part 84,746nrs		8	06-Mar-15	13-Mar-15	-151	
VBDE2-014	Vertical Band Drains 2,878nrs by land plant at PE2 North-East 400nrs/day (1HP)	8	06-Mar-15	13-Mar-15	-151	H
Earthwork Fill		108	01-Dec-14 A	30-Mar-15	-97	
Land Portion C1b		35	01-Dec-14 A	06-Jan-15 A		
EFC1b-010	PC1b Main Type D Sand Fill upto +5.5mPD 235,109m3 60,000m3/day by TSHD	29	01-Dec-14 A	31-Dec-14 A		T
EFC1b-020	PC1b East Type D Sand Fill upto +5.5mPD 355,110m3 60,000m3/day by TSHD	6	01-Jan-15 A	06-Jan-15 A		T
Land Portion C2a		54	13-Dec-14 A	09-Feb-15	-285	
EFC2a-020	PC2a Main West Earthwork Fill Type D Sand 100% stg2 150,000m3 10,000m/day by Pelican	22	13-Dec-14 A	05-Jan-15 A		P
EFC2a-030	PC2a Edge Area West Earthwork Fill Type D Sand 100% stg1 130,000m3 20,000m/day by Pelican	21	06-Jan-15 A	31-Jan-15	-285	P
EFC2a-040	PC2a Edge Area North Earthwork Fill Type D Sand 100% stg2 168,257m3 20,000m/day by Pelican	8	01-Feb-15	09-Feb-15	-285	P
Land Portion E2		12	06-Mar-15	18-Mar-15	-138	
EFE2-010	PE2 South Type B Earthwork Sand Fill upto +5.5mPD 331,051m3 60,000m3/day by TSHD	6	06-Mar-15	12-Mar-15	-138	T
EFE2-020	PE2 North-W Type B Earthwork Sand Fill upto +5.5mPD 165,525m3 60,000m3/day by TSHD	3	13-Mar-15	15-Mar-15	-138	T
EFE2-030	PE2 North-E Type B Earthwork Sand Fill upto +5.5mPD 165,525m3 60,000m3/day by TSHD	3	16-Mar-15	18-Mar-15	-138	T
Land Portion C2b		52	02-Jan-15 A	28-Feb-15	-97	
EFC2b-010	PC2b Earthwork Fill Type B public w compaction upto +5.5mPD 168,546m3 10,000m3/day	52	02-Jan-15 A	28-Feb-15	-97	D
Land Portion C2c		28	01-Mar-15	30-Mar-15	-97	
EFC2c-010	PC2c Earthwork Fill Type B public w compaction upto +5.5mPD 276,853m3 10,000m3/day	28	01-Mar-15	30-Mar-15	-97	D
Surcharge		341	05-Sep-14 A	11-Aug-15	-22	
Portion A Surcharge		280	05-Sep-14 A	11-Jun-15	-229	
Main Reclamation Areas		164	05-Sep-14 A	15-Feb-15	-292	
SURA0-040	Completion of Section A at Main Reclamation Area	0		15-Feb-15	-292	
A2 East		164	05-Sep-14 A	15-Feb-15	-292	
SURA0-420	PA A2 East Surcharge Period as +11.5mPD 4mths (8-2-2=4mths) with Top Up (61,890m3)	149	05-Sep-14 A	31-Jan-15	-292	Tc
SURA0-430	PA A2 East Surcharge Removal 137,647m3 10,000m3/day	14	01-Feb-15	15-Feb-15	-271	
SURA0-440	Completion of PA Main Areas	0		15-Feb-15	-292	
Edge Area From SOL offset within 180m to 50m		280	05-Sep-14 A	11-Jun-15	-229	
SUEA0-199	Completion of Section A at Edge Area	0		16-Mar-15	-142	



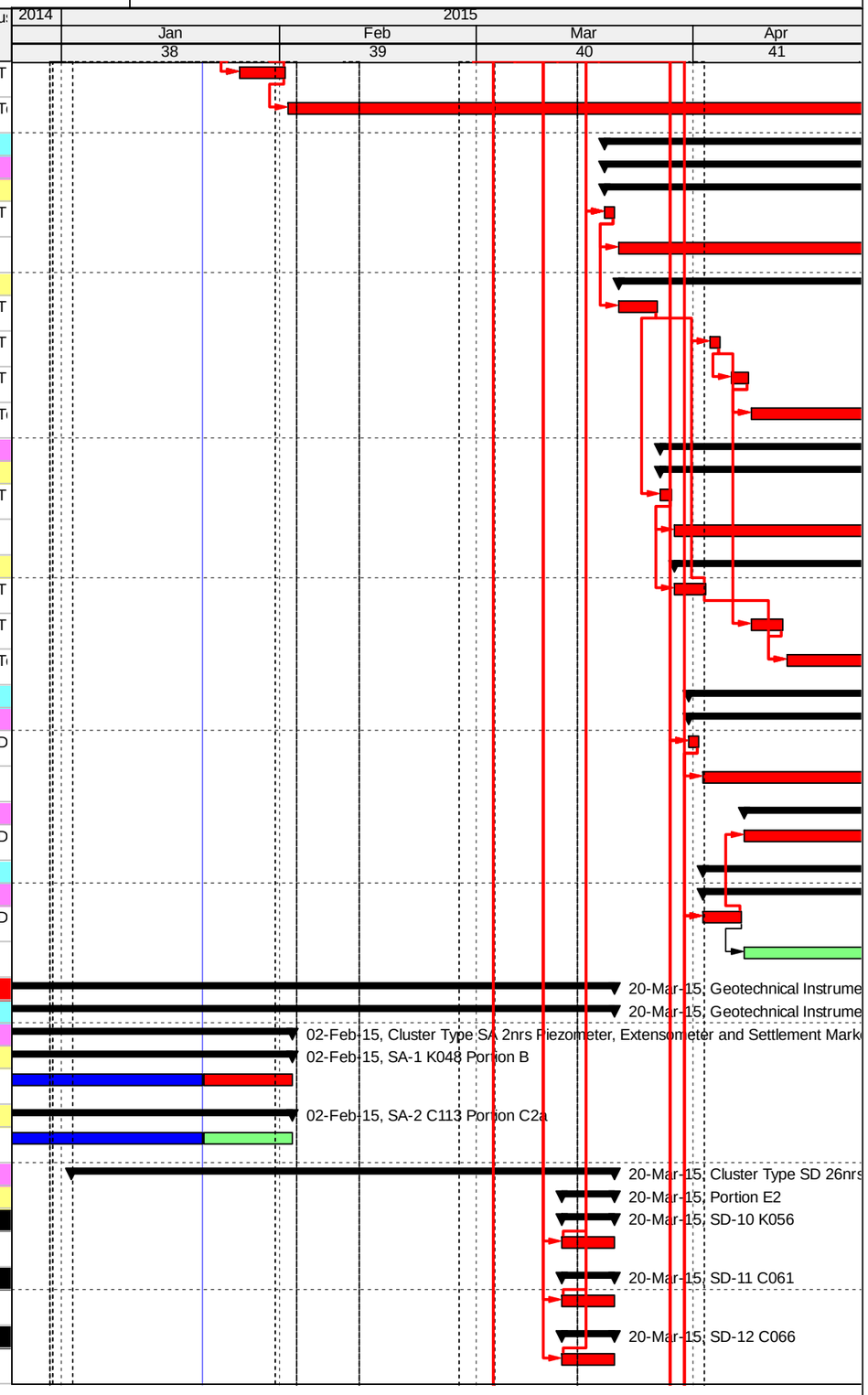
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	u
CH5+000 to 5+300 (at C125 - C119) North		190	19-Oct-14 A	26-Apr-15	-222	
Area of Offset 120m to 40m		147	01-Dec-14 A	26-Apr-15	-371	
SUEA1-0040	PA North (from 40m) Sand Surcharge Laying upto +11.5mPD 61,063m3 10,000m3/day	26	01-Dec-14 A	27-Dec-14 A		D
SUEA1-0050	PA North (from 40m) Surcharge Period +11.5mPD 4mths (8-2-2=4mths) with Top Up (40,709m3)	120	28-Dec-14 A	26-Apr-15	-371	T
Area of Offset 40m to 10m		117	19-Oct-14 A	12-Feb-15	-149	
SUEA1-0180	PA North (10 - 40m) Surcharge Period +7.5mPD 4mths (6-2=4mths)	115	19-Oct-14 A	10-Feb-15	-149	T
SUEA1-0190	PA North (10 - 40m) Surcharge Removal 18,807m3 10,000m3/day	2	11-Feb-15	12-Feb-15	-138	
CH5+300 to 5+700 (at C134 - C126)		280	05-Sep-14 A	11-Jun-15	-307	
Area of CLP substation		151	05-Sep-14 A	02-Feb-15	-280	
SUEA2-0070	PA CLP Substation Sand Surcharge Period as +11.5mPD 4mths (8-2-2=4mths)	149	05-Sep-14 A	31-Jan-15	-280	T
SUEA2-0080	PA CLP Substation Sand Surcharge Removal on Main Area 18,630m3 10,000m3/day	2	01-Feb-15	02-Feb-15	-260	
SUEA2-0090	Completion of CLP Substation	0		02-Feb-15*	-280	
Area of Offset 180m to 40m (other CLP area) near Portion B		195	29-Nov-14 A	11-Jun-15	-415	
SUEA3-0030	PA A2 South Check Point Testing	64	29-Nov-14 A	31-Jan-15	-415	
SUEA3-0040	PA A2 South Sand Surcharge Laying upto +11.5mPD 50,820m3 5,000m3/day	10	01-Feb-15	11-Feb-15	-381	D
SUEA3-0070	PA A2 South Surcharge Period +11.5mPD 4mths (8-2-2=4mths) with Top Up (33,880m3)	120	12-Feb-15	11-Jun-15	-415	T
Area of Offset 40m to 10m (other CLP area)		122	15-Nov-14 A	16-Mar-15	-220	
SUEA4-0070	PA South (10 - 40m) Surcharge Period +7.5mPD 4mths (6-2=4mths)	120	15-Nov-14 A	14-Mar-15	-220	T
SUEA4-0080	PA South (10 - 40m) Surcharge Removal 22,263m3 10,000m3/day	2	15-Mar-15	16-Mar-15	-200	
Land Portion B		323	08-Sep-14 A	27-Jul-15	-269	
Edge Areas		323	08-Sep-14 A	27-Jul-15	-277	
at K038 - K052 (HY/2012/07)		228	08-Sep-14 A	23-Apr-15	-307	
SUEB0-0095	PB Edge Area K038 - K052 Testing	139	08-Sep-14 A	31-Jan-15	-272	
SUEB0-0100	PB Edge Area K038 - K052 Sand Surcharge upto 8.5mPD 147,420m3 20,000m3/day by Pelican	8	17-Feb-15	01-Mar-15	-268	P
SUEB0-0110	PB Edge Area K038-K052 Surcharge Period +8.5mPD 1mth	30	02-Mar-15	31-Mar-15	-293	
SUEB0-0120	PB Edge Area K038-K052 Sand Surcharge Laying up to 11.5mPD 147,420m3 20,000m3/day by Pelican	8	15-Apr-15	23-Apr-15	-281	P
at K028 - K037		166	12-Feb-15	27-Jul-15	-284	
SUEB0-060	PB Edge Area K028-K037 Sand Surcharge upto 8.5mPD 90,720m3 20,000m3/day by Pelican	5	12-Feb-15	16-Feb-15	-268	P
SUEB0-070	PB Edge Area K028-K037 Surcharge Period +8.5mPD 1mth	30	17-Feb-15	18-Mar-15	-289	
SUEB0-080	PB Edge Area K028-K037 Sand Surcharge Laying up to 11.5mPD 90,720m3 20,000m3/day by Pelican	5	25-Mar-15	29-Mar-15	-270	P
SUEB0-090	PB Edge Area K028-K037 Sand Surcharge Period +11.5mPD 4mths (5-1=4mths) with Top Up 60,480m3	120	30-Mar-15	27-Jul-15	-284	T
at K013 - K027		244	21-Nov-14 A	22-Jul-15	-272	
SUEB0-005	PB Edge Area K013-K027 Surcharge Period +5.5mPD 2mths	72	21-Nov-14 A	31-Jan-15	-295	
SUEB0-010	PB Edge Area K013 - K027 Sand Surcharge upto 8.5mPD 200,000m3 20,000m3/day by dumptruck	10	01-Feb-15	11-Feb-15	-274	P
SUEB0-020	PB Edge Area K013-K027 Surcharge Period +8.5mPD 1mth	30	12-Feb-15	13-Mar-15	-295	
SUEB0-030	PB Edge Area K013 - K027 Sand Surcharge up to 11.5mPD 200,000m3 20,000m3/day by dumptruck	10	14-Mar-15	24-Mar-15	-270	P
SUEB0-040	PB Edge Area K013-K027 Sand Surcharge Period as +11.5mPD 4mths (6-2=4mths) with Top Up 133,333m3	120	25-Mar-15	22-Jul-15	-272	T
Reclamation Areas		190	13-Oct-14 A	20-Apr-15	-171	
SURB0-099	Completion of Section B in Reclamation Areas	0		20-Apr-15	-171	
at East of Main Area (HY/2012/07)		136	13-Oct-14 A	25-Feb-15	-117	
SURB0-040	PB Man Area East Sand Surcharge Period +11.5mPD 4mths (7-1-2=4mths) with Top Up 87,593m3	120	13-Oct-14 A	09-Feb-15	-112	T
SURB0-050	PB Main Area East Sand Surcharge Removal 208,145m3 20,000m3/day	11	10-Feb-15	25-Feb-15	-104	



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	u
at West of Main Area stg1		141	20-Oct-14 A	09-Mar-15	-129	
SURB1-030	PB Main Area West-S Sand Surcharge Period +11.5mPD 4mths (7-1-2=4mths) with Top Up 120,000m3	120	20-Oct-14 A	16-Feb-15	-124	T
SURB1-040	PB Main Area West-S Sand Surcharge Removal 285,636m3 20,000m3/day	15	17-Feb-15	09-Mar-15	-115	
at West of Main Area stg2		147	25-Nov-14 A	20-Apr-15	-171	
SURB2-030	PB Main Area West-N Sand Surcharge Period +11.5mPD 4mths (7-1-2=4mths) with Top Up 209,797m3	120	25-Nov-14 A	24-Mar-15	-170	T
SURB2-040	PB Main Area West-N Sand Surcharge Removal 499,892m3 20,000m3/day	25	25-Mar-15	20-Apr-15	-154	
Land Portion C2a		167	02-Feb-15	18-Jul-15	-126	
Edge Areas		159	10-Feb-15	18-Jul-15	-126	
at C107 - C102 Cellular Seawall		156	10-Feb-15	15-Jul-15	-128	
SUEC2a-010	PC2a Edge Area C107-C102 Sand Surcharge Laying up to 8.5mPD 57,173m3 20,000m3/day by Pelican	3	10-Feb-15	12-Feb-15	-119	P
SUEC2a-020a	PC2a Edge Area C107-C102 Sand Surcharge Period +8.5mPD 1mth (4.5-3.5=1mth)	30	13-Feb-15	14-Mar-15	-128	
SUEC2a-030	PC2a Edge Area C107-C102 Sand Surcharge Laying up to 11.5mPD 57,173m3 20,000m3/day by Pelican	3	15-Mar-15	17-Mar-15	-115	P
SUEC2a-040a	PC2a Edge Area C107-C102 Sand Surcharge Period as +11.5mPD 4mths (6-2=4mths) with Top Up 38,115m3	120	18-Mar-15	15-Jul-15	-128	T
at C112 - C108 Cellular Seawall		156	13-Feb-15	18-Jul-15	-126	
SUEC2a-020	PC2a Edge Area C112-C108 Sand Surcharge Laying up to 8.5mPD 45,738m3 20,000m3/day by Pelicans	3	13-Feb-15	15-Feb-15	-117	P
SUEC2a-020a10	PC2a Edge Area C112-C108 Sand Surcharge Period +8.5mPD 1mth (4.5-2.5=1mth)	30	16-Feb-15	17-Mar-15	-126	
SUEC2a-040	PC2a Edge Area C112-C108 Sand Surcharge Laying up to 11.5mPD 45,738m3 20,000m3/day by Pelican	3	18-Mar-15	20-Mar-15	-113	P
SUEC2a-040a10	PC2a Edge Area C112-C108 Sand Surcharge Period as +11.5mPD 4mths (6-2=4mths) with Top Up 30,492m3	120	21-Mar-15	18-Jul-15	-126	T
at C117 - C113 Rubble Mound Seawall		94	10-Feb-15	14-May-15	-182	
SUEC2a-070	PC2a Edge Area C117-C113 Pause Period at +5.5mPD 2mths	60	10-Feb-15	10-Apr-15	-307	
SUEC2a-080	PC2a Edge Area C117-C113 Sand Surcharge Laying upto 8.5mPD 68,607m3 20,000m3/day by Pelican	4	11-Apr-15	14-Apr-15	-281	P
SUEC2a-090	PC2a Edge Area C117-C113 Pause Period at +8.5mPD 1mth	30	15-Apr-15	14-May-15	-182	
Reclamation Areas		142	02-Feb-15	23-Jun-15	-106	
East		133	02-Feb-15	14-Jun-15	-97	
SURC2a-010	PC2a Main East Sand Surcharge Laying upto 8.5mPD 189,165m3 60,000m3/day by TSHD	4	02-Feb-15*	05-Feb-15	-138	T
SURC2a-012	PC2a Main East Sand Surcharge Laying upto 11.5mPD 189,165m3 60,000m3/day by TSHD	4	11-Feb-15*	14-Feb-15	-138	T
SURC2a-020	PC2a Main East Sand Surcharge Period +11.5mPD 4mths (8-2-2=4mths) with Top Up 126,110m3	120	15-Feb-15	14-Jun-15	-97	T
West (about 200m from edge side of Rubble Mound Seawall)		138	06-Feb-15	23-Jun-15	-106	
SURC2a-060	PC2a Main West Sand Surcharge Laying upto 8.5mPD 189,165m3 60,000m3/day by TSHD	4	06-Feb-15*	10-Feb-15	-138	T
SURC2a-066	PC2a Main West Sand Surcharge Laying upto 11.5mPD 189,165m3 60,000m3/day by TSHD	4	15-Feb-15*	23-Feb-15	-138	T
SURC2a-070	PC2a Main West Sand Surcharge Period +11.5mPD 4mths (8-2-2=4mths) with Top Up 126,110m3	120	24-Feb-15	23-Jun-15	-106	T
Land Portion C1a		135	17-Dec-14 A	30-Apr-15	-62	
Reclamation Areas		135	17-Dec-14 A	30-Apr-15	-62	
SURC1a-019	PC1a Main Area Sand Surcharge upto 11.5mPD stg2 222,944m3 60,000m3/day by TSHD	14	17-Dec-14 A	31-Dec-14 A		T
SURC1a-020	PC1a Main Area Sand Surcharge Period as +11.5mPD 4mths (8-2-2=4mths) with Top Up 148,630m3	120	01-Jan-15 A	30-Apr-15	-62	T
Land Portion C1b		146	07-Jan-15 A	01-Jun-15	-209	
Reclamation Areas		146	07-Jan-15 A	01-Jun-15	-209	
West		138	07-Jan-15 A	24-May-15	-227	
SURC1b-010	PC1b West Sand Surcharge upto 8.5mPD 283,489m3 60,000m3/day by TSHD	5	07-Jan-15 A	12-Jan-15 A		T
SURC1b-015	PC1b West Sand Surcharge upto 11.5mPD 283,489m3 40,000m3/day by TSHD	7	19-Jan-15 A	24-Jan-15	-211	T
SURC1b-020	PC1b West Sand Surcharge Period 4mths (7-1-2=4mths) with Top Up 188,993m3	120	25-Jan-15	24-May-15	-227	T
East		140	13-Jan-15 A	01-Jun-15	-209	
SURC1b-040	PC1b East Sand Surcharge upto 8.5mPD 283,488m3 60,000m3/day by TSHD	6	13-Jan-15 A	18-Jan-15 A		T



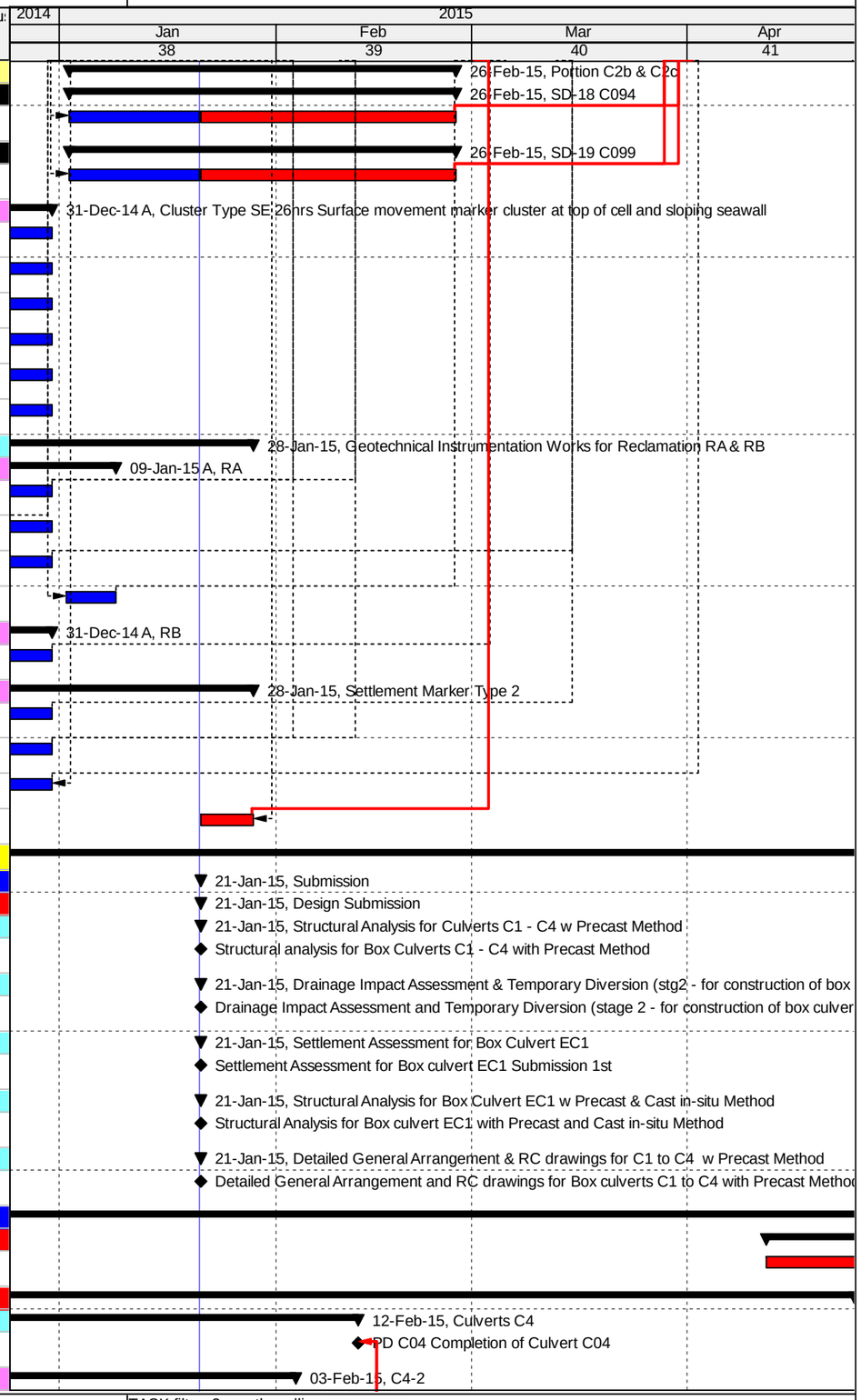
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	u
SURC1b-045	PC1b East Sand Surcharge upto 11.5mPD 283,488m3 40,000m3/day by TSHD	7	26-Jan-15	01-Feb-15	-194	T
SURC1b-050	PC1b East Sand Surcharge Period +11.5mPD 4mths (7-1-2=4mths) with Top Up 188,9933m3	120	02-Feb-15	01-Jun-15	-209	T
Land Portion E2		146	19-Mar-15	11-Aug-15	-86	
South Part		141	19-Mar-15	06-Aug-15	-81	
Edge Areas		62	19-Mar-15	19-May-15	-146	
SUEE2-010	PE2 South Edge Sand Surcharge Laying up to 8.5mPD 103,500m3 60,000m3/day by TSHD	2	19-Mar-15	20-Mar-15	-138	T
SUEE2-020	PE2 South Edge Sand Surcharge Period as +8.5mPD 2mths (4.5-2.5=2mths)	60	21-Mar-15	19-May-15	-146	
Reclamation Areas		139	21-Mar-15	06-Aug-15	-81	
SURE2-010	PE2 South Main Sand Surcharge Laying upto 8.5mPD 293,063m3 60,000m3/day by TSHD	5	21-Mar-15	26-Mar-15	-138	T
SURE2-015	PE2 South Main Sand Surcharge Laying upto 11.5mPD stg1 120,000m3 60,000m3/day by TSHD	2	03-Apr-15	04-Apr-15	-138	T
SURE2-017	PE2 South Main Sand Surcharge Laying upto 11.5mPD stg2 173,063m3 60,000m3/day by TSHD	3	06-Apr-15	08-Apr-15	-138	T
SURE2-020	PE2 South Main Sand Surcharge Period as +11.5mPD 4mths (7-1-2=4mths) with Top Up 195,376m3	120	09-Apr-15	06-Aug-15	-81	T
North Part		138	27-Mar-15	11-Aug-15	-86	
Edge Areas		62	27-Mar-15	27-May-15	-142	
SUEE2-060	PE2 North Edge Sand Surcharge Laying up to 8.5mPD 103,499m3 60,000m3/day by TSHD	2	27-Mar-15	28-Mar-15	-138	T
SUEE2-070	PE2 North Edge Sand Surcharge Period as +8.5mPD 2mths (4.5-2.5=2mths)	60	29-Mar-15	27-May-15	-142	
Reclamation Areas		136	29-Mar-15	11-Aug-15	-86	
SURE2-040	PE2 North Main Sand Surcharge Laying upto 8.5mPD 293,063m3 60,000m3/day by TSHD	5	29-Mar-15	02-Apr-15	-138	T
SURE2-042	PE2 North Main Sand Surcharge Laying upto 11.5mPD 293,063m3 60,000m3/day by TSHD	5	09-Apr-15	13-Apr-15	-138	T
SURE2-050	PE2 North Main Sand Surcharge Period as +11.5mPD 4mths (7-1-2=4mths) with Top Up 195,375m3	120	14-Apr-15	11-Aug-15	-86	T
Land Portion C2b		62	31-Mar-15	31-May-15	-106	
Edge Areas		62	31-Mar-15	31-May-15	-108	
SUEC2c-50	PC2b Edge Area Public Surcharge Laying upto 8.5mPD 12,054m3 10,000m3/day	2	31-Mar-15	01-Apr-15	-97	D
SUEC2c-60	PC2b Edge Area Surcharge Period as +8.5mPD 2mths (4.5-2.5=2mths)	60	02-Apr-15	31-May-15	-108	
Reclamation Areas		25	08-Apr-15	04-May-15	-69	
SURC2b-010	PC2b Main Area Public Surcharge Laying upto 8.5mPD 251,857m3 10,000m3/day	25	08-Apr-15	04-May-15	-69	D
Land Portion C2c		66	02-Apr-15	06-Jun-15	44	
Edge Areas		66	02-Apr-15	06-Jun-15	44	
SUEC2c-010	PC2c Edge Area Public Surcharge Laying upto 8.5mPD 43,395m3 10,000m3/day	5	02-Apr-15	07-Apr-15	-69	D
SUEC2c-020	PC2c Edge Area PBF Surcharge Period +8.5mPD 2mths (4.5-2.5=2mths)	60	08-Apr-15	06-Jun-15	44	
Geotechnical Instrumentation Works		353	02-Apr-14 A	20-Mar-15	5	
Geotechnical Instrumentation Works for Seawalls		353	02-Apr-14 A	20-Mar-15	5	
Cluster Type SA 2nrs Piezometer, Extensometer and Settlement Marker Cluster inside Cells		307	02-Apr-14 A	02-Feb-15	51	
SA-1 K048 Portion B		307	02-Apr-14 A	02-Feb-15	-33	
CTSA1-020	Montioring of SA-1 C048 PB by weekly for subsequent 10mths	307	02-Apr-14 A	02-Feb-15	-33	
SA-2 C113 Portion C2a		307	02-Apr-14 A	02-Feb-15	51	
CTSA2-020	Monitoring of SA-2 C113 PC2a by weekly for subsequent 10mths	307	02-Apr-14 A	02-Feb-15	51	
Cluster Type SD 26nrs Instrumentation and CPT Cluster behind cells		65	02-Jan-15 A	20-Mar-15	-80	
Portion E2		7	13-Mar-15	20-Mar-15	-121	
SD-10 K056		7	13-Mar-15	20-Mar-15	-121	
CTSD-100	Installation of SD-10 (K056) PE2	7	13-Mar-15	20-Mar-15	-121	
SD-11 C061		7	13-Mar-15	20-Mar-15	-121	
CTSD-110	Installation of SD-11 (C061) PE2	7	13-Mar-15	20-Mar-15	-121	
SD-12 C066		7	13-Mar-15	20-Mar-15	-121	
CTSD-120	Installation of SD-12 (C066) PE2	7	13-Mar-15	20-Mar-15	-121	



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

TASK filter: 3 months rolling programme.

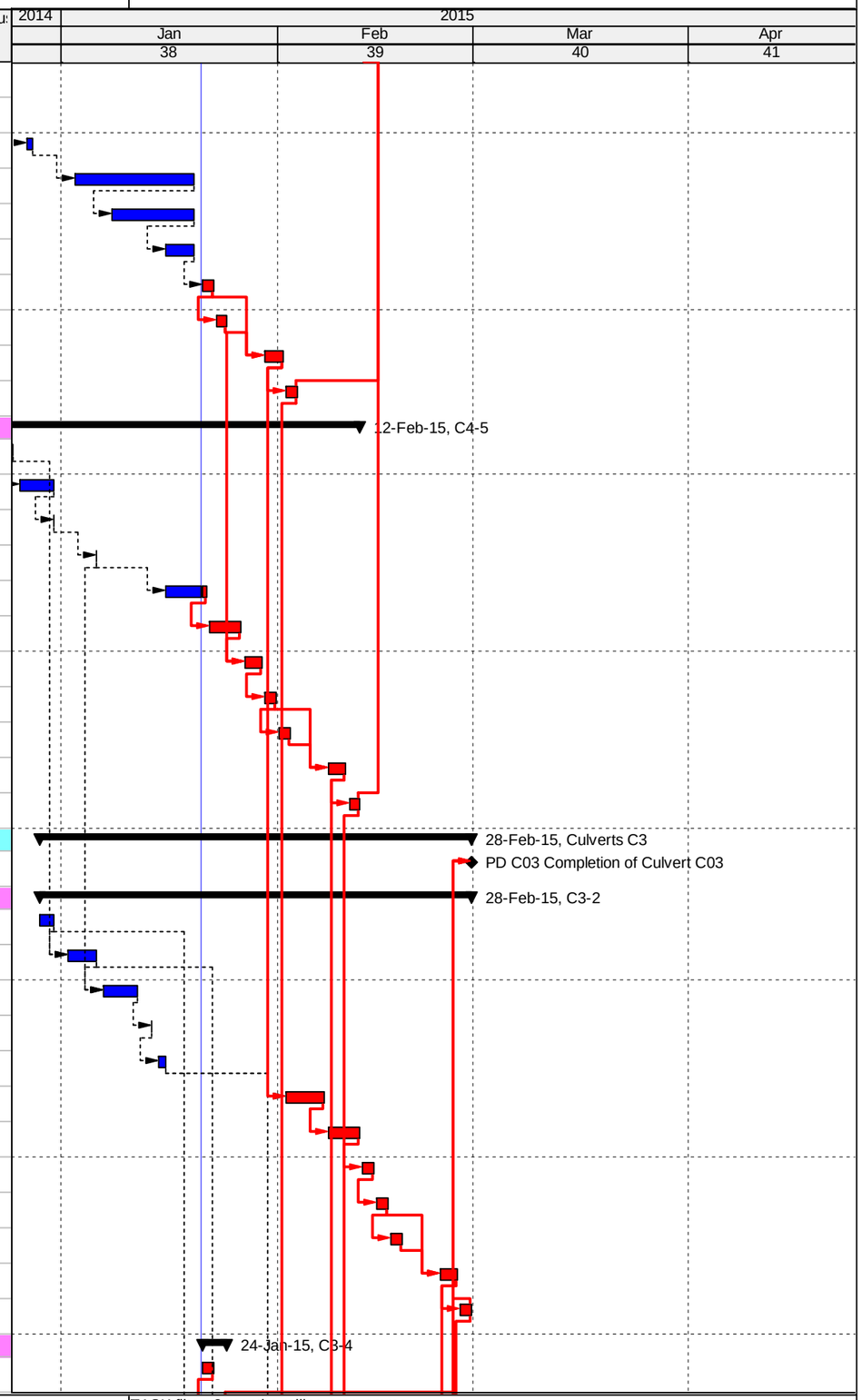
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
Portion C2b & C2c		46	02-Jan-15 A	26-Feb-15	-61
SD-18 C094		46	02-Jan-15 A	26-Feb-15	-61
CTSD-180	Installation of SD-18 (C094) PC2c	46	02-Jan-15 A	26-Feb-15	-61
SD-19 C099		46	02-Jan-15 A	26-Feb-15	-61
CTSD-190	Installation of SD-19 (C099) PC2c	46	02-Jan-15 A	26-Feb-15	-61
Cluster Type SE 26nrs Surface movement marker cluster at top of cell and sloping seawall		6	22-Dec-14 A	31-Dec-14 A	
CTSE-120	Installation of SE-12 (C069) PE2	7	22-Dec-14 A	31-Dec-14 A	
CTSE-170	Installation of SE-17 (C087) PE1	7	22-Dec-14 A	31-Dec-14 A	
CTSE-160	Installation of SE-16 (C082) PE1	7	22-Dec-14 A	31-Dec-14 A	
CTSE-130	Installation of SE-13 (C071) PE1	7	22-Dec-14 A	31-Dec-14 A	
CTSE-150	Installation of SE-15 (C079) PE1	7	22-Dec-14 A	31-Dec-14 A	
CTSE-140	Installation of SE-14 (C077) PE1	7	22-Dec-14 A	31-Dec-14 A	
Geotechnical Instrumentation Works for Reclamation RA & RB		30	22-Dec-14 A	28-Jan-15	-64
RA		13	22-Dec-14 A	09-Jan-15 A	
CTRA-070	Installation of RA 4sets at PC2a	7	22-Dec-14 A	31-Dec-14 A	
CTRA-080	Installation of RA 4sets at PC2b	7	22-Dec-14 A	31-Dec-14 A	
CTRA-100	Installation of RA 6sets at PE2	7	22-Dec-14 A	31-Dec-14 A	
CTRA-090	Installation of RA 4sets at PC2c	7	02-Jan-15 A	09-Jan-15 A	
RB		6	22-Dec-14 A	31-Dec-14 A	
SMT1-110	Installation of RB at PE2	7	22-Dec-14 A	31-Dec-14 A	
Settlement Marker Type 2		30	22-Dec-14 A	28-Jan-15	-64
SMT2-110	M2 - Installation of Settlement Marker Type2 at PE2	7	22-Dec-14 A	31-Dec-14 A	
SMT2-070	M2 - Installation of Settlement Marker Type2 at PC2a	7	22-Dec-14 A	31-Dec-14 A	
SMT2-090	M2 - Installation of Settlement Marker Type2 at PC2c	7	22-Dec-14 A	31-Dec-14 A	
SMT2-080	M2 - Installation of Settlement Marker Type2 at PC2b	7	21-Jan-15	28-Jan-15	-64
Portion D		316	28-Oct-14 A	08-Sep-15	-337
Submission		0	21-Jan-15	21-Jan-15	-293
Design Submission		0	21-Jan-15	21-Jan-15	-293
Structural Analysis for Culverts C1 - C4 w Precast Method		0	21-Jan-15	21-Jan-15	-293
PD-DGN-05010	Structural analysis for Box Culverts C1 - C4 with Precast Method	0		21-Jan-15*	-293
Drainage Impact Assessment & Temporary Diversion (stg2 - for construction of box culvert EC1)		0	21-Jan-15	21-Jan-15	-293
PD-DGN-07010	Drainage Impact Assessment and Temporary Diversion (stage 2 - for construction of box culvert EC1)	0		21-Jan-15*	-293
Settlement Assessment for Box Culvert EC1		0	21-Jan-15	21-Jan-15	-293
PD-DGN-08010	Settlement Assessment for Box culvert EC1 Submission 1st	0		21-Jan-15*	-293
Structural Analysis for Box Culvert EC1 w Precast & Cast in-situ Method		0	21-Jan-15	21-Jan-15	-293
PD-DGN-09010	Structural Analysis for Box culvert EC1 with Precast and Cast in-situ Method	0		21-Jan-15*	-293
Detailed General Arrangement & RC drawings for C1 to C4 w Precast Method		0	21-Jan-15	21-Jan-15	-293
PD-DGN-10010	Detailed General Arrangement and RC drawings for Box culverts C1 to C4 with Precast Method	0		21-Jan-15*	-293
Precast Yard for Seawall Blocks & Culverts		265	18-Dec-14 A	08-Sep-15	-337
Concrete Blocks		150	12-Apr-15	08-Sep-15	-337
PD-PY1-0200	Seawall Blocks for Permanent construction 1,990nrs (3,180 - 1190)	150	12-Apr-15	08-Sep-15	-337
Culverts		128	18-Dec-14 A	24-Apr-15	-316
Culverts C4		57	18-Dec-14 A	12-Feb-15	-245
PY-C4-0000	PD C04 Completion of Culvert C04	0		12-Feb-15	-245
C4-2		48	18-Dec-14 A	03-Feb-15	-376



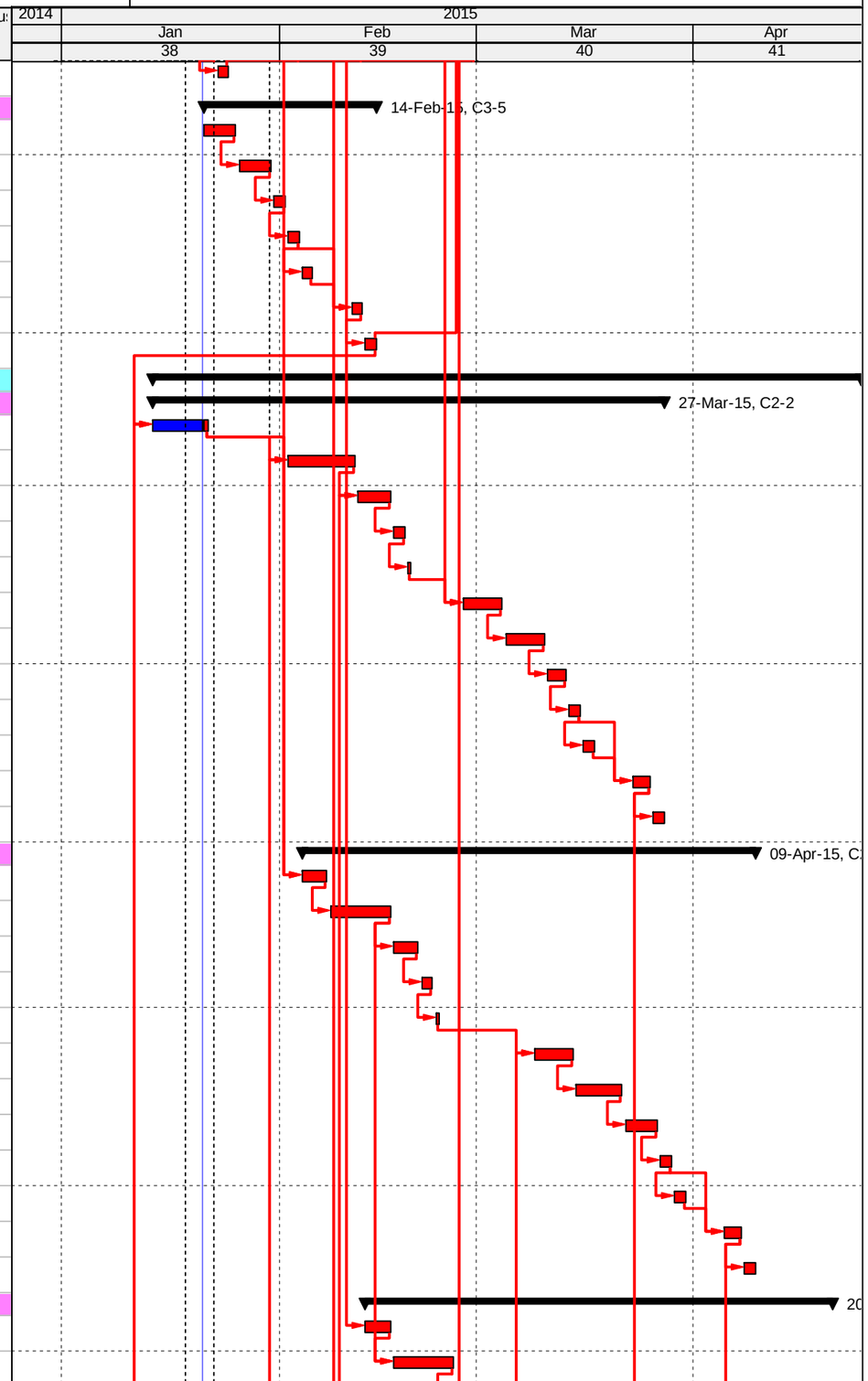
Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

TASK filter: 3 months rolling programme.

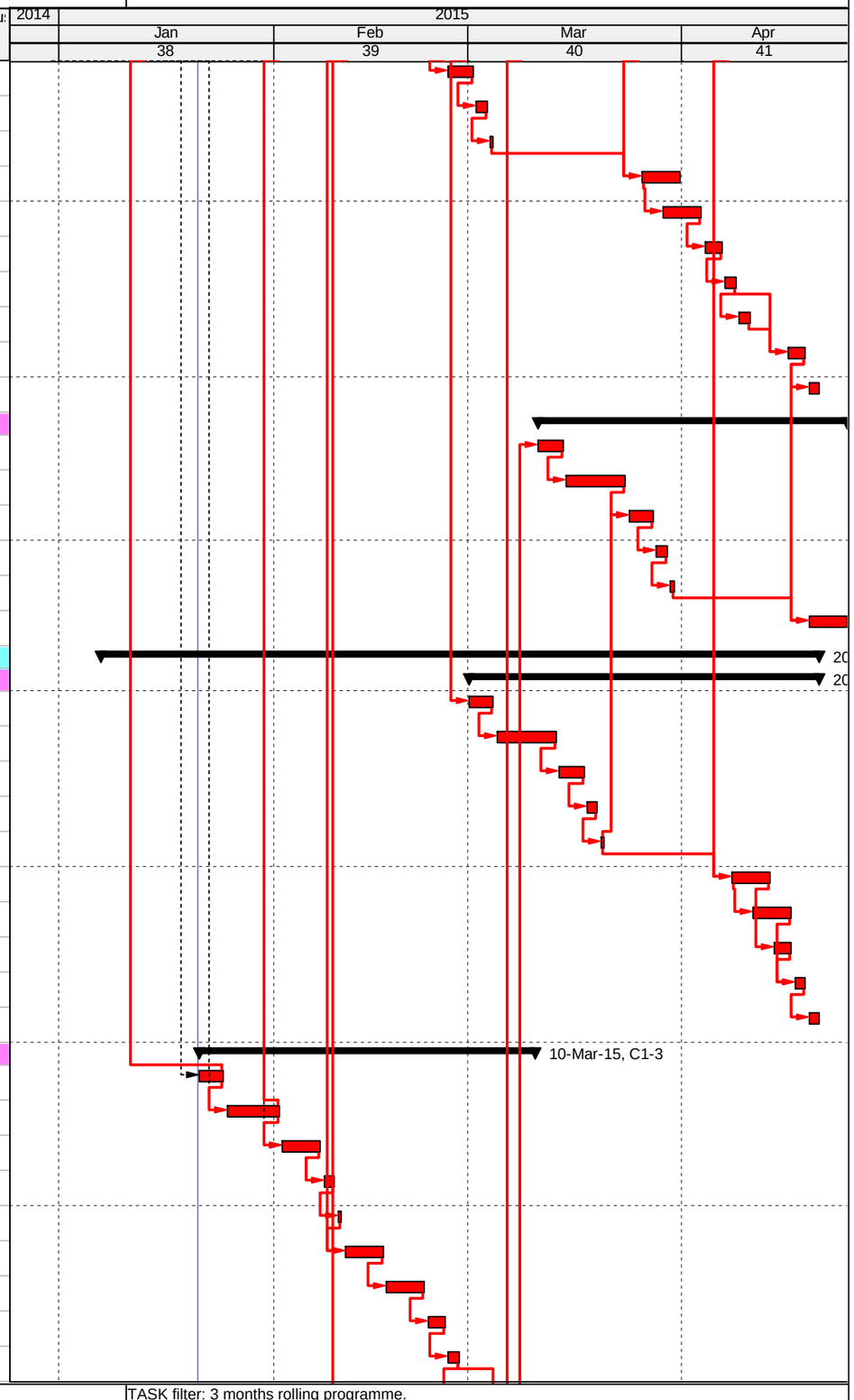
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PY-C4-2030	PD C04-2 - Foundation Formwork	5	18-Dec-14 A	22-Dec-14 A	
PY-C4-2040	PD C04-2 - Foundation Concrete	1	23-Dec-14 A	23-Dec-14 A	
PY-C4-2050	PD C04-2 - Foundation Formwork Removal	2	27-Dec-14 A	28-Dec-14 A	
PY-C4-2060	PD C04-2 - Wall internal Formwork	18	03-Jan-15 A	20-Jan-15 A	
PY-C4-2070	PD C04-2 - Wall Rebar Fixing	13	08-Jan-15 A	20-Jan-15 A	
PY-C4-2080	PD C04-2 - Wall External Formwork	5	16-Jan-15 A	20-Jan-15 A	
PY-C4-2090	PD C04-2 - Wall Concrete	2	21-Jan-15	22-Jan-15	-387
PY-C4-2100	PD C04-2 - Wall External Formwork Removal	2	23-Jan-15	24-Jan-15	-387
PY-C4-2110	PD C04-2 - Wall Internal Formwork Removal	3	30-Jan-15	01-Feb-15	-381
PY-C4-2120	PD C04-2 - Top Slab Formwork Removal	2	02-Feb-15	03-Feb-15	-376
C4-5		56	19-Dec-14 A	12-Feb-15	-360
PY-C4-5030	PD C04-5 - Foundation Rebar Fixing	7	19-Dec-14 A	25-Dec-14 A	
PY-C4-5040	PD C04-5 - Foundation Formwork	6	26-Dec-14 A	31-Dec-14 A	
PY-C4-5050	PD C04-5 - Foundation Concrete	1	31-Dec-14 A	31-Dec-14 A	
PY-C4-5060	PD C04-5 - Foundation Formwork Removal	1	06-Jan-15 A	06-Jan-15 A	
PY-C4-5070	PD C04-5 - Wall internal Formwork	6	16-Jan-15 A	21-Jan-15	-389
PY-C4-5080	PD C04-5 - Wall Rebar Fixing	5	22-Jan-15	26-Jan-15	-389
PY-C4-5090	PD C04-5 - Wall External Formwork	3	27-Jan-15	29-Jan-15	-389
PY-C4-5100	PD C04-5 - Wall Concrete	2	30-Jan-15	31-Jan-15	-389
PY-C4-5110	PD C04-5 - Wall External Formwork Removal	2	01-Feb-15	02-Feb-15	-384
PY-C4-5120	PD C04-5 - Wall Internal Formwork Removal	3	08-Feb-15	10-Feb-15	-389
PY-C4-5130	PD C04-5 - Top Slab Formwork Removal	2	11-Feb-15	12-Feb-15	-360
Culverts C3		62	29-Dec-14 A	28-Feb-15	-278
PY-C3-0000	PD C03 Completion of Culvert C03	0		28-Feb-15	-278
C3-2		62	29-Dec-14 A	28-Feb-15	-371
PY-C3-2010	PD C03-2 - Foundation Platform	3	29-Dec-14 A	31-Dec-14 A	
PY-C3-2020	PD C03-2 - Foundation Rebar Fixing	5	02-Jan-15 A	06-Jan-15 A	
PY-C3-2030	PD C03-2 - Foundation Formwork	6	07-Jan-15 A	12-Jan-15 A	
PY-C3-2040	PD C03-2 - Foundation Concrete	1	14-Jan-15 A	14-Jan-15 A	
PY-C3-2050	PD C03-2 - Foundation Formwork Removal	2	15-Jan-15 A	16-Jan-15 A	
PY-C3-2060	PD C03-2 - Wall internal Formwork	6	02-Feb-15	07-Feb-15	-381
PY-C3-2070	PD C03-2 - Wall Rebar Fixing	5	08-Feb-15	12-Feb-15	-381
PY-C3-2080	PD C03-2 - Wall External Formwork	2	13-Feb-15	14-Feb-15	-381
PY-C3-2090	PD C03-2 - Wall Concrete	2	15-Feb-15	16-Feb-15	-381
PY-C3-2100	PD C03-2 - Wall External Formwork Removal	2	17-Feb-15	18-Feb-15	-376
PY-C3-2110	PD C03-2 - Wall Internal Formwork Removal	3	24-Feb-15	26-Feb-15	-381
PY-C3-2120	PD C03-2 - Top Slab Formwork Removal	2	27-Feb-15	28-Feb-15	-371
C3-4		4	21-Jan-15	24-Jan-15	-243
PY-C3-4110	PD C03-4 - Wall Internal Formwork Removal	2	21-Jan-15	22-Jan-15	-243



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PY-C3-4120	PD C03-4 - Top Slab Formwork Removal	2	23-Jan-15	24-Jan-15	-243
C3-5		25	21-Jan-15	14-Feb-15	-264
PY-C3-5060	PD C03-5 - Wall internal Formwork	5	21-Jan-15	25-Jan-15	-264
PY-C3-5070	PD C03-5 - Wall Rebar Fixing	5	26-Jan-15	30-Jan-15	-264
PY-C3-5080	PD C03-5 - Wall External Formwork	2	31-Jan-15	01-Feb-15	-264
PY-C3-5090	PD C03-5 - Wall Concrete	2	02-Feb-15	03-Feb-15	-264
PY-C3-5100	PD C03-5 - Wall External Formwork Removal	2	04-Feb-15	05-Feb-15	-259
PY-C3-5110	PD C03-5 - Wall Internal Formwork Removal	2	11-Feb-15	12-Feb-15	-264
PY-C3-5120	PD C03-5 - Top Slab Formwork Removal	2	13-Feb-15	14-Feb-15	-264
Culverts C2		101	14-Jan-15 A	24-Apr-15	-361
C2-2		73	14-Jan-15 A	27-Mar-15	-333
PY-C2-2010	PD C02-2 - Foundation Platform	8	14-Jan-15 A	21-Jan-15	-363
PY-C2-2020	PD C02-2 - Foundation Rebar Fixing	10	02-Feb-15	11-Feb-15	-374
PY-C2-2030	PD C02-2 - Foundation Formwork	5	12-Feb-15	16-Feb-15	-374
PY-C2-2040	PD C02-2 - Foundation Concrete	2	17-Feb-15	18-Feb-15	-374
PY-C2-2050	PD C02-2 - Foundation Formwork Removal	1	19-Feb-15	19-Feb-15	-374
PY-C2-2060	PD C02-2 - Wall internal Formwork	6	27-Feb-15	04-Mar-15	-381
PY-C2-2070	PD C02-2 - Wall Rebar Fixing	6	05-Mar-15	10-Mar-15	-381
PY-C2-2080	PD C02-2 - Wall External Formwork	3	11-Mar-15	13-Mar-15	-381
PY-C2-2090	PD C02-2 - Wall Concrete	2	14-Mar-15	15-Mar-15	-381
PY-C2-2100	PD C02-2 - Wall External Formwork Removal	2	16-Mar-15	17-Mar-15	-376
PY-C2-2110	PD C02-2 - Wall Internal Formwork Removal	3	23-Mar-15	25-Mar-15	-381
PY-C2-2120	PD C02-2 - Top Slab Formwork Removal	2	26-Mar-15	27-Mar-15	-333
C2-3		65	04-Feb-15	09-Apr-15	-346
PY-C2-3010	PD C02-3 - Foundation Platform	4	04-Feb-15	07-Feb-15	-376
PY-C2-3020	PD C02-3 - Foundation Rebar Fixing	9	08-Feb-15	16-Feb-15	-376
PY-C2-3030	PD C02-3 - Foundation Formwork	4	17-Feb-15	20-Feb-15	-376
PY-C2-3040	PD C02-3 - Foundation Concrete	2	21-Feb-15	22-Feb-15	-376
PY-C2-3050	PD C02-3 - Foundation Formwork Removal	1	23-Feb-15	23-Feb-15	-376
PY-C2-3060	PD C02-3 - Wall internal Formwork	6	09-Mar-15	14-Mar-15	-389
PY-C2-3070	PD C02-3 - Wall Rebar Fixing	7	15-Mar-15	21-Mar-15	-389
PY-C2-3080	PD C02-3 - Wall External Formwork	5	22-Mar-15	26-Mar-15	-389
PY-C2-3090	PD C02-3 - Wall Concrete	2	27-Mar-15	28-Mar-15	-389
PY-C2-3100	PD C02-3 - Wall External Formwork Removal	2	29-Mar-15	30-Mar-15	-384
PY-C2-3110	PD C02-3 - Wall Internal Formwork Removal	3	05-Apr-15	07-Apr-15	-389
PY-C2-3120	PD C02-3 - Top Slab Formwork Removal	2	08-Apr-15	09-Apr-15	-346
C2-4		67	13-Feb-15	20-Apr-15	-357
PY-C2-4010	PD C02-4 - Foundation Platform	4	13-Feb-15	16-Feb-15	-360
PY-C2-4020	PD C02-4 - Foundation Rebar Fixing	9	17-Feb-15	25-Feb-15	-360



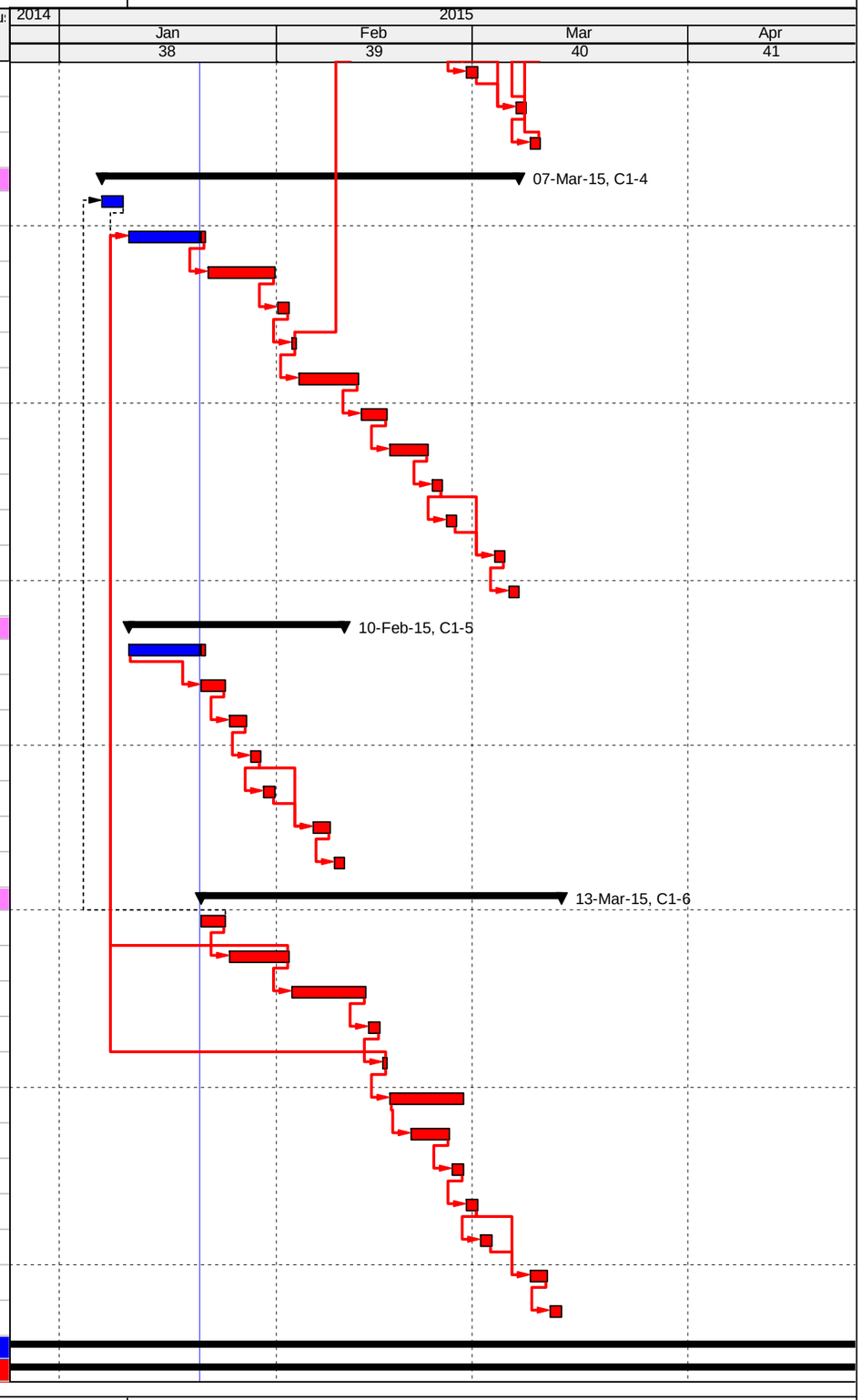
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PY-C2-4030	PD C02-4 - Foundation Formwork	4	26-Feb-15	01-Mar-15	-360
PY-C2-4040	PD C02-4 - Foundation Concrete	2	02-Mar-15	03-Mar-15	-360
PY-C2-4050	PD C02-4 - Foundation Formwork Removal	1	04-Mar-15	04-Mar-15	-360
PY-C2-4060	PD C02-4 - Wall internal Formwork	6	26-Mar-15	31-Mar-15	-381
PY-C2-4070	PD C02-4 - Wall Rebar Fixing	6	29-Mar-15	03-Apr-15	-381
PY-C2-4080	PD C02-4 - Wall External Formwork	3	04-Apr-15	06-Apr-15	-381
PY-C2-4090	PD C02-4 - Wall Concrete	2	07-Apr-15	08-Apr-15	-381
PY-C2-4100	PD C02-4 - Wall External Formwork Removal	2	09-Apr-15	10-Apr-15	-376
PY-C2-4110	PD C02-4 - Wall Internal Formwork Removal	3	16-Apr-15	18-Apr-15	-381
PY-C2-4120	PD C02-4 - Top Slab Formwork Removal	2	19-Apr-15	20-Apr-15	-357
C2-5		45	11-Mar-15	24-Apr-15	-381
PY-C2-5010	PD C02-5 - Foundation Platform	4	11-Mar-15	14-Mar-15	-362
PY-C2-5020	PD C02-5 - Foundation Rebar Fixing	9	15-Mar-15	23-Mar-15	-362
PY-C2-5030	PD C02-5 - Foundation Formwork	4	24-Mar-15	27-Mar-15	-362
PY-C2-5040	PD C02-5 - Foundation Concrete	2	28-Mar-15	29-Mar-15	-362
PY-C2-5050	PD C02-5 - Foundation Formwork Removal	1	30-Mar-15	30-Mar-15	-362
PY-C2-5060	PD C02-5 - Wall internal Formwork	6	19-Apr-15	24-Apr-15	-381
Culverts C1		104	07-Jan-15 A	20-Apr-15	-379
C1-2		51	01-Mar-15	20-Apr-15	-384
PY-C1-2010	PD C01-2 - Foundation Platform	4	01-Mar-15	04-Mar-15	-371
PY-C1-2020	PD C01-2 - Foundation Rebar Fixing	9	05-Mar-15	13-Mar-15	-371
PY-C1-2030	PD C01-2 - Foundation Formwork	4	14-Mar-15	17-Mar-15	-371
PY-C1-2040	PD C01-2 - Foundation Concrete	2	18-Mar-15	19-Mar-15	-371
PY-C1-2050	PD C01-2 - Foundation Formwork Removal	1	20-Mar-15	20-Mar-15	-371
PY-C1-2060	PD C01-2 - Wall internal Formwork	6	08-Apr-15	13-Apr-15	-389
PY-C1-2070	PD C01-2 - Wall Rebar Fixing	6	11-Apr-15	16-Apr-15	-389
PY-C1-2080	PD C01-2 - Wall External Formwork	3	14-Apr-15	16-Apr-15	-389
PY-C1-2090	PD C01-2 - Wall Concrete	2	17-Apr-15	18-Apr-15	-389
PY-C1-2100	PD C01-2 - Wall External Formwork Removal	2	19-Apr-15	20-Apr-15	-384
C1-3		49	21-Jan-15	10-Mar-15	-362
PY-C1-3010	PD C01-3 - Foundation Platform	4	21-Jan-15	24-Jan-15	-389
PY-C1-3020	PD C01-3 - Foundation Rebar Fixing	8	25-Jan-15	01-Feb-15	-389
PY-C1-3030	PD C01-3 - Foundation Formwork	6	02-Feb-15	07-Feb-15	-389
PY-C1-3040	PD C01-3 - Foundation Concrete	2	08-Feb-15	09-Feb-15	-389
PY-C1-3050	PD C01-3 - Foundation Formwork Removal	1	10-Feb-15	10-Feb-15	-389
PY-C1-3060	PD C01-3 - Wall internal Formwork	6	11-Feb-15	16-Feb-15	-389
PY-C1-3070	PD C01-3 - Wall Rebar Fixing	6	17-Feb-15	22-Feb-15	-389
PY-C1-3080	PD C01-3 - Wall External Formwork	3	23-Feb-15	25-Feb-15	-389
PY-C1-3090	PD C01-3 - Wall Concrete	2	26-Feb-15	27-Feb-15	-389



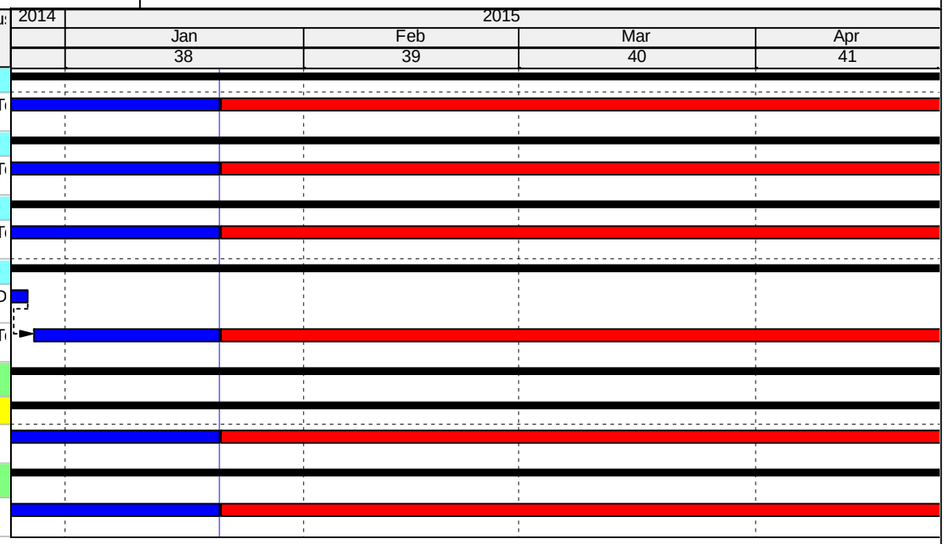
Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

TASK filter: 3 months rolling programme.

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PY-C1-3100	PD C01-3 - Wall External Formwork Removal	2	28-Feb-15	01-Mar-15	-384
PY-C1-3110	PD C01-3 - Wall Internal Formwork Removal	2	07-Mar-15	08-Mar-15	-389
PY-C1-3120	PD C01-3 - Top Slab Formwork Removal	2	09-Mar-15	10-Mar-15	-362
C1-4		60	07-Jan-15 A	07-Mar-15	-335
PY-C1-4010	PD C01-4 - Foundation Platform	4	07-Jan-15 A	10-Jan-15 A	
PY-C1-4020	PD C01-4 - Foundation Rebar Fixing	11	11-Jan-15 A	21-Jan-15	-366
PY-C1-4030	PD C01-4 - Foundation Formwork	10	22-Jan-15	31-Jan-15	-366
PY-C1-4040	PD C01-4 - Foundation Concrete	2	01-Feb-15	02-Feb-15	-366
PY-C1-4050	PD C01-4 - Foundation Formwork Removal	1	03-Feb-15	03-Feb-15	-366
PY-C1-4060	PD C01-4 - Wall internal Formwork	9	04-Feb-15	12-Feb-15	-335
PY-C1-4070	PD C01-4 - Wall Rebar Fixing	4	13-Feb-15	16-Feb-15	-335
PY-C1-4080	PD C01-4 - Wall External Formwork	6	17-Feb-15	22-Feb-15	-335
PY-C1-4090	PD C01-4 - Wall Concrete	2	23-Feb-15	24-Feb-15	-335
PY-C1-4100	PD C01-4 - Wall External Formwork Removal	2	25-Feb-15	26-Feb-15	-330
PY-C1-4110	PD C01-4 - Wall Internal Formwork Removal	2	04-Mar-15	05-Mar-15	-335
PY-C1-4120	PD C01-4 - Top Slab Formwork Removal	2	06-Mar-15	07-Mar-15	-335
C1-5		31	11-Jan-15 A	10-Feb-15	-310
PY-C1-5060	PD C01-5 - Wall internal Formwork	11	11-Jan-15 A	21-Jan-15	-310
PY-C1-5070	PD C01-5 - Wall Rebar Fixing	4	21-Jan-15	24-Jan-15	-310
PY-C1-5080	PD C01-5 - Wall External Formwork	3	25-Jan-15	27-Jan-15	-310
PY-C1-5090	PD C01-5 - Wall Concrete	2	28-Jan-15	29-Jan-15	-310
PY-C1-5100	PD C01-5 - Wall External Formwork Removal	2	30-Jan-15	31-Jan-15	-305
PY-C1-5110	PD C01-5 - Wall Internal Formwork Removal	3	06-Feb-15	08-Feb-15	-310
PY-C1-5120	PD C01-5 - Top Slab Formwork Removal	2	09-Feb-15	10-Feb-15	-310
C1-6		52	21-Jan-15	13-Mar-15	-341
PY-C1-6010	PD C01-6 - Foundation Platform	4	21-Jan-15*	24-Jan-15	-341
PY-C1-6020	PD C01-6 - Foundation Rebar Fixing	9	25-Jan-15	02-Feb-15	-341
PY-C1-6030	PD C01-6 - Foundation Formwork	11	03-Feb-15	13-Feb-15	-341
PY-C1-6040	PD C01-6 - Foundation Concrete	2	14-Feb-15	15-Feb-15	-341
PY-C1-6050	PD C01-6 - Foundation Formwork Removal	1	16-Feb-15	16-Feb-15	-341
PY-C1-6060	PD C01-6 - Wall internal Formwork	11	17-Feb-15	27-Feb-15	-341
PY-C1-6070	PD C01-6 - Wall Rebar Fixing	6	20-Feb-15	25-Feb-15	-341
PY-C1-6080	PD C01-6 - Wall External Formwork	2	26-Feb-15	27-Feb-15	-341
PY-C1-6090	PD C01-6 - Wall Concrete	2	28-Feb-15	01-Mar-15	-341
PY-C1-6100	PD C01-6 - Wall External Formwork Removal	2	02-Mar-15	03-Mar-15	-336
PY-C1-6110	PD C01-6 - Wall Internal Formwork Removal	3	09-Mar-15	11-Mar-15	-341
PY-C1-6120	PD C01-6 - Top Slab Formwork Removal	2	12-Mar-15	13-Mar-15	-341
Site Construction		241	28-Oct-14 A	25-Jun-15	-399
Surcharge		241	28-Oct-14 A	25-Jun-15	-399



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	u
West1 Portion		180	30-Oct-14 A	27-Apr-15	-412	
A1660	PD West1 - Surcharge Period +11.5mPD 6mths	180	30-Oct-14 A	27-Apr-15	-412	T
West2 Portion		180	28-Oct-14 A	25-Apr-15	-384	
A2220	PD West2 - Surcharge Period +11.5mPD 6mths	180	28-Oct-14 A	25-Apr-15	-384	T
East1 Portion		181	26-Nov-14 A	25-May-15	-386	
A1690	PD East1 - Surcharge Period +11.5mPD 6mths	181	26-Nov-14 A	25-May-15	-386	T
East2 Portion		228	10-Nov-14 A	25-Jun-15	-399	
A2258	PD East2 - Surcharge Laying upto +11.5mPD 42,843m3 5,000m3/day	45	10-Nov-14 A	27-Dec-14 A		D
A2260	PD East2 - Surcharge Period +11.5mPD 6mths	180	28-Dec-14 A	25-Jun-15	-399	T
Works Area WA2 (Tung Chung)		1434	21-May-12 A	28-Feb-17	0	
Zone A		1434	21-May-12 A	28-Feb-17	0	
A1880	Maintenance of Engineer's Accommodation	1434	21-May-12 A	28-Feb-17	0	
Works Area TKO Fill Bank		1254	25-Sep-12 A	30-Nov-16	0	
WA-TKO-1040	Operate and Maintain Public Fill Sorting Facilities in Zone A, B1 & B2	1254	25-Sep-12 A	30-Nov-16	0	



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 $\mu g/m^3$	500 $\mu g/m^3$
AMS3A*	368 $\mu g/m^3$	500 $\mu g/m^3$
AMS6	360 $\mu g/m^3$	500 $\mu g/m^3$
AMS7	370 $\mu g/m^3$	500 $\mu g/m^3$

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 $\mu g/m^3$	260 $\mu g/m^3$
AMS3A*	167 $\mu g/m^3$	260 $\mu g/m^3$
AMS6	173 $\mu g/m^3$	260 $\mu g/m^3$
AMS7	183 $\mu g/m^3$	260 $\mu g/m^3$

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:	28-Nov-14	Next Due Date:	28-Jan-15
Equipment No.:	A-001-78T	Serial No.	3383

Ambient Condition			
Temperature, Ta (K)	296	Pressure, Pa (mmHg)	759.8

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

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	$[DH \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	8.5	2.92	1.49	47.0	47.15
13	7.1	2.67	1.36	42.0	42.14
10	5.7	2.40	1.22	37.0	37.12
7	4.2	2.06	1.05	30.0	30.10
5	2.9	1.71	0.87	22.0	22.07

By Linear Regression of Y on X

Slope , mw = **40.3873** **Intercept, bw =** **-12.5727**

Correlation Coefficient* = **0.9980**

*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; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2} =$ **39.80**

Remarks:

QC Reviewer: WS CHAN Signature: Date: 28/11/14

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Tung Chung Development Pier (AMS2)	Operator:	Cheung Hung Wai
Cal. Date:	27-Jan-15	Next Due Date:	27-Mar-15
Equipment No.:	A-001-78T	Serial No.	3383

Ambient Condition			
Temperature, Ta (K)	292	Pressure, Pa (mmHg)	764.4

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

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	$[DH \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	8.4	2.94	1.49	48.0	48.63
13	7.0	2.68	1.36	43.0	43.57
10	5.5	2.38	1.21	36.0	36.47
7	4.0	2.03	1.03	31.0	31.41
5	2.7	1.66	0.85	23.0	23.30

By Linear Regression of Y on X

Slope , mw = 38.7479 **Intercept, bw =** -9.3624

Correlation Coefficient* = 0.9957

*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; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2} =$ **40.48**

Remarks: _____

QC Reviewer: WS CHAN Signature: _____ Date: 28/01/15

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:	7-Nov-14	Next Due Date:	8-Jan-15
Equipment No.:	A-001-79T	Serial No.	3384

Ambient Condition			
Temperature, Ta (K)	297	Pressure, Pa (mmHg)	759.9

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99102	Intercept, bc	-0.00616
Last Calibration Date:	9-Dec-14	**mc x Qstd + bc = [DH x (Pa/760) x (298/Ta)]$^{1/2}$**			
Next Calibration Date:	9-Dec-15	**Qstd = {[DH x (Pa/760) x (298/Ta)]$^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.6	2.76	1.39	54.0	54.11
13	6.1	2.47	1.25	46.0	46.09
10	4.9	2.22	1.12	38.0	38.07
7	3.4	1.85	0.93	28.0	28.05
5	2.1	1.45	0.73	18.0	18.04

By Linear Regression of Y on X

Slope , mw = **55.1146** **Intercept, bw =** **-22.8375**

Correlation Coefficient* = **0.9987**

*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)]$^{1/2}$= **48.72**

Remarks:

QC Reviewer: YT Leung Signature: Date: 16-11-14

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:	6-Jan-15	Next Due Date:	6-Mar-15
Equipment No.:	A-001-79T	Serial No.	3384

Ambient Condition			
Temperature, Ta (K)	292	Pressure, Pa (mmHg)	764.1

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

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.5	2.77	1.41	52.0	52.67
13	6.0	2.48	1.26	43.0	43.56
10	4.9	2.24	1.14	36.0	36.47
7	3.3	1.84	0.94	26.0	26.34
5	2.1	1.47	0.75	18.0	18.23

By Linear Regression of Y on X

Slope , mw = **51.9424** **Intercept, bw =** **-21.6419**

Correlation Coefficient* = **0.9946**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]$^{1/2}$= **45.30**

Remarks:

QC Reviewer: WS CHAN Signature: Date: 07/01/15

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Hong Kong SkyCity Marriott Hotel (AMS7)	Operator:	Cheung Hung Wai
Cal. Date:	28-Nov-14	Next Due Date:	28-Jan-15
Equipment No.:	A-001-80T	Serial No.	3385

Ambient Condition			
Temperature, Ta (K)	296	Pressure, Pa (mmHg)	759.8

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

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (m^3/min) **X-axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.4	2.73	1.39	45.0	45.15
13	6.2	2.50	1.27	39.0	39.13
10	4.8	2.20	1.12	32.0	32.10
7	3.8	1.96	1.00	26.0	26.08
5	3.0	1.74	0.88	22.0	22.07

By Linear Regression of Y on X

Slope , mw = **46.3581** **Intercept, bw =** **-19.5196**

Correlation Coefficient* = **0.9976**

*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)]$^{1/2}$= **40.61**

Remarks: _____

QC Reviewer: WS CHAN Signature: _____ Date: 28/11/14

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Hong Kong SkyCity Marriott Hotel (AMS7)	Operator:	Cheung Hung Wai
Cal. Date:	27-Jan-15	Next Due Date:	27-Mar-15
Equipment No.:	A-001-80T	Serial No.	3385

Ambient Condition			
Temperature, Ta (K)	292	Pressure, Pa (mmHg)	764.4

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

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.2	2.72	1.38	44.0	44.58
13	6.1	2.50	1.27	38.0	38.50
10	4.8	2.22	1.13	32.0	32.42
7	3.7	1.95	0.99	26.0	26.34
5	2.9	1.73	0.88	20.0	20.26

By Linear Regression of Y on X

Slope , mw = 47.1762 **Intercept, bw =** -20.9120

Correlation Coefficient* = 0.9980

*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)]$^{1/2}$= **39.89**

Remarks:

QC Reviewer: WS CHAN Signature: Date: 28/01/15

TISCH Environmental

TISCH ENVIRONMENTAL, INC.
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VILLAGE OF CLEVES, OH
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ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

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

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

DATA TABULATION

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

CALCULATIONS

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

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

For subsequent flow rate calculations:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *11 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *11 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *11 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *11 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *18 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Operator: *Mike Shek (MSKM)*

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *18 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *18 May 2015*

Remarks:

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

EQUIPMENT CALIBRATION RECORD

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

Standard Equipment

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

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

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

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

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

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

Validity of Calibration Record: *26 July 2015*

Remarks:

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

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HOKLAS 028

CERTIFICATE OF CALIBRATION

Certificate No.: 14CA0408 01-02 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Rion Co., Ltd.
Type/Model No.:	NC-74
Serial/Equipment No.:	34246490 N.004.10
Adaptors used:	Yes

Item submitted by

Curstomer:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	08-Apr-2014

Date of test: 15-Apr-2014

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	10-Apr-2015	CEPREI
Measuring amplifier	B&K 2610	2346941	08-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI
Digital multi-meter	34401A	US36087050	17-Dec-2014	CEPREI
Audio analyzer	8903B	GB41300350	07-Apr-2015	CEPREI
Universal counter	53132A	MY40003662	11-Apr-2015	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	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:** 23-Apr-2014 **Company Chop:** SOILS & MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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

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CERTIFICATE OF CALIBRATION

Certificate No.: 14CA0408 01-01 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	B & K
Type/Model No.:	4231
Serial/Equipment No.:	3006428 N1004.03
Adaptors used:	-

Item submitted by

Curstomer:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	08-Apr-2014

Date of test: 15-Apr-2014

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	2743150	10-Apr-2015	CEPREI
Measuring amplifier	B&K 2610	2346941	08-Apr-2015	CEPREI
Signal generator	DS 360	61227	09-Apr-2015	CEPREI
Digital multi-meter	34401A	US36087050	17-Dec-2014	CEPREI
Audio analyzer	8903B	GB41300350	07-Apr-2015	CEPREI
Universal counter	53132A	MY40003662	11-Apr-2015	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	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:** 23-Apr-2014 **Company Chop:** SOILS & MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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

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Fax : (852) 2555 7533
HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

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

Item tested

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

Item submitted by

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

Date of test: 07-Nov-2014

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

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

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

Test results

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

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

Actual Measurement data are documented on worksheets.

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

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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.

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CERTIFICATE OF CALIBRATION

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

Item tested

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

Item submitted by

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

Date of test: 03-Jul-2014

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

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

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

Test results

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

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

Actual Measurement data are documented on worksheets.

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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1435921
Date of Issue: 07/11/2014
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 06 November, 2014 Date of next Calibration: 06 February, 2015

Parameters:

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

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	150.4	+2.4
6667	6520	-2.2
12890	12720	-1.3
58670	58430	-0.4
	Tolerance Limit (%)	±10.0

Dissolved Oxygen **Method Ref: APHA (21s** 12A101545

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.90	3.85	-0.05
5.50	5.46	-0.04
7.80	7.74	-0.06
	Tolerance Limit (mg/L)	±0.20

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

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)
13.0	12.80	-0.2
25.0	24.95	-0.1
38.5	38.25	-0.3
	Tolerance Limit (°C)	±2.0

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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1435921
Date of Issue: 07/11/2014
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 06 November, 2014 Date of next Calibration: 06 February, 2015

Parameters:

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.9	-2.5
10	10.2	+2.0
20	19.2	-4.0
50	49.3	-1.4
100	99.1	-0.9
	Tolerance Limit (%)	±10.0

W.026.35

pH Value **Method Ref: APHA 21st Ed. 4500H:B**

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	3.98	-0.02
7.0	6.96	-0.04
10.0	9.94	-0.06
	Tolerance Limit (pH unit)	± 0.20

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

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0.00	--
10	9.97	-0.3
20	19.89	-0.5
30	29.84	-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: HK1435922
Date of Issue: 07/11/2014
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 06 November, 2014 Date of next Calibration: 06 February, 2015

Parameters:

Turbidity

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.8	-5.0
10	10.0	0.0
20	19.6	-2.0
50	49.5	-1.0
100	100.6	+0.6
	Tolerance Limit (%)	±10.0

pH Value

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	3.98	-0.02
7.0	7.01	+0.01
10.0	9.96	-0.04
	Tolerance Limit (pH unit)	± 0.20

Salinity

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

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0.00	--
10	9.94	-0.6
20	20.06	+0.3
30	30.08	+0.3
	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: HK1435922
Date of Issue: 07/11/2014
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 06 November, 2014 Date of next Calibration: 06 February, 2015

Parameters:

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

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	150.0	+2.1
6667	6620	-0.7
12890	12770	-0.9
58670	58200	-0.8
	Tolerance Limit (%)	±10.0

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.90	3.83	-0.07
5.50	5.48	-0.02
7.80	7.76	-0.04
	Tolerance Limit (mg/L)	±0.20

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

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)
13.0	12.91	-0.1
25.0	24.98	-0.0
38.5	38.41	-0.1
	Tolerance Limit (°C)	±2.0

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

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

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				01-Jan	02-Jan	03-Jan
					Mid-Ebb 11:15 Mid-Flood 16:36 Dolphin monitoring	Dolphin monitoring
04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan
	Mid-Flood 08:00 Mid-Ebb 13:15 24-hour TSP 1-hour TSP Noise		Mid-Flood 09:06 Mid-Ebb 14:21		Mid-Flood 10:02 Mid-Ebb 15:24	24-hour TSP 1-hour TSP
11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan
	Mid-Flood 11:42 Mid-Ebb 17:43		Mid-Ebb 06:02 Mid-Flood 13:12 24-hour TSP 1-hour TSP Noise	Dolphin monitoring	Mid-Ebb 09:31 Mid-Flood 14:56 Dolphin monitoring	
18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan
	Mid-Ebb 12:20 Mid-Flood 17:30	24-hour TSP 1-hour TSP Noise	Mid-Flood 08:20 Mid-Ebb 13:50		Mid-Flood 09:39 Mid-Ebb 15:20	
25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan
	Mid-Flood 11:44 Mid-Ebb 18:08 24-hour TSP 1-hour TSP Noise		Mid-Ebb 06:53 Mid-Flood 13:25		Mid-Ebb 10:09 Mid-Flood 15:23	24-hour TSP 1-hour TSP

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

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb
	Mid-Ebb 12:26 Mid-Flood 17:43		Mid-Flood 08:05 Mid-Ebb 13:26		Mid-Flood 08:51 Mid-Ebb 14:21 24-hour TSP 1-hour TSP Noise	
08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb
	Mid-Flood 10:07 Mid-Ebb 16:05 Dolphin monitoring	Dolphin monitoring	Mid-Flood 11:15 Mid-Ebb 17:49	24-hour TSP 1-hour TSP Noise	Mid-Ebb 07:03 Mid-Flood 12:55	
15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb
	Mid-Ebb 11:19 Mid-Flood 16:25		Mid-Flood 07:13 Mid-Ebb 12:48 24-hour TSP 1-hour TSP Noise		Mid-Flood 08:24 Mid-Ebb 14:11	
22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb
	Mid-Flood 10:03 Mid-Ebb 16:23 Dolphin monitoring	24-hour TSP 1-hour TSP Noise Dolphin monitoring	Mid-Flood 11:22 Mid-Ebb 18:22		Mid-Ebb 08:13 Mid-Flood 13:17	24-hour TSP 1-hour TSP

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

Appendix G Impact Air Quality Monitoring Results

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

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
5-Jan-15	1st Hour	Sunny	2.8	10:05	83	374	500
5-Jan-15	2nd Hour	Sunny	0.1	11:05	83	374	500
5-Jan-15	3rd Hour	Sunny	1.1	12:05	83	374	500
10-Jan-15	1st Hour	Sunny	0.1	12:20	83	374	500
10-Jan-15	2nd Hour	Sunny	0.8	13:20	84	374	500
10-Jan-15	3rd Hour	Sunny	0.2	14:20	83	374	500
14-Jan-15	1st Hour	Sunny	0.1	10:02	81	374	500
14-Jan-15	2nd Hour	Sunny	0.1	11:02	82	374	500
14-Jan-15	3rd Hour	Sunny	1.0	12:02	82	374	500
20-Jan-15	1st Hour	Sunny	2.4	09:58	82	374	500
20-Jan-15	2nd Hour	Sunny	0.1	10:58	82	374	500
20-Jan-15	3rd Hour	Sunny	0.1	11:58	83	374	500
26-Jan-15	1st Hour	Sunny	0.7	11:25	81	374	500
26-Jan-15	2nd Hour	Sunny	1.0	12:25	84	374	500
26-Jan-15	3rd Hour	Sunny	0.0	13:25	86	374	500
31-Jan-15	1st Hour	Sunny	0.1	12:17	82	374	500
31-Jan-15	2nd Hour	Sunny	1.0	13:17	83	374	500
31-Jan-15	3rd Hour	Sunny	1.9	14:07	81	374	500
				Average	83		
				Min	81		
				Max	86		

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

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m^3)	Action Level (μg/m^3) ^	Limit Level (μg/m^3)
5-Jan-15	1st Hour	Sunny	2.8	10:15	84	368	500
5-Jan-15	2nd Hour	Sunny	0.1	11:15	83	368	500
5-Jan-15	3rd Hour	Sunny	1.1	12:15	83	368	500
10-Jan-15	1st Hour	Sunny	0.1	12:34	84	368	500
10-Jan-15	2nd Hour	Sunny	0.8	13:34	82	368	500
10-Jan-15	3rd Hour	Sunny	0.2	14:34	84	368	500
14-Jan-15	1st Hour	Sunny	0.1	11:30	81	368	500
14-Jan-15	2nd Hour	Sunny	1.0	12:30	82	368	500
14-Jan-15	3rd Hour	Sunny	0.6	13:30	81	368	500
20-Jan-15	1st Hour	Sunny	0.1	11:33	82	368	500
20-Jan-15	2nd Hour	Sunny	0.1	12:33	81	368	500
20-Jan-15	3rd Hour	Sunny	1.3	13:33	82	368	500
26-Jan-15	1st Hour	Sunny	0.7	11:15	82	368	500
26-Jan-15	2nd Hour	Sunny	1.0	12:15	84	368	500
26-Jan-15	3rd Hour	Sunny	0.0	13:15	86	368	500
31-Jan-15	1st Hour	Sunny	1.0	12:33	82	368	500
31-Jan-15	2nd Hour	Sunny	1.9	13:33	81	368	500
31-Jan-15	3rd Hour	Sunny	0.1	14:33	82	368	500
				Average	83		
				Min	81		
				Max	86		

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)	Action Level (μg/m^3)	Limit Level (μg/m^3)
5-Jan-15	1st Hour	Sunny	2.8	09:50	84	370	500
5-Jan-15	2nd Hour	Sunny	0.1	10:50	83	370	500
5-Jan-15	3rd Hour	Sunny	1.1	11:50	83	370	500
10-Jan-15	1st Hour	Sunny	0.1	12:05	81	370	500
10-Jan-15	2nd Hour	Sunny	0.8	13:05	80	370	500
10-Jan-15	3rd Hour	Sunny	0.2	14:05	81	370	500
14-Jan-15	1st Hour	Sunny	0.1	09:41	80	370	500
14-Jan-15	2nd Hour	Sunny	0.1	10:41	81	370	500
14-Jan-15	3rd Hour	Sunny	0.1	11:41	81	370	500
20-Jan-15	1st Hour	Sunny	0.1	11:51	79	370	500
20-Jan-15	2nd Hour	Sunny	0.1	12:51	80	370	500
20-Jan-15	3rd Hour	Sunny	1.3	13:51	79	370	500
26-Jan-15	1st Hour	Sunny	0.7	11:45	83	370	500
26-Jan-15	2nd Hour	Sunny	1.0	12:45	85	370	500
26-Jan-15	3rd Hour	Sunny	0.0	13:45	84	370	500
31-Jan-15	1st Hour	Sunny	0.1	11:56	80	370	500
31-Jan-15	2nd Hour	Sunny	1.0	12:56	81	370	500
31-Jan-15	3rd Hour	Sunny	1.9	13:56	80	370	500
				Average	81		
				Min	79		
				Max	85		

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 ($\mu g/m^3$)
5-Jan-15	09:00	6-Jan-15	09:00	Sunny	19.0	1014.5	1.33	1.33	1.33	1912.3	2.6920	2.8231	0.1311	4397.84	4421.84	24.00	69	176	260
9-Jan-15	16:00	10-Jan-15	16:00	Sunny	16.3	1023.4	1.33	1.33	1.33	1912.3	2.7293	2.9420	0.2127	4421.84	4445.84	24.00	111	176	260
13-Jan-15	16:00	14-Jan-15	16:00	Sunny	13.7	1022.0	1.33	1.33	1.33	1912.3	2.7568	2.8287	0.0719	4445.84	4469.84	24.00	38	176	260
20-Jan-15	16:00	21-Jan-15	16:00	Sunny	15.9	1021.3	1.33	1.33	1.33	1912.3	2.6869	2.8894	0.2025	4469.84	4493.84	24.00	106	176	260
26-Jan-15	09:00	27-Jan-15	09:00	Sunny	18.6	1018.5	1.33	1.33	1.33	1912.3	2.6812	2.8116	0.1304	4493.84	4517.84	24.00	68	176	260
30-Jan-15	16:00	31-Jan-15	16:00	Fine	16.5	1025.6	1.33	1.33	1.33	1912.3	2.7702	2.9306	0.1604	4517.84	4541.84	24.00	84	176	260
																Average	79		
																Min	38		
																Max	111		

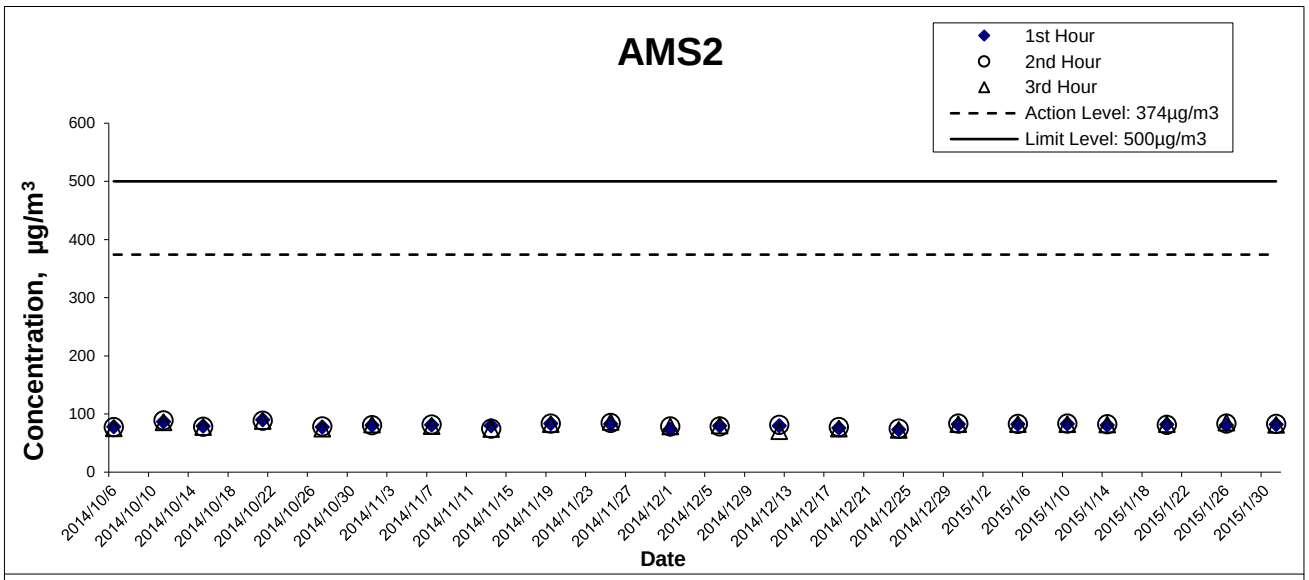
24-hour TSP Monitoring Results at Station AMS3B - Site Boundary of Site Office (WA2)

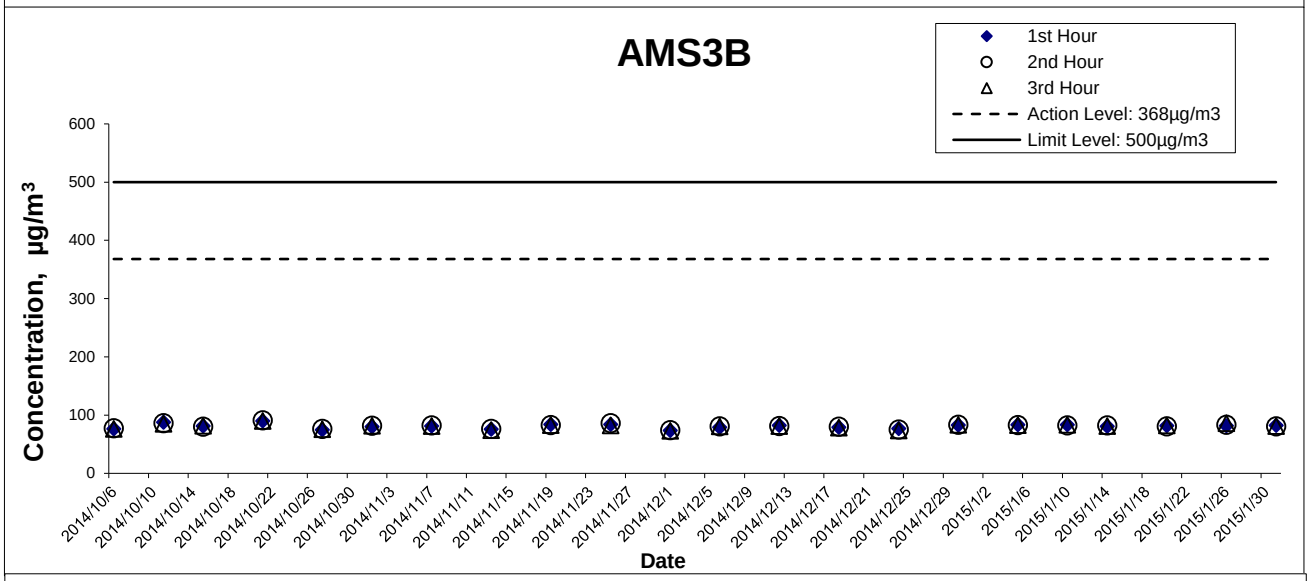
Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
5-Jan-15	09:00	6-Jan-15	09:00	Sunny	19.0	1014.5	1.34	1.34	1.34	1923.8	2.6887	2.8426	0.1539	4333.80	4357.80	24.00	80	167	260
9-Jan-15	16:00	10-Jan-15	16:00	Sunny	16.3	1023.4	1.34	1.34	1.34	1923.8	2.7036	2.9041	0.2005	4357.80	4381.80	24.00	104	167	260
13-Jan-15	16:00	14-Jan-15	16:00	Sunny	13.7	1022.0	1.34	1.34	1.34	1923.8	2.7415	2.8017	0.0602	4381.80	4405.80	24.00	31	167	260
20-Jan-15	16:00	21-Jan-15	16:00	Sunny	15.9	1021.3	1.34	1.34	1.34	1923.8	2.7021	2.9155	0.2134	4405.80	4429.80	24.00	111	167	260
26-Jan-15	09:00	27-Jan-15	09:00	Sunny	18.6	1018.5	1.34	1.34	1.34	1923.8	2.6982	2.8555	0.1573	4429.80	4453.80	24.00	82	167	260
30-Jan-15	16:00	31-Jan-15	16:00	Fine	16.5	1025.6	1.34	1.34	1.34	1923.8	2.7962	2.9507	0.1545	4453.80	4477.80	24.00	80	167	260
																Average	81		
																Min	31		
																Max	111		

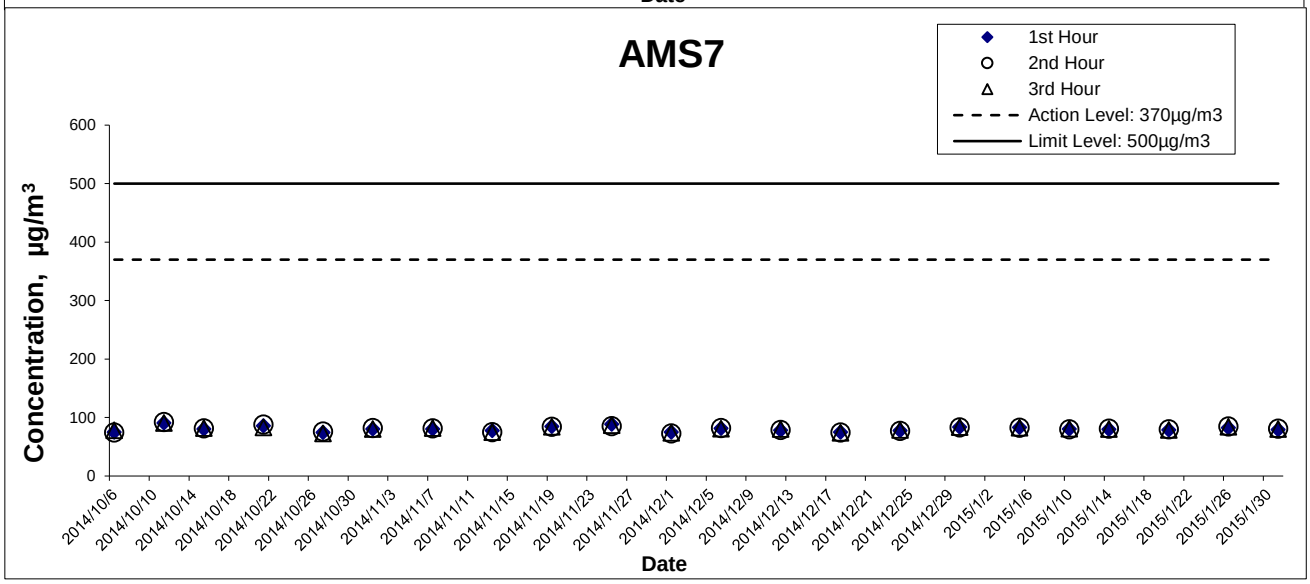
^ Action Level set out at AMS3 Ho Yu College is adopted.

