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 September 2015

[10/2015]

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RAMBOLL ENVIRON

Ref.: HYDHZMBEEM00_0_3467L.15

15 October 2015

By Fax (3698 5999) and By Post

Ove Arup & Partners
Chief Resident Engineer's Office
5 Ying Hei Road, Tung Chung, Lantau
Hong Kong

Attention: Mr. Paul Appleton

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 September 2015

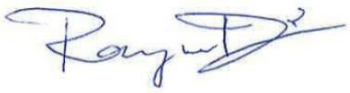
Reference is made to the Environmental Team's submission of Monthly Environmental Monitoring & Audit Report for September 2015 certified by the ET Leader (ET's ref.: "60249820/C/RMKY15101401" dated 14 October 2015) and provided to us via e-mail on 14 October 2015.

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

As per Condition 1.7 of EPs, please be reminded to keep in view on the site condition, in particular in the vicinity of Portion B with your on-going surveillance and monitoring.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours faithfully,
For and on behalf of
Ramboll Environ Hong Kong Limited



Raymond Dai
Independent Environmental Checker

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Internal: DY, YH, LP, CL, 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 17 July 2015 (EP-353/2009/I) and 13 March 2015 (EP-354/2009/D) (for TMCLKL Southern Landfall Reclamation only).

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

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

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

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

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

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

Marine-base

- Rock fill
- Marine fill
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base

- Surcharge removal & laying
- Deep Cement Mixing
- Removal of Temporary Seawall
- Vertical Band Drains
- Installations of Precast Culverts except sloping outfalls
- 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	5 sessions
Impact water quality monitoring	13 sessions
Impact dolphin monitoring	2 surveys
Joint Environmental site inspection	4 sessions

Breaches of Action and Limit Levels for Air Quality

For impact air quality monitoring, no exceedance of 1-Hour TSP or 24-Hour TSP was recorded at all monitoring stations 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 of SS at SR7 during flood tide was recorded on 30 September 2015. After investigation, there is no adequate information to conclude the recorded exceedance is related to this Contract. No Action and Limit Level exceedance was recorded on other monitoring date in the reporting month.

Impact Dolphin Monitoring

A total of two sightings were made, both “on effort”. Both sightings were recorded on the 7 September 2015. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively. The first group sighted on the 7 September 2015 comprised one individual and the second, four individuals.

Behaviour: On the 7 September 2015, the behaviour of the first sighting made was noted as travelling and the second group was engaged in multiple activities; feeding, surface active and travelling. No calves were sighted during impact surveys in September 2015. Locations of sighting with different behaviour are mapped in Figure 5d.

Complaint, Notification of Summons and Successful Prosecution

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

Reporting Change

There was no reporting change required in the reporting period.

Future Key Issues

Key issues to be considered in the coming month included:

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

1 INTRODUCTION

1.1 Background

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

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

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

1.1.4 The Project is a designated project and is governed by the current permits for the Project, i.e. the amended EPs issued on 17 July 2015 (EP-353/2009/I) and 13 March 2015 (EP-354/2009/D) (for TMCLKL Southern Landfall Reclamation only).

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

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

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

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

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

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

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

1.2 Scope of Report

1.2.1 This is the forty-third 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 September 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 (Effective between 1 – 15 September 2015)	3698 5700	2698 5999
Engineer's Representative (ER) (Ove Arup & Partners Hong Kong Limited)	Chief Resident Engineer	Paul Appleton (Effective 16 September 2015 onward)	3698 5889	2698 5999
IEC / ENPO (Ramboll Environ Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
	Environmental Project Office Leader	Y. H. Hui	3547 2133	3465 2899
Contractor (China Harbour Engineering Company Limited)	Environmental Officer	Louie Chan	36932254	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
- Rock fill
- Marine fill
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base
- Surcharge removal & laying
- Deep Cement Mixing
- Removal of Temporary Seawall
- Vertical Band Drains
- Installations of Precast Culverts except sloping outfalls

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

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

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

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

1.5 Summary of EM&A Programme Requirements

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

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

2 AIR QUALITY MONITORING

2.1 Monitoring Requirements

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

2.2 Monitoring Equipment

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

Table 2.1 Air Quality Monitoring Equipment

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

2.3 Monitoring Locations

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

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

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

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

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

Table 2.2 Locations of Impact Air Quality Monitoring Stations

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

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

2.4 Monitoring Parameters, Frequency and Duration

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

Table 2.3 Air Quality Monitoring Parameters, Frequency and Duration

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

2.5 Monitoring Methodology

2.5.1 24-hour TSP Monitoring

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

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

(b) Preparation of Filter Papers

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

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

(c) Field Monitoring

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

(d) Maintenance and Calibration

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

2.5.2 1-hour TSP Monitoring

(a) Measuring Procedures

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

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

(b) Maintenance and Calibration

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

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

2.6 Monitoring Schedule for the Reporting Month

2.6.1 The schedule for air quality monitoring in September 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	78	71-86	374	500
AMS3B	77	68-86	368	500
AMS7A	78	72-85	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	34	11-69	176	260
AMS3B	39	23-70	167	260
AMS7A	50	22-81	183	260

2.7.2 The event action plan is annexed in Appendix L.

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

3 NOISE MONITORING

3.1 Monitoring Requirements

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

3.2 Monitoring Equipment

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

Table 3.1 Noise Monitoring Equipment

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

3.3 Monitoring Locations

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

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

Table 3.2 Locations of Impact Noise Monitoring Stations

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

3.4 Monitoring Parameters, Frequency and Duration

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

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

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

3.5 Monitoring Methodology

3.5.1 Monitoring Procedure

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

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

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

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

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

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

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

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

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

3.5.2 Maintenance and Calibration

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

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

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

3.6 Monitoring Schedule for the Reporting Month

3.6.1 The schedule for construction noise monitoring in September 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	66	64-68*	75
NMS3B	66	64-68*	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 Turbidity Meter	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 September 2015 is provided in Appendix F.

4.6.2 Results and Observations

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

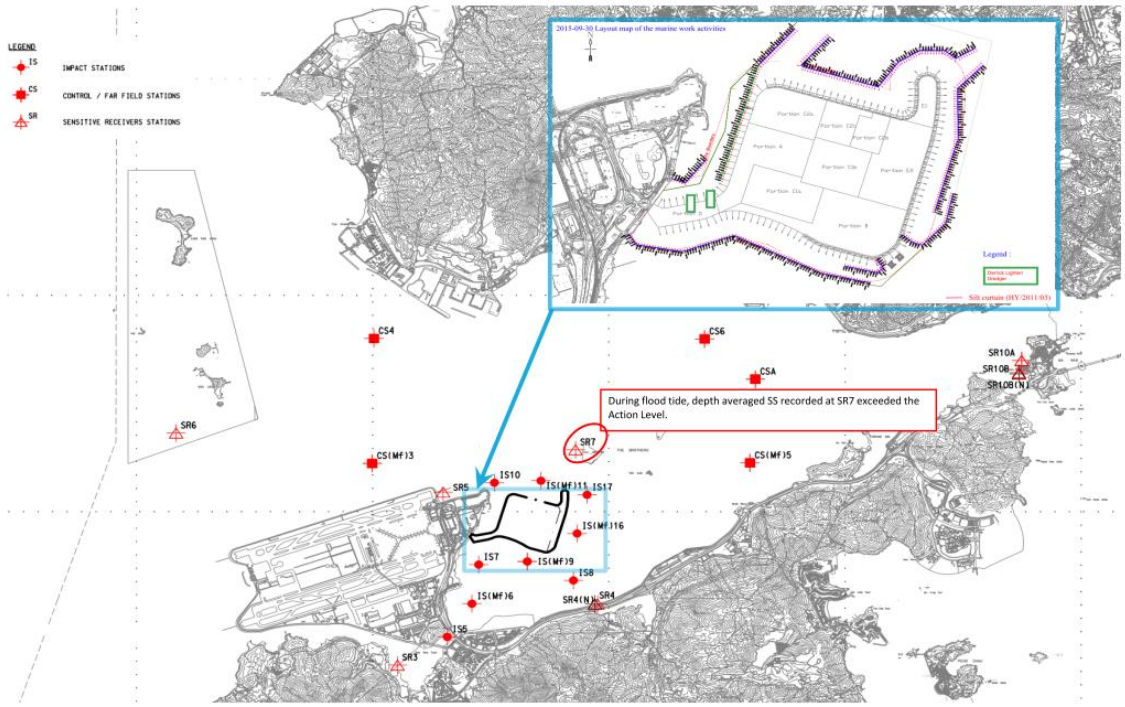
Table 4.5 Summary of Water Quality Exceedances

Station	Exceedance Level	DO (S&M)		DO (Bottom)		Turbidity		SS		Total	
		Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood
IS5	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)6	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS7	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS8	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)9	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS10	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)11	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS(Mf)16	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
IS17	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR3	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR4(N)	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR5	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR6	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
SR7	Action	0	0	0	0	0	0	0	(1) 30 Sept 2015	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	0	0	0
SR10B (N)	Action	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0
Total	**Action**	0	0	0	0	0	0	0	0	1	
	Limit	0	0	0	0	0	0	0	0	0	

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

4.6.4 For water quality, one (1) Action Level Exceedance of SS at SR7 during flood tide was recorded on 30 September 2015.

4.6.4.1 Layout map below shows that vessel activities were carried out at Portion D by vessels during flood tide but no marine based construction work was conducted at north part of the HKBCF reclamation works on 30 September 2015:



4.6.4.2 Exceedance recorded at SR7 during mid-flood tide is unlikely due to marine based construction activities of the Project:

4.6.4.3 With reference to the silt curtain checking record of 30 September 2015, defects such as missing segment or disconnection of the perimeter silt curtain were not observed at north part of the perimeter silt curtain.

4.6.4.4 With referred to the attached layout map, no marine based construction work was conducted at north part of the HKBCF reclamation works on 30 September 2015 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 during flood tide.

4.6.4.5 Photo record which shows the sea condition at north part of the HKBCF reclamation works during flood tide on 30 September 2015.

4.6.4.6 Also, turbidity level recorded at IS(Mf)11, IS10, IS17 and SR7 were 10.6(NTU), 14.5(NTU), 15.8(NTU) and 9.9(NTU) respectively; Suspended solids level recorded at IS(Mf)11, IS10 and IS17 were 14.2 mg/L, 16 mg/L and 8.3 mg/L respectively, which were all below the action and limit level. This indicates the turbidity level at or near SR7 and Suspended Solids level near SR7 was not adversely affected.

4.6.4.7 Impact water quality monitoring stataions IS(Mf)11, IS10 and IS17 are located relatively closer to the construction site of HKBCF reclamation works but no IWQM exceedance was recorded on 30 September 2015 during flood tide. This indicates that the SS exceedance recorded at SR7 on 30 September 2015 during flood tide was unlikely due to activities of HKBCF reclamation works.

4.6.4.8 The exceedance was likely due to local effects in the vicinity of SR7.

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

4.6.4.10 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 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.

4.6.4.11 The exceedences noted were of a localised nature and in the north of HKBCF (on 30 September 2015), the north of the Brothers Island, at NEL. Short duration local increased sedimentation is not anticipated to affect the dolphins which may have occurred in the western reached of NWL.

4.6.4.12 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.

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

4.6.5 The event action plan is annexed in Appendix L.

5 DOLPHIN MONITORING

5.1 Monitoring Requirements

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

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

5.2 Monitoring Equipment

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	815456	113.870287	22.276504
1	804671	831404	113.869975	22.421696
2	805475	815913	113.878079	22.281819
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	820880	113.926749	22.325043
7	810499	824613	113.926688	22.360464
8	811508	821123	113.936539	22.326475
8	811508	824254	113.936486	22.357241
9	812516	821303	113.946320	22.326894
9	812516	824254	113.946279	22.357255
10*	813525	820827	113.956112	22.326321
10*	813525	824657	113.956066	22.360908
11	814556	818853	113.966155	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

Remarks:

(a) *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 108km.

(b) Coordinates for transect lines 1, 2, 7, 8, 9 and 11 have been updated in respect to the Proposal for Alteration of Transect Line for Dolphin Monitoring approved by EPD on 19 August 2015.

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 September 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 7, 8, 29 and 30 September 2015. A total of 216.3 km of transect line was conducted; 212.5km was conducted during Beaufort Sea State 3 or better (favourable water conditions). The amendments proposed to lines 1, 2, 7, 8, 9 and 11 which were submitted to EPD were approved in August 2015. The new lines were travelled in September 2015.

5.7.2 The effort summary and sightings data are shown in Tables 5.3 and 5.4, respectively. The survey efforts conducted in September 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	09/07/2015	NWL	1	53.9	108
	09/07/2015	NWL	2	3.2	
	09/08/2015	NWL	1	14.9	
	09/08/2015	NEL	1	13.7	
	09/08/2015	NEL	2	22.3	
2	09/29/2015	NWL	1	4	108.3
	09/29/2015	NWL	2	30.6	
	09/29/2015	NWL	3	27.8	
	09/29/2015	NWL	4	3.8	
	09/30/2015	NWL	1	3	
	09/30/2015	NWL	2	3.1	
	09/30/2015	NEL	1	12.4	
	09/30/2015	NEL	2	15.5	
	09/30/2015	NEL	3	8.1	
TOTAL in SEPTEMBER 2015					**216.3**

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

Table 5.4 Impact Dolphin Monitoring Survey Details September 2015

Date	Location	No. Sightings "on effort"	No. Sightings "opportunistic"
09/07/2015	NW L	**2**	0
	NEL	0	0
09/08/2015	NW L	0	0
	NEL	0	0
09/29/2015	NW L	0	0
	NEL	0	0
09/30/2015	NW L	0	0
	NEL	0	0
TOTAL in September 2015		**2**	0

* Location indicates which area was being surveyed when the sighting was made. The area noted does not necessarily indicate where the dolphins were when the sighting was made.

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**
7 & 8 Sept 2015	36.0	72.0	0	2	0	2.8
29 & 30 Sept 2015	36.0	68.5	0	0	0	0
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**
7 & 8 Sept 2015	36.0	72.0	0	5	0	6.9
29 & 30 Sept 2015	36.0	68.5	0	0	0	0

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

5.7.3 A total of two sightings were made, both “on effort”. Both sightings were recorded on the 7 September 2015. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively. The first group sighted on the 7 September 2015 comprised one individual and the second, four individuals.

5.7.4 Behaviour: On the 7 September 2015, the behaviour of the first sighting made was noted as travelling and the second group was engaged in multiple activities; feeding, surface active and travelling. No calves were sighted during impact surveys in September 2015. Locations of sighting with different behaviour are mapped in Figure 5d.

5.7.5 Three re-sightings were noted in July 2015. On July 6th, HZMB 008 was sighted in NWL. HZMB 008 has been sighted once previously in NWL in May 2012. HZMB 004 was sighted on 28th July 2015. HZMB 004 was first sighted in March 2012 and again in September 2012, both times in NWL. Previously recorded as HZMB 120, this dolphin left fin is now matched to a right fin of HZMB 107. The single previous sighting of HZMB 120 (May 2014) is now included in HZMB 107 data. HZMB 107 was sighted on 28 July 2015. This dolphin was first sighted in August 2013 and subsequently in May and October of 2014. All sightings have been made in NWL. It is noted that dolphins which have not been sighted for several years have been resighted again in July 2015. Images and re-sightings data are included Appendix K.

5.7.6 One individual was resighted in August 2015 and one new individual was added to the catalogue. HZMB 014 was sighted on 25 August 2015 in NWL. HZMB 014 is known from the AFCD catalogue (NL176) and was sighted during baseline monitoring (Nov 2011) as well as during impact monitoring in 2012 and in 2013 in both NEL and NWL. This individual was last sighted during impact monitoring in December 2013. A new individual HZMB 129 was added to the catalogue. Images and re-sightings data are included in Appendix K.

5.7.7 Noteworthy Observation[1]:

5.7.7.1 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

[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.

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.

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

5.7.7.3 Travel to the northern end of line 10 was slightly impeded by the large numbers of ships in the public anchorage. After checking with Contactor's marine department, no record match with the abovementioned vessels, as such they are unlikely to be related to this Contract. As there are variable numbers of ships in this anchorage through time, it is considered that this could temporarily affect survey protocol, survey data collection and dolphin habitat use.

5.7.7.4 Anchored fishing vessels were noted on lines 1. In previous encounters, dolphins were seen feeding in association with these vessels despite them not being active. This may influence both dolphin behaviour and the view of the area.

5.7.7.5 New projects were ongoing at the southern ends of lines 4, 5 and 6 which were not part of this Project. There are no apparent fixed structures associated with these projects only platforms and servicing vessels. A working vessel was noted at line 5 associated with one of the new projects. As it is not known what activity was being conducted, the effect that these projects may have specifically on dolphins is not known.

5.7.7.6 Vessel traffic congestion delayed start of surveying line 20 on the 30 September 2015 for a short time. This area is where Urmston Road vessel traffic converges to pass under the Kap Shui Mun Bridge. After checking with Contactor's marine department, no record match with the abovementioned vessels, as such they are unlikely to be related to this Contract. As the container vessels were moving and cleared the area within the survey period, it is considered that this temporarily affected survey protocol only.

5.7.7.7 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).

5.7.7.8 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.

5.7.8 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, 10, 17 and 24 September 2015.

6.1.2 Particular observations during the site inspections are described below:

Air Quality

6.1.3 The Contractor was reminded to continue to provide sufficient dust control to prevent generation of fugitive dust. (Reminder)

6.1.4 Fugitive dust was observed when vehicle was drove pass the road, during grout production process and during rock filling process. The Contractor was reminded to provide sufficient dust control to prevent generation of fugitive dust. The Contractor subsequently provided dust control measures to the area. (Closed)

Noise

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

Water Quality

6.1.6 A deformed drip tray was observed on site. The Contractor was reminded to provide drip tray which can effectively contain potential leakage of oil. The Contractor subsequently provided drip tray without defect. (Closed)

6.1.7 Gaps between vehicle accesses were observed on the landing barge near Portion E1. The Contractor was reminded to provide measure to prevent potential runoff on the landing barge. (Reminder)

6.1.8 Material was observed stockpiled on cells at Portion E1. The Contractor was reminded to provide preventative measures to the works process to prevent runoff. The Contractor subsequently removed the material from Portion E1. (Closed)

6.1.9 Delivery pipe of floating grout production facilities was observed not fully enclosed. The Contractor was reminded to ensure full enclosure and prevent any potential runoff. The Contractor subsequently provided full enclosure to delivery pipes of the grout production facilities. (Closed)

Chemical and Waste Management

6.1.10 The Contractor was reminded to remove the water mixture which accumulated inside the drip trays at Portion C2a and dispose of as chemical waste properly. The Contractor subsequently removed the water mixture inside drip tray. (Closed)

6.1.11 It was observed that sand was loaded inside drip trays. The Contractor was reminded to clear the sand inside drip tray. The Contractor subsequently cleared the sand inside drip tray. (Closed)

6.1.12 It was observed that water and oil mixture accumulated inside drip tray. The Contractor was reminded to clear the sand inside drip tray. The Contractor subsequently cleared the water and oil mixture accumulated inside drip tray. (Closed)

6.1.13 Bags of inert waste were observed on site, the Contractor was reminded to collect and dispose them of properly and regularly. (Reminder)

Landscape and Visual Impact

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

Others

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

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, 69,848.7m^3 of fill were imported for the Project use in the reporting period. 24.3kg of chemical waste and 78m^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/I	17/07/2015	N/A	HyD	Hong Kong – Zhuhai – Macao Bridge Hong Kong Boundary Crossing Facilities
		EP-354/2009/D	13/03/2015	N/A		Tuen Mun – Chek Lap Kok Link (TMCLKL Southern Landfall Reclamation only)
APCO	NA notification	--	30/12/2011	--	CHEC	Works Area WA2 and WA3
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	5213-839-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-RS0773-15	17/07/2015	20/10/2015	CHEC	Reclamation Works in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RS1046-15	29/09/2015	31/12/2015	CHEC	Reclamation Works in Contract HY/2010/02
NCO	Construction Noise Permit	GW-RE0622-15	21/06/2015	20/12/2015	CHEC	Section of TKO Fill Bank under Contract HY/2010/02

6.4 Implementation Status of Environmental Mitigation Measures

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

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

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

6.4.4 Regarding the implementation of dolphin monitoring and protection measures (i.e. implementation of Dolphin Watching Plan, Dolphin Exclusion Zone and Silt Curtain integrity Check), regular checking were conducted by the experienced MMOs within the works area to ensure no dolphin was trapped by the enclosed silt curtain systems. Any dolphin spotted within the enclosed silt curtain systems was reported and recorded. Relevant procedures were followed and measures were well implemented. Silt curtain systems were also inspected timely in accordance to the submitted plan. All inspection records were kept properly.

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

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

6.4.7 As informed by the Contractor, an area of Portion B has been handed over to other Contract and the perimeter silt curtain near this area of Portion B has been rearranged on 31 July 2015 for berthing another Contractor's vessels (which do not belong to this Contract). IEC/ENPO was informed on 5 Aug 2015 immediately after ET's review. IEC/ENPO provided further comments on 1 September 2015, ET responded 2 September 2015 with notification letter ref.:60249820/rmky15090201. IEC/ENPO expressed no further comment via letter ref.: HYDHZMBEEM00_0_03351L.15 on 8 September 2015 for the removal of section of perimeter silt curtain near Portion B of HKBCF. EPD replied on 24 September 2015 via memo (39) in Ax(1) to EP2/G/A/146 pt.8 and reminded HyD that if grouting trial is undertaken, to adhere to the VEP requirement and undertake the necessary mitigation measures after the phase removal of the perimeter silt curtain.

6.5 Summary of Exceedances of the Environmental Quality Performance Limit

6.5.1 For impact air quality monitoring, no exceedance of 1-Hour TSP or 24-Hour TSP was recorded at all monitoring stations 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 of SS at SR7 during flood tide was recorded on 30 September 2015. After investigation, there is no adequate information to conclude the recorded exceedance is related to this Contract. No Action and Limit Level exceedance was recorded on other monitoring date in the reporting month.

6.5.4 A total of two sightings were made, both "on effort". Both sightings were recorded on the 7 September 2015. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively. The first group sighted on the 7 September 2015 comprised one individual and the second, four individuals.

6.5.5 Behaviour: On the 7 September 2015, the behaviour of the first sighting made was noted as travelling and the second group was engaged in multiple activities; feeding, surface active and travelling. No calves were sighted during impact surveys in September 2015. Locations of sighting with different behaviour are mapped in Figure 5d.

6.5.6 Environmental site inspection was carried out 4 times in September 2015. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

6.5.7 Cumulative statistics on exceedance is provided in Appendix N.

6.6 Summary of Complaints, Notification of Summons and Successful Prosecutions

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

6.6.2 No complaint, notification of summons and successful prosecutions was received in the reporting period.

6.6.3 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 October and November 2015 will be*:-

Marine-base

- Rubble Mound Seawall
- Marine fill
- Maintenance of silt curtain & silt screen at sea water intake of HKIA

Land-base

- Earthwork fill
- Surcharge removal & laying
- Deep Cement Mixing
- Geotechnical Instrumentation Works
- Removal of Temporary Seawall
- Vertical Band Drains
- Installations of Precast Culverts except sloping outfalls
- 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 October and November 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 October 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 impact air quality monitoring, no exceedance was recorded at all monitoring stations in the reporting month

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

8.2.4 For water quality, one (1) Action Level Exceedance of SS at SR7 during flood tide was recorded on 30 September 2015. After investigation, there is no adequate information to conclude the recorded exceedance is related to this Contract. No Action and Limit Level exceedance was recorded on other monitoring date in the reporting month.

8.2.5 A total of two sightings were made, both “on effort”. Both sightings were recorded on the 7 September 2015. Sighting details are summarised and plotted in Appendix K and Figure 5c, respectively. The first group sighted on the 7 September 2015 comprised one individual and the second, four individuals.

8.2.6 Behaviour: On the 7 September 2015, the behaviour of the first sighting made was noted as travelling and the second group was engaged in multiple activities; feeding, surface active and travelling. No calves were sighted during impact surveys in September 2015. Locations of sighting with different behaviour are mapped in Figure 5d.

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

8.2.8 Environmental site inspection was carried out 4 times in September 2015. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

8.3 Recommendations

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

Air Quality Impact

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

Construction Noise Impact

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

Water Quality Impact

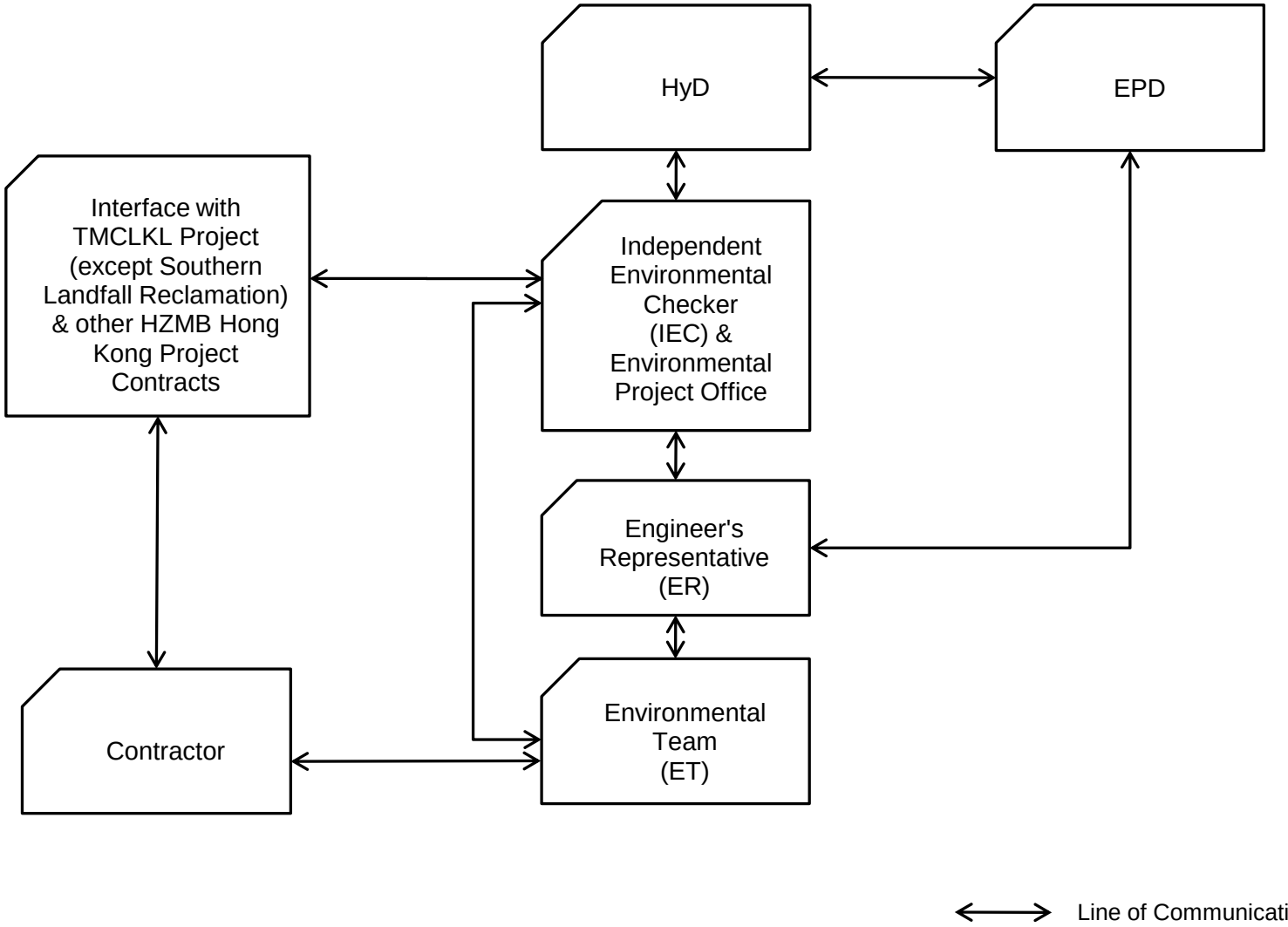
- Regular review and maintenance of silt curtain systems, drainage systems and desilting facilities in order to make sure they are functioning effectively.
- Construction of seawall should be completed as early as possible.
- Regular inspect and review the loading process from barges to avoid splashing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

Chemical and Waste Management

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

Landscape and Visual Impact

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



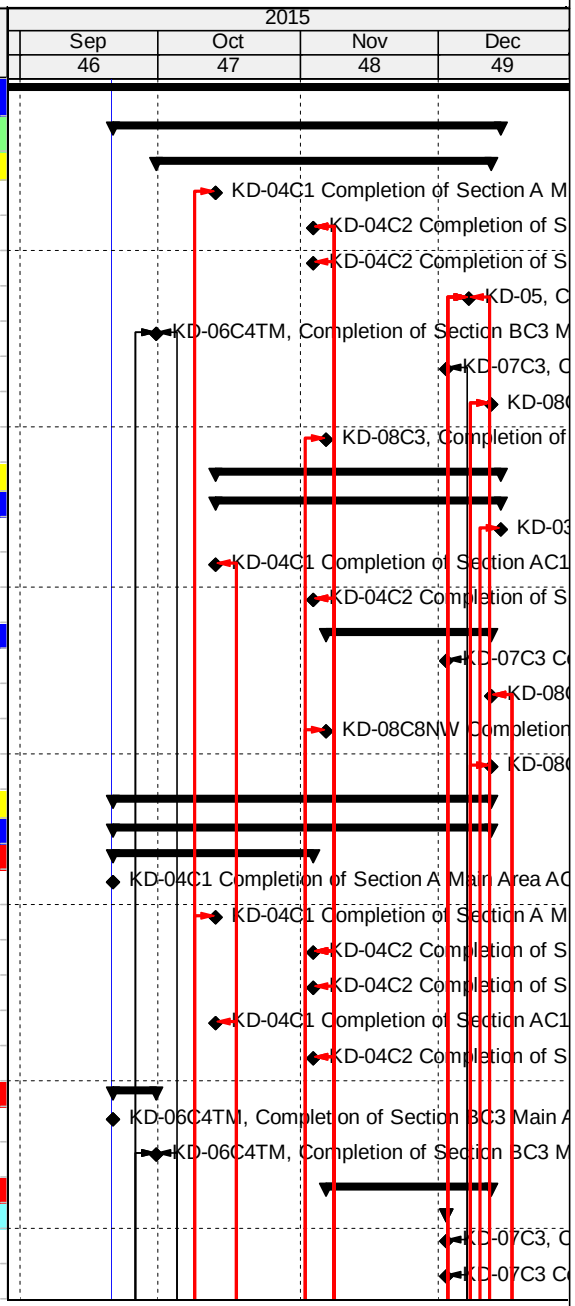
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
--RECLAMATION WORKS
Project No.: 60249820 Date: April 2013

Project Organisation for Environmental Works

AECOM

Appendix A

Activity ID	Activity Name	Duration	Start	Finish	Total Float
46th Monthly Progress Report Status as on 21Sep2015		1745	21-May-12 A	28-Feb-17	319
Contract Key Dates		85	21-Sep-15	14-Dec-15	23
Key Dates for achievement of Stages and completion of Sections		73	30-Sep-15	12-Dec-15	25
G1064	KD-04C1 Completion of Section A Main Area North AC1 A2 15Jul2014 SA3	0		13-Oct-15*	-455
G1065	KD-04C2 Completion of Section A Edge Area AC2 2Aug2015 SA3	0		03-Nov-15*	-93
G1067	KD-04C2 Completion of Section A Main Area South AC2 2 Aug2015 SA3	0		03-Nov-15*	-93
G1070	KD-05, Completion of Section D C1, C2, C3 & C4 Except Sloping outfall 10Aug2015 SA3	0		07-Dec-15*	-119
G1081	KD-06C4TM, Completion of Section BC3 Main Area West 21Nov2015 SA4	0		30-Sep-15*	52
G1090	KD-07C3, Completion of Section C1aC3 6Jan2016 SA4	0		02-Dec-15*	35
G1095	KD-08C3, Completion of Section C1bC3 East 30Sep2015 SA4	0		12-Dec-15*	-73
G1100	KD-08C3, Completion of Section C1bC3 West 30Sep2015 SA4	0		06-Nov-15*	-37
Supplementary Agreement		62	13-Oct-15	14-Dec-15	22
SA3		62	13-Oct-15	14-Dec-15	-126
SA3-KD03-010	KD-03 Achievement of Stage 3 10Aug2015	0		14-Dec-15*	-126
SA3-KD04-010	KD-04C1 Completion of Section AC1 15Jul2014	0		13-Oct-15*	-455
SA3-KD04-020	KD-04C2 Completion of Section AC2 2Aug2015	0		03-Nov-15*	-93
SA4		36	06-Nov-15	12-Dec-15	24
SA4-KD07-010	KD-07C3 Completion of Section C1aC3 6Jan2016	0		02-Dec-15*	34
SA4-KD08-010	KD-08C3 Completion of Section C1bC3 30Sep2015	0		12-Dec-15*	-74
SA4-KD08-030	KD-08C8NW Completion of Section C1bC8NW 17Jul2015	0		06-Nov-15*	-113
SA4-KD08-040	KD-08C8SE Completion of Section C1bC8SE 17Jul2015	0		12-Dec-15*	-149
Summary Programme		83	21-Sep-15	12-Dec-15	25
Portion Summary		83	21-Sep-15	12-Dec-15	25
Portion A		44	21-Sep-15	03-Nov-15	-93
ZG1060	KD-04C1 Completion of Section A Main Area AC1 CLP Substation 15Jul2014 SA3	0		21-Sep-15*	-432
ZG1064	KD-04C1 Completion of Section A Main Area North AC1 A2 15Jul2014 SA3	0		13-Oct-15*	-455
ZG1065	KD-04C2 Completion of Section A Edge Area AC2 2Aug2015 SA3	0		03-Nov-15*	-93
ZG1067	KD-04C2 Completion of Section A Main Area South AC2 2 Aug2015 SA3	0		03-Nov-15*	-93
ZGA3-KD04-010	KD-04C1 Completion of Section AC1 15Jul2014	0		13-Oct-15*	-455
ZGA3-KD04-020	KD-04C2 Completion of Section AC2 2Aug2015	0		03-Nov-15*	-93
Portion B		10	21-Sep-15	30-Sep-15	52
ZG1080	KD-06C4TM, Completion of Section BC3 Main Area East-S 21Nov2015 SA4	0		21-Sep-15*	62
ZG1081	KD-06C4TM, Completion of Section BC3 Main Area West 21Nov2015 SA4	0		30-Sep-15*	52
Portion C		36	06-Nov-15	12-Dec-15	25
Portion C1a		0	02-Dec-15	02-Dec-15	35
ZG1090	KD-07C3, Completion of Section C1aC3 6Jan2016 SA4	0		02-Dec-15*	35
ZGA4-KD07-010	KD-07C3 Completion of Section C1aC3 6Jan2016	0		02-Dec-15*	34

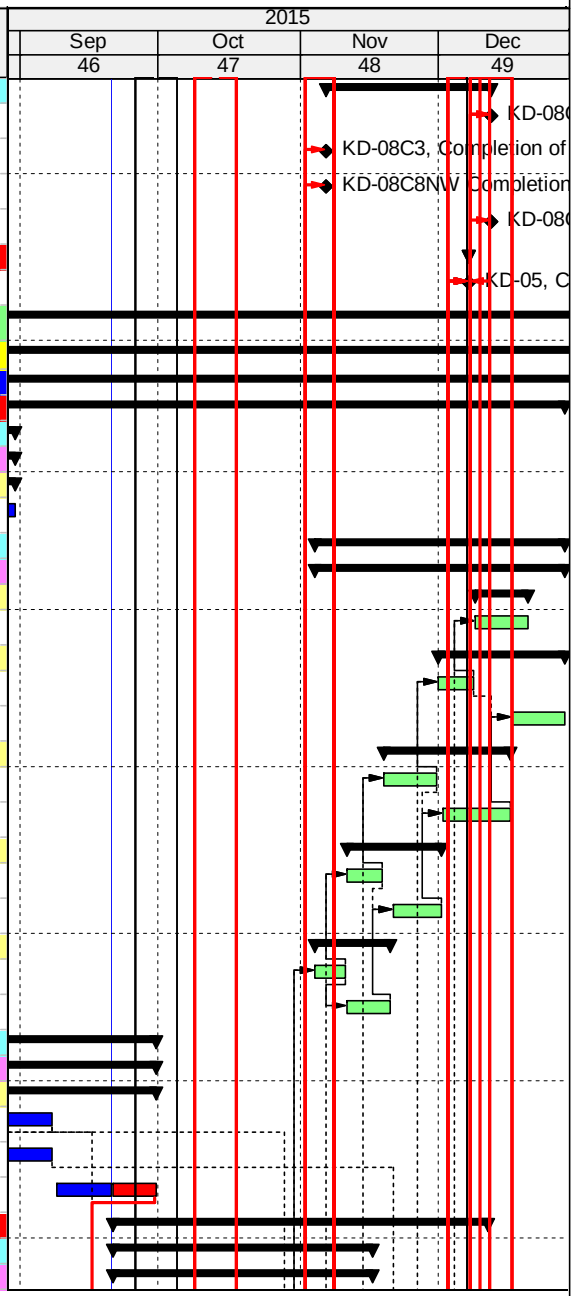


Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Oracle Corporation

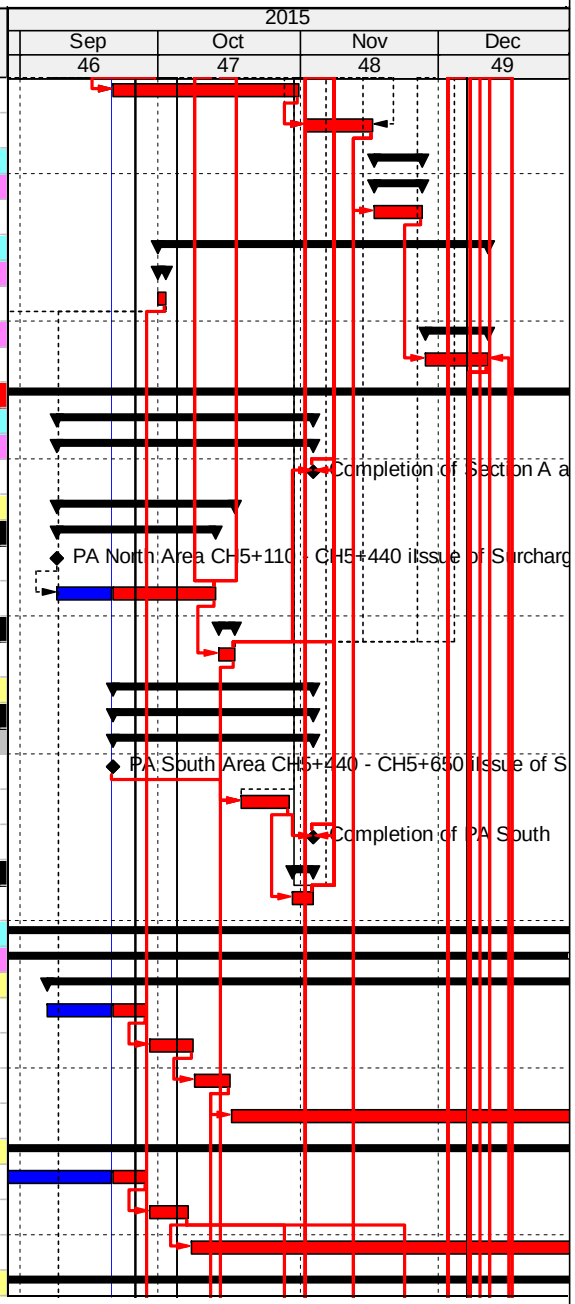
Activity ID	Activity Name	Duration	Start	Finish	Total Float
Portion C1b		36	06-Nov-15	12-Dec-15	-73
ZG1095	KD-08C3, Completion of Section C1bC3 East 30Sep2015 SA4	0		12-Dec-15*	-73
ZG1100	KD-08C3, Completion of Section C1bC3 West 30Sep2015 SA4	0		06-Nov-15*	-37
ZGA4-KD08-030	KD-08C8NW Completion of Section C1bC8NW 17Jul2015	0		06-Nov-15*	-113
ZGA4-KD08-040	KD-08C8SE Completion of Section C1bC8SE 17Jul2015	0		12-Dec-15*	-149
Portion D		0	07-Dec-15	07-Dec-15	-119
ZG1070	KD-05, Completion of Section D C1, C2, C3 & C4 Except Sloping outfall 10Aug2015 SA3	0		07-Dec-15*	-119
Work Zone, as defined in PS Clause 1.03(6)		563	15-Jan-15 A	16-Jul-16	546
Portion A, B, C & E		563	15-Jan-15 A	16-Jul-16	546
Portion A, B, C & E		563	15-Jan-15 A	16-Jul-16	546
Seawall		122	29-Jul-15 A	28-Dec-15	135
Cellular Structures		10	01-Aug-15 A	31-Aug-15 A	
Capping Beams		10	01-Aug-15 A	31-Aug-15 A	
Portion E1 between C090 to C074 Capping Beams		10	01-Aug-15 A	31-Aug-15 A	
CBE1-020	PE1 Capping Beams structure C080 to C077 4cells 10days/cell	10	01-Aug-15 A	31-Aug-15 A	
Optimizing Rubble Mound Seawalls		55	04-Nov-15	28-Dec-15	135
Optimizing Portion A at C118 - C134		55	04-Nov-15	28-Dec-15	135
Seawall Portion A at C118 - C121, Ch5+100 to 4+880		11	09-Dec-15	20-Dec-15	129
RFA1-0110	PA at C121 - C118 Removal of temporary rockfill	11	09-Dec-15	20-Dec-15	129
Seawall Portion A at C122 - C124, Ch5+220 to 5+100		28	01-Dec-15	28-Dec-15	135
RFA2-0110	PA at C122 - C124 Removal of temporary rockfill	8	01-Dec-15	08-Dec-15	129
RFA2-0120	PA at C122 - C124 Rock Armour 1-3ton 8,636m3 850m3/day	10	17-Dec-15	28-Dec-15	116
Seawall Portion A at C125 - C128, Ch5+400 to 5+220		28	19-Nov-15	16-Dec-15	135
RFA3-0110	PA at C125 - C128 Removal of temporary rockfill	11	19-Nov-15	30-Nov-15	123
RFA3-0120	PA at C125 - C128 Rock Armour 1-3ton 11,102m3 850m3/day	13	02-Dec-15	16-Dec-15	116
Seawall Portion A at C129 - C131, Ch5+550 to 5+400		21	11-Nov-15	01-Dec-15	135
RFA4-0110	PA at C129 - C131 Removal of temporary rockfill	7	11-Nov-15	18-Nov-15	123
RFA4-0120	PA at C129 - C131 Rock Armour 0.3-1ton 7,233m3 850m3/day	9	21-Nov-15	01-Dec-15	116
Seawall Portion A at C132 - C134, Ch5+700 to 5+550		17	04-Nov-15	20-Nov-15	136
RFA5-0110	PA at C132 - C134 Removal of temporary rockfill	7	04-Nov-15	10-Nov-15	122
RFA5-0120	PA at C132 - C134 Rock Armour 0.3-1ton 7,233m3 850m3/day	9	11-Nov-15	20-Nov-15	116
Conforming Sloping Seawalls		62	29-Jul-15 A	30-Sep-15	-653
Rockfill		62	29-Jul-15 A	30-Sep-15	-653
Seawall Portion E1 at C068 - C090 23cells		62	29-Jul-15 A	30-Sep-15	-653
RFE1-020	PE1 Rockfill type 2 at C080 - C077 4cells	21	29-Jul-15 A	08-Sep-15 A	
RFE1-022	PE1 Rockfill type 1 at C080 - C077 4cells	21	29-Jul-15 A	08-Sep-15 A	
RFE1-120	PE1 Underlayer	16	09-Sep-15 A	30-Sep-15	-653
Reclamation		82	21-Sep-15	11-Dec-15	-363
Marine Fill		57	21-Sep-15	16-Nov-15	-654
Land Portion E1		57	21-Sep-15	16-Nov-15	-654



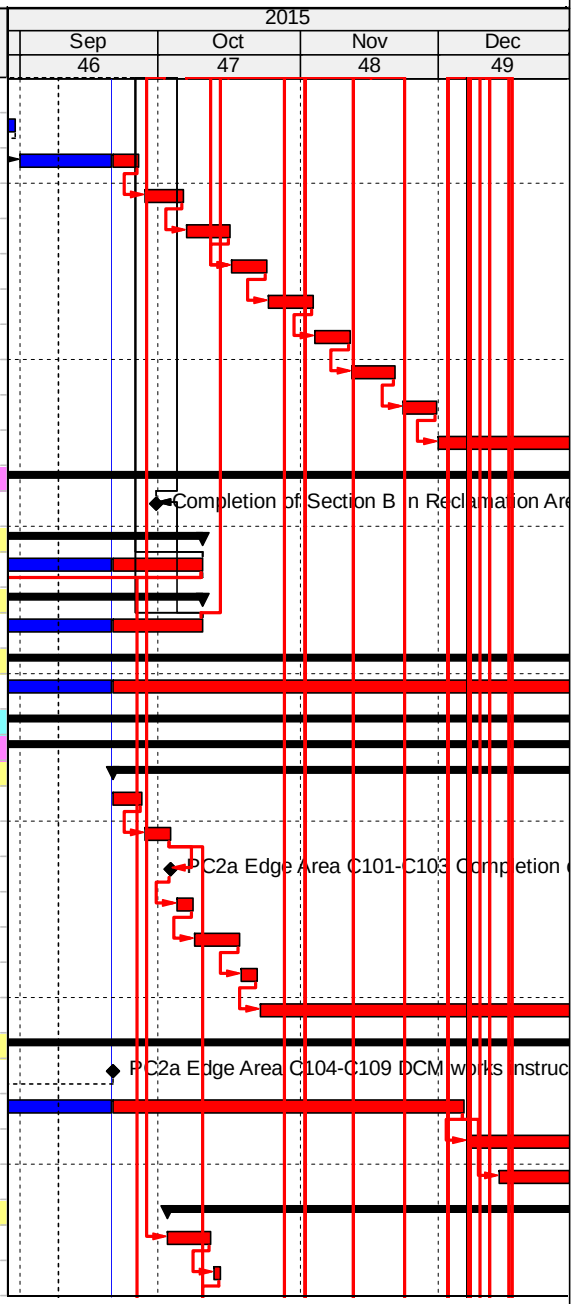
Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Activity ID	Activity Name	Duration	Start	Finish	Total Float
MFE1-010	PE1 Marine Sand Fill upto +2.5mPD stg1 230,000m3 6,000m3/day by Pumping barge	39	21-Sep-15	31-Oct-15	-597
MFE1-020	PE1 Marine Sand Fill upto +2.5mPD stg2 125,354m3 10,000m3/day by Pumping barge	13	02-Nov-15	16-Nov-15	-563
Vertical Band Drains by Land Plant		10	17-Nov-15	27-Nov-15	-563
Land Portion E1 12,243nrs by Land		10	17-Nov-15	27-Nov-15	-563
VBDE1-10	PE1 Vertical Band Drains 3,478nrs by land plant (400nrs/day) (2HP)	10	17-Nov-15	27-Nov-15	-563
Earthwork Fill		62	01-Oct-15	11-Dec-15	-308
Land Portion C2a		2	01-Oct-15	02-Oct-15	-248
EFC2a-065	PC2a Edge Area NorthWest Earthwork Fill Type D Sand 100% stg3 9668m3 5,000m/day by D	2	01-Oct-15*	02-Oct-15	-248
Land Portion E1		12	28-Nov-15	11-Dec-15	-563
EFE1-010	PE1 Type D Earthwork Sand Fill upto +5.5mPD 113,263m3 10,000m3/day by Dump Trucks	12	28-Nov-15	11-Dec-15	-563
Surcharge		563	15-Jan-15 A	16-Jul-16	546
Portion A Surcharge		57	09-Sep-15 A	03-Nov-15	-93
Edge Area From SOL offset within 180m to 50m		57	09-Sep-15 A	03-Nov-15	-93
SUEA0-199	Completion of Section A at Edge Area 0 - 40m	0		03-Nov-15	-93
CH5+110 to 5+440 Portion A North		40	09-Sep-15 A	17-Oct-15	-92
Area of 50m to 120 from Offset		24	09-Sep-15 A	13-Oct-15	-455
SUEA1-2098	PA North Area CH5+110 - CH5+440 iIssue of Surcharge Removal	0		09-Sep-15 A	
SUEA1-2100	PA North 120m-50m from Offset Surcharge Removal 104,941m3 10,000m3/day	11	09-Sep-15 A	13-Oct-15	-419
Area of 0 to 50m from Offset		4	14-Oct-15	17-Oct-15	-86
SUEA1-2190	PA North 50m-10m Surcharge Sand Removal 40,000m3 10,000m3/day	4	14-Oct-15	17-Oct-15	-86
CH5+440 to 5+650 Portion A South		44	21-Sep-15	03-Nov-15	-93
Area of 40m - 120m from Offset (other CLP area)		44	21-Sep-15	03-Nov-15	-93
Upto +11.5mPD Area		44	21-Sep-15	03-Nov-15	-93
SUEA3-0078	PA South Area CH5+440 - CH5+650 iIssue of Surcharge Removal	0		21-Sep-15*	-65
SUEA3-0080	PA South Surcharge Removal 111,581m3 10,000m3/day	11	19-Oct-15	29-Oct-15	-86
SUEA3-0090	Completion of PA South	0		03-Nov-15	-93
Area of 10m - 40m from Offset (other CLP area)		4	30-Oct-15	03-Nov-15	-86
SUEA4-0080	PA South 40m-10m Surcharge Sand Removal 40,000m3 10,000m3/day	4	30-Oct-15	03-Nov-15	-86
Land Portion B		348	17-May-15 A	28-Apr-16	-159
Edge Areas		348	17-May-15 A	28-Apr-16	-601
Deep Cement Mixing at K047 - K052		176	07-Sep-15 A	14-Mar-16	-556
DCM-2060	PB Edge Area K047-K052 Filling up to +8.5mPD 34,864m3 10,000m3/day at DCM by Dump T	4	07-Sep-15 A	28-Sep-15	-520
DCM-2061	PB Edge Area K047-K052 CPT Test	10	29-Sep-15	08-Oct-15	-604
DCM-2062	PB Edge Area K047-K052 Filling up to +11.5mPD 33,470m3 10,000m3/day at DCM by Dump	7	09-Oct-15*	16-Oct-15	-520
DCM-2070	PB Edge Area K047-K052 Surcharge Period 5mths	150	17-Oct-15	14-Mar-16	-556
at K028 - K039		294	17-May-15 A	05-Mar-16	-553
SUEB0-070	PB Edge Area K028-K039 Surcharge Period +8.5mPD 4.5mths	135	17-May-15 A	28-Sep-15	-553
SUEB0-080	PB Edge Area K028-K039 Sand Surcharge Laying up to 11.5mPD 75,733m3 10,000m3/day by	8	29-Sep-15	07-Oct-15	-473
SUEB0-090	PB Edge Area K028-K039 Sand Surcharge Period +11.5mPD 5mths	150	08-Oct-15	05-Mar-16	-553
at K013 - K027		311	23-Jun-15 A	28-Apr-16	-607



Activity ID	Activity Name	Duration	Start	Finish	Total Float
SUEB0-012	PB Edge Area K013-K027 Sand Surcharge Checking at +6.5mPD	32	23-Jun-15 A	21-Aug-15 A	
SUEB0-014	PB Edge Area K013-K027 Sand Surcharge upto 7.5mPD 61,766m3 10,000m3/day by Dump T	6	22-Aug-15 A	31-Aug-15 A	
SUEB0-016	PB Edge Area K013-K027 Sand Surcharge Checking at +7.5mPD	7	01-Sep-15 A	26-Sep-15	-603
SUEB0-018	PB Edge Area K013-K027 Sand Surcharge upto 8.5mPD 61,766m3 10,000m3/day by Dump T	8	28-Sep-15	06-Oct-15	-520
SUEB0-020	PB Edge Area K013-K027 Surcharge Period at +8.5mPD strength record	10	07-Oct-15	16-Oct-15	-604
SUEB0-030	PB Edge Area K013-K027 Sand Surcharge up to 9.5mPD 58,103m3 10,000m3/day by Dump T	7	17-Oct-15	24-Oct-15	-520
SUEB0-032	PB Edge Area K013-K027 Surcharge Period at +9.5mPD strength record	10	25-Oct-15	03-Nov-15	-605
SUEB0-034	PB Edge Area K013-K027 Sand Surcharge up to 10.5mPD 58,102m3 10,000m3/day by Dump	7	04-Nov-15	11-Nov-15	-519
SUEB0-036	PB Edge Area K013-K027 Surcharge Period at +10.5mPD strength record	10	12-Nov-15	21-Nov-15	-606
SUEB0-038	PB Edge Area K013-K027 Sand Surcharge up to 11.5mPD 58,102m3 10,000m3/day by Dump	7	23-Nov-15	30-Nov-15	-519
SUEB0-040	PB Edge Area K013-K027 Sand Surcharge Period at +11.5mPD 5mths	150	01-Dec-15	28-Apr-16	-607
Reclamation Areas		210	21-Jul-15 A	16-Feb-16	-87
SURB0-099	Completion of Section B in Reclamation Areas	0		30-Sep-15	52
at West of Main Area stg1		29	19-Aug-15 A	10-Oct-15	-353
SURB1-040	PB Main Area West-S Sand Surcharge Removal 291,223m3 10,000m3/day	29	19-Aug-15 A	10-Oct-15	-353
at West of Main Area stg2		34	01-Aug-15 A	10-Oct-15	-353
SURB2-040	PB Main Area West-N Sand Surcharge Removal 335,714m3 10,000m3/day	34	01-Aug-15 A	10-Oct-15	-353
at North-East of Main Area (Include BC8N, NE & E)		210	21-Jul-15 A	16-Feb-16	-252
SURB3-030	PB Main Area East-N Sand Surcharge Period +11.5mPD 7mths	210	21-Jul-15 A	16-Feb-16	-252
Land Portion C2a		293	16-Aug-15 A	08-Jun-16	584
Edge Areas		238	16-Aug-15 A	19-Apr-16	634
Deep Cement Mixing Works at C101 - C103		212	21-Sep-15	19-Apr-16	-573
DCM-3035	PC2a Edge Area C101-C103 CPT Test Result	7	21-Sep-15	27-Sep-15	-572
DCM-3040	PC2a Edge Area C101-C103 Filling up to +5.5mPD Type D (73m width, 28,200m3) 10,000m3/	6	28-Sep-15*	03-Oct-15	-491
DCM-3045	PC2a Edge Area C101-C103 Completion of 0-43m	0		03-Oct-15	-572
DCM-3050	PC2a Edge Area C101-C103 Filling up to +8.5mPD Surcharge (30m width, 16,600m3 5,000m3	4	05-Oct-15	08-Oct-15	-491
DCM-3052	PC2a Edge Area C101-C103 CPT Test	10	09-Oct-15	18-Oct-15	-573
DCM-3060	PC2a Edge Area C101-C103 Filling up to +11.5mPD Surcharge (30m width, 16,600m3 5,000m	4	19-Oct-15	22-Oct-15	-490
DCM-3070	PC2a Edge Area C101-C103 Surcharge Period 8mths	180	23-Oct-15	19-Apr-16	-573
Option - Deep Cement Mixing Works at C104 - C109		107	27-Aug-15 A	05-Jan-16	739
DCM-4120	PC2a Edge Area C104-C109 DCM works instructed by RE	0	21-Sep-15*		846
DCM-4130	PC2a Edge Area C104-C109 43m width x 260m Length Installation 2,235nrs 25nrs/day	90	27-Aug-15 A	06-Dec-15	-482
DCM-4140	PC2a Edge Area C104-C109 Hardening & Pause Period	30	07-Dec-15	05-Jan-16	-482
DCM-4150	PC2a Edge Area C104-C109 Filling up to +5.5mPD Type D (73m width, 47,000m3) 5,000m3/d	14	14-Dec-15	29-Dec-15	-404
at C110 - C112 Cellular Seawall		152	03-Oct-15	02-Mar-16	-292
SUEC2a-002	PC2a Edge Area C109-C112 Strength Test Result (CPT)	10	03-Oct-15	12-Oct-15	-292
SUEC2a-010	PC2a Edge Area C110-C112 Sand Surcharge Laying up to 6.5mPD 22,104m3 10,000m3/day b	2	13-Oct-15	14-Oct-15*	-247

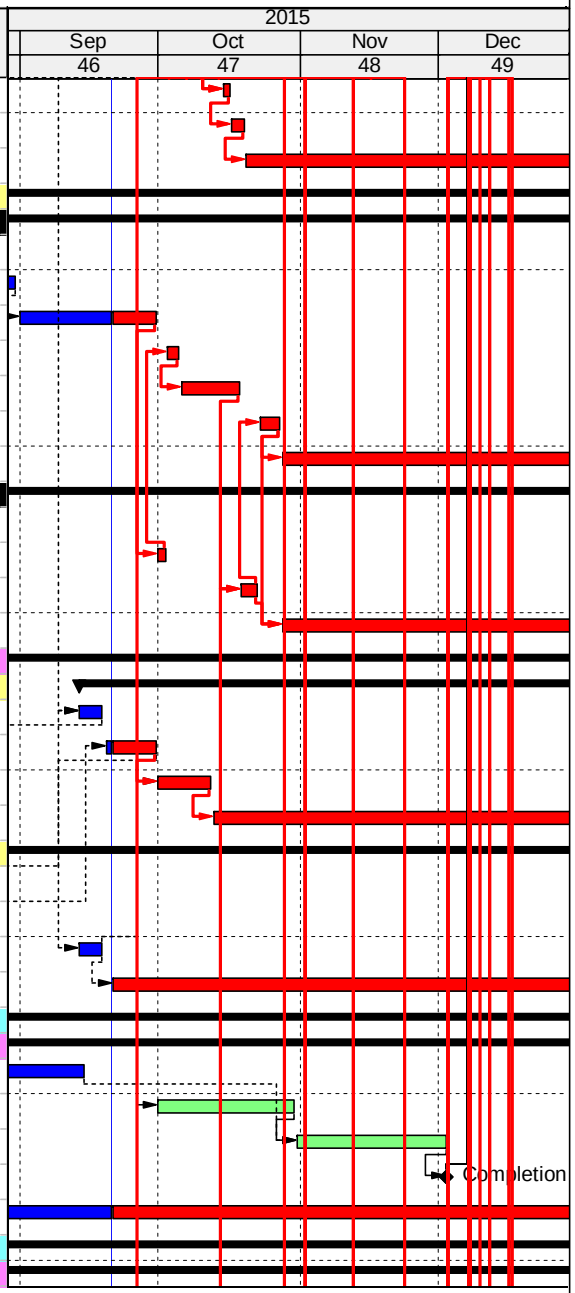


Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Oracle Corporation

Activity ID	Activity Name	Duration	Start	Finish	Total Float
SUEC2a-014	PC2a Edge Area C110-C112 Sand Surcharge Laying up to 7.5mPD 22,104m3 10,000m3/day b	2	15-Oct-15	16-Oct-15	-247
SUEC2a-018	PC2a Edge Area C110-C112 Sand Surcharge Laying up to 8.5mPD 22,103m3 10,000m3/day b	2	17-Oct-15	19-Oct-15	-247
SUEC2a-020a	PC2a Edge Area C110-C112 Sand Surcharge Period +8.5mPD 4.5mths	135	20-Oct-15	02-Mar-16	-292
CH4+710 - CH5+110 Rubble Mound Seawall		213	16-Aug-15 A	25-Mar-16	-125
10-40m		213	16-Aug-15 A	25-Mar-16	-125
SUEC2a-1034	PC2a Edge Area C113-C117 40m-10m Checking Strength at +6.5mPD	7	16-Aug-15 A	22-Aug-15 A	
SUEC2a-1036	PC2a Edge Area C113-C117 40m-10m Surcharge Sand upto 7.5mPD 10,000m3 5,000m3/day	2	26-Aug-15 A	31-Aug-15 A	
SUEC2a-1038	PC2a Edge Area C113-C117 40m-10m Checking Strength at +7.5mPD	7	01-Sep-15 A	30-Sep-15	-133
SUEC2a-1050	PC2a Edge Area C113-C117 40m-10m Surcharge Sand upto 8.5mPD 10,000m3 5,000m3/day	2	03-Oct-15	05-Oct-15	-114
SUEC2a-1060	PC2a Edge Area C113-C117 40m-10m Sucharge Period as 8.5mPD 1mth	13	06-Oct-15	18-Oct-15	-133
SUEC2a-1070	PC2a Edge Area C113-C117 40m-10m Surcharge Sand upto +11.5mPD 33,200m3 10,000m3/	4	23-Oct-15	27-Oct-15	-114
SUEC2a-1080	PC2a Edge Area C113-C117 40m-10m Surcharge Sand Period 5mths	150	28-Oct-15	25-Mar-16	-125
40-120m		177	24-Aug-15 A	25-Mar-16	-133
SUEC2a-1026	PC2a Edge Area C113-C117 120m-40m Surcharge Sand upto 7.5mPD stg2 10,420m3 5,000m	2	24-Aug-15 A	25-Aug-15 A	
SUEC2a-1032	PC2a Edge Area C113-C117 120m-40m Surcharge Sand upto 8.5mPD 10,000m3 5,000m3/da	2	01-Oct-15	02-Oct-15	-114
SUEC2a-1040	PC2a Edge Area C113-C117 120m-40m Surcharge Sand upto 11.5mPD 41,299m3 10,000m3/	4	19-Oct-15	22-Oct-15	-114
SUEC2a-2050	PC2a Edge Area C113-C117 120m-40m Surcharge Sand Period 5mths	150	28-Oct-15	25-Mar-16	-133
Reclamation Areas		293	19-Aug-15 A	08-Jun-16	-618
South C2aC1		252	14-Sep-15 A	08-Jun-16	-618
SURC2aC1-010	PC2a Main South C2aC1 Sand Surcharge Laying upto 9.5mPD 56,412m3 5,000m3/day by Du	6	14-Sep-15 A	19-Sep-15 A	
SURC2aC1-030	PC2a Main South C2aC1 Sand Surcharge Laying upto 10.5mPD 56,412m3 5,000m3/day by D	10	20-Sep-15 A	30-Sep-15	-532
SURC2aC1-050	PC2a Main South C2aC1 Sand Surcharge Laying upto 11.5mPD 56,412m3 5,000m3/day by D	10	01-Oct-15*	12-Oct-15	-532
SURC2aC1-070	PC2a Main South Sand Surcharge Period 8mths	240	13-Oct-15	08-Jun-16	-618
North C2aC2		271	19-Aug-15 A	17-May-16	-602
SURC2aC2-010	PC2a Main North Sand Surcharge Laying upto 9.5mPD 20,000m3 5,000m3/day by Dump Truc	4	19-Aug-15 A	22-Aug-15 A	
SURC2aC2-030	PC2a Main North Sand Surcharge Laying upto 10.5mPD 20,000m3 5,000m3/day by Dump Tru	4	23-Aug-15 A	29-Aug-15 A	
SURC2aC2-050	PC2a Main North Sand Surcharge Laying upto 11.5mPD 20,000m3 5,000m3/day by Dump Tru	4	14-Sep-15 A	19-Sep-15 A	
SURC2aC2-070	PC2a Main North Sand Surcharge Period 8mths	240	21-Sep-15	17-May-16	-602
Land Portion C1a		472	15-Jan-15 A	25-Apr-16	-111
Reclamation Areas		472	15-Jan-15 A	25-Apr-16	-111
SURC1a-022	PC1a Main Area West Sand Surcharge Period as +11.5mPD 8mths	260	15-Jan-15 A	15-Sep-15 A	
SURC1a-030	PC1a Main Area East Sand Surcharge Removal 280,000m3 10,000m3/day	28	01-Oct-15	30-Oct-15	32
SURC1a-032	PC1a Main Area West Sand Surcharge Removal 297,616m3 10,000m3/day	30	31-Oct-15	02-Dec-15	32
SURC1a-040	Completion of Section PC1a North	0		02-Dec-15	34
SURC1a-060	PC1a Main Area C1aC4 Surcharge Period 8mths	240	27-Jul-15 A	25-Apr-16	-588
Land Portion C1b		462	22-Jan-15 A	27-Apr-16	-210
Reclamation Areas		462	22-Jan-15 A	27-Apr-16	-210



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
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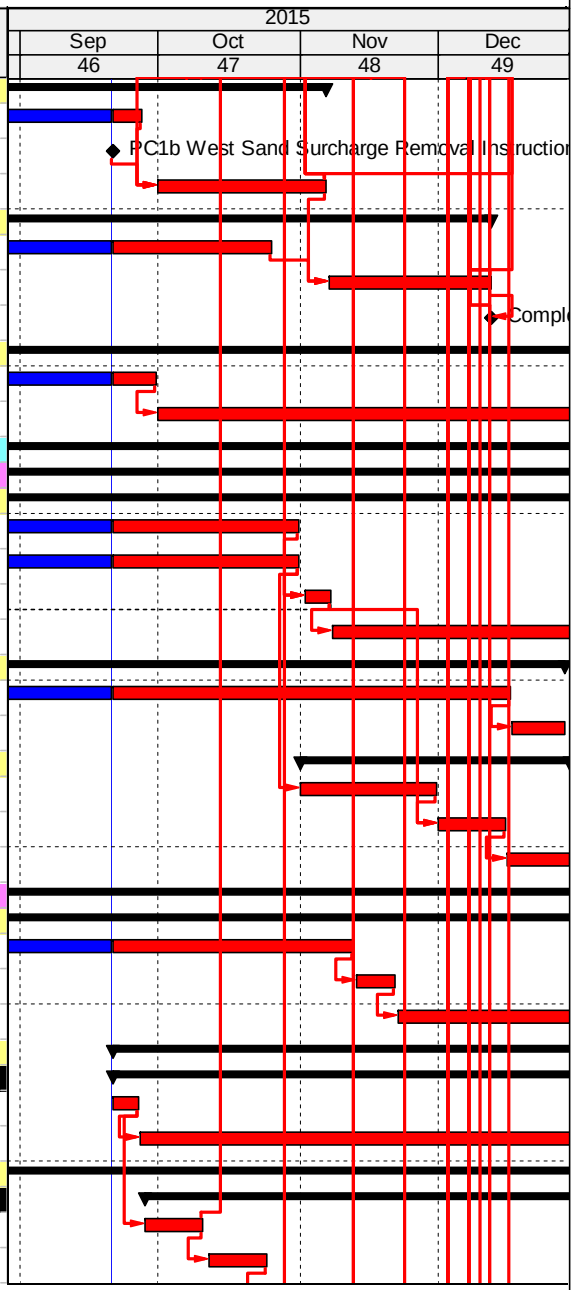
TASK filter: 3 months rolling programme.

Oracle Corporation

Activity ID	Activity Name	Duration	Start	Finish	Total Float
West (1/4 Areas) (Include C1b C8NW)		289	22-Jan-15 A	06-Nov-15	-150
SURC1b-020	PC1b West Sand Surcharge Period 7mths	218	22-Jan-15 A	27-Sep-15	-146
SURC1b-022	PC1b West Sand Surcharge Removal Instruction by RE	0	21-Sep-15*		-139
SURC1b-030	PC1b West Sand Surcharge Removal 336,434m310,000m3/day	34	01-Oct-15	06-Nov-15	-139
East (3/4 Areas) (Include C1b C8SE)		315	01-Feb-15 A	12-Dec-15	-73
SURC1b-050	PC1b East Sand Surcharge Period +11.5mPD 7mths	236	01-Feb-15 A	25-Oct-15	-136
SURC1b-060	PC1b East Sand Surcharge Removal 336,435m3 10,000m3/day	34	07-Nov-15	12-Dec-15	-139
SURC1b-095	Completion of Section PC1b South at Reclamation	0		12-Dec-15	-73
North Side (Include C1b C8NE)		234	16-Aug-15 A	27-Apr-16	-297
SURC1b-1012	PC1b Main Area Sand Surcharge Laying upto 11.5mPD 72,351m3 10,000m3/day by Dump Tru	7	16-Aug-15 A	30-Sep-15	-252
SURC1b-1020	PC1b Main Area Sand Surcharge Period as +11.5mPD 7mths	210	01-Oct-15	27-Apr-16	-297
Land Portion E2		402	16-Apr-15 A	21-May-16	602
North Part		341	16-Apr-15 A	21-Mar-16	-145
Edge Areas - North, Land Area C066-C067 & Edge Area C064-C067		324	03-May-15 A	21-Mar-16	-207
SUEE2-110	PE2 North & East Edge C064-C067 Sand Surcharge Period as +5.5mPD 30days and Testing	121	03-May-15 A	31-Oct-15	-207
SUEE2-112	PE2 North & East Edge C064-C067 Remedial Works by Additional Band Drains	77	16-Jun-15 A	31-Oct-15	-207
SUEE2-120	PE2 North & East Edge C064-C067 Sand Surcharge Laying up to 8.5mPD 54,746m3 10,000m	6	02-Nov-15	07-Nov-15	-178
SUEE2-130	PE2 North & East Edge C064-C067 Sand Surcharge Period as +8.5mPD 4.5mths	135	08-Nov-15	21-Mar-16	-207
Land Areas - East (TM) C057 - C065		257	16-Apr-15 A	28-Dec-15	-326
SURE2-050	PE2 Land C057-C065 Tunnel Sand Surcharge Period as +11.5mPD at tunnel area 7mths	214	16-Apr-15 A	16-Dec-15	-325
SURE2-060	PE2 Land C057-C065 Tunnel Sand Surcharge Removal at tunnel area 107,437m3 10,000m3/c	11	17-Dec-15	28-Dec-15	-298
Land Areas - West (C3)		59	01-Nov-15	29-Dec-15	-62
SURE2-170-10	PE2 Land C061-C065 Non-Tunnel Remedial Works by Additional Band Drains	30	01-Nov-15*	30-Nov-15	-62
SURE2-170-20	PE2 Land C061-C065 Non-Tunnel Sand Surcharge non tunnel area Laying upto 8.5mPD 124,1	13	01-Dec-15	15-Dec-15	-53
SURE2-170-30	PE2 Land C061-C065 Non-Tunnel Sand Surcharge non tunnel area Laying upto 11.5mPD 117,	12	16-Dec-15	29-Dec-15	-53
South Part		357	31-May-15 A	21-May-16	602
Edge Areas East C056 to C063		325	31-May-15 A	19-Apr-16	-450
SUEE2-020	PE2 Edge C057-C063 Sand Surcharge Period as +8.5mPD 4.5mths	135	31-May-15 A	12-Nov-15	-450
SUEE2-030	PE2 Edge C057-C063 Sand Surcharge Laying up to +11.5mPD 70,806m3 10,000m3/day by D	8	13-Nov-15*	21-Nov-15	-383
SUEE2-040	PE2 Edge C057-C063 Sand Surcharge Period as +11.5mPD 5mths	150	22-Nov-15	19-Apr-16	-450
Edge Areas East C052 to C055		141	21-Sep-15	08-Feb-16	-530
C052 to C056		141	21-Sep-15	08-Feb-16	-530
SURE2-410	PE2 Edge C052-C056 300m Zone Sand Surcharge Laying upto 8.5mPD stg1 61,320m3 10,00	6	21-Sep-15	26-Sep-15	-453
SURE2-420	PE2 Edge C052-C056 300m Zone Sand Surcharge Pause Period at 8.5mPD 4.5mths	135	27-Sep-15	08-Feb-16	-530
Land Areas		280	16-Aug-15 A	21-May-16	602
300m to 100m Zone (Include E2 C8N & C8S)		237	28-Sep-15	21-May-16	-482
SURE2-510	PE2 Land C052-C056 300m Zone Sand Surcharge Laying upto 8.5mPD stg2 122,640m3 10,0	12	28-Sep-15	10-Oct-15	-411
SURE2-520	PE2 Land C052-C056 300m Zone Sand Surcharge Laying upto 11.5mPD 116,695m3 10,000m	12	12-Oct-15	24-Oct-15	-411

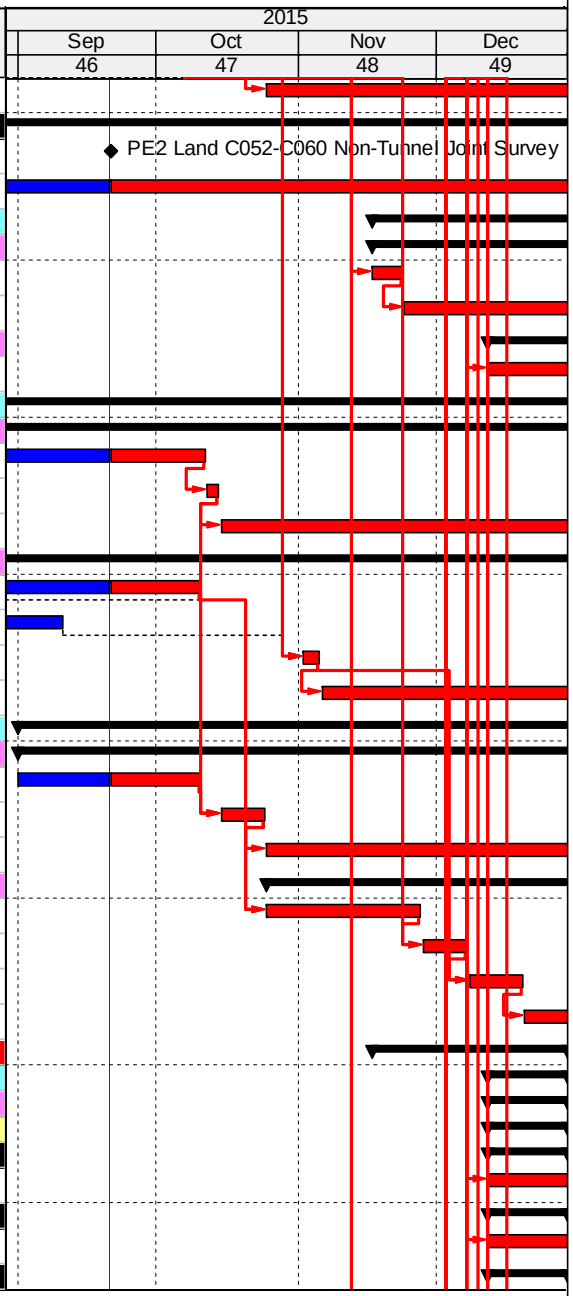


Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Oracle Corporation

Activity ID	Activity Name	Duration	Start	Finish	Total Float
SURE2-530	PE2 Land C052-C056 300m Zone Sand Surcharge Period as +11.5mPD 7mths	210	25-Oct-15	21-May-16	-482
Out of K052 300m		211	16-Aug-15 A	13-Apr-16	640
SURE2-019	PE2 Land C052-C060 Non-Tunnel Joint Survey	0	21-Sep-15		846
SURE2-020	PE2 Land C052-C060 Non-Tunnel Sand Surcharge Period as +11.5mPD 7mths	211	16-Aug-15 A	13-Apr-16	-106
Land Portion E1		65	17-Nov-15	20-Jan-16	-551
Deep Cement Mixing C077 - C080 150m (Exclude VB & RS)		65	17-Nov-15	20-Jan-16	-551
DCM-4010	PE1 Edge Area Mobilization 9plants	7	17-Nov-15	23-Nov-15	-551
DCM-4020	PE1 Edge Area Installation	58	24-Nov-15	20-Jan-16	-551
Edge Areas Excluded 150m of DCM Area		30	12-Dec-15	10-Jan-16	-655
SUEE1-005	PE1 Edge Sand Surcharge Period +5.5mPD 1mth	30	12-Dec-15	10-Jan-16	-655
Land Portion C2b		287	31-Jul-15 A	02-Jun-16	-161
Edge Areas		190	01-Aug-15 A	26-Feb-16	-134
SUEC2c-40	PC2b Edge Area CPT test as 5.5mPD	10	01-Aug-15 A	11-Oct-15	-135
SUEC2c-50	PC2b Edge Area Public Surcharge w compaction upto 8.5mPD 12,054m3 5,000m3/day	3	12-Oct-15	14-Oct-15	-125
SUEC2c-60	PC2b Edge Area Surcharge Period as +8.5mPD 4.5mths	135	15-Oct-15	26-Feb-16	-134
Reclamation Areas (Include C2b C8N & C8S)		256	31-Jul-15 A	02-Jun-16	-161
SURC2b-011	PC2b Main Area Public Surcharge w compaction upto 8.5mPD stg2 111,857m3 5,000m3/day	22	31-Jul-15 A	10-Oct-15	-99
SURC2b-012	PC2b Main Area Sand Surcharge Laying upto 11.5mPD stg1 130,000m3 10,000m3/day by Dur	4	01-Aug-15 A	11-Sep-15 A	
SURC2b-014	PC2b Main Area Sand Surcharge Laying upto 11.5mPD stg2 38842m3 10,000m3/day by Dum	4	02-Nov-15*	05-Nov-15	-138
SURC2b-020	PC2b Main Area Sand Surcharge Period as +11.5mPD 7mths	210	06-Nov-15	02-Jun-16	-161
Land Portion C2c		300	01-Sep-15 A	16-Jul-16	-120
Edge Areas		169	01-Sep-15 A	07-Mar-16	-130
SUEC2c-005	PC2c Edge Area PBF Surcharge Period +5.5mPD 1mth	30	01-Sep-15 A	10-Oct-15	-126
SUEC2c-010	PC2c Edge Area Public Surcharge w compaction upto 8.5mPD 43,395m3 5,000m3/day	9	15-Oct-15	24-Oct-15	-121
SUEC2c-020	PC2c Edge Area PBF Surcharge Period +8.5mPD 4.5mths	135	25-Oct-15	07-Mar-16	-130
Reclamation Areas (Include C2c C8W & C8E)		266	25-Oct-15	16-Jul-16	-120
SURC2c-010	PC2c Main Area Public Surcharge w compaction upto 8.5mPD 158,238m3 5,000m3/day	32	25-Oct-15	27-Nov-15	-112
SURC2c-012	PC2c Main Area Sand Surcharge Laying upto 11.5mPD stg1 80,000m3 10,000m3/day by Dum	8	28-Nov-15*	07-Dec-15	-103
SURC2c-014	PC2c Main Area Sand Surcharge Laying upto 11.5mPD stg2 109,120m3 10,000m3/day by Dur	11	08-Dec-15	19-Dec-15	-103
SURC2c-020	PC2c Main Area Sand Surcharge Period 7mths	210	20-Dec-15	16-Jul-16	-120
Geotechnical Instrumentation Works		36	17-Nov-15	29-Dec-15	-512
Geotechnical Instrumentation Works for Seawalls		14	12-Dec-15	29-Dec-15	-512
Cluster Type SD 26nrs Instrumentation and CPT Cluster behind cells		14	12-Dec-15	29-Dec-15	-512
Portion E1		14	12-Dec-15	29-Dec-15	-512
SD-13 C071		14	12-Dec-15	29-Dec-15	-512
CTSD-130	Installation of SD-13 (C071) PE1	14	12-Dec-15	29-Dec-15	-512
SD-14 C074		14	12-Dec-15	29-Dec-15	-512
CTSD-140	Installation of SD-14 (C074) PE1	14	12-Dec-15	29-Dec-15	-512
SD-15 C078		14	12-Dec-15	29-Dec-15	-512



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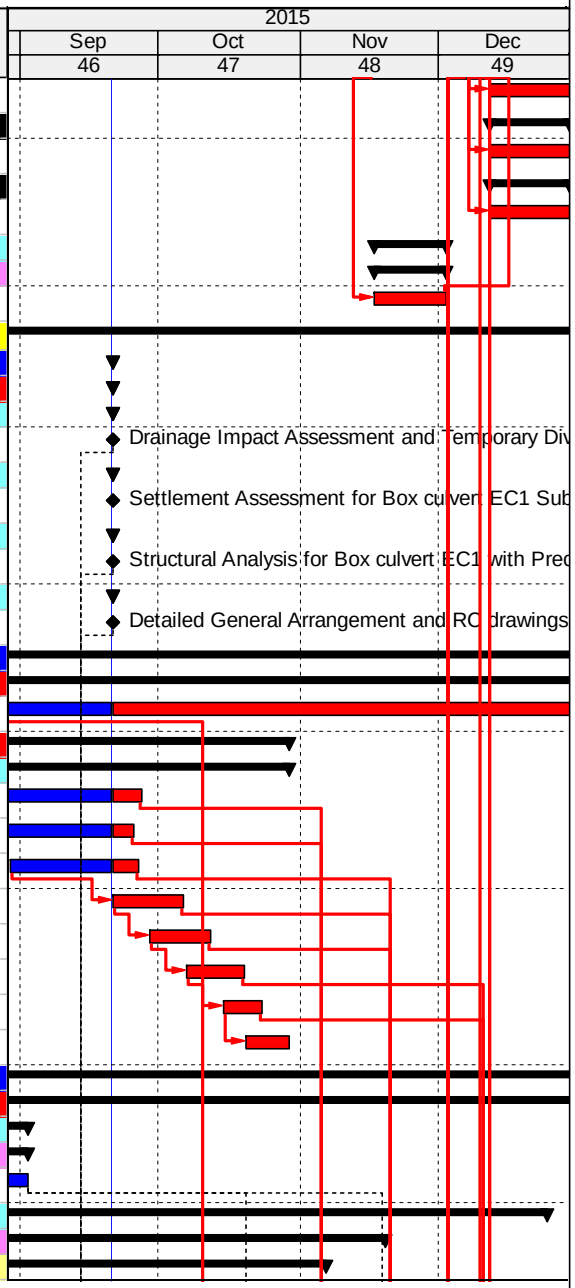
Activity ID	Activity Name	Duration	Start	Finish	Total Float
CTSD-150	Installation of SD-15 (C078) PE1	14	12-Dec-15	29-Dec-15	-512
SD-16 C084		14	12-Dec-15	29-Dec-15	-512
CTSD-160	Installation of SD-16 (C084) PE1	14	12-Dec-15	29-Dec-15	-512
SD-17 C089		14	12-Dec-15	29-Dec-15	-512
CTSD-170	Installation of SD-17 (C089) PE1	14	12-Dec-15	29-Dec-15	-512
Geotechnical Instrumentation Works for Reclamation RA & RB		14	17-Nov-15	02-Dec-15	-530
Settlement Marker Type 2		14	17-Nov-15	02-Dec-15	-530
SMT2-100	M2 - Installation of Settlement Marker Type2 at PE1	14	17-Nov-15	02-Dec-15	-530
Portion D		266	02-Jul-15 A	23-Mar-16	661
Submission		0	21-Sep-15	21-Sep-15	846
Design Submission		0	21-Sep-15	21-Sep-15	846
Drainage Impact Assessment & Temporary Diversion (stg2 - for construction of box culvert EC1)		0	21-Sep-15	21-Sep-15	846
PD-DGN-07010	Drainage Impact Assessment and Temporary Diversion (stage 2 - for construction of box culvert	0		21-Sep-15*	846
Settlement Assessment for Box Culvert EC1		0	21-Sep-15	21-Sep-15	846
PD-DGN-08010	Settlement Assessment for Box culvert EC1 Submission 1st	0		21-Sep-15*	846
Structural Analysis for Box Culvert EC1 w Precast & Cast in-situ Method		0	21-Sep-15	21-Sep-15	846
PD-DGN-09010	Structural Analysis for Box culvert EC1 with Precast and Cast in-situ Method	0		21-Sep-15*	846
Detailed General Arrangement & RC drawings for C1 to C4 w Precast Method		0	21-Sep-15	21-Sep-15	846
PD-DGN-10010	Detailed General Arrangement and RC drawings for Box culverts C1 to C4 with Precast Method	0		21-Sep-15*	846
Precast Yard for Seawall Blocks & Culverts		150	01-Aug-15 A	31-Jan-16	-477
Concrete Blocks		150	01-Aug-15 A	31-Jan-16	-477
PD-PY1-0200	Seawall Blocks for Permanent construction 1,990nrs (3,180 - 1190)	150	01-Aug-15 A	31-Jan-16	-477
Culverts		39	26-Aug-15 A	29-Oct-15	-388
Culverts EC1		39	26-Aug-15 A	29-Oct-15	-388
PY-EC1-01000	PD EC01-01 (6.19m) & 02 (17.3m) Casting	20	27-Aug-15 A	27-Sep-15	-399
PY-EC1-03000	PD EC01-03 (21m) Casting	19	26-Aug-15 A	25-Sep-15	-397
PY-EC1-04000	PD EC01-04 (21m) Casting	6	30-Aug-15 A	26-Sep-15	-396
PY-EC1-05000	PD EC01-05 (21m) Casting	16	21-Sep-15	06-Oct-15	-396
PY-EC1-06000	PD EC01-06 (21m) Casting	14	29-Sep-15	12-Oct-15	-396
PY-EC1-07000	PD EC01-07 (21m) Casting	13	07-Oct-15	19-Oct-15	-390
PY-EC1-08000	PD EC01-08 (15m) Casting	9	15-Oct-15	23-Oct-15	-390
PY-EC1-09000	PD EC01-09 (15.23+3m) Outfall Casting	10	20-Oct-15	29-Oct-15	-388
Site Construction		266	02-Jul-15 A	23-Mar-16	656
C1 to C4		266	02-Jul-15 A	23-Mar-16	656
Removal of Temporary Seawall		17	18-Aug-15 A	03-Sep-15 A	
Removal of North Temporary Seawall		17	18-Aug-15 A	03-Sep-15 A	
PD-V2-0045	PD C4 - Removal of North Temporary Seawall East2 CH5+800 to CH5+650	17	18-Aug-15 A	03-Sep-15 A	
Installations of Precast Culverts except sloping outfalls		126	09-Aug-15 A	24-Dec-15	746
Culvert C1		93	21-Aug-15 A	19-Nov-15	-113
C1-2		47	21-Aug-15 A	06-Nov-15	-113



Remaining Level of Effort | Remaining Work | S...
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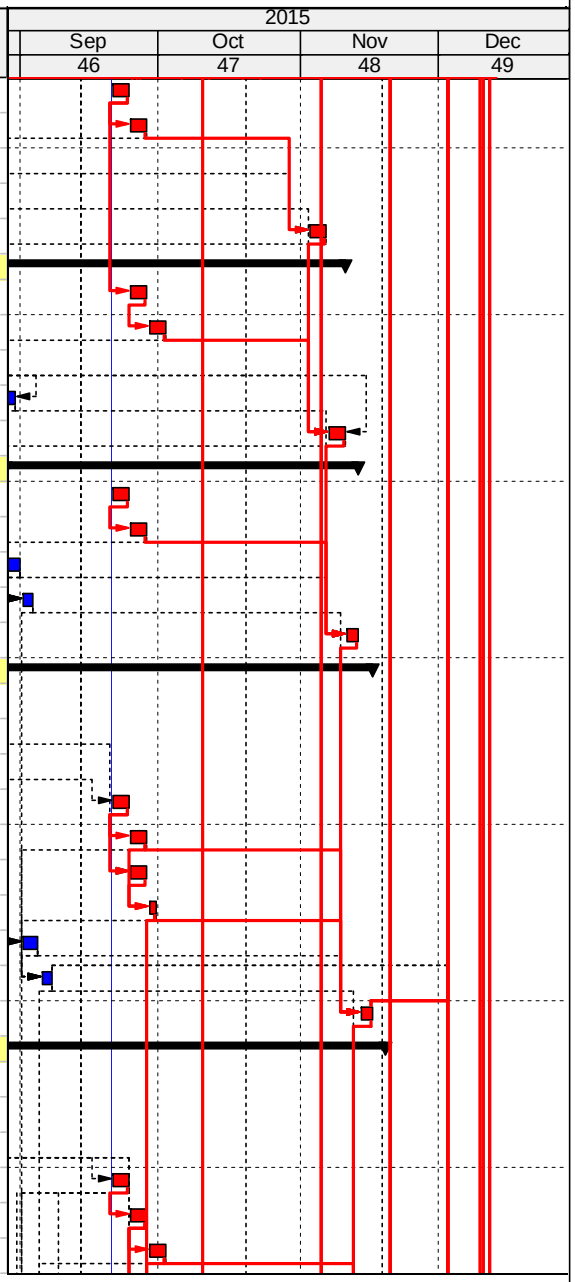
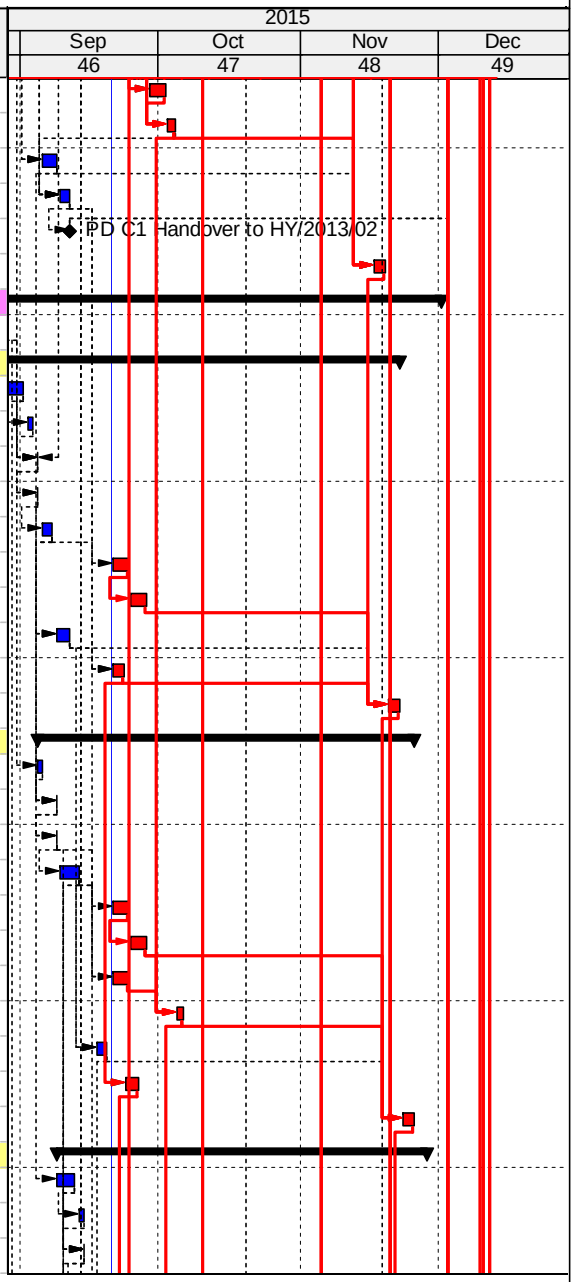
Oracle Corporation

Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C1-2-060	PD C1-2 Removal of South Steel Bulkhead	4	21-Sep-15	24-Sep-15	-78
PD-C1-2-070	PD C1-2 Manhole Insitu concrete	4	25-Sep-15	28-Sep-15	-78
PD-C1-2-100	PD C1-2 Backfill Beside of Culvert	9	21-Aug-15 A	23-Aug-15 A	
PD-C1-2-110	PD C1-2 Backfill upto +3.5mPD	4	24-Aug-15 A	25-Aug-15 A	
PD-C1-2-120	PD C1-2 Backfill upto +5.5mPD	4	03-Nov-15*	06-Nov-15	-113
C1-3		56	25-Aug-15 A	10-Nov-15	-113
PD-C1-3-060	PD C1-3 Removal of South Steel Bulkhead	4	25-Sep-15	28-Sep-15	-78
PD-C1-3-070	PD C1-3 Manhole Insitu concrete	4	29-Sep-15	02-Oct-15	-78
PD-C1-3-100	PD C1-3 Backfill Beside of Culvert	8	25-Aug-15 A	28-Aug-15 A	
PD-C1-3-110	PD C1-3 Backfill upto +3.5mPD	4	29-Aug-15 A	31-Aug-15 A	
PD-C1-3-120	PD C1-3 Backfill upto +5.5mPD	4	07-Nov-15	10-Nov-15	-113
C1-4		63	29-Aug-15 A	13-Nov-15	-113
PD-C1-4-060	PD C1-4 Removal of South Steel Bulkhead	4	21-Sep-15	24-Sep-15	-70
PD-C1-4-070	PD C1-4 Manhole Insitu concrete	4	25-Sep-15	28-Sep-15	-70
PD-C1-4-100	PD C1-4 Backfill Beside of Culvert	6	29-Aug-15 A	01-Sep-15 A	
PD-C1-4-110	PD C1-4 Backfill upto +3.5mPD	3	02-Sep-15 A	04-Sep-15 A	
PD-C1-4-120	PD C1-4 Backfill upto +5.5mPD	3	11-Nov-15	13-Nov-15	-113
C1-5		87	22-Aug-15 A	16-Nov-15	-113
PD-C1-5-020	PD C1-5 floating to the location	1	22-Aug-15 A	22-Aug-15 A	
PD-C1-5-040	PD C1-5 Installation	1	23-Aug-15 A	23-Aug-15 A	
PD-C1-5-050	PD C1-5 Removal of North Steel Bulkhead	4	24-Aug-15 A	25-Aug-15 A	
PD-C1-5-060	PD C1-5 Removal of South Steel Bulkhead	4	21-Sep-15	24-Sep-15	-69
PD-C1-5-070	PD C1-5 Manhole Insitu concrete	4	25-Sep-15	28-Sep-15	-69
PD-C1-5-080	PD C1-4/5 Movement Joint Insitu	4	25-Sep-15	28-Sep-15	-69
PD-C1-5-090	PD C1-4/5 Movement Joint Installation	2	29-Sep-15	30-Sep-15	-69
PD-C1-5-100	PD C1-5 Backfill Beside of Culvert	6	02-Sep-15 A	05-Sep-15 A	
PD-C1-5-110	PD C1-5 Backfill upto +3.5mPD	3	06-Sep-15 A	08-Sep-15 A	
PD-C1-5-120	PD C1-5 Backfill upto +5.5mPD	3	14-Nov-15	16-Nov-15	-113
C1-6		63	22-Aug-15 A	19-Nov-15	-113
PD-C1-6-015	PD C1-6 Buoyancy	2	22-Aug-15 A	23-Aug-15 A	
PD-C1-6-020	PD C1-6 floating to the location	1	25-Aug-15 A	25-Aug-15 A	
PD-C1-6-040	PD C1-6 Installation	1	26-Aug-15 A	26-Aug-15 A	
PD-C1-6-050	PD C1-6 Removal of North Steel Bulkhead	4	21-Sep-15	24-Sep-15	-440
PD-C1-6-060	PD C1-6 Removal of South Steel Bulkhead	4	25-Sep-15	28-Sep-15	-440
PD-C1-6-070	PD C1-6 Manhole Insitu concrete	4	29-Sep-15	02-Oct-15	-70



Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C1-6-080	PD C1-5/6 Movement Joint Insitu	4	29-Sep-15	02-Oct-15	-70
PD-C1-6-090	PD C1-5/6 Movement Joint Installation	2	03-Oct-15	04-Oct-15	-70
PD-C1-6-100	PD C1-6 Backfill Beside of Culvert	6	06-Sep-15 A	09-Sep-15 A	
PD-C1-6-110	PD C1-6 Backfill upto +3.5mPD	3	10-Sep-15 A	12-Sep-15 A	
PD-C1-6-120	PD C1 Handover to HY/2013/02	0		12-Sep-15 A	
PD-C1-6-130	PD C1-6 Backfill upto +5.5mPD	3	17-Nov-15	19-Nov-15	-113
Culvert C2		97	09-Aug-15 A	01-Dec-15	-113
PD-C2-0020	PD C2 Leveling of Foundation	10	09-Aug-15 A	29-Aug-15 A	
C2-2		63	26-Aug-15 A	22-Nov-15	-113
PD-C2-2-010	PD C2-2 & C2-3 Delivery to site	7	26-Aug-15 A	02-Sep-15 A	
PD-C2-2-015	PD C2-2 Buoyancy	2	03-Sep-15 A	04-Sep-15 A	
PD-C2-2-020	PD C2-2 floating to the location	1	05-Sep-15 A	05-Sep-15 A	
PD-C2-2-040	PD C2-2 Installation	1	05-Sep-15 A	05-Sep-15 A	
PD-C2-2-050	PD C2-2 Removal of North Steel Bulkhead	4	06-Sep-15 A	08-Sep-15 A	
PD-C2-2-060	PD C2-2 Removal of South Steel Bulkhead	4	21-Sep-15	24-Sep-15	-61
PD-C2-2-070	PD C2-2 Manhole Insitu concrete	4	25-Sep-15	28-Sep-15	-61
PD-C2-2-100	PD C2-2 Backfill Beside of Culvert	3	09-Sep-15 A	12-Sep-15 A	
PD-C2-2-110	PD C2-2 Backfill upto +3.5mPD	3	21-Sep-15	23-Sep-15	-420
PD-C2-2-120	PD C2-2 Backfill upto +5.5mPD	3	20-Nov-15	22-Nov-15	-113
C2-3		66	05-Sep-15 A	25-Nov-15	-113
PD-C2-3-015	PD C2-3 Buoyancy	2	05-Sep-15 A	06-Sep-15 A	
PD-C2-3-020	PD C2-3 floating to the location	1	09-Sep-15 A	09-Sep-15 A	
PD-C2-3-040	PD C2-3 Installation	1	09-Sep-15 A	09-Sep-15 A	
PD-C2-3-050	PD C2-3 Removal of North Steel Bulkhead	4	10-Sep-15 A	14-Sep-15 A	
PD-C2-3-060	PD C2-3 Removal of South Steel Bulkhead	4	21-Sep-15	24-Sep-15	-60
PD-C2-3-070	PD C2-3 Manhole Insitu concrete	4	25-Sep-15	28-Sep-15	-60
PD-C2-3-080	PD C2-2/3 Movement Joint Insitu	4	21-Sep-15	24-Sep-15	-56
PD-C2-3-090	PD C2-2/3 Movement Joint Installation	2	05-Oct-15	06-Oct-15	-66
PD-C2-3-100	PD C2-3 Backfill Beside of Culvert	3	18-Sep-15 A	20-Sep-15 A	
PD-C2-3-110	PD C2-3 Backfill upto +3.5mPD	3	24-Sep-15	26-Sep-15	-420
PD-C2-3-120	PD C2-3 Backfill upto +5.5mPD	3	23-Nov-15	25-Nov-15	-113
C2-4		69	09-Sep-15 A	28-Nov-15	-113
PD-C2-4-010	PD C2-4 & C2-5 Delivery to site	5	09-Sep-15 A	13-Sep-15 A	
PD-C2-4-015	PD C2-4 Buoyancy	2	14-Sep-15 A	15-Sep-15 A	
PD-C2-4-020	PD C2-4 floating to the location	1	15-Sep-15 A	15-Sep-15 A	



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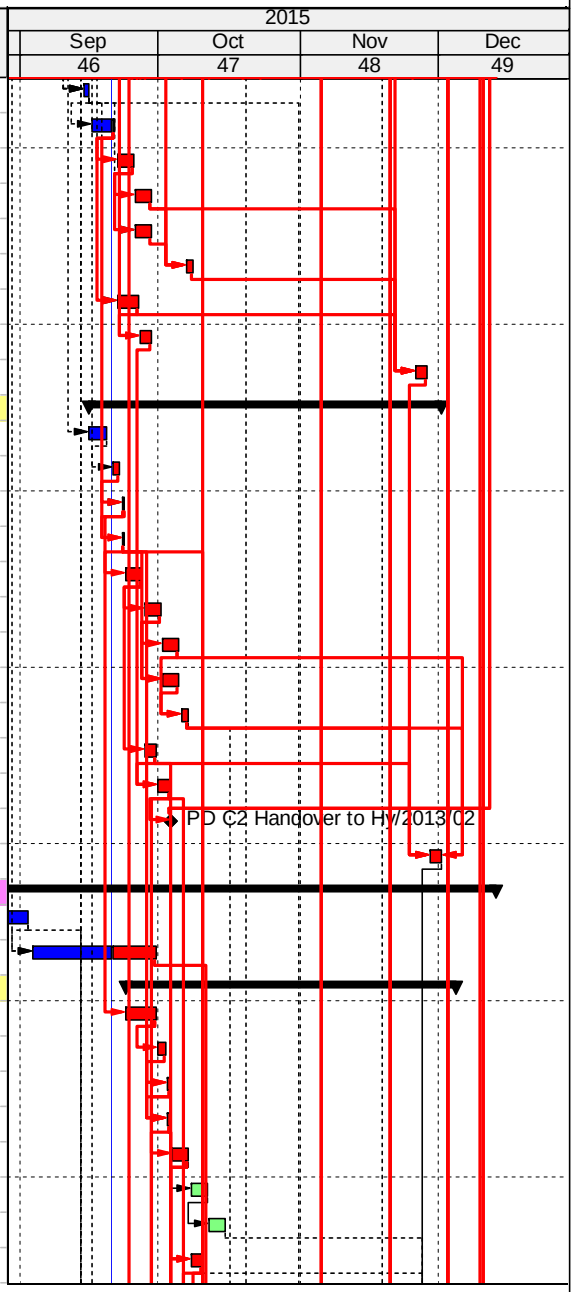
TASK filter: 3 months rolling programme.

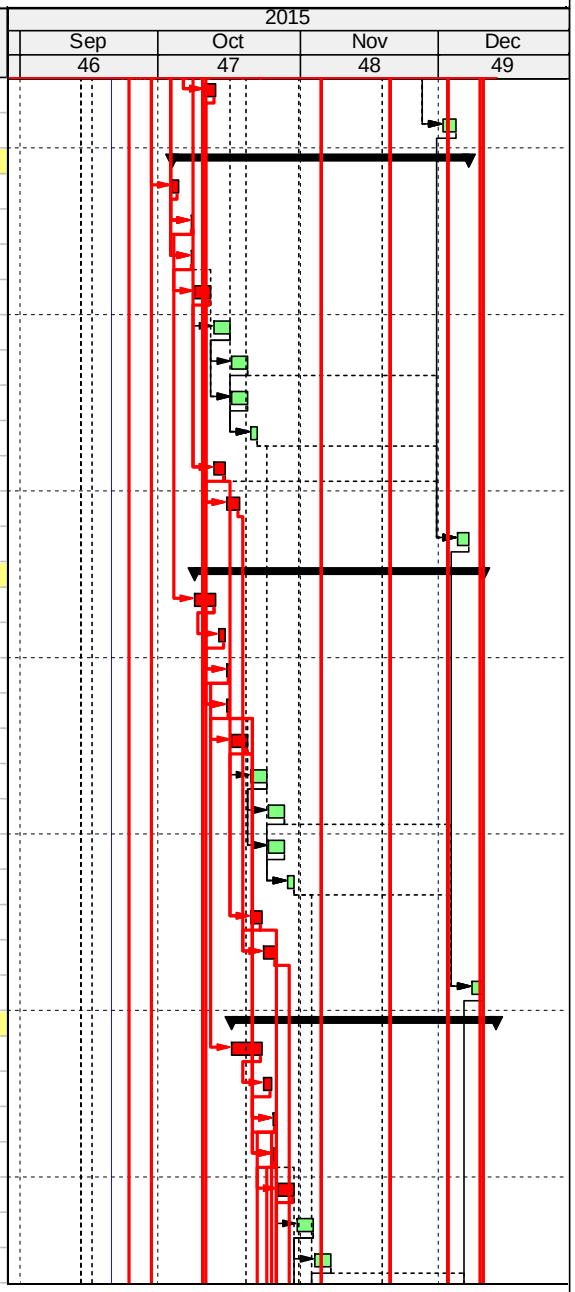
Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C2-4-040	PD C2-4 Installation	1	15-Sep-15 A	16-Sep-15 A	
PD-C2-4-050	PD C2-4 Removal of North Steel Bulkhead	4	17-Sep-15 A	21-Sep-15	-420
PD-C2-4-060	PD C2-4 Removal of South Steel Bulkhead	4	22-Sep-15	25-Sep-15	-58
PD-C2-4-070	PD C2-4 Manhole Insitu concrete	4	26-Sep-15	29-Sep-15	-58
PD-C2-4-080	PD C2-3/4 Movement Joint Insitu	4	26-Sep-15	29-Sep-15	-58
PD-C2-4-090	PD C2-3/4 Movement Joint Installation	2	07-Oct-15	08-Oct-15	-65
PD-C2-4-100	PD C2-4 Backfill Beside of Culvert	5	22-Sep-15	26-Sep-15	-420
PD-C2-4-110	PD C2-4 Backfill upto +3.5mPD	3	27-Sep-15	29-Sep-15	-420
PD-C2-4-120	PD C2-4 Backfill upto +5.5mPD	3	26-Nov-15	28-Nov-15	-113
C2-5		72	16-Sep-15 A	01-Dec-15	-113
PD-C2-5-010	PD C2-5 Delivery to site	5	16-Sep-15 A	20-Sep-15 A	
PD-C2-5-015	PD C2-5 Buoyancy	2	21-Sep-15	22-Sep-15	-426
PD-C2-5-020	PD C2-5 floating to the location	1	23-Sep-15	23-Sep-15	-426
PD-C2-5-040	PD C2-5 Installation	1	23-Sep-15	23-Sep-15	-421
PD-C2-5-050	PD C2-5 Removal of North Steel Bulkhead	4	24-Sep-15	27-Sep-15	-421
PD-C2-5-060	PD C2-5 Removal of South Steel Bulkhead	4	28-Sep-15	01-Oct-15	-61
PD-C2-5-070	PD C2-5 Manhole Insitu concrete	4	02-Oct-15	05-Oct-15	-61
PD-C2-5-080	PD C2-4/5 Movement Joint Insitu	4	02-Oct-15	05-Oct-15	-61
PD-C2-5-090	PD C2-4/5 Movement Joint Installation	2	06-Oct-15	07-Oct-15	-61
PD-C2-5-100	PD C2-5 Backfill Beside of Culvert	3	28-Sep-15	30-Sep-15	-421
PD-C2-5-110	PD C2-5 Backfill upto +3.5mPD	3	01-Oct-15	03-Oct-15	-421
PD-C2-5-120	PD C2 Handover to Hy/2013/02	0		03-Oct-15	-54
PD-C2-5-130	PD C2-5 Backfill upto +5.5mPD	3	29-Nov-15	01-Dec-15	-113
Culvert C3		115	17-Aug-15 A	13-Dec-15	746
PD-C3-0010	PD C3 Excavation 68,000m3 3,500m3/day	30	17-Aug-15 A	03-Sep-15 A	
PD-C3-0020	PD C3 Leveling of Foundation	10	04-Sep-15 A	30-Sep-15	-410
C3-2		72	24-Sep-15	04-Dec-15	746
PD-C3-2-010	PD C3-2 & C2-3 Delivery to site	7	24-Sep-15	30-Sep-15	-426
PD-C3-2-015	PD C3-2 Buoyancy	2	01-Oct-15	02-Oct-15	-426
PD-C3-2-020	PD C3-2 floating to the location	1	03-Oct-15	03-Oct-15	-426
PD-C3-2-040	PD C3-2 Installation	1	03-Oct-15	03-Oct-15	-426
PD-C3-2-050	PD C3-2 Removal of North Steel Bulkhead	4	04-Oct-15	07-Oct-15	-426
PD-C3-2-060	PD C3-2 Removal of South Steel Bulkhead	4	08-Oct-15	11-Oct-15	793
PD-C3-2-070	PD C3-2 Manhole Insitu concrete	4	12-Oct-15	15-Oct-15	793
PD-C3-2-100	PD C3-2 Backfill Beside of Culvert	3	08-Oct-15	10-Oct-15	-391



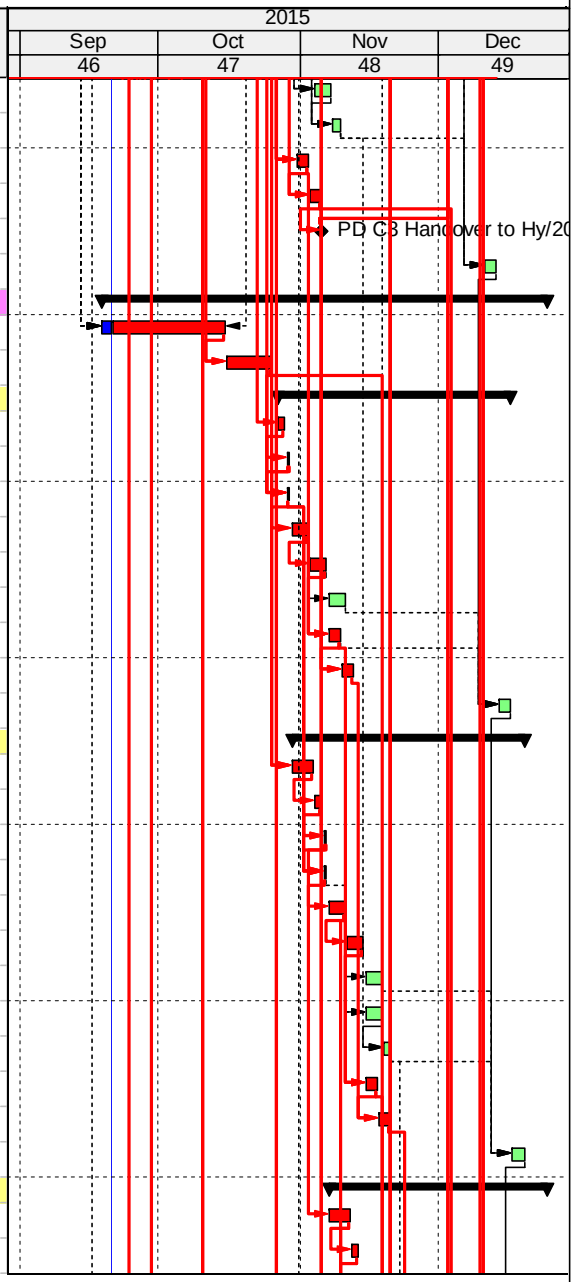
Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C3-2-110	PD C3-2 Backfill upto +3.5mPD	3	11-Oct-15	13-Oct-15	-389
PD-C3-2-120	PD C3-2 Backfill upto +5.5mPD	3	02-Dec-15	04-Dec-15	746
C3-3		65	04-Oct-15	07-Dec-15	746
PD-C3-3-015	PD C3-3 Buoyancy	2	04-Oct-15	05-Oct-15	-424
PD-C3-3-020	PD C3-3 floating to the location	1	08-Oct-15	08-Oct-15	-426
PD-C3-3-040	PD C3-3 Installation	1	08-Oct-15	08-Oct-15	-418
PD-C3-3-050	PD C3-3 Removal of North Steel Bulkhead	4	09-Oct-15	12-Oct-15	-418
PD-C3-3-060	PD C3-3 Removal of South Steel Bulkhead	4	13-Oct-15	16-Oct-15	789
PD-C3-3-070	PD C3-3 Manhole Insitu concrete	4	17-Oct-15	20-Oct-15	789
PD-C3-3-080	PD C3-2/3 Movement Joint Insitu	4	17-Oct-15	20-Oct-15	789
PD-C3-3-090	PD C3-2/3 Movement Joint Installation	2	21-Oct-15	22-Oct-15	789
PD-C3-3-100	PD C3-3 Backfill Beside of Culvert	3	13-Oct-15	15-Oct-15	-393
PD-C3-3-110	PD C3-3 Backfill upto +3.5mPD	3	16-Oct-15	18-Oct-15	-391
PD-C3-3-120	PD C3-3 Backfill upto +5.5mPD	3	05-Dec-15	07-Dec-15	746
C3-4		63	09-Oct-15	10-Dec-15	746
PD-C3-4-010	PD C3-4 & C2-5 Delivery to site	5	09-Oct-15	13-Oct-15	-426
PD-C3-4-015	PD C3-4 Buoyancy	2	14-Oct-15	15-Oct-15	-426
PD-C3-4-020	PD C3-4 floating to the location	1	16-Oct-15	16-Oct-15	-426
PD-C3-4-040	PD C3-4 Installation	1	16-Oct-15	16-Oct-15	-421
PD-C3-4-050	PD C3-4 Removal of North Steel Bulkhead	4	17-Oct-15	20-Oct-15	-421
PD-C3-4-060	PD C3-4 Removal of South Steel Bulkhead	4	21-Oct-15	24-Oct-15	784
PD-C3-4-070	PD C3-4 Manhole Insitu concrete	4	25-Oct-15	28-Oct-15	784
PD-C3-4-080	PD C3-3/4 Movement Joint Insitu	4	25-Oct-15	28-Oct-15	784
PD-C3-4-090	PD C3-3/4 Movement Joint Installation	2	29-Oct-15	30-Oct-15	784
PD-C3-4-100	PD C3-4 Backfill Beside of Culvert	3	21-Oct-15	23-Oct-15	-398
PD-C3-4-110	PD C3-4 Backfill upto +3.5mPD	3	24-Oct-15	26-Oct-15	-396
PD-C3-4-120	PD C3-4 Backfill upto +5.5mPD	3	08-Dec-15	10-Dec-15	746
C3-5		58	17-Oct-15	13-Dec-15	746
PD-C3-5-010	PD C3-5 & C4-2 Delivery to site	7	17-Oct-15	23-Oct-15	-426
PD-C3-5-015	PD C3-5 Buoyancy	2	24-Oct-15	25-Oct-15	-426
PD-C3-5-020	PD C3-5 floating to the location	1	26-Oct-15	26-Oct-15	-426
PD-C3-5-040	PD C3-5 Installation	1	26-Oct-15	26-Oct-15	-426
PD-C3-5-050	PD C3-5 Removal of North Steel Bulkhead	4	27-Oct-15	30-Oct-15	-405
PD-C3-5-060	PD C3-5 Removal of South Steel Bulkhead	4	31-Oct-15	03-Nov-15	777
PD-C3-5-070	PD C3-5 Manhole Insitu concrete	4	04-Nov-15	07-Nov-15	777



Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C3-5-080	PD C3-4/5 Movement Joint Insitu	4	04-Nov-15	07-Nov-15	777
PD-C3-5-090	PD C3-4/5 Movement Joint Installation	2	08-Nov-15	09-Nov-15	777
PD-C3-5-100	PD C3-5 Backfill Beside of Culvert	3	31-Oct-15	02-Nov-15	-405
PD-C3-5-110	PD C3-5 Backfill upto +3.5mPD	3	03-Nov-15	05-Nov-15	-403
PD-C3-5-120	PD C3 Handover to Hy/2013/02	0		05-Nov-15	-87
PD-C3-5-130	PD C3-5 Backfill upto +5.5mPD	3	11-Dec-15	13-Dec-15	746
Culvert C4		95	19-Sep-15 A	24-Dec-15	746
PD-C4-0010	PD C4 Excavation 68,000m3 3,500m3/day	30	19-Sep-15 A	15-Oct-15	-425
PD-C4-0020	PD C4 Leveling of Foundation 3,450m2 200m2/day	10	16-Oct-15	25-Oct-15	-425
C4-2		51	27-Oct-15	16-Dec-15	746
PD-C4-2-015	PD C4-2 Buoyancy	2	27-Oct-15	28-Oct-15	-426
PD-C4-2-020	PD C4-2 floating to the location	1	29-Oct-15	29-Oct-15	-426
PD-C4-2-040	PD C4-2 Installation	1	29-Oct-15	29-Oct-15	-419
PD-C4-2-050	PD C4-2 Removal of North Steel Bulkhead	4	30-Oct-15	02-Nov-15	-417
PD-C4-2-060	PD C4-2 Removal of South Steel Bulkhead	4	03-Nov-15	06-Nov-15	-409
PD-C4-2-070	PD C4-2 Manhole Insitu concrete	4	07-Nov-15	10-Nov-15	779
PD-C4-2-100	PD C4-2 Backfill Beside of Culvert	3	07-Nov-15	09-Nov-15	-409
PD-C4-2-110	PD C4-2 Backfill upto +3.5mPD	3	10-Nov-15	12-Nov-15	-407
PD-C4-2-120	PD C4-2 Backfill upto +5.5mPD	3	14-Dec-15	16-Dec-15	746
C4-3		51	30-Oct-15	19-Dec-15	746
PD-C4-3-010	PD C4-3 Delivery to site	5	30-Oct-15	03-Nov-15	-426
PD-C4-3-015	PD C4-3 Buoyancy	2	04-Nov-15	05-Nov-15	-426
PD-C4-3-020	PD C4-3 floating to the location	1	06-Nov-15	06-Nov-15	-426
PD-C4-3-040	PD C4-3 Installation	1	06-Nov-15	06-Nov-15	-420
PD-C4-3-050	PD C4-3 Removal of North Steel Bulkhead	4	07-Nov-15	10-Nov-15	-420
PD-C4-3-060	PD C4-3 Removal of South Steel Bulkhead	4	11-Nov-15	14-Nov-15	-414
PD-C4-3-070	PD C4-3 Manhole Insitu concrete	4	15-Nov-15	18-Nov-15	774
PD-C4-3-080	PD C4-2/3 Movement Joint Insitu	4	15-Nov-15	18-Nov-15	772
PD-C4-3-090	PD C4-2/3 Movement Joint Installation	2	19-Nov-15	20-Nov-15	772
PD-C4-3-100	PD C4-3 Backfill Beside of Culvert	3	15-Nov-15	17-Nov-15	-414
PD-C4-3-110	PD C4-3 Backfill upto +3.5mPD	3	18-Nov-15	20-Nov-15	-412
PD-C4-3-120	PD C4-3 Backfill upto +5.5mPD	3	17-Dec-15	19-Dec-15	746
C4-4		48	07-Nov-15	24-Dec-15	746
PD-C4-4-010	PD C4-4 Delivery to site	5	07-Nov-15	11-Nov-15	-426
PD-C4-4-015	PD C4-4 Buoyancy	2	12-Nov-15	13-Nov-15	-426

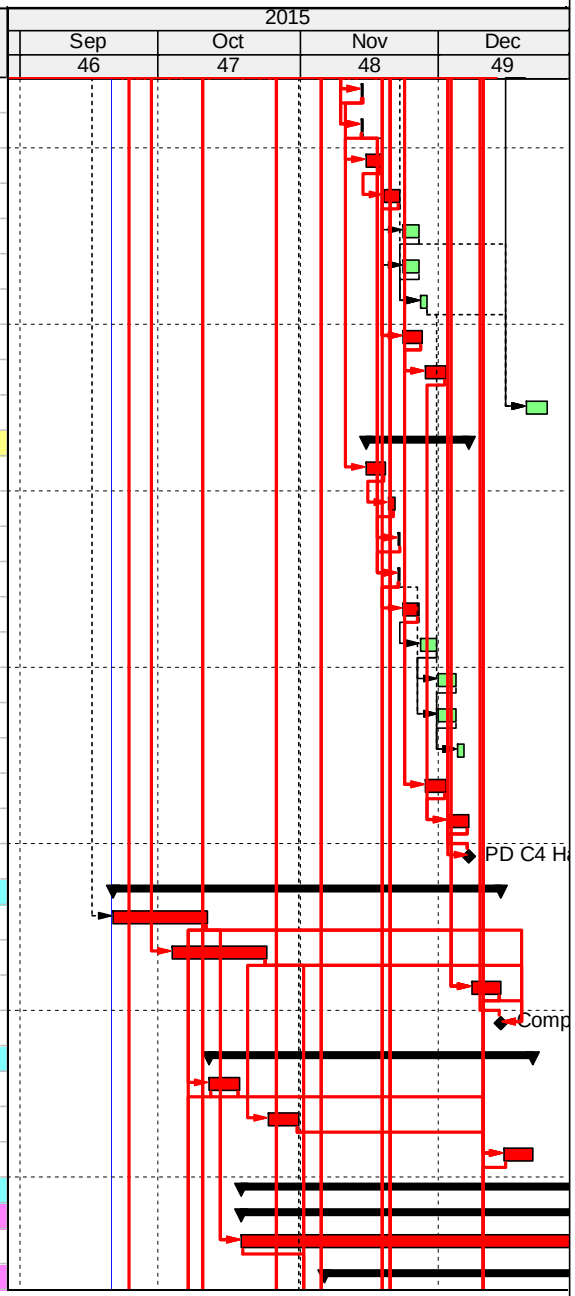


Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Oracle Corporation

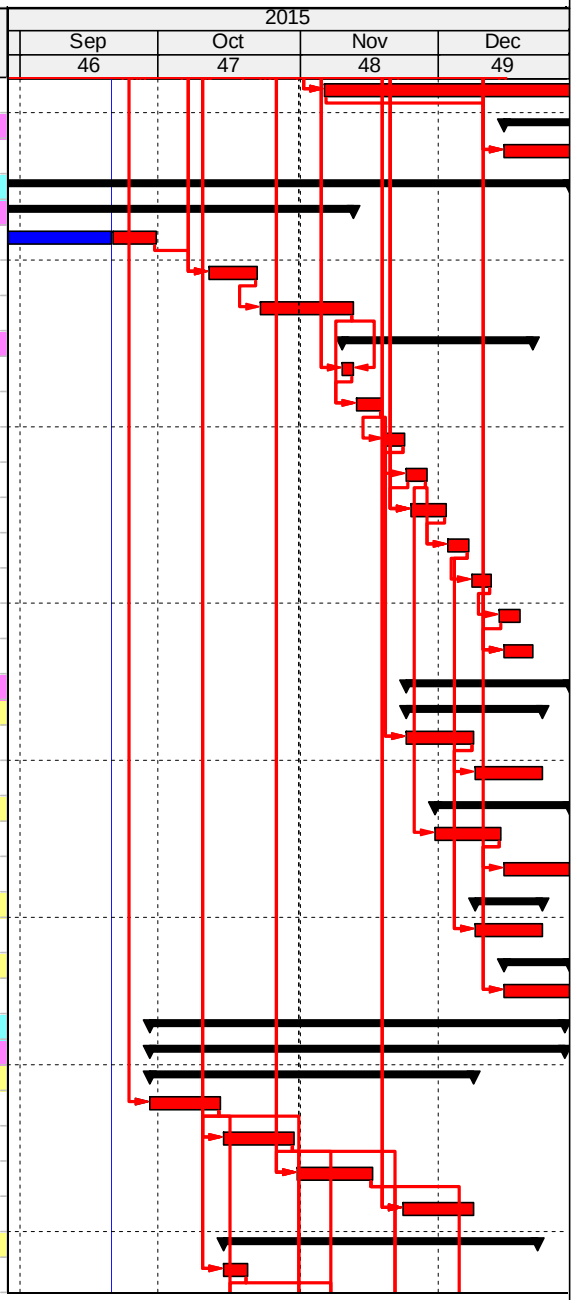
Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C4-4-020	PD C4-4 floating to the location	1	14-Nov-15	14-Nov-15	-426
PD-C4-4-040	PD C4-4 Installation	1	14-Nov-15	14-Nov-15	-423
PD-C4-4-050	PD C4-4 Removal of North Steel Bulkhead	4	15-Nov-15	18-Nov-15	-423
PD-C4-4-060	PD C4-4 Removal of South Steel Bulkhead	4	19-Nov-15	22-Nov-15	-419
PD-C4-4-070	PD C4-4 Manhole Insitu concrete	4	23-Nov-15	26-Nov-15	767
PD-C4-4-080	PD C4-3/4 Movement Joint Insitu	4	23-Nov-15	26-Nov-15	767
PD-C4-4-090	PD C4-3/4 Movement Joint Installation	2	27-Nov-15	28-Nov-15	767
PD-C4-4-100	PD C4-4 Backfill Beside of Culvert	5	23-Nov-15	27-Nov-15	-419
PD-C4-4-110	PD C4-4 Backfill upto +3.5mPD	5	28-Nov-15	02-Dec-15	-419
PD-C4-4-120	PD C4-4 Backfill upto +5.5mPD	5	20-Dec-15	24-Dec-15	746
C4-5		23	15-Nov-15	07-Dec-15	763
PD-C4-5-010	PD C4-5 Delivery to site	5	15-Nov-15	19-Nov-15	-426
PD-C4-5-015	PD C4-5 Buoyancy	2	20-Nov-15	21-Nov-15	-426
PD-C4-5-020	PD C4-5 floating to the location	1	22-Nov-15	22-Nov-15	-426
PD-C4-5-040	PD C4-5 Installation	1	22-Nov-15	22-Nov-15	-426
PD-C4-5-050	PD C4-5 Removal of North Steel Bulkhead	4	23-Nov-15	26-Nov-15	-418
PD-C4-5-060	PD C4-5 Removal of South Steel Bulkhead	4	27-Nov-15	30-Nov-15	764
PD-C4-5-070	PD C4-5 Manhole Insitu concrete	4	01-Dec-15	04-Dec-15	764
PD-C4-5-080	PD C4-4/5 Movement Joint Insitu	4	01-Dec-15	04-Dec-15	764
PD-C4-5-090	PD C4-4/5 Movement Joint Installation	2	05-Dec-15	06-Dec-15	764
PD-C4-5-100	PD C4-5 Backfill Beside of Culvert	5	28-Nov-15	02-Dec-15	-419
PD-C4-5-110	PD C4-5 Backfill upto +3.5mPD	5	03-Dec-15	07-Dec-15	-419
PD-C4-5-120	PD C4 Handover to Hy/2013/02	0		07-Dec-15	-119
Permanent Access to Portion A		85	21-Sep-15	14-Dec-15	-126
PD-A2080	PD - C1 Divert Access	21	21-Sep-15	11-Oct-15	-426
PD-A2090	PD - C2 Divert Access	21	04-Oct-15	24-Oct-15	-421
PD-A2100	PD - C3 & C4 Divert Access	7	08-Dec-15	14-Dec-15	-419
PD-A2140	Completion of Access to PA	0		14-Dec-15	-126
Removal of Temporary Access to Portion A		71	12-Oct-15	21-Dec-15	-419
PD-A1100	PD C1 - Removal of Temporary Access	7	12-Oct-15	18-Oct-15	-426
PD-A1110	PD C2 - Removal of Temporary Access	7	25-Oct-15	31-Oct-15	-421
PD-A1120	PD C3 & C4 - Removal of Temporary Access	7	15-Dec-15	21-Dec-15	-419
Construction of Sloping Outfalls		143	19-Oct-15	23-Mar-16	-385
Culvert C1 Sloping Outfall		90	19-Oct-15	22-Jan-16	-391
PD-C1-0100	PD C1 Construction of Sloping Outfall	90	19-Oct-15	22-Jan-16	-391
Culvert C2 Sloping Outfall		90	06-Nov-15	13-Feb-16	-391



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

TASK filter: 3 months rolling programme.

Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-C2-0100	PD C2 Construction of Sloping Outfall	90	06-Nov-15	13-Feb-16	-391
Culvert C3 Sloping Outfall		90	15-Dec-15	23-Mar-16	-385
PD-C3-0100	PD C3 Construction of Sloping Outfall	90	15-Dec-15	23-Mar-16	-385
Extension Culvert EC1		168	02-Jul-15 A	29-Dec-15	-382
Excavation & Supporting		125	02-Jul-15 A	12-Nov-15	-382
PD-EC1-0005	PD EC1 Sheetpiles at EC1-6	28	02-Jul-15 A	30-Sep-15	-372
PD-EC1-0010	PD EC1 Excavation 31,000m3	10	12-Oct-15	22-Oct-15	-382
PD-EC1-0020	PD EC1 Formation of Foundation	20	23-Oct-15	12-Nov-15	-382
Installation of Precast Bases		39	10-Nov-15	21-Dec-15	-380
PD-EC1-0030-10	PD Delivery of EC1-1, EC1-2 & EC1-3	3	10-Nov-15	12-Nov-15	-382
PD-EC1-0030-2(	PD EC1-1 Installation of Precast Culvert Bases	5	13-Nov-15	18-Nov-15	-382
PD-EC1-0030-2(	PD EC1-2 Installation of Precast Culvert Bases	5	19-Nov-15	23-Nov-15	-382
PD-EC1-0030-2(	PD EC1-3 Installation of Precast Culvert Bases	5	24-Nov-15	28-Nov-15	-382
PD-EC1-0030-30	PD Delivery of EC1-4, EC1-5 & EC1-6	7	25-Nov-15	02-Dec-15	-381
PD-EC1-0030-4(	PD EC1-4 Installation of Precast Culvert Bases	5	03-Dec-15	07-Dec-15	-381
PD-EC1-0030-4(	PD EC1-5 Installation of Precast Culvert Bases	5	08-Dec-15	12-Dec-15	-381
PD-EC1-0030-4(	PD EC1-6 Installation of Precast Culvert Bases	5	14-Dec-15	18-Dec-15	-380
PD-EC1-0030-50	PD Delivery of EC1-7, EC1-8 & EC1-9	7	15-Dec-15	21-Dec-15	-380
Insitu Concrete		33	24-Nov-15	29-Dec-15	-382
EC1-1		28	24-Nov-15	23-Dec-15	-382
PD-EC1-1-010	PD EC1-1 Wall Insitu Concrete	14	24-Nov-15	08-Dec-15	-382
PD-EC1-1-020	PD EC1-1 Base insitu Concrete	14	09-Dec-15	23-Dec-15	-382
EC1-2		28	30-Nov-15	29-Dec-15	-382
PD-EC1-2-10	PD EC1-2 Wall Insitu Concrete	14	30-Nov-15	14-Dec-15	-382
PD-EC1-2-20	PD EC1-2 Base insitu Concrete	14	15-Dec-15	29-Dec-15	-382
EC1-3		14	09-Dec-15	23-Dec-15	-382
PD-EC1-3-10	PD EC1-3 Wall Insitu Concrete	14	09-Dec-15	23-Dec-15	-382
EC1-4		14	15-Dec-15	29-Dec-15	-382
PD-EC1-4-10	PD EC1-4 Wall Insitu Concrete	14	15-Dec-15	29-Dec-15	-382
Construction of Permanent Seawall		84	29-Sep-15	28-Dec-15	-356
Vertical Seawall Type V2 6+136 to 5+650		84	29-Sep-15	28-Dec-15	-356
Foundation Leveling		66	29-Sep-15	08-Dec-15	-392
PD-V2-0050	PD C1 - Vertical Seawall V2 Foundation Leveling 3,000m2	15	29-Sep-15	14-Oct-15	-405
PD-V2-0055	PD C2 - Vertical Seawall V2 Foundation Leveling 3,000m2	15	15-Oct-15	30-Oct-15	-401
PD-V2-0060	PD C3 - Vertical Seawall V2 Foundation Leveling 3,000m2	15	31-Oct-15	16-Nov-15	-396
PD-V2-0065	PD C4 - Vertical Seawall V2 Foundation Leveling 3,000m2	15	23-Nov-15	08-Dec-15	-392
Seawall Blocks Installation		64	15-Oct-15	22-Dec-15	-405
PD-V2-0070	PD C1 West - Vertical Seawall Blocks V2 VSPD2 - 21 Type 2E 150nrs (30nrs/day)	5	15-Oct-15	20-Oct-15	-405

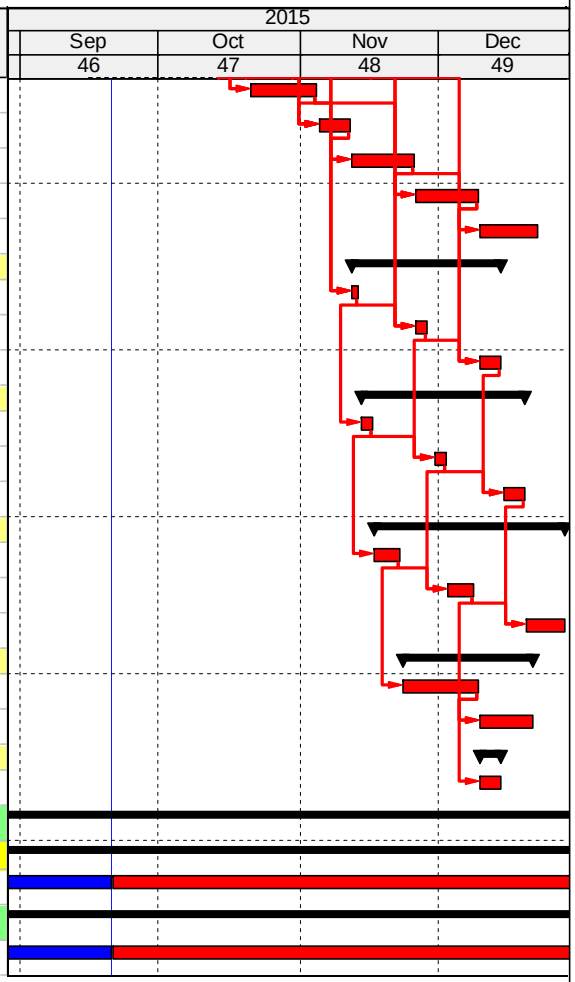


Remaining Level of Effort | Remaining Work | S...
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

TASK filter: 3 months rolling programme.

Oracle Corporation

Activity ID	Activity Name	Duration	Start	Finish	Total Float
PD-V2-0080	PD C1 - Vertical Seawall Blocks V2 VSPD1 - 18 Type 2A & 2A5 404nrs (30nrs/day)	14	21-Oct-15	04-Nov-15	-405
PD-V2-0090	PD C1/C2 - Vertical Seawall Blocks V2 VSOP18 - 17 Type 2A4 202nrs (30nrs/day)	7	05-Nov-15	11-Nov-15	-405
PD-V2-0100	PD C2 - Vertical Seawall Blocks V2 VSOP17 - 14 Type 2A3 & 2A 404nrs (30nrs/day)	13	12-Nov-15	25-Nov-15	-405
PD-V2-0110	PD C2/C3 - Vertical Seawall Blocks V2 VSOP14 - 12 Type 2A & 2A 404nrs (30nrs/day)	13	26-Nov-15	09-Dec-15	-405
PD-V2-0120	PD C3 - Vertical Seawall Blocks V2 VSOP12 - 09 Type 2D & 2A 368nrs (30nrs/day)	12	10-Dec-15	22-Dec-15	-405
Rockfill Type 2 behind seawall		30	12-Nov-15	14-Dec-15	-395
PD-V2-0180	PD C1 West - Vertical Seawall V2 Rockf ill Type 2 VSPD2 to 20 1,400m3	2	12-Nov-15	13-Nov-15	-389
PD-V2-0190	PD C1/C2 - Vertical Seawall V2 Rockf ill Type 2 VSOP19 to 16 2,100m3	3	26-Nov-15	28-Nov-15	-388
PD-V2-0200	PD C2/C3 - Vertical Seawall V2 Rockf ill Type 2 VSOP15 to 11 3,400m3	4	10-Dec-15	14-Dec-15	-395
Geotextile Type 1		33	14-Nov-15	19-Dec-15	-395
PD-V2-0230	PD C1 West - Vertical Seawall V2 Geotextile Type 1 VSOP22 to 20 1,000m2	2	14-Nov-15	16-Nov-15	-389
PD-V2-0240	PD C1/C2 - Vertical Seawall V2 Geotextile Type 1 VSOP19 to 16 1,500m2	3	30-Nov-15	02-Dec-15	-388
PD-V2-0250	PD C2/C3 - Vertical Seawall V2 Geotextile Type 1 VSOP15 to 11 2,400m2	5	15-Dec-15	19-Dec-15	-395
Reclamation upto +3.25mPD		39	17-Nov-15	28-Dec-15	-395
PD-V2-0280	PD C1 West - Vertical Seawall V2 backfill with compaction upto +3.25mPD VSOP22 to 20	6	17-Nov-15	22-Nov-15	-389
PD-V2-0290	PD C1/C2 - Vertical Seawall V2 backfill with compaction upto +3.25mPD VSOP20 to 16	6	03-Dec-15	08-Dec-15	-388
PD-V2-0300	PD C2/C3 - Vertical Seawall V2 backfill with compaction upto +3.25mPD VSOP16 to 11	8	20-Dec-15	28-Dec-15	-395
Insitu Concrete Coping		27	23-Nov-15	21-Dec-15	-389
PD-V2-0330	PD C1 West - Vertical Seawall V2 Insitu Coping VSOP22 to 20 8bays	16	23-Nov-15	09-Dec-15	-389
PD-V2-0340	PD C1/C2 - Vertical Seawall V2 Insitu Coping VSOP20 to 16 11bays	11	10-Dec-15	21-Dec-15	-389
Reclamation upto +5.5mPD		4	10-Dec-15	14-Dec-15	-343
PD-V2-0380	PD C1 - Vertical Seawall V2 backfill with compaction upto +5.5mPD VSOP22 to 20	4	10-Dec-15	14-Dec-15	-343
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 μg/m^3	500 μg/m^3
AMS3B*	368 μg/m^3	500 μg/m^3
AMS6	360 μg/m^3	500 μg/m^3
AMS7A#	370 μg/m^3	500 μg/m^3

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

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

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

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

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

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

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

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

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

Table 4 – Action and Limit Levels for Water Quality

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

Notes:

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

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

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

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

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

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

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

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

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	757.3

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99924	Intercept, bc	-0.01238
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	7.9	2.78	1.40	47.0	46.53
13	6.9	2.60	1.31	43.0	42.57
10	5.0	2.21	1.11	37.0	36.63
7	4.0	1.98	1.00	32.0	31.68
5	2.4	1.53	0.77	23.0	22.77

By Linear Regression of Y on X

Slope , mw = **37.4357** **Intercept, bw =** **-5.8043**

Correlation Coefficient* = **0.9970**

*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)]$^{1/2}$= **43.30**

Remarks:

QC Reviewer: WS CHAN Signature: Date: 27/7/15

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

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

Ambient Condition			
Temperature, Ta (K)	304	Pressure, Pa (mmHg)	756.6

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99924	Intercept, bc	-0.01238
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	8.0	2.79	1.40	48.0	47.42
13	6.9	2.59	1.30	44.0	43.47
10	5.1	2.23	1.12	36.0	35.56
7	4.0	1.98	0.99	32.0	31.61
5	2.5	1.56	0.79	24.0	23.71

By Linear Regression of Y on X

Slope , mw = 38.4119 **Intercept, bw =** -6.7592

Correlation Coefficient* = 0.9978

*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)]$^{1/2}$= **43.71**

Remarks: _____

QC Reviewer: N H Yip Signature: HK Date: 26/9/2015

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

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	749.7

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99924	Intercept, bc	-0.01238
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	7.3	2.66	1.34	50.0	49.25
13	6.0	2.41	1.21	44.0	43.34
10	4.9	2.18	1.10	36.0	35.46
7	3.2	1.76	0.89	25.0	24.62
5	2.0	1.39	0.70	16.0	15.76

By Linear Regression of Y on X

Slope , mw = **53.5454** **Intercept, bw =** **-22.4032**

Correlation Coefficient* = **0.9974**

*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)]$^{1/2}$= **47.93**

Remarks:

QC Reviewer: WS CHAN Signature: Date: 06/07/15

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:	5-Sep-15	Next Due Date:	5-Nov-15
Equipment No.:	A-001-79T	Serial No.	3384

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	749.7

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99924	Intercept, bc	-0.01238
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	7.2	2.64	1.33	49.0	48.26
13	6.0	2.41	1.21	44.0	43.34
10	5.0	2.20	1.11	37.0	36.44
7	3.3	1.79	0.90	25.0	24.62
5	2.1	1.43	0.72	15.0	14.77

By Linear Regression of Y on X

Slope , mw = **56.1741** **Intercept, bw =** **-25.7222**

Correlation Coefficient* = **0.9982**

*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)]$^{1/2}$= **48.03**

Remarks: _____

QC Reviewer: W H Yeo Signature: MK Date: 5/9/2015

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Chu Kong Air-Sea Union Transportation Co.Ltd. (AMS7A)	Operator:	Cheung Hung Wai
Cal. Date:	31-Jul-15	Next Due Date:	30-Sep-15
Equipment No.:	A-001-80T	Serial No.	3385

Ambient Condition			
Temperature, Ta (K)	304.0	Pressure, Pa (mmHg)	752.3

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99924	Intercept, bc	-0.01238
Last Calibration Date:	9-Dec-14	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	9-Dec-15	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	$[DH \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.2	2.64	1.33	47.0	46.30
13	6.0	2.41	1.21	41.0	40.39
10	4.8	2.16	1.09	34.0	33.49
7	3.5	1.84	0.93	26.0	25.61
5	2.7	1.62	0.82	21.0	20.69

By Linear Regression of Y on X

Slope , mw = **50.3841** **Intercept, bw =** **-20.8261**

Correlation Coefficient* = **0.9989**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2}$ = **45.35**

Remarks: _____

QC Reviewer: WS CHAN Signature: _____ Date: 3/7/15

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station	Chu Kong Air-Sea Union Transportation Co.Ltd. (AMS7A)	Operator:	Cheung Hung Wai
Cal. Date:	30-Sep-15	Next Due Date:	30-Nov-15
Equipment No.:	A-001-80T	Serial No.	3385

Ambient Condition			
Temperature, Ta (K)	304.0	Pressure, Pa (mmHg)	750.9

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99924	Intercept, bc	-0.01238
Last Calibration Date:	9-Dec-14	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	9-Dec-15	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Resistance Plate No.	Orfice			HVS Flow Recorder	
	DH (orifice), in. of water	$[DH \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (m^3/min) **X - axis**	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) **Y-axis**
18	7.1	2.62	1.32	47.0	46.25
13	6.0	2.41	1.21	41.0	40.35
10	4.8	2.16	1.08	34.0	33.46
7	3.4	1.81	0.91	25.0	24.60
5	2.6	1.59	0.80	20.0	19.68

By Linear Regression of Y on X

Slope , mw = **51.6145** **Intercept, bw =** **-22.1332**

Correlation Coefficient* = **0.9984**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $IC = (mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2}$ = **45.69**

Remarks: _____

QC Reviewer: N H Yip Signature: HK Date: 30/9/2015

TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE
VILLAGE OF CLEVES, OH
45002
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ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Dec 09, 2014 Rootsmeter S/N 0438320 Ta (K) - 293
Operator Tisch Orifice I.D. - 0843 Pa (mm) - 755.65

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	1.4010	3.2	2.00
2	NA	NA	1.00	0.9950	6.4	4.00
3	NA	NA	1.00	0.8830	7.9	5.00
4	NA	NA	1.00	0.8420	8.8	5.50
5	NA	NA	1.00	0.6960	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0069	0.7187	1.4221		0.9957	0.7107	0.8806
1.0027	1.0077	2.0112		0.9915	0.9965	1.2454
1.0006	1.1332	2.2486		0.9894	1.1206	1.3924
0.9994	1.1870	2.3584		0.9883	1.1738	1.4603
0.9942	1.4285	2.8443		0.9831	1.4126	1.7612
Qstd slope (m) =		1.99924		Qa slope (m) =		1.25189
intercept (b) =		-0.01238		intercept (b) =		-0.00766
coefficient (r) =		0.99990		coefficient (r) =		0.99990
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*:	*7 May 2015*		

*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	*08-05-15*	*09:15 - 10:15*	*26.9*	*76*	*0.04417*	*1763*	*29.38*
2	*08-05-15*	*10:15 - 11:15*	*26.9*	*76*	*0.04625*	*1851*	*30.85*
3	*08-05-15*	*11:15 - 12:15*	*26.9*	*77*	*0.04513*	*1805*	*30.08*
4	*08-05-15*	*12:15 - 13:15*	*27.1*	*77*	*0.04828*	*1926*	*32.10*

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

By Linear Regression of Y or X
Slope (K-factor): *0.0015*
Correlation coefficient: *0.9983*

Validity of Calibration Record: *8 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 11 May 2015

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*:	*7 May 2015*		

*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	*08-05-15*	*09:30 - 10:30*	*26.9*	*76*	*0.04587*	*1722*	*28.70*
2	*08-05-15*	*10:30 - 11:30*	*26.9*	*76*	*0.04774*	*1795*	*29.92*
3	*08-05-15*	*11:30 - 12:30*	*26.9*	*77*	*0.04976*	*1864*	*31.07*
4	*08-05-15*	*12:30 - 13:30*	*27.1*	*77*	*0.05051*	*1901*	*31.68*

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

By Linear Regression of Y or X
Slope (K-factor): *0.0016*
Correlation coefficient: *0.9978*

Validity of Calibration Record: *8 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 11 May 2015

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*:	*7 May 2015*		

*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	*08-05-15*	*13:15 - 14:15*	*27.1*	*77*	*0.04986*	*1994*	*33.23*
2	*08-05-15*	*14:15 - 15:15*	*27.1*	*77*	*0.05083*	*2037*	*33.95*
3	*08-05-15*	*15:15 - 16:15*	*27.1*	*77*	*0.05012*	*2003*	*33.38*
4	*08-05-15*	*16:15 - 17:15*	*27.1*	*76*	*0.05241*	*2095*	*34.92*

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: *0.9968*

Validity of Calibration Record: *8 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: _____ Date: 11 May 2015

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*:	*7 May 2015*		

*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	*08-05-15*	*13:45 - 14:45*	*27.1*	*77*	*0.04963*	*1989*	*33.15*
2	*08-05-15*	*14:45 - 15:45*	*27.1*	*77*	*0.05131*	*2054*	*34.23*
3	*08-05-15*	*15:45 - 16:45*	*27.1*	*77*	*0.05170*	*2066*	*34.43*
4	*08-05-15*	*16:45 - 17:45*	*27.1*	*77*	*0.05269*	*2110*	*35.17*

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: *0.9974*

Validity of Calibration Record: *8 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: _____ Date: 11 May 2015

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*:	*7 May 2015*		

*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	*13-05-15*	*09:15 - 10:15*	*27.3*	*78*	*0.04635*	*1853*	*30.88*
2	*13-05-15*	*10:15 - 11:15*	*27.3*	*78*	*0.04788*	*1916*	*31.93*
3	*13-05-15*	*11:15 - 12:15*	*27.3*	*78*	*0.04943*	*1985*	*33.08*
4	*13-05-15*	*12:15 - 13:15*	*27.4*	*78*	*0.05176*	*2075*	*34.58*

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: *0.9983*

Validity of Calibration Record: *13 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 14 May 2015

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*:	*7 May 2015*		

*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	*13-05-15*	*09:45 - 10:45*	*27.3*	*78*	*0.04654*	*1867*	*31.12*
2	*13-05-15*	*10:45 - 11:45*	*27.3*	*78*	*0.04743*	*1901*	*31.68*
3	*13-05-15*	*11:45 - 12:45*	*27.3*	*78*	*0.05036*	*2010*	*33.50*
4	*13-05-15*	*12:45 - 13:45*	*27.4*	*78*	*0.05271*	*2112*	*35.20*

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: *0.9984*

Validity of Calibration Record: *13 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 14 May 2015

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*:	*7 May 2015*		

*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	*13-05-15*	*13:15 - 14:15*	*27.4*	*78*	*0.05084*	*2178*	*36.30*
2	*13-05-15*	*14:15 - 15:15*	*27.5*	*78*	*0.05236*	*2243*	*37.38*
3	*13-05-15*	*15:15 - 16:15*	*27.5*	*78*	*0.05345*	*2295*	*38.25*
4	*13-05-15*	*16:15 - 17:15*	*27.4*	*77*	*0.05272*	*2261*	*37.68*

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

By Linear Regression of Y or X
Slope (K-factor): *0.0014*
Correlation coefficient: *0.9972*

Validity of Calibration Record: *13 May 2016*

Remarks:

QC Reviewer: *YW Fung* Signature: Date: 14 May 2015

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

HKLAS 028 CAL

CERTIFICATE OF CALIBRATION

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

Item tested

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

Item submitted by

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

Date of test: 07-Nov-2014

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

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

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

Test results

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

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

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

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

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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Fax : (852) 2555 7533

HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

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

Item tested

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

Item submitted by

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

Date of test: 03-Mar-2015

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

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

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

Test results

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

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

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

Huang Jian Min/Feng Jun Qi

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

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

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

CERTIFICATE OF CALIBRATION

Certificate No.: 14CA1106 04-01 **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.

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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HKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 15CA0317 03 **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	,	2791211
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO., LTD.
Address of Customer:	-
Request No.:	-
Date of receipt:	17-Mar-2015

Date of test: 18-Mar-2015

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:	1010 ± 5 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:** 19-Mar-2015 **Company Chop:** SOILS & MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1527900
Sub-batch: 0
Date of Issue: 10/08/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 04 August, 2015 Date of next Calibration: 04 November, 2015

Parameters:

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

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	144.5	-1.6
6667	6630	-0.6
12890	12740	-1.2
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)
3.40	3.45	+0.05
5.60	5.63	+0.03
7.65	7.61	-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)
11.0	11.05	+0.1
23.5	23.57	+0.1
37.5	37.46	-0.0
	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: HK1527900
Sub-batch: 0
Date of Issue: 10/08/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12A101545
Equipment No.: W.026.35
Date of Calibration: 04 August, 2015 Date of next Calibration: 04 November, 2015

Parameters:

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

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0.00	--
10	10.02	+0.2
20	20.05	+0.3
30	30.04	+0.1
	Tolerance Limit (%)	±10.0

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	3.9	-2.5
10	10.4	+4.0
20	20.5	+2.5
50	50.6	+1.2
100	100.7	+0.7
	Tolerance Limit (%)	±10.0

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.02	+0.02
7.0	7.03	+0.03
10.0	10.00	0.00
	Tolerance Limit (pH Unit)	±0.20

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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1527908
Sub-batch: 0
Date of Issue: 10/08/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 04 August, 2015 Date of next Calibration: 04 November, 2015

Parameters:

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

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
146.9	145.0	-1.3
6667	6700	+0.5
12890	12910	+0.2
58670	58740	+0.1
	Tolerance Limit (%)	±10.0

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.40	3.34	-0.06
5.60	5.55	-0.05
7.65	7.60	-0.05
	Tolerance Limit (mg/L)	±0.20

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

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)
11.0	10.96	-0.0
23.5	23.43	-0.1
37.5	37.40	-0.1
	Tolerance Limit (°C)	±2.0

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

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

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1527908
Sub-batch: 0
Date of Issue: 10/08/2015
Client: AECOM ASIA COMPANY LIMITED

Description: Multifunctional Meter
Brand Name: YSI
Model No.: 6820 V2
Serial No.: 12D100972
Equipment No.: W.026.36
Date of Calibration: 04 August, 2015 Date of next Calibration: 04 November, 2015

Parameters:

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

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)
0	0.00	--
10	10.05	+0.5
20	20.03	+0.2
30	29.96	-0.1
	Tolerance Limit (%)	±10.0

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

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	4.1	+2.5
10	9.7	-3.0
20	19.5	-2.5
50	49.3	-1.4
100	100.4	+0.4
	Tolerance Limit (%)	±10.0

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

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.01	+0.01
7.0	6.99	-0.01
10.0	10.03	+0.03
	Tolerance Limit (pH Unit)	±0.20

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

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

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01-Sep	02-Sep	03-Sep	04-Sep	05-Sep
			Mid-Flood 09:16 Mid-Ebb 15:25 24-hour TSP 1-hour TSP Noise		Mid-Flood 11:24 Mid-Ebb 17:04	
06-Sep	07-Sep	08-Sep	09-Sep	10-Sep	11-Sep	12-Sep
	Mid-Ebb 08:33 Mid-Flood 16:10 Dolphin monitoring	Dolphin monitoring 24-hour TSP 1-hour TSP Noise	Mid-Ebb 10:39 Mid-Flood 17:48		Mid-Ebb 12:02 Mid-Flood 18:42	
13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep
	Mid-Flood 07:19 Mid-Ebb 13:42 24-hour TSP 1-hour TSP Noise		Mid-Flood 08:30 Mid-Ebb 14:40		Mid-Flood 09:50 Mid-Ebb 15:45	24-hour TSP 1-hour TSP
20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep
	Mid-Ebb 05:47 Mid-Flood 13:35		Mid-Ebb 08:23 Mid-Flood 16:12		Mid-Ebb 10:30 Mid-Flood 17:34 24-hour TSP 1-hour TSP Noise	
27-Sep	28-Sep	29-Sep	30-Sep			
	Mid-Flood 06:35 Mid-Ebb 12:52	Dolphin monitoring	Mid-Flood 08:20 Mid-Ebb 14:21 Dolphin monitoring 24-hour TSP 1-hour TSP Noise			

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

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				01-Oct	02-Oct	03-Oct
					Mid-Flood 10:17 Mid-Ebb 15:57	
04-Oct	05-Oct	06-Oct	07-Oct	08-Oct	09-Oct	10-Oct
	Mid-Ebb 06:14 Mid-Flood 14:34	24-hour TSP 1-hour TSP Noise	Mid-Ebb 09:07 Mid-Flood 16:36 Dolphin monitoring	Dolphin monitoring	Mid-Ebb 10:53 Mid-Flood 17:33	
11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	17-Oct
	Mid-Flood 06:35 Mid-Ebb 12:42 24-hour TSP 1-hour TSP Noise		Mid-Flood 07:47 Mid-Ebb 13:44		Mid-Flood 09:02 Mid-Ebb 14:50	24-hour TSP 1-hour TSP
18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct
	Mid-Flood 11:46 Mid-Ebb 17:06		Mid-Ebb 06:11 Mid-Flood 14:39		Mid-Ebb 08:54 Mid-Flood 16:15 Dolphin monitoring 24-hour TSP 1-hour TSP Noise	Dolphin monitoring
25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct	31-Oct
	Mid-Ebb 11:43 Mid-Flood 17:57		Mid-Flood 07:27 Mid-Ebb 13:19	24-hour TSP 1-hour TSP Noise	Mid-Flood 09:20 Mid-Ebb 14:55	

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/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
02-Sep-15	1st Hour	Cloudy	0.41	12:12	80	374	500
02-Sep-15	2nd Hour	Cloudy	0.57	13:12	81	374	500
02-Sep-15	3rd Hour	Cloudy	0.63	14:12	79	374	500
08-Sep-15	1st Hour	Sunny	1.62	10:00	73	374	500
08-Sep-15	2nd Hour	Sunny	3.75	11:00	71	374	500
08-Sep-15	3rd Hour	Sunny	1.26	12:00	71	374	500
14-Sep-15	1st Hour	Sunny	1.38	12:32	78	374	500
14-Sep-15	2nd Hour	Sunny	0.17	13:32	78	374	500
14-Sep-15	3rd Hour	Sunny	0.10	14:32	78	374	500
19-Sep-15	1st Hour	Sunny	0.62	12:20	79	374	500
19-Sep-15	2nd Hour	Sunny	0.00	13:20	78	374	500
19-Sep-15	3rd Hour	Sunny	1.76	14:20	79	374	500
25-Sep-15	1st Hour	Sunny	N.A.	10:10	83	374	500
25-Sep-15	2nd Hour	Sunny	N.A.	11:10	86	374	500
25-Sep-15	3rd Hour	Sunny	N.A.	12:10	86	374	500
30-Sep-15	1st Hour	Sunny	0.36	10:12	74	374	500
30-Sep-15	2nd Hour	Sunny	0.00	11:12	76	374	500
30-Sep-15	3rd Hour	Sunny	0.80	12:12	77	374	500
				Average	78		
				Min	71		
				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/m³)	Action Level (μg/m³) ^	Limit Level (μg/m³)
02-Sep-15	1st Hour	Cloudy	0.22	11:32	82	368	500
02-Sep-15	2nd Hour	Cloudy	0.41	12:32	81	368	500
02-Sep-15	3rd Hour	Cloudy	0.57	13:32	81	368	500
08-Sep-15	1st Hour	Sunny	1.62	09:50	71	368	500
08-Sep-15	2nd Hour	Sunny	3.75	10:50	68	368	500
08-Sep-15	3rd Hour	Sunny	1.26	11:50	69	368	500
14-Sep-15	1st Hour	Sunny	1.38	12:14	77	368	500
14-Sep-15	2nd Hour	Sunny	0.17	13:14	78	368	500
14-Sep-15	3rd Hour	Sunny	0.10	14:14	78	368	500
19-Sep-15	1st Hour	Sunny	0.62	12:46	78	368	500
19-Sep-15	2nd Hour	Sunny	0.00	13:46	78	368	500
19-Sep-15	3rd Hour	Sunny	1.76	14:46	78	368	500
25-Sep-15	1st Hour	Sunny	N.A.	10:20	84	368	500
25-Sep-15	2nd Hour	Sunny	N.A.	11:20	82	368	500
25-Sep-15	3rd Hour	Sunny	N.A.	12:20	86	368	500
30-Sep-15	1st Hour	Sunny	0.36	10:25	73	368	500
30-Sep-15	2nd Hour	Sunny	0.00	11:25	73	368	500
30-Sep-15	3rd Hour	Sunny	0.80	12:25	76	368	500
				Average	77		
				Min	68		
				Max	86		

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

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

Date	Session	Weather Condition	averaged Wind Speed (m/s)*	Time (hh:mm)	Conc. (μg/m³)	Action Level (μg/m³)*	Limit Level (μg/m³)
02-Sep-15	1st Hour	Cloudy	0.22	11:53	79	370	500
02-Sep-15	2nd Hour	Sunny	0.41	12:53	80	370	500
02-Sep-15	3rd Hour	Sunny	0.57	13:53	78	370	500
08-Sep-15	1st Hour	Sunny	1.26	09:10	72	370	500
08-Sep-15	2nd Hour	Sunny	1.62	10:10	74	370	500
08-Sep-15	3rd Hour	Sunny	3.75	11:10	72	370	500
14-Sep-15	1st Hour	Sunny	0.17	13:00	79	370	500
14-Sep-15	2nd Hour	Sunny	0.10	14:00	78	370	500
14-Sep-15	3rd Hour	Sunny	2.27	15:00	79	370	500
19-Sep-15	1st Hour	Sunny	0.62	12:07	77	370	500
19-Sep-15	2nd Hour	Sunny	0.00	13:07	79	370	500
19-Sep-15	3rd Hour	Sunny	1.76	14:07	78	370	500
25-Sep-15	1st Hour	Sunny	N.A.	09:50	84	370	500
25-Sep-15	2nd Hour	Sunny	N.A.	10:50	82	370	500
25-Sep-15	3rd Hour	Sunny	N.A.	11:50	85	370	500
30-Sep-15	1st Hour	Sunny	0.36	09:55	77	370	500
30-Sep-15	2nd Hour	Sunny	0.00	10:55	76	370	500
30-Sep-15	3rd Hour	Sunny	0.80	11:55	77	370	500
				Average	78		
				Min	72		
				Max	85		

Remarks:

* Action Level set out at AMS7 Hong Kong SkyCity Marriott Hotel

N.A. - Due to malfunction of the wind data monitoring equipment, wind data was not able to be obtained for monitoring event(s) conducted between 07:42 25 September 2015 – 14:00 25 September 2015. Wind speed and direction dataset 07:42 25 September 2015 – 14:00 25 September 2015 from the Hong Kong Observatory is not available at time this monthly report is submitted.

Appendix G Impact Air Quality Monitoring Results

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

Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
01-Sep-15	14:00	02-Sep-15	14:00	Cloudy	27.4	1007.8	1.33	1.33	1.33	1912.3	2.8095	2.8568	0.0473	5304.04	5328.04	24.00	25	176	260
07-Sep-15	14:00	08-Sep-15	14:00	Sunny	28.3	1007.2	1.33	1.33	1.33	1912.3	2.8188	2.8955	0.0767	5328.04	5352.04	24.00	40	176	260
14-Sep-15	09:00	15-Sep-15	09:00	Sunny	28.0	1012.2	1.33	1.33	1.33	1912.3	2.7944	2.8151	0.0207	5352.04	5376.04	24.00	11	176	260
18-Sep-15	14:00	19-Sep-15	14:00	Sunny	28.5	1015.0	1.33	1.33	1.33	1912.3	2.8336	2.9037	0.0701	5376.04	5400.04	24.00	37	176	260
24-Sep-15	14:00	25-Sep-15	14:00	Sunny	29.3	1006.7	1.33	1.33	1.33	1912.3	2.8227	2.8698	0.0471	5400.04	5424.04	24.00	25	176	260
29-Sep-15	14:00	30-Sep-15	14:00	Sunny	29.7	1005.6	1.33	1.33	1.33	1912.3	2.7953	2.9272	0.1319	5424.04	5448.04	24.00	69	176	260
																Average	34		
																Min	11		
																Max	69		

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

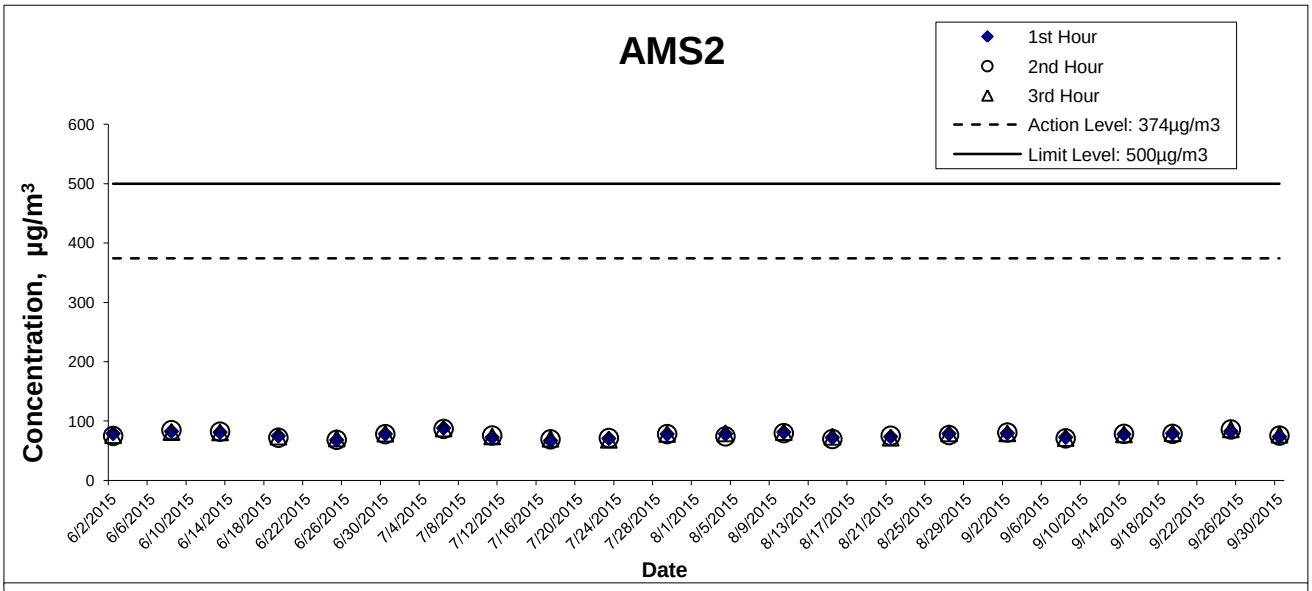
Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
01-Sep-15	14:00	02-Sep-15	14:00	Cloudy	27.4	1007.8	1.34	1.34	1.34	1923.8	2.8222	2.8657	0.0435	6079.38	6103.38	24.00	23	167	260
07-Sep-15	14:00	08-Sep-15	14:00	Sunny	28.3	1007.2	1.34	1.34	1.34	1923.8	2.8048	2.8743	0.0695	6127.38	6151.38	24.00	36	167	260
14-Sep-15	09:00	15-Sep-15	09:00	Sunny	28.0	1012.2	1.34	1.34	1.34	1923.8	2.8048	2.8743	0.0695	6127.38	6151.38	24.00	36	167	260
18-Sep-15	14:00	19-Sep-15	14:00	Sunny	28.5	1015.0	1.34	1.34	1.34	1923.8	2.8146	2.9000	0.0854	6151.38	6175.38	24.00	44	167	260
24-Sep-15	14:00	25-Sep-15	14:00	Sunny	29.3	1006.7	1.34	1.34	1.34	1923.8	2.8351	2.8826	0.0475	6175.38	6199.38	24.00	25	167	260
29-Sep-15	14:00	30-Sep-15	14:00	Sunny	29.7	1005.6	1.34	1.34	1.34	1923.8	2.8223	2.9562	0.1339	6199.38	6223.38	24.00	70	167	260
																Average	39		
																Min	23		
																Max	70		

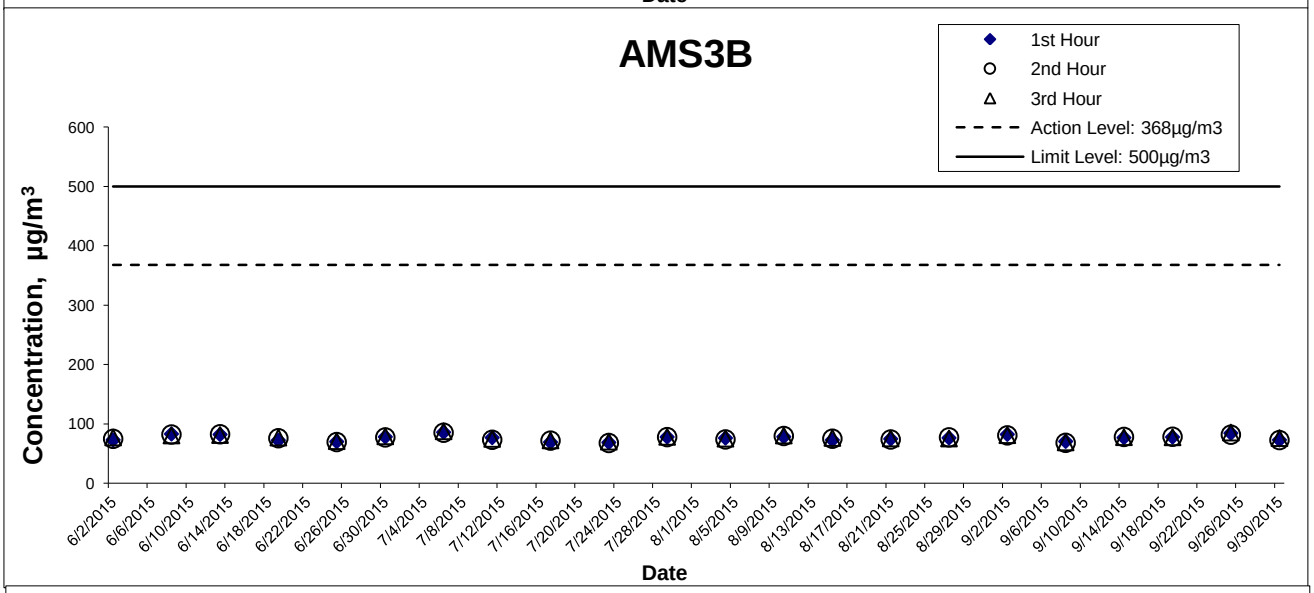
^ Action Level set out at AMS3 Ho Yu College is adopted.

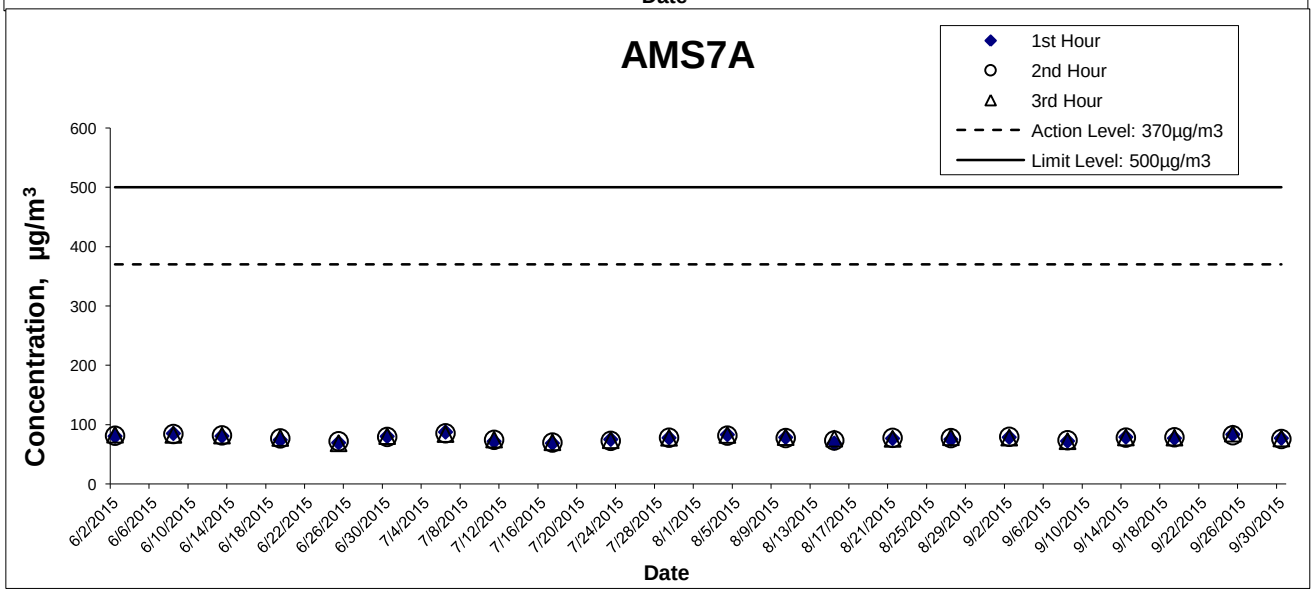
24-hour TSP Monitoring Results at Station AMS7A - Chu Kong Air-Sea Union Transportation Company Limited

Start Date	Start Time	End Date	End Time	Weather Condition	Air Temp. (^oC)	Atmospheric Pressure(hPa)	Flow Rate (m^3/min.) Initial	Flow Rate (m^3/min.) Final	Av. flow (m^3/min)	Total vol. (m^3)	Filter Weight (g) Initial	Filter Weight (g) Final	Particulate weight(g)	Elapse Time Initial	Elapse Time Final	Sampling Time(hrs.)	Conc. ($\mu g/m^3$)	Actino Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
01-Sep-15	14:00	02-Sep-15	14:00	Cloudy	27.4	1007.8	1.30	1.30	1.30	1869.1	2.8114	2.8521	0.0407	5019.92	5043.92	24.00	22	183	260
07-Sep-15	14:00	08-Sep-15	14:00	Sunny	28.3	1007.2	1.30	1.30	1.30	1869.1	2.8065	2.8890	0.0825	5043.92	5067.92	24.00	44	183	260
14-Sep-15	09:00	15-Sep-15	09:00	Sunny	28.0	1012.2	1.30	1.30	1.30	1869.1	2.7946	2.9287	0.1341	5067.92	5091.92	24.00	72	183	260
18-Sep-15	14:00	19-Sep-15	14:00	Sunny	28.5	1015.0	1.30	1.30	1.30	1869.1	2.8219	2.9120	0.0901	5091.92	5115.92	24.00	48	183	260
24-Sep-15	14:00	25-Sep-15	14:00	Sunny	29.3	1006.7	1.30	1.30	1.30	1869.1	2.8369	2.9027	0.0658	5115.92	5139.92	24.00	35	183	260
29-Sep-15	14:00	30-Sep-15	14:00	Sunny	29.7	1005.6	1.30	1.30	1.30	1869.1	2.8082	2.9592	0.1510	5139.92	5163.92	24.00	81	183	260
																Average	50		
																Min	22		
																Max	81		

Remarks:
*Action Level set out at AMS7 Hong Kong SkyCity Marriott Hotel







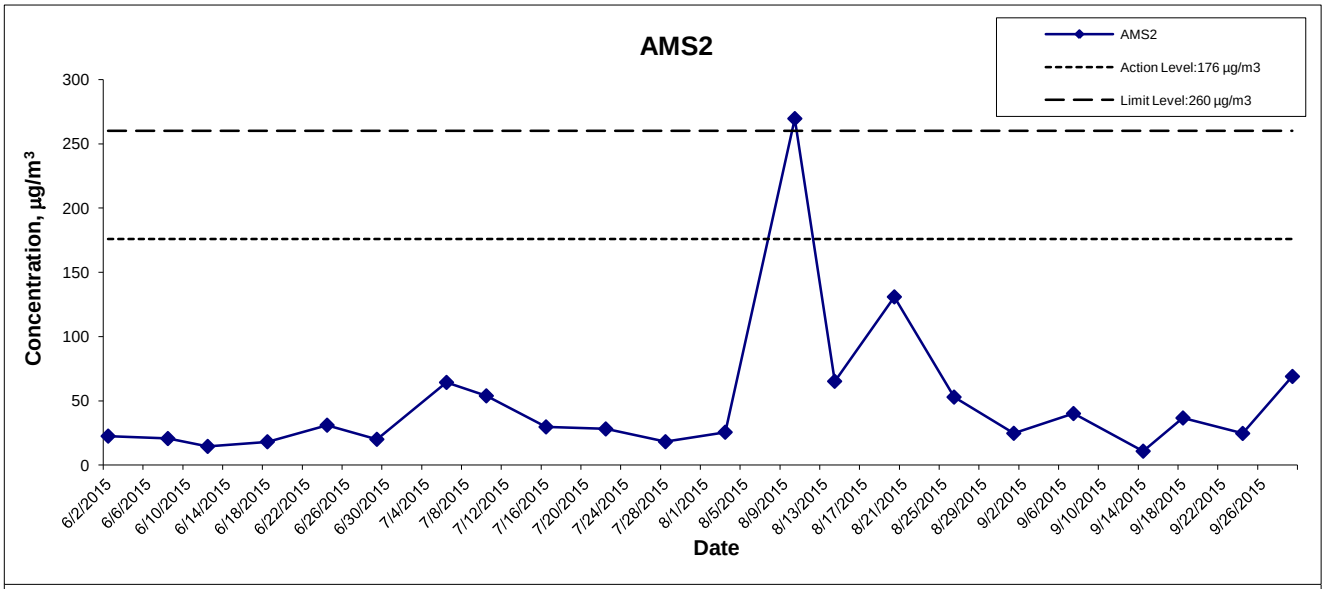
HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS

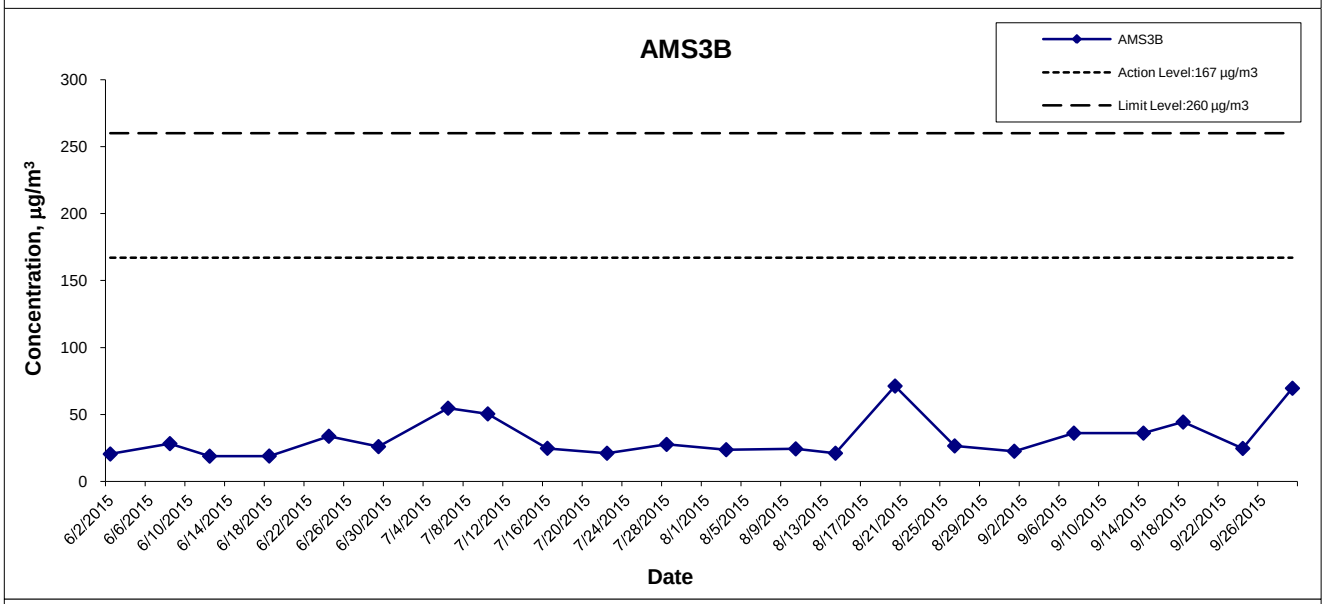
AECOM

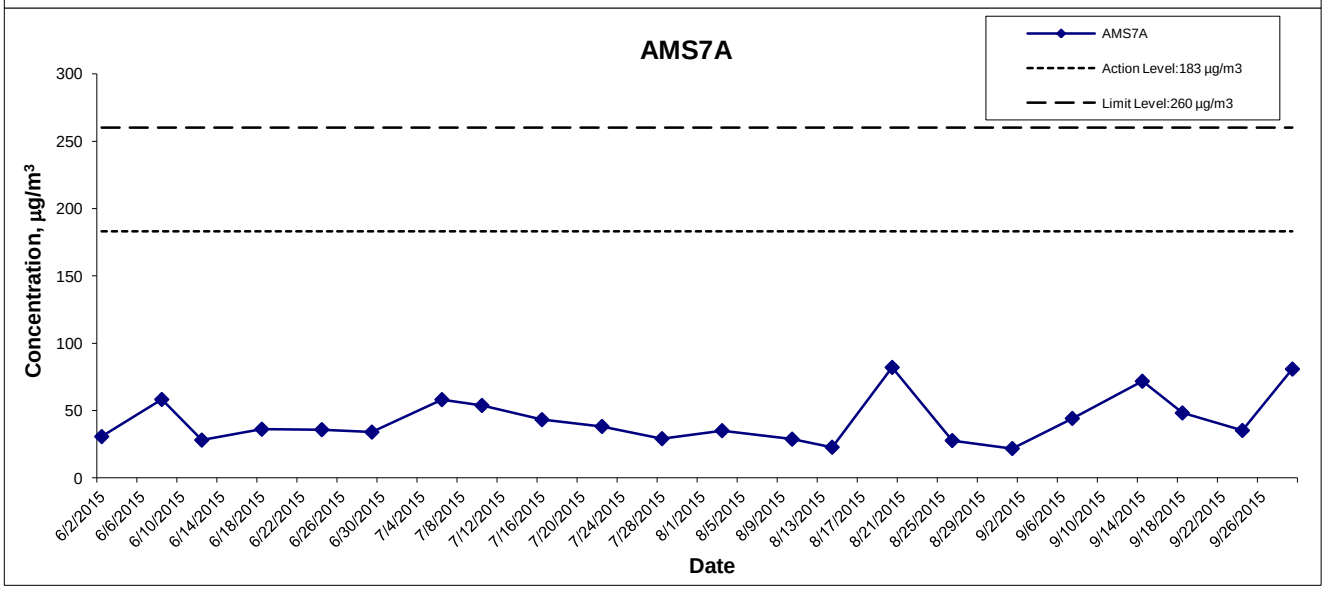
Graphical Presentation of Impact 1-hour TSP Monitoring Results

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

Appendix G







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

AECOM

Graphical Presentation of Impact 24-hour TSP Monitoring Results

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

Appendix G

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

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
09/01/2015	13:38:49	3.30	90
09/01/2015	14:38:49	0.00	96
09/01/2015	15:38:49	0.62	103
09/01/2015	16:38:49	0.00	69
09/01/2015	17:38:49	0.04	60
09/01/2015	18:38:49	0.10	305
09/01/2015	19:38:49	0.13	252
09/01/2015	20:38:49	0.15	228
09/01/2015	21:38:49	0.11	18
09/01/2015	22:38:49	0.24	248
09/01/2015	23:38:49	0.18	68
09/02/2015	00:38:49	0.06	102
09/02/2015	01:38:49	1.41	274
09/02/2015	02:38:49	0.01	263
09/02/2015	03:38:49	0.01	84
09/02/2015	04:38:49	0.01	47
09/02/2015	05:38:49	0.27	146
09/02/2015	06:38:49	1.23	288
09/02/2015	07:38:49	1.96	86
09/02/2015	08:38:49	0.98	112
09/02/2015	09:38:49	0.08	27
09/02/2015	10:38:49	0.06	122
09/02/2015	11:38:49	1.38	112
09/02/2015	11:46:20	0.22	163
09/02/2015	12:46:20	0.41	163
09/02/2015	13:46:20	0.57	93
09/02/2015	14:46:20	0.63	101
09/07/2015	13:46:29	0.03	57
09/07/2015	14:46:29	0.03	80
09/07/2015	15:46:29	0.03	73
09/07/2015	16:46:29	0.06	103
09/07/2015	17:46:29	0.08	278
09/07/2015	18:46:29	0.18	59
09/07/2015	19:46:29	0.62	101
09/07/2015	20:46:29	1.40	103
09/07/2015	21:46:29	0.13	143
09/07/2015	22:46:29	0.20	113
09/07/2015	23:46:29	0.10	249
09/08/2015	00:46:29	0.74	44
09/08/2015	01:46:29	0.42	141
09/08/2015	02:46:29	0.43	110
09/08/2015	03:46:29	1.43	99
09/08/2015	04:46:29	0.13	138
09/08/2015	05:46:29	0.10	101
09/08/2015	06:46:29	0.64	45
09/08/2015	07:46:29	0.13	116
09/08/2015	08:46:29	1.54	103
09/08/2015	09:46:29	1.26	39
09/08/2015	10:46:29	1.62	97
09/08/2015	11:41:41	3.75	86
09/08/2015	12:41:41	1.26	96
09/08/2015	13:41:41	3.54	105
09/08/2015	14:41:41	5.30	101
09/14/2015	08:41:41	2.53	61
09/14/2015	09:41:41	1.94	133
09/14/2015	10:41:41	4.08	112
09/14/2015	11:41:41	3.52	110
09/14/2015	12:41:41	1.38	78
09/14/2015	13:41:41	0.17	138
09/14/2015	14:41:41	0.10	103
09/14/2015	15:41:41	2.27	109
09/14/2015	16:41:41	0.39	59
09/14/2015	17:41:41	0.29	45
09/14/2015	18:41:41	1.23	351
09/14/2015	19:41:41	1.76	113
09/14/2015	20:41:41	0.18	31
09/14/2015	21:41:41	0.94	105
09/14/2015	22:41:41	0.92	121
09/14/2015	23:41:41	2.87	99
09/15/2015	00:41:41	3.48	107
09/15/2015	01:41:41	1.05	110
09/15/2015	02:41:41	8.24	90
09/15/2015	03:41:41	0.90	102
09/15/2015	04:41:41	1.76	125
09/15/2015	05:41:41	2.21	96
09/15/2015	06:41:41	3.75	85
09/15/2015	07:41:41	1.94	127
09/15/2015	08:41:41	3.36	120
09/15/2015	09:41:41	1.89	101
09/18/2015	13:41:41	0.67	88
09/18/2015	14:41:41	1.30	97
09/18/2015	15:41:41	0.42	89
09/18/2015	16:41:41	0.00	94
09/18/2015	17:41:41	0.15	105
09/18/2015	18:41:41	0.45	299
09/18/2015	19:41:41	0.27	300
09/18/2015	20:41:41	0.56	81

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

WIND DATA

Date	Time	Averaged Wind Speed (m/s)	Averaged Wind Direction (degrees)
09/18/2015	21:41:41	0.28	81
09/18/2015	22:41:41	0.32	113
09/18/2015	23:41:41	0.24	272
09/192015	00:41:41	0.18	271
09/192015	01:41:41	0.17	251
09/192015	02:41:41	0.06	238
09/192015	03:41:41	0.01	238
09/192015	04:41:41	0.01	238
09/192015	05:41:41	0.10	219
09/192015	06:41:41	0.11	219
09/192015	07:41:41	0.18	280
09/192015	08:41:41	0.08	42
09/192015	09:41:41	0.62	88
09/192015	10:41:41	0.28	103
09/192015	11:41:41	0.59	101
09/192015	12:41:41	0.62	80
09/192015	13:41:41	0.00	73
09/192015	14:41:41	1.76	282
09/24/2015	13:41:41	0.31	340
09/24/2015	14:41:41	1.61	99
09/24/2015	15:41:41	1.48	284
09/24/2015	16:41:41	1.12	288
09/24/2015	17:41:41	0.97	255
09/24/2015	18:41:41	0.06	236
09/24/2015	19:41:41	0.50	92
09/24/2015	20:41:41	0.20	247
09/24/2015	21:41:41	0.38	232
09/24/2015	22:41:41	0.25	114
09/24/2015	23:41:41	0.17	261
09/25/2015	00:41:41	0.17	242
09/25/2015	01:41:41	0.49	247
09/25/2015	02:41:41	0.01	253
09/25/2015	03:41:41	0.27	114
09/25/2015	04:41:41	0.01	248
09/25/2015	05:41:41	0.04	41
09/25/2015	06:41:41	0.07	126
09/25/2015	07:41:41	0.07	229
09/29/2015	13:54:59	1.58	267
09/29/2015	14:54:59	0.06	309
09/29/2015	15:54:59	0.90	274
09/29/2015	16:54:59	0.57	265
09/29/2015	17:54:59	0.20	257
09/29/2015	18:54:59	0.28	190
09/29/2015	19:54:59	0.34	215
09/29/2015	20:54:59	0.13	75
09/29/2015	21:54:59	0.17	278
09/29/2015	22:54:59	0.56	107
09/29/2015	23:54:59	0.73	256
09/30/2015	00:54:59	0.38	285
09/30/2015	01:54:59	0.04	108
09/30/2015	02:54:59	0.01	297
09/30/2015	03:54:59	0.03	259
09/30/2015	04:54:59	0.00	87
09/30/2015	05:54:59	0.01	101
09/30/2015	06:54:59	0.06	330
09/30/2015	07:54:59	0.15	352
09/30/2015	08:54:59	0.01	185
09/30/2015	09:54:59	1.78	95
09/30/2015	10:54:59	0.36	79
09/30/2015	11:54:59	0.00	314
09/30/2015	12:54:59	0.80	91
09/30/2015	13:54:59	0.67	66

Remarks: Due to malfunction of the wind data monitoring equipment, wind data was not able to be obtained for monitoring event(s) conducted between 07:42 25 September 2015 – 14:00 25 September 2015. Wind speed and direction dataset 07:42 25 September 2015 – 14:00 25 September 2015 from the Hong Kong Observatory is not available at time this monthly report is submitted.

Appendix I Impact Daytime Construction Noise Monitoring Results

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

Date	Weather Condition	Noise Level for 30-min, dB(A)#				Averaged Wind Speed (m/s)	Baseline Noise Level, dB(A)	Limit Level, dB(A)	Exceedance (Y/N)
		Time	L90	L10	Leq				
02-Sep-15	Cloudy	10:42	64	69	67	<5m/s	62.9	75	N
08-Sep-15	Sunny	10:30	64	71	68	<5m/s	62.9	75	N
14-Sep-15	Sunny	10:42	64	69	66	<5m/s	62.9	75	N
25-Sep-15	Sunny	10:30	63	68	66	<5m/s	62.9	75	N
30-Sep-15	Sunny	10:38	61	66	64	<5m/s	62.9	75	N
		Min	61	66	64				
		Max	64	71	68				
		Average	--	--	66				

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

Date	Weather Condition	Noise Level for 30-min, dB(A)#				Averaged Wind Speed (m/s)	Baseline Noise Level, dB(A) ^	Limit Level, dB(A)**	Exceedance (Y/N)
		Time	L90	L10	Leq				
02-Sep-15	Cloudy	11:33	65	70	68	<5m/s	66.3	70	N
08-Sep-15	Sunny	11:18	59	70	66	<5m/s	66.3	70	N
14-Sep-15	Sunny	11:34	60	68	64	<5m/s	66.3	70	N
25-Sep-15	Sunny	11:15	64	69	67	<5m/s	66.3	70	N
30-Sep-15	Sunny	11:30	64	68	67	<5m/s	66.3	70	N
		Min	59	68	64				
		Max	65	70	68				
		Average	--	--	66				

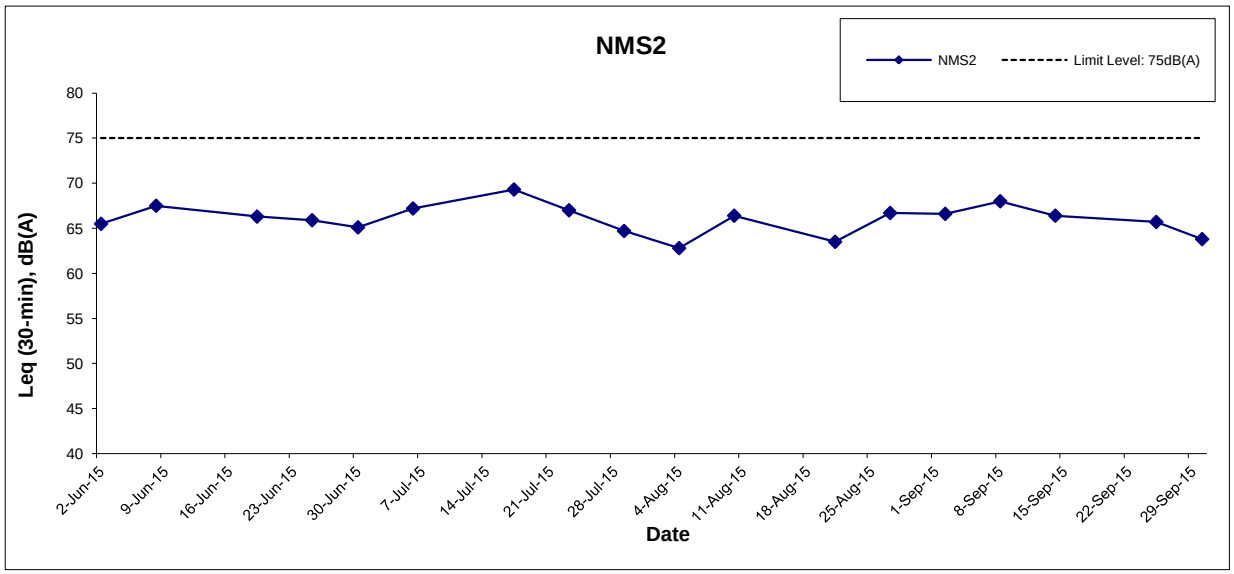
Remark:

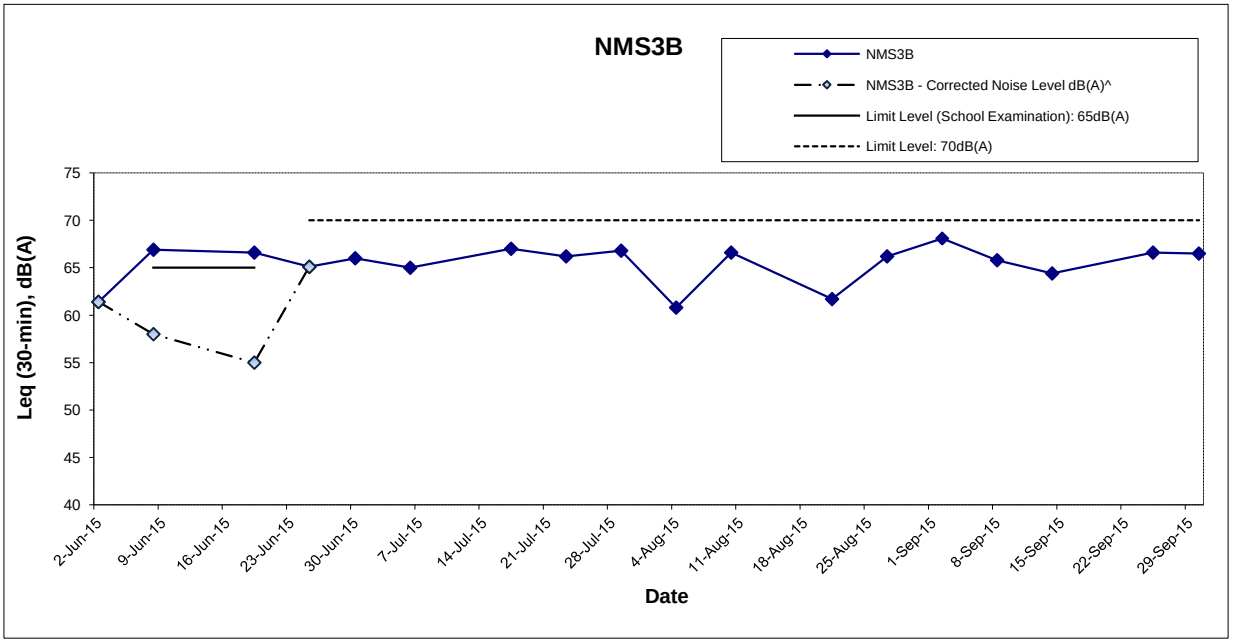
A correction of +3dB(A) was made to the free field measurement.

* Façade measurement.

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

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





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

>The measured noise level on 8 and 19 June 2015 at NMS3B exceeded the noise level of 65dB(A) during examination period but it is higher than the baseline level. Therefore, baseline correction was carried out and the corrected noise level which solely represent the noise level of Construction works are 58.0 dB(A) and 54.8 dB(A) respectively which are lower than the exceedance level of 65dB(A) . As such the EAP was not triggered.

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	15:08	6.4	Surface	1.0	24.6 24.6	24.6	7.9 7.9	7.9	25.5 25.1	25.3	81.1 80.3	80.7	5.8 5.8	5.8	5.8	12.1 12.4	12.3	12.5	11.1 11.1	11.1	11.6
					Middle	3.2	24.4 24.4	24.4	7.9 7.9	7.9	26.1 25.5	25.8	78.7 79.1	78.9	5.7 5.7	5.7		12.2 11.8	12.0		12.5 11.6	12.1	
					Bottom	5.4	24.2 24.3	24.2	7.8 7.8	7.8	27.4 26.8	27.1	78.5 80.3	79.4	5.6 5.8	5.7	5.7	13.1 13.5	13.3		11.8 11.2	11.5	
4-Sep-15	Sunny	Moderate	16:09	7.1	Surface	1.0	24.8 25.0	24.9	7.8 7.8	7.8	22.1 21.9	22.0	72.0 72.4	72.2	5.3 5.3	5.3	5.2	3.5 3.6	3.6	3.7	3.9 4.2	4.1	4.8
					Middle	3.6	24.4 24.5	24.4	7.7 7.8	7.8	25.5 26.5	26.0	71.4 71.9	71.7	5.1 5.1	5.1		3.7 3.6	3.7		5.2 5.0	5.1	
					Bottom	6.1	24.3 24.7	24.5	7.7 7.7	7.7	26.9 26.8	26.8	71.2 71.5	71.4	5.1 5.1	5.1	5.1	4.0 3.8	3.9		5.3 5.2	5.3	
7-Sep-15	Cloudy	Moderate	09:23	6.7	Surface	1.0	26.4 26.4	26.4	7.9 7.9	7.9	10.6 10.5	10.6	84.2 85.7	85.0	6.4 6.5	6.5	6.3	5.0 4.8	4.9	5.7	3.7 2.9	3.3	3.8
					Middle	3.4	26.4 26.3	26.3	7.9 7.8	7.8	11.0 11.9	11.4	78.9 82.4	80.7	6.0 6.2	6.1		5.4 5.0	5.2		3.2 3.9	3.6	
					Bottom	5.7	25.9 25.6	25.8	7.7 7.7	7.7	17.9 17.4	17.7	82.7 77.5	80.1	6.1 5.9	6.0	6.0	6.8 7.1	7.0		4.0 4.8	4.4	
9-Sep-15	Sunny	Moderate	11:17	6.5	Surface	1.0	24.9 24.9	24.9	8.1 8.0	8.1	14.6 13.4	14.0	79.5 84.1	81.8	6.1 6.5	6.3	6.1	3.1 3.2	3.2	3.3	1.3 1.8	1.6	2.8
					Middle	3.3	24.3 24.3	24.3	8.0 8.0	8.0	19.2 18.1	18.7	75.9 80.2	78.1	5.7 6.0	5.9		3.3 3.4	3.4		3.1 4.3	3.7	
					Bottom	5.5	23.8 24.2	24.0	8.0 8.0	8.0	19.4 19.4	19.4	75.8 77.6	76.7	5.6 5.9	5.8	5.8	3.3 3.3	3.3		2.6 3.6	3.1	
11-Sep-15	Fine	Moderate	12:43	6.2	Surface	1.0	25.0 25.1	25.1	7.9 8.0	8.0	17.4 18.1	17.7	79.6 81.7	80.7	6.0 6.1	6.0	5.8	4.0 3.7	3.9	5.1	3.5 3.5	3.5	4.0
					Middle	3.1	24.4 24.4	24.4	7.9 7.9	7.9	23.5 21.6	22.6	74.1 76.2	75.2	5.4 5.6	5.5		5.0 4.6	4.8		5.8 4.3	5.1	
					Bottom	5.2	24.2 24.4	24.3	7.9 7.9	7.9	26.6 22.2	24.4	82.9 79.6	81.3	6.0 5.9	5.9	5.9	6.2 6.8	6.5		3.7 3.3	3.5	
14-Sep-15	Sunny	Moderate	13:06	6.3	Surface	1.0	24.9 24.9	24.9	8.0 8.0	8.0	25.4 25.9	25.7	83.9 83.4	83.7	6.0 6.0	6.0	6.0	5.8 5.9	5.9	5.9	3.6 4.7	4.2	4.0
					Middle	3.2	24.6 24.6	24.6	8.0 8.0	8.0	26.1 27.8	27.0	83.5 83.2	83.4	5.9 5.9	5.9		5.7 5.9	5.8		3.7 4.3	4.0	
					Bottom	5.3	24.4 24.6	24.5	8.0 8.0	8.0	29.4 28.6	29.0	82.0 83.1	82.6	5.8 5.9	5.9	5.9	5.9 5.8	5.9		3.5 4.3	3.9	
16-Sep-15	Fine	Moderate	13:58	6.2	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	19.3 19.4	19.3	86.3 85.7	86.0	6.4 6.3	6.4	6.4	4.2 3.9	4.1	5.7	4.3 5.4	4.9	5.7
					Middle	3.1	25.0 24.9	25.0	8.0 8.0	8.0	19.9 21.1	20.5	85.7 84.8	85.3	6.3 6.2	6.3		6.1 6.6	6.4		4.7 5.3	5.0	
					Bottom	5.2	24.9 24.9	24.9	8.0 8.0	8.0	22.4 21.0	21.7	85.2 85.6	85.4	6.2 6.3	6.3	6.3	6.3 6.9	6.6		7.2 7.4	7.3	
18-Sep-15	Fine	Moderate	15:02	6.2	Surface	1.0	26.0 26.0	26.0	7.8 7.8	7.8	21.0 20.6	20.8	79.2 80.1	79.7	5.7 5.7	5.7	5.7	8.9 8.8	8.9	9.1	5.1 3.4	4.3	4.7
					Middle	3.1	24.9 24.9	24.9	7.8 7.8	7.8	26.4 26.7	26.5	78.8 78.2	78.5	5.6 5.5	5.6		9.1 8.9	9.0		4.5 4.5	4.5	
					Bottom	5.2	24.9 25.0	25.0	7.8 7.8	7.8	27.9 27.8	27.9	77.7 77.9	77.8	5.6 5.5	5.6	5.6	9.3 9.2	9.3		5.3 5.2	5.3	
21-Sep-15	Rainy	Moderate	05:57	6.5	Surface	1.0	25.9 25.9	25.9	7.9 7.9	7.9	14.4 15.2	14.8	88.2 87.4	87.8	6.6 6.5	6.5	6.5	2.2 2.3	2.3	2.4	2.4 3.0	2.7	2.7
					Middle	3.3	25.9 25.9	25.9	7.9 7.9	7.9	16.0 16.0	16.0	86.8 86.1	86.5	6.4 6.4	6.4		2.4 2.5	2.5		2.9 3.0	3.0	
					Bottom	5.5	25.8 25.8	25.8	7.8 7.8	7.8	20.4 21.2	20.8	85.9 86.0	86.0	6.4 6.2	6.3	6.3	2.5 2.5	2.5		2.5 2.2	2.4	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	08:40	6.6	Surface	1.0	25.8 25.7	25.8	8.0 8.0	8.0	12.7 13.4	13.0	90.1 86.0	88.1	6.8 6.5	6.7	6.5	3.6 3.6	3.6	3.7	2.2 2.4	2.3	2.6
					Middle	3.3	25.6 25.7	25.6	8.0 7.9	8.0	18.9 17.3	18.1	82.4 87.5	85.0	6.1 6.5	6.3		3.8 3.8	3.8		2.7 2.7	2.7	
					Bottom	5.6	25.7 25.5	25.6	7.9 7.9	7.9	23.2 26.7	25.0	88.6 84.5	86.6	6.3 6.0	6.1	6.1	3.8 3.8	3.8		2.1 3.4	2.8	
25-Sep-15	Sunny	Moderate	11:22	6.4	Surface	1.0	26.9 26.9	26.9	7.9 7.9	7.9	15.2 14.3	14.7	101.0 100.1	100.6	7.2 7.3	7.3	7.3	3.9 3.9	3.9	4.1	3.9 4.2	4.1	3.8
					Middle	3.2	26.6 26.7	26.7	7.8 7.8	7.8	18.1 17.6	17.9	100.3 99.4	99.9	7.3 7.2	7.2		4.0 4.1	4.1		4.4 2.7	3.6	
					Bottom	5.4	27.2 26.7	26.9	7.8 7.8	7.8	18.4 18.0	18.2	98.3 98.8	98.6	7.1 7.3	7.2	7.2	4.3 4.2	4.3		3.4 3.8	3.6	
28-Sep-15	Sunny	Moderate	12:23	6.5	Surface	1.0	26.3 26.3	26.3	8.0 8.0	8.0	26.2 25.8	26.0	75.6 75.1	75.4	5.3 5.2	5.3	5.3	8.4 8.3	8.4	9.0	6.5 5.5	6.0	6.1
					Middle	3.3	26.2 26.2	26.2	8.0 8.0	8.0	26.5 26.7	26.6	74.1 76.0	75.1	5.2 5.3	5.2		9.3 9.4	9.4		5.7 6.0	5.9	
					Bottom	5.5	26.2 26.2	26.2	8.0 8.0	8.0	26.9 26.8	26.8	77.1 75.3	76.2	5.4 5.2	5.3	5.3	8.8 9.3	9.1		7.0 6.0	6.5	
30-Sep-15	Fine	Moderate	14:41	6.3	Surface	1.0	26.3 26.1	26.2	7.9 7.9	7.9	25.6 25.9	25.7	77.9 77.9	77.9	5.4 5.5	5.4	5.4	13.2 13.3	13.3	13.6	9.0 9.8	9.4	9.6
					Middle	3.2	26.0 25.9	26.0	7.9 7.9	7.9	26.5 27.1	26.8	77.5 77.4	77.5	5.4 5.4	5.4		13.4 13.5	13.5		9.7 9.8	9.8	
					Bottom	5.3	26.1 25.9	26.0	7.9 7.9	7.9	26.6 27.2	26.9	76.7 76.2	76.5	5.4 5.3	5.3	5.3	13.9 14.0	14.0		9.6 9.4	9.5	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)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-Sep-15	Rainy	Moderate	09:32	6.8	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	25.3 25.3	25.3	81.8 78.5	80.2	5.9 5.7	5.8	5.7	14.5 13.1	13.8	13.4	19.1 18.1	18.6	21.3
					Middle	3.4	24.4 24.4	24.4	7.8 7.8	7.8	25.7 26.6	26.1	78.2 77.0	77.6	5.7 5.6	5.6		12.8 13.6	13.2		24.4 23.5	24.0	
					Bottom	5.8	24.4 24.4	24.4	7.8 7.8	7.8	27.4 25.9	26.6	76.0 75.7	75.9	5.5 5.5	5.5	5.5	12.9 13.3	13.1		21.8 20.6	21.2	
4-Sep-15	Sunny	Moderate	11:28	7.1	Surface	1.0	24.7 24.9	24.8	7.8 7.8	7.8	22.1 22.1	22.1	77.1 74.9	76.0	5.6 5.5	5.5	5.5	3.6 3.6	3.6	3.8	8.8 9.5	9.2	9.4
					Middle	3.6	24.5 24.5	24.5	7.8 7.8	7.8	23.5 23.5	23.5	74.2 74.6	74.4	5.4 5.5	5.4		3.8 3.7	3.8		9.9 11.0	10.5	
					Bottom	6.1	24.4 24.3	24.4	7.8 7.8	7.8	23.9 25.5	24.7	73.4 73.8	73.6	5.3 5.4	5.4	5.4	3.8 4.0	3.9		8.0 8.8	8.4	
7-Sep-15	Sunny	Moderate	15:38	6.5	Surface	1.0	26.6 26.7	26.7	7.9 7.9	7.9	7.4 7.4	7.4	90.4 91.9	91.2	7.0 7.1	7.0	6.9	5.0 4.7	4.9	5.4	2.7 2.3	2.5	2.6
					Middle	3.3	26.5 26.5	26.5	7.8 7.8	7.8	8.6 8.7	8.6	89.5 88.1	88.8	6.9 6.8	6.8		5.1 5.7	5.4		3.1 2.2	2.7	
					Bottom	5.5	26.4 26.5	26.4	7.8 7.8	7.8	12.5 12.3	12.4	89.2 91.0	90.1	6.7 6.8	6.8	6.8	6.0 5.7	5.9		2.5 2.7	2.6	
9-Sep-15	Sunny	Moderate	17:15	6.7	Surface	1.0	25.1 25.2	25.2	8.0 8.0	8.0	16.6 16.0	16.3	101.8 97.7	99.8	7.6 7.3	7.5	7.5	2.2 2.3	2.3	2.5	4.3 4.6	4.5	4.3
					Middle	3.4	25.0 24.2	24.6	8.0 8.0	8.0	17.1 17.8	17.5	100.4 97.4	98.9	7.5 7.3	7.4		2.6 2.5	2.6		4.7 3.2	4.0	
					Bottom	5.7	23.8 25.0	24.4	8.0 8.0	8.0	20.5 18.5	19.5	96.1 97.5	96.8	7.3 7.3	7.3	7.3	2.6 2.6	2.6		3.6 4.9	4.3	
11-Sep-15	Fine	Moderate	18:04	6.2	Surface	1.0	25.9 26.0	26.0	8.1 8.1	8.1	16.9 15.4	16.2	108.5 112.6	110.6	8.0 8.4	8.2	7.8	2.7 2.8	2.8	3.2	3.8 4.5	4.2	3.9
					Middle	3.1	25.4 25.5	25.5	8.0 8.0	8.0	16.2 17.6	16.9	100.4 98.0	99.2	7.5 7.3	7.4		3.4 3.1	3.3		4.0 3.3	3.7	
					Bottom	5.2	25.0 25.1	25.1	8.0 8.0	8.0	21.3 19.8	20.6	98.7 105.1	101.9	7.2 7.8	7.5	7.5	3.3 3.5	3.4		3.8 3.5	3.7	
14-Sep-15	Sunny	Moderate	07:33	6.7	Surface	1.0	24.3 24.4	24.3	7.9 7.9	7.9	26.9 26.6	26.8	77.2 77.1	77.2	5.5 5.5	5.5	5.5	10.7 10.3	10.5	10.6	8.0 7.2	7.6	8.8
					Middle	3.4	24.2 24.2	24.2	7.9 7.9	7.9	27.9 27.9	27.9	77.0 76.7	76.9	5.5 5.5	5.5		10.5 10.7	10.6		9.4 7.6	8.5	
					Bottom	5.7	24.2 24.2	24.2	7.9 7.9	7.9	28.2 28.1	28.1	76.5 76.1	76.3	5.5 5.4	5.5	5.5	10.7 10.5	10.6		10.3 10.5	10.4	
16-Sep-15	Fine	Moderate	08:57	6.3	Surface	1.0	24.9 24.8	24.9	7.9 7.9	7.9	19.0 20.7	19.9	83.8 84.9	84.4	6.2 6.3	6.2	6.2	9.2 9.7	9.5	10.0	5.3 5.6	5.5	5.8
					Middle	3.2	24.8 24.8	24.8	7.9 7.9	7.9	23.1 20.9	22.0	86.9 83.4	85.2	6.3 6.1	6.2		9.5 9.3	9.4		4.8 5.4	5.1	
					Bottom	5.3	24.8 24.8	24.8	8.0 7.9	7.9	24.2 21.4	22.8	90.9 84.8	87.9	6.6 6.2	6.4	6.4	11.2 10.9	11.1		6.5 7.3	6.9	
18-Sep-15	Fine	Moderate	10:07	6.4	Surface	1.0	24.9 24.9	24.9	7.8 7.8	7.8	19.4 19.0	19.2	84.3 84.1	84.2	6.2 6.1	6.2	6.2	9.8 9.7	9.8	10.0	9.0 9.4	9.2	12.3
					Middle	3.2	24.9 24.9	24.9	7.8 7.8	7.8	20.8 20.1	20.5	82.1 82.9	82.5	6.1 6.1	6.1		10.0 9.9	10.0		13.1 13.4	13.3	
					Bottom	5.4	24.9 24.9	24.9	7.8 7.8	7.8	20.3 21.6	20.9	81.4 81.5	81.5	6.0 6.0	6.0	6.0	10.3 10.2	10.3		13.1 15.4	14.3	
21-Sep-15	Cloudy	Moderate	13:06	6.5	Surface	1.0	25.8 25.8	25.8	7.9 7.9	7.9	13.8 13.7	13.7	85.0 85.3	85.2	6.4 6.4	6.4	6.3	2.2 2.2	2.2	2.2	2.4 2.0	2.2	2.4
					Middle	3.3	25.7 25.6	25.6	7.9 7.8	7.9	16.3 16.5	16.4	83.2 84.8	84.0	6.1 6.1	6.1		2.2 2.2	2.2		2.4 3.0	2.7	
					Bottom	5.5	25.6 25.7	25.6	7.8 7.8	7.8	25.1 25.4	25.2	81.4 81.3	81.4	5.9 6.0	6.0	6.0	2.3 2.2	2.3		2.5 2.1	2.3	

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-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-Sep-15	Sunny	Moderate	15:35	6.4	Surface	1.0	26.3 26.2	26.3	8.0 8.0	8.0	19.1 19.3	19.2	88.7 89.3	89.0	6.3 6.3	6.3	6.2	2.2 2.3	2.3	2.4	5.4 4.2	4.8	4.8
					Middle	3.2	25.8 25.9	25.9	8.0 8.0	8.0	21.4 21.7	21.6	86.7 87.7	87.2	6.1 6.1	6.1		2.4 2.4	2.4		5.2 4.2	4.7	
					Bottom	5.4	25.7 25.9	25.8	8.0 8.0	8.0	27.6 26.5	27.1	83.2 85.0	84.1	6.0 6.1	6.1	6.1	2.4 2.5	2.5		4.5 5.2	4.9	
25-Sep-15	Sunny	Moderate	17:27	6.4	Surface	1.0	26.8 26.8	26.8	7.9 7.9	7.9	19.5 19.3	19.4	100.6 99.8	100.2	7.1 7.2	7.1	7.1	4.6 4.6	4.6	4.8	3.3 3.0	3.2	4.5
					Middle	3.2	26.6 26.5	26.6	7.8 7.8	7.8	20.2 20.1	20.1	99.2 99.6	99.4	7.1 7.0	7.1		4.7 4.8	4.8		5.1 4.5	4.8	
					Bottom	5.4	26.9 26.4	26.7	7.8 7.8	7.8	22.5 23.1	22.8	97.8 96.5	97.2	7.0 6.9	7.0	7.0	4.9 4.9	4.9		5.1 5.7	5.4	
28-Sep-15	Sunny	Moderate	07:03	6.6	Surface	1.0	26.2 26.2	26.2	8.0 8.0	8.0	27.3 27.4	27.4	78.4 76.0	77.2	5.4 5.3	5.4	5.4	11.3 10.3	10.8	11.1	8.1 8.6	8.4	8.1
					Middle	3.3	26.1 26.1	26.1	8.0 8.0	8.0	27.6 27.5	27.6	79.9 76.9	78.4	5.5 5.3	5.4		11.3 11.0	11.2		8.4 7.7	8.1	
					Bottom	5.6	26.1 26.2	26.1	8.0 8.0	8.0	27.7 27.5	27.6	78.5 77.9	78.2	5.4 5.4	5.4	5.4	11.5 10.8	11.2		8.6 7.0	7.8	
30-Sep-15	Fine	Moderate	08:46	6.5	Surface	1.0	26.2 26.5	26.4	7.8 7.8	7.8	21.2 21.5	21.4	77.9 77.2	77.6	5.6 5.5	5.6	5.6	15.0 14.9	15.0	15.3	16.5 17.2	16.9	16.1
					Middle	3.3	26.6 26.4	26.5	7.8 7.8	7.8	21.9 21.6	21.7	76.9 77.1	77.0	5.5 5.5	5.5		15.2 15.3	15.3		15.9 15.1	15.5	
					Bottom	5.5	26.2 26.4	26.3	7.8 7.8	7.8	21.6 21.9	21.8	76.7 76.6	76.7	5.5 5.5	5.5	5.5	15.6 15.5	15.6		16.0 15.9	16.0	

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

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-Sep-15	Rainy	Moderate	14:48	16.4	Surface	1.0	24.6 24.5	24.5	7.9 7.9	7.9	26.5 25.7	26.1	79.3 78.0	78.7	5.7 5.6	5.7	5.6	17.0 17.6	17.3	16.2	11.1 11.5	11.3	11.7
					Middle	8.2	24.2 24.2	24.2	7.9 7.9	7.9	27.4 28.3	27.8	76.9 76.7	76.8	5.5 5.5	5.5		15.5 14.9	15.2		11.7 11.5	11.6	
					Bottom	15.4	24.2 24.2	24.2	7.8 7.8	7.8	27.7 28.3	28.0	78.7 77.6	78.2	5.6 5.5	5.6	5.6	16.3 15.8	16.1		12.5 11.9	12.2	
4-Sep-15	Sunny	Moderate	15:56	18.3	Surface	1.0	25.1 24.9	25.0	7.8 7.8	7.8	22.2 22.2	22.2	72.9 72.7	72.8	5.3 5.3	5.3	5.3	3.3 3.5	3.4	3.6	5.0 4.7	4.9	4.8
					Middle	9.2	24.6 24.5	24.5	7.7 7.8	7.8	26.0 26.3	26.1	72.4 71.6	72.0	5.2 5.1	5.2		3.5 3.5	3.5		5.0 5.1	5.1	
					Bottom	17.3	24.9 24.4	24.6	7.7 7.7	7.7	26.6 26.9	26.7	72.2 71.4	71.8	5.2 5.1	5.1	5.1	3.8 3.7	3.8		3.8 4.7	4.3	
7-Sep-15	Cloudy	Moderate	09:43	16.2	Surface	1.0	26.4 26.4	26.4	7.8 7.8	7.8	10.9 11.0	11.0	83.0 77.9	80.5	6.3 5.9	6.1	6.1	6.2 6.0	6.1	6.6	3.4 3.8	3.6	4.4
					Middle	8.1	24.8 24.8	24.8	7.7 7.7	7.7	21.9 22.0	21.9	81.2 80.5	80.9	6.1 5.9	6.0		6.9 7.2	7.1		4.7 6.0	5.4	
					Bottom	15.2	24.9 24.8	24.8	7.7 7.7	7.7	21.8 22.0	21.9	74.2 74.4	74.3	5.4 5.5	5.5	5.5	6.3 6.7	6.5		4.5 3.7	4.1	
9-Sep-15	Sunny	Moderate	11:39	16.5	Surface	1.0	25.1 25.1	25.1	8.1 8.1	8.1	13.6 13.2	13.4	77.8 76.2	77.0	5.9 5.8	5.9	5.8	3.6 3.5	3.6	3.6	2.1 2.9	2.5	2.6
					Middle	8.3	23.8 23.8	23.8	8.0 8.0	8.0	19.6 19.2	19.4	75.3 75.3	75.3	5.7 5.7	5.7		3.5 3.5	3.5		3.0 4.0	3.5	
					Bottom	15.5	23.8 23.7	23.8	8.0 8.0	8.0	19.2 20.4	19.8	68.6 66.7	67.7	5.2 5.0	5.1	5.1	3.5 3.6	3.6		2.0 1.8	1.9	
11-Sep-15	Fine	Moderate	13:02	16.3	Surface	1.0	25.0 25.0	25.0	7.9 7.9	7.9	16.6 16.2	16.4	79.9 80.1	80.0	6.0 6.0	6.0	5.8	5.4 5.8	5.6	6.6	3.4 4.1	3.8	4.9
					Middle	8.2	24.3 24.3	24.3	7.9 7.9	7.9	20.6 20.8	20.7	74.4 72.6	73.5	5.5 5.4	5.5		6.0 5.8	5.9		7.7 6.2	7.0	
					Bottom	15.3	24.4 24.2	24.3	7.9 7.9	7.9	20.6 21.1	20.9	79.0 75.5	77.3	5.9 5.6	5.7	5.7	7.9 8.8	8.4		4.0 4.0	4.0	
14-Sep-15	Sunny	Moderate	12:46	16.8	Surface	1.0	24.9 25.0	25.0	8.0 8.0	8.0	26.4 26.3	26.3	83.8 83.6	83.7	5.9 6.0	5.9	5.9	5.2 5.4	5.3	5.6	4.2 3.4	3.8	3.6
					Middle	8.4	24.4 24.4	24.4	8.0 8.0	8.0	29.5 29.6	29.6	83.4 81.0	82.2	5.9 5.7	5.8		5.6 5.6	5.6		3.6 3.1	3.4	
					Bottom	15.8	24.5 24.4	24.5	8.0 8.0	8.0	29.5 29.6	29.6	81.5 78.9	80.2	5.8 5.6	5.7	5.7	5.8 5.7	5.8		3.7 3.4	3.6	
16-Sep-15	Fine	Moderate	13:39	16.5	Surface	1.0	25.1 25.1	25.1	8.1 8.0	8.1	23.6 20.5	22.1	85.2 85.2	85.2	6.1 6.3	6.2	6.1	6.2 5.7	6.0	7.6	6.5 6.2	6.4	5.1
					Middle	8.3	24.9 24.9	24.9	8.0 8.1	8.1	23.7 27.0	25.3	82.9 83.1	83.0	6.0 5.9	6.0		8.1 8.3	8.2		5.6 4.3	5.0	
					Bottom	15.5	24.9 24.9	24.9	8.1 8.0	8.0	27.6 24.9	26.3	83.3 84.6	84.0	5.9 6.1	6.0	6.0	8.5 8.8	8.7		3.8 4.0	3.9	
18-Sep-15	Fine	Moderate	14:41	15.7	Surface	1.0	25.1 25.0	25.1	7.8 7.8	7.8	21.6 24.5	23.0	83.6 83.0	83.3	5.9 5.9	5.9	5.9	7.9 7.8	7.9	8.1	4.1 3.4	3.8	3.7
					Middle	7.9	25.0 24.9	25.0	7.8 7.8	7.8	27.8 27.8	27.8	80.9 81.9	81.4	5.7 6.0	5.8		8.0 8.1	8.1		2.6 4.2	3.4	
					Bottom	14.7	24.9 25.2	25.1	7.8 7.8	7.8	27.9 27.9	27.9	80.0 79.8	79.9	5.7 5.7	5.7	5.7	8.3 8.2	8.3		3.0 4.6	3.8	
21-Sep-15	Rainy	Moderate	06:21	16.8	Surface	1.0	25.9 25.8	25.8	7.9 7.9	7.9	14.3 14.1	14.2	85.7 85.5	85.6	6.3 6.4	6.3	6.2	3.2 3.2	3.2	3.3	2.0 2.1	2.1	2.5
					Middle	8.4	25.7 25.8	25.8	7.8 7.8	7.8	22.1 20.2	21.1	83.9 84.4	84.2	6.1 6.1	6.1		3.4 3.3	3.4		2.4 3.0	2.7	
					Bottom	15.8	25.7 25.7	25.7	7.8 7.8	7.8	23.8 24.0	23.9	81.5 81.6	81.6	5.9 5.9	5.9	5.9	3.3 3.5	3.4		2.3 2.9	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	09:06	16.2	Surface	1.0	25.7 25.8	25.8	8.1 8.0	8.1	10.6 10.3	10.4	82.8 85.9	84.4	6.4 6.6	6.5	6.2	6.5 6.6	6.6	6.7	3.8 2.3	3.1	3.1
					Middle	8.1	25.6 25.5	25.5	7.9 7.9	7.9	23.3 24.0	23.7	85.7 77.1	81.4	6.1 5.5	5.8		6.7 6.6	6.7		2.6 3.3	3.0	
					Bottom	15.2	25.4 25.6	25.5	7.9 7.9	7.9	24.9 23.6	24.3	77.1 82.5	79.8	5.5 5.9	5.7	5.7	6.5 6.8	6.7		2.9 3.2	3.1	
25-Sep-15	Sunny	Moderate	11:40	16.0	Surface	1.0	26.8 26.7	26.8	7.9 7.9	7.9	14.0 14.9	14.4	98.6 97.7	98.2	6.8 6.9	6.8	6.9	6.2 6.1	6.2	6.4	2.8 3.4	3.1	3.2
					Middle	8.0	26.4 26.1	26.3	7.8 7.8	7.8	16.4 17.2	16.8	93.9 93.0	93.5	7.0 6.8	6.9		6.4 6.3	6.4		3.4 3.0	3.2	
					Bottom	15.0	26.9 26.3	26.6	7.8 7.7	7.8	22.7 24.5	23.6	89.9 90.9	90.4	6.6 6.7	6.6	6.6	6.6 6.5	6.6		2.7 3.7	3.2	
28-Sep-15	Sunny	Moderate	12:03	16.5	Surface	1.0	26.3 26.3	26.3	8.0 8.0	8.0	26.2 26.2	26.2	74.9 75.2	75.1	5.2 5.2	5.2	5.2	9.0 8.3	8.7	9.6	6.3 5.9	6.1	6.3
					Middle	8.3	26.2 26.2	26.2	8.0 8.0	8.0	26.9 26.9	26.9	73.5 74.4	74.0	5.1 5.2	5.1		10.8 9.7	10.3		7.2 6.0	6.6	
					Bottom	15.5	26.2 26.1	26.2	8.0 8.0	8.0	26.8 27.1	27.0	76.0 73.5	74.8	5.3 5.1	5.2	5.2	9.4 10.2	9.8		6.5 6.0	6.3	
30-Sep-15	Fine	Moderate	14:20	15.6	Surface	1.0	26.1 26.1	26.1	7.9 7.9	7.9	26.1 25.9	26.0	82.8 83.1	83.0	5.8 5.8	5.8	5.7	14.9 15.1	15.0	15.3	11.9 12.4	12.2	13.1
					Middle	7.8	26.0 26.0	26.0	7.9 7.9	7.9	26.2 26.7	26.4	81.6 80.2	80.9	5.7 5.6	5.6		15.3 15.2	15.3		12.2 13.2	12.7	
					Bottom	14.6	26.1 25.9	26.0	7.9 7.9	7.9	27.1 27.1	27.1	78.8 78.8	78.8	5.5 5.5	5.5	5.5	15.5 15.6	15.6		15.1 13.9	14.5	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	09:53	16.6	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	24.9 25.0	24.9	74.9 73.3	74.1	5.4 5.3	5.4	5.3	15.8 16.1	16.0	15.3	14.1 14.7	14.4	15.0
					Middle	8.3	24.4 24.3	24.3	7.8 7.8	7.8	25.9 25.9	25.9	71.4 71.6	71.5	5.2 5.2	5.2		13.9 14.2	14.1		14.8 15.3	15.1	
					Bottom	15.6	24.3 24.3	24.3	7.8 7.8	7.8	26.1 26.0	26.1	71.8 72.8	72.3	5.2 5.3	5.2	5.2	15.5 15.8	15.7		14.4 16.4	15.4	
4-Sep-15	Sunny	Moderate	11:36	18.1	Surface	1.0	24.9 25.0	25.0	7.8 7.8	7.8	22.4 22.3	22.4	74.9 75.4	75.2	5.5 5.5	5.5	5.5	3.7 3.6	3.7	3.8	10.0 8.8	9.4	9.2
					Middle	9.1	24.4 24.5	24.5	7.7 7.8	7.8	23.7 23.3	23.5	74.8 74.4	74.6	5.5 5.4	5.4		3.7 3.6	3.7		8.8 8.1	8.5	
					Bottom	17.1	24.4 24.4	24.4	7.7 7.7	7.7	23.8 24.2	24.0	73.7 73.5	73.6	5.4 5.4	5.4	5.4	4.0 3.8	3.9		10.0 9.4	9.7	
7-Sep-15	Sunny	Moderate	15:17	16.1	Surface	1.0	26.7 26.7	26.7	7.9 7.9	7.9	7.8 9.4	8.6	89.9 91.5	90.7	6.9 7.0	6.9	6.6	5.0 4.7	4.9	6.1	4.2 4.5	4.4	4.6
					Middle	8.1	26.2 26.4	26.3	7.8 7.8	7.8	10.8 13.3	12.1	87.2 83.2	85.2	6.4 6.3	6.3		6.3 6.6	6.5		4.1 4.1	4.1	
					Bottom	15.1	25.7 25.9	25.8	7.7 7.7	7.7	19.6 18.8	19.2	78.9 81.1	80.0	5.8 6.1	5.9	5.9	7.0 6.6	6.8		5.7 5.1	5.4	
9-Sep-15	Sunny	Moderate	16:56	16.6	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	22.8 19.2	21.0	97.6 90.2	93.9	7.1 6.7	6.9	6.6	2.3 2.4	2.4	2.5	5.8 5.5	5.7	5.1
					Middle	8.3	24.3 24.4	24.3	8.0 8.0	8.0	26.3 22.8	24.6	88.3 82.9	85.6	6.4 6.1	6.2		2.6 2.6	2.6		4.2 4.3	4.3	
					Bottom	15.6	24.0 23.9	24.0	8.0 8.0	8.0	27.6 24.8	26.2	81.0 79.3	80.2	5.8 5.8	5.8	5.8	2.5 2.6	2.6		5.6 4.9	5.3	
11-Sep-15	Fine	Moderate	17:46	16.1	Surface	1.0	25.9 25.9	25.9	8.1 8.1	8.1	18.8 20.3	19.6	100.0 100.3	100.2	7.3 7.3	7.3	6.8	3.0 3.3	3.2	4.1	3.6 2.8	3.2	3.7
					Middle	8.1	24.9 24.9	24.9	7.9 8.0	8.0	23.4 24.0	23.7	87.2 87.4	87.3	6.3 6.3	6.3		4.5 4.4	4.5		4.7 3.4	4.1	
					Bottom	15.1	24.8 24.8	24.8	8.0 8.0	8.0	24.3 24.1	24.2	91.5 93.8	92.7	6.6 6.8	6.7	6.7	4.7 4.3	4.5		4.4 3.1	3.8	
14-Sep-15	Sunny	Moderate	07:59	16.3	Surface	1.0	24.4 24.4	24.4	7.9 7.9	7.9	24.7 25.7	25.2	76.8 78.2	77.5	5.6 5.6	5.6	5.6	7.5 7.6	7.6	7.6	8.2 9.4	8.8	9.0
					Middle	8.2	24.2 24.2	24.2	7.9 7.9	7.9	26.6 27.7	27.2	77.4 76.6	77.0	5.6 5.5	5.5		7.7 7.7	7.7		8.1 8.7	8.4	
					Bottom	15.3	24.2 24.2	24.2	7.9 7.9	7.9	26.9 27.9	27.4	75.9 76.2	76.1	5.5 5.5	5.5	5.5	7.7 7.5	7.6		9.9 9.6	9.8	
16-Sep-15	Fine	Moderate	09:14	16.3	Surface	1.0	24.8 24.8	24.8	7.9 7.9	7.9	19.5 19.4	19.4	83.3 81.5	82.4	6.2 6.1	6.1	6.1	9.5 9.0	9.3	9.9	4.7 5.0	4.9	4.3
					Middle	8.2	24.8 24.8	24.8	7.9 7.9	7.9	20.1 20.1	20.1	81.5 81.1	81.3	6.0 6.0	6.0		8.7 8.8	8.8		3.9 4.3	4.1	
					Bottom	15.3	24.8 24.8	24.8	7.9 7.9	7.9	20.1 20.1	20.1	81.6 82.5	82.1	6.0 6.1	6.1	6.1	11.4 11.8	11.6		4.3 3.2	3.8	
18-Sep-15	Fine	Moderate	10:28	15.9	Surface	1.0	24.9 25.2	25.1	7.8 7.8	7.8	17.8 16.6	17.2	82.6 82.3	82.5	6.2 6.2	6.2	6.1	9.4 9.4	9.4	9.6	4.9 5.1	5.0	5.9
					Middle	8.0	24.9 24.9	24.9	7.8 7.8	7.8	19.1 18.6	18.9	81.1 81.5	81.3	6.0 6.0	6.0		9.6 9.5	9.6		5.7 5.8	5.8	
					Bottom	14.9	24.9 24.9	24.9	7.8 7.8	7.8	19.3 19.6	19.4	80.6 80.3	80.5	6.0 6.0	6.0	6.0	9.8 9.7	9.8		6.4 7.2	6.8	
21-Sep-15	Cloudy	Moderate	12:42	17.0	Surface	1.0	25.7 25.8	25.8	7.9 7.9	7.9	14.2 14.0	14.1	85.1 84.8	85.0	6.4 6.4	6.4	6.2	2.4 2.4	2.4	2.5	2.4 3.2	2.8	2.6
					Middle	8.5	25.7 25.7	25.7	7.8 7.8	7.8	25.2 25.3	25.3	84.4 81.8	83.1	6.0 5.8	5.9		2.5 2.5	2.5		2.1 2.8	2.5	
					Bottom	16.0	25.6 25.6	25.6	7.8 7.7	7.8	25.6 25.4	25.5	84.4 81.6	83.0	6.0 5.8	5.9	5.9	2.5 2.6	2.6		2.8 2.3	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	15:06	16.7	Surface	1.0	26.5 26.3	26.4	8.1 8.1	8.1	19.3 19.0	19.2	85.3 87.5	86.4	6.2 6.1	6.1	6.0	4.5 4.7	4.6	4.6	5.0 4.5	4.8	4.7
					Middle	8.4	25.7 25.7	25.7	8.0 8.0	8.0	28.0 27.8	27.9	86.3 80.0	83.2	6.0 5.6	5.8		4.6 4.5	4.6		4.8 4.6	4.7	
					Bottom	15.7	25.5 25.8	25.7	8.0 8.0	8.0	28.4 28.1	28.3	77.8 81.4	79.6	5.4 5.7	5.6	5.6	4.5 4.6	4.6		4.5 4.4	4.5	
25-Sep-15	Sunny	Moderate	17:10	16.1	Surface	1.0	26.9 26.7	26.8	7.9 7.9	7.9	19.1 19.1	19.1	99.9 100.4	100.2	7.1 7.0	7.0	7.0	5.4 5.5	5.5	5.6	3.2 2.9	3.1	2.9
					Middle	8.1	26.3 26.6	26.5	7.8 7.9	7.8	22.0 20.2	21.1	98.5 97.2	97.9	7.0 7.0	7.0		5.6 5.5	5.6		3.6 2.2	2.9	
					Bottom	15.1	26.7 26.6	26.7	7.8 7.9	7.9	25.5 22.6	24.1	94.7 94.1	94.4	6.8 6.7	6.8	6.8	5.8 5.7	5.8		2.8 2.6	2.7	
28-Sep-15	Sunny	Moderate	07:24	16.7	Surface	1.0	26.2 26.2	26.2	8.0 8.0	8.0	27.1 27.4	27.3	74.4 74.4	74.4	5.2 5.2	5.2	5.2	10.6 11.8	11.2	12.5	7.0 7.1	7.1	7.4
					Middle	8.4	26.1 26.1	26.1	8.0 8.0	8.0	27.6 27.6	27.6	74.4 74.3	74.4	5.2 5.2	5.2		13.1 13.3	13.2		6.9 6.9	6.9	
					Bottom	15.7	26.1 26.1	26.1	8.0 8.0	8.0	27.6 27.7	27.7	74.6 75.1	74.9	5.2 5.2	5.2	5.2	12.9 13.2	13.1		8.2 7.9	8.1	
30-Sep-15	Fine	Moderate	09:05	15.9	Surface	1.0	26.5 26.4	26.5	7.8 7.8	7.8	20.5 19.8	20.2	76.8 77.3	77.1	5.5 5.6	5.6	5.6	16.3 16.4	16.4	16.6	18.3 19.6	19.0	19.5
					Middle	8.0	26.4 26.4	26.4	7.8 7.8	7.8	21.2 20.6	20.9	76.5 76.5	76.5	5.5 5.5	5.5		16.5 16.6	16.6		19.9 18.0	19.0	
					Bottom	14.9	26.4 26.3	26.4	7.8 7.8	7.8	21.5 20.7	21.1	76.0 76.1	76.1	5.5 5.5	5.5	5.5	16.9 16.8	16.9		20.7 20.3	20.5	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	15:21	12.5	Surface	1.0	26.8 26.7	26.7	8.1 8.1	8.1	29.3 29.5	29.4	75.9 78.3	77.1	5.1 5.3	5.2	5.2	7.5 7.5	7.5	7.5	8.0 8.9	8.5	9.2
					Middle	6.3	26.5 26.4	26.5	8.1 8.1	8.1	31.0 31.1	31.0	77.7 76.0	76.9	5.2 5.1	5.2		7.7 7.5	7.6		9.8 9.0	9.4	
					Bottom	11.5	26.5 26.4	26.5	8.1 8.1	8.1	31.1 31.2	31.1	74.4 76.9	75.7	5.0 5.2	5.1	5.1	7.7 7.2	7.5		9.4 9.7	9.6	
4-Sep-15	Sunny	Moderate	16:57	13.1	Surface	1.0	27.8 27.6	27.7	8.0 8.0	8.0	26.7 27.3	27.0	79.1 79.2	79.2	5.7 5.7	5.7	5.5	5.1 5.3	5.2	5.4	6.9 6.0	6.5	5.9
					Middle	6.6	26.1 26.0	26.1	8.0 8.0	8.0	32.6 32.6	32.6	73.7 75.1	74.4	5.3 5.4	5.3		5.5 5.7	5.6		5.6 6.4	6.0	
					Bottom	12.1	26.2 26.0	26.1	8.0 8.0	8.0	32.7 32.6	32.7	77.9 79.2	78.6	5.6 5.7	5.6	5.6	5.4 5.3	5.4		5.6 4.9	5.3	
7-Sep-15	Cloudy	Moderate	08:17	11.9	Surface	1.0	28.8 28.8	28.8	8.0 8.0	8.0	18.3 18.4	18.3	79.7 80.9	80.3	5.6 5.6	5.6	5.4	3.4 3.5	3.5	3.5	2.9 3.2	3.1	3.5
					Middle	6.0	28.5 28.4	28.4	8.0 8.0	8.0	21.2 24.2	22.7	77.1 76.8	77.0	5.2 5.2	5.2		3.5 3.5	3.5		3.9 3.6	3.8	
					Bottom	10.9	27.3 27.5	27.4	8.0 7.9	7.9	27.5 27.2	27.3	76.1 75.5	75.8	5.2 5.2	5.2	5.2	3.5 3.6	3.6		3.4 4.0	3.7	
9-Sep-15	Sunny	Moderate	10:23	13.5	Surface	1.0	26.8 26.7	26.7	8.1 8.1	8.1	27.7 28.5	28.1	85.0 86.1	85.6	6.1 6.2	6.2	5.7	2.9 2.7	2.8	4.6	3.7 2.8	3.3	2.9
					Middle	6.8	25.4 25.4	25.4	8.1 8.0	8.0	34.6 34.7	34.7	71.8 70.5	71.2	5.2 5.1	5.1		5.9 5.5	5.7		2.3 2.0	2.2	
					Bottom	12.5	25.3 25.5	25.4	8.1 8.0	8.0	35.2 34.9	35.1	79.6 77.3	78.5	5.7 5.5	5.6	5.6	5.5 5.3	5.4		3.4 2.7	3.1	
11-Sep-15	Fine	Moderate	11:52	11.8	Surface	1.0	27.5 27.5	27.5	8.2 8.2	8.2	26.4 26.4	26.4	93.9 91.5	92.7	6.4 6.2	6.3	5.7	5.1 4.9	5.0	5.3	4.3 5.5	4.9	5.1
					Middle	5.9	26.3 26.3	26.3	8.1 8.1	8.1	32.5 32.9	32.7	77.4 76.5	77.0	5.2 5.1	5.1		5.2 5.5	5.4		5.2 4.7	5.0	
					Bottom	10.8	26.1 26.1	26.1	8.1 8.1	8.1	34.5 34.2	34.3	71.6 71.8	71.7	4.8 4.8	4.8	4.8	5.4 5.3	5.4		4.8 6.1	5.5	
14-Sep-15	Sunny	Moderate	13:45	12.8	Surface	1.0	26.8 26.9	26.8	7.8 7.8	7.8	31.5 31.0	31.3	94.7 94.9	94.8	6.3 6.4	6.3	6.3	6.7 6.8	6.8	7.0	5.4 4.7	5.1	4.8
					Middle	6.4	26.8 26.8	26.8	7.8 7.8	7.8	31.6 31.3	31.4	92.0 91.9	92.0	6.2 6.2	6.2		6.9 6.9	6.9		4.1 4.9	4.5	
					Bottom	11.8	26.9 26.8	26.9	7.9 7.8	7.8	31.2 31.4	31.3	89.2 88.6	88.9	6.0 5.9	6.0	6.0	7.3 7.2	7.3		5.0 4.7	4.9	
16-Sep-15	Fine	Moderate	14:46	12.3	Surface	1.0	27.3 27.5	27.4	8.2 8.2	8.2	33.8 32.8	33.3	84.7 78.9	81.8	5.5 5.2	5.4	5.3	7.1 7.0	7.1	7.2	7.3 6.6	7.0	7.3
					Middle	6.2	27.2 27.2	27.2	8.2 8.2	8.2	34.6 34.9	34.7	78.1 80.3	79.2	5.1 5.3	5.2		7.2 7.1	7.2		7.1 7.2	7.2	
					Bottom	11.3	27.2 27.2	27.2	8.2 8.2	8.2	35.5 35.4	35.5	77.1 79.7	78.4	5.0 5.2	5.1	5.1	7.2 7.1	7.2		7.8 7.6	7.7	
18-Sep-15	Fine	Moderate	15:41	12.6	Surface	1.0	28.8 28.7	28.8	8.2 8.2	8.2	28.4 28.0	28.2	84.9 85.1	85.0	5.6 5.6	5.6	5.5	4.7 4.9	4.8	4.8	4.6 5.3	5.0	4.9
					Middle	6.3	27.7 27.5	27.6	8.2 8.2	8.2	33.3 33.2	33.3	79.9 82.5	81.2	5.2 5.3	5.3		4.8 4.8	4.8		5.3 4.9	5.1	
					Bottom	11.6	27.5 27.5	27.5	8.2 8.2	8.2	35.8 35.9	35.9	79.7 79.7	79.7	5.2 5.2	5.2	5.2	4.8 4.8	4.8		4.5 4.8	4.7	
21-Sep-15	Rainy	Moderate	05:16	13.6	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	19.3 19.1	19.2	85.0 86.3	85.7	5.9 6.0	6.0	5.7	3.7 3.8	3.8	4.3	2.4 2.2	2.3	2.5
					Middle	6.8	28.4 28.3	28.4	8.1 8.1	8.1	26.5 26.3	26.4	82.1 78.9	80.5	5.5 5.3	5.4		5.2 5.0	5.1		2.6 2.6	2.6	
					Bottom	12.6	28.3 28.4	28.4	8.1 8.1	8.1	27.6 27.4	27.5	81.1 84.8	83.0	5.4 5.7	5.5	5.5	3.9 4.2	4.1		2.6 2.7	2.7	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CS(Mf)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-Sep-15	Sunny	Moderate	08:32	13.8	Surface	1.0	28.4 28.4	28.4	8.2 8.2	8.2	25.2 25.6	25.4	83.7 81.9	82.8	5.7 5.5	5.6	5.4	2.6 2.4	2.5	3.0	3.9 3.8	3.9	4.3
					Middle	6.9	28.2 28.2	28.2	8.1 8.1	8.1	31.2 31.0	31.1	76.8 81.1	79.0	5.0 5.2	5.1		3.2 3.4	3.3		4.8 3.5	4.2	
					Bottom	12.8	28.2 28.3	28.2	8.1 8.1	8.1	32.0 34.0	33.0	75.5 74.5	75.0	4.9 4.9	4.9	4.9	3.3 3.1	3.2		4.6 5.2	4.9	
25-Sep-15	Sunny	Moderate	10:21	12.1	Surface	1.0	29.2 29.1	29.1	8.3 8.2	8.2	22.6 23.2	22.9	90.7 91.8	91.3	6.1 6.2	6.2	6.0	5.3 5.5	5.4	5.5	6.8 6.8	6.8	6.3
					Middle	6.1	29.0 28.8	28.9	8.2 8.2	8.2	26.0 28.3	27.1	87.2 83.6	85.4	5.8 5.5	5.7		5.5 5.4	5.5		5.9 6.7	6.3	
					Bottom	11.1	28.7 28.8	28.8	8.2 8.1	8.1	32.2 30.3	31.2	86.0 89.1	87.6	5.6 5.8	5.7	5.7	5.6 5.5	5.6		5.9 5.4	5.7	
28-Sep-15	Sunny	Moderate	12:51	12.1	Surface	1.0	29.1 29.1	29.1	8.2 8.2	8.2	30.8 30.8	30.8	82.0 83.4	82.7	5.7 5.8	5.7	5.6	7.5 7.5	7.5	7.6	2.8 2.7	2.8	3.6
					Middle	6.1	28.8 28.7	28.7	8.2 8.2	8.2	33.9 33.3	33.6	80.2 79.3	79.8	5.5 5.5	5.5		7.7 7.4	7.6		3.7 4.3	4.0	
					Bottom	11.1	28.7 28.6	28.7	8.2 8.2	8.2	34.9 35.0	35.0	81.8 83.9	82.9	5.6 5.7	5.6	5.6	7.4 7.7	7.6		5.0 2.9	4.0	
30-Sep-15	Fine	Moderate	14:20	12.3	Surface	1.0	29.1 29.1	29.1	8.2 8.2	8.2	30.6 30.3	30.5	77.9 80.1	79.0	5.2 5.3	5.2	5.1	10.5 10.9	10.7	10.6	7.5 7.5	7.5	7.6
					Middle	6.2	28.7 28.8	28.8	8.2 8.2	8.2	32.7 32.5	32.6	76.1 76.7	76.4	5.0 5.1	5.0		10.6 10.3	10.5		7.7 8.3	8.0	
					Bottom	11.3	28.7 28.7	28.7	8.2 8.2	8.2	34.4 34.2	34.3	76.0 75.2	75.6	5.0 5.0	5.0	5.0	10.5 10.5	10.5		7.6 7.0	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