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 ($\mu g/m^3$)
5-Jan-15	09:00	6-Jan-15	09:00	Sunny	19.0	1014.5	1.35	1.35	1.35	1944.0	2.7104	2.8644	0.1540	4255.98	4279.98	24.00	79	183	260
9-Jan-15	16:00	10-Jan-15	16:00	Sunny	16.3	1023.4	1.30	1.30	1.30	1876.3	2.7092	2.7858	0.0766	4279.98	4303.98	24.00	41	183	260
13-Jan-15	16:00	14-Jan-15	16:00	Sunny	13.7	1022.0	1.35	1.35	1.35	1944.0	2.7336	2.7779	0.0443	4303.98	4327.98	24.00	23	183	260
20-Jan-15	16:00	21-Jan-15	16:00	Sunny	15.9	1021.3	1.30	1.30	1.30	1876.3	2.7010	2.8382	0.1372	4327.98	4351.98	24.00	73	183	260
26-Jan-15	09:00	27-Jan-15	09:00	Sunny	18.6	1018.5	1.30	1.30	1.30	1876.3	2.6990	2.8587	0.1597	4351.98	4375.98	24.00	85	183	260
30-Jan-15	16:00	31-Jan-15	16:00	Fine	16.5	1025.6	1.31	1.31	1.31	1890.7	2.7778	2.9132	0.1354	4375.98	4399.98	24.00	72	183	260
																Average	59		
																Min	23		
																Max	85		







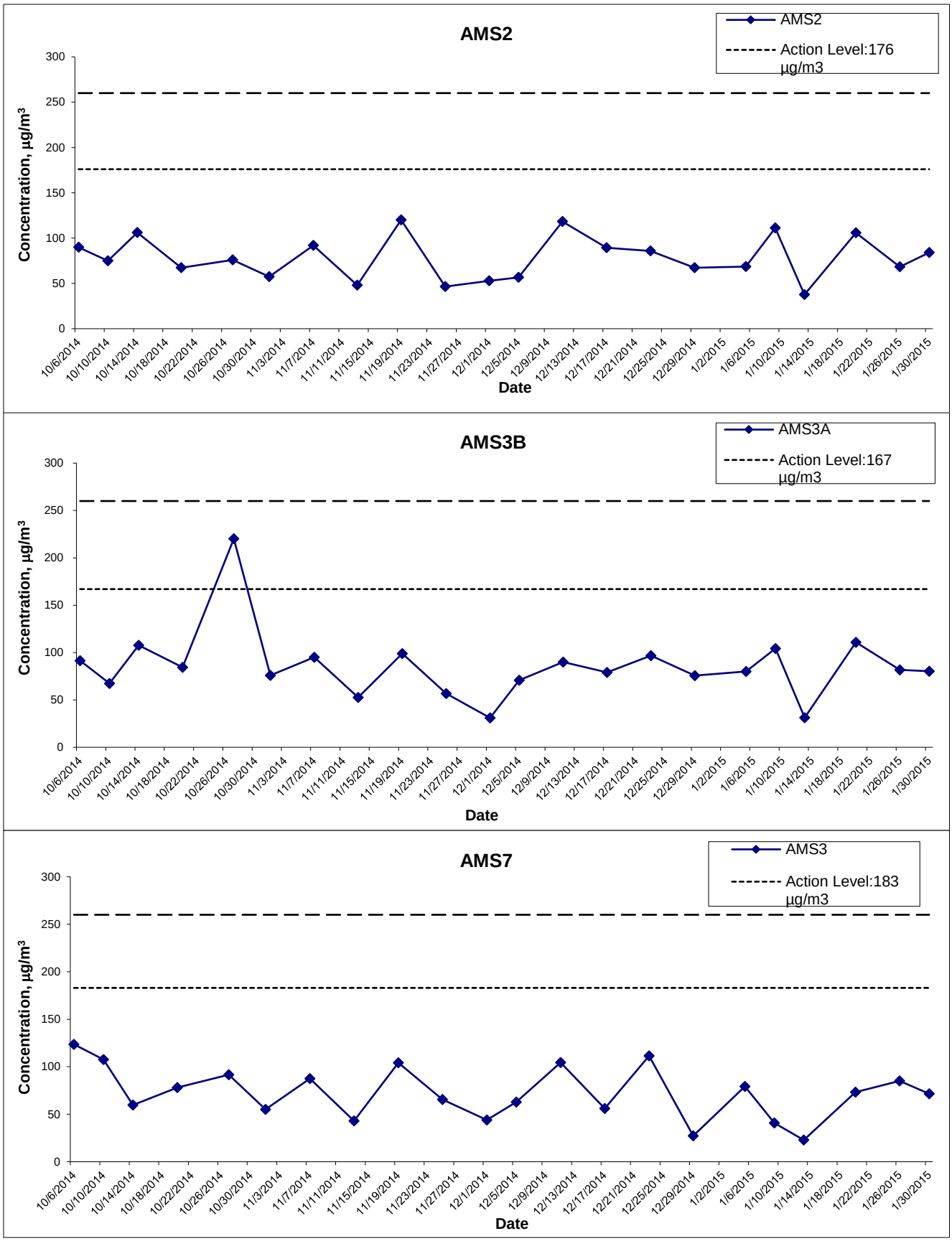
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

AECOM

Graphical Presentation of Impact 1-hour TSP Monitoring Results

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

Appendix G



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

Graphical Presentation of Impact 24-hour TSP Monitoring Results

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

Appendix G

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

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
01/05/2015	09:54:33	1.23	66
01/05/2015	10:54:33	2.76	106
01/05/2015	11:54:33	0.07	171
01/05/2015	12:54:33	1.06	113
01/05/2015	13:54:33	0.11	142
01/05/2015	14:54:33	0.63	135
01/05/2015	15:54:33	0.87	99
01/05/2015	16:54:33	0.39	120
01/05/2015	17:54:33	0.76	154
01/05/2015	18:54:33	1.47	118
01/05/2015	19:54:33	0.73	127
01/05/2015	20:54:33	2.49	111
01/05/2015	21:54:33	0.81	101
01/05/2015	22:54:33	0.36	138
01/05/2015	23:54:33	0.11	107
01/06/2015	00:54:33	0.11	58
01/06/2015	01:54:33	0.04	255
01/06/2015	02:54:33	0.01	135
01/06/2015	03:54:33	0.07	241
01/06/2015	04:54:33	0.03	266
01/06/2015	05:54:33	0.13	274
01/06/2015	06:54:33	0.25	240
01/06/2015	07:54:33	0.13	241
01/06/2015	08:54:33	0.06	324
01/06/2015	09:54:33	0.62	329
01/09/2015	16:54:33	1.66	270
01/09/2015	17:54:33	0.14	242
01/09/2015	18:54:33	0.71	233
01/09/2015	19:54:33	0.73	258
01/09/2015	20:54:33	0.43	213
01/09/2015	21:54:33	0.24	237
01/09/2015	22:54:33	0.46	238
01/09/2015	23:54:33	0.10	257
01/10/2015	00:54:33	0.10	253
01/10/2015	01:54:33	0.07	244
01/10/2015	02:54:33	0.03	239
01/10/2015	03:54:33	0.03	264
01/10/2015	04:54:33	0.03	123
01/10/2015	05:54:33	0.06	248
01/10/2015	06:54:33	0.18	120
01/10/2015	07:54:33	0.48	130
01/10/2015	08:54:33	0.14	164
01/10/2015	09:54:33	1.09	105
01/10/2015	10:54:33	1.24	60
01/10/2015	11:54:33	0.06	40
01/10/2015	12:54:33	0.08	87
01/10/2015	13:54:33	0.81	89
01/10/2015	14:54:33	0.15	314
01/10/2015	15:54:33	1.12	301
01/10/2015	16:54:33	0.29	269
01/13/2015	16:54:33	0.77	44
01/13/2015	17:54:33	0.67	16
01/13/2015	18:54:33	1.43	25
01/13/2015	19:54:33	0.49	78
01/13/2015	20:54:33	0.28	84
01/13/2015	21:54:33	0.15	359
01/13/2015	22:54:33	1.16	31
01/13/2015	23:54:33	0.15	99
01/14/2015	00:54:33	0.08	50
01/14/2015	01:54:33	0.03	52
01/14/2015	02:54:33	0.03	45
01/14/2015	03:54:33	0.60	12
01/14/2015	04:54:33	0.04	71
01/14/2015	05:54:33	0.14	78
01/14/2015	06:54:33	0.94	50
01/14/2015	07:54:33	0.15	118
01/14/2015	08:54:33	0.25	45
01/14/2015	09:54:33	0.10	60
01/14/2015	10:54:33	0.08	63
01/14/2015	11:54:33	0.08	26
01/14/2015	12:54:33	1.04	310
01/14/2015	13:54:33	0.55	336
01/14/2015	14:54:33	0.43	347
01/14/2015	15:54:33	0.80	38
01/14/2015	16:54:33	0.32	310
01/20/2015	16:54:33	0.31	91
01/20/2015	17:54:33	0.22	100
01/20/2015	18:54:33	0.27	114
01/20/2015	19:54:33	0.45	233
01/20/2015	20:54:33	0.35	249
01/20/2015	21:54:33	0.28	249
01/20/2015	22:54:33	0.52	262
01/20/2015	23:54:33	0.28	185
01/21/2015	00:54:33	0.06	255
01/21/2015	01:54:33	0.03	95
01/21/2015	02:54:33	0.06	248
01/21/2015	03:54:33	0.04	258
01/21/2015	04:54:33	0.04	232
01/21/2015	05:54:33	0.10	243

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

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
01/21/2015	06:54:33	0.20	242
01/21/2015	07:54:33	0.18	269
01/21/2015	08:54:33	0.14	253
01/21/2015	09:54:33	0.11	100
01/21/2015	10:54:33	0.34	269
01/21/2015	11:54:33	0.50	293
01/21/2015	12:54:33	0.64	266
01/21/2015	13:54:33	1.29	270
01/21/2015	14:54:33	0.95	322
01/21/2015	15:54:33	0.08	275
01/21/2015	16:54:33	0.13	237
01/26/2015	09:54:33	0.50	280
01/26/2015	10:54:33	0.24	50
01/26/2015	11:54:33	0.73	293
01/26/2015	12:54:33	0.97	294
01/26/2015	13:54:33	0.04	322
01/26/2015	14:54:33	1.38	101
01/26/2015	15:54:33	1.02	99
01/26/2015	16:54:33	0.11	48
01/26/2015	17:54:33	0.21	66
01/26/2015	18:54:33	0.71	271
01/26/2015	19:54:33	0.41	303
01/26/2015	20:54:33	0.27	39
01/26/2015	21:54:33	0.10	278
01/26/2015	22:54:33	0.03	256
01/26/2015	23:54:33	0.08	37
01/27/2015	00:54:33	0.04	163
01/27/2015	01:54:33	0.17	291
01/27/2015	02:54:33	0.64	111
01/27/2015	03:54:33	0.34	327
01/27/2015	04:54:33	0.35	134
01/27/2015	05:54:33	0.10	284
01/27/2015	06:54:33	2.22	312
01/27/2015	07:54:33	0.87	76
01/27/2015	08:54:33	3.16	116
01/27/2015	09:54:33	4.25	101
01/30/2015	16:54:33	1.45	287
01/30/2015	17:54:33	0.76	246
01/30/2015	18:54:33	0.69	214
01/30/2015	19:54:33	0.60	259
01/30/2015	20:54:33	5.02	247
01/30/2015	21:54:33	1.27	257
01/30/2015	22:54:33	0.83	239
01/30/2015	23:54:33	0.07	240
01/31/2015	00:54:33	0.06	242
01/31/2015	01:54:33	0.04	239
01/31/2015	02:54:33	0.01	14
01/31/2015	03:54:33	0.17	57
01/31/2015	04:54:33	0.03	96
01/31/2015	05:54:33	0.08	119
01/31/2015	06:54:33	0.21	141
01/31/2015	07:54:33	0.71	95
01/31/2015	08:54:33	0.13	67
01/31/2015	09:54:33	2.76	86
01/31/2015	10:54:33	0.32	86
01/31/2015	11:54:33	0.13	60
01/31/2015	12:54:33	0.97	95
01/31/2015	13:54:33	1.90	108
01/31/2015	14:54:33	0.10	154
01/31/2015	15:54:33	1.27	127
01/31/2015	16:54:33	0.24	132

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				
05-Jan-15	Sunny	10:35	62	70	66	<5m/s	62.9	75	N
14-Jan-15	Sunny	10:40	64	72	69	<5m/s	62.9	75	N
20-Jan-15	Sunny	10:46	63	71	67	<5m/s	62.9	75	N
26-Jan-15	Sunny	10:35	64	69	67	<5m/s	62.9	75	N
		Min	61	69	66				
		Max	64	71	69				
		Average	--	--	67				

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

Date	Weather Condition	Noise Level for 30-min, dB(A)#				Averaged Wind Speed (m/s)	Baseline Noise Level, dB(A) ^	Limit Level, dB(A)**	Exceedance (Y/N)
		Time	L90	L10	Leq				
05-Jan-15	Sunny	11:25	64	69	66	<5m/s	66.3	70	N
14-Jan-15	Sunny	11:26	64	71	68	<5m/s	66.3	70	N
20-Jan-15	Sunny	11:34	64	70	68	<5m/s	66.3	70	N
26-Jan-15	Sunny	11:15	62	67	65	<5m/s	66.3	70	N
		Min	61	69	65				
		Max	64	70	68				
		Average	--	--	67				

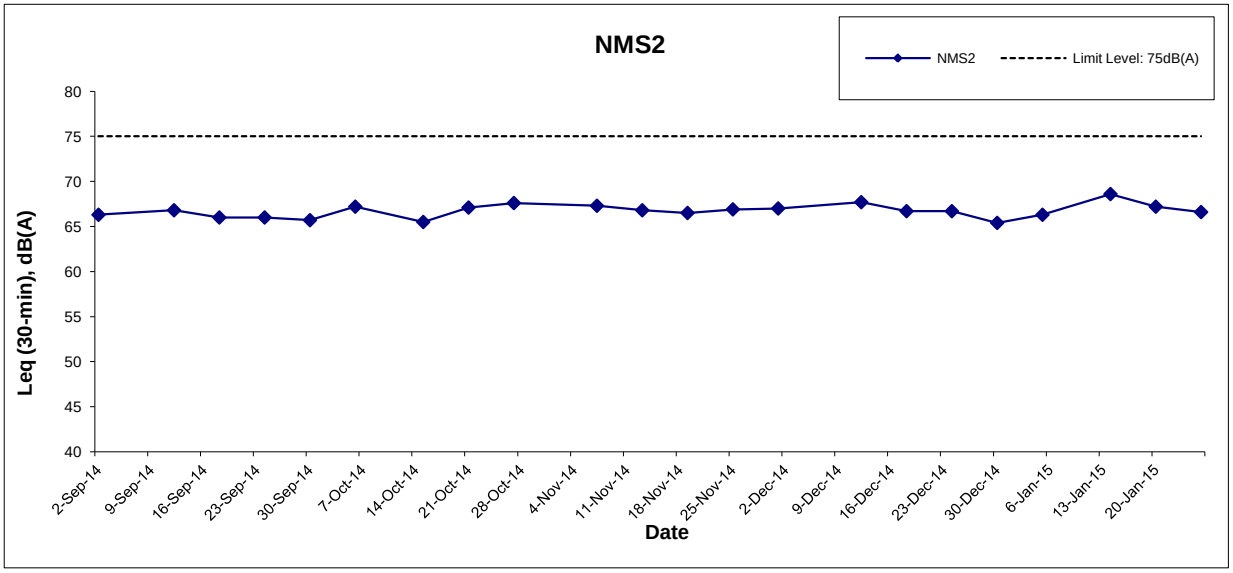
Remark:

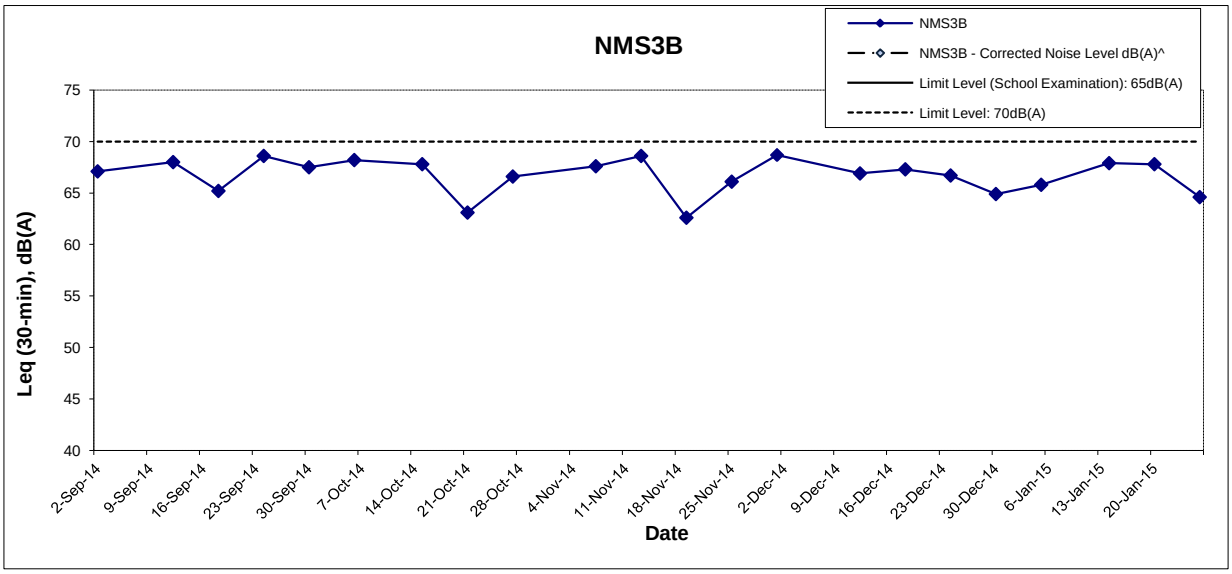
A correction of +3dB(A) was made to the free field measurement.

* 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.





Remarks: Effective from July 2012, the Limit Level at NMS3B 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.

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-Jan-15	Sunny	Moderate	11:33	6.5	Surface	1.0	16.6 16.6	16.6	8.1 8.1	8.1	32.8 32.8	32.8	115.0 116.2	115.6	9.2 9.3	9.2	9.2	2.7 2.6	2.7	2.7	3.0 2.7	2.9	3.5
					Middle	3.3	16.5 16.5	16.5	8.1 8.1	8.1	32.8 32.8	32.8	113.5 115.4	114.5	9.1 9.2	9.2		2.7 2.7	2.7		3.5 3.7	3.6	
					Bottom	5.5	16.4 16.6	16.5	8.0 8.1	8.1	32.8 32.8	32.8	112.8 115.2	114.0	9.0 9.2	9.1	9.1	2.8 2.8	2.8		3.7 4.3	4.0	
5-Jan-15	Cloudy	Moderate	12:46	6.6	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.4 32.4	32.4	113.0 113.0	113.0	9.0 9.0	9.0	9.0	2.7 2.8	2.8	2.8	4.0 4.8	4.4	5.7
					Middle	3.3	17.0 17.0	17.0	8.1 8.1	8.1	32.4 32.4	32.4	112.8 112.9	112.9	9.0 9.0	9.0		2.8 2.7	2.8		5.4 5.9	5.7	
					Bottom	5.6	17.0 17.0	17.0	8.1 8.1	8.1	32.4 32.4	32.4	112.8 112.6	112.7	9.0 9.0	9.0	9.0	2.8 2.8	2.8		6.2 8.0	7.1	
7-Jan-15	Cloudy	Moderate	13:26	6.6	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	30.9 31.0	31.0	108.7 108.7	108.7	8.6 8.6	8.6	8.6	3.5 3.6	3.6	3.6	5.1 5.2	5.2	6.0
					Middle	3.3	17.5 17.5	17.5	8.1 8.1	8.1	31.2 31.2	31.2	108.7 108.7	108.7	8.6 8.6	8.6		3.6 3.5	3.6		6.2 6.5	6.4	
					Bottom	5.6	17.5 17.5	17.5	8.1 8.1	8.1	31.2 31.4	31.3	108.7 108.6	108.7	8.6 8.6	8.6	8.6	3.6 3.6	3.6		6.6 6.1	6.4	
9-Jan-15	Sunny	Moderate	14:50	6.5	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	31.9 32.0	32.0	103.5 103.6	103.6	8.2 8.2	8.2	8.2	3.4 3.6	3.5	3.7	7.9 7.3	7.6	8.4
					Middle	3.3	17.2 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	103.4 103.2	103.3	8.2 8.2	8.2		3.7 3.7	3.7		8.6 9.1	8.9	
					Bottom	5.5	17.2 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	103.4 103.5	103.5	8.2 8.2	8.2	8.2	3.9 3.9	3.9		8.5 9.0	8.8	
12-Jan-15	Rainy	Rough	17:08	6.6	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	32.2 32.2	32.2	95.4 95.4	95.4	7.6 7.6	7.6	7.6	4.6 4.4	4.5	4.5	7.8 10.1	9.0	10.0
					Middle	3.3	16.9 16.8	16.9	7.9 7.9	7.9	32.2 32.2	32.2	95.2 95.3	95.3	7.6 7.6	7.6		4.7 4.5	4.6		11.8 9.8	10.8	
					Bottom	5.6	16.8 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	95.4 95.4	95.4	7.6 7.6	7.6	7.6	4.5 4.5	4.5		10.4 9.9	10.2	
14-Jan-15	Cloudy	Moderate	05:43	6.6	Surface	1.0	16.1 16.1	16.1	7.7 7.5	7.6	32.3 32.3	32.3	96.7 101.1	98.9	7.8 8.2	8.0	8.1	1.6 1.8	1.7	1.8	5.0 6.9	6.0	5.8
					Middle	3.3	16.1 16.1	16.1	7.4 7.7	7.6	32.3 32.3	32.3	103.1 97.4	100.3	8.4 7.9	8.1		1.8 1.7	1.8		6.2 4.5	5.4	
					Bottom	5.6	16.0 16.0	16.0	7.2 7.7	7.4	32.3 32.3	32.3	106.4 98.2	102.3	8.6 8.0	8.3	8.3	1.9 1.8	1.9		6.4 5.7	6.1	
16-Jan-15	Sunny	Moderate	09:33	6.5	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	97.9 100.0	99.0	7.9 8.1	8.0	8.0	2.5 2.5	2.5	2.5	5.0 3.6	4.3	6.3
					Middle	3.3	16.2 16.3	16.2	7.9 7.9	7.9	32.6 32.5	32.6	98.2 100.7	99.5	7.9 8.1	8.0		2.5 2.4	2.5		5.4 5.9	5.7	
					Bottom	5.5	16.2 16.1	16.2	7.9 7.9	7.9	32.6 32.6	32.6	98.4 101.9	100.2	7.9 8.2	8.1	8.1	2.4 2.4	2.4		9.0 8.5	8.8	
19-Jan-15	Sunny	Moderate	12:46	6.5	Surface	1.0	16.1 16.2	16.2	8.0 8.0	8.0	32.4 32.3	32.3	104.0 103.2	103.6	8.4 8.3	8.4	8.4	4.5 4.4	4.5	4.6	3.2 3.4	3.3	4.4
					Middle	3.3	16.1 16.1	16.1	8.0 8.0	8.0	32.5 32.4	32.4	104.6 103.0	103.8	8.5 8.3	8.4		4.7 4.5	4.6		5.1 4.1	4.6	
					Bottom	5.5	16.1 16.1	16.1	8.0 8.0	8.0	32.5 32.5	32.5	105.4 103.6	104.5	8.5 8.4	8.5	8.5	4.7 4.6	4.7		4.2 6.1	5.2	
21-Jan-15	Sunny	Moderate	13:16	6.5	Surface	1.0	16.5 16.5	16.5	7.9 7.9	7.9	31.7 31.7	31.7	99.7 99.8	99.8	8.0 8.1	8.0	8.0	9.2 9.1	9.2	9.3	12.0 11.4	11.7	13.5
					Middle	3.3	16.4 16.3	16.3	7.9 7.9	7.9	31.7 31.8	31.8	99.5 99.1	99.3	8.0 8.0	8.0		9.4 9.2	9.3		13.5 13.6	13.6	
					Bottom	5.5	16.3 16.2	16.2	7.9 7.9	7.9	32.0 32.1	32.1	99.2 99.0	99.1	8.0 8.0	8.0	8.0	9.5 9.5	9.5		15.5 15.0	15.3	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)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-Jan-15	Sunny	Moderate	14:31	6.5	Surface	1.0	16.5 16.5	16.5	7.9 7.9	7.9	31.3 31.3	31.3	98.4 98.4	98.4	8.0 8.0	8.0	8.0	9.9 9.5	9.7	10.7	9.3 9.2	9.3	10.0
					Middle	3.3	16.3 16.3	16.3	7.9 7.9	7.9	31.4 31.4	31.4	97.8 98.0	97.9	7.9 7.9	7.9		11.1 11.0	11.1		9.1 9.7	9.4	
					Bottom	5.5	16.3 16.3	16.3	7.9 7.9	7.9	31.4 31.4	31.4	97.9 98.1	98.0	7.9 8.0	7.9	7.9	11.2 11.1	11.2		11.6 10.9	11.3	
26-Jan-15	Sunny	Moderate	17:36	6.4	Surface	1.0	16.9 17.0	16.9	7.9 7.9	7.9	30.9 30.9	30.9	99.5 99.7	99.6	8.0 8.0	8.0	8.0	7.8 7.9	7.9	8.6	8.7 8.7	8.7	9.7
					Middle	3.2	16.8 16.8	16.8	7.9 7.9	7.9	31.0 31.0	31.0	99.3 99.1	99.2	8.0 8.0	8.0		8.8 8.7	8.8		9.6 9.2	9.4	
					Bottom	5.4	16.8 16.8	16.8	7.9 7.9	7.9	31.0 31.0	31.0	99.5 99.3	99.4	8.0 8.0	8.0	8.0	8.9 9.2	9.1		10.8 11.0	10.9	
28-Jan-15	Fine	Moderate	06:32	7.1	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	30.9 31.0	31.0	98.5 99.5	99.0	7.9 8.0	8.0	8.0	2.5 2.4	2.5	2.7	4.3 4.4	4.4	4.3
					Middle	3.6	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	98.7 100.0	99.4	7.9 8.0	8.0		2.7 2.6	2.7		4.8 4.5	4.7	
					Bottom	6.1	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	100.8 99.0	99.9	8.1 8.0	8.0	8.0	2.8 2.8	2.8		3.7 4.1	3.9	
30-Jan-15	Cloudy	Moderate	10:35	6.6	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	28.2 28.2	28.2	99.7 97.4	98.6	8.1 7.9	8.0	8.1	2.6 2.5	2.6	3.7	3.7 2.8	3.3	4.6
					Middle	3.3	17.2 17.2	17.2	7.8 7.8	7.8	28.5 28.4	28.4	101.0 97.9	99.5	8.2 7.9	8.1		4.3 4.1	4.2		4.6 5.3	5.0	
					Bottom	5.6	17.2 17.2	17.2	7.8 7.8	7.8	30.5 30.3	30.4	103.6 98.3	101.0	8.3 7.9	8.1	8.1	4.4 4.3	4.4		5.3 5.9	5.6	

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

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

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Jan-15	Sunny	Moderate	16:06	6.5	Surface	1.0	16.9 16.9	16.9	8.1 8.1	8.1	32.8 32.8	32.8	119.2 119.4	119.3	9.5 9.5	9.5	9.5	2.4 2.6	2.5	2.6	3.9 3.8	3.9	4.0
					Middle	3.3	16.7 16.7	16.7	8.1 8.1	8.1	32.9 32.9	32.9	118.0 118.5	118.3	9.4 9.4	9.4		2.6 2.6	2.6		4.0 4.4	4.2	
					Bottom	5.5	16.8 16.7	16.8	8.1 8.1	8.1	32.8 32.9	32.8	119.3 119.1	119.2	9.5 9.5	9.5	9.5	2.6 2.5	2.6		3.9 3.6	3.8	
5-Jan-15	Cloudy	Moderate	08:05	6.6	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	111.9 111.4	111.7	8.9 8.8	8.9	8.9	8.3 8.5	8.4	8.5	13.4 13.5	13.5	13.2
					Middle	3.3	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	110.9 111.6	111.3	8.8 8.9	8.8		8.4 8.4	8.4		12.7 12.7	12.7	
					Bottom	5.6	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	109.9 111.6	110.8	8.7 8.9	8.8	8.8	8.5 8.9	8.7		13.4 13.2	13.3	
7-Jan-15	Rainy	Moderate	09:18	6.5	Surface	1.0	17.5 17.5	17.5	8.0 8.0	8.0	31.2 31.2	31.2	107.7 107.9	107.8	8.6 8.6	8.6	8.6	6.5 6.2	6.4	6.4	6.1 6.3	6.2	7.4
					Middle	3.3	17.5 17.5	17.5	8.0 8.0	8.0	31.3 31.3	31.3	107.9 107.3	107.6	8.6 8.5	8.5		6.4 6.4	6.4		7.3 7.5	7.4	
					Bottom	5.5	17.5 17.5	17.5	8.0 8.0	8.0	31.5 31.3	31.4	106.5 107.7	107.1	8.4 8.5	8.5	8.5	6.5 6.1	6.3		8.6 8.6	8.6	
9-Jan-15	Sunny	Moderate	10:14	6.6	Surface	1.0	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	103.9 105.3	104.6	8.3 8.4	8.4	8.4	8.2 8.2	8.2	8.3	10.7 11.2	11.0	11.5
					Middle	3.3	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	104.1 106.0	105.1	8.3 8.5	8.4		8.3 8.2	8.3		11.4 10.8	11.1	
					Bottom	5.6	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	107.4 104.4	105.9	8.6 8.3	8.5	8.5	8.4 8.4	8.4		12.0 12.5	12.3	
12-Jan-15	Cloudy	Moderate	12:12	6.8	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	32.3 32.3	32.3	99.2 98.4	98.8	7.9 7.9	7.9	7.9	7.4 7.5	7.5	8.5	13.6 12.4	13.0	11.7
					Middle	3.4	16.7 16.7	16.7	7.9 7.9	7.9	32.3 32.3	32.3	98.4 99.6	99.0	7.9 8.0	7.9		8.1 8.4	8.3		10.9 10.1	10.5	
					Bottom	5.8	16.7 16.7	16.7	7.9 7.9	7.9	32.3 32.3	32.3	98.4 101.5	100.0	7.9 8.1	8.0	8.0	9.3 9.8	9.6		11.5 11.6	11.6	
14-Jan-15	Cloudy	Moderate	13:18	6.8	Surface	1.0	16.4 16.4	16.4	7.6 7.7	7.7	32.4 32.4	32.4	99.8 96.5	98.2	8.0 7.8	7.9	8.0	1.7 1.7	1.7	1.8	5.1 5.5	5.3	8.0
					Middle	3.4	16.4 16.4	16.4	7.6 7.7	7.7	32.4 32.4	32.4	101.7 97.2	99.5	8.2 7.8	8.0		1.8 1.7	1.8		9.4 9.7	9.6	
					Bottom	5.8	16.4 16.3	16.4	7.7 7.5	7.6	32.4 32.4	32.4	98.0 106.4	102.2	7.9 8.6	8.2	8.2	1.9 1.9	1.9		8.6 9.5	9.1	
16-Jan-15	Sunny	Moderate	14:15	6.1	Surface	1.0	16.5 16.5	16.5	7.9 7.9	7.9	32.7 32.6	32.7	97.3 96.9	97.1	7.8 7.8	7.8	7.8	3.3 3.1	3.2	3.2	6.3 7.1	6.7	6.3
					Middle	3.1	16.4 16.3	16.3	7.9 7.9	7.9	32.7 32.8	32.7	96.8 97.3	97.1	7.8 7.8	7.8		3.2 3.3	3.3		5.6 6.2	5.9	
					Bottom	5.1	16.2 16.2	16.2	7.9 8.0	7.9	32.7 32.9	32.8	96.5 97.4	97.0	7.8 7.8	7.8	7.8	3.2 3.0	3.1		6.6 5.8	6.2	
19-Jan-15	Sunny	Moderate	16:56	6.5	Surface	1.0	16.2 16.2	16.2	7.9 7.9	7.9	32.3 32.3	32.3	102.0 101.7	101.9	8.2 8.2	8.2	8.2	5.2 5.1	5.2	5.3	6.1 6.6	6.4	6.3
					Middle	3.3	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	101.3 101.5	101.4	8.2 8.2	8.2		5.2 5.4	5.3		6.0 4.3	5.2	
					Bottom	5.5	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	101.9 101.8	101.9	8.2 8.2	8.2	8.2	5.3 5.5	5.4		7.8 6.8	7.3	
21-Jan-15	Sunny	Moderate	08:35	6.5	Surface	1.0	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	99.4 100.6	100.0	8.0 8.1	8.1	8.2	24.4 24.4	24.4	24.5	24.5 25.6	25.1	**25.8**
					Middle	3.3	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	99.3 102.3	100.8	8.0 8.3	8.2		24.6 24.7	24.7		24.4 25.8	25.1	
					Bottom	5.5	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	103.6 99.4	101.5	8.4 8.0	8.2	8.2	24.4 24.6	24.5		26.9 27.2	27.1	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)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-Jan-15	Sunny	Moderate	09:48	6.7	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	30.9 30.9	30.9	98.4 97.9	98.2	8.0 8.0	8.0	8.0	24.8 24.3	24.6	24.6	36.8 37.5	37.2	
					Middle	3.4	16.3 16.3	16.3	7.9 7.9	7.9	31.0 30.9	30.9	97.9 99.8	98.9	8.0 8.1	8.0		24.5 24.4	24.5		37.0 37.3	37.2	**<u>37.7</u>**
					Bottom	5.7	16.3 16.3	16.3	7.9 7.9	7.9	30.9 30.9	30.9	100.6 98.1	99.4	8.2 8.0	8.1	8.1	24.5 24.6	24.6		38.3 39.3	38.8	
26-Jan-15	Sunny	Moderate	11:43	6.6	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	30.9 30.9	30.9	99.0 98.5	98.8	8.0 7.9	7.9	7.9	14.2 13.7	14.0	15.6	12.7 12.5	12.6	14.3
					Middle	3.3	16.8 16.8	16.8	7.9 7.9	7.9	30.9 30.9	30.9	98.4 99.0	98.7	7.9 8.0	7.9		16.6 16.1	16.4		14.6 14.1	14.4	
					Bottom	5.6	16.8 16.8	16.8	7.9 7.9	7.9	31.0 30.9	31.0	99.8 98.6	99.2	8.0 7.9	8.0	8.0	16.2 16.3	16.3		16.2 15.7	16.0	
28-Jan-15	Fine	Moderate	13:31	6.7	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	31.0 31.0	31.0	100.3 101.9	101.1	8.0 8.2	8.1	8.2	2.5 2.6	2.6	2.7	7.0 7.2	7.1	6.9
					Middle	3.4	17.0 17.0	17.0	7.9 7.9	7.9	31.0 31.0	31.0	102.6 100.8	101.7	8.2 8.1	8.2		2.7 2.7	2.7		7.3 6.4	6.9	
					Bottom	5.7	16.9 17.0	17.0	7.9 7.9	7.9	31.0 31.0	31.0	103.3 101.4	102.4	8.3 8.1	8.2	8.2	2.8 2.9	2.9		6.2 6.9	6.6	
30-Jan-15	Cloudy	Moderate	14:50	6.7	Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	28.4 28.4	28.4	95.6 95.8	95.7	7.8 7.8	7.8	7.8	3.3 3.2	3.3	4.7	5.0 5.2	5.1	5.8
					Middle	3.4	17.2 17.2	17.2	7.8 7.8	7.8	29.8 30.6	30.2	95.5 95.3	95.4	7.7 7.6	7.7		5.5 5.4	5.5		5.5 5.3	5.4	
					Bottom	5.7	17.1 17.2	17.2	7.8 7.8	7.8	30.8 30.8	30.8	95.5 95.5	95.5	7.6 7.6	7.6	7.6	5.4 5.2	5.3		6.3 7.2	6.8	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Jan-15	Sunny	Moderate	10:38	13.7	Surface	1.0	17.9 17.9	17.9	8.0 7.8	7.9	30.8 31.0	30.9	103.8 104.0	103.9	8.2 8.2	8.2	8.2	1.8 1.7	1.8	1.9	0.6 1.5	1.1	1.4
					Middle	6.9	17.8 17.8	17.8	7.9 7.6	7.8	30.9 31.2	31.0	103.2 101.2	102.2	8.2 8.0	8.1		1.9 1.9	1.9		1.4 1.6	1.5	
					Bottom	12.7	17.8 17.8	17.8	7.4 7.9	7.6	31.4 30.9	31.2	100.4 103.7	102.1	7.9 8.2	8.1	8.1	1.9 1.9	1.9		1.8 1.3	1.6	
5-Jan-15	Cloudy	Moderate	12:52	13.0	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.4 30.4	30.4	112.9 111.8	112.4	8.9 8.8	8.9	8.8	2.0 1.9	2.0	2.0	7.7 7.7	7.7	8.8
					Middle	6.5	17.8 17.8	17.8	8.1 8.1	8.1	30.5 30.5	30.5	112.8 107.8	110.3	8.9 8.5	8.7		2.0 2.0	2.0		9.2 8.9	9.1	
					Bottom	12.0	17.9 17.8	17.8	8.1 8.1	8.1	30.5 30.6	30.6	111.7 104.5	108.1	8.8 8.3	8.6	8.6	2.0 2.1	2.1		9.7 9.5	9.6	
7-Jan-15	Cloudy	Moderate	14:35	13.3	Surface	1.0	18.2 18.2	18.2	8.0 8.0	8.0	30.0 30.0	30.0	110.4 110.9	110.7	8.7 8.7	8.7	8.7	2.5 2.4	2.5	2.7	5.6 5.0	5.3	7.0
					Middle	6.7	18.2 18.2	18.2	7.9 7.9	7.9	30.3 30.2	30.3	109.7 109.1	109.4	8.6 8.6	8.6		2.7 2.6	2.7		6.2 7.2	6.7	
					Bottom	12.3	18.2 18.2	18.2	8.0 7.9	8.0	30.3 30.3	30.3	108.6 109.7	109.2	8.6 8.6	8.6	8.6	2.9 2.7	2.8		8.9 9.1	9.0	
9-Jan-15	Sunny	Moderate	15:43	13.8	Surface	1.0	18.2 18.2	18.2	7.9 7.9	7.9	30.7 30.7	30.7	103.3 105.3	104.3	8.1 8.3	8.2	8.1	2.5 2.3	2.4	2.3	6.6 6.6	6.6	7.0
					Middle	6.9	18.1 18.1	18.1	7.9 7.9	7.9	30.8 31.2	31.0	99.8 100.6	100.2	7.8 7.9	7.9		2.3 2.1	2.2		7.0 6.3	6.7	
					Bottom	12.8	18.1 18.1	18.1	7.9 7.9	7.9	31.1 30.9	31.0	102.1 100.7	101.4	8.0 7.9	8.0	8.0	2.2 2.3	2.3		7.3 8.2	7.8	
12-Jan-15	Rainy	Rough	17:51	12.2	Surface	1.0	17.8 17.7	17.8	7.8 7.9	7.8	30.3 30.2	30.2	96.6 94.3	95.5	7.7 7.5	7.6	7.6	2.7 2.7	2.7	2.8	5.2 7.5	6.4	5.8
					Middle	6.1	17.8 17.8	17.8	7.8 7.8	7.8	30.4 30.3	30.4	97.8 94.6	96.2	7.8 7.5	7.6		2.9 2.8	2.9		4.6 4.5	4.6	
					Bottom	11.2	17.8 17.8	17.8	7.8 7.8	7.8	30.3 30.4	30.4	94.9 102.5	98.7	7.5 8.1	7.8	7.8	2.8 2.9	2.9		7.2 5.4	6.3	
14-Jan-15	Cloudy	Moderate	05:43	12.4	Surface	1.0	17.5 17.5	17.5	7.7 7.6	7.6	30.7 30.7	30.7	93.1 94.7	93.9	7.4 7.5	7.5	7.5	2.1 2.1	2.1	2.1	7.0 6.8	6.9	7.0
					Middle	6.2	17.5 17.5	17.5	7.5 7.6	7.6	30.7 30.8	30.7	95.5 93.2	94.4	7.6 7.4	7.5		2.0 2.2	2.1		7.7 5.9	6.8	
					Bottom	11.4	17.5 17.5	17.5	7.5 7.6	7.5	30.7 30.7	30.7	95.9 93.4	94.7	7.6 7.4	7.5	7.5	2.2 2.2	2.2		7.2 7.6	7.4	
16-Jan-15	Sunny	Moderate	08:59	13.1	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	30.4 30.0	30.2	104.4 96.3	100.4	8.4 7.7	8.1	8.0	1.2 1.2	1.2	1.3	5.8 5.0	5.4	5.4
					Middle	6.6	17.1 17.1	17.1	7.9 7.9	7.9	30.2 30.1	30.2	95.8 100.3	98.1	7.7 8.1	7.9		1.3 1.4	1.4		4.6 4.4	4.5	
					Bottom	12.1	17.1 17.1	17.1	7.9 7.8	7.9	30.9 30.1	30.5	95.7 98.4	97.1	7.7 7.9	7.8	7.8	1.4 1.4	1.4		6.0 6.5	6.3	
19-Jan-15	Sunny	Moderate	12:02	13.7	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	31.3 31.4	31.3	95.5 98.4	97.0	7.6 7.9	7.7	7.8	5.5 5.3	5.4	6.3	4.3 5.0	4.7	5.7
					Middle	6.9	17.1 17.1	17.1	7.7 7.7	7.7	31.3 31.6	31.4	96.6 97.6	97.1	7.7 7.8	7.8		7.0 6.8	6.9		4.7 4.2	4.5	
					Bottom	12.7	17.1 17.1	17.1	7.7 7.7	7.7	31.7 31.4	31.5	98.2 96.6	97.4	7.8 7.7	7.8	7.8	6.8 6.6	6.7		7.8 8.0	7.9	
21-Jan-15	Sunny	Moderate	13:49	11.8	Surface	1.0	17.2 17.2	17.2	7.6 7.6	7.6	30.8 30.9	30.8	97.3 97.1	97.2	7.8 7.8	7.8	7.8	4.0 4.0	4.0	4.4	16.8 16.2	16.5	17.4
					Middle	5.9	17.1 17.1	17.1	7.6 7.7	7.6	30.8 30.8	30.8	96.4 96.9	96.7	7.7 7.8	7.7		4.1 4.1	4.1		17.5 18.0	17.8	
					Bottom	10.8	17.1 17.1	17.1	7.6 7.7	7.6	30.8 30.9	30.8	96.9 97.8	97.4	7.8 7.8	7.8	7.8	5.1 5.3	5.2		17.6 18.4	18.0	

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-Jan-15	Sunny	Moderate	15:12	13.4	Surface	1.0	17.4 17.4	17.4	7.7 7.7	7.7	29.9 29.9	29.9	95.7 96.2	96.0	7.7 7.7	7.7	7.7	6.0 5.8	5.9	6.9	6.2 6.2	6.2	6.4
					Middle	6.7	17.3 17.3	17.3	7.7 7.7	7.7	30.0 30.0	30.0	95.6 95.2	95.4	7.7 7.6	7.7		7.0 7.1	7.1		6.4 6.3	6.4	
					Bottom	12.4	17.2 17.2	17.2	7.7 7.7	7.7	30.1 30.1	30.1	95.4 95.6	95.5	7.7 7.7	7.7	7.7	7.5 7.6	7.6		6.8 6.3	6.6	
26-Jan-15	Sunny	Moderate	18:02	12.9	Surface	1.0	17.6 17.6	17.6	7.6 7.6	7.6	30.1 30.2	30.2	95.2 94.7	95.0	7.6 7.5	7.6	7.6	10.1 10.0	10.1	10.4	10.4 11.5	11.0	13.4
					Middle	6.5	17.5 17.5	17.5	7.7 7.7	7.7	30.4 30.3	30.3	94.2 94.4	94.3	7.5 7.5	7.5		10.4 10.3	10.4		14.0 13.3	13.7	
					Bottom	11.9	17.5 17.4	17.5	7.7 7.7	7.7	30.5 30.5	30.5	93.9 94.3	94.1	7.5 7.5	7.5	7.5	10.5 10.6	10.6		16.1 14.7	15.4	
28-Jan-15	Fine	Moderate	06:45	12.6	Surface	1.0	17.6 17.6	17.6	7.5 7.4	7.5	29.4 29.4	29.4	94.0 95.0	94.5	7.5 7.6	7.6	7.6	2.6 2.6	2.6	3.0	3.1 3.4	3.3	3.4
					Middle	6.3	17.6 17.6	17.6	7.4 7.5	7.5	29.4 29.4	29.4	94.7 93.6	94.2	7.6 7.5	7.5		3.2 3.2	3.2		3.7 3.2	3.5	
					Bottom	11.6	17.6 17.6	17.6	7.4 7.4	7.4	29.5 29.6	29.5	94.1 95.6	94.9	7.5 7.6	7.6	7.6	3.3 3.3	3.3		3.7 3.2	3.5	
30-Jan-15	Cloudy	Moderate	09:27	13.3	Surface	1.0	17.7 17.7	17.7	7.6 7.6	7.6	29.3 29.2	29.3	97.9 95.9	96.9	7.8 7.7	7.7	7.7	2.3 2.2	2.3	2.3	2.8 3.3	3.1	5.0
					Middle	6.7	17.7 17.7	17.7	7.6 7.5	7.5	29.7 30.0	29.9	95.3 97.0	96.2	7.6 7.7	7.7		2.2 2.3	2.3		5.1 5.8	5.5	
					Bottom	12.3	17.7 17.7	17.7	7.5 7.5	7.5	29.8 30.2	30.0	95.7 98.3	97.0	7.6 7.8	7.7	7.7	2.2 2.3	2.3		6.5 6.1	6.3	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	16:49	13.9	Surface	1.0	18.1 18.1	18.1	8.1 8.1	8.1	31.6 31.6	31.6	108.5 108.5	108.5	8.5 8.5	8.5	8.4	1.7 1.6	1.7	1.9	1.0 1.4	1.2	1.2
					Middle	7.0	17.8 17.9	17.9	8.1 8.1	8.1	31.6 31.7	31.6	105.7 105.8	105.8	8.3 8.3	8.3		2.0 1.8	1.9		1.2 1.1	1.2	
					Bottom	12.9	17.8 17.8	17.8	8.1 8.1	8.1	31.6 31.6	31.6	106.5 106.3	106.4	8.4 8.4	8.4	8.4	2.0 2.0	2.0		0.9 1.2	1.1	
5-Jan-15	Cloudy	Moderate	07:44	13.0	Surface	1.0	17.8 17.8	17.8	8.1 8.0	8.1	29.3 28.6	28.9	111.4 110.8	111.1	8.9 8.9	8.9	8.9	2.0 1.9	2.0	2.1	3.4 3.3	3.4	4.4
					Middle	6.5	17.8 17.8	17.8	8.0 8.1	8.0	28.1 29.2	28.6	109.2 110.5	109.9	8.8 8.8	8.8		2.0 2.1	2.1		3.7 3.4	3.6	
					Bottom	12.0	17.8 17.8	17.8	7.9 8.1	8.0	27.5 29.1	28.3	107.5 110.3	108.9	8.7 8.8	8.7	8.7	2.2 2.1	2.2		6.2 6.3	6.3	
7-Jan-15	Rainy	Moderate	08:30	13.4	Surface	1.0	18.2 18.2	18.2	7.9 7.9	7.9	29.1 29.2	29.1	111.0 110.4	110.7	8.8 8.7	8.8	8.8	4.3 4.4	4.4	4.9	7.1 6.9	7.0	8.5
					Middle	6.7	18.2 18.2	18.2	7.9 7.9	7.9	29.3 29.2	29.3	109.9 110.3	110.1	8.7 8.7	8.7		5.0 5.1	5.1		8.1 9.0	8.6	
					Bottom	12.4	18.2 18.2	18.2	7.9 7.9	7.9	29.2 29.4	29.3	109.9 110.2	110.1	8.7 8.7	8.7	8.7	5.4 5.2	5.3		10.1 9.5	9.8	
9-Jan-15	Sunny	Moderate	09:24	13.7	Surface	1.0	17.8 17.8	17.8	7.9 7.9	7.9	30.0 29.8	29.9	105.0 103.1	104.1	8.3 8.2	8.3	8.3	3.0 3.2	3.1	3.0	6.2 6.4	6.3	7.9
					Middle	6.9	17.8 17.8	17.8	7.9 7.9	7.9	29.9 30.1	30.0	102.9 106.1	104.5	8.2 8.4	8.3		2.8 3.0	2.9		7.4 7.9	7.7	
					Bottom	12.7	17.8 17.8	17.8	7.9 7.9	7.9	30.1 29.9	30.0	108.8 103.8	106.3	8.6 8.2	8.4	8.4	2.9 2.9	2.9		9.6 9.8	9.7	
12-Jan-15	Cloudy	Moderate	11:09	12.7	Surface	1.0	17.9 17.9	17.9	7.7 7.6	7.7	30.1 30.1	30.1	95.7 97.7	96.7	7.6 7.7	7.7	7.7	3.5 3.4	3.5	5.5	5.1 3.5	4.3	5.1
					Middle	6.4	17.9 17.9	17.9	7.7 7.6	7.6	30.2 30.2	30.2	96.9 96.5	96.7	7.7 7.6	7.7		6.8 6.5	6.7		6.8 5.2	6.0	
					Bottom	11.7	17.9 17.9	17.9	7.5 7.7	7.6	30.4 30.2	30.3	98.2 96.2	97.2	7.8 7.6	7.7	7.7	6.2 6.1	6.2		3.8 6.0	4.9	
14-Jan-15	Cloudy	Moderate	13:22	12.6	Surface	1.0	17.6 17.6	17.6	7.9 7.9	7.9	30.8 30.8	30.8	94.0 95.6	94.8	7.5 7.6	7.5	7.6	2.1 2.1	2.1	2.2	4.2 4.7	4.5	4.1
					Middle	6.3	17.6 17.6	17.6	7.9 7.9	7.9	30.8 30.7	30.8	93.8 96.6	95.2	7.4 7.7	7.6		2.2 2.2	2.2		3.2 4.2	3.7	
					Bottom	11.6	17.5 17.5	17.5	7.9 7.9	7.9	30.8 30.9	30.9	93.9 98.7	96.3	7.5 7.8	7.7	7.7	2.2 2.1	2.2		4.2 4.0	4.1	
16-Jan-15	Sunny	Moderate	14:59	12.7	Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	30.6 30.6	30.6	96.7 96.9	96.8	7.7 7.7	7.7	7.7	0.5 0.6	0.6	0.7	5.8 6.3	6.1	6.5
					Middle	6.4	17.2 17.2	17.2	7.8 7.8	7.8	30.7 30.6	30.7	95.9 96.1	96.0	7.7 7.7	7.7		0.6 0.7	0.7		7.4 6.9	7.2	
					Bottom	11.7	17.1 17.2	17.2	7.8 7.8	7.8	30.6 30.6	30.6	95.6 95.6	95.6	7.7 7.6	7.7	7.7	0.9 0.8	0.9		6.1 6.2	6.2	
19-Jan-15	Sunny	Moderate	17:42	13.9	Surface	1.0	17.2 17.3	17.2	7.8 7.8	7.8	30.7 30.8	30.7	95.7 95.0	95.4	7.7 7.6	7.6	7.6	2.5 2.3	2.4	2.5	3.7 3.0	3.4	3.4
					Middle	7.0	17.1 17.2	17.1	7.8 7.8	7.8	30.7 30.8	30.7	96.1 94.4	95.3	7.7 7.6	7.6		2.6 2.7	2.7		2.6 2.7	2.7	
					Bottom	12.9	17.1 17.1	17.1	7.8 7.8	7.8	30.7 30.7	30.7	95.0 97.9	96.5	7.6 7.8	7.7	7.7	2.3 2.3	2.3		4.3 3.8	4.1	
21-Jan-15	Sunny	Moderate	07:58	13.4	Surface	1.0	17.0 17.0	17.0	7.6 7.6	7.6	30.6 30.6	30.6	98.4 99.3	98.9	7.9 8.0	7.9	7.9	15.0 15.3	15.2	15.9	6.1 5.4	5.8	6.8
					Middle	6.7	17.0 17.0	17.0	7.5 7.6	7.6	30.7 30.6	30.7	99.3 98.3	98.8	8.0 7.9	7.9		15.8 15.8	15.8		6.5 6.3	6.4	
					Bottom	12.4	17.0 17.0	17.0	7.6 7.5	7.5	30.7 30.8	30.7	98.6 99.8	99.2	7.9 8.0	8.0	8.0	16.6 16.8	16.7		8.8 7.8	8.3	

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 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-Jan-15	Sunny	Moderate	08:37	13.3	Surface	1.0	17.2 17.2	17.2	7.7 7.7	7.7	29.0 28.9	29.0	97.9 98.7	98.3	7.9 8.0	8.0	8.0	6.1 6.1	6.1	6.4	9.1 9.0	9.1	9.2
					Middle	6.7	17.2 17.2	17.2	7.7 7.7	7.7	29.0 29.0	29.0	97.7 98.9	98.3	7.9 8.0	8.0		6.4 6.5	6.5		9.8 9.0	9.4	
					Bottom	12.3	17.2 17.2	17.2	7.6 7.7	7.7	29.0 29.0	29.0	99.2 98.3	98.8	8.0 8.0	8.0	8.0	6.7 6.5	6.6		9.5 8.8	9.2	
26-Jan-15	Sunny	Moderate	11:02	13.5	Surface	1.0	17.5 17.6	17.5	7.5 7.5	7.5	28.7 28.6	28.6	96.9 97.7	97.3	7.8 7.9	7.8	7.8	2.8 2.7	2.8	3.0	3.7 4.3	4.0	5.2
					Middle	6.8	17.4 17.4	17.4	7.5 7.6	7.5	28.8 28.9	28.8	96.7 97.5	97.1	7.8 7.9	7.8		2.9 3.0	3.0		5.7 5.1	5.4	
					Bottom	12.5	17.4 17.4	17.4	7.5 7.5	7.5	28.9 28.8	28.8	96.5 95.9	96.2	7.8 7.7	7.8	7.8	3.1 3.1	3.1		6.5 5.9	6.2	
28-Jan-15	Fine	Moderate	13:21	12.5	Surface	1.0	17.8 17.7	17.8	7.5 7.4	7.5	29.6 29.6	29.6	95.3 95.3	95.3	7.6 7.6	7.6	7.6	2.1 2.2	2.2	2.3	1.3 1.7	1.5	1.5
					Middle	6.3	17.7 17.6	17.6	7.5 7.5	7.5	29.7 29.8	29.7	94.3 93.5	93.9	7.5 7.5	7.5		2.2 2.4	2.3		1.7 1.5	1.6	
					Bottom	11.5	17.6 17.6	17.6	7.5 7.5	7.5	29.8 29.9	29.9	94.4 93.4	93.9	7.5 7.5	7.5	7.5	2.4 2.5	2.5		1.5 1.4	1.5	
30-Jan-15	Cloudy	Moderate	15:42	13.0	Surface	1.0	17.9 18.0	17.9	7.7 7.7	7.7	29.0 28.8	28.9	97.9 101.9	99.9	7.8 8.1	8.0	7.9	2.2 2.4	2.3	2.4	3.8 3.5	3.7	5.6
					Middle	6.5	17.6 17.7	17.7	7.7 7.6	7.7	29.4 29.5	29.5	96.1 98.1	97.1	7.7 7.8	7.8		2.5 2.4	2.5		4.8 5.9	5.4	
					Bottom	12.0	17.7 17.7	17.7	7.7 7.6	7.6	29.4 30.1	29.7	98.2 102.1	100.2	7.9 8.1	8.0	8.0	2.4 2.5	2.5		7.7 7.5	7.6	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:59	15.9	Surface	1.0	16.6 16.6	16.6	8.1 8.1	8.1	32.8 32.8	32.8	115.6 116.7	116.2	9.3 9.3	9.3	9.3	2.7 2.8	2.8	3.2	3.5 3.3	3.4	4.0
					Middle	8.0	16.4 16.5	16.5	8.1 8.1	8.1	32.8 32.8	32.8	114.7 115.6	115.2	9.2 9.3	9.2		3.3 3.3	3.3		3.7 3.8	3.8	
					Bottom	14.9	16.4 16.5	16.5	8.1 8.1	8.1	32.8 32.8	32.8	116.3 115.8	116.1	9.3 9.3	9.3		3.3 3.5	3.4		4.4 4.9	4.7	
5-Jan-15	Cloudy	Moderate	12:22	16.2	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.4 32.4	32.4	112.7 112.3	112.5	9.0 8.9	8.9	8.9	4.9 4.8	4.9	5.3	4.9 5.6	5.3	6.0
					Middle	8.1	17.0 17.0	17.0	8.1 8.1	8.1	32.4 32.6	32.5	112.4 111.9	112.2	8.9 8.9	8.9		5.4 5.2	5.3		5.6 5.8	5.7	
					Bottom	15.2	17.0 17.0	17.0	8.1 8.1	8.1	32.5 32.6	32.5	112.2 112.0	112.1	8.9 8.9	8.9	8.9	5.6 5.6	5.6		7.4 6.8	7.1	
7-Jan-15	Cloudy	Moderate	13:10	16.2	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.0 31.0	31.0	108.9 108.9	108.9	8.6 8.7	8.6	8.6	3.7 3.7	3.7	4.2	2.7 2.6	2.7	6.6
					Middle	8.1	17.5 17.5	17.5	8.1 8.1	8.1	31.6 31.5	31.5	108.6 108.7	108.7	8.6 8.6	8.6		4.4 4.5	4.5		7.8 8.8	8.3	
					Bottom	15.2	17.5 17.5	17.5	8.1 8.1	8.1	31.5 31.7	31.6	108.5 108.6	108.6	8.6 8.6	8.6	8.6	4.5 4.5	4.5		9.3 8.5	8.9	
9-Jan-15	Sunny	Moderate	14:31	16.1	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	32.0 31.9	32.0	103.5 103.6	103.6	8.2 8.2	8.2	8.2	3.7 3.5	3.6	3.7	8.7 9.5	9.1	9.5
					Middle	8.1	17.2 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	103.1 103.3	103.2	8.2 8.2	8.2		3.5 3.7	3.6		9.0 9.2	9.1	
					Bottom	15.1	17.1 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	103.8 103.5	103.7	8.3 8.2	8.2	8.2	4.0 4.0	4.0		10.2 10.3	10.3	
12-Jan-15	Rainy	Rough	16:49	16.2	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	32.2 32.2	32.2	95.5 95.6	95.6	7.6 7.6	7.6	7.6	4.0 4.1	4.1	4.2	10.2 11.4	10.8	11.0
					Middle	8.1	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	95.6 95.3	95.5	7.6 7.6	7.6		4.1 4.3	4.2		11.2 9.5	10.4	
					Bottom	15.2	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	95.5 95.7	95.6	7.6 7.6	7.6	7.6	4.4 4.2	4.3		10.7 12.6	11.7	
14-Jan-15	Cloudy	Moderate	06:06	16.5	Surface	1.0	15.6 15.6	15.6	7.7 7.5	7.6	32.3 32.3	32.3	100.0 102.3	101.2	8.2 8.4	8.3	8.4	1.4 1.3	1.4	1.5	5.9 5.5	5.7	5.7
					Middle	8.3	15.6 15.6	15.6	7.4 7.7	7.5	32.2 32.3	32.3	104.7 100.4	102.6	8.6 8.2	8.4		1.4 1.5	1.5		3.8 4.4	4.1	
					Bottom	15.5	15.6 15.5	15.5	7.6 7.2	7.4	32.3 32.2	32.2	101.1 106.4	103.8	8.3 8.7	8.5	8.5	1.6 1.5	1.6		6.8 7.5	7.2	
16-Jan-15	Sunny	Moderate	09:56	16.0	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	96.6 96.6	96.6	7.8 7.8	7.8	7.8	4.6 4.6	4.6	4.6	3.2 3.8	3.5	5.5
					Middle	8.0	16.2 16.2	16.2	7.9 7.9	7.9	32.6 32.6	32.6	96.1 96.2	96.2	7.8 7.8	7.8		4.6 4.6	4.6		4.8 5.7	5.3	
					Bottom	15.0	16.1 16.2	16.2	7.9 7.9	7.9	32.6 32.5	32.6	96.1 96.3	96.2	7.8 7.8	7.8	7.8	4.6 4.6	4.6		7.3 8.0	7.7	
19-Jan-15	Sunny	Moderate	13:06	16.4	Surface	1.0	16.2 16.2	16.2	8.0 8.0	8.0	32.3 32.3	32.3	102.3 102.0	102.2	8.3 8.2	8.3	8.3	4.7 4.8	4.8	4.9	4.5 5.3	4.9	6.4
					Middle	8.2	16.1 16.1	16.1	8.0 8.0	8.0	32.5 32.5	32.5	101.8 101.4	101.6	8.2 8.2	8.2		4.9 4.8	4.9		5.5 6.5	6.0	
					Bottom	15.4	16.1 16.1	16.1	8.0 8.0	8.0	32.5 32.5	32.5	102.1 102.7	102.4	8.3 8.3	8.3	8.3	4.8 4.9	4.9		8.3 8.4	8.4	
21-Jan-15	Sunny	Moderate	12:51	16.5	Surface	1.0	16.4 16.5	16.4	7.9 7.9	7.9	31.7 31.7	31.7	99.5 99.8	99.7	8.0 8.1	8.0	8.0	9.9 9.4	9.7	10.6	14.6 14.9	14.8	14.2
					Middle	8.3	16.2 16.2	16.2	7.9 7.9	7.9	32.2 32.1	32.1	98.7 98.9	98.8	8.0 8.0	8.0		10.6 10.3	10.5		13.6 12.6	13.1	
					Bottom	15.5	16.2 16.2	16.2	7.9 7.9	7.9	32.2 32.1	32.2	99.0 99.1	99.1	8.0 8.0	8.0	8.0	11.8 11.4	11.6		14.4 15.2	14.8	

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-Jan-15	Sunny	Moderate	14:12	17.0	Surface	1.0	16.4 16.5	16.4	7.9 7.9	7.9	31.3 31.3	31.3	98.4 97.9	98.2	8.0 7.9	7.9	7.9	8.9 8.7	8.8	9.2	9.2 9.1	9.2	10.3
					Middle	8.5	16.3 16.3	16.3	7.9 7.9	7.9	31.4 31.4	31.4	98.0 97.5	97.8	8.0 7.9	7.9		9.3 9.4	9.4		9.5 9.5	9.5	
					Bottom	16.0	16.3 16.3	16.3	7.9 7.9	7.9	31.4 31.4	31.4	98.9 97.6	98.3	8.0 7.9	8.0	8.0	9.4 9.2	9.3		11.8 12.5	12.2	
26-Jan-15	Sunny	Moderate	17:11	16.4	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	30.8 30.9	30.8	99.7 99.4	99.6	8.0 8.0	8.0	8.0	8.4 8.2	8.3	8.6	6.9 7.3	7.1	7.5
					Middle	8.2	16.8 16.8	16.8	7.9 7.9	7.9	31.0 31.1	31.1	99.0 99.0	99.0	8.0 8.0	8.0		8.5 8.8	8.7		7.9 8.1	8.0	
					Bottom	15.4	16.9 16.8	16.8	7.9 7.9	7.9	31.0 31.1	31.0	99.5 99.6	99.6	8.0 8.0	8.0	8.0	8.8 8.9	8.9		7.0 7.9	7.5	
28-Jan-15	Fine	Moderate	06:54	16.6	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	30.9 30.9	30.9	100.8 98.9	99.9	8.1 7.9	8.0	8.1	1.6 1.6	1.6	1.7	4.0 3.9	4.0	3.6
					Middle	8.3	16.9 16.9	16.9	7.9 7.9	7.9	30.9 30.9	30.9	101.6 99.3	100.5	8.2 8.0	8.1		1.7 1.6	1.7		2.9 3.0	3.0	
					Bottom	15.6	16.9 16.9	16.9	7.9 7.9	7.9	30.9 31.0	31.0	100.1 102.4	101.3	8.0 8.2	8.1	8.1	1.7 1.7	1.7		4.0 3.8	3.9	
30-Jan-15	Cloudy	Moderate	11:01	15.9	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	28.1 28.1	28.1	96.1 96.3	96.2	7.8 7.8	7.8	7.8	3.5 3.5	3.5	4.3	5.4 4.7	5.1	5.6
					Middle	8.0	17.2 17.2	17.2	7.8 7.8	7.8	30.6 30.4	30.5	96.4 96.0	96.2	7.7 7.7	7.7		4.6 4.5	4.6		6.1 5.2	5.7	
					Bottom	14.9	17.1 17.2	17.2	7.8 7.8	7.8	31.0 30.6	30.8	96.1 97.0	96.6	7.7 7.8	7.7	7.7	4.8 4.8	4.8		6.2 5.6	5.9	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	15:42	16.8	Surface	1.0	16.9 16.7	16.8	8.1 8.1	8.1	32.8 32.9	32.9	116.5 115.1	115.8	9.3 9.2	9.2	9.2	3.3 3.3	3.3	3.6	3.8 3.6	3.7	3.6
					Middle	8.4	16.5 16.6	16.5	8.1 8.1	8.1	33.0 32.9	33.0	114.5 114.5	114.5	9.2 9.2	9.2		3.5 3.4	3.5		3.5 3.8	3.7	
					Bottom	15.8	16.5 16.6	16.6	8.1 8.1	8.1	33.0 32.9	32.9	117.7 115.8	116.8	9.4 9.2	9.3	9.3	3.9 3.8	3.9		3.6 3.3	3.5	
5-Jan-15	Cloudy	Moderate	08:31	16.7	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.5 112.6	112.6	8.9 8.9	8.9	8.9	8.3 8.9	8.6	8.6	11.9 10.5	11.2	12.5
					Middle	8.4	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.1 112.4	112.3	8.9 8.9	8.9		8.5 8.6	8.6		12.7 13.4	13.1	
					Bottom	15.7	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.2 112.0	112.1	8.9 8.9	8.9	8.9	8.6 8.6	8.6		13.0 13.2	13.1	
7-Jan-15	Rainy	Moderate	09:40	16.8	Surface	1.0	17.5 17.5	17.5	8.0 8.1	8.1	31.3 31.2	31.2	108.0 108.4	108.2	8.6 8.6	8.6	8.6	8.8 8.7	8.8	8.8	6.1 6.3	6.2	6.5
					Middle	8.4	17.5 17.5	17.5	8.0 8.1	8.1	31.5 31.5	31.5	107.6 108.2	107.9	8.5 8.6	8.5		8.7 8.8	8.8		6.0 6.7	6.4	
					Bottom	15.8	17.5 17.5	17.5	8.0 8.0	8.0	31.5 31.5	31.5	107.9 107.9	107.9	8.5 8.5	8.5	8.5	8.8 8.8	8.8		7.0 7.0	7.0	
9-Jan-15	Sunny	Moderate	10:36	16.6	Surface	1.0	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	102.1 101.9	102.0	8.2 8.1	8.1	8.1	5.3 5.1	5.2	5.2	11.5 11.1	11.3	12.2
					Middle	8.3	16.9 16.9	16.9	8.0 8.0	8.0	32.0 31.9	31.9	101.4 101.6	101.5	8.1 8.1	8.1		5.2 5.2	5.2		12.1 12.9	12.5	
					Bottom	15.6	16.9 16.9	16.9	8.0 8.0	8.0	31.2 32.0	31.6	102.8 102.0	102.4	8.2 8.1	8.2	8.2	5.3 5.3	5.3		13.4 12.4	12.9	
12-Jan-15	Cloudy	Moderate	12:33	16.1	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	32.3 32.3	32.3	97.6 97.7	97.7	7.8 7.8	7.8	7.8	8.6 8.3	8.5	8.9	12.0 9.9	11.0	10.8
					Middle	8.1	16.7 16.7	16.7	7.9 7.9	7.9	32.3 32.3	32.3	97.5 97.4	97.5	7.8 7.8	7.8		9.3 9.0	9.2		11.5 10.3	10.9	
					Bottom	15.1	16.7 16.7	16.7	7.9 7.9	7.9	32.3 32.2	32.3	97.5 97.7	97.6	7.8 7.8	7.8	7.8	9.4 8.5	9.0		10.6 10.3	10.5	
14-Jan-15	Cloudy	Moderate	12:56	16.7	Surface	1.0	16.3 16.3	16.3	7.6 7.7	7.6	32.3 32.3	32.3	102.6 98.9	100.8	8.3 8.0	8.1	8.2	1.5 1.4	1.5	1.5	5.1 5.3	5.2	5.7
					Middle	8.4	16.1 16.2	16.1	7.7 7.5	7.6	32.4 32.3	32.3	99.5 104.1	101.8	8.1 8.4	8.2		1.5 1.5	1.5		6.0 6.3	6.2	
					Bottom	15.7	16.2 16.0	16.1	7.6 7.4	7.5	32.3 32.3	32.3	100.3 106.8	103.6	8.1 8.7	8.4	8.4	1.6 1.6	1.6		5.7 5.8	5.8	
16-Jan-15	Sunny	Moderate	13:41	16.2	Surface	1.0	16.3 16.3	16.3	8.0 7.9	8.0	32.6 32.6	32.6	95.1 95.4	95.3	7.7 7.7	7.7	7.7	2.4 2.4	2.4	2.3	6.1 5.2	5.7	5.7
					Middle	8.1	16.3 16.3	16.3	8.0 7.9	8.0	32.6 32.6	32.6	95.0 95.0	95.0	7.7 7.7	7.7		2.2 2.3	2.3		6.4 5.5	6.0	
					Bottom	15.2	16.3 16.3	16.3	8.0 8.0	8.0	32.6 32.6	32.6	95.1 95.1	95.1	7.7 7.7	7.7	7.7	2.3 2.2	2.3		5.6 5.3	5.5	
19-Jan-15	Sunny	Moderate	16:31	16.0	Surface	1.0	16.2 16.2	16.2	7.9 7.9	7.9	32.3 32.3	32.3	102.0 101.6	101.8	8.2 8.2	8.2	8.2	5.8 5.3	5.6	5.6	6.1 5.6	5.9	5.6
					Middle	8.0	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	101.4 101.9	101.7	8.2 8.2	8.2		5.6 5.5	5.6		5.8 3.7	4.8	
					Bottom	15.0	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	102.9 102.1	102.5	8.3 8.2	8.3	8.3	5.5 5.7	5.6		6.9 5.4	6.2	
21-Jan-15	Sunny	Moderate	09:01	16.0	Surface	1.0	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	99.0 99.2	99.1	8.0 8.0	8.0	8.0	24.6 24.2	24.4	24.6	28.2 27.5	27.9	**30.2**
					Middle	8.0	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	99.0 99.0	99.0	8.0 8.0	8.0		24.6 24.1	24.4		28.3 27.2	27.8	
					Bottom	15.0	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	99.1 99.3	99.2	8.0 8.0	8.0	8.0	24.9 25.3	25.1		34.5 35.4	35.0	

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 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-Jan-15	Sunny	Moderate	10:10	16.0	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	31.0 31.0	31.0	97.7 97.8	97.8	7.9 7.9	7.9	7.9	22.3 22.2	22.3	21.9	31.5 31.5	31.5	**33.8**
					Middle	8.0	16.3 16.3	16.3	7.9 7.9	7.9	30.9 31.0	30.9	97.5 97.7	97.6	7.9 7.9	7.9		22.1 21.2	21.7		32.9 34.4	33.7	
					Bottom	15.0	16.3 16.3	16.3	7.9 7.9	7.9	30.9 31.0	31.0	97.7 97.8	97.8	7.9 7.9	7.9	7.9	22.1 21.2	21.7		37.1 35.4	36.3	
26-Jan-15	Sunny	Moderate	12:04	16.5	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	30.9 30.9	30.9	97.8 97.7	97.8	7.9 7.9	7.9	7.9	18.4 18.2	18.3	18.4	13.2 13.5	13.4	15.1
					Middle	8.3	16.8 16.8	16.8	7.9 7.9	7.9	31.0 31.0	31.0	97.7 97.8	97.8	7.9 7.9	7.9		18.2 18.6	18.4		14.9 15.5	15.2	
					Bottom	15.5	16.8 16.8	16.8	7.9 7.9	7.9	31.0 31.0	31.0	98.3 97.8	98.1	7.9 7.9	7.9	7.9	18.8 18.4	18.6		16.3 17.0	16.7	
28-Jan-15	Fine	Moderate	13:09	16.7	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	30.9 30.9	30.9	98.7 100.2	99.5	7.9 8.0	8.0	8.0	1.5 1.5	1.5	1.6	6.6 7.4	7.0	7.2
					Middle	8.4	17.0 17.0	17.0	7.9 7.9	7.9	30.9 30.9	30.9	100.7 99.0	99.9	8.1 8.0	8.0		1.6 1.6	1.6		7.7 8.0	7.9	
					Bottom	15.7	16.9 17.0	16.9	7.9 7.9	7.9	31.0 30.9	30.9	102.1 99.5	100.8	8.2 8.0	8.1	8.1	1.7 1.8	1.8		6.5 6.7	6.6	
30-Jan-15	Cloudy	Moderate	14:26	17.0	Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	28.4 28.5	28.4	95.8 96.0	95.9	7.8 7.8	7.8	7.7	3.1 3.3	3.2	4.6	3.8 3.9	3.9	4.8
					Middle	8.5	17.1 17.1	17.1	7.8 7.8	7.8	30.8 30.8	30.8	95.3 95.4	95.4	7.6 7.6	7.6		5.4 5.2	5.3		5.1 5.1	5.1	
					Bottom	16.0	17.1 17.2	17.2	7.8 7.8	7.8	30.9 30.8	30.8	95.7 95.6	95.7	7.7 7.7	7.7	7.7	5.5 5.3	5.4		5.1 5.6	5.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	10:25	10.0	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	32.8 32.8	32.8	101.7 102.0	101.9	8.0 8.1	8.1	8.1	1.4 1.5	1.5	1.4	1.1 0.9	1.0	1.0
					Middle	5.0	17.1 17.1	17.1	7.9 7.9	7.9	32.8 32.8	32.8	101.6 101.5	101.6	8.0 8.0	8.0		1.4 1.4	1.4		1.0 1.0	1.0	
					Bottom	9.0	17.1 17.1	17.1	7.9 7.9	7.9	32.8 32.8	32.8	101.3 101.6	101.5	8.0 8.0	8.0	8.0	1.4 1.4	1.4		1.0 0.9	1.0	
5-Jan-15	Cloudy	Moderate	14:07	10.1	Surface	1.0	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	102.6 102.9	102.8	8.1 8.1	8.1	8.1	1.2 1.3	1.3	1.3	5.4 5.2	5.3	5.4
					Middle	5.1	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	101.9 102.5	102.2	8.1 8.1	8.1		1.3 1.3	1.3		5.5 5.3	5.4	
					Bottom	9.1	17.1 17.1	17.1	8.0 8.1	8.0	32.9 32.9	32.9	102.5 101.7	102.1	8.1 8.1	8.1	8.1	1.3 1.3	1.3		5.8 4.9	5.4	
7-Jan-15	Cloudy	Moderate	14:54	10.1	Surface	1.0	17.3 17.3	17.3	8.0 8.0	8.0	32.5 32.5	32.5	103.3 103.3	103.3	8.2 8.2	8.2	8.2	1.2 1.2	1.2	1.3	2.7 2.7	2.7	2.6
					Middle	5.1	17.3 17.3	17.3	8.0 8.0	8.0	32.5 32.5	32.5	103.2 102.9	103.1	8.2 8.1	8.1		1.4 1.3	1.4		2.8 2.1	2.5	
					Bottom	9.1	17.3 17.3	17.3	7.9 8.0	8.0	32.6 32.6	32.6	103.9 103.2	103.6	8.2 8.2	8.2	8.2	1.4 1.4	1.4		2.4 2.7	2.6	
9-Jan-15	Sunny	Moderate	16:12	10.1	Surface	1.0	17.4 17.3	17.4	8.0 8.0	8.0	32.6 32.6	32.6	101.0 100.9	101.0	8.0 8.0	8.0	8.0	2.1 2.2	2.2	2.2	3.9 3.0	3.5	5.0
					Middle	5.1	17.3 17.3	17.3	8.0 8.0	8.0	32.6 32.6	32.6	100.3 100.8	100.6	7.9 8.0	7.9		2.2 2.1	2.2		5.1 5.6	5.4	
					Bottom	9.1	17.3 17.3	17.3	8.0 8.0	8.0	32.6 32.6	32.6	101.1 100.5	100.8	8.0 7.9	8.0	8.0	2.1 2.1	2.1		5.3 6.8	6.1	
12-Jan-15	Rainy	Rough	18:25	9.8	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	32.6 32.6	32.6	98.2 95.8	97.0	7.8 7.6	7.7	7.8	0.9 0.9	0.9	1.4	5.9 7.3	6.6	5.8
					Middle	4.9	17.0 17.0	17.0	7.9 7.9	7.9	32.6 32.6	32.6	103.0 96.5	99.8	8.2 7.7	7.9		1.3 1.4	1.4		4.8 5.7	5.3	
					Bottom	8.8	17.0 17.0	17.0	7.9 7.9	7.9	32.6 32.6	32.6	105.6 97.0	101.3	8.4 7.7	8.0	8.0	1.7 1.8	1.8		5.5 5.5	5.5	
14-Jan-15	Cloudy	Moderate	04:36	10.2	Surface	1.0	16.4 16.4	16.4	7.6 7.3	7.5	32.4 32.4	32.4	94.0 98.8	96.4	7.6 8.0	7.8	7.9	1.6 1.6	1.6	1.7	4.9 4.2	4.6	5.8
					Middle	5.1	16.5 16.4	16.5	7.2 7.5	7.4	32.5 32.5	32.5	101.7 94.9	98.3	8.2 7.6	7.9		1.7 1.6	1.7		6.0 7.0	6.5	
					Bottom	9.2	16.4 16.4	16.4	6.9 7.4	7.2	32.4 32.5	32.5	105.2 96.2	100.7	8.5 7.7	8.1	8.1	1.9 1.9	1.9		6.6 5.7	6.2	
16-Jan-15	Sunny	Moderate	08:28	10.2	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	95.6 95.6	95.6	7.7 7.7	7.7	7.7	1.5 1.4	1.5	1.5	2.9 4.4	3.7	4.0
					Middle	5.1	16.3 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	95.5 95.2	95.4	7.7 7.7	7.7		1.5 1.5	1.5		3.0 3.9	3.5	
					Bottom	9.2	16.3 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	95.5 95.2	95.4	7.7 7.7	7.7	7.7	1.5 1.6	1.6		4.6 4.8	4.7	
19-Jan-15	Sunny	Moderate	11:30	10.3	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	92.5 92.4	92.5	7.5 7.4	7.4	7.4	3.2 3.4	3.3	3.3	4.2 4.1	4.2	4.1
					Middle	5.2	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.5	32.5	92.0 92.1	92.1	7.4 7.4	7.4		3.3 3.3	3.3		3.7 3.2	3.5	
					Bottom	9.3	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.5	32.5	92.2 92.2	92.2	7.4 7.4	7.4	7.4	3.3 3.3	3.3		4.3 4.9	4.6	
21-Jan-15	Sunny	Moderate	14:31	10.2	Surface	1.0	16.4 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	95.1 96.3	95.7	7.7 7.8	7.7	7.7	2.5 2.4	2.5	2.5	6.1 6.3	6.2	6.4
					Middle	5.1	16.2 16.2	16.2	7.9 7.9	7.9	32.6 32.5	32.6	96.9 95.0	96.0	7.8 7.7	7.7		2.4 2.4	2.4		7.2 6.8	7.0	
					Bottom	9.2	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.6	32.6	95.6 99.2	97.4	7.7 8.0	7.8	7.8	2.5 2.5	2.5		6.2 5.8	6.0	

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 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-Jan-15	Sunny	Moderate	16:01	10.1	Surface	1.0	16.5 16.5	16.5	7.9 7.9	7.9	31.9 31.9	31.9	96.2 97.1	96.7	7.7 7.8	7.8	7.8	3.5 3.5	3.5	3.5	6.5 7.0	6.8	8.2
					Middle	5.1	16.4 16.4	16.4	7.9 7.9	7.9	32.0 32.0	32.0	95.9 96.7	96.3	7.7 7.8	7.8		3.5 3.4	3.5		8.2 9.0	8.6	
					Bottom	9.1	16.4 16.4	16.4	7.9 7.9	7.9	32.1 32.1	32.1	97.6 96.2	96.9	7.9 7.8	7.8	7.8	3.3 3.4	3.4		9.1 9.4	9.3	
26-Jan-15	Sunny	Moderate	18:41	10.2	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	31.5 31.6	31.5	97.5 97.6	97.6	7.8 7.8	7.8	7.8	1.7 1.8	1.8	1.8	7.4 6.2	6.8	8.2
					Middle	5.1	16.7 16.7	16.7	7.9 7.9	7.9	31.7 31.7	31.7	96.6 97.1	96.9	7.8 7.8	7.8		1.7 1.8	1.8		8.8 7.5	8.2	
					Bottom	9.2	16.7 16.7	16.7	7.9 7.9	7.9	31.7 31.8	31.8	97.2 97.7	97.5	7.8 7.8	7.8	7.8	1.8 1.8	1.8		10.2 9.1	9.7	
28-Jan-15	Fine	Moderate	05:24	10.2	Surface	1.0	16.8 16.8	16.8	7.8 7.8	7.8	31.4 31.4	31.4	98.7 101.3	100.0	7.9 8.1	8.0	8.1	2.2 2.2	2.2	2.3	1.6 1.8	1.7	2.0
					Middle	5.1	16.8 16.8	16.8	7.8 7.8	7.8	31.4 31.4	31.4	102.5 99.2	100.9	8.2 8.0	8.1		2.3 2.3	2.3		1.8 1.9	1.9	
					Bottom	9.2	16.8 16.7	16.8	7.8 7.9	7.9	31.4 31.4	31.4	100.2 103.7	102.0	8.1 8.3	8.2	8.2	2.4 2.5	2.5		2.8 2.1	2.5	
30-Jan-15	Cloudy	Moderate	09:21	10.3	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	31.6 31.6	31.6	94.7 94.8	94.8	7.6 7.6	7.6	7.6	1.5 1.5	1.5	1.5	5.4 4.8	5.1	5.8
					Middle	5.2	16.7 16.7	16.7	7.8 7.8	7.8	32.0 31.9	32.0	94.4 94.2	94.3	7.6 7.6	7.6		1.5 1.5	1.5		4.1 5.4	4.8	
					Bottom	9.3	16.7 16.7	16.7	7.8 7.8	7.8	32.0 32.0	32.0	94.7 94.6	94.7	7.6 7.6	7.6	7.6	1.6 1.5	1.6		8.0 6.9	7.5	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	17:31	10.2	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	32.9 32.9	32.9	105.3 105.6	105.5	8.3 8.3	8.3	8.3	1.4 1.3	1.4	1.4	1.6 1.5	1.6	2.0
					Middle	5.1	17.1 17.1	17.1	8.0 8.0	8.0	33.0 32.9	33.0	105.0 105.2	105.1	8.3 8.3	8.3		1.3 1.4	1.4		2.0 1.5	1.8	
					Bottom	9.2	17.1 17.1	17.1	8.0 8.0	8.0	33.0 32.9	32.9	105.4 105.1	105.3	8.3 8.3	8.3	8.3	1.3 1.3	1.3		2.2 2.9	2.6	
5-Jan-15	Cloudy	Moderate	07:00	10.5	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.8 32.8	32.8	111.5 111.5	111.5	8.8 8.8	8.8	8.8	1.4 1.3	1.4	1.5	6.7 6.4	6.6	6.9
					Middle	5.3	17.0 17.0	17.0	8.1 8.1	8.1	32.8 32.8	32.8	111.2 111.1	111.2	8.8 8.8	8.8		1.5 1.5	1.5		6.6 6.3	6.5	
					Bottom	9.5	17.0 17.0	17.0	8.1 8.1	8.1	32.8 32.8	32.8	110.9 111.0	111.0	8.8 8.8	8.8	8.8	1.6 1.5	1.6		7.7 7.4	7.6	
7-Jan-15	Rainy	Moderate	08:11	10.5	Surface	1.0	17.4 17.4	17.4	8.1 8.1	8.1	31.7 31.7	31.7	109.8 109.8	109.8	8.7 8.7	8.7	8.7	1.4 1.6	1.5	1.6	3.9 3.2	3.6	4.3
					Middle	5.3	17.5 17.5	17.5	8.1 8.1	8.1	31.8 31.8	31.8	109.7 109.6	109.7	8.7 8.7	8.7		1.5 1.5	1.5		4.3 4.1	4.2	
					Bottom	9.5	17.5 17.5	17.5	8.1 8.1	8.1	31.9 31.9	31.9	109.3 109.5	109.4	8.6 8.7	8.6	8.6	1.8 1.8	1.8		4.6 5.8	5.2	
9-Jan-15	Sunny	Moderate	09:09	10.1	Surface	1.0	17.1 17.1	17.1	8.0 8.0	8.0	32.1 32.1	32.1	102.3 102.2	102.3	8.1 8.1	8.1	8.1	1.5 1.4	1.5	1.5	5.9 5.9	5.9	6.5
					Middle	5.1	17.1 17.1	17.1	8.0 8.0	8.0	32.1 32.1	32.1	102.0 102.1	102.1	8.1 8.1	8.1		1.5 1.5	1.5		6.1 6.6	6.4	
					Bottom	9.1	17.1 17.1	17.1	8.0 8.0	8.0	32.1 32.1	32.1	102.1 102.0	102.1	8.1 8.1	8.1	8.1	1.5 1.5	1.5		8.0 6.5	7.3	
12-Jan-15	Cloudy	Moderate	10:55	9.6	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	32.4 32.4	32.4	95.9 95.5	95.7	7.6 7.6	7.6	7.6	0.9 0.9	0.9	0.9	12.8 9.9	11.4	6.6
					Middle	4.8	17.1 17.1	17.1	7.9 7.9	7.9	32.5 32.5	32.5	95.6 95.4	95.5	7.6 7.6	7.6		0.9 0.9	0.9		3.8 4.0	3.9	
					Bottom	8.6	17.1 17.1	17.1	7.9 7.9	7.9	32.5 32.5	32.5	95.6 95.5	95.6	7.6 7.6	7.6	7.6	0.8 0.9	0.9		5.0 3.8	4.4	
14-Jan-15	Cloudy	Moderate	14:25	10.3	Surface	1.0	16.8 16.8	16.8	7.6 7.7	7.6	32.7 32.7	32.7	99.8 96.2	98.0	8.0 7.7	7.8	7.9	1.6 1.7	1.7	1.8	3.4 4.3	3.9	3.5
					Middle	5.2	16.8 16.8	16.8	7.7 7.5	7.6	32.7 32.7	32.7	96.9 102.6	99.8	7.7 8.2	8.0		1.7 1.8	1.8		4.3 2.9	3.6	
					Bottom	9.3	16.8 16.8	16.8	7.3 7.6	7.5	32.7 32.7	32.7	106.7 97.7	102.2	8.5 7.8	8.1	8.1	1.9 1.9	1.9		2.7 3.2	3.0	
16-Jan-15	Sunny	Moderate	15:36	10.2	Surface	1.0	16.3 16.4	16.3	8.0 7.9	8.0	32.6 32.6	32.6	95.3 95.4	95.4	7.7 7.7	7.7	7.7	2.2 2.2	2.2	2.2	5.7 6.1	5.9	5.6
					Middle	5.1	16.3 16.3	16.3	8.0 8.0	8.0	32.6 32.6	32.6	95.0 95.2	95.1	7.6 7.7	7.7		2.2 2.1	2.2		3.9 5.9	4.9	
					Bottom	9.2	16.3 16.3	16.3	8.0 8.0	8.0	32.6 32.6	32.6	95.3 95.1	95.2	7.7 7.7	7.7	7.7	2.1 2.1	2.1		5.7 6.2	6.0	
19-Jan-15	Sunny	Moderate	18:32	10.6	Surface	1.0	16.3 16.2	16.3	7.9 7.9	7.9	32.5 32.5	32.5	92.1 92.1	92.1	7.4 7.4	7.4	7.4	3.5 3.4	3.5	3.5	4.9 3.3	4.1	4.8
					Middle	5.3	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.5	32.5	91.9 91.9	91.9	7.4 7.4	7.4		3.4 3.3	3.4		5.9 4.6	5.3	
					Bottom	9.6	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.5	32.5	92.1 92.0	92.1	7.4 7.4	7.4	7.4	3.5 3.5	3.5		4.4 5.3	4.9	
21-Jan-15	Sunny	Moderate	07:30	10.4	Surface	1.0	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	97.9 97.9	97.9	7.9 7.9	7.9	7.9	9.0 8.9	9.0	8.7	9.8 8.6	9.2	10.5
					Middle	5.2	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	97.9 97.8	97.9	7.9 7.9	7.9		8.4 8.5	8.5		11.1 10.9	11.0	
					Bottom	9.4	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	97.8 97.8	97.8	7.9 7.9	7.9	7.9	8.6 8.7	8.7		10.8 11.5	11.2	

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 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-Jan-15	Sunny	Moderate	08:31	10.5	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	31.5 31.5	31.5	97.7 97.7	97.7	7.9 7.9	7.9	7.9	4.4 4.6	4.5	4.6	7.2 7.6	7.4	9.8
					Middle	5.3	16.4 16.4	16.4	7.9 7.9	7.9	31.5 31.5	31.5	97.6 97.5	97.6	7.9 7.9	7.9		4.5 4.5	4.5		8.7 9.6	9.2	
					Bottom	9.5	16.4 16.4	16.4	7.9 7.9	7.9	31.5 31.5	31.5	97.6 97.5	97.6	7.9 7.9	7.9	7.9	4.7 4.8	4.8		13.2 12.6	12.9	
26-Jan-15	Sunny	Moderate	10:31	10.2	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	31.3 31.3	31.3	96.8 96.3	96.6	7.8 7.8	7.8	7.8	3.0 2.8	2.9	3.5	5.3 5.9	5.6	7.7
					Middle	5.1	16.6 16.6	16.6	7.9 7.9	7.9	31.5 31.5	31.5	95.8 95.8	95.8	7.7 7.7	7.7		3.7 3.8	3.8		6.2 6.7	6.5	
					Bottom	9.2	16.6 16.6	16.6	7.9 7.9	7.9	31.5 31.4	31.5	96.6 96.6	96.6	7.8 7.8	7.8	7.8	3.8 3.9	3.9		11.4 10.6	11.0	
28-Jan-15	Fine	Moderate	14:30	10.3	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	31.3 31.4	31.4	99.6 101.3	100.5	8.0 8.1	8.1	8.1	2.3 2.2	2.3	2.5	2.6 2.4	2.5	2.5
					Middle	5.2	16.9 16.8	16.9	7.9 8.0	7.9	31.4 31.4	31.4	100.0 102.2	101.1	8.0 8.2	8.1		2.5 2.4	2.5		2.7 2.5	2.6	
					Bottom	9.3	16.9 16.9	16.9	7.9 8.0	8.0	31.4 31.4	31.4	100.6 103.4	102.0	8.1 8.3	8.2	8.2	2.6 2.6	2.6		2.7 2.3	2.5	
30-Jan-15	Cloudy	Moderate	16:13	10.6	Surface	1.0	16.8 16.9	16.9	7.9 7.9	7.9	31.8 31.8	31.8	93.7 95.9	94.8	7.5 7.7	7.6	7.6	1.3 1.3	1.3	1.4	3.5 4.7	4.1	4.3
					Middle	5.3	16.8 16.7	16.7	7.9 7.9	7.9	31.9 32.1	32.0	95.3 93.3	94.3	7.6 7.5	7.6		1.4 1.3	1.4		4.7 4.1	4.4	
					Bottom	9.6	16.7 16.7	16.7	7.9 7.9	7.9	32.1 32.0	32.0	94.4 96.4	95.4	7.6 7.7	7.6	7.6	1.5 1.4	1.5		4.6 4.1	4.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	10:17	33.8	Surface	1.0	17.2 17.1	17.1	7.9 7.9	7.9	32.7 32.7	32.7	102.4 101.8	102.1	8.1 8.1	8.1	8.1	1.2 1.3	1.3	1.3	0.6 0.8	0.7	1.3
					Middle	16.9	17.1 17.1	17.1	7.9 7.8	7.9	32.8 32.7	32.7	101.0 102.0	101.5	8.0 8.1	8.0		1.3 1.3	1.3		1.1 1.5	1.3	
					Bottom	32.8	17.1 17.1	17.1	7.8 7.9	7.9	32.7 32.8	32.7	102.4 101.7	102.1	8.1 8.1	8.1	8.1	1.3 1.3	1.3		1.5 2.1	1.8	
5-Jan-15	Cloudy	Moderate	14:17	34.2	Surface	1.0	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	102.6 102.6	102.6	8.1 8.1	8.1	8.1	1.3 1.4	1.4	1.5	5.2 5.3	5.3	5.8
					Middle	17.1	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	102.0 101.9	102.0	8.1 8.1	8.1		1.5 1.5	1.5		5.9 5.1	5.5	
					Bottom	33.2	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	102.3 102.3	102.3	8.1 8.1	8.1	8.1	1.5 1.5	1.5		7.2 6.2	6.7	
7-Jan-15	Cloudy	Moderate	15:11	34.3	Surface	1.0	17.3 17.3	17.3	8.0 8.0	8.0	32.5 32.5	32.5	103.0 103.0	103.0	8.1 8.1	8.1	8.1	1.3 1.2	1.3	1.3	3.3 3.3	3.3	3.8
					Middle	17.2	17.3 17.3	17.3	8.0 8.0	8.0	32.6 32.6	32.6	102.1 102.3	102.2	8.1 8.1	8.1		1.3 1.3	1.3		2.9 3.3	3.1	
					Bottom	33.3	17.3 17.3	17.3	8.0 8.0	8.0	32.6 32.6	32.6	102.7 103.0	102.9	8.1 8.1	8.1	8.1	1.3 1.3	1.3		4.6 5.4	5.0	
9-Jan-15	Sunny	Moderate	16:21	33.1	Surface	1.0	17.3 17.3	17.3	8.0 8.0	8.0	32.6 32.6	32.6	100.2 99.9	100.1	7.9 7.9	7.9	7.9	2.1 2.2	2.2	2.2	5.2 4.8	5.0	7.7
					Middle	16.6	17.2 17.2	17.2	8.0 8.0	8.0	32.6 32.6	32.6	99.3 99.1	99.2	7.9 7.8	7.8		2.1 2.2	2.2		8.0 6.8	7.4	
					Bottom	32.1	17.2 17.2	17.2	8.0 8.0	8.0	32.6 32.6	32.6	100.0 99.5	99.8	7.9 7.9	7.9	7.9	2.2 2.2	2.2		10.6 10.9	10.8	
12-Jan-15	Rainy	Rough	18:42	34.5	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	32.6 32.6	32.6	94.4 94.1	94.3	7.5 7.5	7.5	7.5	1.4 1.5	1.5	1.3	5.4 5.8	5.6	5.6
					Middle	17.3	17.1 17.1	17.1	7.9 7.9	7.9	32.6 32.6	32.6	94.3 93.8	94.1	7.5 7.4	7.5		1.0 1.1	1.1		6.0 4.6	5.3	
					Bottom	33.5	17.1 17.1	17.1	7.9 7.9	7.9	32.6 32.6	32.6	94.3 93.9	94.1	7.5 7.5	7.5	7.5	1.2 1.3	1.3		5.6 6.2	5.9	
14-Jan-15	Cloudy	Moderate	04:23	35.1	Surface	1.0	16.7 16.7	16.7	7.4 7.1	7.2	32.7 32.7	32.7	95.1 97.6	96.4	7.6 7.8	7.7	7.8	1.8 1.8	1.8	2.0	5.9 5.8	5.9	6.0
					Middle	17.6	16.7 16.7	16.7	7.3 6.9	7.1	32.7 32.7	32.7	95.6 99.3	97.5	7.6 7.9	7.8		1.9 1.9	1.9		5.0 4.7	4.9	
					Bottom	34.1	16.7 16.7	16.7	7.2 6.8	7.0	32.7 32.7	32.7	96.2 101.8	99.0	7.7 8.1	7.9	7.9	2.3 2.1	2.2		6.6 8.0	7.3	
16-Jan-15	Sunny	Moderate	08:21	34.4	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	96.2 95.9	96.1	7.8 7.7	7.7	7.7	1.3 1.4	1.4	1.4	3.4 3.8	3.6	4.3
					Middle	17.2	16.3 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	96.1 95.5	95.8	7.7 7.7	7.7		1.3 1.4	1.4		4.4 4.6	4.5	
					Bottom	33.4	16.3 16.3	16.3	7.9 7.8	7.9	32.6 32.6	32.6	95.7 96.8	96.3	7.7 7.8	7.8	7.8	1.5 1.4	1.5		4.7 4.6	4.7	
19-Jan-15	Sunny	Moderate	11:21	33.5	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	92.8 92.5	92.7	7.5 7.5	7.5	7.5	3.5 3.5	3.5	3.5	4.3 3.6	4.0	4.2
					Middle	16.8	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.4	32.5	92.1 92.7	92.4	7.4 7.5	7.5		3.5 3.4	3.5		4.7 3.3	4.0	
					Bottom	32.5	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.4	32.5	92.3 93.1	92.7	7.4 7.5	7.5	7.5	3.5 3.5	3.5		5.3 3.8	4.6	
21-Jan-15	Sunny	Moderate	14:42	34.6	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.6	32.6	94.3 93.9	94.1	7.6 7.6	7.6	7.6	2.2 2.2	2.2	2.7	7.2 6.6	6.9	8.0
					Middle	17.3	16.2 16.2	16.2	7.9 7.9	7.9	32.6 32.6	32.6	93.7 93.2	93.5	7.6 7.5	7.5		2.8 2.9	2.9		6.8 6.8	6.8	
					Bottom	33.6	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.6	32.6	93.7 94.1	93.9	7.6 7.6	7.6	7.6	2.9 2.8	2.9		10.0 10.8	10.4	

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 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-Jan-15	Sunny	Moderate	16:21	35.0	Surface	1.0	16.5 16.7	16.6	7.9 7.9	7.9	31.9 31.8	31.9	95.6 96.0	95.8	7.7 7.7	7.7	7.7	3.4 3.2	3.3	3.5	6.6 6.2	6.4	8.6
					Middle	17.5	16.4 16.4	16.4	7.9 7.9	7.9	32.2 32.2	32.2	94.5 94.8	94.7	7.6 7.6	7.6		3.5 3.6	3.6		8.7 8.7	8.7	
					Bottom	34.0	16.4 16.3	16.4	7.9 7.9	7.9	32.2 32.2	32.2	95.9 95.4	95.7	7.7 7.7	7.7	7.7	3.5 3.5	3.5		11.0 10.1	10.6	
26-Jan-15	Sunny	Moderate	18:52	33.4	Surface	1.0	16.9 17.0	17.0	7.9 7.9	7.9	31.4 31.4	31.4	96.6 96.9	96.8	7.7 7.8	7.8	7.7	1.2 1.2	1.2	1.4	7.6 7.6	7.6	9.3
					Middle	16.7	16.6 16.6	16.6	7.9 7.9	7.9	31.9 31.8	31.9	94.5 95.2	94.9	7.6 7.7	7.6		1.4 1.4	1.4		9.5 8.3	8.9	
					Bottom	32.4	16.6 16.6	16.6	7.9 7.9	7.9	31.8 31.9	31.9	96.1 95.0	95.6	7.7 7.6	7.7	7.7	1.7 1.6	1.7		10.7 12.2	11.5	
28-Jan-15	Fine	Moderate	05:12	35.2	Surface	1.0	16.7 16.7	16.7	7.7 7.7	7.7	31.0 30.7	30.8	99.3 100.5	99.9	8.0 8.1	8.1	8.0	2.0 2.1	2.1	2.2	2.6 2.3	2.5	2.6
					Middle	17.6	16.7 16.7	16.7	7.8 7.8	7.8	31.2 31.1	31.1	98.1 98.6	98.4	7.9 8.0	7.9		2.2 2.3	2.3		4.1 2.1	3.1	
					Bottom	34.2	16.7 16.7	16.7	7.8 7.7	7.7	31.2 30.1	30.6	97.7 102.7	100.2	7.9 8.3	8.1	8.1	2.0 2.2	2.1		2.3 2.2	2.3	
30-Jan-15	Cloudy	Moderate	09:12	33.7	Surface	1.0	16.8 16.8	16.8	7.8 7.8	7.8	31.5 31.5	31.5	95.1 95.1	95.1	7.6 7.6	7.6	7.6	1.1 1.2	1.2	1.3	6.5 6.0	6.3	6.8
					Middle	16.9	16.7 16.7	16.7	7.8 7.8	7.8	32.1 32.0	32.0	93.8 94.0	93.9	7.5 7.5	7.5		1.3 1.3	1.3		6.6 7.0	6.8	
					Bottom	32.7	16.7 16.7	16.7	7.8 7.8	7.8	32.0 32.0	32.0	94.7 94.6	94.7	7.6 7.6	7.6	7.6	1.3 1.3	1.3		8.1 6.7	7.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	17:41	34.4	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	32.9 32.9	32.9	104.9 104.6	104.8	8.3 8.3	8.3	8.3	1.2 1.2	1.2	1.3	1.3 1.0	1.2	1.3
					Middle	17.2	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	103.9 103.8	103.9	8.2 8.2	8.2		1.2 1.3	1.3		1.0 1.2	1.1	
					Bottom	33.4	17.1 17.1	17.1	8.0 8.0	8.0	32.9 32.9	32.9	104.5 104.6	104.6	8.3 8.3	8.3		1.4 1.4	1.4		1.7 1.2	1.5	
5-Jan-15	Cloudy	Moderate	06:52	34.5	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	111.2 110.7	111.0	8.8 8.8	8.8	8.8	2.2 2.2	2.2	2.3	6.5 5.6	6.1	6.8
					Middle	17.3	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.6	32.7	110.4 109.6	110.0	8.8 8.7	8.7		2.3 2.2	2.3		6.8 7.1	7.0	
					Bottom	33.5	17.0 17.0	17.0	8.1 8.0	8.1	32.7 32.3	32.5	110.3 108.0	109.2	8.8 8.6	8.7	8.7	2.4 2.5	2.5		6.6 7.7	7.2	
7-Jan-15	Rainy	Moderate	08:02	34.5	Surface	1.0	17.4 17.4	17.4	8.0 8.1	8.1	31.7 31.7	31.7	109.0 109.5	109.3	8.6 8.7	8.7	8.7	2.8 2.6	2.7	3.0	4.8 5.2	5.0	5.0
					Middle	17.3	17.5 17.5	17.5	8.0 8.1	8.1	31.9 31.9	31.9	108.4 109.0	108.7	8.6 8.6	8.6		3.0 2.9	3.0		5.1 4.6	4.9	
					Bottom	33.5	17.5 17.5	17.5	8.0 8.0	8.0	31.9 31.9	31.9	107.0 108.7	107.9	8.5 8.6	8.5	8.5	3.2 3.1	3.2		4.3 5.7	5.0	
9-Jan-15	Sunny	Moderate	09:02	33.9	Surface	1.0	17.0 17.1	17.1	7.9 8.0	8.0	31.9 32.0	32.0	102.8 102.3	102.6	8.2 8.1	8.2	8.2	1.3 1.3	1.3	1.3	7.0 7.4	7.2	7.7
					Middle	17.0	17.1 17.1	17.1	8.0 7.9	7.9	32.0 31.8	31.9	101.6 102.7	102.2	8.1 8.2	8.1		1.3 1.3	1.3		7.6 7.7	7.7	
					Bottom	32.9	17.1 17.1	17.1	8.0 7.8	7.9	32.0 31.5	31.8	102.1 104.0	103.1	8.1 8.3	8.2	8.2	1.3 1.4	1.4		8.1 8.2	8.2	
12-Jan-15	Cloudy	Moderate	10:41	34.4	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	32.3 32.4	32.3	96.3 95.9	96.1	7.7 7.6	7.6	7.6	1.1 1.0	1.1	0.9	12.0 10.5	11.3	10.5
					Middle	17.2	17.1 17.1	17.1	7.9 7.9	7.9	32.4 32.3	32.4	95.7 96.3	96.0	7.6 7.7	7.6		0.8 0.8	0.8		10.8 10.0	10.4	
					Bottom	33.4	17.1 17.1	17.1	7.9 7.9	7.9	32.4 32.2	32.3	95.8 97.1	96.5	7.6 7.7	7.7	7.7	0.8 0.9	0.9		10.2 9.6	9.9	
14-Jan-15	Cloudy	Moderate	14:37	35.4	Surface	1.0	16.8 16.8	16.8	7.7 7.6	7.6	32.7 32.7	32.7	98.0 102.0	100.0	7.8 8.1	8.0	8.1	1.8 1.8	1.8	1.9	2.6 4.5	3.6	3.9
					Middle	17.7	16.8 16.7	16.7	7.7 7.5	7.6	32.7 32.7	32.7	99.1 104.5	101.8	7.9 8.3	8.1		1.8 1.8	1.8		4.2 2.6	3.4	
					Bottom	34.4	16.8 16.7	16.7	7.6 7.4	7.5	32.7 32.8	32.7	100.1 107.6	103.9	8.0 8.6	8.3	8.3	2.1 1.9	2.0		4.9 4.3	4.6	
16-Jan-15	Sunny	Moderate	15:46	34.6	Surface	1.0	16.3 16.4	16.4	7.9 7.9	7.9	32.6 32.6	32.6	95.2 95.3	95.3	7.7 7.7	7.7	7.7	2.3 2.3	2.3	2.4	4.4 5.7	5.1	5.6
					Middle	17.3	16.3 16.3	16.3	7.9 7.9	7.9	32.6 32.6	32.6	94.7 94.7	94.7	7.6 7.6	7.6		2.4 2.4	2.4		4.8 5.1	5.0	
					Bottom	33.6	16.3 16.3	16.3	8.0 7.9	8.0	32.6 32.6	32.6	94.9 94.8	94.9	7.6 7.6	7.6	7.6	2.5 2.4	2.5		6.7 6.6	6.7	
19-Jan-15	Sunny	Moderate	18:33	34.8	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	92.2 92.3	92.3	7.4 7.4	7.4	7.4	2.1 2.2	2.2	2.2	5.6 4.5	5.1	4.4
					Middle	17.4	16.2 16.2	16.2	7.9 7.9	7.9	32.6 32.5	32.6	91.6 91.6	91.6	7.4 7.4	7.4		2.2 2.2	2.2		3.4 4.3	3.9	
					Bottom	33.8	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.5	32.5	91.8 91.7	91.8	7.4 7.4	7.4	7.4	2.2 2.1	2.2		3.4 5.1	4.3	
21-Jan-15	Sunny	Moderate	07:23	34.7	Surface	1.0	16.2 16.2	16.2	7.9 7.8	7.9	32.4 32.3	32.4	98.1 98.4	98.3	7.9 7.9	7.9	7.9	8.8 8.8	8.8	8.8	9.4 9.9	9.7	9.9
					Middle	17.4	16.2 16.2	16.2	7.9 7.8	7.8	32.4 32.3	32.3	97.8 98.3	98.1	7.9 7.9	7.9		8.7 8.8	8.8		8.9 9.4	9.2	
					Bottom	33.7	16.2 16.2	16.2	7.8 7.9	7.8	32.2 32.4	32.3	99.0 98.0	98.5	8.0 7.9	8.0	8.0	8.9 8.9	8.9		10.9 10.6	10.8	

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 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-Jan-15	Sunny	Moderate	08:22	34.1	Surface	1.0	16.4 16.4	16.4	7.8 7.9	7.8	31.4 31.4	31.4	98.4 97.8	98.1	8.0 7.9	7.9	7.9	4.6 4.5	4.6	5.7	8.0 8.0	8.0	8.8
					Middle	17.1	16.4 16.4	16.4	7.8 7.8	7.8	31.5 31.5	31.5	97.5 98.3	97.9	7.9 8.0	7.9		6.1 6.3	6.2		7.8 8.8	8.3	
					Bottom	33.1	16.3 16.3	16.3	7.8 7.8	7.8	31.6 31.6	31.6	97.6 98.8	98.2	7.9 8.0	8.0	8.0	6.3 6.4	6.4		10.2 10.2	10.2	
26-Jan-15	Sunny	Moderate	10:21	34.2	Surface	1.0	16.6 16.7	16.7	7.9 7.9	7.9	31.3 31.3	31.3	95.9 96.0	96.0	7.7 7.7	7.7	7.7	4.6 4.6	4.6	4.4	6.2 6.1	6.2	7.2
					Middle	17.1	16.6 16.6	16.6	7.9 7.9	7.9	31.5 31.4	31.4	95.2 95.0	95.1	7.7 7.7	7.7		4.4 4.2	4.3		6.0 6.8	6.4	
					Bottom	33.2	16.6 16.6	16.6	7.9 7.9	7.9	31.4 31.4	31.4	95.7 95.8	95.8	7.7 7.7	7.7	7.7	4.5 4.2	4.4		9.6 8.5	9.1	
28-Jan-15	Fine	Moderate	14:41	35.4	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	31.8 31.8	31.8	96.2 98.7	97.5	7.7 7.9	7.8	7.9	2.0 1.9	2.0	2.1	2.0 3.1	2.6	2.6
					Middle	17.7	16.8 16.8	16.8	7.9 7.9	7.9	31.8 31.8	31.8	99.5 96.7	98.1	8.0 7.8	7.9		2.0 2.1	2.1		2.3 2.6	2.5	
					Bottom	34.4	16.7 16.8	16.8	7.9 7.9	7.9	31.8 31.8	31.8	101.4 97.1	99.3	8.1 7.8	8.0	8.0	2.2 2.3	2.3		3.2 2.3	2.8	
30-Jan-15	Cloudy	Moderate	16:21	34.4	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	31.8 31.8	31.8	93.5 93.6	93.6	7.5 7.5	7.5	7.5	1.1 1.1	1.1	1.2	3.0 3.3	3.2	5.9
					Middle	17.2	16.7 16.7	16.7	7.9 7.9	7.9	31.9 32.0	32.0	92.5 93.2	92.9	7.4 7.5	7.4		1.2 1.2	1.2		6.1 6.1	6.1	
					Bottom	33.4	16.7 16.7	16.7	7.9 7.9	7.9	32.1 32.1	32.1	93.6 92.5	93.1	7.5 7.4	7.5	7.5	1.3 1.3	1.3		7.9 8.9	8.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	12:07	3.2	Surface	1.0	17.4 17.5	17.5	8.1 8.1	8.1	30.7 30.6	30.7	116.9 116.2	116.6	9.3 9.3	9.3	9.3	3.5 3.8	3.7	4.3	2.5 2.7	2.6	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	17.3 17.3	17.3	8.1 8.1	8.1	30.7 30.5	30.6	116.4 116.3	116.4	9.3 9.3	9.3	9.3	4.8 5.0	4.9		3.2 2.2	2.7	
5-Jan-15	Cloudy	Moderate	11:53	3.2	Surface	1.0	18.0 18.0	18.0	8.1 8.1	8.1	30.6 30.6	30.6	106.9 106.4	106.7	8.4 8.4	8.4	8.4	1.9 1.8	1.9	1.9	3.1 3.8	3.5	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	18.0 18.1	18.0	8.1 8.1	8.1	30.6 30.5	30.6	106.2 103.5	104.9	8.4 8.2	8.3	8.3	1.9 1.8	1.9		6.4 6.5	6.5	
7-Jan-15	Cloudy	Moderate	13:20	3.1	Surface	1.0	18.6 18.6	18.6	8.0 7.9	7.9	30.5 30.5	30.5	106.0 106.0	106.0	8.3 8.3	8.3	8.3	4.4 4.4	4.4	4.5	6.9 7.2	7.1	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	18.6 18.6	18.6	7.9 7.9	7.9	30.5 30.5	30.5	105.9 106.6	106.3	8.3 8.3	8.3	8.3	4.5 4.6	4.6		7.4 7.1	7.3	
9-Jan-15	Sunny	Moderate	14:29	3.3	Surface	1.0	18.4 18.4	18.4	8.0 8.0	8.0	30.9 30.9	30.9	109.9 109.8	109.9	8.6 8.6	8.6	8.6	3.2 3.6	3.4	3.5	3.4 3.9	3.7	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.2 18.3	18.3	8.0 8.0	8.0	31.7 31.0	31.3	107.3 110.0	108.7	8.4 8.6	8.5	8.5	3.3 3.7	3.5		4.1 5.1	4.6	
12-Jan-15	Rainy	Rough	16:37	3.3	Surface	1.0	17.5 17.5	17.5	7.9 7.9	7.9	30.3 30.2	30.3	96.3 95.8	96.1	7.7 7.7	7.7	7.7	3.5 3.4	3.5	3.5	6.3 7.3	6.8	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.5 17.5	17.5	7.9 7.9	7.9	30.3 30.3	30.3	95.9 98.7	97.3	7.7 7.9	7.8	7.8	3.4 3.4	3.4		5.3 7.2	6.3	
14-Jan-15	Cloudy	Moderate	06:51	3.2	Surface	1.0	16.6 16.6	16.6	7.9 7.9	7.9	29.7 29.7	29.7	94.4 93.3	93.9	7.7 7.6	7.6	7.6	13.2 13.7	13.5	13.4	10.5 9.6	10.1	10.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	16.6 16.6	16.6	7.9 7.9	7.9	29.7 29.7	29.7	94.4 96.7	95.6	7.7 7.9	7.8	7.8	13.3 13.3	13.3		10.5 10.3	10.4	
16-Jan-15	Sunny	Moderate	10:01	3.3	Surface	1.0	16.6 16.6	16.6	7.8 7.8	7.8	29.3 29.3	29.3	102.2 98.8	100.5	8.3 8.1	8.2	8.2	4.3 4.2	4.3	4.4	5.7 6.4	6.1	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	16.6 16.6	16.6	7.8 7.8	7.8	29.3 29.3	29.3	99.9 97.9	98.9	8.2 8.0	8.1	8.1	4.4 4.3	4.4		7.8 7.0	7.4	
19-Jan-15	Sunny	Moderate	13:32	3.1	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	30.3 30.3	30.3	104.1 102.6	103.4	8.4 8.3	8.3	8.3	5.7 5.7	5.7	6.0	4.6 4.7	4.7	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	17.1 17.1	17.1	7.8 7.8	7.8	30.3 30.3	30.3	102.9 105.2	104.1	8.3 8.5	8.4	8.4	6.0 6.3	6.2		6.6 7.0	6.8	
21-Jan-15	Sunny	Moderate	12:40	3.6	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	31.0 31.0	31.0	104.5 104.6	104.6	8.4 8.4	8.4	8.4	4.7 4.7	4.7	4.8	9.9 8.3	9.1	8.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	17.1 17.0	17.0	7.7 7.7	7.7	31.0 31.1	31.1	104.4 104.3	104.4	8.3 8.4	8.3	8.3	4.7 4.9	4.8		8.9 8.2	8.6	

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 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-Jan-15	Sunny	Moderate	14:04	3.3	Surface	1.0	17.4 17.4	17.4	7.7 7.7	7.7	30.3 30.3	30.3	109.7 109.3	109.5	8.8 8.7	8.7	8.7	5.1 5.2	5.2	5.3	7.5 6.8	7.2	7.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.4 17.4	17.4	7.7 7.7	7.7	30.3 30.3	30.3	109.2 109.3	109.3	8.7 8.7	8.7	8.7	5.3 5.2	5.3		8.0 8.2	8.1	
26-Jan-15	Sunny	Moderate	17:05	3.2	Surface	1.0	18.0 18.0	18.0	7.5 7.4	7.5	30.6 30.5	30.6	98.8 99.0	98.9	7.8 7.8	7.8	7.8	8.4 8.3	8.4	8.4	8.4 9.4	8.9	10.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	18.0 18.0	18.0	7.5 7.4	7.4	30.6 30.5	30.5	98.7 99.0	98.9	7.8 7.8	7.8	7.8	8.4 8.4	8.4		11.2 10.8	11.0	
28-Jan-15	Fine	Moderate	07:51	3.2	Surface	1.0	17.7 17.7	17.7	7.5 7.5	7.5	29.0 29.0	29.0	98.8 100.2	99.5	7.9 8.0	8.0	8.0	9.5 9.3	9.4	9.5	13.7 12.8	13.3	13.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	17.7 17.7	17.7	7.5 7.5	7.5	29.0 29.0	29.0	101.9 99.7	100.8	8.2 8.0	8.1	8.1	9.8 9.4	9.6		13.2 14.5	13.9	
30-Jan-15	Cloudy	Moderate	11:03	3.2	Surface	1.0	18.0 18.0	18.0	7.8 7.7	7.8	29.0 29.2	29.1	99.3 101.3	100.3	7.9 8.1	8.0	8.0	8.9 9.6	9.3	10.6	4.6 4.7	4.7	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	18.0 18.0	18.0	7.7 7.8	7.8	29.1 29.1	29.1	102.5 99.5	101.0	8.2 7.9	8.0	8.0	12.1 11.6	11.9		8.7 9.8	9.3	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	15:28	3.2	Surface	1.0	17.7 17.7	17.7	8.1 8.1	8.1	31.9 31.8	31.9	113.1 114.6	113.9	8.9 9.0	9.0	9.0	3.0 3.2	3.1	3.1	1.5 2.5	2.0	1.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	17.6 17.6	17.6	8.1 8.1	8.1	31.9 31.9	31.9	113.9 112.1	113.0	9.0 8.9	8.9	8.9	3.0 3.2	3.1		1.6 1.9	1.8	
5-Jan-15	Cloudy	Moderate	08:39	3.3	Surface	1.0	18.0 18.0	18.0	8.1 8.1	8.1	30.3 30.3	30.3	107.3 106.5	106.9	8.5 8.4	8.5	8.5	2.2 2.3	2.3	2.3	2.0 1.3	1.7	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.0 18.0	18.0	8.1 8.1	8.1	30.3 30.2	30.3	106.5 103.9	105.2	8.4 8.2	8.3	8.3	2.3 2.3	2.3		6.8 6.3	6.6	
7-Jan-15	Rainy	Moderate	09:45	3.2	Surface	1.0	18.5 18.5	18.5	8.0 8.0	8.0	29.8 29.8	29.8	111.3 111.6	111.5	8.7 8.8	8.7	8.7	6.3 6.2	6.3	6.3	4.6 5.2	4.9	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	18.5 18.5	18.5	8.0 8.0	8.0	29.8 29.8	29.8	111.7 111.3	111.5	8.8 8.7	8.7	8.7	6.0 6.5	6.3		9.8 9.5	9.7	
9-Jan-15	Sunny	Moderate	10:40	3.2	Surface	1.0	17.8 17.8	17.8	7.9 7.9	7.9	29.5 29.4	29.4	101.7 104.0	102.9	8.1 8.3	8.2	8.2	4.3 4.3	4.3	4.5	8.2 7.6	7.9	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	17.8 17.8	17.8	7.9 7.9	7.9	29.4 29.4	29.4	102.6 105.3	104.0	8.2 8.4	8.3	8.3	4.7 4.7	4.7		7.8 8.4	8.1	
12-Jan-15	Cloudy	Moderate	12:11	3.1	Surface	1.0	17.5 17.5	17.5	7.9 7.9	7.9	29.5 29.5	29.5	97.5 101.2	99.4	7.8 8.1	8.0	8.0	4.4 4.4	4.4	4.5	10.0 10.3	10.2	8.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	17.5 17.5	17.5	7.9 7.9	7.9	29.6 29.5	29.5	104.4 98.3	101.4	8.4 7.9	8.1	8.1	4.5 4.4	4.5		6.6 6.4	6.5	
14-Jan-15	Cloudy	Moderate	12:05	3.2	Surface	1.0	16.6 16.6	16.6	7.9 7.9	7.9	29.8 29.9	29.8	93.1 94.5	93.8	7.6 7.7	7.6	7.6	5.7 5.6	5.7	5.7	7.2 7.8	7.5	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	16.6 16.6	16.6	7.9 7.9	7.9	30.1 29.8	30.0	97.2 93.5	95.4	7.9 7.6	7.8	7.8	5.6 5.5	5.6		8.4 7.5	8.0	
16-Jan-15	Sunny	Moderate	13:59	3.3	Surface	1.0	17.2 17.3	17.3	7.9 7.9	7.9	29.6 29.6	29.6	98.8 102.4	100.6	7.9 8.3	8.1	8.1	4.8 4.8	4.8	4.9	7.4 8.0	7.7	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.1 17.3	17.2	7.8 7.9	7.8	29.8 29.6	29.7	99.0 98.4	98.7	8.0 7.9	7.9	7.9	5.0 4.9	5.0		8.2 8.8	8.5	
19-Jan-15	Sunny	Moderate	16:19	3.3	Surface	1.0	17.5 17.4	17.5	7.9 7.9	7.9	30.5 30.5	30.5	109.0 107.1	108.1	8.7 8.5	8.6	8.6	4.9 4.9	4.9	5.1	6.1 5.5	5.8	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.3 17.4	17.3	7.8 7.9	7.9	30.7 30.5	30.6	105.7 107.6	106.7	8.4 8.6	8.5	8.5	5.3 5.3	5.3		6.3 5.6	6.0	
21-Jan-15	Sunny	Moderate	09:09	3.5	Surface	1.0	16.9 16.9	16.9	7.7 7.7	7.7	30.6 30.6	30.6	102.5 102.4	102.5	8.2 8.2	8.2	8.2	7.1 7.0	7.1	7.2	6.8 6.7	6.8	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	16.9 16.9	16.9	7.7 7.7	7.7	30.6 30.6	30.6	103.2 102.5	102.9	8.3 8.2	8.3	8.3	7.4 7.2	7.3		7.9 6.2	7.1	

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)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-Jan-15	Sunny	Moderate	09:44	3.5	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	29.7 29.7	29.7	106.4 105.9	106.2	8.6 8.6	8.6	8.6	6.4 6.2	6.3	6.6	14.4 15.6	15.0	16.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	16.9 17.0	16.9	7.7 7.7	7.7	29.7 29.7	29.7	106.2 105.8	106.0	8.6 8.6	8.6	8.6	6.9 6.7	6.8		16.9 17.0	17.0	
26-Jan-15	Sunny	Moderate	11:58	3.5	Surface	1.0	17.9 17.9	17.9	7.7 7.7	7.7	29.3 29.4	29.4	102.5 103.0	102.8	8.1 8.2	8.2	8.2	8.9 8.6	8.8	9.0	12.5 11.4	12.0	13.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	18.0 18.0	18.0	7.7 7.7	7.7	29.3 29.3	29.3	102.6 102.3	102.5	8.2 8.1	8.2	8.2	9.1 9.0	9.1		15.1 15.6	15.4	
28-Jan-15	Fine	Moderate	12:05	3.1	Surface	1.0	18.1 18.1	18.1	7.5 7.5	7.5	29.5 29.6	29.6	100.2 100.8	100.5	7.9 8.0	8.0	8.0	8.0 8.2	8.1	8.3	10.9 10.5	10.7	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	18.1 18.1	18.1	7.5 7.5	7.5	29.7 29.6	29.6	100.4 100.6	100.5	7.9 8.0	8.0	8.0	8.4 8.3	8.4		11.2 11.3	11.3	
30-Jan-15	Cloudy	Moderate	14:22	3.3	Surface	1.0	18.1 18.0	18.1	7.7 7.7	7.7	29.5 29.7	29.6	102.2 103.1	102.7	8.1 8.2	8.1	8.1	3.9 3.9	3.9	4.0	8.6 9.4	9.0	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.0 18.0	18.0	7.7 7.7	7.7	29.9 29.6	29.8	103.0 102.3	102.7	8.2 8.1	8.1	8.1	4.1 4.0	4.1		11.2 9.7	10.5	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	11:51	3.7	Surface	1.0	17.6 17.6	17.6	8.1 8.1	8.1	30.9 31.1	31.0	118.4 116.2	117.3	9.4 9.2	9.3	9.3	2.2 2.4	2.3	2.7	1.5 1.9	1.7	2.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.6 17.5	17.6	8.1 8.0	8.1	30.9 31.3	31.1	117.4 114.2	115.8	9.3 9.0	9.2	9.2	3.0 3.2	3.1		2.8 2.5	2.7	
5-Jan-15	Cloudy	Moderate	12:07	3.4	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.7 30.6	30.6	113.4 114.4	113.9	9.0 9.0	9.0	9.0	1.7 1.7	1.7	1.8	6.7 7.0	6.9	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.9 17.9	17.9	8.1 8.1	8.1	30.8 30.6	30.7	109.8 114.2	112.0	8.7 9.0	8.8	8.8	1.7 1.8	1.8		7.4 7.6	7.5	
7-Jan-15	Cloudy	Moderate	13:36	3.2	Surface	1.0	18.4 18.5	18.4	8.0 8.0	8.0	30.0 30.1	30.1	112.4 113.2	112.8	8.8 8.9	8.8	8.8	4.8 4.4	4.6	4.6	5.8 6.0	5.9	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	18.5 18.5	18.5	8.0 7.9	8.0	30.2 30.3	30.3	113.5 111.8	112.7	8.9 8.7	8.8	8.8	4.6 4.5	4.6		8.8 8.3	8.6	
9-Jan-15	Sunny	Moderate	14:45	3.5	Surface	1.0	18.1 18.1	18.1	8.0 8.0	8.0	30.7 30.8	30.7	107.3 108.4	107.9	8.4 8.5	8.5	8.5	6.4 6.2	6.3	6.7	7.7 8.9	8.3	9.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	18.1 18.1	18.1	7.9 8.0	8.0	31.1 30.7	30.9	109.0 108.1	108.6	8.6 8.5	8.5	8.5	7.1 6.9	7.0		10.5 11.4	11.0	
12-Jan-15	Rainy	Rough	16:51	3.7	Surface	1.0	17.6 17.5	17.6	7.9 7.9	7.9	30.0 29.9	30.0	96.4 98.1	97.3	7.7 7.8	7.8	7.8	4.6 4.7	4.7	4.7	6.1 7.5	6.8	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.6 17.6	17.6	7.9 7.9	7.9	30.0 29.9	30.0	96.9 99.2	98.1	7.7 7.9	7.8	7.8	4.7 4.7	4.7		6.7 8.8	7.8	
14-Jan-15	Cloudy	Moderate	06:36	3.7	Surface	1.0	16.2 16.2	16.2	7.9 7.9	7.9	29.9 29.9	29.9	95.8 94.7	95.3	7.9 7.8	7.8	7.8	5.2 5.2	5.2	5.6	7.1 6.6	6.9	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	16.2 16.2	16.2	7.9 7.9	7.9	30.0 29.9	30.0	97.3 95.3	96.3	8.0 7.8	7.9	7.9	6.0 5.7	5.9		8.0 7.8	7.9	
16-Jan-15	Sunny	Moderate	09:48	3.2	Surface	1.0	16.8 16.8	16.8	7.8 7.8	7.8	29.5 29.3	29.4	104.1 99.8	102.0	8.5 8.1	8.3	8.3	5.3 5.2	5.3	5.4	7.7 8.4	8.1	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	16.8 16.7	16.8	7.8 7.8	7.8	29.4 29.6	29.5	98.0 101.8	99.9	8.0 8.3	8.1	8.1	5.4 5.4	5.4		7.6 8.2	7.9	
19-Jan-15	Sunny	Moderate	13:14	3.5	Surface	1.0	17.2 17.2	17.2	7.8 7.9	7.9	30.4 30.5	30.4	108.0 109.2	108.6	8.6 8.8	8.7	8.7	6.4 6.8	6.6	6.6	5.8 6.7	6.3	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	17.2 17.2	17.2	7.9 7.8	7.8	30.5 30.5	30.5	109.1 107.5	108.3	8.7 8.6	8.7	8.7	6.8 6.4	6.6		7.2 6.6	6.9	
21-Jan-15	Sunny	Moderate	12:56	4.1	Surface	1.0	17.2 17.1	17.2	7.8 7.8	7.8	30.7 30.7	30.7	122.4 123.4	122.9	9.8 9.9	9.8	9.8	7.7 7.8	7.8	7.8	8.5 8.3	8.4	8.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	17.1 17.1	17.1	7.8 7.8	7.8	30.8 30.8	30.8	121.5 122.4	122.0	9.7 9.8	9.8	9.8	7.8 7.7	7.8		8.0 9.1	8.6	

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 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-Jan-15	Sunny	Moderate	14:16	3.3	Surface	1.0	17.5 17.5	17.5	7.8 7.8	7.8	30.1 30.0	30.0	105.1 104.9	105.0	8.4 8.4	8.4	8.4	7.1 7.9	7.5	8.0	8.7 8.3	8.5	9.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.5 17.5	17.5	7.8 7.8	7.8	29.9 30.0	30.0	104.6 105.0	104.8	8.4 8.4	8.4	8.4	8.2 8.5	8.4		11.1 11.5	11.3	
26-Jan-15	Sunny	Moderate	17:19	3.3	Surface	1.0	18.3 18.5	18.4	7.6 7.6	7.6	30.6 30.6	30.6	105.8 106.0	105.9	8.3 8.3	8.3	8.3	7.5 7.6	7.6	7.7	9.2 9.7	9.5	9.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.4 18.1	18.3	7.6 7.6	7.6	30.6 30.6	30.6	105.9 105.0	105.5	8.3 8.3	8.3	8.3	7.7 7.7	7.7		9.7 9.3	9.5	
28-Jan-15	Fine	Moderate	07:37	3.8	Surface	1.0	17.9 17.9	17.9	7.5 7.5	7.5	29.1 29.1	29.1	99.9 98.7	99.3	8.0 7.9	7.9	7.9	8.3 8.0	8.2	8.3	10.6 10.0	10.3	10.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.9 17.9	17.9	7.5 7.5	7.5	29.2 29.1	29.2	101.1 99.3	100.2	8.1 7.9	8.0	8.0	8.4 8.2	8.3		10.0 11.0	10.5	
30-Jan-15	Cloudy	Moderate	10:49	3.6	Surface	1.0	17.9 17.9	17.9	7.7 7.7	7.7	28.8 28.9	28.8	101.0 98.6	99.8	8.1 7.9	8.0	8.0	11.0 10.7	10.9	11.8	6.2 7.3	6.8	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	17.9 17.9	17.9	7.7 7.7	7.7	28.8 28.9	28.9	103.5 99.7	101.6	8.3 8.0	8.1	8.1	13.1 12.2	12.7		9.2 9.4	9.3	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	15:48	3.7	Surface	1.0	17.5 17.7	17.6	8.1 8.0	8.1	31.7 31.8	31.7	120.9 118.2	119.6	9.6 9.3	9.4	9.4	2.1 2.3	2.2	2.4	0.9 0.9	0.9	1.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.5 17.4	17.4	8.1 8.0	8.0	31.7 31.9	31.8	119.9 115.7	117.8	9.5 9.2	9.3	9.3	2.4 2.5	2.5		1.3 1.2	1.3	
5-Jan-15	Cloudy	Moderate	08:26	3.3	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.3	30.3	112.1 110.4	111.3	8.9 8.7	8.8	8.8	1.6 1.6	1.6	1.7	2.4 2.6	2.5	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.8 17.9	17.9	8.1 8.1	8.1	30.3 30.2	30.2	111.5 106.8	109.2	8.8 8.5	8.6	8.6	1.7 1.7	1.7		4.2 3.6	3.9	
7-Jan-15	Rainy	Moderate	09:27	3.4	Surface	1.0	18.4 18.4	18.4	7.9 7.9	7.9	29.7 29.7	29.7	110.8 110.0	110.4	8.7 8.6	8.7	8.7	4.0 3.9	4.0	4.1	5.5 5.6	5.6	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	18.4 18.5	18.5	7.9 7.9	7.9	29.7 30.3	30.0	110.2 108.4	109.3	8.7 8.5	8.6	8.6	4.0 4.2	4.1		8.2 7.7	8.0	
9-Jan-15	Sunny	Moderate	10:24	3.4	Surface	1.0	17.9 17.9	17.9	7.9 7.9	7.9	29.6 29.4	29.5	107.5 105.2	106.4	8.6 8.4	8.5	8.5	5.1 5.1	5.1	6.2	7.4 6.7	7.1	9.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.8 17.9	17.9	7.9 7.9	7.9	29.8 29.6	29.7	109.5 106.1	107.8	8.7 8.4	8.6	8.6	7.6 7.0	7.3		11.5 12.4	12.0	
12-Jan-15	Cloudy	Moderate	11:58	3.6	Surface	1.0	17.7 17.6	17.7	7.9 7.9	7.9	29.5 29.5	29.5	97.1 98.0	97.6	7.8 7.8	7.8	7.8	6.6 6.6	6.6	6.6	10.4 10.8	10.6	9.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	17.7 17.7	17.7	7.9 7.9	7.9	29.5 29.6	29.6	97.4 98.4	97.9	7.8 7.9	7.8	7.8	6.3 6.6	6.5		8.8 7.3	8.1	
14-Jan-15	Cloudy	Moderate	12:19	3.7	Surface	1.0	16.8 16.7	16.8	7.9 7.9	7.9	30.1 30.1	30.1	99.7 96.0	97.9	8.1 7.8	7.9	7.9	7.2 7.6	7.4	7.5	9.3 8.8	9.1	10.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	16.6 16.7	16.7	7.9 7.9	7.9	30.2 30.1	30.1	103.2 97.8	100.5	8.4 7.9	8.1	8.1	7.4 7.5	7.5		12.3 11.3	11.8	
16-Jan-15	Sunny	Moderate	14:11	3.4	Surface	1.0	17.4 17.4	17.4	7.9 7.9	7.9	29.7 29.7	29.7	101.6 103.2	102.4	8.2 8.3	8.2	8.2	5.3 5.2	5.3	5.4	7.4 7.6	7.5	8.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.3 17.4	17.4	7.9 7.9	7.9	29.8 29.7	29.8	101.0 101.5	101.3	8.1 8.1	8.1	8.1	5.3 5.4	5.4		11.0 9.3	10.2	
19-Jan-15	Sunny	Moderate	16:34	3.6	Surface	1.0	17.6 17.6	17.6	8.0 8.0	8.0	30.6 30.6	30.6	127.3 124.3	125.8	10.1 9.9	10.0	10.0	4.9 5.1	5.0	5.4	5.2 5.6	5.4	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	17.4 17.2	17.3	8.0 7.9	8.0	30.6 30.6	30.6	126.3 122.7	124.5	10.1 9.8	9.9	9.9	5.7 5.9	5.8		5.0 5.4	5.2	
21-Jan-15	Sunny	Moderate	08:54	3.5	Surface	1.0	16.9 16.9	16.9	7.8 7.8	7.8	30.6 30.6	30.6	114.3 115.0	114.7	9.2 9.3	9.2	9.2	6.5 6.3	6.4	6.9	9.6 10.0	9.8	9.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	16.9 16.9	16.9	7.8 7.8	7.8	30.6 30.6	30.6	113.5 115.1	114.3	9.1 9.3	9.2	9.2	7.4 7.2	7.3		9.9 9.2	9.6	

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 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-Jan-15	Sunny	Moderate	09:25	3.5	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	29.3 29.3	29.3	99.5 100.3	99.9	8.1 8.1	8.1	8.1	5.7 5.6	5.7	5.8	10.3 10.9	10.6	11.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	17.1 17.1	17.1	7.8 7.8	7.8	29.3 29.4	29.3	99.8 100.8	100.3	8.1 8.2	8.1	8.1	5.7 5.8	5.8		11.8 12.9	12.4	
26-Jan-15	Sunny	Moderate	11:44	3.3	Surface	1.0	17.7 17.7	17.7	7.6 7.6	7.6	29.0 29.0	29.0	100.7 100.0	100.4	8.1 8.0	8.0	8.0	12.5 12.6	12.6	12.7	12.8 13.1	13.0	12.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.7 17.7	17.7	7.6 7.6	7.6	29.1 29.1	29.1	99.5 99.9	99.7	8.0 8.0	8.0	8.0	12.8 12.7	12.8		13.0 12.0	12.5	
28-Jan-15	Fine	Moderate	12:19	3.7	Surface	1.0	18.1 18.1	18.1	7.5 7.5	7.5	29.3 29.3	29.3	102.0 101.4	101.7	8.1 8.0	8.1	8.1	6.3 6.2	6.3	6.4	7.2 8.1	7.7	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	18.1 18.1	18.1	7.5 7.5	7.5	29.3 29.3	29.3	102.0 101.8	101.9	8.1 8.1	8.1	8.1	6.5 6.2	6.4		8.0 8.1	8.1	
30-Jan-15	Cloudy	Moderate	14:37	3.5	Surface	1.0	18.1 18.1	18.1	7.7 7.7	7.7	28.9 28.9	28.9	103.9 102.1	103.0	8.3 8.1	8.2	8.2	5.0 5.0	5.0	5.0	5.9 6.0	6.0	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	18.1 18.0	18.0	7.7 7.6	7.7	28.9 29.1	29.0	102.7 105.0	103.9	8.2 8.4	8.3	8.3	5.0 4.7	4.9		7.2 7.1	7.2	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:03	10.3	Surface	1.0	16.9 16.9	16.9	8.0 8.0	8.0	32.9 32.9	32.9	110.3 110.2	110.3	8.8 8.8	8.8	8.8	1.7 1.7	1.7	1.8	1.6 1.4	1.5	1.8
					Middle	5.2	16.8 16.8	16.8	8.0 8.0	8.0	32.9 32.9	32.9	109.9 110.0	110.0	8.7 8.8	8.7		1.8 1.7	1.8		2.1 1.9	2.0	
					Bottom	9.3	16.8 16.8	16.8	8.0 8.0	8.0	32.9 32.9	32.9	110.2 110.2	110.2	8.8 8.8	8.8	8.8	1.8 1.7	1.8		2.0 1.9	2.0	
5-Jan-15	Cloudy	Moderate	13:16	10.4	Surface	1.0	17.1 17.1	17.1	8.1 8.1	8.1	32.5 32.6	32.5	111.3 112.5	111.9	8.8 8.9	8.9	8.8	2.2 2.1	2.2	2.2	4.7 4.0	4.4	5.0
					Middle	5.2	17.0 17.0	17.0	8.1 8.1	8.1	32.6 32.6	32.6	108.2 111.7	110.0	8.6 8.9	8.7		2.2 2.1	2.2		5.3 5.0	5.2	
					Bottom	9.4	17.0 17.0	17.0	8.1 8.1	8.1	32.6 32.6	32.6	106.3 111.6	109.0	8.4 8.9	8.7	8.7	2.3 2.3	2.3		5.5 5.5	5.5	
7-Jan-15	Cloudy	Moderate	14:15	11.6	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.6 31.6	31.6	110.5 110.1	110.3	8.7 8.7	8.7	8.7	2.5 2.5	2.5	2.9	6.0 6.4	6.2	7.7
					Middle	5.8	17.5 17.5	17.5	8.1 8.1	8.1	31.7 31.7	31.7	109.7 110.0	109.9	8.7 8.7	8.7		2.7 2.9	2.8		5.7 6.6	6.2	
					Bottom	10.6	17.5 17.5	17.5	8.1 8.1	8.1	31.7 31.7	31.7	110.0 109.1	109.6	8.7 8.6	8.7	8.7	3.4 3.2	3.3		10.4 11.2	10.8	
9-Jan-15	Sunny	Moderate	15:22	10.6	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	32.1 32.0	32.0	102.8 103.4	103.1	8.2 8.2	8.2	8.2	2.4 2.3	2.4	2.4	8.3 7.9	8.1	8.6
					Middle	5.3	17.1 17.1	17.1	8.0 8.0	8.0	32.0 32.0	32.0	102.5 103.3	102.9	8.2 8.2	8.2		2.3 2.4	2.4		8.4 8.2	8.3	
					Bottom	9.6	17.1 17.1	17.1	8.0 8.0	8.0	32.0 32.0	32.0	102.9 104.2	103.6	8.2 8.3	8.2	8.2	2.4 2.4	2.4		9.5 9.2	9.4	
12-Jan-15	Rainy	Rough	17:45	10.1	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	96.5 98.0	97.3	7.7 7.8	7.8	7.9	8.2 8.3	8.3	8.7	10.9 9.5	10.2	10.3
					Middle	5.1	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	96.5 101.2	98.9	7.7 8.1	7.9		8.2 8.7	8.5		10.0 11.3	10.7	
					Bottom	9.1	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	104.0 96.9	100.5	8.3 7.7	8.0	8.0	9.3 9.0	9.2		8.9 11.1	10.0	
14-Jan-15	Cloudy	Moderate	05:15	10.4	Surface	1.0	16.4 16.4	16.4	7.6 7.4	7.5	32.4 32.4	32.4	97.0 102.6	99.8	7.8 8.3	8.0	8.1	2.7 2.9	2.8	2.9	5.4 5.3	5.4	7.9
					Middle	5.2	16.4 16.4	16.4	7.3 7.6	7.5	32.4 32.4	32.4	105.4 98.1	101.8	8.5 7.9	8.2		2.9 2.9	2.9		8.2 7.5	7.9	
					Bottom	9.4	16.3 16.4	16.4	7.2 7.5	7.4	32.4 32.4	32.4	104.7 99.4	102.1	8.4 8.0	8.2	8.2	3.0 3.1	3.1		10.7 10.1	10.4	
16-Jan-15	Sunny	Moderate	09:04	10.7	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	32.6 32.6	32.6	95.2 95.5	95.4	7.6 7.7	7.7	7.7	7.1 7.2	7.2	7.5	8.4 7.8	8.1	8.3
					Middle	5.4	16.3 16.2	16.3	7.9 7.9	7.9	32.6 32.6	32.6	95.4 94.8	95.1	7.7 7.6	7.7		7.5 7.4	7.5		8.0 7.7	7.9	
					Bottom	9.7	16.2 16.3	16.2	7.9 7.9	7.9	32.6 32.5	32.6	95.2 94.7	95.0	7.7 7.6	7.7	7.7	7.9 7.8	7.9		8.9 8.7	8.8	
19-Jan-15	Sunny	Moderate	12:15	10.4	Surface	1.0	16.2 16.3	16.3	7.9 7.9	7.9	32.5 32.6	32.5	100.4 100.9	100.7	8.1 8.1	8.1	8.1	3.3 3.5	3.4	4.1	4.7 3.1	3.9	4.4
					Middle	5.2	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.6	32.6	100.5 100.0	100.3	8.1 8.1	8.1		4.4 4.1	4.3		4.5 3.3	3.9	
					Bottom	9.4	16.2 16.2	16.2	7.9 7.9	7.9	32.6 32.6	32.6	101.6 100.7	101.2	8.2 8.1	8.2	8.2	4.5 4.5	4.5		6.1 4.7	5.4	
21-Jan-15	Sunny	Moderate	13:47	10.5	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.3 32.4	32.4	100.2 99.5	99.9	8.1 8.0	8.1	8.1	2.7 2.6	2.7	4.0	8.7 8.8	8.8	8.4
					Middle	5.3	16.2 16.2	16.2	7.9 7.9	7.9	32.3 32.3	32.3	100.3 99.4	99.9	8.1 8.0	8.1		4.4 4.8	4.6		8.6 7.8	8.2	
					Bottom	9.5	16.2 16.2	16.2	7.9 7.9	7.9	32.3 32.3	32.3	99.8 100.8	100.3	8.1 8.1	8.1	8.1	4.7 4.5	4.6		7.9 8.4	8.2	

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)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-Jan-15	Sunny	Moderate	15:11	10.5	Surface	1.0	16.6 16.4	16.5	7.9 7.9	7.9	31.5 31.5	31.5	98.6 99.0	98.8	8.0 8.0	8.0	8.0	7.6 7.9	7.8	8.4	9.7 9.6	9.7	13.1
					Middle	5.3	16.4 16.4	16.4	7.9 7.9	7.9	31.5 31.5	31.5	99.3 98.1	98.7	8.0 7.9	8.0		8.6 8.4	8.5		13.1 13.2	13.2	
					Bottom	9.5	16.4 16.4	16.4	7.9 7.9	7.9	31.5 31.5	31.5	101.1 98.9	100.0	8.2 8.0	8.1	8.1	8.8 8.7	8.8		16.7 15.9	16.3	
26-Jan-15	Sunny	Moderate	18:09	10.3	Surface	1.0	17.1 17.2	17.1	7.9 7.9	7.9	30.8 30.7	30.7	99.4 99.8	99.6	8.0 8.0	8.0	8.0	6.4 6.4	6.4	6.5	6.4 6.8	6.6	9.6
					Middle	5.2	16.9 16.8	16.9	7.9 7.9	7.9	31.0 31.0	31.0	98.8 98.8	98.8	7.9 7.9	7.9		6.4 6.3	6.4		9.9 9.2	9.6	
					Bottom	9.3	16.9 16.8	16.9	7.9 7.9	7.9	31.0 31.1	31.0	99.5 99.8	99.7	8.0 8.0	8.0	8.0	6.8 6.6	6.7		12.4 12.7	12.6	
28-Jan-15	Fine	Moderate	06:03	10.6	Surface	1.0	16.9 16.9	16.9	7.8 7.9	7.9	31.0 31.0	31.0	99.5 101.6	100.6	8.0 8.2	8.1	8.1	6.4 6.2	6.3	6.3	6.7 7.0	6.9	6.9
					Middle	5.3	16.9 16.9	16.9	7.8 7.9	7.9	31.0 31.0	31.0	100.1 102.7	101.4	8.0 8.3	8.1		6.3 6.2	6.3		6.3 6.9	6.6	
					Bottom	9.6	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.1	31.0	100.8 104.1	102.5	8.1 8.4	8.2	8.2	6.4 6.4	6.4		7.5 6.9	7.2	
30-Jan-15	Cloudy	Moderate	10:04	10.7	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	28.8 28.9	28.9	98.2 98.4	98.3	8.0 8.0	8.0	8.0	1.9 1.9	1.9	2.0	3.4 3.3	3.4	4.9
					Middle	5.4	17.0 17.0	17.0	7.8 7.8	7.8	31.1 31.1	31.1	98.2 98.0	98.1	7.9 7.9	7.9		1.9 2.0	2.0		5.0 6.0	5.5	
					Bottom	9.7	17.0 17.0	17.0	7.8 7.8	7.8	31.1 31.0	31.1	98.1 98.3	98.2	7.9 7.9	7.9	7.9	2.2 2.1	2.2		5.1 6.3	5.7	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	16:38	10.6	Surface	1.0	17.1 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	112.4 113.4	112.9	8.9 9.0	8.9	8.9	2.7 2.6	2.7	2.7	1.9 2.0	2.0	2.3
					Middle	5.3	17.0 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	112.9 111.1	112.0	8.9 8.8	8.9		2.6 2.6	2.6		2.5 2.3	2.4	
					Bottom	9.6	17.0 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	112.6 109.5	111.1	8.9 8.7	8.8	8.8	2.6 2.7	2.7		2.2 3.0	2.6	
5-Jan-15	Cloudy	Moderate	07:33	10.5	Surface	1.0	17.0 17.0	17.0	8.2 8.2	8.2	32.7 32.7	32.7	112.4 112.1	112.3	8.9 8.9	8.9	8.9	6.3 6.3	6.3	6.5	8.0 9.0	8.5	10.2
					Middle	5.3	17.0 17.0	17.0	8.2 8.2	8.2	32.7 32.7	32.7	111.8 112.0	111.9	8.9 8.9	8.9		6.5 6.7	6.6		8.0 9.3	8.7	
					Bottom	9.5	17.0 17.0	17.0	8.2 8.2	8.2	32.7 32.7	32.7	111.9 111.5	111.7	8.9 8.9	8.9	8.9	6.5 6.6	6.6		13.5 13.1	13.3	
7-Jan-15	Rainy	Moderate	08:44	10.6	Surface	1.0	17.4 17.4	17.4	8.1 8.1	8.1	31.7 31.7	31.7	110.4 110.6	110.5	8.7 8.8	8.8	8.8	7.3 7.1	7.2	7.5	6.8 6.5	6.7	7.4
					Middle	5.3	17.4 17.4	17.4	8.1 8.1	8.1	31.7 31.7	31.7	110.5 110.2	110.4	8.8 8.7	8.7		7.6 7.6	7.6		7.0 7.0	7.0	
					Bottom	9.6	17.4 17.4	17.4	8.1 8.1	8.1	31.8 31.7	31.8	109.9 110.4	110.2	8.7 8.7	8.7	8.7	7.7 7.9	7.8		9.1 8.0	8.6	
9-Jan-15	Sunny	Moderate	09:39	10.2	Surface	1.0	16.8 16.9	16.9	8.0 8.0	8.0	32.1 32.1	32.1	102.4 102.6	102.5	8.2 8.2	8.2	8.2	8.2 8.3	8.3	8.5	7.1 7.2	7.2	8.5
					Middle	5.1	16.8 16.8	16.8	8.0 8.0	8.0	32.1 32.1	32.1	102.5 102.2	102.4	8.2 8.2	8.2		8.4 8.5	8.5		8.4 8.4	8.4	
					Bottom	9.2	16.8 16.8	16.8	8.0 8.0	8.0	32.1 32.1	32.1	102.7 102.3	102.5	8.2 8.2	8.2	8.2	8.7 8.6	8.7		10.4 9.6	10.0	
12-Jan-15	Cloudy	Moderate	11:37	9.8	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	32.3 32.3	32.3	96.9 96.3	96.6	7.7 7.7	7.7	7.7	7.2 7.2	7.2	7.2	13.2 14.7	14.0	12.8
					Middle	4.9	16.9 16.9	16.9	7.9 7.9	7.9	32.3 32.3	32.3	96.3 97.0	96.7	7.7 7.7	7.7		7.0 7.3	7.2		14.8 13.8	14.3	
					Bottom	8.8	16.9 16.9	16.9	7.9 7.9	7.9	32.3 32.3	32.3	96.5 97.1	96.8	7.7 7.7	7.7	7.7	7.1 7.5	7.3		11.4 8.8	10.1	
14-Jan-15	Cloudy	Moderate	13:49	10.6	Surface	1.0	16.6 16.6	16.6	7.6 7.8	7.7	32.4 32.4	32.4	100.2 95.9	98.1	8.0 7.7	7.9	8.0	2.6 2.7	2.7	2.8	7.6 6.8	7.2	7.1
					Middle	5.3	16.6 16.6	16.6	7.7 7.5	7.6	32.4 32.4	32.4	96.1 103.0	99.6	7.7 8.3	8.0		2.8 2.7	2.8		6.2 7.0	6.6	
					Bottom	9.6	16.6 16.5	16.5	7.7 7.4	7.5	32.4 32.5	32.4	97.2 107.5	102.4	7.8 8.6	8.2	8.2	2.8 2.9	2.9		6.9 7.8	7.4	
16-Jan-15	Sunny	Moderate	14:59	10.5	Surface	1.0	16.7 16.6	16.7	7.9 7.9	7.9	32.5 32.5	32.5	95.6 96.0	95.8	7.6 7.7	7.7	7.7	4.8 4.9	4.9	5.1	7.4 8.0	7.7	8.3
					Middle	5.3	16.6 16.6	16.6	7.9 7.9	7.9	32.6 32.6	32.6	97.4 95.3	96.4	7.8 7.6	7.7		5.1 5.1	5.1		8.2 8.4	8.3	
					Bottom	9.5	16.6 16.6	16.6	7.9 7.9	7.9	32.6 32.6	32.6	99.0 95.4	97.2	7.9 7.6	7.8	7.8	5.1 5.2	5.2		9.2 8.3	8.8	
19-Jan-15	Sunny	Moderate	17:28	10.3	Surface	1.0	16.4 16.5	16.5	8.0 8.0	8.0	32.5 32.5	32.5	100.7 101.2	101.0	8.1 8.1	8.1	8.1	12.3 12.2	12.3	12.3	5.5 6.1	5.8	6.0
					Middle	5.2	16.3 16.3	16.3	8.0 7.9	8.0	32.5 32.5	32.5	100.8 100.3	100.6	8.1 8.1	8.1		12.3 12.2	12.3		5.8 6.3	6.1	
					Bottom	9.3	16.3 16.3	16.3	7.9 8.0	8.0	32.5 32.5	32.5	100.6 101.2	100.9	8.1 8.2	8.1	8.1	12.4 12.2	12.3		6.0 6.0	6.0	
21-Jan-15	Sunny	Moderate	08:02	10.4	Surface	1.0	16.1 16.1	16.1	7.9 7.9	7.9	32.3 32.3	32.3	99.8 99.6	99.7	8.1 8.1	8.1	8.1	13.2 12.9	13.1	13.1	13.4 13.8	13.6	16.3
					Middle	5.2	16.1 16.1	16.1	7.9 7.9	7.9	32.3 32.3	32.3	99.9 99.4	99.7	8.1 8.0	8.1		12.8 13.4	13.1		17.0 17.1	17.1	
					Bottom	9.4	16.1 16.1	16.1	7.9 7.9	7.9	32.3 32.3	32.3	100.2 99.5	99.9	8.1 8.1	8.1	8.1	12.6 13.5	13.1		18.4 17.8	18.1	

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-Jan-15	Sunny	Moderate	09:11	10.8	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	31.3 31.3	31.3	98.6 98.3	98.5	8.0 8.0	8.0	8.0	23.2 23.8	23.5	24.7	26.5 25.6	26.1	**27.3**
					Middle	5.4	16.3 16.3	16.3	7.9 7.9	7.9	31.3 31.3	31.3	98.0 98.6	98.3	8.0 8.0	8.0		25.1 25.4	25.3		25.8 26.4	26.1	
					Bottom	9.8	16.3 16.3	16.3	7.9 7.9	7.9	31.3 31.3	31.3	98.4 99.2	98.8	8.0 8.1	8.0	8.0	25.3 25.5	25.4		30.2 29.4	29.8	
26-Jan-15	Sunny	Moderate	11:13	10.6	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	31.2 31.2	31.2	98.0 97.9	98.0	7.9 7.9	7.9	7.9	14.4 14.1	14.3	15.3	21.4 20.9	21.2	**23.8**
					Middle	5.3	16.6 16.6	16.6	7.9 7.9	7.9	31.2 31.2	31.2	97.8 97.9	97.9	7.9 7.9	7.9		15.7 15.6	15.7		24.1 23.7	23.9	
					Bottom	9.6	16.7 16.6	16.7	7.9 7.9	7.9	31.2 31.2	31.2	97.7 97.7	97.7	7.9 7.9	7.9	7.9	15.8 16.2	16.0		26.2 26.2	26.2	
28-Jan-15	Fine	Moderate	14:04	10.6	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	31.0 31.0	31.0	97.2 97.4	97.3	7.8 7.8	7.8	7.8	6.0 6.1	6.1	6.2	7.9 8.5	8.2	7.9
					Middle	5.3	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	97.3 97.2	97.3	7.8 7.8	7.8		6.1 6.1	6.1		8.1 8.4	8.3	
					Bottom	9.6	17.0 17.0	17.0	7.9 7.9	7.9	31.0 31.1	31.1	97.5 97.5	97.5	7.8 7.8	7.8	7.8	6.4 6.3	6.4		7.5 7.1	7.3	
30-Jan-15	Cloudy	Moderate	15:21	10.6	Surface	1.0	17.2 17.1	17.1	7.9 7.9	7.9	30.7 30.8	30.8	99.2 97.6	98.4	8.0 7.8	7.9	7.9	4.0 4.3	4.2	4.9	6.2 5.0	5.6	6.7
					Middle	5.3	17.0 17.0	17.0	7.9 7.9	7.9	31.3 31.1	31.2	97.3 99.5	98.4	7.8 8.0	7.9		5.2 5.1	5.2		7.0 7.5	7.3	
					Bottom	9.6	17.0 17.0	17.0	7.9 7.9	7.9	31.3 31.3	31.3	101.9 98.2	100.1	8.2 7.9	8.0	8.0	5.4 5.3	5.4		7.3 7.0	7.2	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:08	6.7	Surface	1.0	17.7 17.7	17.7	8.1 8.0	8.1	30.3 29.8	30.1	113.7 113.4	113.6	9.0 9.0	9.0	9.0	2.9 3.1	3.0	3.5	2.1 1.5	1.8	2.5
					Middle	3.4	17.7 17.6	17.6	8.0 8.0	8.0	30.2 29.6	29.9	113.2 112.3	112.8	9.0 9.0	9.0		3.7 3.6	3.7		2.1 3.5	2.8	
					Bottom	5.7	17.5 17.6	17.6	8.0 8.0	8.0	29.3 30.0	29.7	111.7 112.8	112.3	9.0 9.0	9.0	9.0	3.8 4.0	3.9		3.0 2.8	2.9	
5-Jan-15	Cloudy	Moderate	12:28	7.0	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.3	30.3	114.9 114.3	114.6	9.1 9.1	9.1	8.9	3.1 3.2	3.2	3.4	6.1 5.8	6.0	6.4
					Middle	3.5	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.4	30.4	114.1 105.8	110.0	9.0 8.4	8.7		3.2 3.3	3.3		6.4 6.3	6.4	
					Bottom	6.0	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.4	30.4	114.1 104.4	109.3	9.0 8.3	8.7	8.7	3.5 3.6	3.6		6.8 6.6	6.7	
7-Jan-15	Cloudy	Moderate	14:11	6.6	Surface	1.0	18.3 18.3	18.3	8.0 8.0	8.0	29.8 29.7	29.8	111.8 111.5	111.7	8.8 8.8	8.8	8.8	6.0 6.5	6.3	7.2	7.0 7.9	7.5	8.2
					Middle	3.3	18.3 18.3	18.3	8.0 8.0	8.0	29.9 29.7	29.8	110.8 110.0	110.4	8.7 8.7	8.7		7.2 7.7	7.5		7.9 8.5	8.2	
					Bottom	5.6	18.3 18.3	18.3	7.9 8.0	8.0	29.8 30.1	30.0	109.0 111.2	110.1	8.6 8.7	8.7	8.7	8.0 7.6	7.8		9.4 8.4	8.9	
9-Jan-15	Sunny	Moderate	15:18	6.2	Surface	1.0	18.1 18.1	18.1	7.9 8.0	8.0	30.4 30.5	30.5	105.5 105.5	105.5	8.3 8.3	8.3	8.3	3.9 3.9	3.9	4.2	6.1 7.4	6.8	7.3
					Middle	3.1	18.1 18.1	18.1	8.0 7.9	8.0	30.5 30.4	30.5	104.5 106.0	105.3	8.2 8.4	8.3		4.3 4.4	4.4		7.0 7.8	7.4	
					Bottom	5.2	18.0 18.0	18.0	8.0 7.9	8.0	30.5 30.4	30.5	104.8 106.4	105.6	8.3 8.4	8.3	8.3	4.3 4.3	4.3		7.3 7.9	7.6	
12-Jan-15	Rainy	Rough	17:12	6.2	Surface	1.0	17.6 17.6	17.6	7.9 7.9	7.9	29.8 29.8	29.8	96.7 99.0	97.9	7.7 7.9	7.8	7.9	5.5 5.6	5.6	5.7	11.2 9.1	10.2	11.8
					Middle	3.1	17.6 17.6	17.6	7.9 7.9	7.9	29.8 29.8	29.8	100.0 97.1	98.6	8.0 7.8	7.9		5.7 5.7	5.7		9.0 7.8	8.4	
					Bottom	5.2	17.6 17.6	17.6	7.9 7.9	7.9	29.7 29.8	29.8	102.2 97.2	99.7	8.2 7.8	8.0	8.0	5.7 5.7	5.7		16.2 17.6	16.9	
14-Jan-15	Cloudy	Moderate	06:10	6.4	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	30.3 30.3	30.3	98.0 94.4	96.2	7.9 7.6	7.7	7.8	4.0 4.1	4.1	4.3	4.8 4.6	4.7	5.7
					Middle	3.2	17.1 17.1	17.1	7.9 7.9	7.9	30.4 30.3	30.4	100.2 95.1	97.7	8.0 7.6	7.8		3.9 4.1	4.0		6.4 6.0	6.2	
					Bottom	5.4	17.1 17.1	17.1	7.9 7.9	7.9	31.0 30.3	30.7	103.7 96.3	100.0	8.3 7.7	8.0	8.0	4.7 4.8	4.8		6.6 5.6	6.1	
16-Jan-15	Sunny	Moderate	09:28	6.6	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	30.0 30.0	30.0	96.3 98.4	97.4	7.7 7.9	7.8	7.8	3.6 3.6	3.6	3.7	8.1 8.5	8.3	8.7
					Middle	3.3	17.2 17.2	17.2	7.9 7.9	7.9	30.0 30.0	30.0	95.7 96.7	96.2	7.7 7.8	7.7		3.6 3.6	3.6		8.7 7.6	8.2	
					Bottom	5.6	17.2 17.2	17.2	7.9 7.9	7.9	30.0 30.1	30.0	95.2 96.4	95.8	7.7 7.7	7.7	7.7	3.7 3.8	3.8		9.2 10.1	9.7	
19-Jan-15	Sunny	Moderate	12:29	6.4	Surface	1.0	17.2 17.2	17.2	7.8 7.9	7.9	30.4 30.4	30.4	106.1 105.7	105.9	8.5 8.5	8.5	8.5	6.9 6.3	6.6	8.4	6.5 5.1	5.8	5.0
					Middle	3.2	17.0 17.1	17.1	7.8 7.9	7.8	30.3 30.4	30.4	105.7 105.2	105.5	8.5 8.5	8.5		8.8 8.7	8.8		5.1 4.2	4.7	
					Bottom	5.4	17.1 17.0	17.1	7.8 7.8	7.8	30.4 30.4	30.4	105.4 107.0	106.2	8.5 8.6	8.5	8.5	9.3 10.3	9.8		3.9 4.9	4.4	
21-Jan-15	Sunny	Moderate	13:26	6.9	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	30.6 30.6	30.6	99.9 100.4	100.2	8.0 8.1	8.0	8.0	7.4 7.4	7.4	7.6	13.9 13.2	13.6	14.4
					Middle	3.5	17.1 17.0	17.1	7.7 7.7	7.7	30.7 30.6	30.6	100.0 100.2	100.1	8.0 8.0	8.0		7.6 7.6	7.6		14.1 15.6	14.9	
					Bottom	5.9	17.1 17.0	17.1	7.7 7.7	7.7	30.6 30.7	30.6	100.1 99.8	100.0	8.0 8.0	8.0	8.0	7.8 7.8	7.8		14.8 14.3	14.6	

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 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-Jan-15	Sunny	Moderate	14:46	7.0	Surface	1.0	17.4 17.4	17.4	7.7 7.7	7.7	29.7 29.7	29.7	102.1 102.2	102.2	8.2 8.2	8.2	8.2	5.8 6.0	5.9	6.2	8.0 7.8	7.9	9.3
					Middle	3.5	17.4 17.4	17.4	7.7 7.7	7.7	29.7 29.7	29.7	102.3 102.4	102.4	8.2 8.2	8.2		6.1 6.2	6.2		9.1 9.3	9.2	
					Bottom	6.0	17.4 17.4	17.4	7.7 7.7	7.7	29.8 29.7	29.8	102.2 102.3	102.3	8.2 8.2	8.2	8.2	6.6 6.4	6.5		10.9 10.7	10.8	
26-Jan-15	Sunny	Moderate	17:37	7.1	Surface	1.0	18.1 18.1	18.1	7.6 7.6	7.6	30.1 30.1	30.1	101.3 105.0	103.2	8.0 8.3	8.1	8.1	5.5 5.4	5.5	5.6	6.8 6.7	6.8	8.3
					Middle	3.6	17.9 17.9	17.9	7.7 7.6	7.6	30.2 30.2	30.2	100.7 101.7	101.2	8.0 8.0	8.0		5.5 5.6	5.6		8.2 9.0	8.6	
					Bottom	6.1	17.9 18.0	18.0	7.7 7.6	7.6	30.3 30.1	30.2	99.9 100.7	100.3	7.9 8.0	7.9	7.9	5.7 5.8	5.8		9.0 10.0	9.5	
28-Jan-15	Fine	Moderate	07:13	6.5	Surface	1.0	17.8 17.8	17.8	7.5 7.6	7.6	28.7 28.7	28.7	96.6 97.5	97.1	7.7 7.8	7.8	7.8	6.5 6.3	6.4	6.4	6.9 7.3	7.1	6.9
					Middle	3.3	17.8 17.8	17.8	7.5 7.5	7.5	28.7 28.7	28.7	98.4 96.6	97.5	7.9 7.7	7.8		6.3 6.4	6.4		6.0 7.5	6.8	
					Bottom	5.5	17.8 17.8	17.8	7.5 7.5	7.5	28.8 28.8	28.8	99.8 97.0	98.4	8.0 7.8	7.9	7.9	6.3 6.2	6.3		7.0 6.5	6.8	
30-Jan-15	Cloudy	Moderate	10:10	6.2	Surface	1.0	17.9 17.9	17.9	7.8 7.7	7.7	28.5 28.4	28.5	98.5 98.4	98.5	7.9 7.9	7.9	7.9	7.8 7.2	7.5	9.1	9.6 9.9	9.8	10.6
					Middle	3.1	17.9 17.9	17.9	7.7 7.8	7.7	28.5 28.5	28.5	98.9 97.8	98.4	7.9 7.8	7.9		9.6 9.0	9.3		10.7 10.6	10.7	
					Bottom	5.2	17.9 17.9	17.9	7.6 7.7	7.7	28.8 28.7	28.7	101.1 96.5	98.8	8.1 7.7	7.9	7.9	10.4 10.6	10.5		11.3 11.4	11.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	16:22	6.5	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	31.4 31.4	31.4	116.2 115.1	115.7	9.2 9.1	9.1	9.1	3.5 3.5	3.5	3.5	2.7 3.2	3.0	3.4
					Middle	3.3	17.8 17.8	17.8	8.1 8.1	8.1	31.4 31.4	31.4	115.9 113.7	114.8	9.1 9.0	9.1		3.4 3.7	3.6		3.1 3.6	3.4	
					Bottom	5.5	17.7 17.7	17.7	8.1 8.1	8.1	31.4 31.4	31.4	115.0 111.8	113.4	9.1 8.8	8.9	8.9	3.4 3.3	3.4		3.1 4.2	3.7	
5-Jan-15	Cloudy	Moderate	08:09	7.0	Surface	1.0	17.7 17.7	17.7	8.2 8.2	8.2	29.8 29.7	29.8	114.2 113.6	113.9	9.1 9.1	9.1	9.1	3.3 3.4	3.4	3.5	3.3 3.8	3.6	4.0
					Middle	3.5	17.7 17.7	17.7	8.2 8.2	8.2	29.8 29.8	29.8	113.4 112.3	112.9	9.0 8.9	9.0		3.5 3.6	3.6		3.6 3.0	3.3	
					Bottom	6.0	17.7 17.7	17.7	8.2 8.2	8.2	29.9 29.9	29.9	113.3 110.5	111.9	9.0 8.8	8.9	8.9	3.6 3.6	3.6		4.8 5.5	5.2	
7-Jan-15	Rainy	Moderate	08:55	6.6	Surface	1.0	18.3 18.2	18.3	7.9 7.9	7.9	29.2 29.2	29.2	110.8 110.0	110.4	8.8 8.7	8.7	8.7	4.6 4.6	4.6	5.8	8.0 7.4	7.7	7.8
					Middle	3.3	18.3 18.3	18.3	7.8 7.9	7.9	29.3 29.2	29.2	110.2 109.0	109.6	8.7 8.6	8.7		6.4 5.8	6.1		7.9 7.3	7.6	
					Bottom	5.6	18.3 18.3	18.3	7.8 7.9	7.9	29.4 29.4	29.4	109.5 107.9	108.7	8.6 8.5	8.6	8.6	7.0 6.3	6.7		7.7 8.7	8.2	
9-Jan-15	Sunny	Moderate	09:48	6.2	Surface	1.0	17.9 17.9	17.9	7.9 7.9	7.9	29.3 29.4	29.4	103.9 102.7	103.3	8.3 8.2	8.2	8.2	4.0 4.2	4.1	4.6	6.2 5.6	5.9	8.0
					Middle	3.1	17.9 17.9	17.9	7.9 7.9	7.9	29.3 29.3	29.3	102.5 104.1	103.3	8.2 8.3	8.2		5.0 4.7	4.9		7.3 7.2	7.3	
					Bottom	5.2	17.8 17.8	17.8	7.9 7.9	7.9	29.6 29.6	29.6	102.8 105.3	104.1	8.2 8.4	8.3	8.3	4.6 4.7	4.7		10.3 11.3	10.8	
12-Jan-15	Cloudy	Moderate	11:33	6.4	Surface	1.0	17.7 17.6	17.6	7.8 7.8	7.8	29.8 29.5	29.7	100.2 97.2	98.7	8.0 7.8	7.9	8.0	2.6 2.5	2.6	2.5	7.3 5.7	6.5	6.3
					Middle	3.2	17.7 17.7	17.7	7.8 7.7	7.8	29.8 29.8	29.8	97.8 101.9	99.9	7.8 8.1	8.0		2.4 2.5	2.5		7.2 4.6	5.9	
					Bottom	5.4	17.7 17.6	17.6	7.8 7.7	7.7	29.7 30.1	29.9	98.7 105.6	102.2	7.9 8.4	8.1	8.1	2.4 2.5	2.5		7.1 5.8	6.5	
14-Jan-15	Cloudy	Moderate	12:42	6.5	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	30.2 30.2	30.2	94.3 95.5	94.9	7.6 7.7	7.6	7.7	3.5 3.6	3.6	3.5	4.6 4.6	4.6	6.7
					Middle	3.3	17.1 17.1	17.1	7.9 7.9	7.9	30.2 30.3	30.2	94.6 97.1	95.9	7.6 7.8	7.7		3.5 3.5	3.5		7.3 7.3	7.3	
					Bottom	5.5	17.1 17.1	17.1	7.9 7.9	7.9	30.4 30.2	30.3	99.3 95.3	97.3	8.0 7.7	7.8	7.8	3.5 3.4	3.5		8.0 8.6	8.3	
16-Jan-15	Sunny	Moderate	14:33	7.0	Surface	1.0	17.6 17.5	17.6	7.8 7.8	7.8	30.3 30.4	30.4	94.9 101.6	98.3	7.6 8.1	7.9	7.8	5.4 5.3	5.4	5.6	9.1 8.2	8.7	9.2
					Middle	3.5	17.3 17.4	17.4	7.8 7.8	7.8	30.4 30.7	30.5	97.3 94.6	96.0	7.8 7.5	7.7		5.7 5.6	5.7		8.9 8.2	8.6	
					Bottom	6.0	17.4 17.3	17.3	7.8 7.8	7.8	30.6 30.3	30.5	93.7 96.0	94.9	7.5 7.6	7.6	7.6	5.7 5.8	5.8		10.3 10.5	10.4	
19-Jan-15	Sunny	Moderate	17:06	6.3	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	30.8 30.8	30.8	103.1 103.0	103.1	8.3 8.2	8.2	8.3	5.6 5.3	5.5	5.6	5.6 5.3	5.5	6.4
					Middle	3.2	17.1 17.1	17.1	7.9 7.9	7.9	30.8 30.8	30.8	103.1 103.1	103.1	8.3 8.3	8.3		5.7 6.0	5.9		5.1 7.4	6.3	
					Bottom	5.3	17.1 17.1	17.1	7.9 7.9	7.9	30.8 30.8	30.8	103.3 104.1	103.7	8.3 8.3	8.3	8.3	5.5 5.0	5.3		7.6 7.2	7.4	
21-Jan-15	Sunny	Moderate	08:22	7.1	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	30.4 30.4	30.4	99.2 100.0	99.6	8.0 8.0	8.0	8.0	11.1 11.3	11.2	11.7	9.4 9.4	9.4	9.9
					Middle	3.6	17.0 16.9	17.0	7.7 7.7	7.7	30.6 30.4	30.5	99.0 100.2	99.6	8.0 8.1	8.0		11.9 11.7	11.8		9.7 9.4	9.6	
					Bottom	6.1	17.0 17.0	17.0	7.7 7.7	7.7	30.5 30.4	30.5	99.2 101.0	100.1	8.0 8.1	8.0	8.0	12.2 12.1	12.2		10.8 10.6	10.7	

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)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-Jan-15	Sunny	Moderate	08:58	7.1	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	28.8 28.8	28.8	98.8 97.8	98.3	8.0 7.9	8.0	8.0	12.4 12.2	12.3	13.3	11.8 13.4	12.6	14.7
					Middle	3.6	17.1 17.1	17.1	7.7 7.7	7.7	28.9 28.9	28.9	98.8 98.1	98.5	8.0 8.0	8.0		13.6 13.5	13.6		15.9 15.1	15.5	
					Bottom	6.1	17.1 17.1	17.1	7.7 7.6	7.7	28.9 28.9	28.9	98.3 98.9	98.6	8.0 8.0	8.0	8.0	14.0 14.2	14.1		16.6 15.6	16.1	
26-Jan-15	Sunny	Moderate	11:25	6.9	Surface	1.0	17.6 17.6	17.6	7.5 7.5	7.5	28.7 28.7	28.7	100.5 99.7	100.1	8.1 8.0	8.0	8.0	6.0 6.0	6.0	6.1	9.5 10.5	10.0	10.5
					Middle	3.5	17.6 17.6	17.6	7.5 7.5	7.5	28.8 28.8	28.8	100.1 99.1	99.6	8.0 8.0	8.0		6.0 6.2	6.1		9.9 10.8	10.4	
					Bottom	5.9	17.7 17.6	17.6	7.5 7.5	7.5	28.7 28.8	28.8	99.3 99.0	99.2	8.0 8.0	8.0	8.0	6.2 6.4	6.3		11.2 11.2	11.2	
28-Jan-15	Fine	Moderate	12:44	6.6	Surface	1.0	17.9 17.9	17.9	7.5 7.5	7.5	29.0 29.2	29.1	97.8 99.6	98.7	7.8 7.9	7.9	7.9	10.2 10.2	10.2	10.4	14.7 13.3	14.0	13.9
					Middle	3.3	17.9 17.9	17.9	7.5 7.5	7.5	29.3 29.1	29.2	100.5 98.0	99.3	8.0 7.8	7.9		10.3 10.4	10.4		14.2 14.7	14.5	
					Bottom	5.6	17.9 17.9	17.9	7.5 7.5	7.5	29.1 29.4	29.3	98.2 102.5	100.4	7.8 8.2	8.0	8.0	10.9 10.4	10.7		13.2 13.1	13.2	
30-Jan-15	Cloudy	Moderate	15:14	6.3	Surface	1.0	18.1 18.1	18.1	7.7 7.7	7.7	28.3 28.3	28.3	100.5 100.8	100.7	8.0 8.0	8.0	8.0	4.6 5.1	4.9	5.7	6.5 6.3	6.4	8.8
					Middle	3.2	18.0 18.0	18.0	7.7 7.7	7.7	28.5 28.5	28.5	99.8 100.4	100.1	8.0 8.0	8.0		5.6 6.1	5.9		9.7 8.8	9.3	
					Bottom	5.3	18.0 18.0	18.0	7.7 7.6	7.7	28.5 28.6	28.6	101.3 100.2	100.8	8.1 8.0	8.0	8.0	6.6 5.9	6.3		11.2 10.4	10.8	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	12:22	8.5	Surface	1.0	17.2 17.2	17.2	8.1 8.1	8.1	30.6 30.6	30.6	104.2 104.8	104.5	8.3 8.4	8.4	8.4	3.2 3.2	3.2	3.2	1.8 1.5	1.7	2.8
					Middle	4.3	17.2 17.2	17.2	8.1 8.1	8.1	30.5 30.7	30.6	104.0 103.6	103.8	8.3 8.3	8.3		3.1 3.2	3.2		2.4 2.8	2.6	
					Bottom	7.5	17.2 17.2	17.2	8.1 8.1	8.1	30.5 30.6	30.5	104.3 104.1	104.2	8.4 8.3	8.4	8.4	3.2 3.1	3.2		4.1 3.9	4.0	
5-Jan-15	Cloudy	Moderate	11:46	9.1	Surface	1.0	18.0 18.0	18.0	8.1 8.1	8.1	30.8 30.9	30.8	106.1 106.1	106.1	8.4 8.4	8.4	8.4	2.1 2.0	2.1	2.2	2.8 3.0	2.9	3.2
					Middle	4.6	17.9 17.9	17.9	8.1 8.1	8.1	30.9 30.7	30.8	105.8 106.0	105.9	8.3 8.4	8.3		2.2 2.2	2.2		2.5 3.1	2.8	
					Bottom	8.1	17.9 17.9	17.9	8.1 8.1	8.1	31.2 30.8	31.0	105.4 105.6	105.5	8.3 8.3	8.3	8.3	2.3 2.3	2.3		3.9 3.7	3.8	
7-Jan-15	Cloudy	Moderate	13:09	8.5	Surface	1.0	18.6 18.6	18.6	8.0 8.0	8.0	29.9 29.9	29.9	105.7 105.6	105.7	8.3 8.3	8.3	8.3	5.8 6.0	5.9	6.0	7.1 7.6	7.4	9.8
					Middle	4.3	18.6 18.6	18.6	8.0 8.0	8.0	29.9 29.9	29.9	105.3 105.7	105.5	8.2 8.3	8.3		6.3 5.7	6.0		9.6 9.3	9.5	
					Bottom	7.5	18.6 18.6	18.6	8.0 8.0	8.0	29.9 29.9	29.9	105.6 105.6	105.6	8.3 8.3	8.3	8.3	6.1 5.8	6.0		12.1 12.6	12.4	
9-Jan-15	Sunny	Moderate	14:17	8.4	Surface	1.0	18.0 18.0	18.0	8.0 8.0	8.0	31.0 31.2	31.1	100.1 99.8	100.0	7.9 7.8	7.9	7.9	7.5 7.0	7.3	7.0	9.4 9.3	9.4	10.3
					Middle	4.2	18.0 18.0	18.0	8.0 8.0	8.0	31.0 31.1	31.0	100.4 99.9	100.2	7.9 7.9	7.9		7.2 6.6	6.9		9.8 10.6	10.2	
					Bottom	7.4	18.0 18.0	18.0	8.0 8.0	8.0	31.1 30.9	31.0	99.8 100.3	100.1	7.9 7.9	7.9	7.9	6.8 7.0	6.9		11.7 10.6	11.2	
12-Jan-15	Rainy	Rough	16:29	8.5	Surface	1.0	17.5 17.5	17.5	7.9 7.9	7.9	30.4 30.4	30.4	93.6 93.6	93.6	7.5 7.5	7.5	7.5	3.2 3.3	3.3	3.4	6.6 8.5	7.6	8.0
					Middle	4.3	17.6 17.6	17.6	7.8 7.9	7.9	30.5 30.5	30.5	93.7 93.4	93.6	7.5 7.4	7.4		3.3 3.4	3.4		9.7 7.5	8.6	
					Bottom	7.5	17.5 17.6	17.6	7.9 7.8	7.9	30.5 30.6	30.5	93.6 94.0	93.8	7.4 7.5	7.5	7.5	3.4 3.3	3.4		8.7 6.9	7.8	
14-Jan-15	Cloudy	Moderate	07:01	8.7	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	29.8 29.8	29.8	91.3 93.6	92.5	7.4 7.6	7.5	7.6	3.1 3.0	3.1	3.1	4.0 2.7	3.4	4.8
					Middle	4.4	16.8 16.8	16.8	7.9 7.8	7.9	29.9 30.0	30.0	91.5 95.3	93.4	7.4 7.7	7.6		3.2 3.1	3.2		5.6 6.3	6.0	
					Bottom	7.7	16.8 16.8	16.8	7.8 7.8	7.8	30.2 30.1	30.2	95.1 91.6	93.4	7.7 7.4	7.6	7.6	3.2 3.0	3.1		5.2 4.8	5.0	
16-Jan-15	Sunny	Moderate	10:08	9.1	Surface	1.0	16.7 16.7	16.7	7.8 7.8	7.8	29.4 29.5	29.4	101.5 94.3	97.9	8.3 7.7	8.0	7.9	3.2 3.3	3.3	3.4	5.1 5.8	5.5	7.0
					Middle	4.6	16.7 16.7	16.7	7.8 7.8	7.8	29.5 29.4	29.5	93.3 98.2	95.8	7.6 8.0	7.8		3.4 3.4	3.4		8.1 7.4	7.8	
					Bottom	8.1	16.7 16.7	16.7	7.8 7.8	7.8	29.5 29.5	29.5	96.3 93.1	94.7	7.8 7.6	7.7	7.7	3.5 3.6	3.6		7.5 7.7	7.6	
19-Jan-15	Sunny	Moderate	13:45	8.7	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	30.3 30.3	30.3	100.5 101.1	100.8	8.1 8.1	8.1	8.1	5.2 4.8	5.0	4.9	7.3 5.5	6.4	6.9
					Middle	4.4	17.0 17.0	17.0	7.8 7.8	7.8	30.3 30.4	30.4	101.1 100.5	100.8	8.1 8.1	8.1		4.6 5.2	4.9		7.1 7.7	7.4	
					Bottom	7.7	17.0 17.0	17.0	7.8 7.8	7.8	30.4 30.3	30.3	100.7 102.0	101.4	8.1 8.2	8.2	8.2	5.0 4.6	4.8		6.9 6.8	6.9	
21-Jan-15	Sunny	Moderate	12:30	9.6	Surface	1.0	17.0 16.9	16.9	7.7 7.7	7.7	30.6 30.9	30.8	104.6 104.5	104.6	8.4 8.4	8.4	8.4	9.4 9.5	9.5	9.6	12.0 12.1	12.1	11.6
					Middle	4.8	16.9 16.9	16.9	7.7 7.7	7.7	31.1 30.7	30.9	104.4 104.3	104.4	8.4 8.4	8.4		9.7 9.4	9.6		11.5 11.0	11.3	
					Bottom	8.6	16.9 16.9	16.9	7.7 7.7	7.7	30.7 31.2	31.0	104.3 104.7	104.5	8.4 8.4	8.4	8.4	9.8 9.8	9.8		11.7 11.2	11.5	

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-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-Jan-15	Sunny	Moderate	13:56	9.0	Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	30.5 30.6	30.6	102.8 102.3	102.6	8.2 8.2	8.2	8.2	10.1 10.1	10.1	10.2	6.2 5.8	6.0	10.8
					Middle	4.5	17.2 17.2	17.2	7.8 7.7	7.8	30.7 30.5	30.6	102.3 102.0	102.2	8.2 8.2	8.2		10.2 10.2	10.2		11.6 11.0	11.3	
					Bottom	8.0	17.2 17.2	17.2	7.8 7.7	7.8	30.8 30.6	30.7	102.6 101.7	102.2	8.2 8.1	8.2	8.2	10.3 10.2	10.3		14.5 15.5	15.0	
26-Jan-15	Sunny	Moderate	16:59	9.2	Surface	1.0	17.9 17.9	17.9	7.5 7.5	7.5	30.8 30.7	30.7	97.9 98.3	98.1	7.7 7.8	7.7	7.7	14.2 14.0	14.1	14.3	17.8 20.9	19.4	23.4
					Middle	4.6	17.9 17.9	17.9	7.5 7.6	7.6	30.8 30.7	30.7	97.8 98.0	97.9	7.7 7.7	7.7		14.3 14.0	14.2		22.6 21.5	22.1	
					Bottom	8.2	17.9 17.9	17.9	7.5 7.5	7.5	30.8 30.6	30.7	97.7 97.7	97.7	7.7 7.7	7.7	7.7	14.6 14.4	14.5		29.7 27.7	28.7	
28-Jan-15	Fine	Moderate	08:00	8.5	Surface	1.0	18.1 18.1	18.1	7.5 7.5	7.5	29.1 29.0	29.0	97.1 97.4	97.3	7.7 7.7	7.7	7.7	4.4 4.5	4.5	4.5	5.3 5.9	5.6	5.7
					Middle	4.3	18.1 18.1	18.1	7.5 7.5	7.5	29.0 29.1	29.1	97.9 96.7	97.3	7.8 7.7	7.7		4.6 4.4	4.5		5.7 5.8	5.8	
					Bottom	7.5	18.1 18.1	18.1	7.5 7.5	7.5	29.0 29.1	29.0	98.3 97.4	97.9	7.8 7.7	7.8	7.8	4.6 4.4	4.5		5.3 5.9	5.6	
30-Jan-15	Cloudy	Moderate	11:16	8.7	Surface	1.0	17.9 17.9	17.9	7.7 7.7	7.7	29.2 29.1	29.1	97.4 99.0	98.2	7.8 7.9	7.8	7.9	4.5 4.5	4.5	4.6	6.3 7.2	6.8	7.2
					Middle	4.4	17.9 17.9	17.9	7.7 7.7	7.7	29.2 29.2	29.2	97.1 99.9	98.5	7.7 8.0	7.9		4.8 4.4	4.6		7.1 6.7	6.9	
					Bottom	7.7	17.9 17.9	17.9	7.7 7.7	7.7	29.5 29.2	29.3	100.7 97.6	99.2	8.0 7.8	7.9	7.9	4.4 4.7	4.6		7.4 8.1	7.8	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	15:16	8.6	Surface	1.0	17.5 17.5	17.5	8.2 8.2	8.2	31.8 31.8	31.8	108.8 109.1	109.0	8.6 8.6	8.6	8.6	3.0 3.1	3.1	3.0	1.8 2.1	2.0	2.0
					Middle	4.3	17.4 17.4	17.4	8.2 8.2	8.2	32.0 31.9	31.9	108.2 108.5	108.4	8.6 8.6	8.6		3.0 3.3	3.2		1.7 2.1	1.9	
					Bottom	7.6	17.4 17.5	17.4	8.2 8.2	8.2	32.1 31.9	32.0	108.8 108.3	108.6	8.6 8.6	8.6	8.6	2.7 2.7	2.7		2.3 1.8	2.1	
5-Jan-15	Cloudy	Moderate	08:48	9.1	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.3 30.3	30.3	105.5 105.5	105.5	8.4 8.4	8.4	8.4	1.1 1.1	1.1	1.2	3.4 3.7	3.6	6.1
					Middle	4.6	17.9 17.9	17.9	8.1 8.1	8.1	30.4 30.4	30.4	105.4 104.6	105.0	8.3 8.3	8.3		1.2 1.1	1.2		5.4 5.3	5.4	
					Bottom	8.1	17.9 17.9	17.9	8.1 8.1	8.1	30.4 30.4	30.4	105.0 103.3	104.2	8.3 8.2	8.2	8.2	1.3 1.3	1.3		9.3 9.1	9.2	
7-Jan-15	Rainy	Moderate	09:58	8.3	Surface	1.0	18.6 18.6	18.6	7.9 7.9	7.9	29.8 29.9	29.9	106.5 106.7	106.6	8.3 8.4	8.3	8.3	4.3 4.0	4.2	4.3	5.1 5.5	5.3	6.1
					Middle	4.2	18.6 18.6	18.6	7.9 7.9	7.9	29.8 29.9	29.9	106.4 106.4	106.4	8.3 8.3	8.3		4.3 4.4	4.4		5.9 5.4	5.7	
					Bottom	7.3	18.6 18.6	18.6	7.9 7.9	7.9	29.8 30.1	29.9	106.5 106.6	106.6	8.3 8.3	8.3	8.3	4.1 4.4	4.3		7.2 7.2	7.2	
9-Jan-15	Sunny	Moderate	10:52	8.3	Surface	1.0	17.8 17.8	17.8	7.9 7.9	7.9	29.5 29.6	29.6	100.3 99.3	99.8	8.0 7.9	8.0	8.0	4.6 5.0	4.8	4.7	7.1 8.0	7.6	9.5
					Middle	4.2	17.8 17.8	17.8	7.9 7.9	7.9	29.5 29.5	29.5	101.0 99.4	100.2	8.1 7.9	8.0		4.7 5.0	4.9		8.8 9.7	9.3	
					Bottom	7.3	17.8 17.8	17.8	7.9 7.9	7.9	29.5 29.5	29.5	103.1 99.6	101.4	8.2 7.9	8.1	8.1	4.5 4.2	4.4		11.6 11.4	11.5	
12-Jan-15	Cloudy	Moderate	12:20	8.7	Surface	1.0	17.6 17.6	17.6	7.9 7.9	7.9	29.8 29.7	29.8	94.8 97.4	96.1	7.6 7.8	7.7	7.7	3.5 3.3	3.4	3.4	9.1 7.8	8.5	8.1
					Middle	4.4	17.6 17.6	17.6	7.8 7.9	7.9	29.8 30.0	29.9	98.5 95.5	97.0	7.9 7.6	7.7		3.3 3.4	3.4		7.9 7.1	7.5	
					Bottom	7.7	17.6 17.6	17.6	7.8 7.9	7.8	30.0 29.8	29.9	101.7 96.0	98.9	8.1 7.7	7.9	7.9	3.3 3.3	3.3		8.5 8.2	8.4	
14-Jan-15	Cloudy	Moderate	11:56	8.9	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	30.0 29.9	30.0	89.1 89.2	89.2	7.2 7.2	7.2	7.2	4.4 4.1	4.3	4.3	6.3 6.9	6.6	8.4
					Middle	4.5	16.8 16.8	16.8	7.9 7.9	7.9	30.0 30.1	30.0	88.2 89.1	88.7	7.1 7.2	7.2		4.4 4.4	4.4		9.0 8.7	8.9	
					Bottom	7.9	16.8 16.8	16.8	7.9 7.9	7.9	30.0 30.1	30.1	88.6 90.0	89.3	7.2 7.3	7.2	7.2	4.2 4.1	4.2		9.9 9.3	9.6	
16-Jan-15	Sunny	Moderate	13:51	9.2	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	30.4 30.6	30.5	95.6 93.3	94.5	7.7 7.5	7.6	7.6	3.5 3.3	3.4	3.5	6.8 7.1	7.0	8.3
					Middle	4.6	17.0 17.0	17.0	7.9 7.9	7.9	31.0 30.5	30.7	92.7 94.8	93.8	7.4 7.6	7.5		3.4 3.5	3.5		6.9 7.2	7.1	
					Bottom	8.2	17.0 17.0	17.0	7.9 7.9	7.9	31.0 30.5	30.7	92.3 92.4	92.4	7.4 7.4	7.4	7.4	3.6 3.6	3.6		11.7 10.1	10.9	
19-Jan-15	Sunny	Moderate	16:08	8.7	Surface	1.0	17.3 17.3	17.3	7.9 7.9	7.9	30.6 30.5	30.5	103.8 103.7	103.8	8.3 8.3	8.3	8.3	4.2 4.4	4.3	4.3	6.0 4.9	5.5	6.9
					Middle	4.4	17.2 17.2	17.2	7.9 7.9	7.9	30.6 30.6	30.6	103.5 102.8	103.2	8.3 8.2	8.3		4.1 4.4	4.3		5.5 6.3	5.9	
					Bottom	7.7	17.2 17.2	17.2	7.9 7.9	7.9	30.6 30.6	30.6	103.3 103.6	103.5	8.3 8.3	8.3	8.3	4.5 4.0	4.3		9.0 9.5	9.3	
21-Jan-15	Sunny	Moderate	09:19	9.5	Surface	1.0	16.9 16.9	16.9	7.7 7.7	7.7	30.9 30.8	30.9	102.5 102.6	102.6	8.2 8.2	8.2	8.2	6.8 7.0	6.9	7.1	14.0 14.7	14.4	15.4
					Middle	4.8	16.9 16.9	16.9	7.7 7.7	7.7	31.0 30.7	30.8	102.6 102.2	102.4	8.2 8.2	8.2		7.0 7.0	7.0		16.0 15.2	15.6	
					Bottom	8.5	16.9 16.9	16.9	7.7 7.7	7.7	30.6 31.0	30.8	102.3 102.6	102.5	8.2 8.2	8.2	8.2	7.4 7.1	7.3		16.7 15.5	16.1	

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 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-Jan-15	Sunny	Moderate	09:53	9.3	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	29.7 29.7	29.7	103.1 102.9	103.0	8.3 8.3	8.3	8.3	7.4 7.3	7.4	7.6	12.9 12.9	12.9	13.9
					Middle	4.7	17.0 17.0	17.0	7.7 7.7	7.7	29.7 29.7	29.7	102.8 103.0	102.9	8.3 8.3	8.3		7.5 7.7	7.6		13.8 13.8	13.8	
					Bottom	8.3	17.0 17.0	17.0	7.7 7.7	7.7	29.7 29.7	29.7	104.1 102.8	103.5	8.4 8.3	8.4	8.4	8.0 7.8	7.9		15.2 14.9	15.1	
26-Jan-15	Sunny	Moderate	12:06	9.1	Surface	1.0	17.7 17.7	17.7	7.7 7.7	7.7	29.3 29.2	29.3	100.4 98.9	99.7	8.0 7.9	8.0	8.0	6.7 6.7	6.7	6.9	9.5 9.7	9.6	11.2
					Middle	4.6	17.7 17.7	17.7	7.7 7.7	7.7	29.3 29.3	29.3	99.7 98.8	99.3	8.0 7.9	7.9		6.9 6.8	6.9		10.8 10.1	10.5	
					Bottom	8.1	17.7 17.7	17.7	7.7 7.7	7.7	29.3 29.3	29.3	99.2 98.4	98.8	7.9 7.9	7.9	7.9	7.1 7.0	7.1		12.9 13.9	13.4	
28-Jan-15	Fine	Moderate	11:59	8.7	Surface	1.0	18.0 18.0	18.0	7.5 7.5	7.5	29.5 29.6	29.5	98.3 98.5	98.4	7.8 7.8	7.8	7.8	10.4 10.1	10.3	10.5	9.1 9.2	9.2	9.4
					Middle	4.4	17.9 18.0	17.9	7.5 7.5	7.5	29.7 29.6	29.6	98.5 97.9	98.2	7.8 7.8	7.8		10.2 11.0	10.6		10.0 9.5	9.8	
					Bottom	7.7	17.9 17.9	17.9	7.5 7.5	7.5	29.6 29.8	29.7	98.1 98.4	98.3	7.8 7.8	7.8	7.8	10.9 10.2	10.6		9.9 8.2	9.1	
30-Jan-15	Cloudy	Moderate	14:10	8.6	Surface	1.0	18.0 18.0	18.0	7.7 7.7	7.7	29.0 29.1	29.1	97.0 97.2	97.1	7.7 7.7	7.7	7.7	4.5 4.8	4.7	4.7	6.9 6.5	6.7	8.3
					Middle	4.3	18.0 18.0	18.0	7.7 7.7	7.7	29.2 29.1	29.1	97.4 96.6	97.0	7.7 7.7	7.7		4.9 4.6	4.8		8.4 8.6	8.5	
					Bottom	7.6	18.0 18.0	18.0	7.7 7.7	7.7	28.9 29.1	29.0	97.5 96.6	97.1	7.8 7.7	7.7	7.7	4.7 4.7	4.7		10.1 9.2	9.7	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:59	3.4	Surface	1.0	17.4 17.4	17.4	8.1 8.1	8.1	30.6 30.6	30.6	113.8 115.0	114.4	9.1 9.2	9.1	9.1	3.4 3.2	3.3	3.6	2.4 1.5	2.0	2.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.4 17.3	17.3	8.1 8.0	8.1	30.6 30.7	30.7	114.7 111.3	113.0	9.2 8.9	9.0	9.0	3.6 4.0	3.8		1.9 2.1	2.0	
5-Jan-15	Cloudy	Moderate	12:00	3.4	Surface	1.0	18.0 18.0	18.0	8.1 8.1	8.1	30.6 30.6	30.6	108.6 109.1	108.9	8.6 8.6	8.6	8.6	2.9 3.0	3.0	3.1	5.6 7.7	6.7	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	18.0 18.0	18.0	8.1 8.1	8.1	30.6 30.6	30.6	106.1 109.1	107.6	8.4 8.6	8.5	8.5	3.0 3.1	3.1		8.0 8.2	8.1	
7-Jan-15	Cloudy	Moderate	13:28	3.3	Surface	1.0	18.6 18.6	18.6	8.0 8.0	8.0	30.4 30.5	30.5	105.3 105.5	105.4	8.2 8.2	8.2	8.2	4.6 4.8	4.7	4.8	6.0 6.8	6.4	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.6 18.6	18.6	8.0 8.0	8.0	30.4 30.5	30.4	105.8 105.3	105.6	8.3 8.2	8.2	8.2	4.8 4.9	4.9		7.8 7.0	7.4	
9-Jan-15	Sunny	Moderate	14:36	3.2	Surface	1.0	18.3 18.3	18.3	8.0 8.0	8.0	31.0 30.9	30.9	107.6 107.2	107.4	8.4 8.4	8.4	8.4	3.8 4.0	3.9	4.2	8.3 8.9	8.6	9.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	18.1 18.2	18.1	8.0 8.0	8.0	31.4 31.0	31.2	107.6 106.4	107.0	8.4 8.3	8.4	8.4	4.5 4.3	4.4		10.7 10.4	10.6	
12-Jan-15	Rainy	Rough	16:44	3.1	Surface	1.0	17.4 17.4	17.4	7.9 7.9	7.9	30.1 30.0	30.1	99.3 101.8	100.6	8.0 8.2	8.1	8.1	4.5 4.4	4.5	4.5	7.4 8.7	8.1	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	17.4 17.3	17.4	7.9 7.8	7.9	30.0 30.1	30.1	100.6 105.6	103.1	8.1 8.5	8.3	8.3	4.5 4.4	4.5		9.6 10.6	10.1	
14-Jan-15	Cloudy	Moderate	06:44	3.2	Surface	1.0	16.2 16.2	16.2	7.9 7.9	7.9	29.8 29.8	29.8	94.9 97.0	96.0	7.8 8.0	7.9	7.9	6.2 6.3	6.3	6.4	6.3 5.4	5.9	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	16.2 16.2	16.2	7.9 7.9	7.9	29.8 29.8	29.8	95.8 100.1	98.0	7.9 8.2	8.0	8.0	6.5 6.4	6.5		6.7 5.6	6.2	
16-Jan-15	Sunny	Moderate	09:55	3.3	Surface	1.0	16.6 16.6	16.6	7.8 7.8	7.8	29.3 29.2	29.2	97.4 104.3	100.9	8.0 8.5	8.2	8.2	6.5 6.6	6.6	6.7	4.9 5.1	5.0	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	16.5 16.6	16.6	7.8 7.8	7.8	29.3 29.2	29.2	98.4 96.3	97.4	8.0 7.9	8.0	8.0	6.8 6.7	6.8		6.2 6.0	6.1	
19-Jan-15	Sunny	Moderate	13:21	3.4	Surface	1.0	17.3 17.2	17.2	7.9 7.9	7.9	30.3 30.3	30.3	112.2 111.8	112.0	9.0 9.0	9.0	9.0	7.2 6.5	6.9	7.4	6.8 7.2	7.0	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.2 17.2	17.2	7.9 7.9	7.9	30.3 30.3	30.3	112.4 112.6	112.5	9.0 9.0	9.0	9.0	7.5 8.1	7.8		7.2 6.9	7.1	
21-Jan-15	Sunny	Moderate	12:47	3.8	Surface	1.0	17.0 17.0	17.0	7.8 7.8	7.8	30.8 30.8	30.8	113.9 113.2	113.6	9.1 9.1	9.1	9.1	5.0 5.2	5.1	5.1	9.3 8.6	9.0	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.0 17.0	17.0	7.8 7.8	7.8	30.9 30.8	30.8	113.9 113.5	113.7	9.1 9.1	9.1	9.1	5.1 5.0	5.1		12.3 13.6	13.0	