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-Sep-15	Rainy	Moderate	08:43	12.6	Surface	1.0	26.7 26.8	26.8	8.0 8.0	8.0	28.6 28.7	28.6	75.9 81.6	78.8	5.1 5.5	5.3	5.3	8.2 8.6	8.4	8.5	4.9 4.6	4.8	6.5
					Middle	6.3	26.3 26.2	26.2	8.0 8.0	8.0	31.0 31.7	31.3	77.7 75.5	76.6	5.3 5.1	5.2		8.6 8.4	8.5		7.6 7.0	7.3	
					Bottom	11.6	26.1 26.4	26.3	8.0 8.0	8.0	32.1 31.8	32.0	77.2 74.9	76.1	5.2 5.0	5.1	5.1	8.5 8.5	8.5		7.6 7.1	7.4	
4-Sep-15	Sunny	Moderate	10:51	13.2	Surface	1.0	26.9 26.8	26.8	8.0 8.0	8.0	27.7 28.0	27.9	74.6 74.6	74.6	5.4 5.4	5.4	5.3	5.3 5.7	5.5	6.0	6.1 6.4	6.3	5.7
					Middle	6.6	26.0 26.1	26.1	8.0 8.0	8.0	31.5 31.3	31.4	72.7 71.6	72.2	5.3 5.2	5.2		6.2 6.3	6.3		5.7 5.3	5.5	
					Bottom	12.2	26.0 26.1	26.0	8.0 8.0	8.0	31.8 31.6	31.7	75.2 72.4	73.8	5.4 5.2	5.3	5.3	6.6 6.0	6.3		4.8 5.6	5.2	
7-Sep-15	Sunny	Moderate	16:21	12.5	Surface	1.0	29.3 29.2	29.3	8.2 8.2	8.2	16.6 16.8	16.7	80.7 81.9	81.3	5.6 5.7	5.7	5.5	4.4 4.7	4.6	4.6	1.5 1.6	1.6	1.8
					Middle	6.3	26.3 26.3	26.3	8.0 8.0	8.0	32.1 32.0	32.1	76.1 77.5	76.8	5.2 5.2	5.2		4.5 4.5	4.5		1.8 2.2	2.0	
					Bottom	11.5	25.3 25.2	25.2	8.0 8.1	8.0	35.1 35.2	35.1	72.8 72.3	72.6	5.1 5.0	5.0	5.0	4.6 4.6	4.6		2.0 1.8	1.9	
9-Sep-15	Sunny	Moderate	17:53	13.6	Surface	1.0	26.7 27.1	26.9	8.0 8.0	8.0	29.5 27.8	28.6	82.5 88.5	85.5	5.6 6.0	5.8	5.5	3.0 2.8	2.9	4.1	6.1 6.4	6.3	5.0
					Middle	6.8	25.6 25.6	25.6	8.0 7.9	7.9	32.5 32.8	32.7	75.5 76.9	76.2	5.1 5.3	5.2		4.6 4.3	4.5		3.1 4.4	3.8	
					Bottom	12.6	25.7 25.5	25.6	7.8 8.0	7.9	32.7 32.6	32.6	74.4 73.6	74.0	5.1 5.0	5.0	5.0	4.6 5.0	4.8		4.8 4.8	4.8	
11-Sep-15	Fine	Moderate	18:40	12.7	Surface	1.0	27.6 27.6	27.6	8.3 8.3	8.3	27.5 27.5	27.5	96.3 94.5	95.4	6.5 6.4	6.5	5.9	4.5 4.4	4.5	4.7	7.5 6.7	7.1	6.5
					Middle	6.4	26.9 26.7	26.8	8.2 8.2	8.2	30.3 30.5	30.4	83.1 76.5	79.8	5.5 5.1	5.3		4.9 4.8	4.9		6.8 7.2	7.0	
					Bottom	11.7	26.4 26.3	26.3	8.2 8.1	8.2	33.6 33.7	33.6	81.3 74.7	78.0	5.5 5.1	5.3	5.3	4.8 4.8	4.8		5.5 5.3	5.4	
14-Sep-15	Sunny	Moderate	06:54	13.0	Surface	1.0	26.6 26.5	26.6	7.8 7.8	7.8	31.3 32.3	31.8	89.9 89.5	89.7	6.0 6.0	6.0	5.9	7.6 7.5	7.6	7.8	2.8 3.0	2.9	3.6
					Middle	6.5	26.5 26.5	26.5	7.8 7.8	7.8	34.5 34.5	34.5	86.5 87.1	86.8	5.8 5.8	5.8		7.8 7.7	7.8		3.5 4.3	3.9	
					Bottom	12.0	26.5 26.5	26.5	7.8 7.8	7.8	34.5 34.5	34.5	83.2 84.4	83.8	5.6 5.7	5.6	5.6	8.0 8.0	8.0		4.0 4.0	4.0	
16-Sep-15	Fine	Moderate	08:11	11.8	Surface	1.0	27.3 27.3	27.3	8.2 8.2	8.2	32.1 32.1	32.1	80.8 85.7	83.3	5.4 5.6	5.5	5.4	6.6 6.9	6.8	6.9	4.0 4.7	4.4	4.3
					Middle	5.9	27.2 27.1	27.1	8.2 8.2	8.2	34.3 34.5	34.4	81.9 79.9	80.9	5.4 5.2	5.3		6.9 6.8	6.9		4.7 5.1	4.9	
					Bottom	10.8	27.1 27.1	27.1	8.2 8.1	8.2	34.5 34.6	34.6	79.4 78.6	79.0	5.2 5.2	5.2	5.2	6.9 6.8	6.9		3.8 3.5	3.7	
18-Sep-15	Fine	Moderate	09:19	12.2	Surface	1.0	27.6 27.6	27.6	8.2 8.2	8.2	29.6 29.6	29.6	80.8 80.1	80.5	5.4 5.4	5.4	5.3	8.5 8.6	8.6	8.6	4.0 3.6	3.8	3.5
					Middle	6.1	27.5 27.5	27.5	8.2 8.2	8.2	30.8 32.0	31.4	78.5 79.7	79.1	5.2 5.2	5.2		8.5 8.4	8.5		3.6 2.6	3.1	
					Bottom	11.2	27.5 27.5	27.5	8.1 8.1	8.1	33.7 33.7	33.7	79.7 78.4	79.1	5.2 5.2	5.2	5.2	8.5 8.6	8.6		2.8 4.6	3.7	
21-Sep-15	Cloudy	Moderate	13:45	13.4	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	21.8 20.8	21.3	84.0 84.5	84.3	5.8 5.8	5.8	5.5	2.8 3.0	2.9	3.6	2.1 2.6	2.4	2.5
					Middle	6.7	28.0 28.0	28.0	8.2 8.2	8.2	34.3 34.1	34.2	80.9 77.6	79.3	5.2 5.0	5.1		4.3 4.1	4.2		2.4 2.3	2.4	
					Bottom	12.4	28.0 28.1	28.0	8.1 8.1	8.1	34.4 34.4	34.4	88.2 82.1	85.2	5.7 5.3	5.5	5.5	3.8 3.6	3.7		2.6 2.5	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	16:19	13.9	Surface	1.0	29.4 29.5	29.5	8.3 8.3	8.3	23.9 23.5	23.7	93.8 93.0	93.4	6.3 6.2	6.3	5.7	3.1 3.2	3.2	4.0	4.0 3.5	3.8	3.7
					Middle	7.0	28.1 28.1	28.1	8.2 8.2	8.2	35.1 35.1	35.1	79.8 77.9	78.9	5.1 5.0	5.1		4.6 4.7	4.7		3.1 4.2	3.7	
					Bottom	12.9	28.4 28.2	28.3	8.2 8.2	8.2	35.0 35.2	35.1	88.3 93.2	90.8	5.7 6.0	5.8	5.8	3.9 4.1	4.0		4.0 3.2	3.6	
25-Sep-15	Sunny	Moderate	17:38	12.6	Surface	1.0	29.2 29.2	29.2	8.3 8.3	8.3	25.5 25.6	25.6	83.4 85.9	84.7	5.6 5.7	5.6	5.4	4.8 4.7	4.8	5.2	4.3 5.1	4.7	5.0
					Middle	6.3	28.4 28.4	28.4	8.2 8.2	8.2	34.4 34.4	34.4	80.2 81.2	80.7	5.1 5.2	5.2		5.5 5.5	5.5		5.4 4.6	5.0	
					Bottom	11.6	28.6 28.4	28.5	8.2 8.2	8.2	34.6 34.7	34.7	76.7 76.1	76.4	4.9 4.9	4.9	4.9	5.5 5.3	5.4		4.9 5.4	5.2	
28-Sep-15	Sunny	Moderate	06:11	12.3	Surface	1.0	28.7 28.7	28.7	8.2 8.2	8.2	31.5 32.1	31.8	82.1 81.5	81.8	5.7 5.6	5.7	5.6	6.5 6.4	6.5	6.6	3.9 3.4	3.7	3.7
					Middle	6.2	28.6 28.6	28.6	8.2 8.2	8.2	34.3 34.0	34.2	79.0 78.8	78.9	5.4 5.4	5.4		6.6 6.5	6.6		3.0 3.6	3.3	
					Bottom	11.3	28.6 28.6	28.6	8.2 8.2	8.2	34.4 34.2	34.3	79.9 78.2	79.1	5.5 5.4	5.4	5.4	6.6 6.6	6.6		4.7 3.7	4.2	
30-Sep-15	Fine	Moderate	07:30	12.1	Surface	1.0	28.8 28.8	28.8	8.2 8.2	8.2	30.1 30.9	30.5	80.0 79.3	79.7	5.3 5.3	5.3	5.3	15.6 15.6	15.6	15.5	7.4 8.1	7.8	7.8
					Middle	6.1	28.7 28.7	28.7	8.2 8.2	8.2	32.4 32.4	32.4	78.0 79.1	78.6	5.1 5.2	5.2		15.4 15.4	15.4		7.6 7.9	7.8	
					Bottom	11.1	28.7 28.7	28.7	8.2 8.2	8.2	32.7 32.7	32.7	77.4 77.9	77.7	5.1 5.2	5.1	5.1	15.5 15.6	15.6		7.2 8.1	7.7	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	16:34	9.7	Surface	1.0	24.5 24.6	24.6	7.9 7.9	7.9	24.6 24.6	24.6	79.1 79.6	79.4	5.7 5.8	5.7	5.7	4.7 4.4	4.6	4.0	5.3 5.9	5.6	6.8
					Middle	4.9	23.9 23.9	23.9	7.9 7.9	7.9	27.4 27.6	27.5	76.7 77.4	77.1	5.5 5.6	5.6		2.5 2.8	2.7		5.7 6.1	5.9	
					Bottom	8.7	24.1 23.8	24.0	7.9 7.9	7.9	27.5 27.7	27.6	79.6 81.6	80.6	5.7 5.9	5.8	5.8	4.5 4.7	4.6		8.1 9.7	8.9	
4-Sep-15	Sunny	Moderate	16:57	10.1	Surface	1.0	25.4 25.3	25.4	7.8 7.8	7.8	21.3 21.7	21.5	82.2 89.3	85.8	6.0 6.5	6.2	6.2	2.0 2.0	2.0	2.1	3.5 3.8	3.7	6.7
					Middle	5.1	25.1 25.1	25.1	7.9 7.8	7.8	22.2 22.0	22.1	85.5 81.5	83.5	6.2 5.9	6.1		2.2 2.0	2.1		7.7 6.2	7.0	
					Bottom	9.1	25.0 25.0	25.0	7.9 7.8	7.8	23.2 23.1	23.2	84.3 81.3	82.8	6.1 5.9	6.0	6.0	2.2 2.0	2.1		8.5 10.0	9.3	
7-Sep-15	Cloudy	Moderate	07:59	10.3	Surface	1.0	26.4 26.4	26.4	7.8 7.8	7.8	15.6 15.6	15.6	87.9 86.1	87.0	6.5 6.4	6.4	6.1	3.0 2.7	2.9	2.4	4.9 4.1	4.5	3.8
					Middle	5.2	25.9 26.0	25.9	7.7 7.7	7.7	20.4 20.2	20.3	80.1 80.1	80.1	5.8 5.8	5.8		2.0 2.3	2.2		3.9 4.6	4.3	
					Bottom	9.3	25.9 25.9	25.9	7.7 7.7	7.7	20.6 20.5	20.6	81.2 80.9	81.1	5.9 5.9	5.9	5.9	2.2 2.0	2.1		2.8 2.3	2.6	
9-Sep-15	Sunny	Moderate	09:51	10.7	Surface	1.0	24.5 24.4	24.5	8.0 8.0	8.0	26.6 26.6	26.6	77.8 77.3	77.6	5.6 5.5	5.6	5.4	1.6 1.6	1.6	1.6	3.4 2.7	3.1	3.1
					Middle	5.4	23.8 23.2	23.5	8.0 8.0	8.0	28.6 29.8	29.2	73.3 73.2	73.3	5.2 5.2	5.2		1.6 1.6	1.6		2.1 3.4	2.8	
					Bottom	9.7	22.7 22.7	22.7	8.0 8.0	8.0	33.1 33.1	33.1	70.9 70.5	70.7	5.1 5.0	5.1	5.1	1.6 1.7	1.7		3.4 3.1	3.3	
11-Sep-15	Fine	Moderate	11:18	9.8	Surface	1.0	24.8 24.7	24.7	8.1 8.0	8.1	25.7 25.8	25.8	104.6 96.2	100.4	7.5 6.9	7.2	6.8	1.9 1.8	1.9	2.0	5.3 4.4	4.9	4.7
					Middle	4.9	24.1 24.1	24.1	8.0 8.0	8.0	28.0 28.0	28.0	91.5 87.8	89.7	6.6 6.3	6.4		1.9 2.0	2.0		5.0 3.8	4.4	
					Bottom	8.8	24.0 24.1	24.0	8.0 8.0	8.0	28.2 28.1	28.2	92.7 98.5	95.6	6.6 7.1	6.8	6.8	1.9 2.0	2.0		4.6 5.1	4.9	
14-Sep-15	Sunny	Moderate	14:31	10.1	Surface	1.0	24.5 25.0	24.8	8.0 8.0	8.0	25.5 21.9	23.7	88.0 85.3	86.7	6.2 6.2	6.2	6.2	1.9 1.8	1.9	2.0	3.0 3.6	3.3	3.4
					Middle	5.1	24.2 24.1	24.1	8.0 8.0	8.0	24.1 28.9	26.5	85.0 83.7	84.4	6.1 6.0	6.1		2.0 1.9	2.0		3.5 4.0	3.8	
					Bottom	9.1	24.3 24.1	24.2	8.0 8.0	8.0	27.3 31.9	29.6	82.1 83.6	82.9	6.0 6.0	6.0	6.0	2.0 2.1	2.1		2.8 3.1	3.0	
16-Sep-15	Fine	Moderate	15:19	10.1	Surface	1.0	25.2 25.2	25.2	8.0 8.0	8.0	16.6 17.0	16.8	85.1 86.5	85.8	6.4 6.5	6.4	6.3	2.6 2.6	2.6	2.5	3.1 3.6	3.4	3.6
					Middle	5.1	24.6 24.6	24.6	8.1 8.0	8.0	19.7 19.0	19.4	83.8 81.8	82.8	6.2 6.1	6.2		2.4 2.5	2.5		3.1 3.7	3.4	
					Bottom	9.1	24.6 24.7	24.7	8.1 8.0	8.0	21.0 19.2	20.1	85.3 83.0	84.2	6.3 6.2	6.2	6.2	2.4 2.5	2.5		3.7 4.5	4.1	
18-Sep-15	Fine	Moderate	16:04	9.6	Surface	1.0	25.6 25.3	25.5	7.9 7.9	7.9	17.3 20.5	18.9	86.8 86.3	86.6	6.3 6.3	6.3	6.3	2.3 2.2	2.3	2.5	3.8 4.7	4.3	5.0
					Middle	4.8	25.1 25.2	25.2	7.9 7.9	7.9	22.8 20.3	21.6	85.9 85.3	85.6	6.3 6.3	6.3		2.4 2.5	2.5		5.9 5.1	5.5	
					Bottom	8.6	25.0 25.0	25.0	7.9 7.9	7.9	23.8 27.1	25.5	84.3 83.6	84.0	6.1 6.1	6.1	6.1	2.6 2.6	2.6		5.3 5.2	5.3	
21-Sep-15	Rainy	Moderate	04:54	10.4	Surface	1.0	25.6 25.6	25.6	8.0 8.0	8.0	18.6 18.8	18.7	82.4 81.1	81.8	6.1 6.0	6.0	5.8	2.1 2.2	2.2	2.3	2.4 2.5	2.5	2.6
					Middle	5.2	25.6 25.6	25.6	7.9 7.9	7.9	25.9 25.6	25.8	81.1 80.5	80.8	5.6 5.6	5.6		2.4 2.3	2.4		2.9 2.6	2.8	
					Bottom	9.4	25.6 25.6	25.6	7.9 7.9	7.9	28.6 28.6	28.6	79.0 79.9	79.5	5.6 5.5	5.6	5.6	2.3 2.4	2.4		3.0 2.2	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	07:26	10.5	Surface	1.0	25.7 25.7	25.7	8.0 8.0	8.0	21.2 21.6	21.4	80.9 81.3	81.1	5.8 5.9	5.8	5.7	2.4 2.4	2.4	2.5	2.4 4.1	3.3	3.3
					Middle	5.3	25.5 25.5	25.5	7.9 7.9	7.9	27.7 26.9	27.3	79.9 80.0	80.0	5.6 5.6	5.6		2.5 2.6	2.6		2.2 2.2	2.2	
					Bottom	9.5	25.5 25.5	25.5	7.9 7.9	7.9	30.2 29.2	29.7	79.3 77.8	78.6	5.6 5.5	5.5	5.5	2.5 2.6	2.6		3.7 4.9	4.3	
25-Sep-15	Sunny	Moderate	09:09	10.2	Surface	1.0	26.3 26.3	26.3	7.9 7.9	7.9	17.6 19.2	18.4	87.5 86.0	86.8	6.0 6.3	6.2	6.1	1.7 1.7	1.7	1.9	3.8 4.4	4.1	3.6
					Middle	5.1	26.1 26.1	26.1	7.8 7.8	7.8	23.5 21.9	22.7	85.8 84.1	85.0	6.2 5.8	6.0		1.8 1.9	1.9		3.2 3.8	3.5	
					Bottom	9.2	26.0 26.0	26.0	7.8 7.8	7.8	27.7 29.5	28.6	83.3 84.1	83.7	6.0 6.0	6.0	6.0	2.0 2.1	2.1		3.4 3.2	3.3	
28-Sep-15	Sunny	Moderate	13:45	9.8	Surface	1.0	26.4 26.3	26.3	8.0 8.0	8.0	22.3 22.2	22.2	78.1 79.7	78.9	5.6 5.7	5.6	5.6	5.4 5.5	5.5	5.6	5.2 5.2	5.2	4.6
					Middle	4.9	26.1 26.0	26.1	8.1 8.0	8.0	23.5 23.9	23.7	80.0 77.2	78.6	5.7 5.5	5.6		5.6 5.5	5.6		4.9 4.2	4.6	
					Bottom	8.8	26.1 26.0	26.1	8.0 8.1	8.0	24.1 23.8	24.0	79.4 81.6	80.5	5.6 5.8	5.7	5.7	5.7 5.6	5.7		3.4 4.8	4.1	
30-Sep-15	Fine	Moderate	15:50	9.7	Surface	1.0	26.6 26.7	26.6	8.0 7.9	7.9	22.8 19.2	21.0	85.7 85.3	85.5	6.0 6.0	6.0	6.0	5.9 5.9	5.9	6.0	5.3 5.7	5.5	7.6
					Middle	4.9	26.4 26.3	26.3	7.9 8.0	8.0	25.5 26.0	25.7	84.1 84.9	84.5	5.9 5.9	5.9		6.1 6.0	6.1		8.6 9.0	8.8	
					Bottom	8.7	26.2 26.5	26.3	7.9 7.9	7.9	28.5 28.4	28.4	82.8 82.2	82.5	6.0 5.9	5.9	5.9	6.1 6.1	6.1		9.1 8.0	8.6	

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 CS6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	08:16	9.8	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	27.3 27.3	27.3	76.1 75.7	75.9	5.4 5.4	5.4	5.4	3.9 4.0	4.0	4.2	7.2 7.4	7.3	7.5
					Middle	4.9	24.5 24.5	24.5	7.8 7.8	7.8	27.5 27.4	27.5	75.7 75.8	75.8	5.4 5.4	5.4		4.3 4.3	4.3		6.7 6.9	6.8	
					Bottom	8.8	24.5 24.5	24.5	7.8 7.8	7.8	27.4 27.5	27.5	76.6 76.5	76.6	5.5 5.5	5.5	5.5	4.3 4.1	4.2		8.0 9.0	8.5	
4-Sep-15	Sunny	Moderate	10:41	10.0	Surface	1.0	25.0 25.0	25.0	7.8 7.8	7.8	25.5 25.4	25.4	79.7 80.6	80.2	5.7 5.8	5.7	5.7	1.7 1.7	1.7	1.8	4.7 4.1	4.4	5.0
					Middle	5.0	25.0 25.0	25.0	7.8 7.8	7.8	25.5 25.5	25.5	80.2 79.5	79.9	5.7 5.7	5.7		1.7 1.9	1.8		4.3 5.2	4.8	
					Bottom	9.0	25.0 25.0	25.0	7.8 7.8	7.8	25.5 25.5	25.5	80.1 79.5	79.8	5.7 5.7	5.7	5.7	1.7 1.9	1.8		5.2 6.2	5.7	
7-Sep-15	Sunny	Moderate	17:02	10.6	Surface	1.0	26.7 26.7	26.7	8.0 8.0	8.0	9.4 8.5	9.0	81.9 87.9	84.9	6.2 6.7	6.5	6.0	3.4 3.4	3.4	3.4	4.5 3.5	4.0	4.4
					Middle	5.3	24.7 24.3	24.5	7.8 7.9	7.9	17.4 19.2	18.3	72.2 74.9	73.6	5.4 5.6	5.5		3.4 3.3	3.4		4.1 5.1	4.6	
					Bottom	9.6	24.1 23.9	24.0	7.8 7.9	7.9	19.6 22.8	21.2	77.0 79.1	78.1	5.8 5.9	5.8	5.8	3.4 3.2	3.3		3.8 5.5	4.7	
9-Sep-15	Sunny	Moderate	18:32	10.6	Surface	1.0	24.6 24.7	24.6	8.0 8.0	8.0	16.4 16.3	16.4	91.5 93.8	92.7	6.8 7.1	7.0	6.4	2.2 2.2	2.2	2.2	4.8 4.6	4.7	4.3
					Middle	5.3	23.7 23.6	23.7	8.0 8.0	8.0	20.7 19.6	20.2	80.0 74.5	77.3	5.8 5.6	5.7		2.2 2.1	2.2		3.2 3.0	3.1	
					Bottom	9.6	23.2 23.3	23.3	8.0 8.0	8.0	21.6 22.2	21.9	70.9 73.5	72.2	5.4 5.4	5.4	5.4	2.2 2.1	2.2		4.6 5.6	5.1	
11-Sep-15	Fine	Moderate	19:32	10.2	Surface	1.0	25.2 25.1	25.1	8.2 8.1	8.2	14.5 15.2	14.8	111.3 103.2	107.3	8.5 7.8	8.1	7.8	3.5 3.6	3.6	3.6	4.8 4.8	4.8	4.4
					Middle	5.1	24.8 24.7	24.8	8.1 8.1	8.1	15.8 17.6	16.7	102.5 96.3	99.4	7.8 7.2	7.5		3.5 3.6	3.6		5.4 4.9	5.2	
					Bottom	9.2	24.7 24.8	24.7	8.1 8.1	8.1	19.3 16.2	17.8	97.5 105.3	101.4	7.3 8.0	7.6	7.6	3.7 3.5	3.6		3.0 3.3	3.2	
14-Sep-15	Sunny	Moderate	06:27	10.3	Surface	1.0	24.0 24.0	24.0	8.0 7.9	8.0	30.6 30.4	30.5	78.6 78.8	78.7	5.6 5.6	5.6	5.6	4.0 4.1	4.1	4.1	6.2 6.2	6.2	6.3
					Middle	5.2	24.0 24.0	24.0	7.9 8.0	8.0	30.9 30.9	30.9	78.8 78.2	78.5	5.6 5.5	5.5		4.1 4.1	4.1		6.4 6.8	6.6	
					Bottom	9.3	23.9 24.0	24.0	7.9 7.9	7.9	31.6 31.3	31.5	78.6 79.5	79.1	5.5 5.6	5.6	5.6	4.2 4.1	4.2		5.5 6.4	6.0	
16-Sep-15	Fine	Moderate	07:47	10.2	Surface	1.0	24.7 24.7	24.7	7.9 7.9	7.9	28.1 28.1	28.1	83.7 83.1	83.4	5.9 5.9	5.9	5.9	3.5 3.6	3.6	3.6	8.3 7.3	7.8	6.9
					Middle	5.1	24.7 24.7	24.7	7.9 7.9	7.9	28.2 28.2	28.2	83.7 83.3	83.5	5.9 5.9	5.9		3.7 3.5	3.6		6.7 7.5	7.1	
					Bottom	9.2	24.7 24.7	24.7	7.9 7.9	7.9	28.2 28.2	28.2	83.5 83.9	83.7	5.9 5.9	5.9	5.9	3.5 3.4	3.5		5.9 5.5	5.7	
18-Sep-15	Fine	Moderate	09:01	9.7	Surface	1.0	24.9 24.9	24.9	7.8 7.8	7.8	27.7 27.2	27.4	84.6 84.2	84.4	5.9 5.9	5.9	5.9	3.6 3.6	3.6	3.8	4.4 5.0	4.7	4.6
					Middle	4.9	24.9 24.9	24.9	7.8 7.8	7.8	28.6 28.2	28.4	82.6 82.4	82.5	5.9 5.8	5.8		3.8 3.7	3.8		4.7 3.9	4.3	
					Bottom	8.7	24.9 24.9	24.9	7.8 7.8	7.8	28.8 29.1	29.0	81.8 81.3	81.6	5.8 5.7	5.7	5.7	3.9 3.9	3.9		5.5 4.3	4.9	
21-Sep-15	Cloudy	Moderate	14:15	10.7	Surface	1.0	25.7 25.8	25.8	8.0 8.0	8.0	18.0 15.1	16.6	83.7 85.0	84.4	6.0 6.4	6.2	6.0	2.1 2.1	2.1	2.2	1.6 1.7	1.7	2.2
					Middle	5.4	25.5 25.4	25.4	7.9 7.9	7.9	23.2 26.4	24.8	81.2 81.3	81.3	5.8 5.9	5.8		2.2 2.2	2.2		3.1 2.1	2.6	
					Bottom	9.7	25.4 25.4	25.4	7.9 7.9	7.9	24.8 28.1	26.5	78.3 80.5	79.4	5.6 5.7	5.7	5.7	2.2 2.2	2.2		2.1 2.2	2.2	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	16:51	10.7	Surface	1.0	26.4 26.5	26.4	8.1 8.1	8.1	16.1 15.0	15.6	90.8 92.2	91.5	6.7 6.8	6.8	6.5	2.1 2.1	2.1	2.2	3.4 3.8	3.6	3.4
					Middle	5.4	25.9 25.9	25.9	8.1 8.1	8.1	18.5 18.5	18.5	87.3 83.5	85.4	6.3 6.1	6.2		2.2 2.1	2.2		3.5 2.2	2.9	
					Bottom	9.7	25.5 25.6	25.5	8.1 8.0	8.0	26.2 23.7	24.9	81.5 85.8	83.7	5.8 6.3	6.0	6.0	2.2 2.2	2.2		3.8 3.6	3.7	
25-Sep-15	Sunny	Moderate	18:45	10.3	Surface	1.0	26.7 26.5	26.6	7.9 7.9	7.9	21.5 22.8	22.2	103.2 102.2	102.7	7.3 7.2	7.3	7.3	2.4 2.3	2.4	2.5	1.6 1.5	1.6	1.6
					Middle	5.2	26.7 26.8	26.8	7.9 7.9	7.9	23.2 25.7	24.5	102.2 104.1	103.2	7.2 7.3	7.2		2.5 2.5	2.5		1.4 1.2	1.3	
					Bottom	9.3	26.7 26.9	26.8	7.9 7.9	7.9	23.7 20.6	22.1	101.4 101.3	101.4	7.2 7.1	7.2	7.2	2.6 2.6	2.6		1.8 1.7	1.8	
28-Sep-15	Sunny	Moderate	05:48	10.0	Surface	1.0	25.8 25.8	25.8	8.0 8.0	8.0	30.8 30.8	30.8	74.3 74.5	74.4	5.2 5.2	5.2	5.2	2.9 3.1	3.0	3.1	7.0 6.5	6.8	7.0
					Middle	5.0	25.8 25.8	25.8	8.0 8.0	8.0	30.8 31.0	30.9	74.6 74.2	74.4	5.2 5.2	5.2		2.9 3.1	3.0		6.9 6.6	6.8	
					Bottom	9.0	25.8 25.8	25.8	8.0 8.0	8.0	31.1 30.7	30.9	74.1 75.0	74.6	5.2 5.2	5.2	5.2	3.3 3.5	3.4		7.2 7.8	7.5	
30-Sep-15	Fine	Moderate	07:32	9.7	Surface	1.0	26.0 26.0	26.0	7.9 7.9	7.9	27.9 28.3	28.1	77.8 77.9	77.9	5.4 5.4	5.4	5.4	5.3 5.1	5.2	5.5	7.2 7.9	7.6	7.6
					Middle	4.9	26.0 25.9	26.0	7.8 7.8	7.8	28.5 28.8	28.7	77.1 77.2	77.2	5.3 5.3	5.3		5.6 5.5	5.6		6.9 7.7	7.3	
					Bottom	8.7	25.9 26.0	25.9	7.8 7.8	7.8	29.0 28.7	28.8	77.0 76.9	77.0	5.3 5.3	5.3	5.3	5.8 5.8	5.8		8.0 7.5	7.8	

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 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-Sep-15	Rainy	Moderate	16:45	34.6	Surface	1.0	24.5 24.5	24.5	7.9 7.9	7.9	24.6 24.6	24.6	78.2 77.4	77.8	5.7 5.6	5.7	5.6	4.1 4.1	4.1	4.3	8.6 8.0	8.3	8.4
					Middle	17.3	23.9 23.8	23.9	7.9 7.9	7.9	27.4 27.4	27.4	76.1 76.9	76.5	5.5 5.6	5.5		3.8 3.8	3.8		9.4 8.3	8.9	
					Bottom	33.6	24.0 23.8	23.9	7.9 7.9	7.9	27.3 27.4	27.4	78.0 78.9	78.5	5.6 5.7	5.7	5.7	5.0 4.7	4.9		8.4 7.6	8.0	
4-Sep-15	Sunny	Moderate	17:17	36.2	Surface	1.0	25.4 25.4	25.4	7.8 7.8	7.8	21.3 21.4	21.3	80.8 81.5	81.2	5.9 5.9	5.9	5.9	2.0 2.0	2.0	2.1	5.1 4.7	4.9	5.7
					Middle	18.1	25.0 25.0	25.0	7.8 7.8	7.8	22.6 22.4	22.5	81.3 79.9	80.6	5.9 5.8	5.8		2.1 2.0	2.1		5.9 5.4	5.7	
					Bottom	35.2	25.0 25.2	25.1	7.8 7.8	7.8	22.9 23.0	22.9	79.7 80.3	80.0	5.8 5.8	5.8	5.8	2.1 2.1	2.1		7.1 6.0	6.6	
7-Sep-15	Cloudy	Moderate	07:45	35.4	Surface	1.0	26.4 26.4	26.4	7.8 7.8	7.8	15.6 15.7	15.6	86.7 86.7	86.7	6.4 6.4	6.4	5.9	1.8 2.0	1.9	1.4	5.2 4.0	4.6	4.7
					Middle	17.7	25.6 25.2	25.4	7.8 7.8	7.8	21.6 23.1	22.3	74.2 73.1	73.7	5.4 5.3	5.3		1.1 1.0	1.1		4.4 4.8	4.6	
					Bottom	34.4	24.9 24.9	24.9	7.7 7.8	7.8	25.2 24.9	25.0	75.3 74.3	74.8	5.4 5.3	5.4	5.4	1.1 1.0	1.1		4.8 5.0	4.9	
9-Sep-15	Sunny	Moderate	09:41	33.6	Surface	1.0	24.4 24.4	24.4	8.0 8.0	8.0	26.5 26.6	26.6	81.2 78.3	79.8	5.8 5.6	5.7	5.5	1.4 1.5	1.5	1.5	2.6 3.7	3.2	2.9
					Middle	16.8	22.5 22.6	22.5	8.0 8.0	8.0	33.6 33.0	33.3	74.6 73.1	73.9	5.3 5.2	5.3		1.5 1.5	1.5		3.2 2.1	2.7	
					Bottom	32.6	22.4 22.5	22.4	8.0 8.0	8.0	34.0 33.3	33.7	69.9 68.4	69.2	5.0 4.9	4.9	4.9	1.6 1.5	1.6		2.7 2.7	2.7	
11-Sep-15	Fine	Moderate	11:04	34.7	Surface	1.0	24.7 24.7	24.7	8.1 8.1	8.1	25.8 25.8	25.8	88.9 87.6	88.3	6.4 6.3	6.4	5.9	1.2 1.1	1.2	1.4	6.3 7.6	7.0	6.5
					Middle	17.4	23.6 23.7	23.6	8.0 7.9	8.0	29.4 28.9	29.1	73.5 73.5	73.5	5.3 5.3	5.3		1.3 1.2	1.3		6.3 8.1	7.2	
					Bottom	33.7	23.2 23.2	23.2	7.9 8.0	8.0	31.4 31.5	31.4	76.6 78.1	77.4	5.5 5.6	5.5	5.5	1.6 1.5	1.6		5.1 5.7	5.4	
14-Sep-15	Sunny	Moderate	14:41	34.2	Surface	1.0	24.7 24.8	24.8	8.0 8.0	8.0	20.2 20.8	20.5	81.8 81.5	81.7	6.0 6.0	6.0	6.0	2.0 2.1	2.1	2.4	4.6 4.2	4.4	3.7
					Middle	17.1	23.9 23.9	23.9	8.0 8.0	8.0	25.0 24.6	24.8	79.3 80.8	80.1	5.8 5.9	5.9		2.5 2.4	2.5		3.4 3.6	3.5	
					Bottom	33.2	24.0 23.9	24.0	8.0 8.0	8.0	24.6 25.4	25.0	78.9 77.6	78.3	5.8 5.7	5.7	5.7	2.6 2.5	2.6		2.7 3.5	3.1	
16-Sep-15	Fine	Moderate	15:31	35.4	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	16.9 16.9	16.9	83.7 83.6	83.7	6.3 6.3	6.3	6.2	2.4 2.5	2.5	2.4	3.6 3.5	3.6	3.2
					Middle	17.7	24.6 24.6	24.6	8.0 8.0	8.0	20.8 20.9	20.9	81.4 80.7	81.1	6.0 6.0	6.0		2.3 2.0	2.2		2.2 3.1	2.7	
					Bottom	34.4	24.5 24.6	24.6	8.0 8.0	8.0	20.7 21.0	20.8	81.1 82.5	81.8	6.0 6.1	6.1	6.1	2.3 2.4	2.4		2.7 3.7	3.2	
18-Sep-15	Fine	Moderate	16:15	34.0	Surface	1.0	25.8 26.1	26.0	7.9 7.9	7.9	16.4 16.2	16.3	86.9 88.3	87.6	6.4 6.5	6.5	6.5	2.3 2.4	2.4	2.5	4.0 5.1	4.6	4.7
					Middle	17.0	25.7 25.3	25.5	7.9 7.9	7.9	16.2 17.8	17.0	87.4 85.4	86.4	6.5 6.3	6.4		2.5 2.5	2.5		5.2 4.3	4.8	
					Bottom	33.0	25.2 25.8	25.5	7.8 7.8	7.8	20.1 18.4	19.3	83.8 84.2	84.0	6.2 6.2	6.2	6.2	2.6 2.6	2.6		4.8 4.5	4.7	
21-Sep-15	Rainy	Moderate	04:47	33.9	Surface	1.0	25.6 25.6	25.6	8.0 8.0	8.0	18.5 18.9	18.7	82.9 81.2	82.1	6.1 6.0	6.0	5.9	2.2 2.1	2.2	2.2	2.1 2.1	2.1	2.2
					Middle	17.0	25.6 25.6	25.6	7.9 7.9	7.9	28.5 26.9	27.7	82.3 80.1	81.2	5.7 5.6	5.7		2.2 2.2	2.2		1.8 1.9	1.9	
					Bottom	32.9	25.6 25.6	25.6	7.9 7.9	7.9	29.0 27.8	28.4	79.0 78.4	78.7	5.5 5.5	5.5	5.5	2.3 2.2	2.3		2.3 2.7	2.5	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CSA - Mid-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-Sep-15	Sunny	Moderate	07:17	34.1	Surface	1.0	25.6 25.7	25.7	8.0 8.0	8.0	21.6 23.2	22.4	80.5 82.1	81.3	5.7 5.9	5.8	5.6	2.6 2.7	2.7	2.8	3.3 3.6	3.5	3.3
					Middle	17.1	25.4 25.4	25.4	8.0 7.9	8.0	31.4 31.0	31.2	79.4 79.1	79.3	5.4 5.5	5.4		2.7 2.8	2.8		3.4 3.3	3.4	
					Bottom	33.1	25.3 25.4	25.4	7.9 7.9	7.9	33.5 33.2	33.4	77.5 78.6	78.1	5.3 5.4	5.4	5.4	2.8 2.8	2.8		2.5 3.7	3.1	
25-Sep-15	Sunny	Moderate	08:45	34.2	Surface	1.0	26.3 26.3	26.3	7.8 7.9	7.8	18.1 16.3	17.2	91.9 92.0	92.0	6.6 6.4	6.5	6.5	4.5 4.5	4.5	4.7	3.5 3.3	3.4	3.5
					Middle	17.1	26.1 26.1	26.1	7.8 7.8	7.8	21.1 21.4	21.3	90.1 90.2	90.2	6.3 6.6	6.4		4.6 4.7	4.7		3.6 3.6	3.6	
					Bottom	33.2	26.2 26.0	26.1	7.8 7.8	7.8	27.3 25.9	26.6	88.4 89.7	89.1	6.4 6.4	6.4	6.4	4.9 4.8	4.9		4.0 2.9	3.5	
28-Sep-15	Sunny	Moderate	14:00	34.3	Surface	1.0	26.3 26.4	26.4	8.0 8.0	8.0	22.4 22.6	22.5	76.9 77.9	77.4	5.5 5.5	5.5	5.4	5.4 5.4	5.4	5.4	5.0 4.2	4.6	4.4
					Middle	17.2	25.9 25.9	25.9	8.0 8.0	8.0	24.5 24.3	24.4	75.2 74.0	74.6	5.3 5.2	5.3		5.3 5.3	5.3		4.2 3.9	4.1	
					Bottom	33.3	26.0 25.9	26.0	8.0 8.0	8.0	24.5 24.3	24.4	76.6 74.7	75.7	5.4 5.3	5.4	5.4	5.6 5.5	5.6		4.4 4.3	4.4	
30-Sep-15	Fine	Moderate	16:01	34.1	Surface	1.0	26.7 26.6	26.6	7.9 7.9	7.9	17.6 18.0	17.8	83.0 82.5	82.8	6.0 6.0	6.0	6.0	6.5 6.5	6.5	6.7	6.2 7.1	6.7	6.4
					Middle	17.1	26.3 26.5	26.4	7.9 7.9	7.9	18.2 18.6	18.4	81.6 81.9	81.8	5.9 5.9	5.9		6.7 6.6	6.7		6.5 6.7	6.6	
					Bottom	33.1	26.4 26.4	26.4	7.9 7.9	7.9	19.2 19.5	19.3	80.7 80.3	80.5	5.9 5.9	5.9	5.9	6.8 6.8	6.8		6.4 5.6	6.0	
31-Dec-15	0	0	0	1.0	Surface	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0
					Middle	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		0.0 0.0	0.0	
					Bottom	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0	

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

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 (^{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-Sep-15	Rainy	Moderate	08:03	34.6	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	27.2 27.2	27.2	85.3 90.9	88.1	6.1 6.5	6.3	6.0	3.8 3.9	3.9	3.9	5.8 6.9	6.4	8.2
					Middle	17.3	24.5 24.5	24.5	7.8 7.9	7.8	27.4 27.3	27.3	77.9 80.1	79.0	5.6 5.7	5.6		4.0 3.8	3.9		8.7 9.7	9.2	
					Bottom	33.6	24.5 24.5	24.5	7.9 7.8	7.9	27.4 27.4	27.4	77.0 78.4	77.7	5.5 5.6	5.6	5.6	3.9 3.9	3.9		8.5 9.3	8.9	
4-Sep-15	Sunny	Moderate	10:22	36.2	Surface	1.0	25.1 25.1	25.1	7.8 7.8	7.8	25.1 25.2	25.2	85.7 80.9	83.3	6.1 5.8	6.0	6.0	1.5 1.5	1.5	1.6	5.0 4.2	4.6	4.3
					Middle	18.1	25.0 25.1	25.1	7.8 7.8	7.8	25.1 25.3	25.2	83.3 80.7	82.0	6.0 5.8	5.9		1.5 1.6	1.6		3.7 3.7	3.7	
					Bottom	35.2	25.1 25.1	25.1	7.8 7.8	7.8	25.4 25.0	25.2	80.5 81.9	81.2	5.8 5.9	5.8	5.8	1.6 1.5	1.6		4.6 4.6	4.6	
7-Sep-15	Sunny	Moderate	17:19	35.6	Surface	1.0	26.7 26.7	26.7	8.0 8.0	8.0	10.1 9.1	9.6	85.7 87.9	86.8	6.5 6.7	6.6	6.1	3.5 3.5	3.5	3.4	2.9 4.2	3.6	3.3
					Middle	17.8	23.8 23.9	23.8	7.8 7.8	7.8	21.9 20.4	21.1	73.8 75.8	74.8	5.6 5.7	5.6		3.4 3.3	3.4		3.1 2.5	2.8	
					Bottom	34.6	23.7 23.8	23.7	7.8 7.8	7.8	21.5 20.4	21.0	70.0 69.3	69.7	5.2 5.2	5.2	5.2	3.5 3.1	3.3		3.9 2.8	3.4	
9-Sep-15	Sunny	Moderate	18:41	34.6	Surface	1.0	24.7 24.1	24.4	7.9 8.0	7.9	18.4 16.9	17.6	92.3 91.1	91.7	6.9 6.8	6.9	6.4	2.3 2.3	2.3	2.2	6.4 5.9	6.2	3.9
					Middle	17.3	23.3 23.5	23.4	7.9 8.0	7.9	21.3 21.0	21.2	74.6 79.0	76.8	5.6 6.0	5.8		2.2 2.2	2.2		2.6 2.6	2.6	
					Bottom	33.6	22.9 23.2	23.1	7.8 7.9	7.9	25.4 27.1	26.3	73.9 67.5	70.7	5.6 5.1	5.4	5.4	2.2 2.1	2.2		3.1 2.7	2.9	
11-Sep-15	Fine	Moderate	19:48	35.1	Surface	1.0	25.1 25.2	25.2	8.1 8.2	8.2	14.0 14.1	14.1	106.8 110.0	108.4	8.1 8.4	8.3	7.9	3.6 3.5	3.6	3.7	3.3 4.5	3.9	4.6
					Middle	17.6	24.7 24.7	24.7	8.0 8.1	8.1	15.9 15.2	15.6	97.8 96.5	97.2	7.4 7.4	7.4		3.8 3.8	3.8		5.5 4.5	5.0	
					Bottom	34.1	24.7 24.8	24.7	8.1 8.1	8.1	17.0 15.3	16.1	104.5 103.6	104.1	7.9 7.9	7.9	7.9	3.6 3.6	3.6		4.9 4.6	4.8	
14-Sep-15	Sunny	Moderate	06:17	34.2	Surface	1.0	24.0 24.0	24.0	7.9 7.9	7.9	30.3 29.6	29.9	79.5 81.0	80.3	5.6 5.8	5.7	5.7	3.5 3.5	3.5	3.4	5.0 4.2	4.6	5.4
					Middle	17.1	24.0 24.0	24.0	8.0 7.9	8.0	30.8 30.9	30.8	81.9 79.4	80.7	5.8 5.6	5.7		3.2 3.3	3.3		6.2 6.5	6.4	
					Bottom	33.2	24.0 24.0	24.0	8.0 7.9	8.0	30.5 30.9	30.7	84.0 80.3	82.2	6.0 5.7	5.8	5.8	3.2 3.3	3.3		4.9 5.4	5.2	
16-Sep-15	Fine	Moderate	07:34	35.4	Surface	1.0	24.7 24.7	24.7	7.9 7.9	7.9	28.0 27.9	28.0	83.5 84.7	84.1	5.9 6.0	6.0	6.0	2.4 2.5	2.5	2.5	5.0 5.5	5.3	6.1
					Middle	17.7	24.7 24.7	24.7	7.9 7.9	7.9	28.1 28.0	28.0	83.9 84.8	84.4	5.9 6.0	6.0		2.6 2.5	2.6		7.3 7.7	7.5	
					Bottom	34.4	24.7 24.7	24.7	7.9 7.9	7.9	28.1 27.9	28.0	84.0 85.6	84.8	6.0 6.1	6.0	6.0	2.5 2.3	2.4		5.3 5.7	5.5	
18-Sep-15	Fine	Moderate	08:51	34.3	Surface	1.0	24.9 24.9	24.9	7.8 7.8	7.8	27.3 27.4	27.4	83.6 83.8	83.7	5.9 5.9	5.9	5.9	3.1 3.0	3.1	3.2	3.9 4.2	4.1	4.5
					Middle	17.2	24.9 24.9	24.9	7.8 7.8	7.8	27.5 27.6	27.6	82.0 83.4	82.7	5.8 5.9	5.9		3.2 3.3	3.3		3.8 5.1	4.5	
					Bottom	33.3	24.9 24.9	24.9	7.8 7.8	7.8	28.0 28.2	28.1	82.5 81.6	82.1	5.8 5.8	5.8	5.8	3.3 3.2	3.3		5.9 4.0	5.0	
21-Sep-15	Cloudy	Moderate	14:27	34.5	Surface	1.0	25.7 25.6	25.6	8.0 8.0	8.0	14.3 14.6	14.5	80.7 78.4	79.6	5.9 5.8	5.9	5.8	2.2 2.3	2.3	2.3	1.9 1.7	1.8	1.8
					Middle	17.3	25.4 25.4	25.4	7.9 8.0	7.9	21.3 23.0	22.2	78.7 76.7	77.7	5.7 5.5	5.6		2.2 2.3	2.3		1.6 1.8	1.7	
					Bottom	33.5	25.3 25.4	25.4	7.9 7.9	7.9	25.0 21.3	23.1	76.6 77.1	76.9	5.5 5.6	5.5	5.5	2.3 2.3	2.3		1.8 1.8	1.8	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at CSA - Mid-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-Sep-15	Sunny	Moderate	17:01	34.3	Surface	1.0	26.6 26.5	26.5	8.1 8.1	8.1	14.0 14.7	14.4	91.1 93.0	92.1	6.8 6.9	6.8	6.5	2.1 2.1	2.1	2.2	4.2 2.4	3.3	4.6
					Middle	17.2	25.5 25.5	25.5	8.0 8.0	8.0	22.9 23.4	23.1	89.0 83.7	86.4	6.3 6.0	6.2		2.2 2.3	2.3		5.2 4.8	5.0	
					Bottom	33.3	25.4 25.5	25.5	8.0 8.0	8.0	25.0 24.5	24.8	80.1 81.7	80.9	5.7 5.9	5.8	5.8	2.3 2.3	2.3		6.2 4.6	5.4	
25-Sep-15	Sunny	Moderate	18:59	34.2	Surface	1.0	26.8 26.7	26.8	7.9 7.9	7.9	15.1 16.4	15.7	101.7 100.1	100.9	7.5 7.3	7.4	7.3	3.3 3.4	3.4	3.6	1.4 1.0	1.2	2.0
					Middle	17.1	26.5 26.4	26.5	7.9 7.9	7.9	18.3 20.0	19.2	100.6 99.3	100.0	7.2 7.3	7.2		3.5 3.6	3.6		2.2 2.1	2.2	
					Bottom	33.2	26.1 26.5	26.3	7.8 7.9	7.8	25.9 21.6	23.7	97.8 99.6	98.7	7.1 7.2	7.1	7.1	3.8 3.7	3.8		2.7 2.5	2.6	
28-Sep-15	Sunny	Moderate	05:35	34.8	Surface	1.0	25.8 25.8	25.8	8.0 8.0	8.0	30.6 30.7	30.7	77.5 75.7	76.6	5.4 5.3	5.3	5.4	1.5 1.4	1.5	1.9	6.8 7.0	6.9	8.0
					Middle	17.4	25.8 25.8	25.8	8.0 8.0	8.0	30.7 30.9	30.8	79.7 75.5	77.6	5.6 5.3	5.4		2.0 1.8	1.9		8.7 8.8	8.8	
					Bottom	33.8	25.8 25.8	25.8	8.0 8.0	8.0	30.7 30.8	30.7	75.5 76.0	75.8	5.2 5.3	5.3	5.3	2.3 2.2	2.3		8.7 7.9	8.3	
30-Sep-15	Fine	Moderate	07:21	34.2	Surface	1.0	25.9 25.9	25.9	7.9 7.9	7.9	29.3 29.6	29.4	75.2 75.4	75.3	5.2 5.2	5.2	5.2	5.2 5.1	5.2	5.3	6.0 6.9	6.5	7.0
					Middle	17.1	25.9 25.9	25.9	7.9 7.9	7.9	29.6 29.8	29.7	74.8 74.9	74.9	5.2 5.2	5.2		5.3 5.3	5.3		6.8 7.6	7.2	
					Bottom	33.2	25.9 25.9	25.9	7.9 7.9	7.9	29.8 29.7	29.7	74.3 74.5	74.4	5.1 5.1	5.1	5.1	5.4 5.5	5.5		7.4 6.9	7.2	
31-Dec-15	0	0	0	1.0	Surface	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0
					Middle	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		0.0 0.0	0.0	
					Bottom	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0	

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

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	14:18	3.2	Surface	1.0	27.0 27.0	27.0	8.1 8.1	8.1	29.5 29.4	29.4	90.3 97.2	93.8	6.1 6.5	6.3	6.3	9.5 9.5	9.5	9.4	7.3 5.9	6.6	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.0 27.0	27.0	8.1 8.1	8.1	29.4 29.5	29.5	91.9 88.9	90.4	6.2 6.0	6.1	6.1	9.2 9.3	9.3		9.6 8.2	8.9	
4-Sep-15	Sunny	Moderate	15:48	3.3	Surface	1.0	27.7 27.7	27.7	8.0 8.0	8.0	29.8 29.8	29.8	85.5 86.2	85.9	6.0 6.1	6.1	6.1	10.6 9.6	10.1	10.2	6.5 6.4	6.5	7.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	27.7 27.5	27.6	8.0 8.0	8.0	29.9 30.1	30.0	86.2 84.1	85.2	6.1 6.0	6.0	6.0	10.5 10.1	10.3		7.9 9.5	8.7	
7-Sep-15	Cloudy	Moderate	09:32	3.2	Surface	1.0	29.6 29.5	29.5	8.0 8.0	8.0	19.1 18.6	18.9	81.1 80.3	80.7	5.6 5.5	5.5	5.5	3.4 3.5	3.5	3.6	2.0 2.2	2.1	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	29.6 29.6	29.6	8.0 7.9	8.0	22.9 23.3	23.1	83.0 80.3	81.7	5.6 5.5	5.5	5.5	3.6 3.6	3.6		2.7 2.4	2.6	
9-Sep-15	Sunny	Moderate	11:52	3.3	Surface	1.0	28.1 28.0	28.1	8.0 7.9	8.0	23.6 23.7	23.7	85.0 87.8	86.4	6.1 6.3	6.2	6.2	6.6 7.0	6.8	7.8	4.2 4.8	4.5	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	26.7 26.8	26.8	8.0 7.9	7.9	29.7 29.3	29.5	84.5 87.3	85.9	6.1 6.2	6.1	6.1	8.5 8.9	8.7		4.6 3.9	4.3	
11-Sep-15	Fine	Moderate	12:59	3.1	Surface	1.0	27.7 27.7	27.7	8.3 8.3	8.3	28.0 28.1	28.1	100.4 104.5	102.5	6.8 7.0	6.9	6.9	9.8 9.7	9.8	9.8	14.2 16.0	15.1	14.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	27.7 27.7	27.7	8.3 8.3	8.3	28.2 28.3	28.3	102.0 106.1	104.1	6.9 7.1	7.0	7.0	9.6 9.8	9.7		12.1 13.5	12.8	
14-Sep-15	Sunny	Moderate	12:54	3.3	Surface	1.0	27.5 27.5	27.5	7.9 7.9	7.9	27.9 28.1	28.0	93.7 92.3	93.0	6.3 6.2	6.2	6.2	6.2 6.1	6.2	6.3	6.2 5.6	5.9	5.3
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.3	27.6 27.3	27.4	7.9 7.9	7.9	28.0 29.1	28.6	90.2 91.3	90.8	6.0 6.1	6.1	6.1	6.4 6.4	6.4		5.1 4.1	4.6	
16-Sep-15	Fine	Moderate	13:39	3.2	Surface	1.0	27.8 27.8	27.8	8.2 8.2	8.2	32.1 32.1	32.1	89.5 88.4	89.0	5.9 5.8	5.8	5.8	8.5 8.5	8.5	8.6	10.3 9.6	10.0	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.8 27.8	27.8	8.2 8.2	8.2	32.2 32.2	32.2	91.5 88.9	90.2	6.0 5.8	5.9	5.9	8.8 8.6	8.7		8.8 7.9	8.4	
18-Sep-15	Fine	Moderate	14:38	3.2	Surface	1.0	28.5 28.4	28.4	8.2 8.2	8.2	31.5 31.3	31.4	92.1 90.8	91.5	6.0 5.9	6.0	6.0	7.5 7.2	7.4	7.5	4.3 3.3	3.8	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	28.0 28.1	28.1	8.2 8.2	8.2	32.5 32.2	32.4	91.5 91.0	91.3	6.0 5.9	6.0	6.0	7.5 7.4	7.5		4.0 4.3	4.2	
21-Sep-15	Rainy	Moderate	06:27	3.1	Surface	1.0	28.2 28.4	28.3	8.2 8.2	8.2	22.9 22.4	22.6	99.6 98.5	99.1	6.8 6.6	6.7	6.7	6.2 6.0	6.1	6.6	3.0 2.3	2.7	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	28.7 28.5	28.6	8.1 8.2	8.1	26.7 25.1	25.9	89.7 87.1	88.4	6.0 5.9	5.9	5.9	6.8 7.1	7.0		2.5 2.6	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)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-Sep-15	Sunny	Moderate	09:57	3.1	Surface	1.0	28.7 28.7	28.7	8.2 8.2	8.2	24.5 23.7	24.1	88.2 87.7	88.0	6.0 6.0	6.0	6.0	5.6 5.8	5.7	6.5	3.2 2.7	3.0	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	28.6 28.6	28.6	8.2 8.2	8.2	29.0 28.1	28.6	89.9 87.9	88.9	5.9 5.8	5.9	5.9	7.4 7.0	7.2		2.6 2.9	2.8	
25-Sep-15	Sunny	Moderate	11:30	3.2	Surface	1.0	29.7 29.7	29.7	8.3 8.3	8.3	23.5 23.9	23.7	95.5 95.7	95.6	6.4 6.4	6.4	6.4	10.5 10.5	10.5	10.4	3.1 4.0	3.6	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	29.5 29.4	29.4	8.3 8.3	8.3	25.5 24.3	24.9	94.5 91.3	92.9	6.3 6.1	6.2	6.2	10.3 10.2	10.3		4.1 4.5	4.3	
28-Sep-15	Sunny	Moderate	11:44	3.3	Surface	1.0	29.3 29.3	29.3	8.2 8.2	8.2	28.7 28.8	28.8	78.5 78.5	78.5	5.1 5.1	5.1	5.1	8.9 8.5	8.7	8.7	7.0 6.7	6.9	8.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	29.3 29.2	29.3	8.2 8.2	8.2	28.7 29.1	28.9	78.7 80.2	79.5	5.1 5.2	5.2	5.2	8.5 8.8	8.7		11.0 10.7	10.9	
30-Sep-15	Fine	Moderate	13:18	3.2	Surface	1.0	29.2 29.2	29.2	8.2 8.2	8.2	32.8 32.8	32.8	84.9 84.4	84.7	5.5 5.5	5.5	5.5	15.3 15.1	15.2	15.4	6.4 7.3	6.9	8.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	29.1 29.1	29.1	8.2 8.2	8.2	32.9 32.8	32.9	87.4 84.4	85.9	5.7 5.5	5.6	5.6	15.5 15.4	15.5		9.1 9.7	9.4	

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

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

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	09:49	3.1	Surface	1.0	26.9 26.9	26.9	8.0 8.0	8.0	29.9 29.8	29.9	83.9 90.5	87.2	5.6 6.1	5.9	5.9	18.4 17.6	18.0	18.1	19.7 18.6	19.2	19.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	26.9 26.9	26.9	8.1 8.0	8.1	29.8 29.9	29.8	85.2 83.4	84.3	5.7 5.6	5.7	5.7	17.8 18.3	18.1		20.8 20.4	20.6	
4-Sep-15	Sunny	Moderate	11:55	3.2	Surface	1.0	27.8 27.8	27.8	8.0 8.0	8.0	27.9 27.9	27.9	86.2 87.2	86.7	6.1 6.2	6.2	6.2	8.8 8.2	8.5	9.3	5.5 4.9	5.2	5.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.8 27.5	27.6	8.0 8.0	8.0	28.0 28.2	28.1	86.6 84.6	85.6	6.2 6.0	6.1	6.1	9.7 10.2	10.0		6.4 5.9	6.2	
7-Sep-15	Sunny	Moderate	15:08	3.0	Surface	1.0	29.5 29.5	29.5	8.1 8.1	8.1	18.3 18.5	18.4	90.3 94.0	92.2	6.2 6.3	6.3	6.3	2.6 2.8	2.7	2.8	4.0 4.7	4.4	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	29.7 29.5	29.6	8.0 8.0	8.0	21.7 21.6	21.7	89.8 92.0	90.9	6.2 6.2	6.2	6.2	2.8 2.7	2.8		4.2 4.0	4.1	
9-Sep-15	Sunny	Moderate	16:35	3.1	Surface	1.0	28.7 28.7	28.7	8.0 8.0	8.0	25.0 25.0	25.0	117.8 120.8	119.3	7.9 8.1	8.0	8.0	4.8 5.0	4.9	5.7	6.1 6.6	6.4	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	28.6 28.7	28.7	8.0 7.9	7.9	25.1 25.1	25.1	112.8 119.6	116.2	7.6 8.1	7.8	7.8	6.6 6.2	6.4		4.5 3.1	3.8	
11-Sep-15	Fine	Moderate	17:29	3.0	Surface	1.0	28.4 28.4	28.4	8.5 8.5	8.5	29.0 29.1	29.1	109.8 110.9	110.4	7.3 7.3	7.3	7.3	7.2 7.2	7.2	7.2	6.9 7.8	7.4	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	28.4 28.3	28.3	8.5 8.5	8.5	29.1 29.1	29.1	106.4 109.2	107.8	7.0 7.2	7.1	7.1	7.2 7.1	7.2		9.2 9.2	9.2	
14-Sep-15	Sunny	Moderate	07:43	3.3	Surface	1.0	27.1 27.1	27.1	7.8 7.8	7.8	28.3 28.3	28.3	94.7 95.6	95.2	6.3 6.4	6.4	6.4	5.0 5.0	5.0	5.2	4.1 4.2	4.2	4.0
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.3	27.1 27.1	27.1	7.8 7.8	7.8	28.5 28.2	28.4	91.6 93.1	92.4	6.1 6.2	6.2	6.2	5.2 5.3	5.3		3.5 3.9	3.7	
16-Sep-15	Fine	Moderate	09:05	3.3	Surface	1.0	27.7 27.7	27.7	8.2 8.2	8.2	31.5 31.5	31.5	87.3 87.7	87.5	5.8 5.8	5.8	5.8	7.1 7.3	7.2	7.3	6.7 6.8	6.8	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	27.7 27.7	27.7	8.2 8.2	8.2	31.5 31.5	31.5	88.1 87.6	87.9	5.8 5.8	5.8	5.8	7.3 7.2	7.3		6.3 6.6	6.5	
18-Sep-15	Fine	Moderate	10:31	3.2	Surface	1.0	27.8 27.8	27.8	8.2 8.2	8.2	30.5 30.6	30.6	88.3 90.0	89.2	5.9 6.0	5.9	5.9	7.8 7.5	7.7	7.6	6.3 6.2	6.3	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.7 27.8	27.8	8.2 8.2	8.2	30.7 30.9	30.8	89.3 94.4	91.9	5.9 6.2	6.1	6.1	7.2 7.5	7.4		6.7 5.5	6.1	
21-Sep-15	Cloudy	Moderate	12:26	3.2	Surface	1.0	28.4 28.4	28.4	8.2 8.2	8.2	21.7 21.7	21.7	98.9 99.8	99.4	6.8 6.9	6.9	6.9	2.5 2.6	2.6	2.7	2.4 2.1	2.3	2.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	28.4 28.4	28.4	8.2 8.2	8.2	22.0 21.9	22.0	100.8 99.5	100.2	6.9 6.9	6.9	6.9	2.8 2.6	2.7		2.7 2.7	2.7	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)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-Sep-15	Sunny	Moderate	15:02	3.2	Surface	1.0	30.1 29.9	30.0	8.4 8.4	8.4	23.8 24.2	24.0	110.3 115.5	112.9	7.3 7.7	7.5	7.5	8.1 8.1	8.1	8.8	4.2 3.4	3.8	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	29.2 29.7	29.4	8.3 8.3	8.3	27.4 26.7	27.0	103.7 110.9	107.3	6.8 7.3	7.1	7.1	9.7 9.0	9.4		5.0 4.1	4.6	
25-Sep-15	Sunny	Moderate	16:35	3.1	Surface	1.0	30.8 30.7	30.7	8.4 8.4	8.4	22.8 22.8	22.8	128.9 123.9	126.4	8.5 8.2	8.3	8.3	6.3 6.6	6.5	6.5	3.3 3.8	3.6	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	30.0 30.1	30.1	8.3 8.3	8.3	24.6 24.5	24.6	119.5 118.0	118.8	7.9 7.8	7.8	7.8	6.5 6.4	6.5		4.4 3.9	4.2	
28-Sep-15	Sunny	Moderate	07:14	3.1	Surface	1.0	29.1 29.1	29.1	8.2 8.2	8.2	28.4 28.4	28.4	89.2 89.5	89.4	6.2 6.2	6.2	6.2	5.7 5.6	5.7	5.8	4.4 3.9	4.2	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	29.1 29.1	29.1	8.2 8.2	8.2	28.7 28.6	28.7	91.0 89.0	90.0	6.3 6.2	6.2	6.2	6.0 5.8	5.9		3.1 5.0	4.1	
30-Sep-15	Fine	Moderate	08:28	3.2	Surface	1.0	28.9 28.9	28.9	8.2 8.2	8.2	30.4 30.3	30.4	86.2 93.2	89.7	5.7 6.2	6.0	6.0	8.7 8.4	8.6	8.7	8.0 8.8	8.4	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	28.9 28.9	28.9	8.2 8.2	8.2	30.4 30.4	30.4	86.7 85.7	86.2	5.8 5.7	5.7	5.7	8.8 8.8	8.8		8.2 8.2	8.2	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	14:33	3.6	Surface	1.0	27.0 27.0	27.0	8.1 8.1	8.1	29.2 29.2	29.2	80.8 75.1	78.0	5.5 5.1	5.3	5.3	10.5 10.8	10.7	10.5	8.6 8.6	8.6	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	26.9 26.9	26.9	8.1 8.1	8.1	29.3 29.4	29.3	74.8 76.6	75.7	5.1 5.2	5.1	5.1	10.2 10.3	10.3		10.7 11.2	11.0	
4-Sep-15	Sunny	Moderate	16:05	3.5	Surface	1.0	28.1 27.9	28.0	8.0 8.0	8.0	27.5 27.8	27.6	87.6 86.3	87.0	6.2 6.1	6.2	6.2	7.4 7.4	7.4	7.6	6.6 5.9	6.3	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	27.9 27.9	27.9	8.0 8.0	8.0	28.6 28.6	28.6	86.8 88.4	87.6	6.1 6.2	6.2	6.2	7.6 7.8	7.7		5.5 6.6	6.1	
7-Sep-15	Cloudy	Moderate	09:15	3.7	Surface	1.0	29.3 29.3	29.3	8.1 8.1	8.1	18.4 18.6	18.5	91.2 92.6	91.9	6.3 6.4	6.3	6.3	3.0 3.2	3.1	3.2	4.6 5.8	5.2	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	29.5 29.5	29.5	8.0 8.0	8.0	20.6 21.1	20.9	95.7 91.9	93.8	6.5 6.2	6.4	6.4	3.2 3.1	3.2		2.6 3.2	2.9	
9-Sep-15	Sunny	Moderate	11:37	3.4	Surface	1.0	27.8 28.0	27.9	7.9 8.0	8.0	23.9 23.8	23.8	97.4 98.8	98.1	6.9 7.1	7.0	7.0	4.5 4.5	4.5	4.8	3.3 3.3	3.3	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	27.7 27.4	27.5	8.0 7.9	7.9	27.0 27.0	27.0	89.6 87.4	88.5	6.5 6.3	6.4	6.4	5.1 4.8	5.0		3.6 4.1	3.9	
11-Sep-15	Fine	Moderate	12:45	3.7	Surface	1.0	27.6 27.6	27.6	8.3 8.3	8.3	28.6 28.6	28.6	107.4 103.4	105.4	7.2 7.0	7.1	7.1	4.8 4.8	4.8	4.8	5.9 5.8	5.9	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.5 27.4	27.4	8.3 8.3	8.3	28.8 28.9	28.9	107.2 101.2	104.2	7.2 6.8	7.0	7.0	4.8 4.8	4.8		5.9 7.6	6.8	
14-Sep-15	Sunny	Moderate	13:06	3.4	Surface	1.0	27.5 27.5	27.5	7.9 7.9	7.9	28.2 28.2	28.2	92.8 93.2	93.0	6.2 6.2	6.2	6.2	4.4 4.9	4.7	4.8	3.3 2.5	2.9	2.9
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.4	27.6 27.6	27.6	7.9 7.9	7.9	28.1 28.2	28.2	90.1 89.3	89.7	6.0 6.0	6.0	6.0	4.8 4.7	4.8		3.0 2.7	2.9	
16-Sep-15	Fine	Moderate	13:51	3.8	Surface	1.0	27.8 27.8	27.8	8.2 8.2	8.2	32.1 32.0	32.1	90.2 91.6	90.9	5.9 6.0	6.0	6.0	7.7 7.8	7.8	7.8	4.2 4.2	4.2	4.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	27.8 27.8	27.8	8.2 8.2	8.2	32.1 32.1	32.1	90.9 95.2	93.1	6.0 6.3	6.1	6.1	7.7 7.8	7.8		4.3 4.4	4.4	
18-Sep-15	Fine	Moderate	14:49	3.7	Surface	1.0	28.3 28.3	28.3	8.2 8.2	8.2	30.8 30.8	30.8	94.2 92.4	93.3	6.2 6.1	6.1	6.1	5.5 5.5	5.5	5.5	4.5 5.2	4.9	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	28.1 28.0	28.1	8.2 8.2	8.2	31.2 31.5	31.3	92.7 96.8	94.8	6.1 6.4	6.2	6.2	5.6 5.4	5.5		6.4 5.1	5.8	
21-Sep-15	Rainy	Moderate	06:10	3.4	Surface	1.0	28.4 28.5	28.4	8.2 8.2	8.2	22.4 22.4	22.4	93.6 92.5	93.1	6.4 6.3	6.4	6.4	2.7 2.8	2.8	3.0	2.6 2.1	2.4	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.5 28.6	28.6	8.1 8.1	8.1	24.7 24.3	24.5	93.4 94.5	94.0	6.3 6.4	6.4	6.4	3.0 3.2	3.1		2.7 3.4	3.1	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)9 - Mid-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-Sep-15	Sunny	Moderate	09:41	3.4	Surface	1.0	28.6 28.6	28.6	8.2 8.2	8.2	26.5 26.6	26.6	80.3 81.4	80.9	5.4 5.4	5.4	5.4	4.7 4.7	4.7	5.1	4.2 5.3	4.8	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.4 28.4	28.4	8.1 8.1	8.1	28.9 29.3	29.1	82.7 78.4	80.6	5.5 5.2	5.3	5.3	5.2 5.7	5.5		5.4 5.8	5.6	
25-Sep-15	Sunny	Moderate	11:13	3.6	Surface	1.0	29.6 29.7	29.6	8.3 8.3	8.3	22.7 22.7	22.7	92.5 95.9	94.2	6.2 6.4	6.3	6.3	7.2 6.9	7.1	7.2	3.7 3.4	3.6	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	29.5 29.4	29.5	8.3 8.3	8.3	25.2 24.8	25.0	95.8 91.5	93.7	6.4 6.1	6.2	6.2	7.2 7.2	7.2		4.0 3.1	3.6	
28-Sep-15	Sunny	Moderate	11:57	3.7	Surface	1.0	29.2 29.2	29.2	8.2 8.2	8.2	28.6 28.6	28.6	85.0 84.7	84.9	5.6 5.6	5.6	5.6	4.4 4.3	4.4	4.4	2.2 2.6	2.4	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	29.2 29.1	29.2	8.2 8.2	8.2	28.6 28.7	28.7	84.9 85.8	85.4	5.6 5.6	5.6	5.6	4.3 4.4	4.4		4.4 3.3	3.9	
30-Sep-15	Fine	Moderate	13:31	3.7	Surface	1.0	29.4 29.5	29.5	8.2 8.2	8.2	31.4 31.4	31.4	91.7 96.1	93.9	6.0 6.3	6.1	6.1	6.6 6.8	6.7	6.8	6.0 6.8	6.4	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	29.4 29.5	29.4	8.2 8.2	8.2	31.5 31.3	31.4	91.0 92.5	91.8	6.0 6.1	6.0	6.0	6.8 6.8	6.8		6.9 6.0	6.5	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)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-Sep-15	Rainy	Moderate	09:36	3.6	Surface	1.0	26.8 26.8	26.8	8.0 8.0	8.0	29.4 29.3	29.3	80.5 80.7	80.6	5.4 5.4	5.4	5.4	13.1 13.6	13.4	13.4	11.6 11.9	11.8	14.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	26.8 26.8	26.8	8.0 8.0	8.0	29.5 29.8	29.7	80.4 81.2	80.8	5.4 5.5	5.4	5.4	13.5 13.2	13.4		17.5 16.1	16.8	
4-Sep-15	Sunny	Moderate	11:40	3.4	Surface	1.0	27.2 27.2	27.2	8.0 8.0	8.0	27.2 27.8	27.5	81.5 82.7	82.1	5.9 6.0	5.9	5.9	11.0 10.4	10.7	10.8	13.0 12.2	12.6	12.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	27.2 27.1	27.2	8.0 8.0	8.0	28.1 28.2	28.1	81.7 83.4	82.6	5.9 6.0	5.9	5.9	11.1 10.4	10.8		12.1 14.0	13.1	
7-Sep-15	Sunny	Moderate	15:22	3.6	Surface	1.0	29.2 29.2	29.2	8.1 8.0	8.1	18.4 18.6	18.5	86.7 86.1	86.4	6.0 6.0	6.0	6.0	8.8 8.9	8.9	8.9	8.3 8.2	8.3	8.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	29.4 29.2	29.3	8.0 8.0	8.0	20.1 21.6	20.8	89.9 87.4	88.7	6.2 5.9	6.0	6.0	8.9 8.9	8.9		9.1 8.0	8.6	
9-Sep-15	Sunny	Moderate	16:51	3.4	Surface	1.0	28.3 28.4	28.3	8.0 8.0	8.0	25.1 25.1	25.1	110.6 106.8	108.7	7.5 7.2	7.4	7.4	5.5 5.4	5.5	6.4	6.3 6.8	6.6	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.3 27.7	28.0	8.0 8.0	8.0	25.8 26.8	26.3	109.6 102.4	106.0	7.4 6.9	7.2	7.2	7.0 7.5	7.3		10.0 9.2	9.6	
11-Sep-15	Fine	Moderate	17:44	3.7	Surface	1.0	27.6 27.5	27.6	8.3 8.3	8.3	29.7 29.7	29.7	100.5 95.5	98.0	6.7 6.4	6.6	6.6	7.6 7.7	7.7	7.8	8.0 7.2	7.6	10.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.6 27.3	27.4	8.3 8.3	8.3	29.9 30.7	30.3	98.6 94.9	96.8	6.6 6.3	6.5	6.5	7.8 7.8	7.8		14.4 12.5	13.5	
14-Sep-15	Sunny	Moderate	07:32	3.6	Surface	1.0	27.0 26.9	26.9	7.8 7.8	7.8	29.0 29.0	29.0	90.2 91.0	90.6	6.0 6.1	6.1	6.1	5.1 5.1	5.1	5.2	4.5 5.1	4.8	4.5
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.6	27.0 26.9	27.0	7.8 7.8	7.8	28.9 29.1	29.0	88.9 86.9	87.9	6.0 5.8	5.9	5.9	5.2 5.2	5.2		4.4 3.9	4.2	
16-Sep-15	Fine	Moderate	08:53	3.6	Surface	1.0	27.4 27.3	27.4	8.1 8.1	8.1	31.6 31.6	31.6	85.1 84.2	84.7	5.7 5.6	5.6	5.6	5.3 5.3	5.3	5.4	3.9 3.9	3.9	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	27.3 27.3	27.3	8.1 8.1	8.1	31.7 31.7	31.7	86.3 84.3	85.3	5.7 5.6	5.7	5.7	5.3 5.4	5.4		6.3 5.9	6.1	
18-Sep-15	Fine	Moderate	10:17	3.7	Surface	1.0	27.7 27.7	27.7	8.1 8.1	8.1	30.2 30.1	30.1	83.8 83.4	83.6	5.6 5.6	5.6	5.6	7.5 7.4	7.5	7.6	2.8 2.2	2.5	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.6 27.6	27.6	8.1 8.1	8.1	31.0 30.8	30.9	84.5 83.5	84.0	5.6 5.5	5.6	5.6	7.5 7.6	7.6		3.0 3.4	3.2	
21-Sep-15	Cloudy	Moderate	12:44	3.4	Surface	1.0	28.6 28.6	28.6	8.2 8.2	8.2	22.7 22.8	22.8	90.8 90.9	90.9	6.2 6.2	6.2	6.2	8.2 7.9	8.1	7.7	9.3 8.8	9.1	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.6 28.6	28.6	8.2 8.2	8.2	23.0 22.9	22.9	90.9 91.0	91.0	6.2 6.2	6.2	6.2	6.9 7.7	7.3		9.0 9.4	9.2	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)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-Sep-15	Sunny	Moderate	15:18	3.3	Surface	1.0	29.4 29.5	29.4	8.3 8.3	8.3	24.3 24.3	24.3	106.0 107.6	106.8	7.1 7.2	7.1	7.1	3.9 3.9	3.9	4.1	4.1 4.7	4.4	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	29.0 29.2	29.1	8.3 8.3	8.3	25.6 25.4	25.5	103.6 106.4	105.0	6.9 7.1	7.0	7.0	4.4 4.0	4.2		5.5 6.1	5.8	
25-Sep-15	Sunny	Moderate	16:48	3.5	Surface	1.0	29.9 30.0	29.9	8.3 8.3	8.3	23.1 23.1	23.1	111.6 112.6	112.1	7.4 7.5	7.5	7.5	11.5 11.4	11.5	11.4	4.7 5.1	4.9	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	29.9 29.9	29.9	8.3 8.3	8.3	23.9 23.3	23.6	112.6 112.4	112.5	7.5 7.5	7.5	7.5	11.2 11.3	11.3		5.4 5.5	5.5	
28-Sep-15	Sunny	Moderate	07:00	3.7	Surface	1.0	29.0 28.9	29.0	8.2 8.2	8.2	28.5 28.5	28.5	82.0 82.3	82.2	5.4 5.4	5.4	5.4	3.9 3.9	3.9	3.9	2.0 2.1	2.1	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	28.9 28.9	28.9	8.2 8.2	8.2	28.5 28.5	28.5	83.4 82.0	82.7	5.5 5.4	5.4	5.4	3.9 3.9	3.9		2.6 3.4	3.0	
30-Sep-15	Fine	Moderate	08:15	3.7	Surface	1.0	28.8 28.8	28.8	8.2 8.2	8.2	29.8 29.8	29.8	90.4 85.5	88.0	6.0 5.7	5.9	5.9	6.7 6.4	6.6	6.6	7.5 7.8	7.7	7.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	28.8 28.8	28.8	8.2 8.2	8.2	30.3 30.0	30.1	86.2 84.9	85.6	5.7 5.7	5.7	5.7	6.5 6.6	6.6		7.0 6.6	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 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-Sep-15	Rainy	Moderate	15:33	10.5	Surface	1.0	24.4 24.4	24.4	7.9 7.8	7.9	25.6 25.6	25.6	75.6 75.4	75.5	5.5 5.4	5.4	5.4	13.2 13.7	13.5	14.5	17.2 17.8	17.5	18.2
					Middle	5.3	24.4 24.4	24.4	7.8 7.8	7.8	25.7 25.7	25.7	75.1 74.6	74.9	5.4 5.4	5.4		14.9 15.2	15.1		18.1 18.6	18.4	
					Bottom	9.5	24.4 24.3	24.4	7.8 7.8	7.8	25.7 25.8	25.8	76.3 75.7	76.0	5.5 5.5	5.5	5.5	14.4 15.5	15.0		18.7 18.8	18.8	
4-Sep-15	Sunny	Moderate	16:22	11.2	Surface	1.0	25.2 25.6	25.4	7.7 7.7	7.7	17.5 17.3	17.4	72.8 73.4	73.1	5.4 5.4	5.4	5.4	3.5 3.6	3.6	3.7	5.5 5.9	5.7	5.8
					Middle	5.6	24.9 24.7	24.8	7.7 7.7	7.7	19.9 20.9	20.4	72.6 72.3	72.5	5.3 5.3	5.3		3.8 3.6	3.7		5.7 5.1	5.4	
					Bottom	10.2	25.2 25.1	25.2	7.7 7.7	7.7	21.6 22.1	21.9	72.4 72.1	72.3	5.3 5.3	5.3	5.3	3.8 3.9	3.9		5.9 6.7	6.3	
7-Sep-15	Cloudy	Moderate	08:58	10.8	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	13.7 14.0	13.8	87.3 85.0	86.2	6.5 6.3	6.4	6.3	3.9 3.6	3.8	3.8	3.9 2.4	3.2	4.3
					Middle	5.4	26.2 26.2	26.2	7.8 7.8	7.8	16.9 16.6	16.8	82.0 83.3	82.7	6.0 6.1	6.1		3.8 3.6	3.7		4.1 4.2	4.2	
					Bottom	9.8	26.2 26.1	26.1	7.8 7.8	7.8	17.8 18.9	18.3	85.2 83.4	84.3	6.2 6.1	6.2	6.2	3.8 4.0	3.9		5.7 5.1	5.4	
9-Sep-15	Sunny	Moderate	10:53	11.1	Surface	1.0	25.0 25.0	25.0	8.0 8.0	8.0	19.8 18.0	18.9	75.6 73.7	74.7	5.6 5.5	5.5	5.4	3.2 3.1	3.2	3.1	2.4 3.0	2.7	3.2
					Middle	5.6	23.6 23.6	23.6	8.0 8.0	8.0	26.8 23.9	25.3	73.7 73.1	73.4	5.3 5.2	5.2		3.1 3.0	3.1		3.6 4.3	4.0	
					Bottom	10.1	23.3 23.3	23.3	8.0 8.0	8.0	30.5 27.8	29.2	72.3 68.9	70.6	5.2 5.0	5.1	5.1	3.0 3.1	3.1		2.2 3.4	2.8	
11-Sep-15	Fine	Moderate	12:17	10.3	Surface	1.0	25.4 25.2	25.3	8.0 8.0	8.0	20.4 20.4	20.4	93.9 92.9	93.4	6.9 6.8	6.8	6.8	2.4 2.6	2.5	3.1	4.8 4.8	4.8	5.0
					Middle	5.2	25.0 24.9	25.0	8.0 8.0	8.0	22.1 22.6	22.4	90.7 91.8	91.3	6.6 6.7	6.7		3.0 3.1	3.1		4.8 4.4	4.6	
					Bottom	9.3	25.0 24.9	24.9	8.0 8.0	8.0	22.6 23.0	22.8	94.4 94.1	94.3	6.9 6.8	6.9	6.9	3.7 3.6	3.7		6.4 5.0	5.7	
14-Sep-15	Sunny	Moderate	13:27	10.6	Surface	1.0	24.9 25.0	25.0	8.0 8.0	8.0	23.0 21.7	22.3	82.5 79.6	81.1	6.0 5.8	5.9	5.9	4.5 4.6	4.6	4.5	4.3 3.5	3.9	3.7
					Middle	5.3	24.3 24.4	24.4	8.0 8.0	8.0	25.0 23.7	24.4	80.7 78.8	79.8	5.9 5.7	5.8		4.4 4.4	4.4		4.1 4.1	4.1	
					Bottom	9.6	24.4 24.4	24.4	8.0 8.0	8.0	24.3 25.5	24.9	76.7 79.3	78.0	5.6 5.8	5.7	5.7	4.4 4.5	4.5		3.2 2.8	3.0	
16-Sep-15	Fine	Moderate	14:22	10.7	Surface	1.0	25.1 25.2	25.1	8.0 8.0	8.0	17.0 16.6	16.8	82.9 84.6	83.8	6.2 6.3	6.3	6.2	5.9 5.4	5.7	6.4	6.6 5.6	6.1	5.9
					Middle	5.4	24.7 24.7	24.7	8.0 8.0	8.0	19.0 19.0	19.0	81.4 80.7	81.1	6.1 6.0	6.0		6.1 6.2	6.2		5.9 4.9	5.4	
					Bottom	9.7	24.8 24.8	24.8	8.0 8.0	8.0	19.0 19.1	19.1	82.5 82.7	82.6	6.1 6.2	6.1	6.1	7.4 7.1	7.3		5.8 6.3	6.1	
18-Sep-15	Fine	Moderate	15:15	10.2	Surface	1.0	26.4 26.4	26.4	7.8 7.8	7.8	14.4 13.3	13.8	83.9 83.4	83.7	6.2 6.2	6.2	6.2	4.8 4.9	4.9	5.1	4.2 5.4	4.8	4.5
					Middle	5.1	25.6 25.3	25.4	7.7 7.8	7.8	15.1 16.3	15.7	82.9 82.9	82.9	6.2 6.2	6.2		5.0 5.1	5.1		4.4 4.4	4.4	
					Bottom	9.2	25.7 25.1	25.4	7.7 7.7	7.7	18.5 21.8	20.2	82.1 81.2	81.7	6.0 6.1	6.0	6.0	5.2 5.3	5.3		4.6 3.7	4.2	
21-Sep-15	Rainy	Moderate	05:35	10.9	Surface	1.0	25.9 25.9	25.9	7.9 7.9	7.9	15.0 15.0	15.0	85.1 85.3	85.2	6.4 6.4	6.4	6.2	2.5 2.6	2.6	3.0	2.9 2.9	2.9	3.0
					Middle	5.5	25.9 25.8	25.9	7.9 7.9	7.9	18.5 20.3	19.4	84.0 80.5	82.3	6.2 5.8	6.0		2.8 2.9	2.9		3.1 2.4	2.8	
					Bottom	9.9	25.3 25.8	25.6	7.8 7.8	7.8	29.1 28.4	28.7	82.8 86.1	84.5	5.8 6.0	5.9	5.9	3.6 3.5	3.6		4.1 2.3	3.2	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	08:19	10.6	Surface	1.0	25.9 25.9	25.9	8.0 8.0	8.0	19.5 19.5	19.5	82.7 82.6	82.7	5.9 5.9	5.9	5.8	3.2 3.4	3.3	3.3	3.1 2.6	2.9	2.9
					Middle	5.3	25.6 25.6	25.6	7.9 7.9	7.9	25.5 26.7	26.1	81.3 81.5	81.4	5.8 5.7	5.7		3.3 3.2	3.3		2.6 2.8	2.7	
					Bottom	9.6	25.3 25.5	25.4	7.9 7.9	7.9	29.4 29.0	29.2	76.5 78.2	77.4	5.4 5.5	5.5	5.5	3.2 3.3	3.3		3.1 3.0	3.1	
25-Sep-15	Sunny	Moderate	11:10	10.1	Surface	1.0	26.4 26.3	26.3	7.9 7.9	7.9	17.2 16.9	17.0	80.6 90.1	85.4	5.9 6.3	6.1	6.1	7.2 7.3	7.3	7.5	3.5 2.5	3.0	3.2
					Middle	5.1	26.0 26.0	26.0	7.8 7.8	7.8	24.5 23.6	24.0	87.5 86.8	87.2	6.1 6.0	6.1		7.5 7.5	7.5		3.2 3.5	3.4	
					Bottom	9.1	26.0 25.9	26.0	7.7 7.7	7.7	25.9 27.1	26.5	81.8 83.9	82.9	5.8 6.2	6.0	6.0	7.7 7.8	7.8		3.6 2.5	3.1	
28-Sep-15	Sunny	Moderate	12:48	10.2	Surface	1.0	26.2 26.2	26.2	8.0 8.0	8.0	17.8 17.5	17.7	74.1 73.5	73.8	5.4 5.4	5.4	5.4	8.6 8.7	8.7	8.9	4.6 4.3	4.5	4.3
					Middle	5.1	26.1 26.1	26.1	8.0 8.0	8.0	19.3 19.1	19.2	73.3 73.0	73.2	5.3 5.3	5.3		9.1 9.2	9.2		4.7 3.7	4.2	
					Bottom	9.2	26.1 26.1	26.1	8.0 8.0	8.0	19.3 19.1	19.2	73.5 74.4	74.0	5.4 5.4	5.4	5.4	8.9 8.9	8.9		3.9 4.3	4.1	
30-Sep-15	Fine	Moderate	14:58	10.3	Surface	1.0	26.2 26.5	26.3	7.9 7.9	7.9	21.9 20.7	21.3	78.2 78.7	78.5	5.6 5.6	5.6	5.6	13.0 13.1	13.1	13.3	5.3 5.8	5.6	5.6
					Middle	5.2	26.0 26.1	26.0	7.9 7.9	7.9	23.6 22.1	22.9	77.4 77.4	77.4	5.6 5.6	5.6		13.2 13.4	13.3		5.4 5.3	5.4	
					Bottom	9.3	25.9 26.2	26.1	7.9 7.9	7.9	24.1 22.5	23.3	76.8 76.7	76.8	5.5 5.5	5.5	5.5	13.5 13.6	13.6		6.4 5.0	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