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 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-Jan-15	Sunny	Moderate	14:09	3.3	Surface	1.0	17.6 17.6	17.6	7.8 7.8	7.8	30.4 30.4	30.4	112.1 111.6	111.9	8.9 8.9	8.9	8.9	6.8 6.7	6.8	7.0	10.8 11.4	11.1	11.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.5 17.6	17.6	7.8 7.8	7.8	30.4 30.4	30.4	110.2 111.8	111.0	8.8 8.9	8.8	8.8	7.1 7.3	7.2		11.8 10.8	11.3	
26-Jan-15	Sunny	Moderate	17:12	3.4	Surface	1.0	18.0 17.9	18.0	7.5 7.5	7.5	30.6 30.5	30.5	103.0 102.9	103.0	8.1 8.1	8.1	8.1	6.3 6.2	6.3	6.3	8.7 9.9	9.3	10.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.9 18.1	18.0	7.5 7.5	7.5	30.5 30.5	30.5	102.8 103.0	102.9	8.1 8.1	8.1	8.1	6.2 6.4	6.3		10.7 11.4	11.1	
28-Jan-15	Fine	Moderate	07:45	3.1	Surface	1.0	17.8 17.8	17.8	7.5 7.5	7.5	29.0 29.0	29.0	99.7 98.8	99.3	8.0 7.9	7.9	7.9	9.0 8.8	8.9	9.2	10.7 10.5	10.6	10.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	17.8 17.8	17.8	7.5 7.5	7.5	29.0 29.0	29.0	99.0 101.0	100.0	7.9 8.1	8.0	8.0	9.3 9.6	9.5		10.6 10.5	10.6	
30-Jan-15	Cloudy	Moderate	10:58	3.3	Surface	1.0	17.9 17.9	17.9	7.7 7.7	7.7	28.9 28.9	28.9	100.4 99.1	99.8	8.0 7.9	8.0	8.0	5.0 5.1	5.1	5.4	5.1 6.0	5.6	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.9 17.9	17.9	7.7 7.7	7.7	29.4 28.9	29.1	102.8 99.8	101.3	8.2 8.0	8.1	8.1	5.8 5.3	5.6		9.3 9.1	9.2	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	15:36	3.4	Surface	1.0	17.7 17.7	17.7	8.1 8.1	8.1	31.6 31.6	31.6	114.6 114.9	114.8	9.0 9.1	9.0	9.0	2.8 3.0	2.9	3.1	1.6 2.2	1.9	2.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.6 17.7	17.6	8.1 8.1	8.1	31.5 31.6	31.5	115.8 114.6	115.2	9.2 9.0	9.1	9.1	3.4 3.2	3.3		1.6 2.5	2.1	
5-Jan-15	Cloudy	Moderate	08:34	3.4	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.3 30.3	30.3	111.3 110.8	111.1	8.8 8.8	8.8	8.8	1.7 1.8	1.8	1.9	3.6 3.1	3.4	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.9 17.9	17.9	8.1 8.1	8.1	30.3 30.3	30.3	109.3 110.9	110.1	8.7 8.8	8.7	8.7	1.9 1.8	1.9		5.5 5.8	5.7	
7-Jan-15	Rainy	Moderate	09:37	3.1	Surface	1.0	18.5 18.5	18.5	7.9 7.9	7.9	29.8 29.8	29.8	110.6 109.9	110.3	8.7 8.6	8.6	8.6	4.8 4.6	4.7	4.5	5.8 5.8	5.8	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	18.5 18.5	18.5	7.9 7.9	7.9	30.1 29.8	30.0	108.4 110.4	109.4	8.5 8.7	8.6	8.6	4.0 4.3	4.2		8.8 8.6	8.7	
9-Jan-15	Sunny	Moderate	10:33	3.2	Surface	1.0	17.9 17.8	17.9	7.9 7.9	7.9	29.6 30.1	29.8	106.7 108.2	107.5	8.5 8.6	8.5	8.5	5.8 5.7	5.8	6.2	9.4 9.1	9.3	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	17.8 17.8	17.8	7.9 7.9	7.9	29.7 30.6	30.2	107.2 108.6	107.9	8.5 8.6	8.6	8.6	6.5 6.5	6.5		10.1 10.5	10.3	
12-Jan-15	Cloudy	Moderate	12:05	3.1	Surface	1.0	17.5 17.5	17.5	7.9 7.9	7.9	29.6 29.6	29.6	99.5 100.7	100.1	8.0 8.1	8.0	8.0	8.3 8.3	8.3	8.4	12.1 11.3	11.7	11.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	17.5 17.5	17.5	7.9 7.9	7.9	29.7 29.6	29.6	104.5 100.3	102.4	8.4 8.0	8.2	8.2	8.4 8.3	8.4		11.8 11.2	11.5	
14-Jan-15	Cloudy	Moderate	12:13	3.2	Surface	1.0	16.6 16.6	16.6	7.9 7.9	7.9	29.9 30.0	30.0	99.2 97.4	98.3	8.1 7.9	8.0	8.0	4.2 4.1	4.2	4.2	5.3 6.5	5.9	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	16.5 16.4	16.5	7.9 7.9	7.9	29.9 30.0	30.0	97.4 101.0	99.2	7.9 8.2	8.1	8.1	4.1 4.1	4.1		6.0 7.2	6.6	
16-Jan-15	Sunny	Moderate	14:04	3.3	Surface	1.0	17.1 17.0	17.0	7.9 7.9	7.9	29.5 29.5	29.5	102.6 100.8	101.7	8.3 8.2	8.2	8.2	5.4 5.3	5.4	5.5	9.8 9.8	9.8	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	16.9 17.0	17.0	7.9 7.9	7.9	29.5 29.4	29.5	101.9 100.6	101.3	8.2 8.2	8.2	8.2	5.6 5.5	5.6		8.3 8.5	8.4	
19-Jan-15	Sunny	Moderate	16:26	3.4	Surface	1.0	17.6 17.6	17.6	8.0 7.9	7.9	30.5 30.4	30.5	124.9 123.3	124.1	9.9 9.8	9.9	9.9	4.7 4.8	4.8	6.3	4.5 5.8	5.2	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.6 17.3	17.5	8.0 7.9	7.9	30.4 30.4	30.4	124.2 120.2	122.2	9.9 9.5	9.7	9.7	7.7 7.6	7.7		4.9 6.0	5.5	
21-Jan-15	Sunny	Moderate	09:02	3.6	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	30.9 30.8	30.8	108.0 108.4	108.2	8.7 8.7	8.7	8.7	6.6 6.4	6.5	6.7	6.5 5.8	6.2	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	17.0 17.0	17.0	7.8 7.8	7.8	30.8 30.8	30.8	108.3 108.1	108.2	8.7 8.7	8.7	8.7	6.8 6.7	6.8		7.3 6.1	6.7	

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 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-Jan-15	Sunny	Moderate	09:33	3.5	Surface	1.0	16.9 17.0	16.9	7.8 7.8	7.8	29.7 29.7	29.7	110.0 109.0	109.5	8.9 8.8	8.9	8.9	11.2 11.5	11.4	11.6	12.5 11.9	12.2	12.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	16.9 17.0	17.0	7.8 7.8	7.8	29.8 29.8	29.8	109.5 108.3	108.9	8.9 8.7	8.8	8.8	11.8 11.7	11.8		13.6 12.5	13.1	
26-Jan-15	Sunny	Moderate	11:50	3.4	Surface	1.0	17.7 17.7	17.7	7.7 7.7	7.7	29.2 29.2	29.2	100.5 100.1	100.3	8.0 8.0	8.0	8.0	11.1 11.2	11.2	11.3	14.4 14.7	14.6	15.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.8 17.7	17.7	7.7 7.7	7.7	29.2 29.2	29.2	99.6 100.3	100.0	8.0 8.0	8.0	8.0	11.4 11.4	11.4		15.4 15.6	15.5	
28-Jan-15	Fine	Moderate	12:14	3.3	Surface	1.0	18.0 18.0	18.0	7.5 7.5	7.5	29.2 29.2	29.2	100.1 100.1	100.1	8.0 8.0	8.0	8.0	9.0 9.2	9.1	9.1	11.0 11.3	11.2	11.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.0 18.0	18.0	7.5 7.5	7.5	29.3 29.3	29.3	100.4 99.7	100.1	8.0 7.9	7.9	7.9	8.8 9.2	9.0		10.0 11.9	11.0	
30-Jan-15	Cloudy	Moderate	14:30	3.3	Surface	1.0	18.1 18.1	18.1	7.7 7.6	7.7	28.9 28.9	28.9	99.0 101.4	100.2	7.9 8.1	8.0	8.0	12.2 11.8	12.0	12.4	7.7 8.1	7.9	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.1 18.1	18.1	7.6 7.7	7.7	29.0 28.9	29.0	102.7 99.0	100.9	8.2 7.9	8.0	8.0	12.1 13.3	12.7		7.0 9.1	8.1	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:21	3.8	Surface	1.0	17.7 17.7	17.7	8.0 8.0	8.0	30.8 30.8	30.8	113.7 114.9	114.3	9.0 9.1	9.1	9.1	4.2 4.0	4.1	4.3	1.8 2.0	1.9	1.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.7 17.7	17.7	8.0 8.0	8.0	30.8 30.8	30.8	112.1 114.1	113.1	8.9 9.0	9.0	9.0	4.6 4.4	4.5		1.8 1.8	1.8	
5-Jan-15	Cloudy	Moderate	12:20	3.5	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.6 30.6	30.6	115.4 114.9	115.2	9.1 9.1	9.1	9.1	3.1 3.0	3.1	3.2	7.2 7.6	7.4	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	17.9 17.9	17.9	8.1 8.1	8.1	30.8 30.6	30.7	114.8 115.3	115.1	9.1 9.1	9.1	9.1	3.3 3.2	3.3		7.4 7.8	7.6	
7-Jan-15	Cloudy	Moderate	13:59	3.6	Surface	1.0	18.3 18.3	18.3	8.0 8.0	8.0	29.8 29.8	29.8	112.1 111.7	111.9	8.8 8.8	8.8	8.8	6.1 6.6	6.4	6.5	10.5 10.0	10.3	10.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	18.4 18.3	18.4	8.0 8.0	8.0	30.0 30.0	30.0	112.3 112.5	112.4	8.8 8.8	8.8	8.8	6.2 6.7	6.5		10.3 11.8	11.1	
9-Jan-15	Sunny	Moderate	15:08	3.9	Surface	1.0	18.0 18.0	18.0	7.9 7.9	7.9	30.5 30.5	30.5	105.0 105.1	105.1	8.3 8.3	8.3	8.3	4.6 4.3	4.5	4.9	7.7 7.3	7.5	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	18.0 17.9	17.9	7.9 7.9	7.9	30.5 30.6	30.5	104.7 104.9	104.8	8.3 8.3	8.3	8.3	5.1 5.2	5.2		9.0 9.2	9.1	
12-Jan-15	Rainy	Rough	17:05	4.0	Surface	1.0	17.5 17.5	17.5	7.9 7.9	7.9	29.7 29.7	29.7	94.8 94.9	94.9	7.6 7.6	7.6	7.6	5.8 5.8	5.8	5.9	11.9 10.8	11.4	11.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	17.5 17.6	17.5	7.9 7.9	7.9	29.7 29.7	29.7	95.0 95.0	95.0	7.6 7.6	7.6	7.6	5.8 5.9	5.9		10.4 12.0	11.2	
14-Jan-15	Cloudy	Moderate	06:19	4.0	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	29.8 29.8	29.8	97.2 93.9	95.6	7.9 7.7	7.8	7.8	8.6 8.9	8.8	8.9	3.9 4.2	4.1	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	16.4 16.4	16.4	7.9 7.8	7.9	29.8 29.8	29.8	95.3 99.9	97.6	7.8 8.2	8.0	8.0	8.9 8.8	8.9		3.6 4.1	3.9	
16-Jan-15	Sunny	Moderate	09:34	3.3	Surface	1.0	17.2 17.2	17.2	7.8 7.8	7.8	29.7 29.7	29.7	100.4 95.8	98.1	8.1 7.7	7.9	7.9	3.3 3.3	3.3	3.4	4.5 4.3	4.4	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.2 17.2	17.2	7.8 7.8	7.8	29.7 29.8	29.8	96.9 95.1	96.0	7.8 7.7	7.7	7.7	3.5 3.4	3.5		6.3 7.4	6.9	
19-Jan-15	Sunny	Moderate	12:37	3.7	Surface	1.0	17.2 17.2	17.2	7.8 7.8	7.8	30.5 30.5	30.5	106.9 104.0	105.5	8.6 8.3	8.4	8.4	5.0 5.0	5.0	5.1	5.3 5.9	5.6	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.2 17.1	17.1	7.8 7.8	7.8	30.5 30.6	30.6	106.9 104.5	105.7	8.6 8.4	8.5	8.5	4.9 5.3	5.1		8.2 7.5	7.9	
21-Jan-15	Sunny	Moderate	13:16	4.0	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	30.7 30.6	30.6	105.2 104.8	105.0	8.4 8.4	8.4	8.4	7.9 8.1	8.0	8.1	20.8 20.0	20.4	20.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	17.0 17.1	17.1	7.7 7.7	7.7	30.6 30.6	30.6	104.7 104.7	104.7	8.4 8.4	8.4	8.4	8.1 8.0	8.1		20.8 19.1	20.0	

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 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-Jan-15	Sunny	Moderate	14:36	3.5	Surface	1.0	17.3 17.4	17.4	7.8 7.7	7.8	29.8 29.8	29.8	102.5 102.1	102.3	8.2 8.2	8.2	8.2	10.3 10.2	10.3	10.4	18.4 19.1	18.8	19.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	17.3 17.4	17.3	7.8 7.8	7.8	29.8 29.8	29.8	102.1 102.2	102.2	8.2 8.2	8.2	8.2	10.4 10.3	10.4		20.1 19.5	19.8	
26-Jan-15	Sunny	Moderate	17:31	3.3	Surface	1.0	18.1 18.1	18.1	7.7 7.7	7.7	30.3 30.3	30.3	103.5 103.4	103.5	8.2 8.2	8.2	8.2	5.3 5.2	5.3	5.5	8.3 9.1	8.7	8.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.1 18.2	18.1	7.7 7.7	7.7	30.2 30.2	30.2	103.1 103.4	103.3	8.1 8.1	8.1	8.1	5.5 5.6	5.6		9.5 8.7	9.1	
28-Jan-15	Fine	Moderate	07:20	4.1	Surface	1.0	17.8 17.8	17.8	7.5 7.5	7.5	28.8 28.8	28.8	97.9 99.1	98.5	7.8 7.9	7.9	7.9	8.3 8.1	8.2	8.3	6.0 6.5	6.3	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	17.8 17.8	17.8	7.5 7.5	7.5	28.8 28.8	28.8	100.5 98.6	99.6	8.0 7.9	8.0	8.0	8.4 8.3	8.4		6.9 6.4	6.7	
30-Jan-15	Cloudy	Moderate	10:20	3.8	Surface	1.0	17.9 18.0	18.0	7.6 7.6	7.6	28.7 28.9	28.8	98.4 101.5	100.0	7.9 8.1	8.0	8.0	6.0 5.9	6.0	6.1	6.6 7.0	6.8	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.9 18.0	18.0	7.6 7.6	7.6	29.0 28.9	29.0	103.4 99.5	101.5	8.2 7.9	8.1	8.1	6.0 6.2	6.1		6.9 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.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	16:10	4.1	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	31.5 31.5	31.5	118.8 118.4	118.6	9.3 9.3	9.3	9.3	6.0 6.3	6.2	6.2	4.4 4.0	4.2	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	17.8 17.8	17.8	8.1 8.1	8.1	31.5 31.5	31.5	118.0 118.2	118.1	9.3 9.3	9.3	9.3	6.1 6.1	6.1		4.6 4.9	4.8	
5-Jan-15	Cloudy	Moderate	08:16	3.4	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	30.0 30.0	30.0	112.1 112.0	112.1	8.9 8.9	8.9	8.9	4.0 4.0	4.0	4.1	5.6 5.4	5.5	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.8 17.8	17.8	8.1 8.1	8.1	30.0 30.0	30.0	111.7 110.6	111.2	8.9 8.8	8.8	8.8	4.0 4.1	4.1		7.4 7.6	7.5	
7-Jan-15	Rainy	Moderate	09:03	3.6	Surface	1.0	18.2 18.2	18.2	8.0 7.9	7.9	29.3 29.3	29.3	109.5 108.7	109.1	8.7 8.6	8.6	8.6	4.1 4.1	4.1	4.1	6.8 7.7	7.3	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	18.2 18.2	18.2	7.9 7.9	7.9	29.3 29.4	29.3	107.0 109.6	108.3	8.5 8.7	8.6	8.6	3.9 4.1	4.0		9.7 8.6	9.2	
9-Jan-15	Sunny	Moderate	09:55	3.7	Surface	1.0	17.8 17.8	17.8	7.9 7.9	7.9	29.4 29.4	29.4	102.9 104.3	103.6	8.2 8.3	8.3	8.3	3.8 4.0	3.9	4.2	8.7 9.2	9.0	10.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.8 17.7	17.8	7.9 7.9	7.9	29.4 29.3	29.4	103.4 105.5	104.5	8.2 8.4	8.3	8.3	4.6 4.3	4.5		12.1 11.7	11.9	
12-Jan-15	Cloudy	Moderate	11:40	4.0	Surface	1.0	17.6 17.6	17.6	7.8 7.9	7.9	29.5 29.5	29.5	97.6 96.9	97.3	7.8 7.7	7.8	7.8	2.9 2.9	2.9	2.9	5.9 5.0	5.5	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	17.6 17.6	17.6	7.9 7.8	7.8	29.6 29.5	29.6	96.9 99.0	98.0	7.7 7.9	7.8	7.8	2.8 2.8	2.8		7.5 5.2	6.4	
14-Jan-15	Cloudy	Moderate	12:34	4.0	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	30.0 30.1	30.0	92.8 92.6	92.7	7.5 7.5	7.5	7.5	4.3 4.3	4.3	4.4	5.5 7.3	6.4	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	17.1 17.1	17.1	7.9 7.9	7.9	30.0 30.1	30.1	92.8 93.1	93.0	7.5 7.5	7.5	7.5	4.4 4.3	4.4		6.2 5.6	5.9	
16-Jan-15	Sunny	Moderate	14:24	3.4	Surface	1.0	17.7 17.7	17.7	7.8 7.8	7.8	30.1 30.1	30.1	97.5 97.4	97.5	7.8 7.7	7.7	7.7	5.3 5.3	5.3	5.4	10.4 10.0	10.2	10.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.7 17.7	17.7	7.8 7.8	7.8	30.1 30.1	30.1	97.3 97.4	97.4	7.7 7.7	7.7	7.7	5.5 5.4	5.5		12.0 11.1	11.6	
19-Jan-15	Sunny	Moderate	16:58	3.8	Surface	1.0	17.5 17.6	17.6	7.9 7.9	7.9	30.8 30.7	30.7	109.0 110.8	109.9	8.7 8.8	8.7	8.7	14.5 16.1	15.3	15.1	12.8 12.5	12.7	14.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.5 17.4	17.5	7.9 7.9	7.9	30.7 30.7	30.7	109.1 108.5	108.8	8.7 8.7	8.7	8.7	15.0 14.8	14.9		16.8 16.6	16.7	
21-Jan-15	Sunny	Moderate	08:31	3.7	Surface	1.0	16.9 16.9	16.9	7.7 7.7	7.7	30.5 30.5	30.5	100.8 100.1	100.5	8.1 8.1	8.1	8.1	11.2 11.4	11.3	11.5	11.6 12.4	12.0	12.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	16.9 16.9	16.9	7.7 7.8	7.8	30.5 30.5	30.5	101.6 100.2	100.9	8.2 8.1	8.1	8.1	11.6 11.8	11.7		12.1 11.7	11.9	

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 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-Jan-15	Sunny	Moderate	09:08	3.7	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	29.0 29.0	29.0	98.5 98.7	98.6	8.0 8.0	8.0	8.0	13.2 13.2	13.2	13.4	16.9 16.1	16.5	19.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.0 17.0	17.0	7.7 7.7	7.7	29.0 29.0	29.0	99.3 98.5	98.9	8.1 8.0	8.0	8.0	13.6 13.4	13.5		20.7 22.4	21.6	
26-Jan-15	Sunny	Moderate	11:32	3.4	Surface	1.0	17.7 17.7	17.7	7.5 7.6	7.6	29.1 29.1	29.1	99.7 99.2	99.5	8.0 7.9	8.0	8.0	9.7 9.9	9.8	9.9	13.5 14.1	13.8	14.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.7 17.7	17.7	7.6 7.6	7.6	29.1 29.7	29.4	99.1 99.4	99.3	7.9 7.9	7.9	7.9	9.9 9.8	9.9		15.9 14.4	15.2	
28-Jan-15	Fine	Moderate	12:36	4.1	Surface	1.0	18.0 18.0	18.0	7.6 7.6	7.6	29.0 29.0	29.0	98.2 98.8	98.5	7.8 7.9	7.8	7.8	10.2 10.2	10.2	10.4	9.0 9.7	9.4	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	18.0 18.0	18.0	7.6 7.6	7.6	29.1 29.0	29.0	98.3 98.3	98.3	7.8 7.8	7.8	7.8	10.8 10.4	10.6		12.6 12.4	12.5	
30-Jan-15	Cloudy	Moderate	15:03	3.7	Surface	1.0	18.0 18.1	18.1	7.7 7.7	7.7	28.6 28.6	28.6	98.7 99.1	98.9	7.9 7.9	7.9	7.9	11.8 12.1	12.0	12.9	7.8 8.5	8.2	10.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	18.0 18.0	18.0	7.7 7.8	7.8	28.6 28.6	28.6	98.5 98.4	98.5	7.9 7.9	7.9	7.9	14.0 13.4	13.7		11.9 13.1	12.5	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:12	10.6	Surface	1.0	16.8 16.8	16.8	8.0 8.0	8.0	32.9 32.9	32.9	110.5 110.3	110.4	8.8 8.8	8.8	8.8	1.9 1.9	1.9	2.6	2.2 2.2	2.2	2.5
					Middle	5.3	16.7 16.7	16.7	8.0 8.0	8.0	32.9 32.9	32.9	110.1 109.3	109.7	8.8 8.7	8.7		2.6 2.7	2.7		2.6 2.8	2.7	
					Bottom	9.6	16.8 16.7	16.7	8.0 8.0	8.0	32.9 32.9	32.9	110.0 108.7	109.4	8.8 8.7	8.7	8.7	3.2 3.1	3.2		2.7 2.5	2.6	
5-Jan-15	Cloudy	Moderate	13:06	10.6	Surface	1.0	17.1 17.1	17.1	8.1 8.1	8.1	32.5 32.5	32.5	114.1 114.0	114.1	9.1 9.0	9.0	9.0	1.7 1.8	1.8	2.3	2.4 2.6	2.5	4.4
					Middle	5.3	17.1 17.0	17.1	8.1 8.1	8.1	32.5 32.5	32.5	113.3 113.7	113.5	9.0 9.0	9.0		2.5 2.5	2.5		3.7 3.7	3.7	
					Bottom	9.6	17.0 17.1	17.1	8.1 8.1	8.1	32.6 32.6	32.6	112.9 113.8	113.4	9.0 9.0	9.0	9.0	2.6 2.6	2.6		6.5 7.2	6.9	
7-Jan-15	Cloudy	Moderate	13:51	10.6	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.1 30.8	31.0	109.0 108.9	109.0	8.6 8.7	8.6	8.6	3.3 2.9	3.1	3.2	7.3 6.7	7.0	8.9
					Middle	5.3	17.5 17.5	17.5	8.1 8.1	8.1	31.7 31.7	31.7	108.6 108.7	108.7	8.6 8.6	8.6		3.1 3.2	3.2		8.5 9.7	9.1	
					Bottom	9.6	17.5 17.5	17.5	8.1 8.1	8.1	31.6 31.7	31.6	108.8 108.2	108.5	8.6 8.6	8.6	8.6	3.3 3.1	3.2		10.8 10.2	10.5	
9-Jan-15	Sunny	Moderate	15:13	10.9	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	102.6 102.4	102.5	8.2 8.1	8.1	8.1	6.3 6.4	6.4	6.3	9.9 9.6	9.8	10.5
					Middle	5.5	17.1 17.2	17.1	8.0 8.0	8.0	32.0 32.0	32.0	102.1 102.4	102.3	8.1 8.1	8.1		6.1 6.5	6.3		9.0 10.2	9.6	
					Bottom	9.9	17.1 17.1	17.1	8.0 8.0	8.0	32.0 32.0	32.0	102.2 102.7	102.5	8.1 8.2	8.1	8.1	6.1 6.3	6.2		12.6 11.4	12.0	
12-Jan-15	Rainy	Rough	17:34	9.8	Surface	1.0	16.8 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	95.5 95.4	95.5	7.6 7.6	7.6	7.6	2.1 2.1	2.1	2.0	6.4 4.3	5.4	6.5
					Middle	4.9	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.3	32.3	95.3 95.2	95.3	7.6 7.6	7.6		1.9 2.0	2.0		6.5 5.2	5.9	
					Bottom	8.8	16.9 16.9	16.9	7.9 7.9	7.9	32.3 32.3	32.3	95.4 95.5	95.5	7.6 7.6	7.6	7.6	1.7 1.9	1.8		9.0 7.5	8.3	
14-Jan-15	Cloudy	Moderate	05:21	10.6	Surface	1.0	16.3 16.3	16.3	7.6 7.7	7.7	32.3 32.3	32.3	99.0 95.4	97.2	8.0 7.7	7.8	7.9	2.7 2.6	2.7	2.8	6.9 6.5	6.7	7.3
					Middle	5.3	16.3 16.3	16.3	7.7 7.5	7.6	32.3 32.3	32.3	96.1 101.4	98.8	7.7 8.2	8.0		2.7 2.8	2.8		7.6 6.4	7.0	
					Bottom	9.6	16.4 16.3	16.4	7.4 7.7	7.5	32.4 32.4	32.4	106.1 97.0	101.6	8.5 7.8	8.2	8.2	2.8 2.8	2.8		8.2 8.3	8.3	
16-Jan-15	Sunny	Moderate	09:13	10.7	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	32.5 32.5	32.5	94.7 95.5	95.1	7.6 7.7	7.6	7.6	2.0 2.1	2.1	2.1	7.3 7.3	7.3	8.9
					Middle	5.4	16.4 16.4	16.4	7.9 7.9	7.9	32.6 32.6	32.6	94.5 95.7	95.1	7.6 7.7	7.6		2.1 2.0	2.1		8.8 10.0	9.4	
					Bottom	9.7	16.4 16.4	16.4	7.9 7.9	7.9	32.6 32.6	32.6	95.0 96.5	95.8	7.6 7.8	7.7	7.7	2.2 2.1	2.2		9.2 10.9	10.1	
19-Jan-15	Sunny	Moderate	12:26	10.6	Surface	1.0	16.2 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	101.2 101.1	101.2	8.2 8.1	8.2	8.2	3.2 3.4	3.3	4.7	4.3 3.7	4.0	4.7
					Middle	5.3	16.2 16.1	16.1	7.9 7.9	7.9	32.6 32.6	32.6	100.4 100.5	100.5	8.1 8.1	8.1		5.5 5.2	5.4		4.5 3.3	3.9	
					Bottom	9.6	16.1 16.1	16.1	7.9 7.9	7.9	32.6 32.6	32.6	100.8 100.6	100.7	8.1 8.1	8.1	8.1	5.1 5.5	5.3		6.0 6.2	6.1	
21-Jan-15	Sunny	Moderate	13:37	10.7	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.0 32.0	32.0	99.8 99.8	99.8	8.1 8.1	8.1	8.1	7.6 7.6	7.6	7.6	12.7 11.0	11.9	12.9
					Middle	5.4	16.2 16.2	16.2	7.9 7.9	7.9	32.3 32.3	32.3	99.1 99.1	99.1	8.0 8.0	8.0		7.4 7.7	7.6		11.4 13.1	12.3	
					Bottom	9.7	16.2 16.2	16.2	7.9 7.9	7.9	32.3 32.3	32.3	99.1 99.4	99.3	8.0 8.0	8.0	8.0	7.7 7.6	7.7		14.4 14.6	14.5	

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 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-Jan-15	Sunny	Moderate	14:51	10.6	Surface	1.0	16.5 16.6	16.6	7.9 7.9	7.9	31.0 30.9	31.0	99.1 99.3	99.2	8.0 8.0	8.0	8.0	7.6 7.5	7.6	7.5	11.0 10.0	10.5	12.0
					Middle	5.3	16.4 16.5	16.5	7.9 7.9	7.9	31.4 31.3	31.4	98.6 98.7	98.7	8.0 8.0	8.0		7.4 7.5	7.5		12.1 11.2	11.7	
					Bottom	9.6	16.5 16.4	16.4	7.9 7.9	7.9	31.3 31.4	31.3	98.9 98.5	98.7	8.0 8.0	8.0	8.0	7.4 7.5	7.5		14.3 13.0	13.7	
26-Jan-15	Sunny	Moderate	17:57	10.8	Surface	1.0	17.3 17.3	17.3	7.9 7.9	7.9	30.5 30.5	30.5	100.1 99.9	100.0	8.0 8.0	8.0	8.0	5.4 5.4	5.4	5.5	6.5 7.0	6.8	6.9
					Middle	5.4	16.9 16.9	16.9	7.9 7.9	7.9	30.9 30.9	30.9	98.7 98.8	98.8	7.9 8.0	7.9		5.5 5.5	5.5		6.8 7.0	6.9	
					Bottom	9.8	17.0 16.9	16.9	7.9 7.9	7.9	30.8 30.9	30.9	99.7 99.1	99.4	8.0 8.0	8.0	8.0	5.5 5.4	5.5		7.4 6.8	7.1	
28-Jan-15	Fine	Moderate	06:10	10.7	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	99.3 101.2	100.3	8.0 8.1	8.1	8.1	3.6 3.5	3.6	3.7	4.6 5.1	4.9	4.9
					Middle	5.4	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	102.0 99.6	100.8	8.2 8.0	8.1		3.6 3.6	3.6		5.8 4.4	5.1	
					Bottom	9.7	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	103.3 100.3	101.8	8.3 8.1	8.2	8.2	3.8 3.8	3.8		4.8 4.4	4.6	
30-Jan-15	Cloudy	Moderate	10:13	10.7	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	28.7 28.6	28.6	98.1 97.3	97.7	8.0 7.9	7.9	7.9	3.9 4.0	4.0	5.2	2.7 3.4	3.1	3.4
					Middle	5.4	17.1 17.1	17.1	7.8 7.8	7.8	30.8 31.0	30.9	98.1 97.2	97.7	7.9 7.8	7.8		5.6 5.8	5.7		3.2 4.2	3.7	
					Bottom	9.7	17.1 17.1	17.1	7.8 7.8	7.8	31.2 31.2	31.2	97.1 98.4	97.8	7.8 7.9	7.8	7.8	5.8 5.7	5.8		3.7 3.2	3.5	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	16:27	10.7	Surface	1.0	17.1 17.1	17.1	8.1 8.1	8.1	33.0 33.0	33.0	115.1 116.7	115.9	9.1 9.2	9.2	9.1	2.2 2.2	2.2	2.2	2.0 2.7	2.4	2.5
					Middle	5.4	16.8 16.8	16.8	8.1 8.1	8.1	33.0 33.0	33.0	113.1 114.0	113.6	9.0 9.1	9.0		2.2 2.1	2.2		2.3 2.6	2.5	
					Bottom	9.7	16.8 16.8	16.8	8.1 8.1	8.1	33.0 33.0	33.0	114.4 113.6	114.0	9.1 9.0	9.1	9.1	2.1 2.1	2.1		2.9 2.1	2.5	
5-Jan-15	Cloudy	Moderate	07:44	10.6	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	111.9 111.1	111.5	8.9 8.8	8.9	8.9	6.6 6.5	6.6	6.8	9.5 8.1	8.8	11.3
					Middle	5.3	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	110.2 111.4	110.8	8.8 8.9	8.8		6.8 6.9	6.9		11.3 11.6	11.5	
					Bottom	9.6	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	108.1 111.2	109.7	8.6 8.8	8.7	8.7	6.9 6.8	6.9		13.0 14.0	13.5	
7-Jan-15	Rainy	Moderate	08:54	10.7	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.8 31.8	31.8	109.9 109.0	109.5	8.7 8.6	8.7	8.7	9.0 8.6	8.8	8.8	13.5 13.6	13.6	15.3
					Middle	5.4	17.5 17.5	17.5	8.1 8.1	8.1	31.8 31.8	31.8	109.5 108.1	108.8	8.7 8.5	8.6		8.8 8.8	8.8		14.3 13.7	14.0	
					Bottom	9.7	17.5 17.5	17.5	8.1 8.1	8.1	31.8 31.8	31.8	109.3 106.8	108.1	8.6 8.4	8.5	8.5	8.7 8.8	8.8		19.2 17.3	18.3	
9-Jan-15	Sunny	Moderate	09:49	10.7	Surface	1.0	17.0 17.0	17.0	8.0 8.0	8.0	32.1 32.1	32.1	102.9 102.1	102.5	8.2 8.1	8.2	8.2	11.5 11.4	11.5	11.4	20.1 21.6	20.9	21.6
					Middle	5.4	17.0 17.0	17.0	8.0 8.0	8.0	32.1 32.1	32.1	103.6 102.0	102.8	8.3 8.1	8.2		11.2 11.4	11.3		20.8 21.4	21.1	
					Bottom	9.7	16.9 17.0	17.0	8.0 8.0	8.0	32.1 32.1	32.1	104.5 102.3	103.4	8.3 8.2	8.2	8.2	11.2 11.5	11.4		22.6 23.0	22.8	
12-Jan-15	Cloudy	Moderate	11:47	9.8	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	99.0 97.4	98.2	7.9 7.8	7.8	7.9	21.8 21.1	21.5	20.7	30.6 27.2	28.9	**30.7**
					Middle	4.9	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	101.0 97.4	99.2	8.1 7.8	7.9		19.9 20.6	20.3		32.8 31.5	32.2	
					Bottom	8.8	16.9 16.8	16.9	7.9 7.9	7.9	32.2 32.2	32.2	97.7 102.4	100.1	7.8 8.2	8.0	8.0	20.4 20.3	20.4		29.3 32.9	31.1	
14-Jan-15	Cloudy	Moderate	13:38	10.6	Surface	1.0	16.5 16.5	16.5	7.7 7.6	7.7	32.4 32.4	32.4	96.9 101.3	99.1	7.8 8.1	8.0	8.1	2.8 2.7	2.8	2.9	7.1 7.2	7.2	6.9
					Middle	5.3	16.5 16.5	16.5	7.7 7.5	7.6	32.4 32.4	32.4	97.7 104.3	101.0	7.8 8.4	8.1		2.8 2.8	2.8		5.7 6.5	6.1	
					Bottom	9.6	16.4 16.5	16.4	7.4 7.7	7.6	32.4 32.4	32.4	106.9 99.0	103.0	8.6 8.0	8.3	8.3	3.0 2.9	3.0		7.8 6.8	7.3	
16-Jan-15	Sunny	Moderate	14:45	10.9	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	32.6 32.6	32.6	97.0 95.6	96.3	7.7 7.6	7.7	7.7	20.3 20.7	20.5	20.9	9.4 9.5	9.5	9.7
					Middle	5.5	16.5 16.5	16.5	7.9 7.9	7.9	32.6 32.6	32.6	95.5 97.4	96.5	7.7 7.8	7.7		20.6 20.4	20.5		8.3 8.9	8.6	
					Bottom	9.9	16.6 16.5	16.5	7.9 7.9	7.9	32.5 32.6	32.6	96.1 99.1	97.6	7.7 8.0	7.8	7.8	22.1 21.1	21.6		10.2 11.6	10.9	
19-Jan-15	Sunny	Moderate	17:17	10.8	Surface	1.0	16.4 16.4	16.4	7.9 8.0	8.0	32.4 32.4	32.4	102.7 103.1	102.9	8.3 8.3	8.3	8.3	8.3 8.0	8.2	8.5	6.6 6.5	6.6	6.8
					Middle	5.4	16.4 16.3	16.3	7.9 7.9	7.9	32.4 32.4	32.4	102.3 102.2	102.3	8.2 8.2	8.2		8.5 8.7	8.6		7.6 6.2	6.9	
					Bottom	9.8	16.3 16.3	16.3	7.9 7.9	7.9	32.4 32.4	32.4	102.3 102.6	102.5	8.2 8.3	8.3	8.3	8.6 8.6	8.6		6.1 7.8	7.0	
21-Jan-15	Sunny	Moderate	08:13	10.6	Surface	1.0	16.2 16.1	16.2	7.9 7.9	7.9	32.4 32.3	32.4	101.2 100.3	100.8	8.2 8.1	8.1	8.2	24.1 24.2	24.2	24.5	26.6 25.9	26.3	**30.9**
					Middle	5.3	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	100.4 101.5	101.0	8.1 8.2	8.2		24.3 24.4	24.4		32.5 33.4	33.0	
					Bottom	9.6	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	100.4 102.2	101.3	8.1 8.3	8.2	8.2	25.4 24.5	25.0		34.4 32.1	33.3	

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 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-Jan-15	Sunny	Moderate	09:26	10.8	Surface	1.0	16.3 16.4	16.4	7.9 7.9	7.9	31.3 31.3	31.3	98.1 98.7	98.4	8.0 8.0	8.0	8.0	22.1 22.0	22.1	21.6	20.8 20.7	20.8	21.9
					Middle	5.4	16.2 16.2	16.2	7.9 7.9	7.9	31.7 31.6	31.6	100.3 98.2	99.3	8.1 8.0	8.0		21.4 21.3	21.4		21.1 21.2	21.2	
					Bottom	9.8	16.2 16.2	16.2	7.9 7.9	7.9	31.6 31.6	31.6	101.2 98.1	99.7	8.2 8.0	8.1	8.1	21.1 21.6	21.4		23.6 23.8	23.7	
26-Jan-15	Sunny	Moderate	11:22	10.6	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	31.2 31.1	31.2	98.0 98.5	98.3	7.9 7.9	7.9	7.9	16.7 16.5	16.6	16.5	20.3 20.2	20.3	22.6
					Middle	5.3	16.7 16.6	16.6	7.9 7.9	7.9	31.2 31.2	31.2	98.5 97.7	98.1	7.9 7.9	7.9		16.3 16.5	16.4		23.0 22.5	22.8	
					Bottom	9.6	16.6 16.6	16.6	7.9 7.9	7.9	31.2 31.2	31.2	99.5 98.2	98.9	8.0 7.9	8.0	8.0	16.2 16.6	16.4		24.3 25.1	24.7	
28-Jan-15	Fine	Moderate	13:53	10.8	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	97.5 97.8	97.7	7.8 7.8	7.8	7.8	3.5 3.5	3.5	3.7	8.3 8.0	8.2	9.1
					Middle	5.4	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	97.6 97.8	97.7	7.8 7.8	7.8		3.6 3.7	3.7		9.4 9.8	9.6	
					Bottom	9.8	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	97.7 97.9	97.8	7.8 7.9	7.8	7.8	3.9 3.9	3.9		9.3 9.4	9.4	
30-Jan-15	Cloudy	Moderate	15:08	10.7	Surface	1.0	17.2 17.2	17.2	7.9 7.8	7.9	28.8 28.7	28.7	97.8 98.6	98.2	7.9 8.0	7.9	7.9	5.3 5.5	5.4	5.4	3.0 2.3	2.7	3.9
					Middle	5.4	17.1 17.1	17.1	7.9 7.9	7.9	30.7 30.6	30.6	97.4 97.9	97.7	7.8 7.9	7.8		5.4 5.4	5.4		3.4 3.1	3.3	
					Bottom	9.7	17.1 17.1	17.1	7.9 7.9	7.9	30.8 30.8	30.8	98.2 97.8	98.0	7.9 7.8	7.9	7.9	5.5 5.5	5.5		6.2 5.4	5.8	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:00	11.1	Surface	1.0	17.6 17.6	17.6	8.1 8.0	8.1	30.9 30.9	30.9	109.0 110.6	109.8	8.7 8.8	8.7	8.7	7.8 7.7	7.8	7.9	5.6 5.1	5.4	5.8
					Middle	5.6	17.6 17.6	17.6	8.1 8.1	8.1	30.9 31.1	31.0	109.8 107.6	108.7	8.7 8.5	8.6		7.5 8.0	7.8		5.6 6.0	5.8	
					Bottom	10.1	17.6 17.6	17.6	8.1 8.1	8.1	30.8 31.6	31.2	109.8 104.6	107.2	8.7 8.3	8.5	8.5	7.9 8.0	8.0		6.7 5.6	6.2	
5-Jan-15	Cloudy	Moderate	12:33	11.6	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.4	30.3	112.1 113.7	112.9	8.9 9.0	9.0	8.9	3.0 3.1	3.1	3.2	7.1 7.2	7.2	8.4
					Middle	5.8	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.4	30.4	110.2 112.8	111.5	8.7 8.9	8.8		3.2 3.1	3.2		8.1 8.2	8.2	
					Bottom	10.6	17.8 17.8	17.8	8.1 8.1	8.1	30.3 30.3	30.3	108.9 112.0	110.5	8.6 8.9	8.8	8.8	3.2 3.3	3.3		9.5 10.0	9.8	
7-Jan-15	Cloudy	Moderate	14:17	10.9	Surface	1.0	18.3 18.3	18.3	8.0 8.0	8.0	29.9 29.9	29.9	109.8 110.8	110.3	8.7 8.7	8.7	8.7	7.9 7.1	7.5	7.5	9.0 9.4	9.2	11.3
					Middle	5.5	18.3 18.3	18.3	8.0 8.0	8.0	29.9 29.9	29.9	108.6 110.9	109.8	8.6 8.7	8.7		7.5 7.2	7.4		11.4 12.0	11.7	
					Bottom	9.9	18.2 18.3	18.3	8.0 8.0	8.0	29.9 29.8	29.9	107.4 110.2	108.8	8.5 8.7	8.6	8.6	7.9 7.5	7.7		13.4 12.3	12.9	
9-Jan-15	Sunny	Moderate	15:25	10.7	Surface	1.0	17.9 17.9	17.9	7.9 7.9	7.9	30.6 30.6	30.6	102.8 103.6	103.2	8.1 8.2	8.1	8.2	10.2 10.6	10.4	11.1	11.3 11.8	11.6	13.2
					Middle	5.4	17.9 17.9	17.9	7.9 7.9	7.9	30.7 30.6	30.7	102.2 105.3	103.8	8.1 8.3	8.2		12.0 11.0	11.5		12.8 12.0	12.4	
					Bottom	9.7	17.9 17.9	17.9	7.9 7.9	7.9	30.7 30.7	30.7	102.1 105.3	103.7	8.1 8.3	8.2	8.2	11.9 11.0	11.5		15.9 15.5	15.7	
12-Jan-15	Rainy	Rough	17:18	10.2	Surface	1.0	17.7 17.7	17.7	7.9 7.9	7.9	29.9 29.9	29.9	97.7 96.1	96.9	7.8 7.7	7.7	7.8	10.8 10.4	10.6	10.4	15.1 12.6	13.9	15.3
					Middle	5.1	17.7 17.7	17.7	7.9 7.9	7.9	30.0 29.9	29.9	99.3 96.2	97.8	7.9 7.7	7.8		10.4 10.1	10.3		16.7 17.3	17.0	
					Bottom	9.2	17.7 17.7	17.7	7.9 7.9	7.9	30.0 29.9	30.0	101.1 96.8	99.0	8.0 7.7	7.9	7.9	10.3 10.1	10.2		15.4 14.5	15.0	
14-Jan-15	Cloudy	Moderate	06:03	10.3	Surface	1.0	17.2 17.2	17.2	7.8 7.9	7.8	30.5 30.5	30.5	95.9 93.2	94.6	7.7 7.5	7.6	7.6	11.1 11.1	11.1	11.2	19.3 19.7	19.5	19.7
					Middle	5.2	17.3 17.3	17.3	7.8 7.8	7.8	30.5 30.6	30.5	97.3 93.0	95.2	7.8 7.4	7.6		11.2 11.2	11.2		19.8 19.4	19.6	
					Bottom	9.3	17.3 17.3	17.3	7.8 7.8	7.8	30.7 30.6	30.7	93.5 97.8	95.7	7.5 7.8	7.6	7.6	11.2 11.5	11.4		19.7 20.1	19.9	
16-Jan-15	Sunny	Moderate	09:20	11.4	Surface	1.0	17.3 17.3	17.3	7.9 7.9	7.9	30.2 30.2	30.2	99.9 94.2	97.1	8.0 7.6	7.8	7.7	13.3 13.1	13.2	13.4	24.2 23.6	23.9	**25.8**
					Middle	5.7	17.3 17.3	17.3	7.9 7.9	7.9	30.2 30.3	30.3	95.9 94.0	95.0	7.7 7.5	7.6		13.4 13.5	13.5		26.3 26.3	26.3	
					Bottom	10.4	17.3 17.3	17.3	7.9 7.9	7.9	30.3 30.2	30.3	95.6 93.9	94.8	7.7 7.5	7.6	7.6	13.5 13.5	13.5		27.8 26.8	27.3	
19-Jan-15	Sunny	Moderate	12:22	11.3	Surface	1.0	17.3 17.3	17.3	7.8 7.7	7.8	30.9 31.2	31.0	99.6 101.7	100.7	7.9 8.1	8.0	8.1	9.2 9.2	9.2	9.6	7.2 6.5	6.9	7.3
					Middle	5.7	17.1 17.2	17.2	7.7 7.8	7.7	31.3 31.1	31.2	103.0 99.7	101.4	8.2 8.0	8.1		9.4 9.9	9.7		8.2 7.5	7.9	
					Bottom	10.3	17.1 17.2	17.2	7.7 7.7	7.7	31.3 31.1	31.2	105.6 100.3	103.0	8.4 8.0	8.2	8.2	9.8 9.9	9.9		7.3 7.1	7.2	
21-Jan-15	Sunny	Moderate	13:33	11.1	Surface	1.0	17.2 17.1	17.2	7.7 7.7	7.7	30.7 30.7	30.7	99.5 99.6	99.6	8.0 8.0	8.0	8.0	16.7 16.8	16.8	17.4	13.7 14.2	14.0	14.8
					Middle	5.6	17.1 17.1	17.1	7.7 7.7	7.7	30.7 30.7	30.7	99.9 98.8	99.4	8.0 7.9	8.0		17.7 17.4	17.6		15.6 14.9	15.3	
					Bottom	10.1	17.1 17.1	17.1	7.7 7.7	7.7	30.7 30.7	30.7	99.8 99.1	99.5	8.0 7.9	8.0	8.0	17.8 17.8	17.8		15.4 14.8	15.1	

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-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-Jan-15	Sunny	Moderate	14:55	11.0	Surface	1.0	17.4 17.5	17.4	7.7 7.7	7.7	29.6 29.6	29.6	99.8 100.8	100.3	8.0 8.1	8.0	8.0	9.0 8.8	8.9	9.5	7.7 7.4	7.6	9.4
					Middle	5.5	17.2 17.3	17.3	7.7 7.7	7.7	29.6 29.6	29.6	99.1 99.0	99.1	8.0 8.0	8.0		9.5 9.6	9.6		8.9 8.3	8.6	
					Bottom	10.0	17.2 17.3	17.3	7.7 7.7	7.7	29.6 29.6	29.6	99.4 99.3	99.4	8.0 8.0	8.0	8.0	10.2 10.0	10.1		13.1 10.9	12.0	
26-Jan-15	Sunny	Moderate	17:45	11.4	Surface	1.0	17.7 17.8	17.8	7.7 7.7	7.7	30.0 30.0	30.0	98.2 99.2	98.7	7.8 7.9	7.8	7.8	11.0 10.9	11.0	11.3	12.5 12.3	12.4	13.6
					Middle	5.7	17.7 17.7	17.7	7.6 7.7	7.7	30.1 30.0	30.0	97.5 97.4	97.5	7.8 7.8	7.8		11.3 11.3	11.3		13.4 13.0	13.2	
					Bottom	10.4	17.6 17.7	17.7	7.7 7.6	7.7	30.1 30.0	30.0	97.2 97.2	97.2	7.7 7.7	7.7	7.7	11.6 11.5	11.6		15.5 14.8	15.2	
28-Jan-15	Fine	Moderate	07:06	10.1	Surface	1.0	17.8 17.8	17.8	7.5 7.5	7.5	28.8 29.1	29.0	95.6 96.9	96.3	7.6 7.7	7.7	7.7	13.7 13.5	13.6	14.5	11.9 11.0	11.5	11.1
					Middle	5.1	17.8 17.8	17.8	7.5 7.5	7.5	29.0 29.2	29.1	95.8 97.8	96.8	7.7 7.8	7.7		14.5 14.1	14.3		10.8 11.8	11.3	
					Bottom	9.1	17.8 17.8	17.8	7.5 7.5	7.5	29.4 29.0	29.2	99.9 96.0	98.0	8.0 7.7	7.8	7.8	15.6 15.3	15.5		10.5 10.5	10.5	
30-Jan-15	Cloudy	Moderate	10:00	10.3	Surface	1.0	17.9 17.9	17.9	7.6 7.6	7.6	28.6 28.8	28.7	96.7 98.5	97.6	7.7 7.9	7.8	7.8	7.6 7.7	7.7	8.2	5.5 5.3	5.4	8.2
					Middle	5.2	18.0 18.0	18.0	7.5 7.6	7.6	28.9 28.8	28.8	98.3 96.5	97.4	7.8 7.7	7.8		8.1 8.2	8.2		9.4 9.2	9.3	
					Bottom	9.3	18.0 17.9	18.0	7.5 7.6	7.5	29.0 29.0	29.0	99.2 96.5	97.9	7.9 7.7	7.8	7.8	8.7 8.7	8.7		9.7 10.0	9.9	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	16:30	11.2	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	31.6 31.6	31.6	114.9 116.1	115.5	9.1 9.1	9.1	9.1	3.5 3.2	3.4	3.2	1.5 1.4	1.5	1.8
					Middle	5.6	17.7 17.7	17.7	8.1 8.1	8.1	31.6 31.6	31.6	114.7 113.3	114.0	9.1 8.9	9.0		2.8 3.0	2.9		1.4 1.6	1.5	
					Bottom	10.2	17.7 17.7	17.7	8.1 8.1	8.1	31.6 31.6	31.6	112.5 114.8	113.7	8.9 9.0	9.0	9.0	3.5 3.3	3.4		2.2 2.7	2.5	
5-Jan-15	Cloudy	Moderate	08:01	11.3	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	29.8 29.7	29.8	113.5 112.2	112.9	9.0 8.9	9.0	9.0	4.9 4.8	4.9	5.1	5.7 4.6	5.2	6.8
					Middle	5.7	17.8 17.8	17.8	8.1 8.1	8.1	29.8 29.8	29.8	113.1 109.6	111.4	9.0 8.7	8.9		5.0 5.0	5.0		6.9 6.8	6.9	
					Bottom	10.3	17.8 17.8	17.8	8.1 8.1	8.1	29.8 29.8	29.8	102.9 112.7	107.8	8.2 9.0	8.6	8.6	5.2 5.3	5.3		7.9 8.6	8.3	
7-Jan-15	Rainy	Moderate	08:47	10.6	Surface	1.0	18.2 18.2	18.2	7.9 7.9	7.9	28.8 28.9	28.9	111.0 111.0	111.0	8.8 8.8	8.8	8.8	5.0 5.1	5.1	5.5	7.2 7.7	7.5	9.6
					Middle	5.3	18.2 18.2	18.2	7.9 7.9	7.9	29.0 29.0	29.0	110.6 110.6	110.6	8.8 8.8	8.8		5.5 5.3	5.4		9.2 8.2	8.7	
					Bottom	9.6	18.2 18.2	18.2	7.9 7.9	7.9	29.0 29.0	29.0	111.2 110.0	110.6	8.8 8.7	8.8	8.8	6.0 5.8	5.9		13.0 12.0	12.5	
9-Jan-15	Sunny	Moderate	09:41	10.8	Surface	1.0	17.7 17.7	17.7	7.9 7.9	7.9	29.3 29.4	29.4	104.5 102.9	103.7	8.4 8.2	8.3	8.3	5.9 6.1	6.0	6.2	8.4 8.5	8.5	11.5
					Middle	5.4	17.7 17.7	17.7	7.9 7.9	7.9	29.4 29.4	29.4	102.4 104.6	103.5	8.2 8.4	8.3		6.5 6.1	6.3		10.1 11.9	11.0	
					Bottom	9.8	17.7 17.7	17.7	7.9 7.9	7.9	29.4 29.4	29.4	107.0 103.3	105.2	8.6 8.3	8.4	8.4	6.1 6.7	6.4		14.1 15.8	15.0	
12-Jan-15	Cloudy	Moderate	11:26	10.2	Surface	1.0	17.7 17.7	17.7	7.7 7.8	7.7	29.8 30.0	29.9	99.7 97.0	98.4	7.9 7.7	7.8	7.9	6.1 6.1	6.1	6.4	9.5 9.8	9.7	9.2
					Middle	5.1	17.7 17.7	17.7	7.7 7.8	7.7	30.0 29.9	30.0	100.8 97.2	99.0	8.0 7.7	7.9		6.0 6.3	6.2		8.3 8.8	8.6	
					Bottom	9.2	17.7 17.7	17.7	7.7 7.7	7.7	30.0 30.2	30.1	97.3 103.7	100.5	7.7 8.2	8.0	8.0	7.1 6.8	7.0		10.3 8.3	9.3	
14-Jan-15	Cloudy	Moderate	12:48	10.5	Surface	1.0	17.3 17.4	17.3	7.9 7.9	7.9	30.3 30.5	30.4	94.7 93.0	93.9	7.6 7.4	7.5	7.5	3.1 3.2	3.2	5.3	3.8 4.4	4.1	4.9
					Middle	5.3	17.4 17.4	17.4	7.9 7.9	7.9	30.6 30.7	30.6	95.4 92.6	94.0	7.6 7.4	7.5		6.1 6.3	6.2		6.1 5.1	5.6	
					Bottom	9.5	17.4 17.4	17.4	7.8 7.9	7.9	30.6 30.7	30.6	98.2 93.7	96.0	7.8 7.5	7.7	7.7	6.5 6.7	6.6		5.5 4.4	5.0	
16-Jan-15	Sunny	Moderate	14:39	10.4	Surface	1.0	17.5 17.6	17.5	7.8 7.8	7.8	30.5 30.4	30.5	96.8 96.0	96.4	7.7 7.6	7.7	7.7	3.8 3.7	3.8	4.0	6.8 5.9	6.4	6.9
					Middle	5.2	17.4 17.4	17.4	7.8 7.8	7.8	30.5 30.6	30.6	94.9 96.3	95.6	7.6 7.7	7.6		3.9 4.0	4.0		6.6 6.9	6.8	
					Bottom	9.4	17.3 17.4	17.3	7.8 7.8	7.8	30.6 30.6	30.6	95.8 94.7	95.3	7.6 7.6	7.6	7.6	4.2 4.1	4.2		6.6 8.3	7.5	
19-Jan-15	Sunny	Moderate	17:14	11.3	Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	30.8 30.8	30.8	103.2 102.2	102.7	8.2 8.2	8.2	8.2	7.5 8.2	7.9	8.5	5.1 5.8	5.5	6.8
					Middle	5.7	17.1 17.2	17.2	7.8 7.8	7.8	30.8 30.8	30.8	101.9 101.8	101.9	8.2 8.1	8.1		8.7 9.0	8.9		6.3 7.5	6.9	
					Bottom	10.3	17.2 17.1	17.2	7.8 7.8	7.8	30.8 30.8	30.8	102.2 102.7	102.5	8.2 8.2	8.2	8.2	8.4 9.0	8.7		7.5 8.4	8.0	
21-Jan-15	Sunny	Moderate	08:15	11.0	Surface	1.0	17.0 17.0	17.0	7.6 7.6	7.6	30.6 30.6	30.6	99.6 100.4	100.0	8.0 8.1	8.0	8.0	8.5 8.6	8.6	9.0	26.1 26.5	26.3	**25.7**
					Middle	5.5	17.0 17.0	17.0	7.6 7.6	7.6	30.6 30.7	30.6	99.8 100.1	100.0	8.0 8.0	8.0		9.3 9.1	9.2		27.2 28.5	27.9	
					Bottom	10.0	17.0 17.0	17.0	7.6 7.6	7.6	30.7 30.6	30.7	100.6 99.6	100.1	8.1 8.0	8.0	8.0	9.3 9.3	9.3		22.1 23.5	22.8	

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-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-Jan-15	Sunny	Moderate	08:53	11.1	Surface	1.0	17.1 17.1	17.1	7.6 7.6	7.6	28.8 28.9	28.9	98.3 98.9	98.6	8.0 8.0	8.0	8.0	14.2 14.5	14.4	15.1	14.4 13.4	13.9	14.7
					Middle	5.6	17.1 17.1	17.1	7.6 7.6	7.6	29.0 28.9	28.9	99.3 98.1	98.7	8.1 8.0	8.0		15.2 15.4	15.3		13.8 14.6	14.2	
					Bottom	10.1	17.1 17.1	17.1	7.6 7.6	7.6	28.9 29.0	29.0	98.6 99.4	99.0	8.0 8.1	8.0	8.0	15.5 15.6	15.6		15.0 16.9	16.0	
26-Jan-15	Sunny	Moderate	11:19	11.1	Surface	1.0	17.6 17.6	17.6	7.5 7.5	7.5	28.5 28.6	28.6	99.1 98.2	98.7	8.0 7.9	7.9	7.9	6.4 6.5	6.5	6.6	8.0 8.9	8.5	9.0
					Middle	5.6	17.4 17.4	17.4	7.5 7.6	7.6	28.7 28.6	28.7	98.1 98.9	98.5	7.9 8.0	7.9		6.5 6.6	6.6		8.8 8.1	8.5	
					Bottom	10.1	17.5 17.5	17.5	7.6 7.5	7.5	28.6 28.7	28.6	98.6 97.5	98.1	8.0 7.9	7.9	7.9	6.6 6.7	6.7		10.2 9.9	10.1	
28-Jan-15	Fine	Moderate	12:51	10.0	Surface	1.0	17.9 17.9	17.9	7.4 7.5	7.4	28.9 28.9	28.9	95.9 96.2	96.1	7.7 7.7	7.7	7.7	15.2 15.1	15.2	15.3	17.9 17.7	17.8	17.7
					Middle	5.0	17.8 17.8	17.8	7.5 7.5	7.5	29.0 29.0	29.0	95.3 96.7	96.0	7.6 7.7	7.7		15.3 15.3	15.3		17.5 18.4	18.0	
					Bottom	9.0	17.8 17.8	17.8	7.4 7.5	7.5	29.0 29.0	29.0	96.2 97.6	96.9	7.7 7.8	7.7	7.7	15.4 15.5	15.5		17.6 17.1	17.4	
30-Jan-15	Cloudy	Moderate	15:21	10.3	Surface	1.0	18.0 17.9	18.0	7.7 7.7	7.7	28.3 28.5	28.4	98.6 97.4	98.0	7.9 7.8	7.8	7.9	4.7 4.4	4.6	4.5	6.5 7.1	6.8	8.1
					Middle	5.2	17.9 17.9	17.9	7.7 7.7	7.7	28.7 28.5	28.6	97.5 99.9	98.7	7.8 8.0	7.9		4.3 4.4	4.4		8.0 6.8	7.4	
					Bottom	9.3	17.9 17.9	17.9	7.7 7.7	7.7	28.6 28.4	28.5	97.8 102.0	99.9	7.8 8.2	8.0	8.0	4.8 4.3	4.6		9.8 10.1	10.0	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	12:34	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-		-	-	
					Middle	0.8	17.2	17.2	8.1	8.1	30.5	30.5	103.3	103.4	8.3	8.3		3.0	3.1	3.1	4.1	3.7	3.7
							17.2		8.1		30.5		103.4		8.3			3.1			3.3		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
5-Jan-15	Cloudy	Moderate	11:39	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.1	-	-		-	-	
					Middle	0.8	18.0	18.0	8.1	8.1	31.9	31.7	102.9	103.7	8.1	8.1		2.1	2.2	2.2	3.2	2.8	2.8
							18.0		8.1		31.4		104.4		8.2			2.2			2.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
7-Jan-15	Cloudy	Moderate	12:52	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-		-	-	
					Middle	0.8	18.6	18.6	7.9	7.9	30.2	30.1	106.5	106.4	8.3	8.3		4.6	4.7	4.7	8.3	8.7	8.7
							18.6		7.9		30.0		106.3		8.3			4.7			9.0		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
9-Jan-15	Sunny	Moderate	13:53	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.2	-	-		-	-	
					Middle	0.8	18.0	18.0	8.0	8.0	30.9	31.0	105.4	104.6	8.3	8.2		6.3	6.6	6.6	12.0	12.1	12.1
							18.0		8.0		31.0		103.7		8.2			6.8			12.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
12-Jan-15	Rainy	Rough	16:18	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.2	-	-		-	-	
					Middle	0.8	17.5	17.5	7.7	7.8	31.3	31.1	105.3	102.8	8.4	8.2		3.3	3.3	3.3	9.6	9.7	9.7
							17.5		7.8		31.0		100.3		8.0			3.3			9.8		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
14-Jan-15	Cloudy	Moderate	07:16	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.3	-	-		-	-	
					Middle	0.7	16.6	16.6	7.9	7.9	29.7	29.7	89.6	89.7	7.3	7.3		2.6	2.6	2.6	4.5	4.4	4.4
							16.6		7.9		29.6		89.7		7.3			2.5			4.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
16-Jan-15	Sunny	Moderate	10:18	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.5	-	-		-	-	
					Middle	0.8	16.8	16.8	7.8	7.8	29.2	29.2	92.6	92.7	7.5	7.5		3.2	3.1	3.1	7.8	7.1	7.1
							16.8		7.8		29.3		92.7		7.6			2.9			6.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
19-Jan-15	Sunny	Moderate	13:55	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.2	-	-		-	-	
					Middle	0.8	17.2	17.2	7.8	7.8	30.2	30.2	102.7	102.7	8.2	8.2		4.4	4.3	4.3	6.8	6.6	6.6
							17.2		7.8		30.2		102.7		8.2			4.1			6.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
21-Jan-15	Sunny	Moderate	12:18	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.4	-	-		-	-	
					Middle	0.8	17.0	17.0	7.7	7.7	31.6	31.6	104.8	104.9	8.4	8.4		8.9	9.0	9.0	11.9	11.5	11.5
							16.9		7.7		31.6		104.9		8.4			9.0			11.0		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remark: * DA: Depth-Averaged

**** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher**

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Jan-15	Sunny	Moderate	13:45	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	8.1	-	-	10.0	-	-	14.3
					Middle	0.7	17.2	17.2	7.9	7.9	31.4	31.4	102.1	102.0	8.1	8.1		10.0	10.0		13.5	14.3	
							17.2		7.9		31.4		101.9		8.1			10.0			15.1		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
26-Jan-15	Sunny	Moderate	16:53	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.8	-	-	14.3	-	-	15.3
					Middle	0.7	17.9	17.9	7.5	7.6	30.6	30.6	98.5	98.5	7.8	7.8		14.2	14.3		14.8	15.3	
							17.9		7.6		30.6		98.5		7.8			14.4			15.7		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
28-Jan-15	Fine	Moderate	08:08	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.7	-	-	4.1	-	-	5.6
					Middle	0.7	18.1	18.1	7.6	7.6	29.0	29.0	97.2	97.0	7.7	7.7		4.1	4.1		5.5	5.6	
							18.1		7.6		29.0		96.7		7.7			4.1			5.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
30-Jan-15	Cloudy	Moderate	11:28	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.8	-	-	4.4	-	-	7.7
					Middle	0.8	17.9	17.9	7.8	7.8	28.9	28.9	97.3	97.2	7.8	7.8		4.5	4.4		7.7	7.7	
							17.9		7.8		28.8		97.1		7.8			4.3			7.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Jan-15	Sunny	Moderate	15:02	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.5	-	-	2.5	-	-	1.4
					Middle	0.8	17.5	17.5	8.3	8.3	32.8	32.7	107.2	107.8	8.4	8.5		2.4	2.5		1.7	1.4	
							17.5		8.2		32.6		108.3		8.5			2.5			1.1		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
5-Jan-15	Cloudy	Moderate	08:55	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	8.4	-	-	1.1	-	-	5.7
					Middle	0.6	17.9	17.9	8.1	8.1	30.2	30.2	106.3	106.1	8.4	8.4		1.1	1.1		5.7	5.7	
							17.9		8.1		30.2		105.9		8.4			1.0			5.7		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
7-Jan-15	Rainy	Moderate	10:11	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	8.4	-	-	3.9	-	-	12.2
					Middle	0.7	18.6	18.6	7.9	7.9	29.9	29.9	106.8	106.7	8.4	8.4		3.9	3.9		12.0	12.2	
							18.6		7.9		29.9		106.6		8.3			3.8			12.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
9-Jan-15	Sunny	Moderate	11:04	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.9	-	-	4.5	-	-	10.1
					Middle	0.7	17.8	17.8	7.9	7.9	29.6	29.6	98.4	98.7	7.8	7.9		4.6	4.5		10.4	10.1	
							17.8		7.9		29.6		98.9		7.9			4.3			9.8		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
12-Jan-15	Cloudy	Moderate	12:26	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.6	-	-	3.5	-	-	9.0
					Middle	0.8	17.5	17.5	7.9	7.9	29.7	29.7	94.6	94.5	7.6	7.6		3.5	3.5		10.0	9.0	
							17.5		7.9		29.7		94.4		7.6			3.5			7.9		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
14-Jan-15	Cloudy	Moderate	11:44	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	8.1	-	-	4.4	-	-	5.5
					Middle	0.7	16.8	16.8	8.0	8.0	30.9	30.7	103.2	100.3	8.3	8.1		4.5	4.4		5.9	5.5	
							16.8		8.0		30.4		97.3		7.9			4.3			5.1		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
16-Jan-15	Sunny	Moderate	13:45	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	7.7	-	-	3.6	-	-	7.9
					Middle	0.7	17.2	17.2	7.9	7.9	31.4	31.4	96.3	96.7	7.7	7.7		3.6	3.6		7.6	7.9	
							17.2		7.9		31.4		97.1		7.7			3.5			8.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
19-Jan-15	Sunny	Moderate	15:53	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-	4.0	-	-	6.2
					Middle	0.9	17.2	17.2	8.0	8.0	30.9	31.0	103.5	103.4	8.3	8.3		4.0	4.0		6.9	6.2	
							17.2		8.0		31.2		103.2		8.2			4.0			5.5		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
21-Jan-15	Sunny	Moderate	09:29	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-	6.8	-	-	13.4
					Middle	0.8	16.9	16.9	7.7	7.7	30.6	30.6	102.9	102.8	8.3	8.3		6.7	6.8		14.1	13.4	
							16.9		7.7		30.6		102.6		8.2			6.8			12.7		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

Remark: * **DA: Depth-Averaged**

****** **Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher**

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Jan-15	Sunny	Moderate	10:05	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-	7.4	-	-	14.1
					Middle	0.9	17.1 17.1	17.1	7.7 7.7	7.7	29.6 29.5	29.5	102.9 103.0	103.0	8.3 8.3	8.3		7.3 7.5	7.4		13.1 15.1	14.1	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
26-Jan-15	Sunny	Moderate	12:12	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.9	-	-	7.1	-	-	11.7
					Middle	0.8	17.7 17.7	17.7	7.7 7.7	7.7	29.0 29.1	29.1	99.1 99.3	99.2	7.9 7.9	7.9		7.2 7.0	7.1		11.9 11.5	11.7	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
28-Jan-15	Fine	Moderate	11:51	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	8.0	-	-	7.3	-	-	9.1
					Middle	0.7	18.0 18.0	18.0	7.5 7.5	7.5	30.4 30.6	30.5	100.9 101.7	101.3	8.0 8.0	8.0		7.5 7.1	7.3		9.2 9.0	9.1	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
30-Jan-15	Cloudy	Moderate	13:53	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.1	-	-	4.1	-	-	8.9
					Middle	0.8	18.0 18.0	18.0	7.6 7.7	7.7	28.8 28.9	28.8	102.5 101.4	102.0	8.2 8.1	8.1		4.1 4.0	4.1		8.7 9.1	8.9	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

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

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

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{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-Jan-15	Sunny	Moderate	11:33	3.7	Surface	1.0	17.7 17.7	17.7	8.1 8.1	8.1	30.7 30.7	30.7	116.1 115.6	115.9	9.2 9.2	9.2	9.2	3.3 3.1	3.2	3.2	2.9 3.4	3.2	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.7 17.7	17.7	8.1 8.1	8.1	30.6 30.7	30.6	115.2 115.9	115.6	9.1 9.2	9.2	9.2	3.1 3.1	3.1		3.4 2.9	3.2	
5-Jan-15	Cloudy	Moderate	12:14	3.5	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.8 30.9	30.8	111.4 108.3	109.9	8.8 8.6	8.7	8.7	3.1 3.1	3.1	3.2	5.7 5.4	5.6	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	17.9 17.9	17.9	8.1 8.1	8.1	30.8 30.9	30.8	105.2 109.8	107.5	8.3 8.7	8.5	8.5	3.3 3.2	3.3		9.0 7.9	8.5	
7-Jan-15	Cloudy	Moderate	13:48	3.7	Surface	1.0	18.3 18.3	18.3	8.0 8.0	8.0	30.0 30.0	30.0	110.4 111.5	111.0	8.7 8.8	8.7	8.7	7.1 6.8	7.0	7.0	6.7 6.4	6.6	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	18.3 18.3	18.3	8.0 7.9	8.0	30.0 29.9	29.9	110.9 109.0	110.0	8.7 8.6	8.7	8.7	6.9 7.0	7.0		9.1 10.2	9.7	
9-Jan-15	Sunny	Moderate	14:57	3.8	Surface	1.0	18.1 18.1	18.1	7.9 7.9	7.9	30.6 30.7	30.6	105.8 105.7	105.8	8.3 8.3	8.3	8.3	4.8 5.1	5.0	5.2	6.4 5.4	5.9	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	18.0 17.9	18.0	7.9 7.9	7.9	30.6 30.6	30.6	105.8 106.2	106.0	8.3 8.4	8.4	8.4	5.2 5.6	5.4		7.7 5.2	6.5	
12-Jan-15	Rainy	Rough	16:58	3.7	Surface	1.0	17.5 17.5	17.5	7.9 7.8	7.9	29.8 29.9	29.8	98.0 100.8	99.4	7.8 8.1	7.9	7.9	5.7 5.9	5.8	5.8	5.4 6.7	6.1	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.5 17.5	17.5	7.8 7.8	7.8	30.0 29.8	29.9	104.9 99.7	102.3	8.4 8.0	8.2	8.2	5.8 5.8	5.8		7.1 5.4	6.3	
14-Jan-15	Cloudy	Moderate	06:27	3.8	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	29.8 29.8	29.8	90.2 90.7	90.5	7.4 7.4	7.4	7.4	2.5 2.5	2.5	2.6	5.1 5.2	5.2	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	16.4 16.4	16.4	7.9 7.9	7.9	29.8 29.8	29.8	90.8 90.5	90.7	7.4 7.4	7.4	7.4	2.6 2.5	2.6		5.2 5.1	5.2	
16-Jan-15	Sunny	Moderate	09:42	3.4	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	29.7 29.6	29.6	93.7 94.5	94.1	7.6 7.6	7.6	7.6	3.3 3.4	3.4	3.5	7.6 7.8	7.7	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.3 17.2	17.3	7.8 7.9	7.9	29.7 29.6	29.7	93.7 93.7	93.7	7.5 7.5	7.5	7.5	3.4 3.5	3.5		7.4 6.8	7.1	
19-Jan-15	Sunny	Moderate	12:49	3.8	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	30.4 30.5	30.4	104.7 104.7	104.7	8.4 8.4	8.4	8.4	8.4 7.8	8.1	8.5	4.6 5.5	5.1	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.2 17.2	17.2	7.9 7.9	7.9	30.5 30.3	30.4	104.4 104.9	104.7	8.4 8.4	8.4	8.4	9.2 8.4	8.8		6.3 8.1	7.2	
21-Jan-15	Sunny	Moderate	13:07	3.9	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	30.7 30.8	30.8	106.5 105.0	105.8	8.5 8.4	8.5	8.5	7.2 7.1	7.2	7.3	17.6 16.6	17.1	18.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	17.1 17.1	17.1	7.7 7.7	7.7	30.8 30.8	30.8	105.9 104.1	105.0	8.5 8.3	8.4	8.4	7.2 7.3	7.3		19.4 21.0	20.2	

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 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-Jan-15	Sunny	Moderate	14:26	3.3	Surface	1.0	17.3 17.2	17.3	7.8 7.8	7.8	29.9 30.0	30.0	101.9 101.7	101.8	8.2 8.2	8.2	8.2	11.0 10.7	10.9	11.2	16.7 16.4	16.6	17.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.3 17.3	17.3	7.8 7.8	7.8	30.0 30.0	30.0	101.6 101.5	101.6	8.2 8.1	8.1	8.1	11.5 11.2	11.4		18.5 19.9	19.2	
26-Jan-15	Sunny	Moderate	17:25	3.3	Surface	1.0	18.1 18.2	18.2	7.6 7.6	7.6	30.4 30.4	30.4	104.3 105.0	104.7	8.2 8.3	8.2	8.2	5.5 5.6	5.6	5.7	8.8 8.6	8.7	10.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	18.0 18.2	18.1	7.6 7.6	7.6	30.5 30.4	30.4	104.0 104.7	104.4	8.2 8.2	8.2	8.2	5.6 5.7	5.7		11.9 10.8	11.4	
28-Jan-15	Fine	Moderate	07:27	3.7	Surface	1.0	17.8 17.8	17.8	7.5 7.5	7.5	28.8 28.8	28.8	97.0 97.1	97.1	7.8 7.8	7.8	7.8	7.5 7.3	7.4	7.5	8.4 7.6	8.0	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.8 17.8	17.8	7.5 7.5	7.5	28.7 28.8	28.8	96.7 97.0	96.9	7.7 7.8	7.8	7.8	7.5 7.6	7.6		7.8 8.0	7.9	
30-Jan-15	Cloudy	Moderate	10:34	3.7	Surface	1.0	18.0 18.0	18.0	7.7 7.7	7.7	28.7 28.7	28.7	95.4 95.7	95.6	7.6 7.6	7.6	7.6	6.5 6.2	6.4	6.2	9.1 9.2	9.2	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	18.0 18.0	18.0	7.7 7.6	7.7	28.7 28.8	28.8	95.4 95.5	95.5	7.6 7.6	7.6	7.6	5.7 6.2	6.0		8.8 9.2	9.0	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	16:00	3.9	Surface	1.0	18.0 17.9	18.0	8.1 8.1	8.1	31.5 31.5	31.5	118.4 116.9	117.7	9.3 9.2	9.2	9.2	5.9 6.1	6.0	6.0	5.4 4.4	4.9	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	17.9 17.8	17.9	8.1 8.1	8.1	31.5 31.5	31.5	112.1 117.1	114.6	8.8 9.2	9.0	9.0	6.0 6.0	6.0		5.8 6.0	5.9	
5-Jan-15	Cloudy	Moderate	08:20	3.4	Surface	1.0	17.8 17.8	17.8	8.2 8.2	8.2	30.0 30.0	30.0	112.7 113.0	112.9	9.0 9.0	9.0	9.0	4.0 3.9	4.0	4.0	3.6 2.9	3.3	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	17.8 17.8	17.8	8.1 8.2	8.2	30.0 29.9	30.0	112.5 112.7	112.6	8.9 9.0	9.0	9.0	3.9 4.0	4.0		7.2 7.4	7.3	
7-Jan-15	Rainy	Moderate	09:14	3.6	Surface	1.0	18.2 18.2	18.2	8.0 8.0	8.0	29.3 29.4	29.3	110.7 111.1	110.9	8.8 8.8	8.8	8.8	4.0 4.1	4.1	4.2	9.5 8.4	9.0	10.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	18.2 18.2	18.2	8.0 8.0	8.0	29.3 29.6	29.5	111.1 110.7	110.9	8.8 8.7	8.8	8.8	4.0 4.3	4.2		11.8 11.0	11.4	
9-Jan-15	Sunny	Moderate	10:10	3.8	Surface	1.0	17.8 17.8	17.8	7.9 7.9	7.9	29.7 29.8	29.8	102.0 102.1	102.1	8.1 8.1	8.1	8.1	4.0 3.8	3.9	4.1	7.3 8.5	7.9	9.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.8 17.8	17.8	7.9 7.9	7.9	29.9 29.8	29.9	102.6 102.2	102.4	8.2 8.1	8.1	8.1	4.0 4.3	4.2		10.8 11.8	11.3	
12-Jan-15	Cloudy	Moderate	11:48	3.7	Surface	1.0	17.6 17.7	17.6	7.9 7.9	7.9	29.5 29.4	29.5	97.5 97.1	97.3	7.8 7.8	7.8	7.8	2.9 2.9	2.9	2.9	5.7 7.1	6.4	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.6 17.6	17.6	7.9 7.9	7.9	29.4 29.4	29.4	97.5 97.0	97.3	7.8 7.8	7.8	7.8	2.8 2.8	2.8		8.0 9.1	8.6	
14-Jan-15	Cloudy	Moderate	12:27	3.7	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	30.0 30.1	30.0	95.1 97.3	96.2	7.7 7.8	7.7	7.7	3.4 3.5	3.5	3.5	6.4 5.0	5.7	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	17.1 17.1	17.1	7.8 7.8	7.8	30.2 30.2	30.2	100.1 95.9	98.0	8.1 7.7	7.9	7.9	3.5 3.5	3.5		8.5 8.4	8.5	
16-Jan-15	Sunny	Moderate	14:18	3.3	Surface	1.0	17.7 17.6	17.7	7.8 7.8	7.8	30.3 30.2	30.2	99.9 102.5	101.2	7.9 8.2	8.1	8.1	5.5 5.5	5.5	5.6	8.9 8.9	8.9	9.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.7 17.6	17.7	7.8 7.9	7.9	30.3 30.2	30.2	99.2 101.2	100.2	7.9 8.1	8.0	8.0	5.7 5.6	5.7		9.1 9.5	9.3	
19-Jan-15	Sunny	Moderate	16:45	3.8	Surface	1.0	17.6 17.6	17.6	7.9 7.9	7.9	30.6 30.6	30.6	108.2 110.0	109.1	8.6 8.7	8.7	8.7	12.7 13.4	13.1	13.9	14.3 14.2	14.3	14.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	17.5 17.4	17.5	7.9 7.9	7.9	30.6 30.6	30.6	109.5 106.0	107.8	8.7 8.5	8.6	8.6	14.0 15.4	14.7		13.8 14.6	14.2	
21-Jan-15	Sunny	Moderate	08:45	3.5	Surface	1.0	16.9 16.9	16.9	7.8 7.8	7.8	30.4 30.5	30.4	99.5 98.8	99.2	8.0 8.0	8.0	8.0	13.8 14.0	13.9	14.1	10.3 11.6	11.0	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	16.9 16.9	16.9	7.8 7.8	7.8	30.3 30.4	30.4	99.2 99.0	99.1	8.0 8.0	8.0	8.0	14.0 14.3	14.2		10.6 11.1	10.9	

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-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-Jan-15	Sunny	Moderate	09:19	3.5	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	29.0 28.9	29.0	97.9 98.2	98.1	7.9 8.0	8.0	8.0	11.2 11.5	11.4	11.8	13.7 14.3	14.0	14.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	17.0 17.0	17.0	7.7 7.7	7.7	29.0 28.9	28.9	98.1 98.1	98.1	8.0 8.0	8.0	8.0	12.1 12.3	12.2		14.0 13.9	14.0	
26-Jan-15	Sunny	Moderate	11:38	3.3	Surface	1.0	17.7 17.7	17.7	7.6 7.6	7.6	28.9 28.8	28.9	98.1 98.3	98.2	7.9 7.9	7.9	7.9	9.3 9.0	9.2	9.3	15.9 16.4	16.2	16.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	17.6 17.7	17.7	7.7 7.7	7.7	28.9 28.9	28.9	98.3 97.9	98.1	7.9 7.9	7.9	7.9	9.4 9.4	9.4		16.3 17.0	16.7	
28-Jan-15	Fine	Moderate	12:28	3.6	Surface	1.0	18.1 18.1	18.1	7.6 7.5	7.5	29.0 29.0	29.0	98.9 99.9	99.4	7.9 8.0	7.9	7.9	6.6 6.3	6.5	6.5	7.2 6.5	6.9	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	18.1 18.0	18.1	7.6 7.5	7.6	29.0 29.5	29.3	99.4 100.1	99.8	7.9 7.9	7.9	7.9	6.6 6.4	6.5		7.6 7.9	7.8	
30-Jan-15	Cloudy	Moderate	14:51	3.7	Surface	1.0	18.0 18.1	18.1	7.7 7.7	7.7	28.6 28.6	28.6	100.9 99.5	100.2	8.0 7.9	8.0	8.0	13.8 14.3	14.1	15.0	7.6 6.4	7.0	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	18.0 18.0	18.0	7.7 7.7	7.7	28.6 28.6	28.6	101.6 99.9	100.8	8.1 8.0	8.0	8.0	16.1 15.5	15.8		8.2 8.9	8.6	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	11:22	4.8	Surface	1.0	16.8 16.8	16.8	8.0 8.0	8.0	32.9 32.9	32.9	111.7 111.5	111.6	8.9 8.9	8.9	8.9	1.4 1.4	1.4	1.4	2.5 3.2	2.9	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	16.8 16.8	16.8	8.0 8.0	8.0	32.9 32.9	32.9	111.3 111.3	111.3	8.9 8.9	8.9	8.9	1.3 1.4	1.4		2.4 2.7	2.6	
5-Jan-15	Cloudy	Moderate	12:57	5.1	Surface	1.0	17.1 17.1	17.1	8.1 8.1	8.1	32.5 32.5	32.5	110.6 108.4	109.5	8.8 8.6	8.7	8.7	2.1 2.1	2.1	2.1	4.2 3.7	4.0	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	17.1 17.1	17.1	8.1 8.1	8.1	32.5 32.5	32.5	106.0 109.5	107.8	8.4 8.7	8.5	8.5	2.0 2.1	2.1		5.0 5.6	5.3	
7-Jan-15	Cloudy	Moderate	13:40	5.1	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.4 31.1	31.3	107.6 108.1	107.9	8.5 8.6	8.6	8.6	3.5 3.4	3.5	3.6	6.8 8.2	7.5	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	17.5 17.5	17.5	8.1 8.1	8.1	31.7 31.4	31.5	106.8 108.0	107.4	8.5 8.6	8.5	8.5	3.6 3.6	3.6		7.2 7.2	7.2	
9-Jan-15	Sunny	Moderate	15:01	4.9	Surface	1.0	17.2 17.3	17.3	8.0 8.0	8.0	31.9 31.9	31.9	103.1 103.2	103.2	8.2 8.2	8.2	8.2	4.4 4.2	4.3	4.4	6.7 7.3	7.0	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	17.2 17.2	17.2	8.0 8.0	8.0	32.0 31.9	32.0	102.9 103.2	103.1	8.2 8.2	8.2	8.2	4.4 4.4	4.4		8.5 8.5	8.5	
12-Jan-15	Rainy	Rough	17:24	4.8	Surface	1.0	16.8 16.8	16.8	7.8 7.8	7.8	32.2 32.2	32.2	100.3 98.3	99.3	8.0 7.9	7.9	7.9	2.4 2.2	2.3	2.4	9.6 10.6	10.1	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	16.8 16.8	16.8	7.7 7.8	7.7	32.3 32.3	32.3	104.2 99.5	101.9	8.3 7.9	8.1	8.1	2.4 2.4	2.4		7.0 9.4	8.2	
14-Jan-15	Cloudy	Moderate	05:31	5.2	Surface	1.0	16.2 16.2	16.2	7.6 7.4	7.5	32.3 32.3	32.3	99.6 104.4	102.0	8.1 8.4	8.2	8.2	1.7 1.7	1.7	1.8	6.0 4.4	5.2	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	16.1 16.2	16.2	7.3 7.5	7.4	32.3 32.3	32.3	105.4 101.7	103.6	8.5 8.2	8.4	8.4	1.9 1.9	1.9		6.8 7.8	7.3	
16-Jan-15	Sunny	Moderate	09:23	5.2	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	32.5 32.5	32.5	94.1 94.1	94.1	7.6 7.6	7.6	7.6	2.0 2.0	2.0	2.0	4.7 3.5	4.1	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	16.4 16.4	16.4	7.9 7.9	7.9	32.5 32.5	32.5	94.2 94.1	94.2	7.6 7.6	7.6	7.6	1.9 2.0	2.0		6.6 8.1	7.4	
19-Jan-15	Sunny	Moderate	12:35	5.3	Surface	1.0	16.3 16.2	16.3	7.9 7.9	7.9	32.5 32.5	32.5	101.7 101.4	101.6	8.2 8.2	8.2	8.2	2.5 2.7	2.6	2.7	3.7 5.2	4.5	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	16.2 16.2	16.2	7.9 7.9	7.9	32.5 32.5	32.5	101.4 101.2	101.3	8.2 8.2	8.2	8.2	2.7 2.7	2.7		3.6 2.6	3.1	
21-Jan-15	Sunny	Moderate	13:27	5.0	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.0 31.9	32.0	100.1 100.5	100.3	8.1 8.1	8.1	8.1	7.5 7.1	7.3	7.4	10.9 11.8	11.4	12.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	16.3 16.3	16.3	7.9 7.9	7.9	32.2 32.2	32.2	100.0 101.0	100.5	8.1 8.2	8.1	8.1	7.4 7.4	7.4		13.4 14.8	14.1	

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 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-Jan-15	Sunny	Moderate	14:41	5.1	Surface	1.0	16.6 16.6	16.6	7.9 7.9	7.9	30.9 30.9	30.9	101.1 100.3	100.7	8.2 8.1	8.1	8.1	7.6 7.4	7.5	7.5	11.1 10.1	10.6	11.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	16.5 16.4	16.5	7.9 7.9	7.9	31.1 31.2	31.2	100.1 101.6	100.9	8.1 8.2	8.2	8.2	7.4 7.5	7.5		12.8 12.1	12.5	
26-Jan-15	Sunny	Moderate	17:47	5.2	Surface	1.0	17.3 17.3	17.3	7.9 7.9	7.9	30.6 30.6	30.6	101.1 100.7	100.9	8.1 8.1	8.1	8.1	4.5 4.5	4.5	4.5	6.3 7.5	6.9	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	17.0 17.1	17.1	7.9 7.9	7.9	30.8 30.7	30.8	99.9 100.7	100.3	8.0 8.1	8.0	8.0	4.4 4.5	4.5		7.0 6.5	6.8	
28-Jan-15	Fine	Moderate	06:19	5.2	Surface	1.0	16.9 17.0	17.0	7.9 7.9	7.9	30.9 30.9	30.9	97.9 98.2	98.1	7.9 7.9	7.9	7.9	4.2 4.2	4.2	4.3	6.1 6.8	6.5	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	17.0 17.0	17.0	7.9 7.9	7.9	30.9 30.9	30.9	98.0 98.5	98.3	7.9 7.9	7.9	7.9	4.2 4.3	4.3		6.8 5.8	6.3	
30-Jan-15	Cloudy	Moderate	10:25	5.2	Surface	1.0	17.2 17.2	17.2	7.8 7.8	7.8	29.0 29.1	29.0	97.0 96.9	97.0	7.9 7.8	7.8	7.8	2.1 2.1	2.1	2.2	3.7 4.2	4.0	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	17.2 17.1	17.1	7.8 7.8	7.8	30.6 30.9	30.7	96.8 96.7	96.8	7.8 7.7	7.7	7.7	2.1 2.2	2.2		4.8 3.4	4.1	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	16:17	4.9	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	112.8 114.1	113.5	8.9 9.0	9.0	9.0	2.5 2.5	2.5	2.5	2.2 1.8	2.0	2.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	17.0 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	110.1 113.3	111.7	8.7 9.0	8.8	8.8	2.5 2.5	2.5		2.3 2.5	2.4	
5-Jan-15	Cloudy	Moderate	07:54	5.3	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.7 112.7	112.7	9.0 9.0	9.0	9.0	5.1 5.1	5.1	5.1	9.9 9.6	9.8	10.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.7 112.3	112.5	9.0 8.9	8.9	8.9	5.1 5.1	5.1		12.2 11.7	12.0	
7-Jan-15	Rainy	Moderate	09:05	5.0	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.8 31.8	31.8	110.4 110.4	110.4	8.7 8.7	8.7	8.7	7.3 7.4	7.4	7.4	11.4 12.2	11.8	12.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	17.5 17.5	17.5	8.1 8.1	8.1	31.8 31.8	31.8	110.1 110.3	110.2	8.7 8.7	8.7	8.7	7.4 7.4	7.4		12.7 12.7	12.7	
9-Jan-15	Sunny	Moderate	09:59	5.0	Surface	1.0	17.1 17.1	17.1	8.0 8.0	8.0	32.1 32.1	32.1	101.7 101.6	101.7	8.1 8.1	8.1	8.1	13.9 13.5	13.7	13.6	17.3 17.9	17.6	17.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	17.1 17.1	17.1	8.0 8.0	8.0	32.1 32.1	32.1	101.6 101.5	101.6	8.1 8.1	8.1	8.1	13.5 13.3	13.4		18.7 17.4	18.1	
12-Jan-15	Cloudy	Moderate	11:58	4.8	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	96.2 96.5	96.4	7.7 7.7	7.7	7.7	20.2 20.6	20.4	19.8	32.6 29.6	31.1	**31.5**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	96.4 96.3	96.4	7.7 7.7	7.7	7.7	19.4 18.9	19.2		32.5 31.2	31.9	
14-Jan-15	Cloudy	Moderate	13:30	5.3	Surface	1.0	16.4 16.4	16.4	7.4 7.6	7.5	32.3 32.3	32.3	104.1 100.0	102.1	8.4 8.1	8.2	8.2	1.8 1.8	1.8	1.9	7.1 7.3	7.2	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	16.4 16.4	16.4	7.5 7.3	7.4	32.4 32.4	32.4	102.0 107.2	104.6	8.2 8.6	8.4	8.4	2.0 1.9	2.0		8.0 6.7	7.4	
16-Jan-15	Sunny	Moderate	14:32	5.4	Surface	1.0	16.7 16.8	16.8	7.9 7.9	7.9	32.6 32.6	32.6	96.2 96.6	96.4	7.7 7.7	7.7	7.7	6.0 6.4	6.2	7.2	6.3 6.5	6.4	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	16.6 16.5	16.6	7.9 7.9	7.9	32.5 32.6	32.6	96.1 96.0	96.1	7.7 7.7	7.7	7.7	7.9 8.2	8.1		8.0 6.4	7.2	
19-Jan-15	Sunny	Moderate	17:08	4.8	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	32.4 32.4	32.4	103.0 103.2	103.1	8.3 8.3	8.3	8.3	7.7 7.7	7.7	7.7	7.8 7.4	7.6	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	16.3 16.4	16.4	7.9 7.9	7.9	32.4 32.4	32.4	102.6 103.5	103.1	8.3 8.3	8.3	8.3	7.6 7.7	7.7		7.9 8.4	8.2	
21-Jan-15	Sunny	Moderate	08:23	5.3	Surface	1.0	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	100.0 99.9	100.0	8.1 8.1	8.1	8.1	25.8 26.5	26.2	26.5	23.6 22.0	22.8	**24.9**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	16.2 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	99.8 99.7	99.8	8.1 8.1	8.1	8.1	26.9 26.6	26.8		27.0 27.0	27.0	

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 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-Jan-15	Sunny	Moderate	09:36	5.3	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	31.5 31.5	31.5	97.9 97.8	97.9	7.9 7.9	7.9	7.9	23.1 23.4	23.3	24.5	16.4 16.4	16.4	17.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	16.3 16.2	16.3	7.9 7.9	7.9	31.6 31.6	31.6	97.7 97.6	97.7	7.9 7.9	7.9	7.9	25.5 25.6	25.6		18.2 19.9	19.1	
26-Jan-15	Sunny	Moderate	11:32	5.3	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	31.2 31.2	31.2	97.8 97.8	97.8	7.9 7.9	7.9	7.9	16.0 15.7	15.9	16.1	21.9 20.3	21.1	21.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	16.7 16.6	16.7	7.9 7.9	7.9	31.2 31.2	31.2	97.8 97.8	97.8	7.9 7.9	7.9	7.9	16.3 16.3	16.3		22.5 21.9	22.2	
28-Jan-15	Fine	Moderate	13:44	5.3	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	100.7 99.6	100.2	8.1 8.0	8.0	8.0	4.2 4.2	4.2	4.3	8.4 8.7	8.6	8.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	101.6 100.0	100.8	8.1 8.0	8.1	8.1	4.4 4.3	4.4		8.7 8.6	8.7	
30-Jan-15	Cloudy	Moderate	14:59	5.3	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	28.8 28.8	28.8	97.9 98.0	98.0	7.9 7.9	7.9	7.9	3.6 3.6	3.6	3.6	2.4 2.4	2.4	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	17.2 17.1	17.1	7.9 7.9	7.9	30.2 30.3	30.2	98.1 97.6	97.9	7.9 7.8	7.9	7.9	3.6 3.6	3.6		4.4 4.3	4.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	12:21	4.2	Surface	1.0	16.6 16.6	16.6	8.1 8.1	8.1	32.8 32.8	32.8	118.0 117.9	118.0	9.4 9.4	9.4	9.4	2.3 2.3	2.3	2.3	3.3 3.8	3.6	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.6 16.5	16.6	8.1 8.1	8.1	32.8 32.8	32.8	117.6 117.9	117.8	9.4 9.4	9.4	9.4	2.2 2.4	2.3		3.8 3.7	3.8	
5-Jan-15	Cloudy	Moderate	12:01	4.2	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.5 32.5	32.5	112.4 112.1	112.3	8.9 8.9	8.9	8.9	2.9 2.8	2.9	2.9	6.6 6.7	6.7	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.0 17.0	17.0	8.1 8.1	8.1	32.5 32.5	32.5	112.0 111.7	111.9	8.9 8.9	8.9	8.9	2.8 2.7	2.8		7.8 8.0	7.9	
7-Jan-15	Cloudy	Moderate	12:56	4.1	Surface	1.0	17.5 17.5	17.5	8.1 8.1	8.1	31.0 31.1	31.1	108.8 108.9	108.9	8.6 8.6	8.6	8.6	3.3 3.2	3.3	3.2	6.8 5.7	6.3	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	17.5 17.5	17.5	8.1 8.1	8.1	31.2 31.5	31.3	108.7 108.7	108.7	8.6 8.6	8.6	8.6	3.0 3.2	3.1		6.9 6.6	6.8	
9-Jan-15	Sunny	Moderate	14:10	4.1	Surface	1.0	17.2 17.3	17.3	8.0 8.0	8.0	32.0 32.0	32.0	104.3 104.4	104.4	8.3 8.3	8.3	8.3	3.8 3.8	3.8	3.9	4.6 5.4	5.0	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	17.2 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	104.1 104.2	104.2	8.3 8.3	8.3	8.3	4.0 3.7	3.9		6.6 7.3	7.0	
12-Jan-15	Rainy	Rough	16:27	4.2	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	32.2 32.2	32.2	96.1 96.3	96.2	7.7 7.7	7.7	7.7	4.6 4.2	4.4	4.4	11.4 10.8	11.1	10.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.8 16.8	16.8	7.9 7.8	7.9	32.2 32.2	32.2	96.2 96.3	96.3	7.7 7.7	7.7	7.7	4.2 4.3	4.3		11.4 9.3	10.4	
14-Jan-15	Cloudy	Moderate	06:27	4.1	Surface	1.0	15.5 15.5	15.5	7.7 7.6	7.6	32.2 32.2	32.2	102.5 106.0	104.3	8.4 8.7	8.5	8.5	1.5 1.4	1.5	1.6	2.6 3.8	3.2	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	15.4 15.5	15.5	7.5 7.6	7.6	32.2 32.2	32.2	105.6 104.0	104.8	8.7 8.5	8.6	8.6	1.6 1.6	1.6		4.0 2.8	3.4	
16-Jan-15	Sunny	Moderate	10:15	4.4	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	96.1 96.0	96.1	7.7 7.7	7.7	7.7	2.3 2.5	2.4	2.4	6.8 7.0	6.9	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	16.3 16.3	16.3	7.9 7.9	7.9	32.5 32.5	32.5	96.0 96.0	96.0	7.7 7.7	7.7	7.7	2.3 2.4	2.4		6.5 5.9	6.2	
19-Jan-15	Sunny	Moderate	13:25	4.3	Surface	1.0	16.2 16.2	16.2	8.0 8.0	8.0	32.3 32.3	32.3	102.8 103.0	102.9	8.3 8.3	8.3	8.3	3.5 3.6	3.6	3.5	3.7 3.4	3.6	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.2 16.1	16.1	8.0 8.0	8.0	32.3 32.4	32.3	103.0 102.4	102.7	8.3 8.3	8.3	8.3	3.4 3.4	3.4		4.8 4.5	4.7	
21-Jan-15	Sunny	Moderate	12:30	4.2	Surface	1.0	16.3 16.4	16.4	7.9 7.9	7.9	31.8 31.7	31.8	99.4 99.7	99.6	8.0 8.1	8.0	8.0	9.3 9.1	9.2	9.4	12.4 13.6	13.0	13.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.2 16.4	16.3	8.0 7.9	8.0	32.1 31.8	31.9	99.1 99.6	99.4	8.0 8.1	8.0	8.0	9.5 9.5	9.5		13.3 14.5	13.9	

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 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-Jan-15	Sunny	Moderate	13:59	4.2	Surface	1.0	16.5 16.5	16.5	7.9 7.9	7.9	31.3 31.3	31.3	99.2 99.0	99.1	8.0 8.0	8.0	8.0	9.6 9.9	9.8	9.9	8.2 8.6	8.4	9.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.5 16.3	16.4	7.9 7.9	7.9	31.3 31.5	31.4	99.0 98.8	98.9	8.0 8.0	8.0	8.0	9.9 9.8	9.9		10.4 10.5	10.5	
26-Jan-15	Sunny	Moderate	16:51	4.3	Surface	1.0	16.9 17.0	17.0	7.9 7.9	7.9	30.9 30.9	30.9	100.0 100.1	100.1	8.0 8.0	8.0	8.0	6.4 6.6	6.5	6.6	5.6 6.6	6.1	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.9 16.8	16.9	7.9 7.9	7.9	31.0 31.1	31.0	99.9 99.9	99.9	8.0 8.0	8.0	8.0	6.7 6.6	6.7		8.5 8.6	8.6	
28-Jan-15	Fine	Moderate	07:15	4.2	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	98.7 99.5	99.1	7.9 8.0	8.0	8.0	1.9 1.8	1.9	2.0	3.6 3.4	3.5	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	99.2 100.3	99.8	8.0 8.1	8.0	8.0	1.9 2.0	2.0		3.0 3.5	3.3	
30-Jan-15	Cloudy	Moderate	11:20	4.1	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	28.2 28.1	28.1	96.3 96.3	96.3	7.8 7.8	7.8	7.8	2.3 2.2	2.3	2.3	4.2 3.5	3.9	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	17.1 17.2	17.2	7.8 7.8	7.8	28.3 28.5	28.4	96.3 96.4	96.4	7.8 7.8	7.8	7.8	2.3 2.3	2.3		3.8 3.9	3.9	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	15:21	4.1	Surface	1.0	16.9 16.8	16.9	8.1 8.1	8.1	32.9 32.9	32.9	119.6 119.0	119.3	9.5 9.5	9.5	9.5	2.7 2.6	2.7	2.8	3.0 3.3	3.2	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	16.7 16.8	16.8	8.1 8.1	8.1	32.9 32.8	32.9	119.3 119.1	119.2	9.5 9.5	9.5	9.5	2.7 2.8	2.8		4.4 3.7	4.1	
5-Jan-15	Cloudy	Moderate	08:50	4.2	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.7 112.6	112.7	9.0 8.9	8.9	8.9	9.5 9.2	9.4	9.4	12.1 13.1	12.6	13.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	112.5 112.5	112.5	8.9 8.9	8.9	8.9	9.4 9.2	9.3		13.7 13.7	13.7	
7-Jan-15	Rainy	Moderate	10:00	4.3	Surface	1.0	17.5 17.5	17.5	8.0 8.0	8.0	31.3 31.2	31.3	108.3 108.1	108.2	8.6 8.6	8.6	8.6	7.4 7.8	7.6	7.5	7.7 8.1	7.9	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	17.5 17.5	17.5	8.0 8.0	8.0	31.4 31.4	31.4	108.1 108.2	108.2	8.6 8.6	8.6	8.6	7.3 7.4	7.4		9.2 9.1	9.2	
9-Jan-15	Sunny	Moderate	10:55	4.3	Surface	1.0	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	102.3 102.3	102.3	8.2 8.2	8.2	8.2	8.4 8.5	8.5	8.6	10.8 11.7	11.3	11.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	102.2 102.2	102.2	8.2 8.2	8.2	8.2	8.5 8.8	8.7		11.1 12.9	12.0	
12-Jan-15	Cloudy	Moderate	12:55	4.0	Surface	1.0	16.7 16.7	16.7	8.0 8.0	8.0	32.3 32.3	32.3	97.6 97.6	97.6	7.8 7.8	7.8	7.8	8.0 8.0	8.0	8.2	11.2 10.2	10.7	10.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	16.7 16.7	16.7	8.0 8.0	8.0	32.3 32.3	32.3	97.7 97.5	97.6	7.8 7.8	7.8	7.8	8.8 7.9	8.4		10.2 10.0	10.1	
14-Jan-15	Cloudy	Moderate	12:35	4.3	Surface	1.0	16.0 15.9	16.0	7.4 7.2	7.3	32.3 32.3	32.3	101.5 104.9	103.2	8.2 8.5	8.4	8.4	1.4 1.4	1.4	1.5	4.7 5.3	5.0	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	15.6 16.0	15.8	7.0 7.3	7.2	32.4 32.3	32.3	106.9 102.7	104.8	8.7 8.3	8.5	8.5	1.5 1.6	1.6		5.7 6.6	6.2	
16-Jan-15	Sunny	Moderate	13:22	4.2	Surface	1.0	16.3 16.3	16.3	8.0 8.0	8.0	32.6 32.6	32.6	95.6 95.4	95.5	7.7 7.7	7.7	7.7	2.2 2.3	2.3	2.3	5.4 4.7	5.1	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.3 16.3	16.3	8.0 8.0	8.0	32.6 32.6	32.6	95.5 95.7	95.6	7.7 7.7	7.7	7.7	2.2 2.3	2.3		4.0 6.0	5.0	
19-Jan-15	Sunny	Moderate	16:11	4.2	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	32.3 32.4	32.3	103.2 103.2	103.2	8.3 8.3	8.3	8.3	3.7 3.9	3.8	3.8	7.1 6.7	6.9	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.3 16.3	16.3	7.9 7.9	7.9	32.4 32.4	32.4	103.0 103.0	103.0	8.3 8.3	8.3	8.3	3.8 3.7	3.8		7.0 6.5	6.8	
21-Jan-15	Sunny	Moderate	09:20	4.2	Surface	1.0	16.1 16.2	16.2	7.9 7.9	7.9	32.4 32.4	32.4	99.0 99.1	99.1	8.0 8.0	8.0	8.0	23.4 23.6	23.5	23.5	31.4 32.8	32.1	**34.1**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.1 16.1	16.1	7.9 7.9	7.9	32.4 32.4	32.4	99.1 98.9	99.0	8.0 8.0	8.0	8.0	23.3 23.5	23.4		35.9 36.0	36.0	

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 SR6 - 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*
23-Jan-15	Sunny	Moderate	10:31	4.3	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	30.9 30.9	30.9	97.7 97.6	97.7	7.9 7.9	7.9	7.9	24.3 24.5	24.4	25.1	38.2 37.9	38.1	**41.1**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.3 16.3	16.3	7.9 7.9	7.9	30.9 30.9	30.9	97.6 97.6	97.6	7.9 7.9	7.9	7.9	25.8 25.6	25.7		43.5 44.5	44.0	
26-Jan-15	Sunny	Moderate	12:25	4.4	Surface	1.0	16.8 16.8	16.8	7.9 7.9	7.9	30.9 30.9	30.9	97.9 97.9	97.9	7.9 7.9	7.9	7.9	13.0 13.2	13.1	13.4	13.6 13.8	13.7	13.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	16.8 16.8	16.8	7.9 7.9	7.9	31.0 30.9	31.0	97.7 97.8	97.8	7.9 7.9	7.9	7.9	13.3 13.8	13.6		13.6 14.5	14.1	
28-Jan-15	Fine	Moderate	12:47	4.2	Surface	1.0	17.1 17.2	17.1	7.9 8.0	7.9	31.0 31.0	31.0	100.5 101.6	101.1	8.0 8.1	8.1	8.1	2.8 2.8	2.8	2.5	3.2 4.0	3.6	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.1 17.2	17.2	8.0 7.9	8.0	31.0 31.0	31.0	102.3 100.9	101.6	8.2 8.1	8.1	8.1	2.1 2.0	2.1		2.9 2.8	2.9	
30-Jan-15	Cloudy	Moderate	14:06	4.3	Surface	1.0	17.3 17.3	17.3	7.8 7.8	7.8	28.3 28.4	28.3	96.4 96.3	96.4	7.8 7.8	7.8	7.8	2.3 2.2	2.3	2.4	5.2 5.1	5.2	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	17.2 17.3	17.2	7.8 7.8	7.8	28.9 28.8	28.8	96.0 96.0	96.0	7.8 7.8	7.8	7.8	2.5 2.4	2.5		6.8 5.3	6.1	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	10:53	4.3	Surface	1.0	16.9 16.9	16.9	8.0 8.0	8.0	32.9 32.9	32.9	110.3 109.7	110.0	8.8 8.7	8.7	8.7	1.8 1.7	1.8	1.7	2.2 2.3	2.3	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.9 16.8	16.8	8.0 8.0	8.0	32.9 32.9	32.9	110.0 109.0	109.5	8.7 8.7	8.7	8.7	1.6 1.6	1.6		2.6 2.4	2.5	
5-Jan-15	Cloudy	Moderate	13:25	4.2	Surface	1.0	17.1 17.1	17.1	8.1 8.1	8.1	32.5 32.5	32.5	113.7 114.3	114.0	9.0 9.1	9.0	9.0	1.7 1.6	1.7	1.7	5.0 5.5	5.3	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.1 17.1	17.1	8.1 8.1	8.1	32.6 32.5	32.6	113.4 114.0	113.7	9.0 9.0	9.0	9.0	1.7 1.7	1.7		8.9 9.6	9.3	
7-Jan-15	Cloudy	Moderate	14:26	4.5	Surface	1.0	17.5 17.5	17.5	8.0 8.1	8.0	31.8 31.8	31.8	108.8 109.6	109.2	8.6 8.7	8.6	8.6	2.4 2.2	2.3	2.4	6.8 7.1	7.0	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	17.5 17.5	17.5	8.1 8.0	8.0	31.8 31.8	31.8	109.3 108.0	108.7	8.6 8.5	8.6	8.6	2.3 2.4	2.4		8.4 8.7	8.6	
9-Jan-15	Sunny	Moderate	15:32	4.2	Surface	1.0	17.2 17.2	17.2	8.0 8.0	8.0	32.0 32.0	32.0	103.8 103.3	103.6	8.2 8.2	8.2	8.2	2.0 2.2	2.1	2.1	5.4 5.0	5.2	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.2 17.1	17.2	8.0 8.0	8.0	32.0 32.0	32.0	103.3 103.1	103.2	8.2 8.2	8.2	8.2	2.0 2.1	2.1		8.3 9.1	8.7	
12-Jan-15	Rainy	Rough	17:51	4.2	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	95.9 96.0	96.0	7.7 7.7	7.7	7.7	7.0 7.4	7.2	7.7	11.1 8.6	9.9	10.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.9 16.9	16.9	7.9 7.9	7.9	32.2 32.2	32.2	96.0 95.7	95.9	7.7 7.6	7.7	7.7	8.0 8.3	8.2		9.4 10.7	10.1	
14-Jan-15	Cloudy	Moderate	05:09	4.1	Surface	1.0	16.4 16.5	16.5	7.1 7.4	7.2	32.4 32.4	32.4	103.6 97.5	100.6	8.3 7.8	8.1	8.1	4.3 4.4	4.4	4.5	7.2 6.0	6.6	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	16.5 16.4	16.4	7.2 6.8	7.0	32.4 32.4	32.4	100.1 105.2	102.7	8.0 8.5	8.3	8.3	4.5 4.5	4.5		6.4 7.7	7.1	
16-Jan-15	Sunny	Moderate	08:53	4.2	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	32.6 32.6	32.6	99.6 97.4	98.5	8.0 7.8	7.9	7.9	7.4 7.3	7.4	7.4	7.6 6.6	7.1	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.4 16.4	16.4	7.9 7.9	7.9	32.6 32.6	32.6	101.5 98.4	100.0	8.2 7.9	8.0	8.0	7.3 7.5	7.4		5.6 5.8	5.7	
19-Jan-15	Sunny	Moderate	12:05	4.3	Surface	1.0	16.4 16.3	16.3	7.9 7.9	7.9	32.5 32.6	32.6	103.9 105.5	104.7	8.4 8.5	8.4	8.4	1.9 1.8	1.9	1.9	2.6 4.3	3.5	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.3 16.2	16.3	7.9 7.9	7.9	32.5 32.6	32.6	104.1 106.0	105.1	8.4 8.6	8.5	8.5	1.9 1.9	1.9		6.4 3.8	5.1	
21-Jan-15	Sunny	Moderate	13:55	4.3	Surface	1.0	16.4 16.4	16.4	7.9 7.9	7.9	32.4 32.4	32.4	100.1 100.4	100.3	8.1 8.1	8.1	8.1	5.7 5.6	5.7	5.7	8.3 9.0	8.7	8.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.3 16.4	16.3	7.9 7.9	7.9	32.3 32.3	32.3	99.8 100.2	100.0	8.1 8.1	8.1	8.1	5.7 5.7	5.7		9.1 7.1	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 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-Jan-15	Sunny	Moderate	15:22	4.2	Surface	1.0	16.5 16.5	16.5	7.9 7.9	7.9	31.5 31.5	31.5	99.4 99.5	99.5	8.0 8.0	8.0	8.0	6.3 6.4	6.4	6.5	9.1 8.9	9.0	10.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.4 16.5	16.5	7.9 7.9	7.9	31.5 31.5	31.5	99.7 99.4	99.6	8.1 8.0	8.0	8.0	6.6 6.6	6.6		11.8 12.0	11.9	
26-Jan-15	Sunny	Moderate	18:16	4.2	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	30.7 30.7	30.7	100.0 100.4	100.2	8.0 8.0	8.0	8.0	3.0 3.2	3.1	3.2	6.2 5.6	5.9	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.0 17.1	17.0	7.9 7.9	7.9	30.8 30.8	30.8	99.8 99.9	99.9	8.0 8.0	8.0	8.0	3.3 3.1	3.2		7.4 7.4	7.4	
28-Jan-15	Fine	Moderate	05:56	4.0	Surface	1.0	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	101.9 100.3	101.1	8.2 8.1	8.1	8.1	6.6 6.6	6.6	6.7	7.6 8.6	8.1	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	16.9 16.9	16.9	7.9 7.9	7.9	31.0 31.0	31.0	103.5 101.0	102.3	8.3 8.1	8.2	8.2	6.8 6.7	6.8		9.2 8.7	9.0	
30-Jan-15	Cloudy	Moderate	09:54	4.3	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	28.9 28.7	28.8	99.8 101.6	100.7	8.1 8.3	8.2	8.2	2.1 2.1	2.1	2.1	2.6 3.0	2.8	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	17.0 17.0	17.0	7.8 7.8	7.8	30.5 30.4	30.5	100.2 103.5	101.9	8.1 8.3	8.2	8.2	2.1 2.1	2.1		4.8 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.
CS4 and CS(Mf)3 are considered as upstream contol stations of mid-ebb tide. The averaged turbidity and suspended solid values of these stations will be used for determination of Action and Limit Levels.

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	16:46	4.2	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	114.0 113.8	113.9	9.0 9.0	9.0	9.0	2.3 2.5	2.4	2.5	2.2 2.6	2.4	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.0 17.0	17.0	8.1 8.1	8.1	33.0 33.0	33.0	113.7 113.9	113.8	9.0 9.0	9.0	9.0	2.6 2.6	2.6		2.8 2.6	2.7	
5-Jan-15	Cloudy	Moderate	07:23	4.3	Surface	1.0	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	109.9 108.3	109.1	8.7 8.6	8.7	8.7	6.0 6.3	6.2	6.3	8.4 7.4	7.9	10.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	17.0 17.0	17.0	8.1 8.1	8.1	32.7 32.7	32.7	106.0 109.0	107.5	8.4 8.7	8.5	8.5	6.3 6.5	6.4		12.8 11.9	12.4	
7-Jan-15	Rainy	Moderate	08:37	4.2	Surface	1.0	17.4 17.4	17.4	8.0 8.0	8.0	31.6 31.6	31.6	109.4 108.4	108.9	8.7 8.6	8.6	8.6	3.8 3.8	3.8	3.8	8.3 7.9	8.1	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.4 17.4	17.4	8.0 8.0	8.0	31.7 31.7	31.7	108.9 106.7	107.8	8.6 8.5	8.5	8.5	3.8 3.8	3.8		7.5 8.6	8.1	
9-Jan-15	Sunny	Moderate	09:31	4.3	Surface	1.0	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.0	32.0	103.6 104.6	104.1	8.3 8.4	8.3	8.3	3.4 3.5	3.5	3.5	7.6 7.5	7.6	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.9 16.9	16.9	8.0 8.0	8.0	32.0 32.1	32.1	104.1 106.7	105.4	8.3 8.5	8.4	8.4	3.4 3.5	3.5		8.3 9.6	9.0	
12-Jan-15	Cloudy	Moderate	11:30	4.3	Surface	1.0	16.9 16.9	16.9	7.8 7.8	7.8	32.0 32.1	32.1	101.5 99.3	100.4	8.1 7.9	8.0	8.0	5.2 5.6	5.4	5.9	9.5 11.0	10.3	11.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.9 16.9	16.9	7.8 7.8	7.8	32.1 31.9	32.0	100.0 104.4	102.2	8.0 8.3	8.2	8.2	6.6 6.0	6.3		10.9 12.2	11.6	
14-Jan-15	Cloudy	Moderate	13:54	4.3	Surface	1.0	16.5 16.5	16.5	7.6 7.7	7.7	32.5 32.5	32.5	102.4 98.0	100.2	8.2 7.9	8.0	8.0	4.2 4.2	4.2	4.3	4.1 5.5	4.8	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.5 16.5	16.5	7.5 7.7	7.6	32.5 32.5	32.5	106.0 100.4	103.2	8.5 8.1	8.3	8.3	4.4 4.3	4.4		4.6 4.6	4.6	
16-Jan-15	Sunny	Moderate	15:04	4.4	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	32.6 32.6	32.6	96.1 96.8	96.5	7.7 7.7	7.7	7.7	5.8 5.7	5.8	6.0	10.3 10.2	10.3	10.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	16.7 16.7	16.7	7.9 7.9	7.9	32.6 32.6	32.6	99.3 96.4	97.9	7.9 7.7	7.8	7.8	6.2 6.1	6.2		11.3 9.5	10.4	
19-Jan-15	Sunny	Moderate	17:33	4.3	Surface	1.0	16.4 16.5	16.5	8.0 8.0	8.0	32.5 32.5	32.5	101.0 101.3	101.2	8.1 8.1	8.1	8.1	11.1 11.2	11.2	11.4	7.7 6.8	7.3	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.4 16.4	16.4	8.0 8.0	8.0	32.5 32.5	32.5	101.2 101.0	101.1	8.1 8.1	8.1	8.1	11.5 11.6	11.6		7.3 7.0	7.2	
21-Jan-15	Sunny	Moderate	07:53	4.3	Surface	1.0	16.1 16.1	16.1	7.9 7.9	7.9	32.3 32.3	32.3	103.9 102.1	103.0	8.4 8.3	8.3	8.3	8.5 8.6	8.6	8.8	14.8 14.0	14.4	15.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.1 16.1	16.1	7.9 7.9	7.9	32.3 32.3	32.3	103.0 105.5	104.3	8.3 8.5	8.4	8.4	8.8 8.9	8.9		16.3 16.4	16.4	

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-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-Jan-15	Sunny	Moderate	09:00	4.2	Surface	1.0	16.3 16.3	16.3	7.9 7.9	7.9	31.3 31.3	31.3	100.3 101.4	100.9	8.1 8.2	8.2	8.2	20.9 20.5	20.7	20.8	25.4 24.9	25.2	**26.1**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	16.3 16.3	16.3	7.9 7.9	7.9	31.3 31.3	31.3	102.6 100.8	101.7	8.3 8.2	8.3	8.3	20.8 20.8	20.8		26.6 27.4	27.0	
26-Jan-15	Sunny	Moderate	11:01	4.3	Surface	1.0	16.7 16.7	16.7	7.9 7.9	7.9	31.2 31.2	31.2	98.5 98.3	98.4	7.9 7.9	7.9	7.9	14.6 13.6	14.1	14.2	18.0 21.0	19.5	21.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	16.7 16.7	16.7	7.9 7.9	7.9	31.2 31.2	31.2	98.5 98.2	98.4	7.9 7.9	7.9	7.9	14.5 14.0	14.3		21.9 22.8	22.4	
28-Jan-15	Fine	Moderate	14:11	4.2	Surface	1.0	17.0 17.0	17.0	7.9 7.9	7.9	31.1 31.1	31.1	97.1 97.0	97.1	7.8 7.8	7.8	7.8	6.3 6.3	6.3	6.5	6.6 6.6	6.6	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	17.0 17.0	17.0	7.9 7.9	7.9	31.0 31.0	31.0	97.3 97.3	97.3	7.8 7.8	7.8	7.8	6.6 6.5	6.6		6.7 5.9	6.3	
30-Jan-15	Cloudy	Moderate	15:31	4.3	Surface	1.0	17.1 17.1	17.1	7.9 7.9	7.9	30.9 30.9	30.9	97.7 97.7	97.7	7.8 7.8	7.8	7.8	3.3 3.4	3.4	3.5	6.7 7.3	7.0	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	17.0 17.1	17.0	7.9 7.9	7.9	31.1 31.1	31.1	97.5 97.7	97.6	7.8 7.8	7.8	7.8	3.6 3.4	3.5		9.6 9.2	9.4	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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 (^{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-Jan-15	Sunny	Moderate	10:03	6.6	Surface	1.0	17.8 17.8	17.8	8.1 8.0	8.0	30.5 30.7	30.6	100.4 100.7	100.6	7.9 8.0	7.9	7.9	1.7 1.8	1.8	1.9	2.4 2.4	2.4	2.4
					Middle	3.3	17.8 17.8	17.8	8.0 8.1	8.0	30.6 30.6	30.6	99.7 100.0	99.9	7.9 7.9	7.9		1.8 1.8	1.8		2.6 2.2	2.4	
					Bottom	5.6	17.8 17.8	17.8	8.0 8.0	8.0	30.6 30.6	30.6	100.1 99.8	100.0	7.9 7.9	7.9	7.9	1.9 2.0	2.0		2.1 2.5	2.3	
5-Jan-15	Cloudy	Moderate	13:21	6.5	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	30.5 30.6	30.5	106.1 104.8	105.5	8.4 8.3	8.3	8.3	1.0 1.1	1.1	1.1	2.1 3.0	2.6	4.2
					Middle	3.3	17.8 17.8	17.8	8.1 8.1	8.1	30.6 30.5	30.6	104.8 106.0	105.4	8.3 8.4	8.3		1.1 1.0	1.1		4.0 4.5	4.3	
					Bottom	5.5	17.9 17.9	17.9	8.1 8.1	8.1	30.6 30.5	30.6	104.3 105.8	105.1	8.3 8.4	8.3	8.3	1.1 1.1	1.1		5.6 5.8	5.7	
7-Jan-15	Cloudy	Moderate	15:04	6.6	Surface	1.0	18.1 18.1	18.1	7.9 7.9	7.9	30.4 30.4	30.4	107.2 106.9	107.1	8.4 8.4	8.4	8.4	2.0 2.1	2.1	2.1	3.1 3.2	3.2	3.7
					Middle	3.3	18.1 18.1	18.1	7.9 7.9	7.9	30.4 30.4	30.4	106.5 106.5	106.5	8.4 8.4	8.4		1.9 2.0	2.0		3.8 3.1	3.5	
					Bottom	5.6	18.1 18.1	18.1	7.9 7.9	7.9	30.6 30.4	30.5	105.9 106.7	106.3	8.3 8.4	8.4	8.4	2.0 2.1	2.1		4.4 4.2	4.3	
9-Jan-15	Sunny	Moderate	16:09	6.7	Surface	1.0	18.1 18.1	18.1	7.9 7.9	7.9	30.9 30.8	30.9	102.5 104.8	103.7	8.1 8.2	8.1	8.2	1.7 1.6	1.7	1.6	5.4 4.7	5.1	6.3
					Middle	3.4	18.1 18.1	18.1	7.9 7.9	7.9	30.9 30.9	30.9	102.5 105.4	104.0	8.1 8.3	8.2		1.5 1.5	1.5		4.8 6.1	5.5	
					Bottom	5.7	18.1 18.1	18.1	7.9 7.9	7.9	30.9 31.1	31.0	102.2 107.0	104.6	8.0 8.4	8.2	8.2	1.5 1.6	1.6		8.4 8.0	8.2	
12-Jan-15	Rainy	Rough	18:20	6.4	Surface	1.0	17.7 17.7	17.7	7.9 7.9	7.9	30.1 30.2	30.2	94.3 94.3	94.3	7.5 7.5	7.5	7.5	1.3 1.3	1.3	1.3	11.3 8.9	10.1	10.7
					Middle	3.2	17.8 17.8	17.8	7.9 7.9	7.9	30.2 30.1	30.2	94.3 94.4	94.4	7.5 7.5	7.5		1.3 1.2	1.3		10.9 10.8	10.9	
					Bottom	5.4	17.7 17.8	17.8	7.9 7.9	7.9	30.2 30.2	30.2	94.5 94.5	94.5	7.5 7.5	7.5	7.5	1.3 1.3	1.3		12.1 9.8	11.0	
14-Jan-15	Cloudy	Moderate	05:10	6.5	Surface	1.0	17.4 17.4	17.4	7.6 7.6	7.6	29.8 29.9	29.8	93.2 93.2	93.2	7.5 7.5	7.5	7.5	1.3 1.4	1.4	1.4	8.3 6.8	7.6	7.1
					Middle	3.3	17.5 17.4	17.5	7.6 7.5	7.6	29.9 29.7	29.8	93.3 93.4	93.4	7.5 7.5	7.5		1.4 1.4	1.4		6.6 5.7	6.2	
					Bottom	5.5	17.4 17.4	17.4	7.6 7.5	7.5	29.9 29.8	29.8	93.6 93.2	93.4	7.5 7.5	7.5	7.5	1.5 1.4	1.5		6.8 8.4	7.6	
16-Jan-15	Sunny	Moderate	08:27	6.4	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	29.6 29.6	29.6	95.6 95.4	95.5	7.7 7.7	7.7	7.7	0.7 0.7	0.7	0.8	5.4 5.7	5.6	5.6
					Middle	3.2	17.0 17.0	17.0	7.7 7.7	7.7	29.6 29.6	29.6	95.5 95.4	95.5	7.7 7.7	7.7		0.8 0.7	0.8		4.3 5.6	5.0	
					Bottom	5.4	17.0 17.0	17.0	7.7 7.7	7.7	29.6 29.6	29.6	95.3 95.4	95.4	7.7 7.7	7.7	7.7	0.8 0.9	0.9		5.4 7.1	6.3	
19-Jan-15	Sunny	Moderate	11:25	6.7	Surface	1.0	17.0 16.9	17.0	7.8 7.8	7.8	30.6 30.6	30.6	95.5 102.9	99.2	7.7 8.3	8.0	7.8	2.9 3.0	3.0	2.8	4.7 4.9	4.8	5.3
					Middle	3.4	17.0 17.0	17.0	7.8 7.8	7.8	30.7 30.4	30.6	94.7 94.7	94.7	7.6 7.6	7.6		2.6 2.5	2.6		5.8 6.2	6.0	
					Bottom	5.7	17.0 17.0	17.0	7.8 7.8	7.8	30.6 30.4	30.5	95.8 94.9	95.4	7.7 7.6	7.7	7.7	2.9 2.8	2.9		4.9 5.1	5.0	
21-Jan-15	Sunny	Moderate	14:18	7.3	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	30.8 30.7	30.7	93.6 93.7	93.7	7.5 7.5	7.5	7.5	4.9 4.8	4.9	5.3	13.1 12.4	12.8	14.4
					Middle	3.7	17.1 17.1	17.1	7.7 7.7	7.7	30.8 30.7	30.8	93.0 93.2	93.1	7.4 7.5	7.5		5.1 5.4	5.3		15.0 14.8	14.9	
					Bottom	6.3	17.1 17.1	17.1	7.7 7.7	7.7	30.8 30.8	30.8	92.8 93.3	93.1	7.4 7.5	7.5	7.5	5.6 5.5	5.6		15.3 15.4	15.4	

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-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-Jan-15	Sunny	Moderate	15:40	6.5	Surface	1.0	17.2 17.2	17.2	7.6 7.6	7.6	30.1 30.2	30.1	94.0 95.2	94.6	7.5 7.6	7.6	7.6	5.3 5.3	5.3	5.5	8.1 7.9	8.0	7.9
					Middle	3.3	17.2 17.2	17.2	7.7 7.7	7.7	30.2 30.1	30.2	95.5 94.0	94.8	7.7 7.6	7.6		5.5 5.3	5.4		8.1 7.6	7.9	
					Bottom	5.5	17.2 17.2	17.2	7.7 7.6	7.7	30.4 30.1	30.3	95.8 94.4	95.1	7.7 7.6	7.6	7.6	5.7 5.6	5.7		7.8 7.6	7.7	
26-Jan-15	Sunny	Moderate	18:30	6.4	Surface	1.0	17.6 17.6	17.6	7.6 7.6	7.6	30.5 30.5	30.5	95.7 97.1	96.4	7.6 7.7	7.7	7.7	2.2 2.2	2.2	2.4	5.2 4.5	4.9	5.9
					Middle	3.2	17.5 17.5	17.5	7.6 7.6	7.6	30.6 30.6	30.6	95.1 95.8	95.5	7.6 7.6	7.6		2.4 2.3	2.4		5.4 6.2	5.8	
					Bottom	5.4	17.6 17.4	17.5	7.6 7.7	7.6	30.5 30.6	30.6	95.0 95.7	95.4	7.6 7.6	7.6	7.6	2.5 2.6	2.6		7.0 7.1	7.1	
28-Jan-15	Fine	Moderate	06:11	6.8	Surface	1.0	17.5 17.5	17.5	7.4 7.4	7.4	29.0 29.1	29.0	92.6 92.4	92.5	7.4 7.4	7.4	7.4	1.3 1.3	1.3	1.4	3.2 3.3	3.3	2.8
					Middle	3.4	17.5 17.5	17.5	7.4 7.4	7.4	29.1 29.0	29.0	92.1 92.3	92.2	7.4 7.4	7.4		1.4 1.5	1.5		2.4 2.3	2.4	
					Bottom	5.8	17.5 17.5	17.5	7.3 7.4	7.4	29.1 29.1	29.1	92.9 92.2	92.6	7.5 7.4	7.4	7.4	1.5 1.5	1.5		2.9 2.3	2.6	
30-Jan-15	Cloudy	Moderate	08:55	6.7	Surface	1.0	17.6 17.6	17.6	7.6 7.6	7.6	29.7 29.7	29.7	92.0 92.0	92.0	7.4 7.4	7.4	7.4	1.4 1.5	1.5	1.5	5.5 5.1	5.3	5.5
					Middle	3.4	17.6 17.6	17.6	7.6 7.6	7.6	29.7 29.8	29.8	92.2 92.3	92.3	7.4 7.4	7.4		1.4 1.5	1.5		5.1 6.0	5.6	
					Bottom	5.7	17.6 17.6	17.6	7.6 7.6	7.6	30.0 29.7	29.9	92.0 92.0	92.0	7.3 7.4	7.3	7.3	1.6 1.5	1.6		5.8 5.5	5.7	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	17:27	6.9	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	31.8 31.8	31.8	103.7 104.8	104.3	8.1 8.2	8.2	8.2	2.0 1.9	2.0	1.9	1.5 1.6	1.6	1.7
					Middle	3.5	17.9 17.9	17.9	8.1 8.1	8.1	31.8 31.9	31.8	103.8 105.8	104.8	8.1 8.3	8.2		1.8 1.7	1.8		2.0 1.4	1.7	
					Bottom	5.9	17.9 17.9	17.9	8.1 8.1	8.1	31.9 31.8	31.9	107.2 103.8	105.5	8.4 8.1	8.3	8.3	1.8 1.8	1.8		1.6 2.2	1.9	
5-Jan-15	Cloudy	Moderate	07:12	6.1	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	30.0 29.9	30.0	108.5 108.2	108.4	8.6 8.6	8.6	8.6	2.3 2.4	2.4	2.5	3.8 3.9	3.9	5.1
					Middle	3.1	17.8 17.8	17.8	8.1 8.1	8.1	29.9 30.0	29.9	108.4 108.1	108.3	8.6 8.6	8.6		2.5 2.4	2.5		4.7 5.3	5.0	
					Bottom	5.1	17.8 17.8	17.8	8.1 8.1	8.1	29.9 30.0	29.9	107.8 108.1	108.0	8.6 8.6	8.6	8.6	2.5 2.5	2.5		6.4 6.1	6.3	
7-Jan-15	Rainy	Moderate	08:00	6.3	Surface	1.0	18.2 18.2	18.2	7.9 7.9	7.9	29.7 29.8	29.7	107.8 108.3	108.1	8.5 8.6	8.5	8.5	3.4 3.2	3.3	3.4	6.1 6.1	6.1	6.0
					Middle	3.2	18.2 18.2	18.2	7.9 7.9	7.9	29.6 29.7	29.7	107.9 108.1	108.0	8.5 8.5	8.5		3.3 3.4	3.4		6.3 5.7	6.0	
					Bottom	5.3	18.2 18.2	18.2	7.9 7.9	7.9	29.7 29.6	29.7	107.5 107.7	107.6	8.5 8.5	8.5	8.5	3.3 3.4	3.4		5.6 6.2	5.9	
9-Jan-15	Sunny	Moderate	08:55	6.6	Surface	1.0	18.0 18.0	18.0	7.9 7.9	7.9	29.9 29.8	29.9	100.6 100.9	100.8	8.0 8.0	8.0	8.0	2.9 2.9	2.9	3.5	4.5 4.9	4.7	6.9
					Middle	3.3	18.0 18.0	18.0	7.9 7.9	7.9	29.9 29.9	29.9	100.4 100.7	100.6	8.0 8.0	8.0		3.3 3.3	3.3		6.8 7.0	6.9	
					Bottom	5.6	18.0 18.0	18.0	7.9 7.9	7.9	29.9 29.9	29.9	100.4 100.4	100.4	8.0 8.0	8.0	8.0	4.0 4.3	4.2		9.4 8.5	9.0	
12-Jan-15	Cloudy	Moderate	10:39	6.5	Surface	1.0	17.9 17.9	17.9	7.6 7.6	7.6	29.7 29.7	29.7	94.2 93.8	94.0	7.5 7.5	7.5	7.5	1.6 1.6	1.6	1.5	3.9 5.6	4.8	4.8
					Middle	3.3	17.9 17.9	17.9	7.5 7.6	7.6	29.8 29.7	29.8	94.0 93.8	93.9	7.5 7.4	7.5		1.5 1.5	1.5		3.7 4.7	4.2	
					Bottom	5.5	17.9 17.9	17.9	7.6 7.5	7.5	29.8 30.0	29.9	93.9 94.1	94.0	7.5 7.5	7.5	7.5	1.5 1.5	1.5		5.2 5.8	5.5	
14-Jan-15	Cloudy	Moderate	13:56	6.6	Surface	1.0	17.5 17.5	17.5	7.8 7.8	7.8	30.6 30.7	30.7	95.0 97.2	96.1	7.6 7.7	7.6	7.7	1.2 1.3	1.3	1.4	6.6 8.6	7.6	6.9
					Middle	3.3	17.5 17.5	17.5	7.8 7.8	7.8	30.8 30.8	30.8	98.3 95.3	96.8	7.8 7.6	7.7		1.4 1.5	1.5		5.8 5.9	5.9	
					Bottom	5.6	17.5 17.4	17.5	7.8 7.8	7.8	30.7 31.0	30.8	95.9 101.6	98.8	7.6 8.1	7.9	7.9	1.4 1.4	1.4		6.3 7.9	7.1	
16-Jan-15	Sunny	Moderate	15:33	6.3	Surface	1.0	17.2 17.2	17.2	7.9 7.9	7.9	30.6 30.7	30.6	99.1 97.0	98.1	7.9 7.8	7.9	7.9	0.6 0.5	0.6	0.6	7.5 6.2	6.9	7.2
					Middle	3.2	17.2 17.2	17.2	7.9 7.9	7.9	30.6 30.6	30.6	98.5 96.8	97.7	7.9 7.8	7.8		0.6 0.6	0.6		7.8 6.4	7.1	
					Bottom	5.3	17.2 17.1	17.2	7.9 7.9	7.9	30.6 30.6	30.6	96.4 98.0	97.2	7.7 7.9	7.8	7.8	0.6 0.6	0.6		7.6 7.5	7.6	
19-Jan-15	Sunny	Moderate	18:18	6.7	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	30.7 30.8	30.7	96.6 93.7	95.2	7.8 7.5	7.6	7.7	5.0 4.6	4.8	5.0	6.9 6.9	6.9	6.5
					Middle	3.4	17.1 17.1	17.1	7.8 7.8	7.8	30.8 30.8	30.8	94.6 98.6	96.6	7.6 7.9	7.7		5.1 5.2	5.2		6.0 6.5	6.3	
					Bottom	5.7	17.1 17.1	17.1	7.8 7.8	7.8	30.8 30.8	30.8	100.6 95.1	97.9	8.1 7.6	7.8	7.8	5.4 4.8	5.1		6.8 5.9	6.4	
21-Jan-15	Sunny	Moderate	07:29	7.6	Surface	1.0	17.0 17.0	17.0	7.6 7.6	7.6	30.4 30.3	30.4	96.5 97.2	96.9	7.8 7.8	7.8	7.8	8.8 8.9	8.9	10.0	8.4 9.4	8.9	9.1
					Middle	3.8	17.0 17.0	17.0	7.6 7.5	7.6	30.4 30.4	30.4	96.5 96.5	96.5	7.8 7.7	7.7		10.1 10.1	10.1		7.8 8.5	8.2	
					Bottom	6.6	17.0 17.0	17.0	7.5 7.5	7.5	30.5 30.4	30.5	97.3 96.4	96.9	7.8 7.7	7.8	7.8	10.9 11.0	11.0		10.0 10.1	10.1	

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 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-Jan-15	Sunny	Moderate	08:07	6.5	Surface	1.0	17.1 17.1	17.1	7.4 7.5	7.5	29.1 29.1	29.1	96.7 95.8	96.3	7.8 7.8	7.8	7.8	21.7 21.9	21.8	22.6	34.2 34.4	34.3	**40.7**
					Middle	3.3	17.1 17.1	17.1	7.4 7.5	7.4	29.1 29.2	29.2	96.6 95.9	96.3	7.8 7.8	7.8		22.8 23.0	22.9		38.8 37.3	38.1	
					Bottom	5.5	17.1 17.1	17.1	7.4 7.4	7.4	29.1 29.2	29.2	97.1 96.2	96.7	7.9 7.8	7.8	7.8	23.0 23.1	23.1		48.1 51.1	49.6	
26-Jan-15	Sunny	Moderate	10:35	6.2	Surface	1.0	17.4 17.4	17.4	7.4 7.4	7.4	29.2 29.0	29.1	95.9 94.5	95.2	7.7 7.6	7.7	7.7	4.2 4.1	4.2	4.3	9.6 10.6	10.1	11.0
					Middle	3.1	17.4 17.4	17.4	7.4 7.4	7.4	29.3 29.1	29.2	95.8 94.5	95.2	7.7 7.6	7.7		4.3 4.3	4.3		10.6 11.2	10.9	
					Bottom	5.2	17.4 17.4	17.4	7.3 7.4	7.4	29.3 29.2	29.2	94.9 94.2	94.6	7.6 7.6	7.6	7.6	4.5 4.4	4.5		12.2 11.9	12.1	
28-Jan-15	Fine	Moderate	14:01	6.7	Surface	1.0	17.5 17.5	17.5	7.6 7.5	7.6	30.4 30.3	30.4	94.2 93.0	93.6	7.5 7.4	7.5	7.5	1.3 1.4	1.4	1.4	2.9 2.4	2.7	2.8
					Middle	3.4	17.5 17.5	17.5	7.6 7.6	7.6	30.5 30.4	30.4	94.1 92.6	93.4	7.5 7.4	7.4		1.4 1.4	1.4		2.5 2.4	2.5	
					Bottom	5.7	17.5 17.5	17.5	7.6 7.5	7.6	30.5 30.4	30.5	94.6 93.1	93.9	7.5 7.4	7.5	7.5	1.5 1.4	1.5		3.5 2.7	3.1	
30-Jan-15	Cloudy	Moderate	16:17	6.7	Surface	1.0	17.5 17.5	17.5	7.6 7.6	7.6	29.6 29.6	29.6	92.1 93.4	92.8	7.4 7.5	7.4	7.4	1.6 1.6	1.6	1.6	5.2 5.4	5.3	6.4
					Middle	3.4	17.5 17.5	17.5	7.6 7.6	7.6	29.6 29.7	29.6	93.4 92.5	93.0	7.5 7.4	7.4		1.4 1.5	1.5		7.2 6.7	7.0	
					Bottom	5.7	17.5 17.5	17.5	7.6 7.6	7.6	29.7 29.7	29.7	95.7 92.4	94.1	7.7 7.4	7.5	7.5	1.5 1.6	1.6		7.7 6.2	7.0	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	09:49	5.3	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	29.3 27.9	28.6	99.8 99.6	99.7	8.0 8.0	8.0	8.0	2.0 2.1	2.1	2.3	1.6 0.9	1.3	1.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	17.8 17.8	17.8	8.0 8.0	8.0	28.9 25.6	27.2	99.9 98.3	99.1	8.0 8.0	8.0	8.0	2.4 2.3	2.4		2.0 1.8	1.9	
5-Jan-15	Cloudy	Moderate	13:31	4.9	Surface	1.0	17.9 17.8	17.9	8.1 8.1	8.1	30.4 30.4	30.4	106.5 106.3	106.4	8.4 8.4	8.4	8.4	0.9 1.0	1.0	1.0	3.8 4.4	4.1	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	17.8 17.8	17.8	8.1 8.1	8.1	30.4 30.4	30.4	105.8 106.4	106.1	8.4 8.4	8.4	8.4	1.0 1.0	1.0		5.9 6.3	6.1	
7-Jan-15	Cloudy	Moderate	15:21	5.2	Surface	1.0	18.1 18.1	18.1	7.9 7.9	7.9	30.3 30.4	30.4	106.0 105.6	105.8	8.3 8.3	8.3	8.3	1.9 2.0	2.0	2.0	2.5 2.4	2.5	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	18.1 18.1	18.1	7.9 7.9	7.9	30.4 30.4	30.4	105.9 106.3	106.1	8.3 8.4	8.4	8.4	2.0 2.0	2.0		4.0 3.9	4.0	
9-Jan-15	Sunny	Moderate	16:21	5.0	Surface	1.0	18.1 18.1	18.1	7.9 7.9	7.9	30.8 30.9	30.8	101.5 101.6	101.6	8.0 8.0	8.0	8.0	1.8 1.7	1.8	2.1	4.3 5.1	4.7	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	18.1 18.1	18.1	7.9 7.9	7.9	30.7 30.9	30.8	100.8 101.3	101.1	7.9 8.0	7.9	7.9	2.3 2.2	2.3		5.7 5.6	5.7	
12-Jan-15	Rainy	Rough	18:30	4.8	Surface	1.0	17.8 17.8	17.8	7.9 7.9	7.9	30.0 30.1	30.1	94.1 94.0	94.1	7.5 7.5	7.5	7.5	1.6 1.5	1.6	1.6	9.1 9.2	9.2	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	17.7 17.8	17.8	7.9 7.9	7.9	30.1 30.1	30.1	94.5 94.0	94.3	7.5 7.5	7.5	7.5	1.5 1.6	1.6		9.5 8.6	9.1	
14-Jan-15	Cloudy	Moderate	05:00	5.2	Surface	1.0	17.4 17.4	17.4	7.5 7.5	7.5	27.4 28.6	28.0	96.2 95.9	96.1	7.8 7.7	7.8	7.8	1.7 1.7	1.7	1.7	5.6 4.9	5.3	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	17.4 17.5	17.5	7.5 7.5	7.5	26.6 28.3	27.4	99.0 96.2	97.6	8.0 7.8	7.9	7.9	1.6 1.6	1.6		5.1 5.2	5.2	
16-Jan-15	Sunny	Moderate	08:18	5.4	Surface	1.0	17.0 17.0	17.0	7.5 7.4	7.4	28.5 27.6	28.1	98.5 102.8	100.7	8.0 8.5	8.2	8.2	0.8 0.9	0.9	0.9	7.7 6.5	7.1	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	17.0 17.0	17.0	7.4 7.3	7.4	28.3 26.6	27.4	98.3 100.1	99.2	8.0 8.2	8.1	8.1	0.8 0.9	0.9		5.8 8.1	7.0	
19-Jan-15	Sunny	Moderate	11:10	5.2	Surface	1.0	17.0 17.0	17.0	7.7 7.7	7.7	29.2 29.6	29.4	99.2 96.8	98.0	8.0 7.8	7.9	7.9	3.1 2.8	3.0	3.2	4.7 5.2	5.0	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	17.0 17.0	17.0	7.7 7.7	7.7	29.5 28.8	29.2	97.8 101.1	99.5	7.9 8.2	8.1	8.1	3.2 3.4	3.3		5.0 6.0	5.5	
21-Jan-15	Sunny	Moderate	14:29	5.6	Surface	1.0	17.1 17.1	17.1	7.7 7.7	7.7	30.6 30.7	30.7	93.7 93.9	93.8	7.5 7.5	7.5	7.5	4.1 4.2	4.2	4.2	19.5 19.9	19.7	20.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	17.1 17.1	17.1	7.7 7.7	7.7	30.6 30.7	30.7	93.8 93.7	93.8	7.5 7.5	7.5	7.5	4.2 4.1	4.2		21.3 21.7	21.5	

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 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-Jan-15	Sunny	Moderate	15:51	5.5	Surface	1.0	17.2 17.2	17.2	7.6 7.6	7.6	30.1 30.0	30.0	93.8 93.6	93.7	7.5 7.5	7.5	7.5	4.8 5.0	4.9	5.1	5.9 5.4	5.7	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	17.2 17.2	17.2	7.6 7.6	7.6	29.9 30.0	30.0	94.0 93.8	93.9	7.6 7.5	7.5	7.5	5.3 5.1	5.2		8.9 9.0	9.0	
26-Jan-15	Sunny	Moderate	18:41	4.3	Surface	1.0	17.7 17.7	17.7	7.6 7.6	7.6	30.3 30.3	30.3	96.1 95.5	95.8	7.6 7.6	7.6	7.6	2.5 2.4	2.5	2.5	8.0 7.7	7.9	9.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	17.7 17.6	17.7	7.6 7.7	7.6	30.3 30.3	30.3	96.1 95.5	95.8	7.6 7.6	7.6	7.6	2.5 2.5	2.5		11.2 10.2	10.7	
28-Jan-15	Fine	Moderate	06:01	5.1	Surface	1.0	17.5 17.5	17.5	7.2 7.2	7.2	28.0 26.9	27.5	93.2 94.4	93.8	7.5 7.7	7.6	7.6	1.6 1.5	1.6	1.6	2.4 2.6	2.5	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	17.5 17.5	17.5	7.2 7.2	7.2	27.6 26.4	27.0	93.8 95.1	94.5	7.6 7.8	7.7	7.7	1.5 1.5	1.5		2.8 2.8	2.8	
30-Jan-15	Cloudy	Moderate	08:43	5.2	Surface	1.0	17.6 17.6	17.6	7.5 7.5	7.5	29.6 29.7	29.6	92.7 92.4	92.6	7.4 7.4	7.4	7.4	1.5 1.5	1.5	1.6	4.7 5.6	5.2	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	17.6 17.6	17.6	7.6 7.6	7.6	29.7 29.6	29.7	92.1 92.6	92.4	7.4 7.4	7.4	7.4	1.6 1.5	1.6		7.2 7.4	7.3	

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

Remarks:
* DA: Depth-Averaged
** Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
*** 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-Jan-15	Sunny	Moderate	17:41	5.4	Surface	1.0	17.9 17.9	17.9	8.1 8.1	8.1	31.6 31.6	31.6	103.1 103.1	103.1	8.1 8.1	8.1	8.1	1.7 1.8	1.8	1.8	1.2 1.4	1.3	1.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	17.9 17.9	17.9	8.1 8.1	8.1	31.6 31.5	31.5	102.9 103.2	103.1	8.1 8.1	8.1	8.1	1.7 1.6	1.7		1.5 1.7	1.6	
5-Jan-15	Cloudy	Moderate	07:08	4.9	Surface	1.0	17.8 17.8	17.8	8.1 8.1	8.1	29.9 29.9	29.9	108.1 107.8	108.0	8.6 8.6	8.6	8.6	2.3 2.2	2.3	2.4	4.0 4.5	4.3	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	17.8 17.8	17.8	8.1 8.1	8.1	29.9 30.0	29.9	107.4 107.1	107.3	8.5 8.5	8.5	8.5	2.3 2.4	2.4		4.6 5.5	5.1	
7-Jan-15	Rainy	Moderate	07:43	5.0	Surface	1.0	18.2 18.2	18.2	7.9 7.9	7.9	28.7 28.1	28.4	107.8 107.4	107.6	8.6 8.6	8.6	8.6	3.4 3.5	3.5	3.5	6.2 5.9	6.1	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	18.2 18.2	18.2	7.9 7.9	7.9	28.5 27.7	28.1	107.8 107.2	107.5	8.6 8.6	8.6	8.6	3.3 3.6	3.5		6.8 7.3	7.1	
9-Jan-15	Sunny	Moderate	08:41	4.9	Surface	1.0	18.0 18.0	18.0	7.8 7.8	7.8	28.8 29.2	29.0	103.8 101.4	102.6	8.3 8.1	8.2	8.2	3.0 3.1	3.1	2.8	8.1 7.9	8.0	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	18.0 18.0	18.0	7.8 7.8	7.8	28.3 29.2	28.8	106.3 102.6	104.5	8.5 8.2	8.3	8.3	2.3 2.5	2.4		7.6 7.8	7.7	
12-Jan-15	Cloudy	Moderate	10:33	5.1	Surface	1.0	17.9 17.9	17.9	7.4 7.4	7.4	29.1 29.4	29.2	95.2 94.6	94.9	7.6 7.5	7.6	7.6	1.5 1.6	1.6	1.6	6.4 4.5	5.5	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	17.9 17.9	17.9	7.3 7.4	7.4	28.8 29.3	29.1	95.3 94.5	94.9	7.6 7.5	7.6	7.6	1.6 1.6	1.6		5.0 6.0	5.5	
14-Jan-15	Cloudy	Moderate	14:06	5.4	Surface	1.0	17.5 17.5	17.5	7.9 7.9	7.9	30.7 30.8	30.8	93.9 93.9	93.9	7.5 7.5	7.5	7.5	1.3 1.3	1.3	1.3	5.2 4.8	5.0	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	17.5 17.5	17.5	7.9 7.9	7.9	30.8 30.7	30.8	93.9 93.8	93.9	7.5 7.5	7.5	7.5	1.2 1.3	1.3		4.9 6.4	5.7	
16-Jan-15	Sunny	Moderate	15:41	4.7	Surface	1.0	17.2 17.2	17.2	7.8 7.8	7.8	30.6 30.5	30.6	95.9 95.7	95.8	7.7 7.7	7.7	7.7	0.5 0.5	0.5	0.6	4.8 6.0	5.4	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	17.2 17.2	17.2	7.8 7.8	7.8	30.6 30.5	30.5	95.8 95.4	95.6	7.7 7.7	7.7	7.7	0.6 0.6	0.6		6.8 7.6	7.2	
19-Jan-15	Sunny	Moderate	18:31	5.3	Surface	1.0	17.1 17.1	17.1	7.8 7.8	7.8	30.7 30.7	30.7	92.2 92.3	92.3	7.4 7.4	7.4	7.4	4.0 4.0	4.0	4.2	5.4 6.9	6.2	6.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	17.1 17.1	17.1	7.8 7.8	7.8	30.7 30.8	30.7	91.9 92.1	92.0	7.4 7.4	7.4	7.4	4.3 4.3	4.3		6.0 6.7	6.4	
21-Jan-15	Sunny	Moderate	07:17	5.4	Surface	1.0	17.0 17.0	17.0	7.4 7.3	7.4	30.5 30.3	30.4	94.2 94.3	94.3	7.6 7.6	7.6	7.6	10.2 10.4	10.3	10.4	9.9 9.0	9.5	10.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	17.0 17.0	17.0	7.3 7.4	7.3	30.3 30.4	30.3	95.0 94.5	94.8	7.6 7.6	7.6	7.6	10.6 10.4	10.5		10.4 10.7	10.6	

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

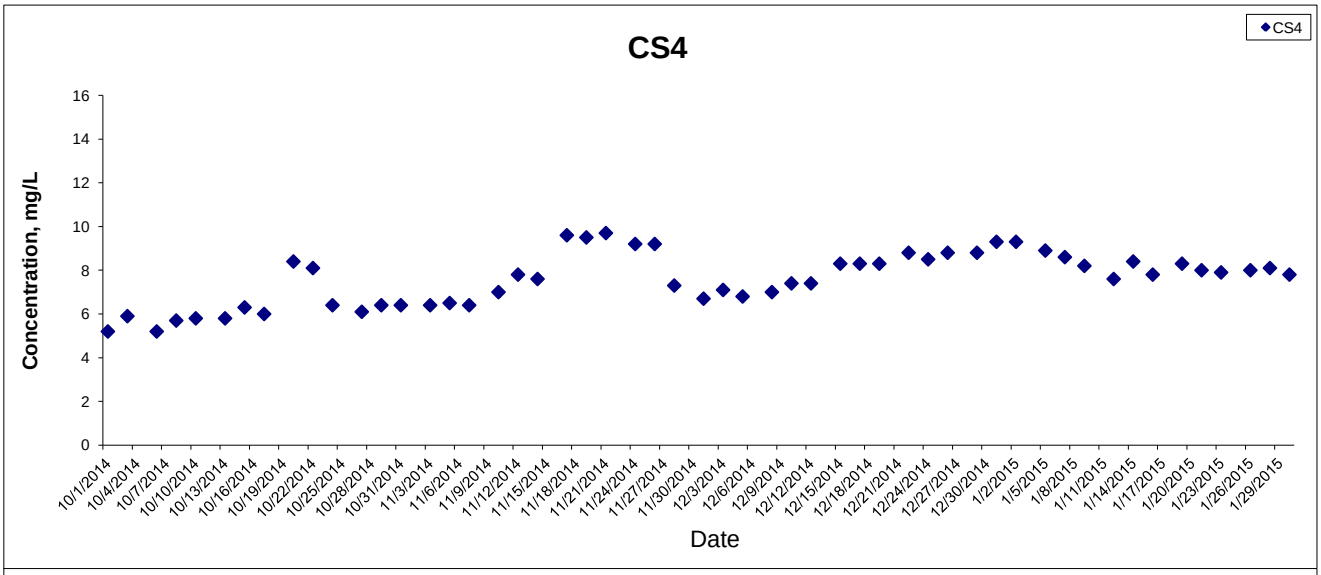
Water Quality Monitoring Results at SR10B(N) - Mid-FloodTide

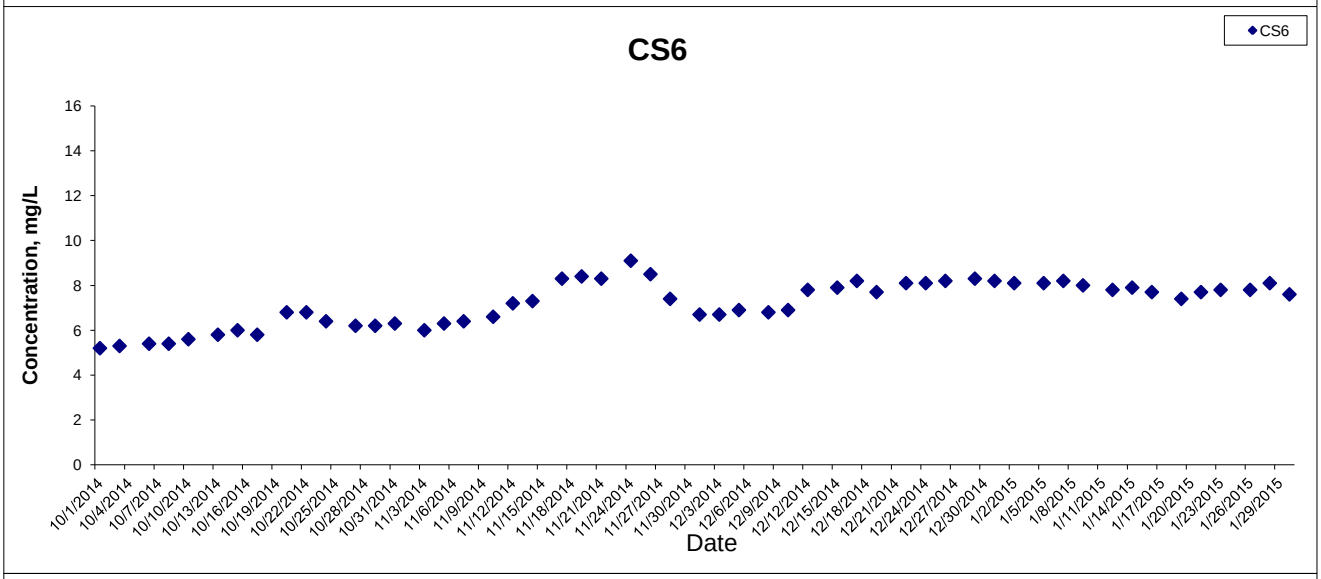
Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Jan-15	Sunny	Moderate	07:59	5.6	Surface	1.0	17.1 17.1	17.1	7.2 7.3	7.3	28.3 28.7	28.5	94.5 94.1	94.3	7.7 7.6	7.7	7.7	12.7 13.0	12.9	13.1	22.7 23.8	23.3	**24.2**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	17.1 17.1	17.1	7.3 7.2	7.2	28.6 28.0	28.3	93.9 94.4	94.2	7.6 7.7	7.7	7.7	13.2 13.1	13.2		24.2 25.9	25.1	
26-Jan-15	Sunny	Moderate	10:31	4.6	Surface	1.0	17.3 17.3	17.3	7.2 7.3	7.3	25.7 27.0	26.4	96.5 94.6	95.6	8.0 7.7	7.9	7.9	5.2 5.3	5.3	5.4	10.2 11.2	10.7	11.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	17.3 17.3	17.3	7.1 7.3	7.2	23.4 26.5	24.9	94.6 93.8	94.2	7.8 7.7	7.7	7.7	5.4 5.5	5.5		13.6 12.4	13.0	
28-Jan-15	Fine	Moderate	14:10	5.3	Surface	1.0	17.6 17.6	17.6	7.5 7.5	7.5	30.1 30.1	30.1	92.3 92.6	92.5	7.4 7.4	7.4	7.4	1.2 1.3	1.3	1.3	3.0 3.3	3.2	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	17.5 17.5	17.5	7.5 7.5	7.5	30.1 30.2	30.2	91.9 92.2	92.1	7.3 7.4	7.3	7.3	1.3 1.2	1.3		3.0 3.3	3.2	
30-Jan-15	Cloudy	Moderate	16:31	5.0	Surface	1.0	17.5 17.5	17.5	7.7 7.7	7.7	29.6 29.6	29.6	91.6 91.7	91.7	7.3 7.3	7.3	7.3	1.4 1.5	1.5	1.6	4.1 4.8	4.5	6.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	17.5 17.5	17.5	7.7 7.7	7.7	29.6 29.7	29.6	91.6 91.5	91.6	7.3 7.3	7.3	7.3	1.6 1.5	1.6		8.0 6.9	7.5	

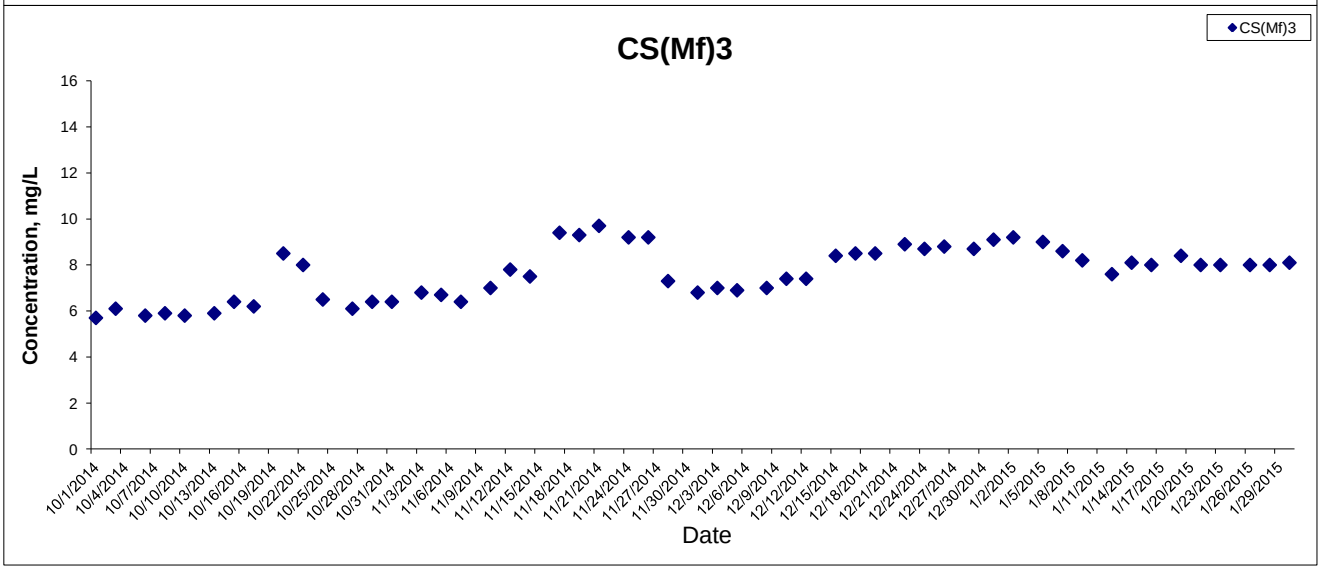
Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will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

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

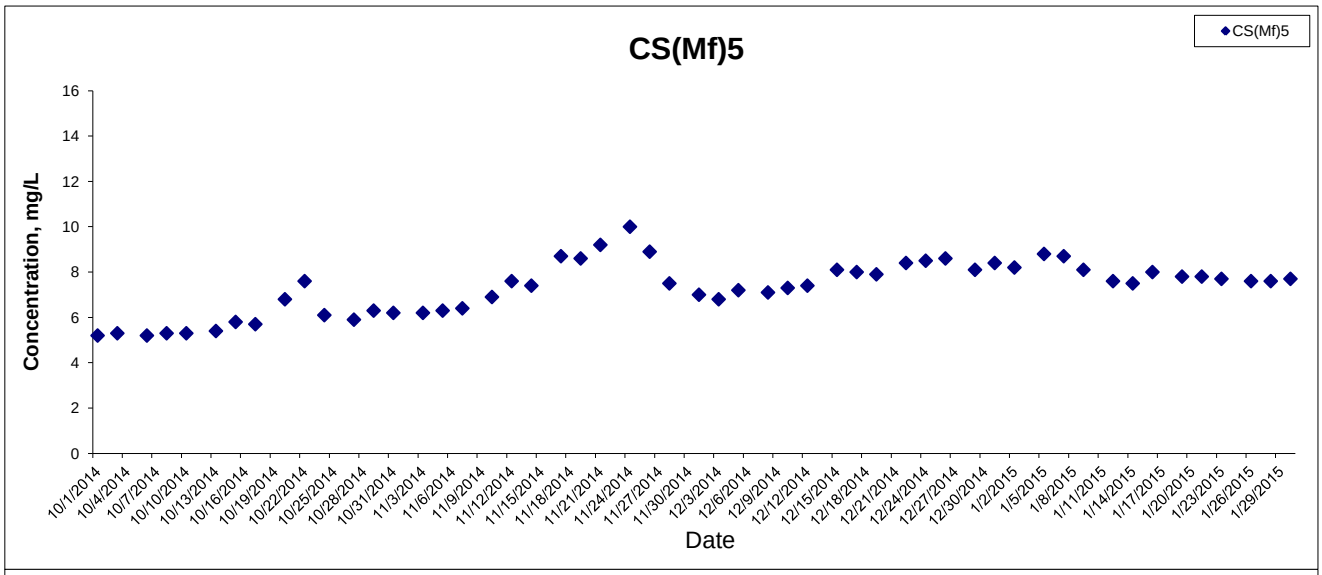
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide

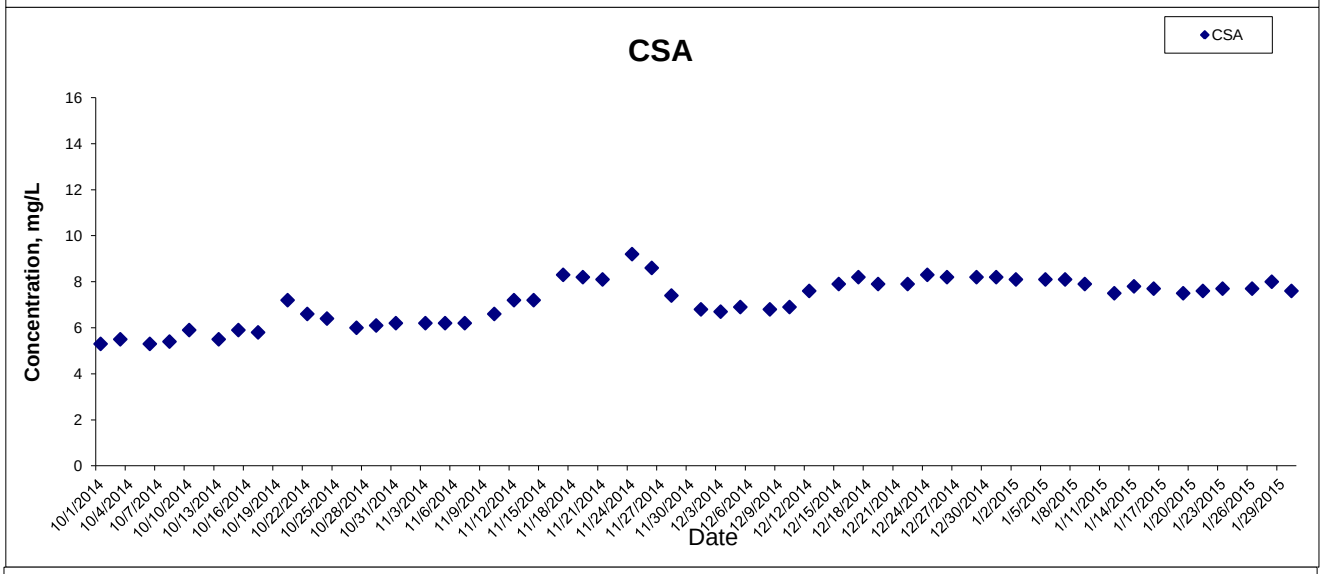


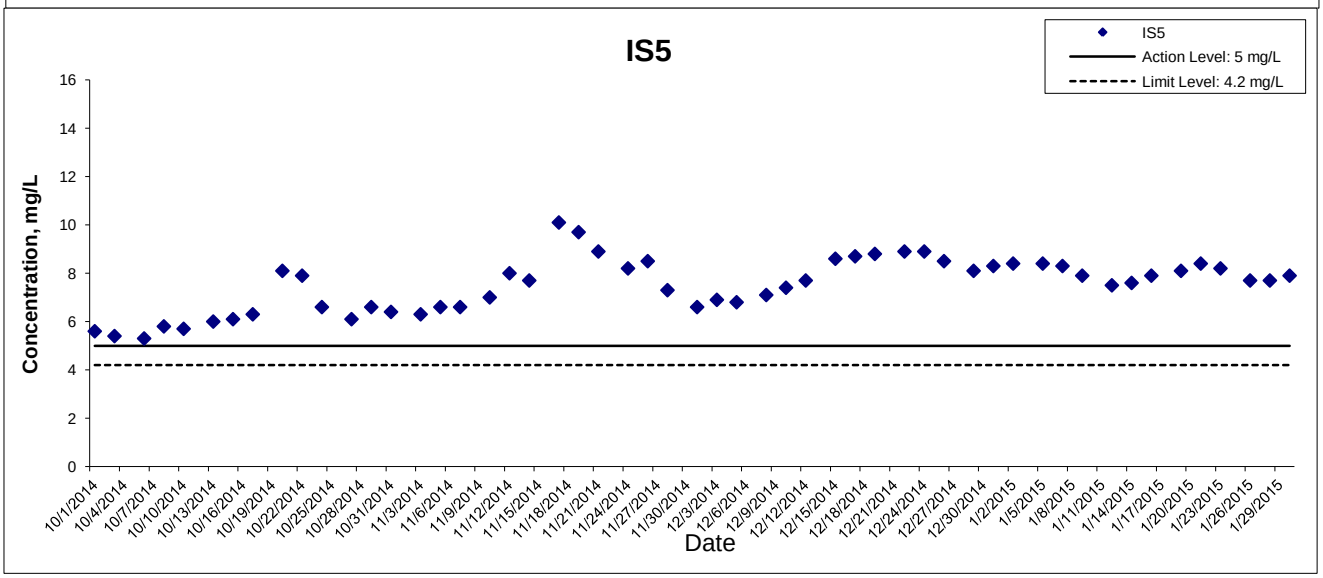




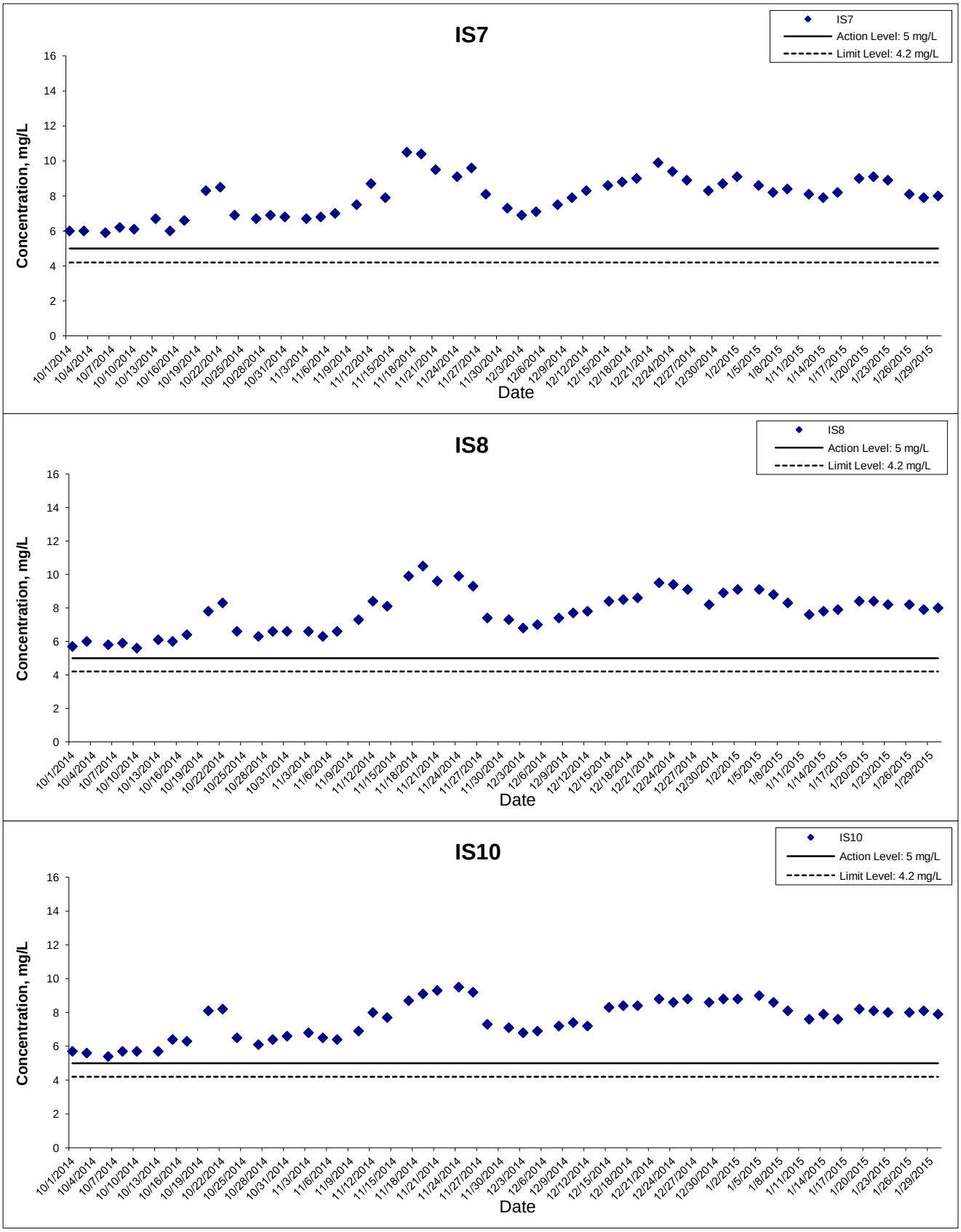
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide







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



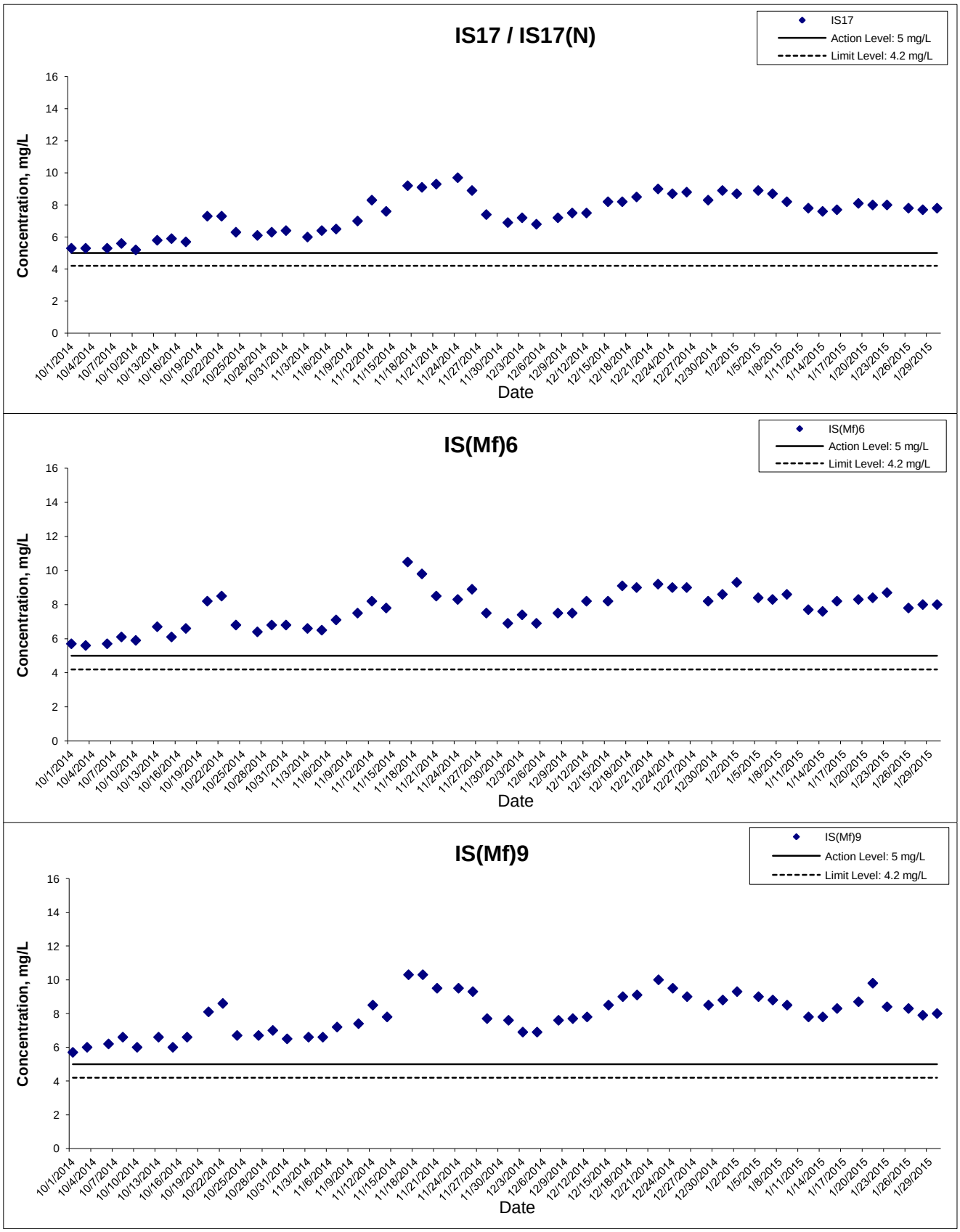
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

Graphical Presentation of Impact Water Quality Monitoring Results

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

Appendix J

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



HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
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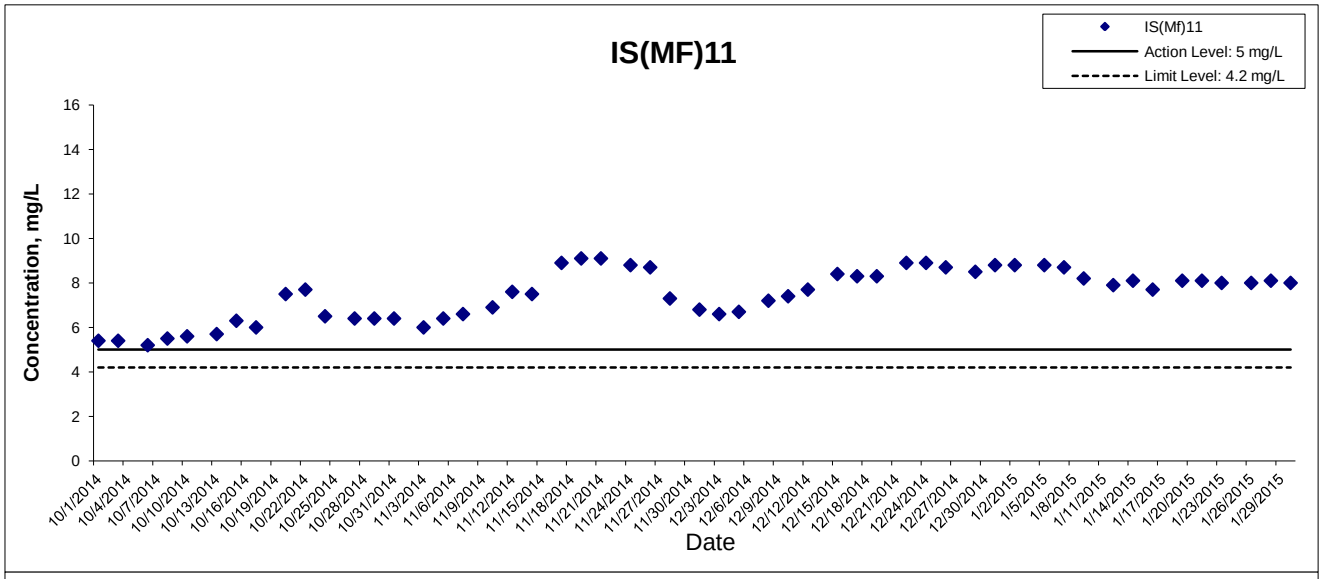
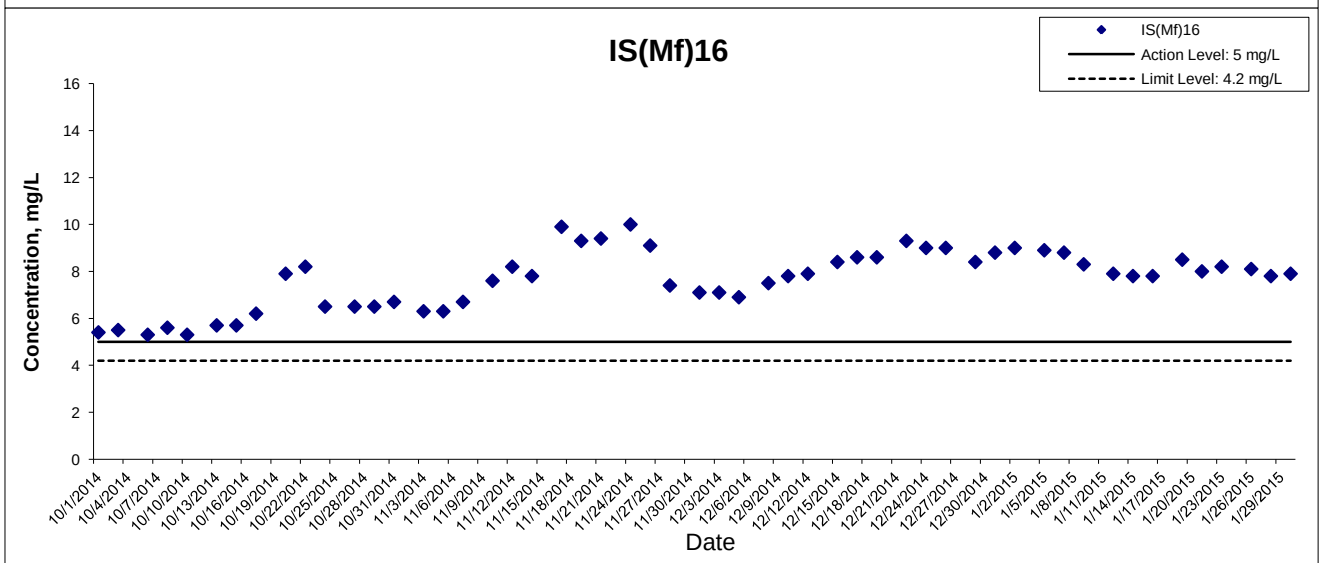
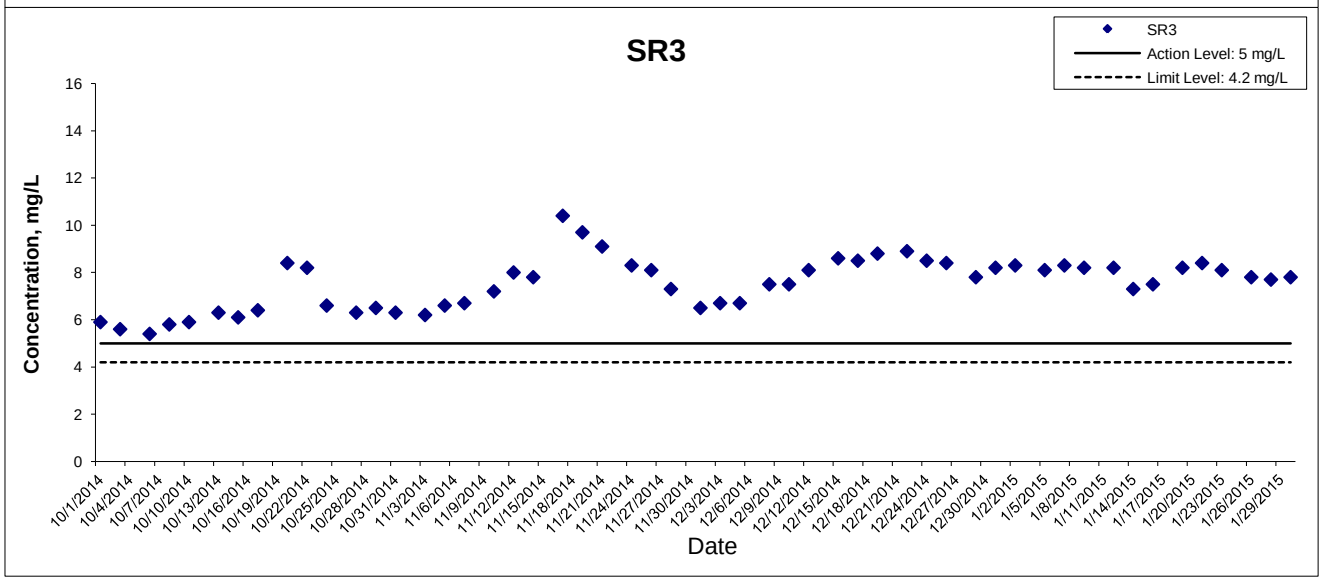
Graphical Presentation of Impact Water Quality Monitoring Results

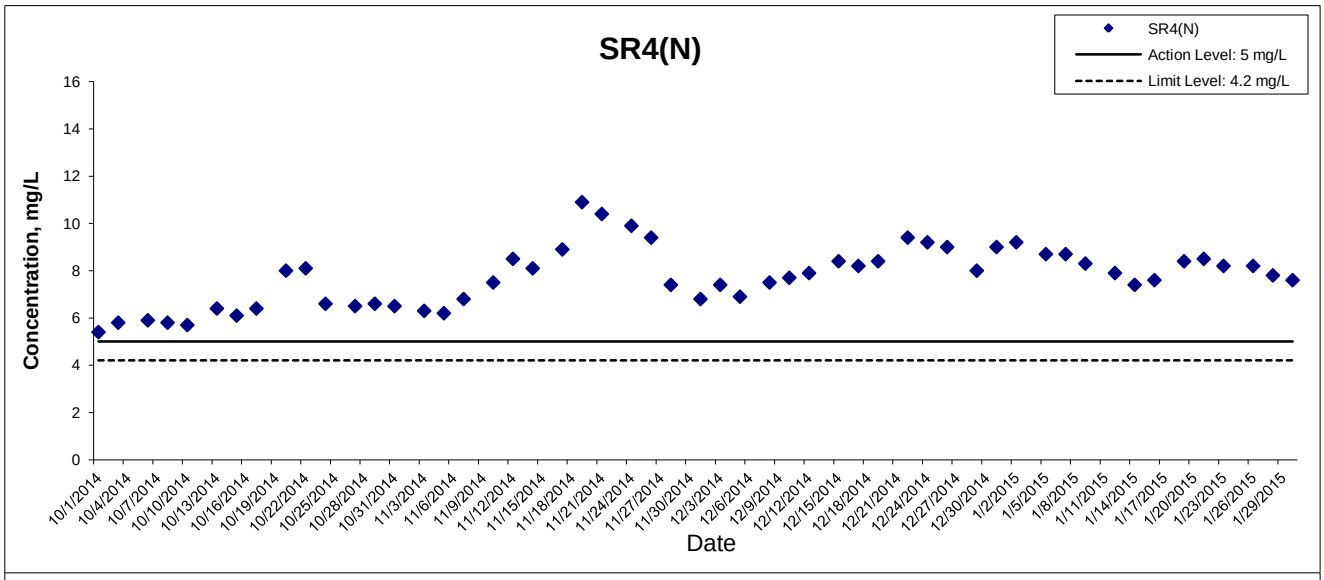
Project No.: 60249820 **Date: Feb 2015**

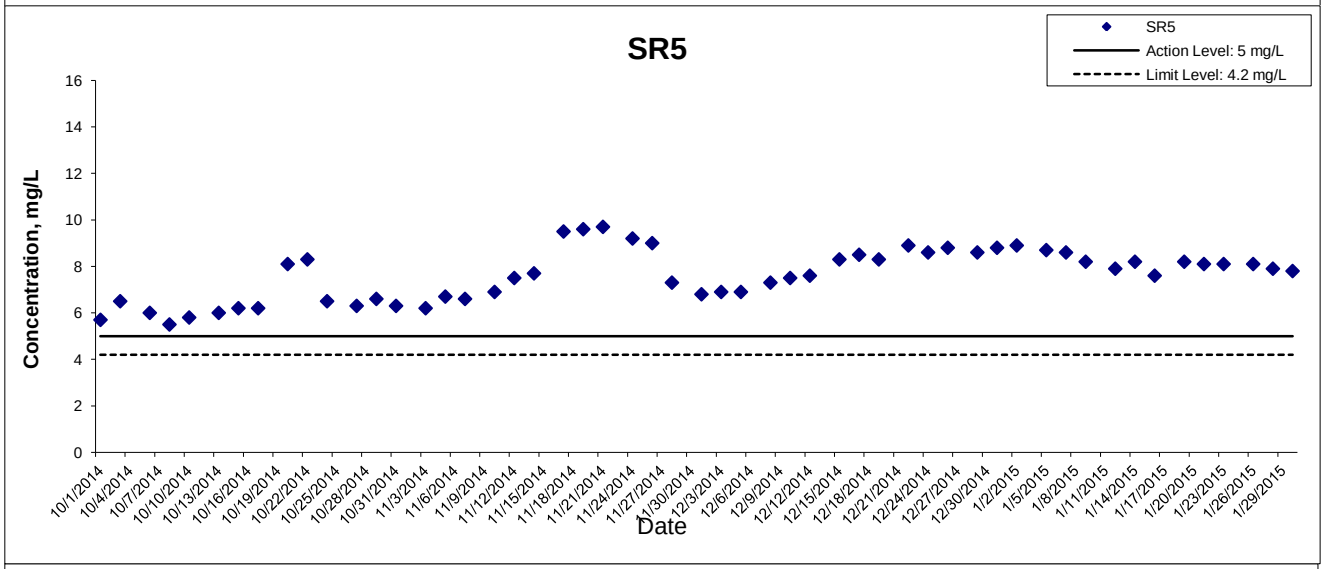
Appendix J

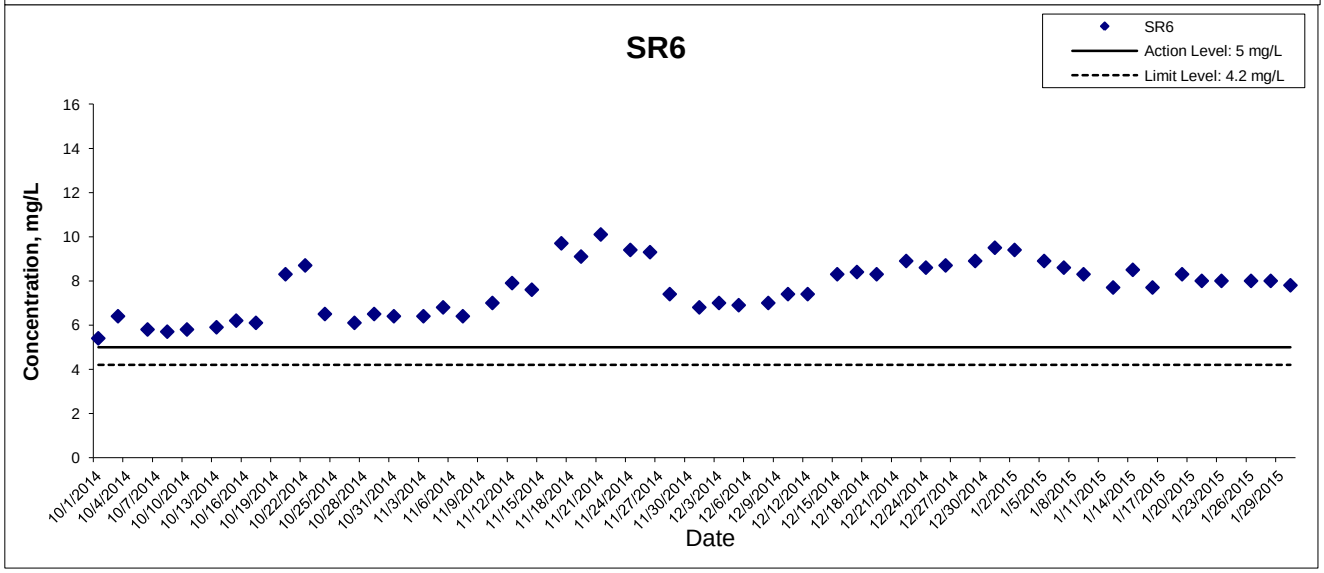


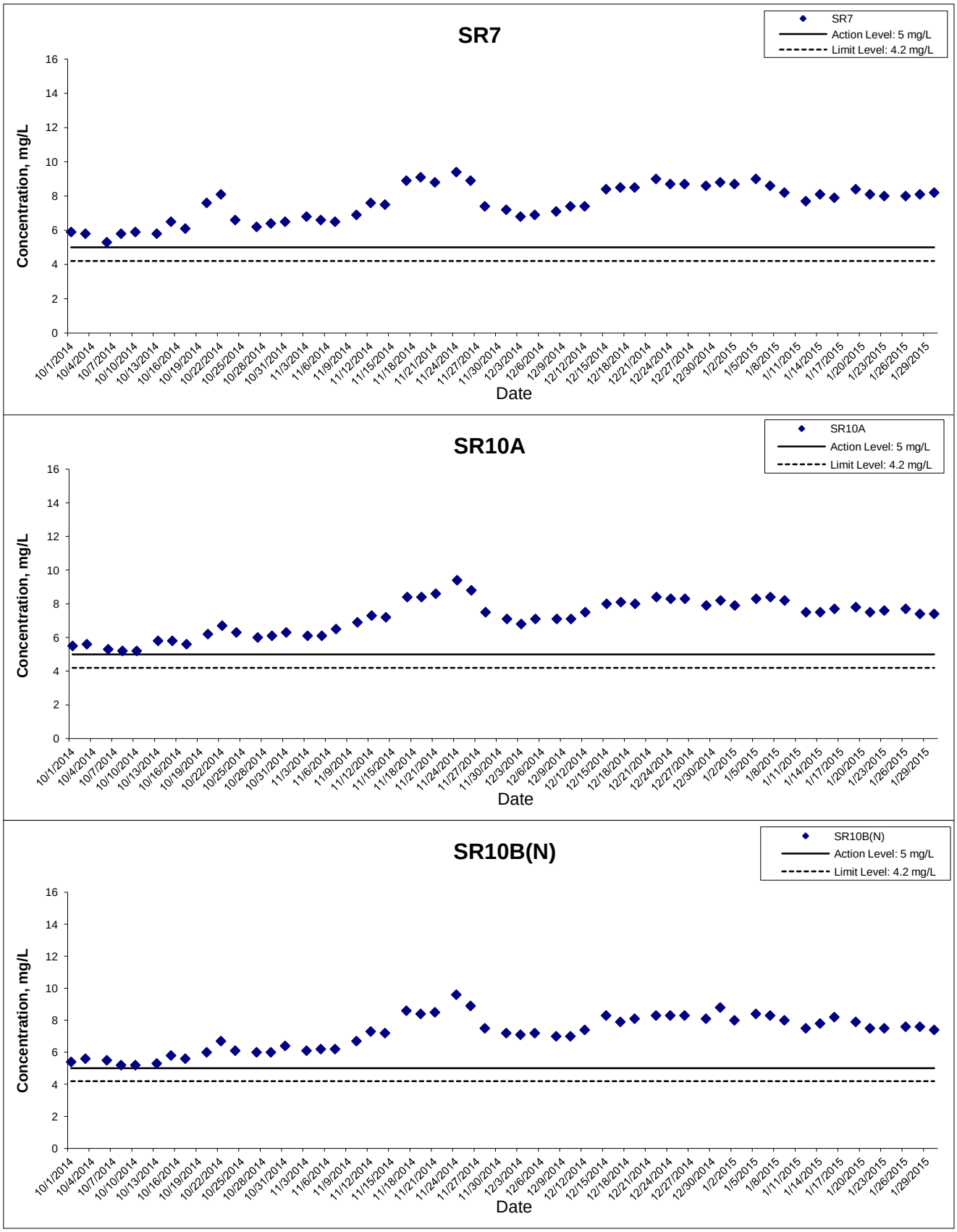












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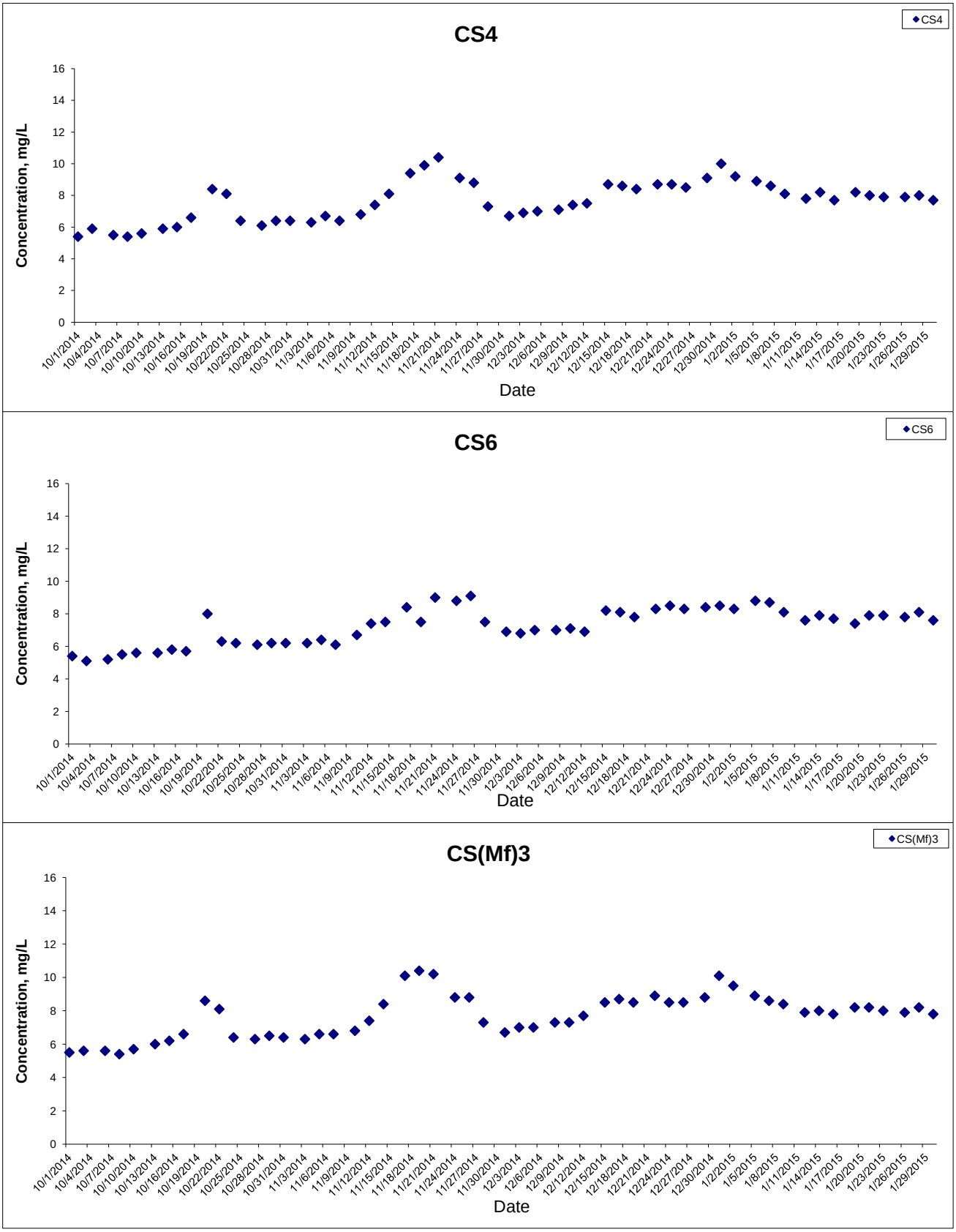
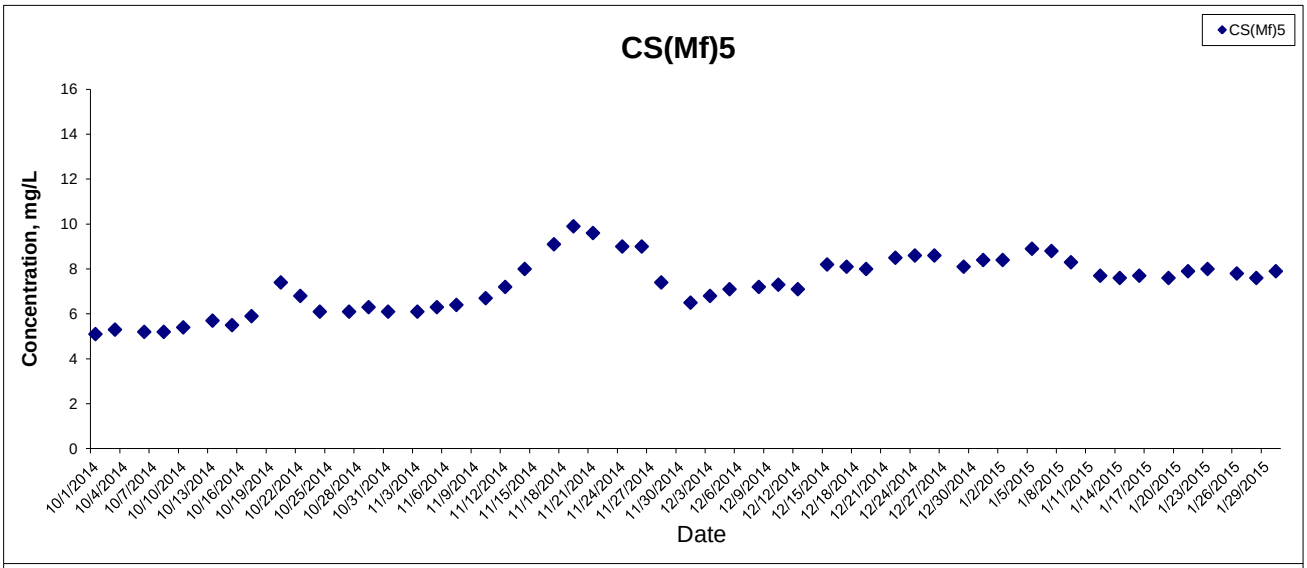
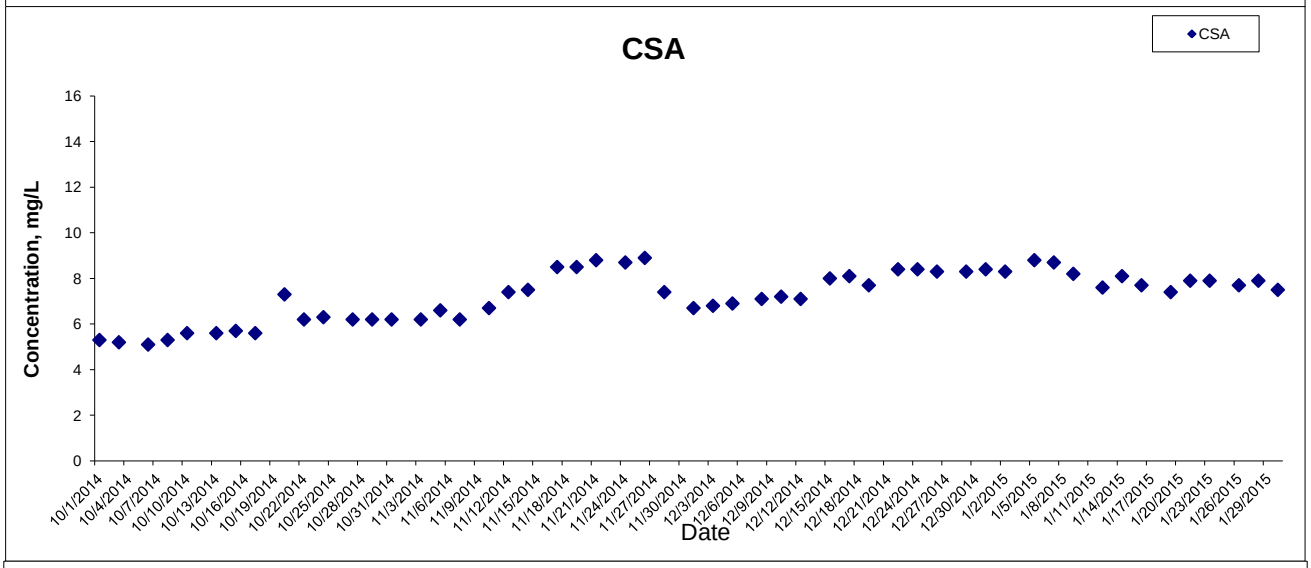
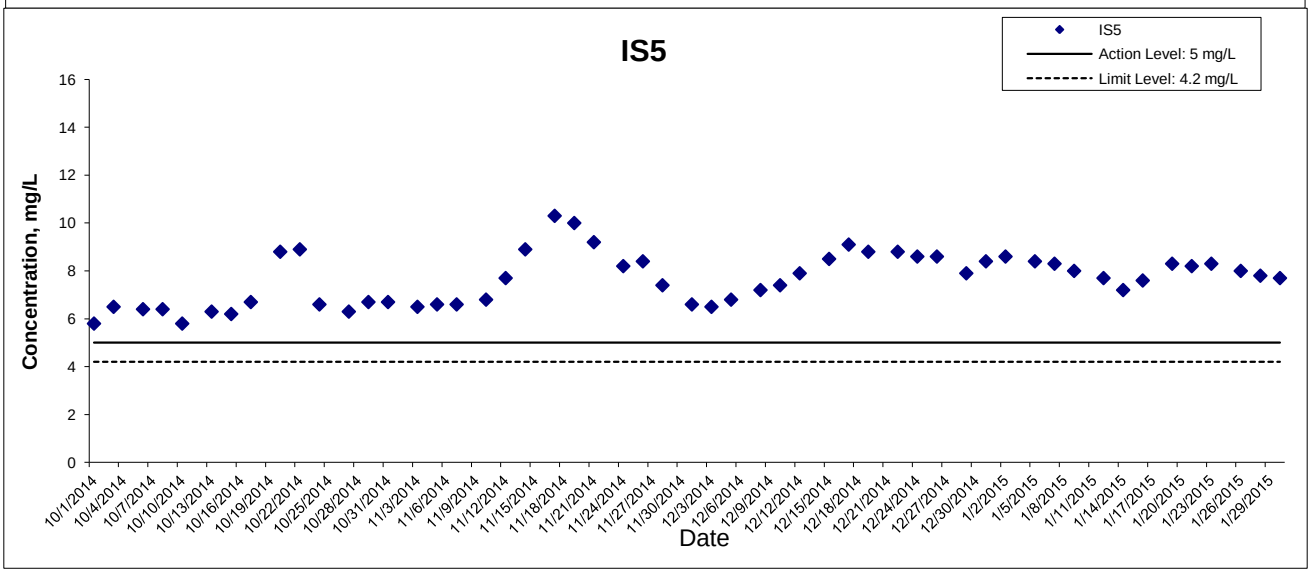
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