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-Sep-15	Rainy	Moderate	09:06	10.6	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	27.7 27.5	27.6	82.0 85.4	83.7	5.8 6.1	6.0	5.8	12.5 11.9	12.2	12.8	14.6 14.2	14.4	15.2
					Middle	5.3	24.4 24.3	24.4	7.8 7.8	7.8	28.1 28.2	28.2	76.8 79.4	78.1	5.5 5.7	5.6		12.2 12.7	12.5		15.2 14.4	14.8	
					Bottom	9.6	24.4 24.3	24.4	7.8 7.8	7.8	28.1 28.2	28.2	78.2 76.6	77.4	5.6 5.5	5.5	5.5	14.0 13.4	13.7		15.8 17.2	16.5	
4-Sep-15	Sunny	Moderate	11:08	11.1	Surface	1.0	24.6 24.5	24.6	7.8 7.8	7.8	22.8 23.0	22.9	75.9 84.3	80.1	5.5 6.2	5.9	5.9	14.5 14.6	14.6	14.7	15.6 14.6	15.1	12.8
					Middle	5.6	24.3 24.4	24.3	7.8 7.8	7.8	23.6 23.7	23.7	83.4 75.0	79.2	6.1 5.5	5.8		14.6 14.7	14.7		12.2 12.4	12.3	
					Bottom	10.1	24.3 24.3	24.3	7.8 7.8	7.8	23.5 23.9	23.7	79.1 74.6	76.9	5.8 5.4	5.6	5.6	15.0 14.8	14.9		11.9 10.1	11.0	
7-Sep-15	Sunny	Moderate	16:03	10.1	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	10.9 10.8	10.8	82.0 84.4	83.2	6.2 6.4	6.3	5.9	7.4 7.5	7.5	9.6	5.2 5.0	5.1	5.0
					Middle	5.1	25.7 25.7	25.7	7.8 7.8	7.8	19.3 17.3	18.3	73.8 72.5	73.2	5.4 5.4	5.4		10.8 11.0	10.9		4.8 5.4	5.1	
					Bottom	9.1	24.6 24.6	24.6	7.7 7.7	7.7	21.7 21.3	21.5	79.3 78.0	78.7	5.8 5.7	5.8	5.8	10.4 10.5	10.5		5.0 4.7	4.9	
9-Sep-15	Sunny	Moderate	17:38	11.0	Surface	1.0	25.2 25.3	25.3	8.0 8.0	8.0	17.7 17.0	17.3	101.5 95.5	98.5	7.6 7.2	7.4	7.1	5.3 5.4	5.4	5.5	4.0 2.6	3.3	2.8
					Middle	5.5	24.2 24.5	24.3	8.0 8.0	8.0	18.8 18.4	18.6	92.3 86.9	89.6	6.9 6.6	6.7		5.5 5.4	5.5		2.6 2.5	2.6	
					Bottom	10.0	23.8 23.6	23.7	8.0 8.0	8.0	20.7 21.5	21.1	77.4 83.2	80.3	5.8 6.3	6.0	6.0	5.5 5.5	5.5		2.3 2.8	2.6	
11-Sep-15	Fine	Moderate	18:31	10.3	Surface	1.0	25.6 25.6	25.6	8.0 8.0	8.0	12.8 13.0	12.9	99.5 95.3	97.4	7.6 7.2	7.4	7.1	4.1 4.6	4.4	6.4	5.3 4.0	4.7	4.9
					Middle	5.2	24.8 24.8	24.8	7.9 8.0	8.0	15.6 15.6	15.6	89.1 89.1	89.1	6.8 6.8	6.8		8.2 8.4	8.3		5.9 4.7	5.3	
					Bottom	9.3	24.9 25.0	24.9	8.0 8.0	8.0	15.7 15.9	15.8	92.2 93.5	92.9	7.0 7.1	7.0	7.0	6.6 6.5	6.6		3.9 5.3	4.6	
14-Sep-15	Sunny	Moderate	07:10	10.8	Surface	1.0	24.2 24.2	24.2	7.9 7.9	7.9	28.0 27.6	27.8	81.1 84.9	83.0	5.8 6.0	5.9	5.8	14.6 14.3	14.5	14.3	8.0 9.7	8.9	9.1
					Middle	5.4	24.1 24.1	24.1	7.9 7.9	7.9	28.9 28.8	28.8	78.9 76.5	77.7	5.7 5.5	5.6		14.2 14.1	14.2		8.5 9.4	9.0	
					Bottom	9.8	24.1 24.1	24.1	7.9 7.9	7.9	29.2 29.2	29.2	75.8 78.0	76.9	5.4 5.5	5.5	5.5	14.4 14.1	14.3		9.0 9.5	9.3	
16-Sep-15	Fine	Moderate	08:33	10.3	Surface	1.0	24.8 24.8	24.8	7.9 7.9	7.9	23.3 24.4	23.8	83.0 84.3	83.7	6.0 6.1	6.1	6.1	6.3 6.1	6.2	7.1	7.0 6.1	6.6	7.4
					Middle	5.2	24.7 24.7	24.7	7.9 7.9	7.9	24.7 25.3	25.0	82.9 84.8	83.9	6.0 6.1	6.0		7.7 7.3	7.5		7.6 7.2	7.4	
					Bottom	9.3	24.7 24.7	24.7	7.9 7.9	7.9	24.8 26.1	25.5	83.8 86.4	85.1	6.0 6.2	6.1	6.1	7.5 7.7	7.6		7.2 9.0	8.1	
18-Sep-15	Fine	Moderate	09:46	10.3	Surface	1.0	25.0 25.0	25.0	7.8 7.8	7.8	20.0 21.1	20.6	87.2 86.6	86.9	6.4 6.4	6.4	6.3	6.2 6.3	6.3	6.4	10.2 10.6	10.4	10.8
					Middle	5.2	24.9 25.0	25.0	7.8 7.8	7.8	22.1 20.7	21.4	84.1 83.4	83.8	6.2 6.2	6.2		6.4 6.4	6.4		11.4 11.0	11.2	
					Bottom	9.3	25.0 24.9	25.0	7.8 7.8	7.8	21.5 24.0	22.8	81.3 81.2	81.3	6.0 6.0	6.0	6.0	6.5 6.5	6.5		11.1 10.3	10.7	
21-Sep-15	Cloudy	Moderate	13:28	11.2	Surface	1.0	25.8 25.7	25.8	8.0 8.0	8.0	11.7 13.0	12.4	83.7 80.9	82.3	6.3 6.0	6.2	6.1	4.4 4.4	4.4	4.5	3.2 3.3	3.3	3.2
					Middle	5.6	25.4 25.5	25.5	7.8 7.8	7.8	21.1 22.5	21.8	82.1 79.8	81.0	6.0 5.8	5.9		4.4 4.5	4.5		3.6 2.7	3.2	
					Bottom	10.2	25.6 25.4	25.5	7.8 7.8	7.8	23.7 25.1	24.4	80.3 77.0	78.7	5.8 5.6	5.7	5.7	4.5 4.4	4.5		3.1 2.8	3.0	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS10 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Sep-15	Sunny	Moderate	15:57	10.7	Surface	1.0	27.0 26.6	26.8	8.1 8.1	8.1	16.2 16.0	16.1	88.7 92.3	90.5	6.5 6.7	6.6	6.4	2.6 2.5	2.6	2.5	3.4 2.8	3.1	3.8
					Middle	5.4	25.6 25.6	25.6	8.0 8.0	8.0	25.5 25.1	25.3	83.3 91.0	87.2	5.9 6.5	6.2		2.5 2.4	2.5		4.1 4.5	4.3	
					Bottom	9.7	25.6 25.5	25.6	8.0 8.0	8.0	26.0 27.1	26.5	84.2 80.1	82.2	6.0 5.7	5.8	5.8	2.4 2.5	2.5		4.2 3.9	4.1	
25-Sep-15	Sunny	Moderate	17:42	10.2	Surface	1.0	26.6 26.6	26.6	7.8 7.8	7.8	20.8 19.8	20.3	96.0 96.1	96.1	6.8 6.7	6.8	6.8	6.3 6.4	6.4	6.6	5.8 5.6	5.7	6.2
					Middle	5.1	26.3 26.4	26.4	7.8 7.8	7.8	22.3 20.8	21.6	94.8 94.6	94.7	6.8 6.8	6.8		6.4 6.6	6.5		6.7 6.7	6.7	
					Bottom	9.2	26.3 26.6	26.5	7.8 7.8	7.8	25.0 24.6	24.8	93.7 93.8	93.8	6.7 6.7	6.7	6.7	6.8 6.8	6.8		6.4 5.8	6.1	
28-Sep-15	Sunny	Moderate	06:40	10.4	Surface	1.0	26.1 26.1	26.1	8.0 8.0	8.0	27.4 27.3	27.3	81.0 83.3	82.2	5.6 5.8	5.7	5.6	12.9 13.3	13.1	12.7	9.1 10.1	9.6	10.5
					Middle	5.2	26.1 26.0	26.1	8.0 8.0	8.0	28.1 28.2	28.2	76.5 78.0	77.3	5.3 5.4	5.4		12.5 11.8	12.2		11.4 11.2	11.3	
					Bottom	9.4	26.0 26.1	26.1	8.0 8.0	8.0	28.3 28.0	28.2	75.6 77.2	76.4	5.3 5.3	5.3	5.3	12.3 13.0	12.7		10.6 10.3	10.5	
30-Sep-15	Fine	Moderate	08:25	10.5	Surface	1.0	26.1 26.1	26.1	7.8 7.8	7.8	26.7 26.5	26.6	79.3 78.9	79.1	5.5 5.5	5.5	5.5	14.1 14.3	14.2	14.5	16.1 15.6	15.9	16.0
					Middle	5.3	26.0 26.0	26.0	7.8 7.8	7.8	27.0 27.1	27.0	78.2 78.2	78.2	5.5 5.5	5.5		14.5 14.4	14.5		16.4 15.8	16.1	
					Bottom	9.5	26.0 26.0	26.0	7.8 7.8	7.8	27.0 26.9	27.0	77.1 77.3	77.2	5.4 5.4	5.4	5.4	14.6 14.8	14.7		16.5 15.2	15.9	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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*
2-Sep-15	Rainy	Moderate	15:43	10.2	Surface	1.0	24.4 24.5	24.5	7.9 7.9	7.9	24.7 24.5	24.6	76.0 77.8	76.9	5.5 5.6	5.6	5.6	9.3 8.8	9.1	12.3	10.3 10.5	10.4	11.0
					Middle	5.1	24.2 24.2	24.2	7.8 7.9	7.9	25.7 26.0	25.9	76.2 76.3	76.3	5.5 5.5	5.5		14.3 15.1	14.7		11.4 10.9	11.2	
					Bottom	9.2	24.2 24.3	24.3	7.8 7.8	7.8	26.4 25.6	26.0	78.0 77.4	77.7	5.6 5.6	5.6	5.6	13.1 13.2	13.2		11.8 11.0	11.4	
4-Sep-15	Sunny	Moderate	16:29	11.2	Surface	1.0	25.4 25.3	25.3	7.8 7.8	7.8	18.0 17.2	17.6	78.5 85.4	82.0	5.7 6.3	6.0	6.0	3.6 3.8	3.7	4.0	6.1 6.8	6.5	7.2
					Middle	5.6	24.8 25.1	24.9	7.7 7.8	7.7	21.0 19.1	20.1	77.5 81.9	79.7	5.7 6.0	5.9		4.0 4.1	4.1		7.6 7.2	7.4	
					Bottom	10.2	24.8 25.3	25.1	7.8 7.7	7.7	21.9 21.7	21.8	80.4 77.5	79.0	6.0 5.7	5.8	5.8	4.1 4.0	4.1		7.2 8.0	7.6	
7-Sep-15	Cloudy	Moderate	08:48	10.2	Surface	1.0	26.5 26.4	26.5	7.9 7.9	7.9	14.5 14.5	14.5	85.9 84.5	85.2	6.4 6.3	6.3	6.1	3.0 2.9	3.0	2.4	4.1 3.0	3.6	3.5
					Middle	5.1	25.9 25.6	25.7	7.8 7.7	7.7	20.5 22.0	21.2	81.9 78.4	80.2	5.9 5.7	5.8		2.3 2.2	2.3		3.8 3.1	3.5	
					Bottom	9.2	26.1 25.5	25.8	7.7 7.7	7.7	23.7 24.4	24.0	86.1 84.4	85.3	6.1 6.0	6.1	6.1	2.0 1.8	1.9		3.4 3.3	3.4	
9-Sep-15	Sunny	Moderate	10:44	12.1	Surface	1.0	25.0 25.0	25.0	8.0 8.1	8.1	20.4 22.4	21.4	74.2 77.7	76.0	5.5 5.7	5.6	5.4	1.4 1.3	1.4	1.4	3.9 2.7	3.3	4.1
					Middle	6.1	24.2 24.1	24.2	8.0 8.0	8.0	25.1 26.8	25.9	72.1 71.9	72.0	5.1 5.1	5.1		1.4 1.4	1.4		3.3 3.4	3.4	
					Bottom	11.1	23.4 23.1	23.3	8.0 8.0	8.0	30.4 31.7	31.1	70.1 70.8	70.5	5.1 5.1	5.1	5.1	1.3 1.4	1.4		6.3 5.1	5.7	
11-Sep-15	Fine	Moderate	12:07	10.6	Surface	1.0	25.0 24.6	24.8	8.0 8.0	8.0	23.1 23.6	23.3	85.6 82.6	84.1	6.2 6.0	6.1	5.9	5.6 5.0	5.3	7.2	5.3 3.9	4.6	5.5
					Middle	5.3	24.2 24.2	24.2	7.9 7.9	7.9	27.3 27.2	27.2	78.2 78.3	78.3	5.6 5.6	5.6		7.8 7.9	7.9		5.4 4.1	4.8	
					Bottom	9.6	24.2 24.0	24.1	7.9 7.9	7.9	27.8 28.0	27.9	83.1 81.1	82.1	6.0 5.8	5.9	5.9	8.5 8.2	8.4		6.4 7.9	7.2	
14-Sep-15	Sunny	Moderate	13:38	10.4	Surface	1.0	24.6 24.4	24.5	8.0 8.0	8.0	19.8 20.7	20.2	76.7 77.8	77.3	5.7 5.8	5.7	5.7	5.4 5.2	5.3	5.4	3.3 4.2	3.8	3.9
					Middle	5.2	24.3 24.3	24.3	8.0 8.0	8.0	21.4 22.1	21.8	75.2 77.4	76.3	5.6 5.7	5.6		5.5 5.5	5.5		4.5 4.4	4.5	
					Bottom	9.4	24.2 24.1	24.2	8.0 8.0	8.0	22.3 23.7	23.0	77.8 80.7	79.3	5.7 5.9	5.8	5.8	5.5 5.3	5.4		3.3 3.6	3.5	
16-Sep-15	Fine	Moderate	14:31	10.4	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	16.4 16.8	16.6	84.7 85.2	85.0	6.4 6.4	6.4	6.3	5.2 5.1	5.2	6.4	6.2 5.0	5.6	6.2
					Middle	5.2	24.7 24.7	24.7	8.0 8.0	8.0	18.3 18.7	18.5	82.2 84.6	83.4	6.2 6.3	6.2		7.1 7.4	7.3		6.2 7.2	6.7	
					Bottom	9.4	24.7 24.8	24.8	8.0 8.0	8.0	19.8 18.4	19.1	87.5 83.6	85.6	6.5 6.3	6.4	6.4	6.7 6.5	6.6		5.7 6.8	6.3	
18-Sep-15	Fine	Moderate	15:25	10.1	Surface	1.0	25.6 25.4	25.5	7.8 7.8	7.8	14.6 14.2	14.4	85.3 85.7	85.5	6.3 6.4	6.3	6.3	5.4 5.5	5.5	5.6	3.3 2.6	3.0	3.4
					Middle	5.1	24.9 25.0	25.0	7.8 7.8	7.8	19.5 16.2	17.9	83.0 82.9	83.0	6.3 6.2	6.2		5.6 5.5	5.6		4.0 2.9	3.5	
					Bottom	9.1	25.0 25.0	25.0	7.8 7.8	7.8	19.4 19.8	19.6	80.3 80.8	80.6	5.9 6.1	6.0	6.0	5.7 5.7	5.7		3.6 3.9	3.8	
21-Sep-15	Rainy	Moderate	05:26	10.6	Surface	1.0	25.7 25.7	25.7	7.9 8.0	8.0	15.5 14.9	15.2	83.2 82.3	82.8	6.0 6.0	6.0	5.9	2.1 2.1	2.1	2.2	2.4 2.8	2.6	2.7
					Middle	5.3	25.5 25.5	25.5	7.8 7.8	7.8	24.8 24.3	24.5	80.5 80.0	80.3	5.8 5.8	5.8		2.2 2.2	2.2		3.2 2.7	3.0	
					Bottom	9.6	25.6 25.3	25.4	7.8 7.8	7.8	28.3 28.8	28.6	79.6 77.5	78.6	5.7 5.5	5.6	5.6	2.3 2.3	2.3		2.3 2.4	2.4	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)11 - Mid-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-Sep-15	Sunny	Moderate	08:08	10.7	Surface	1.0	25.8 25.7	25.8	7.9 7.9	7.9	20.1 20.5	20.3	81.2 78.7	80.0	5.9 5.7	5.8	5.8	1.9 1.9	1.9	2.2	2.8 3.0	2.9	3.1
					Middle	5.4	25.5 25.5	25.5	7.8 7.8	7.8	27.3 27.5	27.4	81.1 78.5	79.8	5.9 5.7	5.8		2.3 2.4	2.4		3.4 2.9	3.2	
					Bottom	9.7	25.4 25.5	25.5	7.8 7.8	7.8	27.9 27.8	27.8	78.6 77.9	78.3	5.5 5.5	5.5	5.5	2.3 2.5	2.4		2.6 4.0	3.3	
25-Sep-15	Sunny	Moderate	10:56	11.0	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	15.8 15.9	15.8	89.1 89.6	89.4	6.6 6.2	6.4	6.3	6.2 6.3	6.3	6.5	2.6 2.5	2.6	2.7
					Middle	5.5	25.9 26.0	26.0	7.8 7.8	7.8	24.3 21.6	22.9	86.8 88.5	87.7	5.9 6.5	6.2		6.4 6.5	6.5		2.7 3.1	2.9	
					Bottom	10.0	25.9 25.8	25.9	7.7 7.7	7.7	29.1 28.4	28.7	81.7 78.8	80.3	5.9 5.6	5.7	5.7	6.6 6.7	6.7		2.4 2.5	2.5	
28-Sep-15	Sunny	Moderate	12:57	10.2	Surface	1.0	26.3 26.3	26.3	8.0 8.0	8.0	16.7 15.3	16.0	75.5 75.1	75.3	5.6 5.6	5.6	5.5	8.0 7.3	7.7	8.4	4.9 4.6	4.8	4.5
					Middle	5.1	26.1 26.1	26.1	8.0 8.0	8.0	18.7 19.2	19.0	74.7 74.3	74.5	5.4 5.4	5.4		8.7 8.8	8.8		4.2 4.8	4.5	
					Bottom	9.2	26.1 26.2	26.1	8.0 8.0	8.0	19.5 18.8	19.1	75.2 76.1	75.7	5.5 5.5	5.5	5.5	9.1 8.2	8.7		4.5 3.9	4.2	
30-Sep-15	Fine	Moderate	15:09	10.5	Surface	1.0	26.4 26.4	26.4	7.9 7.9	7.9	19.3 18.2	18.8	82.1 83.1	82.6	6.0 6.0	6.0	5.9	10.3 10.1	10.2	10.5	6.3 5.7	6.0	6.2
					Middle	5.3	26.1 26.0	26.0	7.9 7.9	7.9	18.8 21.8	20.3	80.7 81.2	81.0	5.8 5.9	5.8		10.5 10.4	10.5		6.6 5.4	6.0	
					Bottom	9.5	26.0 26.3	26.1	7.9 7.9	7.9	23.8 20.4	22.1	79.2 79.9	79.6	5.8 5.8	5.8	5.8	10.7 10.9	10.8		5.9 7.4	6.7	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	08:57	10.2	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	27.4 27.3	27.3	74.7 75.5	75.1	5.3 5.4	5.4	5.4	10.7 11.0	10.9	12.2	12.6 12.8	12.7	15.1
					Middle	5.1	24.4 24.5	24.5	7.8 7.8	7.8	27.7 27.6	27.6	74.1 74.4	74.3	5.3 5.3	5.3		12.5 12.2	12.4		16.0 14.9	15.5	
					Bottom	9.2	24.5 24.4	24.5	7.8 7.8	7.8	27.6 27.7	27.6	74.8 74.3	74.6	5.3 5.3	5.3	5.3	13.6 13.1	13.4		16.9 17.1	17.0	
4-Sep-15	Sunny	Moderate	11:00	11.1	Surface	1.0	25.0 24.7	24.9	7.8 7.8	7.8	23.0 23.4	23.2	76.0 73.3	74.7	5.5 5.3	5.4	5.4	4.4 4.5	4.5	4.6	7.2 6.7	7.0	5.9
					Middle	5.6	24.4 24.5	24.5	7.8 7.8	7.8	25.0 24.5	24.8	73.0 73.7	73.4	5.3 5.3	5.3		4.5 4.5	4.5		5.6 4.5	5.1	
					Bottom	10.1	24.6 24.4	24.5	7.8 7.8	7.8	24.8 25.2	25.0	73.1 72.6	72.9	5.3 5.3	5.3	5.3	4.7 4.8	4.8		5.1 6.3	5.7	
7-Sep-15	Sunny	Moderate	16:12	10.3	Surface	1.0	26.5 26.4	26.5	7.9 7.9	7.9	10.9 10.1	10.5	83.5 84.8	84.2	6.3 6.5	6.4	6.2	7.2 7.8	7.5	9.0	3.7 4.9	4.3	5.0
					Middle	5.2	25.4 25.4	25.4	7.8 7.8	7.8	15.5 15.4	15.5	82.0 78.2	80.1	6.2 5.9	6.0		9.0 9.7	9.4		4.3 3.5	3.9	
					Bottom	9.3	25.3 25.2	25.3	7.8 7.8	7.8	16.8 16.6	16.7	86.5 82.9	84.7	6.5 6.2	6.3	6.3	9.9 10.2	10.1		6.1 7.5	6.8	
9-Sep-15	Sunny	Moderate	17:48	11.1	Surface	1.0	25.0 24.9	24.9	8.0 8.0	8.0	16.8 17.7	17.3	91.8 89.9	90.9	6.9 6.7	6.8	6.2	7.2 7.4	7.3	7.4	3.1 2.0	2.6	3.3
					Middle	5.6	23.8 23.6	23.7	8.0 8.0	8.0	19.8 21.0	20.4	77.4 72.3	74.9	5.8 5.4	5.6		7.4 7.3	7.4		3.3 4.3	3.8	
					Bottom	10.1	23.5 23.7	23.6	8.0 8.0	8.0	21.5 19.9	20.7	69.8 74.3	72.1	5.3 5.6	5.4	5.4	7.3 7.5	7.4		3.6 3.2	3.4	
11-Sep-15	Fine	Moderate	18:41	10.4	Surface	1.0	25.4 25.3	25.3	8.1 8.1	8.1	13.1 12.6	12.8	103.3 101.9	102.6	7.9 7.8	7.8	7.7	7.5 7.2	7.4	7.1	5.5 5.2	5.4	5.1
					Middle	5.2	24.9 24.8	24.9	8.1 8.1	8.1	17.4 16.9	17.1	102.0 99.4	100.7	7.7 7.5	7.6		6.3 5.9	6.1		4.6 4.7	4.7	
					Bottom	9.4	24.8 24.7	24.7	8.0 8.1	8.0	18.1 18.3	18.2	100.4 100.7	100.6	7.5 7.5	7.5	7.5	7.9 7.5	7.7		5.3 5.0	5.2	
14-Sep-15	Sunny	Moderate	07:00	10.8	Surface	1.0	24.3 24.3	24.3	7.9 7.9	7.9	26.5 26.6	26.5	79.0 79.7	79.4	5.7 5.7	5.7	5.7	10.3 10.5	10.4	10.3	4.5 4.2	4.4	4.8
					Middle	5.4	24.1 24.1	24.1	7.9 7.9	7.9	28.6 28.8	28.7	78.9 77.6	78.3	5.6 5.6	5.6		10.2 10.3	10.3		5.4 4.6	5.0	
					Bottom	9.8	24.2 24.1	24.1	7.9 7.8	7.9	28.8 29.0	28.9	78.1 77.3	77.7	5.6 5.5	5.5	5.5	10.2 10.2	10.2		4.7 5.3	5.0	
16-Sep-15	Fine	Moderate	08:22	10.3	Surface	1.0	24.8 24.8	24.8	7.9 7.9	7.9	27.3 27.4	27.4	82.3 82.4	82.4	5.8 5.8	5.8	5.8	10.7 10.3	10.5	11.6	5.5 5.9	5.7	5.5
					Middle	5.2	24.8 24.8	24.8	7.9 7.9	7.9	28.3 28.2	28.2	82.4 82.0	82.2	5.8 5.8	5.8		11.7 11.4	11.6		5.3 6.8	6.1	
					Bottom	9.3	24.8 24.8	24.8	7.9 7.9	7.9	28.3 28.2	28.3	82.9 82.5	82.7	5.9 5.8	5.8	5.8	12.5 13.1	12.8		4.4 4.7	4.6	
18-Sep-15	Fine	Moderate	09:40	10.3	Surface	1.0	25.0 25.0	25.0	7.8 7.8	7.8	23.8 21.8	22.8	86.7 86.3	86.5	6.3 6.2	6.2	6.2	5.8 5.7	5.8	6.0	10.0 8.9	9.5	10.4
					Middle	5.2	24.9 25.0	24.9	7.8 7.8	7.8	22.9 24.5	23.7	85.1 84.7	84.9	6.1 6.1	6.1		5.9 6.0	6.0		9.2 11.0	10.1	
					Bottom	9.3	25.0 24.9	25.0	7.8 7.8	7.8	24.7 27.1	25.9	83.4 82.8	83.1	6.1 6.1	6.1	6.1	6.3 6.2	6.3		11.2 11.9	11.6	
21-Sep-15	Cloudy	Moderate	13:35	10.8	Surface	1.0	25.7 25.8	25.8	8.0 8.0	8.0	11.9 10.4	11.2	85.9 88.7	87.3	6.3 6.8	6.6	6.3	2.5 2.5	2.5	2.5	3.2 2.3	2.8	2.8
					Middle	5.4	25.6 25.5	25.6	7.9 7.9	7.9	18.8 19.3	19.0	81.6 83.2	82.4	5.9 6.2	6.0		2.6 2.5	2.6		3.6 2.8	3.2	
					Bottom	9.8	25.4 25.4	25.4	7.8 7.8	7.8	21.8 23.7	22.8	78.8 80.7	79.8	5.8 5.9	5.9	5.9	2.5 2.5	2.5		2.0 3.0	2.5	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	16:09	10.6	Surface	1.0	26.4 26.2	26.3	8.1 8.1	8.1	16.8 16.9	16.9	86.3 90.6	88.5	6.2 6.6	6.4	6.2	3.7 3.6	3.7	3.6	6.4 6.8	6.6	6.1
					Middle	5.3	25.6 25.8	25.7	8.0 8.0	8.0	23.0 22.5	22.8	81.9 79.8	80.9	6.0 5.7	5.9		3.5 3.5	3.5		5.6 6.8	6.2	
					Bottom	9.6	25.8 25.4	25.6	8.0 8.0	8.0	25.6 26.0	25.8	77.8 76.0	76.9	5.6 5.4	5.5	5.5	3.6 3.5	3.6		5.1 5.6	5.4	
25-Sep-15	Sunny	Moderate	17:54	11.2	Surface	1.0	26.6 26.6	26.6	7.9 7.9	7.9	20.9 19.1	20.0	101.7 99.3	100.5	7.3 7.1	7.2	7.1	5.9 5.8	5.9	6.1	6.8 6.5	6.7	7.6
					Middle	5.6	26.5 26.6	26.6	7.9 7.9	7.9	21.4 19.7	20.6	98.2 97.0	97.6	7.0 7.0	7.0		6.1 5.9	6.0		7.5 8.3	7.9	
					Bottom	10.2	26.2 26.6	26.4	7.9 7.9	7.9	22.0 20.1	21.1	97.2 97.7	97.5	7.0 7.0	7.0	7.0	6.4 6.4	6.4		8.4 8.1	8.3	
28-Sep-15	Sunny	Moderate	06:31	10.3	Surface	1.0	26.0 26.0	26.0	8.0 8.0	8.0	26.9 26.9	26.9	74.6 75.5	75.1	5.2 5.3	5.2	5.2	8.1 8.0	8.1	9.8	4.5 4.5	4.5	4.5
					Middle	5.2	26.0 26.0	26.0	8.0 8.0	8.0	29.3 29.3	29.3	74.9 73.9	74.4	5.2 5.1	5.1		10.9 11.0	11.0		4.9 4.6	4.8	
					Bottom	9.3	26.0 26.0	26.0	8.0 8.0	8.0	29.3 29.3	29.3	75.1 76.3	75.7	5.2 5.2	5.2	5.2	10.5 10.3	10.4		4.1 4.5	4.3	
30-Sep-15	Fine	Moderate	08:12	10.6	Surface	1.0	26.1 26.2	26.1	7.8 7.8	7.8	27.1 27.0	27.0	82.3 85.9	84.1	5.7 6.0	5.8	5.7	10.3 10.2	10.3	10.6	9.8 9.9	9.9	14.2
					Middle	5.3	26.3 26.3	26.3	7.8 7.8	7.8	27.1 27.5	27.3	79.5 80.0	79.8	5.5 5.6	5.6		10.6 10.5	10.6		9.8 10.2	10.0	
					Bottom	9.6	26.1 26.2	26.2	7.8 7.8	7.8	27.4 27.3	27.3	78.5 78.6	78.6	5.5 5.5	5.5	5.5	10.9 10.8	10.9		23.3 22.0	22.7	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	14:53	6.3	Surface	1.0	26.9 27.0	27.0	8.1 8.1	8.1	29.0 29.0	29.0	91.4 85.0	88.2	6.2 5.7	5.9	5.8	9.5 9.6	9.6	9.6	7.7 7.6	7.7	7.9
					Middle	3.2	26.8 26.7	26.7	8.1 8.1	8.1	29.9 30.1	30.0	80.9 84.3	82.6	5.4 5.7	5.6		9.6 9.6	9.6		7.0 8.7	7.9	
					Bottom	5.3	26.6 26.7	26.7	8.1 8.0	8.1	30.6 30.4	30.5	83.7 78.7	81.2	5.7 5.3	5.5	5.5	9.6 9.6	9.6		8.5 7.6	8.1	
4-Sep-15	Sunny	Moderate	16:33	6.5	Surface	1.0	27.8 27.9	27.8	8.0 8.0	8.0	28.2 28.1	28.2	80.7 82.6	81.7	5.8 5.9	5.8	5.7	8.3 7.6	8.0	8.7	5.9 6.3	6.1	5.9
					Middle	3.3	26.8 26.7	26.8	8.0 8.0	8.0	29.6 29.8	29.7	76.2 76.3	76.3	5.5 5.5	5.5		9.0 8.9	9.0		6.1 5.7	5.9	
					Bottom	5.5	26.5 26.5	26.5	7.9 8.0	8.0	31.3 31.4	31.3	77.8 79.3	78.6	5.6 5.7	5.6	5.6	9.4 8.8	9.1		5.1 6.3	5.7	
7-Sep-15	Cloudy	Moderate	08:47	6.4	Surface	1.0	29.3 29.4	29.3	8.0 8.0	8.0	19.1 19.5	19.3	85.1 83.8	84.5	5.9 5.8	5.8	5.6	5.1 4.9	5.0	5.3	5.1 4.0	4.6	3.7
					Middle	3.2	29.1 29.0	29.0	8.0 8.0	8.0	20.2 19.5	19.8	76.4 81.5	79.0	5.3 5.6	5.4		5.4 5.3	5.4		2.5 3.9	3.2	
					Bottom	5.4	29.0 28.6	28.8	7.9 7.9	7.9	25.3 24.3	24.8	80.8 75.4	78.1	5.6 5.1	5.3	5.3	5.5 5.4	5.5		3.0 3.3	3.2	
9-Sep-15	Sunny	Moderate	10:59	6.1	Surface	1.0	27.8 27.8	27.8	8.0 8.1	8.0	25.0 25.3	25.1	84.8 89.1	87.0	6.1 6.4	6.3	5.8	7.2 7.4	7.3	7.6	3.4 4.2	3.8	3.8
					Middle	3.1	26.7 26.7	26.7	8.1 8.0	8.0	29.4 30.0	29.7	72.8 71.2	72.0	5.2 5.1	5.2		7.0 6.7	6.9		4.7 3.8	4.3	
					Bottom	5.1	26.5 26.5	26.5	8.0 8.0	8.0	30.9 30.8	30.8	68.4 67.7	68.1	5.0 4.9	4.9	4.9	8.5 8.8	8.7		2.7 3.6	3.2	
11-Sep-15	Fine	Moderate	12:23	6.2	Surface	1.0	27.5 27.5	27.5	8.3 8.3	8.3	29.4 29.4	29.4	100.0 98.0	99.0	6.7 6.6	6.6	6.2	6.4 6.5	6.5	6.5	5.3 3.6	4.5	6.3
					Middle	3.1	27.1 27.1	27.1	8.2 8.2	8.2	30.3 30.4	30.3	87.2 86.6	86.9	5.8 5.8	5.8		6.5 6.4	6.5		4.8 5.5	5.2	
					Bottom	5.2	26.5 26.5	26.5	8.1 8.2	8.2	32.6 32.7	32.7	85.0 85.9	85.5	5.7 5.8	5.7	5.7	6.4 6.3	6.4		9.1 9.0	9.1	
14-Sep-15	Sunny	Moderate	13:25	6.5	Surface	1.0	27.6 27.3	27.4	7.8 7.8	7.8	28.6 28.9	28.8	94.6 95.0	94.8	6.3 6.4	6.3	6.3	5.3 5.3	5.3	5.4	5.1 5.0	5.1	5.0
					Middle	3.3	27.4 27.4	27.4	7.8 7.8	7.8	28.7 28.8	28.7	93.1 92.9	93.0	6.2 6.2	6.2		5.4 5.4	5.4		4.2 4.7	4.5	
					Bottom	5.5	27.4 27.4	27.4	7.8 7.9	7.8	28.7 28.8	28.8	91.1 91.1	91.1	6.1 6.1	6.1	6.1	5.5 5.4	5.5		5.7 5.0	5.4	
16-Sep-15	Fine	Moderate	14:15	6.1	Surface	1.0	27.5 27.7	27.6	8.2 8.2	8.2	32.5 32.1	32.3	91.2 84.9	88.1	6.0 5.6	5.8	5.7	6.8 6.7	6.8	6.8	11.7 13.0	12.4	8.1
					Middle	3.1	27.4 27.4	27.4	8.2 8.2	8.2	33.2 32.7	33.0	84.6 86.1	85.4	5.5 5.7	5.6		6.8 6.9	6.9		6.8 6.1	6.5	
					Bottom	5.1	27.4 27.5	27.5	8.2 8.2	8.2	33.7 33.6	33.6	84.9 82.7	83.8	5.6 5.4	5.5	5.5	6.8 6.8	6.8		4.9 5.8	5.4	
18-Sep-15	Fine	Moderate	15:14	6.1	Surface	1.0	28.1 28.2	28.2	8.2 8.2	8.2	31.4 31.3	31.4	83.5 84.9	84.2	5.5 5.6	5.5	5.5	5.5 5.4	5.5	5.5	5.0 5.7	5.4	5.7
					Middle	3.1	27.7 27.7	27.7	8.2 8.2	8.2	32.0 32.0	32.0	83.0 83.3	83.2	5.4 5.5	5.4		5.5 5.4	5.5		5.5 6.2	5.9	
					Bottom	5.1	27.6 27.7	27.6	8.2 8.2	8.2	33.3 33.3	33.3	81.6 81.5	81.6	5.4 5.4	5.4	5.4	5.3 5.5	5.4		6.3 5.2	5.8	
21-Sep-15	Rainy	Moderate	05:44	6.3	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	21.4 21.5	21.5	90.6 91.2	90.9	6.2 6.3	6.2	6.1	3.4 3.1	3.3	4.1	2.5 2.1	2.3	2.6
					Middle	3.2	28.5 28.5	28.5	8.1 8.1	8.1	22.7 22.5	22.6	83.8 88.2	86.0	5.7 6.1	5.9		4.5 4.2	4.4		3.1 2.5	2.8	
					Bottom	5.3	28.3 28.6	28.4	8.1 8.1	8.1	28.8 29.3	29.1	84.5 87.1	85.8	5.6 5.7	5.7	5.7	4.6 4.6	4.6		2.9 2.3	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS(Mf)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-Sep-15	Sunny	Moderate	09:06	6.4	Surface	1.0	28.4 28.4	28.4	8.2 8.2	8.2	25.2 24.8	25.0	81.2 81.3	81.3	5.5 5.5	5.5	5.4	2.8 2.9	2.9	3.4	5.2 5.5	5.4	5.1
					Middle	3.2	28.4 28.4	28.4	8.2 8.2	8.2	26.9 26.4	26.6	77.8 78.8	78.3	5.2 5.3	5.3		3.4 3.3	3.4		4.7 4.8	4.8	
					Bottom	5.4	28.3 28.3	28.3	8.1 8.1	8.1	30.0 29.7	29.9	79.9 78.5	79.2	5.3 5.2	5.2	5.2	4.0 3.9	4.0		5.1 5.3	5.2	
25-Sep-15	Sunny	Moderate	10:48	6.2	Surface	1.0	29.4 29.4	29.4	8.3 8.2	8.3	23.8 23.9	23.8	91.5 88.0	89.8	6.1 5.9	6.0	5.9	5.7 5.5	5.6	5.6	3.5 4.1	3.8	3.9
					Middle	3.1	29.0 29.1	29.1	8.2 8.2	8.2	24.9 24.8	24.9	86.2 91.2	88.7	5.7 5.9	5.8		5.5 5.6	5.6		4.1 3.6	3.9	
					Bottom	5.2	28.8 29.4	29.1	8.2 8.2	8.2	29.4 29.1	29.2	82.3 88.0	85.2	5.5 5.9	5.7	5.7	5.5 5.8	5.7		3.0 4.8	3.9	
28-Sep-15	Sunny	Moderate	12:24	6.3	Surface	1.0	29.1 29.1	29.1	8.2 8.2	8.2	30.0 30.1	30.0	84.7 85.4	85.1	5.9 5.9	5.9	5.9	6.0 6.1	6.1	6.1	4.2 3.8	4.0	4.8
					Middle	3.2	29.0 29.0	29.0	8.2 8.2	8.2	31.1 30.6	30.8	83.7 84.0	83.9	5.8 5.8	5.8		6.1 5.8	6.0		5.5 5.0	5.3	
					Bottom	5.3	28.8 28.9	28.9	8.2 8.2	8.2	32.7 32.8	32.8	83.9 84.6	84.3	5.8 5.8	5.8	5.8	6.1 6.1	6.1		5.0 5.3	5.2	
30-Sep-15	Fine	Moderate	13:55	6.2	Surface	1.0	29.2 29.4	29.3	8.2 8.2	8.2	31.4 31.1	31.3	87.5 89.4	88.5	5.7 5.9	5.8	5.8	9.3 8.9	9.1	11.3	6.8 6.7	6.8	7.2
					Middle	3.1	29.1 29.0	29.0	8.2 8.2	8.2	32.0 32.0	32.0	85.2 88.8	87.0	5.6 5.8	5.7		12.3 12.2	12.3		6.9 7.8	7.4	
					Bottom	5.2	29.1 28.9	29.0	8.2 8.2	8.2	32.8 32.8	32.8	84.2 85.0	84.6	5.5 5.6	5.6	5.6	12.7 12.2	12.5		7.2 7.7	7.5	
31-Dec-15	0	0	0	1.0	Surface	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0
					Middle	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		0.0 0.0	0.0	
					Bottom	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0	

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

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	09:11	6.2	Surface	1.0	27.0 27.0	27.0	8.0 8.0	8.0	28.6 28.7	28.6	80.9 78.2	79.6	5.5 5.3	5.4	5.4	10.2 10.5	10.4	10.3	7.8 7.3	7.6	8.4
					Middle	3.1	27.0 27.0	27.0	8.0 8.0	8.0	28.9 29.0	28.9	77.9 78.7	78.3	5.3 5.3	5.3		10.2 10.1	10.2		8.2 7.8	8.0	
					Bottom	5.2	26.9 27.0	27.0	8.0 8.0	8.0	29.2 29.1	29.2	78.4 77.8	78.1	5.3 5.2	5.3	5.3	10.1 10.2	10.2		9.7 9.5	9.6	
4-Sep-15	Sunny	Moderate	11:15	6.4	Surface	1.0	27.5 27.4	27.5	8.0 8.0	8.0	26.1 26.1	26.1	78.4 77.5	78.0	5.7 5.6	5.6	5.7	8.1 8.6	8.4	9.8	6.3 6.7	6.5	7.7
					Middle	3.2	27.2 27.2	27.2	8.0 8.0	8.0	26.7 26.5	26.6	78.6 77.3	78.0	5.7 5.6	5.7		10.7 9.8	10.3		8.1 7.5	7.8	
					Bottom	5.4	27.3 27.1	27.2	8.0 8.0	8.0	26.5 26.9	26.7	77.8 80.1	79.0	5.6 5.8	5.7	5.7	11.0 10.4	10.7		9.3 8.2	8.8	
7-Sep-15	Sunny	Moderate	15:46	6.2	Surface	1.0	29.2 29.2	29.2	8.1 8.1	8.1	17.3 17.5	17.4	89.5 92.2	90.9	6.2 6.4	6.3	6.2	5.5 5.5	5.5	5.6	3.7 3.1	3.4	3.8
					Middle	3.1	29.1 29.0	29.1	8.1 8.0	8.1	17.6 18.2	17.9	88.4 89.7	89.1	6.2 6.1	6.1		5.6 5.6	5.6		4.0 4.4	4.2	
					Bottom	5.2	28.9 29.2	29.1	8.0 8.1	8.0	24.0 23.2	23.6	83.5 91.3	87.4	5.8 6.2	6.0	6.0	5.6 5.6	5.6		3.6 3.7	3.7	
9-Sep-15	Sunny	Moderate	17:24	6.2	Surface	1.0	27.6 27.6	27.6	8.1 8.0	8.1	26.4 26.3	26.4	92.9 94.3	93.6	6.3 6.4	6.4	6.2	5.5 5.2	5.4	6.3	4.5 4.7	4.6	5.0
					Middle	3.1	27.2 27.2	27.2	8.1 8.0	8.0	27.6 27.5	27.6	87.8 87.2	87.5	6.0 5.9	6.0		5.8 6.0	5.9		5.7 6.4	6.1	
					Bottom	5.2	27.2 27.2	27.2	8.1 7.9	8.0	27.7 27.6	27.7	92.3 92.5	92.4	6.3 6.3	6.3	6.3	7.7 7.3	7.5		4.3 4.4	4.4	
11-Sep-15	Fine	Moderate	18:06	6.5	Surface	1.0	27.9 27.8	27.9	8.3 8.3	8.3	27.7 27.9	27.8	112.3 104.1	108.2	7.6 7.0	7.3	6.8	11.5 11.3	11.4	11.3	6.5 7.5	7.0	6.3
					Middle	3.3	27.2 27.3	27.3	8.3 8.3	8.3	29.4 29.3	29.4	92.2 92.8	92.5	6.1 6.2	6.2		11.1 11.2	11.2		5.5 5.8	5.7	
					Bottom	5.5	26.6 26.7	26.7	8.2 8.2	8.2	32.7 32.9	32.8	91.4 86.0	88.7	6.1 5.8	6.0	6.0	11.5 11.2	11.4		6.9 5.3	6.1	
14-Sep-15	Sunny	Moderate	07:11	6.6	Surface	1.0	26.9 26.9	26.9	7.8 7.8	7.8	29.4 29.5	29.5	89.0 87.8	88.4	6.0 5.9	5.9	5.9	4.8 4.9	4.9	5.1	3.4 2.8	3.1	4.0
					Middle	3.3	26.9 26.8	26.9	7.8 7.8	7.8	29.6 29.9	29.7	87.5 86.0	86.8	5.9 5.8	5.8		5.0 5.1	5.1		3.7 4.7	4.2	
					Bottom	5.6	26.9 26.9	26.9	7.8 7.8	7.8	30.2 31.5	30.9	85.0 83.5	84.3	5.7 5.6	5.6	5.6	5.2 5.3	5.3		5.1 4.5	4.8	
16-Sep-15	Fine	Moderate	08:29	6.3	Surface	1.0	27.4 27.4	27.4	8.2 8.2	8.2	31.2 31.2	31.2	83.8 80.9	82.4	5.6 5.4	5.5	5.5	10.8 10.8	10.8	11.2	4.0 4.6	4.3	4.5
					Middle	3.2	27.4 27.4	27.4	8.1 8.1	8.1	32.1 32.2	32.1	81.6 80.4	81.0	5.4 5.3	5.4		11.5 11.2	11.4		5.0 4.4	4.7	
					Bottom	5.3	27.4 27.4	27.4	8.2 8.1	8.2	32.2 32.0	32.1	81.5 80.3	80.9	5.4 5.3	5.4	5.4	11.6 11.4	11.5		4.2 5.0	4.6	
18-Sep-15	Fine	Moderate	09:55	6.1	Surface	1.0	27.7 27.7	27.7	8.1 8.1	8.1	29.1 29.1	29.1	81.4 81.6	81.5	5.4 5.4	5.4	5.4	6.4 6.2	6.3	6.9	2.7 3.7	3.2	3.2
					Middle	3.1	27.5 27.6	27.6	8.1 8.1	8.1	30.3 30.3	30.3	81.0 81.5	81.3	5.4 5.4	5.4		7.2 7.1	7.2		3.5 3.2	3.4	
					Bottom	5.1	27.6 27.5	27.6	8.1 8.1	8.1	30.4 30.5	30.5	80.7 80.3	80.5	5.4 5.4	5.4	5.4	7.2 7.0	7.1		3.3 2.7	3.0	
21-Sep-15	Cloudy	Moderate	13:18	6.2	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	21.5 21.5	21.5	88.2 88.9	88.6	6.1 6.1	6.1	6.1	2.8 2.9	2.9	2.8	4.2 4.2	4.2	3.7
					Middle	3.1	28.4 28.4	28.4	8.1 8.2	8.2	22.9 22.8	22.8	87.5 88.8	88.2	6.0 6.1	6.0		2.7 2.9	2.8		2.7 2.3	2.5	
					Bottom	5.2	28.4 28.4	28.4	8.1 8.1	8.1	24.6 24.5	24.5	88.8 95.1	92.0	6.0 6.5	6.2	6.2	2.8 2.7	2.8		4.6 4.1	4.4	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	15:51	6.3	Surface	1.0	28.9 28.8	28.9	8.3 8.3	8.3	24.6 25.0	24.8	94.6 90.1	92.4	6.4 6.1	6.2	6.0	4.4 4.4	4.4	4.3	4.6 5.3	5.0	5.0
					Middle	3.2	28.4 28.4	28.4	8.2 8.2	8.2	27.5 27.4	27.4	85.4 88.1	86.8	5.7 5.9	5.8		4.3 4.4	4.4		4.5 4.3	4.4	
					Bottom	5.3	28.5 28.5	28.5	8.2 8.2	8.2	29.3 29.2	29.3	92.2 93.1	92.7	6.1 6.2	6.1	6.1	4.2 3.8	4.0		5.8 5.6	5.7	
25-Sep-15	Sunny	Moderate	17:12	6.4	Surface	1.0	29.8 29.8	29.8	8.3 8.3	8.3	21.9 21.8	21.9	107.7 105.1	106.4	7.2 7.1	7.2	7.0	7.6 7.7	7.7	7.5	3.3 2.8	3.1	4.1
					Middle	3.2	29.6 29.4	29.5	8.3 8.3	8.3	22.3 22.7	22.5	105.3 98.0	101.7	7.0 6.6	6.8		7.4 7.5	7.5		4.6 4.5	4.6	
					Bottom	5.4	29.4 29.6	29.5	8.3 8.3	8.3	24.0 24.0	24.0	99.8 102.1	101.0	6.7 6.9	6.8	6.8	7.5 7.3	7.4		4.5 4.6	4.6	
28-Sep-15	Sunny	Moderate	06:39	6.1	Surface	1.0	29.0 28.9	29.0	8.2 8.2	8.2	29.3 29.2	29.3	84.9 85.3	85.1	5.9 5.9	5.9	5.9	6.6 6.7	6.7	7.1	3.4 2.8	3.1	2.8
					Middle	3.1	29.0 28.9	28.9	8.2 8.2	8.2	29.5 29.4	29.5	84.2 83.2	83.7	5.9 5.8	5.8		7.4 7.5	7.5		2.2 3.4	2.8	
					Bottom	5.1	28.9 28.9	28.9	8.2 8.2	8.2	30.8 30.8	30.8	85.0 84.0	84.5	5.9 5.8	5.8	5.8	7.2 7.2	7.2		2.3 2.6	2.5	
30-Sep-15	Fine	Moderate	07:52	6.2	Surface	1.0	28.9 28.8	28.9	8.1 8.1	8.1	29.7 29.9	29.8	83.3 91.7	87.5	5.6 6.1	5.8	5.7	15.8 16.1	16.0	16.0	10.1 11.7	10.9	11.3
					Middle	3.1	28.8 28.9	28.9	8.1 8.1	8.1	30.0 29.9	29.9	84.2 82.9	83.6	5.6 5.5	5.6		16.2 15.8	16.0		11.7 11.6	11.7	
					Bottom	5.2	28.8 28.8	28.8	8.1 8.1	8.1	30.0 30.0	30.0	85.6 82.5	84.1	5.7 5.5	5.6	5.6	16.2 16.0	16.1		11.8 10.6	11.2	
31-Dec-15	0	0	0	1.0	Surface	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0	0.0
					Middle	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		0.0 0.0	0.0	
					Bottom	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0	

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

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-Sep-15	Rainy	Moderate	14:11	8.4	Surface	1.0	26.8 26.8	26.8	8.0 8.0	8.0	29.1 29.1	29.1	82.7 82.9	82.8	5.6 5.6	5.6	5.6	22.4 22.7	22.6	22.5	18.8 19.6	19.2	20.9
					Middle	4.2	26.8 26.8	26.8	8.0 8.0	8.0	29.1 29.1	29.1	82.9 82.6	82.8	5.6 5.6	5.6		22.5 22.3	22.4		21.6 21.8	21.7	
					Bottom	7.4	26.8 26.8	26.8	8.0 8.0	8.0	29.1 29.1	29.1	82.6 82.5	82.6	5.6 5.6	5.6		22.6 22.6	22.6		21.6 21.8	21.7	
4-Sep-15	Sunny	Moderate	15:37	8.7	Surface	1.0	27.9 28.0	27.9	8.0 8.0	8.0	29.7 29.8	29.8	85.9 86.9	86.4	6.1 6.1	6.1	6.1	9.3 8.7	9.0	9.7	8.9 8.3	8.6	9.0
					Middle	4.4	27.5 27.5	27.5	8.0 8.0	8.0	29.8 30.0	29.9	84.3 85.1	84.7	6.0 6.0	6.0		10.6 10.0	10.3		9.4 8.5	9.0	
					Bottom	7.7	27.6 27.5	27.6	8.0 8.0	8.0	29.9 29.7	29.8	86.0 85.4	85.7	6.1 6.1	6.1	6.1	9.7 10.0	9.9		8.8 10.1	9.5	
7-Sep-15	Cloudy	Moderate	09:41	8.6	Surface	1.0	29.4 29.4	29.4	8.1 8.1	8.1	19.5 19.5	19.5	82.1 82.6	82.4	5.6 5.7	5.7	5.5	5.5 5.4	5.5	5.5	3.4 3.7	3.6	4.1
					Middle	4.3	28.7 27.3	28.0	8.0 8.0	8.0	25.3 27.4	26.4	75.4 77.2	76.3	5.1 5.2	5.2		5.5 5.4	5.5		4.9 4.3	4.6	
					Bottom	7.6	27.1 27.0	27.1	8.0 8.0	8.0	28.7 28.7	28.7	75.7 73.2	74.5	5.1 5.0	5.0	5.0	5.6 5.5	5.6		4.2 4.1	4.2	
9-Sep-15	Sunny	Moderate	12:04	8.3	Surface	1.0	27.4 27.5	27.5	8.0 8.0	8.0	25.2 24.9	25.0	85.8 86.4	86.1	6.2 6.3	6.2	5.9	6.6 6.4	6.5	8.9	5.0 4.7	4.9	6.5
					Middle	4.2	26.3 26.2	26.3	8.0 8.0	8.0	29.0 29.3	29.2	77.6 77.2	77.4	5.6 5.6	5.6		9.8 10.2	10.0		6.3 7.2	6.8	
					Bottom	7.3	26.1 26.1	26.1	8.0 8.0	8.0	31.2 31.2	31.2	83.2 84.3	83.8	6.0 6.1	6.0	6.0	10.3 9.8	10.1		7.9 7.9	7.9	
11-Sep-15	Fine	Moderate	13:12	8.2	Surface	1.0	27.5 27.6	27.5	8.2 8.2	8.2	27.1 27.0	27.1	87.4 88.7	88.1	5.9 6.0	6.0	5.7	8.9 9.2	9.1	9.4	7.8 7.1	7.5	7.4
					Middle	4.1	26.9 26.8	26.9	8.2 8.1	8.2	29.1 30.6	29.9	77.6 79.9	78.8	5.2 5.4	5.3		9.4 9.5	9.5		7.5 6.7	7.1	
					Bottom	7.2	26.8 26.8	26.8	8.2 8.2	8.2	30.9 30.9	30.9	73.9 74.4	74.2	5.0 5.0	5.0	5.0	9.5 9.6	9.6		7.7 7.3	7.5	
14-Sep-15	Sunny	Moderate	12:48	8.1	Surface	1.0	27.3 27.3	27.3	7.9 7.9	7.9	28.5 28.7	28.6	90.4 89.5	90.0	6.1 6.0	6.0	6.0	6.6 6.7	6.7	6.9	6.1 5.3	5.7	4.7
					Middle	4.1	27.3 27.2	27.3	7.9 7.9	7.9	28.8 28.8	28.8	87.7 89.5	88.6	5.9 6.0	5.9		6.9 6.8	6.9		4.2 4.3	4.3	
					Bottom	7.1	27.4 27.3	27.3	7.9 7.9	7.9	28.5 28.7	28.6	86.2 87.5	86.9	5.8 5.9	5.8	5.8	7.0 7.2	7.1		4.4 4.0	4.2	
16-Sep-15	Fine	Moderate	13:31	8.7	Surface	1.0	27.8 27.8	27.8	8.2 8.3	8.3	31.8 31.5	31.7	86.3 86.5	86.4	5.7 5.7	5.7	5.7	12.5 12.6	12.6	12.9	13.8 12.5	13.2	12.3
					Middle	4.4	27.8 27.8	27.8	8.3 8.2	8.3	31.5 31.9	31.7	85.9 85.7	85.8	5.7 5.6	5.7		13.1 12.7	12.9		11.9 11.2	11.6	
					Bottom	7.7	27.8 27.8	27.8	8.3 8.3	8.3	31.6 31.9	31.8	86.0 86.1	86.1	5.7 5.7	5.7	5.7	13.2 13.4	13.3		11.7 12.4	12.1	
18-Sep-15	Fine	Moderate	14:31	8.2	Surface	1.0	28.2 28.2	28.2	8.2 8.2	8.2	32.7 32.5	32.6	86.7 86.9	86.8	5.6 5.7	5.7	5.7	9.8 9.8	9.8	10.3	6.4 7.0	6.7	6.5
					Middle	4.1	28.1 28.0	28.0	8.2 8.2	8.2	32.8 32.6	32.7	86.4 87.0	86.7	5.6 5.7	5.6		10.6 10.6	10.6		6.2 6.7	6.5	
					Bottom	7.2	28.0 28.1	28.0	8.2 8.2	8.2	32.6 32.7	32.6	86.0 85.8	85.9	5.6 5.6	5.6	5.6	10.5 10.4	10.5		6.4 5.9	6.2	
21-Sep-15	Rainy	Moderate	06:36	8.2	Surface	1.0	28.5 28.4	28.5	8.2 8.2	8.2	23.4 22.7	23.1	83.8 83.5	83.7	5.7 5.7	5.7	5.5	8.0 8.4	8.2	9.2	6.6 6.4	6.5	7.8
					Middle	4.1	28.2 28.2	28.2	8.2 8.2	8.2	29.3 29.0	29.1	80.7 80.4	80.6	5.4 5.3	5.3		10.5 9.7	10.1		8.4 8.0	8.2	
					Bottom	7.2	28.2 28.1	28.1	8.1 8.1	8.1	33.2 31.2	32.2	84.6 87.7	86.2	5.5 5.8	5.6	5.6	9.9 8.9	9.4		8.6 8.5	8.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	10:08	8.2	Surface	1.0	28.5 28.6	28.6	8.3 8.2	8.2	23.2 23.3	23.2	82.7 86.7	84.7	5.6 5.9	5.8	5.5	7.1 7.7	7.4		3.5 4.3	3.9	
					Middle	4.1	28.2 28.2	28.2	8.2 8.2	8.2	31.7 31.6	31.6	78.7 79.2	79.0	5.2 5.2	5.2		10.1 10.3	10.2	9.8	4.7 4.1	4.4	4.3
					Bottom	7.2	28.2 28.3	28.2	8.2 8.1	8.2	33.4 33.6	33.5	84.0 84.1	84.1	5.5 5.4	5.4	5.4	11.4 11.9	11.7		4.3 5.0	4.7	
25-Sep-15	Sunny	Moderate	11:39	8.6	Surface	1.0	29.5 29.4	29.5	8.3 8.3	8.3	22.3 22.9	22.6	89.4 89.8	89.6	6.0 6.1	6.0	5.7	10.4 10.2	10.3		6.4 6.7	6.6	
					Middle	4.3	28.5 28.6	28.5	8.2 8.2	8.2	31.3 27.9	29.6	85.1 79.2	82.2	5.5 5.2	5.3		10.6 10.3	10.5	10.4	8.1 7.3	7.7	7.3
					Bottom	7.6	28.7 28.4	28.6	8.2 8.2	8.2	31.4 31.6	31.5	76.9 75.0	76.0	5.0 5.0	5.0	5.0	10.5 10.2	10.4		6.8 8.1	7.5	
28-Sep-15	Sunny	Moderate	11:36	8.8	Surface	1.0	29.3 29.2	29.3	8.2 8.2	8.2	29.0 29.0	29.0	77.7 77.4	77.6	5.1 5.1	5.1	5.1	11.2 11.6	11.4		6.3 7.2	6.8	
					Middle	4.4	29.2 29.2	29.2	8.2 8.2	8.2	29.2 29.1	29.1	76.9 77.0	77.0	5.0 5.0	5.0		12.0 12.3	12.2	12.0	8.7 8.2	8.5	8.0
					Bottom	7.8	29.2 29.2	29.2	8.2 8.2	8.2	29.2 29.1	29.2	77.6 77.4	77.5	5.1 5.1	5.1	5.1	12.2 12.4	12.3		8.2 8.9	8.6	
30-Sep-15	Fine	Moderate	13:10	8.4	Surface	1.0	29.0 29.0	29.0	8.2 8.2	8.2	33.2 33.2	33.2	84.6 84.5	84.6	5.5 5.5	5.5	5.5	19.1 19.4	19.3		20.8 19.1	20.0	
					Middle	4.2	29.0 29.0	29.0	8.2 8.2	8.2	33.2 33.2	33.2	84.4 84.7	84.6	5.5 5.5	5.5		19.3 19.4	19.4	19.3	22.2 21.0	21.6	21.9
					Bottom	7.4	29.0 29.0	29.0	8.2 8.2	8.2	33.2 33.2	33.2	84.6 84.3	84.5	5.5 5.5	5.5	5.5	19.5 18.9	19.2		25.2 23.1	24.2	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	09:58	8.7	Surface	1.0	26.9 26.9	26.9	8.1 8.1	8.1	30.0 30.0	30.0	84.4 81.6	83.0	5.7 5.5	5.6	5.6	16.5 16.2	16.4	16.3	15.0 15.0	15.0	15.6
					Middle	4.4	26.9 26.9	26.9	8.1 8.1	8.1	30.0 30.0	30.0	82.2 81.5	81.9	5.5 5.5	5.5		16.3 16.1	16.2		15.2 15.1	15.2	
					Bottom	7.7	26.9 26.9	26.9	8.1 8.1	8.1	30.0 30.0	30.0	81.9 81.3	81.6	5.5 5.5	5.5	5.5	16.2 16.2	16.2		16.9 16.4	16.7	
4-Sep-15	Sunny	Moderate	12:07	8.7	Surface	1.0	27.6 27.6	27.6	8.0 8.0	8.0	27.7 27.8	27.8	85.1 84.9	85.0	6.1 6.1	6.1	6.1	6.4 6.8	6.6	7.3	7.6 7.3	7.5	6.4
					Middle	4.4	27.2 27.2	27.2	8.0 8.0	8.0	28.2 28.2	28.2	83.5 83.5	83.5	6.0 6.0	6.0		7.7 7.8	7.8		6.3 5.3	5.8	
					Bottom	7.7	27.4 27.2	27.3	8.0 8.0	8.0	28.0 28.2	28.1	84.8 84.3	84.6	6.1 6.0	6.1	6.1	7.3 7.6	7.5		6.1 5.5	5.8	
7-Sep-15	Sunny	Moderate	14:56	8.7	Surface	1.0	29.3 29.3	29.3	8.1 8.1	8.1	19.3 19.3	19.3	87.1 84.5	85.8	6.0 5.8	5.9	5.6	7.5 7.7	7.6	7.7	4.9 4.2	4.6	3.5
					Middle	4.4	28.9 29.0	28.9	8.0 8.0	8.0	20.8 21.2	21.0	78.7 78.6	78.7	5.3 5.3	5.3		7.5 7.8	7.7		2.4 3.0	2.7	
					Bottom	7.7	28.7 28.5	28.6	8.0 8.0	8.0	25.0 25.3	25.1	75.1 74.5	74.8	5.2 5.1	5.1	5.1	7.6 7.7	7.7		2.9 3.3	3.1	
9-Sep-15	Sunny	Moderate	16:24	8.1	Surface	1.0	28.5 28.4	28.4	8.0 7.9	8.0	24.0 24.0	24.0	91.2 87.9	89.6	6.2 6.0	6.1	5.7	10.5 10.9	10.7	12.0	6.5 7.2	6.9	15.1
					Middle	4.1	27.5 27.5	27.5	7.9 8.0	8.0	26.9 27.0	27.0	78.0 75.3	76.7	5.3 5.1	5.2		12.3 12.1	12.2		19.4 19.6	19.5	
					Bottom	7.1	27.0 26.9	26.9	8.0 7.9	7.9	28.5 28.5	28.5	81.2 80.4	80.8	5.5 5.4	5.5	5.5	13.3 12.7	13.0		18.5 19.3	18.9	
11-Sep-15	Fine	Moderate	17:21	8.4	Surface	1.0	28.1 28.1	28.1	8.4 8.4	8.4	29.7 29.7	29.7	109.5 111.1	110.3	7.2 7.4	7.3	6.9	10.3 10.5	10.4	10.3	10.4 12.2	11.3	11.7
					Middle	4.2	27.4 27.4	27.4	8.3 8.3	8.3	31.1 30.5	30.8	97.8 98.8	98.3	6.5 6.6	6.5		10.4 10.2	10.3		11.1 12.4	11.8	
					Bottom	7.4	27.1 27.6	27.3	8.3 8.4	8.3	32.4 31.9	32.2	87.4 86.8	87.1	5.8 5.8	5.8	5.8	10.2 10.2	10.2		12.8 11.2	12.0	
14-Sep-15	Sunny	Moderate	07:51	8.3	Surface	1.0	27.2 27.2	27.2	7.8 7.8	7.8	28.8 28.8	28.8	91.0 90.5	90.8	6.1 6.1	6.1	6.0	5.3 5.3	5.3	5.6	2.6 3.2	2.9	3.5
					Middle	4.2	27.1 27.1	27.1	7.8 7.8	7.8	28.8 28.9	28.8	88.7 88.6	88.7	5.9 5.9	5.9		5.5 5.6	5.6		3.8 3.6	3.7	
					Bottom	7.3	27.1 27.2	27.1	7.8 7.8	7.8	28.9 28.8	28.9	86.2 86.5	86.4	5.8 5.8	5.8	5.8	5.8 5.9	5.9		3.7 4.2	4.0	
16-Sep-15	Fine	Moderate	09:15	8.7	Surface	1.0	27.6 27.6	27.6	8.2 8.2	8.2	31.2 31.4	31.3	86.1 85.3	85.7	5.7 5.7	5.7	5.7	7.9 7.8	7.9	8.0	8.4 9.1	8.8	8.7
					Middle	4.4	27.6 27.6	27.6	8.2 8.2	8.2	31.5 31.4	31.5	85.0 86.4	85.7	5.6 5.7	5.7		7.8 7.9	7.9		9.0 8.9	9.0	
					Bottom	7.7	27.6 27.6	27.6	8.2 8.2	8.2	31.5 31.5	31.5	85.6 88.7	87.2	5.7 5.9	5.8	5.8	8.2 8.2	8.2		8.6 8.2	8.4	
18-Sep-15	Fine	Moderate	10:42	8.8	Surface	1.0	27.8 27.8	27.8	8.2 8.1	8.2	30.8 30.8	30.8	89.7 86.1	87.9	5.9 5.7	5.8	5.8	7.2 7.0	7.1	7.2	5.6 5.6	5.6	6.5
					Middle	4.4	27.7 27.7	27.7	8.2 8.2	8.2	31.0 31.0	31.0	85.9 87.1	86.5	5.7 5.8	5.7		7.3 7.3	7.3		6.3 6.8	6.6	
					Bottom	7.8	27.7 27.8	27.7	8.2 8.1	8.2	31.1 31.0	31.0	86.5 85.2	85.9	5.7 5.6	5.7	5.7	7.2 7.2	7.2		7.1 7.4	7.3	
21-Sep-15	Cloudy	Moderate	12:17	8.5	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	22.6 22.6	22.6	84.3 87.4	85.9	5.8 6.0	5.9	5.7	8.0 8.1	8.1	8.3	3.5 2.8	3.2	3.3
					Middle	4.3	28.4 28.4	28.4	8.1 8.1	8.1	27.7 27.6	27.7	80.8 80.3	80.6	5.4 5.4	5.4		7.9 8.2	8.1		2.9 2.7	2.8	
					Bottom	7.5	28.4 28.3	28.4	8.1 8.1	8.1	29.1 29.2	29.2	85.6 83.3	84.5	5.7 5.6	5.6	5.6	8.8 8.5	8.7		4.8 3.0	3.9	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	14:51	8.1	Surface	1.0	29.3 29.1	29.2	8.3 8.3	8.3	23.8 24.4	24.1	94.1 92.4	93.3	6.3 6.2	6.3	6.0	7.1 7.1	7.1	8.6	5.4 5.2	5.3	5.6
					Middle	4.1	28.5 28.4	28.4	8.3 8.2	8.2	29.1 29.4	29.3	88.7 81.4	85.1	5.9 5.4	5.6		9.7 9.7	9.7		5.3 5.7	5.5	
					Bottom	7.1	28.8 28.5	28.6	8.3 8.2	8.3	28.9 29.5	29.2	84.7 87.1	85.9	5.7 5.7	5.7	5.7	9.2 8.9	9.1		6.4 5.6	6.0	
25-Sep-15	Sunny	Moderate	16:27	8.7	Surface	1.0	30.3 30.3	30.3	8.4 8.4	8.4	23.0 22.7	22.8	109.8 110.5	110.2	7.3 7.3	7.3	7.1	18.4 18.6	18.5	18.5	11.4 11.7	11.6	11.8
					Middle	4.4	29.8 29.6	29.7	8.3 8.3	8.3	23.5 23.6	23.5	107.3 101.1	104.2	7.1 6.7	6.9		18.5 18.4	18.5		12.3 12.4	12.4	
					Bottom	7.7	29.4 29.8	29.6	8.3 8.3	8.3	26.0 26.0	26.0	93.7 101.1	97.4	6.3 6.7	6.5	6.5	18.5 18.5	18.5		11.5 11.4	11.5	
28-Sep-15	Sunny	Moderate	07:20	8.7	Surface	1.0	29.1 29.2	29.2	8.2 8.2	8.2	28.8 28.8	28.8	85.4 84.6	85.0	5.9 5.9	5.9	5.9	10.2 10.5	10.4	11.1	8.5 7.1	7.8	8.7
					Middle	4.4	29.1 29.1	29.1	8.2 8.2	8.2	28.9 28.9	28.9	84.0 83.5	83.8	5.8 5.8	5.8		11.4 11.3	11.4		8.9 7.8	8.4	
					Bottom	7.7	29.1 29.1	29.1	8.2 8.2	8.2	29.7 29.7	29.7	87.0 84.7	85.9	6.0 5.9	5.9	5.9	11.2 11.5	11.4		10.6 9.1	9.9	
30-Sep-15	Fine	Moderate	08:36	8.7	Surface	1.0	28.9 28.9	28.9	8.2 8.2	8.2	30.3 30.3	30.3	86.4 83.2	84.8	5.7 5.5	5.6	5.6	12.0 12.1	12.1	12.1	14.5 14.2	14.4	15.7
					Middle	4.4	28.9 28.9	28.9	8.2 8.2	8.2	30.3 30.4	30.4	83.7 83.0	83.4	5.6 5.5	5.5		12.0 12.0	12.0		14.3 14.4	14.4	
					Bottom	7.7	28.9 28.9	28.9	8.2 8.2	8.2	30.4 30.4	30.4	82.7 83.9	83.3	5.5 5.6	5.5	5.5	12.1 12.5	12.3		18.7 17.9	18.3	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	14:26	3.3	Surface	1.0	27.0 27.0	27.0	8.1 8.1	8.1	29.0 29.0	29.0	86.2 80.2	83.2	5.9 5.4	5.6	5.6	8.1 8.0	8.1	8.2	6.0 4.0	5.0	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	27.0 27.0	27.0	8.1 8.1	8.1	29.0 29.0	29.0	78.8 81.3	80.1	5.3 5.5	5.4	5.4	8.1 8.2	8.2		7.2 6.9	7.1	
4-Sep-15	Sunny	Moderate	15:58	3.3	Surface	1.0	28.0 28.2	28.1	8.0 8.0	8.0	27.9 27.9	27.9	87.4 88.6	88.0	6.2 6.3	6.2	6.2	7.2 6.7	7.0	7.1	4.8 5.2	5.0	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	28.0 27.7	27.8	8.0 8.0	8.0	29.2 29.5	29.4	87.7 86.2	87.0	6.2 6.1	6.1	6.1	7.0 7.3	7.2		5.4 5.1	5.3	
7-Sep-15	Cloudy	Moderate	09:23	3.3	Surface	1.0	29.5 29.5	29.5	8.0 8.0	8.0	19.2 19.4	19.3	94.2 87.0	90.6	6.4 6.0	6.2	6.2	3.6 3.4	3.5	3.5	3.6 3.8	3.7	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	29.5 29.5	29.5	8.0 8.0	8.0	20.9 21.0	21.0	87.9 91.7	89.8	6.0 6.3	6.1	6.1	3.5 3.5	3.5		4.0 3.7	3.9	
9-Sep-15	Sunny	Moderate	11:44	3.4	Surface	1.0	28.0 28.1	28.1	8.0 7.9	8.0	22.6 22.6	22.6	93.0 95.3	94.2	6.7 6.9	6.8	6.8	4.1 4.2	4.2	4.6	3.3 3.6	3.5	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	27.1 27.5	27.3	7.9 7.8	7.9	28.6 28.1	28.4	85.8 93.0	89.4	6.1 6.6	6.4	6.4	4.9 5.0	5.0		4.8 3.9	4.4	
11-Sep-15	Fine	Moderate	12:52	3.1	Surface	1.0	28.0 27.9	27.9	8.4 8.4	8.4	28.5 28.5	28.5	129.4 132.5	131.0	8.7 8.7	8.7	8.7	3.9 3.9	3.9	3.9	4.1 4.5	4.3	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	27.8 27.6	27.7	8.4 8.3	8.4	28.6 28.8	28.7	124.2 124.7	124.5	8.3 8.3	8.3	8.3	3.8 3.9	3.9		6.6 5.7	6.2	
14-Sep-15	Sunny	Moderate	13:00	3.2	Surface	1.0	27.7 27.6	27.6	7.9 7.9	7.9	27.6 27.6	27.6	95.9 96.8	96.4	6.4 6.5	6.5	6.5	4.3 4.3	4.3	4.5	3.5 3.4	3.5	3.4
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.2	27.7 27.6	27.6	7.9 7.9	7.9	27.6 27.6	27.6	92.9 93.7	93.3	6.2 6.3	6.2	6.2	4.7 4.6	4.7		3.2 3.1	3.2	
16-Sep-15	Fine	Moderate	13:45	3.2	Surface	1.0	27.9 27.9	27.9	8.2 8.2	8.2	32.3 32.3	32.3	93.8 92.3	93.1	6.2 6.1	6.1	6.1	9.5 9.6	9.6	9.5	4.9 4.0	4.5	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.9 27.9	27.9	8.2 8.2	8.2	32.4 32.4	32.4	94.8 92.8	93.8	6.2 6.1	6.1	6.1	9.6 9.2	9.4		8.1 9.6	8.9	
18-Sep-15	Fine	Moderate	14:43	3.2	Surface	1.0	28.3 28.3	28.3	8.2 8.2	8.2	31.1 31.1	31.1	92.2 91.9	92.1	6.0 6.0	6.0	6.0	5.7 6.0	5.9	6.1	5.1 5.2	5.2	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.9 28.2	28.1	8.2 8.2	8.2	31.9 31.5	31.7	91.7 92.2	92.0	6.0 6.0	6.0	6.0	6.2 6.2	6.2		4.8 4.2	4.5	
21-Sep-15	Rainy	Moderate	06:17	3.4	Surface	1.0	28.6 28.6	28.6	8.2 8.2	8.2	22.8 22.5	22.7	84.1 88.5	86.3	5.7 6.1	5.9	5.9	3.9 4.2	4.1	4.3	2.3 3.5	2.9	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.6 28.6	28.6	8.1 8.2	8.1	25.4 24.7	25.1	80.0 86.3	83.2	5.4 5.8	5.6	5.6	4.4 4.5	4.5		3.2 3.1	3.2	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS7 - Mid-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-Sep-15	Sunny	Moderate	09:49	3.4	Surface	1.0	28.5 28.6	28.6	8.2 8.2	8.2	27.0 26.7	26.9	79.4 79.4	79.4	5.3 5.3	5.3	5.3	4.6 4.1	4.4	4.6	5.4 4.7	5.1	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.4 28.5	28.5	8.1 8.2	8.2	28.5 28.6	28.6	74.6 79.8	77.2	5.0 5.3	5.1	5.1	4.8 4.5	4.7		6.1 4.9	5.5	
25-Sep-15	Sunny	Moderate	11:20	3.2	Surface	1.0	29.8 29.6	29.7	8.3 8.3	8.3	22.7 23.2	23.0	98.5 96.3	97.4	6.6 6.5	6.5	6.5	7.5 7.0	7.3	7.4	3.2 2.7	3.0	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	29.6 29.6	29.6	8.2 8.2	8.2	24.5 24.9	24.7	95.8 93.7	94.8	6.4 6.2	6.3	6.3	7.6 7.4	7.5		4.1 2.5	3.3	
28-Sep-15	Sunny	Moderate	11:50	3.3	Surface	1.0	29.4 29.4	29.4	8.2 8.2	8.2	28.2 28.3	28.3	79.3 78.5	78.9	5.2 5.1	5.2	5.2	6.5 6.5	6.5	6.6	5.6 5.5	5.6	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	29.2 29.4	29.3	8.2 8.2	8.2	28.6 28.5	28.6	80.4 78.8	79.6	5.3 5.2	5.2	5.2	6.6 6.6	6.6		6.7 5.6	6.2	
30-Sep-15	Fine	Moderate	13:25	3.1	Surface	1.0	29.5 29.6	29.6	8.2 8.2	8.2	32.0 31.9	31.9	94.1 96.7	95.4	6.1 6.3	6.2	6.2	6.2 6.3	6.3	6.5	4.0 4.5	4.3	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	29.2 29.4	29.3	8.2 8.2	8.2	32.2 32.0	32.1	90.5 91.1	90.8	5.9 5.9	5.9	5.9	6.5 6.6	6.6		5.9 5.2	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 IS7 - 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-Sep-15	Rainy	Moderate	09:42	3.3	Surface	1.0	26.9 26.9	26.9	8.0 8.0	8.0	29.9 29.9	29.9	83.4 88.6	86.0	5.6 6.0	5.8	5.8	18.2 18.5	18.4	18.4	17.0 17.8	17.4	18.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	26.9 26.9	26.9	8.0 8.1	8.1	29.9 29.9	29.9	82.3 85.0	83.7	5.5 5.7	5.6	5.6	18.4 18.2	18.3		18.4 18.9	18.7	
4-Sep-15	Sunny	Moderate	11:46	3.3	Surface	1.0	27.7 27.8	27.8	8.0 8.0	8.0	27.6 27.5	27.6	85.7 85.0	85.4	6.1 6.1	6.1	6.1	9.7 10.0	9.9	10.0	12.0 13.5	12.8	13.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	27.7 27.7	27.7	8.0 8.0	8.0	27.8 27.6	27.7	86.9 85.2	86.1	6.2 6.1	6.1	6.1	9.9 10.1	10.0		14.2 14.1	14.2	
7-Sep-15	Sunny	Moderate	15:16	3.0	Surface	1.0	29.5 29.5	29.5	8.1 8.1	8.1	18.5 18.7	18.6	91.2 89.8	90.5	6.3 6.2	6.2	6.2	4.5 4.2	4.4	4.4	3.4 3.6	3.5	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	29.7 29.5	29.6	8.0 8.0	8.0	21.6 21.3	21.4	90.5 91.2	90.9	6.1 6.2	6.1	6.1	4.3 4.4	4.4		4.3 4.2	4.3	
9-Sep-15	Sunny	Moderate	16:41	3.1	Surface	1.0	28.7 28.7	28.7	8.0 8.0	8.0	25.1 25.1	25.1	124.1 124.7	124.4	8.4 8.4	8.4	8.4	4.6 5.0	4.8	5.1	7.7 7.7	7.7	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.1	28.7 28.7	28.7	8.0 8.0	8.0	25.1 25.1	25.1	124.3 123.9	124.1	8.4 8.3	8.4	8.4	5.6 5.2	5.4		6.7 5.4	6.1	
11-Sep-15	Fine	Moderate	17:36	3.0	Surface	1.0	28.4 28.4	28.4	8.5 8.5	8.5	29.2 29.2	29.2	115.8 116.2	116.0	7.6 7.6	7.6	7.6	8.6 8.5	8.6	8.7	7.0 6.6	6.8	8.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	28.4 28.4	28.4	8.5 8.5	8.5	29.2 29.3	29.3	116.5 115.5	116.0	7.7 7.6	7.6	7.6	8.7 8.8	8.8		8.4 9.8	9.1	
14-Sep-15	Sunny	Moderate	07:37	3.3	Surface	1.0	27.2 27.2	27.2	7.8 7.8	7.8	28.0 28.0	28.0	94.0 93.8	93.9	6.3 6.3	6.3	6.3	4.6 4.5	4.6	4.8	4.0 3.7	3.9	4.0
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.3	27.1 27.2	27.2	7.8 7.8	7.8	28.0 28.1	28.1	91.1 90.4	90.8	6.1 6.1	6.1	6.1	5.0 4.9	5.0		4.0 4.1	4.1	
16-Sep-15	Fine	Moderate	08:59	3.2	Surface	1.0	27.6 27.6	27.6	8.2 8.2	8.2	31.6 31.6	31.6	86.7 87.6	87.2	5.7 5.8	5.8	5.8	6.5 6.4	6.5	6.6	8.2 8.0	8.1	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.6 27.6	27.6	8.2 8.2	8.2	31.6 31.6	31.6	89.3 87.1	88.2	5.9 5.8	5.8	5.8	6.6 6.6	6.6		7.3 6.4	6.9	
18-Sep-15	Fine	Moderate	10:23	3.2	Surface	1.0	28.0 28.0	28.0	8.2 8.2	8.2	30.8 30.9	30.8	88.9 89.2	89.1	5.9 5.9	5.9	5.9	6.5 6.5	6.5	6.6	3.2 3.3	3.3	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	27.9 27.8	27.8	8.2 8.2	8.2	31.0 31.0	31.0	88.8 89.3	89.1	5.9 5.9	5.9	5.9	6.6 6.6	6.6		3.4 4.5	4.0	
21-Sep-15	Cloudy	Moderate	12:35	3.2	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	22.2 22.3	22.2	95.5 92.8	94.2	6.6 6.4	6.5	6.5	8.5 8.7	8.6	8.6	6.6 6.1	6.4	7.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.2	28.5 28.6	28.5	8.2 8.2	8.2	22.7 22.6	22.7	99.2 94.0	96.6	6.8 6.4	6.6	6.6	8.7 8.5	8.6		9.5 8.4	9.0	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	15:09	3.0	Surface	1.0	29.8 29.6	29.7	8.3 8.3	8.3	24.3 24.8	24.6	113.1 110.3	111.7	7.5 7.3	7.4	7.4	4.6 4.5	4.6	4.8	3.5 2.7	3.1	2.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	29.0 29.2	29.1	8.3 8.3	8.3	26.4 26.0	26.2	102.1 109.9	106.0	6.8 7.3	7.0	7.0	5.2 4.7	5.0		3.2 2.2	2.7	
25-Sep-15	Sunny	Moderate	16:41	3.0	Surface	1.0	30.6 30.5	30.6	8.4 8.4	8.4	22.8 22.9	22.9	121.8 123.9	122.9	8.0 8.2	8.1	8.1	7.5 7.7	7.6	7.6	2.1 4.1	3.1	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.0	30.0 30.5	30.2	8.3 8.4	8.4	24.3 24.2	24.3	117.8 125.5	121.7	7.8 8.2	8.0	8.0	7.5 7.4	7.5		3.7 4.7	4.2	
28-Sep-15	Sunny	Moderate	07:06	3.3	Surface	1.0	29.0 29.0	29.0	8.2 8.2	8.2	28.2 28.2	28.2	84.9 84.0	84.5	5.6 5.5	5.6	5.6	4.1 4.1	4.1	4.1	2.5 2.8	2.7	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	28.9 28.9	28.9	8.2 8.2	8.2	28.4 28.4	28.4	84.5 86.7	85.6	5.6 5.7	5.6	5.6	4.1 4.0	4.1		3.8 5.2	4.5	
30-Sep-15	Fine	Moderate	08:22	3.3	Surface	1.0	28.9 28.9	28.9	8.2 8.2	8.2	30.1 30.4	30.3	90.6 85.7	88.2	6.0 5.7	5.9	5.9	8.5 8.7	8.6	8.7	10.1 10.2	10.2	10.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	28.9 28.9	28.9	8.2 8.2	8.2	30.4 30.6	30.5	84.5 86.6	85.6	5.6 5.8	5.7	5.7	8.8 8.8	8.8		10.7 10.3	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

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-Sep-15	Rainy	Moderate	14:47	4.2	Surface	1.0	27.0 27.0	27.0	8.1 8.1	8.1	29.0 29.0	29.0	74.8 74.4	74.6	5.1 5.1	5.1	5.1	9.5 9.3	9.4	9.5	8.4 8.3	8.4	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	26.9 27.0	26.9	8.0 8.1	8.1	29.8 29.8	29.8	74.2 74.9	74.6	5.0 5.1	5.0	5.0	9.6 9.6	9.6		8.1 9.2	8.7	
4-Sep-15	Sunny	Moderate	16:23	3.7	Surface	1.0	27.8 27.9	27.9	8.0 8.0	8.0	27.4 27.4	27.4	85.1 85.4	85.3	6.1 6.1	6.1	6.1	7.3 7.2	7.3	7.4	7.8 8.4	8.1	8.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.5 27.8	27.7	8.0 8.0	8.0	29.1 29.0	29.0	85.3 84.9	85.1	6.1 6.0	6.0	6.0	7.6 7.4	7.5		8.1 8.8	8.5	
7-Sep-15	Cloudy	Moderate	08:56	3.9	Surface	1.0	29.1 29.1	29.1	8.0 8.0	8.0	18.4 18.6	18.5	88.5 89.5	89.0	6.1 6.2	6.2	6.2	8.4 8.5	8.5	8.6	3.5 2.9	3.2	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	29.2 29.2	29.2	8.0 8.0	8.0	19.0 19.1	19.1	88.9 91.3	90.1	6.1 6.3	6.2	6.2	8.6 8.5	8.6		4.9 5.1	5.0	
9-Sep-15	Sunny	Moderate	11:11	3.7	Surface	1.0	27.7 27.8	27.8	8.1 8.1	8.1	24.8 24.9	24.8	89.2 88.7	89.0	6.4 6.4	6.4	6.4	6.6 6.3	6.5	7.2	5.8 5.1	5.5	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.2 26.9	27.1	8.1 8.1	8.1	28.8 28.8	28.8	88.4 83.4	85.9	6.3 6.0	6.1	6.1	8.0 7.5	7.8		4.0 3.5	3.8	
11-Sep-15	Fine	Moderate	12:31	3.9	Surface	1.0	27.7 27.7	27.7	8.3 8.4	8.3	28.8 28.7	28.8	107.2 116.1	111.7	7.2 7.8	7.5	7.5	4.4 4.5	4.5	4.5	11.5 9.7	10.6	12.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	27.7 27.5	27.6	8.3 8.3	8.3	28.8 29.4	29.1	111.4 107.6	109.5	7.5 7.2	7.3	7.3	4.3 4.5	4.4		14.3 14.3	14.3	
14-Sep-15	Sunny	Moderate	13:18	3.7	Surface	1.0	27.3 27.6	27.4	7.8 7.8	7.8	28.7 28.4	28.6	91.4 90.8	91.1	6.1 6.1	6.1	6.1	5.1 5.2	5.2	5.3	5.0 4.9	5.0	4.2
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.7	27.2 27.6	27.4	7.8 7.8	7.8	28.8 28.5	28.7	88.4 88.0	88.2	5.9 5.9	5.9	5.9	5.3 5.4	5.4		3.2 3.5	3.4	
16-Sep-15	Fine	Moderate	14:07	3.8	Surface	1.0	27.7 27.8	27.8	8.2 8.2	8.2	32.1 32.0	32.0	85.7 86.8	86.3	5.6 5.7	5.7	5.7	6.5 6.3	6.4	6.4	6.0 5.3	5.7	5.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	27.7 27.8	27.7	8.2 8.2	8.2	32.4 32.0	32.2	85.6 86.4	86.0	5.6 5.7	5.7	5.7	6.3 6.3	6.3		5.8 6.4	6.1	
18-Sep-15	Fine	Moderate	15:06	3.9	Surface	1.0	28.1 28.1	28.1	8.2 8.2	8.2	30.7 30.9	30.8	88.0 88.3	88.2	5.8 5.8	5.8	5.8	10.1 10.4	10.3	10.3	6.3 6.5	6.4	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	27.9 28.0	27.9	8.2 8.2	8.2	31.9 31.6	31.8	87.9 87.9	87.9	5.8 5.8	5.8	5.8	10.4 10.2	10.3		5.7 6.0	5.9	
21-Sep-15	Rainy	Moderate	05:51	3.8	Surface	1.0	28.5 28.4	28.5	8.2 8.2	8.2	21.7 21.2	21.5	91.9 90.5	91.2	6.3 6.3	6.3	6.3	5.2 5.3	5.3	5.9	3.2 2.4	2.8	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	28.5 28.5	28.5	8.1 8.1	8.1	23.9 24.2	24.0	91.7 94.9	93.3	6.2 6.4	6.3	6.3	6.2 6.6	6.4		2.4 3.2	2.8	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	09:17	3.6	Surface	1.0	28.7 28.6	28.7	8.2 8.2	8.2	24.1 26.7	25.4	85.3 86.0	85.7	5.8 5.7	5.8	5.8	11.2 11.4	11.3	12.1	6.2 6.9	6.6	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	28.4 28.6	28.5	8.1 8.2	8.2	28.4 28.7	28.6	86.6 86.3	86.5	5.8 5.7	5.7	5.7	12.5 13.3	12.9		8.2 6.0	7.1	
25-Sep-15	Sunny	Moderate	10:57	3.9	Surface	1.0	29.7 29.6	29.6	8.3 8.3	8.3	22.5 22.5	22.5	103.2 98.3	100.8	6.9 6.6	6.8	6.8	11.1 11.5	11.3	11.3	3.8 3.7	3.8	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	29.3 29.6	29.5	8.2 8.3	8.3	24.3 24.2	24.3	96.1 102.1	99.1	6.4 6.8	6.6	6.6	11.2 11.3	11.3		3.9 3.6	3.8	
28-Sep-15	Sunny	Moderate	12:17	4.1	Surface	1.0	29.2 29.2	29.2	8.2 8.2	8.2	28.8 28.8	28.8	88.2 87.7	88.0	6.1 6.1	6.1	6.1	5.7 5.6	5.7	5.8	2.8 3.8	3.3	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	29.2 29.0	29.1	8.2 8.2	8.2	29.1 30.1	29.6	88.0 85.4	86.7	6.1 5.9	6.0	6.0	5.8 5.8	5.8		3.3 3.8	3.6	
30-Sep-15	Fine	Moderate	13:46	3.9	Surface	1.0	29.1 29.2	29.2	8.2 8.2	8.2	31.6 31.5	31.6	83.9 85.0	84.5	5.5 5.6	5.6	5.6	9.8 9.7	9.8	9.8	6.5 6.4	6.5	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	28.9 29.2	29.0	8.2 8.2	8.2	32.1 31.7	31.9	84.0 85.1	84.6	5.5 5.6	5.6	5.6	9.8 9.8	9.8		7.6 7.2	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

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-Sep-15	Rainy	Moderate	09:19	3.8	Surface	1.0	27.0 27.0	27.0	8.0 8.0	8.0	28.3 28.3	28.3	80.7 82.5	81.6	5.4 5.6	5.5	5.5	9.4 9.6	9.5	9.5	6.8 7.5	7.2	7.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	27.0 27.0	27.0	8.0 8.0	8.0	28.7 28.8	28.8	80.3 81.5	80.9	5.4 5.5	5.5	5.5	9.5 9.5	9.5		6.3 7.8	7.1	
4-Sep-15	Sunny	Moderate	11:22	3.7	Surface	1.0	27.5 27.7	27.6	8.0 8.0	8.0	25.8 25.6	25.7	79.6 81.7	80.7	5.8 5.9	5.8	5.8	8.9 8.5	8.7	9.4	10.5 8.1	9.3	8.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.6 27.4	27.5	8.0 7.9	7.9	26.0 26.4	26.2	80.2 79.8	80.0	5.8 5.8	5.8	5.8	10.2 9.8	10.0		7.8 8.2	8.0	
7-Sep-15	Sunny	Moderate	15:37	3.9	Surface	1.0	29.2 29.2	29.2	8.1 8.1	8.1	18.0 18.0	18.0	89.1 88.9	89.0	6.2 6.2	6.2	6.2	8.7 8.4	8.6	8.7	8.2 7.7	8.0	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	29.3 29.2	29.3	8.0 8.0	8.0	20.2 20.2	20.2	89.5 89.4	89.5	6.1 6.1	6.1	6.1	8.7 8.7	8.7		7.8 7.4	7.6	
9-Sep-15	Sunny	Moderate	17:14	3.4	Surface	1.0	27.6 27.7	27.7	8.0 7.9	8.0	27.0 27.0	27.0	95.0 96.2	95.6	6.4 6.5	6.5	6.5	10.4 11.0	10.7	11.4	17.8 17.7	17.8	15.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	27.6 27.6	27.6	7.9 8.0	8.0	27.2 27.2	27.2	96.6 95.8	96.2	6.5 6.5	6.5	6.5	11.7 12.3	12.0		14.0 13.6	13.8	
11-Sep-15	Fine	Moderate	17:56	3.9	Surface	1.0	27.8 27.8	27.8	8.3 8.3	8.3	29.2 29.4	29.3	106.9 110.7	108.8	7.1 7.4	7.3	7.3	10.1 10.2	10.2	10.3	17.7 17.3	17.5	23.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	27.9 27.5	27.7	8.3 8.3	8.3	30.2 30.6	30.4	110.3 104.7	107.5	7.3 7.0	7.1	7.1	10.5 10.2	10.4		29.7 27.4	28.6	
14-Sep-15	Sunny	Moderate	07:19	3.8	Surface	1.0	26.9 26.9	26.9	7.8 7.8	7.8	29.2 29.3	29.3	87.1 88.0	87.6	5.8 5.9	5.9	5.9	6.1 6.2	6.2	6.3	3.6 4.3	4.0	4.2
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.8	26.9 26.9	26.9	7.8 7.8	7.8	29.2 29.3	29.3	85.3 83.2	84.3	5.7 5.6	5.6	5.6	6.4 6.4	6.4		4.0 4.6	4.3	
16-Sep-15	Fine	Moderate	08:37	4.0	Surface	1.0	27.4 27.4	27.4	8.1 8.1	8.1	30.9 31.0	30.9	85.0 83.8	84.4	5.7 5.6	5.6	5.6	8.2 8.1	8.2	8.2	10.9 9.9	10.4	9.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	27.4 27.4	27.4	8.1 8.1	8.1	31.1 31.0	31.0	86.7 84.6	85.7	5.8 5.6	5.7	5.7	8.2 8.2	8.2		8.3 8.3	8.3	
18-Sep-15	Fine	Moderate	10:04	3.7	Surface	1.0	27.8 27.8	27.8	8.1 8.1	8.1	28.8 28.7	28.7	82.0 81.6	81.8	5.5 5.5	5.5	5.5	11.0 11.8	11.4	11.3	5.2 4.3	4.8	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.8 27.6	27.7	8.1 8.1	8.1	30.0 29.4	29.7	82.1 81.2	81.7	5.5 5.4	5.4	5.4	11.1 11.2	11.2		5.2 4.4	4.8	
21-Sep-15	Cloudy	Moderate	13:06	3.4	Surface	1.0	28.5 28.5	28.5	8.1 8.2	8.2	21.1 20.9	21.0	89.4 92.8	91.1	6.2 6.4	6.3	6.3	13.8 14.2	14.0	14.6	4.6 4.6	4.6	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.5 28.5	28.5	8.1 8.1	8.1	23.4 23.1	23.2	96.3 90.7	93.5	6.6 6.2	6.4	6.4	15.1 15.1	15.1		9.0 9.0	9.0	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	15:40	3.3	Surface	1.0	29.1 29.1	29.1	8.3 8.3	8.3	24.7 24.5	24.6	99.2 100.1	99.7	6.7 6.7	6.7	6.7	10.6 10.4	10.5	11.1	7.0 6.9	7.0	7.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.3	29.0 29.1	29.0	8.2 8.2	8.2	25.6 24.8	25.2	100.1 100.1	100.1	6.7 6.7	6.7	6.7	11.3 11.8	11.6		8.1 7.8	8.0	
25-Sep-15	Sunny	Moderate	17:06	3.8	Surface	1.0	29.9 29.8	29.9	8.3 8.3	8.3	22.2 22.3	22.2	108.4 107.3	107.9	7.3 7.2	7.2	7.2	16.6 16.4	16.5	16.5	3.4 2.9	3.2	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	29.8 29.9	29.8	8.3 8.3	8.3	22.9 23.2	23.0	108.1 109.0	108.6	7.2 7.3	7.3	7.3	16.4 16.5	16.5		4.3 4.3	4.3	
28-Sep-15	Sunny	Moderate	06:43	4.1	Surface	1.0	28.9 28.9	28.9	8.2 8.2	8.2	28.4 28.4	28.4	84.8 85.6	85.2	5.9 6.0	5.9	5.9	7.5 7.7	7.6	7.6	3.5 2.6	3.1	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	29.0 29.0	29.0	8.2 8.2	8.2	29.5 29.4	29.5	84.4 85.5	85.0	5.9 5.9	5.9	5.9	7.5 7.4	7.5		3.5 2.1	2.8	
30-Sep-15	Fine	Moderate	07:59	3.9	Surface	1.0	28.9 28.9	28.9	8.2 8.2	8.2	29.2 29.2	29.2	85.3 83.9	84.6	5.7 5.6	5.7	5.7	11.5 11.5	11.5	11.6	8.2 7.9	8.1	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	28.8 28.9	28.8	8.2 8.2	8.2	29.5 29.4	29.5	84.1 83.4	83.8	5.6 5.6	5.6	5.6	11.5 11.7	11.6		7.6 7.8	7.7	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	15:00	10.1	Surface	1.0	26.9 26.9	26.9	8.1 8.1	8.1	29.2 29.2	29.2	81.6 84.4	83.0	5.5 5.7	5.6	5.6	9.8 9.5	9.7	9.8	8.1 7.6	7.9	8.8
					Middle	5.1	26.7 26.7	26.7	8.1 8.1	8.1	29.4 29.5	29.4	81.6 80.9	81.3	5.5 5.5	5.5		9.7 9.8	9.8		8.8 9.6	9.2	
					Bottom	9.1	26.8 26.5	26.6	8.0 8.1	8.1	30.7 31.0	30.9	79.7 80.0	79.9	5.4 5.4	5.4	5.4	9.7 9.9	9.8		8.8 9.5	9.2	
4-Sep-15	Sunny	Moderate	16:39	10.8	Surface	1.0	27.6 27.6	27.6	8.0 8.0	8.0	27.7 27.5	27.6	79.1 79.3	79.2	5.7 5.7	5.7	5.5	10.7 10.2	10.5	11.8	9.4 7.9	8.7	9.1
					Middle	5.4	26.4 26.4	26.4	8.0 8.0	8.0	31.1 31.4	31.3	74.7 72.9	73.8	5.4 5.3	5.3		12.5 12.4	12.5		9.5 8.3	8.9	
					Bottom	9.8	26.6 26.3	26.5	8.0 7.9	8.0	31.5 31.7	31.6	75.7 74.5	75.1	5.4 5.3	5.4	5.4	12.7 12.2	12.5		9.0 10.4	9.7	
7-Sep-15	Cloudy	Moderate	08:39	10.1	Surface	1.0	29.0 28.9	29.0	8.0 8.0	8.0	17.0 17.0	17.0	80.4 78.4	79.4	5.6 5.5	5.6	5.4	3.3 3.3	3.3	3.6	2.5 3.0	2.8	4.8
					Middle	5.1	28.3 28.1	28.2	8.0 8.0	8.0	23.1 22.9	23.0	74.6 75.2	74.9	5.1 5.1	5.1		3.8 3.8	3.8		6.8 6.0	6.4	
					Bottom	9.1	26.2 26.1	26.1	7.9 7.9	7.9	32.3 32.6	32.4	73.7 71.8	72.8	5.0 4.8	4.9	4.9	3.8 3.8	3.8		4.7 5.7	5.2	
9-Sep-15	Sunny	Moderate	10:47	10.7	Surface	1.0	27.3 27.3	27.3	8.0 8.0	8.0	26.5 26.5	26.5	85.3 84.7	85.0	6.2 6.1	6.1	5.6	4.1 4.3	4.2	6.1	2.6 3.2	2.9	4.0
					Middle	5.4	26.3 26.4	26.4	8.0 8.0	8.0	30.4 30.0	30.2	69.5 69.9	69.7	5.1 5.1	5.1		6.5 6.0	6.3		4.9 5.2	5.1	
					Bottom	9.7	26.1 26.3	26.2	8.0 8.0	8.0	32.5 31.2	31.9	75.6 73.7	74.7	5.4 5.3	5.4	5.4	8.0 7.6	7.8		3.4 4.6	4.0	
11-Sep-15	Fine	Moderate	12:17	10.7	Surface	1.0	27.6 27.7	27.6	8.2 8.2	8.2	25.3 25.5	25.4	90.2 91.4	90.8	6.2 6.3	6.2	5.8	4.8 4.8	4.8	5.3	4.4 3.4	3.9	4.4
					Middle	5.4	26.6 26.6	26.6	8.1 8.1	8.1	31.2 30.9	31.1	79.8 78.6	79.2	5.3 5.3	5.3		5.7 5.5	5.6		5.1 5.0	5.1	
					Bottom	9.7	26.5 26.4	26.4	8.1 8.1	8.1	33.4 33.5	33.4	76.2 74.5	75.4	5.1 5.0	5.1	5.1	5.6 5.5	5.6		4.2 4.1	4.2	
14-Sep-15	Sunny	Moderate	13:31	10.6	Surface	1.0	27.1 27.1	27.1	7.8 7.8	7.8	29.2 29.0	29.1	92.9 92.9	92.9	6.2 6.2	6.2	6.2	4.9 5.0	5.0	5.2	4.2 5.0	4.6	4.8
					Middle	5.3	27.2 27.1	27.1	7.8 7.8	7.8	30.3 29.5	29.9	90.8 91.3	91.1	6.1 6.1	6.1		5.3 5.1	5.2		5.4 4.7	5.1	
					Bottom	9.6	27.4 27.1	27.2	7.8 7.8	7.8	30.4 30.2	30.3	89.5 88.9	89.2	6.0 6.0	6.0	6.0	5.3 5.3	5.3		5.0 4.1	4.6	
16-Sep-15	Fine	Moderate	14:21	10.2	Surface	1.0	27.7 27.7	27.7	8.2 8.2	8.2	32.2 32.3	32.2	84.4 83.5	84.0	5.6 5.5	5.5	5.5	7.4 7.8	7.6	7.6	5.3 5.2	5.3	5.3
					Middle	5.1	27.4 27.5	27.5	8.2 8.2	8.2	33.1 32.9	33.0	83.4 81.2	82.3	5.5 5.3	5.4		7.7 7.5	7.6		5.0 4.6	4.8	
					Bottom	9.2	27.5 27.2	27.3	8.2 8.2	8.2	35.0 34.8	34.9	81.2 81.2	81.2	5.3 5.3	5.3	5.3	7.7 7.5	7.6		5.8 5.9	5.9	
18-Sep-15	Fine	Moderate	15:19	9.9	Surface	1.0	28.4 28.4	28.4	8.2 8.2	8.2	26.8 27.3	27.1	83.9 79.7	81.8	5.5 5.3	5.4	5.3	6.4 6.4	6.4	6.6	6.2 5.6	5.9	5.8
					Middle	5.0	27.5 27.6	27.6	8.2 8.2	8.2	33.1 33.5	33.3	77.2 80.1	78.7	5.1 5.4	5.2		6.6 6.6	6.6		5.9 6.1	6.0	
					Bottom	8.9	27.5 27.5	27.5	8.2 8.1	8.2	34.0 34.1	34.1	77.8 76.5	77.2	5.1 5.0	5.0	5.0	6.6 6.7	6.7		5.3 5.6	5.5	
21-Sep-15	Rainy	Moderate	05:38	10.8	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	19.3 19.5	19.4	85.9 85.6	85.8	6.0 6.0	6.0	5.8	3.8 3.7	3.8	4.4	2.3 2.9	2.6	2.5
					Middle	5.4	28.4 28.4	28.4	8.1 8.1	8.1	23.6 23.7	23.7	81.7 83.1	82.4	5.6 5.7	5.6		4.9 4.6	4.8		2.4 2.5	2.5	
					Bottom	9.8	28.4 28.4	28.4	8.1 8.1	8.1	25.6 26.3	26.0	82.4 83.9	83.2	5.6 5.6	5.6	5.6	4.5 4.6	4.6		2.3 2.6	2.5	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	08:56	10.6	Surface	1.0	28.4 28.4	28.4	8.2 8.2	8.2	24.8 24.7	24.7	80.6 82.6	81.6	5.5 5.6	5.5	5.6	3.1 3.3	3.2	3.9	3.2 4.1	3.7	3.6
					Middle	5.3	28.2 28.3	28.2	8.2 8.1	8.2	29.4 28.3	28.8	83.7 89.5	86.6	5.6 5.9	5.7		4.6 4.2	4.4		3.5 3.5	3.5	
					Bottom	9.6	28.2 28.3	28.3	8.2 8.1	8.1	31.6 29.9	30.8	77.8 80.6	79.2	5.2 5.3	5.3	5.3	4.2 4.0	4.1		3.6 3.6	3.6	
25-Sep-15	Sunny	Moderate	10:41	9.9	Surface	1.0	29.0 29.2	29.1	8.2 8.3	8.3	22.9 21.2	22.1	86.6 87.6	87.1	5.8 6.0	5.9	5.7	5.2 5.3	5.3	8.2	4.2 3.3	3.8	4.0
					Middle	5.0	28.8 28.9	28.8	8.2 8.2	8.2	25.8 26.4	26.1	80.0 85.1	82.6	5.3 5.6	5.4		8.3 8.2	8.3		4.2 3.8	4.0	
					Bottom	8.9	28.7 28.7	28.7	8.2 8.2	8.2	31.0 31.5	31.2	82.0 78.4	80.2	5.5 5.2	5.3	5.3	11.1 10.8	11.0		4.3 4.2	4.3	
28-Sep-15	Sunny	Moderate	12:30	10.5	Surface	1.0	28.9 28.8	28.9	8.2 8.2	8.2	31.1 31.7	31.4	79.9 80.4	80.2	5.5 5.6	5.5	5.5	10.5 10.3	10.4	10.3	4.9 4.0	4.5	5.0
					Middle	5.3	28.7 28.7	28.7	8.2 8.2	8.2	32.6 33.3	33.0	79.8 78.8	79.3	5.5 5.4	5.5		10.1 10.5	10.3		4.8 4.6	4.7	
					Bottom	9.5	28.7 28.7	28.7	8.2 8.2	8.2	33.4 33.4	33.4	80.8 79.1	80.0	5.6 5.4	5.5	5.5	10.2 10.4	10.3		5.7 5.7	5.7	
30-Sep-15	Fine	Moderate	14:01	10.3	Surface	1.0	29.4 29.4	29.4	8.2 8.2	8.2	31.4 31.3	31.3	84.6 85.2	84.9	5.6 5.6	5.6	5.5	8.1 8.3	8.2	8.4	5.4 5.3	5.4	6.2
					Middle	5.2	29.1 29.1	29.1	8.2 8.2	8.2	32.1 32.2	32.1	81.5 79.7	80.6	5.3 5.2	5.3		8.5 8.5	8.5		6.8 7.0	6.9	
					Bottom	9.3	28.9 28.8	28.8	8.2 8.2	8.2	33.5 33.4	33.4	80.7 80.1	80.4	5.3 5.3	5.3	5.3	8.6 8.5	8.6		6.4 6.2	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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at IS17 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	09:02	10.3	Surface	1.0	27.1 27.1	27.1	8.0 8.0	8.0	27.8 27.7	27.8	80.1 78.1	79.1	5.4 5.3	5.3	5.3	10.1 10.4	10.3	10.3	6.4 6.8	6.6	8.8
					Middle	5.2	26.8 26.8	26.8	8.0 8.0	8.0	29.7 29.7	29.7	77.5 79.4	78.5	5.2 5.4	5.3		10.2 10.1	10.2		8.6 9.2	8.9	
					Bottom	9.3	26.9 26.8	26.8	8.0 8.0	8.0	29.7 29.8	29.8	75.5 76.6	76.1	5.1 5.2	5.1	5.1	10.5 10.2	10.4		11.2 10.7	11.0	
4-Sep-15	Sunny	Moderate	11:08	10.6	Surface	1.0	27.0 26.9	27.0	8.0 8.0	8.0	27.2 27.5	27.4	74.4 73.4	73.9	5.4 5.3	5.4	5.4	7.8 8.4	8.1	8.5	7.0 6.1	6.6	7.3
					Middle	5.3	26.6 26.5	26.6	8.0 8.0	8.0	28.6 29.5	29.1	73.0 72.2	72.6	5.3 5.2	5.3		8.8 8.3	8.6		6.9 7.3	7.1	
					Bottom	9.6	26.4 26.5	26.5	8.0 8.0	8.0	30.2 30.0	30.1	72.9 72.8	72.9	5.3 5.3	5.3	5.3	8.5 9.0	8.8		8.5 7.7	8.1	
7-Sep-15	Sunny	Moderate	15:55	10.6	Surface	1.0	29.0 29.0	29.0	8.1 8.1	8.1	17.5 18.0	17.7	81.5 82.1	81.8	5.7 5.7	5.7	5.5	7.1 7.0	7.1	7.1	1.6 1.4	1.5	2.3
					Middle	5.3	28.1 27.9	28.0	8.0 8.0	8.0	21.5 22.6	22.0	76.9 78.3	77.6	5.2 5.3	5.2		7.2 7.2	7.2		2.3 2.5	2.4	
					Bottom	9.6	27.5 28.0	27.7	7.9 7.9	7.9	29.1 26.8	28.0	70.6 72.1	71.4	4.9 5.0	4.9	4.9	7.1 7.1	7.1		3.3 2.7	3.0	
9-Sep-15	Sunny	Moderate	17:32	10.1	Surface	1.0	27.8 27.9	27.9	8.1 8.0	8.1	25.9 25.8	25.8	92.5 89.0	90.8	6.3 6.1	6.2	5.7	3.8 3.9	3.9	4.8	4.5 4.7	4.6	5.1
					Middle	5.1	26.5 26.4	26.5	8.1 8.0	8.0	29.6 29.8	29.7	76.9 76.8	76.9	5.2 5.2	5.2		4.9 4.8	4.9		4.4 4.4	4.4	
					Bottom	9.1	26.5 26.5	26.5	8.1 7.9	8.0	30.1 30.2	30.1	89.6 82.8	86.2	6.1 5.6	5.9	5.9	5.8 5.5	5.7		6.3 6.2	6.3	
11-Sep-15	Fine	Moderate	18:13	10.5	Surface	1.0	27.7 27.8	27.7	8.3 8.3	8.3	27.1 27.1	27.1	98.3 98.1	98.2	6.7 6.6	6.6	6.1	6.7 6.5	6.6	6.6	5.4 5.6	5.5	4.7
					Middle	5.3	27.2 26.8	27.0	8.2 8.2	8.2	30.4 30.7	30.6	80.0 84.4	82.2	5.4 5.6	5.5		6.6 6.6	6.6		4.0 3.7	3.9	
					Bottom	9.5	26.5 26.3	26.4	8.2 8.1	8.2	33.4 33.7	33.5	79.8 79.2	79.5	5.4 5.3	5.4	5.4	6.5 6.6	6.6		4.5 4.9	4.7	
14-Sep-15	Sunny	Moderate	07:07	10.9	Surface	1.0	26.8 26.8	26.8	7.8 7.8	7.8	30.0 30.3	30.2	89.2 86.8	88.0	6.0 5.8	5.9	5.9	4.1 4.0	4.1	4.3	4.2 3.8	4.0	3.8
					Middle	5.5	26.7 26.7	26.7	7.8 7.8	7.8	30.8 30.8	30.8	86.9 85.7	86.3	5.8 5.7	5.8		4.2 4.3	4.3		3.3 2.9	3.1	
					Bottom	9.9	26.8 26.8	26.8	7.8 7.8	7.8	30.8 33.1	31.9	84.7 83.5	84.1	5.7 5.6	5.6	5.6	4.4 4.5	4.5		4.2 4.2	4.2	
16-Sep-15	Fine	Moderate	08:24	10.1	Surface	1.0	27.4 27.4	27.4	8.2 8.2	8.2	31.1 31.4	31.3	80.8 81.9	81.4	5.4 5.4	5.4	5.4	10.2 10.5	10.4	10.5	5.4 4.9	5.2	5.7
					Middle	5.1	27.3 27.3	27.3	8.2 8.2	8.2	32.4 32.4	32.4	81.6 80.4	81.0	5.4 5.3	5.3		10.3 10.6	10.5		6.0 5.9	6.0	
					Bottom	9.1	27.2 27.3	27.2	8.2 8.1	8.2	33.8 33.8	33.8	80.0 79.7	79.9	5.3 5.3	5.3	5.3	10.2 10.8	10.5		5.1 6.4	5.8	
18-Sep-15	Fine	Moderate	09:44	11.0	Surface	1.0	27.8 27.6	27.7	8.1 8.1	8.1	29.6 30.2	29.9	79.7 81.9	80.8	5.3 5.4	5.4	5.3	5.6 5.8	5.7	12.1	4.0 3.4	3.7	5.5
					Middle	5.5	27.5 27.5	27.5	8.1 8.2	8.2	32.5 32.3	32.4	79.6 78.8	79.2	5.3 5.2	5.2		14.5 14.2	14.4		5.0 5.4	5.2	
					Bottom	10.0	27.5 27.5	27.5	8.2 8.1	8.1	32.6 32.6	32.6	77.8 77.4	77.6	5.1 5.1	5.1	5.1	16.5 15.8	16.2		7.8 7.4	7.6	
21-Sep-15	Cloudy	Moderate	13:28	11.1	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	21.5 21.6	21.5	88.2 87.8	88.0	6.1 6.1	6.1	5.9	2.6 2.7	2.7	2.7	4.2 3.0	3.6	3.2
					Middle	5.6	28.4 28.4	28.4	8.1 8.1	8.1	24.2 24.3	24.3	84.4 83.8	84.1	5.7 5.7	5.7		2.7 2.8	2.8		3.1 2.2	2.7	
					Bottom	10.1	28.4 28.4	28.4	8.1 8.1	8.1	25.0 25.1	25.0	84.4 82.9	83.7	5.7 5.6	5.7	5.7	2.7 2.7	2.7		3.8 2.8	3.3	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	16:00	10.7	Surface	1.0	28.6 28.7	28.7	8.2 8.2	8.2	25.4 25.5	25.4	85.1 88.5	86.8	5.7 5.9	5.8	5.6	3.9 4.1	4.0	3.8	5.9 4.8	5.4	5.6
					Middle	5.4	28.4 28.4	28.4	8.2 8.2	8.2	29.7 29.7	29.7	80.6 83.0	81.8	5.3 5.5	5.4		3.6 3.7	3.7		5.7 5.7	5.7	
					Bottom	9.7	28.5 28.4	28.4	8.2 8.2	8.2	30.4 30.8	30.6	85.8 80.9	83.4	5.6 5.3	5.5	5.5	3.7 3.5	3.6		5.3 5.9	5.6	
25-Sep-15	Sunny	Moderate	17:18	10.5	Surface	1.0	29.8 29.6	29.7	8.3 8.3	8.3	21.9 22.3	22.1	97.4 93.6	95.5	6.6 6.3	6.4	6.0	7.4 7.4	7.4	7.3	6.8 7.0	6.9	7.0
					Middle	5.3	28.7 29.0	28.8	8.2 8.3	8.2	27.5 25.9	26.7	90.2 80.1	85.2	5.8 5.2	5.5		7.3 7.2	7.3		6.3 6.8	6.6	
					Bottom	9.5	28.9 28.6	28.7	8.2 8.2	8.2	31.9 31.9	31.9	80.8 78.6	79.7	5.4 5.1	5.2	5.2	7.5 7.1	7.3		8.0 7.1	7.6	
28-Sep-15	Sunny	Moderate	06:30	11.0	Surface	1.0	28.8 28.8	28.8	8.2 8.2	8.2	29.2 29.2	29.2	83.2 83.7	83.5	5.8 5.8	5.8	5.7	6.8 6.7	6.8	6.9	3.9 3.4	3.7	3.3
					Middle	5.5	28.8 28.8	28.8	8.2 8.2	8.2	32.6 32.6	32.6	81.0 80.3	80.7	5.6 5.5	5.6		6.8 6.9	6.9		3.2 3.3	3.3	
					Bottom	10.0	28.8 28.8	28.8	8.2 8.2	8.2	32.8 32.7	32.8	81.0 82.3	81.7	5.6 5.7	5.6	5.6	6.9 6.9	6.9		3.0 2.5	2.8	
30-Sep-15	Fine	Moderate	07:45	10.1	Surface	1.0	28.8 28.8	28.8	8.2 8.2	8.2	29.8 29.9	29.8	82.3 80.8	81.6	5.5 5.4	5.4	5.4	15.7 15.3	15.5	15.8	6.2 6.1	6.2	8.3
					Middle	5.1	28.8 28.8	28.8	8.2 8.2	8.2	30.4 29.8	30.1	80.4 80.9	80.7	5.3 5.4	5.4		15.4 16.2	15.8		8.5 8.6	8.6	
					Bottom	9.1	28.8 28.8	28.8	8.2 8.2	8.2	31.8 31.7	31.8	79.6 81.4	80.5	5.3 5.4	5.4	5.4	15.9 16.5	16.2		10.6 9.6	10.1	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	5.7	-	-	20.5	-	-	23.5
							-		-		-		-		-			-			-		
					Middle	0.7	26.8	26.8	8.0	8.0	29.0	29.0	84.4	84.9	5.7	5.7		20.4	20.5		23.2	23.5	
							26.8		8.0		29.0		85.3		5.8			20.5			23.7		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
4-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-	7.4	-	-	7.9
							-		-		-		-		-			-			-		
					Middle	0.8	27.9	27.9	8.0	8.0	28.6	28.6	89.5	90.0	6.3	6.4		7.4	7.4		8.5	7.9	
							27.9		7.9		28.5		90.5		6.4			7.3			7.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
7-Sep-15	Cloudy	Moderate	-	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	6.3	-	-	3.8	-	-	2.8
							-		-		-		-		-			-			-		
					Middle	0.9	29.4	29.4	8.1	8.1	19.2	19.2	90.9	91.2	6.3	6.3		3.8	3.8		2.7	2.8	
							29.4		8.1		19.2		91.4		6.3			3.8			2.8		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
9-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	4.3	-	-	8.0
							-		-		-		-		-			-			-		
					Middle	0.8	27.6	27.6	7.9	7.9	24.6	24.7	94.6	94.1	6.8	6.8		4.1	4.3		7.4	8.0	
							27.6		7.9		24.7		93.6		6.7			4.4			8.5		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
11-Sep-15	Fine	Moderate	-	1.2	Surface	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-	6.1	-	-	7.3
							-		-		-		-		-			-			-		
					Middle	0.6	27.6	27.6	8.2	8.2	27.0	27.0	94.4	95.1	6.4	6.4		6.1	6.1		7.4	7.3	
							27.6		8.2		26.9		95.7		6.5			6.0			7.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
14-Sep-15	Sunny	Moderate	0	1.2	Surface	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	6.7	-	-	4.4
							0.0		-		0.0		0.0		0.0			0.0			-		
					Middle	0.6	27.4	27.4	8.0	8.0	27.4	27.4	87.2	87.0	5.8	5.8		6.6	6.7		4.5	4.4	
							27.4		8.0		27.5		86.8		5.8			6.8			4.2		
					Bottom	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		-	-	
							0.0		-		0.0		0.0		0.0			0.0			-		
16-Sep-15	Fine	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.1	-	-	10.9	-	-	12.0
							-		-		-		-		-			-			-		
					Middle	0.8	27.8	27.8	8.3	8.3	30.0	29.6	88.9	91.1	5.9	6.1		10.9	10.9		11.8	12.0	
							27.8		8.4		29.2		93.2		6.2			10.8			12.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
18-Sep-15	Fine	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	5.9	-	-	8.3	-	-	7.6
							-		-		-		-		-			-			-		
					Middle	0.8	28.3	28.3	8.3	8.3	31.7	31.8	91.8	90.9	6.0	5.9		8.2	8.3		7.3	7.6	
							28.3		8.3		32.0		90.0		5.9			8.4			7.9		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		
21-Sep-15	Rainy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.0	-	-	6.9	-	-	10.1
							-		-		-		-		-			-			-		
					Middle	0.7	28.5	28.5	8.2	8.2	23.5	23.5	88.3	88.6	6.0	6.0		7.1	6.9		10.2	10.1	
							28.5		8.2		23.6		88.9		6.1			6.7			10.0		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
							-		-		-		-		-			-			-		

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.0	-	-	4.6	-	-	5.4
					Middle	0.8	28.5 28.6	28.6	8.2 8.2	8.2	23.0 23.0	23.0	86.5 87.9	87.2	5.9 6.0	6.0		4.6 4.6	4.6		5.3 5.4	5.4	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
25-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.2	-	-	5.3	-	-	4.9
					Middle	0.8	29.6 29.2	29.4	8.3 8.3	8.3	22.1 22.3	22.2	94.1 88.9	91.5	6.3 6.0	6.2		5.2 5.3	5.3		4.4 5.3	4.9	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
28-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	5.4	-	-	7.8	-	-	7.3
					Middle	0.8	29.3 29.3	29.3	8.3 8.3	8.3	29.1 29.1	29.1	81.7 82.9	82.3	5.3 5.4	5.4		7.8 7.8	7.8		7.6 7.0	7.3	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
30-Sep-15	Fine	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	5.7	-	-	17.8	-	-	23.5
					Middle	0.7	29.0 29.0	29.0	8.3 8.3	8.3	32.7 32.9	32.8	88.9 86.7	87.8	5.8 5.7	5.7		17.8 17.8	17.8		23.6 23.4	23.5	
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{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-Sep-15	Rainy	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	5.5	-	-	15.6	-	-	16.0
					Middle	0.7	26.9	26.9	8.1	8.1	30.0	30.0	81.4	81.3	5.5	5.5		15.6	15.6		16.4	16.0	
							26.9		8.1		30.0		81.2		5.5			15.6			15.5		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
4-Sep-15	Sunny	Moderate	-	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	6.2	-	-	4.2	-	-	4.7
					Middle	0.9	27.8	27.8	8.0	8.0	27.6	27.6	87.3	87.2	6.2	6.2		4.2	4.2		4.1	4.7	
							27.8		8.0		27.6		87.1		6.2			4.2			5.2		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
7-Sep-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.5	-	-	4.8	-	-	2.7
					Middle	0.7	29.3	29.3	8.1	8.1	19.1	19.3	94.9	94.3	6.5	6.5		4.7	4.8		2.4	2.7	
							29.3		8.1		19.4		93.7		6.4			4.8			2.9		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
9-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.3	-	-	4.9	-	-	6.1
					Middle	0.8	28.6	28.6	8.1	8.1	22.8	22.8	105.9	107.6	7.2	7.3		5.0	4.9		5.8	6.1	
							28.6		8.1		22.9		109.3		7.5			4.8			6.4		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
11-Sep-15	Fine	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	8.6	-	-	7.4	-	-	11.8
					Middle	0.8	28.3	28.4	8.5	8.5	29.6	29.6	127.6	130.6	8.4	8.6		7.5	7.4		11.5	11.8	
							28.4		8.5		29.5		133.6		8.8			7.3			12.1		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
14-Sep-15	Sunny	Moderate	0	1.4	Surface	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	5.3	-	-	5.1
					Middle	0.7	27.1	27.2	7.8	7.8	28.9	28.9	85.0	84.8	5.7	5.7		5.4	5.3		5.2	5.1	
							27.2		7.8		28.9		84.6		5.7			5.2			5.0		
					Bottom	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		-	-	
16-Sep-15	Fine	Moderate	-	1.8	Surface	-	-	-	-	-	-	-	-	-	-	-	5.6	-	-	7.5	-	-	8.0
					Middle	0.9	27.6	27.6	8.1	8.1	31.2	31.2	85.0	85.0	5.6	5.6		7.5	7.5		8.2	8.0	
							27.6		8.1		31.2		84.9		5.6			7.5			7.8		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
18-Sep-15	Fine	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	5.7	-	-	6.7	-	-	7.5
					Middle	0.8	27.8	27.8	8.1	8.1	30.8	30.8	85.9	86.0	5.7	5.7		6.7	6.7		7.3	7.5	
							27.8		8.1		30.8		86.1		5.7			6.7			7.7		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
21-Sep-15	Cloudy	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	3.8	-	-	3.3
					Middle	0.8	28.4	28.4	8.3	8.3	22.4	22.4	100.2	99.1	6.9	6.8		3.7	3.8		2.9	3.3	
							28.4		8.2		22.5		97.9		6.7			3.8			3.7		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR3 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{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-Sep-15	Sunny	Moderate	-	1.6	Surface	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-		-	-	
					Middle	0.8	29.5	29.5	8.5	8.5	22.2	22.1	108.4	106.9	7.3	7.2		3.3	3.2	3.2	4.5	4.5	4.5
							29.5		8.5		22.0		105.4		7.1			3.1			4.5		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
25-Sep-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	8.3	-	-		-	-	
					Middle	0.7	30.5	30.5	8.5	8.5	21.8	21.6	124.5	124.8	8.3	8.3		9.9	9.9	9.9	11.3	11.5	11.5
							30.5		8.5		21.5		125.0		8.3			9.8			11.6		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
28-Sep-15	Sunny	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	6.0	-	-		-	-	
					Middle	0.7	29.2	29.2	8.2	8.2	28.7	28.8	86.7	86.8	6.0	6.0		7.9	7.9	7.9	8.4	8.2	8.2
							29.2		8.2		28.8		86.8		6.0			7.9			7.9		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
30-Sep-15	Fine	Moderate	-	1.4	Surface	-	-	-	-	-	-	-	-	-	-	-	5.5	-	-		-	-	
					Middle	0.7	28.9	28.9	8.2	8.2	30.2	30.3	82.2	82.2	5.5	5.5		12.8	12.7	12.7	14.3	14.4	14.4
							28.9		8.2		30.3		82.2		5.5			12.6			14.5		
					Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	