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







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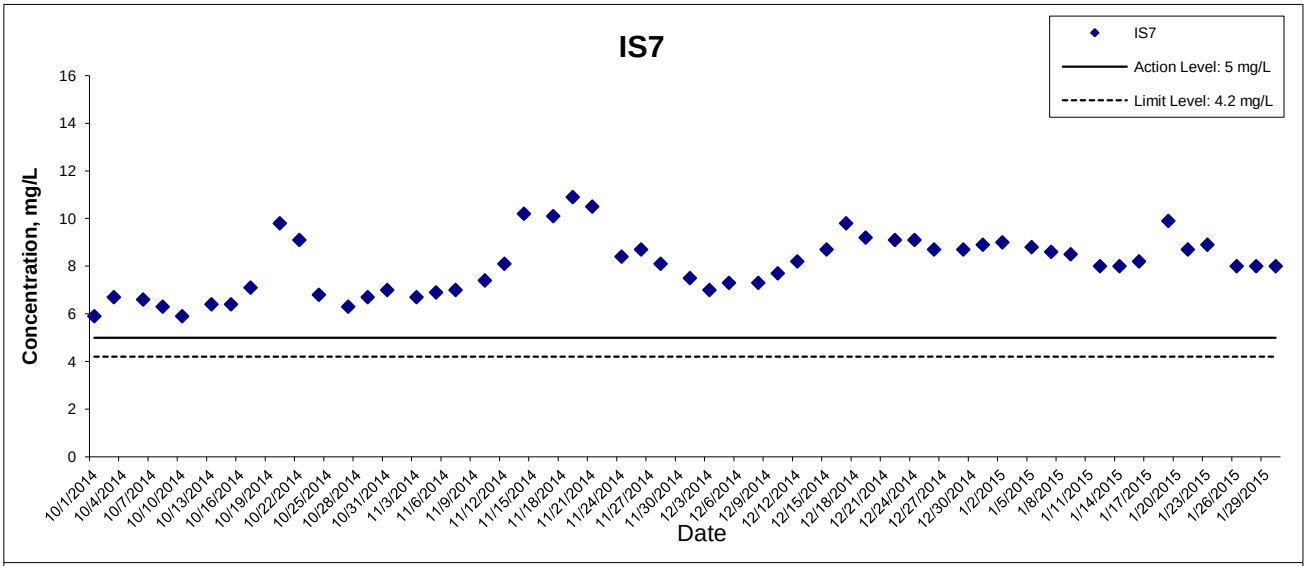

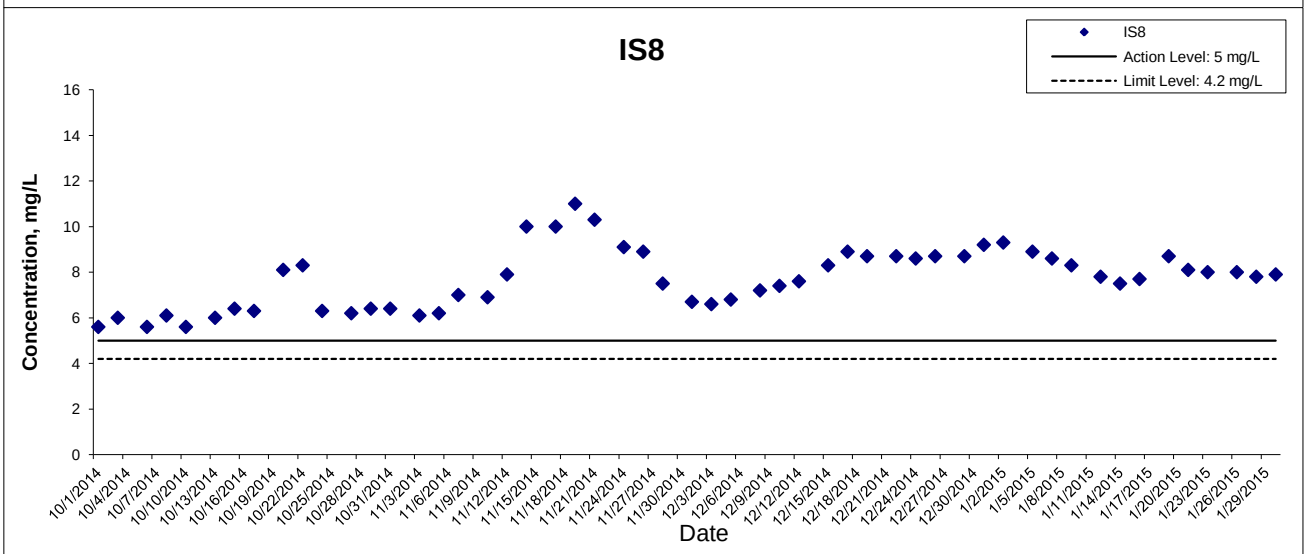

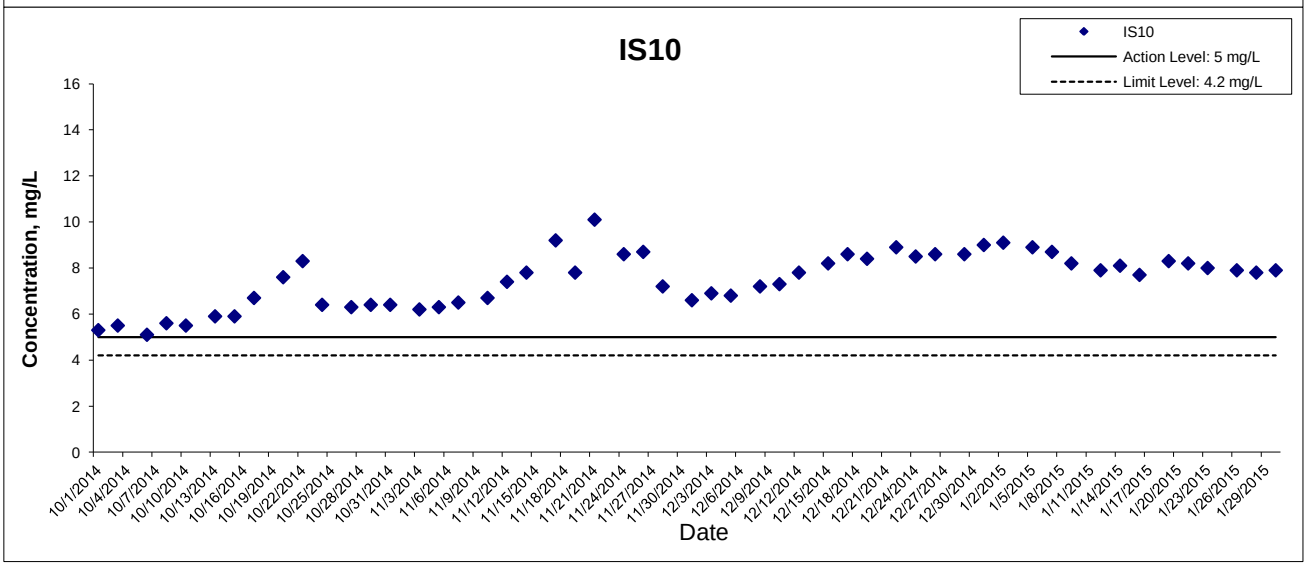

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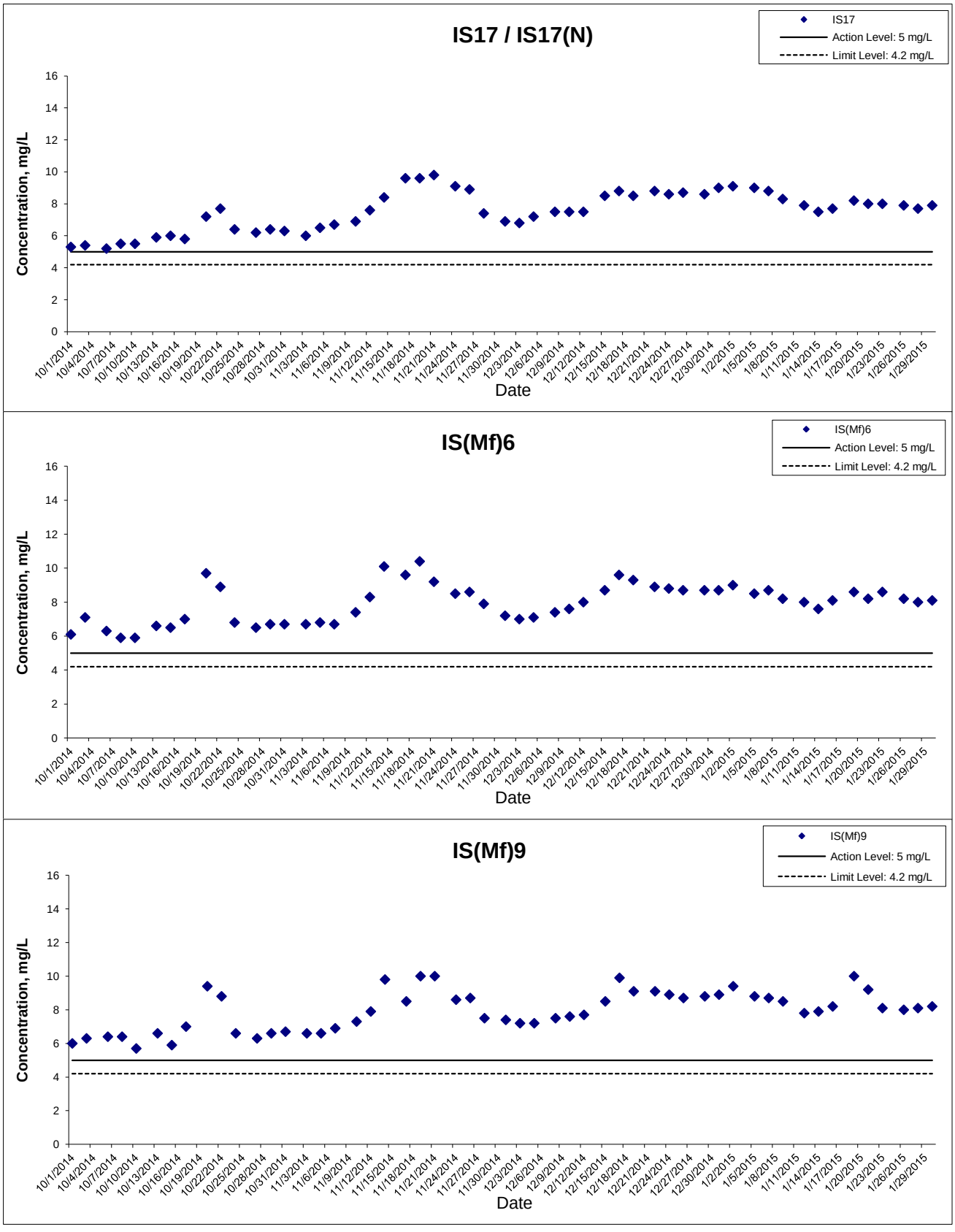

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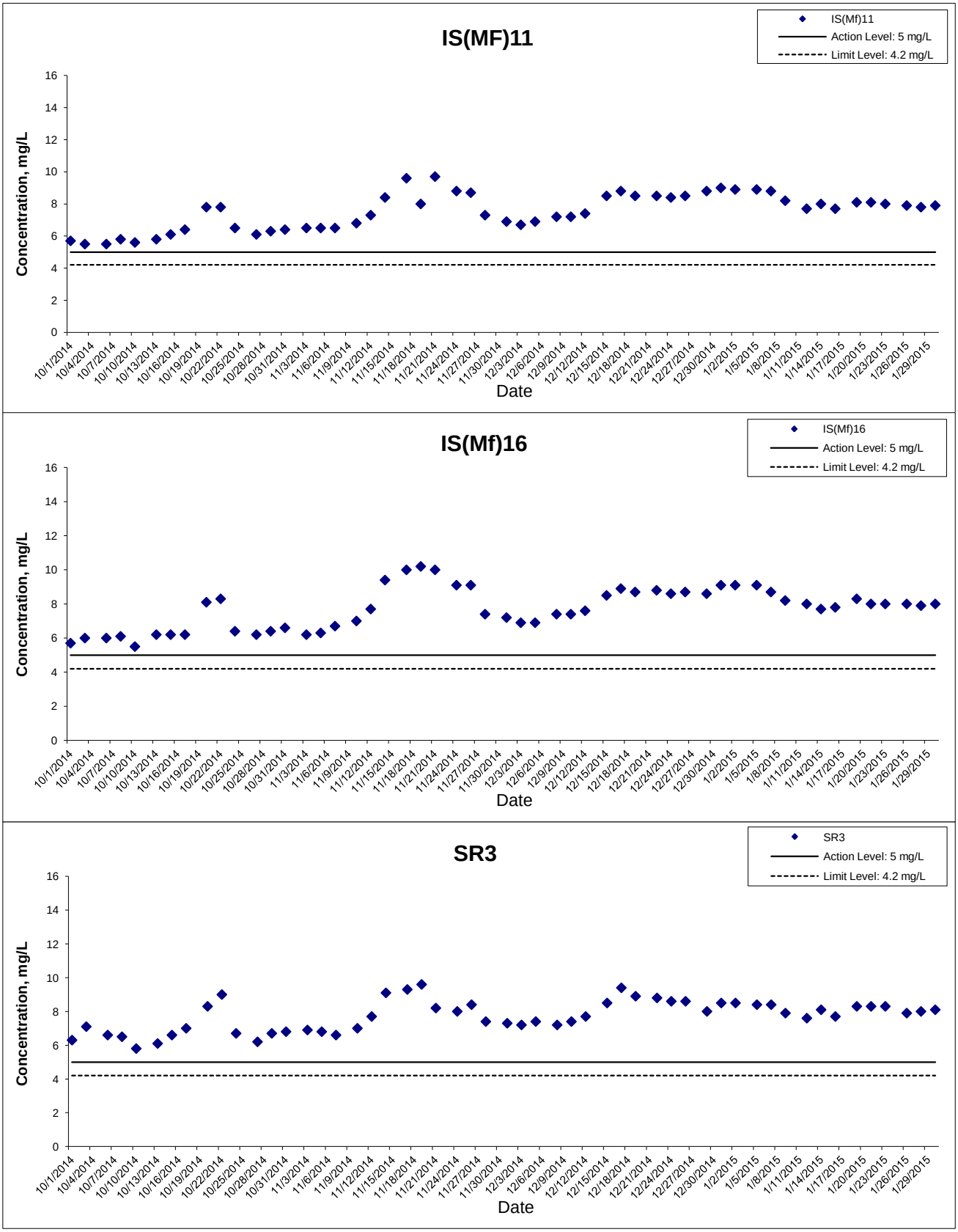

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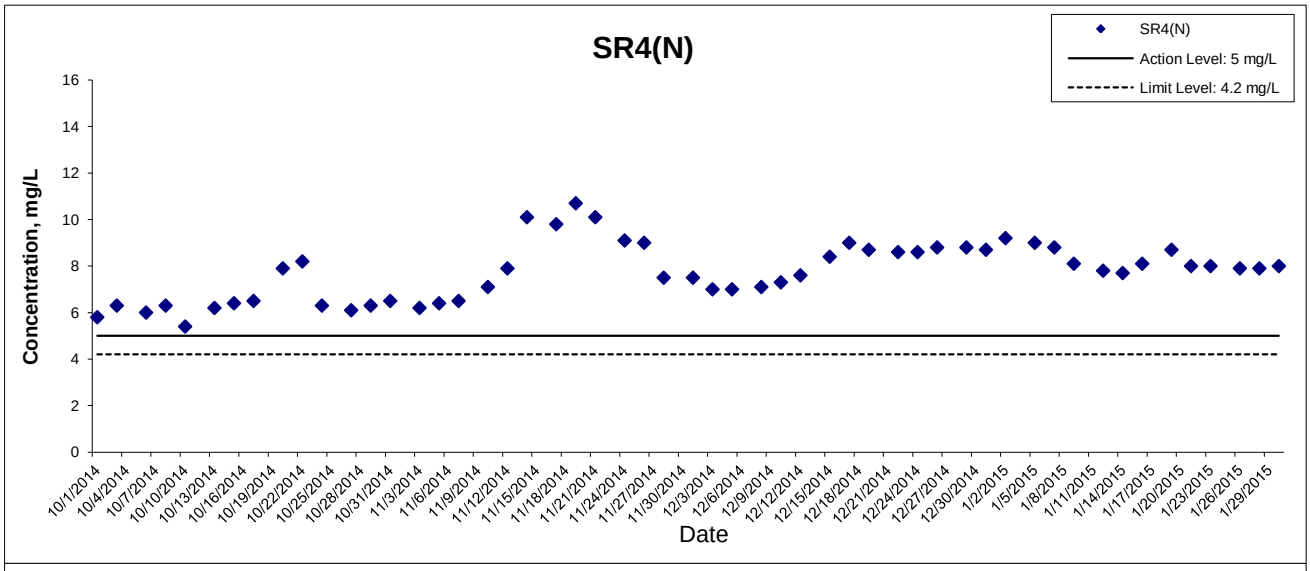

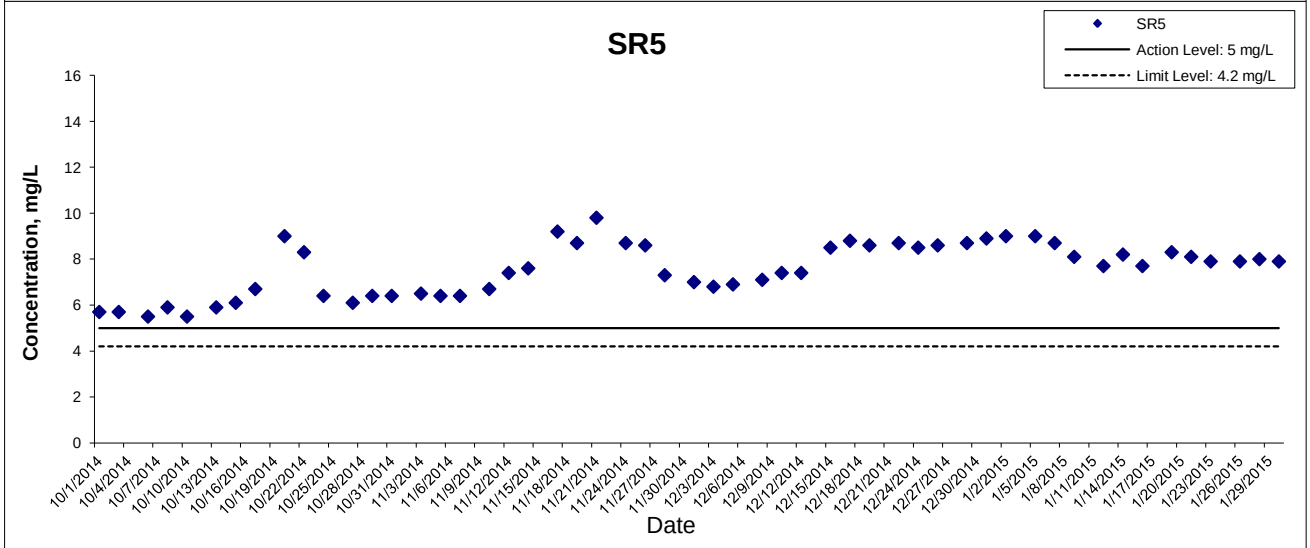

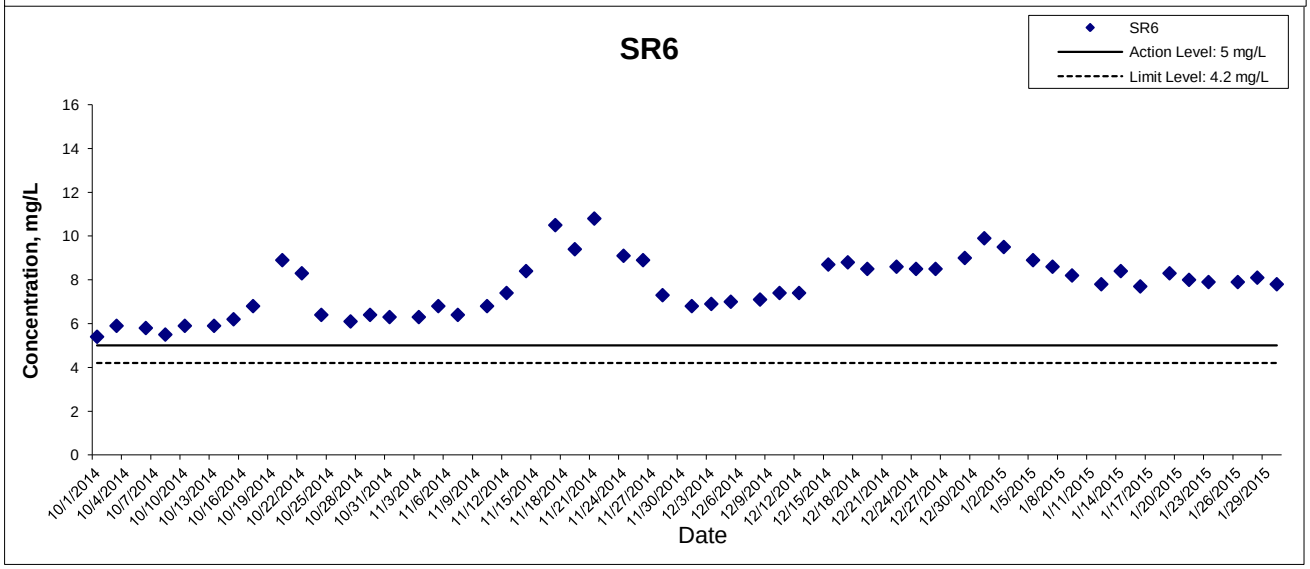

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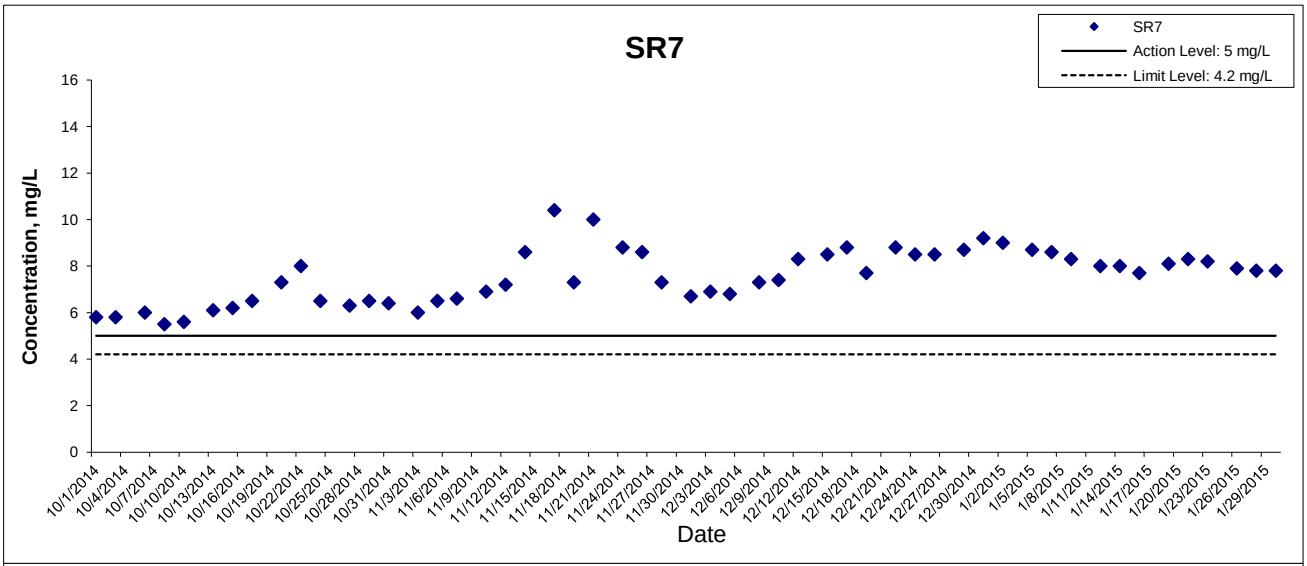
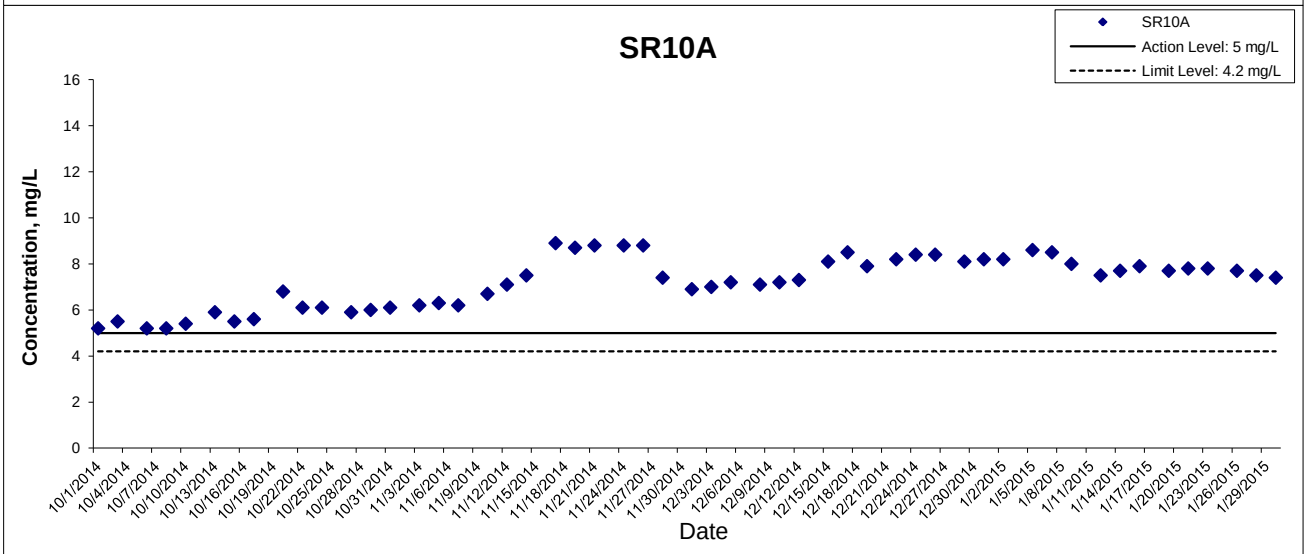
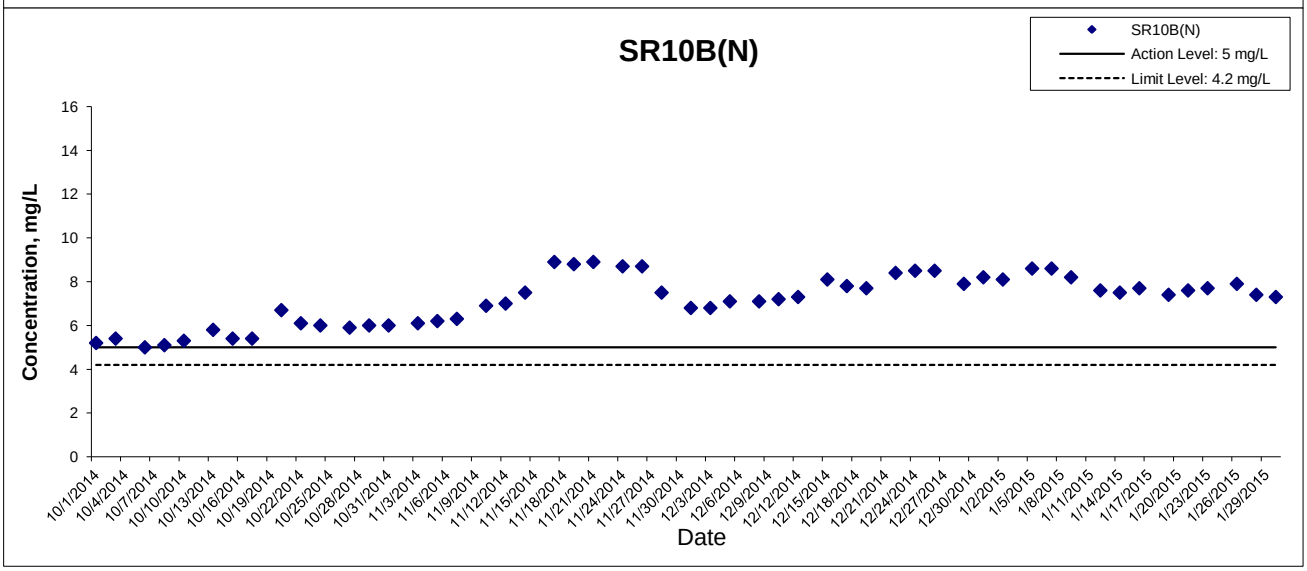
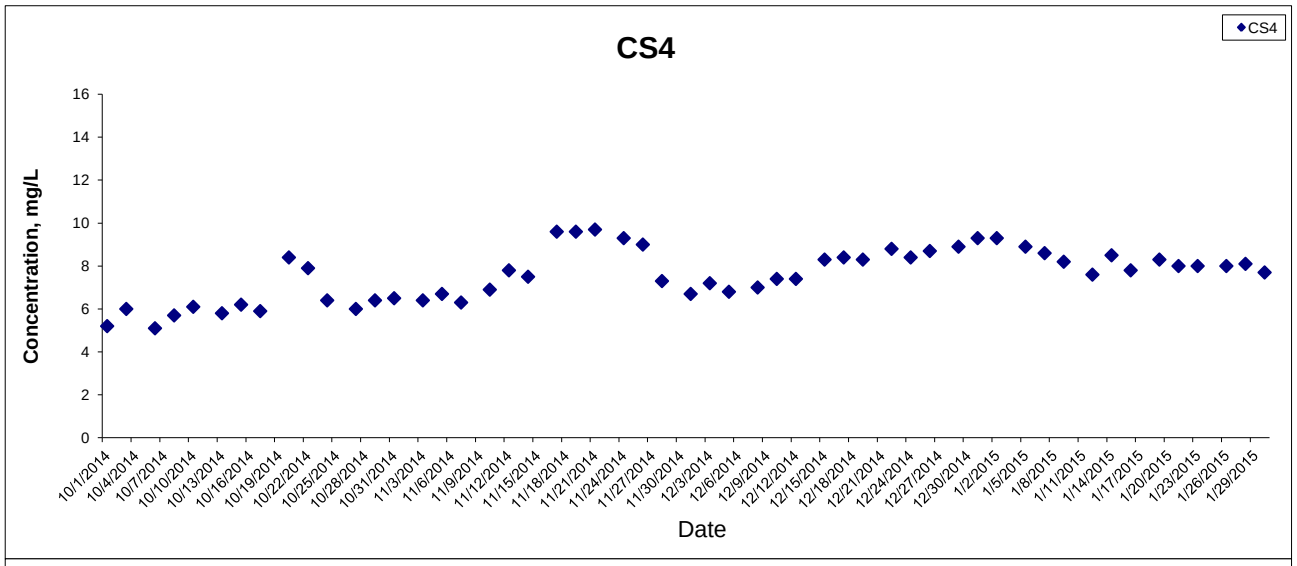
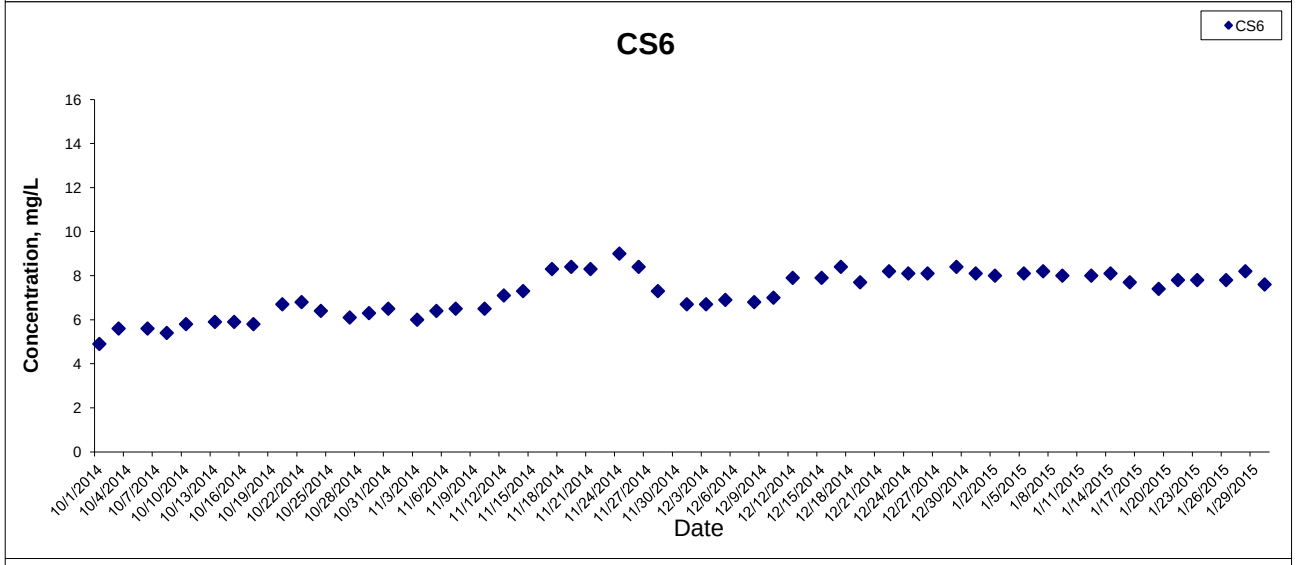


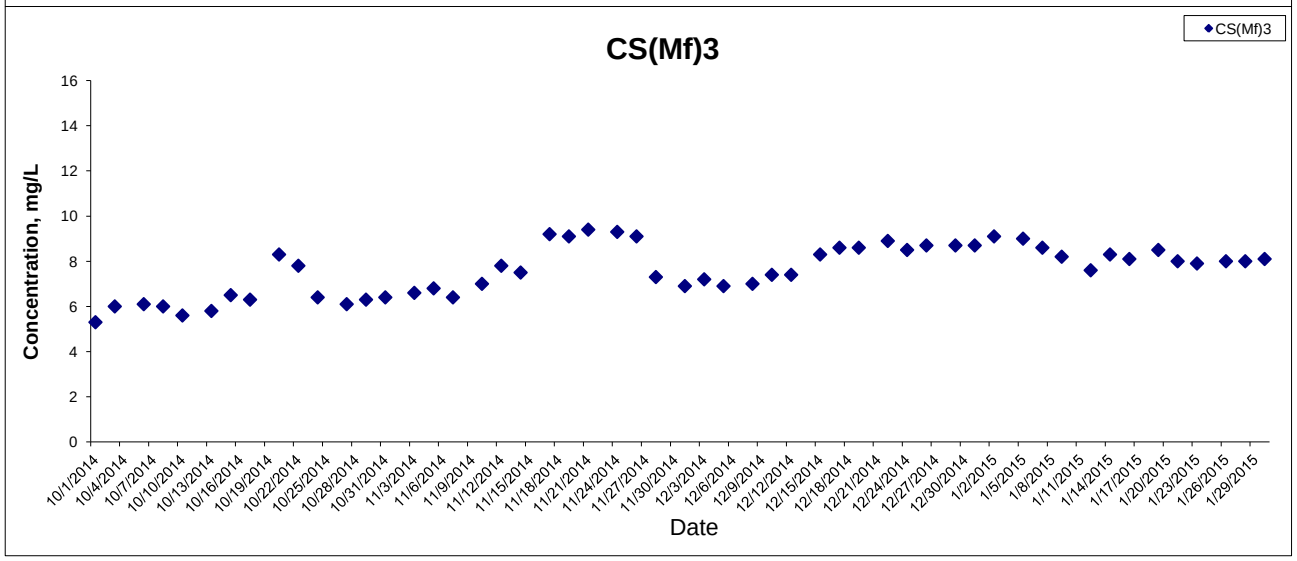




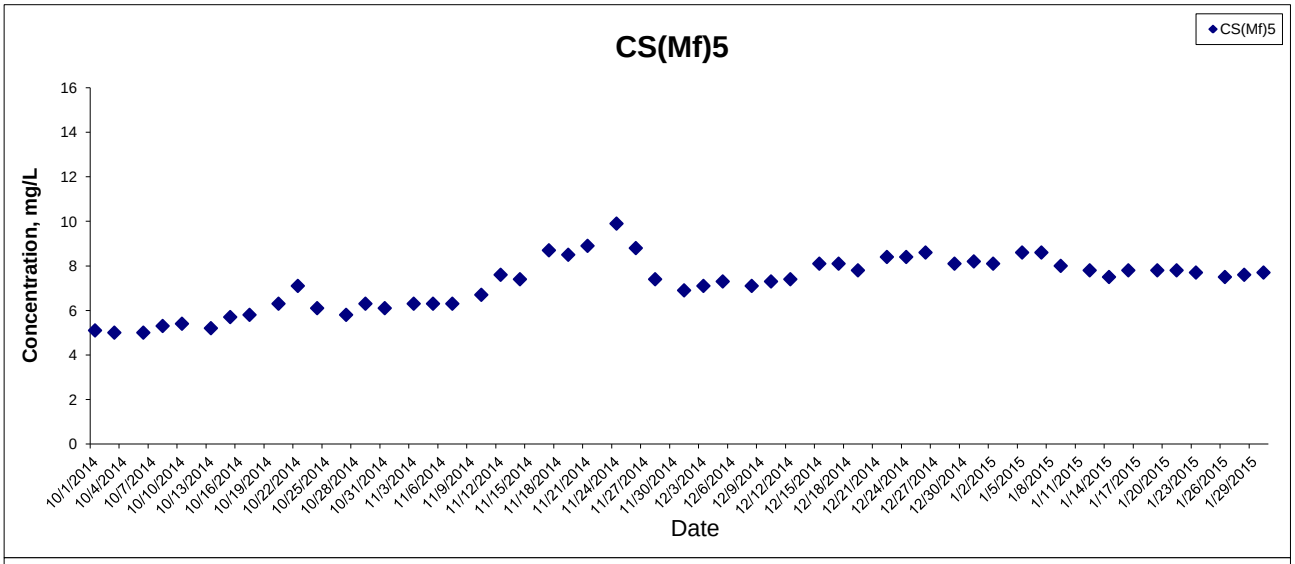
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

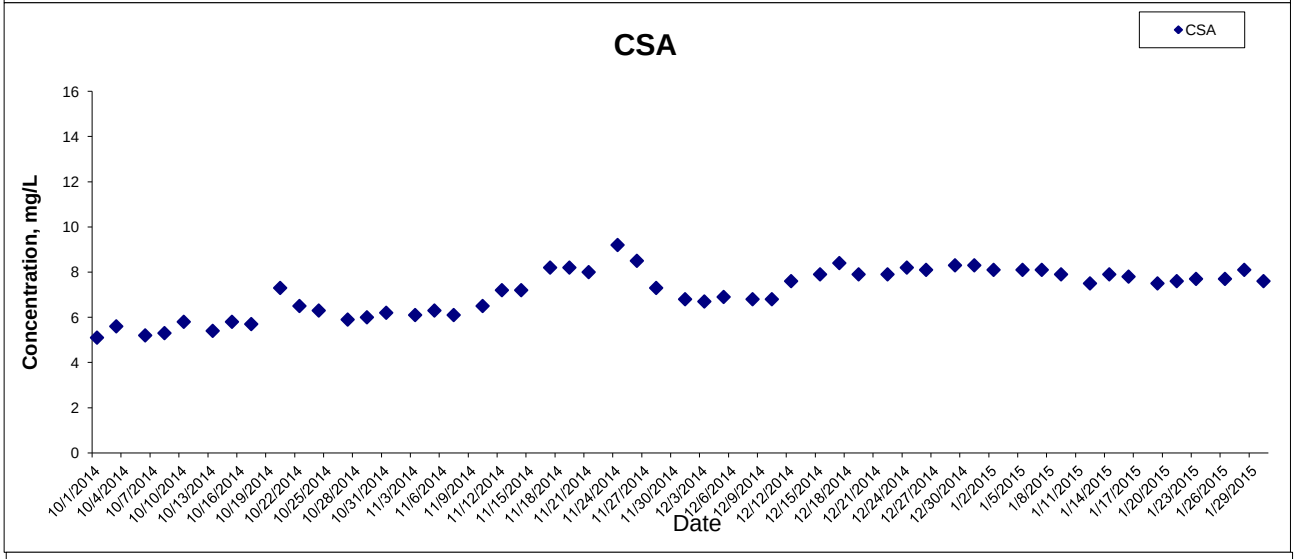


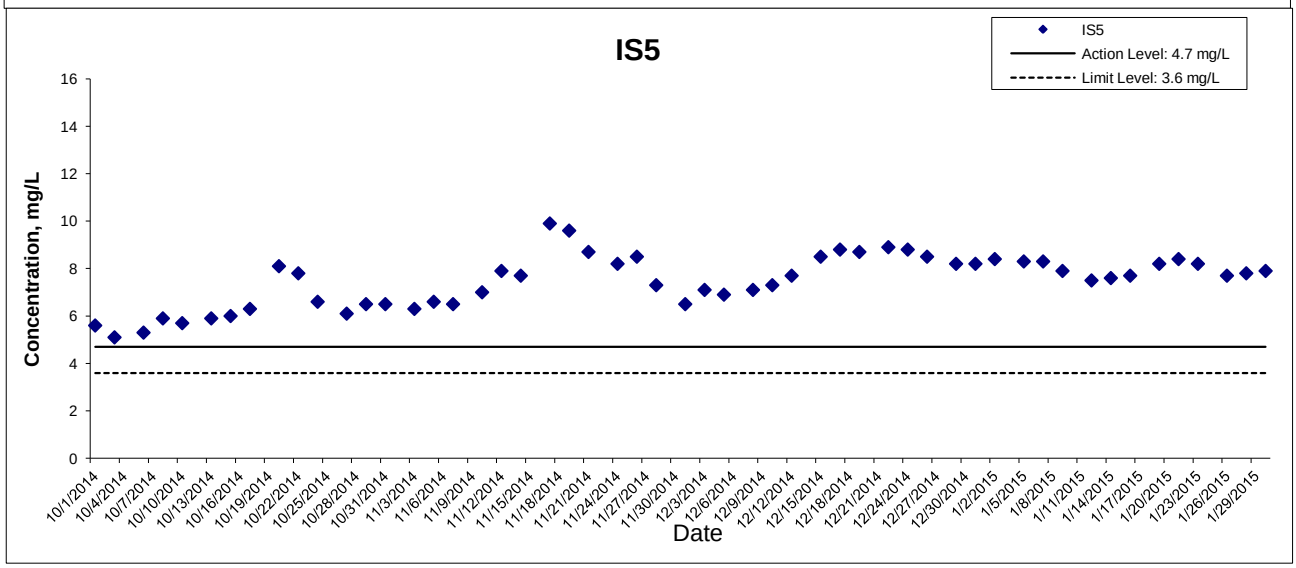




Dissolved Oxygen (Bottom) at Mid-Ebb Tide







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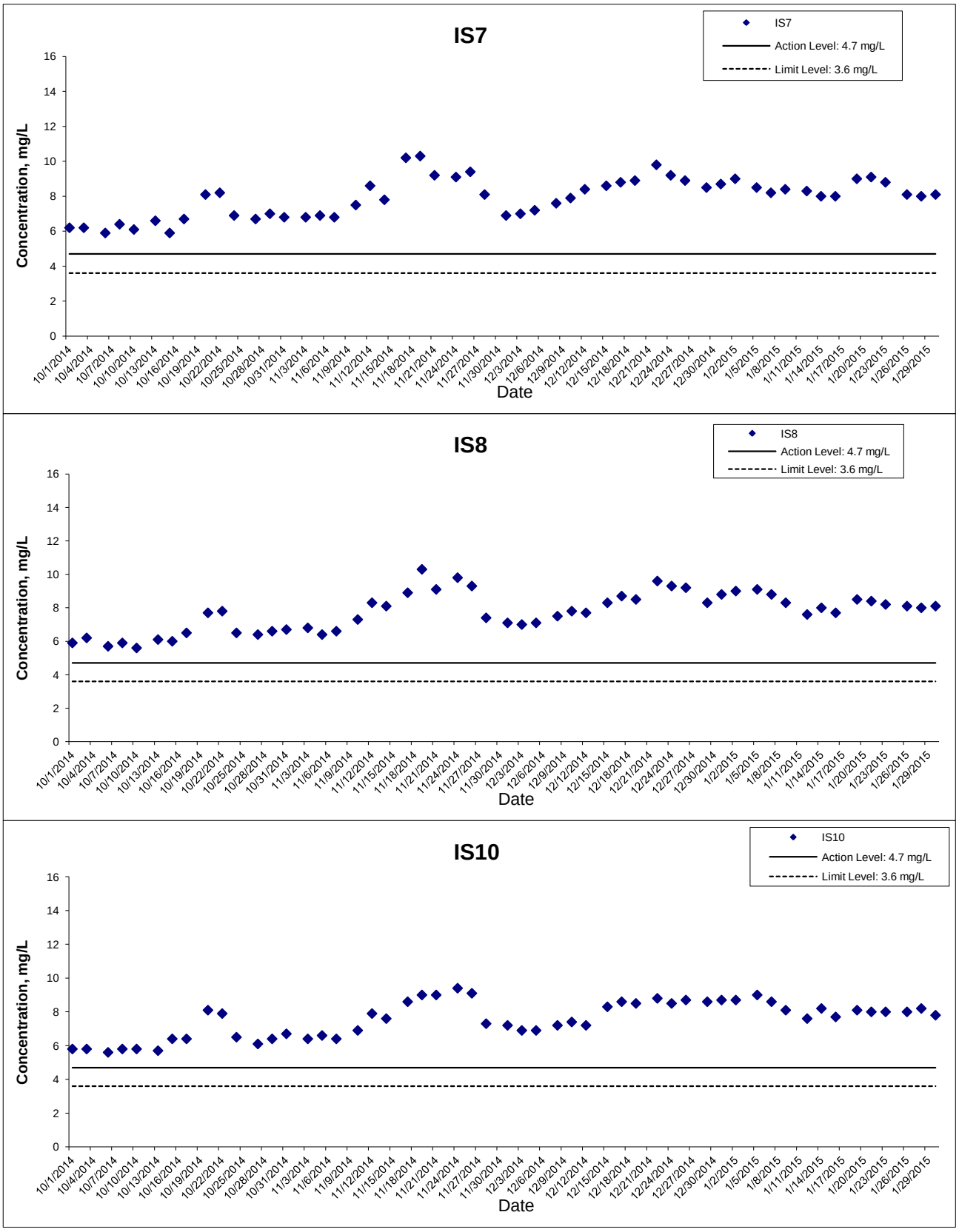
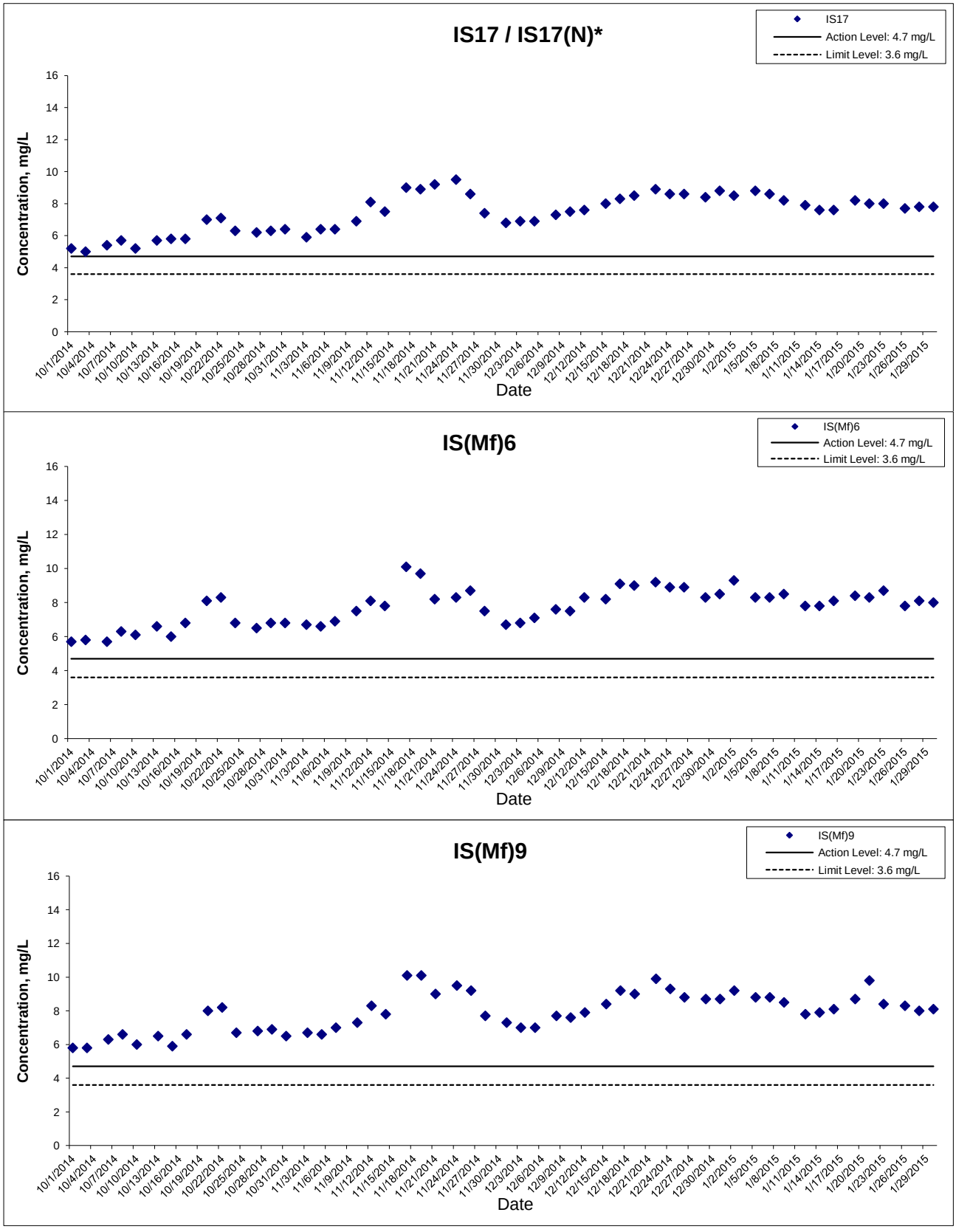
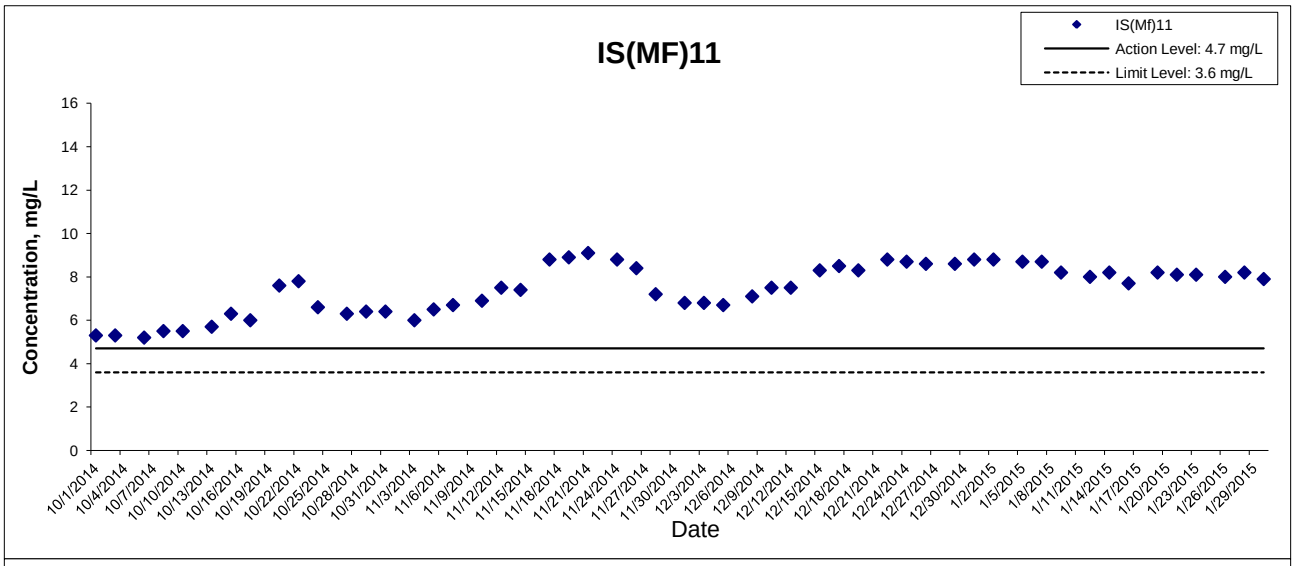
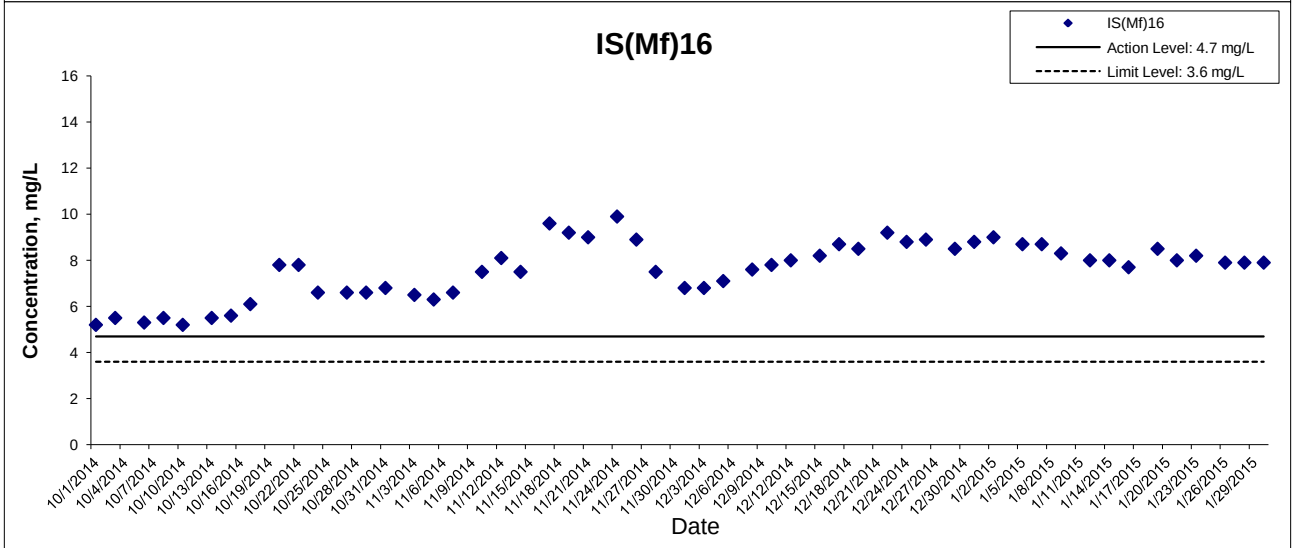


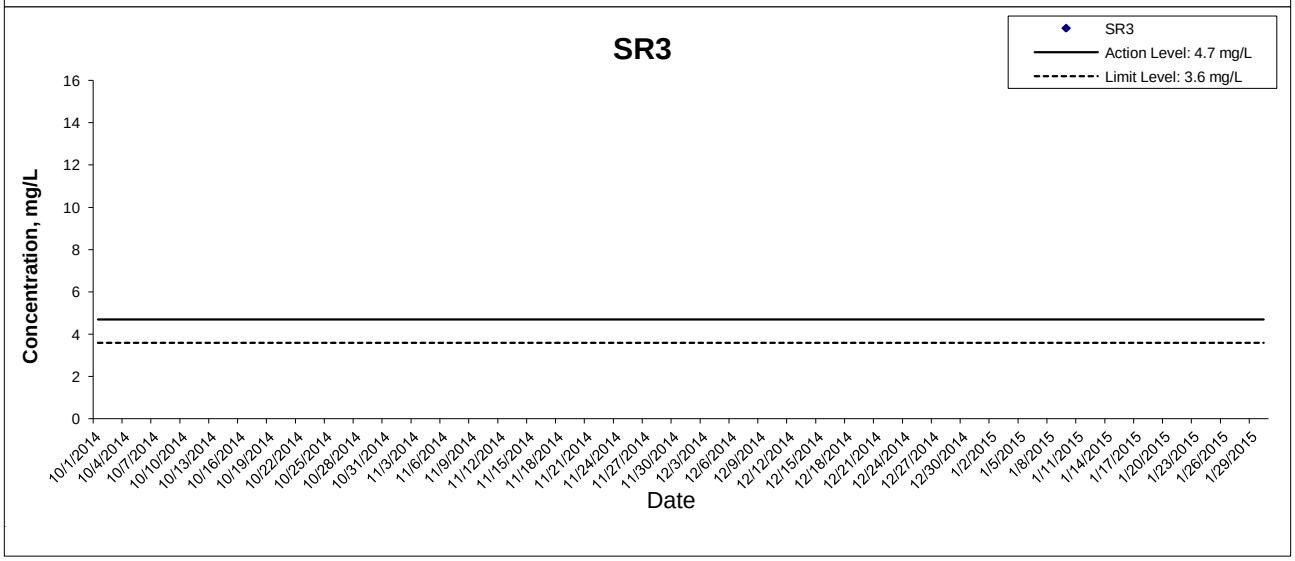
Dissolved Oxygen (Bottom) at Mid-Ebb Tide



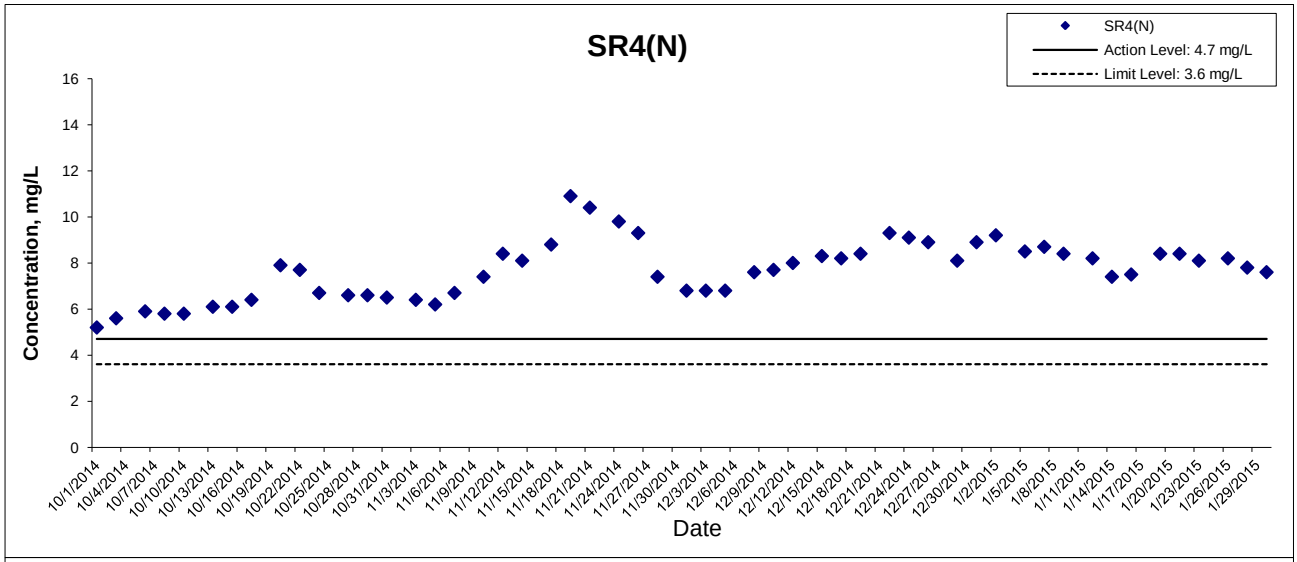
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

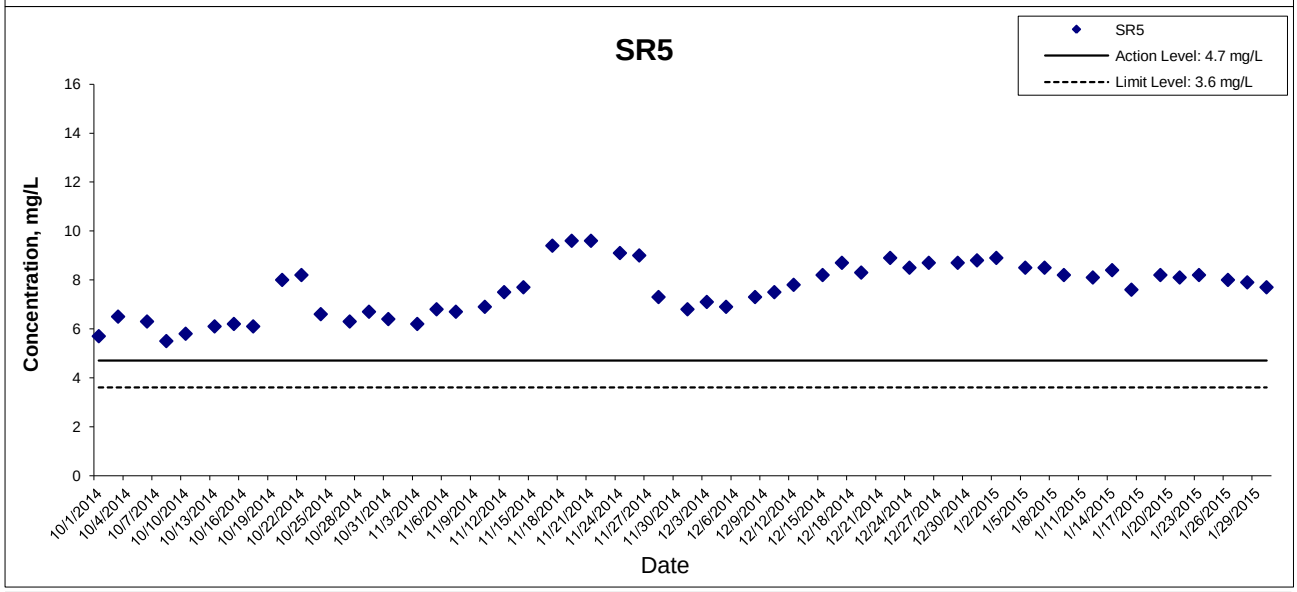


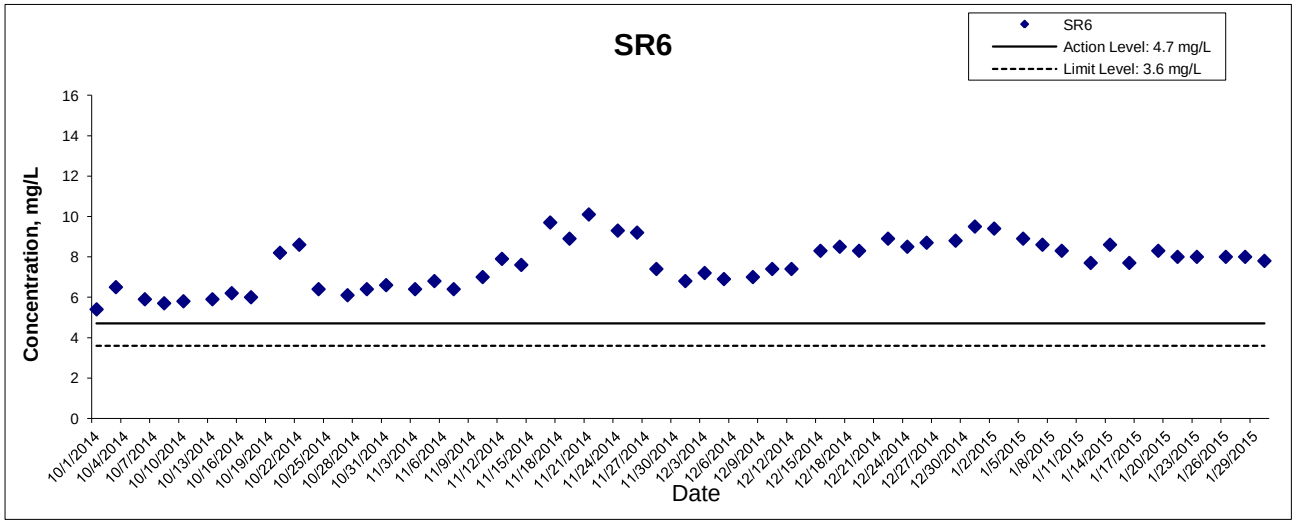




Dissolved Oxygen (Bottom) at Mid-Ebb Tide







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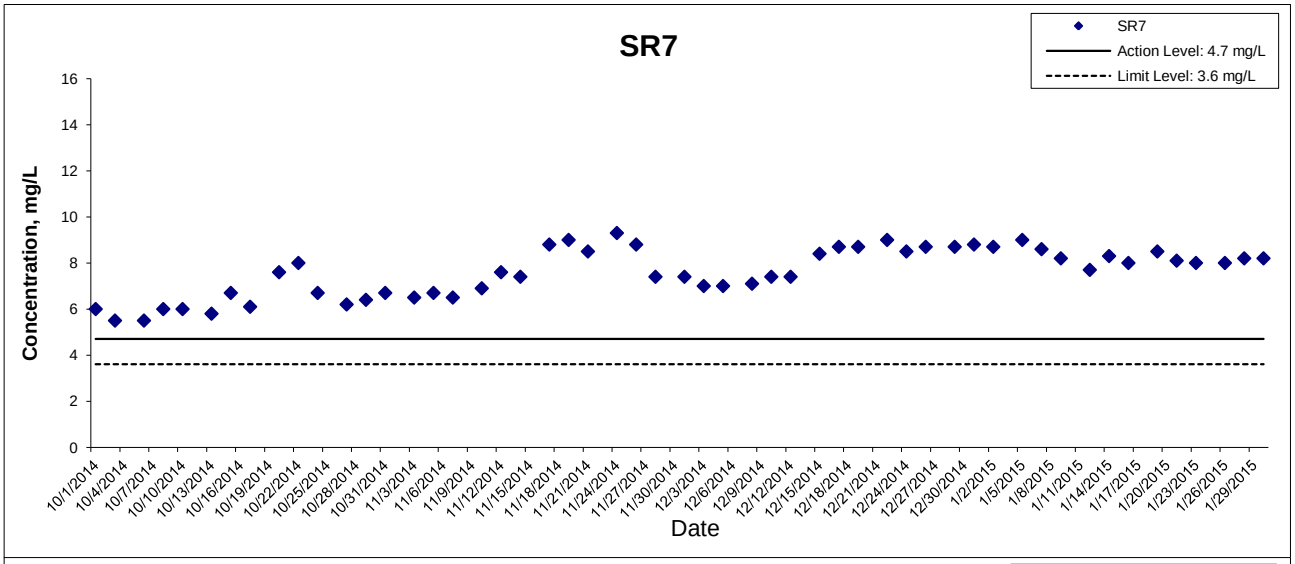
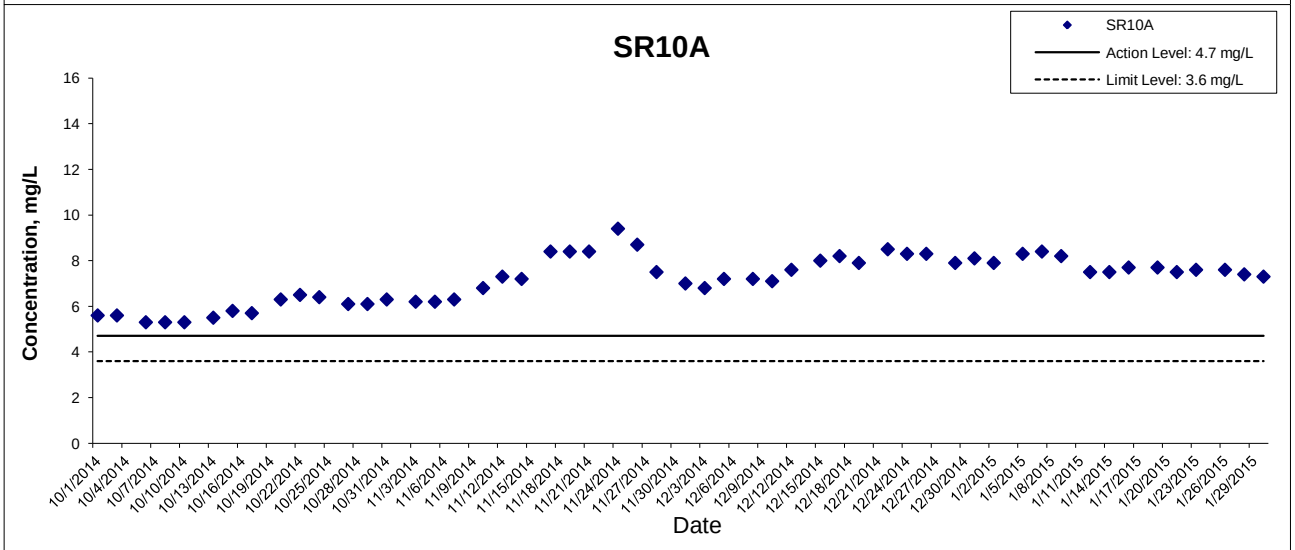
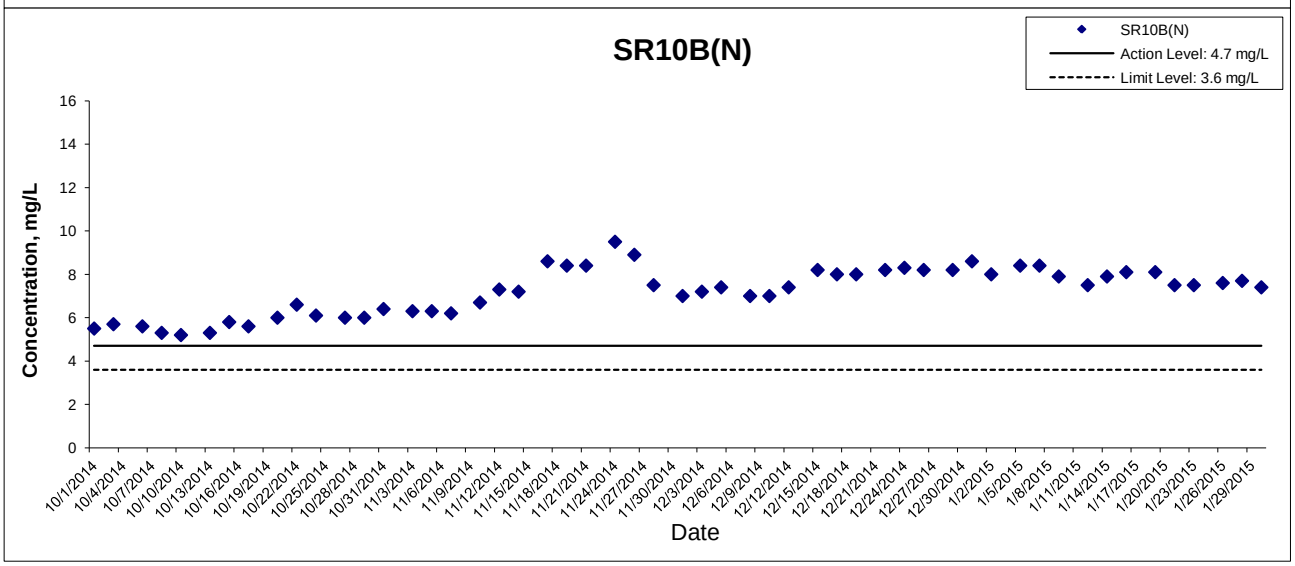
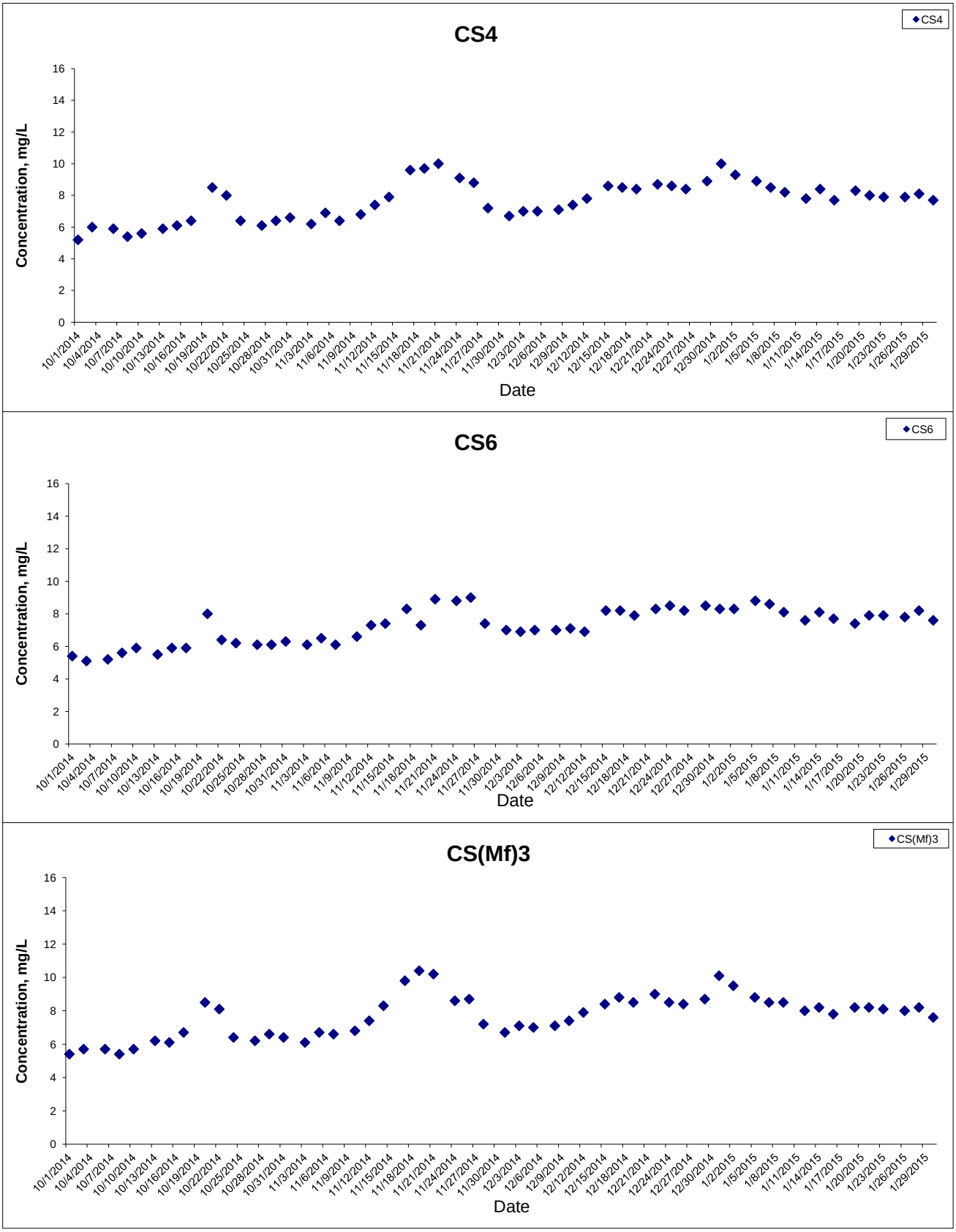


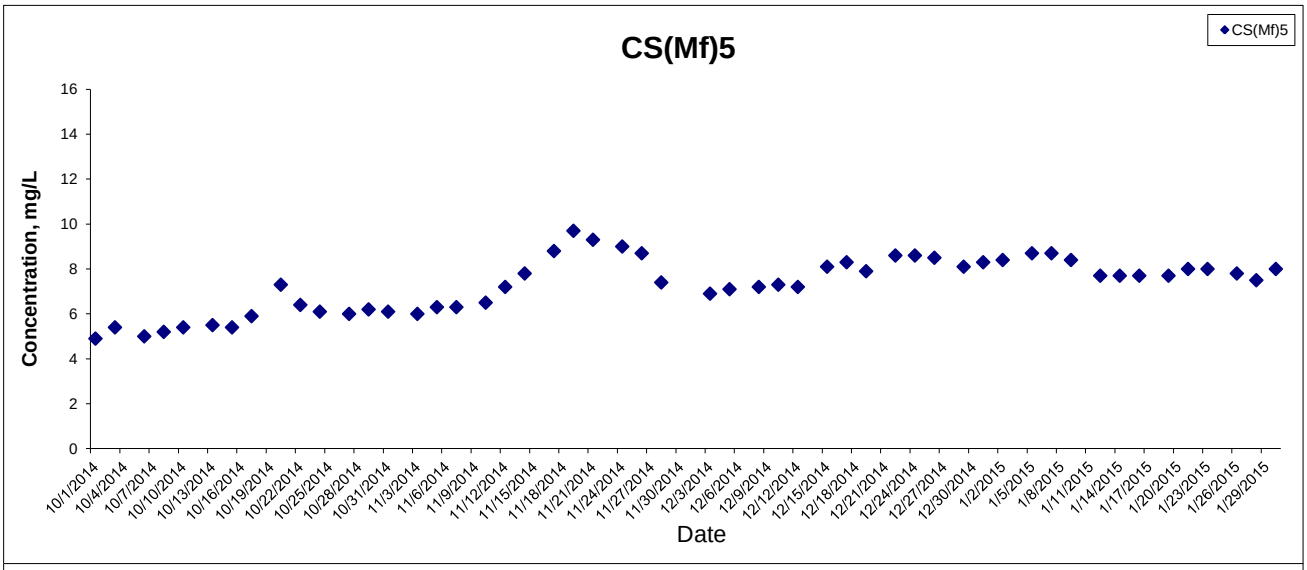


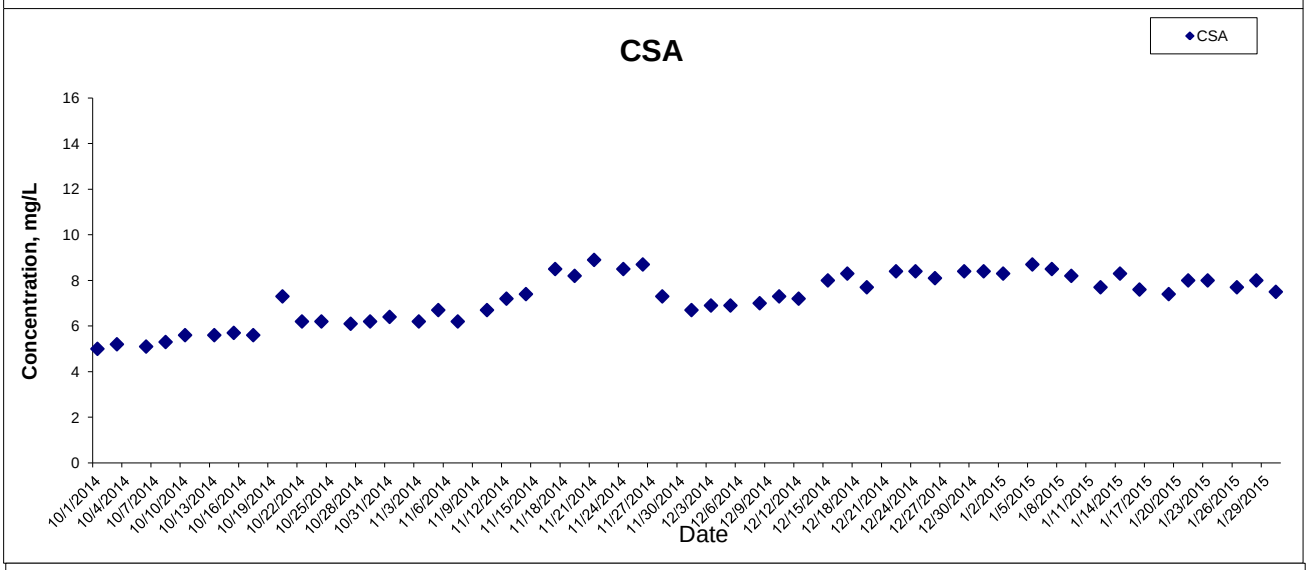


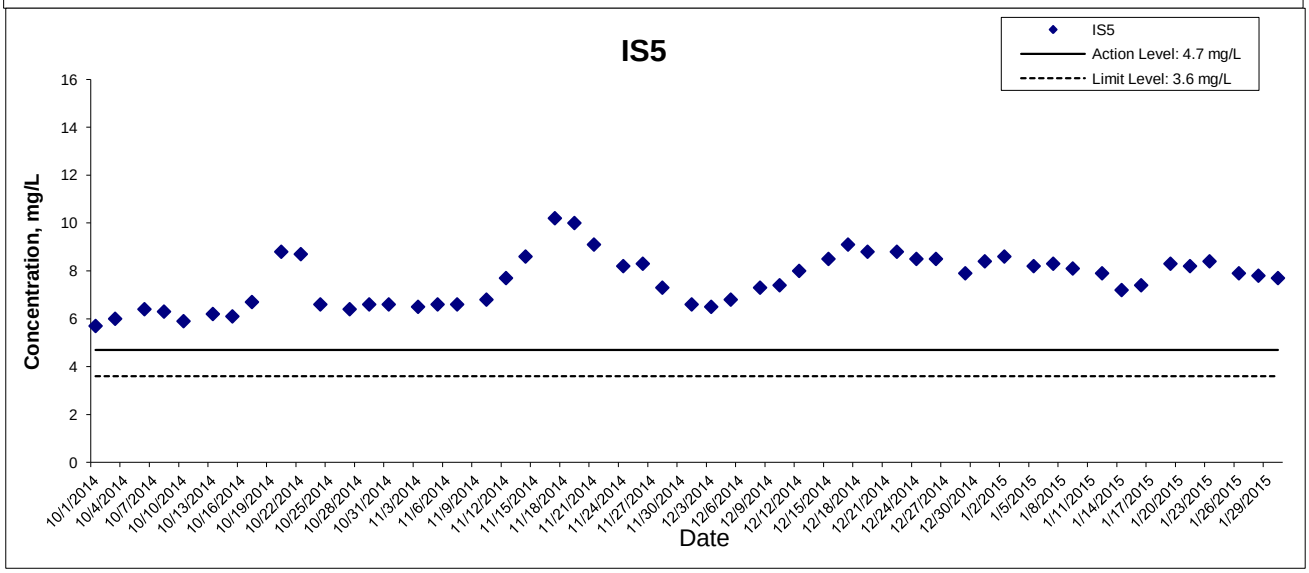
Dissolved Oxygen (Bottom) at Mid-Flood Tide



Dissolved Oxygen (Bottom) at Mid-Flood Tide







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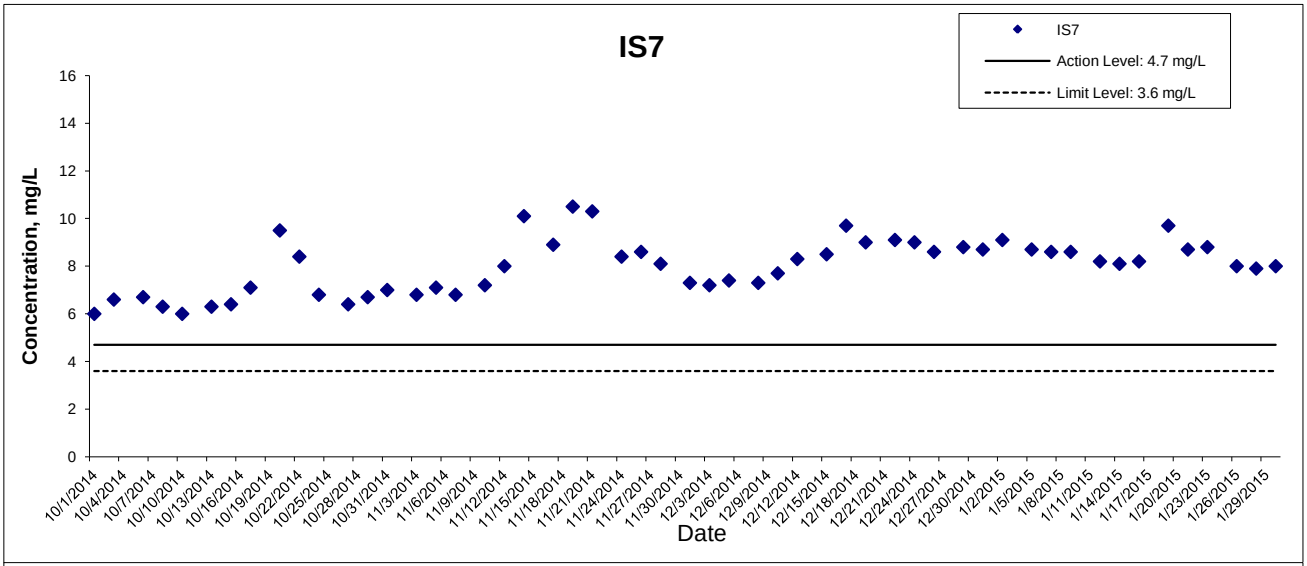

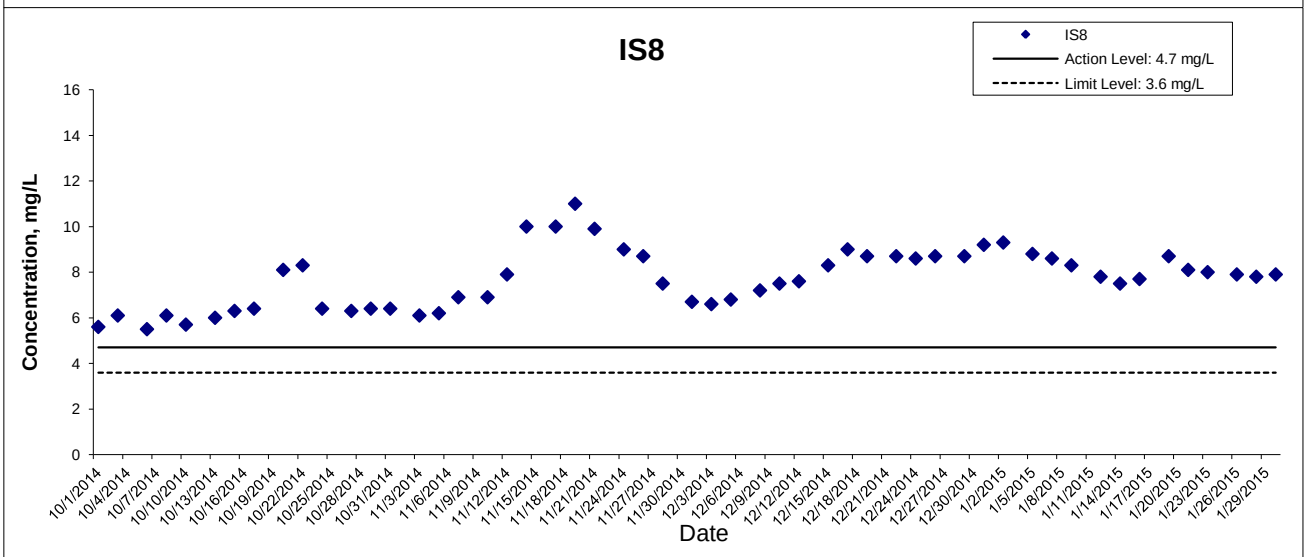

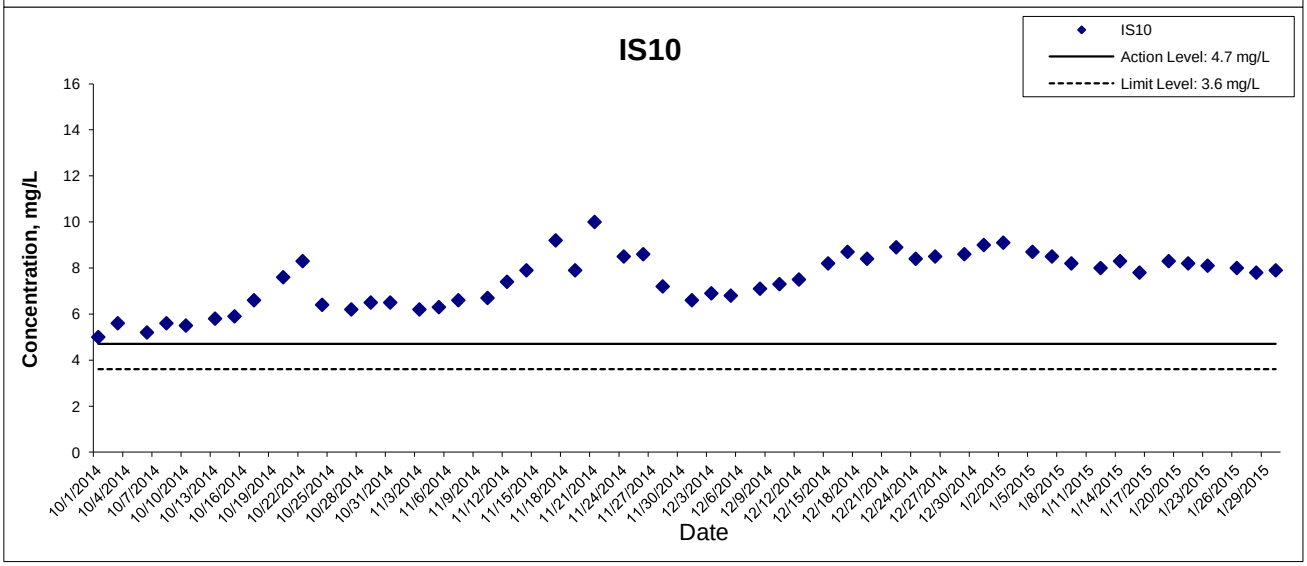

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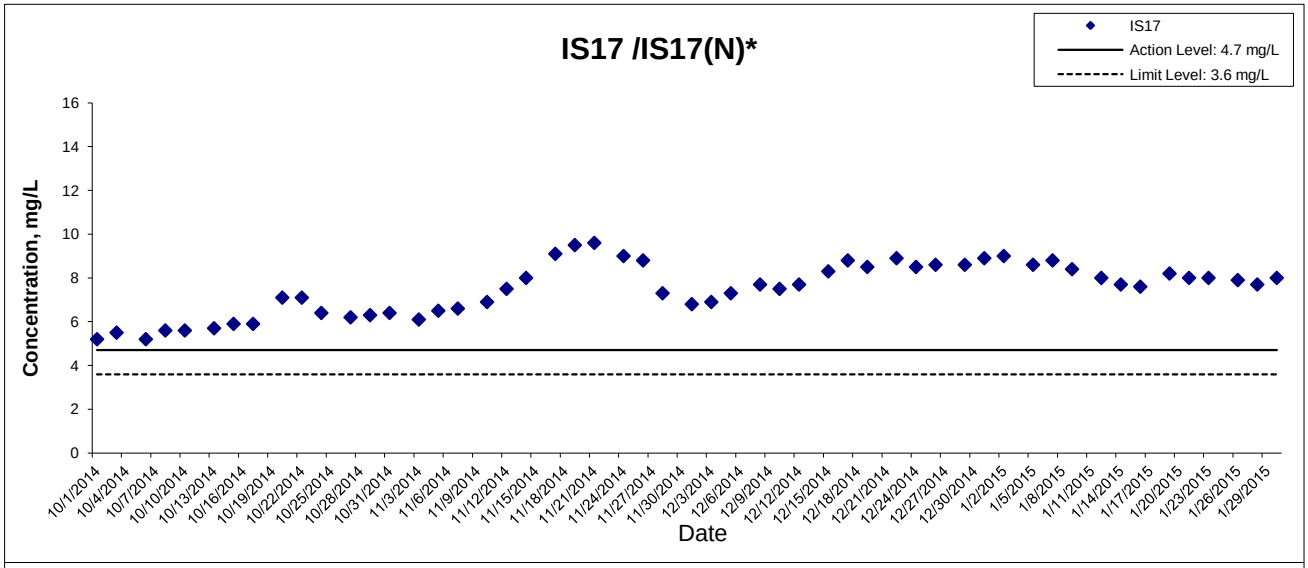

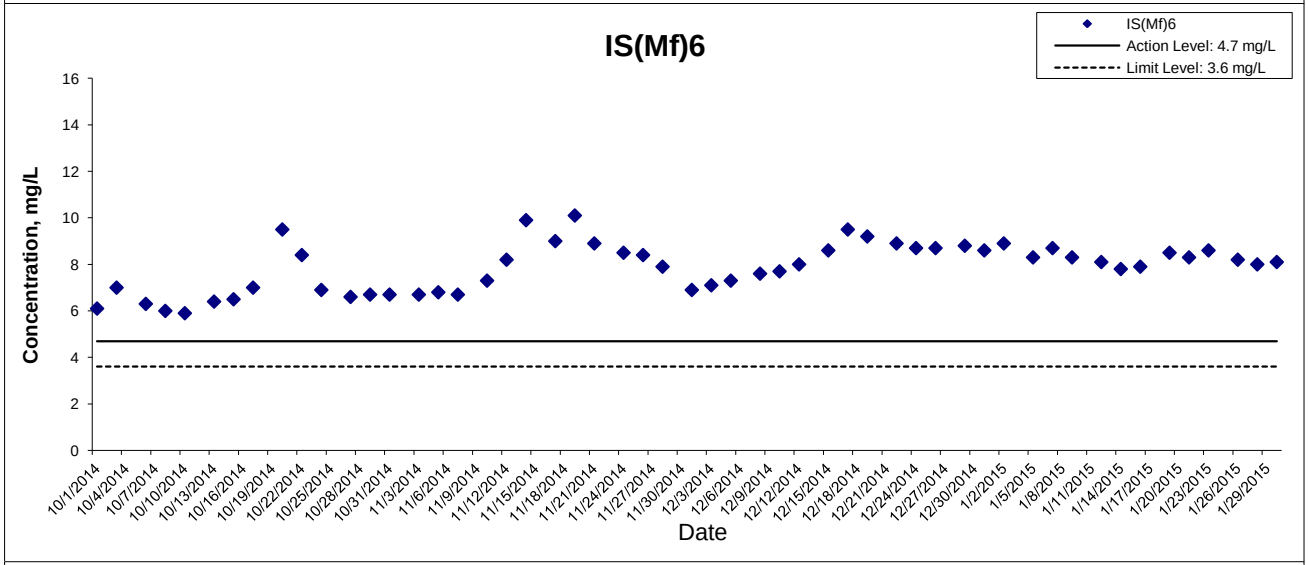

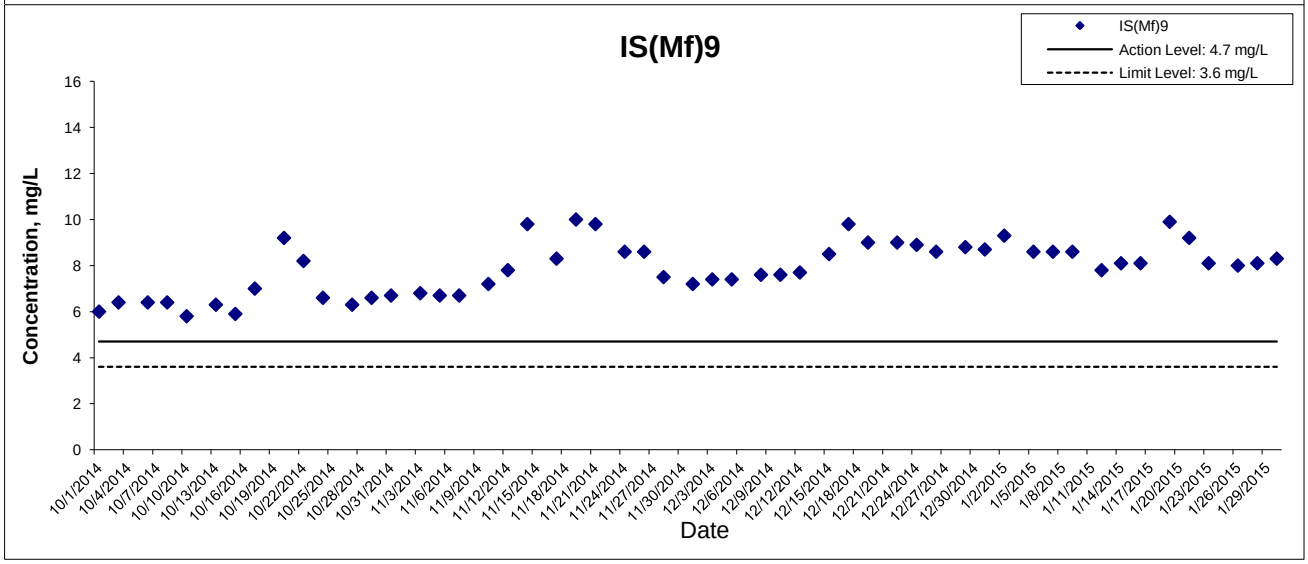

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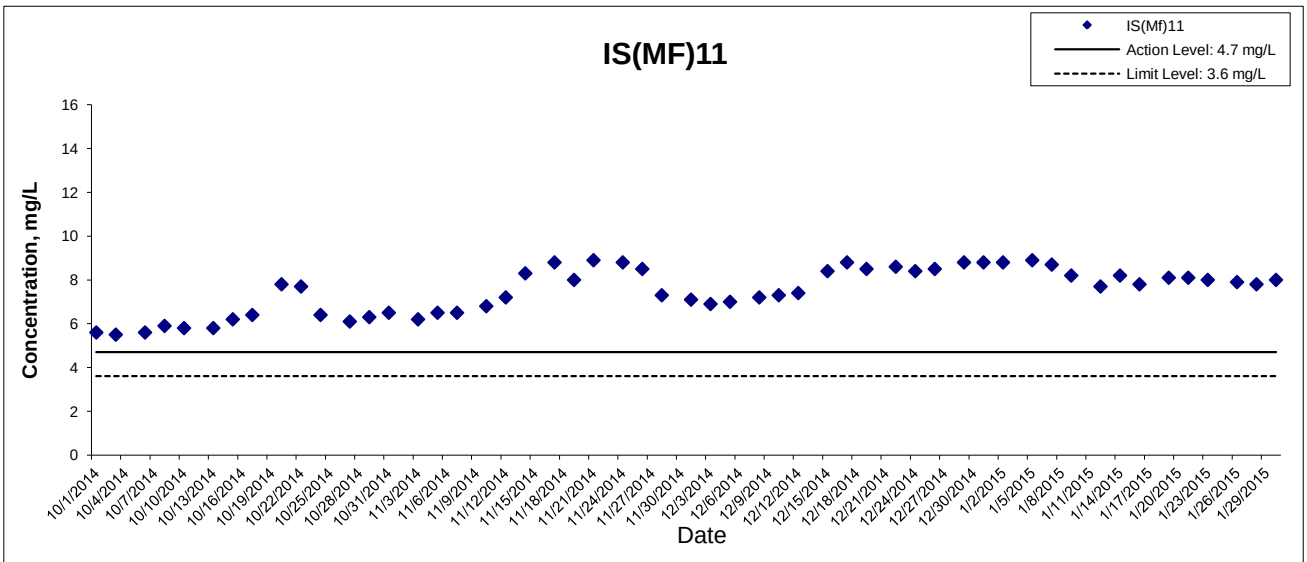
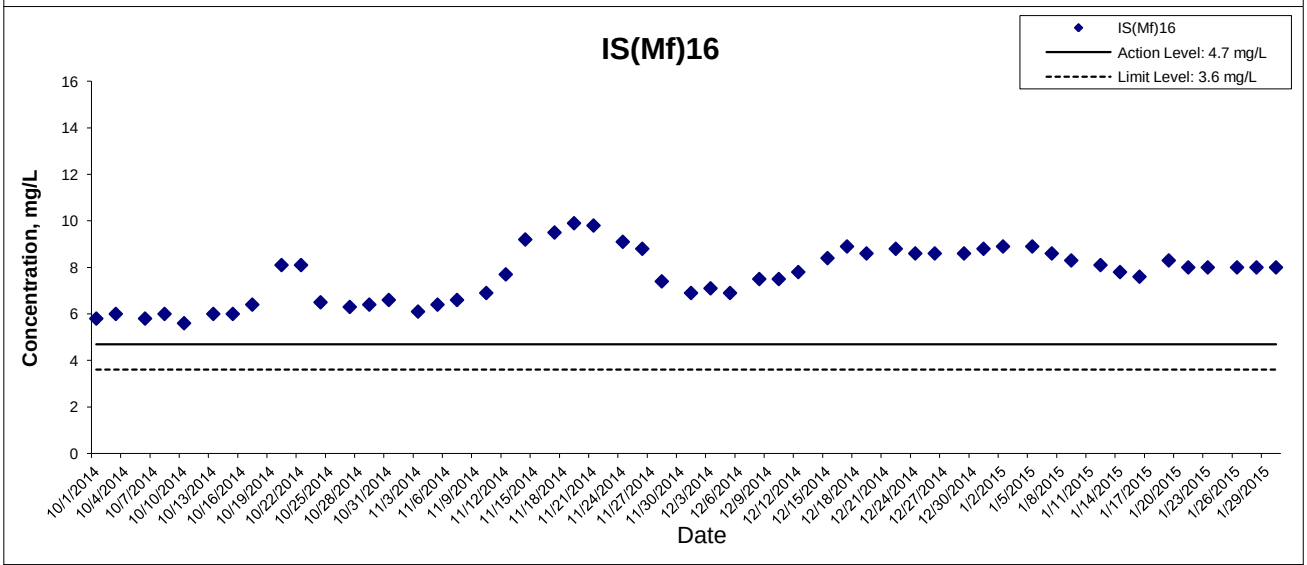
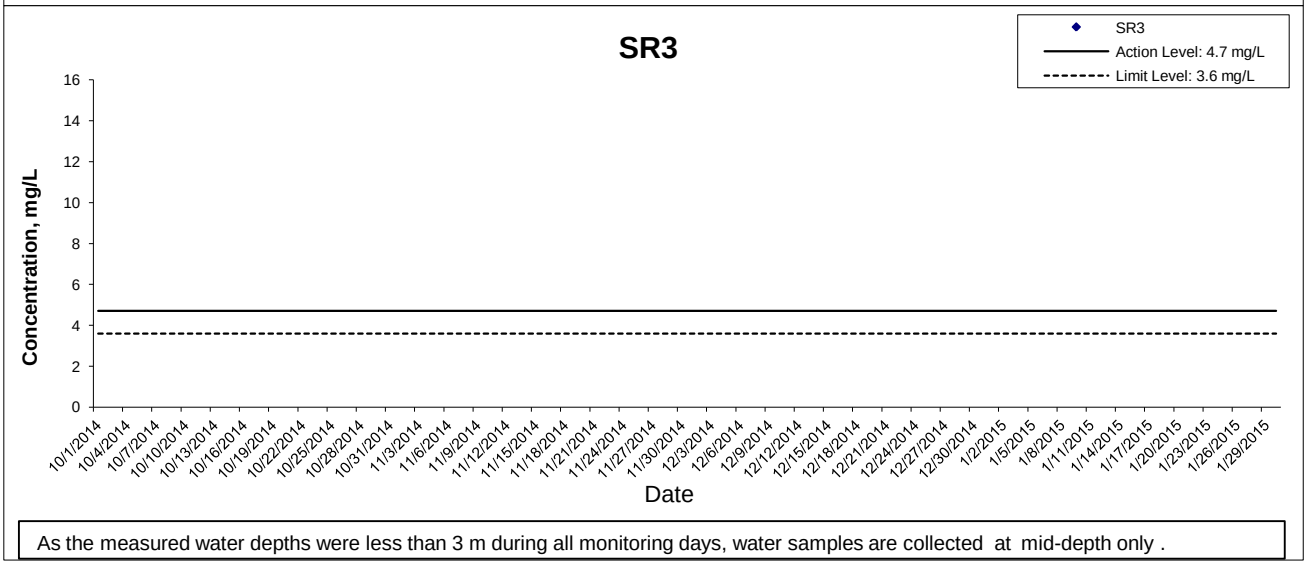
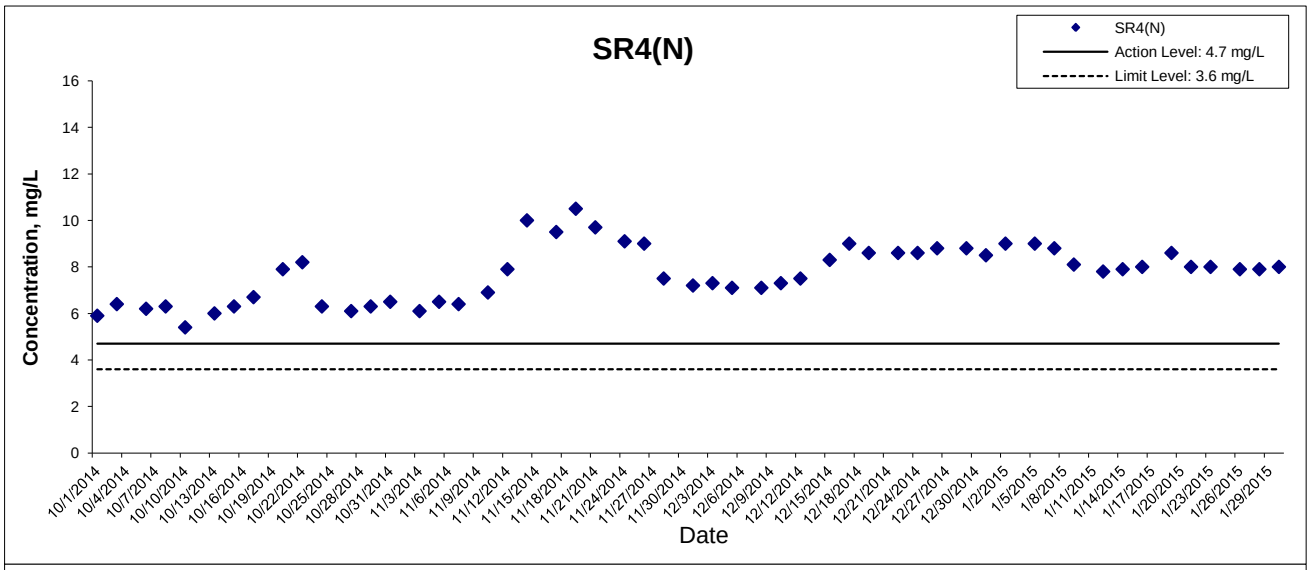


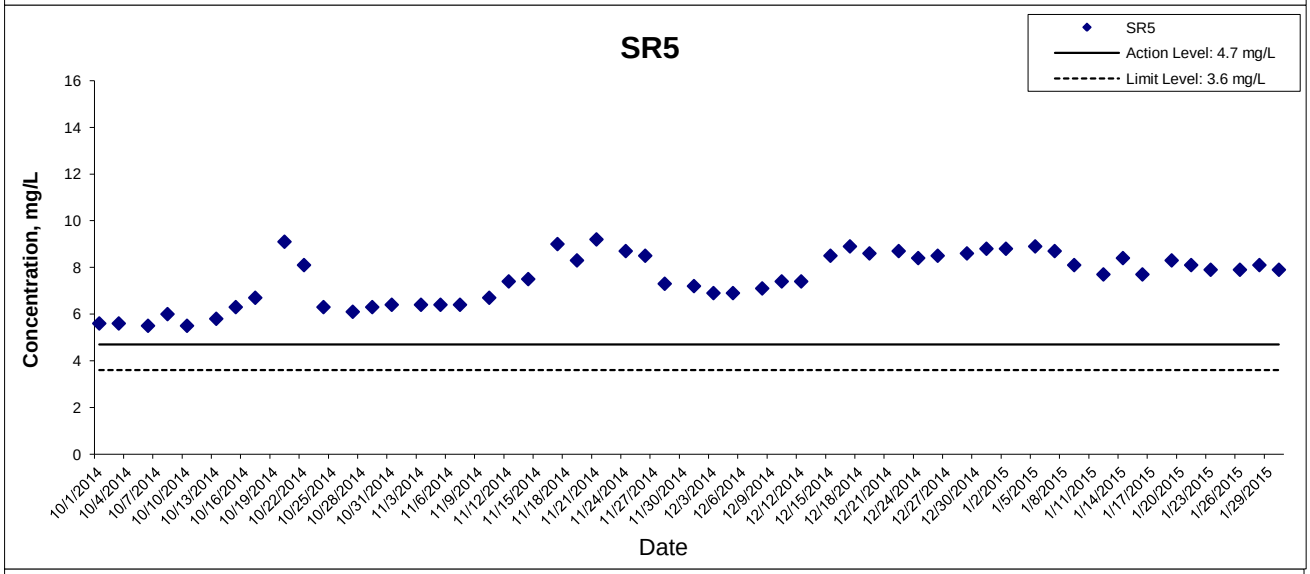


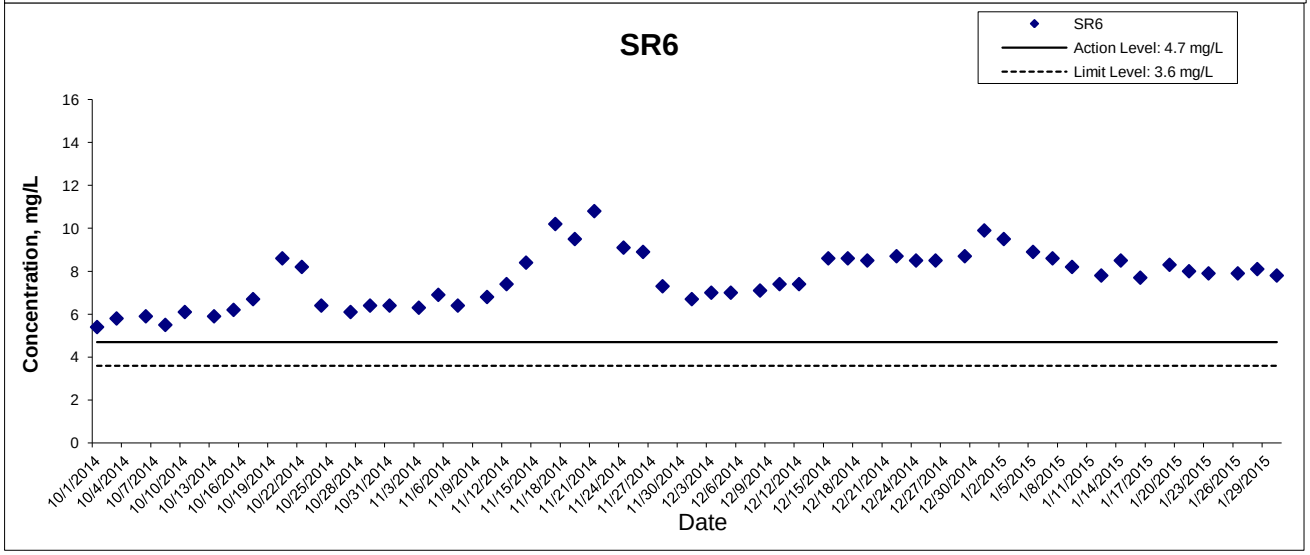


As the measured water depths were less than 3 m during all monitoring days, water samples are collected at mid-depth only .

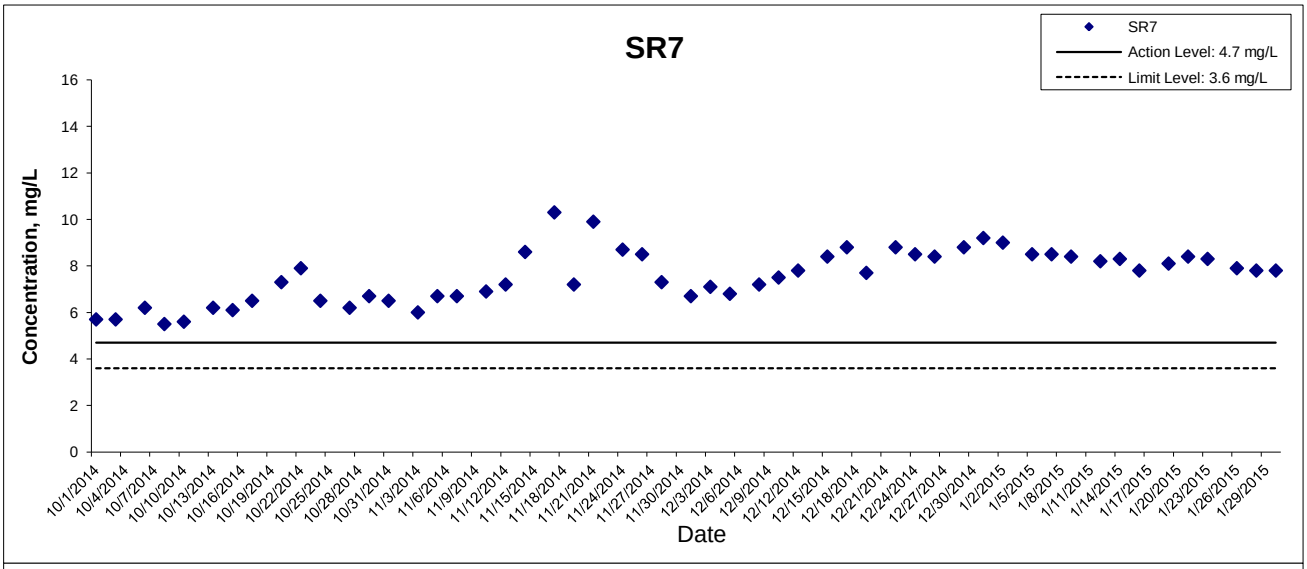
Dissolved Oxygen (Bottom) at Mid-Flood Tide

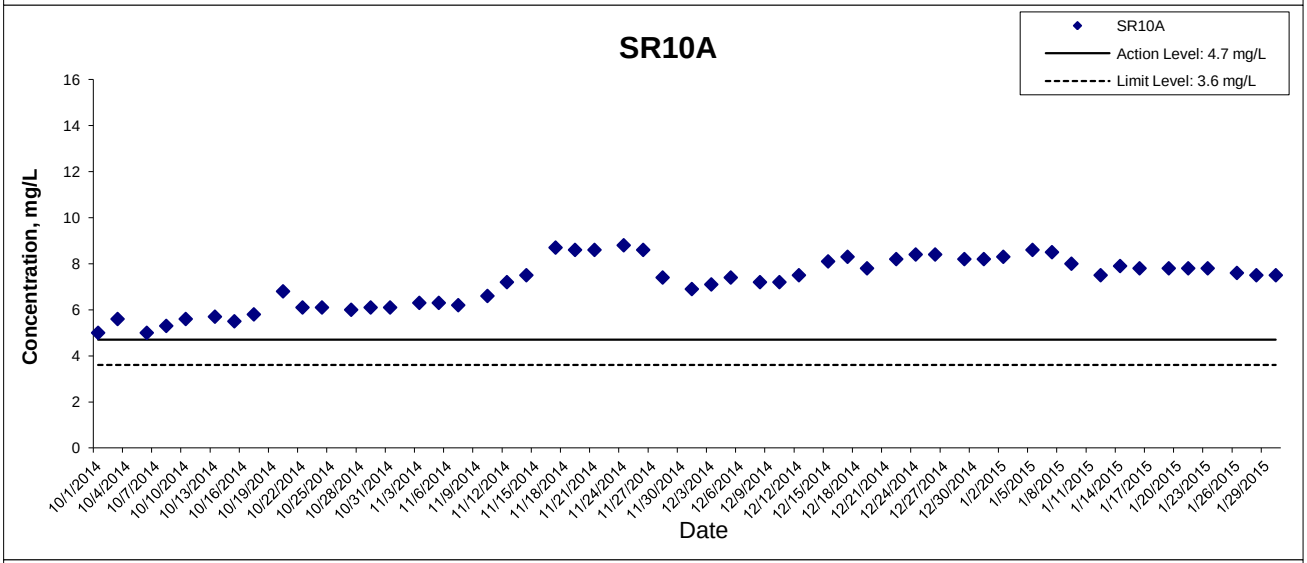


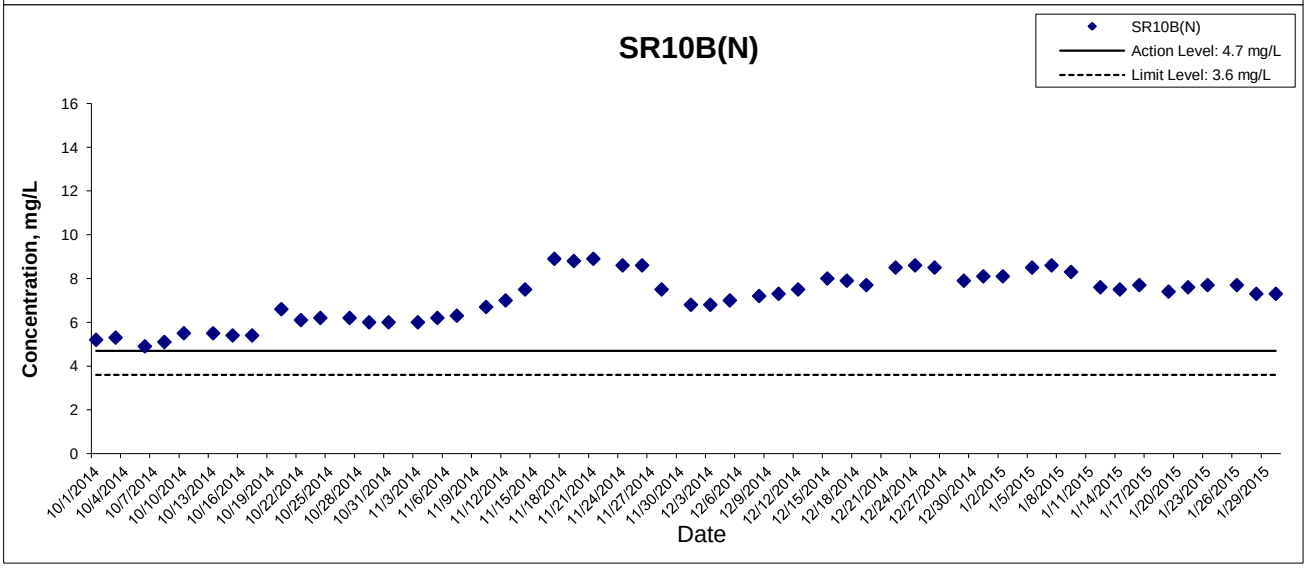




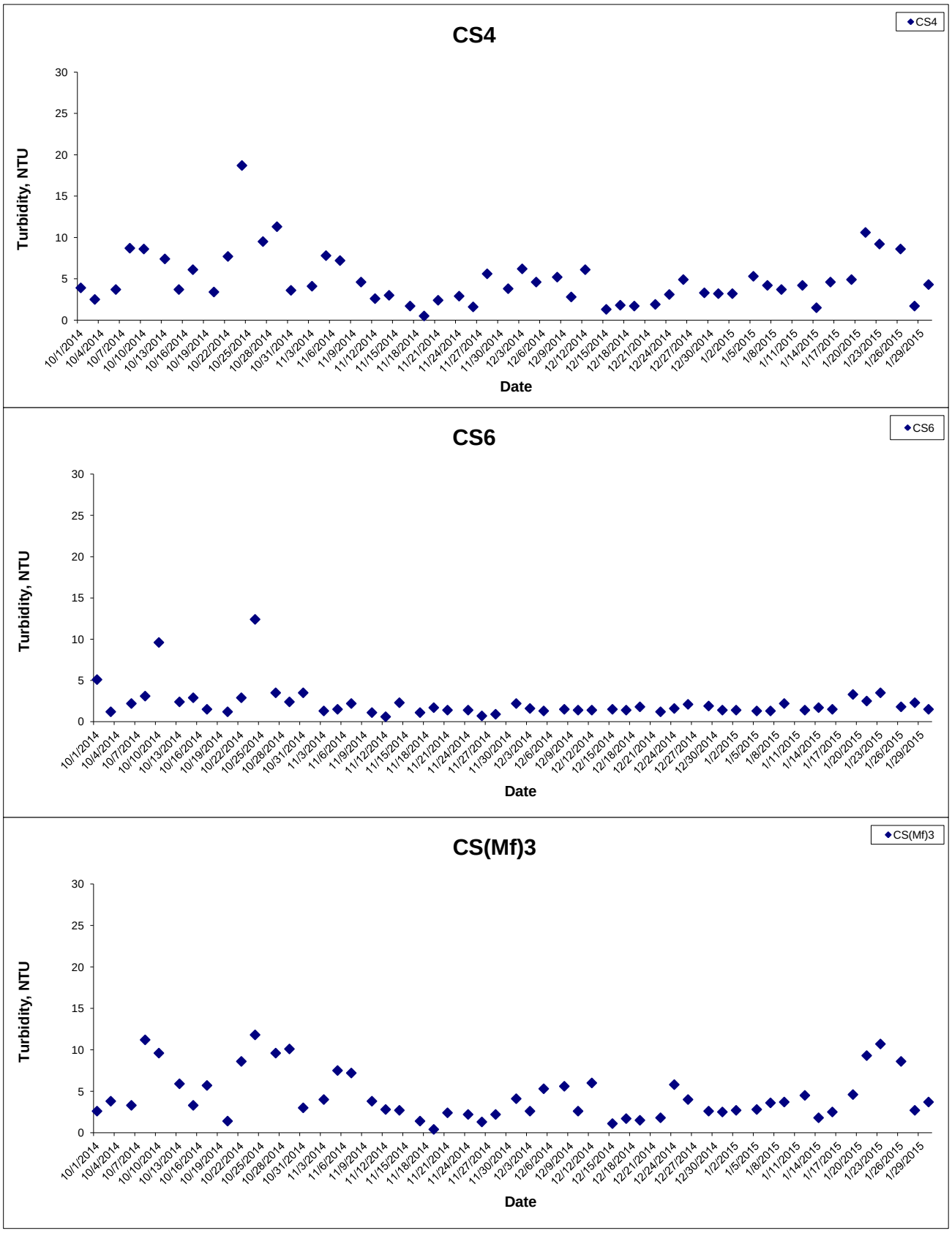
Dissolved Oxygen (Bottom) at Mid-Flood Tide







Turbidity at Mid-Ebb Tide



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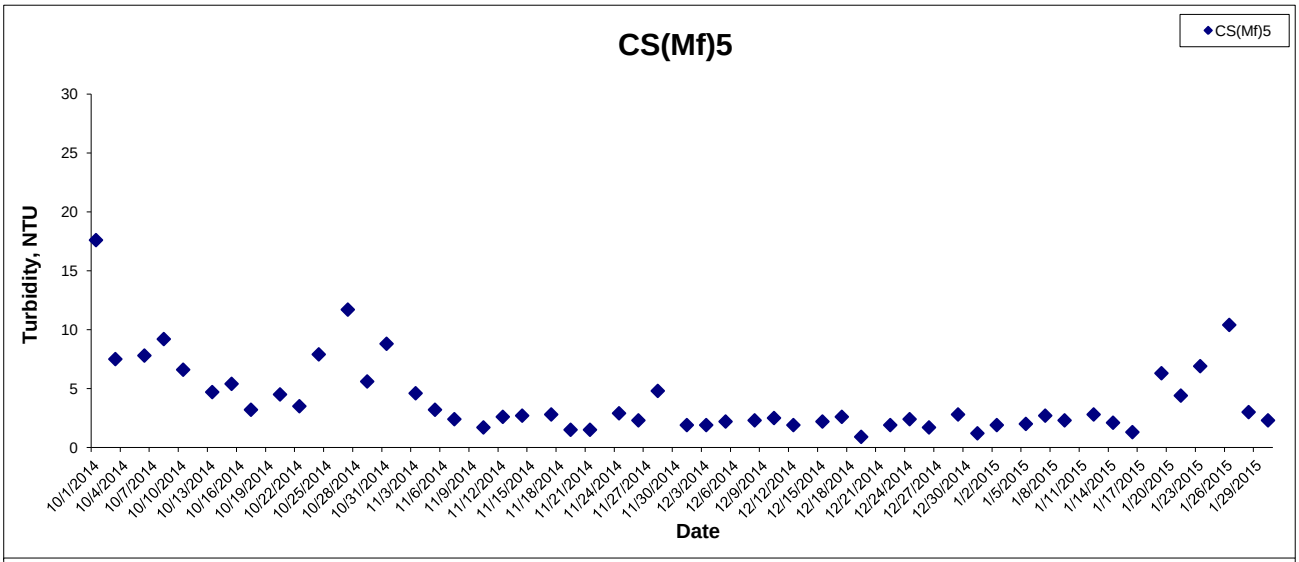

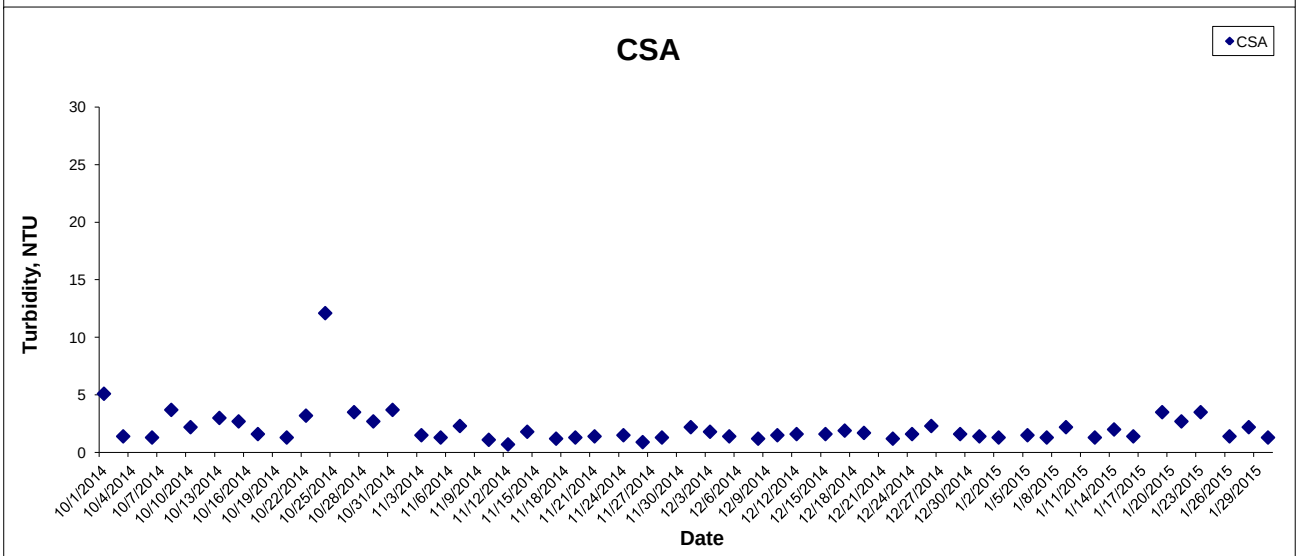

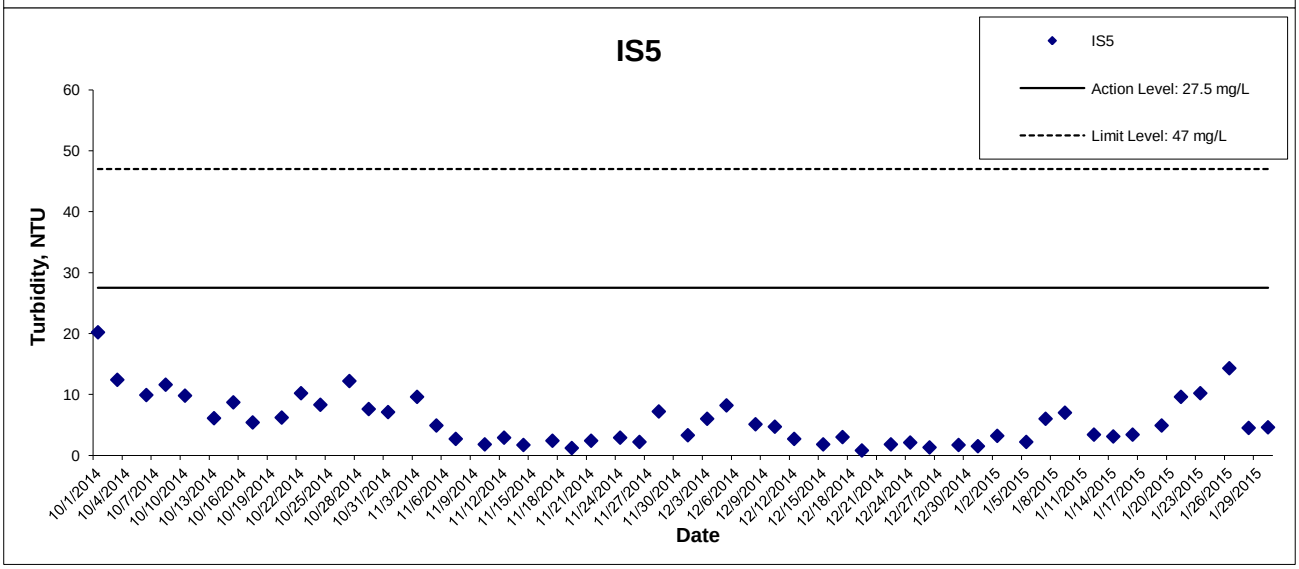

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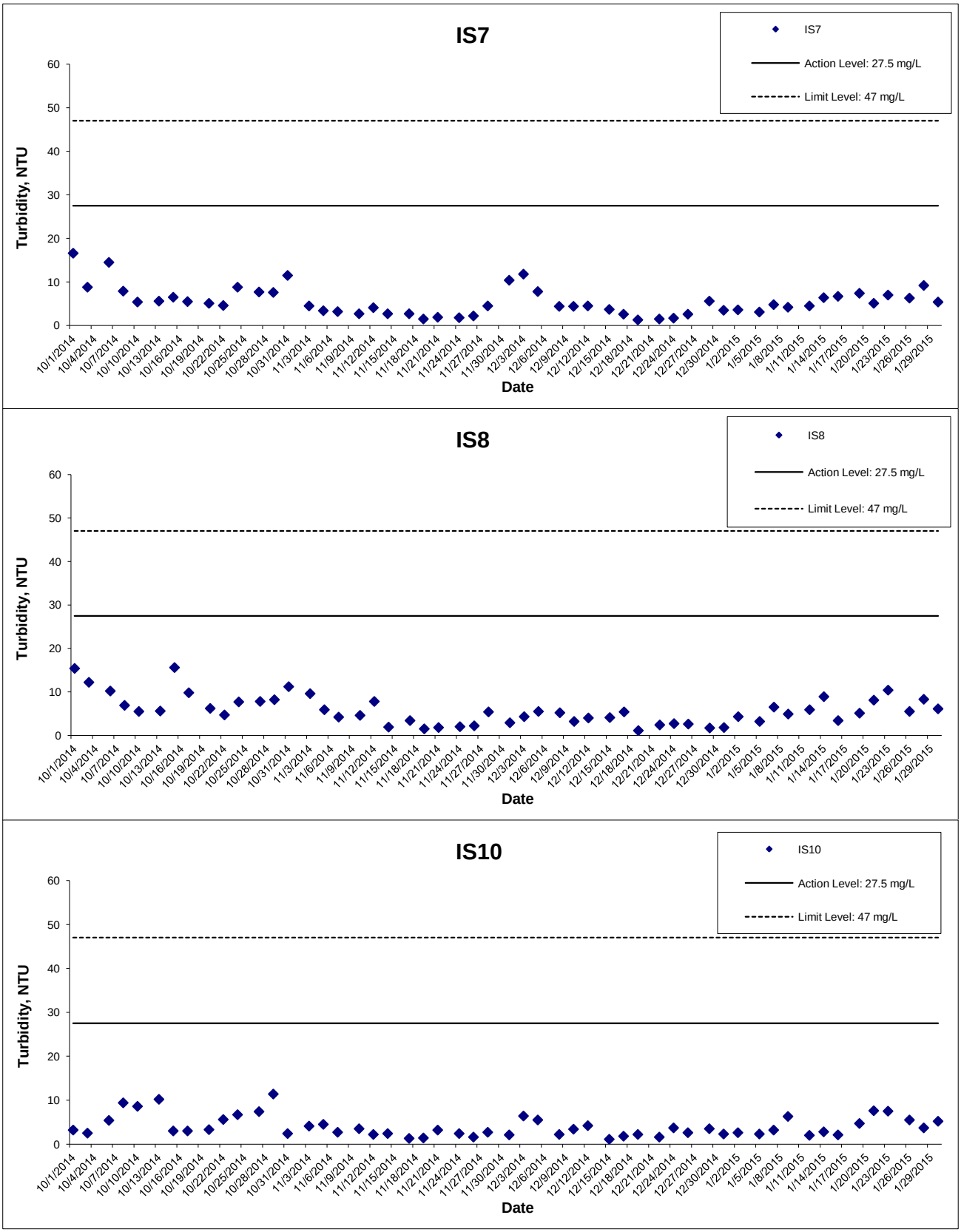
Turbidity at Mid-Ebb Tide



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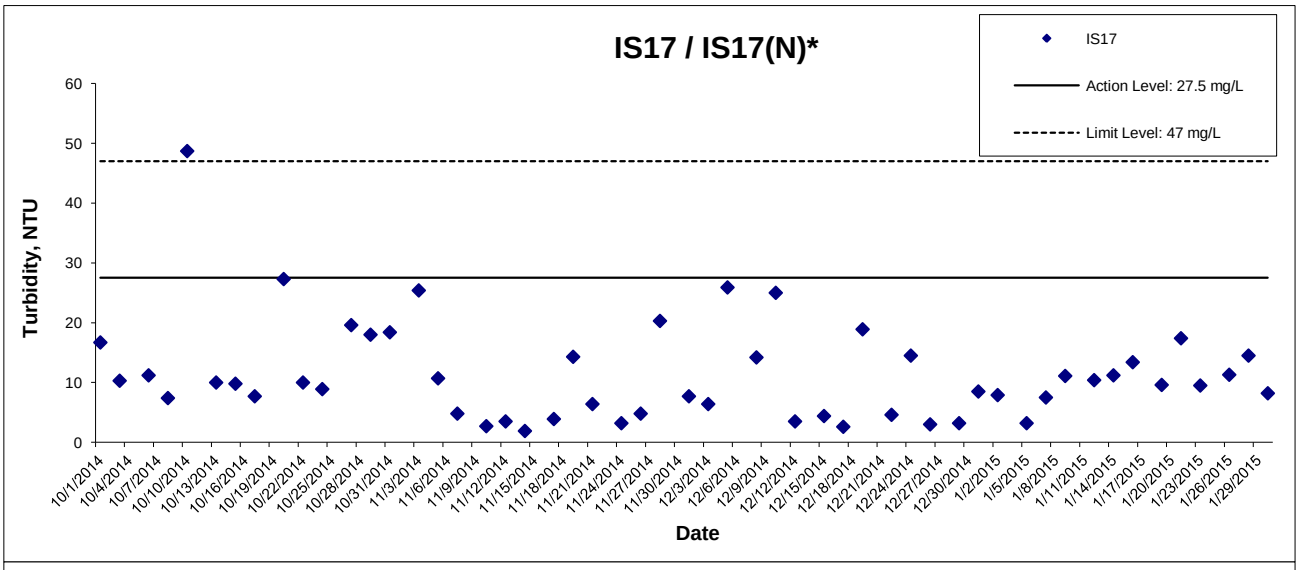
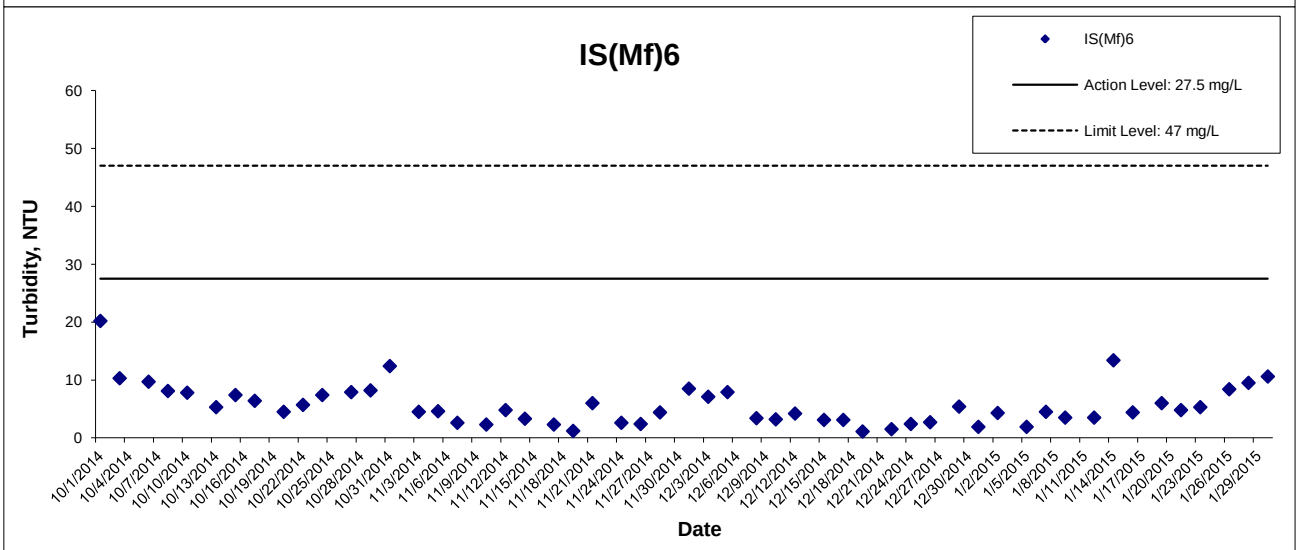
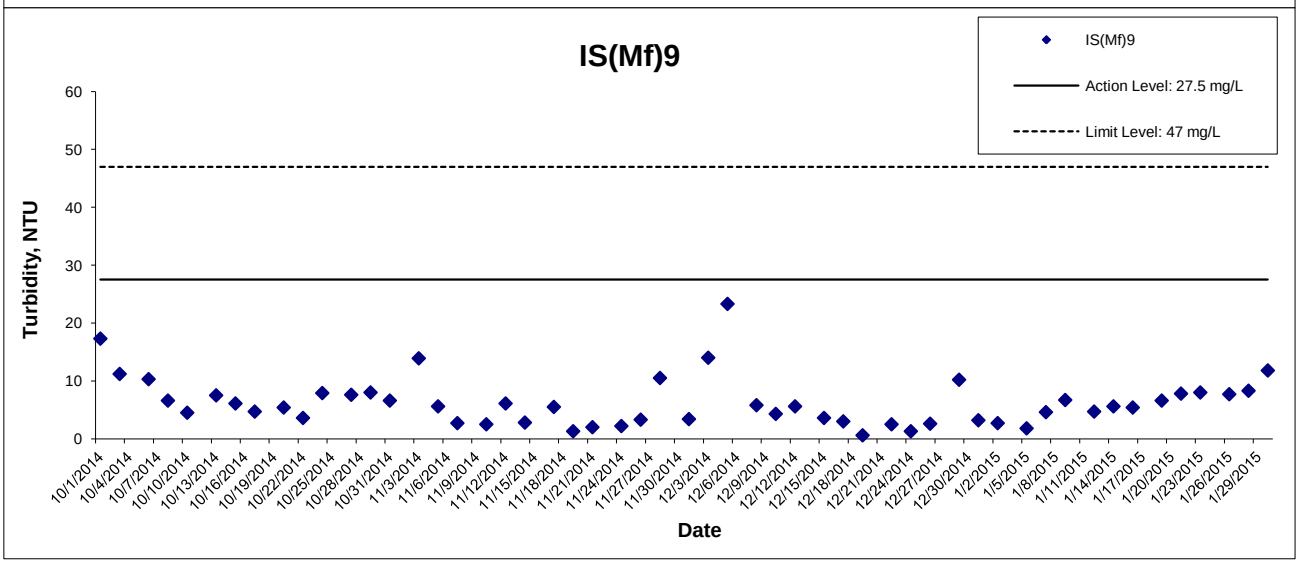
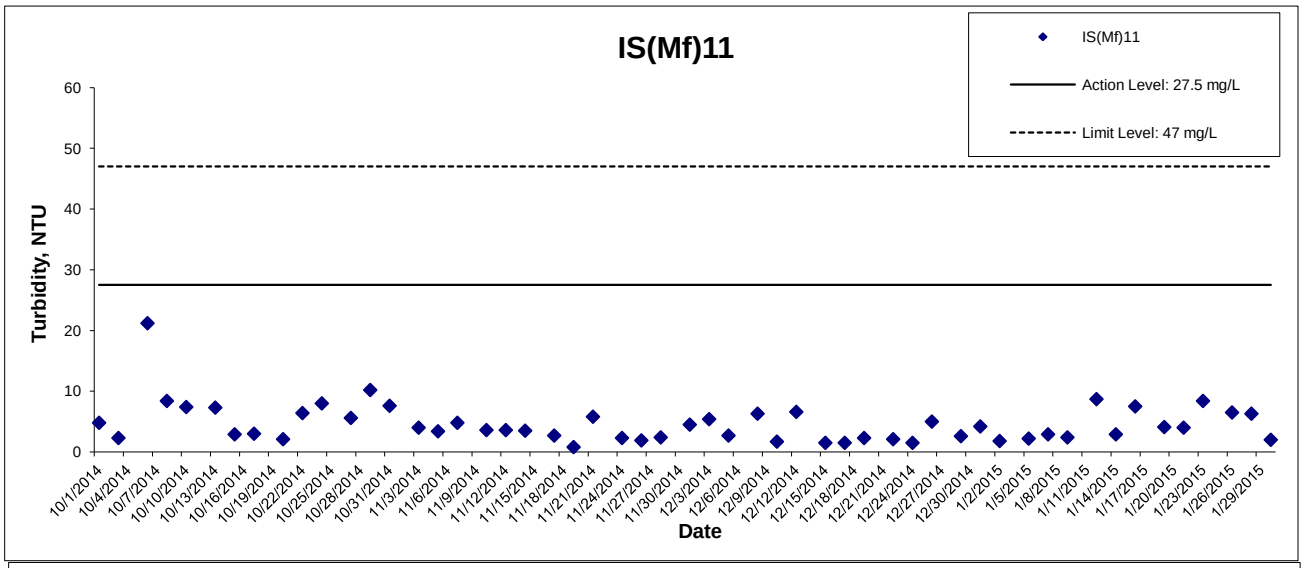
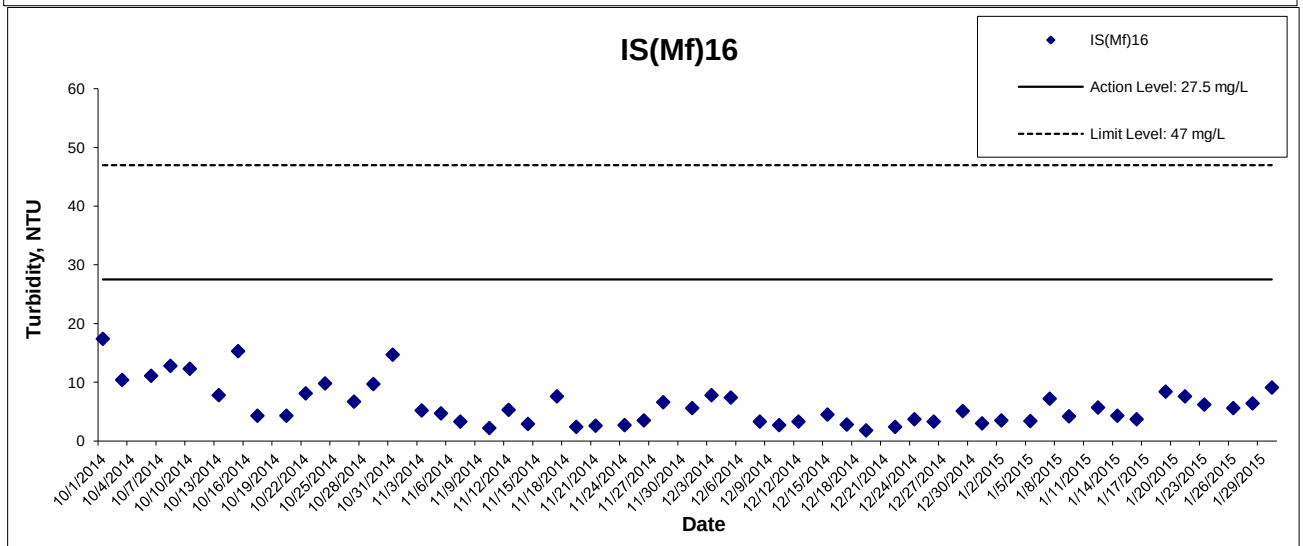


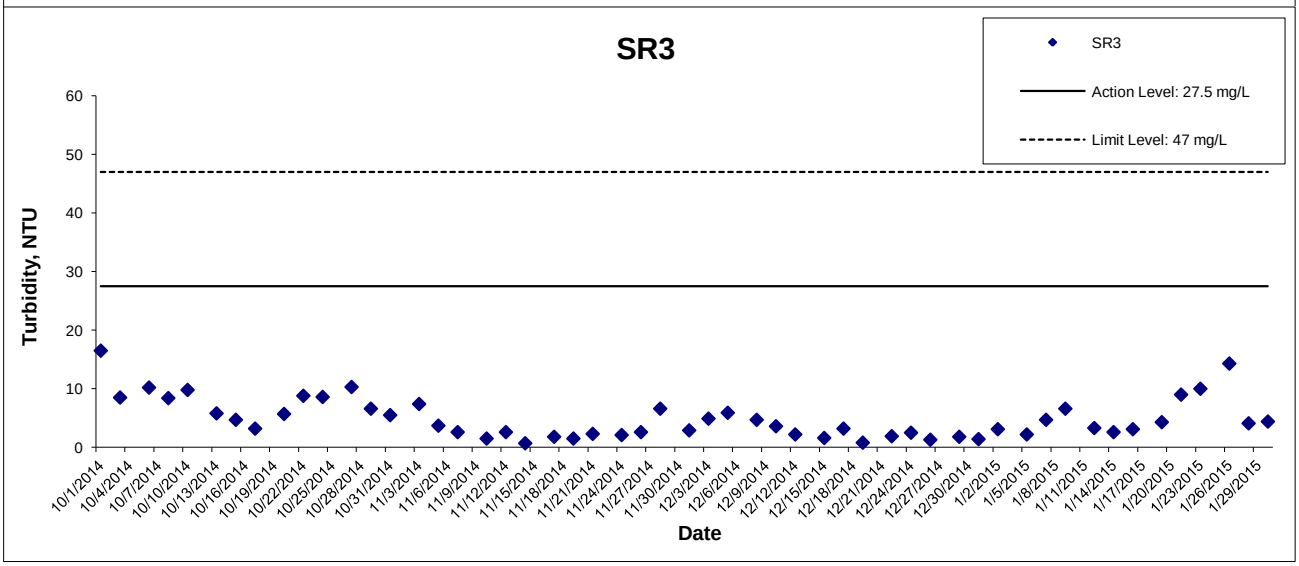




Turbidity at Mid-Ebb Tide







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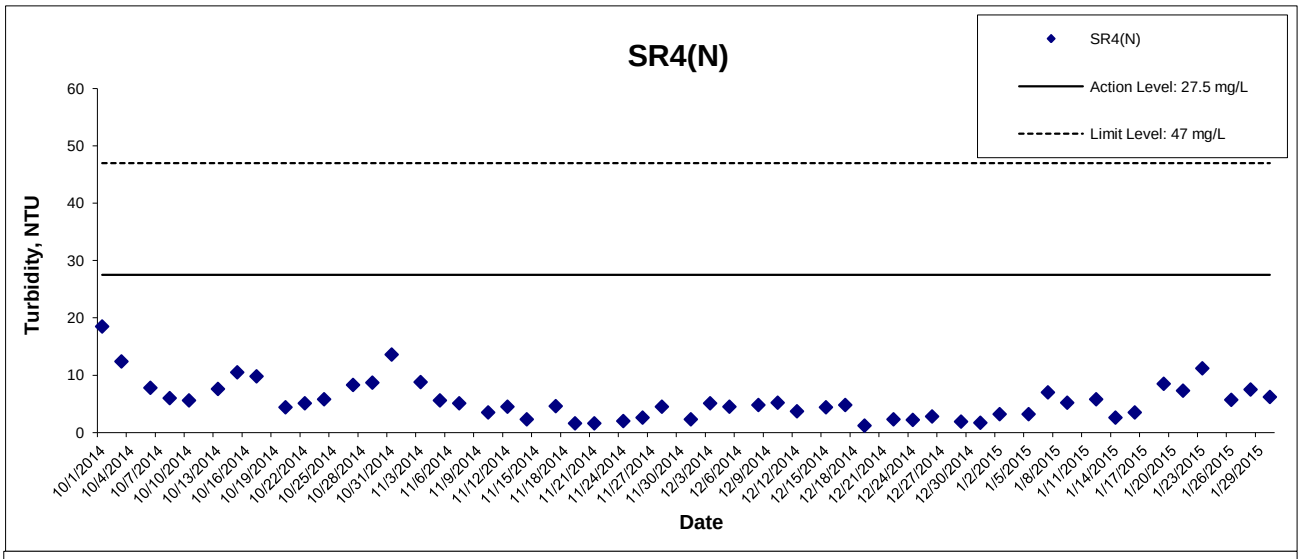

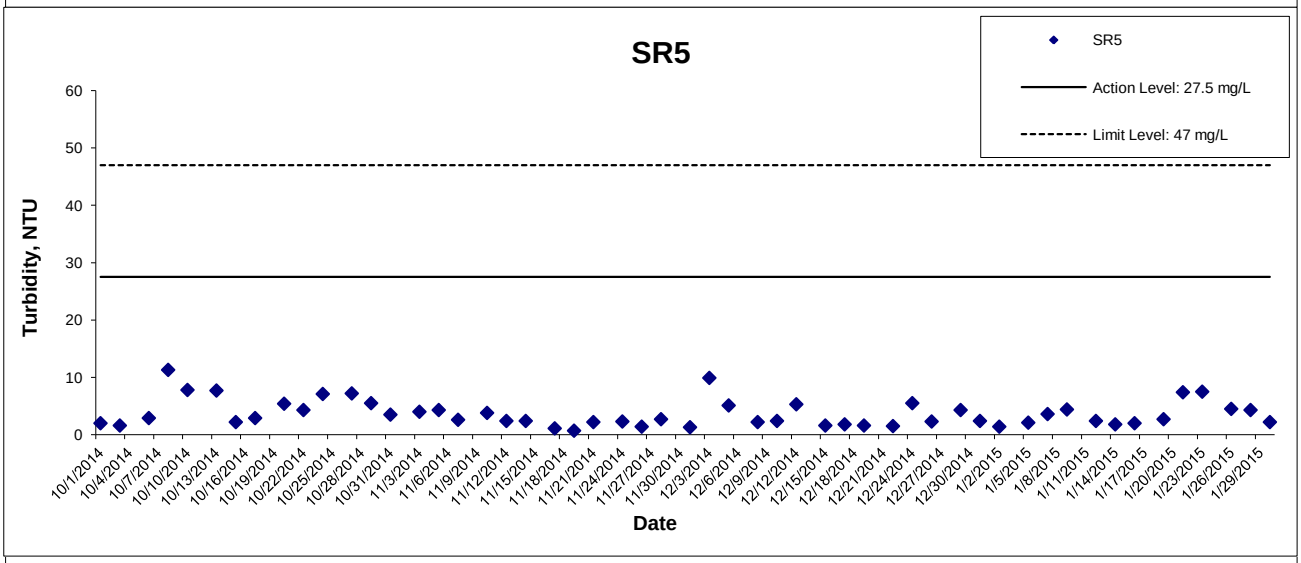

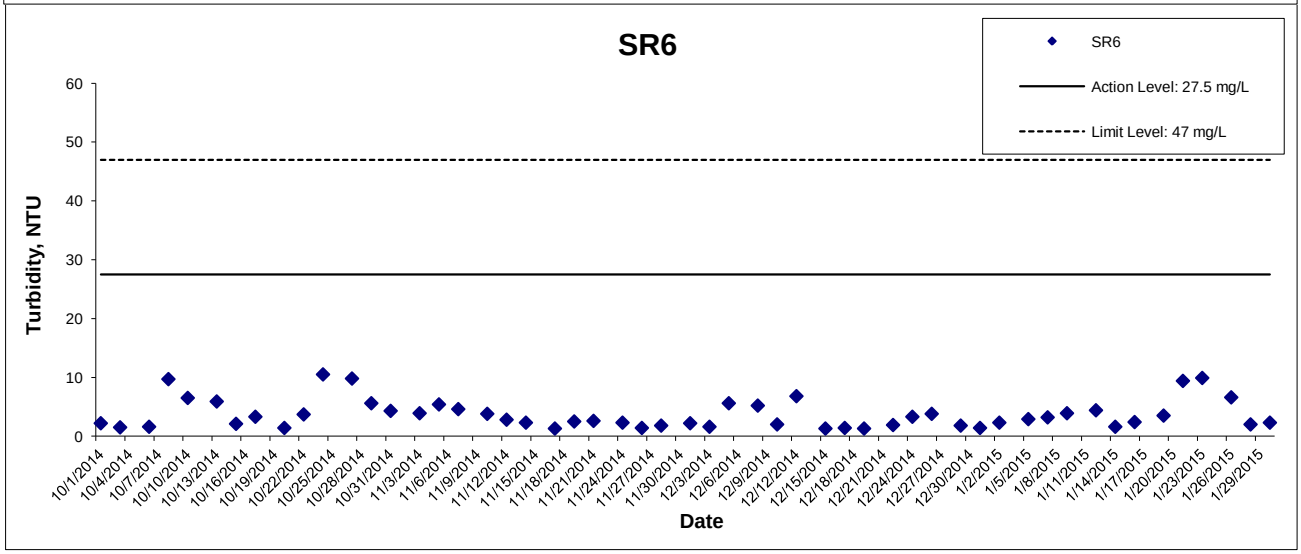

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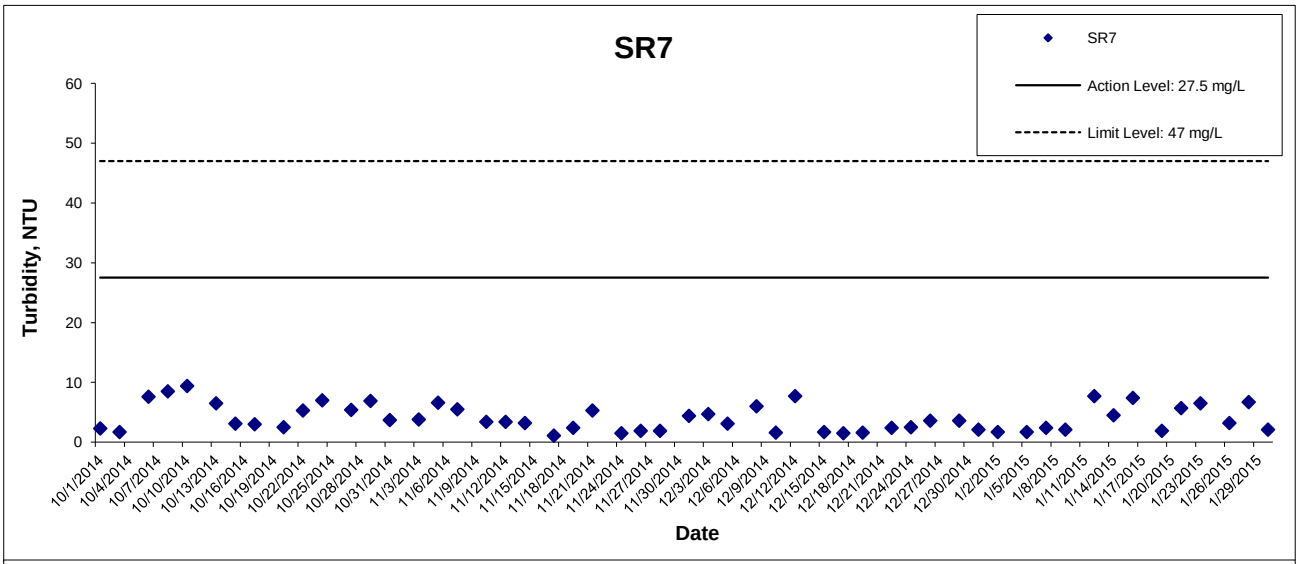

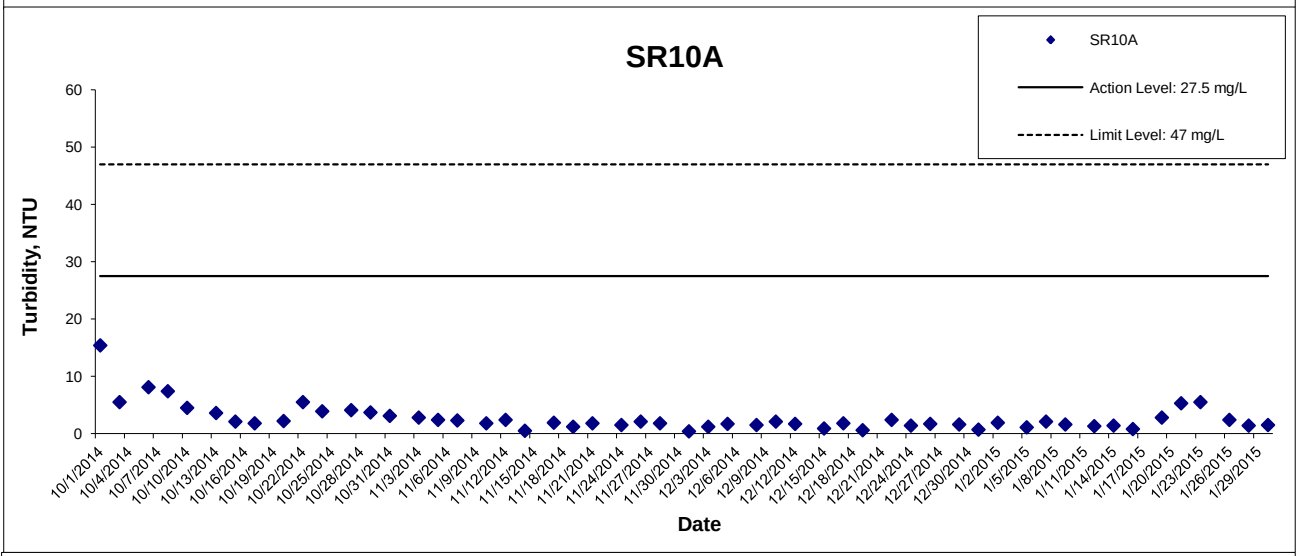

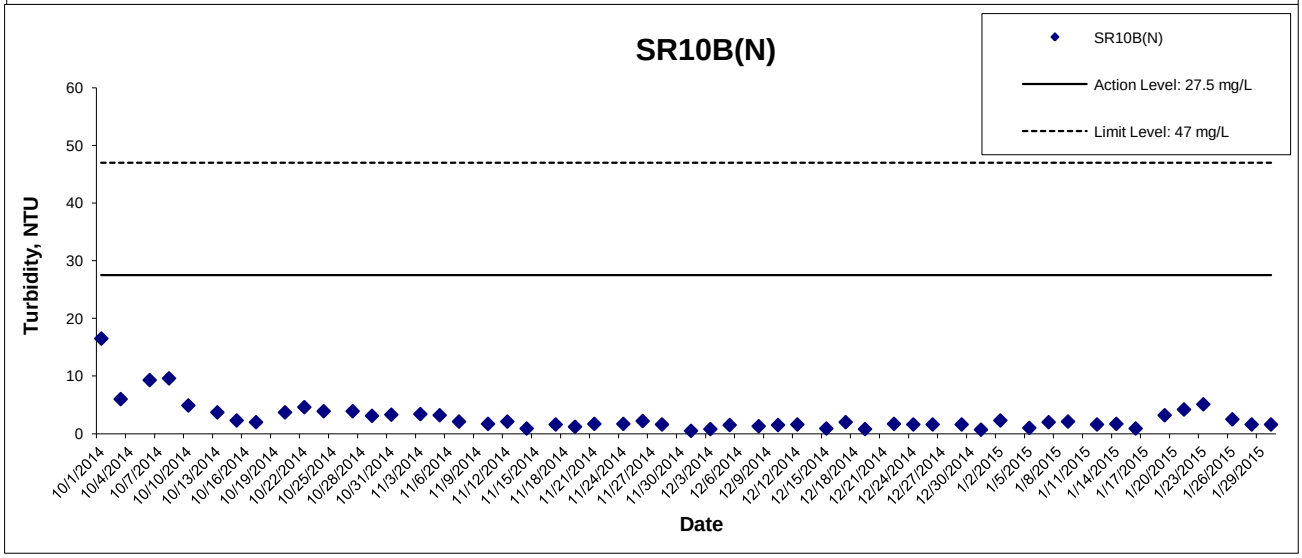

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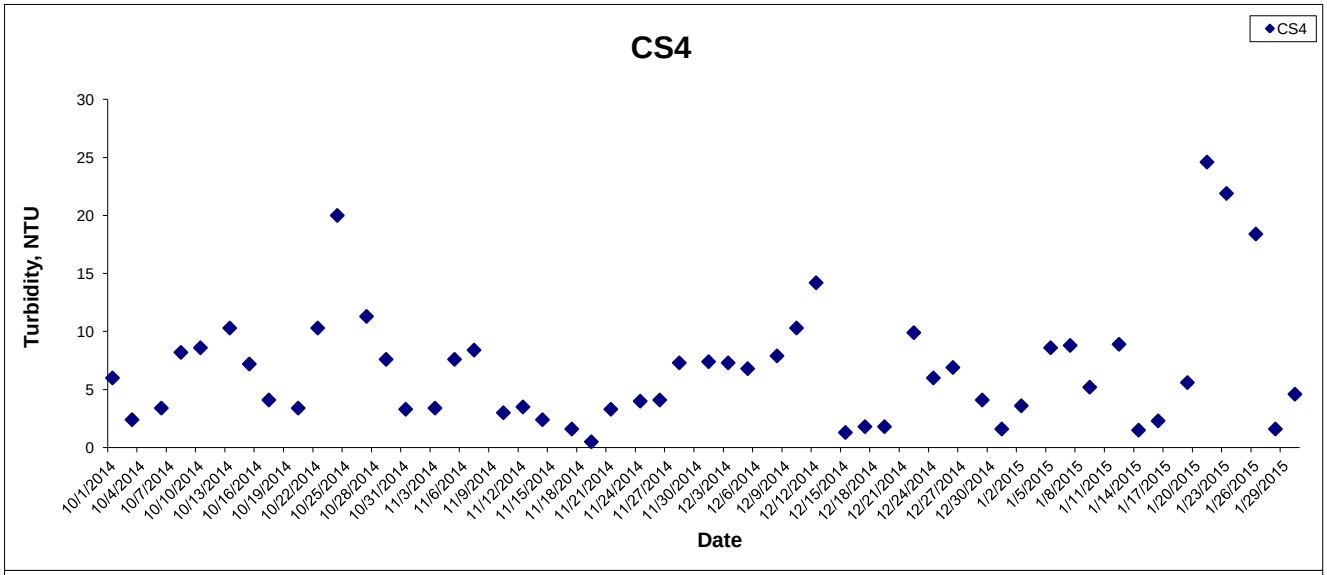

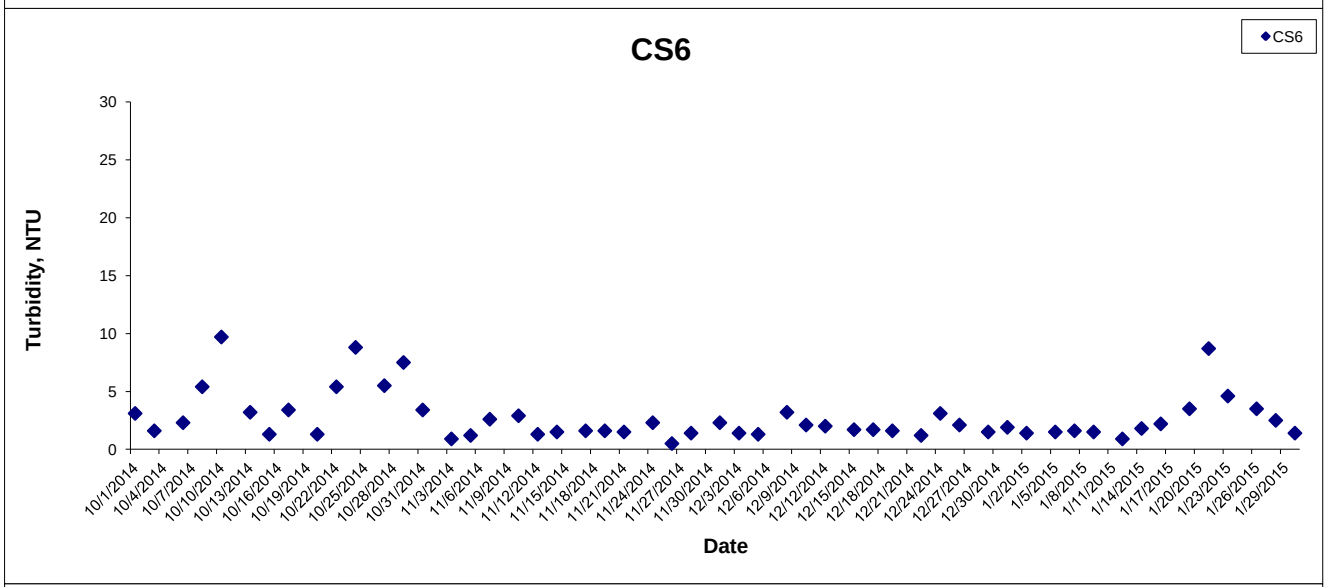

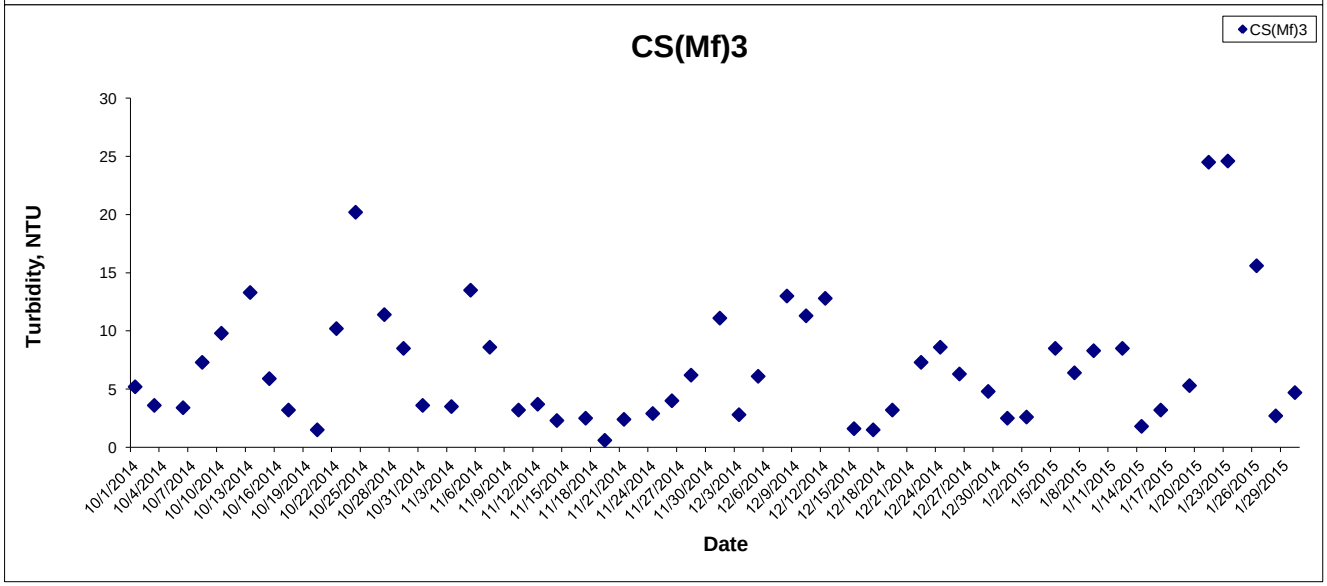

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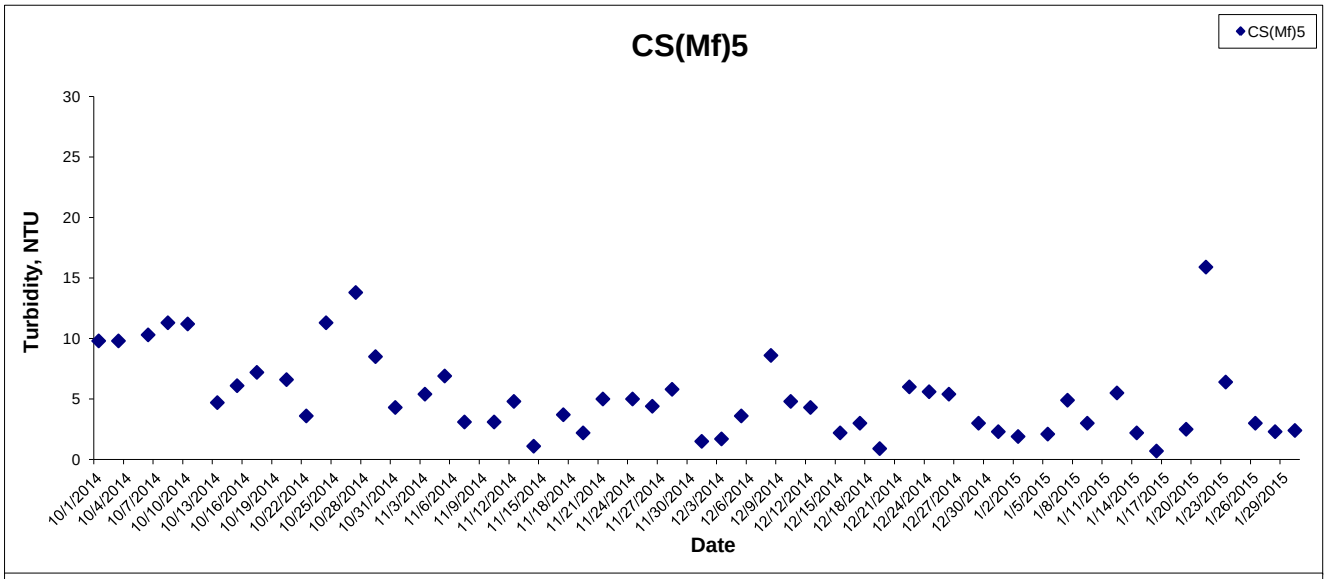

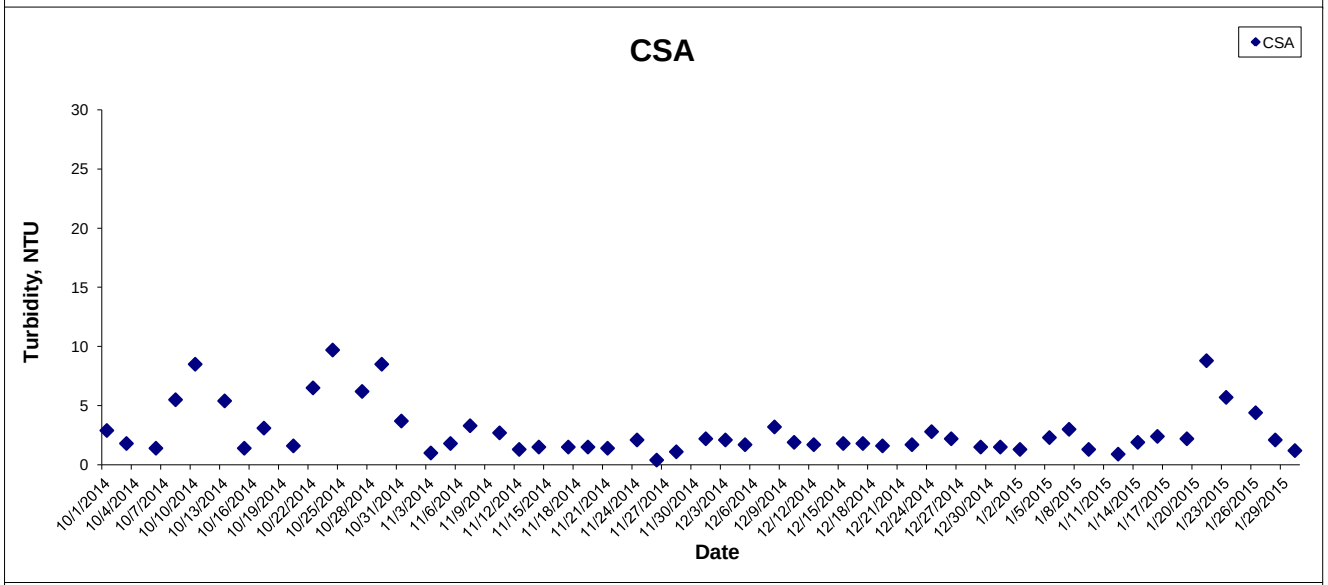

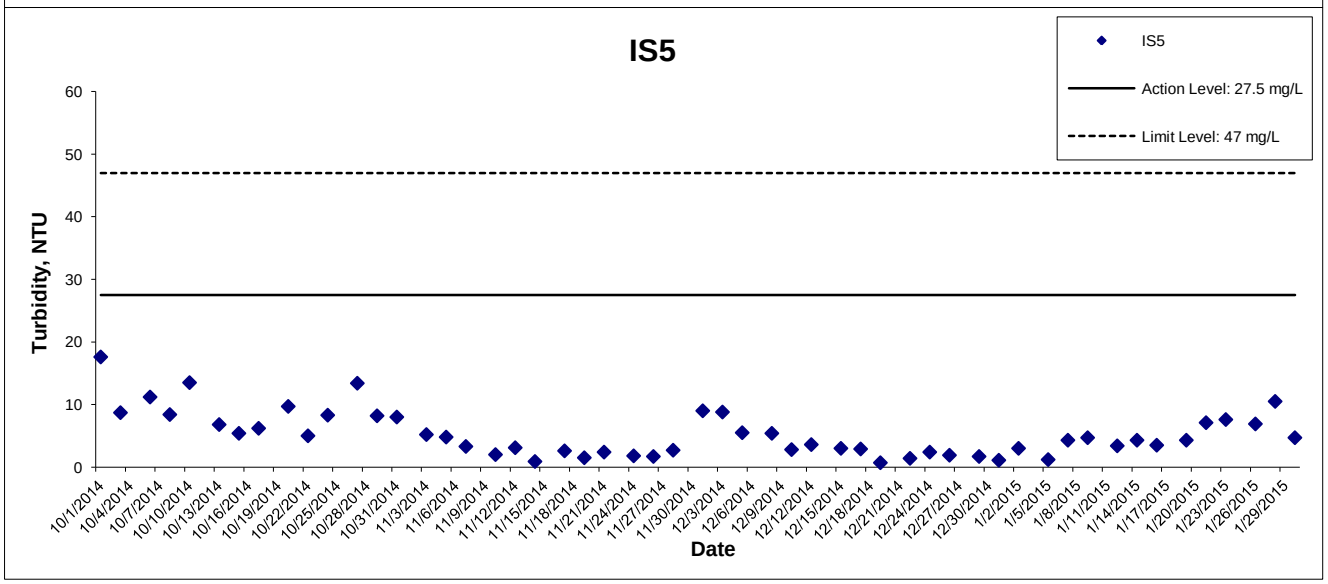

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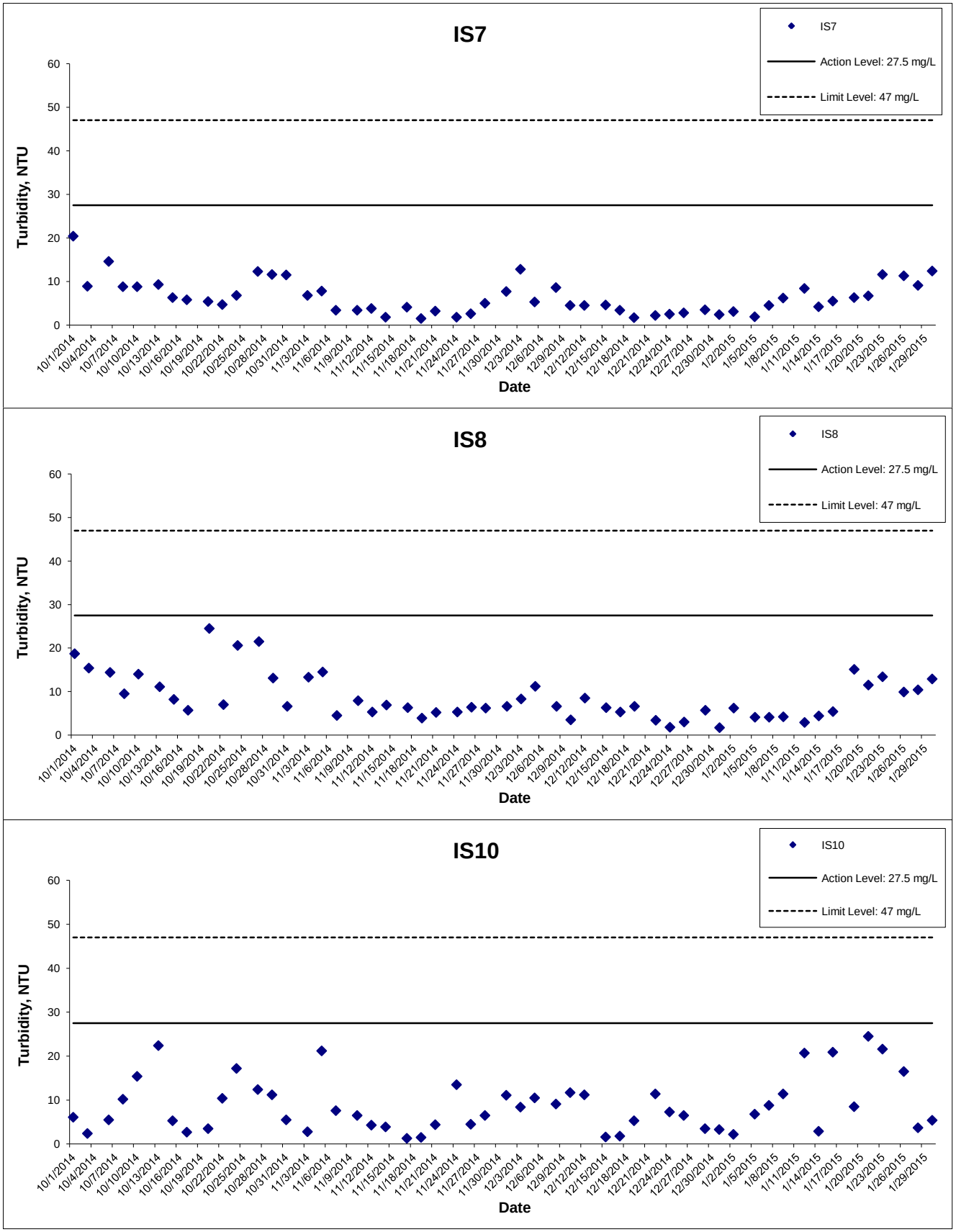

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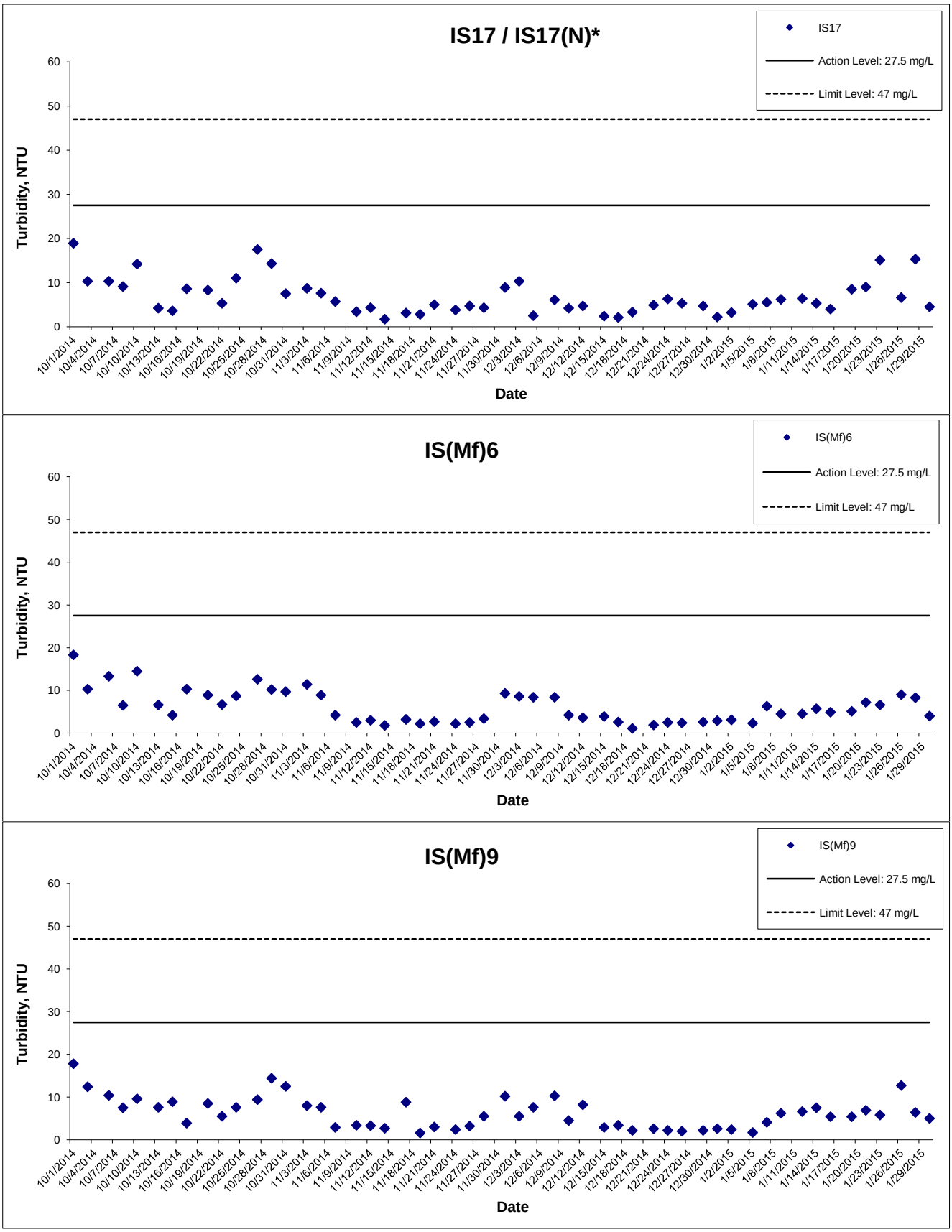

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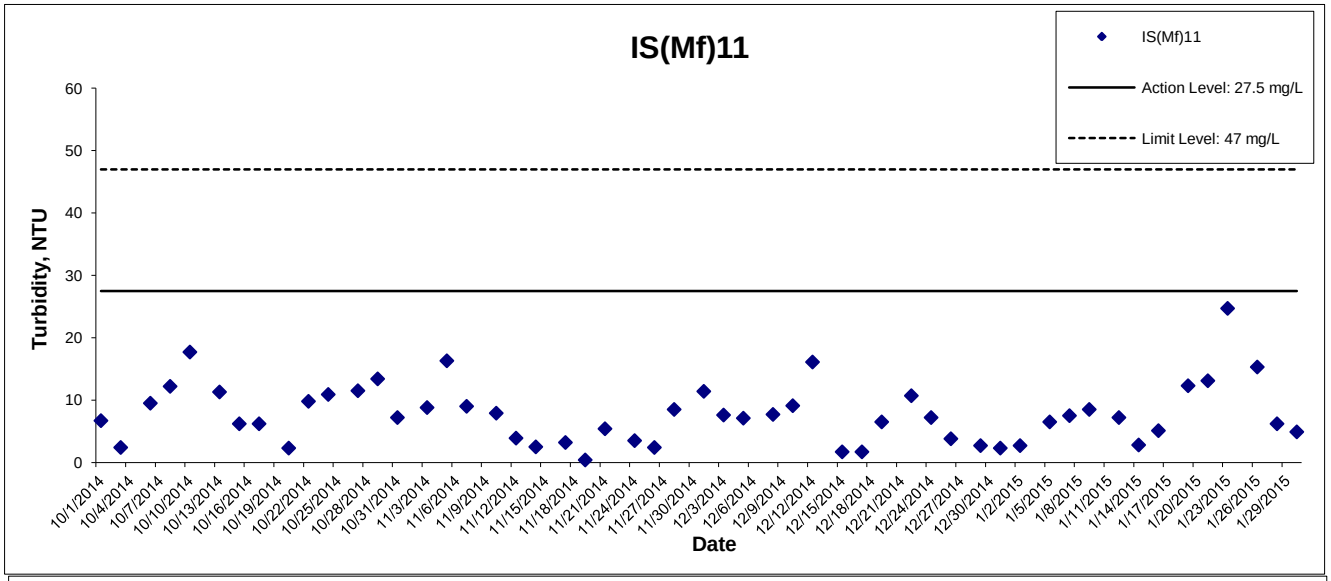

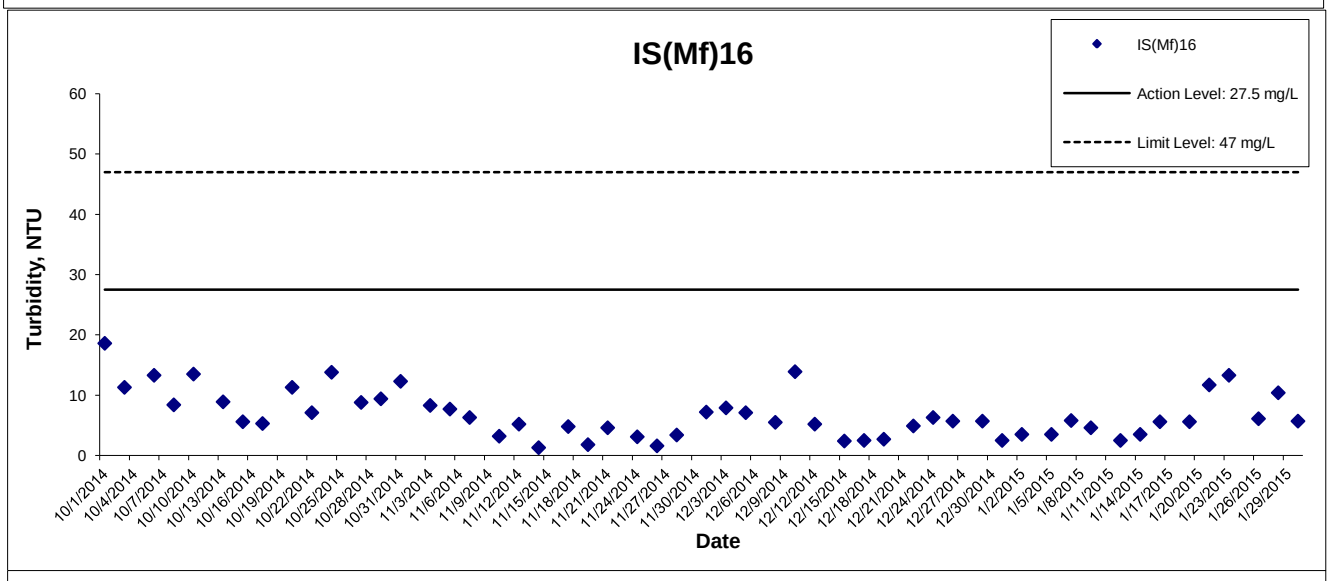

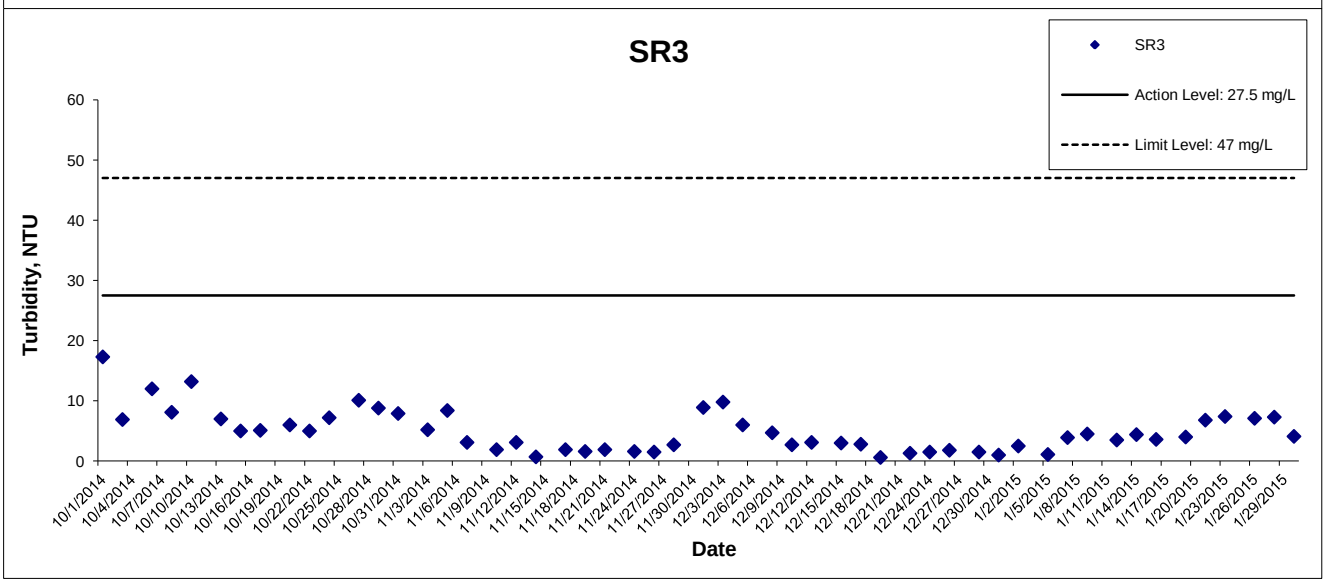

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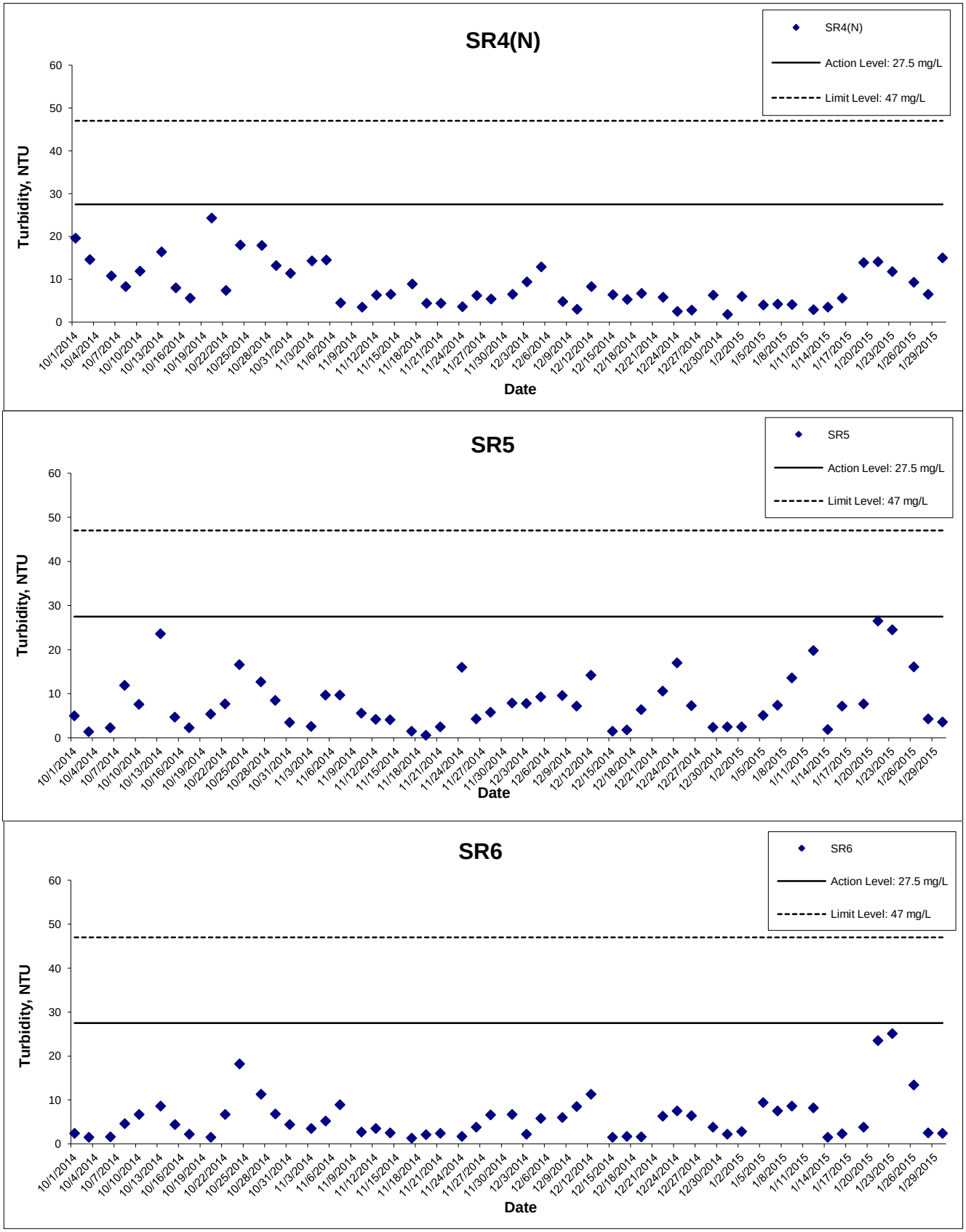

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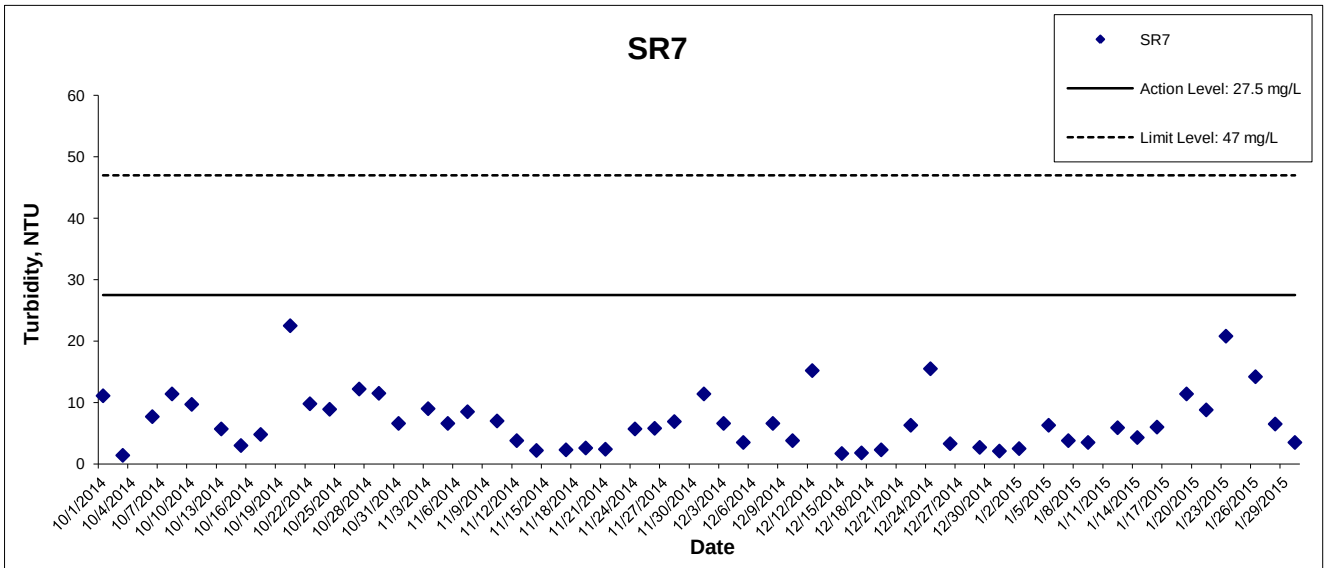
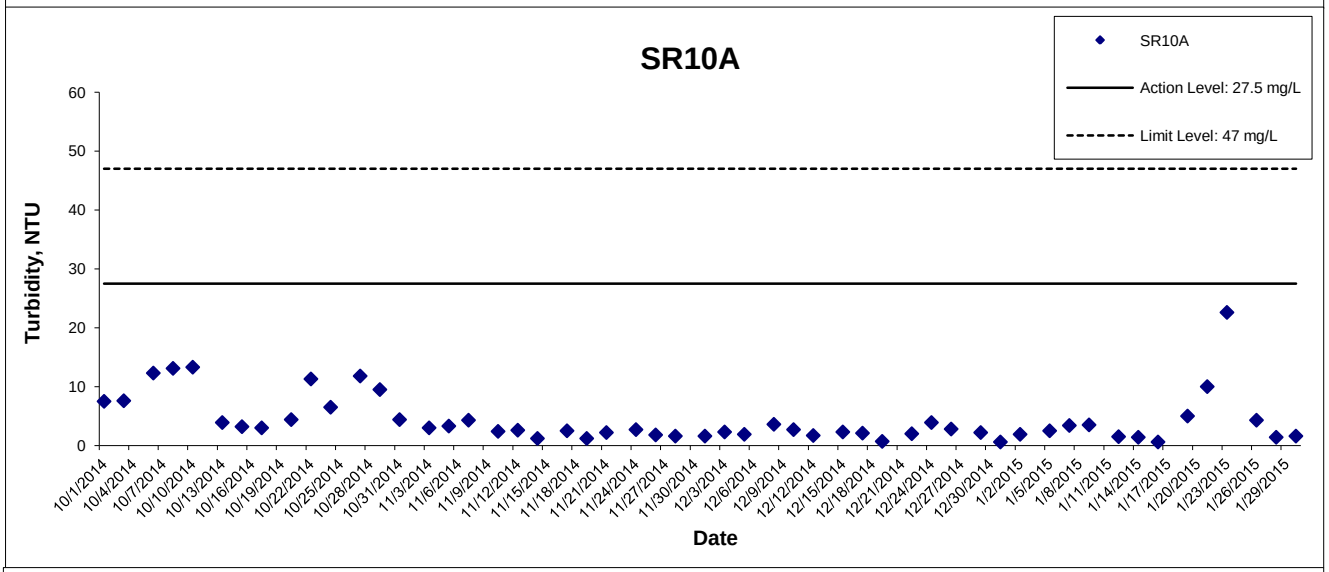
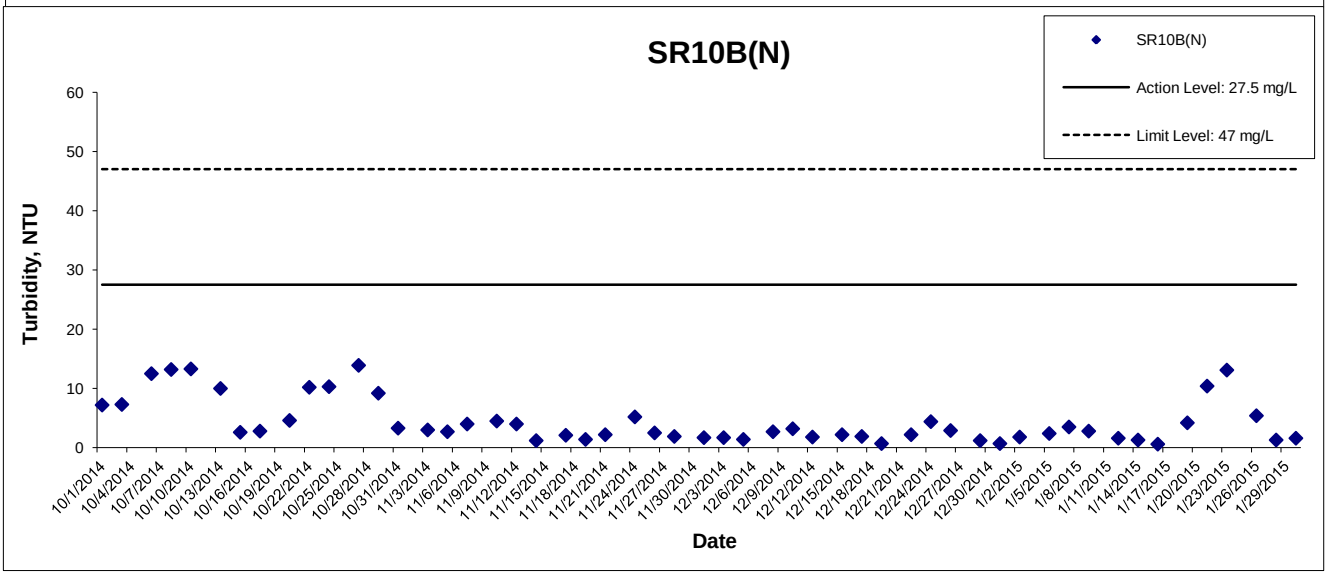
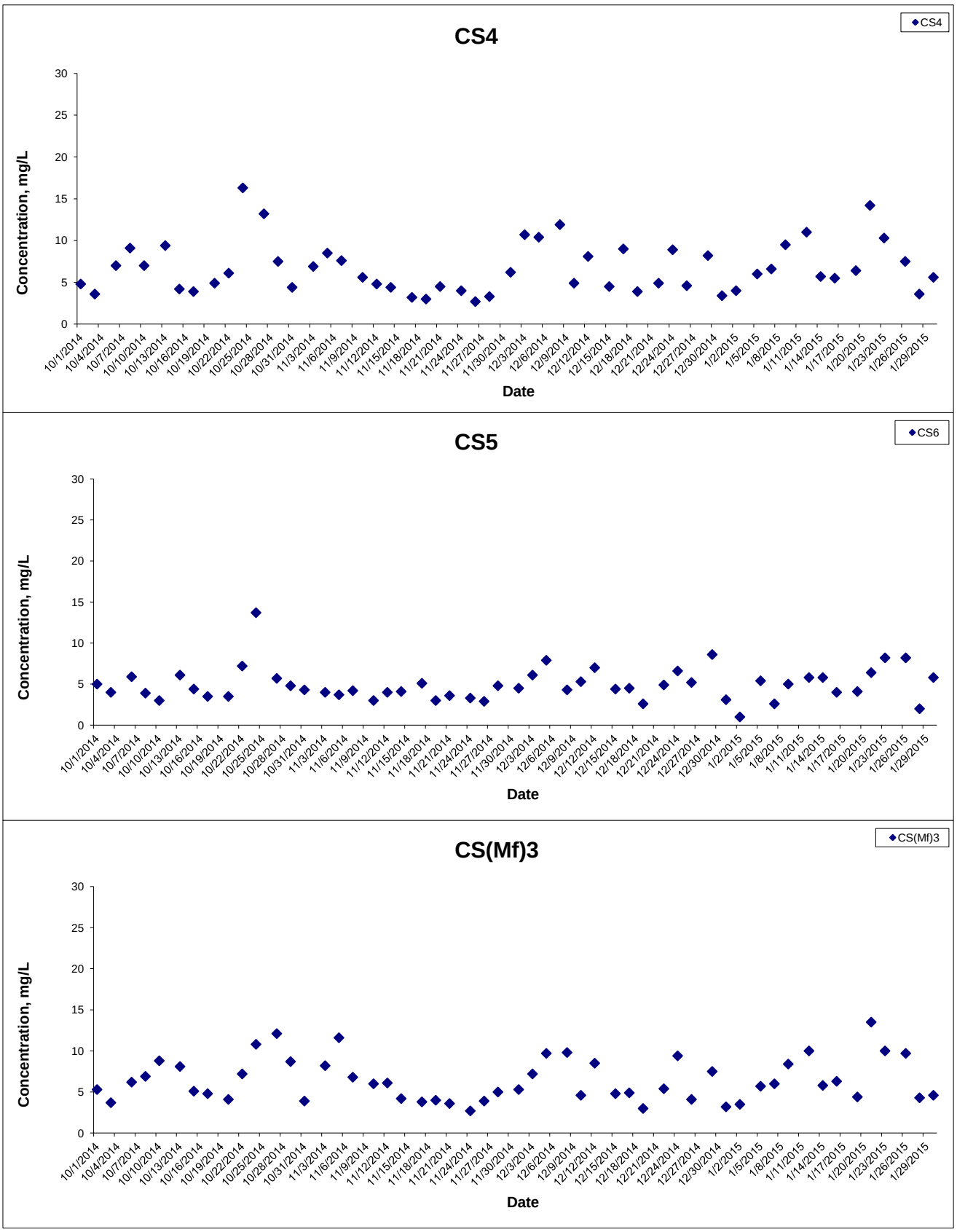