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

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

Appendix J - Marine Water Quality Monitoring Results

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

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (^{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-Sep-15	Rainy	Moderate	14:41	3.6	Surface	1.0	27.0 27.0	27.0	8.1 8.1	8.1	28.8 29.0	28.9	81.6 76.9	79.3	5.5 5.2	5.4	5.4	9.6 9.9	9.8	9.7	8.6 9.3	9.0	8.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	26.9 26.9	26.9	8.1 8.1	8.1	29.6 29.8	29.7	78.1 76.2	77.2	5.3 5.2	5.2	5.2	9.5 9.5	9.5		9.6 8.0	8.8	
4-Sep-15	Sunny	Moderate	16:13	3.6	Surface	1.0	27.8 27.9	27.8	8.0 8.0	8.0	27.6 27.3	27.4	85.8 86.5	86.2	6.1 6.2	6.1	6.1	7.4 7.9	7.7	8.0	8.1 8.4	8.3	8.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	27.7 27.6	27.7	8.0 8.0	8.0	28.8 28.9	28.8	85.8 87.5	86.7	6.1 6.2	6.1	6.1	7.9 8.5	8.2		9.4 8.6	9.0	
7-Sep-15	Cloudy	Moderate	09:03	3.8	Surface	1.0	29.1 29.1	29.1	8.0 8.0	8.0	18.4 18.4	18.4	87.8 88.2	88.0	6.1 6.1	6.1	6.1	8.6 8.6	8.6	8.7	8.6 8.2	8.4	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	29.1 29.2	29.2	8.0 8.0	8.0	19.2 19.1	19.2	88.2 87.8	88.0	6.1 6.1	6.1	6.1	8.8 8.8	8.8		3.9 3.4	3.7	
9-Sep-15	Sunny	Moderate	11:23	3.8	Surface	1.0	27.9 27.3	27.6	8.0 8.0	8.0	25.3 26.1	25.7	83.5 81.9	82.7	6.0 5.9	6.0	6.0	7.0 7.6	7.3	7.0	2.6 2.9	2.8	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	27.2 26.6	26.9	7.9 8.0	8.0	29.4 29.9	29.6	85.1 82.1	83.6	6.1 5.9	6.0	6.0	6.6 6.6	6.6		3.4 3.9	3.7	
11-Sep-15	Fine	Moderate	12:37	3.8	Surface	1.0	27.6 27.5	27.5	8.3 8.3	8.3	28.8 28.8	28.8	98.8 100.1	99.5	6.6 6.7	6.7	6.7	6.5 6.6	6.6	6.6	5.9 6.6	6.3	6.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	27.2 27.5	27.3	8.2 8.3	8.2	30.0 29.7	29.9	98.3 101.5	99.9	6.6 6.8	6.7	6.7	6.6 6.6	6.6		6.5 6.5	6.5	
14-Sep-15	Sunny	Moderate	13:12	3.8	Surface	1.0	27.5 27.4	27.4	7.9 7.8	7.9	28.4 28.5	28.5	94.6 93.7	94.2	6.3 6.3	6.3	6.3	5.5 5.6	5.6	5.7	4.0 4.2	4.1	3.6
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.8	27.6 27.5	27.6	7.9 7.9	7.9	28.4 28.4	28.4	92.2 91.4	91.8	6.2 6.1	6.1	6.1	5.7 5.8	5.8		3.3 2.7	3.0	
16-Sep-15	Fine	Moderate	13:59	3.7	Surface	1.0	27.8 27.8	27.8	8.2 8.2	8.2	31.9 31.9	31.9	89.4 89.1	89.3	5.9 5.9	5.9	5.9	6.5 6.4	6.5	6.6	6.1 5.7	5.9	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.8 27.7	27.7	8.2 8.2	8.2	32.0 32.2	32.1	88.9 92.1	90.5	5.9 6.1	6.0	6.0	6.6 6.5	6.6		4.8 5.5	5.2	
18-Sep-15	Fine	Moderate	15:00	3.7	Surface	1.0	28.2 28.1	28.1	8.2 8.2	8.2	30.7 31.0	30.9	89.0 89.3	89.2	5.9 5.9	5.9	5.9	9.4 9.5	9.5	9.5	5.4 5.6	5.5	5.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.9 28.0	28.0	8.2 8.2	8.2	31.5 31.4	31.5	89.7 89.0	89.4	5.9 5.9	5.9	5.9	9.6 9.4	9.5		6.0 6.0	6.0	
21-Sep-15	Rainy	Moderate	06:03	3.8	Surface	1.0	28.5 28.5	28.5	8.1 8.1	8.1	21.6 21.6	21.6	82.8 87.3	85.1	5.7 6.0	5.9	5.9	5.9 5.5	5.7	6.7	2.1 2.8	2.5	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	28.5 28.6	28.6	8.1 8.1	8.1	23.6 24.2	23.9	85.8 81.3	83.6	5.8 5.5	5.7	5.7	7.4 7.8	7.6		2.4 2.8	2.6	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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*
23-Sep-15	Sunny	Moderate	09:31	3.6	Surface	1.0	28.5 28.6	28.6	8.2 8.2	8.2	24.7 24.7	24.7	78.1 81.1	79.6	5.3 5.5	5.4	5.4	8.9 8.7	8.8	9.0	6.4 5.3	5.9	6.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	28.4 28.6	28.5	8.1 8.2	8.1	29.3 28.5	28.9	78.5 79.8	79.2	5.2 5.3	5.2	5.2	8.8 9.6	9.2		7.8 7.1	7.5	
25-Sep-15	Sunny	Moderate	11:04	3.7	Surface	1.0	29.8 29.9	29.8	8.3 8.3	8.3	22.5 22.5	22.5	107.9 106.5	107.2	7.2 7.1	7.2	7.2	8.5 8.6	8.6	8.7	3.5 3.4	3.5	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	29.5 29.8	29.6	8.3 8.3	8.3	23.7 23.5	23.6	102.5 107.6	105.1	6.9 7.2	7.0	7.0	8.5 8.8	8.7		2.7 3.5	3.1	
28-Sep-15	Sunny	Moderate	12:07	3.7	Surface	1.0	29.2 29.2	29.2	8.2 8.2	8.2	28.8 28.8	28.8	78.5 78.5	78.5	5.1 5.1	5.1	5.1	6.5 6.5	6.5	6.6	2.9 3.4	3.2	3.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	29.2 29.2	29.2	8.2 8.2	8.2	29.1 29.5	29.3	78.6 76.7	77.7	5.1 5.0	5.1	5.1	6.6 6.6	6.6		3.3 3.7	3.5	
30-Sep-15	Fine	Moderate	13:39	3.8	Surface	1.0	29.2 29.2	29.2	8.2 8.2	8.2	31.5 31.5	31.5	90.0 86.7	88.4	5.9 5.7	5.8	5.8	10.7 10.5	10.6	10.5	7.8 7.0	7.4	7.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	29.1 29.3	29.2	8.2 8.2	8.2	31.7 31.2	31.4	87.9 96.5	92.2	5.8 6.3	6.1	6.1	10.2 10.5	10.4		8.4 7.5	8.0	

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

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*
2-Sep-15	Rainy	Moderate	09:26	3.6	Surface	1.0	27.0 27.0	27.0	8.0 8.0	8.0	28.3 28.3	28.3	79.9 79.5	79.7	5.4 5.4	5.4	5.4	8.6 8.4	8.5	8.7	8.0 8.7	8.4	8.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	27.0 26.9	27.0	8.0 8.0	8.0	28.5 28.9	28.7	80.1 79.6	79.9	5.4 5.4	5.4	5.4	8.7 8.8	8.8		8.9 8.9	8.9	
4-Sep-15	Sunny	Moderate	11:33	3.6	Surface	1.0	27.7 27.9	27.8	8.0 8.0	8.0	25.6 25.4	25.5	79.0 79.4	79.2	5.7 5.7	5.7	5.7	7.7 7.1	7.4	7.9	8.0 7.5	7.8	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	27.4 27.8	27.6	8.0 8.0	8.0	26.2 25.6	25.9	78.7 78.9	78.8	5.7 5.7	5.7	5.7	8.5 8.0	8.3		7.4 8.1	7.8	
7-Sep-15	Sunny	Moderate	15:31	3.8	Surface	1.0	29.2 29.2	29.2	8.1 8.1	8.1	18.0 18.0	18.0	90.6 91.6	91.1	6.3 6.4	6.3	6.3	9.0 9.0	9.0	9.2	10.9 9.5	10.2	9.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	29.2 29.1	29.1	8.0 8.1	8.1	18.4 18.3	18.4	91.0 93.1	92.1	6.3 6.5	6.4	6.4	9.4 9.1	9.3		7.6 7.9	7.8	
9-Sep-15	Sunny	Moderate	17:03	3.5	Surface	1.0	27.7 27.7	27.7	8.1 8.1	8.1	26.9 26.8	26.9	99.7 101.5	100.6	6.8 6.9	6.8	6.8	12.8 11.7	12.3	12.1	16.3 14.7	15.5	16.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	27.7 27.6	27.7	8.1 8.1	8.1	26.9 26.8	26.9	100.9 102.4	101.7	6.8 7.0	6.9	6.9	12.0 11.7	11.9		17.0 16.7	16.9	
11-Sep-15	Fine	Moderate	17:52	3.7	Surface	1.0	27.9 27.9	27.9	8.4 8.4	8.4	28.6 29.0	28.8	115.9 112.0	114.0	7.8 7.5	7.6	7.6	8.7 8.9	8.8	8.9	16.4 18.6	17.5	17.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.9 27.8	27.8	8.4 8.3	8.3	29.2 29.8	29.5	114.6 104.0	109.3	7.7 6.9	7.3	7.3	8.8 8.9	8.9		17.5 16.0	16.8	
14-Sep-15	Sunny	Moderate	07:25	3.9	Surface	1.0	26.9 26.9	26.9	7.8 7.8	7.8	29.4 29.3	29.3	89.2 90.4	89.8	6.0 6.1	6.0	6.0	6.6 6.7	6.7	6.8	4.9 4.4	4.7	4.7
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	2.9	26.9 27.0	26.9	7.8 7.8	7.8	29.4 29.3	29.4	86.5 86.6	86.6	5.8 5.8	5.8	5.8	6.8 6.8	6.8		5.0 4.3	4.7	
16-Sep-15	Fine	Moderate	08:42	3.7	Surface	1.0	27.4 27.4	27.4	8.1 8.1	8.1	31.1 31.0	31.1	81.4 81.4	81.4	5.4 5.4	5.4	5.4	9.3 9.7	9.5	9.6	7.9 9.2	8.6	8.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	27.4 27.3	27.4	8.1 8.1	8.1	31.3 31.5	31.4	81.5 81.5	81.5	5.4 5.4	5.4	5.4	9.5 9.6	9.6		7.7 7.4	7.6	
18-Sep-15	Fine	Moderate	10:10	3.8	Surface	1.0	27.7 27.7	27.7	8.1 8.1	8.1	28.9 28.9	28.9	80.1 80.2	80.2	5.4 5.4	5.4	5.4	10.7 10.5	10.6	10.6	5.5 5.1	5.3	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	27.6 27.7	27.6	8.1 8.1	8.1	30.1 30.0	30.1	80.1 80.4	80.3	5.3 5.4	5.4	5.4	10.5 10.6	10.6		5.8 5.0	5.4	
21-Sep-15	Cloudy	Moderate	12:55	3.4	Surface	1.0	28.5 28.5	28.5	8.2 8.2	8.2	20.3 20.8	20.5	93.1 94.4	93.8	6.5 6.5	6.5	6.5	7.8 7.7	7.8	8.1	4.2 3.4	3.8	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.4	28.5 28.5	28.5	8.2 8.2	8.2	21.3 21.8	21.6	92.8 97.1	95.0	6.4 6.7	6.5	6.5	8.5 8.1	8.3		3.1 3.1	3.1	

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 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-Sep-15	Sunny	Moderate	15:30	3.5	Surface	1.0	29.2 29.2	29.2	8.3 8.3	8.3	24.2 24.3	24.2	100.8 101.0	100.9	6.8 6.8	6.8	6.8	12.2 12.9	12.6	13.0	6.9 7.0	7.0	7.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.5	28.9 29.1	29.0	8.3 8.3	8.3	25.0 24.6	24.8	98.2 100.8	99.5	6.6 6.8	6.7	6.7	13.1 13.4	13.3		8.6 8.4	8.5	
25-Sep-15	Sunny	Moderate	16:58	3.6	Surface	1.0	29.9 29.9	29.9	8.3 8.3	8.3	22.2 22.3	22.3	107.0 109.7	108.4	7.2 7.4	7.3	7.3	16.5 16.3	16.4	16.5	5.2 4.2	4.7	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	29.9 29.8	29.8	8.3 8.3	8.3	22.6 22.9	22.8	109.3 102.8	106.1	7.3 6.9	7.1	7.1	16.4 16.5	16.5		6.1 4.4	5.3	
28-Sep-15	Sunny	Moderate	06:50	3.7	Surface	1.0	29.0 29.0	29.0	8.2 8.2	8.2	28.4 28.5	28.5	84.1 84.7	84.4	5.9 5.9	5.9	5.9	7.6 7.3	7.5	7.6	3.7 2.6	3.2	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	29.0 29.0	29.0	8.2 8.2	8.2	29.5 29.5	29.5	83.7 84.9	84.3	5.8 5.9	5.9	5.9	7.5 7.7	7.6		2.6 2.9	2.8	
30-Sep-15	Fine	Moderate	08:04	3.7	Surface	1.0	28.9 28.9	28.9	8.2 8.2	8.2	29.3 29.2	29.2	81.3 82.1	81.7	5.4 5.5	5.5	5.5	10.5 10.3	10.4	10.6	6.3 6.4	6.4	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.7	28.8 28.9	28.8	8.1 8.1	8.1	29.6 29.5	29.5	81.2 82.0	81.6	5.4 5.5	5.5	5.5	10.5 10.9	10.7		5.3 6.4	5.9	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	15:22	5.0	Surface	1.0	24.4 24.4	24.4	7.8 7.8	7.8	26.1 25.8	26.0	83.3 81.0	82.2	6.0 5.8	5.9	5.9	13.5 14.7	14.1	14.3	15.4 15.1	15.3	16.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	24.4 24.3	24.3	7.8 7.9	7.9	25.9 27.1	26.5	82.3 80.9	81.6	5.9 5.7	5.8	5.8	13.9 14.8	14.4		17.4 18.3	17.9	
4-Sep-15	Sunny	Moderate	16:15	4.7	Surface	1.0	25.0 25.5	25.2	7.8 7.7	7.8	18.9 17.9	18.4	93.0 82.4	87.7	6.8 6.0	6.4	6.4	3.5 3.6	3.6	3.7	5.2 6.4	5.8	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	24.7 25.3	25.0	7.8 7.7	7.8	22.4 21.1	21.7	86.2 79.8	83.0	6.4 5.9	6.1	6.1	3.7 3.6	3.7		4.1 4.8	4.5	
7-Sep-15	Cloudy	Moderate	09:09	4.8	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	11.8 11.9	11.8	89.3 88.4	88.9	6.7 6.7	6.7	6.7	3.7 3.6	3.7	3.7	3.2 4.2	3.7	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	26.4 26.4	26.4	7.8 7.8	7.8	14.2 13.8	14.0	89.4 89.4	89.4	6.6 6.7	6.7	6.7	3.6 3.5	3.6		3.9 4.0	4.0	
9-Sep-15	Sunny	Moderate	11:04	5.3	Surface	1.0	24.7 24.5	24.6	8.0 8.0	8.0	15.2 15.6	15.4	75.8 73.0	74.4	5.7 5.6	5.6	5.6	1.4 1.3	1.4	1.4	2.8 3.3	3.1	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	24.1 24.6	24.4	8.0 8.0	8.0	19.0 18.9	19.0	73.9 74.6	74.3	5.6 5.6	5.6	5.6	1.4 1.3	1.4		4.2 3.4	3.8	
11-Sep-15	Fine	Moderate	12:28	4.7	Surface	1.0	25.3 25.4	25.3	8.0 8.0	8.0	20.5 20.0	20.2	96.3 97.0	96.7	7.0 7.1	7.1	7.1	2.0 2.1	2.1	2.2	6.7 6.4	6.6	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	25.2 25.2	25.2	8.0 8.0	8.0	21.3 21.0	21.2	96.6 96.2	96.4	7.1 7.0	7.0	7.0	2.2 2.2	2.2		4.9 3.8	4.4	
14-Sep-15	Sunny	Moderate	13:17	5.0	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	26.3 26.5	26.4	89.8 90.5	90.2	6.4 6.4	6.4	6.4	2.6 2.6	2.6	2.7	3.8 4.6	4.2	4.7
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	4.0	25.1 24.9	25.0	8.0 8.0	8.0	26.6 26.9	26.7	90.6 91.4	91.0	6.4 6.5	6.5	6.5	2.7 2.6	2.7		5.4 4.7	5.1	
16-Sep-15	Fine	Moderate	14:11	5.1	Surface	1.0	25.1 25.1	25.1	8.0 8.0	8.0	18.5 19.3	18.9	84.8 88.6	86.7	6.3 6.6	6.4	6.4	5.7 5.5	5.6	6.3	7.7 7.4	7.6	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	24.8 24.8	24.8	8.0 8.0	8.0	23.5 20.6	22.0	91.7 85.4	88.6	6.7 6.3	6.5	6.5	6.8 7.0	6.9		6.2 5.9	6.1	
18-Sep-15	Fine	Moderate	15:09	4.5	Surface	1.0	26.0 25.6	25.8	7.8 7.8	7.8	18.4 21.2	19.8	87.8 85.4	86.6	6.3 6.1	6.2	6.2	6.2 6.1	6.2	6.4	3.4 3.8	3.6	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	26.2 25.5	25.9	7.8 7.8	7.8	23.7 25.0	24.3	81.4 81.7	81.6	6.0 5.9	5.9	5.9	6.5 6.4	6.5		4.8 4.8	4.8	
21-Sep-15	Rainy	Moderate	05:47	5.1	Surface	1.0	25.9 25.9	25.9	7.9 7.9	7.9	15.0 15.4	15.2	87.1 86.3	86.7	6.5 6.4	6.5	6.5	2.3 2.2	2.3	2.3	2.8 2.4	2.6	2.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	26.0 25.9	25.9	7.8 7.8	7.8	17.2 17.0	17.1	86.4 86.8	86.6	6.4 6.4	6.4	6.4	2.2 2.2	2.2		2.4 2.2	2.3	

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 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-Sep-15	Sunny	Moderate	08:28	5.0	Surface	1.0	25.8 25.8	25.8	8.0 7.9	7.9	18.5 19.5	19.0	81.0 84.3	82.7	5.9 6.2	6.0	6.0	1.6 1.6	1.6	1.7	1.4 1.4	1.4	2.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	25.5 25.8	25.7	7.9 7.9	7.9	22.2 21.5	21.8	79.4 84.0	81.7	5.7 6.1	5.9	5.9	1.7 1.7	1.7		2.6 2.4	2.5	
25-Sep-15	Sunny	Moderate	11:15	4.8	Surface	1.0	26.8 26.7	26.8	7.9 7.9	7.9	17.5 17.6	17.5	100.8 100.9	100.9	7.3 7.3	7.3	7.3	1.8 1.7	1.8	2.0	2.9 2.8	2.9	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	26.7 26.9	26.8	7.9 7.9	7.9	18.7 17.6	18.1	100.4 100.5	100.5	7.3 7.3	7.3	7.3	2.2 2.1	2.2		3.4 3.8	3.6	
28-Sep-15	Sunny	Moderate	12:38	4.8	Surface	1.0	26.2 26.2	26.2	8.0 8.0	8.0	18.2 17.9	18.1	83.1 88.4	85.8	6.1 6.4	6.2	6.2	8.3 8.2	8.3	8.6	2.9 3.5	3.2	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	26.1 26.2	26.2	8.0 8.0	8.0	19.5 19.4	19.4	78.6 81.3	80.0	5.8 5.9	5.8	5.8	9.0 8.8	8.9		3.1 4.7	3.9	
30-Sep-15	Fine	Moderate	14:49	5.1	Surface	1.0	26.2 26.1	26.1	7.9 7.9	7.9	24.9 25.6	25.3	81.3 80.5	80.9	5.7 5.7	5.7	5.7	14.4 14.5	14.5	14.7	4.8 5.1	5.0	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	26.0 26.3	26.1	7.9 7.9	7.9	26.9 26.3	26.6	78.6 79.3	79.0	5.6 5.6	5.6	5.6	14.9 14.9	14.9		5.4 5.2	5.3	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR5 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	09:18	5.1	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	26.0 25.7	25.9	76.0 76.2	76.1	5.5 5.5	5.5	5.5	10.4 10.5	10.5	10.6	17.2 17.9	17.6	17.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	24.5 24.5	24.5	7.8 7.8	7.8	26.2 26.3	26.2	76.3 76.2	76.3	5.5 5.5	5.5		10.6 10.8	10.7		17.9 17.4	17.7	
4-Sep-15	Sunny	Moderate	11:17	4.5	Surface	1.0	24.4 24.6	24.5	7.8 7.8	7.8	22.9 22.8	22.9	72.8 75.2	74.0	5.3 5.5	5.4	5.4	14.7 14.4	14.6	14.8	13.3 11.1	12.2	14.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	24.5 24.4	24.4	7.8 7.8	7.8	22.9 23.1	23.0	72.8 72.8	72.8	5.3 5.3	5.3	5.3	15.0 14.7	14.9		16.3 15.1	15.7	
7-Sep-15	Sunny	Moderate	15:52	5.0	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	9.6 9.8	9.7	93.5 94.5	94.0	7.1 7.2	7.1	7.1	6.5 6.5	6.5	7.2	4.1 5.4	4.8	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	26.3 26.0	26.1	7.9 7.8	7.8	11.0 12.1	11.6	88.8 88.4	88.6	6.8 6.6	6.7	6.7	7.9 7.8	7.9		5.4 5.5	5.5	
9-Sep-15	Sunny	Moderate	17:28	5.6	Surface	1.0	25.1 24.8	25.0	8.0 8.0	8.0	18.5 18.4	18.5	91.7 90.9	91.3	6.8 6.8	6.8	6.8	6.6 6.6	6.6	6.6	5.9 5.0	5.5	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.6	24.6 24.5	24.6	8.0 8.0	8.0	19.6 20.7	20.1	88.0 84.8	86.4	6.6 6.3	6.4	6.4	6.5 6.5	6.5		5.4 4.7	5.1	
11-Sep-15	Fine	Moderate	18:21	4.8	Surface	1.0	25.4 25.2	25.3	8.0 8.0	8.0	17.0 19.9	18.5	95.3 95.6	95.5	7.1 7.0	7.1	7.1	3.9 4.0	4.0	4.2	4.8 4.5	4.7	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	25.2 25.0	25.1	8.0 8.1	8.0	20.3 23.2	21.7	95.0 99.0	97.0	7.0 7.2	7.1	7.1	4.4 4.4	4.4		6.7 5.2	6.0	
14-Sep-15	Sunny	Moderate	07:20	5.0	Surface	1.0	24.2 24.2	24.2	7.9 7.9	7.9	27.8 28.0	27.9	75.0 75.0	75.0	5.4 5.4	5.4	5.4	10.8 10.5	10.7	10.6	11.0 10.6	10.8	11.2
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	4.0	24.2 24.2	24.2	7.9 7.9	7.9	28.1 28.3	28.2	75.1 75.5	75.3	5.4 5.4	5.4	5.4	10.6 10.2	10.4		11.5 11.5	11.5	
16-Sep-15	Fine	Moderate	08:42	5.1	Surface	1.0	24.8 24.8	24.8	7.9 7.9	7.9	21.0 21.2	21.1	81.8 81.6	81.7	6.0 6.0	6.0	6.0	8.2 8.4	8.3	8.5	6.4 6.5	6.5	6.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	24.7 24.7	24.7	7.9 7.9	7.9	21.2 21.6	21.4	81.4 81.4	81.4	6.0 6.0	6.0	6.0	8.4 8.7	8.6		6.7 6.2	6.5	
18-Sep-15	Fine	Moderate	09:54	4.8	Surface	1.0	24.9 25.0	25.0	7.8 7.8	7.8	18.9 18.7	18.8	81.1 81.1	81.1	6.0 6.0	6.0	6.0	7.6 7.5	7.6	7.8	13.2 12.8	13.0	12.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	25.0 25.0	25.0	7.8 7.8	7.8	19.7 20.1	19.9	80.7 80.8	80.8	6.0 6.0	6.0	6.0	7.8 7.9	7.9		12.5 12.6	12.6	
21-Sep-15	Cloudy	Moderate	13:16	5.3	Surface	1.0	25.8 25.8	25.8	7.9 7.9	7.9	16.1 15.3	15.7	90.3 91.0	90.7	6.7 6.8	6.8	6.8	2.6 2.6	2.6	2.6	3.0 2.4	2.7	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	25.8 25.7	25.8	7.9 7.9	7.9	19.4 20.8	20.1	91.1 92.0	91.6	6.7 6.7	6.7	6.7	2.6 2.6	2.6		2.8 2.1	2.5	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	15:46	5.2	Surface	1.0	26.5 26.2	26.4	8.1 8.1	8.1	19.6 19.8	19.7	96.9 89.6	93.3	7.0 6.5	6.7	6.7	2.1 2.1	2.1	2.2	3.6 2.7	3.2	2.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	26.3 25.8	26.0	8.1 8.0	8.0	24.0 25.0	24.5	93.8 89.9	91.9	6.6 6.4	6.5	6.5	2.2 2.1	2.2		2.3 2.5	2.4	
25-Sep-15	Sunny	Moderate	17:36	5.0	Surface	1.0	26.8 26.8	26.8	7.9 7.9	7.9	20.6 20.7	20.7	102.3 102.0	102.2	7.2 7.2	7.2	7.2	2.2 2.2	2.2	2.4	5.9 5.1	5.5	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	26.9 26.9	26.9	7.9 7.9	7.9	22.6 21.7	22.2	100.8 101.1	101.0	7.2 7.2	7.2	7.2	2.5 2.6	2.6		5.1 5.0	5.1	
28-Sep-15	Sunny	Moderate	06:49	5.1	Surface	1.0	26.1 26.1	26.1	8.0 8.0	8.0	27.5 27.5	27.5	73.9 73.8	73.9	5.1 5.1	5.1	5.1	15.2 14.7	15.0	15.3	9.4 10.0	9.7	11.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	26.1 26.1	26.1	8.0 8.0	8.0	27.9 27.9	27.9	73.7 73.8	73.8	5.1 5.1	5.1	5.1	15.6 15.6	15.6		12.5 12.3	12.4	
30-Sep-15	Fine	Moderate	08:35	5.2	Surface	1.0	26.4 26.3	26.3	7.8 7.8	7.8	24.2 23.8	24.0	77.3 77.5	77.4	5.5 5.5	5.5	5.5	16.4 16.4	16.4	16.7	18.9 19.5	19.2	19.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	26.2 26.3	26.2	7.8 7.8	7.8	25.9 24.5	25.2	77.1 77.2	77.2	5.5 5.5	5.5	5.5	16.9 16.8	16.9		19.5 19.3	19.4	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	14:28	4.3	Surface	1.0	24.6 24.5	24.5	7.8 7.8	7.8	26.9 27.0	27.0	81.2 80.7	81.0	5.8 5.8	5.8	5.8	8.6 9.4	9.0	10.3	13.9 13.6	13.8	12.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	24.4 24.3	24.4	7.8 7.8	7.8	27.9 27.7	27.8	81.2 80.3	80.8	5.8 5.7	5.8	5.8	11.2 11.7	11.5		11.2 11.3	11.3	
4-Sep-15	Sunny	Moderate	15:43	4.8	Surface	1.0	24.8 25.2	25.0	7.8 7.8	7.8	22.8 22.8	22.8	73.2 73.8	73.5	5.3 5.3	5.3	5.3	3.3 3.5	3.4	3.4	5.8 6.5	6.2	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	24.9 25.0	25.0	7.7 7.7	7.7	26.2 26.3	26.3	73.7 73.1	73.4	5.3 5.2	5.2	5.2	3.5 3.3	3.4		3.8 4.0	3.9	
7-Sep-15	Cloudy	Moderate	10:02	4.1	Surface	1.0	26.4 26.4	26.4	7.8 7.8	7.8	10.5 10.6	10.5	88.0 88.6	88.3	6.7 6.7	6.7	6.7	4.8 4.7	4.8	4.8	3.9 4.8	4.4	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	26.4 26.4	26.4	7.8 7.8	7.8	10.9 10.8	10.9	88.5 87.5	88.0	6.7 6.6	6.7	6.7	4.6 4.8	4.7		3.1 2.9	3.0	
9-Sep-15	Sunny	Moderate	11:58	4.2	Surface	1.0	25.1 24.8	24.9	8.1 8.1	8.1	13.0 13.6	13.3	84.6 81.6	83.1	6.5 6.3	6.4	6.4	2.4 2.5	2.5	2.5	2.3 1.6	2.0	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	24.3 24.6	24.4	8.1 8.1	8.1	17.3 17.2	17.3	81.6 82.5	82.1	6.2 6.2	6.2	6.2	2.4 2.4	2.4		4.8 4.4	4.6	
11-Sep-15	Fine	Moderate	13:22	3.9	Surface	1.0	24.9 25.0	25.0	7.9 7.9	7.9	15.8 16.1	15.9	80.3 82.9	81.6	6.1 6.3	6.2	6.2	3.2 2.9	3.1	3.3	3.9 4.0	4.0	4.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	24.7 24.6	24.6	7.9 7.9	7.9	18.2 18.6	18.4	80.2 80.2	80.2	6.0 6.0	6.0	6.0	3.6 3.3	3.5		4.8 4.9	4.9	
14-Sep-15	Sunny	Moderate	12:31	4.2	Surface	1.0	24.8 24.9	24.8	8.0 8.0	8.0	26.6 26.5	26.5	83.4 83.6	83.5	5.9 6.0	5.9	5.9	6.4 6.5	6.5	6.5	3.8 3.1	3.5	3.3
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	3.2	24.5 24.4	24.5	8.0 8.0	8.0	28.9 29.1	29.0	82.7 82.8	82.8	5.9 5.9	5.9	5.9	6.5 6.4	6.5		2.9 3.2	3.1	
16-Sep-15	Fine	Moderate	13:18	4.2	Surface	1.0	25.1 25.0	25.1	8.1 8.1	8.1	26.3 26.4	26.3	85.5 84.9	85.2	6.1 6.0	6.1	6.1	3.6 3.3	3.5	5.3	2.9 3.9	3.4	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	25.0 24.9	24.9	8.1 8.1	8.1	28.2 28.4	28.3	85.1 84.7	84.9	6.0 6.0	6.0	6.0	7.0 7.2	7.1		4.5 4.2	4.4	
18-Sep-15	Fine	Moderate	14:21	3.8	Surface	1.0	25.3 25.3	25.3	7.8 7.8	7.8	21.9 22.8	22.4	80.5 80.5	80.5	5.8 5.7	5.7	5.7	8.8 8.9	8.9	9.1	1.7 1.5	1.6	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	25.2 25.0	25.1	7.8 7.8	7.8	27.5 27.9	27.7	79.7 79.6	79.7	5.8 5.6	5.7	5.7	9.2 9.1	9.2		2.9 3.3	3.1	
21-Sep-15	Rainy	Moderate	06:40	4.2	Surface	1.0	25.9 25.8	25.9	7.9 7.9	7.9	14.3 13.8	14.1	88.0 88.1	88.1	6.6 6.6	6.6	6.6	2.6 2.5	2.6	2.6	2.6 3.5	3.1	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	25.9 25.9	25.9	7.8 7.8	7.8	15.4 16.0	15.7	88.2 87.9	88.1	6.6 6.5	6.6	6.6	2.6 2.5	2.6		2.7 2.8	2.8	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	09:26	4.2	Surface	1.0	25.8 25.8	25.8	8.0 8.0	8.0	9.6 9.2	9.4	91.4 93.0	92.2	7.1 7.2	7.1	7.1	2.5 2.4	2.5	2.5	2.3 2.5	2.4	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	25.7 25.8	25.8	7.9 7.9	7.9	14.8 14.1	14.4	90.7 92.1	91.4	6.8 6.9	6.9	6.9	2.5 2.5	2.5		3.1 2.9	3.0	
25-Sep-15	Sunny	Moderate	11:58	4.0	Surface	1.0	27.1 26.9	27.0	7.9 7.9	7.9	12.9 12.7	12.8	100.9 100.1	100.5	7.5 7.3	7.4	7.4	2.7 2.8	2.8	2.9	3.2 3.2	3.2	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	26.7 27.2	27.0	7.8 7.8	7.8	14.9 14.6	14.8	99.2 98.7	99.0	7.3 7.3	7.3	7.3	2.8 2.9	2.9		4.0 4.6	4.3	
28-Sep-15	Sunny	Moderate	11:44	4.2	Surface	1.0	26.4 26.3	26.3	8.0 8.0	8.0	26.1 26.3	26.2	77.6 76.6	77.1	5.4 5.3	5.4	5.4	6.6 6.6	6.6	6.8	3.8 4.6	4.2	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	26.3 26.2	26.3	8.0 8.0	8.0	26.2 26.6	26.4	77.4 76.6	77.0	5.4 5.3	5.4	5.4	6.8 7.1	7.0		4.9 5.3	5.1	
30-Sep-15	Fine	Moderate	14:00	3.8	Surface	1.0	25.9 25.9	25.9	7.9 7.9	7.9	26.9 26.9	26.9	77.0 77.0	77.0	5.4 5.4	5.4	5.4	15.7 15.9	15.8	16.1	9.3 9.1	9.2	10.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	26.0 25.9	25.9	7.9 7.9	7.9	27.1 27.2	27.1	76.7 76.9	76.8	5.4 5.4	5.4	5.4	16.4 16.3	16.4		10.7 10.9	10.8	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	10:12	4.3	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	24.8 24.8	24.8	74.3 74.4	74.4	5.4 5.4	5.4	5.4	12.3 12.6	12.5	12.8	13.7 14.1	13.9	14.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	24.5 24.5	24.5	7.8 7.8	7.8	25.3 25.1	25.2	74.5 74.4	74.5	5.4 5.4	5.4	5.4	13.2 13.0	13.1		16.2 15.6	15.9	
4-Sep-15	Sunny	Moderate	11:53	4.9	Surface	1.0	24.6 24.7	24.7	7.8 7.8	7.8	22.4 22.5	22.5	75.0 74.7	74.9	5.5 5.4	5.5	5.5	3.7 3.8	3.8	3.9	9.1 8.7	8.9	8.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	24.4 24.6	24.5	7.7 7.7	7.7	23.4 23.6	23.5	74.6 74.6	74.6	5.5 5.4	5.4	5.4	3.8 4.0	3.9		8.0 8.3	8.2	
7-Sep-15	Sunny	Moderate	14:57	3.8	Surface	1.0	26.7 26.7	26.7	7.9 7.9	7.9	13.2 13.4	13.3	93.2 91.8	92.5	6.9 6.8	6.9	6.9	4.4 4.2	4.3	4.3	3.4 4.3	3.9	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	26.6 26.5	26.5	7.9 7.9	7.9	14.8 14.7	14.8	92.4 89.6	91.0	6.8 6.6	6.7	6.7	4.2 4.2	4.2		4.1 3.4	3.8	
9-Sep-15	Sunny	Moderate	16:31	4.1	Surface	1.0	25.2 25.1	25.1	8.0 8.0	8.0	23.6 23.7	23.7	101.9 97.7	99.8	7.3 7.1	7.2	7.2	2.0 2.0	2.0	2.1	5.2 5.0	5.1	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	25.1 24.8	25.0	8.0 8.0	8.0	23.7 24.0	23.9	100.4 95.6	98.0	7.2 6.9	7.1	7.1	2.2 2.1	2.2		5.5 4.6	5.1	
11-Sep-15	Fine	Moderate	17:24	3.9	Surface	1.0	26.0 26.0	26.0	8.1 8.1	8.1	20.2 20.2	20.2	110.8 117.1	114.0	8.0 8.5	8.3	8.3	2.3 2.4	2.4	2.4	3.2 3.2	3.2	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	26.0 25.9	25.9	8.1 8.1	8.1	20.3 20.3	20.3	113.3 106.7	110.0	8.2 7.7	8.0	8.0	2.3 2.2	2.3		4.9 6.0	5.5	
14-Sep-15	Sunny	Moderate	08:15	4.2	Surface	1.0	24.3 24.3	24.3	7.9 7.9	7.9	23.8 23.7	23.8	77.7 78.2	78.0	5.7 5.7	5.7	5.7	8.1 8.1	8.1	8.1	8.5 9.3	8.9	9.0
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	3.2	24.3 24.3	24.3	7.9 7.9	7.9	24.3 25.4	24.9	78.3 77.8	78.1	5.7 5.6	5.7	5.7	7.9 8.2	8.1		8.9 9.0	9.0	
16-Sep-15	Fine	Moderate	09:34	4.1	Surface	1.0	24.8 24.9	24.8	7.9 7.9	7.9	18.7 18.8	18.8	82.3 82.2	82.3	6.1 6.1	6.1	6.1	6.6 6.7	6.7	7.6	5.3 4.2	4.8	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	24.8 24.8	24.8	7.9 7.9	7.9	19.3 19.4	19.4	82.5 82.6	82.6	6.1 6.1	6.1	6.1	8.2 8.6	8.4		4.0 3.1	3.6	
18-Sep-15	Fine	Moderate	10:48	3.9	Surface	1.0	25.0 24.9	25.0	7.8 7.8	7.8	17.0 18.6	17.8	85.5 86.7	86.1	6.3 6.5	6.4	6.4	9.8 9.7	9.8	10.0	3.9 4.7	4.3	5.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	25.0 25.0	25.0	7.8 7.8	7.8	19.5 20.6	20.0	84.4 94.7	89.6	6.3 7.0	6.7	6.7	10.1 10.0	10.1		6.0 7.2	6.6	
21-Sep-15	Cloudy	Moderate	12:20	4.3	Surface	1.0	25.8 25.8	25.8	7.9 7.9	7.9	14.1 14.1	14.1	90.8 90.0	90.4	6.8 6.8	6.8	6.8	2.5 2.6	2.6	2.6	2.0 2.5	2.3	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	25.7 25.7	25.7	7.8 7.8	7.8	16.3 16.6	16.4	90.6 88.4	89.5	6.7 6.6	6.7	6.7	2.5 2.6	2.6		2.3 3.4	2.9	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR6 - Mid-FloodTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Sep-15	Sunny	Moderate	14:51	4.3	Surface	1.0	26.5 26.5	26.5	8.1 8.1	8.1	18.2 18.1	18.2	93.3 93.4	93.4	6.8 6.8	6.8	6.8	1.7 1.8	1.8	1.8	5.1 4.9	5.0	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	26.3 26.1	26.2	8.0 8.0	8.0	21.6 21.6	21.6	93.5 93.6	93.6	6.7 6.7	6.7	6.7	1.7 1.8	1.8		5.6 4.8	5.2	
25-Sep-15	Sunny	Moderate	16:53	4.0	Surface	1.0	27.0 27.1	27.1	7.9 7.9	7.9	17.0 16.9	17.0	107.7 106.6	107.2	7.7 7.7	7.7	7.7	2.5 2.5	2.5	2.6	4.1 4.6	4.4	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	27.3 27.4	27.4	7.9 7.9	7.9	20.0 19.2	19.6	102.2 105.7	104.0	7.6 7.7	7.6	7.6	2.6 2.7	2.7		4.2 6.0	5.1	
28-Sep-15	Sunny	Moderate	07:44	4.0	Surface	1.0	26.2 26.2	26.2	8.0 8.0	8.0	26.7 26.9	26.8	75.2 75.3	75.3	5.2 5.2	5.2	5.2	9.1 9.4	9.3	9.5	7.0 7.2	7.1	6.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	26.2 26.2	26.2	8.0 8.0	8.0	27.3 27.0	27.1	74.6 75.7	75.2	5.2 5.3	5.2	5.2	10.1 9.3	9.7		6.4 6.6	6.5	
30-Sep-15	Fine	Moderate	09:25	4.0	Surface	1.0	26.2 26.2	26.2	7.8 7.8	7.8	19.6 19.0	19.3	82.3 82.5	82.4	6.0 6.0	6.0	6.0	16.0 16.1	16.1	16.3	14.9 14.1	14.5	14.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	26.1 26.2	26.1	7.8 7.8	7.8	20.2 19.5	19.9	78.5 78.3	78.4	5.7 5.7	5.7	5.7	16.4 16.5	16.5		14.6 15.9	15.3	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-EbbTide

Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
2-Sep-15	Rainy	Moderate	15:50	3.6	Surface	1.0	24.5 24.5	24.5	7.8 7.8	7.8	24.4 24.4	24.4	77.7 77.6	77.7	5.6 5.6	5.6	5.6	8.3 9.2	8.8	9.5	9.5 9.6	9.6	9.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.6	24.3 24.4	24.4	7.8 7.8	7.8	25.3 25.4	25.4	76.9 78.0	77.5	5.6 5.6	5.6	5.6	9.5 10.8	10.2		10.2 9.8	10.0	
4-Sep-15	Sunny	Moderate	16:34	4.8	Surface	1.0	24.9 25.1	25.0	7.7 7.7	7.7	17.6 18.2	17.9	75.1 74.8	75.0	5.6 5.6	5.6	5.6	3.4 3.5	3.5	3.6	2.8 3.1	3.0	3.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	24.8 25.0	24.9	7.7 7.7	7.7	21.1 21.0	21.1	75.1 74.6	74.9	5.5 5.5	5.5	5.5	3.6 3.7	3.7		4.4 4.3	4.4	
7-Sep-15	Cloudy	Moderate	08:41	4.1	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	14.4 14.4	14.4	92.4 91.7	92.1	6.9 6.8	6.8	6.8	2.8 3.1	3.0	2.9	3.1 3.1	3.1	3.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	26.4 26.4	26.4	7.8 7.9	7.9	17.3 16.4	16.8	91.5 93.7	92.6	6.7 6.9	6.8	6.8	2.6 2.7	2.7		2.5 3.1	2.8	
9-Sep-15	Sunny	Moderate	10:32	5.2	Surface	1.0	24.9 24.8	24.8	8.1 8.1	8.1	22.6 22.9	22.8	77.6 77.2	77.4	5.7 5.6	5.6	5.6	1.5 1.3	1.4	1.5	2.9 3.6	3.3	3.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	24.4 24.4	24.4	8.1 8.1	8.1	25.2 25.2	25.2	76.5 79.2	77.9	5.5 5.7	5.6	5.6	1.4 1.5	1.5		2.9 4.2	3.6	
11-Sep-15	Fine	Moderate	11:59	3.8	Surface	1.0	25.1 25.0	25.1	8.0 8.1	8.1	21.6 21.8	21.7	94.3 92.9	93.6	6.9 6.8	6.8	6.8	2.4 2.6	2.5	3.1	5.0 5.3	5.2	5.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.7 24.6	24.6	8.1 8.1	8.1	23.9 25.3	24.6	92.8 91.4	92.1	6.7 6.6	6.7	6.7	3.5 3.6	3.6		4.4 5.9	5.2	
14-Sep-15	Sunny	Moderate	13:46	4.2	Surface	1.0	25.0 24.8	24.9	8.0 8.0	8.0	18.9 19.1	19.0	84.8 83.9	84.4	6.3 6.2	6.3	6.3	2.5 2.5	2.5	2.7	4.9 5.4	5.2	4.9
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	3.2	24.7 24.7	24.7	8.0 8.0	8.0	19.5 19.6	19.6	84.4 85.4	84.9	6.3 6.3	6.3	6.3	2.8 2.8	2.8		4.6 4.3	4.5	
16-Sep-15	Fine	Moderate	14:39	3.8	Surface	1.0	25.1 25.2	25.1	8.0 8.0	8.0	15.9 15.8	15.9	86.4 87.2	86.8	6.5 6.6	6.5	6.5	3.6 3.4	3.5	3.5	6.0 4.8	5.4	5.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	25.0 25.2	25.1	8.0 8.0	8.0	17.2 16.9	17.1	86.4 87.7	87.1	6.5 6.6	6.5	6.5	3.6 3.1	3.4		5.4 4.1	4.8	
18-Sep-15	Fine	Moderate	15:33	3.8	Surface	1.0	25.3 25.3	25.3	7.8 7.8	7.8	13.6 14.8	14.2	81.2 80.9	81.1	6.0 6.1	6.1	6.1	4.7 4.8	4.8	4.9	10.5 10.9	10.7	11.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	25.2 25.4	25.3	7.8 7.7	7.8	19.1 18.2	18.7	80.4 80.1	80.3	5.9 6.1	6.0	6.0	4.9 4.9	4.9		12.9 12.7	12.8	
21-Sep-15	Rainy	Moderate	05:16	4.3	Surface	1.0	25.7 25.7	25.7	7.9 8.0	8.0	15.3 14.7	15.0	86.8 89.7	88.3	6.5 6.7	6.6	6.6	1.8 1.8	1.8	1.9	2.8 2.2	2.5	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.3	25.6 25.6	25.6	7.9 7.8	7.9	21.7 21.7	21.7	93.2 87.3	90.3	6.7 6.3	6.5	6.5	1.9 1.9	1.9		2.2 2.3	2.3	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at SR7 - Mid-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-Sep-15	Sunny	Moderate	07:58	4.4	Surface	1.0	25.8 25.8	25.8	7.8 7.8	7.8	20.1 20.0	20.0	85.5 85.4	85.5	6.2 6.2	6.2	6.2	1.3 1.2	1.3	1.3	3.4 4.1	3.8	3.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	25.7 25.5	25.6	7.8 7.6	7.7	24.2 25.5	24.9	85.8 88.2	87.0	6.1 6.2	6.2	6.2	1.3 1.3	1.3		3.4 3.4	3.4	
25-Sep-15	Sunny	Moderate	10:43	3.9	Surface	1.0	26.3 26.3	26.3	7.9 7.9	7.9	17.0 16.5	16.8	94.6 94.6	94.6	6.9 6.8	6.9	6.9	8.2 8.2	8.2	8.4	5.3 4.0	4.7	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	26.3 26.3	26.3	7.9 7.9	7.9	22.0 21.0	21.5	94.0 93.9	94.0	6.9 6.9	6.9	6.9	8.5 8.6	8.6		4.8 5.1	5.0	
28-Sep-15	Sunny	Moderate	13:04	3.9	Surface	1.0	26.3 26.4	26.4	8.0 8.0	8.0	15.1 15.2	15.1	76.9 77.5	77.2	5.7 5.7	5.7	5.7	5.8 5.7	5.8	6.8	3.5 4.1	3.8	4.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	26.2 26.2	26.2	8.0 8.0	8.0	17.0 16.9	16.9	76.6 76.5	76.6	5.6 5.6	5.6	5.6	7.9 7.5	7.7		5.3 5.9	5.6	
30-Sep-15	Fine	Moderate	15:18	4.1	Surface	1.0	26.5 26.3	26.4	7.9 7.9	7.9	17.2 17.2	17.2	81.3 81.4	81.4	5.9 5.7	5.8	5.8	11.2 11.3	11.3	11.5	6.7 6.6	6.7	6.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	26.2 26.1	26.2	7.9 7.9	7.9	18.6 19.0	18.8	80.0 80.5	80.3	5.8 5.9	5.9	5.9	11.8 11.6	11.7		7.8 6.1	7.0	

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

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 (^{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-Sep-15	Rainy	Moderate	08:49	3.8	Surface	1.0	24.4 24.4	24.4	7.7 7.7	7.7	27.7 27.8	27.7	80.0 78.0	79.0	5.7 5.6	5.6	5.6	14.5 14.6	14.6	14.8	18.8 18.7	18.8	19.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.8	24.4 24.4	24.4	7.7 7.7	7.7	27.8 27.8	27.8	76.6 75.8	76.2	5.5 5.4	5.4	5.4	14.7 15.2	15.0		19.8 21.2	20.5	
4-Sep-15	Sunny	Moderate	10:46	4.9	Surface	1.0	24.9 24.8	24.8	7.8 7.8	7.8	23.3 23.6	23.5	78.6 76.3	77.5	5.7 5.5	5.6	5.6	4.5 4.4	4.5	4.6	4.0 5.2	4.6	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	24.7 24.4	24.5	7.8 7.9	7.8	25.1 24.9	25.0	75.8 77.2	76.5	5.5 5.6	5.5	5.5	4.6 4.7	4.7		4.4 5.5	5.0	
7-Sep-15	Sunny	Moderate	16:21	4.4	Surface	1.0	26.5 26.5	26.5	7.8 7.8	7.8	11.3 11.4	11.4	89.1 90.0	89.6	6.7 6.8	6.8	6.8	5.6 6.0	5.8	6.5	4.5 4.5	4.5	4.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	26.5 26.5	26.5	7.8 7.8	7.8	12.7 12.2	12.4	89.5 90.3	89.9	6.7 6.8	6.7	6.7	7.0 7.2	7.1		4.8 5.1	5.0	
9-Sep-15	Sunny	Moderate	17:55	4.5	Surface	1.0	24.7 24.9	24.8	8.0 8.0	8.0	17.4 17.3	17.3	95.8 97.8	96.8	7.2 7.3	7.3	7.3	4.3 4.4	4.4	4.4	8.3 7.9	8.1	7.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	24.8 24.5	24.7	8.0 8.0	8.0	17.4 17.9	17.7	96.9 95.4	96.2	7.3 7.2	7.2	7.2	4.4 4.3	4.4		5.4 6.5	6.0	
11-Sep-15	Fine	Moderate	18:51	4.0	Surface	1.0	25.3 25.4	25.4	8.0 8.1	8.1	12.2 11.8	12.0	97.0 101.0	99.0	7.4 7.8	7.6	7.6	3.5 3.5	3.5	3.8	4.7 5.6	5.2	5.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	25.1 25.0	25.0	8.0 8.0	8.0	14.3 14.6	14.5	98.0 95.0	96.5	7.5 7.2	7.3	7.3	3.8 4.1	4.0		5.4 6.6	6.0	
14-Sep-15	Sunny	Moderate	06:51	4.3	Surface	1.0	24.4 24.4	24.4	7.8 7.8	7.8	26.4 26.2	26.3	83.0 84.4	83.7	6.0 6.1	6.0	6.0	3.8 4.1	4.0	3.9	4.0 4.3	4.2	4.1
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	3.3	24.4 24.3	24.3	7.8 7.7	7.8	26.5 26.1	26.3	84.0 87.2	85.6	6.0 6.3	6.2	6.2	3.8 3.8	3.8		4.3 3.6	4.0	
16-Sep-15	Fine	Moderate	08:14	4.1	Surface	1.0	24.8 24.8	24.8	8.0 7.9	7.9	27.5 27.3	27.4	88.2 84.4	86.3	6.3 6.0	6.1	6.1	7.5 7.2	7.4	7.8	5.1 5.1	5.1	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	24.8 24.8	24.8	7.9 8.0	8.0	28.0 27.9	28.0	84.4 90.6	87.5	6.0 6.4	6.2	6.2	8.0 8.3	8.2		3.9 3.3	3.6	
18-Sep-15	Fine	Moderate	09:31	4.1	Surface	1.0	25.0 25.0	25.0	7.8 7.8	7.8	26.4 25.2	25.8	88.3 86.9	87.6	6.2 6.2	6.2	6.2	5.1 5.2	5.2	5.3	4.3 4.0	4.2	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.1	25.0 24.9	25.0	7.8 7.9	7.8	25.8 28.2	27.0	82.3 83.4	82.9	5.9 6.0	5.9	5.9	5.4 5.3	5.4		3.6 4.6	4.1	
21-Sep-15	Cloudy	Moderate	13:46	4.5	Surface	1.0	25.8 25.8	25.8	7.9 7.9	7.9	9.4 10.0	9.7	88.8 87.0	87.9	6.9 6.7	6.8	6.8	2.6 2.6	2.6	2.6	4.2 4.0	4.1	4.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.5	25.6 25.8	25.7	7.9 7.9	7.9	13.6 12.4	13.0	87.3 88.9	88.1	6.6 6.8	6.7	6.7	2.6 2.6	2.6		3.4 4.3	3.9	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	16:17	4.4	Surface	1.0	26.3 26.3	26.3	8.0 8.0	8.0	16.4 16.0	16.2	93.5 94.0	93.8	6.8 6.9	6.8	6.8	3.6 3.5	3.6	3.6	4.9 4.7	4.8	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.4	26.2 26.3	26.2	8.0 8.0	8.0	19.3 19.1	19.2	92.7 92.8	92.8	6.8 6.8	6.8	6.8	3.4 3.6	3.5		5.8 5.7	5.8	
25-Sep-15	Sunny	Moderate	18:06	4.0	Surface	1.0	26.6 26.6	26.6	7.8 7.8	7.8	18.5 17.5	18.0	94.7 95.0	94.9	6.8 6.8	6.8	6.8	7.3 7.4	7.4	7.6	6.4 7.2	6.8	7.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.0	26.5 26.6	26.5	7.8 7.8	7.8	20.0 19.4	19.7	94.2 93.6	93.9	6.8 6.8	6.8	6.8	7.8 7.7	7.8		6.9 7.2	7.1	
28-Sep-15	Sunny	Moderate	06:21	3.9	Surface	1.0	26.0 26.0	26.0	8.0 8.0	8.0	26.9 27.0	27.0	82.2 85.0	83.6	5.7 5.9	5.8	5.8	3.1 2.9	3.0	3.0	4.6 4.7	4.7	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	2.9	26.0 26.0	26.0	8.0 8.0	8.0	27.2 27.4	27.3	83.9 88.5	86.2	5.8 6.2	6.0	6.0	3.0 3.0	3.0		4.1 4.0	4.1	
30-Sep-15	Fine	Moderate	08:03	4.2	Surface	1.0	26.2 26.2	26.2	7.9 7.8	7.9	26.9 26.9	26.9	80.4 80.5	80.5	5.6 5.6	5.6	5.6	9.6 9.7	9.7	9.9	31.4 31.8	31.6	**31.3**
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.2	26.1 26.2	26.2	7.9 7.9	7.9	26.9 26.9	26.9	79.2 80.0	79.6	5.5 5.6	5.5	5.5	9.9 10.1	10.0		30.8 31.0	30.9	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Rainy	Moderate	16:00	6.5	Surface	1.0	26.7 26.7	26.7	8.1 8.1	8.1	29.8 29.9	29.9	93.6 83.8	88.7	6.3 5.6	6.0	5.9	6.5 6.4	6.5	6.5	7.5 8.1	7.8	8.4
					Middle	3.3	26.7 26.6	26.7	8.1 8.1	8.1	30.2 30.3	30.2	83.2 86.7	85.0	5.6 5.8	5.7		6.5 6.5	6.5		7.0 7.6	7.3	
					Bottom	5.5	26.5 26.7	26.6	8.1 8.1	8.1	30.6 30.4	30.5	85.1 82.9	84.0	5.7 5.6	5.7	5.7	6.3 6.6	6.5		9.8 10.6	10.2	
4-Sep-15	Sunny	Moderate	17:20	6.6	Surface	1.0	27.5 27.4	27.4	8.0 8.1	8.0	29.7 29.6	29.7	79.4 78.9	79.2	5.7 5.6	5.6	5.5	3.8 4.0	3.9	3.9	4.6 5.4	5.0	6.4
					Middle	3.3	26.2 26.1	26.1	8.1 8.0	8.0	31.7 32.4	32.0	74.3 74.8	74.6	5.4 5.4	5.4		4.1 3.8	4.0		6.2 6.1	6.2	
					Bottom	5.6	25.9 25.9	25.9	8.0 8.0	8.0	33.2 33.1	33.2	76.7 75.4	76.1	5.5 5.4	5.5	5.5	3.8 3.9	3.9		8.1 8.0	8.1	
7-Sep-15	Cloudy	Moderate	07:40	6.4	Surface	1.0	29.0 29.0	29.0	8.0 8.0	8.0	16.9 17.0	17.0	88.7 88.0	88.4	6.2 6.2	6.2	6.2	2.4 2.3	2.4	2.4	4.2 4.2	4.2	4.1
					Middle	3.2	29.0 29.0	29.0	8.0 8.0	8.0	18.4 18.4	18.4	87.2 87.8	87.5	6.1 6.1	6.1		2.3 2.3	2.3		3.6 3.8	3.7	
					Bottom	5.4	29.0 28.9	29.0	8.0 8.0	8.0	18.6 19.0	18.8	88.8 87.7	88.3	6.2 6.1	6.1	6.1	2.4 2.3	2.4		3.5 5.0	4.3	
9-Sep-15	Sunny	Moderate	09:41	6.8	Surface	1.0	26.3 26.3	26.3	8.0 8.0	8.0	30.0 30.0	30.0	79.5 80.2	79.9	5.7 5.8	5.8	5.7	2.2 2.0	2.1	2.1	4.0 2.9	3.5	3.2
					Middle	3.4	26.1 26.1	26.1	8.0 8.0	8.0	31.0 30.9	31.0	77.8 78.6	78.2	5.6 5.7	5.6		2.1 2.3	2.2		3.1 3.6	3.4	
					Bottom	5.8	26.1 26.1	26.1	8.0 8.0	8.0	31.0 31.0	31.0	79.1 77.9	78.5	5.7 5.6	5.7	5.7	1.9 2.0	2.0		2.6 2.8	2.7	
11-Sep-15	Fine	Moderate	11:20	6.4	Surface	1.0	26.7 26.8	26.8	8.2 8.2	8.2	30.8 30.7	30.8	95.5 100.1	97.8	6.4 6.7	6.6	6.5	2.7 2.8	2.8	2.8	6.1 5.3	5.7	6.3
					Middle	3.2	26.5 26.6	26.5	8.2 8.2	8.2	32.1 31.4	31.7	94.2 97.0	95.6	6.3 6.5	6.4		2.8 2.8	2.8		6.7 8.2	7.5	
					Bottom	5.4	26.6 26.4	26.5	8.2 8.2	8.2	31.5 32.4	32.0	96.5 91.6	94.1	6.5 6.2	6.3	6.3	2.7 2.9	2.8		5.5 6.0	5.8	
14-Sep-15	Sunny	Moderate	14:12	6.3	Surface	1.0	27.2 27.2	27.2	7.9 7.9	7.9	32.1 32.1	32.1	92.5 91.7	92.1	6.2 6.1	6.2	6.1	3.2 3.1	3.2	3.4	4.6 3.7	4.2	3.8
					Middle	3.2	27.2 27.2	27.2	7.9 7.9	7.9	32.3 32.3	32.3	88.6 90.2	89.4	5.9 6.0	6.0		3.3 3.4	3.4		3.7 2.8	3.3	
					Bottom	5.3	27.2 27.3	27.3	7.9 7.9	7.9	32.4 32.1	32.3	86.3 87.4	86.9	5.8 5.9	5.8	5.8	3.5 3.6	3.6		3.7 3.8	3.8	
16-Sep-15	Fine	Moderate	15:20	6.5	Surface	1.0	27.5 27.6	27.5	8.2 8.2	8.2	33.1 32.8	33.0	85.9 92.2	89.1	5.6 6.0	5.8	5.7	3.7 3.7	3.7	3.7	5.6 4.5	5.1	4.1
					Middle	3.3	27.4 27.3	27.3	8.2 8.2	8.2	34.0 34.7	34.3	86.2 83.5	84.9	5.7 5.5	5.6		3.6 3.7	3.7		3.6 3.0	3.3	
					Bottom	5.5	27.5 27.4	27.5	8.2 8.2	8.2	34.6 34.3	34.5	83.5 86.1	84.8	5.5 5.6	5.5	5.5	3.7 3.6	3.7		4.3 3.4	3.9	
18-Sep-15	Fine	Moderate	16:21	6.4	Surface	1.0	28.3 27.9	28.1	8.2 8.2	8.2	32.7 33.5	33.1	86.0 82.8	84.4	5.6 5.4	5.5	5.4	4.3 4.2	4.3	4.4	3.1 3.1	3.1	4.2
					Middle	3.2	27.8 27.7	27.8	8.2 8.2	8.2	33.7 34.2	33.9	82.6 81.7	82.2	5.4 5.3	5.3		4.5 4.4	4.5		3.3 4.5	3.9	
					Bottom	5.4	27.7 27.7	27.7	8.2 8.2	8.2	34.5 34.2	34.4	81.4 82.2	81.8	5.3 5.4	5.3	5.3	4.5 4.5	4.5		5.2 6.1	5.7	
21-Sep-15	Rainy	Moderate	04:40	6.6	Surface	1.0	28.5 28.5	28.5	8.1 8.1	8.1	17.8 17.6	17.7	87.0 86.0	86.5	6.1 6.1	6.1	6.0	3.5 3.5	3.5	3.8	3.2 2.4	2.8	2.9
					Middle	3.3	28.5 28.5	28.5	8.1 8.1	8.1	21.9 22.0	21.9	84.2 84.7	84.5	5.8 5.8	5.8		4.0 3.7	3.9		3.2 2.9	3.1	
					Bottom	5.6	28.5 28.5	28.5	8.0 8.0	8.0	25.3 26.0	25.7	86.7 84.5	85.6	5.9 5.7	5.8	5.8	3.8 4.0	3.9		2.4 3.0	2.7	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	07:52	6.8	Surface	1.0	28.4 28.4	28.4	8.2 8.2	8.2	27.0 27.3	27.2	87.8 88.0	87.9	5.9 5.9	5.9	5.9	1.6 1.7	1.7	1.6	2.6 2.3	2.5	2.6
					Middle	3.4	28.5 28.5	28.5	8.2 8.2	8.2	27.8 28.1	28.0	87.9 87.8	87.9	5.8 5.8	5.8		1.5 1.5	1.5		2.8 2.2	2.5	
					Bottom	5.8	28.5 28.5	28.5	8.2 8.2	8.2	28.5 28.4	28.5	88.0 88.1	88.1	5.8 5.8	5.8	5.8	1.5 1.5	1.5		2.1 3.2	2.7	
25-Sep-15	Sunny	Moderate	09:36	6.5	Surface	1.0	29.2 29.1	29.1	8.3 8.2	8.3	23.0 24.4	23.7	96.6 95.7	96.2	6.5 6.4	6.5	6.5	1.9 1.9	1.9	2.0	2.6 2.7	2.7	3.1
					Middle	3.3	29.1 29.1	29.1	8.2 8.2	8.2	24.8 25.5	25.2	95.4 95.1	95.3	6.4 6.4	6.4		2.0 2.0	2.0		3.0 3.1	3.1	
					Bottom	5.5	29.0 29.0	29.0	8.2 8.2	8.2	25.7 26.2	26.0	95.6 94.8	95.2	6.4 6.3	6.4	6.4	2.1 2.0	2.1		3.5 3.3	3.4	
28-Sep-15	Sunny	Moderate	13:31	6.5	Surface	1.0	28.7 28.7	28.7	8.3 8.2	8.3	34.3 34.4	34.3	82.1 81.5	81.8	5.6 5.6	5.6	5.6	4.7 4.8	4.8	4.8	4.6 4.2	4.4	4.5
					Middle	3.3	28.7 28.7	28.7	8.2 8.3	8.3	34.4 34.4	34.4	81.5 82.6	82.1	5.6 5.6	5.6		4.7 4.8	4.8		5.4 4.3	4.9	
					Bottom	5.5	28.7 28.7	28.7	8.3 8.2	8.3	34.3 34.4	34.4	83.6 81.4	82.5	5.7 5.6	5.6	5.6	4.8 4.8	4.8		4.0 4.6	4.3	
30-Sep-15	Fine	Moderate	14:51	6.5	Surface	1.0	29.3 29.3	29.3	8.2 8.2	8.2	32.1 32.3	32.2	83.3 82.9	83.1	5.5 5.4	5.4	5.4	4.9 5.0	5.0	5.1	6.3 6.4	6.4	6.3
					Middle	3.3	28.8 28.8	28.8	8.2 8.2	8.2	33.9 34.5	34.2	83.0 80.3	81.7	5.4 5.2	5.3		5.1 5.0	5.1		5.3 7.3	6.3	
					Bottom	5.5	28.8 29.1	29.0	8.2 8.2	8.2	34.6 34.1	34.4	81.2 83.2	82.2	5.3 5.4	5.4	5.4	5.1 5.1	5.1		5.8 6.3	6.1	

Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
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 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-Sep-15	Rainy	Moderate	08:16	6.6	Surface	1.0	26.6 26.6	26.6	8.0 8.0	8.0	29.5 29.6	29.5	75.3 75.4	75.4	5.1 5.1	5.1	5.1	7.4 7.2	7.3	7.4	7.6 8.4	8.0	9.1
					Middle	3.3	26.5 26.5	26.5	8.0 8.0	8.0	29.6 29.7	29.6	75.3 74.7	75.0	5.1 5.1	5.1		7.3 7.6	7.5		8.4 9.5	9.0	
					Bottom	5.6	26.6 26.5	26.5	8.0 8.0	8.0	29.6 29.9	29.7	75.4 74.7	75.1	5.1 5.0	5.1	5.1	7.4 7.6	7.5		10.0 10.8	10.4	
4-Sep-15	Sunny	Moderate	10:22	6.5	Surface	1.0	26.6 26.5	26.6	8.0 8.0	8.0	28.3 28.3	28.3	73.6 73.2	73.4	5.4 5.3	5.3	5.3	4.9 5.3	5.1	5.4	6.3 5.7	6.0	6.1
					Middle	3.3	26.4 26.4	26.4	8.0 8.0	8.0	29.3 29.3	29.3	72.7 73.0	72.9	5.3 5.3	5.3		5.6 5.3	5.5		6.0 6.4	6.2	
					Bottom	5.5	26.3 26.3	26.3	8.0 8.0	8.0	29.6 29.5	29.5	72.7 73.1	72.9	5.3 5.3	5.3	5.3	5.8 5.5	5.7		5.9 6.1	6.0	
7-Sep-15	Sunny	Moderate	16:59	6.8	Surface	1.0	27.1 26.8	27.0	8.1 8.1	8.1	26.8 27.6	27.2	77.2 77.2	77.2	5.3 5.2	5.2	5.2	2.7 2.9	2.8	2.9	3.7 4.2	4.0	4.5
					Middle	3.4	26.7 26.7	26.7	8.1 8.1	8.1	29.3 29.2	29.2	76.6 76.0	76.3	5.2 5.1	5.2		2.9 3.0	3.0		3.8 5.3	4.6	
					Bottom	5.8	26.7 26.8	26.8	8.1 8.1	8.1	30.0 29.7	29.9	75.4 76.5	76.0	5.1 5.2	5.1	5.1	3.0 2.8	2.9		4.2 5.6	4.9	
9-Sep-15	Sunny	Moderate	18:32	6.7	Surface	1.0	26.1 26.4	26.3	7.9 7.9	7.9	31.2 30.1	30.7	83.8 80.6	82.2	6.0 5.8	5.9	5.8	3.0 2.8	2.9	3.6	3.8 2.6	3.2	4.6
					Middle	3.4	26.1 26.1	26.1	7.9 7.9	7.9	31.6 31.6	31.6	78.1 79.0	78.6	5.6 5.7	5.6		3.5 3.8	3.7		6.3 6.3	6.3	
					Bottom	5.7	26.1 26.0	26.0	7.9 7.9	7.9	31.8 32.0	31.9	78.4 78.8	78.6	5.6 5.7	5.7	5.7	3.9 4.2	4.1		4.2 4.6	4.4	
11-Sep-15	Fine	Moderate	19:24	6.6	Surface	1.0	27.0 27.1	27.0	8.2 8.3	8.2	30.2 29.5	29.9	86.4 88.4	87.4	5.8 6.0	5.9	5.8	4.1 4.1	4.1	4.3	5.4 6.6	6.0	6.9
					Middle	3.3	26.5 26.6	26.6	8.2 8.2	8.2	32.4 30.9	31.6	83.9 81.5	82.7	5.6 5.5	5.6		4.4 4.4	4.4		6.1 6.8	6.5	
					Bottom	5.6	26.4 26.4	26.4	8.2 8.2	8.2	32.9 32.8	32.8	82.2 81.2	81.7	5.5 5.4	5.5	5.5	4.5 4.4	4.5		7.3 9.2	8.3	
14-Sep-15	Sunny	Moderate	06:23	6.4	Surface	1.0	26.5 26.5	26.5	7.8 7.8	7.8	33.8 33.3	33.6	86.6 85.9	86.3	5.8 5.8	5.8	5.7	4.3 4.2	4.3	4.4	3.7 3.7	3.7	3.5
					Middle	3.2	26.5 26.5	26.5	7.8 7.8	7.8	34.2 34.4	34.3	83.5 85.2	84.4	5.6 5.7	5.6		4.3 4.4	4.4		3.5 3.6	3.6	
					Bottom	5.4	26.5 26.5	26.5	7.8 7.8	7.8	34.3 34.3	34.3	83.1 82.8	83.0	5.6 5.5	5.6	5.6	4.6 4.5	4.6		3.0 3.2	3.1	
16-Sep-15	Fine	Moderate	07:41	6.5	Surface	1.0	27.2 27.2	27.2	8.1 8.1	8.1	34.1 34.0	34.0	79.0 79.1	79.1	5.2 5.2	5.2	5.2	5.3 5.4	5.4	5.5	5.4 6.1	5.8	6.4
					Middle	3.3	27.2 27.2	27.2	8.1 8.1	8.1	34.4 34.4	34.4	79.0 78.9	79.0	5.2 5.2	5.2		5.5 5.4	5.5		5.8 6.3	6.1	
					Bottom	5.5	27.2 27.2	27.2	8.1 8.1	8.1	34.7 34.4	34.5	79.2 78.9	79.1	5.2 5.2	5.2	5.2	5.5 5.6	5.6		6.9 7.9	7.4	
18-Sep-15	Fine	Moderate	08:51	6.5	Surface	1.0	27.5 27.5	27.5	8.1 8.1	8.1	31.5 31.7	31.6	79.2 80.1	79.7	5.2 5.3	5.3	5.3	5.1 5.1	5.1	5.2	4.8 3.0	3.9	4.5
					Middle	3.3	27.5 27.5	27.5	8.1 8.1	8.1	32.8 32.8	32.8	78.9 79.7	79.3	5.2 5.2	5.2		5.2 5.2	5.2		4.1 5.1	4.6	
					Bottom	5.5	27.5 27.5	27.5	8.1 8.1	8.1	33.4 33.2	33.3	79.3 79.0	79.2	5.2 5.2	5.2	5.2	5.2 5.3	5.3		5.3 4.5	4.9	
21-Sep-15	Cloudy	Moderate	14:19	6.8	Surface	1.0	28.3 28.4	28.3	8.2 8.2	8.2	27.3 26.8	27.0	83.8 85.8	84.8	5.6 5.8	5.7	5.7	2.7 2.7	2.7	2.9	2.7 2.7	2.7	2.9
					Middle	3.4	28.2 28.2	28.2	8.2 8.2	8.2	30.8 30.9	30.8	86.4 83.5	85.0	5.7 5.5	5.6		3.1 2.9	3.0		3.0 2.9	3.0	
					Bottom	5.8	28.2 28.2	28.2	8.2 8.2	8.2	31.2 31.0	31.1	84.4 90.7	87.6	5.5 6.0	5.8	5.8	2.9 3.2	3.1		2.6 3.5	3.1	

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 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-Sep-15	Sunny	Moderate	16:54	6.7	Surface	1.0	28.5 28.4	28.5	8.2 8.2	8.2	30.2 30.7	30.5	82.5 82.3	82.4	5.4 5.4	5.4	5.4	2.7 2.7	2.7	3.0	4.4 3.7	4.1	4.6
					Middle	3.4	28.5 28.5	28.5	8.2 8.2	8.2	31.4 31.4	31.4	84.2 81.7	83.0	5.5 5.3	5.4		3.2 3.0	3.1		4.5 4.9	4.7	
					Bottom	5.7	28.4 28.4	28.4	8.3 8.2	8.2	33.1 33.0	33.1	86.6 81.9	84.3	5.6 5.3	5.5	5.5	3.4 3.2	3.3		4.7 5.5	5.1	
25-Sep-15	Sunny	Moderate	18:21	6.3	Surface	1.0	28.9 28.9	28.9	8.3 8.3	8.3	28.9 28.5	28.7	84.3 83.7	84.0	5.5 5.5	5.5	5.5	4.7 4.8	4.8	5.2	1.6 1.7	1.7	1.8
					Middle	3.2	28.8 28.8	28.8	8.3 8.3	8.3	31.0 31.3	31.1	84.3 85.0	84.7	5.5 5.5	5.5		5.6 5.3	5.5		1.7 1.8	1.8	
					Bottom	5.3	28.8 28.8	28.8	8.2 8.3	8.3	32.1 31.9	32.0	83.6 84.7	84.2	5.4 5.5	5.4	5.4	5.1 5.2	5.2		1.9 1.8	1.9	
28-Sep-15	Sunny	Moderate	05:41	6.6	Surface	1.0	28.6 28.6	28.6	8.2 8.2	8.2	33.4 33.1	33.3	78.5 78.5	78.5	5.4 5.4	5.4	5.4	9.7 9.5	9.6	9.7	4.2 3.8	4.0	4.9
					Middle	3.3	28.5 28.6	28.6	8.2 8.2	8.2	34.3 34.3	34.3	78.7 78.3	78.5	5.4 5.4	5.4		9.6 9.7	9.7		5.3 5.2	5.3	
					Bottom	5.6	28.5 28.6	28.6	8.2 8.2	8.2	34.4 34.1	34.3	79.1 78.1	78.6	5.4 5.4	5.4	5.4	9.5 9.9	9.7		5.8 4.8	5.3	
30-Sep-15	Fine	Moderate	07:01	6.5	Surface	1.0	28.7 28.7	28.7	8.1 8.1	8.1	31.2 31.4	31.3	78.3 77.9	78.1	5.2 5.2	5.2	5.2	12.3 12.3	12.3	12.4	7.3 6.8	7.1	7.6
					Middle	3.3	28.6 28.7	28.7	8.1 8.1	8.1	33.0 32.3	32.7	77.1 77.3	77.2	5.1 5.1	5.1		12.4 12.2	12.3		8.1 7.2	7.7	
					Bottom	5.5	28.6 28.7	28.7	8.1 8.1	8.1	33.1 33.1	33.1	77.2 77.6	77.4	5.1 5.1	5.1	5.1	12.4 12.6	12.5		8.3 7.4	7.9	

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

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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*
2-Sep-15	Rainy	Moderate	16:10	5.1	Surface	1.0	26.7 26.7	26.7	8.1 8.1	8.1	29.9 30.2	30.0	82.2 81.6	81.9	5.5 5.5	5.5	5.5	6.4 6.5	6.5	6.5	6.9 7.7	7.3	7.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	26.7 26.6	26.7	8.1 8.1	8.1	30.1 30.5	30.3	81.8 81.4	81.6	5.5 5.5	5.5		6.5 6.5	6.5		7.0 8.0	7.5	
4-Sep-15	Sunny	Moderate	17:34	4.9	Surface	1.0	26.8 27.2	27.0	8.1 8.1	8.1	30.4 30.2	30.3	77.8 79.0	78.4	5.6 5.6	5.6	5.6	4.1 4.2	4.2	4.3	8.0 7.1	7.6	6.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	26.8 26.9	26.8	8.0 8.1	8.1	31.9 31.0	31.5	78.6 78.0	78.3	5.6 5.6	5.6	5.6	4.1 4.5	4.3		5.8 5.1	5.5	
7-Sep-15	Cloudy	Moderate	07:31	5.2	Surface	1.0	29.0 29.0	29.0	8.0 8.0	8.0	17.0 17.1	17.1	88.6 88.0	88.3	6.2 6.2	6.2	6.2	2.5 2.4	2.5	2.5	3.0 4.2	3.6	3.8
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	28.9 29.0	29.0	8.0 8.0	8.0	18.8 18.6	18.7	88.2 88.7	88.5	6.1 6.2	6.1	6.1	2.4 2.4	2.4		4.4 3.3	3.9	
9-Sep-15	Sunny	Moderate	09:27	5.2	Surface	1.0	26.1 26.2	26.2	8.0 8.0	8.0	30.9 30.6	30.7	83.3 84.7	84.0	6.0 6.1	6.1	6.1	2.0 2.1	2.1	2.2	2.3 3.4	2.9	2.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	26.1 26.2	26.1	8.0 8.0	8.0	30.6 30.7	30.7	80.9 82.8	81.9	5.8 6.0	5.9	5.9	2.1 2.2	2.2		2.6 1.9	2.3	
11-Sep-15	Fine	Moderate	11:11	4.6	Surface	1.0	27.1 27.0	27.1	8.2 8.2	8.2	30.2 30.8	30.5	103.9 107.7	105.8	7.0 7.2	7.1	7.1	2.4 2.4	2.4	2.5	5.3 4.6	5.0	6.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.6	26.7 26.8	26.7	8.2 8.2	8.2	32.2 31.8	32.0	98.0 100.3	99.2	6.6 6.7	6.7	6.7	2.6 2.6	2.6		7.2 7.0	7.1	
14-Sep-15	Sunny	Moderate	14:18	4.9	Surface	1.0	27.0 26.9	26.9	7.8 7.8	7.8	32.8 32.9	32.9	85.2 85.7	85.5	5.7 5.7	5.7	5.7	5.6 5.6	5.6	5.8	6.4 7.2	6.8	6.4
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	3.9	26.9 26.9	26.9	7.8 7.9	7.9	32.9 32.9	32.9	82.5 82.9	82.7	5.5 5.6	5.5	5.5	5.9 5.8	5.9		6.3 5.7	6.0	
16-Sep-15	Fine	Moderate	15:30	5.0	Surface	1.0	27.6 27.7	27.6	8.2 8.2	8.2	33.3 33.2	33.3	85.5 86.9	86.2	5.6 5.7	5.6	5.6	3.7 3.7	3.7	3.8	3.5 3.1	3.3	3.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	27.3 27.7	27.5	8.2 8.2	8.2	34.1 33.4	33.7	85.1 86.6	85.9	5.6 5.7	5.6	5.6	3.8 3.7	3.8		3.7 2.8	3.3	
18-Sep-15	Fine	Moderate	16:31	5.0	Surface	1.0	27.8 27.8	27.8	8.2 8.2	8.2	33.8 33.8	33.8	81.2 81.1	81.2	5.3 5.3	5.3	5.3	4.8 4.7	4.8	4.9	4.0 3.2	3.6	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	27.7 27.8	27.7	8.2 8.2	8.2	34.5 34.2	34.4	80.9 81.0	81.0	5.3 5.3	5.3	5.3	4.9 4.8	4.9		5.2 5.1	5.2	
21-Sep-15	Rainy	Moderate	04:26	5.2	Surface	1.0	28.5 28.5	28.5	8.1 8.1	8.1	19.0 20.3	19.7	89.3 90.1	89.7	6.2 6.2	6.2	6.2	3.3 3.3	3.3	3.3	1.9 1.9	1.9	2.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	28.6 28.5	28.5	8.1 8.1	8.1	23.9 23.8	23.9	92.9 89.9	91.4	6.3 6.1	6.2	6.2	3.3 3.2	3.3		2.9 2.8	2.9	

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

Appendix J - Marine Water Quality Monitoring Results

Water Quality Monitoring Results at 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-Sep-15	Sunny	Moderate	07:39	5.3	Surface	1.0	28.4 28.5	28.4	8.2 8.2	8.2	28.2 27.9	28.0	90.6 89.1	89.9	6.0 5.9	6.0	6.0	1.6 1.6	1.6	1.6	2.7 2.5	2.6	3.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	28.4 28.5	28.5	8.2 8.2	8.2	29.3 29.9	29.6	89.9 93.3	91.6	5.9 6.1	6.0	6.0	1.6 1.5	1.6		3.1 4.1	3.6	
25-Sep-15	Sunny	Moderate	09:26	4.8	Surface	1.0	29.2 29.1	29.2	8.2 8.2	8.2	24.9 24.8	24.9	95.3 95.3	95.3	6.4 6.4	6.4	6.4	1.9 1.8	1.9	1.9	2.8 2.8	2.8	3.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.8	29.0 29.1	29.1	8.2 8.2	8.2	26.9 26.4	26.6	93.9 95.2	94.6	6.2 6.3	6.3	6.3	1.9 1.9	1.9		3.6 3.6	3.6	
28-Sep-15	Sunny	Moderate	13:41	5.1	Surface	1.0	28.7 28.7	28.7	8.2 8.2	8.2	34.4 34.4	34.4	80.9 80.9	80.9	5.5 5.5	5.5	5.5	4.8 4.9	4.9	4.9	4.5 5.3	4.9	4.6
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	28.7 28.7	28.7	8.2 8.2	8.2	34.5 34.4	34.5	80.7 80.9	80.8	5.5 5.5	5.5	5.5	4.8 4.8	4.8		4.2 4.3	4.3	
30-Sep-15	Fine	Moderate	15:00	4.7	Surface	1.0	29.2 29.3	29.3	8.2 8.2	8.2	32.0 32.0	32.0	81.9 80.6	81.3	5.4 5.3	5.3	5.3	5.3 5.2	5.3	5.3	5.9 6.3	6.1	6.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.7	28.8 29.2	29.0	8.2 8.2	8.2	34.2 34.0	34.1	78.0 81.9	80.0	5.1 5.3	5.2	5.2	5.3 5.1	5.2		6.7 5.9	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

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-Sep-15	Rainy	Moderate	08:07	5.4	Surface	1.0	26.5 26.5	26.5	7.9 7.9	7.9	29.7 29.7	29.7	75.6 76.1	75.9	5.1 5.2	5.1	5.1	8.4 8.0	8.2	8.2	9.5 8.6	9.1	9.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	26.4 26.5	26.5	7.8 7.9	7.9	30.0 29.8	29.9	78.1 75.8	77.0	5.3 5.1	5.2	5.2	8.1 8.1	8.1		8.9 9.4	9.2	
4-Sep-15	Sunny	Moderate	10:09	5.2	Surface	1.0	26.6 26.6	26.6	8.0 8.0	8.0	28.6 28.4	28.5	74.6 75.3	75.0	5.4 5.5	5.4	5.4	5.1 5.1	5.1	5.2	5.3 5.1	5.2	5.3
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	26.5 26.4	26.5	8.0 8.0	8.0	29.1 29.2	29.2	74.8 75.6	75.2	5.4 5.5	5.5	5.5	5.1 5.3	5.2		5.1 5.7	5.4	
7-Sep-15	Sunny	Moderate	17:06	5.1	Surface	1.0	26.7 27.2	27.0	8.1 8.1	8.1	28.2 26.4	27.3	75.9 76.9	76.4	5.2 5.2	5.2	5.2	2.8 2.8	2.8	2.8	5.1 4.7	4.9	5.0
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	26.9 26.5	26.7	8.1 8.1	8.1	30.3 29.9	30.1	76.7 74.8	75.8	5.1 5.1	5.1	5.1	2.7 2.9	2.8		5.7 4.3	5.0	
9-Sep-15	Sunny	Moderate	18:44	5.3	Surface	1.0	26.1 26.1	26.1	7.9 7.9	7.9	31.2 31.1	31.2	75.5 75.8	75.7	5.4 5.5	5.5	5.5	2.3 2.5	2.4	2.8	5.7 6.1	5.9	4.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.3	26.1 26.1	26.1	7.9 7.9	7.9	31.5 31.6	31.5	75.3 75.7	75.5	5.4 5.5	5.4	5.4	3.0 3.3	3.2		3.3 4.5	3.9	
11-Sep-15	Fine	Moderate	19:36	5.0	Surface	1.0	26.8 26.7	26.8	8.2 8.2	8.2	31.1 31.2	31.1	83.8 82.5	83.2	5.6 5.5	5.6	5.6	3.7 3.8	3.8	3.8	4.1 5.5	4.8	4.2
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.0	26.5 26.5	26.5	8.2 8.2	8.2	32.6 33.1	32.9	83.4 82.5	83.0	5.6 5.5	5.5	5.5	3.8 3.8	3.8		3.4 3.6	3.5	
14-Sep-15	Sunny	Moderate	06:19	4.9	Surface	1.0	26.4 26.4	26.4	7.7 7.7	7.7	35.8 35.7	35.8	84.3 85.5	84.9	5.6 5.7	5.7	5.7	6.4 6.5	6.5	6.6	6.8 6.4	6.6	6.9
					Middle	0.0	0.0 0.0	0.0	- -	-	0.0 0.0	0.0	0.0 0.0	0.0	0.0 0.0	0.0		0.0 0.0	0.0		- -	-	
					Bottom	3.9	26.4 26.4	26.4	7.7 7.7	7.7	36.0 35.8	35.9	81.4 81.7	81.6	5.5 5.5	5.5	5.5	6.7 6.6	6.7		7.7 6.6	7.2	
16-Sep-15	Fine	Moderate	07:31	4.9	Surface	1.0	27.2 27.2	27.2	8.1 8.1	8.1	33.9 33.9	33.9	79.9 80.4	80.2	5.3 5.3	5.3	5.3	5.3 5.3	5.3	5.4	5.0 4.4	4.7	5.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	3.9	27.2 27.2	27.2	8.1 8.1	8.1	34.0 34.1	34.1	82.0 80.1	81.1	5.4 5.3	5.3	5.3	5.4 5.3	5.4		6.0 6.2	6.1	
18-Sep-15	Fine	Moderate	08:42	5.2	Surface	1.0	27.5 27.5	27.5	8.1 8.1	8.1	32.6 32.3	32.5	80.3 80.5	80.4	5.3 5.3	5.3	5.3	5.3 5.3	5.3	5.4	4.8 4.3	4.6	3.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	27.5 27.5	27.5	8.1 8.1	8.1	33.7 32.8	33.3	80.5 80.3	80.4	5.3 5.3	5.3	5.3	5.4 5.5	5.5		3.3 3.1	3.2	
21-Sep-15	Cloudy	Moderate	14:32	5.5	Surface	1.0	28.2 28.2	28.2	8.2 8.2	8.2	28.5 29.3	28.9	82.7 82.2	82.5	5.5 5.5	5.5	5.5	2.7 2.6	2.7	2.7	3.4 2.3	2.9	2.7
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	28.2 28.2	28.2	8.2 8.2	8.2	30.8 31.0	30.9	82.4 82.4	82.4	5.4 5.4	5.4	5.4	2.7 2.4	2.6		2.2 2.8	2.5	

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

Appendix J - Marine Water Quality Monitoring Results

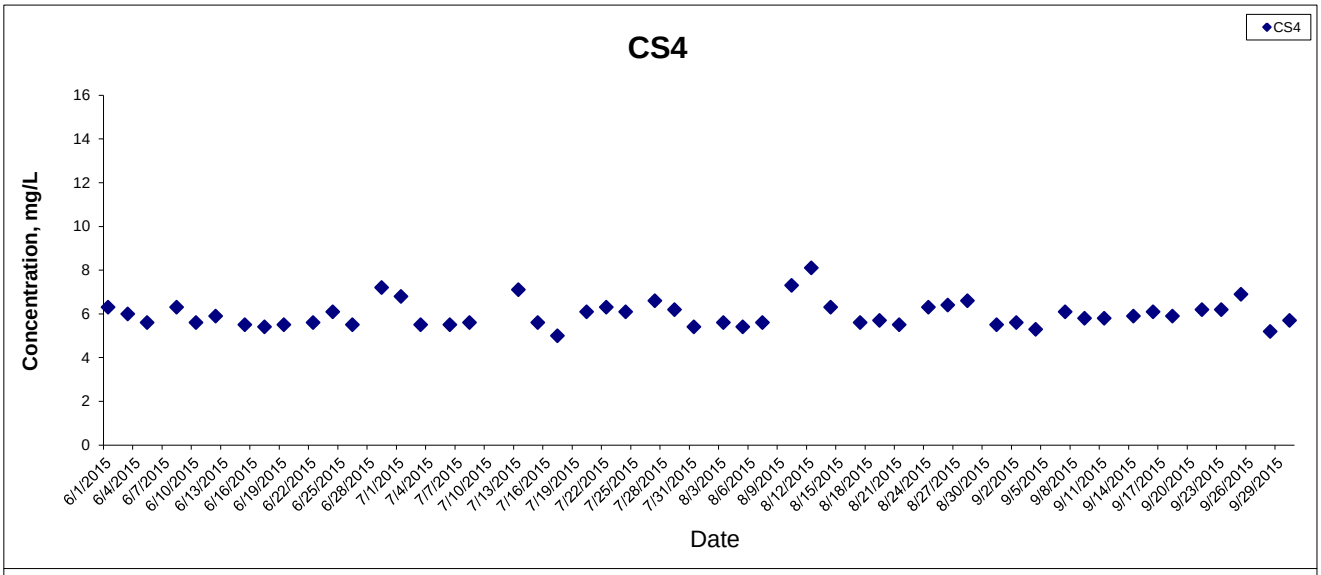
Water Quality Monitoring Results at SR10B(N) - Mid-FloodTide

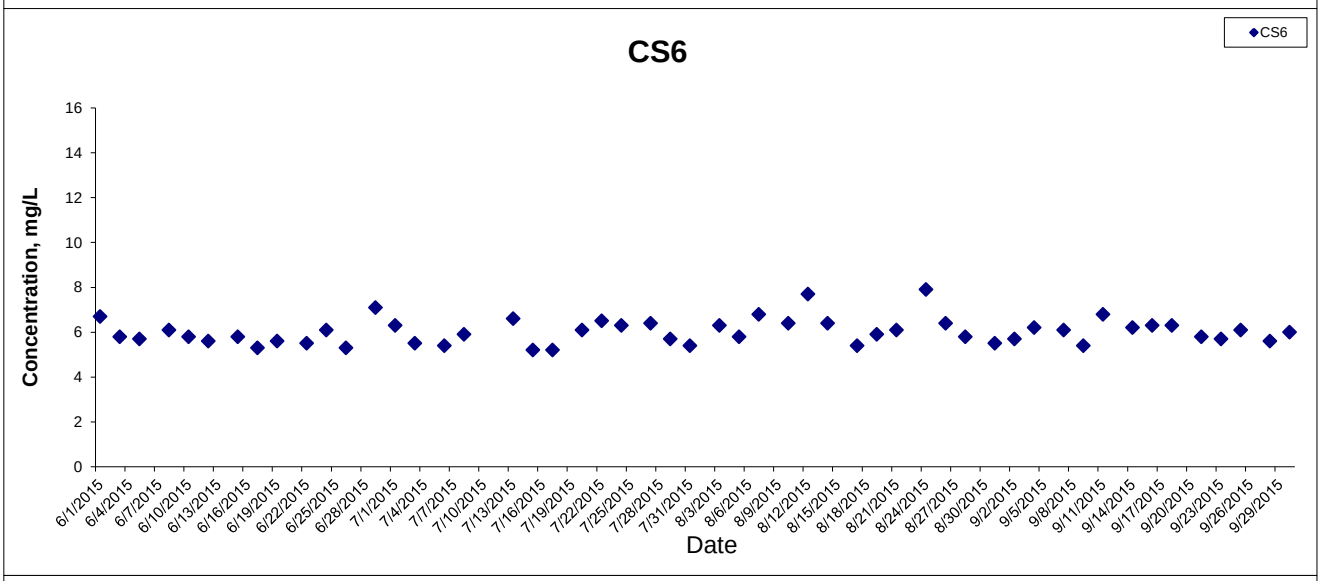
Date	Weather Condition	Sea Condition**	Sampling Time	Water Depth (m)	Sampling Depth (m)		Temperature (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity(NTU)			Suspended Solids (mg/L)		
							Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
23-Sep-15	Sunny	Moderate	17:06	5.5	Surface	1.0	28.6 28.5	28.6	8.2 8.2	8.2	30.7 30.4	30.5	82.2 83.0	82.6	5.4 5.4	5.4	5.4	2.6 2.6	2.6	2.5	4.2 4.6	4.4	4.4
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.5	28.5 28.5	28.5	8.2 8.2	8.2	32.0 32.4	32.2	82.4 82.1	82.3	5.4 5.3	5.3	5.3	2.3 2.5	2.4		4.4 4.1	4.3	
25-Sep-15	Sunny	Moderate	18:30	5.4	Surface	1.0	28.9 28.9	28.9	8.3 8.3	8.3	28.5 28.4	28.5	83.0 83.4	83.2	5.5 5.5	5.5	5.5	4.0 4.0	4.0	4.2	2.6 2.3	2.5	2.5
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.4	28.9 28.8	28.9	8.2 8.2	8.2	31.0 31.4	31.2	82.8 83.8	83.3	5.4 5.4	5.4	5.4	4.3 4.4	4.4		2.7 2.2	2.5	
28-Sep-15	Sunny	Moderate	05:33	5.1	Surface	1.0	28.6 28.6	28.6	8.2 8.2	8.2	34.7 34.6	34.6	80.2 79.7	80.0	5.5 5.5	5.5	5.5	10.9 10.6	10.8	10.9	3.7 4.5	4.1	4.1
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.1	28.5 28.5	28.5	8.2 8.2	8.2	34.9 34.7	34.8	81.9 79.7	80.8	5.6 5.5	5.5	5.5	10.7 11.0	10.9		4.4 3.8	4.1	
30-Sep-15	Fine	Moderate	06:52	5.2	Surface	1.0	28.8 28.7	28.8	8.1 8.1	8.1	31.4 31.8	31.6	78.4 78.3	78.4	5.2 5.2	5.2	5.2	13.1 13.1	13.1	13.2	7.5 7.9	7.7	7.9
					Middle	-	- -	-	- -	-	- -	-	- -	-	- -	-		- -	-		- -	-	
					Bottom	4.2	28.8 28.7	28.7	8.1 8.1	8.1	32.1 33.4	32.7	78.3 78.5	78.4	5.2 5.2	5.2	5.2	13.2 13.2	13.2		8.7 7.3	8.0	

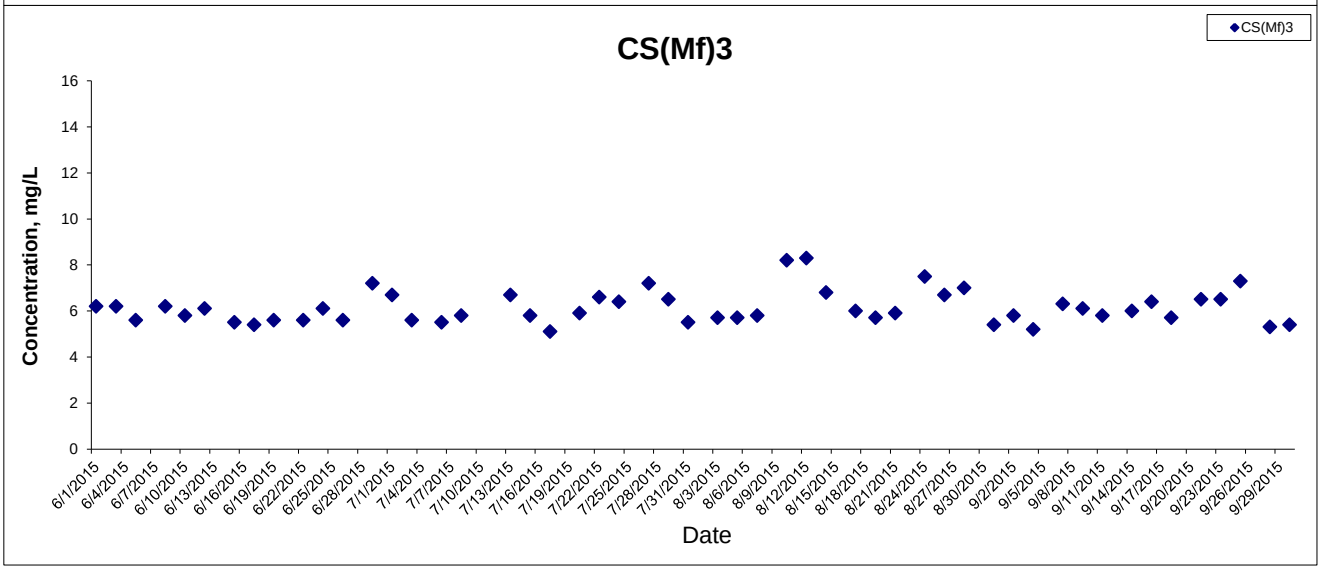
Remarks:
Bolded values means the measured values exceed the Action Level; Underlined bolded values means the measured values exceed the Limit Level.
CS6, CSA and CS(Mf)5 are considered as upstream contol stations of mid-flood tide. The averaged turbidity and suspended solid values of these stations will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

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







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

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Graphical Presentation of Impact Water Quality Monitoring Results

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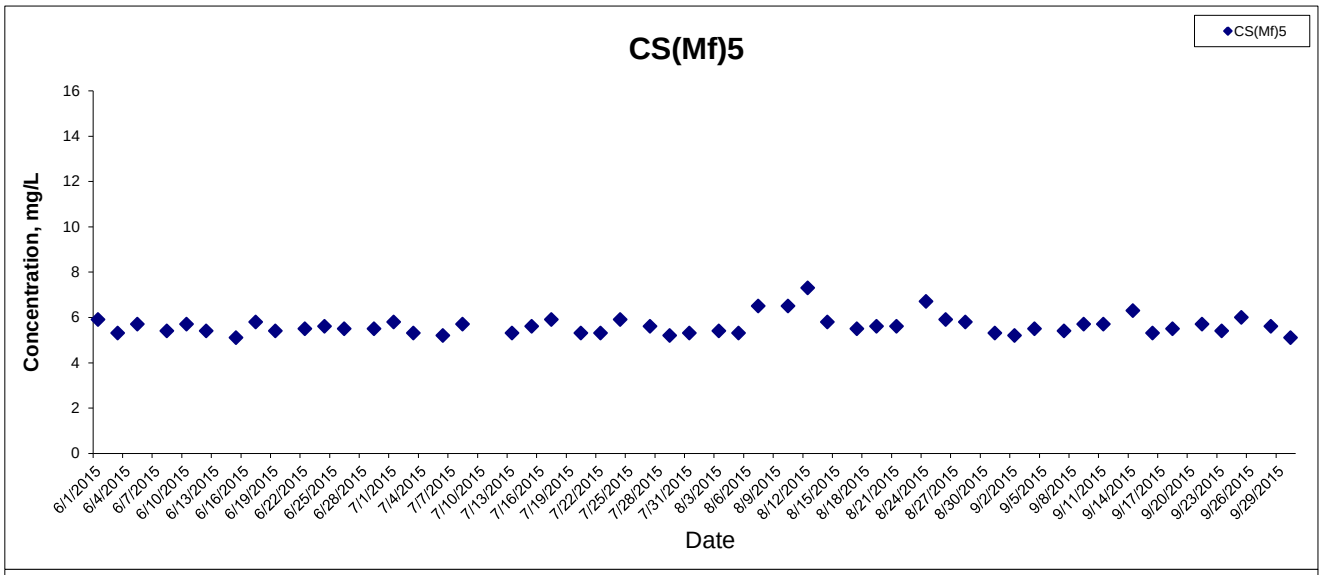
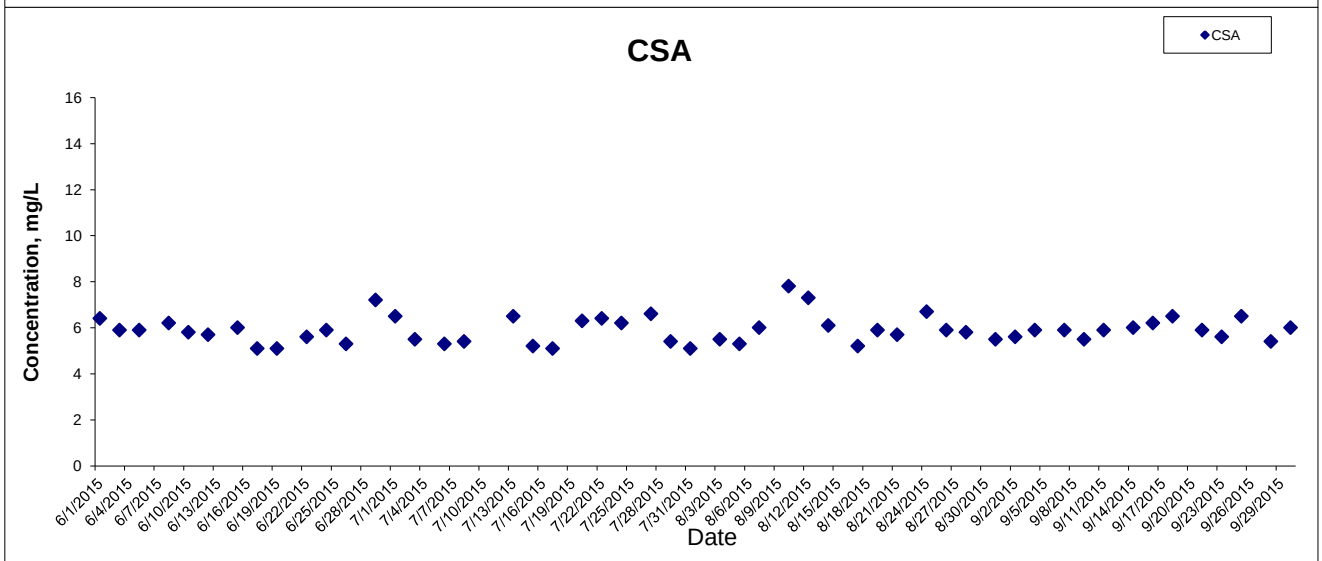
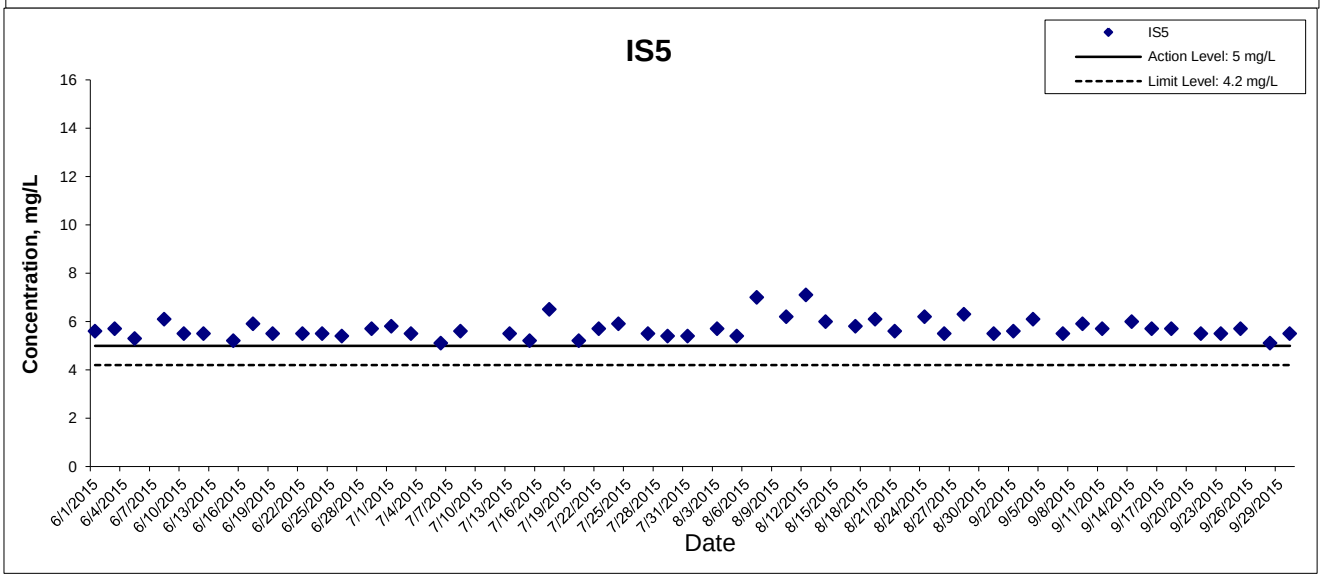
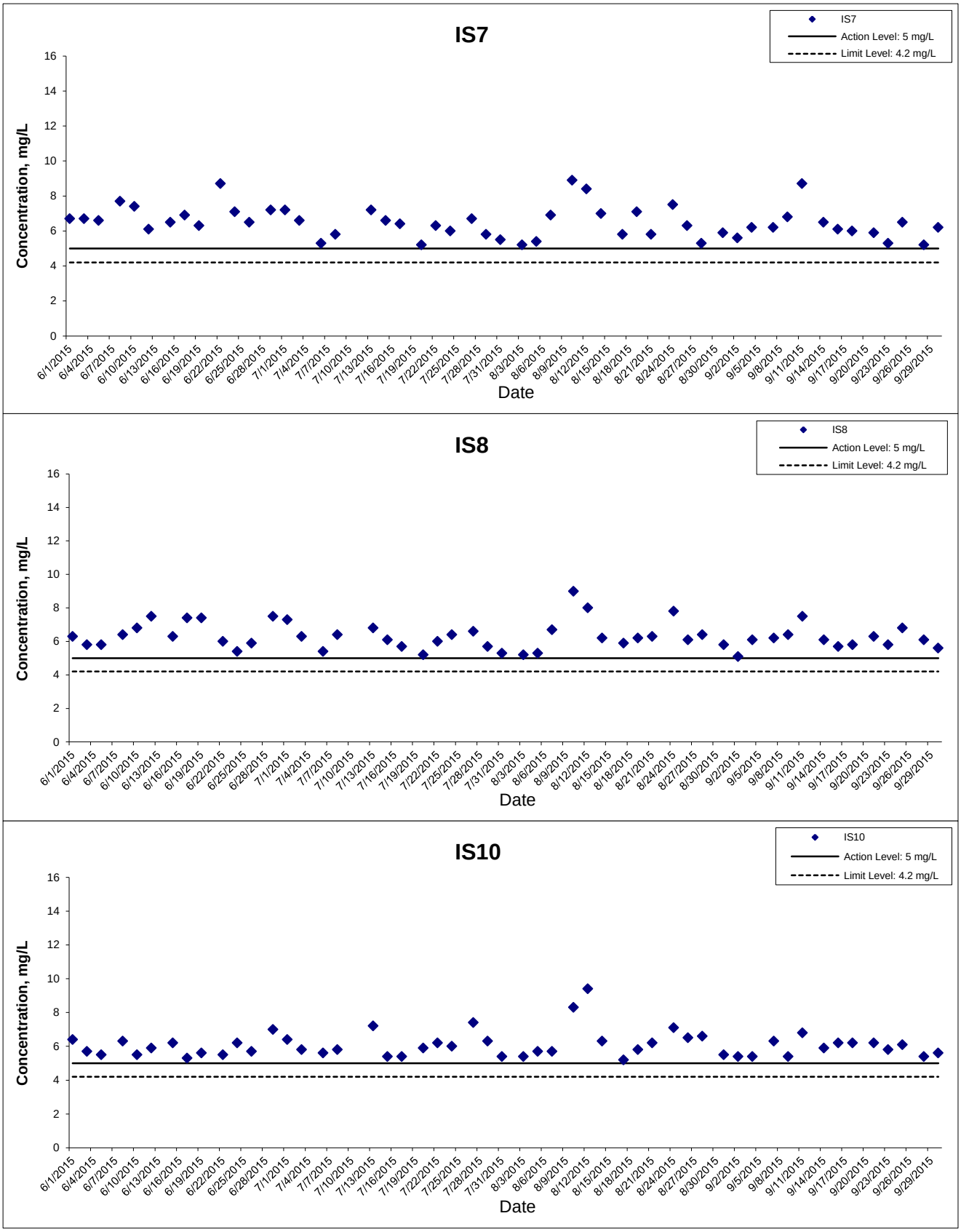
Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide







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



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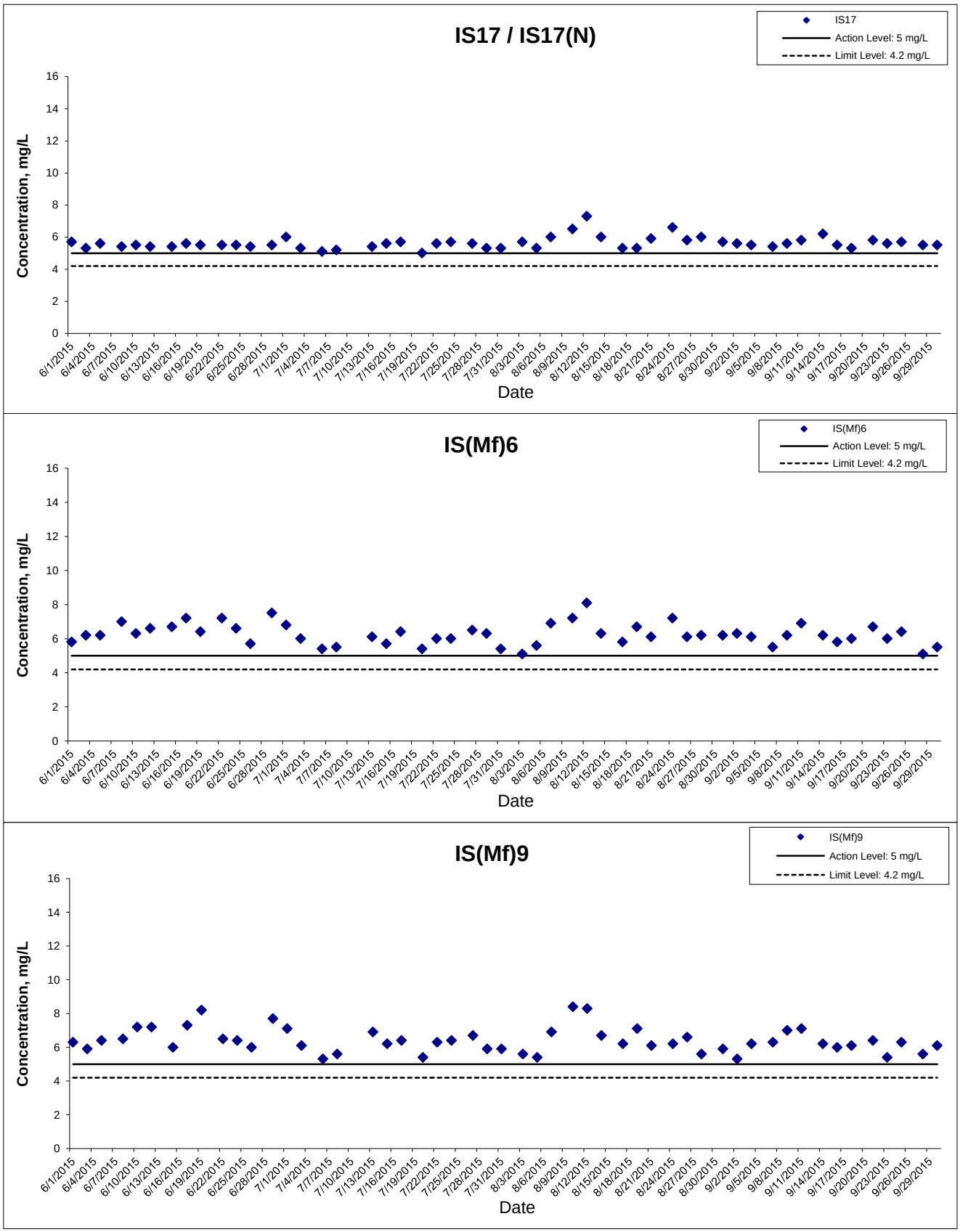

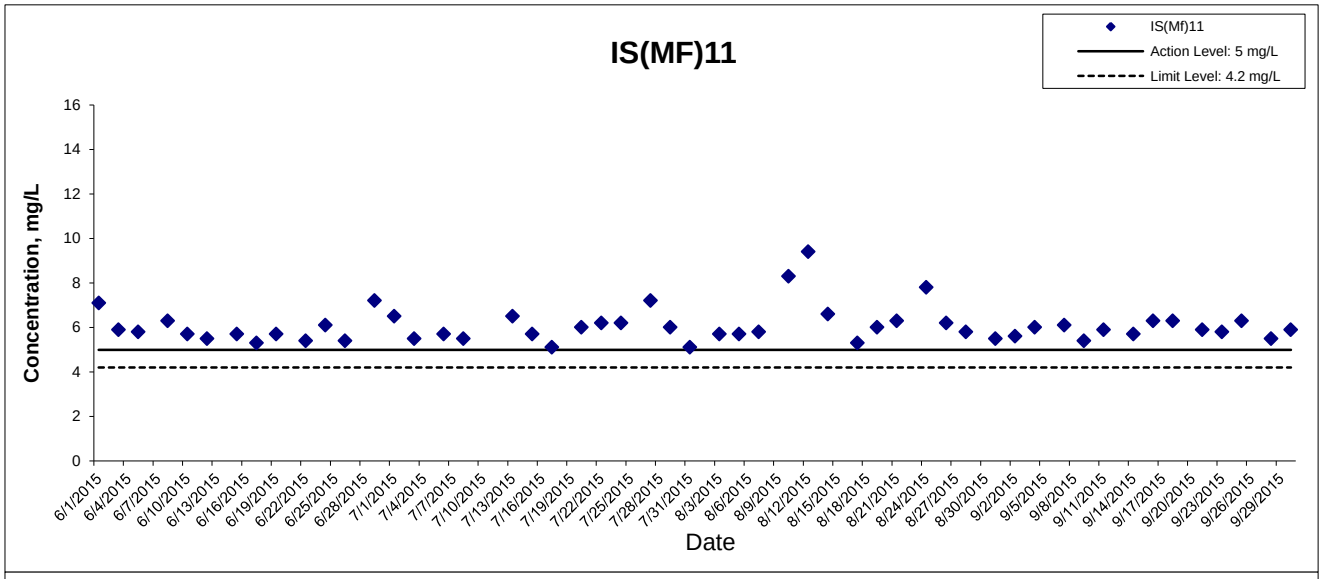

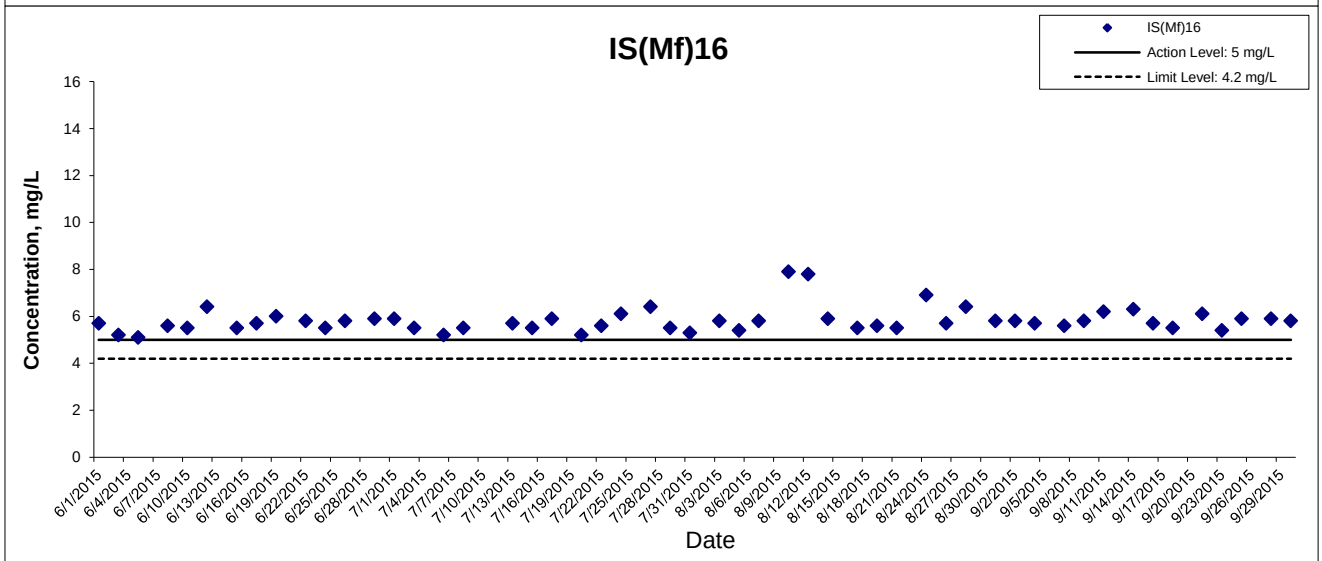

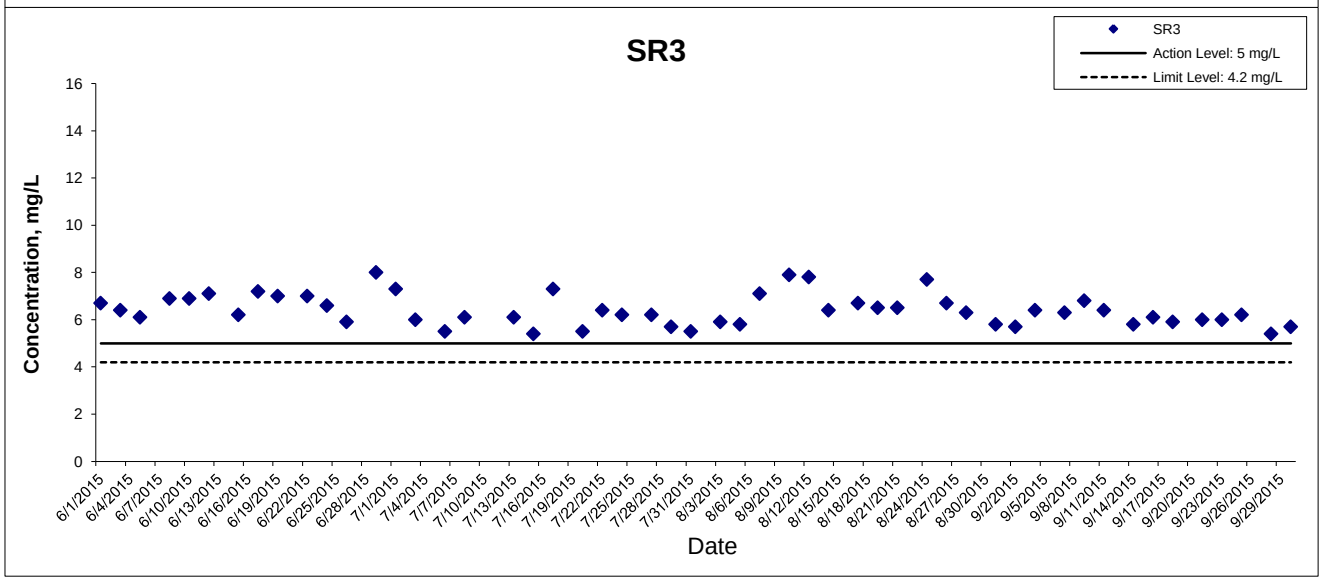

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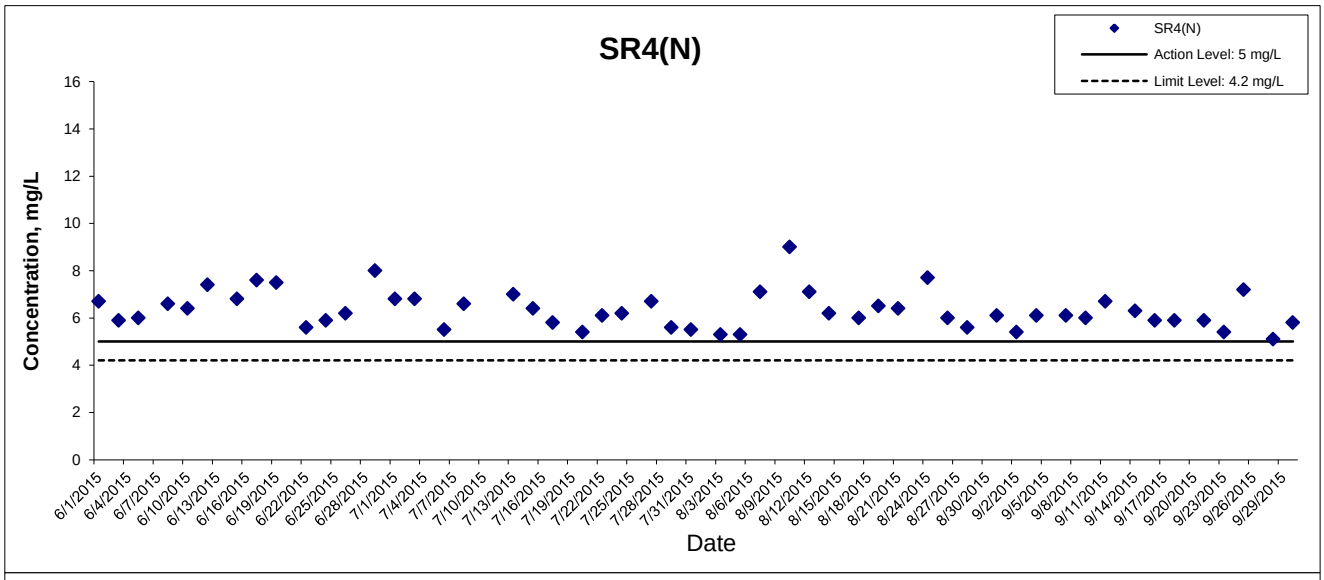

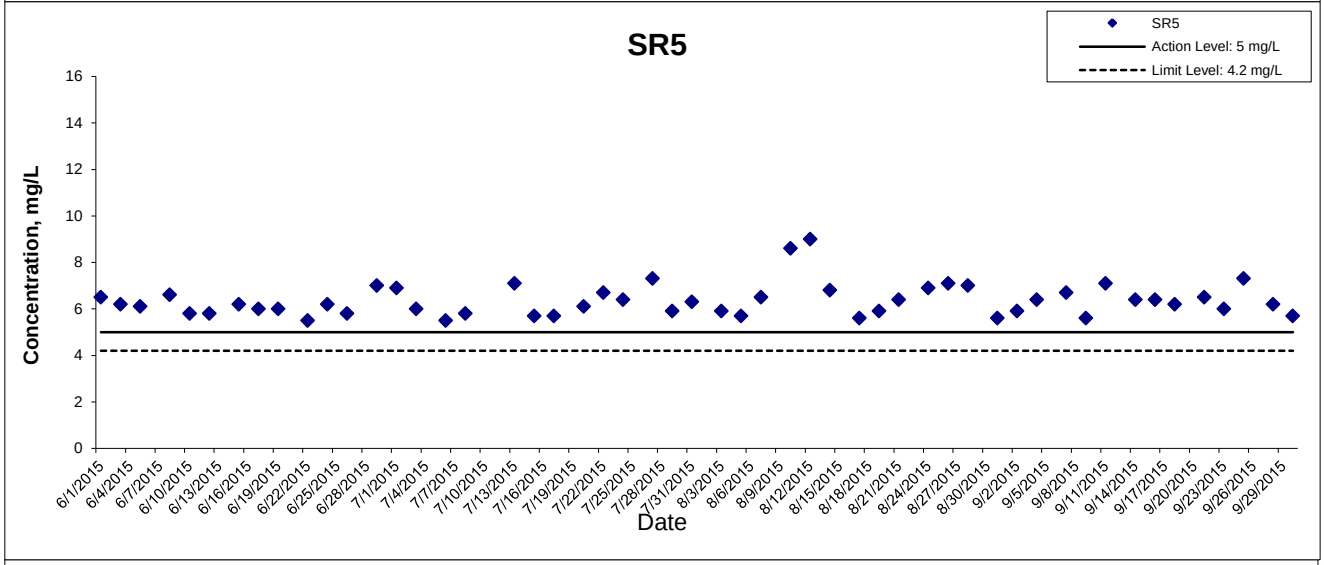

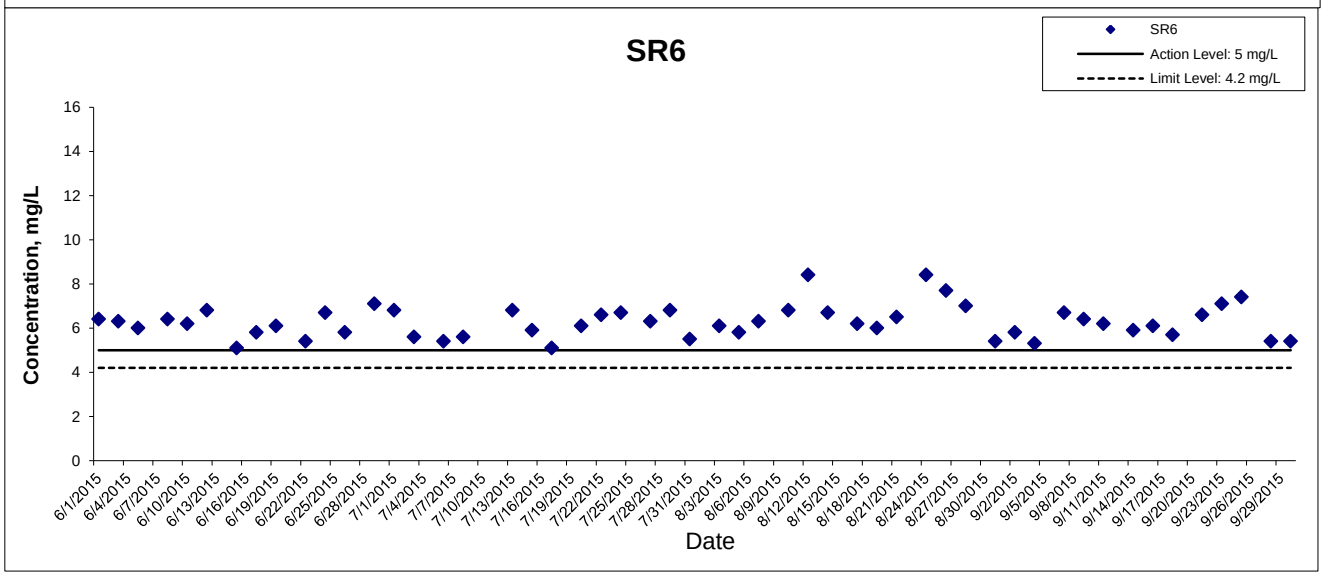

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HONG KONG BOUNDARY CROSSING FACILITIES
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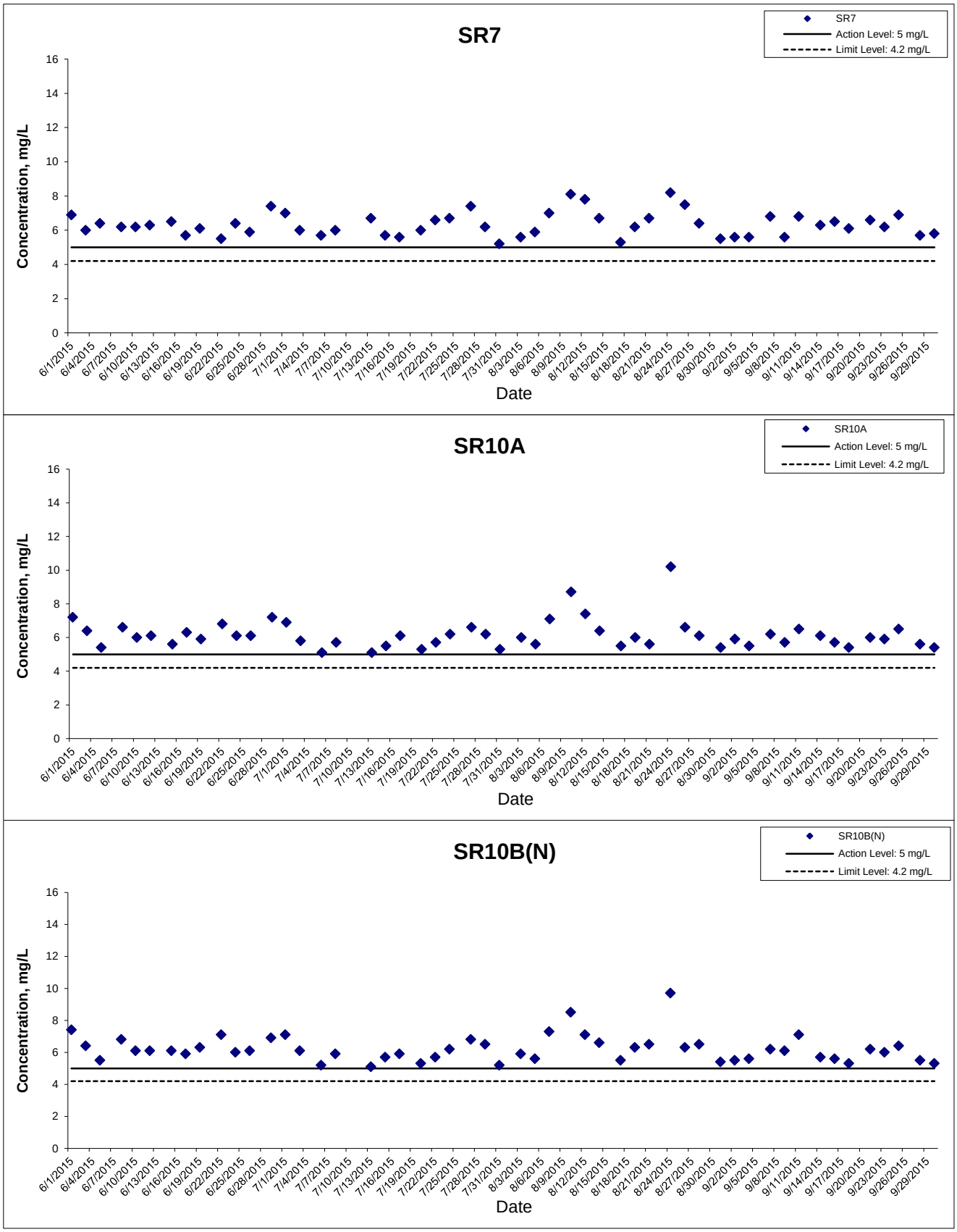

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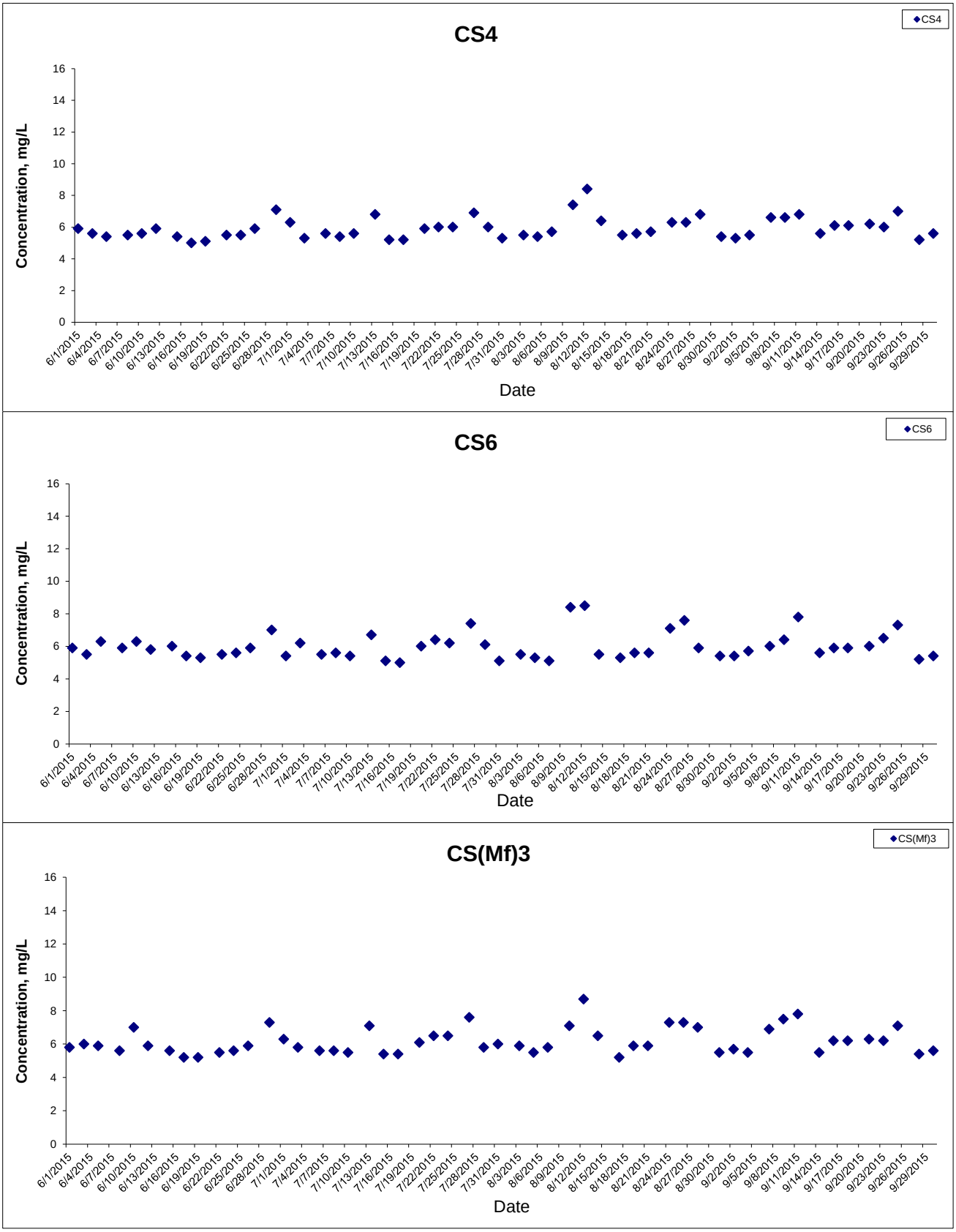
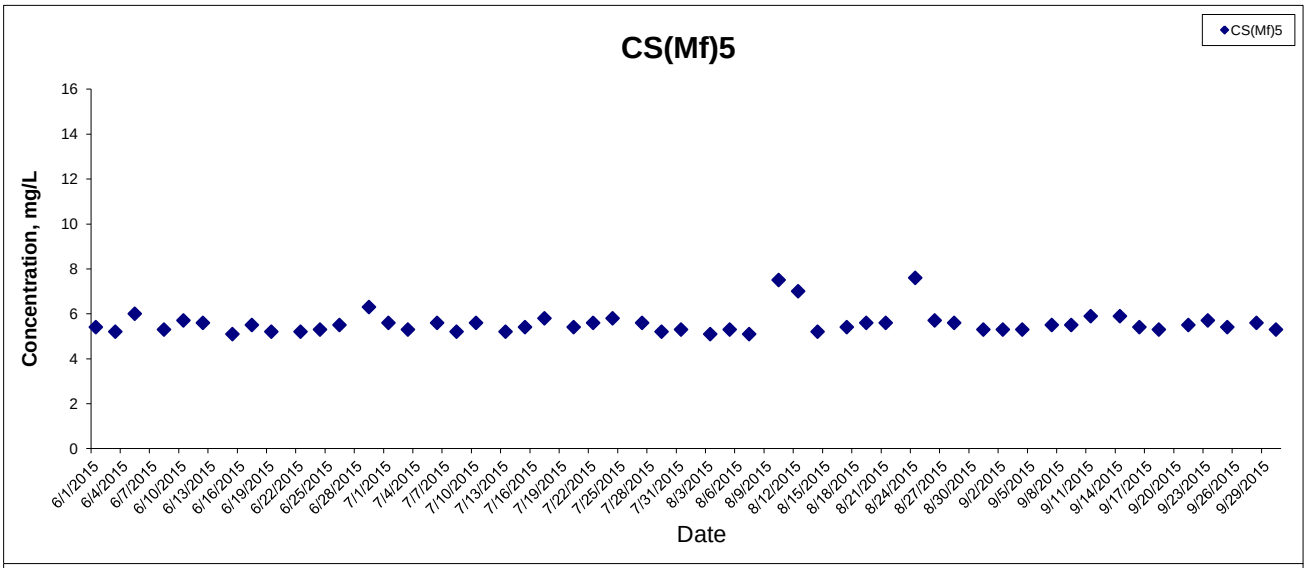
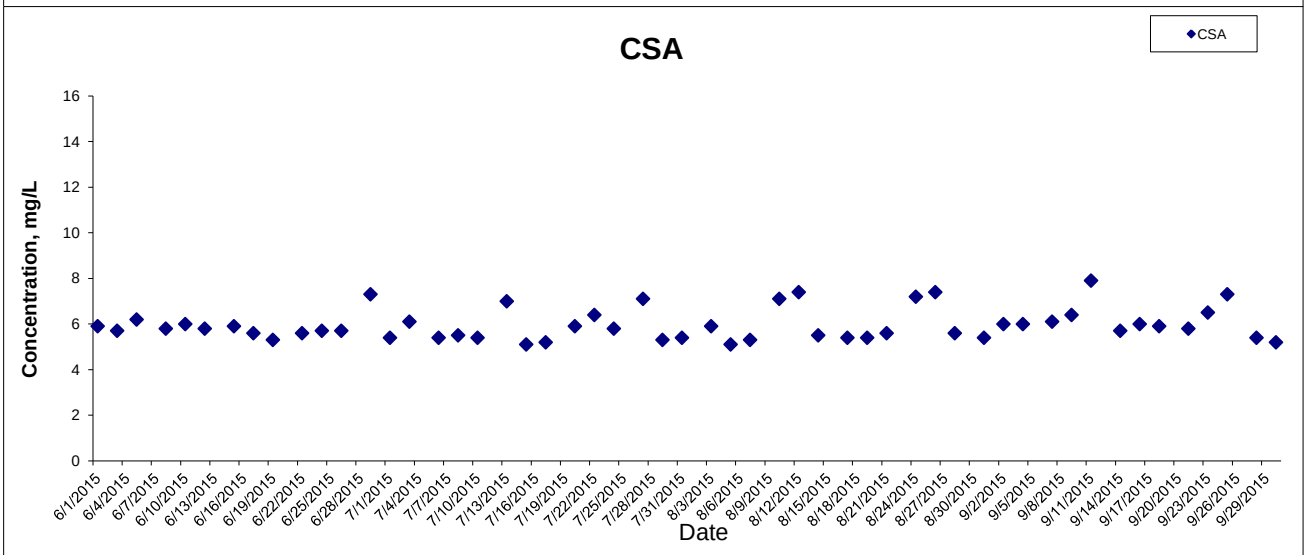
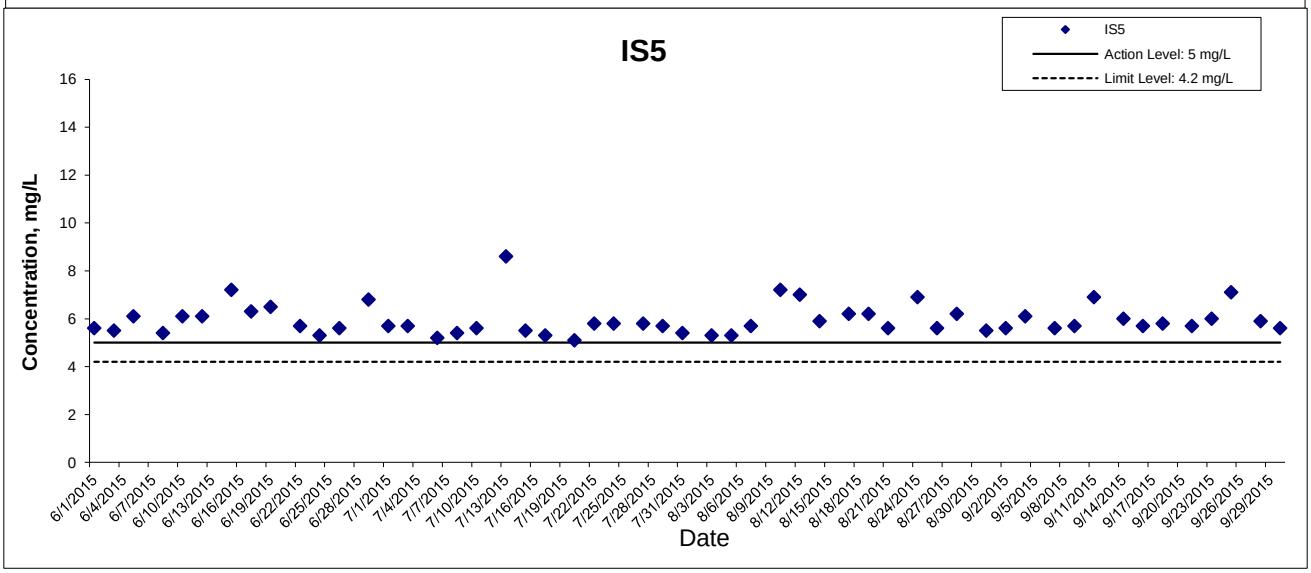
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



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







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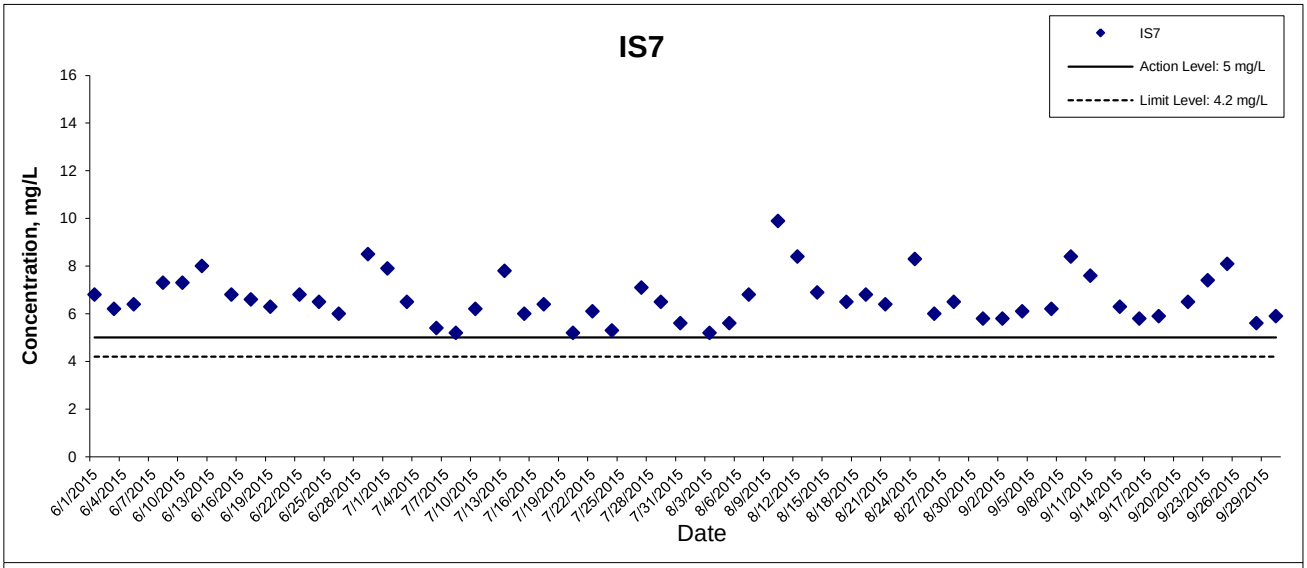
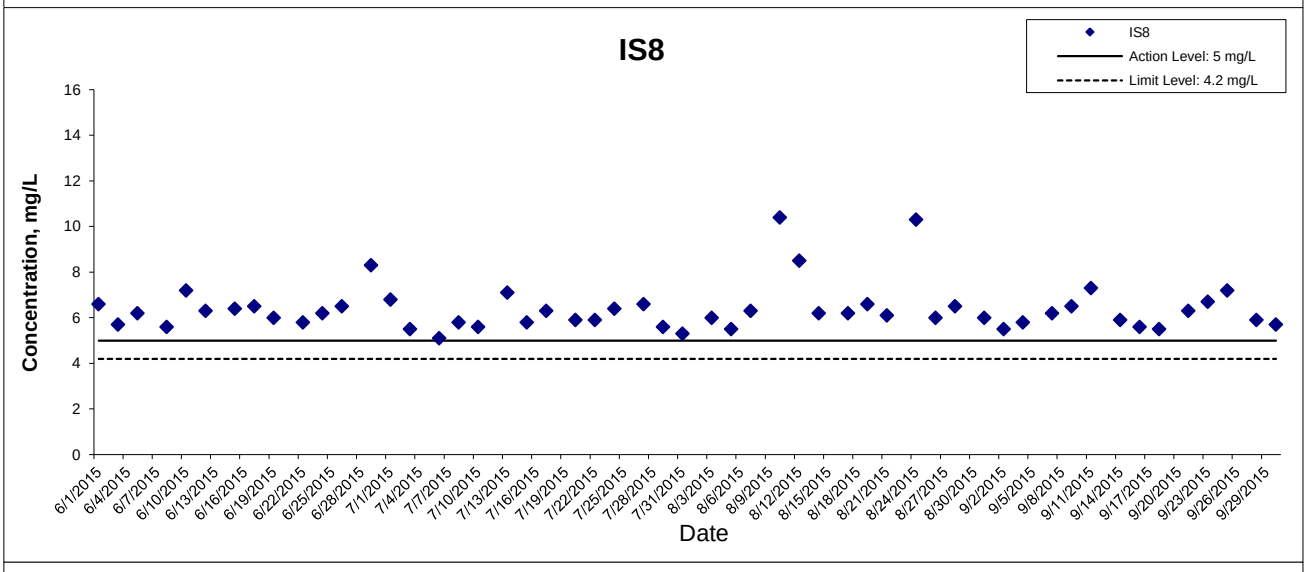
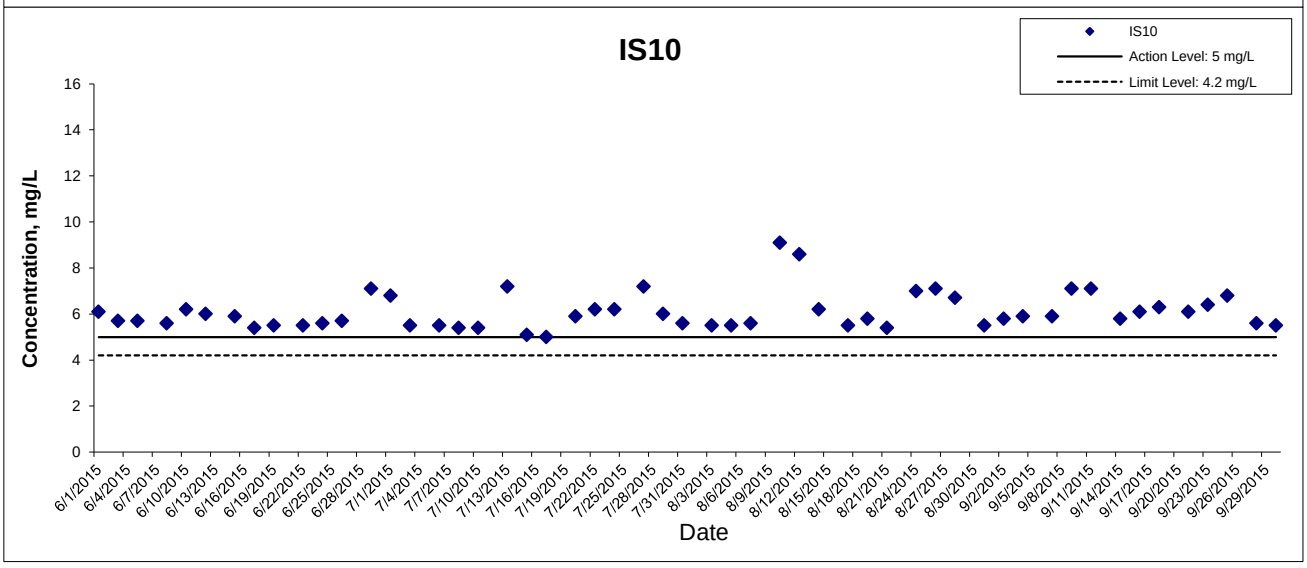
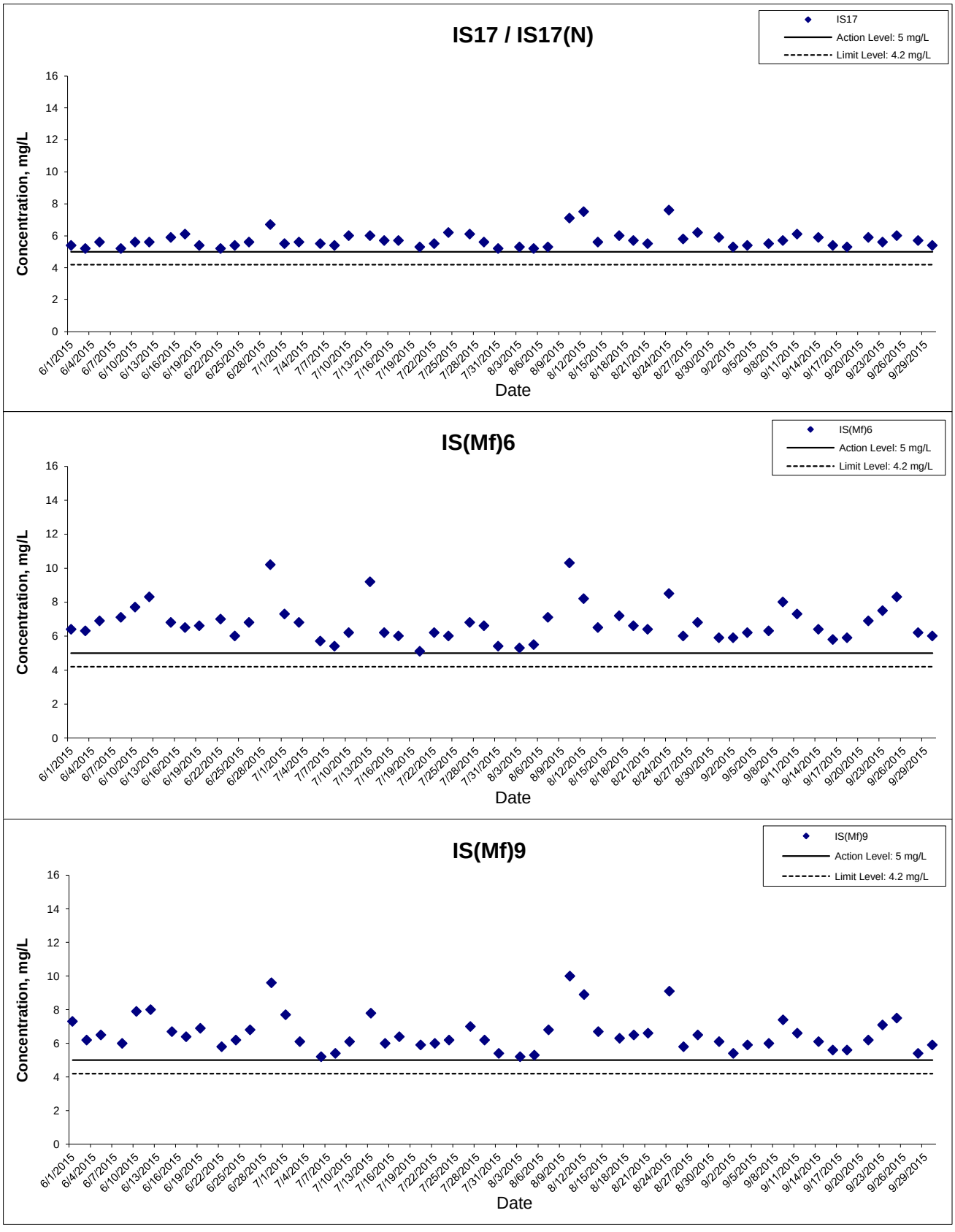
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



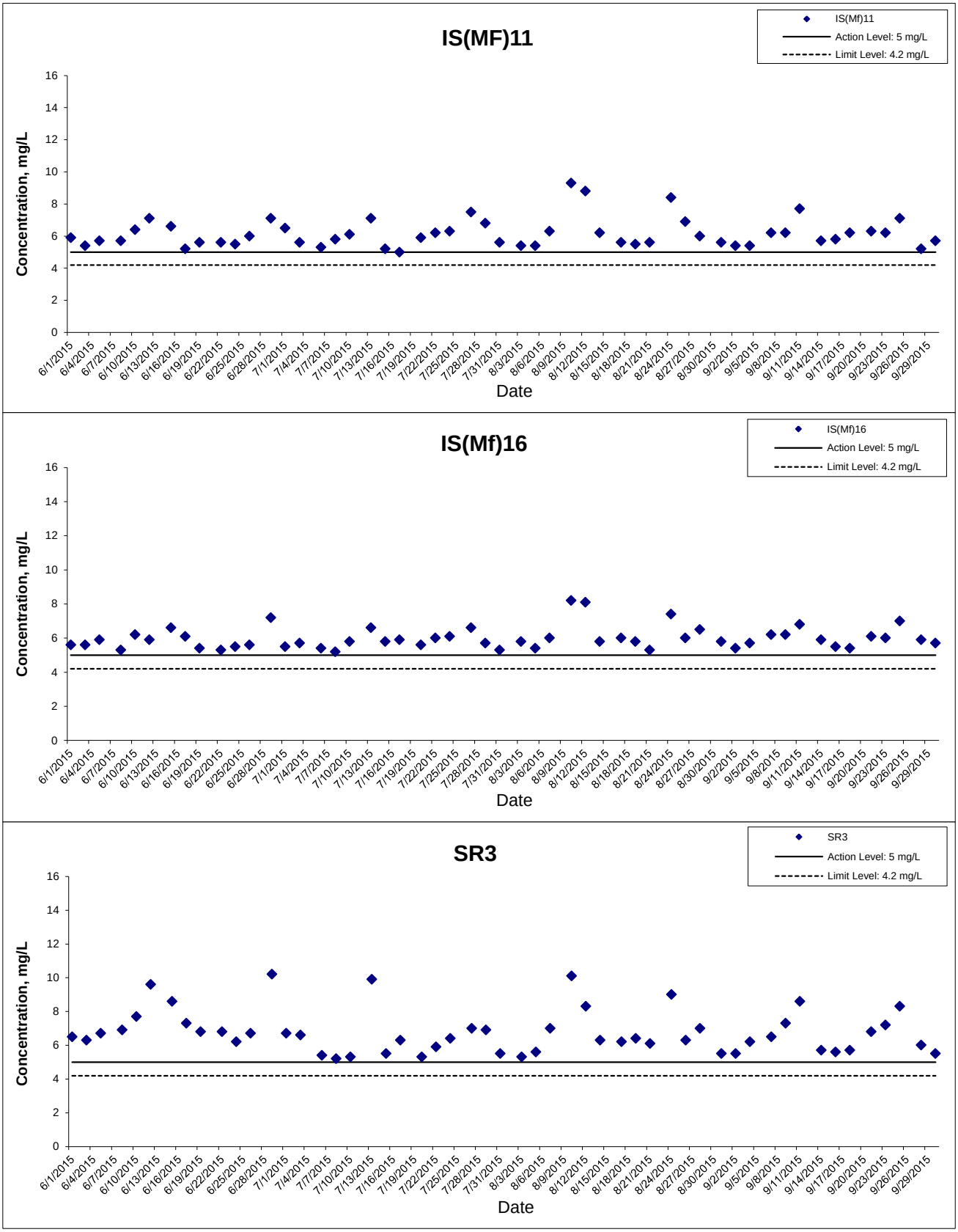




Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



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



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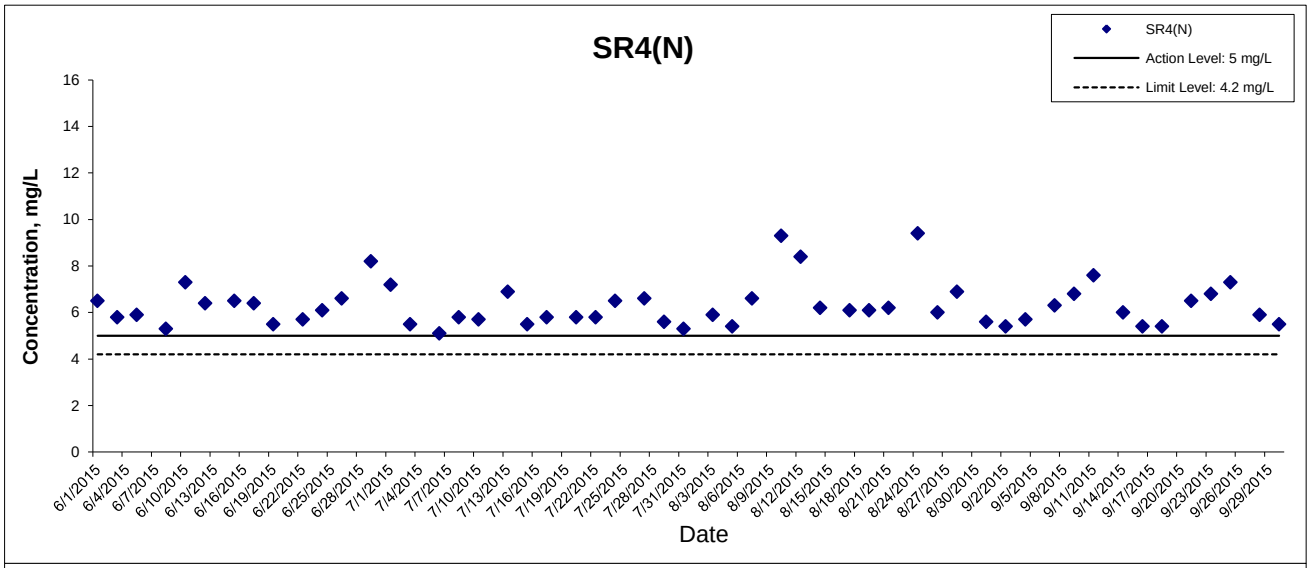
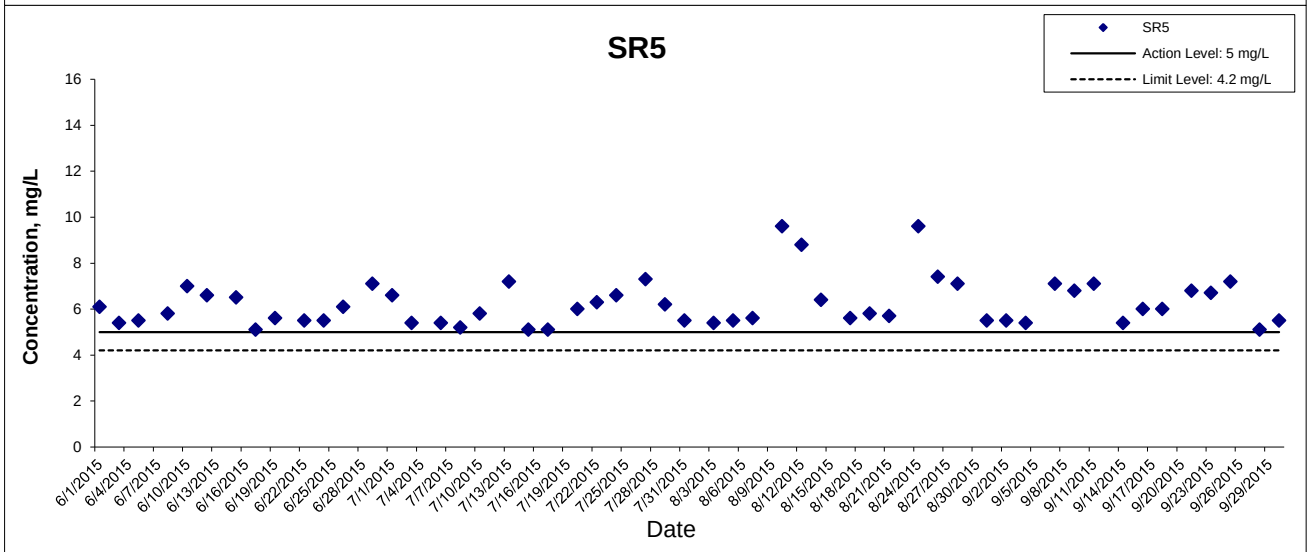
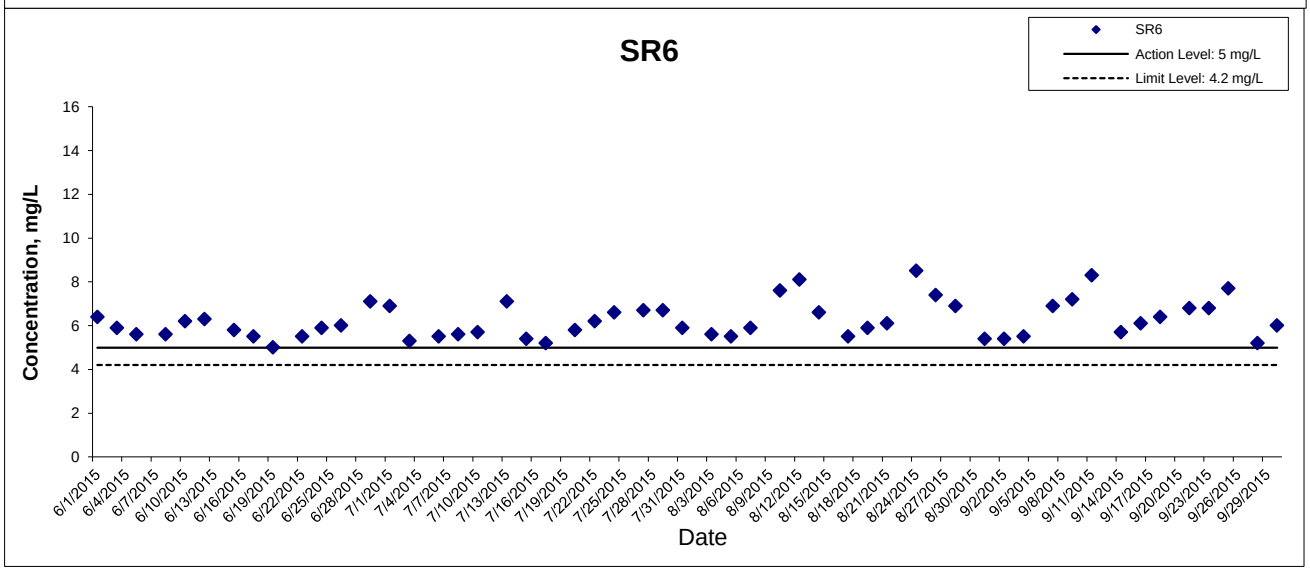
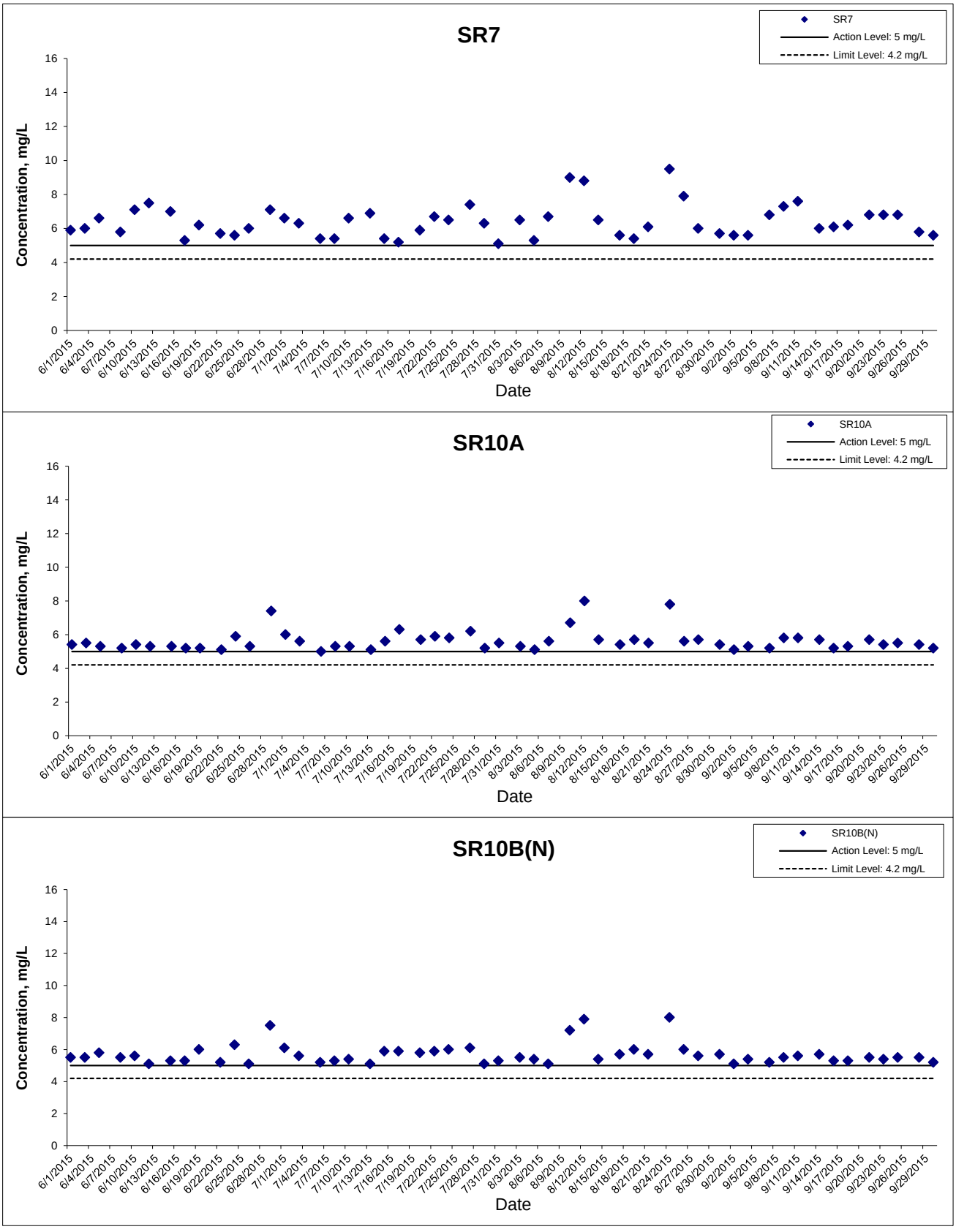
Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide







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



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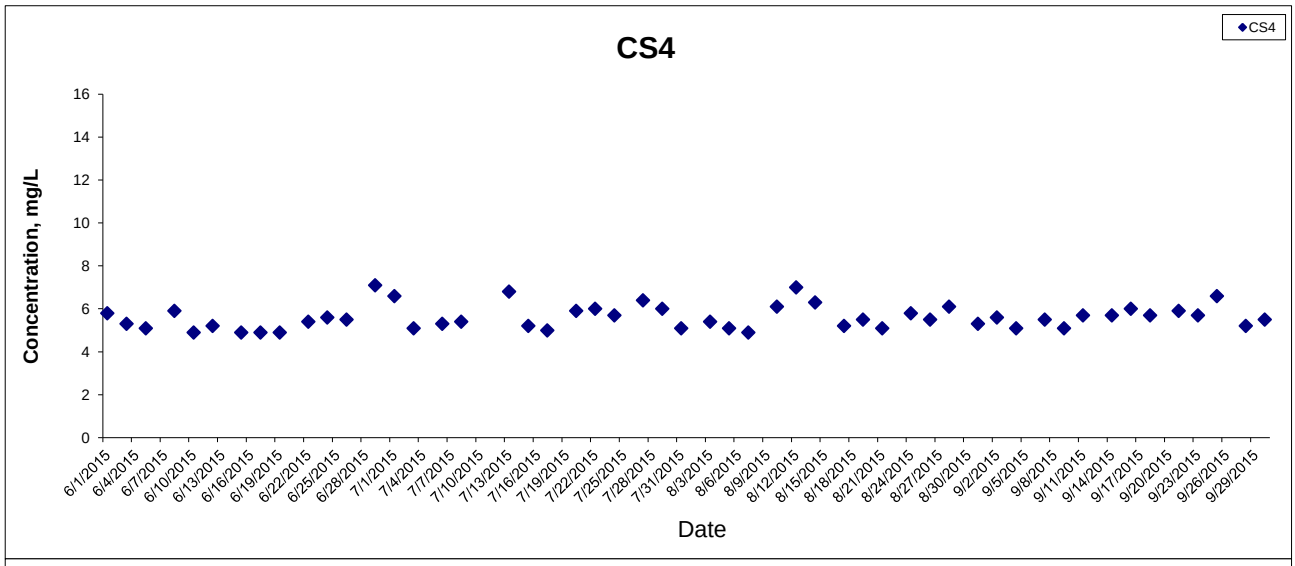
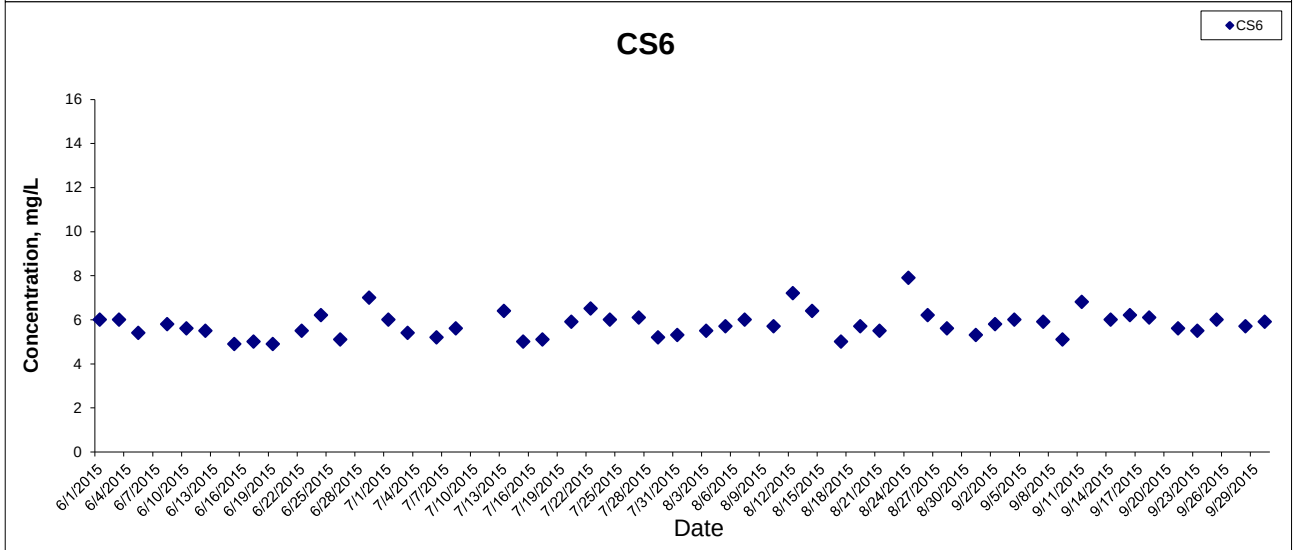
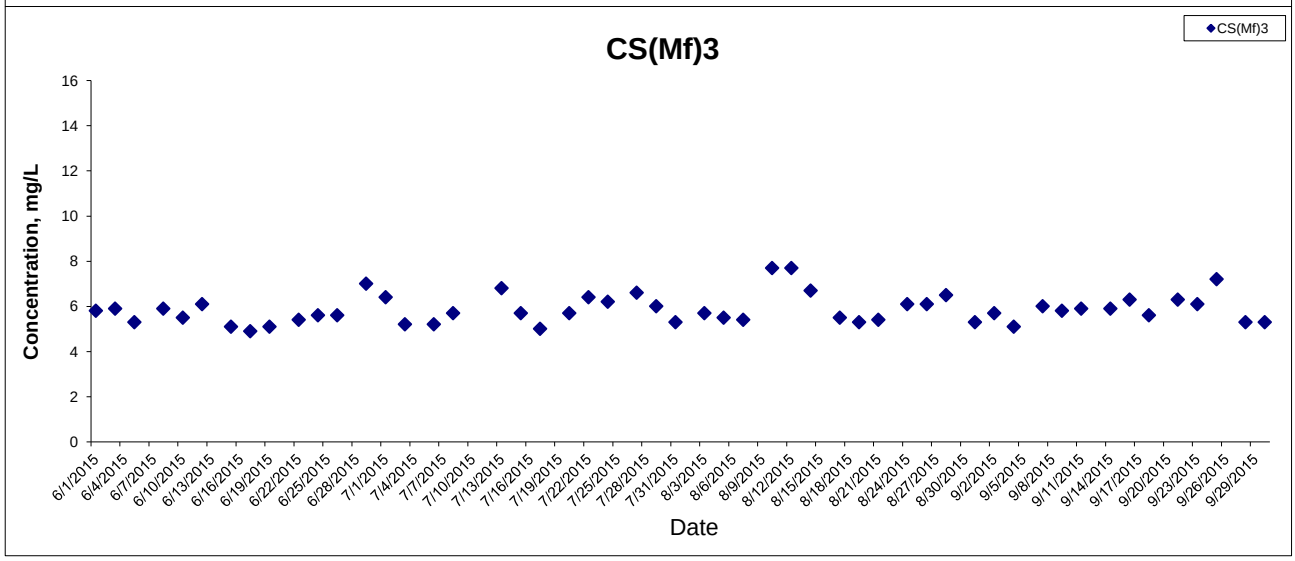
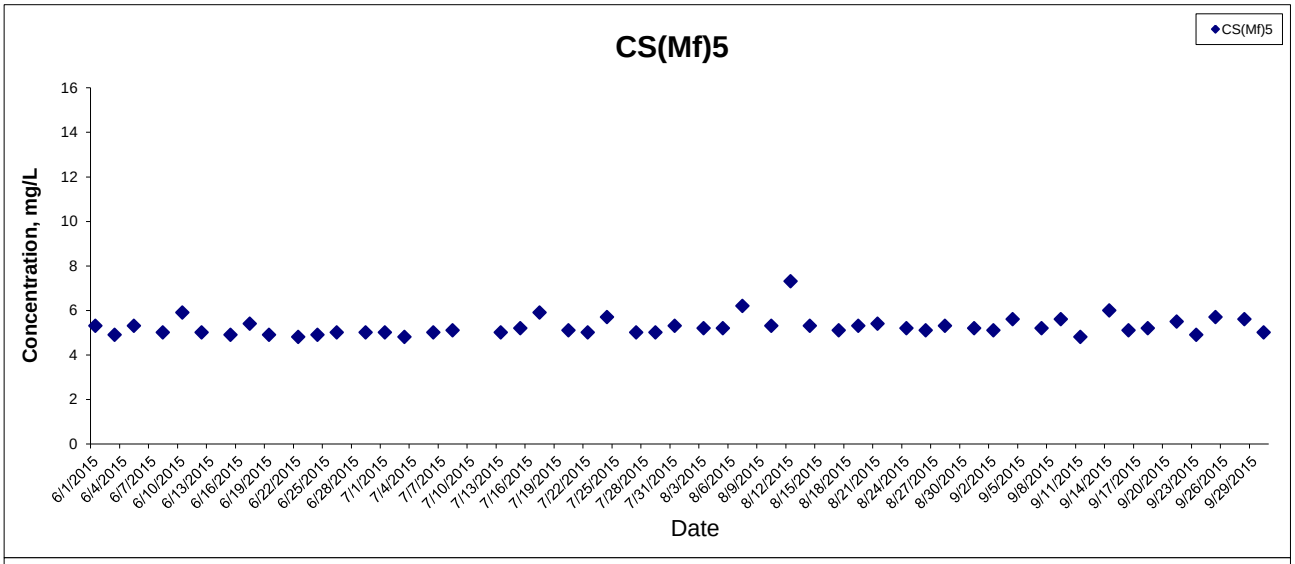
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

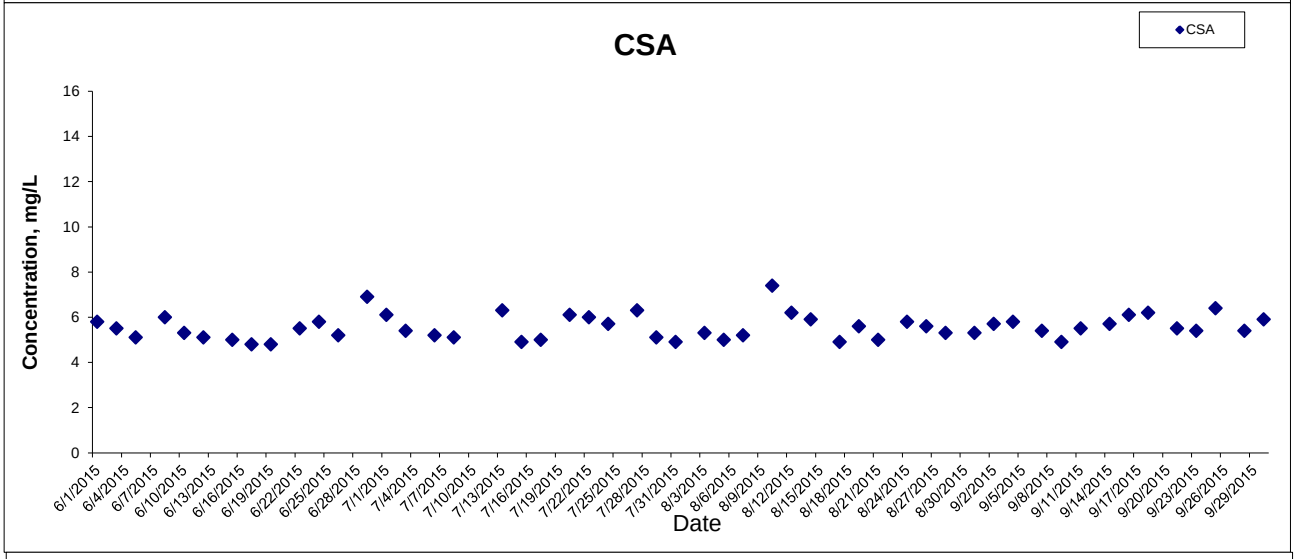


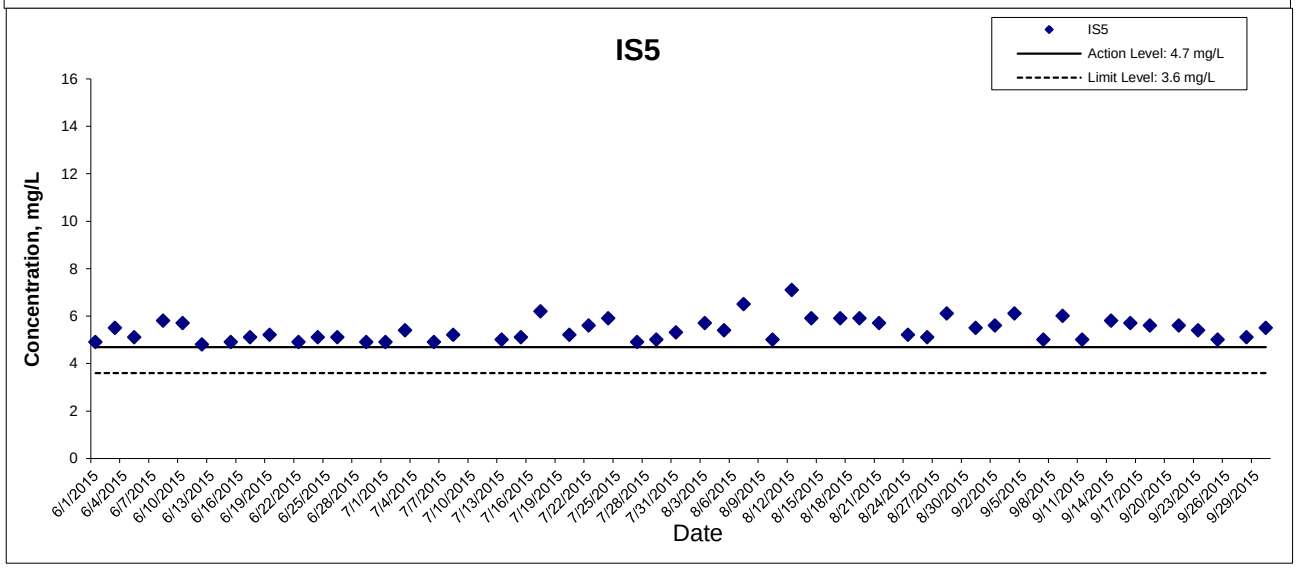




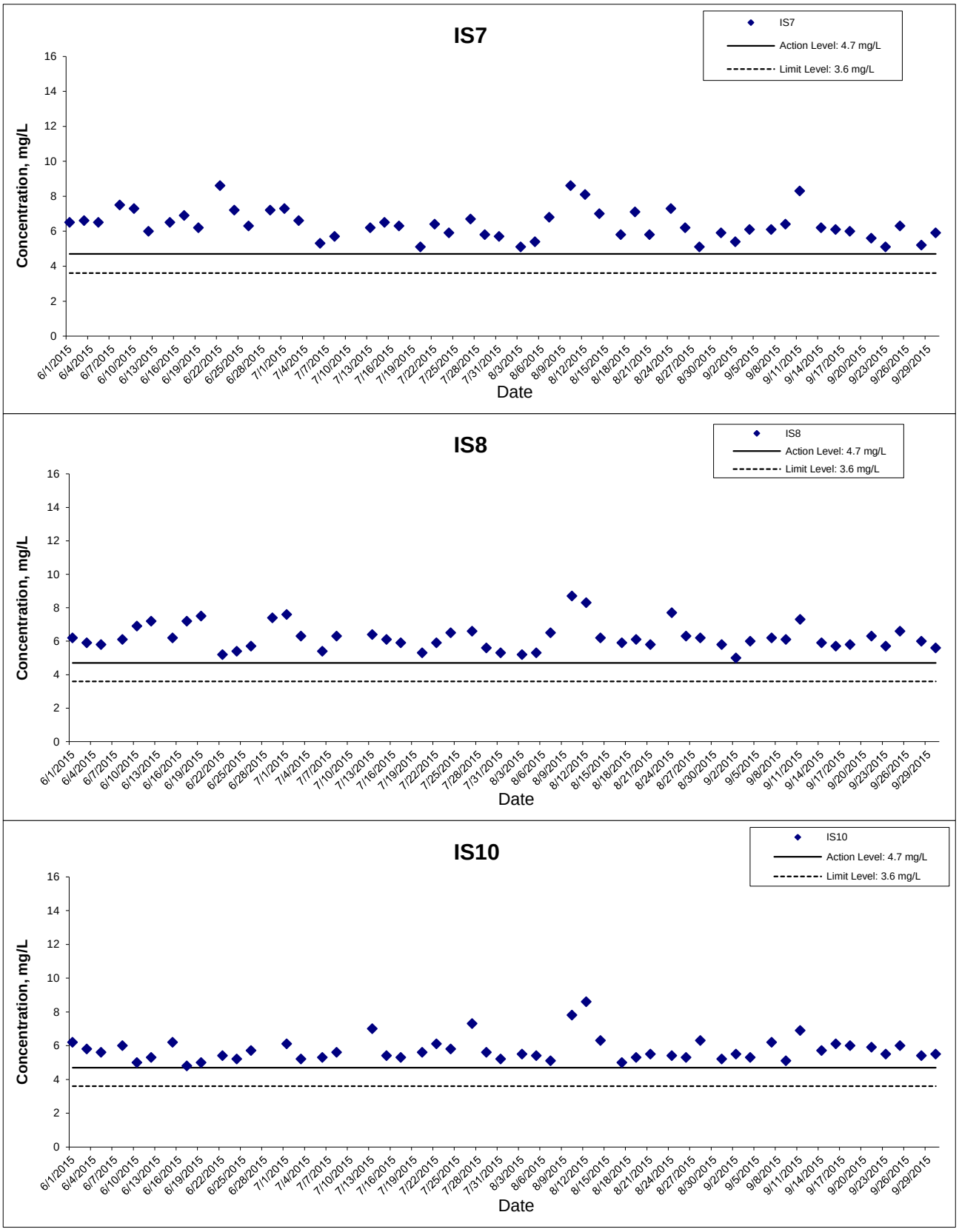
Dissolved Oxygen (Bottom) at Mid-Ebb Tide



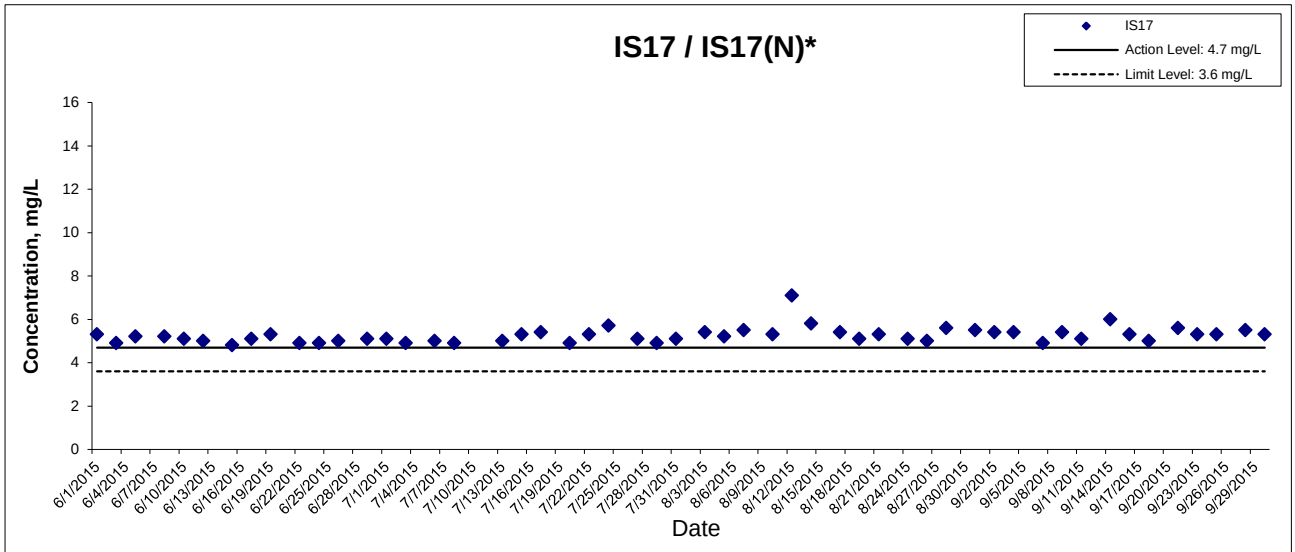


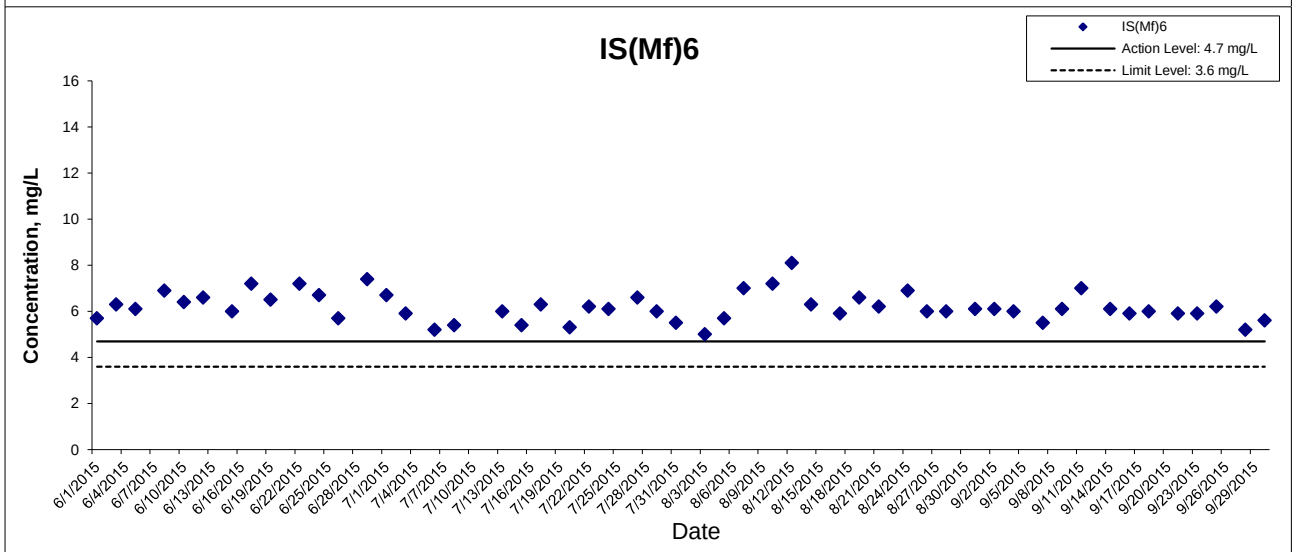


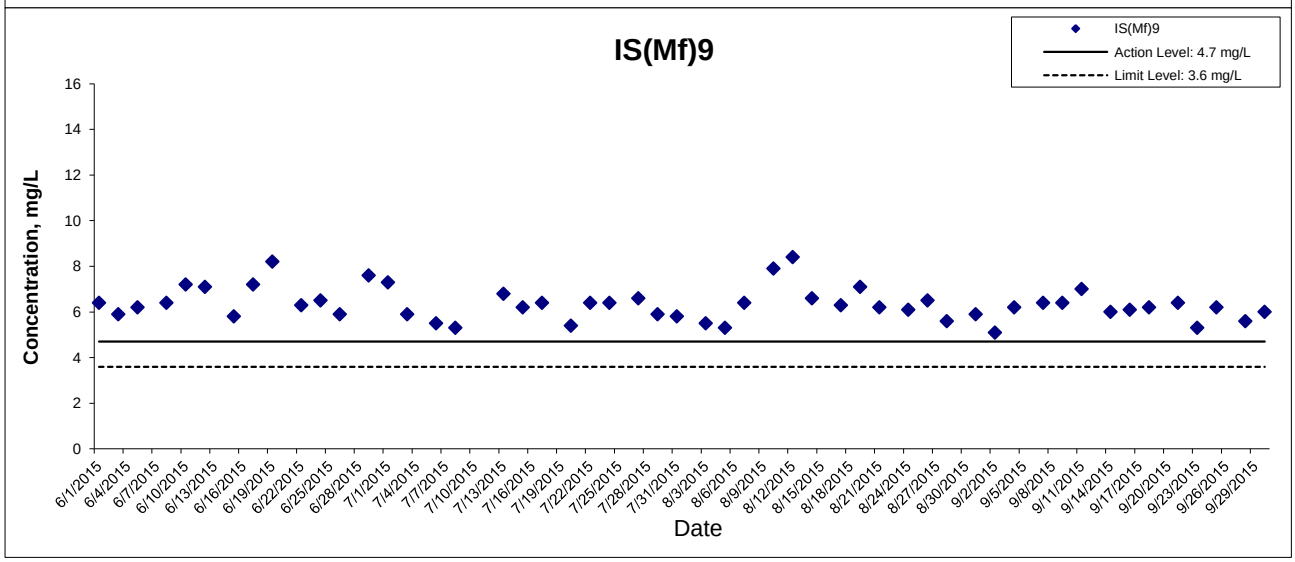
Dissolved Oxygen (Bottom) at Mid-Ebb Tide



Dissolved Oxygen (Bottom) at Mid-Ebb Tide







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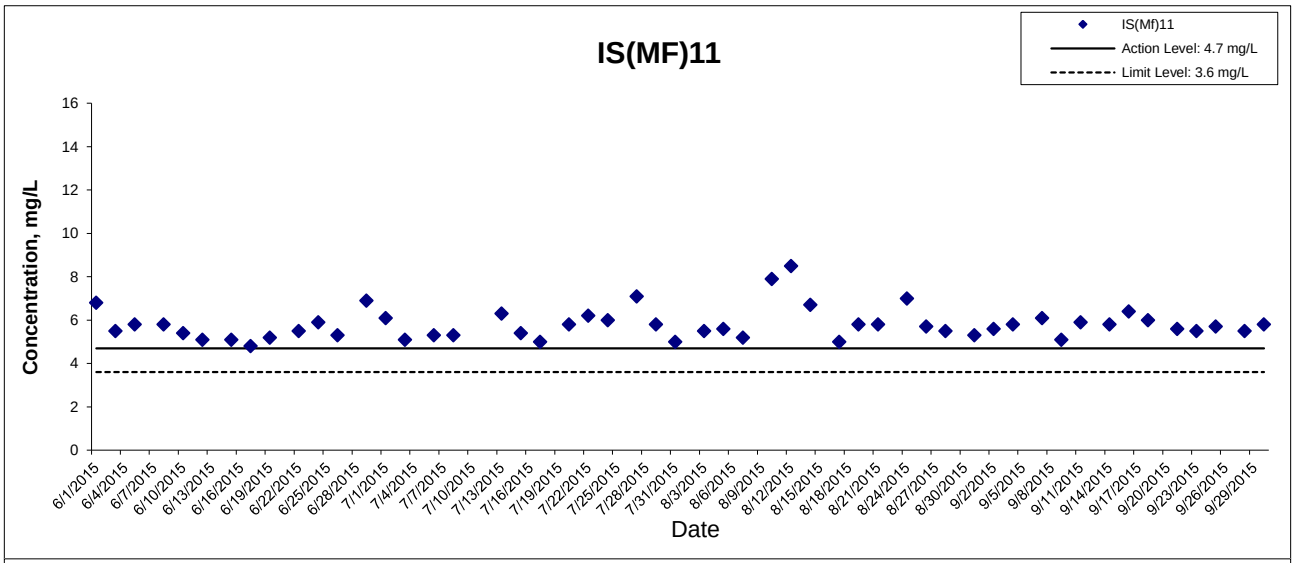
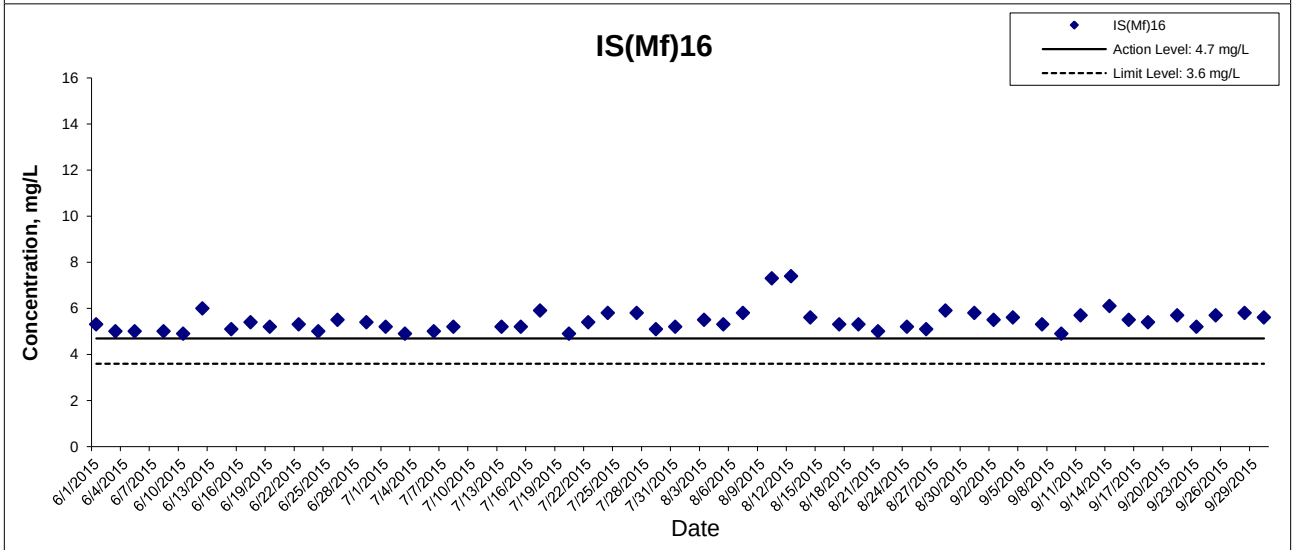
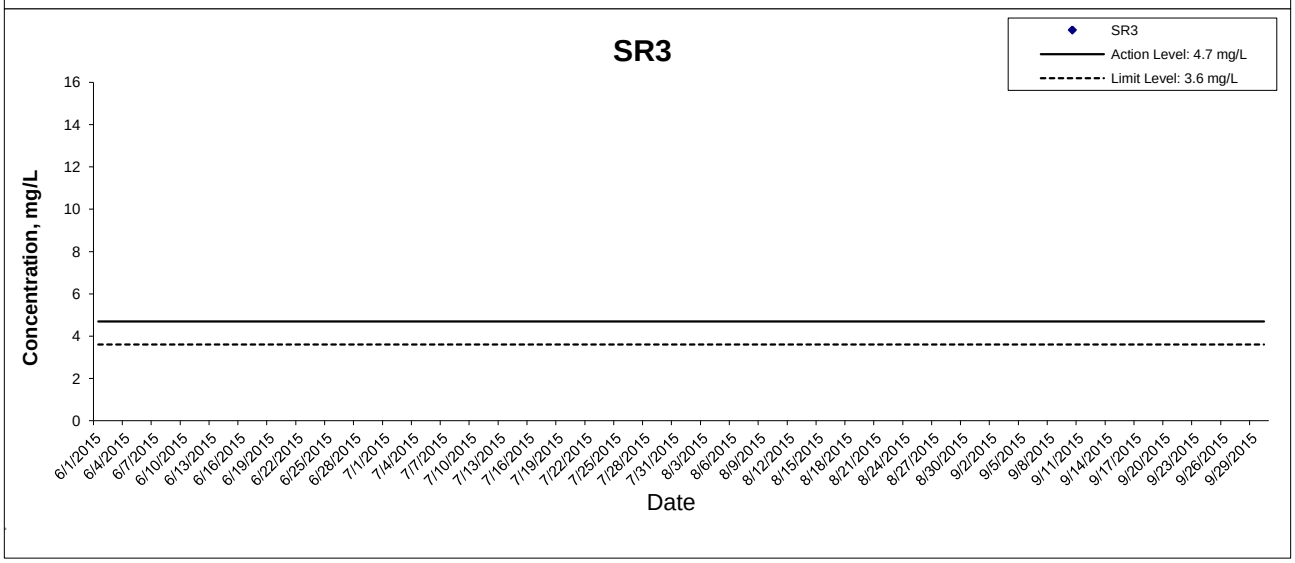
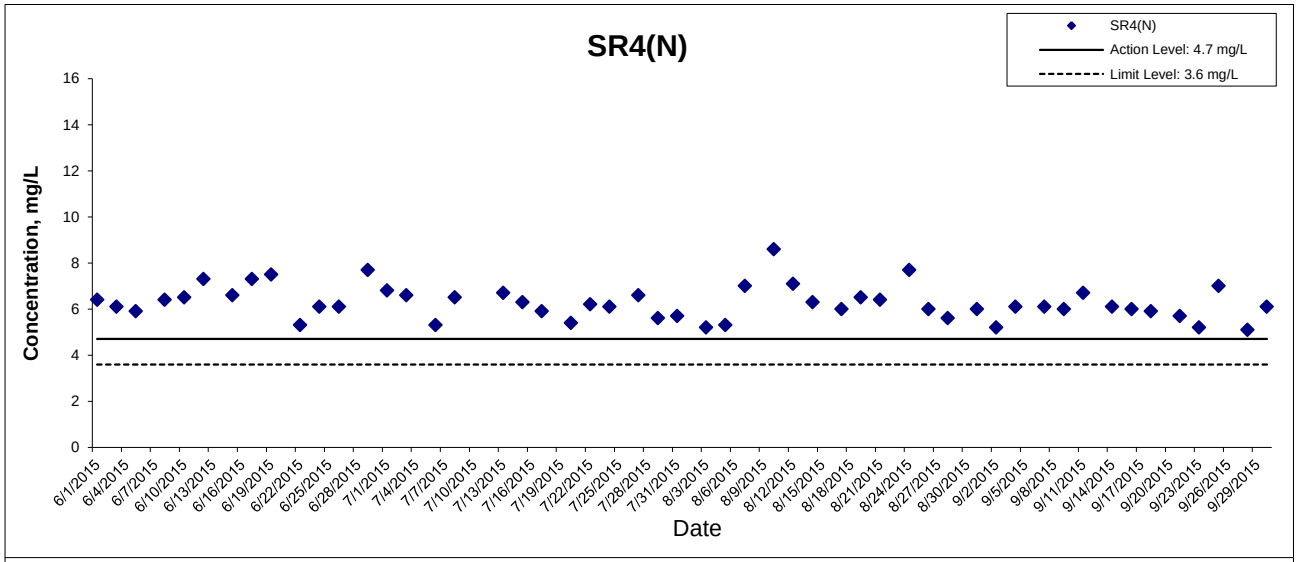
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

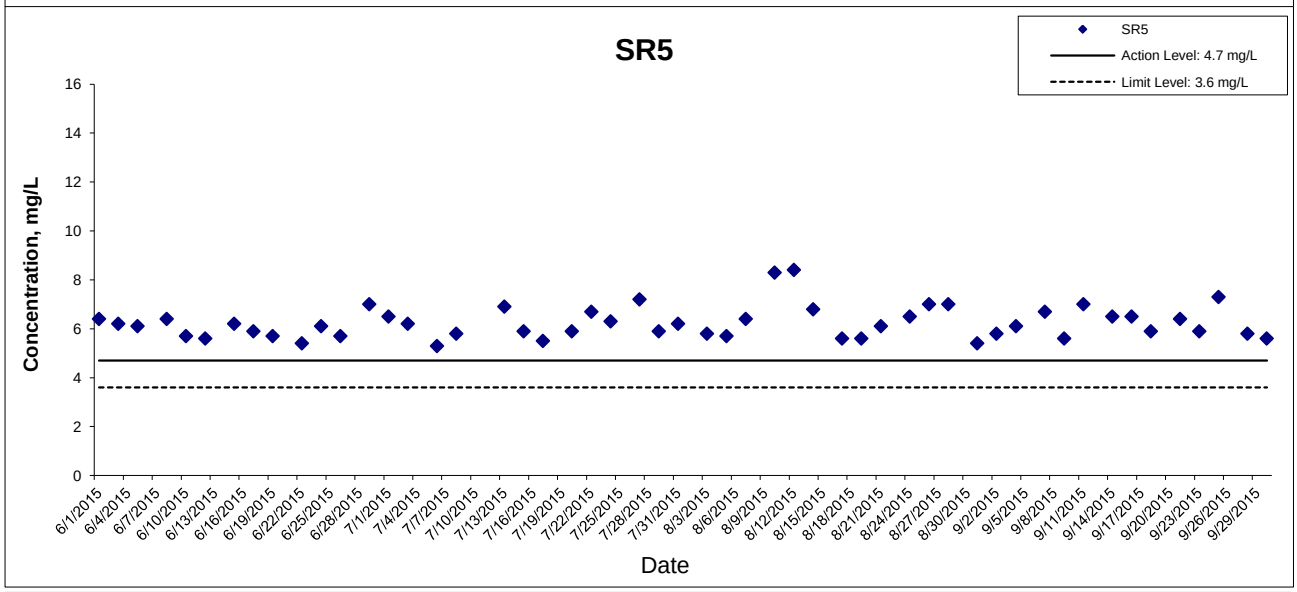


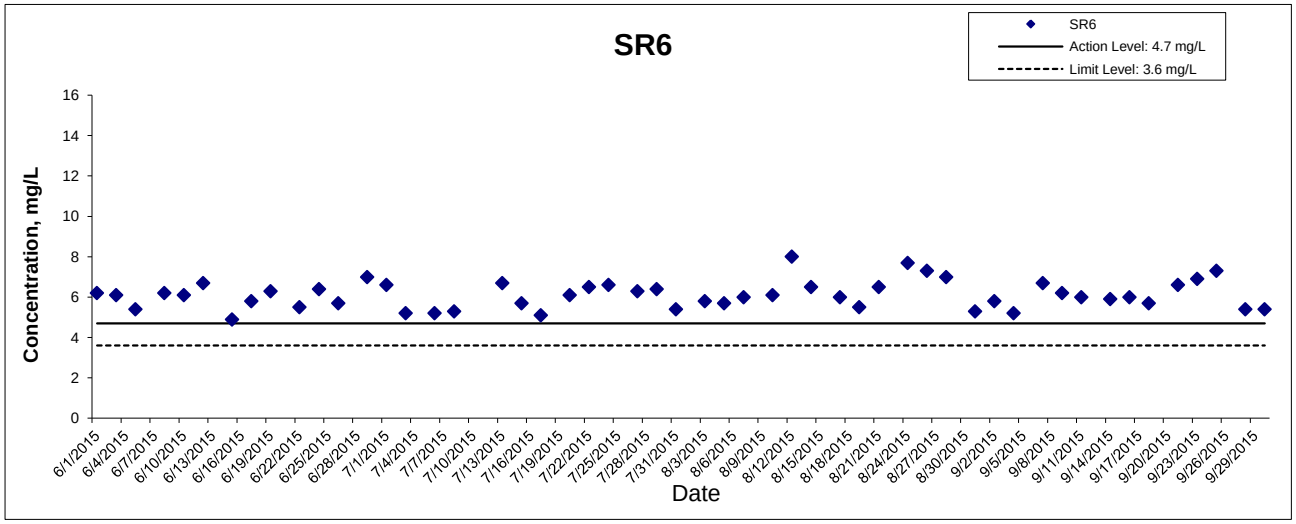




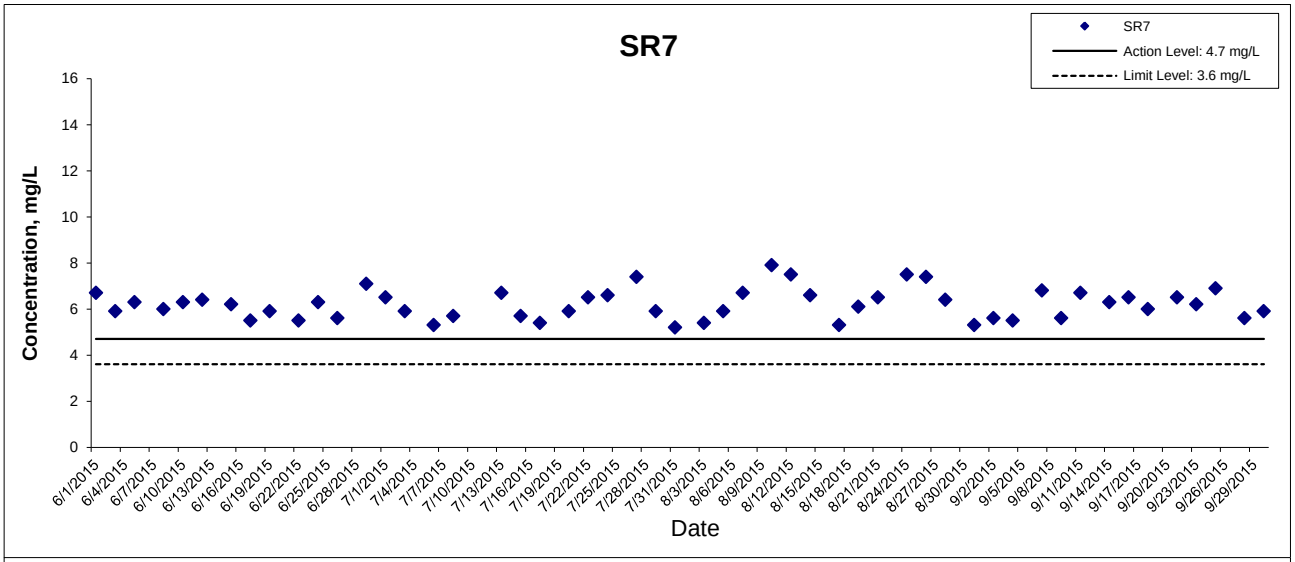
Dissolved Oxygen (Bottom) at Mid-Ebb Tide

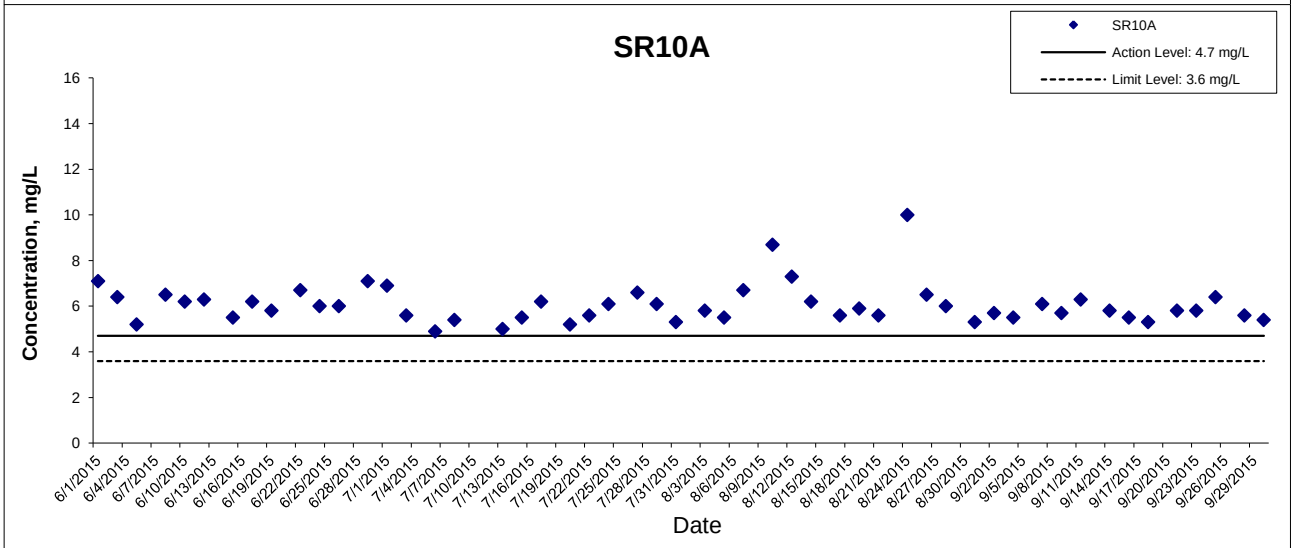


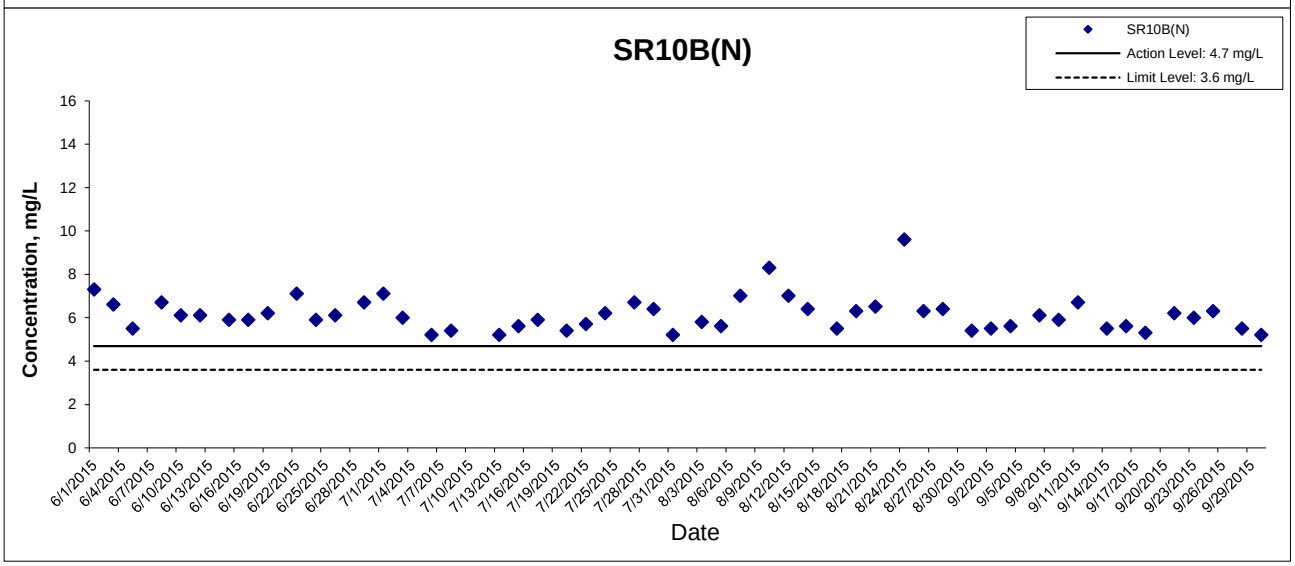




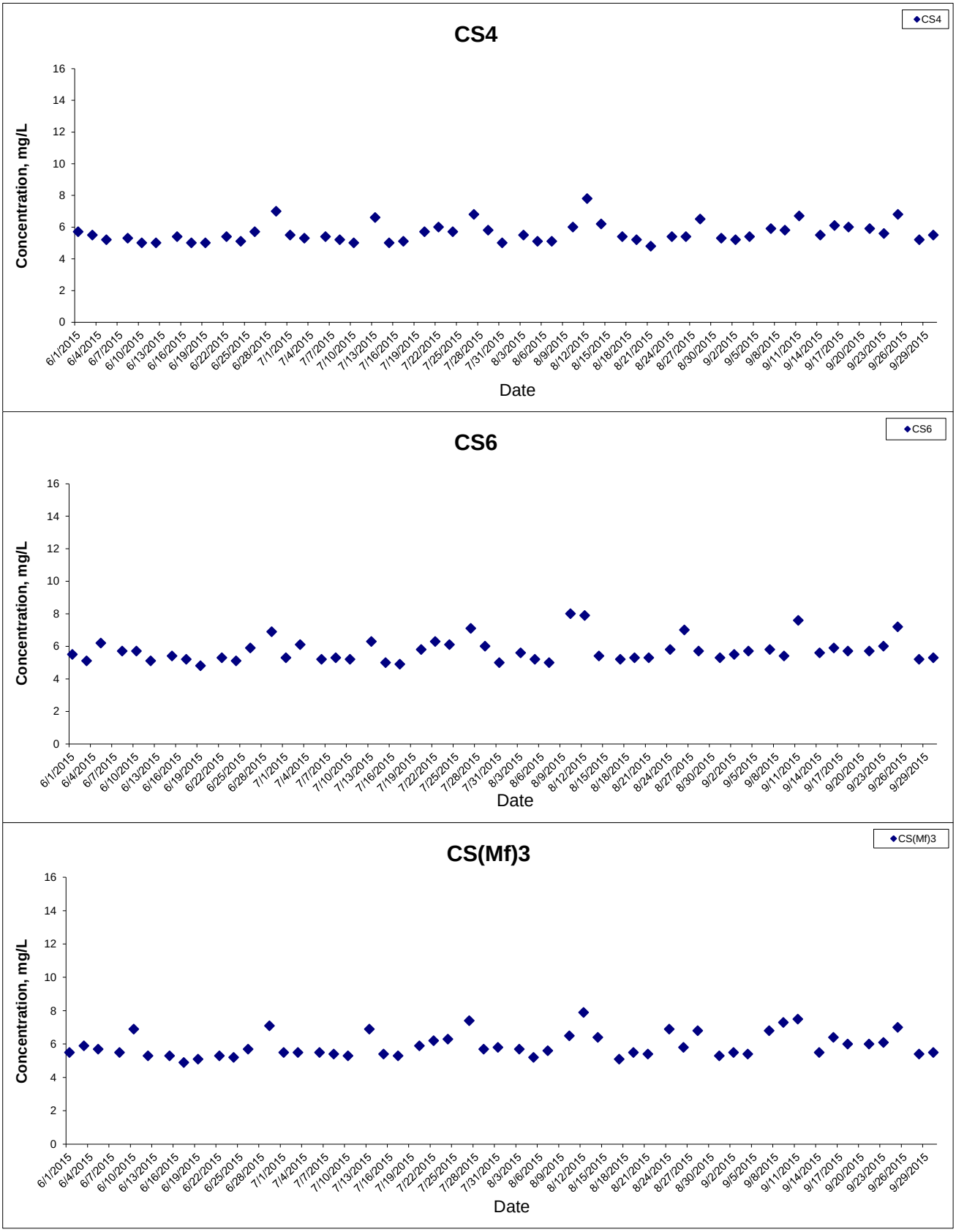
Dissolved Oxygen (Bottom) at Mid-Ebb Tide



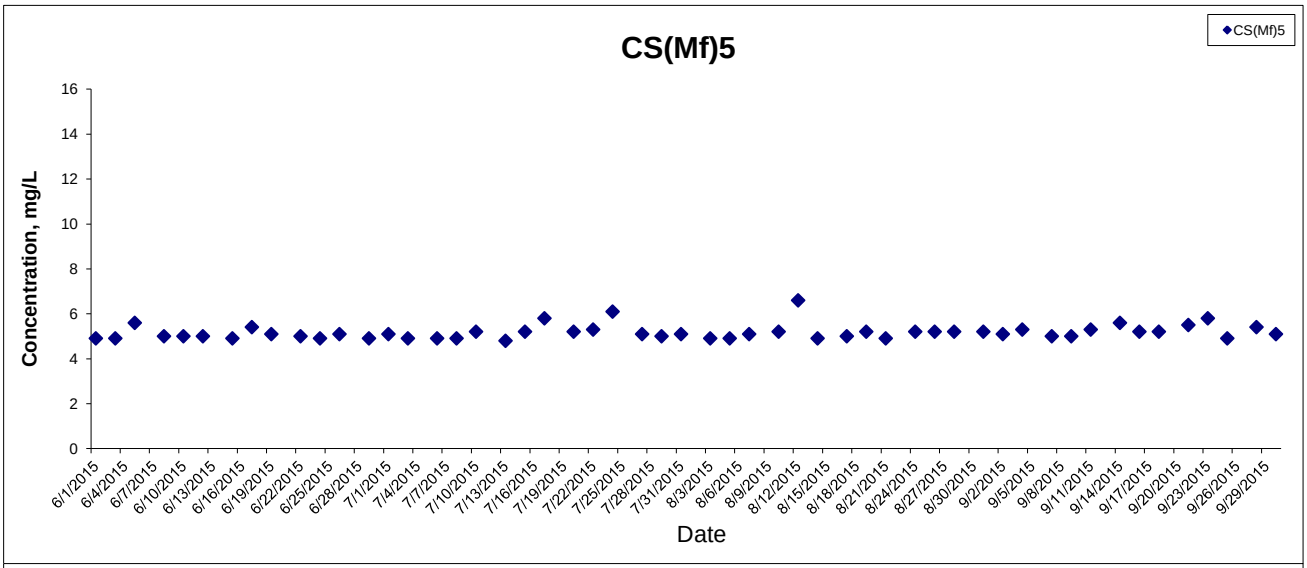


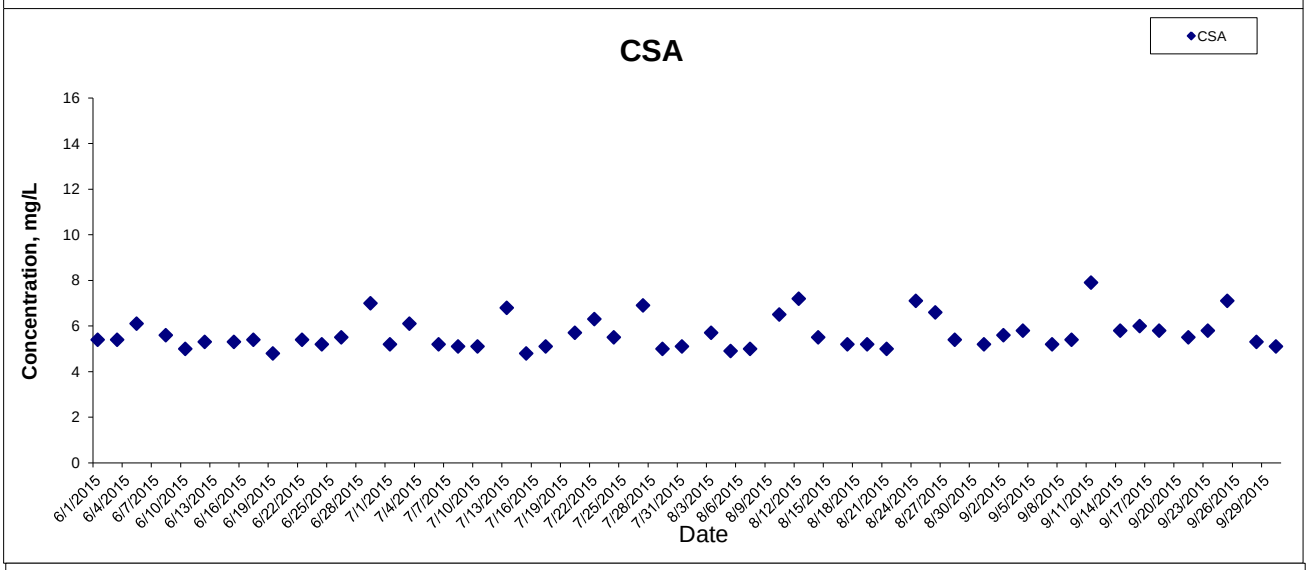


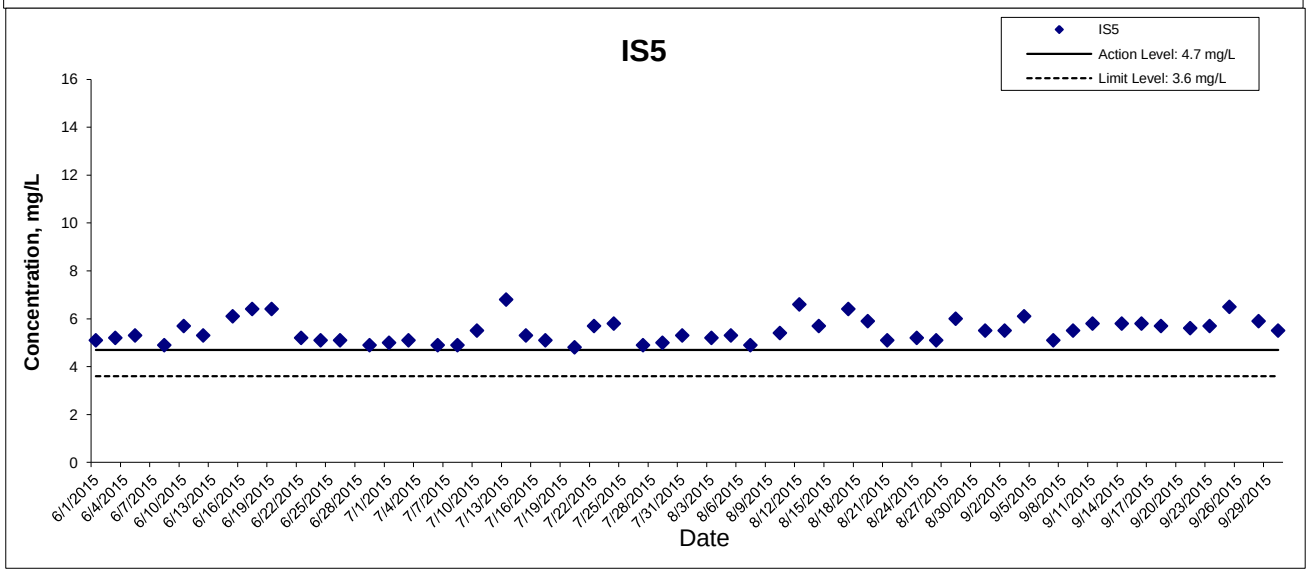
Dissolved Oxygen (Bottom) at Mid-Flood Tide



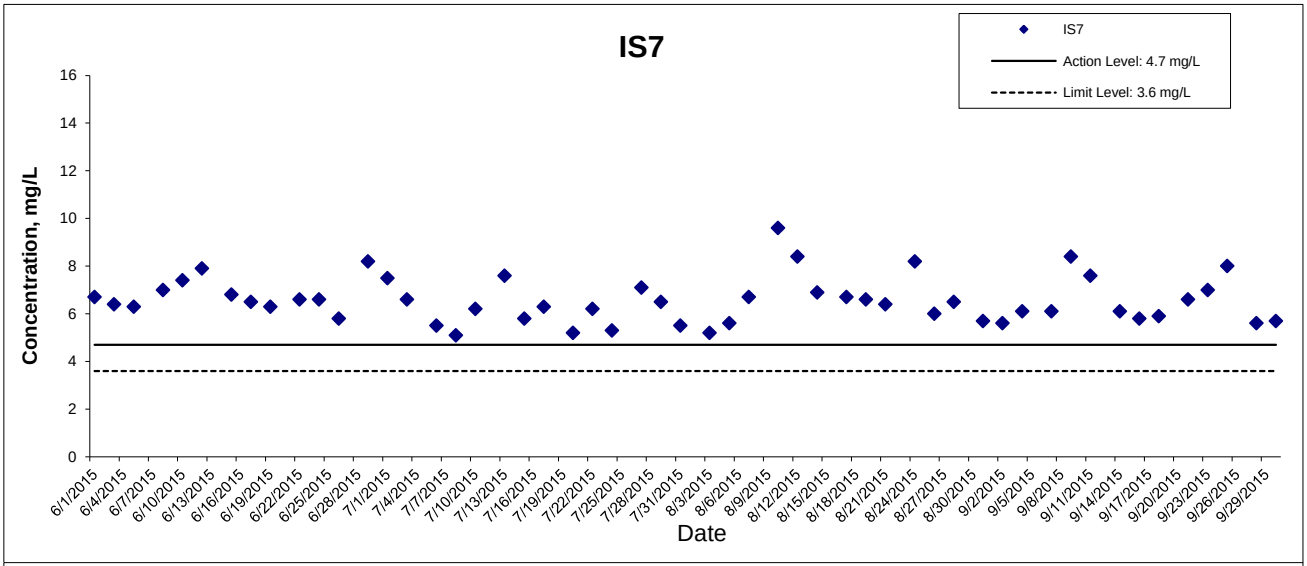
Dissolved Oxygen (Bottom) at Mid-Flood Tide

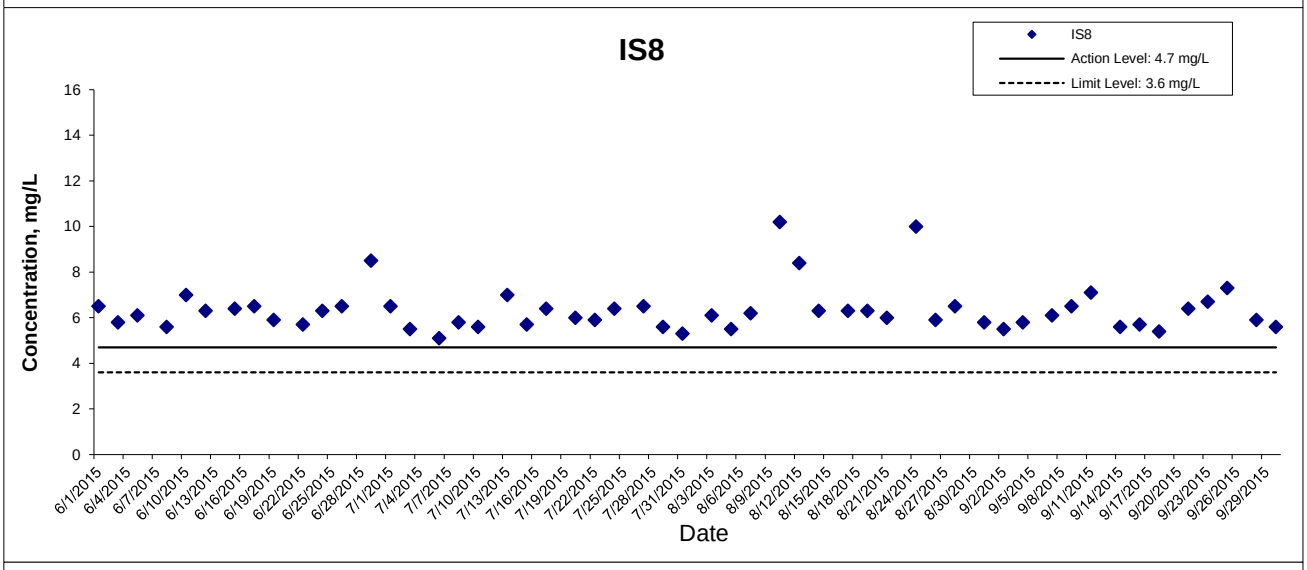


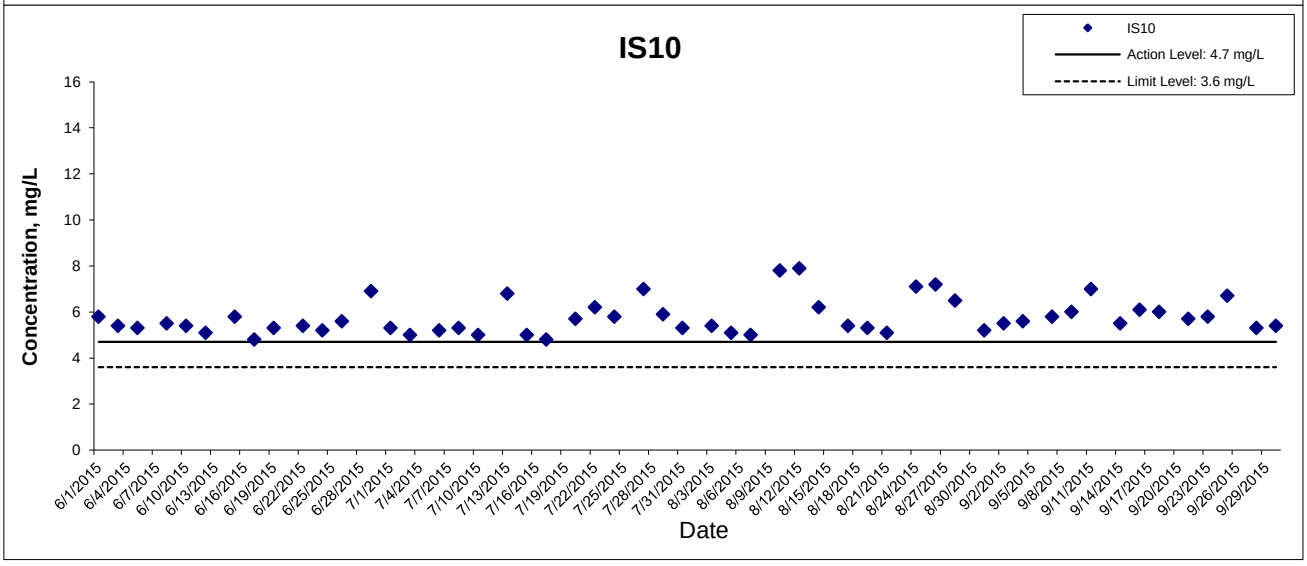




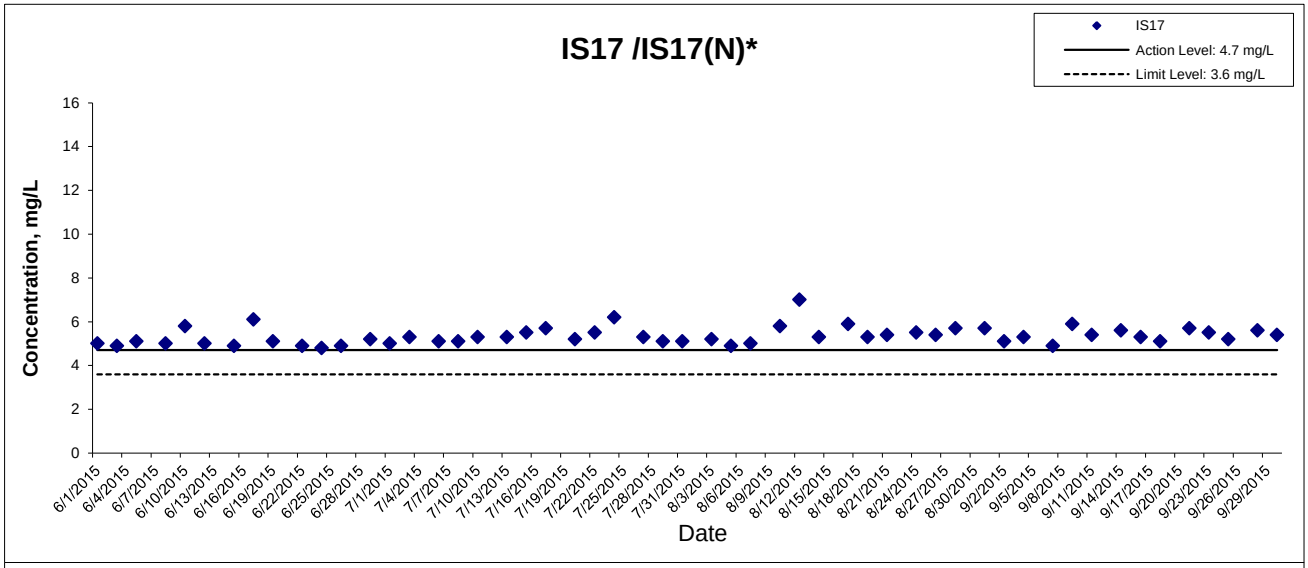
Dissolved Oxygen (Bottom) at Mid-Flood Tide