Suspended Solids at Mid-Ebb Tide



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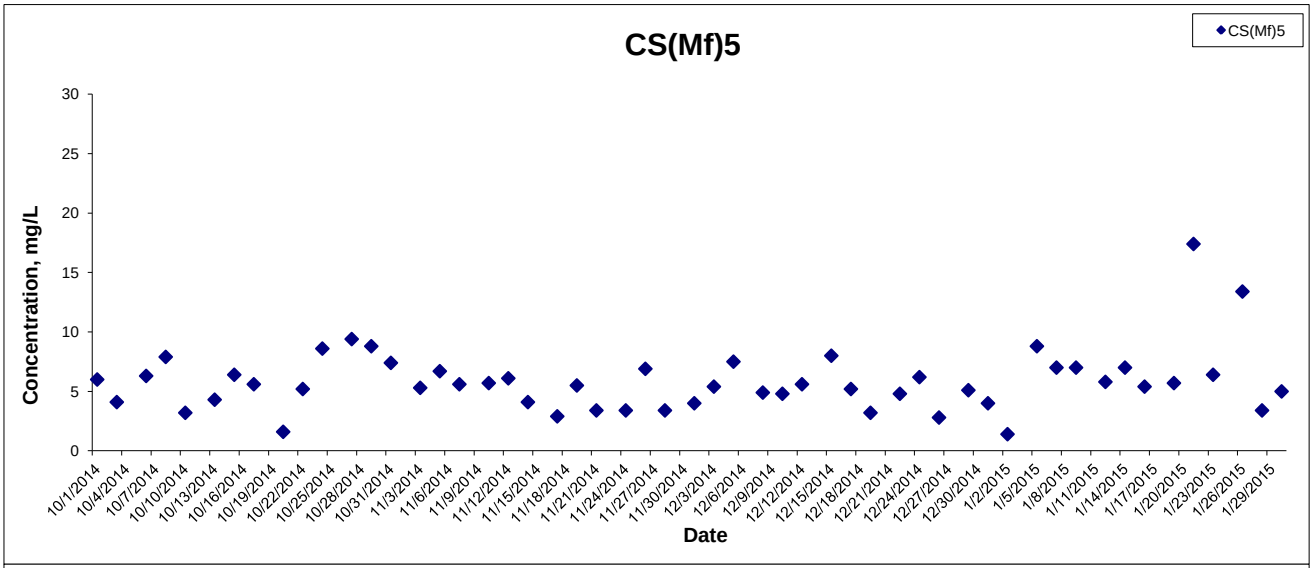

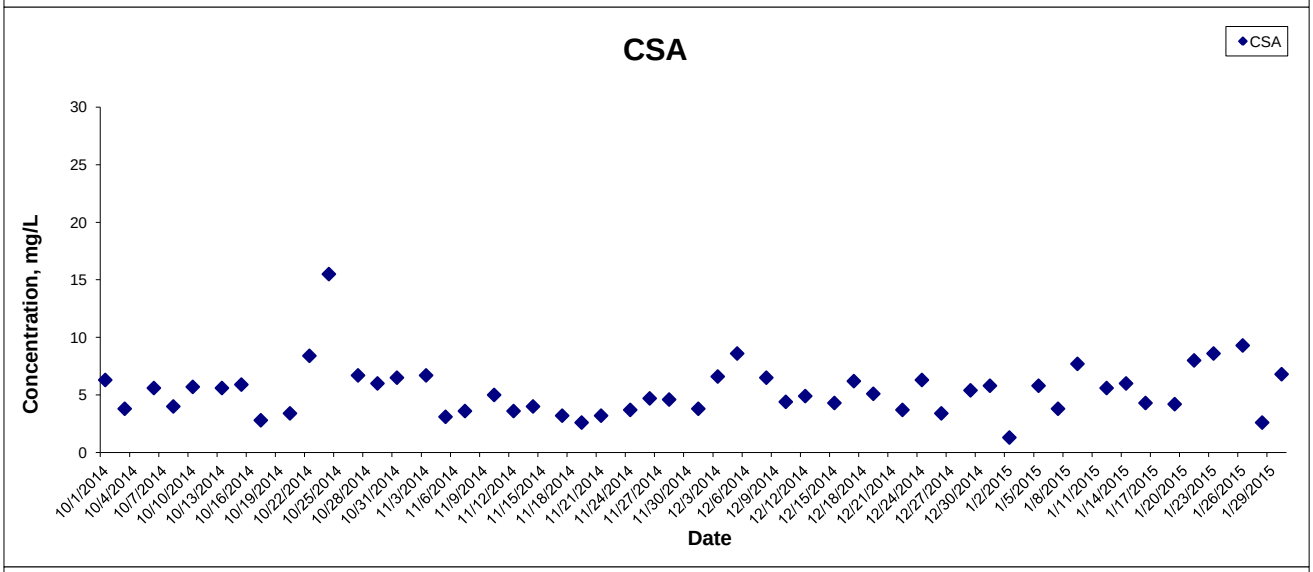

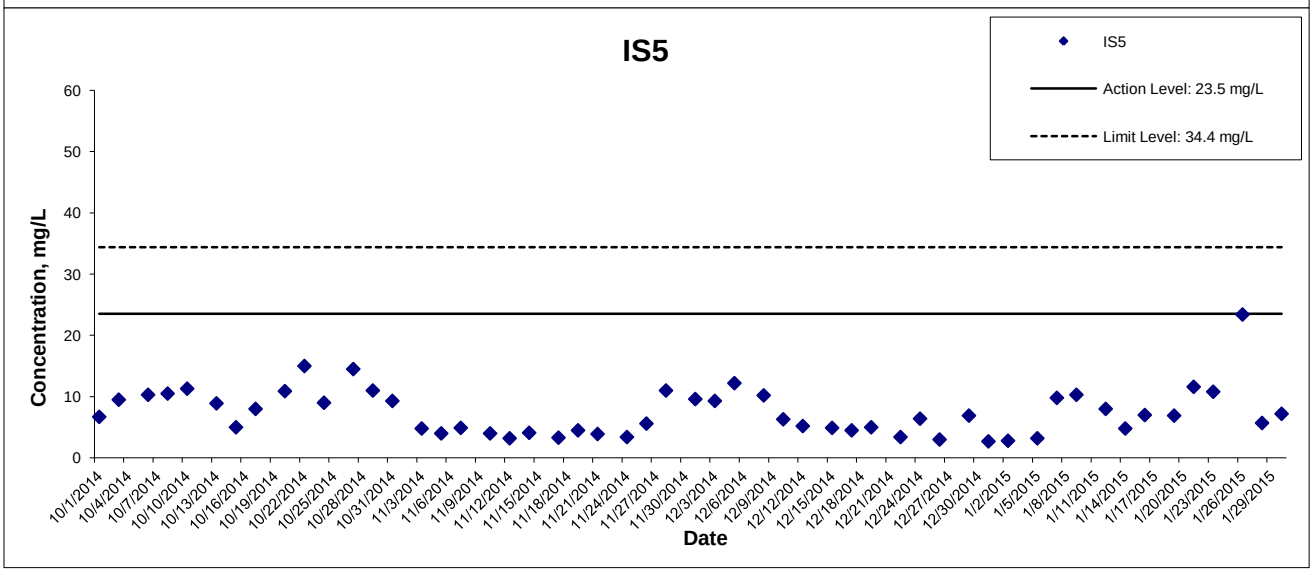

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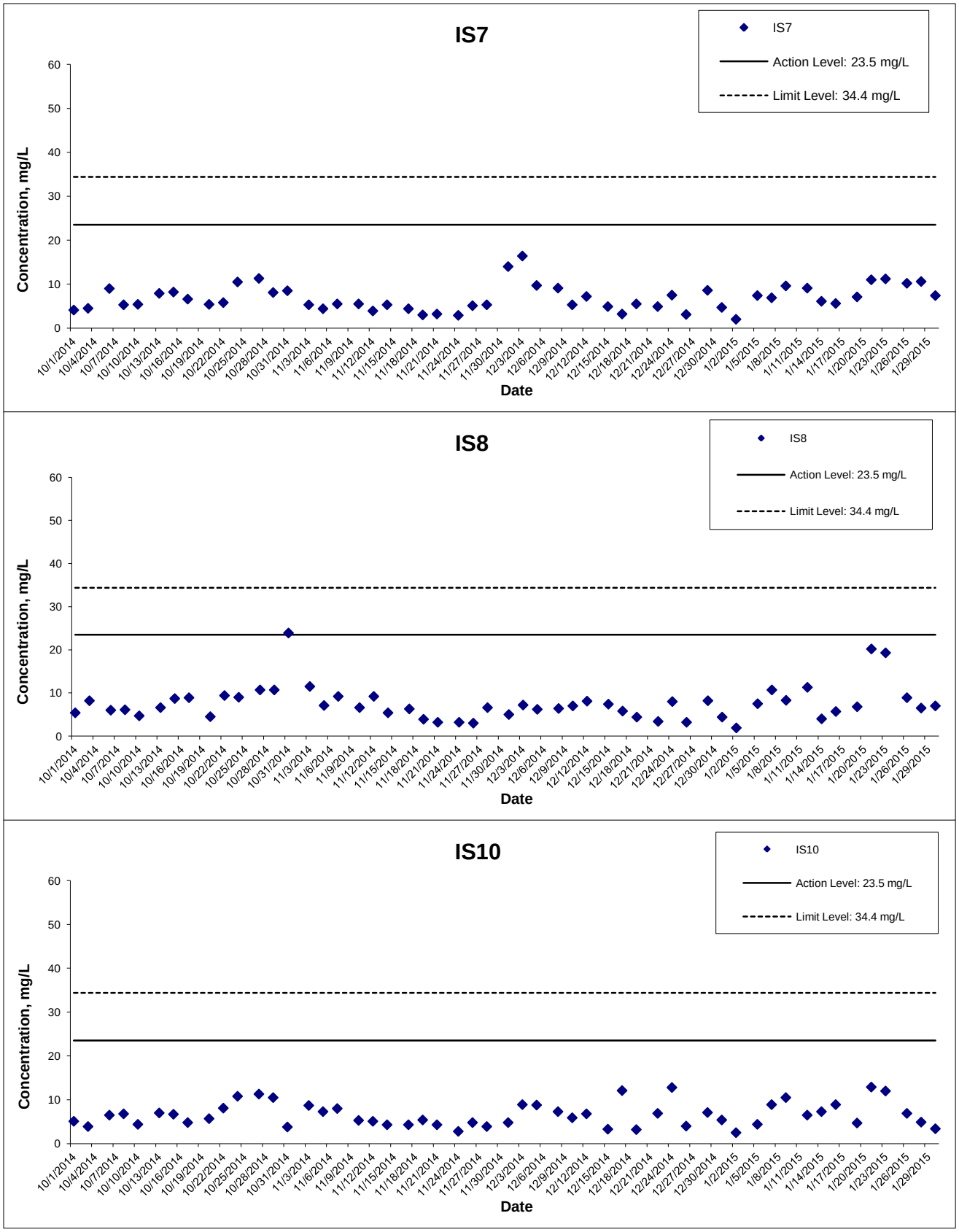

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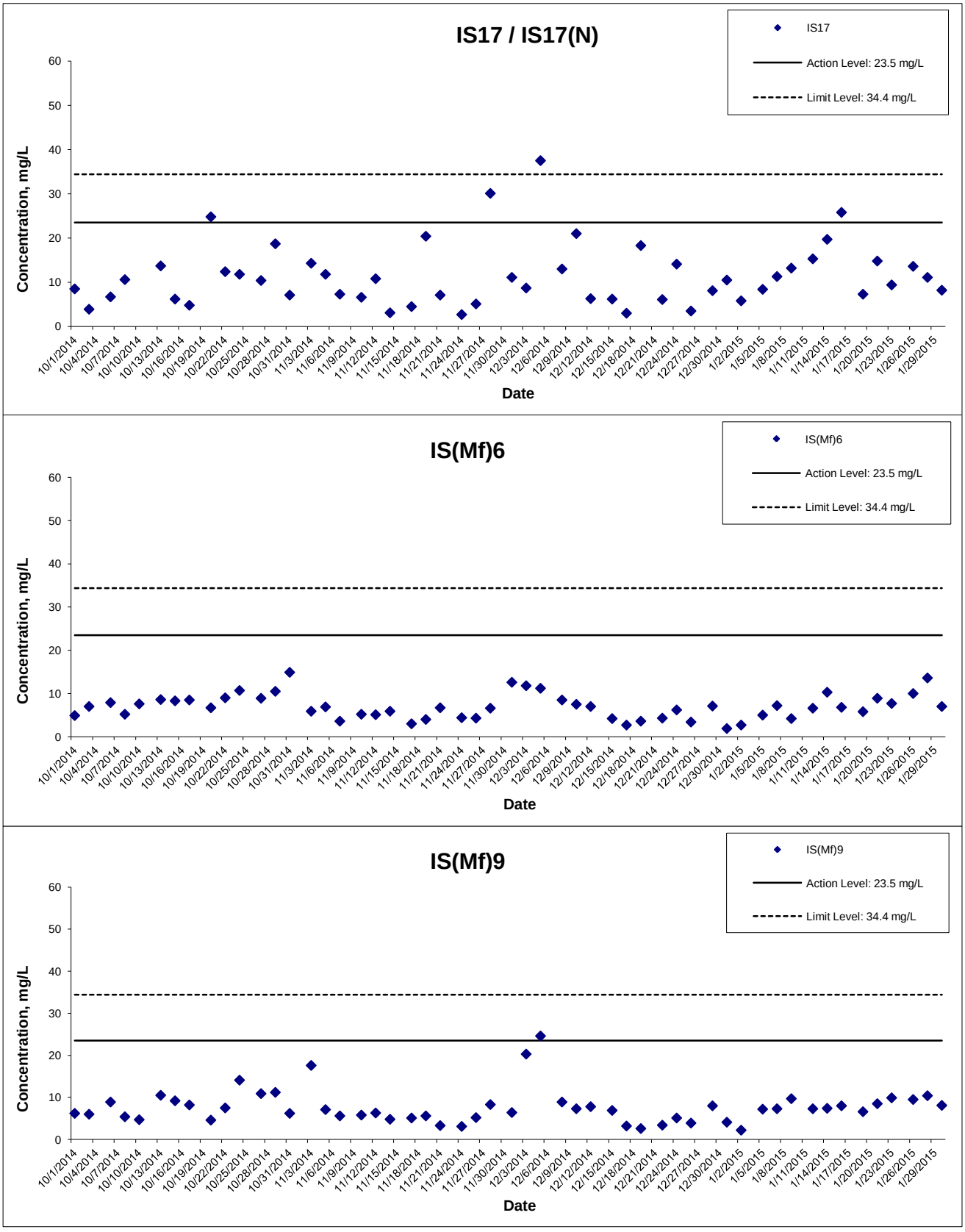

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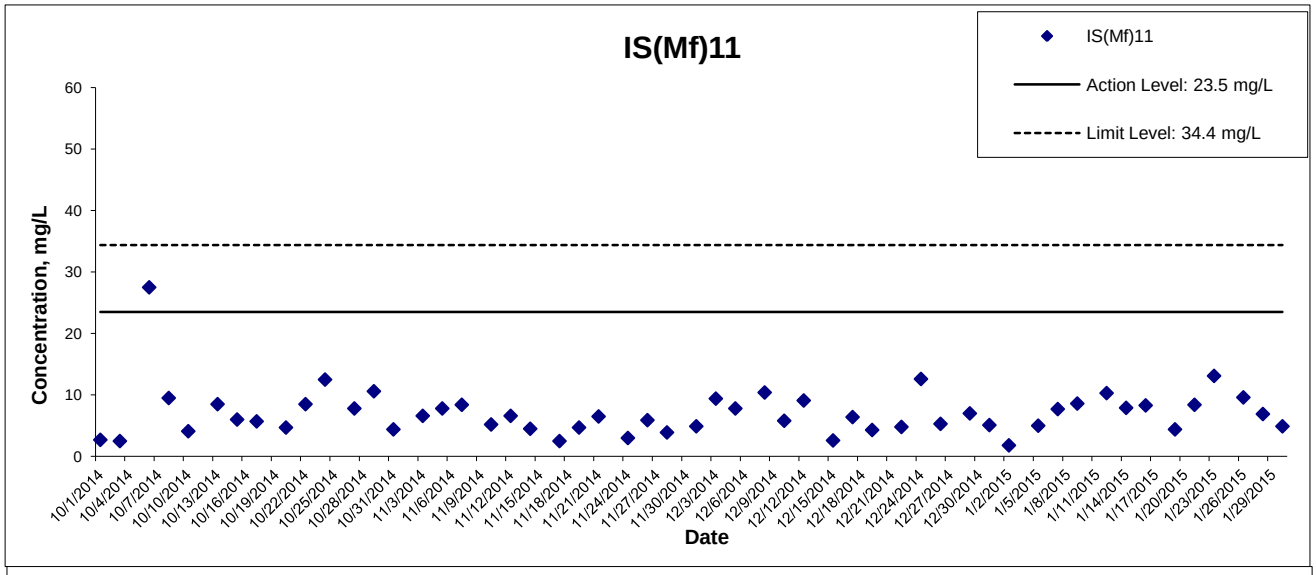

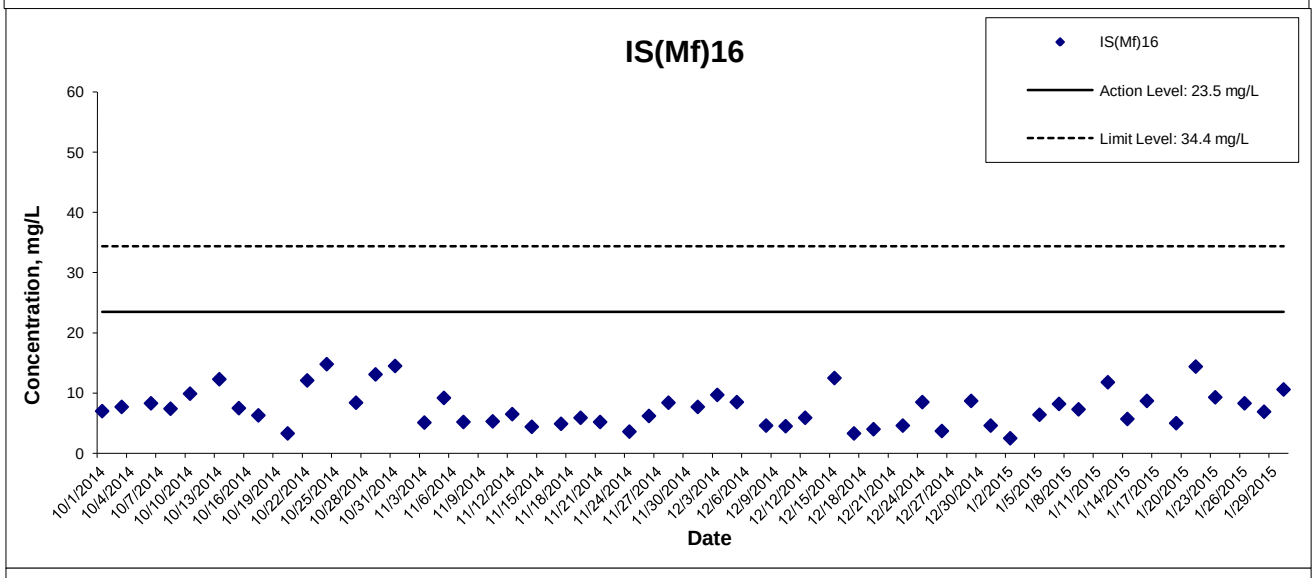

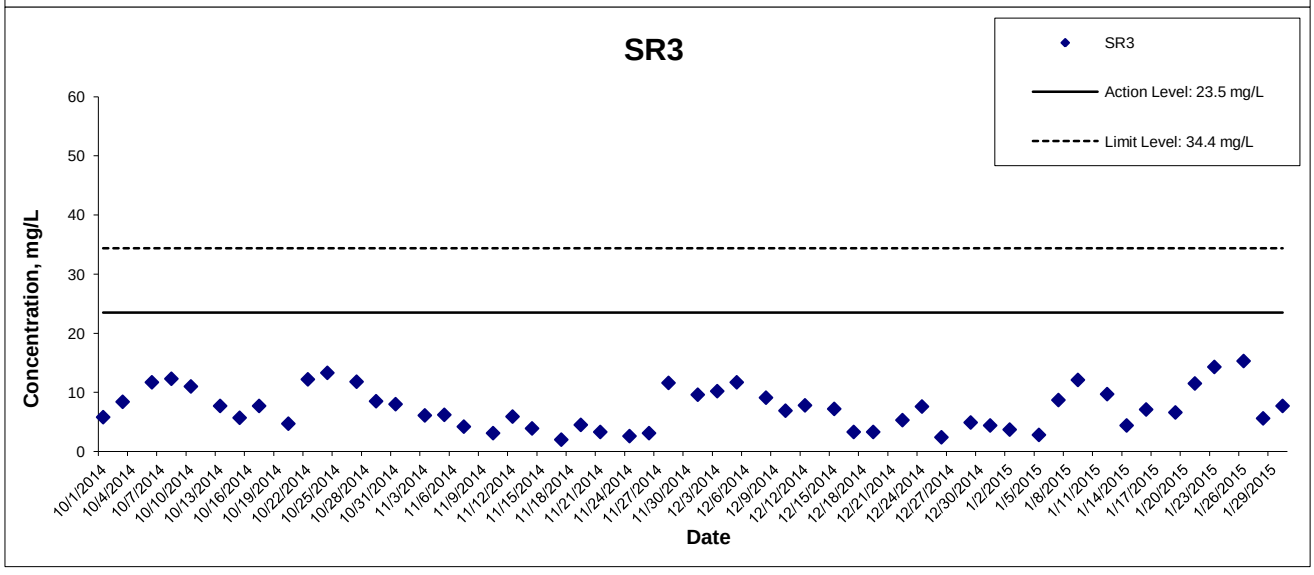

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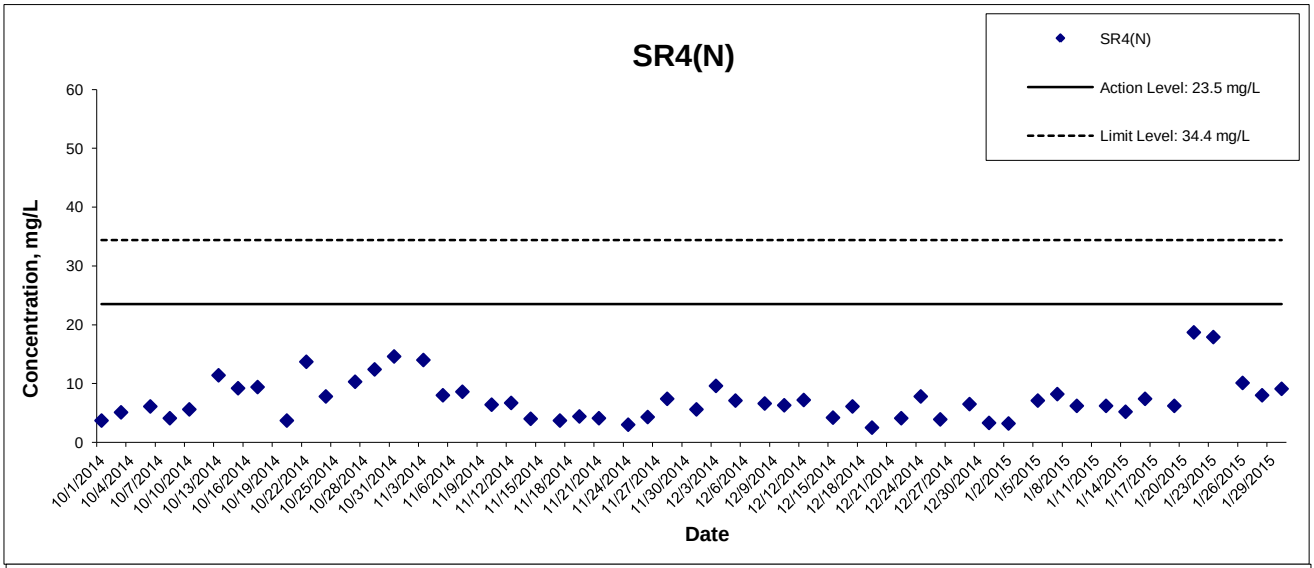

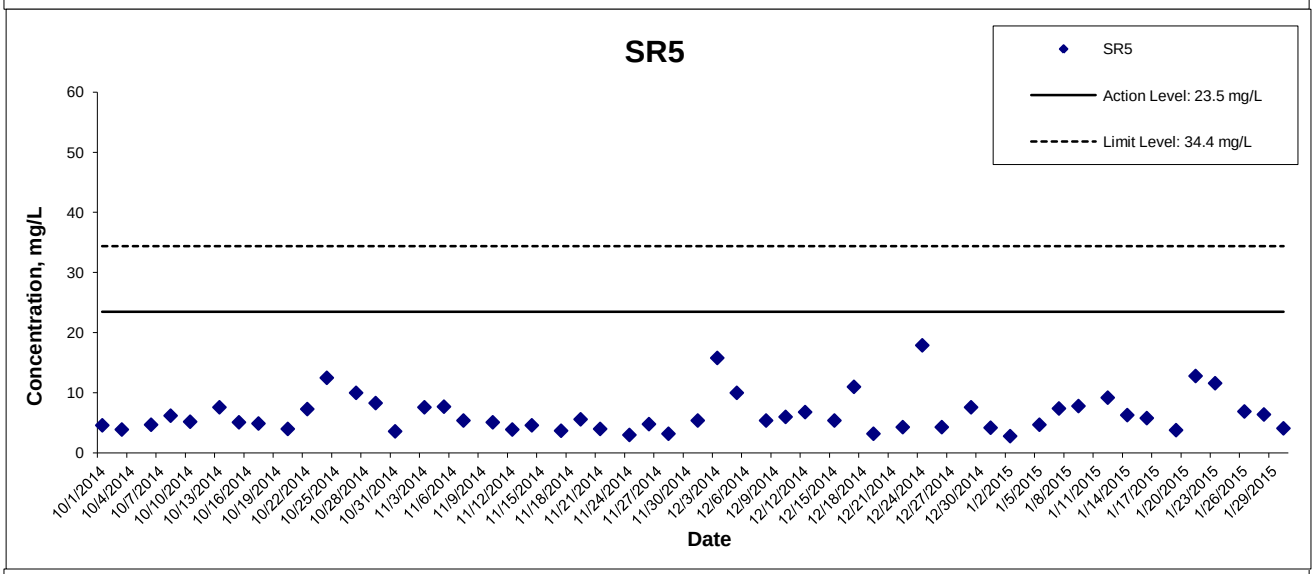

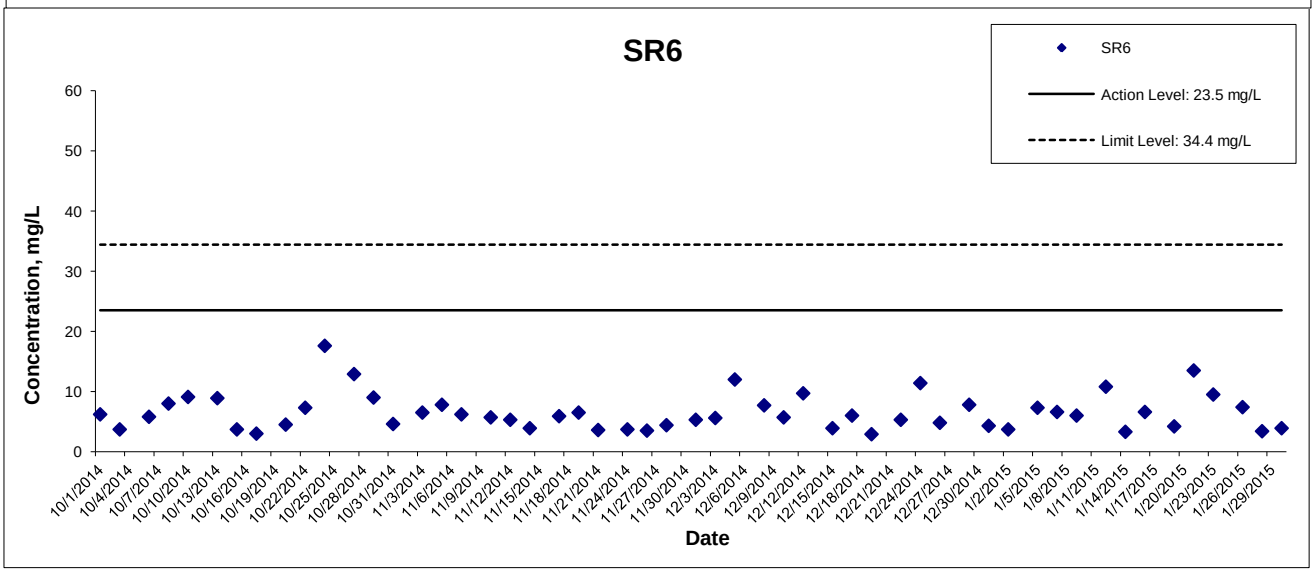

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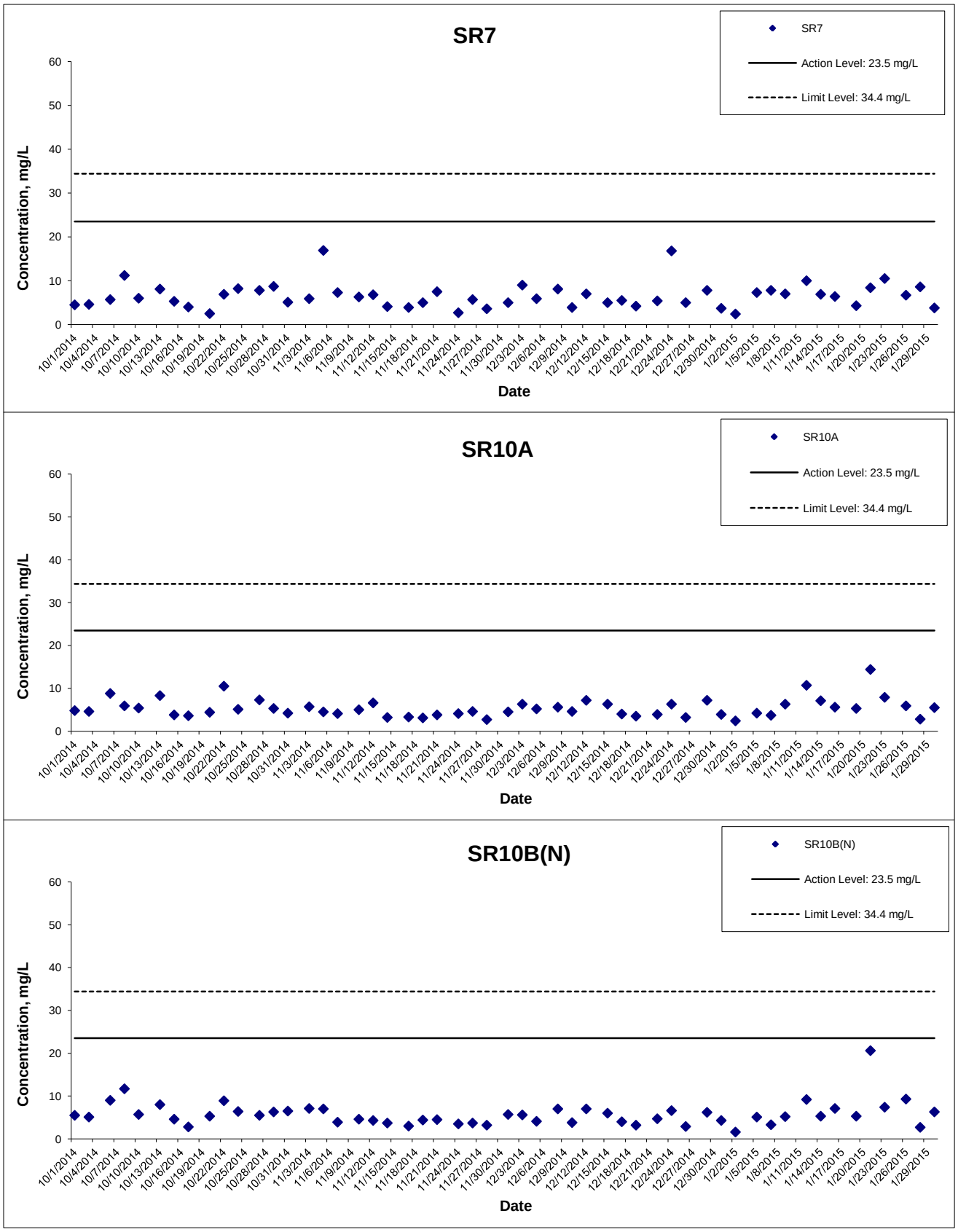

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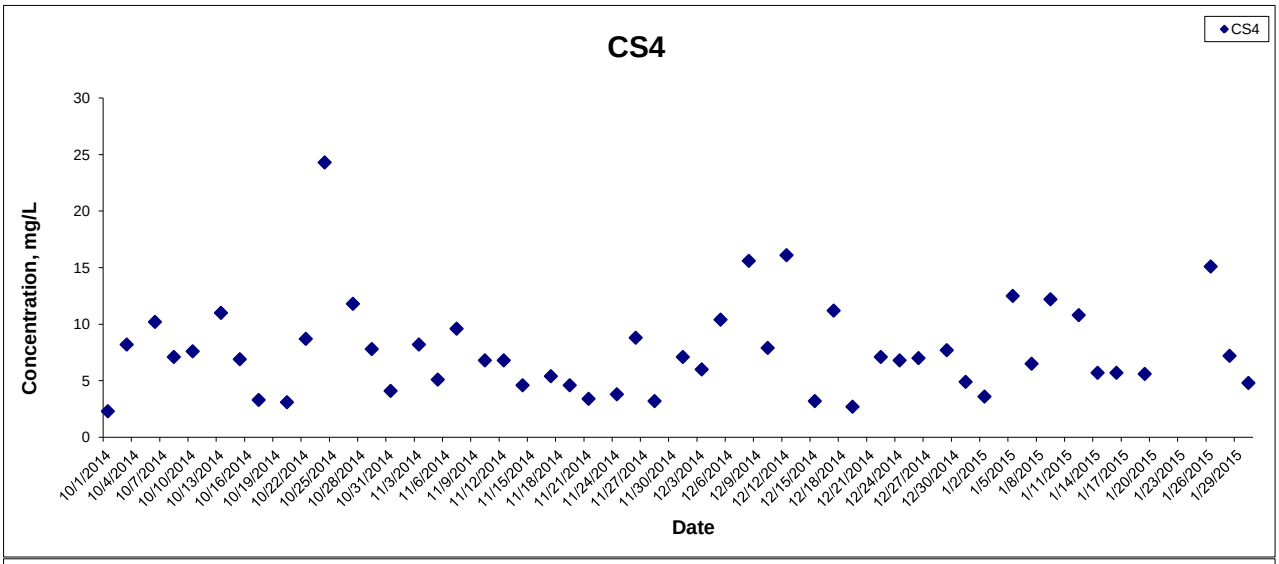

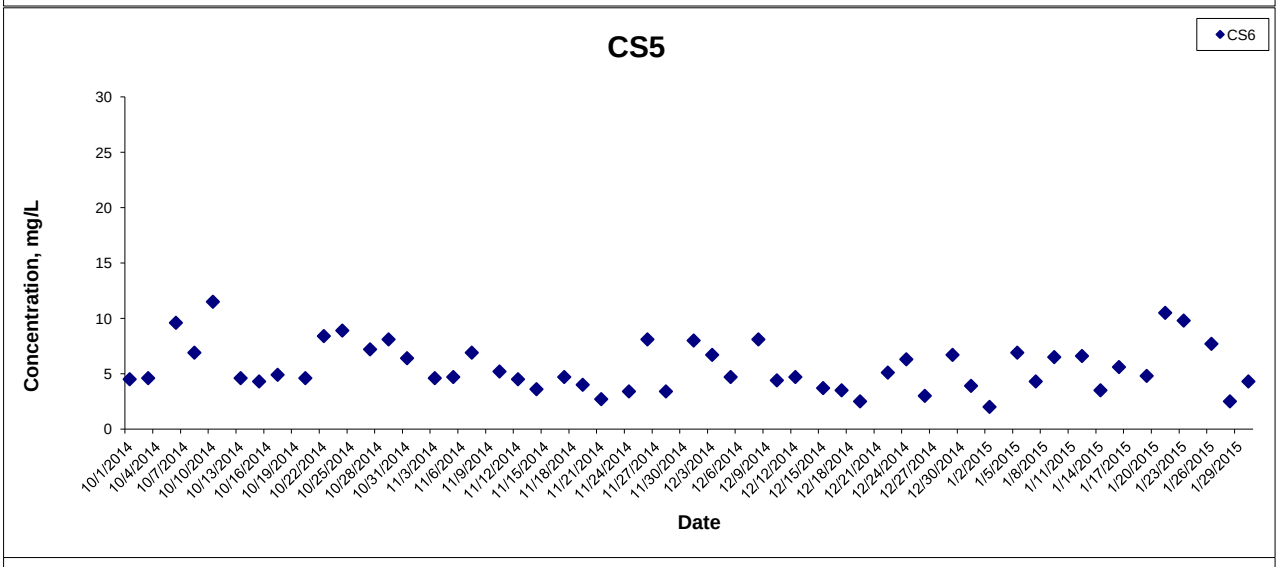

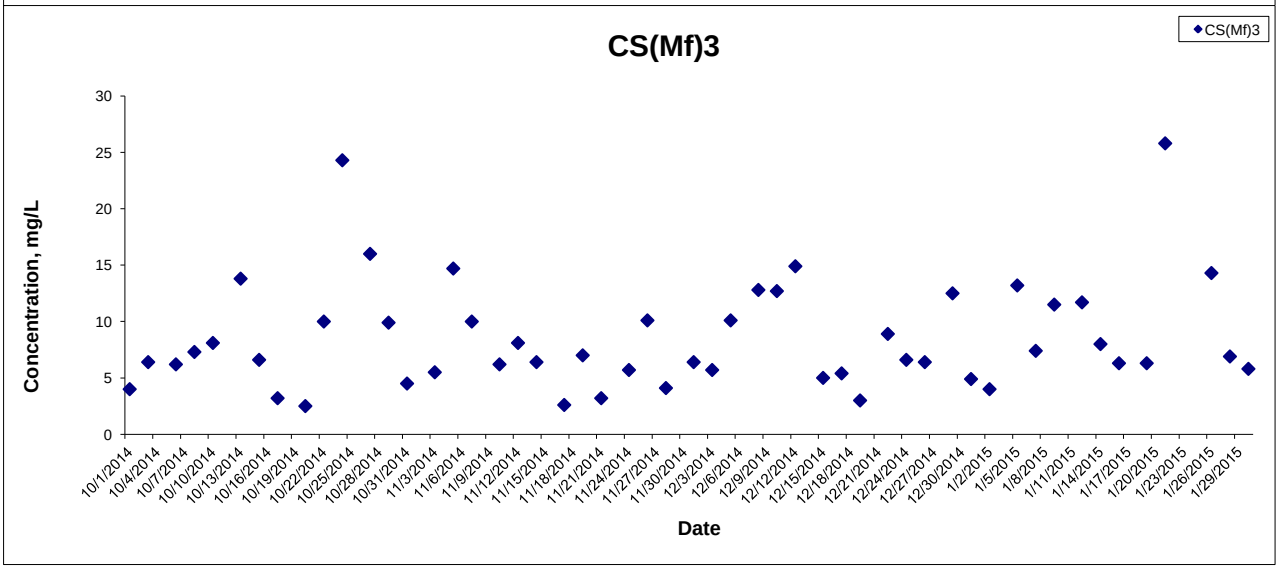

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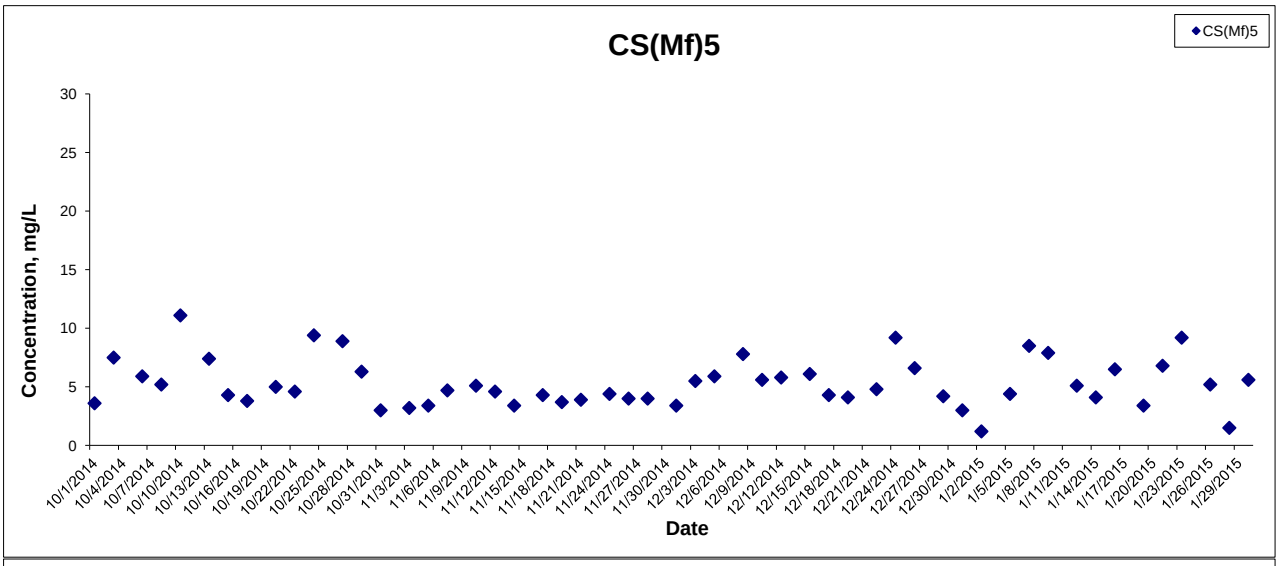

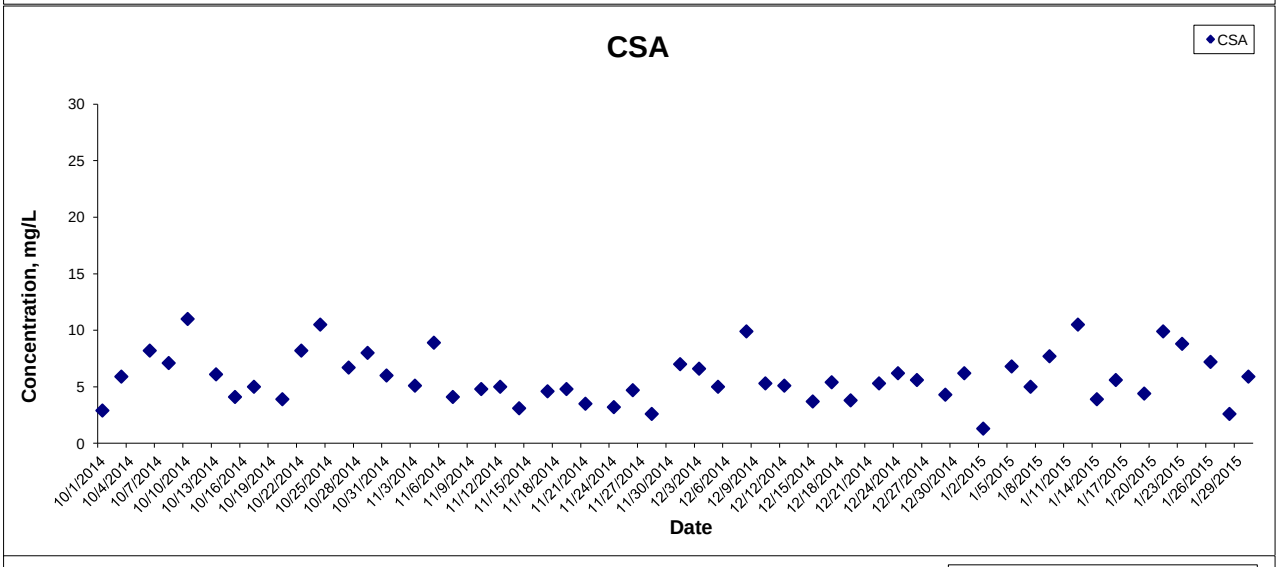

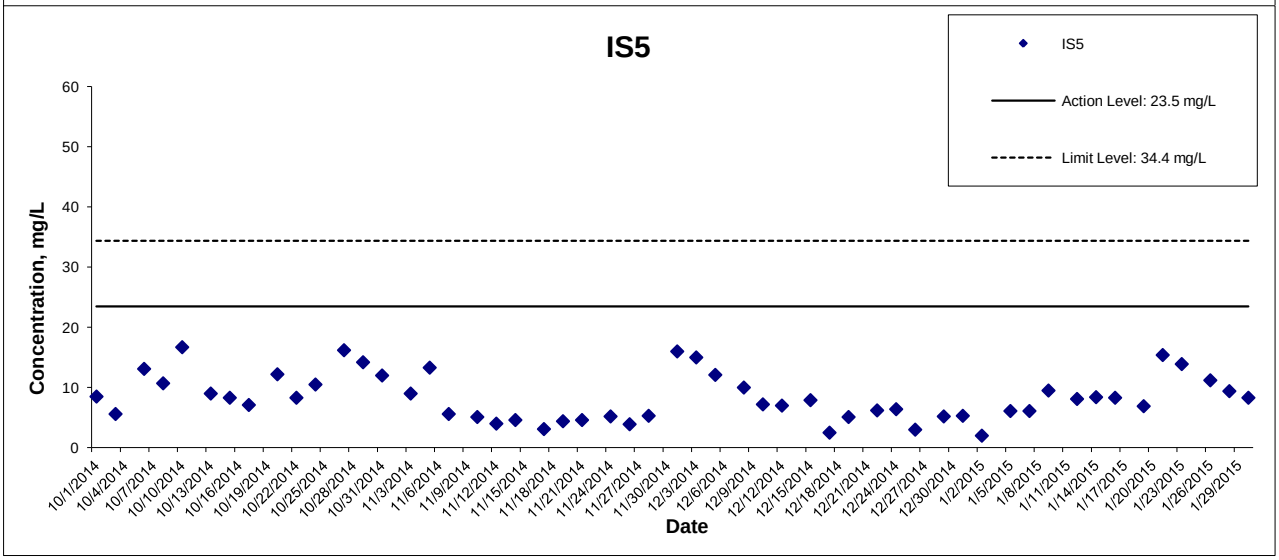

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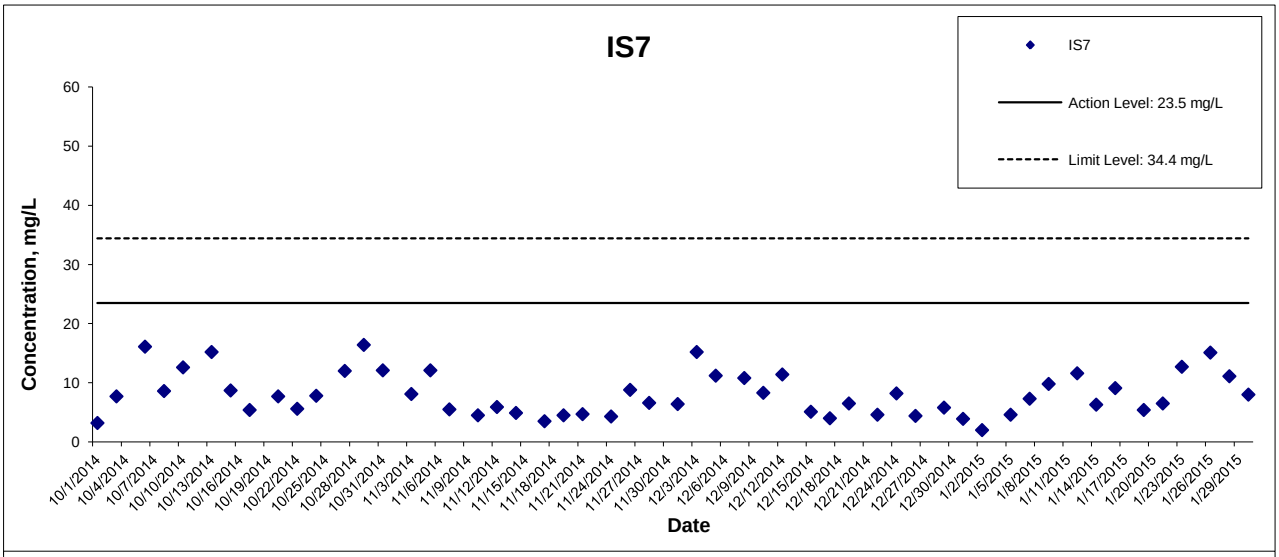

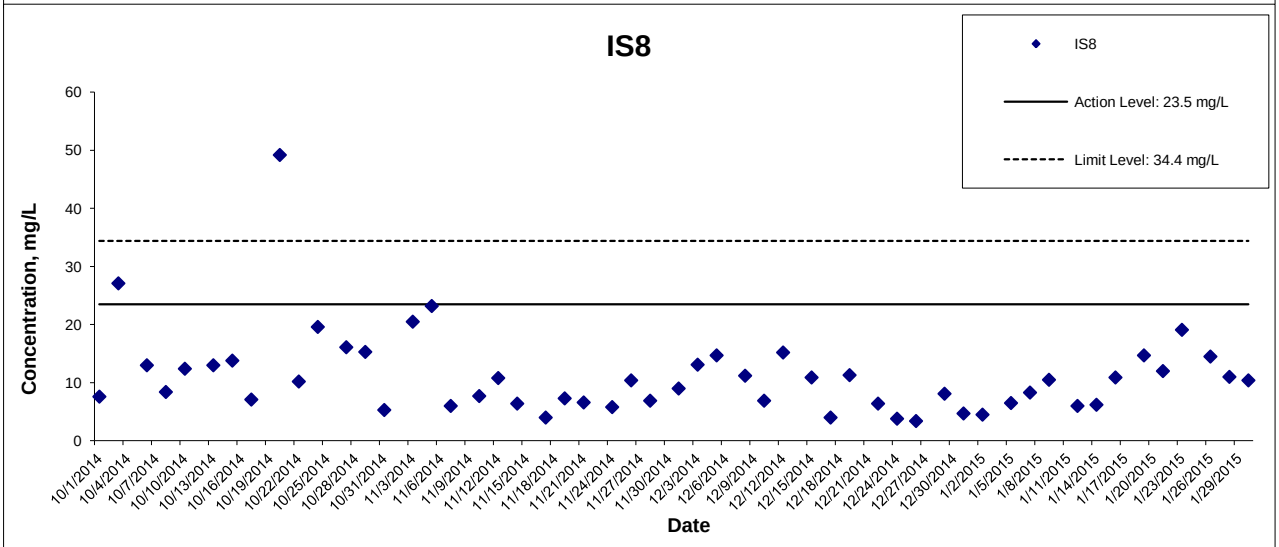

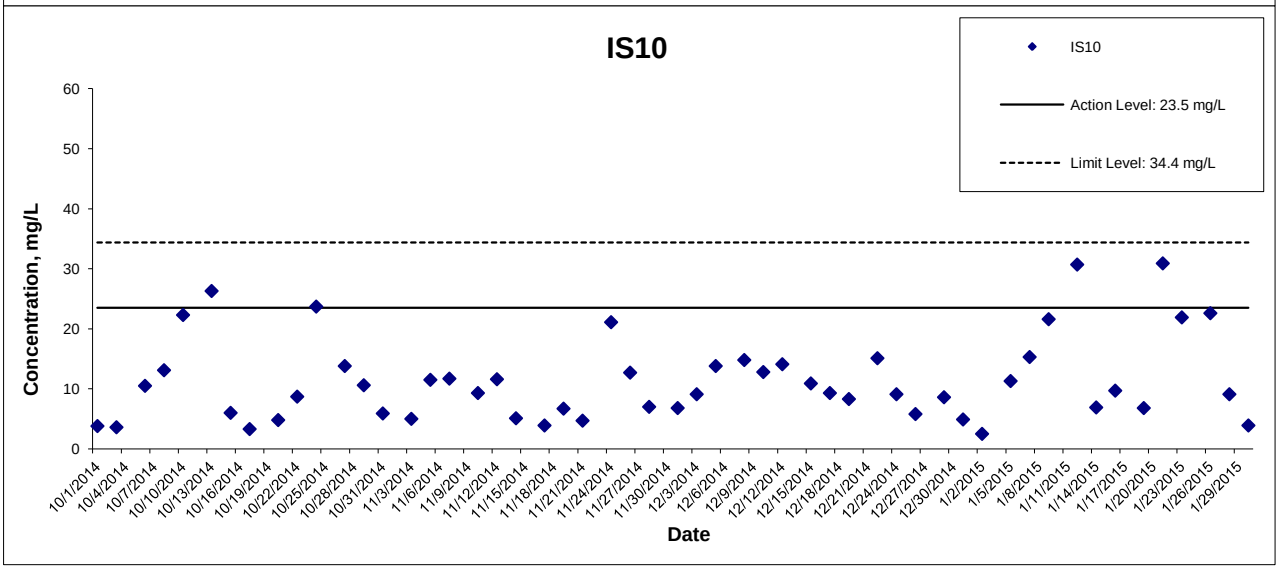

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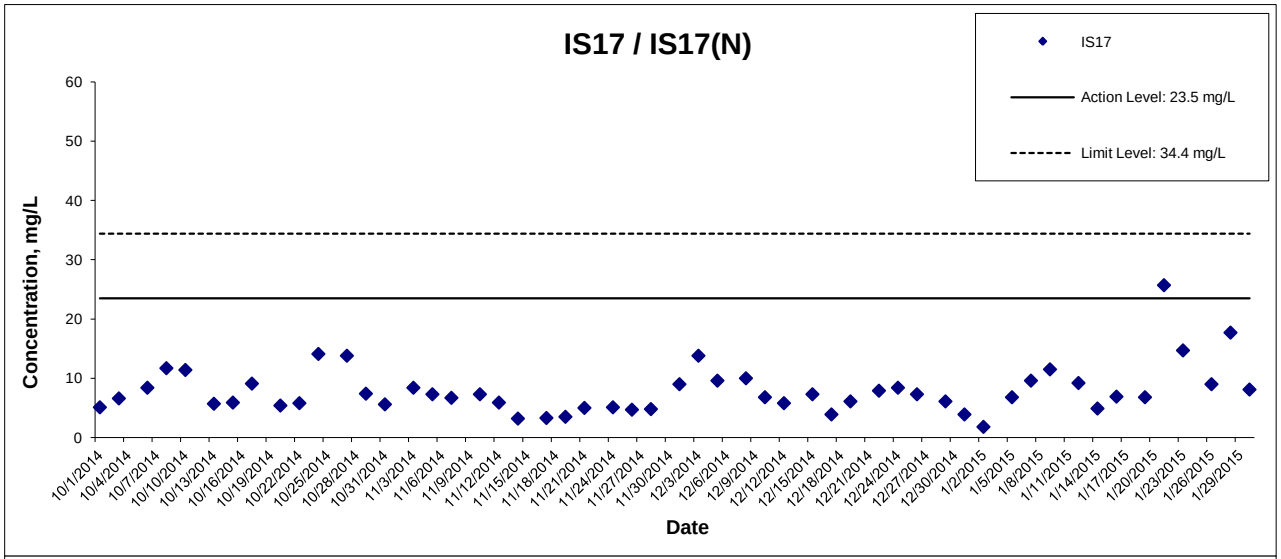

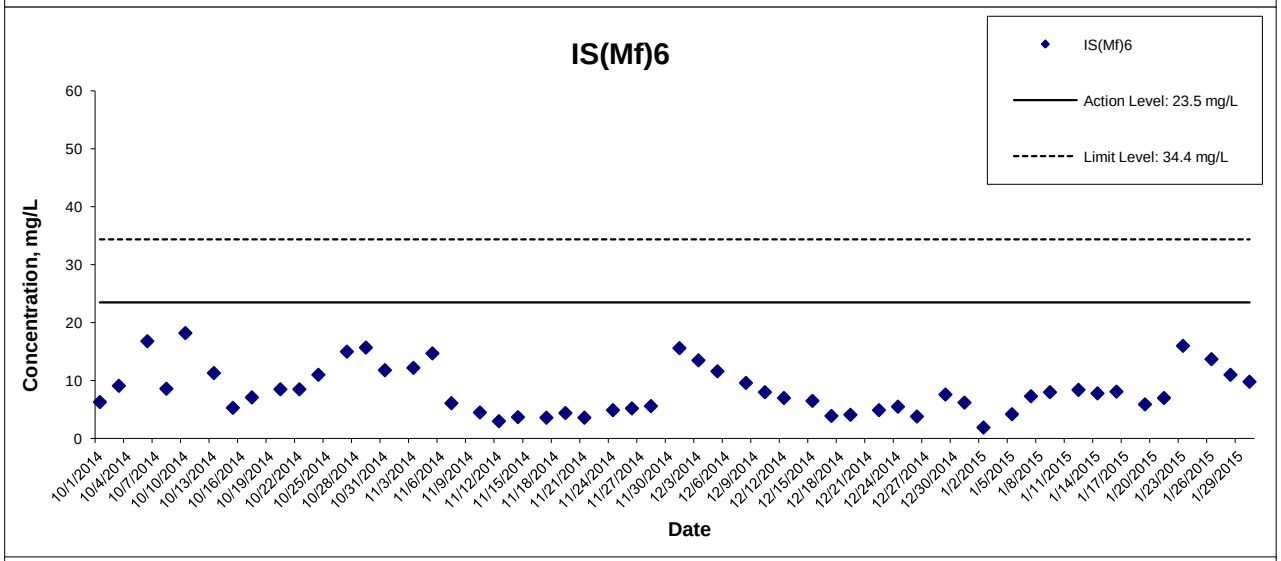

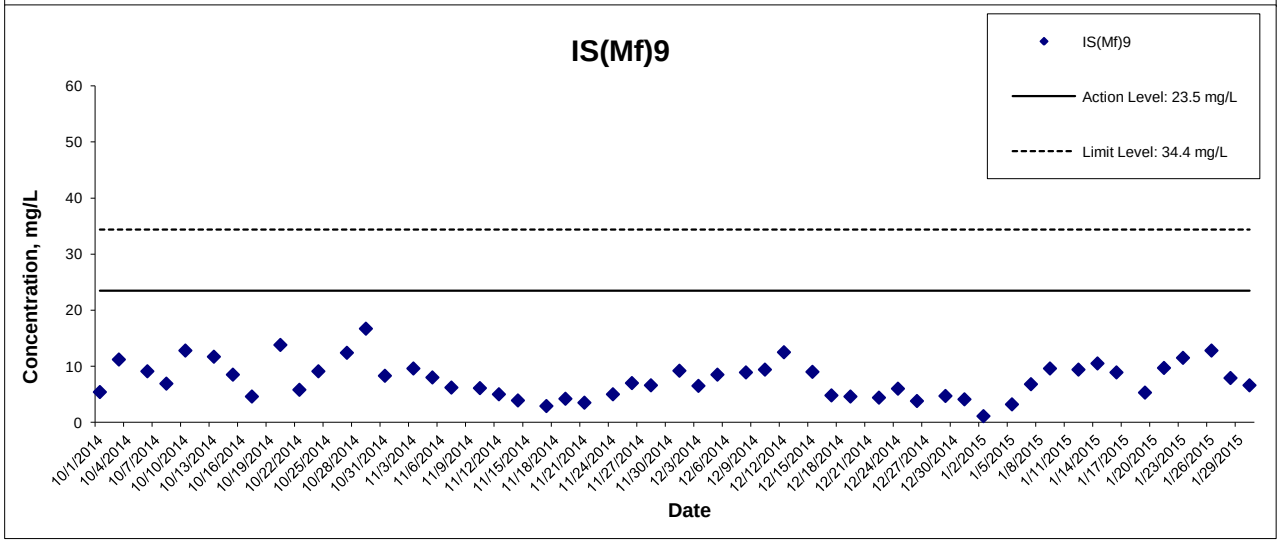

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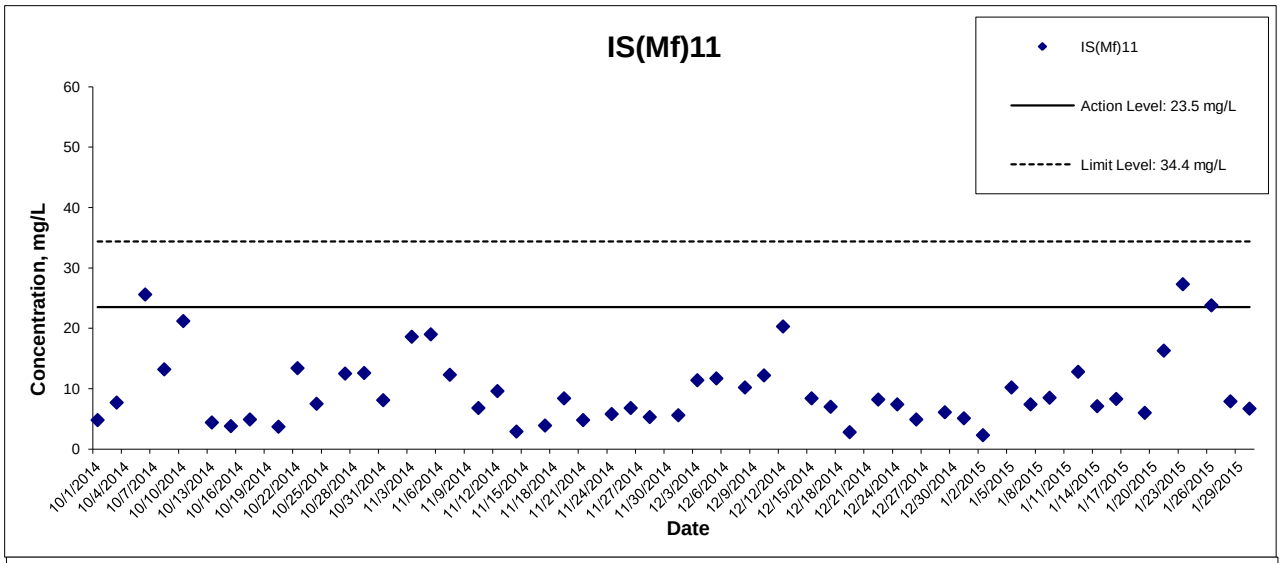

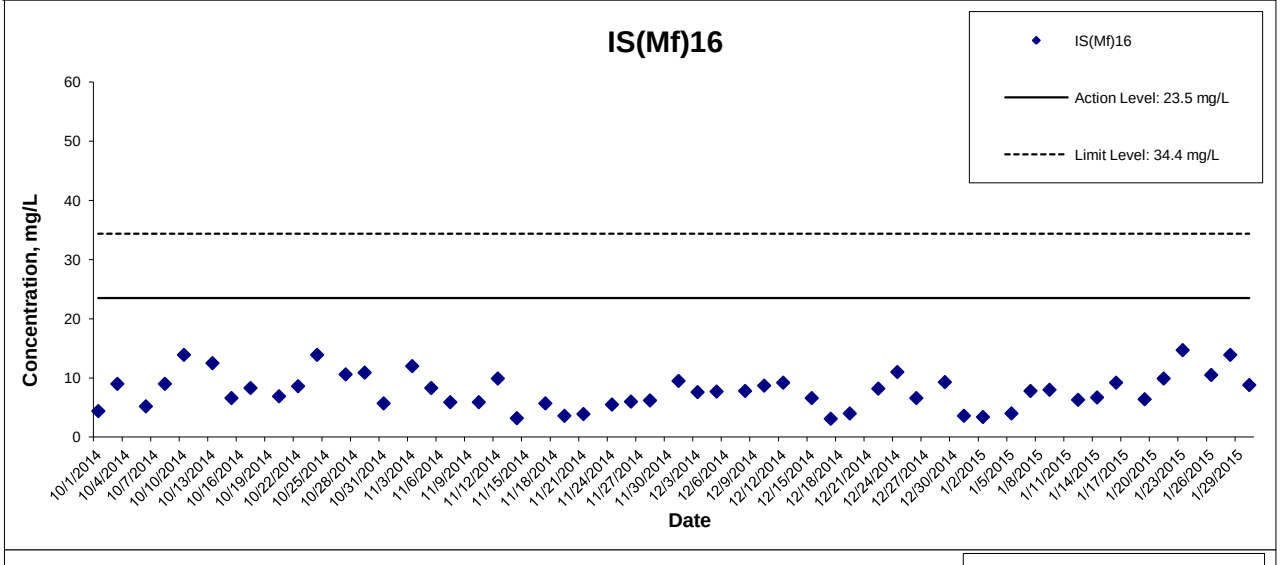

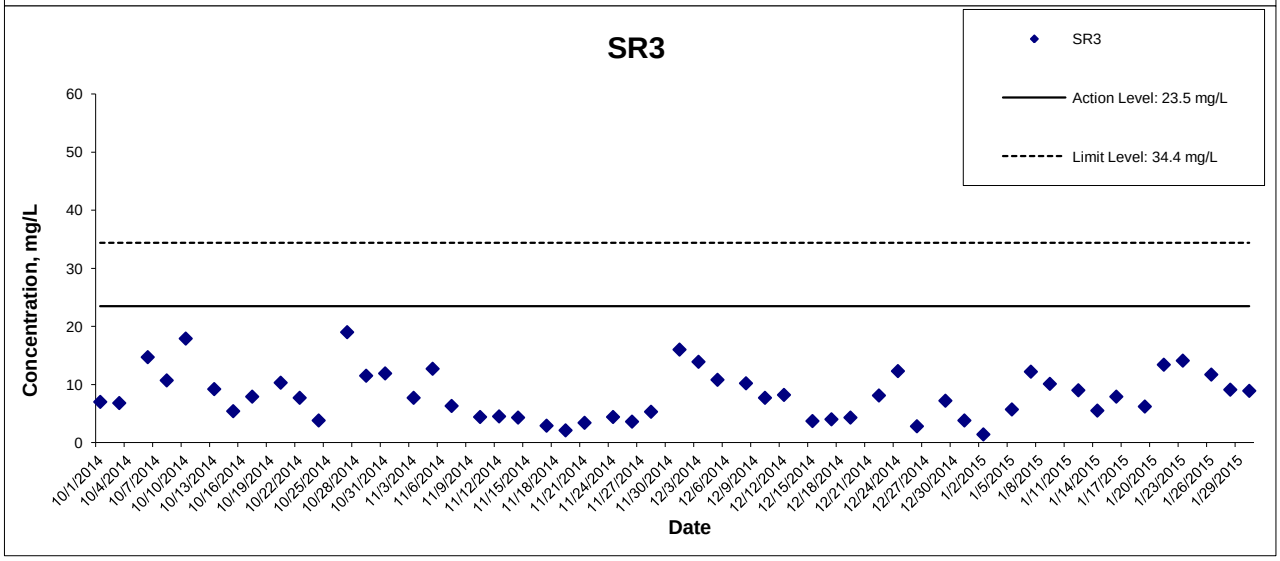

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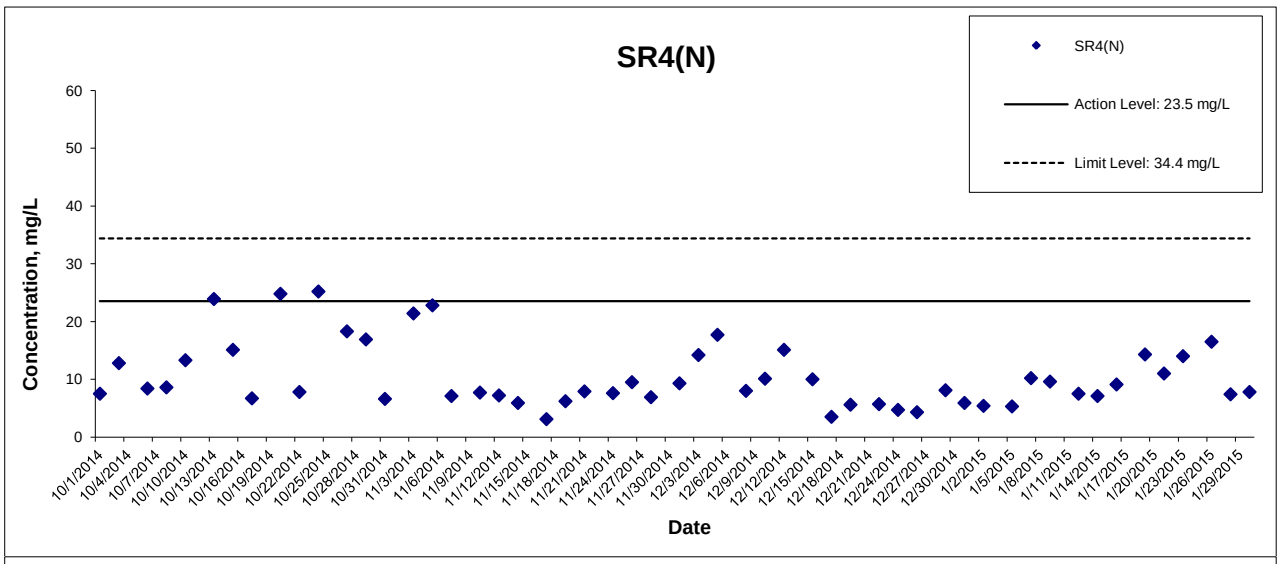
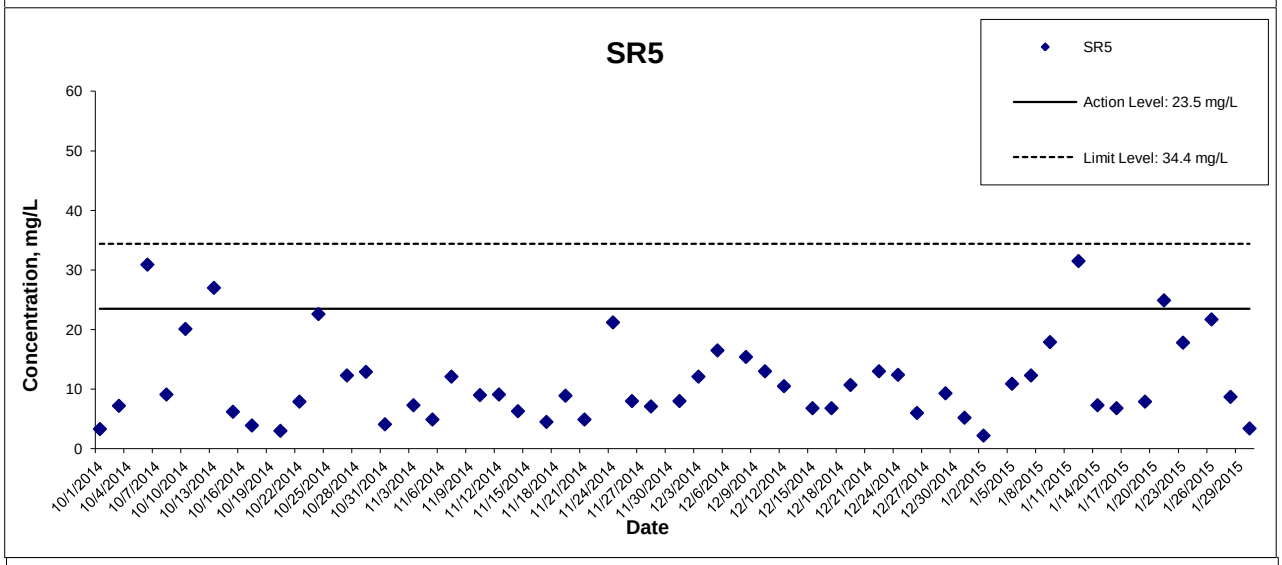
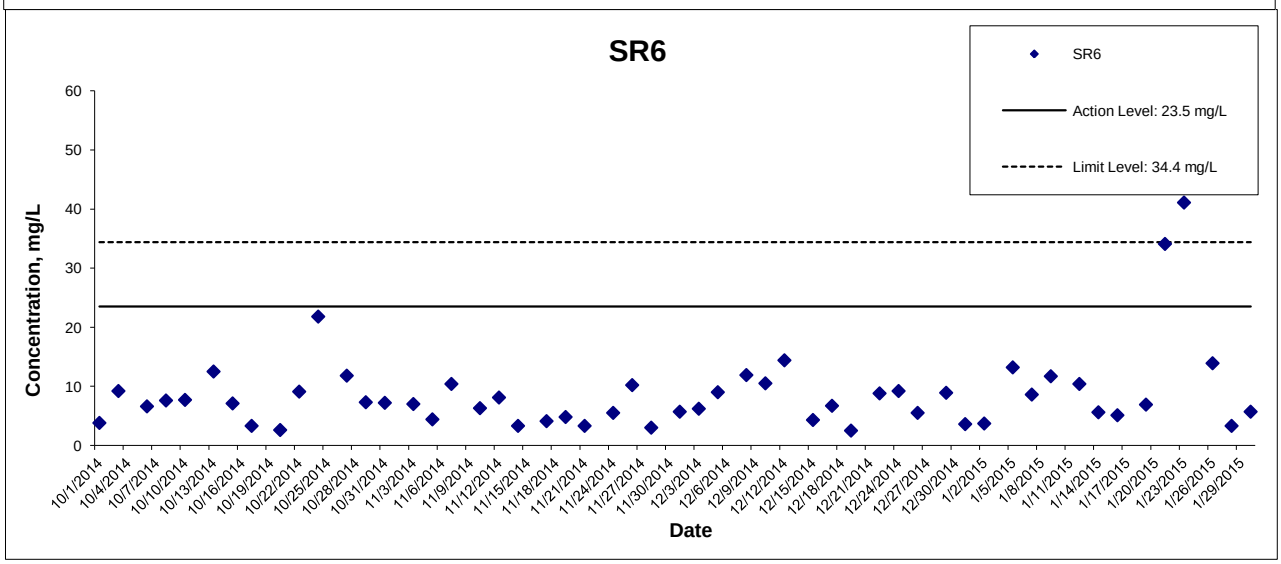
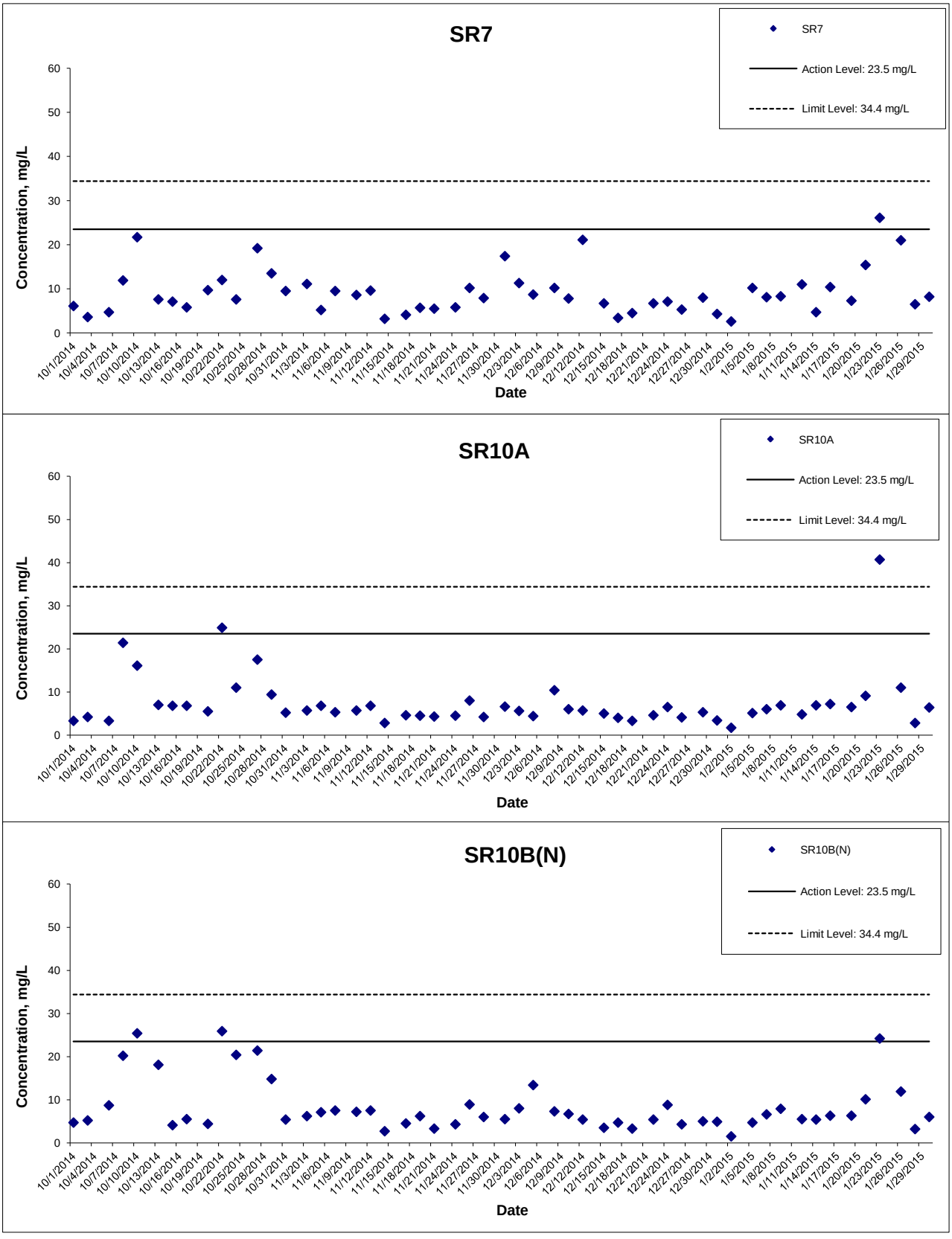






Suspended Solids at Mid-Flood Tide



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	03-Jan-15	1054	09:56:01	1	NWL	1	N/A	Opp	Impact	22.25039	113.8475	Winter	No
HKBCF	HY/2010/02	03-Jan-15	1055	11:29:54	1	NWL	1	1027	On	Impact	22.41850	113.8694	Winter	No
HKBCF	HY/2010/02	03-Jan-15	1056	11:34:38	2	NWL	1	N/A	Opp	Impact	22.41490	113.8763	Winter	No
HKBCF	HY/2010/02	15-Jan-15	1062	11:30:51	2	NWL	2	108	On	Impact	22.41158	113.8698	Winter	No
HKBCF	HY/2010/02	15-Jan-15	1063	13:37:27	1	NWL	2	76	On	Impact	22.37618	113.8875	Winter	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

Annex I

December 2014
Photo Identification Information

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 125		2014/10/13	1019	NWL
HZMB 124		2014/09/22	1005	NWL
HZMB 123		2014/08/25	998	NWL
HZMB 122		2014/08/04	989	NWL
HZMB 121		2014/07/14	968	NWL
HZMB 120		2014/05/31	951	NWL
HZMB 119		2014/04/19	940	NWL
HZMB 118		2014/01/06	890	NWL
HZMB 117		2014/06/17	964	NWL
		2014/01/06	888	NWL
HZMB 116		2014/08/25	999	NWL
		2014/07/14	972	NWL
		2014/07/14	971	NWL
		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		2014/10/13	1019	NWL
		2013/08/21	770	NWL
HZMB 106		2013/08/21	769	NWL
HZMB 105		2014/05/31	951	NWL
		2013/07/08	711	NWL
HZMB 104		2013/07/08	711	NWL
HZMB 103		2013/07/08	711	NWL
HZMB 102		2013/07/08	706	NWL
HZMB 101		2013/07/08	706	NWL
HZMB 100		2013/07/08	706	NWL
HZMB 099		2013/06/13	681	NWL
		2013/06/13	680	NWL

HZMB 098	NL104	2014/12/18	1044	NWL
		2014/08/04	992	NWL
		2014/01/06	888	NWL
		2013/11/02	849	NWL
		2013/11/02	845	NWL
		2013/10/24	831	NWL
		2013/07/08	711	NWL
		2013/05/24	659	NWL
HZMB 097		2013/05/09	647	NWL
HZMB 096		2013/04/01	621	NWL
HZMB 095		2013/08/30	780	NEL
		2013/06/25	697	NWL
		2013/06/13	682	NWL
		2013/04/01	621	NWL
HZMB 094		2014/10/13	1019	NWL
		2014/05/31	954	NWL
		2014/02/17	910	NWL
		2013/06/26	703	NWL
		2013/06/25	698	NWL
		2013/03/18	601	NWL
HZMB 093		2013/05/24	657	NWL
		2013/02/21	587	NWL
HZMB 092		2013/02/21	589	NWL
		2013/02/15	581	NWL
HZMB 091		2013/02/15	579	NWL
HZMB 090		2013/06/25	697	NWL
		2013/06/13	682	NWL
		2013/02/15	579	NWL
HZMB 089		2013/02/15	579	NWL
HZMB 088		2013/02/15	579	NWL
HZMB 087		2013/02/15	579	NWL
HZMB 086	NL242	2013/05/09	642	NWL
		2013/02/15	579	NWL
		2011/10/10	Baseline	NWL
HZMB 085		2014/10/13	1019	NWL
		2014/05/31	954	NWL
		2013/06/26	703	NWL
		2013/02/15	579	NWL

HZMB 084		2013/02/14	575	NWL
HZMB 083	NL136	2013/12/19	863	NWL
		2013/03/28	607	NWL
		2013/02/15	579	NWL
		2013/01/28	568	NWL
		2012/01/28	564	NWL
HZMB 082		2014/10/20	1024	NWL
		2013/02/21	587	NWL
		2013/02/15	579	NWL
		2013/01/28	563	NWL
HZMB 081		2013/01/28	559	NWL
		2013/01/28	557	NWL
HZMB 080		2013/01/28	556	NWL
HZMB 079		2013/01/28	556	NWL
HZMB 078		2013/02/15	579	NWL
		2013/01/08	552	NWL
HZMB 077		2013/12/26	878	NWL
		2013/07/08	706	NWL
		2012/12/11	541	NWL
HZMB 076		2013/07/08	706	NWL
		2012/12/11	541	NWL
HZMB 075		2012/12/06	525	NEL
HZMB 074		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/21	594	NEL
		2012/12/10	529	NEL
		2012/12/06	525	NEL
HZMB 073		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/21	594	NEL
		2012/12/10	529	NEL
		2012/12/06	525	NEL
HZMB 072		2012/10/24	476	NWL
HZMB 071		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 070		2012/10/24	476	NWL
HZMB 069		2013/08/21	774	NWL
		2013/07/08	711	NWL
		2012/10/24	476	NWL

HZMB 068		2014/10/20	1025	NWL
		2013/11/01	839	NWL
		2012/10/24	476	NWL
HZMB 067		2012/10/24	475	NWL
HZMB 066	NL93	2013/01/28	559	NWL
		2012/12/11	537	NWL
		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 064		2014/06/17	964	NWL
		2013/05/09	647	NWL
		2013/01/28	561	NWL
		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 063		2013/05/09	647	NWL
		2012/10/12	466	NWL
HZMB 062		2012/12/06	525	NEL
		2012/10/11	457	NWL
HZMB 060		2012/09/18	447	NWL
HZMB 059		2013/02/21	591	NWL
		2012/09/18	445	NWL
HZMB 057		2012/09/18	440	NWL
HZMB 056		2012/09/18	442	NWL
		2012/09/05	433	NEL
HZMB 055		2012/09/04	425	NWL
HZMB 054	CH34	2014/05/31	953	NWL
		2014/01/06	888	NWL
		2013/11/07	854	NWL
		2013/11/02	845	NWL
		2013/10/24	831	NWL
		2013/08/30	780	NEL
		2013/07/08	711	NWL
		2013/09/18	448	NWL
		2012/09/05	432	NEL
		2011/11/07	Baseline	NWL
		2011/11/05	Baseline	NWL
		2011/11/02	Baseline	NWL
		2011/11/01	Baseline	NEL
		2011/11/01	Baseline	NEL
		2011/10/28	Baseline	NWL
		2011/10/06	Baseline	NWL
HZMB 053		2012/09/04	425	NWL

HZMB 052		2012/09/04	423	NWL
HZMB 051	NL213	2014/08/04	989	NWL
		2013/05/09	644	NWL
		2013/04/01	622	NWL
		2013/02/15	582	NWL
		2013/02/15	581	NWL
		2013/01/28	559	NWL
		2013/01/28	556	NWL
		2012/09/04	422	NWL
HZMB 050		2014/07/14	971	NWL
		2014/01/10	900	NWL
		2014/01/06	888	NWL
		2013/02/15	579	NWL
		2012/09/04	421	NWL
HZMB 049		2014/07/29	982	NWL
		2012/09/03	419	NWL
HZMB 048		2012/09/03	419	NWL
HZMB 047		2012/09/03	412	NWL
HZMB 046		2012/09/03	412	NWL
HZMB 045		2014/02/17	910	NWL
		2013/06/13	682	NWL
		2013/02/15	579	NWL
		2012/11/01	495	NWL
HZMB 044	NL98	2014/10/13	1019	NWL
		2014/02/17	910	NWL
		2013/12/19	864	NWL
		2013/11/02	845	NWL
		2013/11/01	842	NWL
		2013/10/15	819	NWL
		2013/05/09	648	NWL
		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/15	579	NWL
		2012/11/01	495	NWL
HZMB 043		2012/09/03	407	NWL
HZMB 042	NL260	2013/12/19	863	NWL
		2012/11/01	495	NWL
		2011/11/07	Baseline	NWL

HZMB 041	NL24	2014/06/05	960	NEL
		2014/02/17	910	NWL
		2013/11/02	845	NWL
		2013/05/09	648	NWL
		2013/05/09	647	NWL
		2013/04/01	623	NWL
		2013/04/01	621	NWL
		2013/02/15	579	NWL
		2012/11/01	495	NWL
		2011/11/06	Baseline	NEL
		2011/11/05	Baseline	NWL
		2011/11/05	Baseline	NWL
		2011/10/10	Baseline	NWL
HZMB 040		2014/02/17	910	NWL
		2014/01/06	893	NWL
		2013/10/15	821	NWL
		2013/07/08	714	NWL
		2013/07/08	711	NWL
		2013/02/21	589	NWL
		2012/11/01	493	NWL
HZMB 038		2012/11/01	490	NWL
HZMB 037		2012/11/01	490	NWL
HZMB 036		2012/09/03	407	NWL
		2012/11/01	490	NWL
HZMB 035		2013/02/15	579	NWL
		2012/11/01	490	NWL
HZMB 034		2012/11/01	493	NWL
HZMB 028		2014/11/17	1035	NWL
		2013/04/01	625	NWL
		2012/08/06	373	NWL
HZMB 027		2013/12/19	863	NWL
		2013/02/15	579	NWL
		2013/01/28	568	NWL
		2013/01/28	564	NWL
		2012/06/14	299	NWL
HZMB 026		2014/10/13	1018	NWL
		2013/06/25	697	NWL
		2013/05/09	642	NWL
		2013/01/28	561	NWL
		2012/06/13	295	NEL

HZMB 025		2013/02/22	596	NEL
		2013/02/21	591	NWL
		2012/12/06	525	NEL
		2012/10/11	457	NWL
		2012/06/13	295	NEL
HZMB 024		2013/03/18	601	NWL
		2012/06/13	295	NEL
HZMB 023		2014/12/18	1044	NWL
		2014/11/17	1035	NWL
		2014/01/06	888	NWL
		2013/07/08	715	NWL
		2013/07/08	711	NWL
		2013/04/01	619	NWL
		2013/02/21	589	NWL
		2013/02/15	579	NWL
		2012/07/10	330	NWL
HZMB 022		2014/12/18	1044	NWL
		2014/11/17	1035	NWL
		2014/08/04	991	NWL
		2014/01/06	888	NWL
		2013/10/24	827	NWL
		2013/07/08	715	NWL
		2013/07/08	711	NWL
		2013/04/01	619	NWL
		2013/02/21	589	NWL
		2013/02/15	579	NWL
		2012/07/10	330	NWL
HZMB 021	NL37	2012/07/10	330	NWL
		2011/09/16	Baseline	NWL
HZMB 020		2012/07/10	330	NWL
HZMB 019		2012/07/10	330	NWL
HZMB 018		2014/02/17	910	NWL
		2013/05/09	647	NWL
		2013/02/21	594	NEL
		2012/12/10	529	NEL
		2012/07/10	330	NWL
HZMB 017		2012/07/10	330	NWL
HZMB 016		2013/07/08	706	NWL
		2012/12/11	539	NWL
		2012/09/18	446	NWL
		2012/09/04	421	NWL
		2012/07/10	330	NWL

HZMB 015		2012/07/10	330	NEL

HZMB 014	NL176	2013/12/26	880	NWL
		2012/08/06	373	NWL
		2012/06/13	295	NEL
		2011/11/06	Baseline	NEL
		2011/11/01	Baseline	NEL
		2011/11/01	Baseline	NEL
HZMB 013		2012/05/28	281	NWL
HZMB 012		2012/05/28	281	NWL
HZMB 011	EL01	2013/02/22	597	NEL
		2013/02/21	592	NEL
		2013/02/14	572	NEL
		2012/11/06	517	NEL
		2012/09/19	452	NWL
		2012/03/31	261	NEL
		2011/11/02	Baseline	NWL
		2011/11/01	Baseline	NEL
HZMB 009		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
HZMB 003	NL179	2013/10/15	812	NWL
		2013/06/25	697	NWL
		2012/12/10	529	NEL
		2012/03/31	261	NWL
		2011/11/06	Baseline	NEL
		2011/09/16	Baseline	NWL

HZMB 002	WL111	2014/05/31	951	NWL
		2013/12/26	878	NWL
		2013/12/19	863	NWL
		2013/11/01	839	NWL
		2013/10/15	819	NWL
		2013/09/24	798	NWL
		2013/02/14	573	NWL
		2012/12/11	536	NWL
		2012/12/11	535	NWL
		2012/10/12	466	NWL
		2012/10/24	475	NWL
		2012/05/28	281	NWL
		2012/03/29	250	NWL
HZMB 001	WL46	2014/08/25	997	NWL
		2013/08/21	771	NWL
		2013/06/13	681	NWL
		2013/04/01	617	NWL
		2013/02/14	573	NWL
		2012/03/29	250	NWL
	CH98	2011/11/02	Baseline	NWL
	NL11	2011/11/02	Baseline	NWL
		2011/11/07	Baseline	NWL
	NL12	2011/11/02	Baseline	NWL
	NL33	2011/09/23	Baseline	NWL
		2011/11/01	Baseline	NEL
		2011/11/05	Baseline	NWL
		2011/11/07	Baseline	NWL
	NL37	2011/09/16	Baseline	NWL
	NL46	2011/10/28	Baseline	NWL

HZMB 022 2014-12-18-11-38-57 med

HZMB 023 2014-12-18-11-38-40_01 med

HZMB 098 2014-12-18-11-17-49_01 med

Appendix L – Event Action Plan

Event / Action Plan for Air Quality

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action Level				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit Level				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Construction Noise

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action Level	1. Notify IEC and Contractor; 2. Identify source, investigate the causes of exceedance and propose remedial measures; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER, EPD and Contractor; 2. Identify source; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Water Quality

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action level being exceeded by one sampling day	1. Repeat *in situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and ER; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Repeat measurement on next day of exceedance to confirm findings.	1. Check monitoring data submitted by ET and Contractor's working methods; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of non-compliance in writing; 2. Discuss with IEC on the proposed mitigation measures; 3. Make agreement on mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER; 5. Implement the agreed mitigation measures. 6. Amend working methods if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action level being exceeded by two or more consecutive sampling days	1. Repeat *in situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and ER; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Action level; 8. Repeat measurement on next day of exceedance to confirm findings.	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of non-compliance in writing; 2. Discuss with IEC on the proposed mitigation measures; 3. Make agreement on mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER within 3 working days of notification; 5. Implement the agreed mitigation measures; 6. Amend working methods if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit level being exceeded by one sampling day	1. Repeat *in-situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level.	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; 4. Assess the effectiveness of the implemented mitigation measures.	1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to critically review the working methods; 4. Ensure mitigation measures are properly implemented; 5. Assess the effectiveness of the implemented mitigation measures.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER; 5. Implement the agreed mitigation measures; 6. Amend working methods if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit level being exceeded by two or more consecutive sampling days	1. Repeat *in-situ* measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to critically review the working methods; 4. Make agreement on the mitigation measures to be implemented; 5. Ensure mitigation measures are properly implemented; 6. Assess the effectiveness of the implemented mitigation measures; 7. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Take immediate action to avoid further exceedance; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER; 6. Implement the agreed mitigation measures; 7. Resubmit proposals of mitigation measures if problem still not under control; 8. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Event / Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	ER / SOR	Contractor
Action Level	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor; 5. Check monitoring data. 6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and finding with the ET and the Contractor.	1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented.	1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR; 3. Implement the agreed measures.
Limit Level	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, ER/SOR and Contractor of findings; 5. Check monitoring data;	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor; 3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures. 4. Review proposals for additional monitoring and any other mitigation measures submitted	1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures. 2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any other mitigation measures.	1. Inform the ER/SOR and confirm notification of the non-compliance in writing; 2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures. 3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary. 4. Implement the agreed additional dolphin monitoring

	6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary. 7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.	by ET and Contractor and advise ER/SOR of the results and findings accordingly. 5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.	3. Supervise the implementation of additional monitoring and/or any other mitigation measures.	and/or any other mitigation measures.

China Harbour Engineering Company Limited

Monthly Summary Waste Flow Table for January / 2015 (year)

Project : Hong Kong – Zhuhai – Macao Bridge, Hong Kong Boundary Crossing Facilities – Reclamation Works Contract No.: HY/2010/02

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2 and 5)	Chemical Waste (see Note 4)	Others, e.g. general refuse (see Note 3)
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan-15	0.0000	0.0000	0.0000	0.0000	0.0000	1774.7845	0.0000	0.4200	4.0000	2.4000	0.0455
Feb-15											
Mar-15											
Apr-15											
May-15											
Jun-15											
Sub-total	0.0000	0.0000	0.0000	0.0000	0.0000	1774.7845	0.0000	0.4200	4.0000	2.4000	0.0455
Jul-15											
Aug-15											
Sep-15											
Oct-15											
Nov-15											
Dec-15											
Total	0.0000	0.0000	0.0000	0.0000	0.0000	1774.7845	0.0000	0.4200	4.0000	2.4000	0.0455

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”.

(5) About 100 Water-barriers were recycled (~40kg each, Total: ~4000kg or ~4.0 '000kg).

Appendix N
Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics on Exceedances

		Total no. recorded in this month	Total no. recorded since project commencement
1-Hour TSP	Action	-	-
	Limit	-	-
24-Hour TSP	Action	-	-
	Limit	-	-
Noise	Action	-	-
	Limit	-	-
Water Quality	Action	-	2
	Limit	-	3
Dolphin Monitoring	Action	-	-
	Limit	-	-

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

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

	Date Received	Subject	Status	Total no. received in this month	Total no. received since project commencement
Environmental complaints	-	-	-	-	-
Notification of summons	-	-	-	-	2
Successful Prosecutions	-	-	-	-	2

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