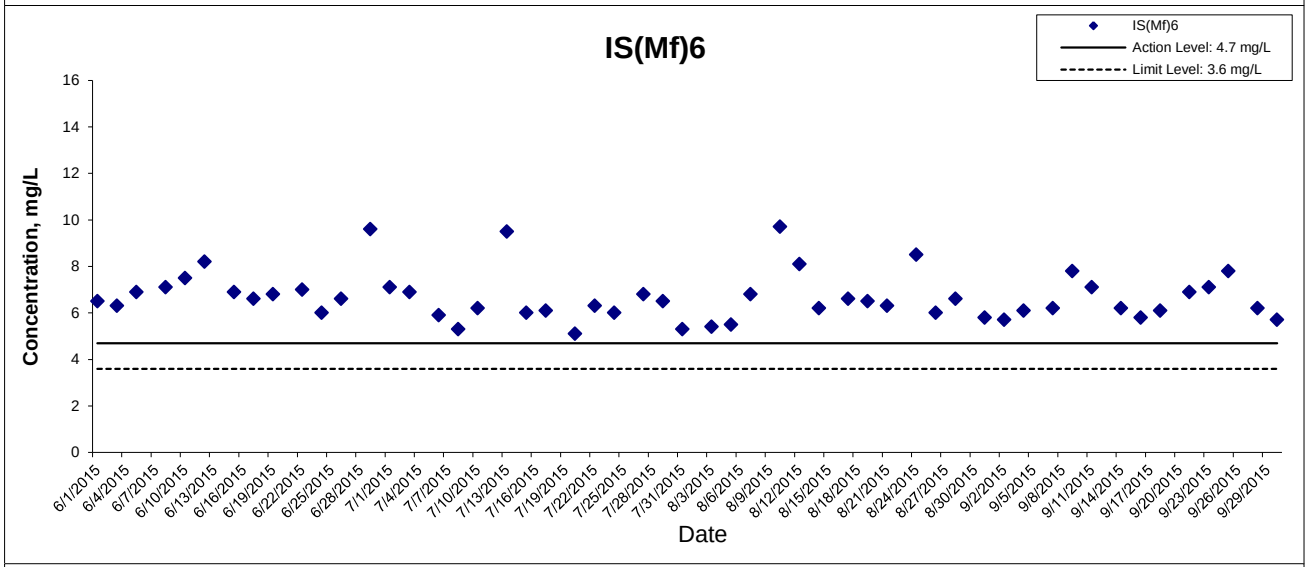


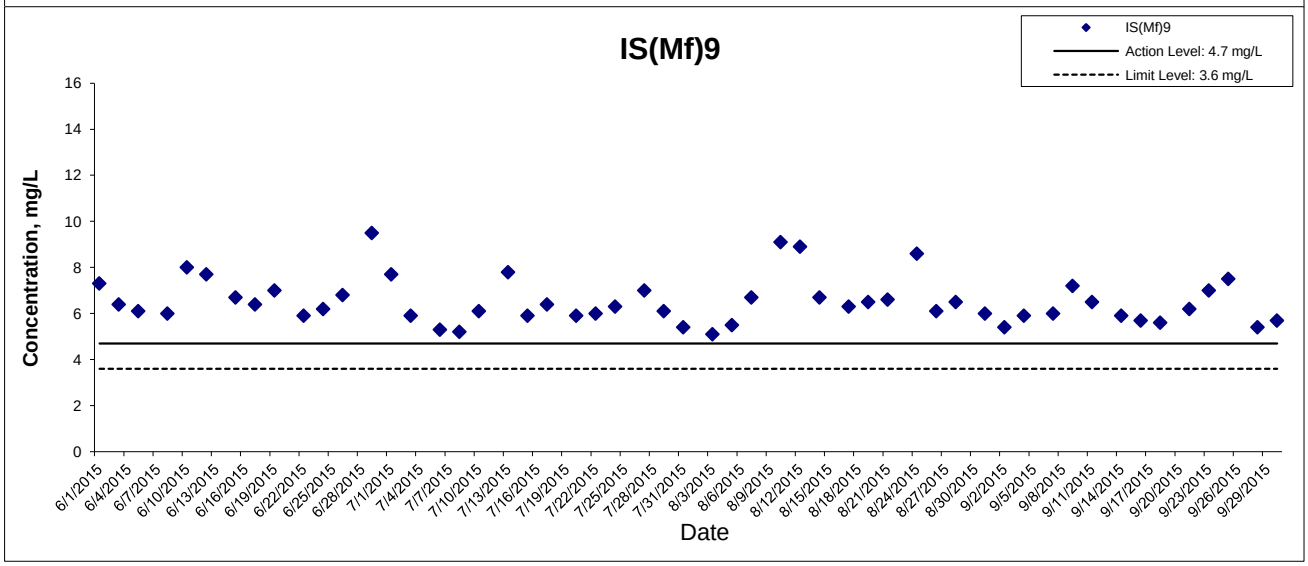




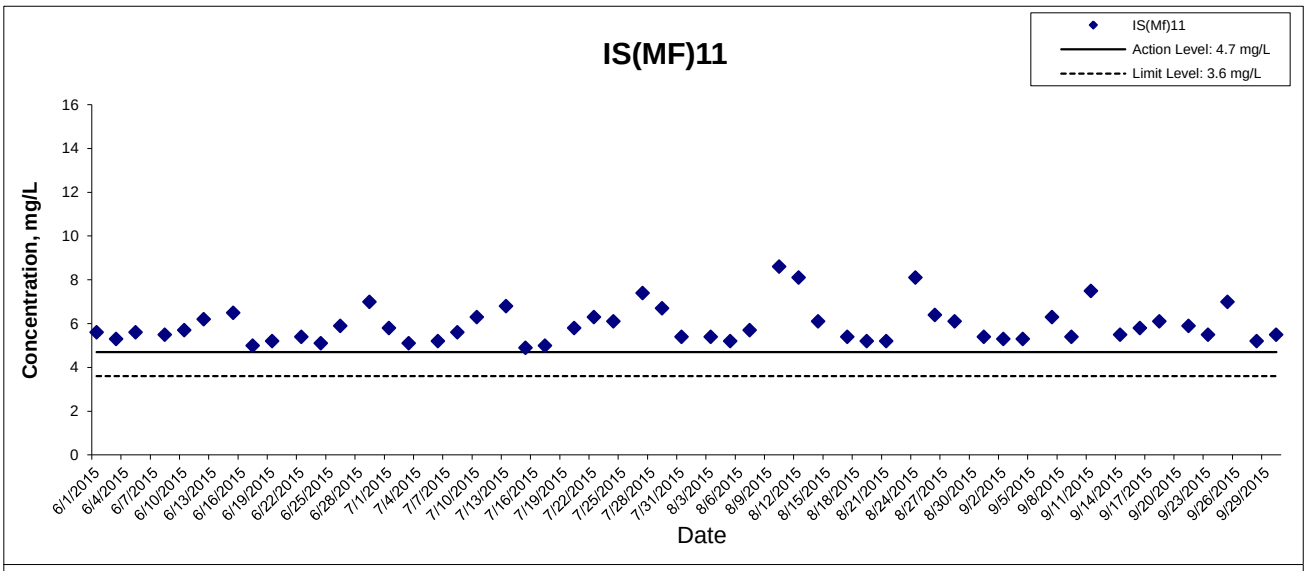
Dissolved Oxygen (Bottom) at Mid-Flood Tide

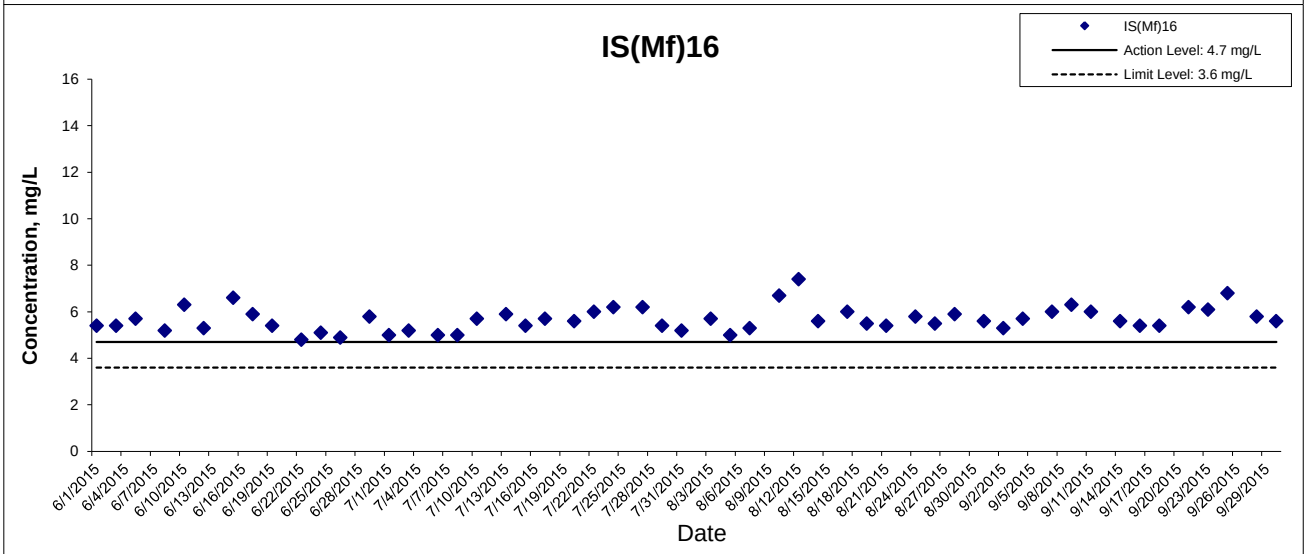


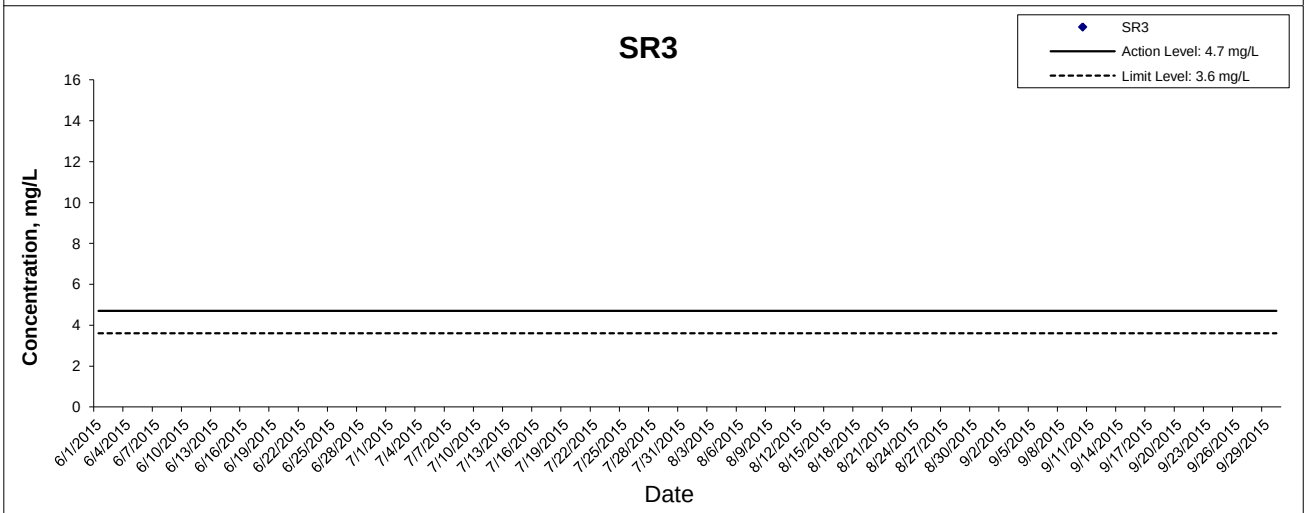




Dissolved Oxygen (Bottom) at Mid-Flood Tide

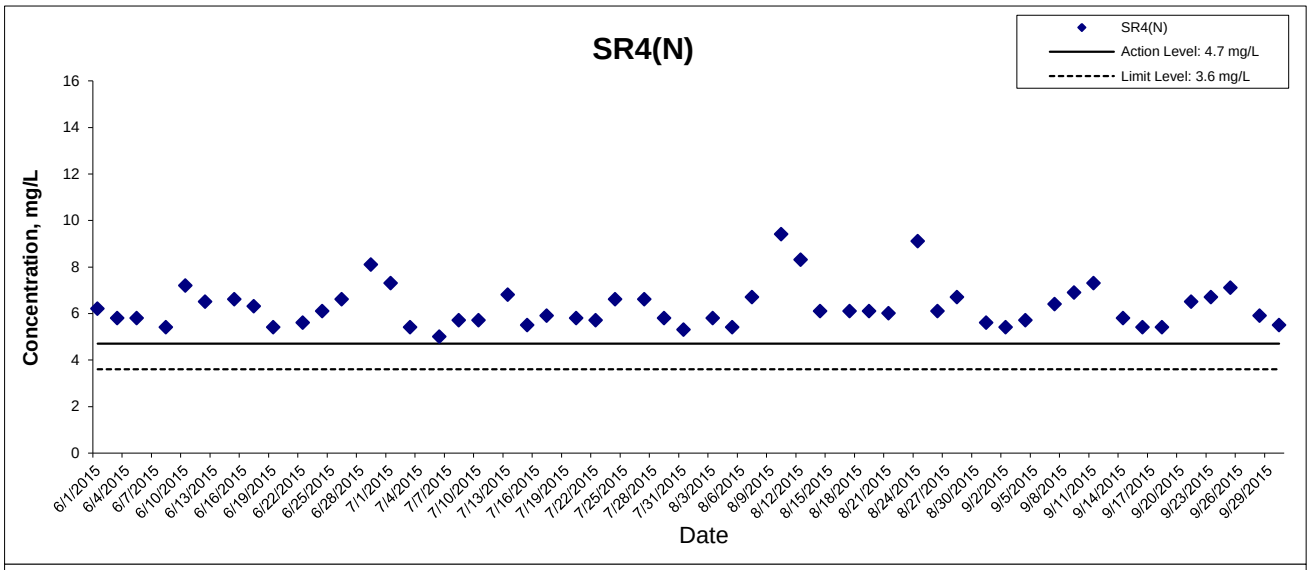


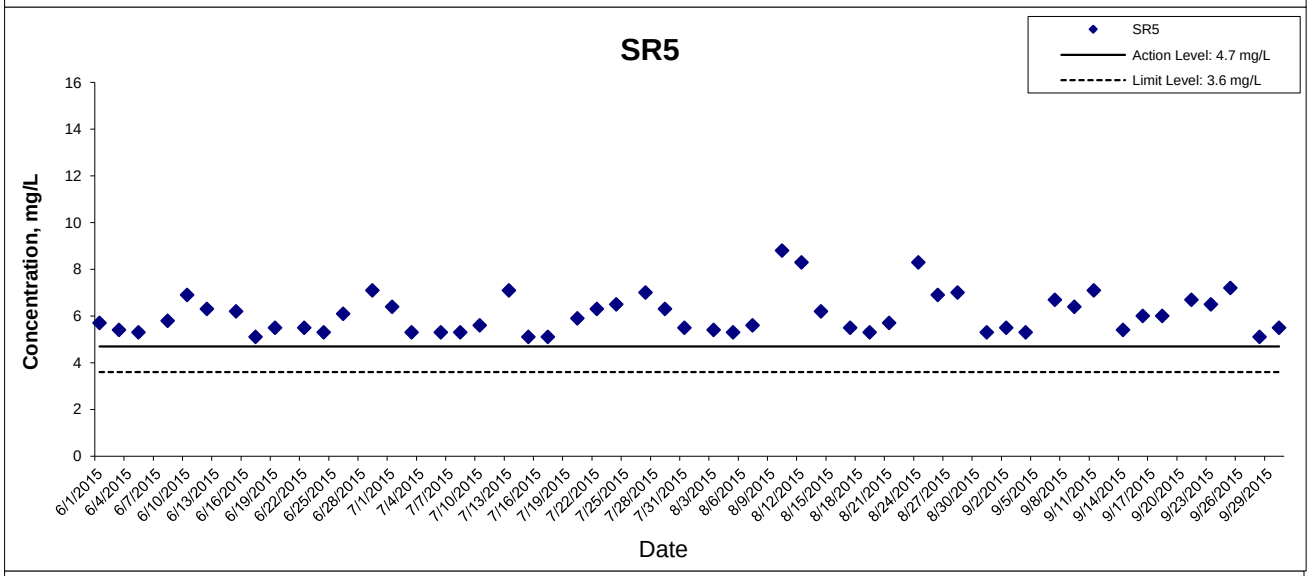


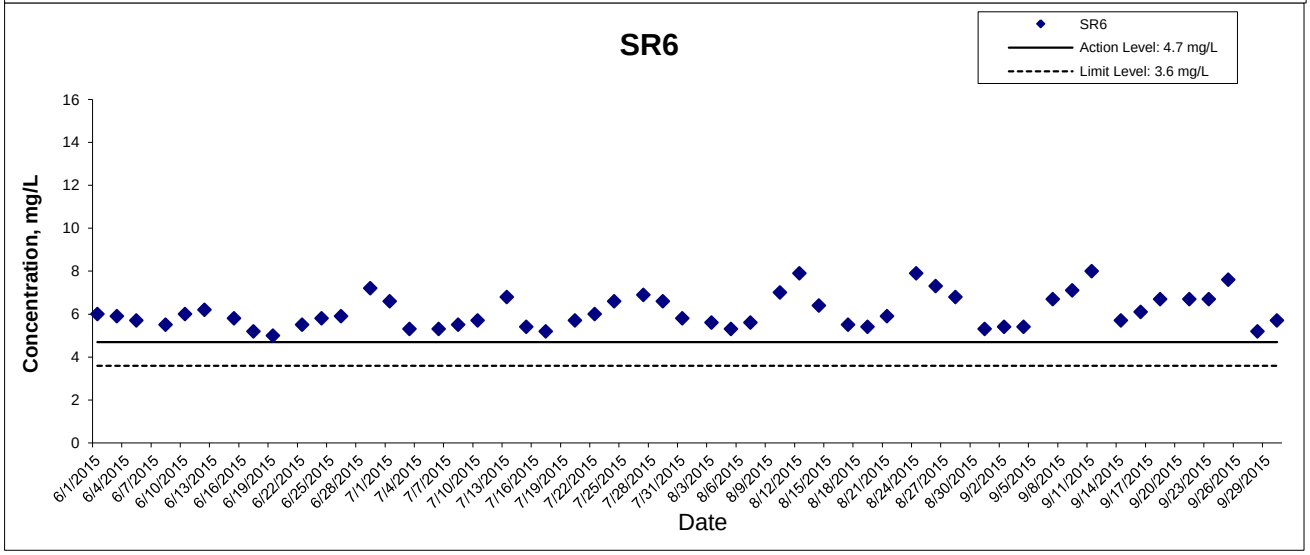


As the measured water depths were less than 3 m during all monitoring days, water samples are collected at mid-depth only .

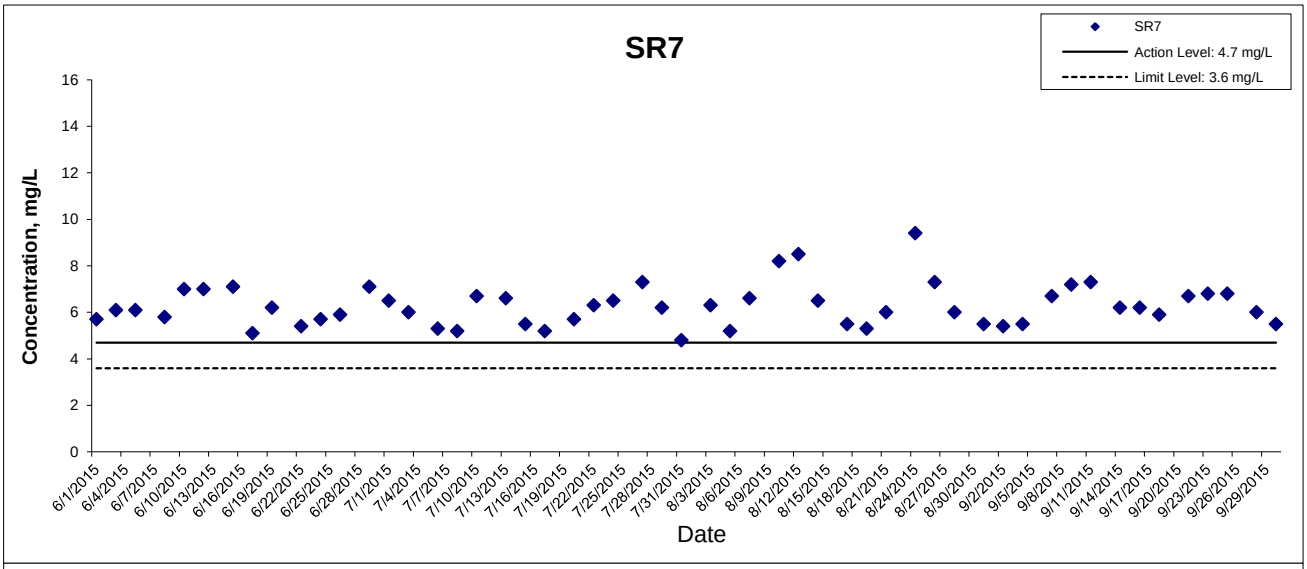
Dissolved Oxygen (Bottom) at Mid-Flood Tide

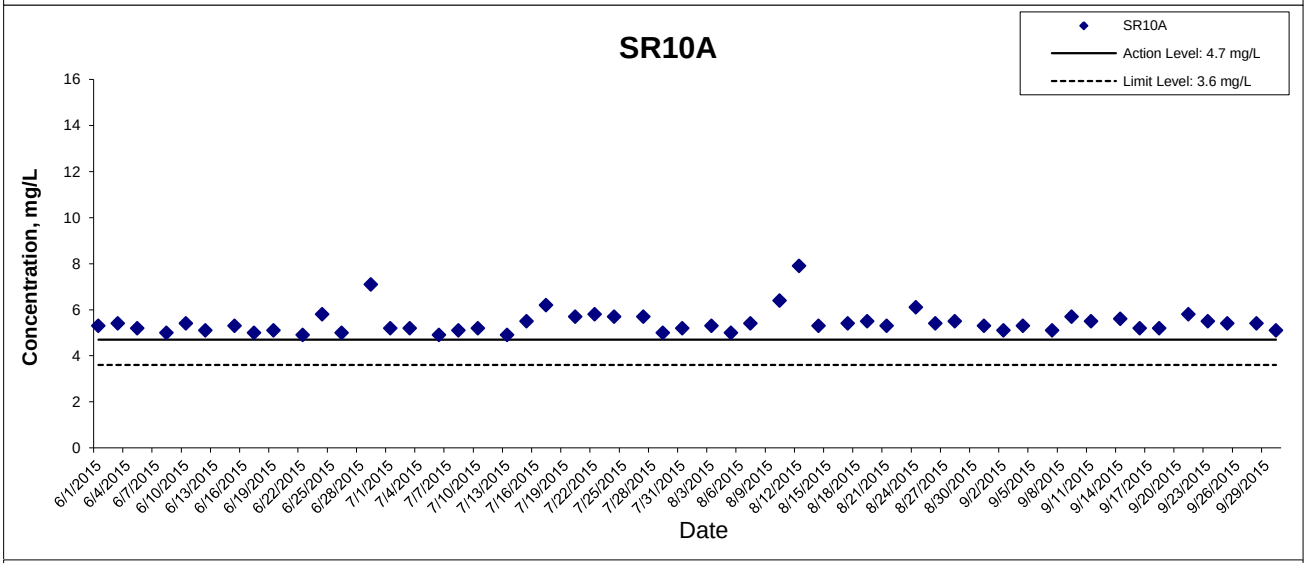


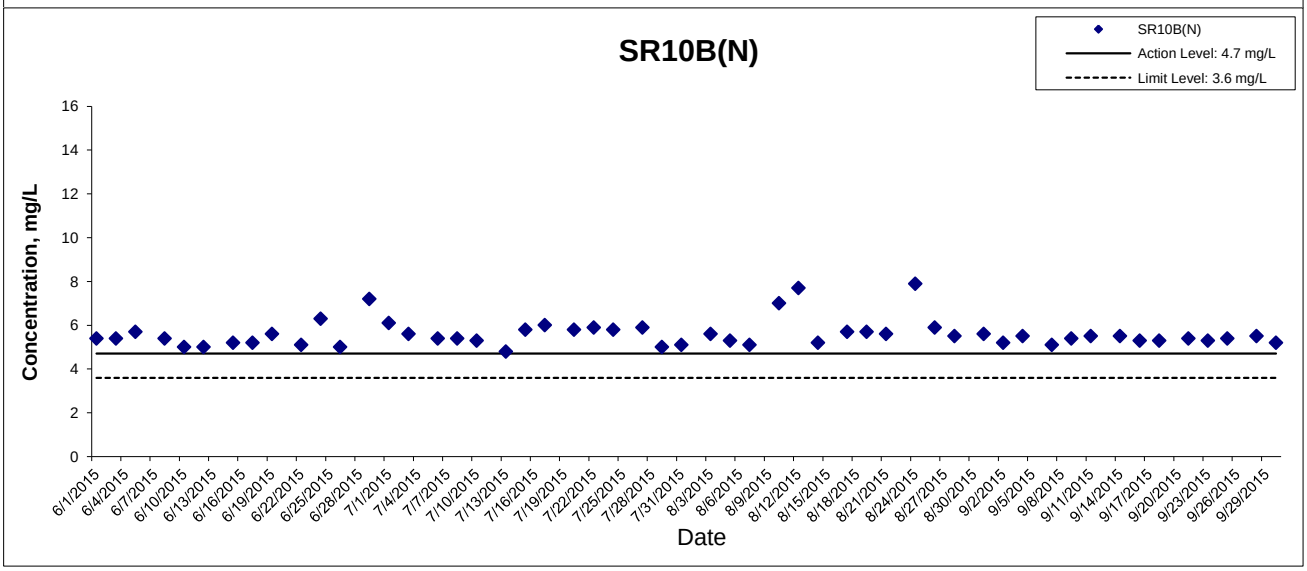




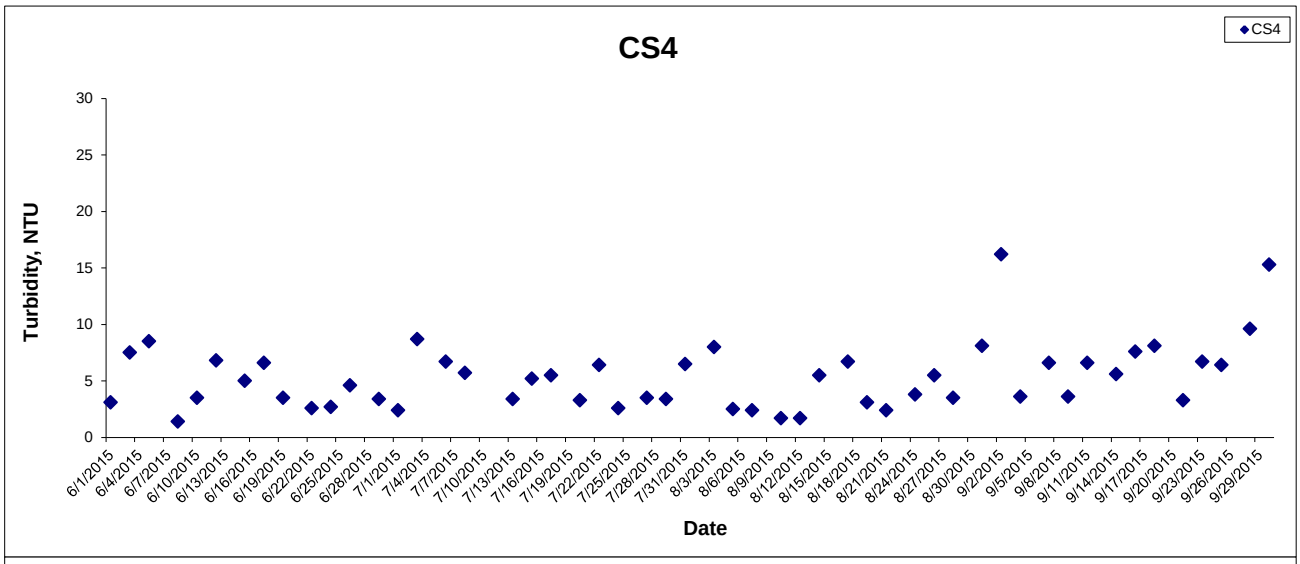
Dissolved Oxygen (Bottom) at Mid-Flood Tide

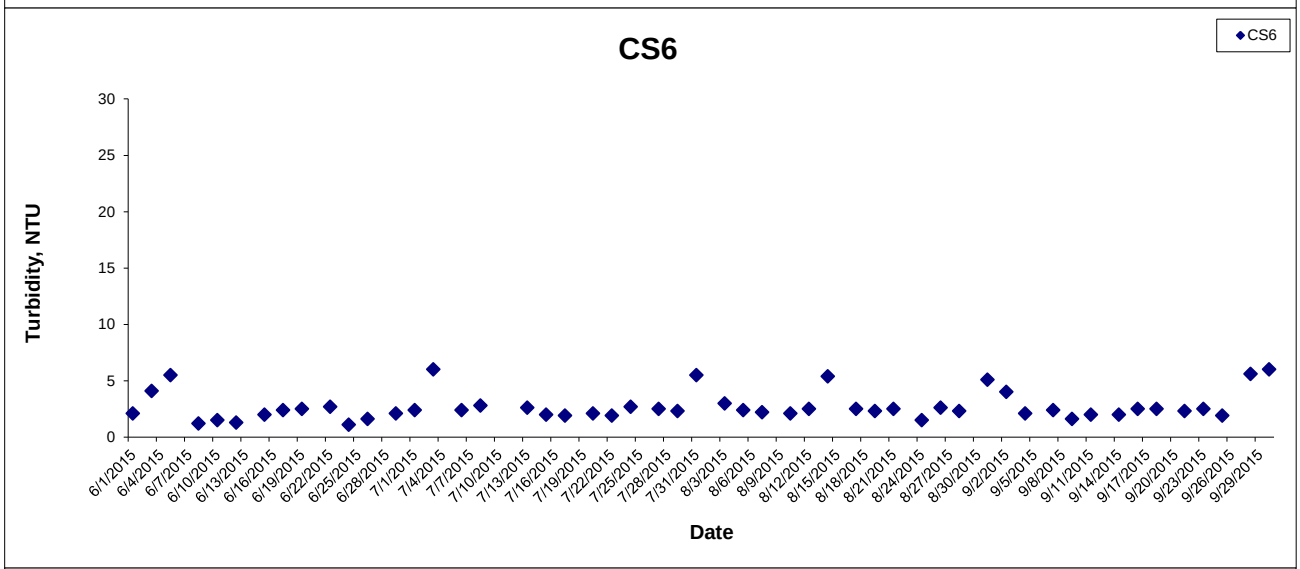


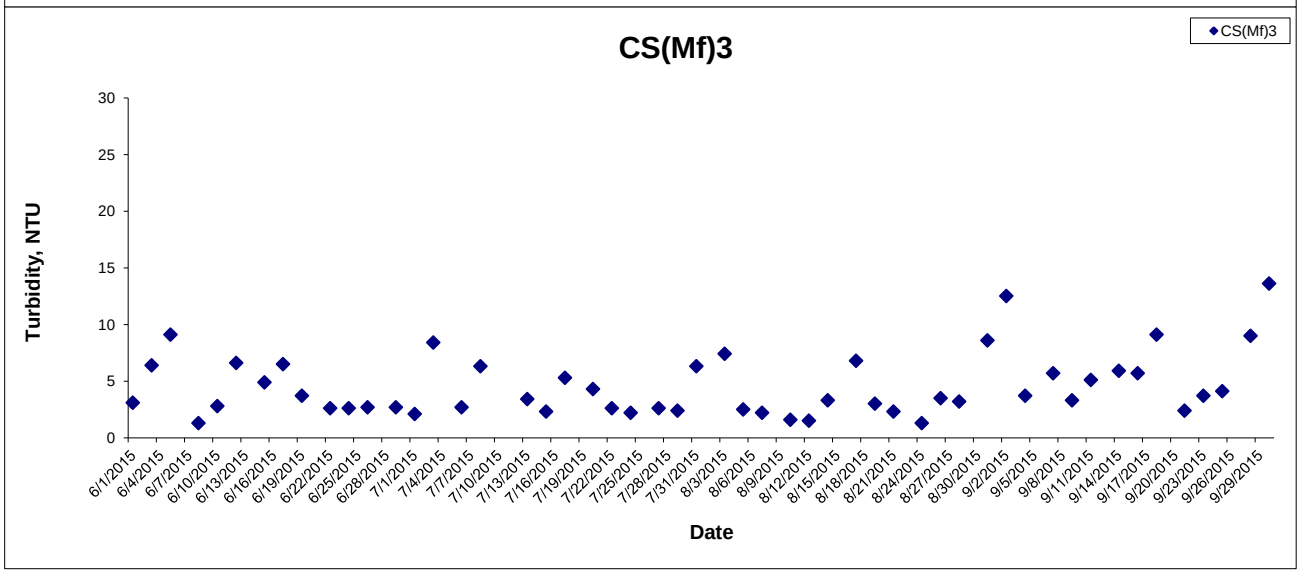




Turbidity at Mid-Ebb Tide







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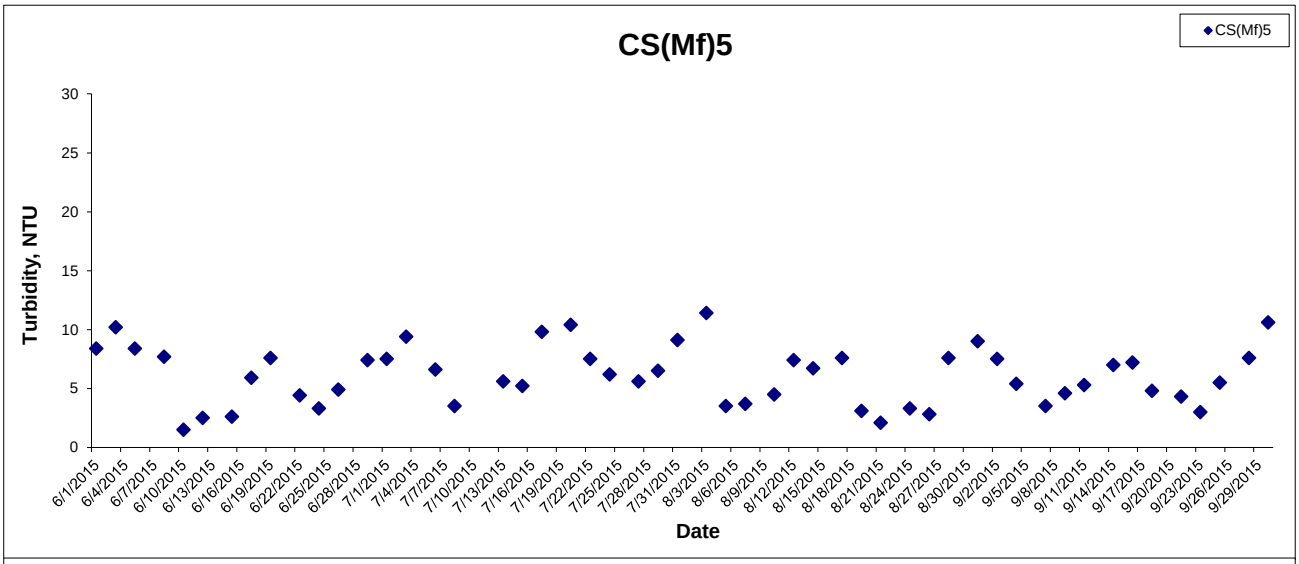
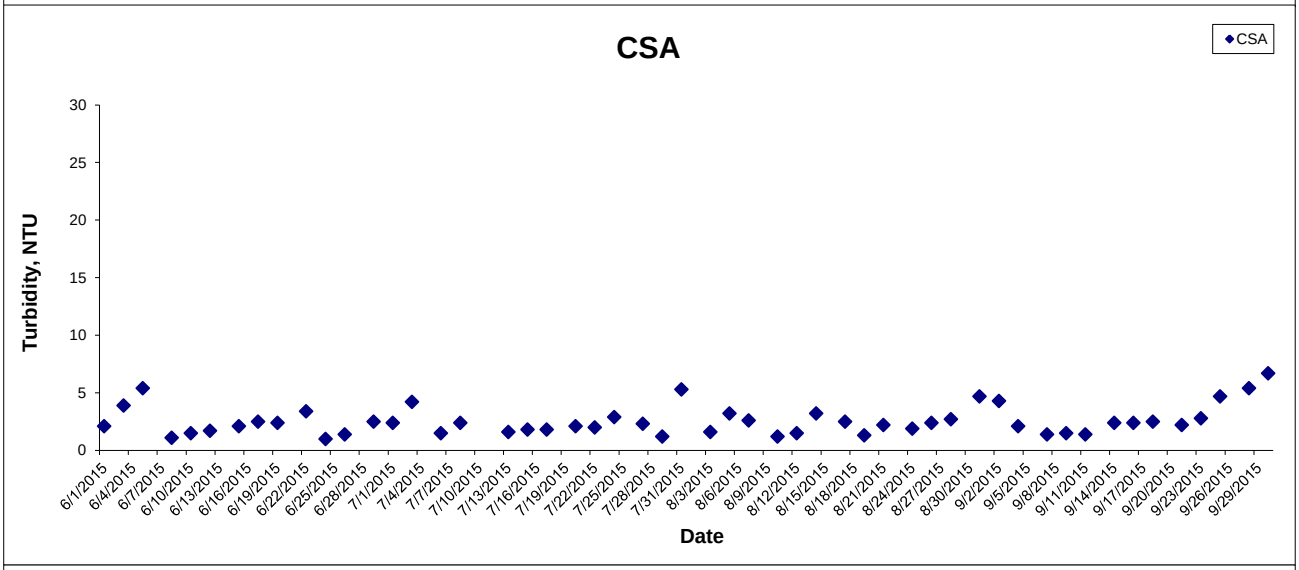
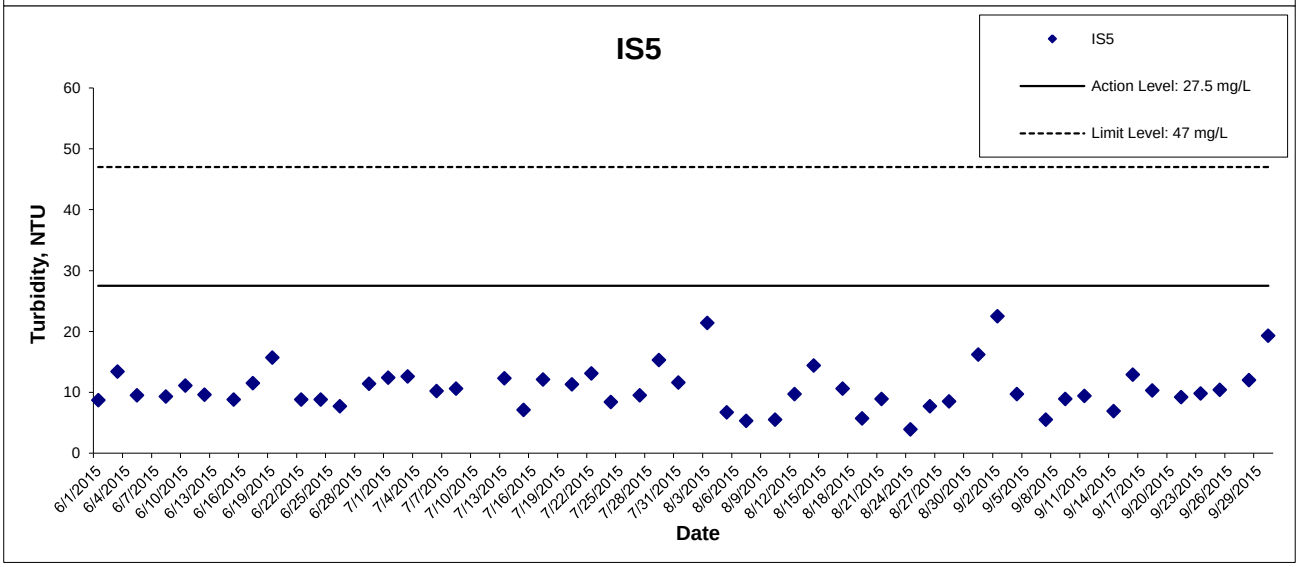
Turbidity at Mid-Ebb Tide







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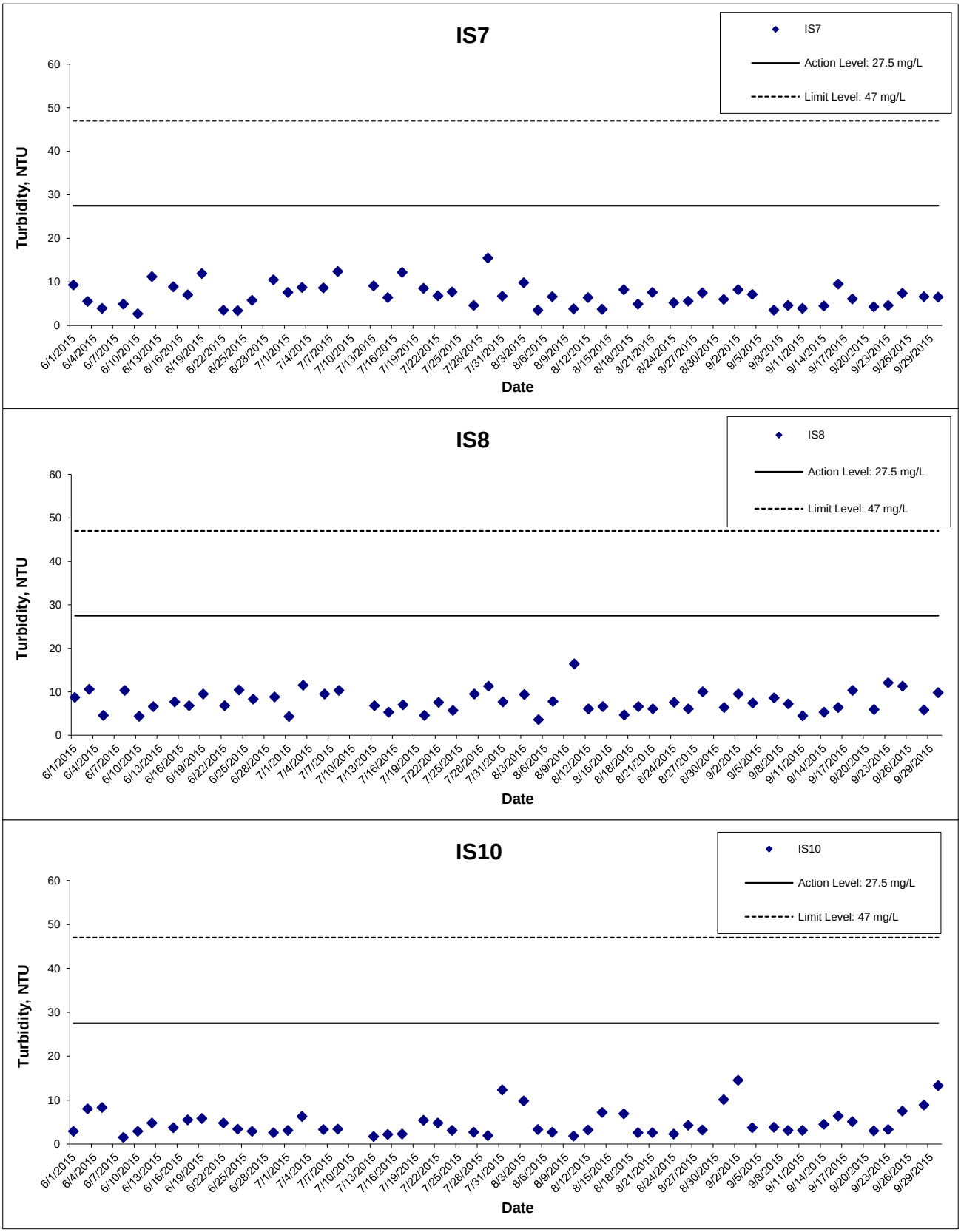
Turbidity at Mid-Ebb Tide



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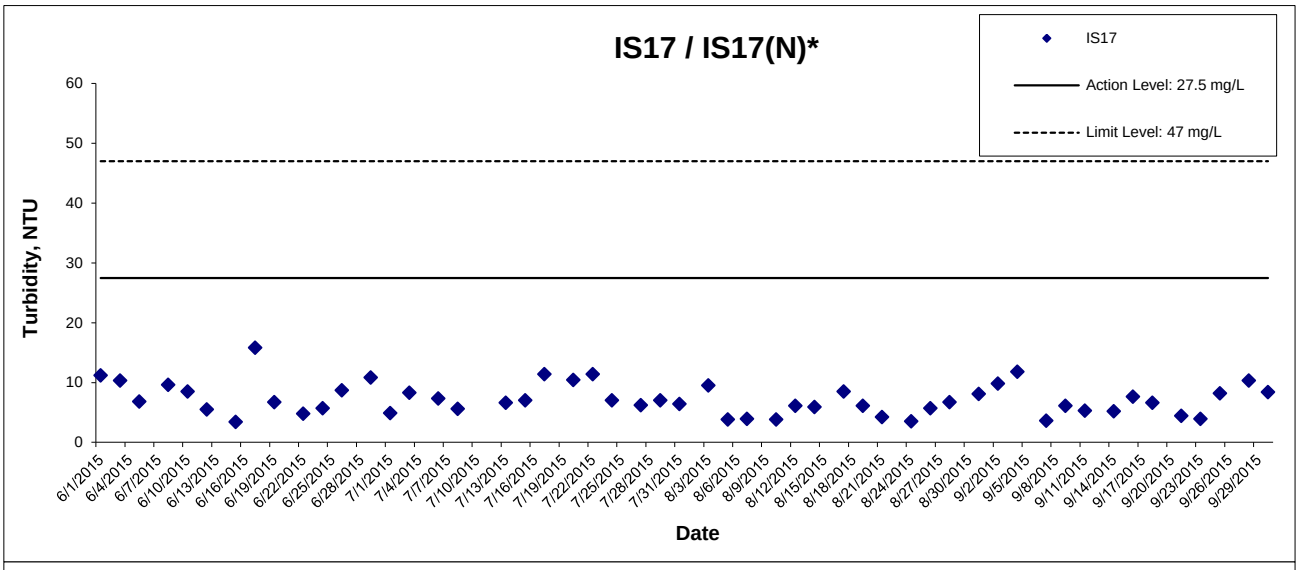
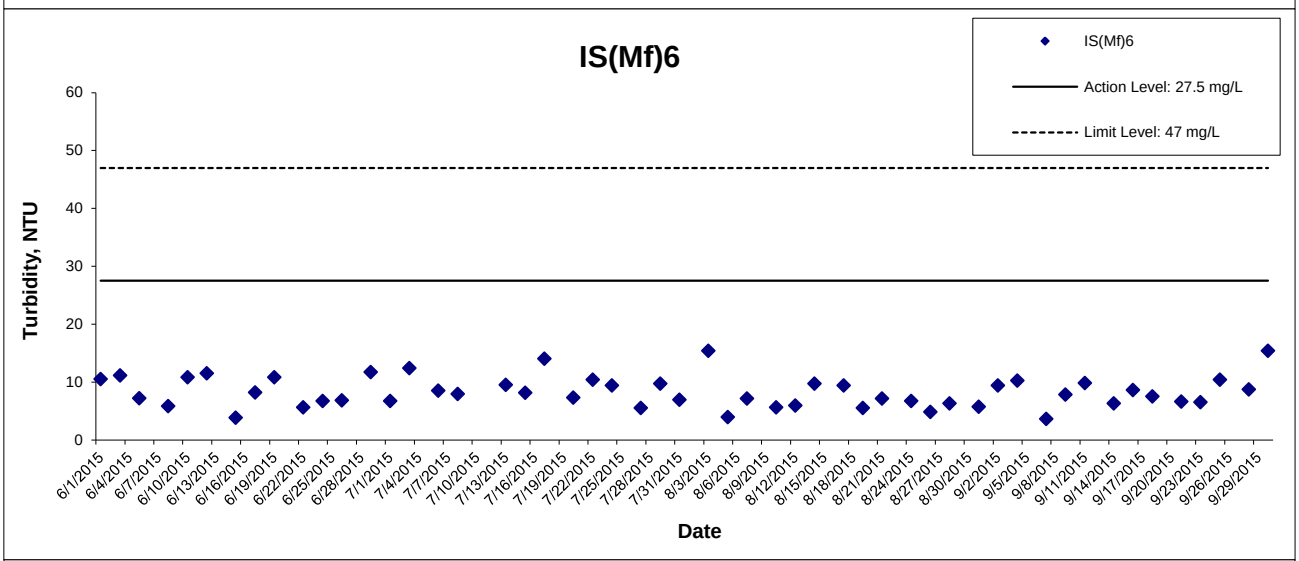
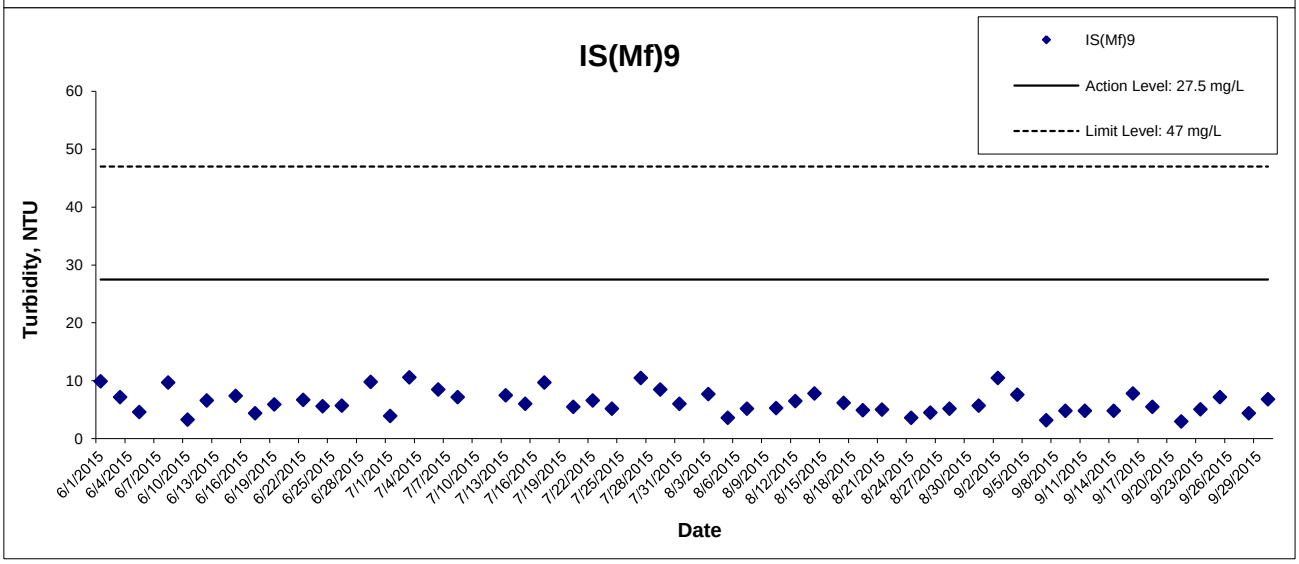
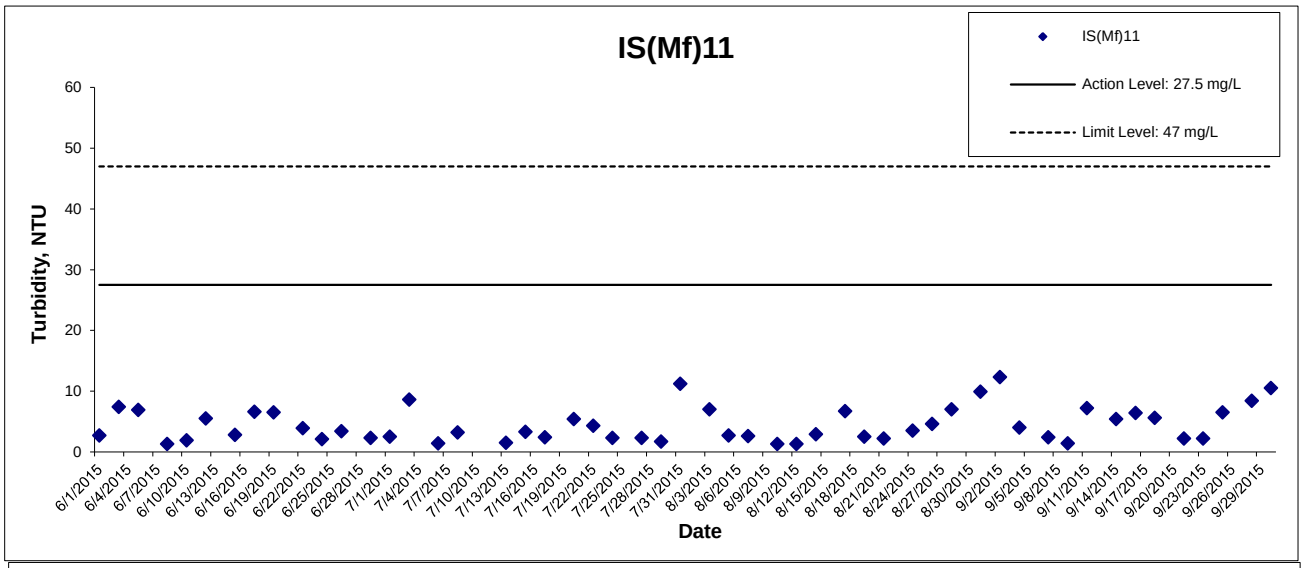
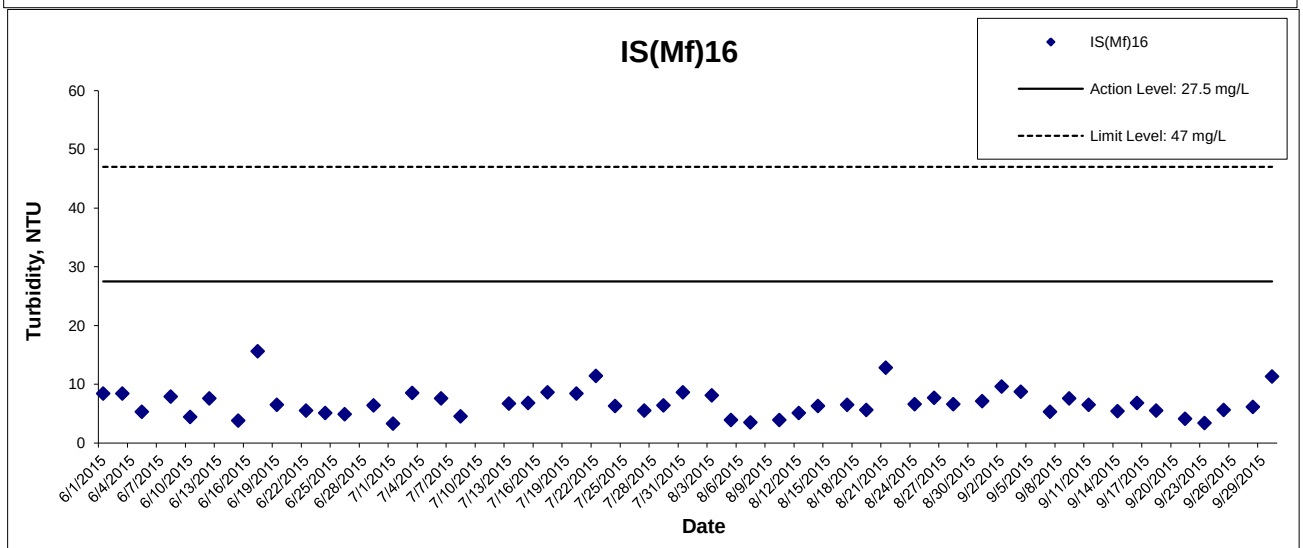


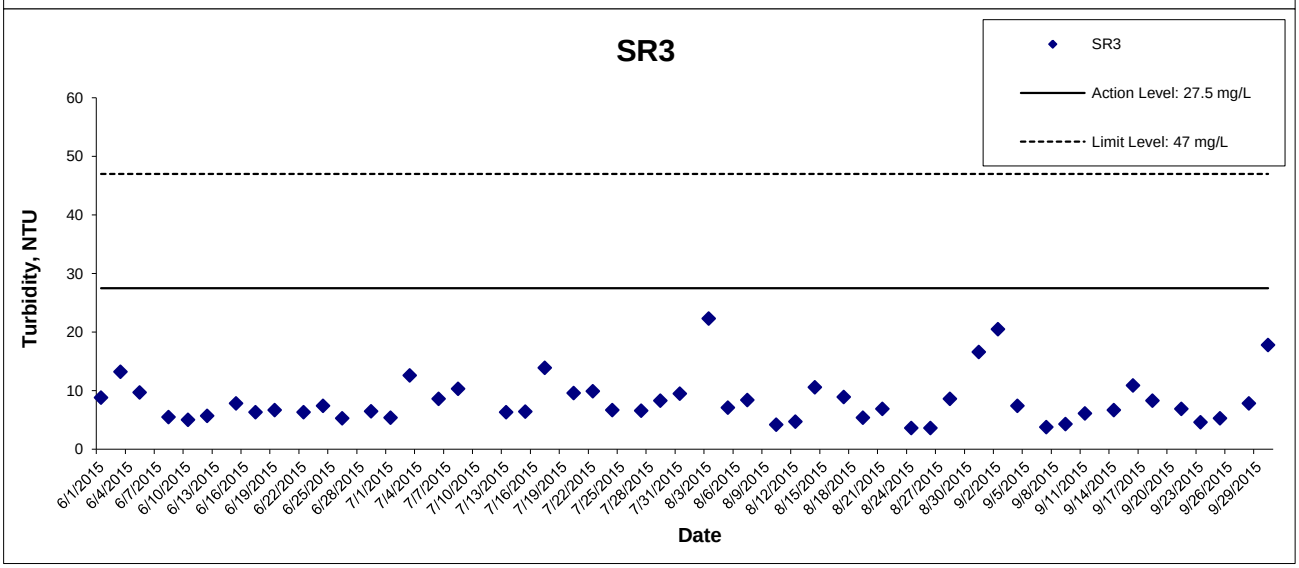




Turbidity at Mid-Ebb Tide







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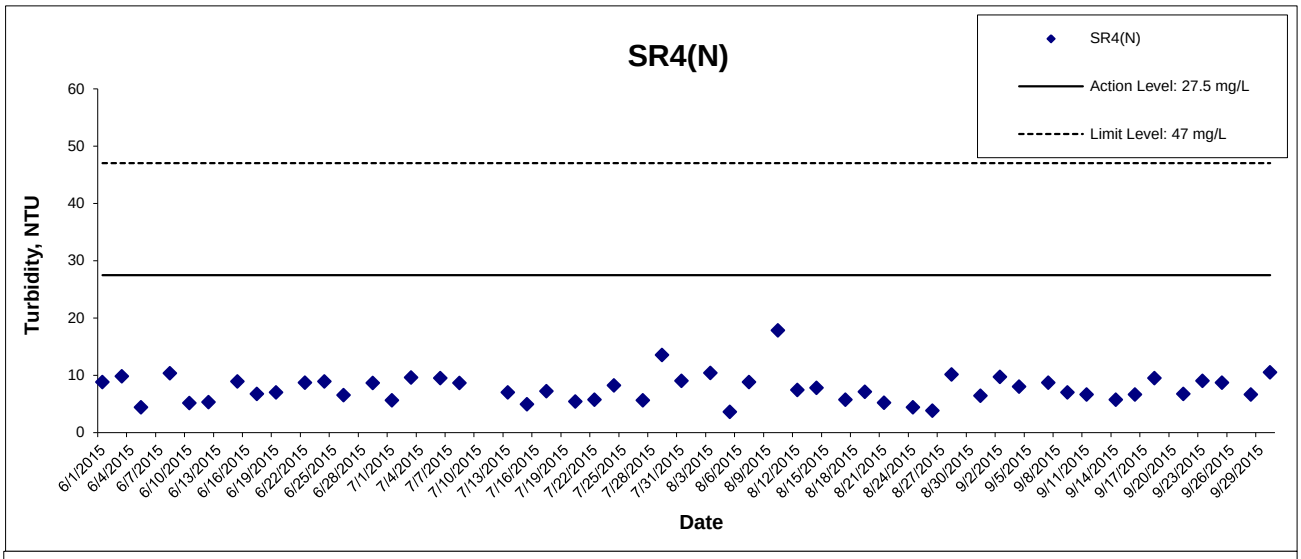
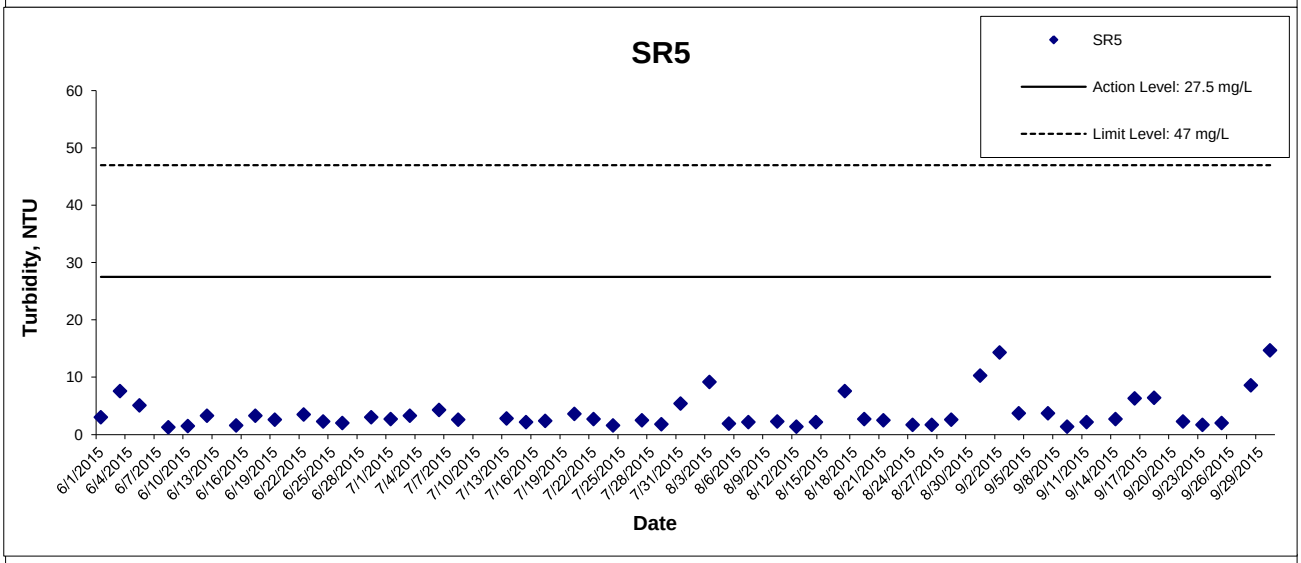
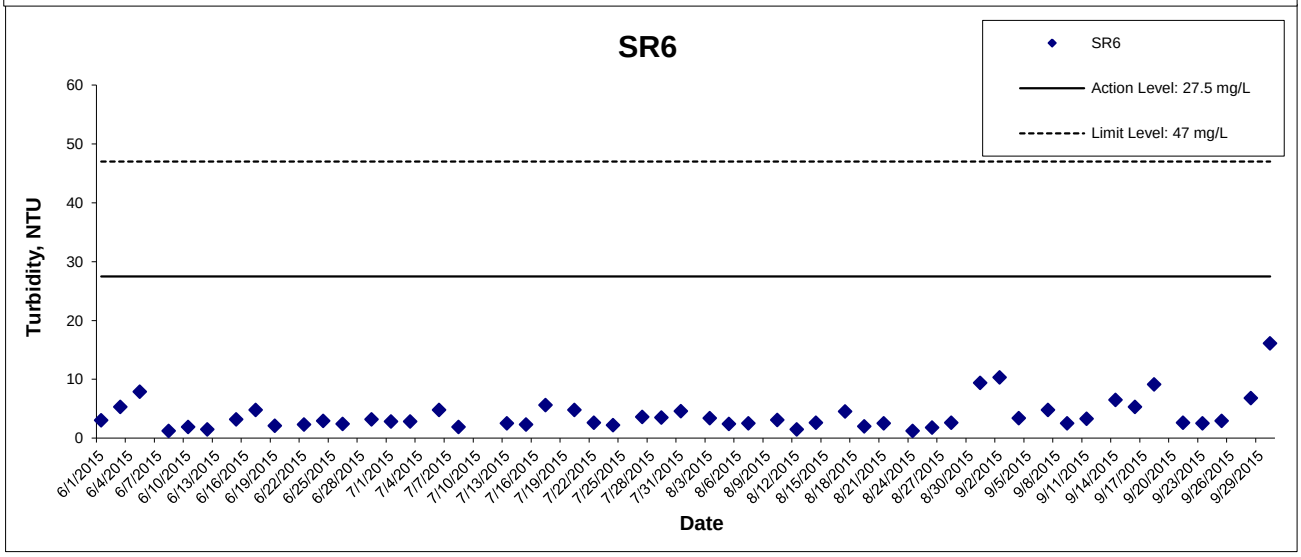
Turbidity at Mid-Ebb Tide







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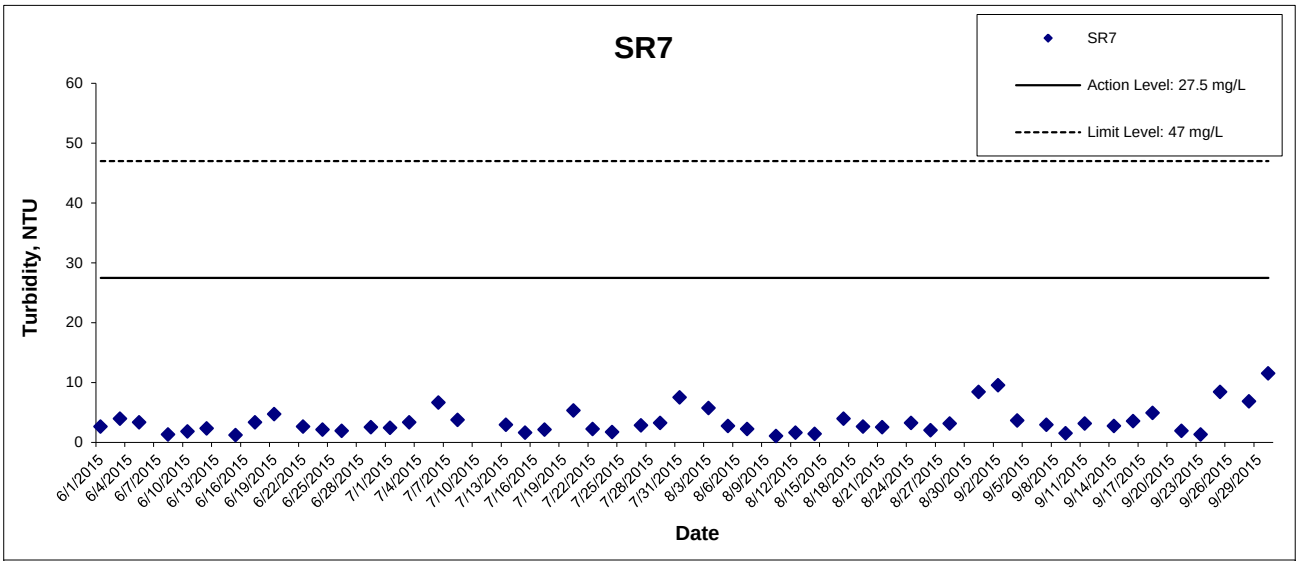
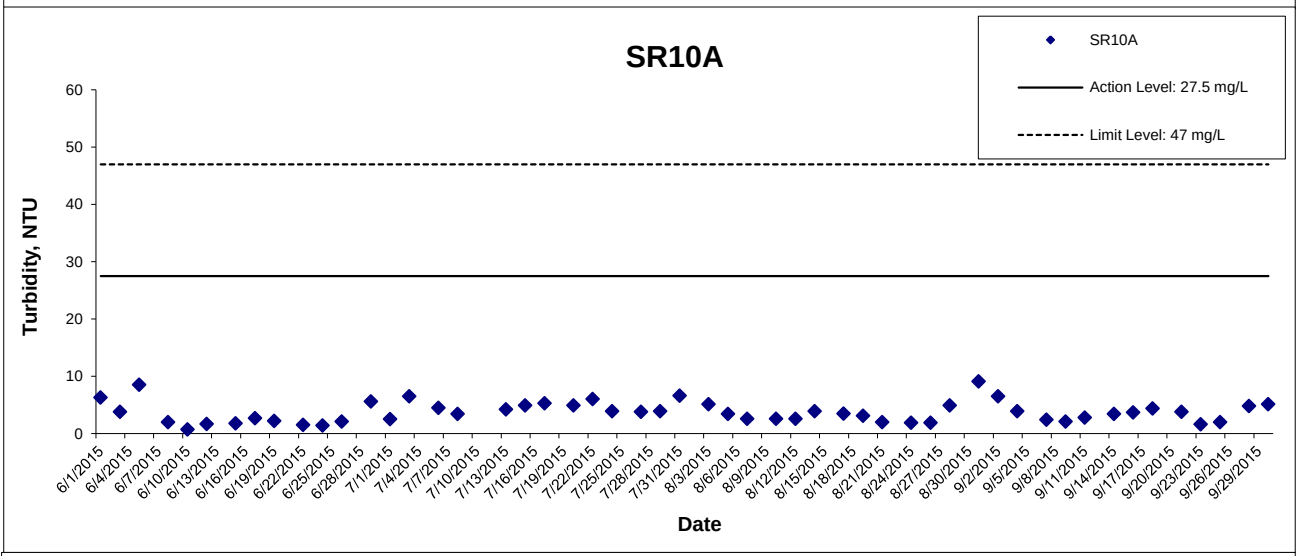
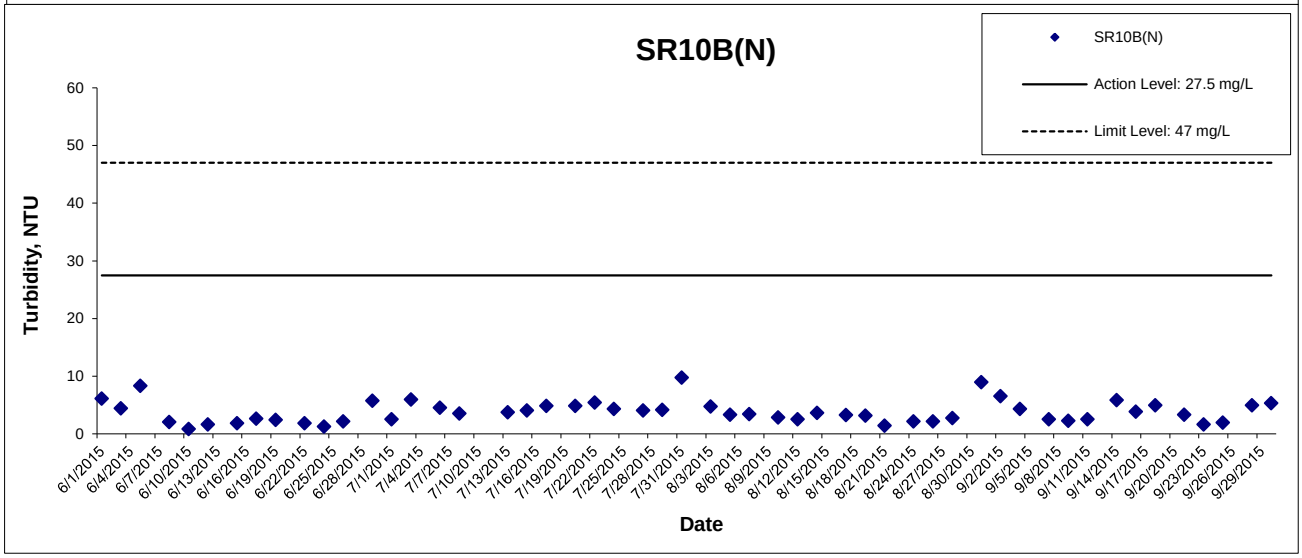
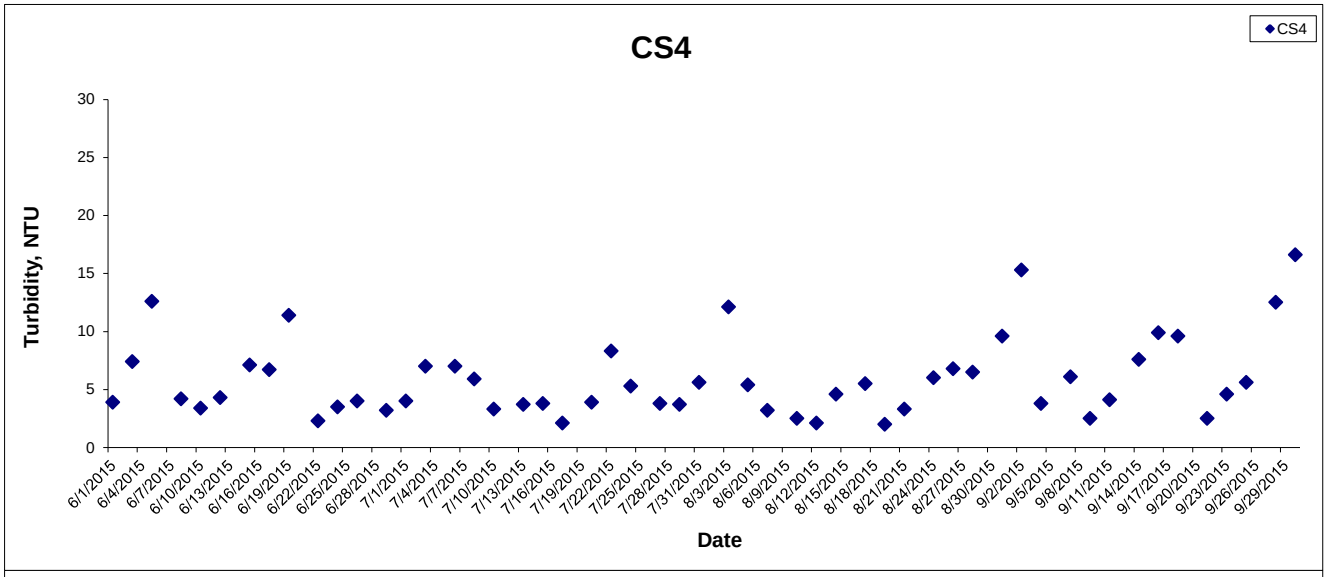
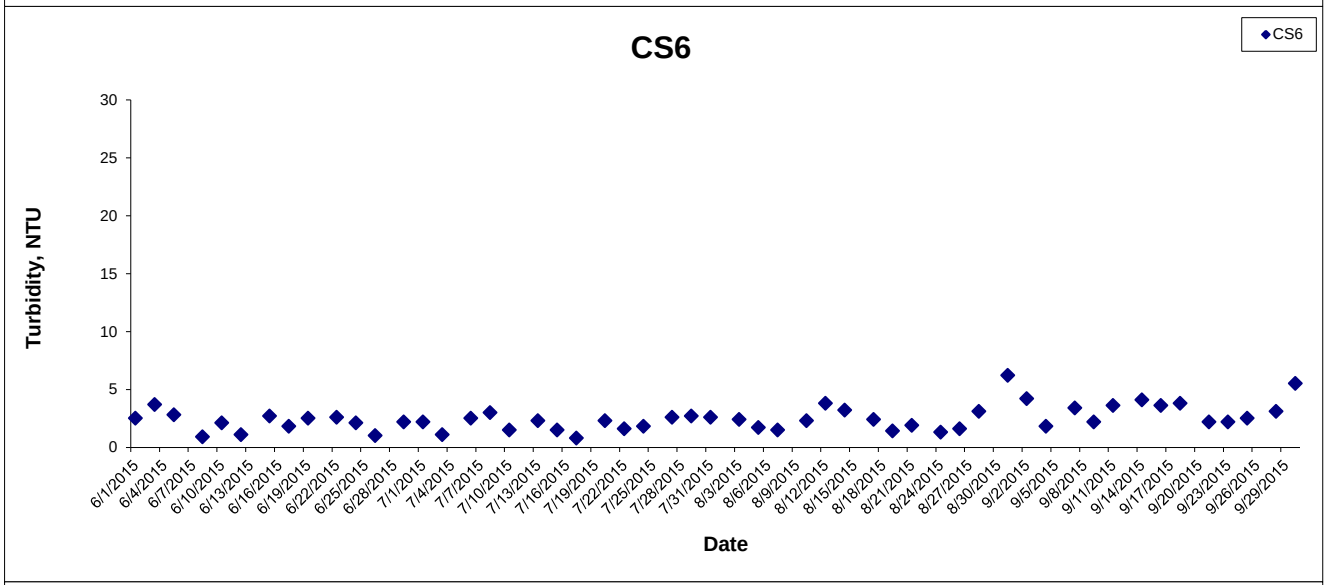


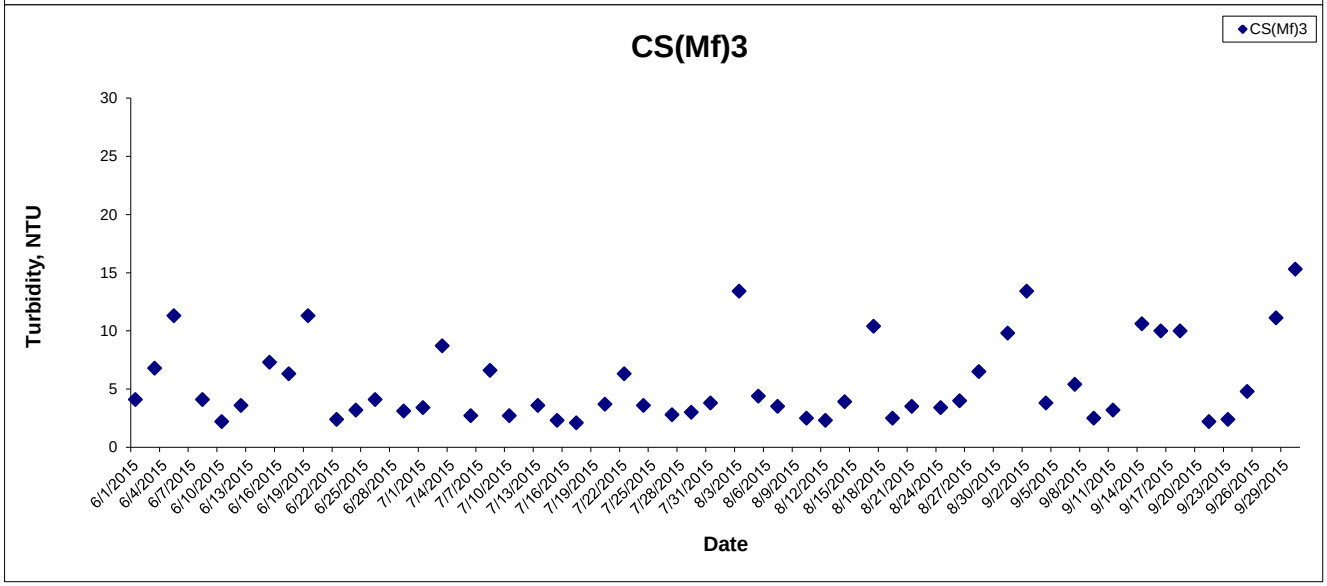




Turbidity at Mid-Flood Tide







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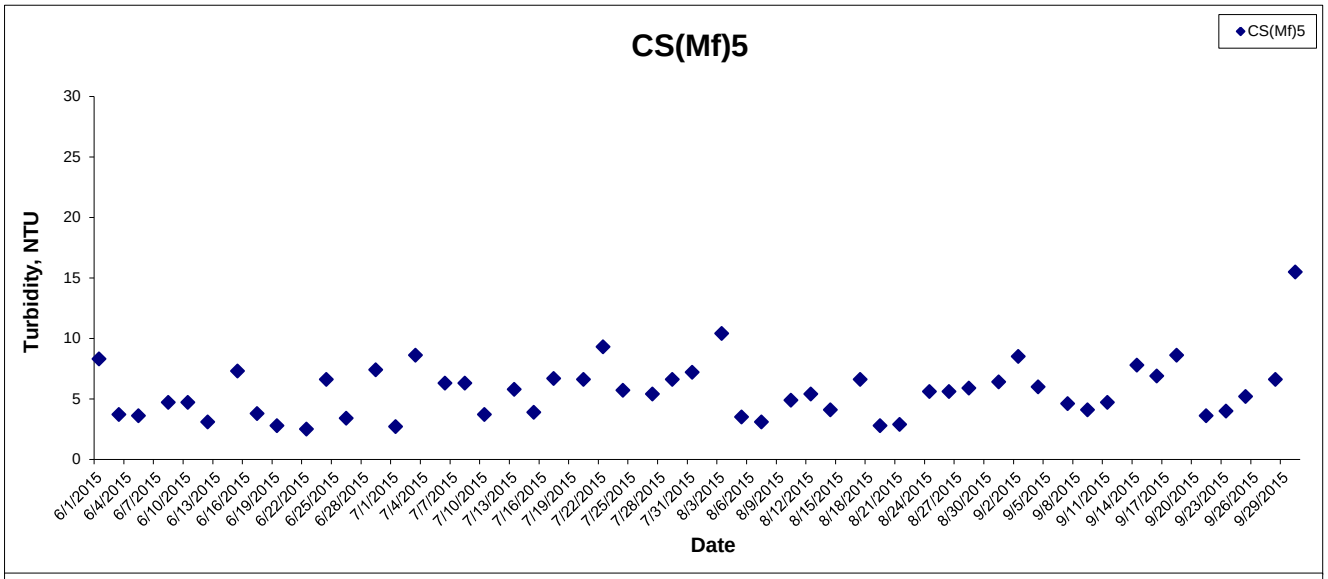

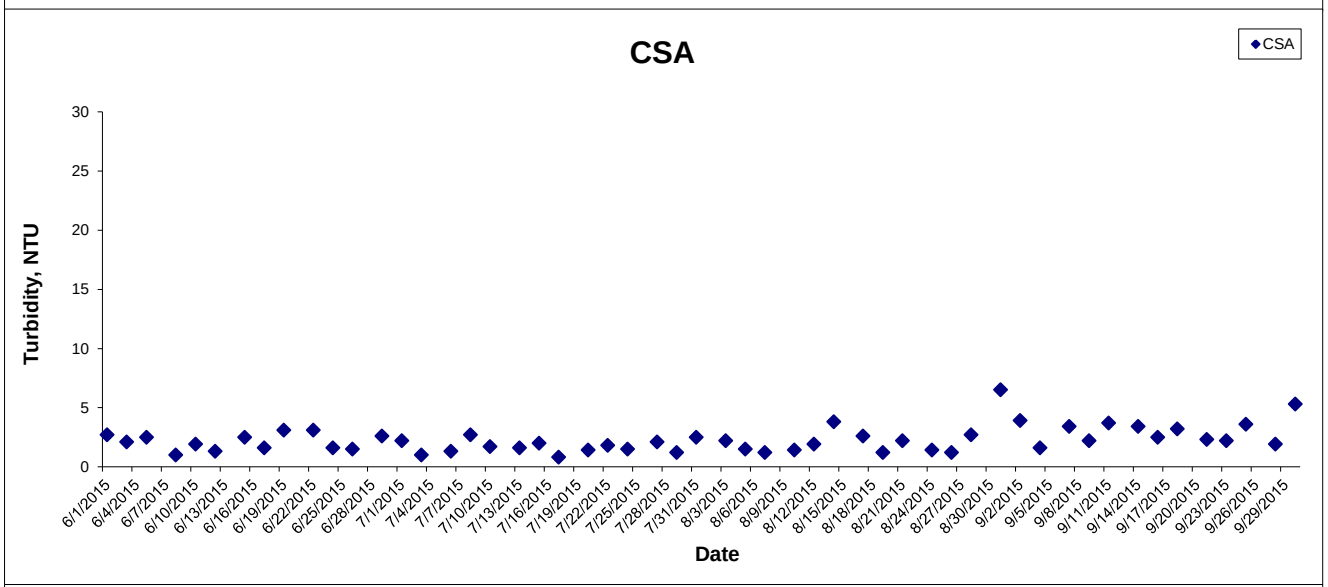

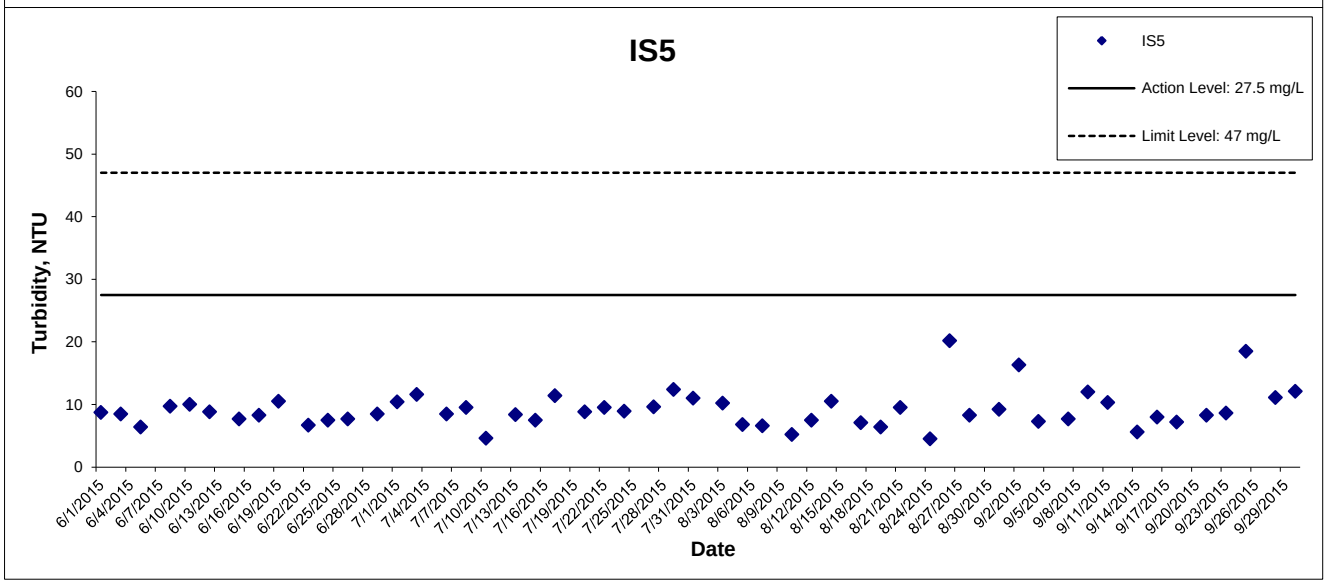

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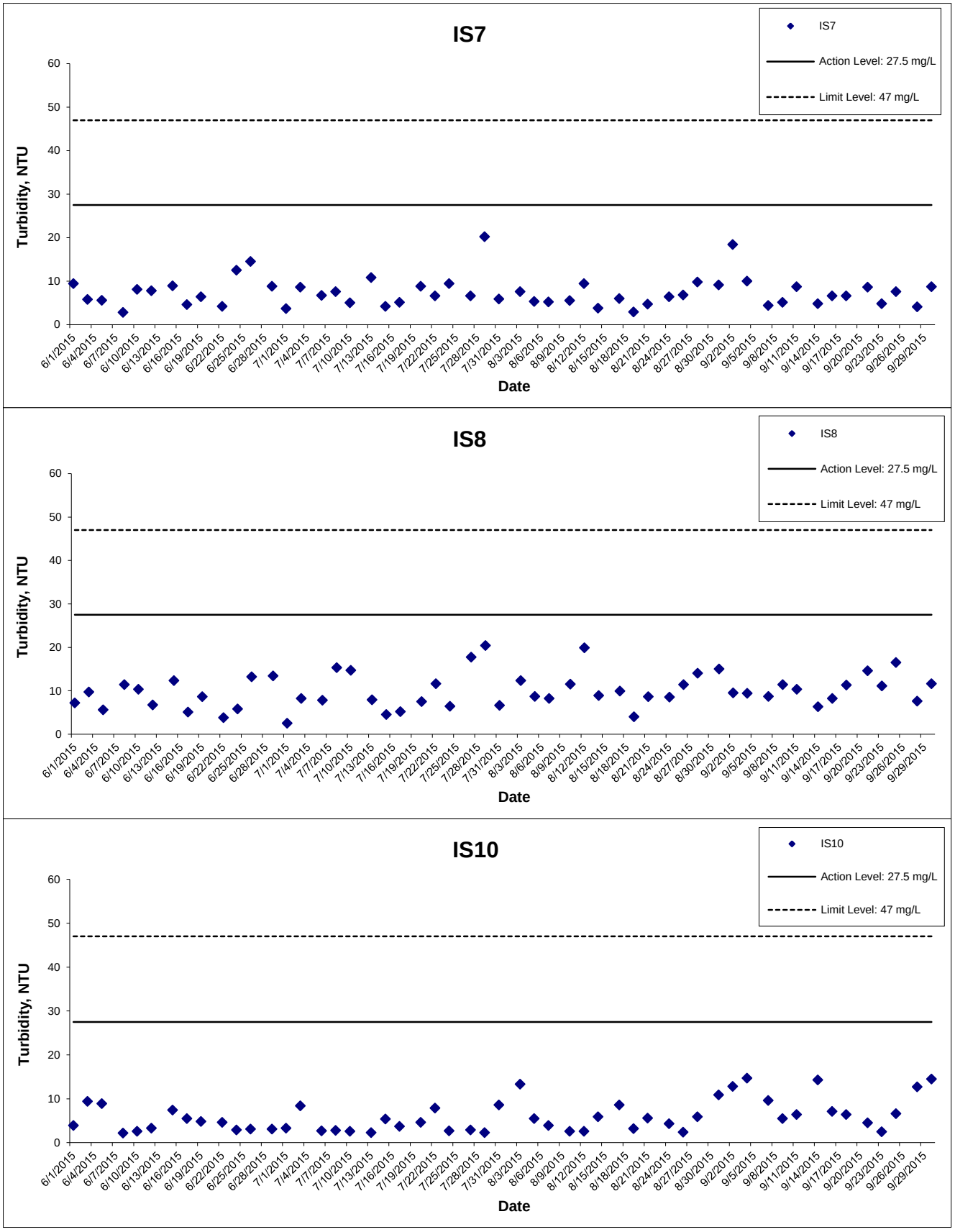

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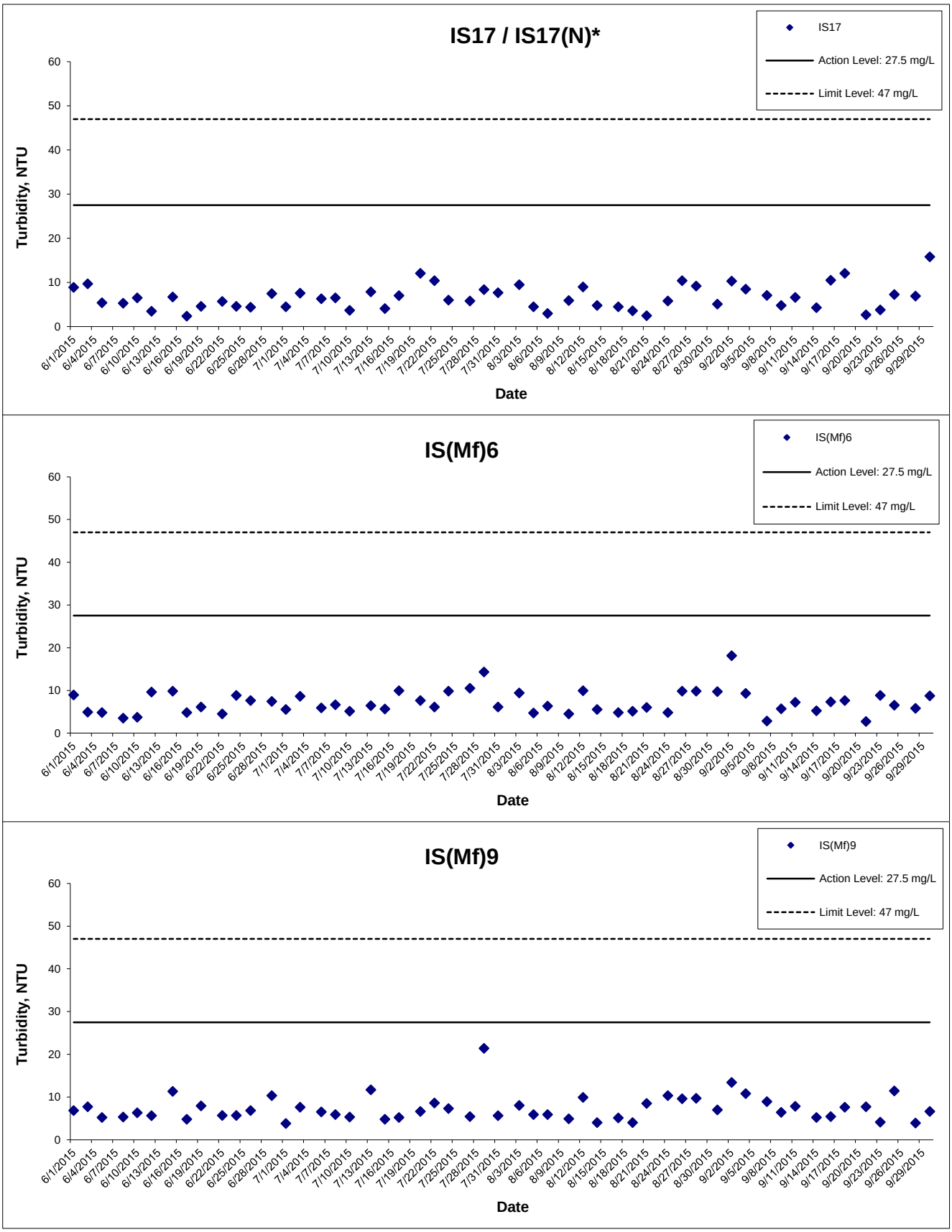

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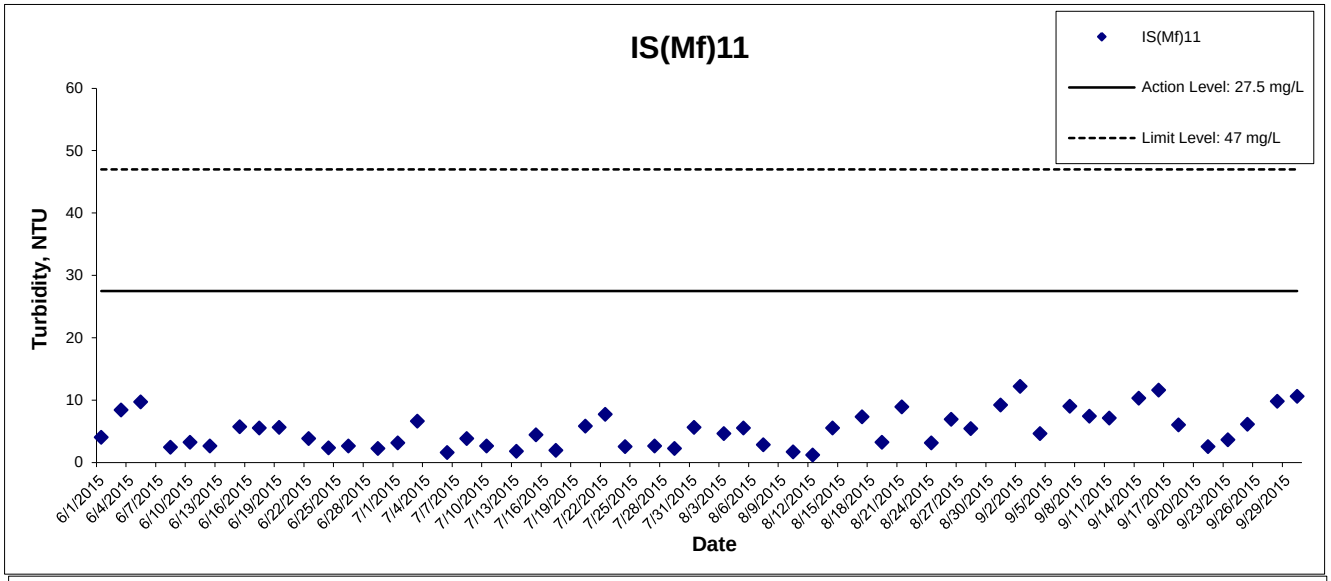
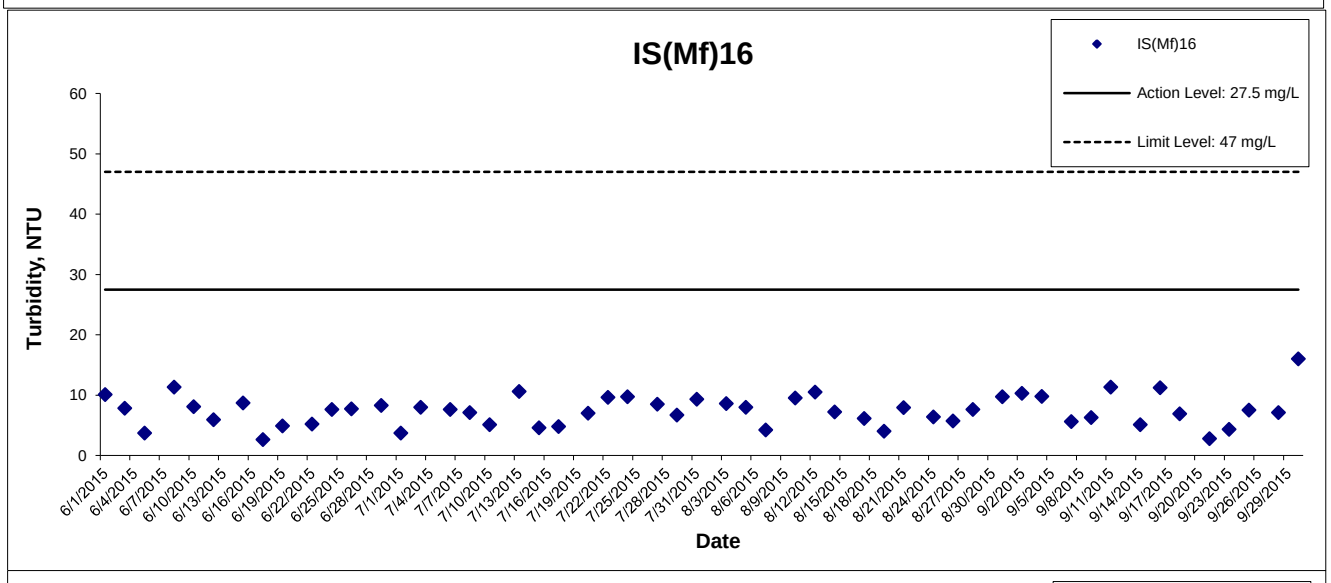
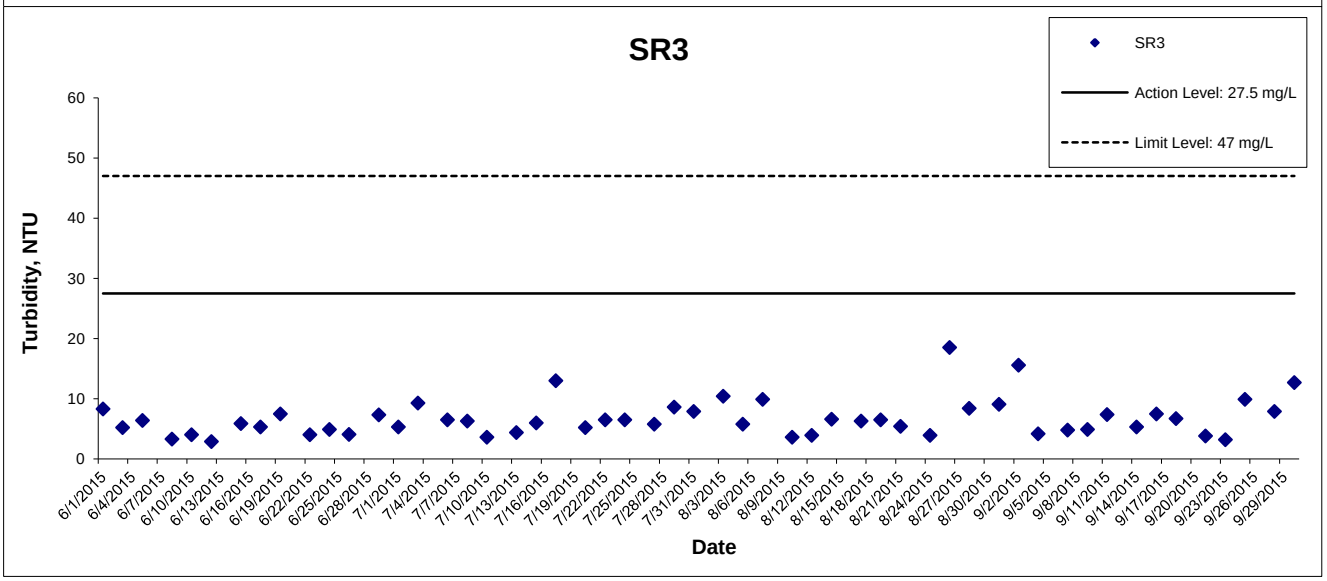
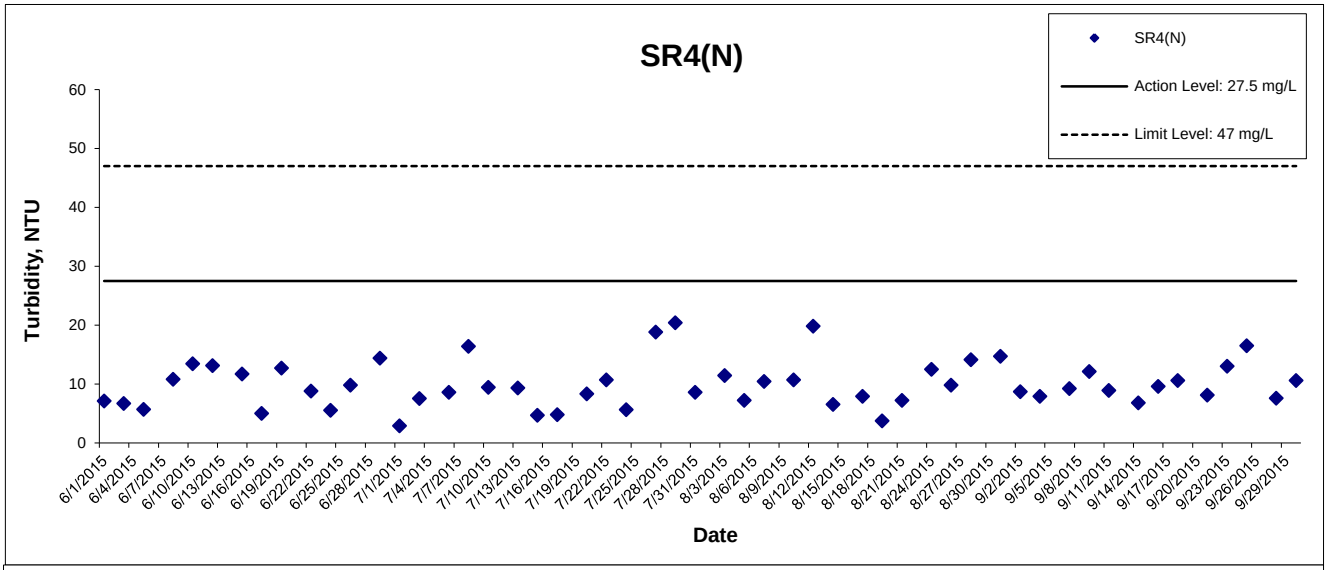
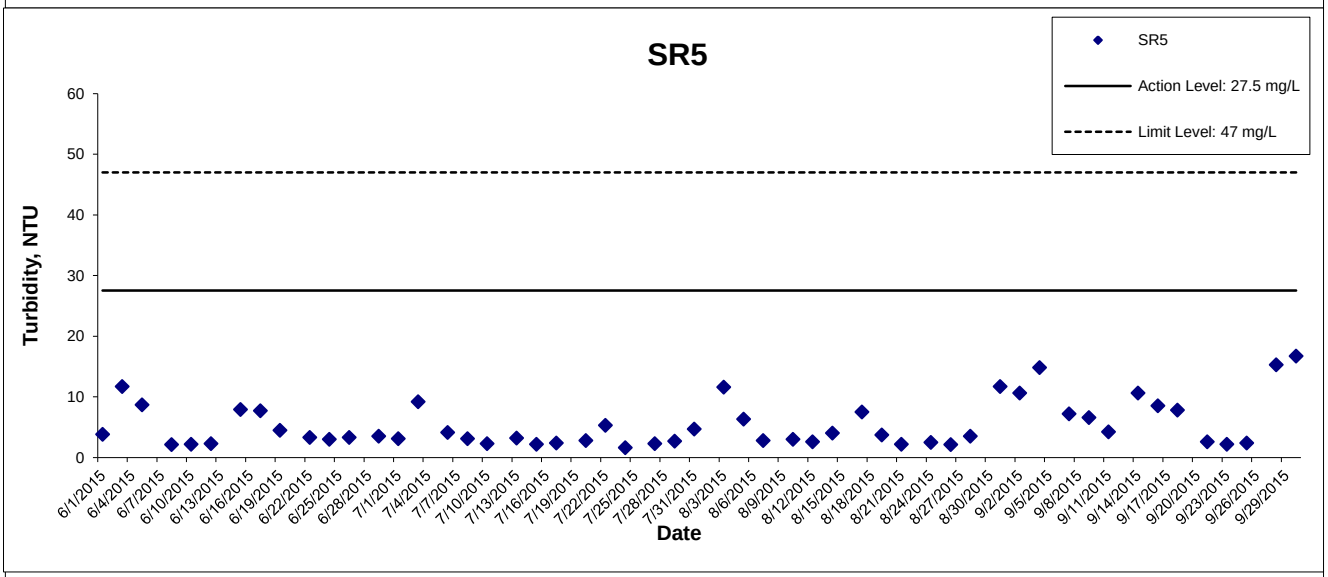


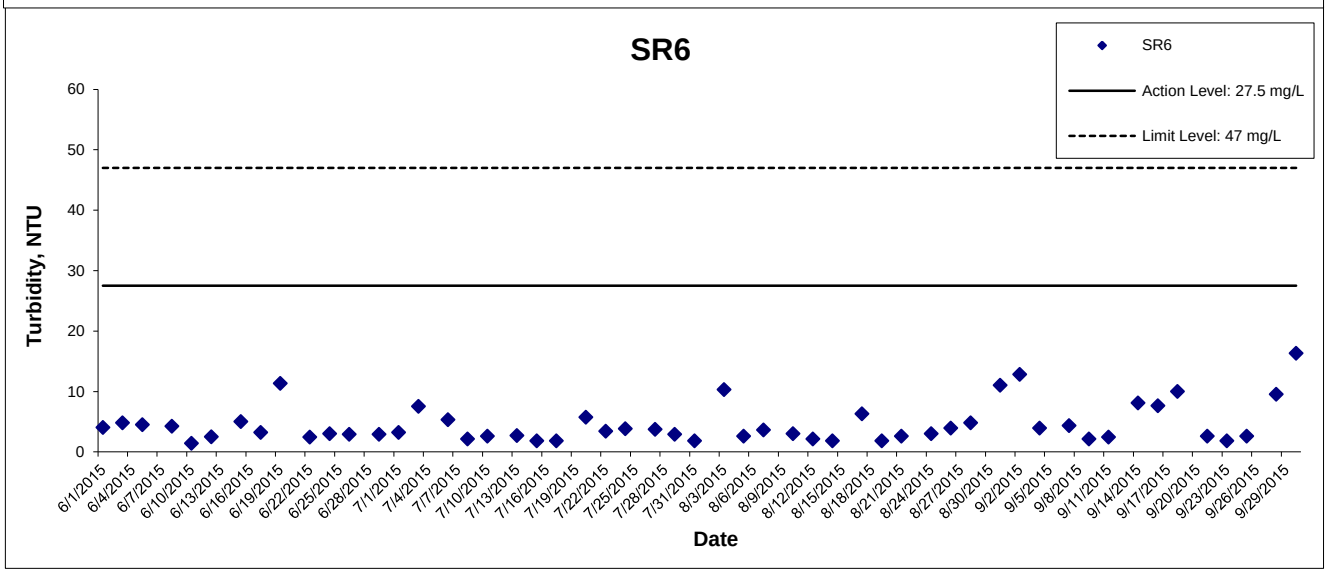




Turbidity at Mid-Flood Tide







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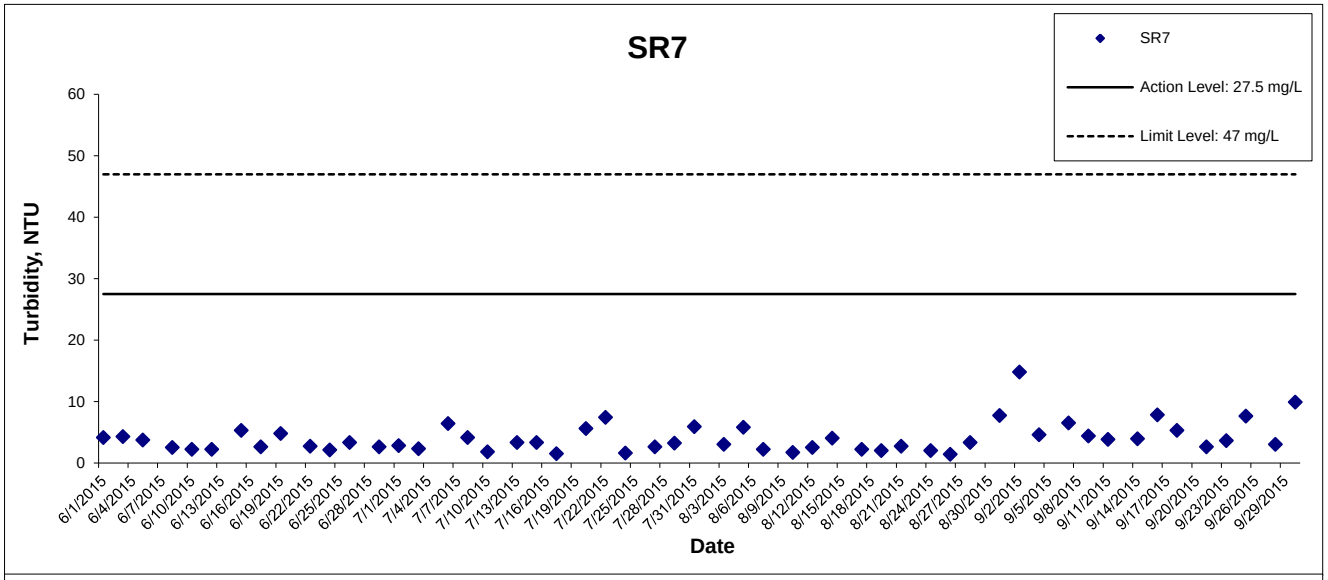
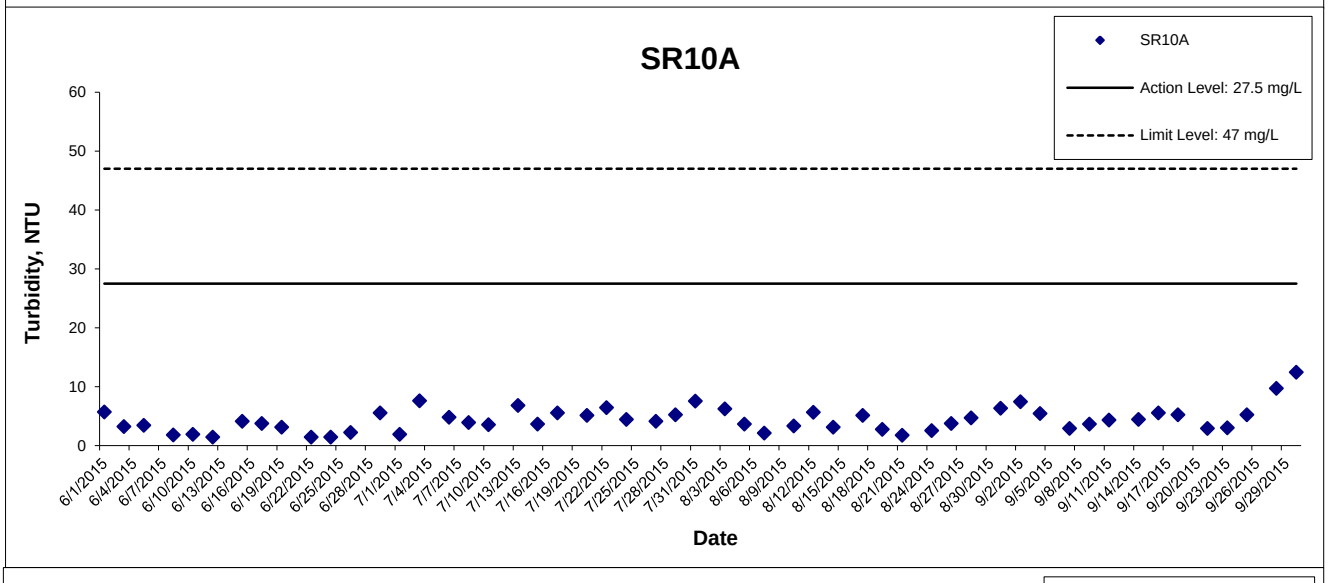
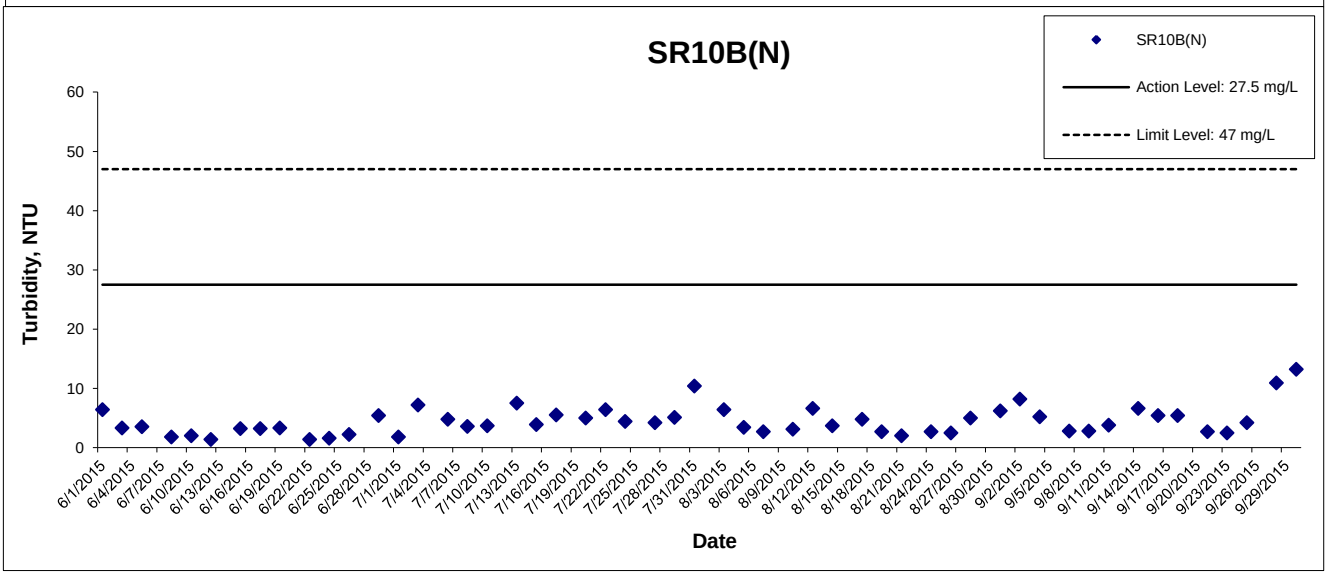
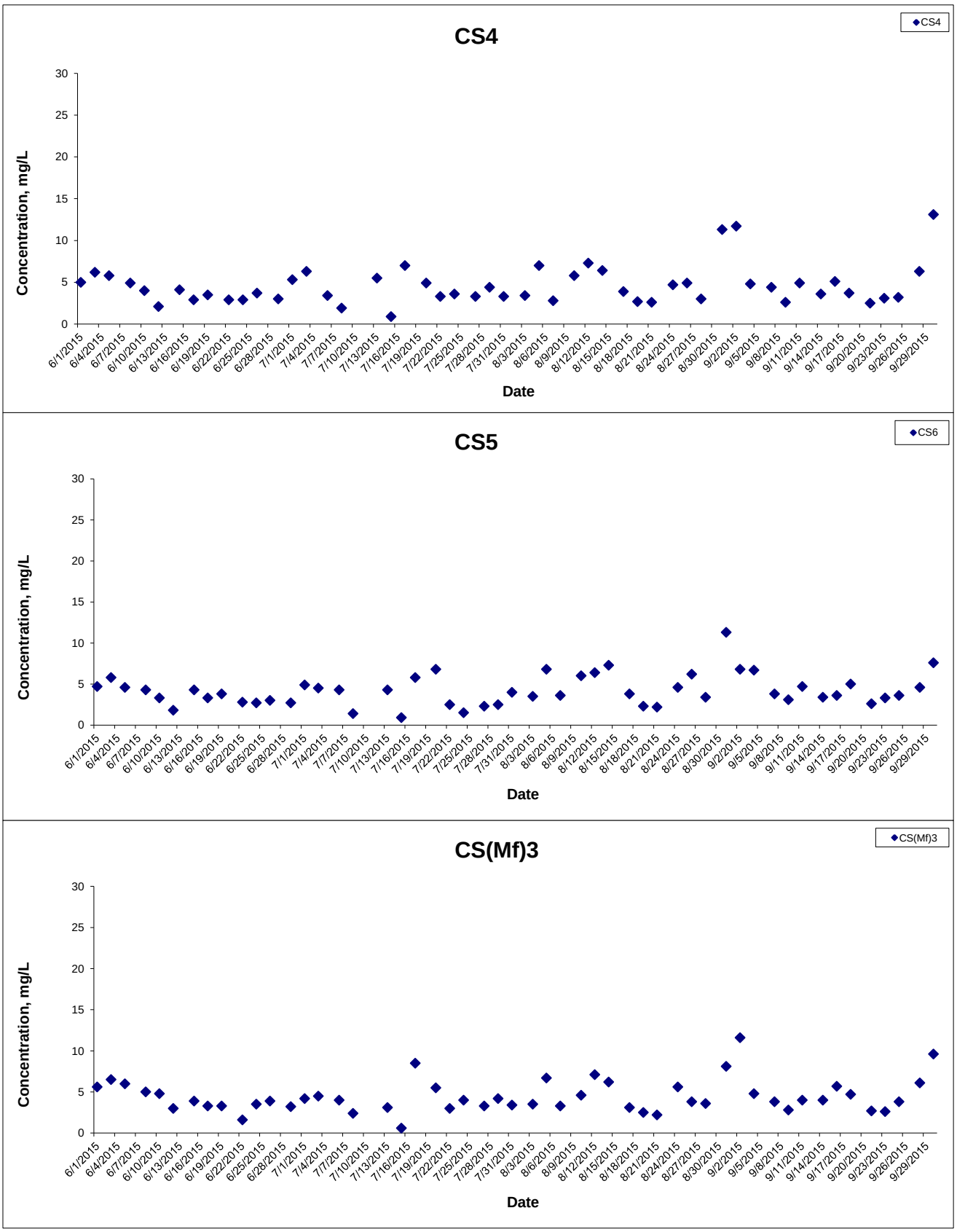


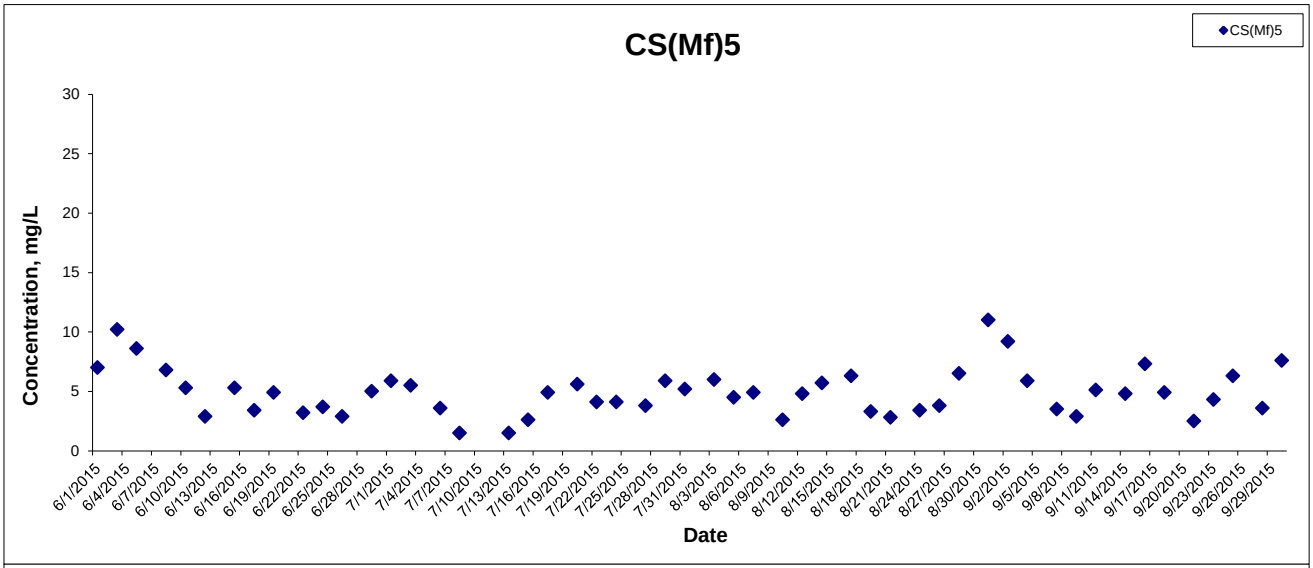


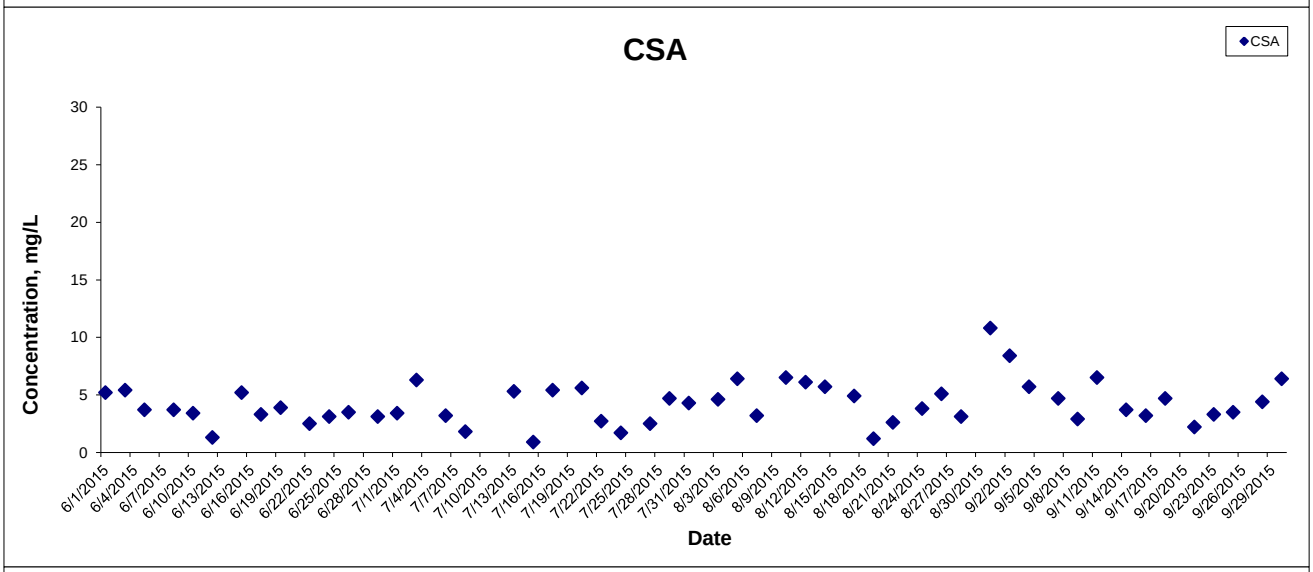


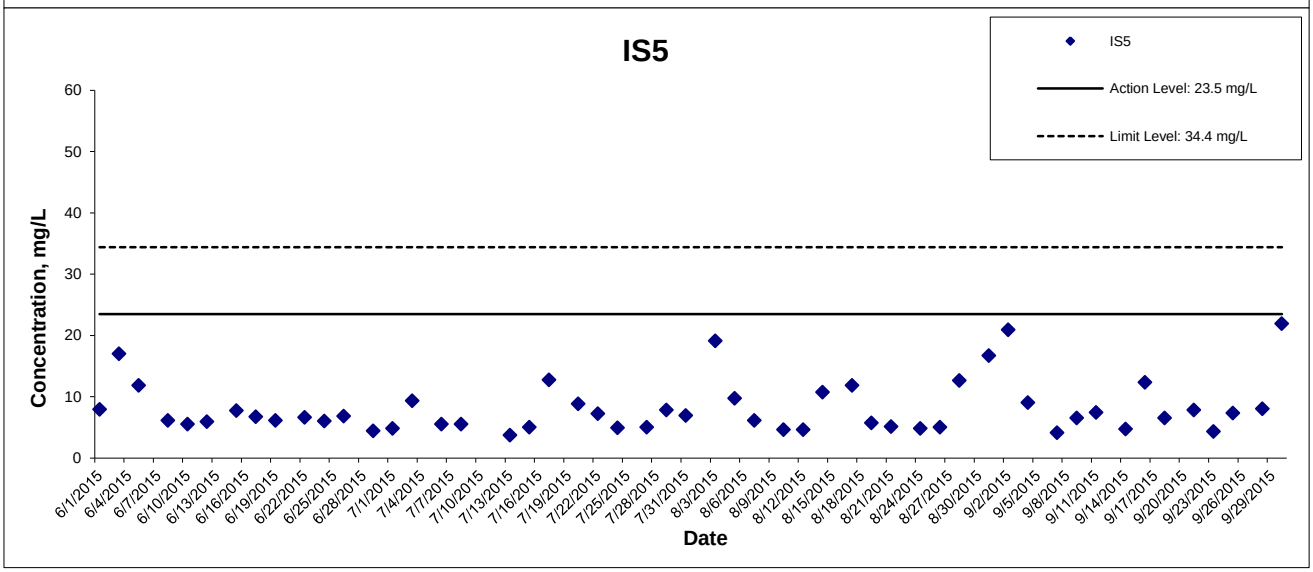
Suspended Solids at Mid-Ebb Tide



Suspended Solids at Mid-Ebb Tide







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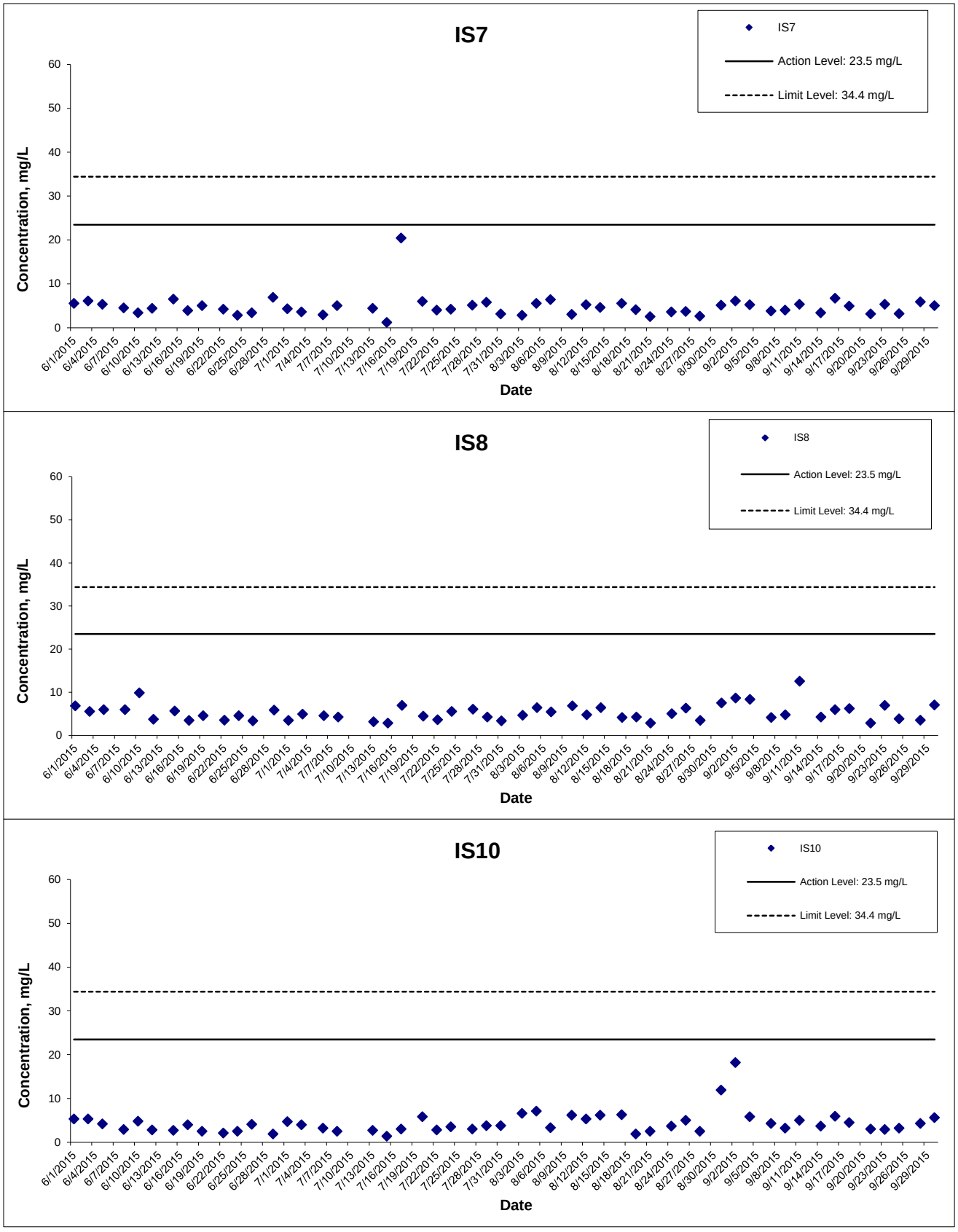

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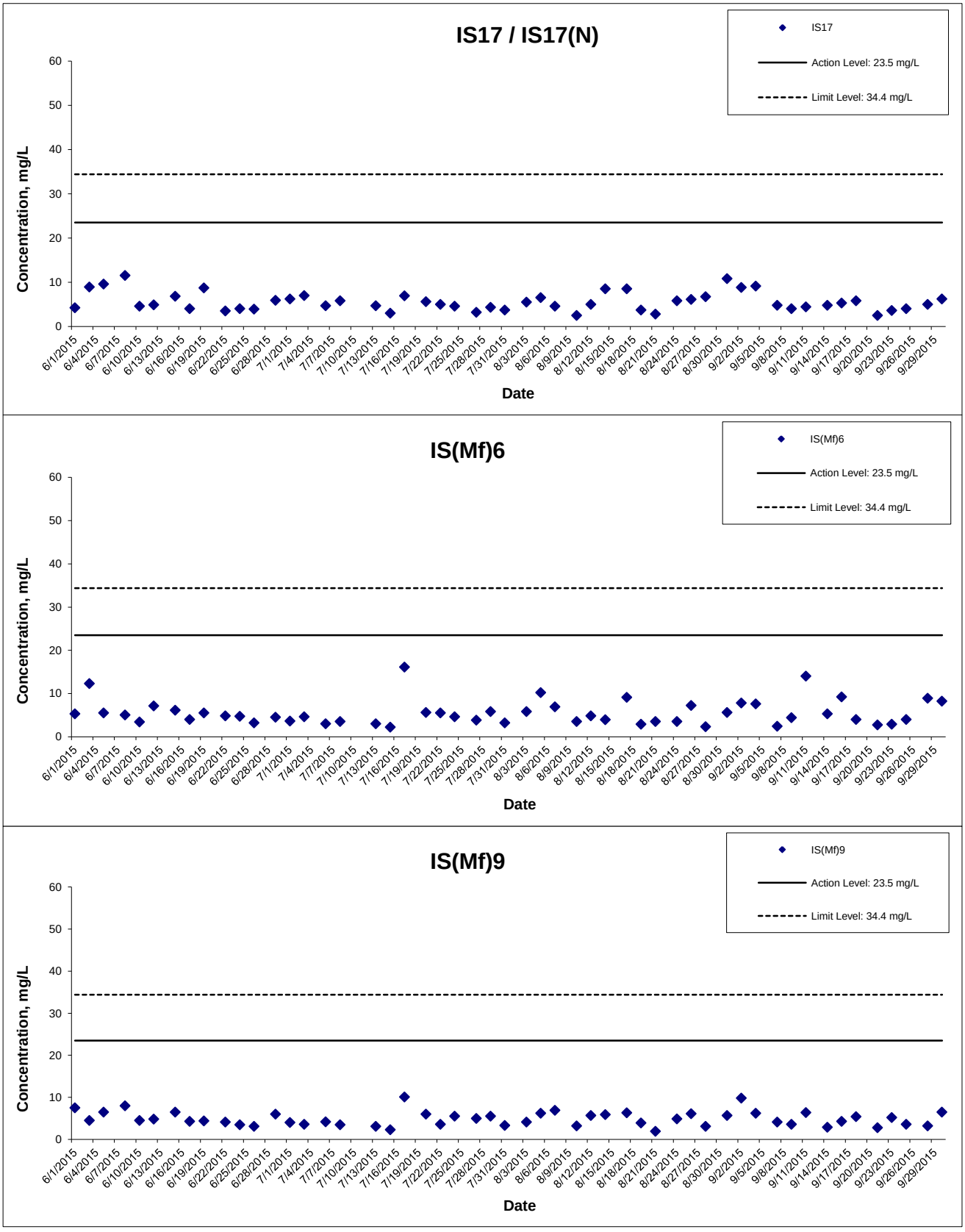

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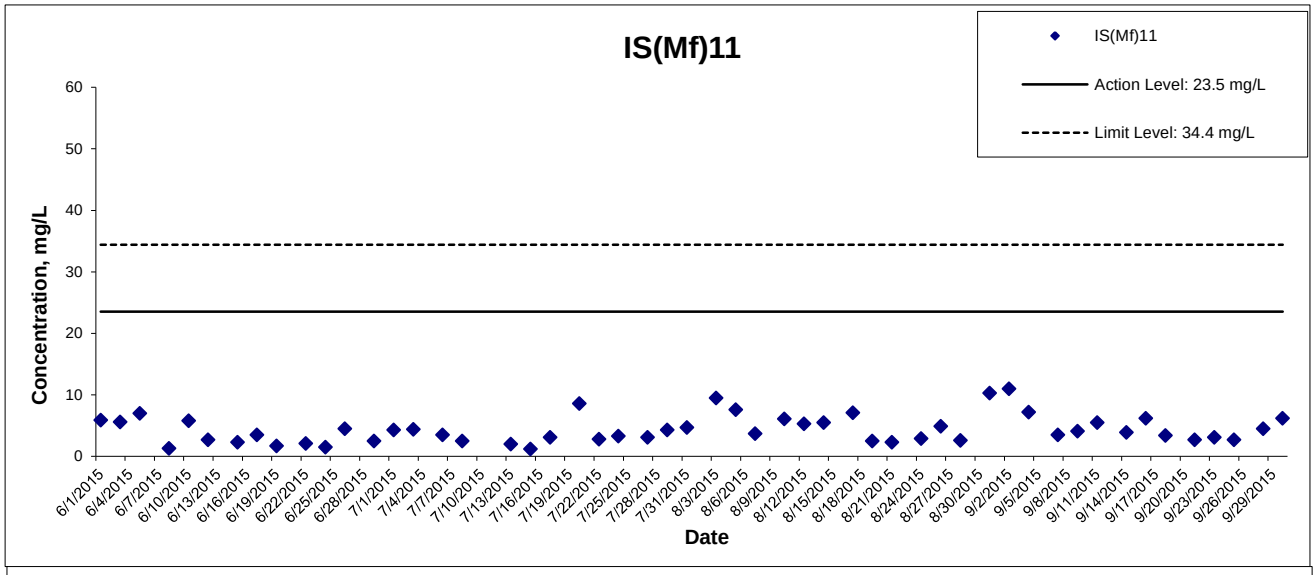
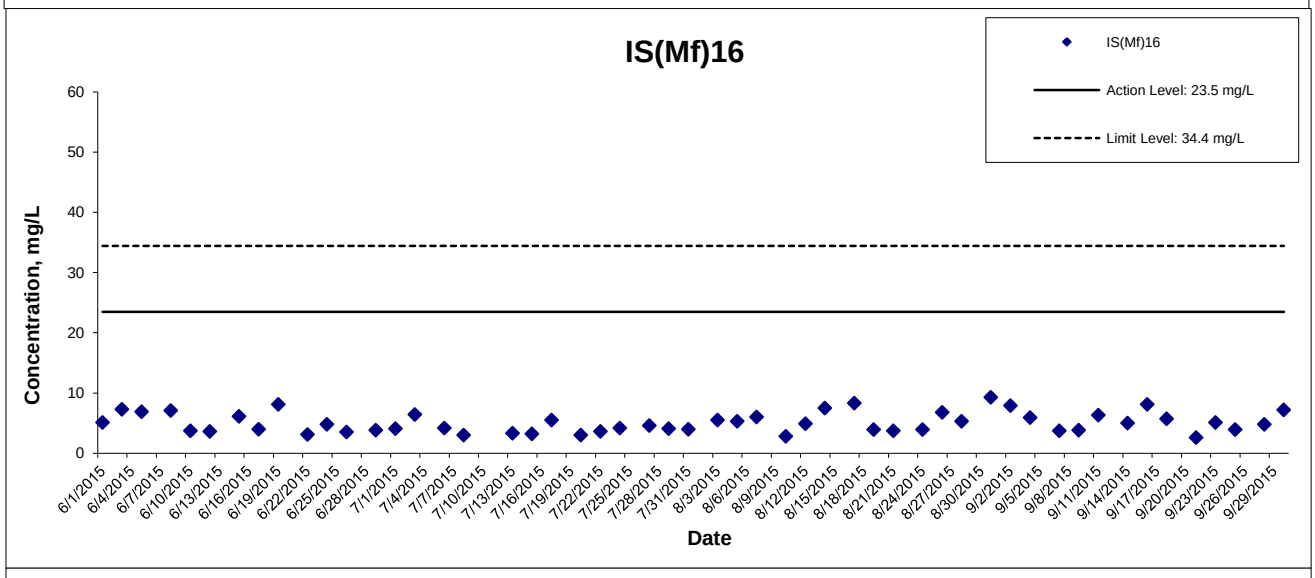
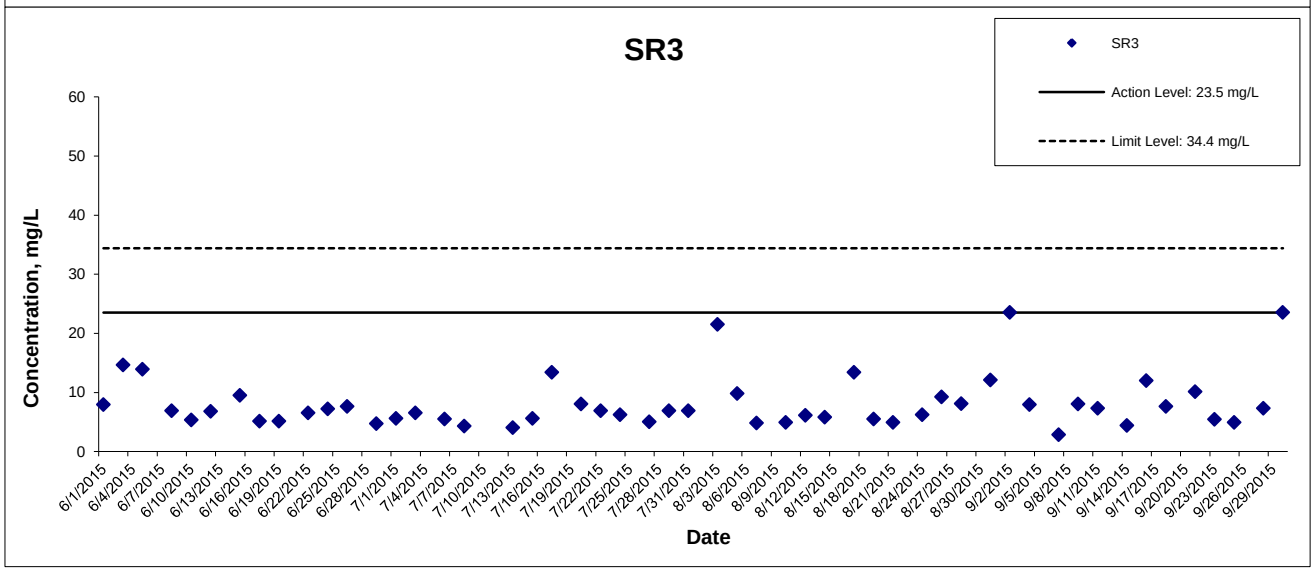
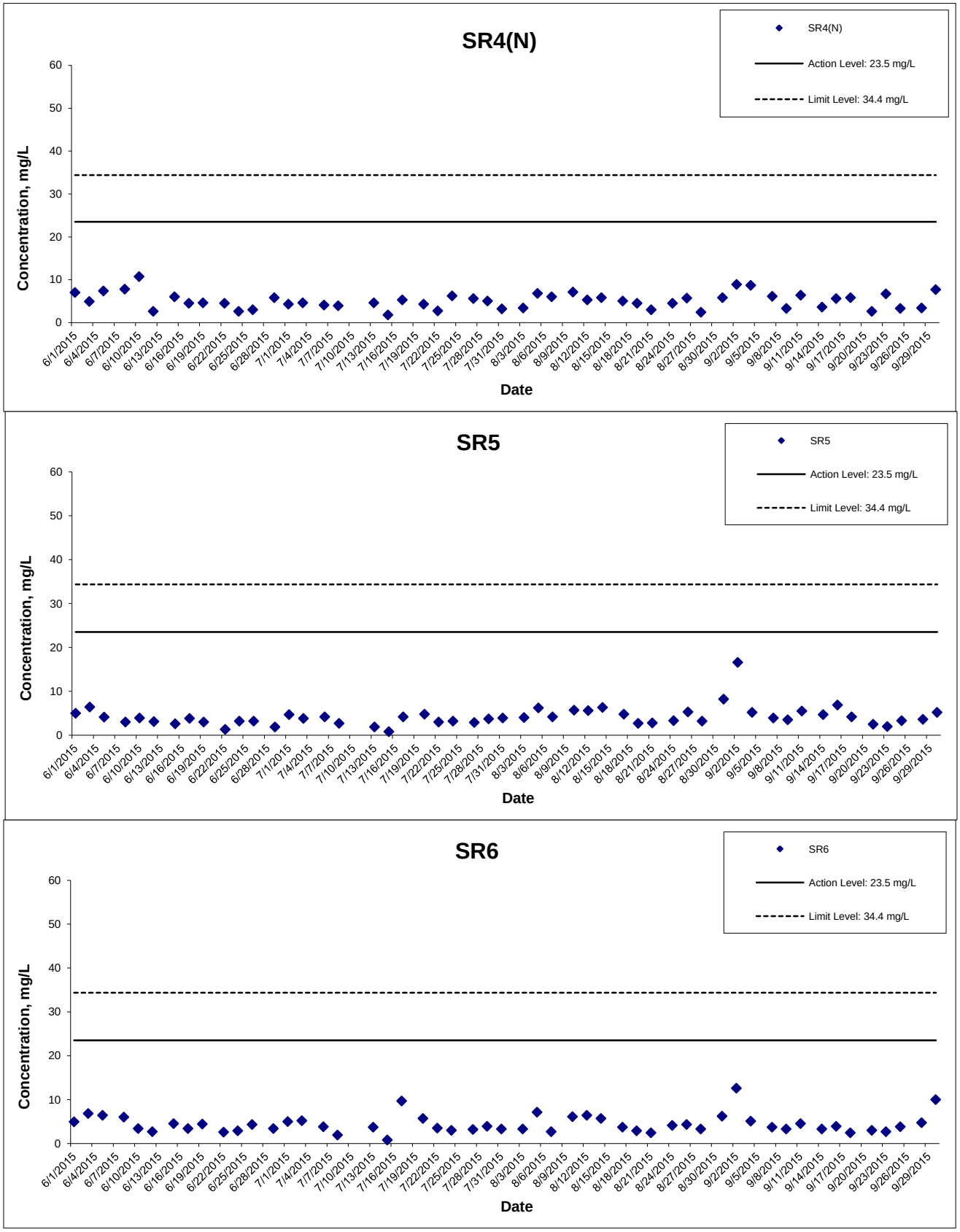






Suspended Solids at Mid-Ebb Tide



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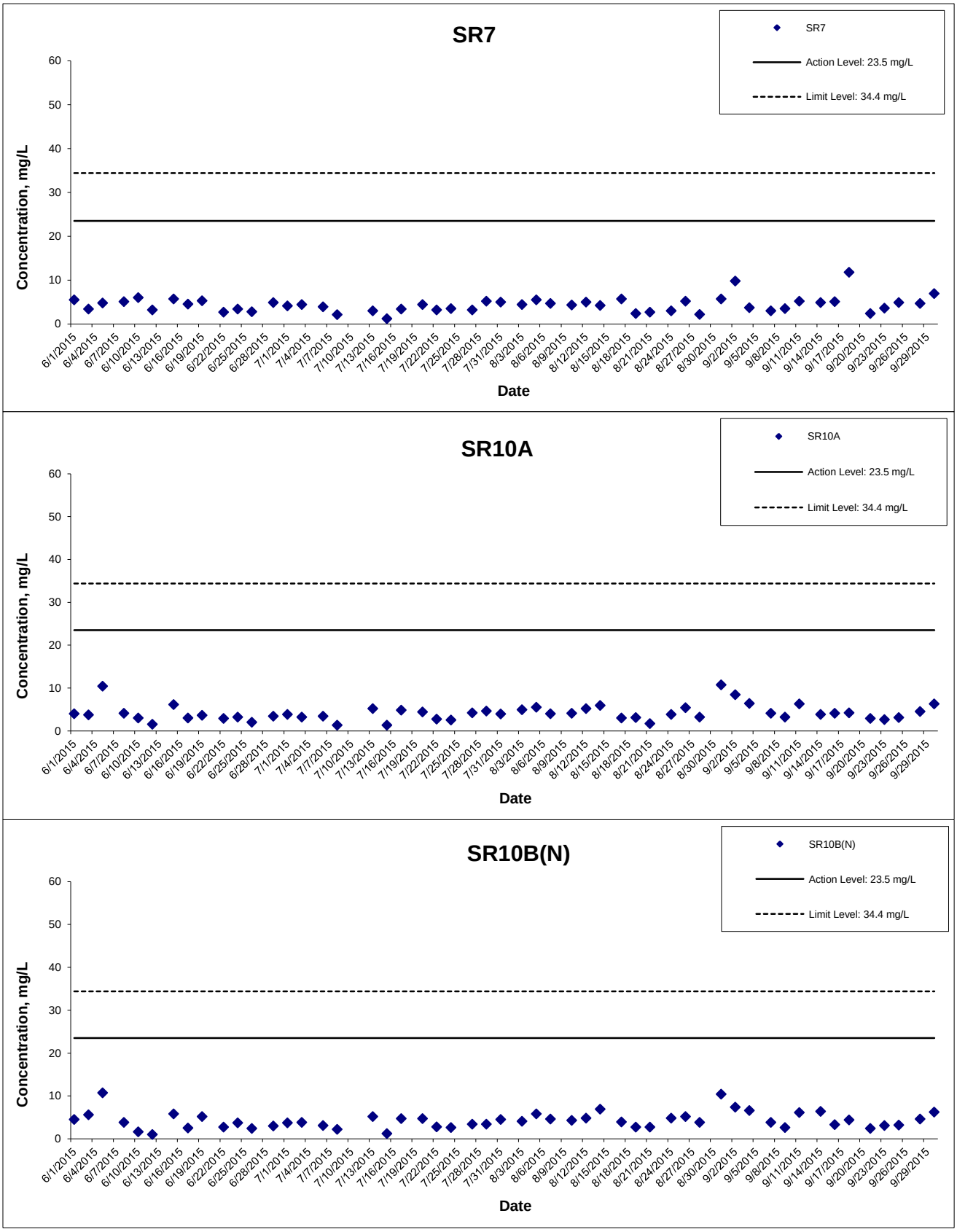

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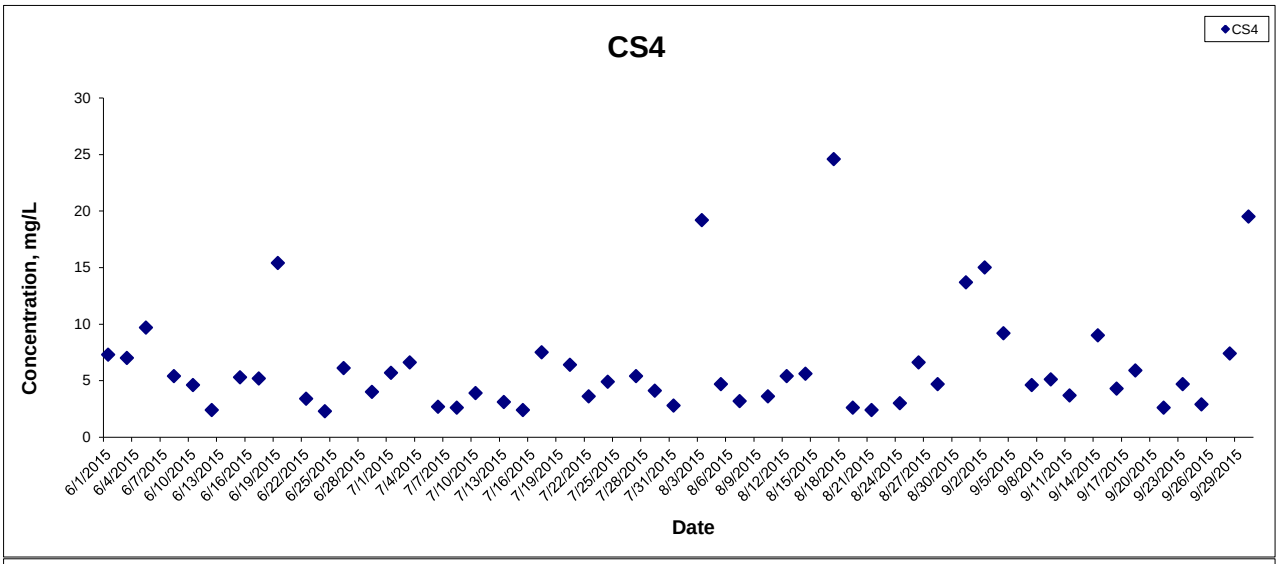
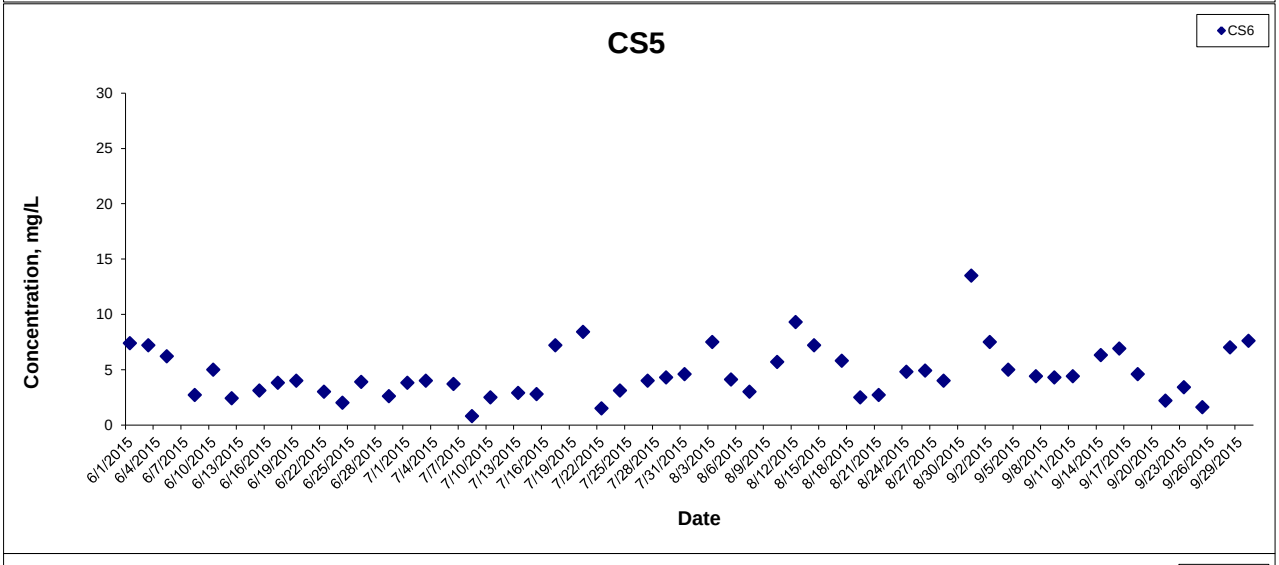
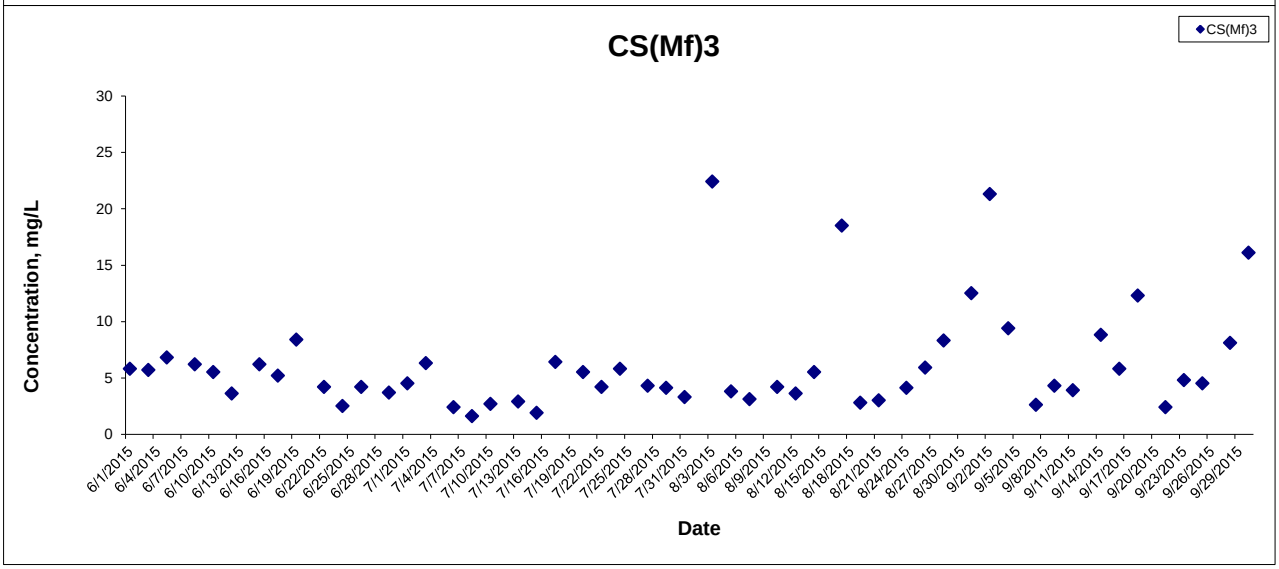
Suspended Solids at Mid-Flood Tide







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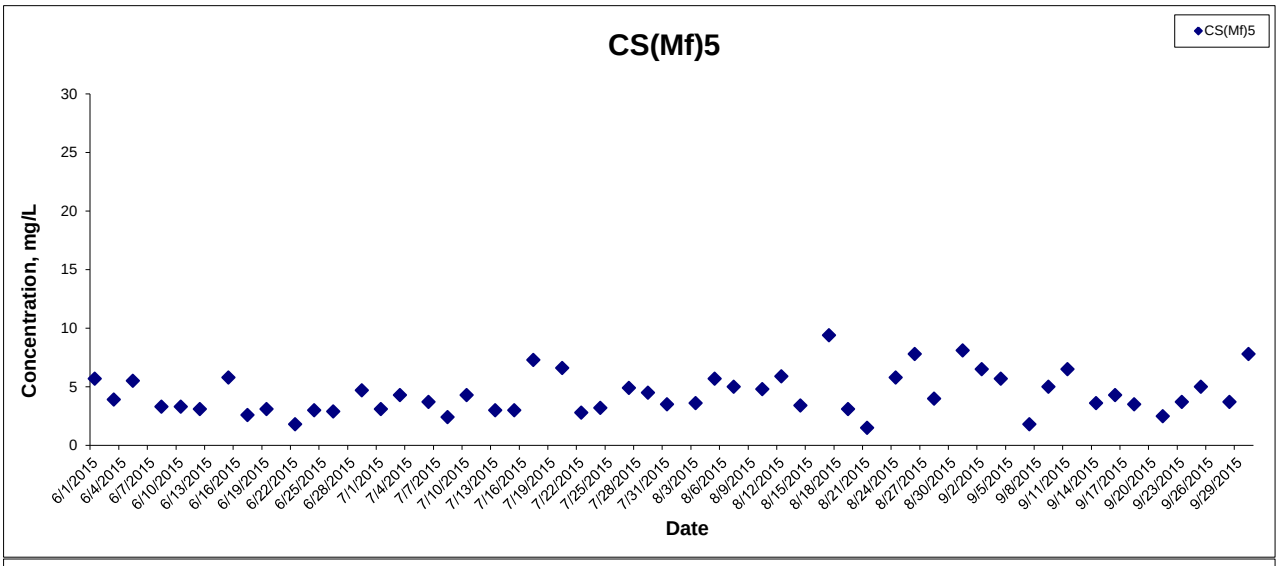
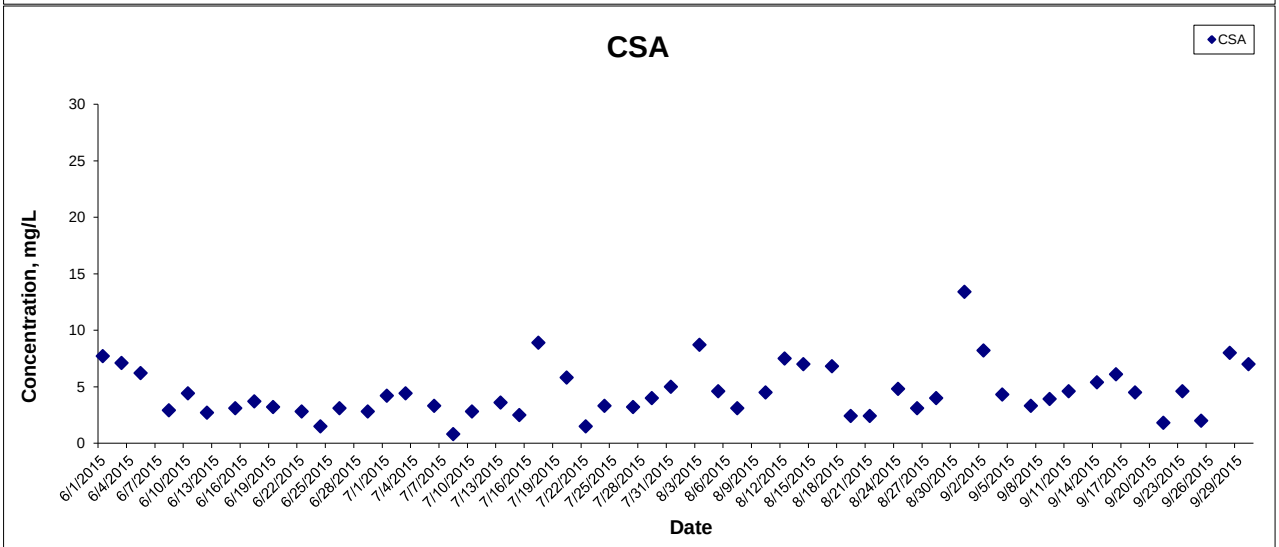
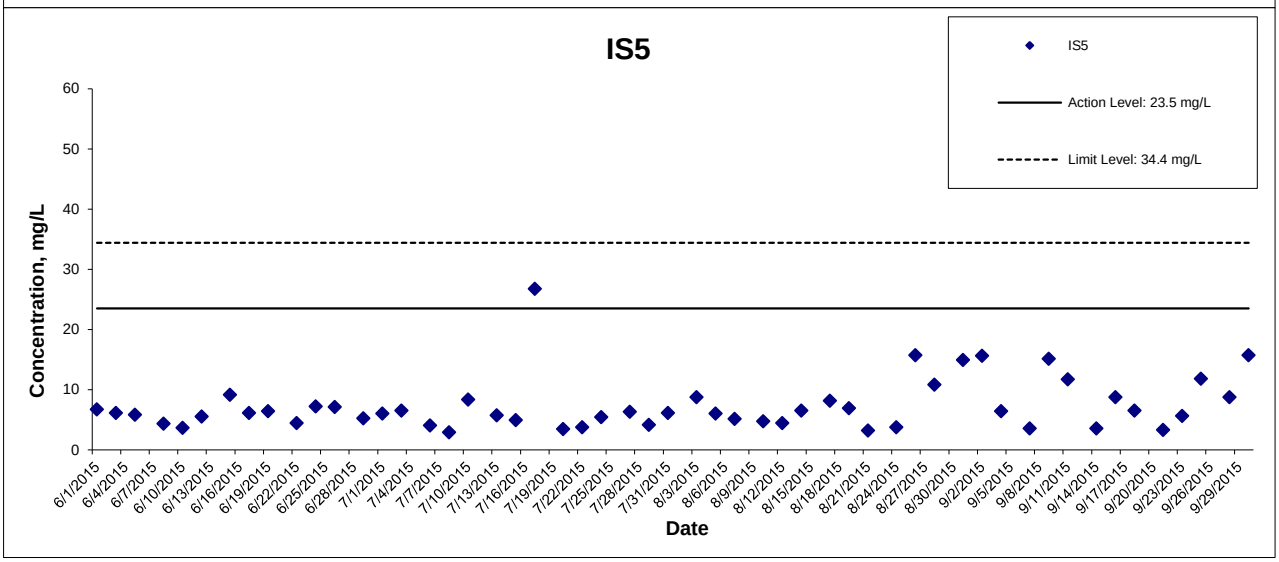
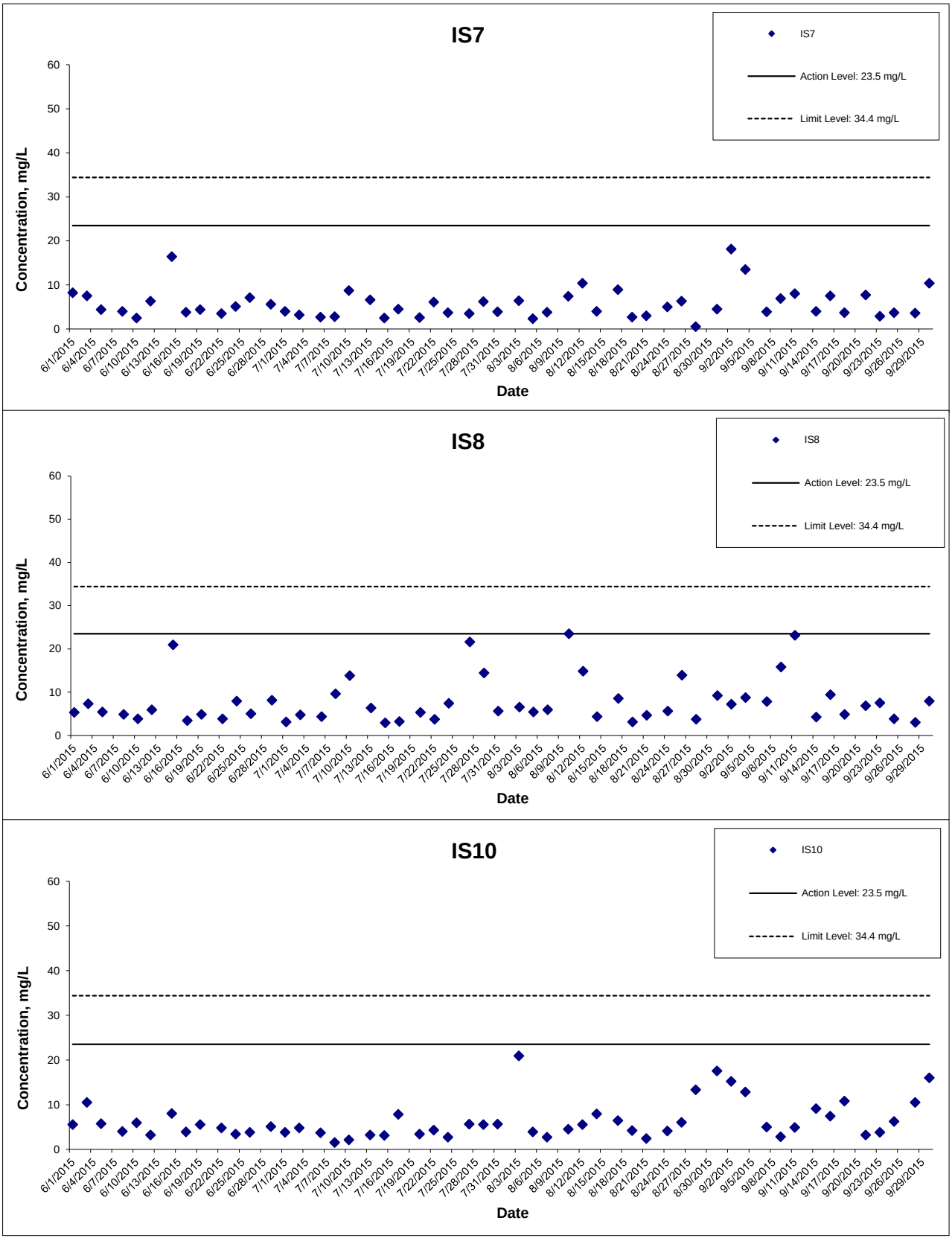






Suspended Solids at Mid-Flood Tide



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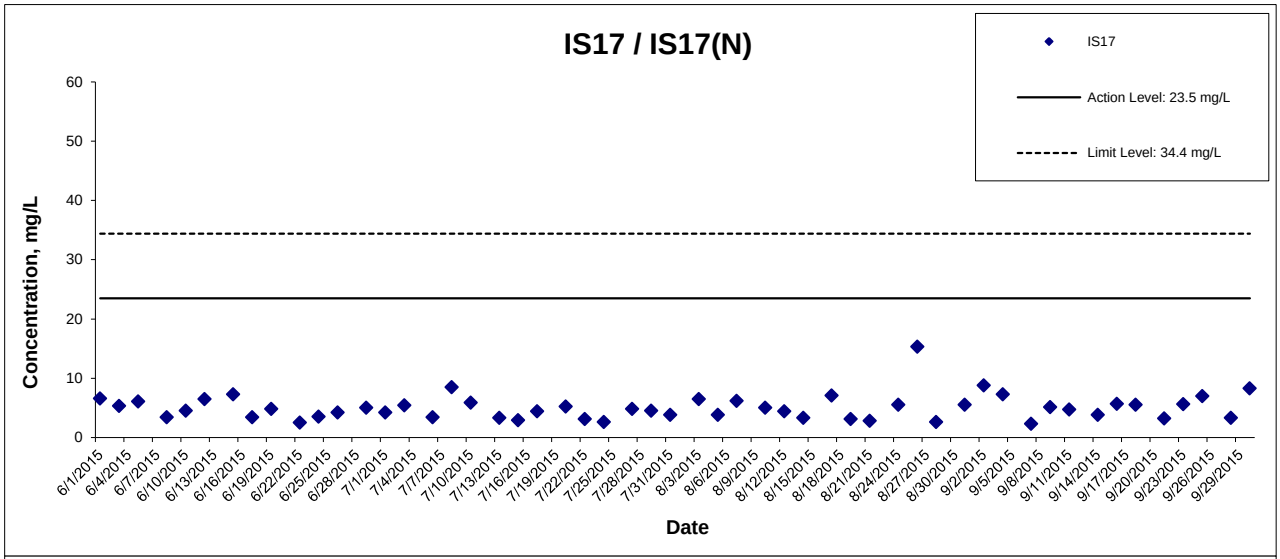

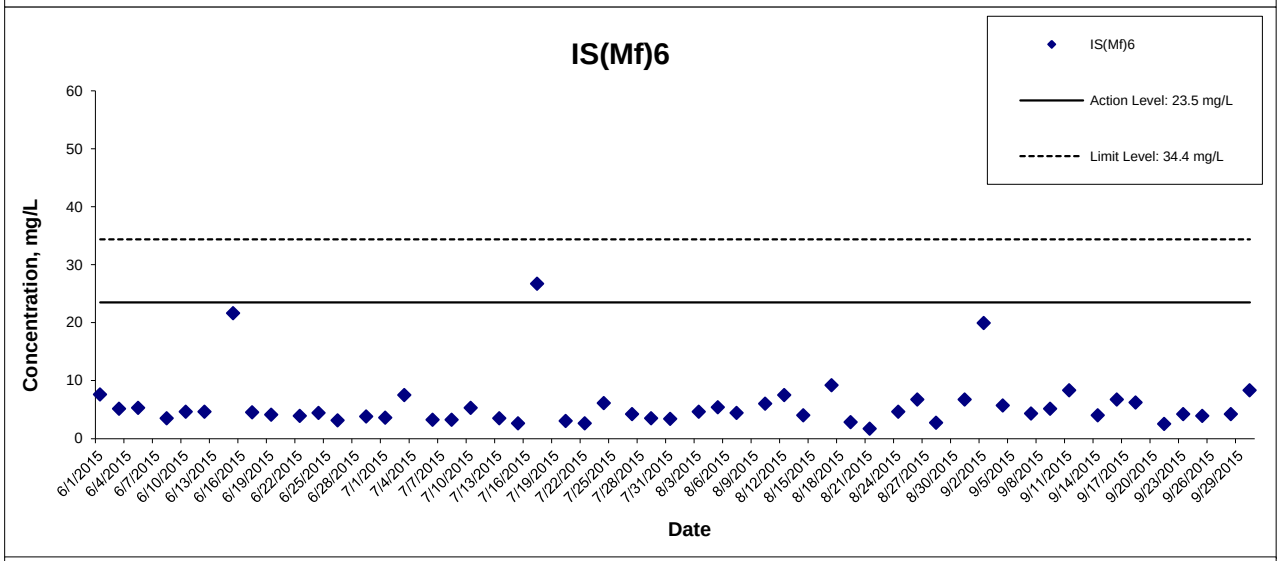

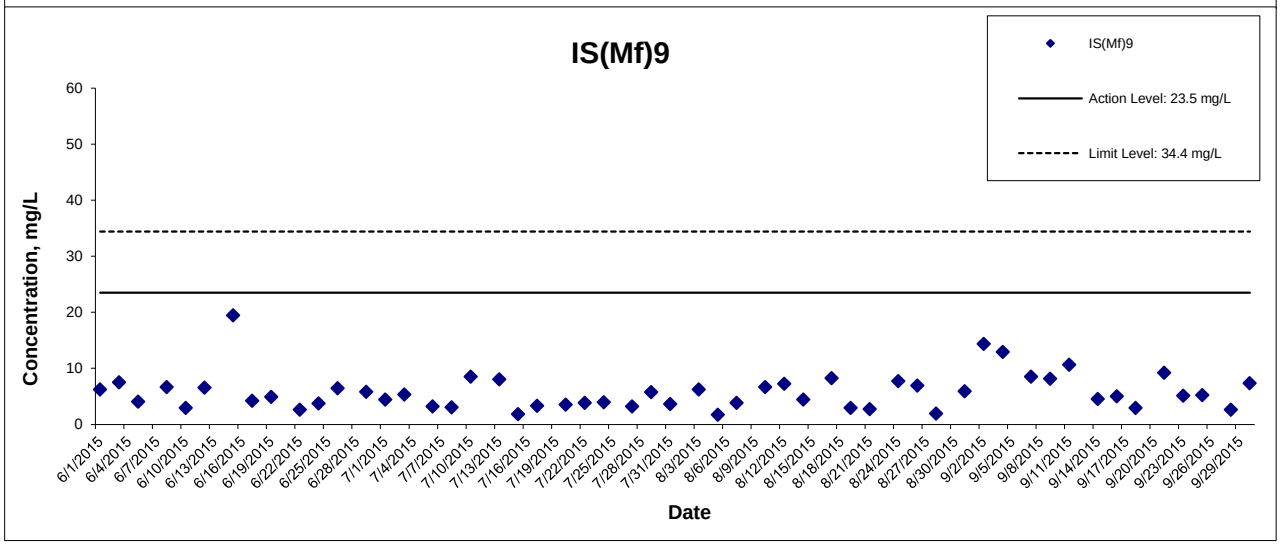

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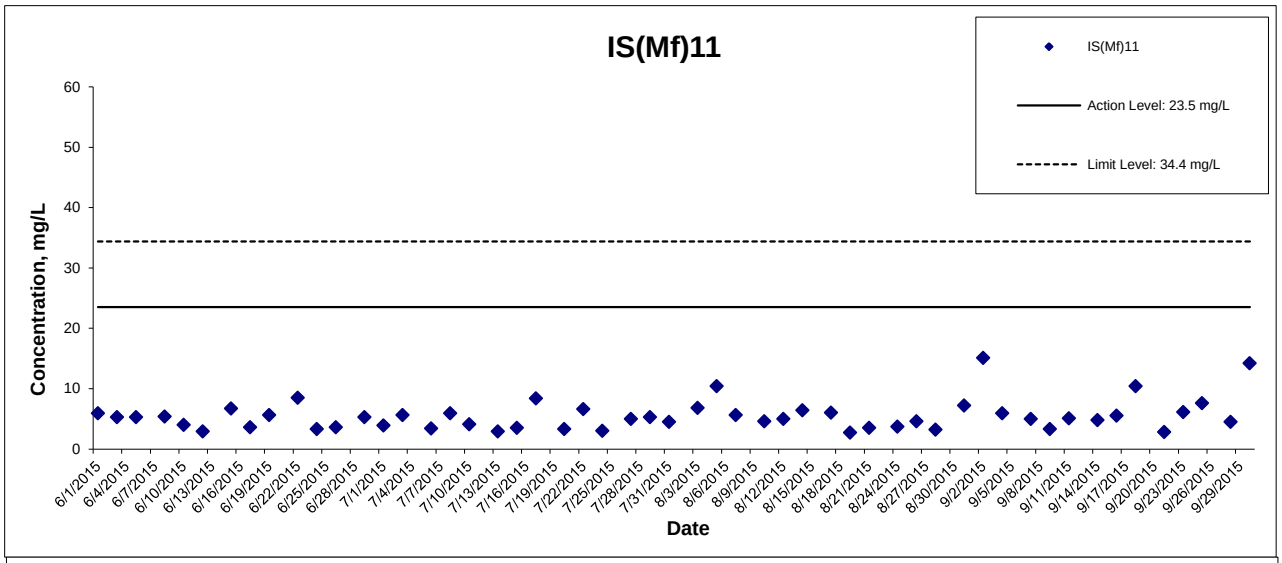

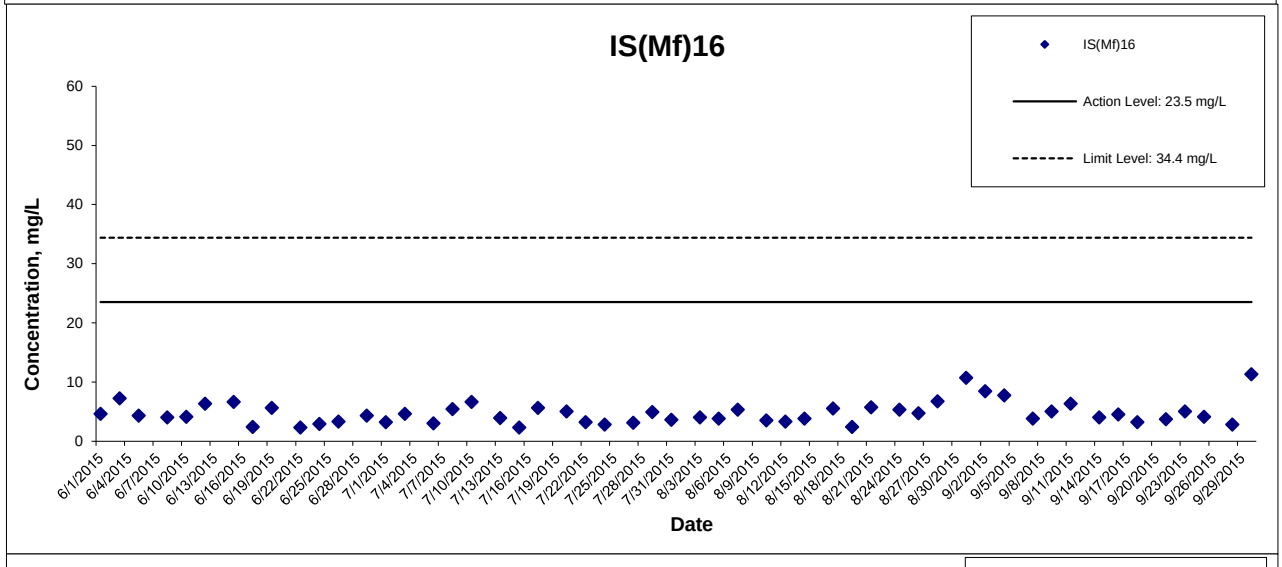

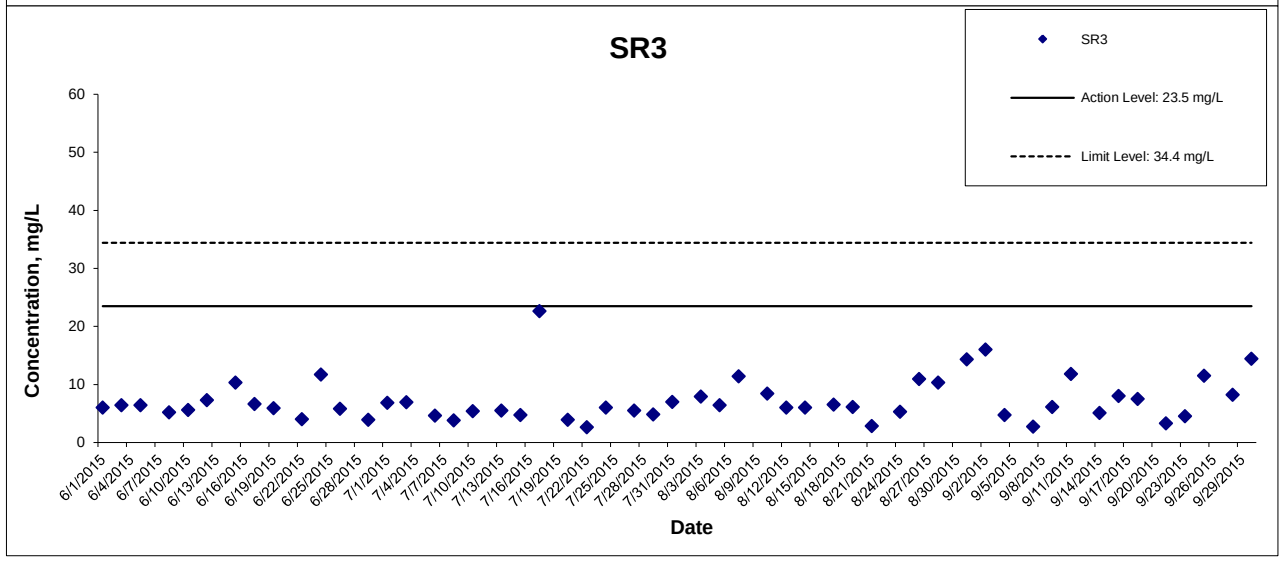

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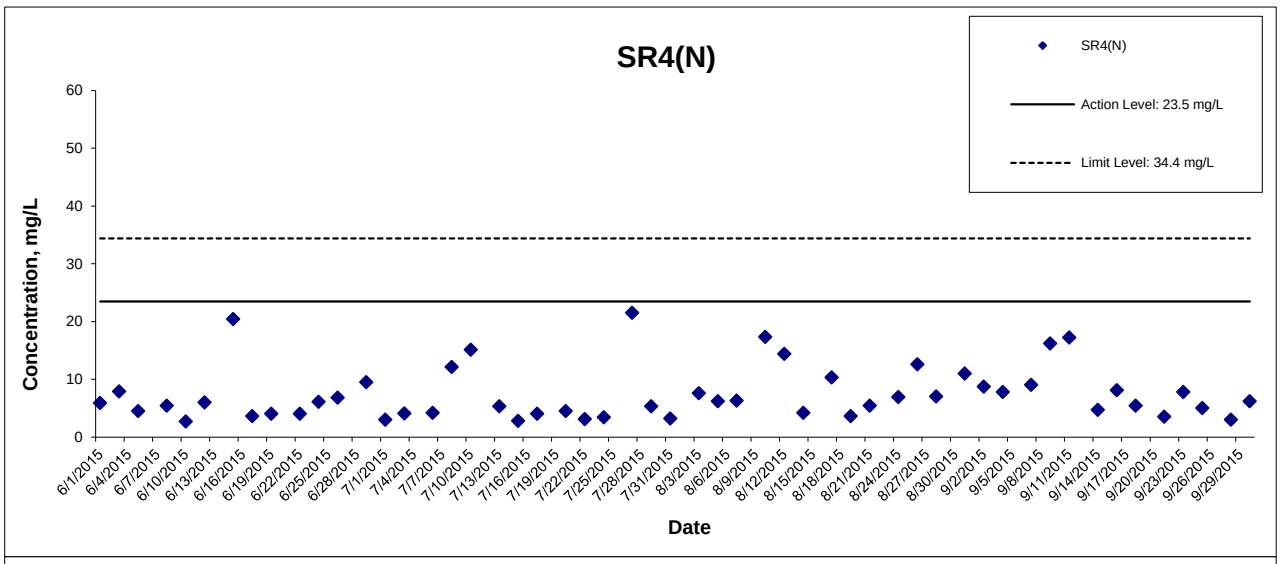

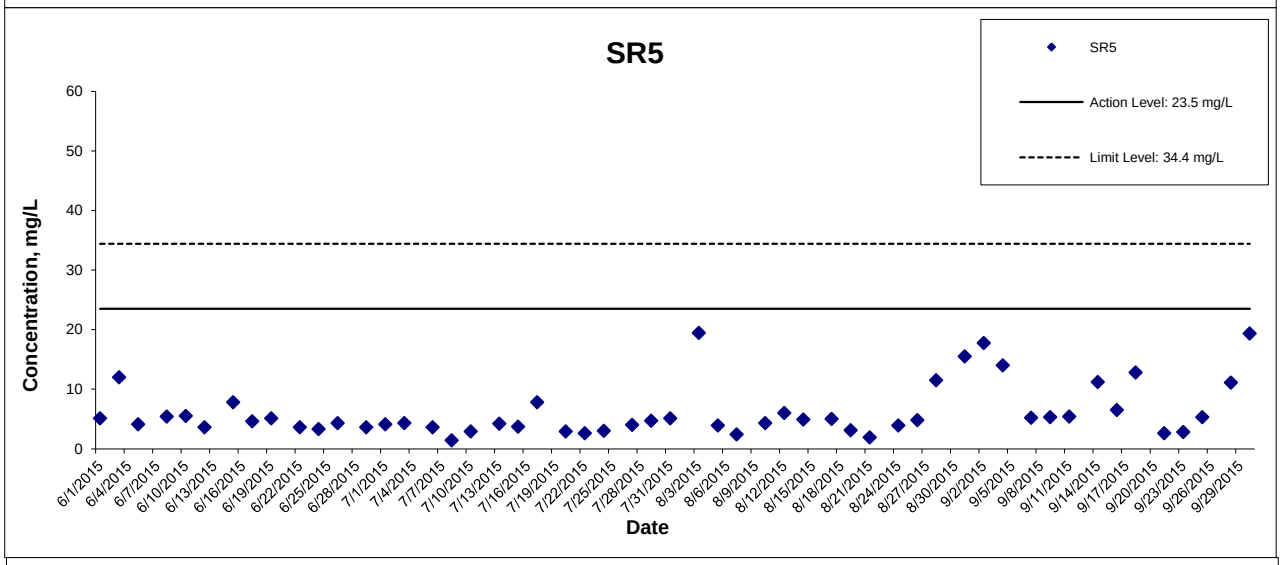

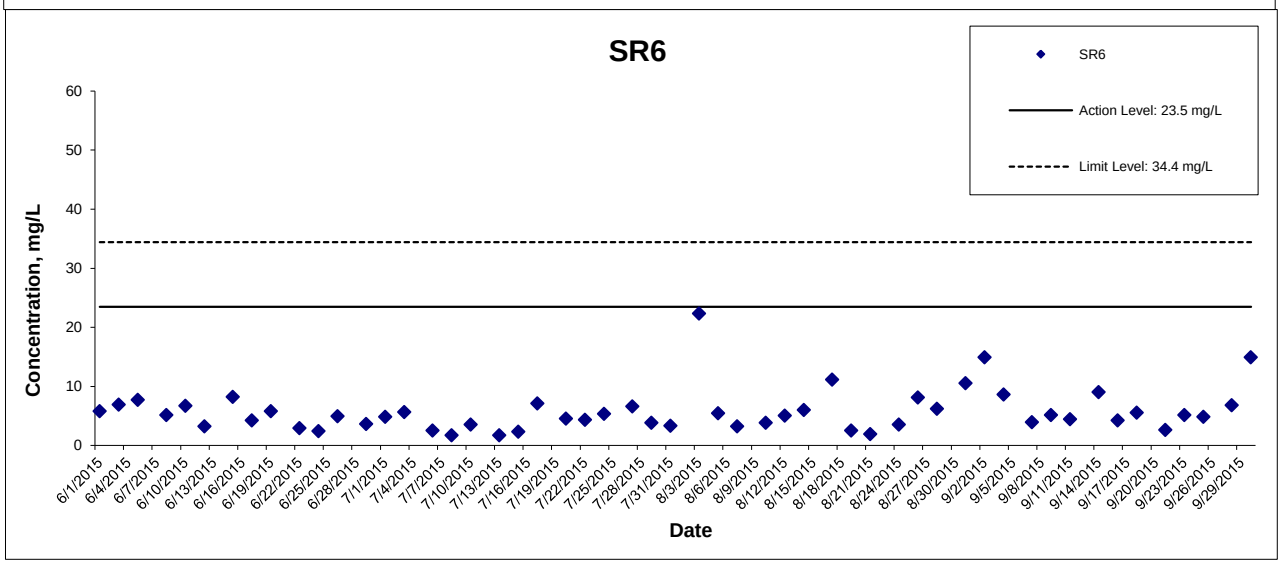

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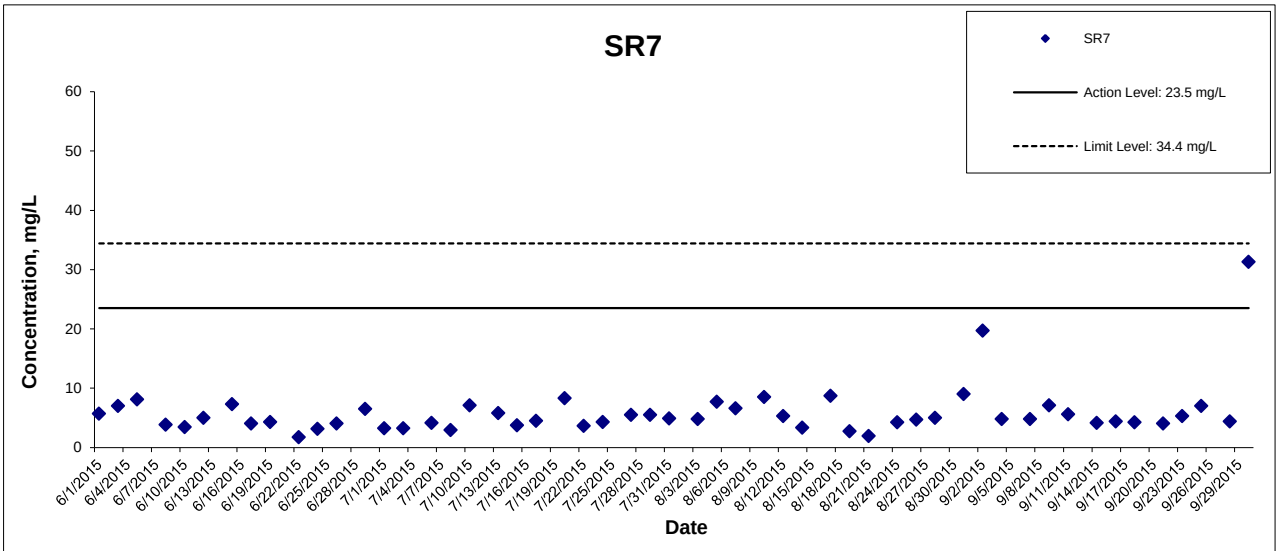

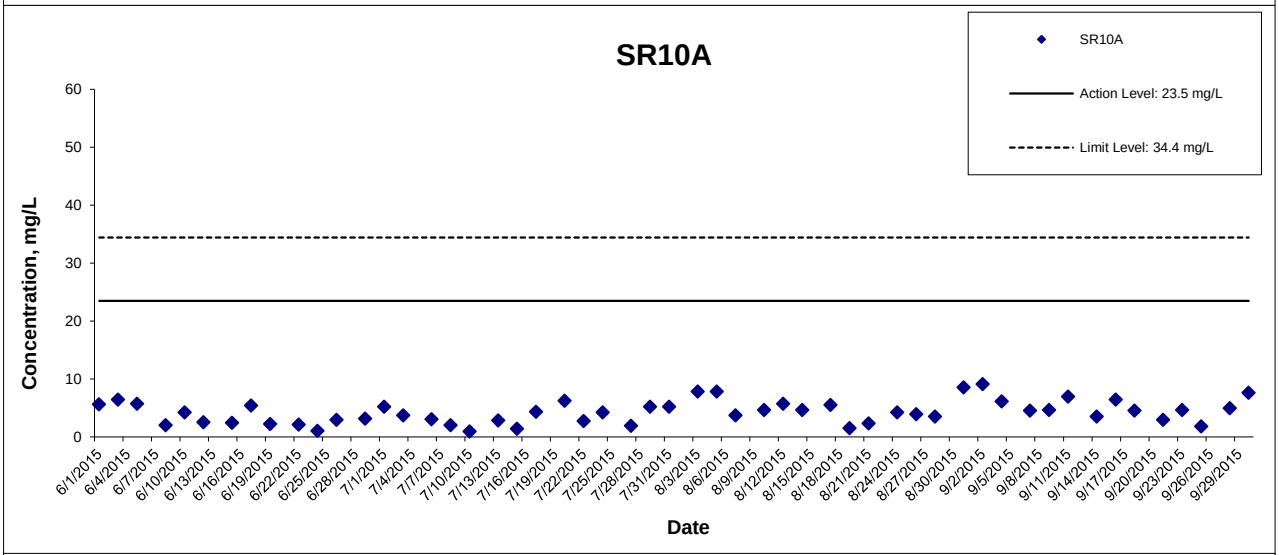

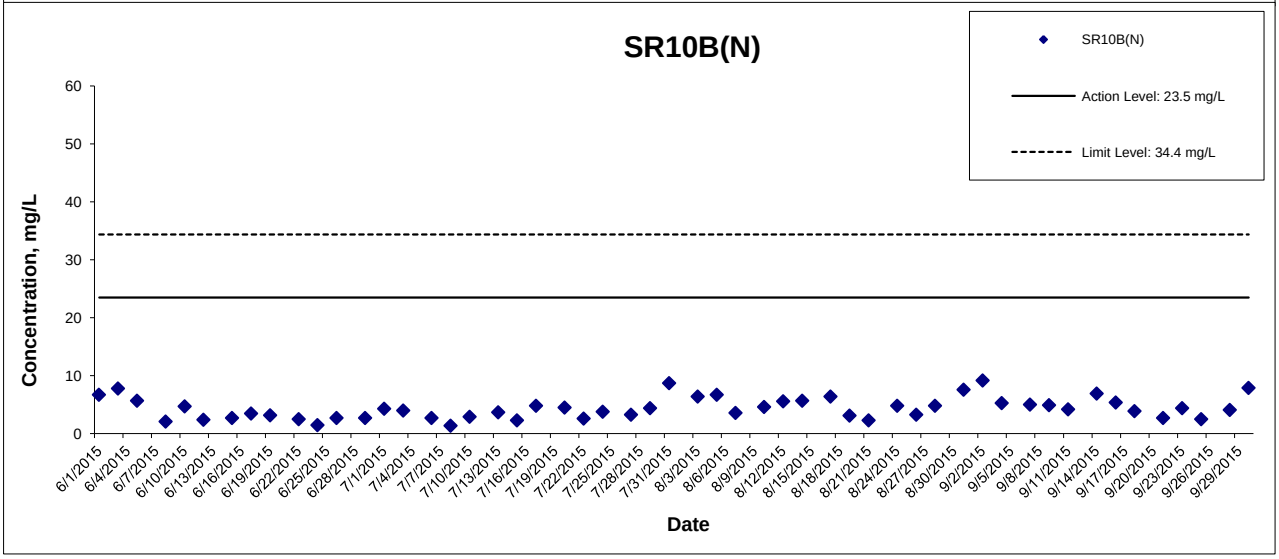

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Appendix K Impact Dolphin Monitoring Survey Sighting Summary

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	07-Sep-15	1142	13:04:11	1	NWL	1	257	On	Impact	824850.9	806452.7	Autumn	No
HKBCF	HY/2010/02	07-Sep-15	1143	13:20:30	4	NWL	1	77	On	Impact	825329.3	806443.3	Autumn	No

KEY:

Sighting Opp Opportunistic
On On effort
PSD Perpendicular Sighting Distance
Group Size Represents best estimate for group encountered
NEL North East Lantau
NWL North West Lantau
PS = Purse Seine trawler (active)
HT = Hang Trawler (not active but sorting fish and cleaning nets)

Annex I

AUGUST 2015
Photo Identification Information

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 129		2015/08/25	1138	NWL
HZMB 128		2015/01/03	1056	NWL
HZMB 127		2015/01/03	1056	NWL
HZMB 126		2015/02/23	1068	NWL
		2015/01/03	1054	NWL
HZMB 125		2014/10/13	1019	NWL
HZMB 124		2014/09/22	1005	NWL
HZMB 123		2014/08/25	998	NWL
HZMB 122		2014/08/04	989	NWL
HZMB 121		2014/07/14	968	NWL
HZMB 120		2014/05/31	951	NWL
HZMB 119		2014/04/19	940	NWL
HZMB 118		2014/01/06	890	NWL
HZMB 117		2014/06/17	964	NWL
		2014/01/06	888	NWL
HZMB 116		2014/08/25	999	NWL
HZMB 115		2014/07/14	972	NWL
		2014/07/14	971	NWL
		2013/12/26	879	NWL
		2013/12/26	879	NWL
HZMB 114		2013/10/24	827	NWL
HZMB 113		2013/10/24	827	NWL
HZMB 112		2013/10/15	815	NWL
HZMB 111		2013/10/15	815	NWL
HZMB 110		2013/10/15	812	NWL
HZMB 108		2015/06/11	1118	NWL
		2013/08/30	780	NEL
HZMB 107		2015/07/28	1126	NWL
		2014/10/13	1019	NWL
		2014/05/31	951	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	2015/02/23	1077	NWL
		2014/12/18	1044	NWL
		2014/08/04	992	NWL
		2014/01/06	888	NWL
		2013/11/02	849	NWL
		2013/11/02	845	NWL
		2013/10/24	831	NWL
		2013/07/08	711	NWL
		2013/05/24	659	NWL
HZMB 097		2013/05/09	647	NWL
HZMB 096		2013/04/01	621	NWL
HZMB 095		2013/08/30	780	NEL
		2013/06/25	697	NWL
		2013/06/13	682	NWL
		2013/04/01	621	NWL
HZMB 094		2014/10/13	1019	NWL
		2014/05/31	954	NWL
		2014/02/17	910	NWL
		2013/06/26	703	NWL
		2013/06/25	698	NWL
		2013/03/18	601	NWL
HZMB 093		2013/05/24	657	NWL
		2013/02/21	587	NWL
HZMB 092		2015/04/20	1097	NWL
		2013/02/21	589	NWL
		2013/02/15	581	NWL
HZMB 091		2013/02/15	579	NWL
HZMB 090		2013/06/25	697	NWL
		2013/06/13	682	NWL
		2013/02/15	579	NWL
HZMB 089		2013/02/15	579	NWL
HZMB 088		2013/02/15	579	NWL
HZMB 087		2013/02/15	579	NWL
HZMB 086	NL242	2015/03/19	1086	NWL
		2013/05/09	642	NWL
		2013/02/15	579	NWL
		2011/10/10	Baseline	NWL
HZMB 085		2014/10/13	1019	NWL
		2014/05/31	954	NWL

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 084		2013/06/26	703	NWL
		2013/02/15	579	NWL
		2013/02/14	575	NWL
HZMB 083	NL136	2015/05/11	1104	NWL
		2013/12/19	863	NWL
		2013/03/28	607	NWL
		2013/02/15	579	NWL
		2013/01/28	568	NWL
		2013/01/28	564	NWL
		2012/04/19	267	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		2015/06/04	1116	NWL
		2013/08/21	774	NWL
		2013/07/08	711	NWL
		2012/10/24	476	NWL
HZMB 068		2014/10/20	1025	NWL
		2013/11/01	839	NWL
		2012/10/24	476	NWL
HZMB 067		2012/10/24	475	NWL
HZMB 066	NL93	2013/01/28	559	NWL
		2012/12/11	537	NWL
		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 064		2015/03/19	1086	NWL
		2014/06/17	964	NWL
		2013/05/09	647	NWL
		2013/01/28	561	NWL
		2012/10/24	475	NWL
		2012/10/12	466	NWL
HZMB 063		2013/05/09	647	NWL
		2012/10/12	466	NWL
HZMB 062		2012/12/06	525	NEL
		2012/10/11	457	NWL
HZMB 060		2012/09/18	447	NWL
HZMB 059		2013/02/21	591	NWL
		2012/09/18	445	NWL
HZMB 057		2012/09/18	440	NWL
HZMB 056		2012/09/18	442	NWL
		2012/09/05	433	NEL
HZMB 055		2012/09/04	425	NWL

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 054	CH34	2015/04/20	1097	NWL
		2015/01/15	1062	NWL
		2014/05/31	953	NWL
		2014/01/06	888	NWL
		2013/11/07	854	NWL
		2013/11/02	845	NWL
		2013/10/24	831	NWL
		2013/08/30	780	NEL
		2013/07/08	711	NWL
		2013/09/18	448	NWL
		2012/09/05	432	NEL
		2011/11/07	Baseline	NWL
		2011/11/05	Baseline	NWL
		2011/11/02	Baseline	NWL
		2011/11/01	Baseline	NEL
		2011/11/01	Baseline	NEL
		2011/10/28	Baseline	NWL
		2011/10/06	Baseline	NWL
HZMB 053		2012/09/04	425	NWL
HZMB 052		2012/09/04	423	NWL
HZMB 051	NL213	2015/05/11	1104	NWL
		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		2015/04/28	1100	NWL
		2012/09/03	412	NWL

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
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		2015/04/20	1097	NWL
		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		2015/04/20	1097	NWL
		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	2015/08/25	1139	NWL
		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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
HZMB 012		2012/05/28	281	NWL
HZMB 011	EL01	2013/02/22	597	NEL
		2013/02/21	592	NEL
		2013/02/14	572	NEL
		2012/11/06	517	NEL
		2012/09/19	452	NWL
		2012/03/31	261	NEL
		2011/11/02	Baseline	NWL
		2011/11/01	Baseline	NEL
HZMB 009		2015/03/19	1084	NWL
		2012/05/28	281	NWL
HZMB 008		2015/07/06	1122	NWL
		2012/05/28	281	NWL
HZMB 007	NL246	2012/12/10	529	NEL
HZMB 006		2013/02/21	594	NEL
		2012/12/11	539	NWL
		2012/11/01	495	NWL
		2012/03/29	250	NWL
HZMB 005		2015/02/09	1070	NWL
		2015/02/09	1069	NWL
		2013/11/09	860	NWL
		2013/11/07	858	NWL
		2013/10/15	813	NWL
		2012/12/10	532	NWL
		2012/08/06	374	NWL
		2012/05/28	287	NWL
HZMB 004		2015/07/28	1126	NWL
		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

Identification Number	Baseline Identification Number	Date (YYYY-MM-DD)	Sighting Number	Area Sighted
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 014 2015-08-25-13-03-41_01 MED

HZMB 129 2015-08-25-12-52-20 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; 6. Repeat review to ensure all the	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 by ET and Contractor and	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. 3. Supervise the implementation	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 and/or any other mitigation

	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.	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.	of additional monitoring and/or any other mitigation measures.	measures.

China Harbour Engineering Company Limited

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

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

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (see Note 1)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste (see Note 4)	Others, e.g. general refuse (see Note 3)
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan-15	0.0000	0.0000	0.0000	0.0000	0.0000	1774.7845	0.0000	0.4200	4.0000	2.4000	0.0455
Feb-15	0.0000	0.0000	0.0000	0.0000	0.0000	1120.6675	0.0000	0.1400	0.0000	0.0000	0.0390
Mar-15	0.0000	0.0000	0.0000	0.0000	0.0000	390.8735	0.0040	0.3340	0.0020	0.0000	0.0390
Apr-15	0.0000	0.0000	0.0000	0.0000	0.0000	251.3183	0.0000	0.1400	0.0000	0.0000	0.0390
May-15	0.0000	0.0000	0.0000	0.0000	0.0000	778.9842	0.0000	0.1960	0.0000	0.0000	0.0260
Jun-15	0.0000	0.0000	0.0000	0.0000	0.0000	400.6428	0.0000	0.1680	0.0000	0.0000	0.0520
Sub-total	0.0000	0.0000	0.0000	0.0000	0.0000	4717.2709	0.0040	1.3980	4.0020	2.4000	0.2405
Jul-15	0.0000	0.0000	0.0000	0.0000	0.0000	60.7108	0.0150	0.4750	0.0020	0.0000	0.0585
Aug-15	0.0000	0.0000	0.0000	0.0000	0.0000	60.6718	0.0000	0.3360	5.1200	0.0000	0.0585
Sep-15	0.0000	0.0000	0.0000	0.0000	0.0000	69.8487	0.0000	0.0000	0.0000	0.0243	0.0780
Oct-15											
Nov-15											
Dec-15											
Total	0.0000	0.0000	0.0000	0.0000	0.0000	4908.5022	0.0190	2.2090	9.1240	2.4243	0.4355

Notes: (1) Broken concrete for recycling into aggregates.

(2) Plastics refer to plastic bottles/ containers, plastic sheets/ foam from packaging materials.

(3) Use the conversion factor : 1 full load of dumping truck being equivalent to 6.5m^3 by volume.

(4) Chemical waste refer to spent “battery” and “oil with water”.

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

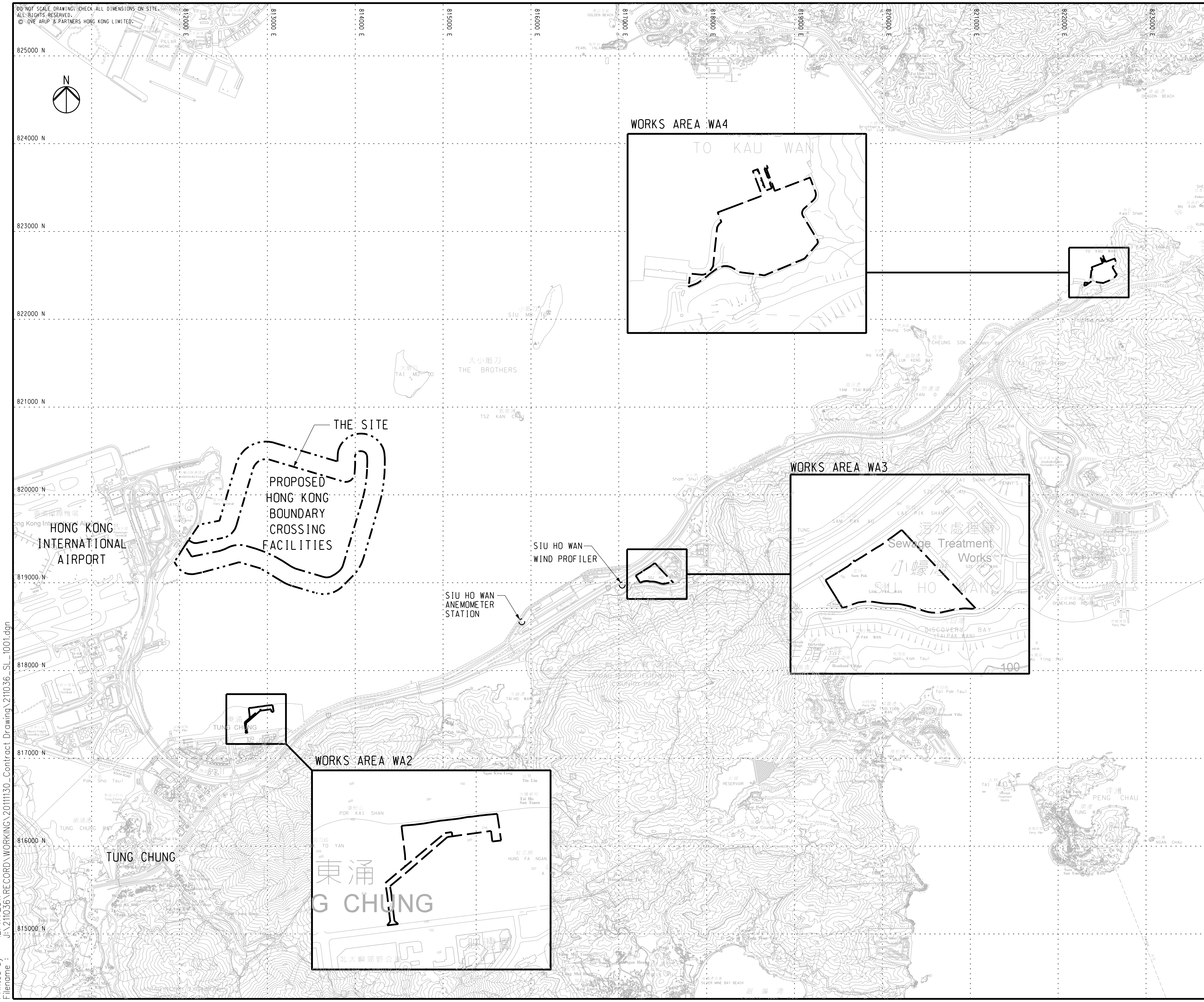
Cumulative statistics on Exceedances

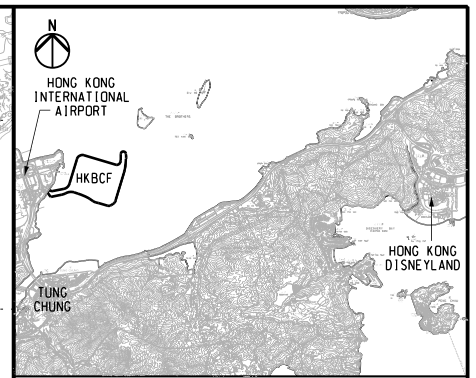
		Total no. recorded in this month	Total no. recorded since project commencement
1-Hour TSP	Action	-	-
	Limit	-	-
24-Hour TSP	Action	-	-
	Limit	-	-
Noise	Action	-	-
	Limit	-	-
Water Quality	Action	-	2
	Limit	-	3
Dolphin Monitoring	Action	-	-
	Limit	-	-

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

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

	Date Received	Subject	Status	Total no. received in this month	Total no. received since project commencement
Environmental complaints	-	-	-	-	33
Notification of summons	-	-	-	-	2
Successful Prosecutions	-	-	-	-	2





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
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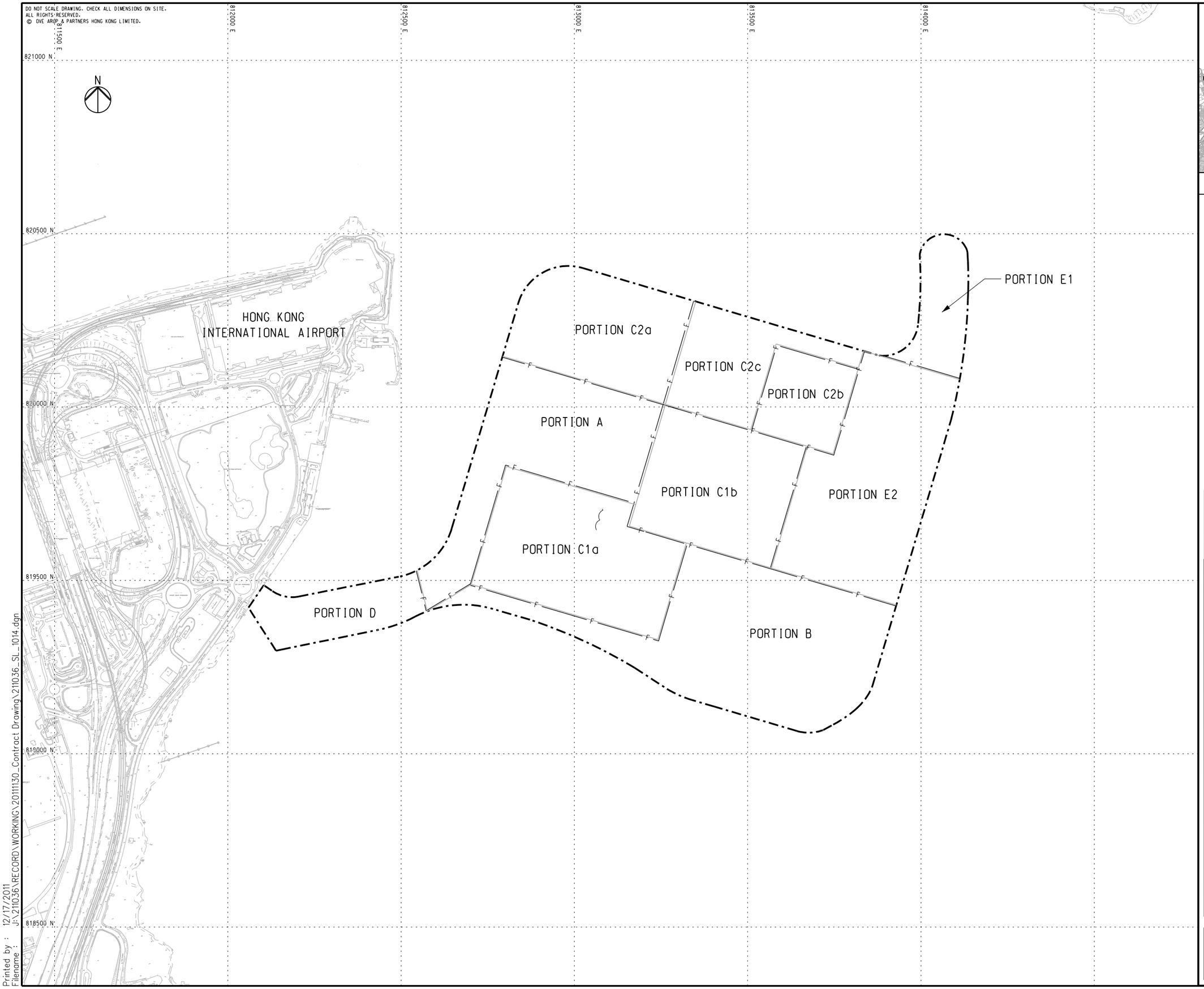

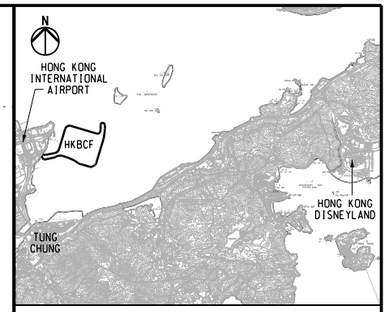

KEY PLAN

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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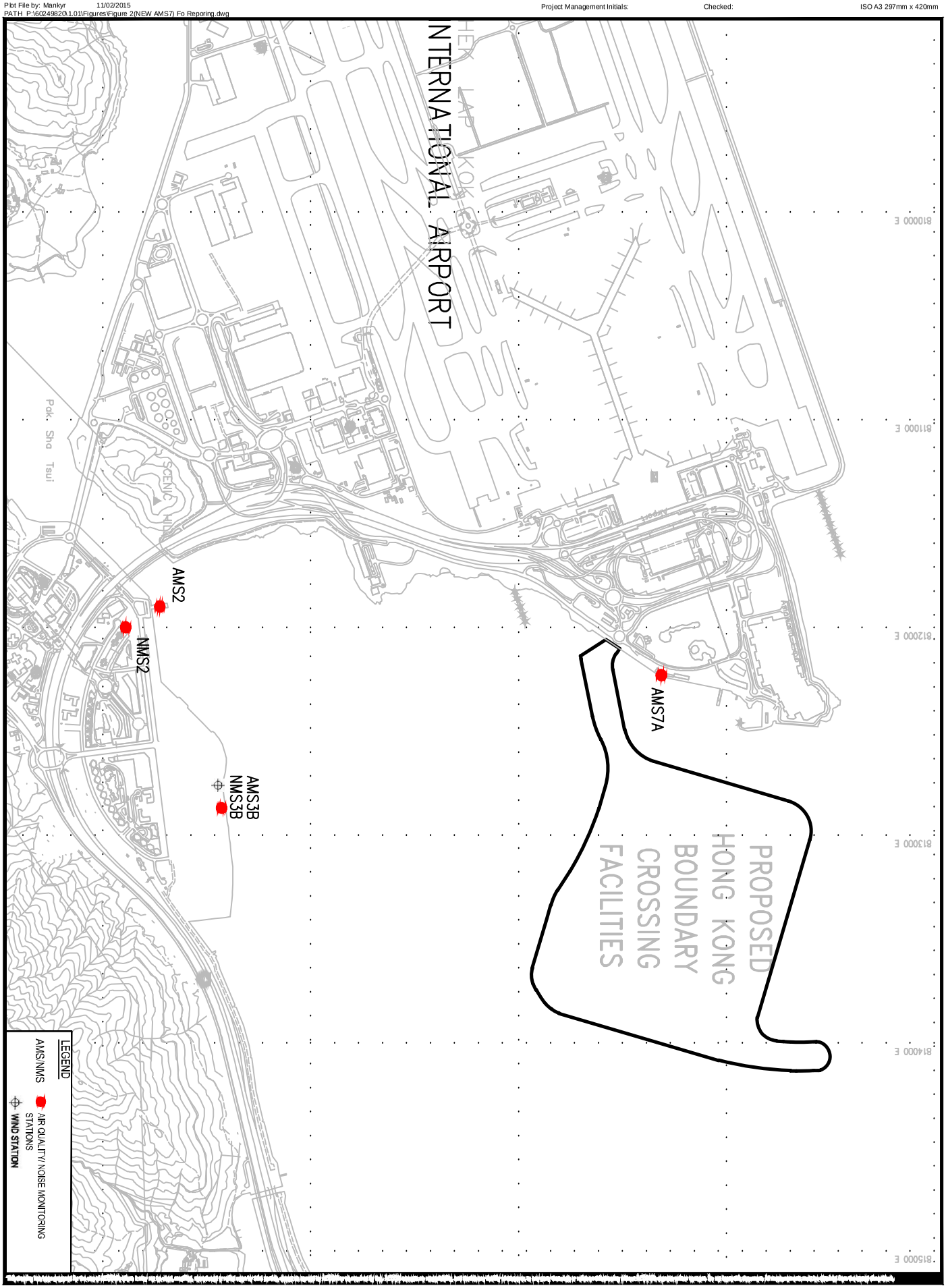

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.: - Date: JANUARY 2015

AIR QUALITY AND NOISE MONITORING STATIONS FOR HKBCF

AECOM

Figure 2

Plot File by: Kwwkhc
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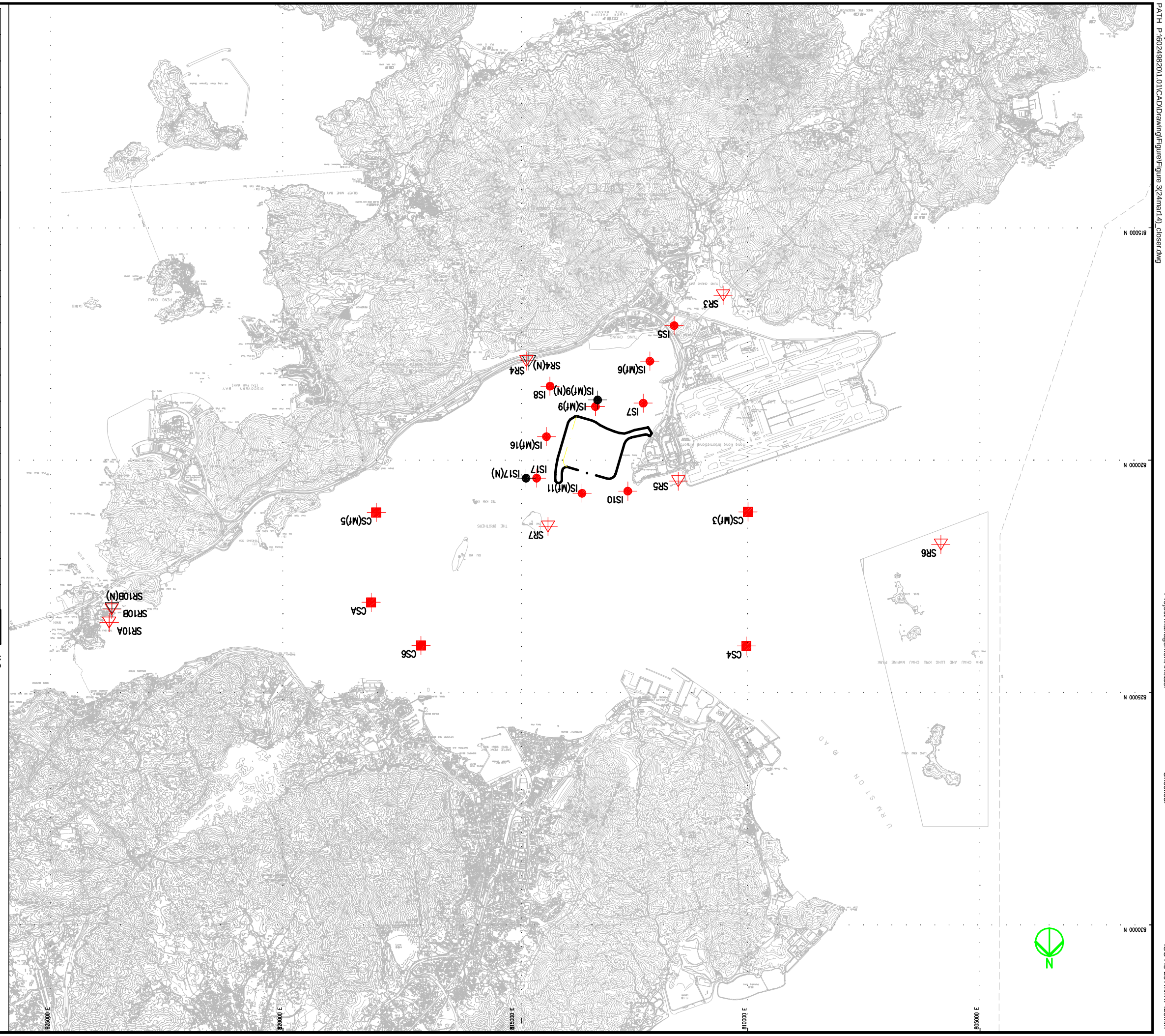
25/03/2014

Project Management Initials:

Checked:

ISO A3 297mm x 420mm



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

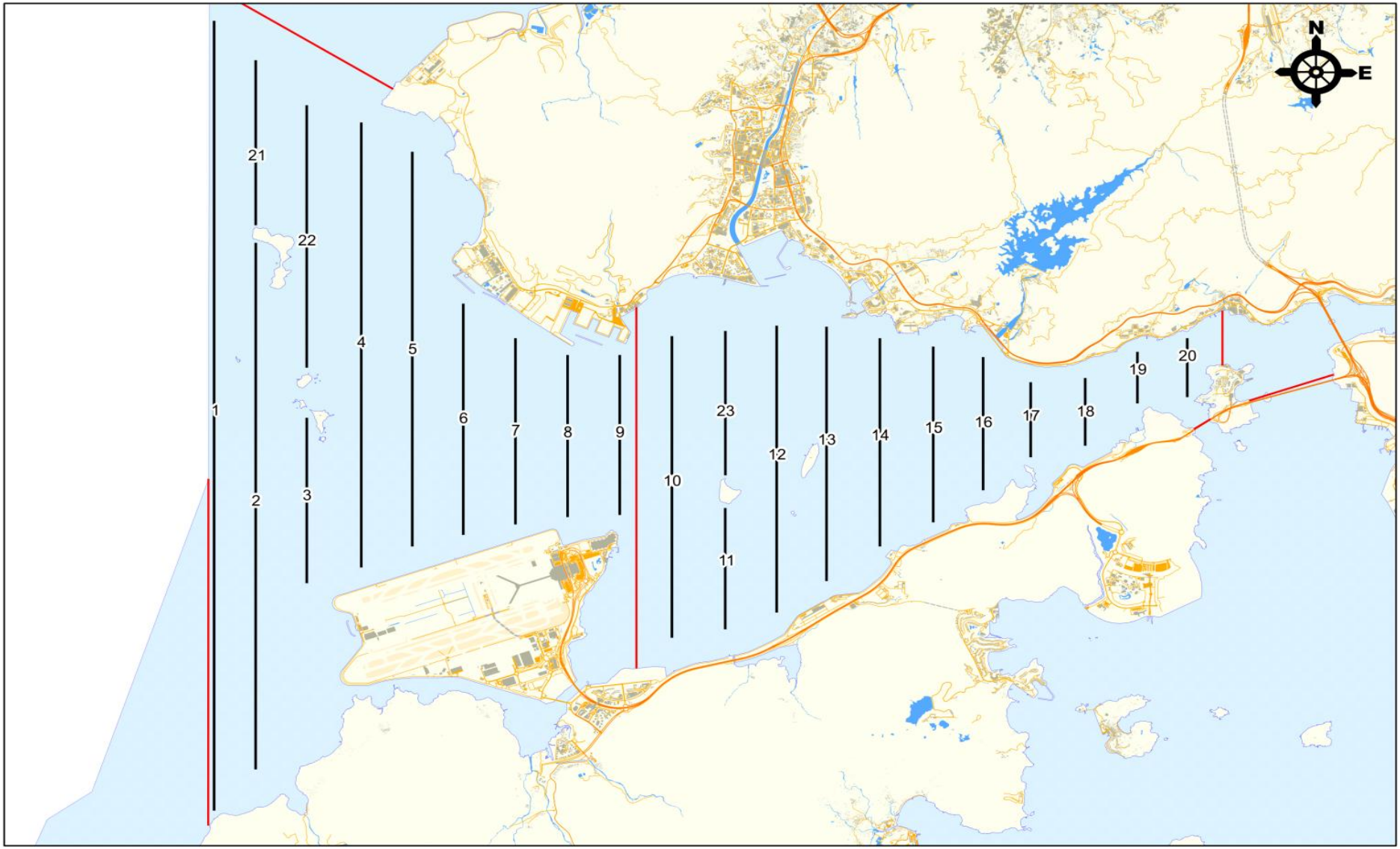
Project No.: -

Date: MAR 2014

WATER QUALITY MONITORING STATION

AECOM

Figure 3



Remarks:

***Transect 10 is now 3.6km in length due to the HKBCF construction site.**

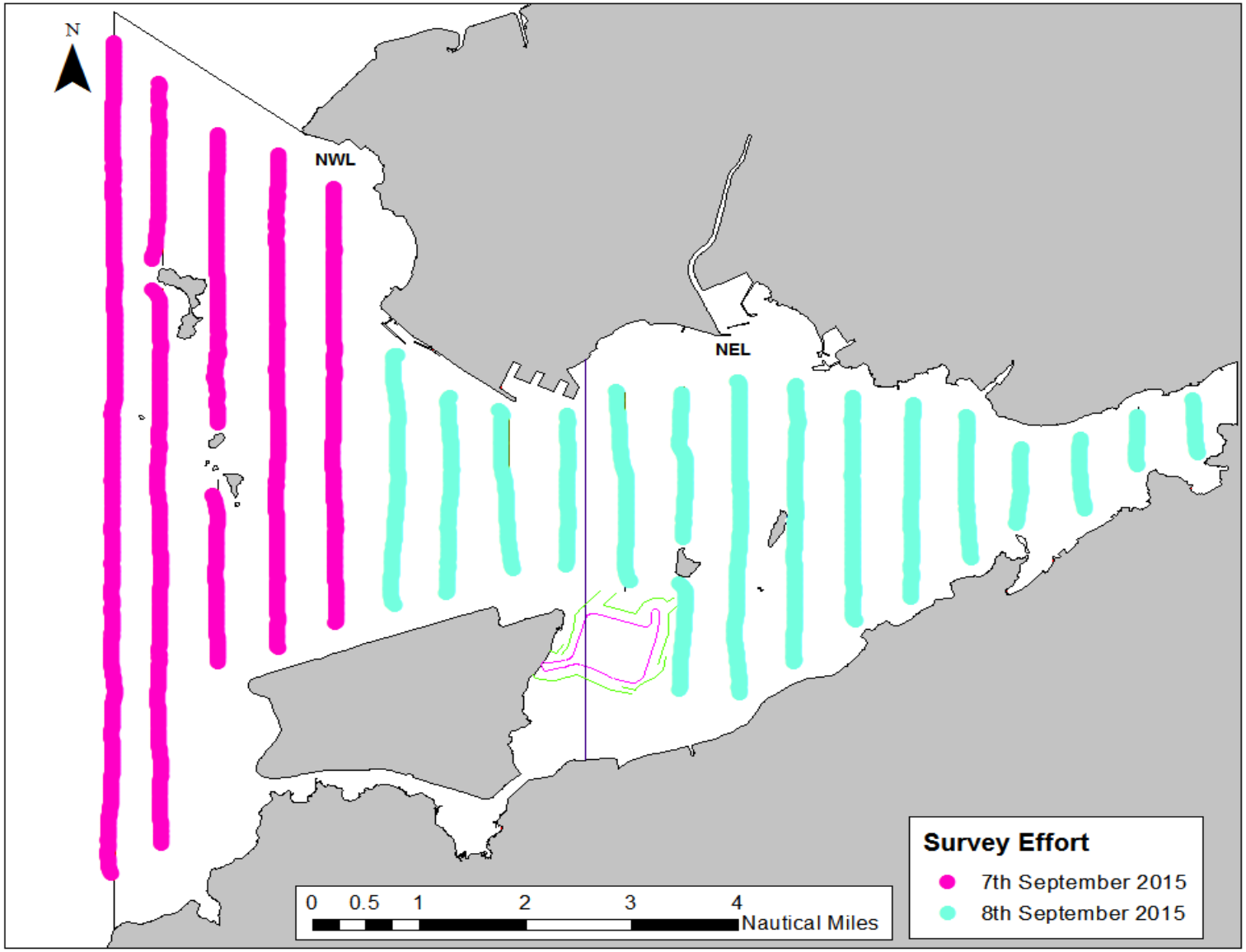
^Coordinates for transect lines 1, 2, 7, 8, 9 and 11 have been updated in respect to the Proposal for Alteration of Transect Line for Dolphin Monitoring approved by EPD on 19 August 2015. The total transect length for both NEL and NWL combined is 108km.

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

Impact Dolphin Monitoring
Line Transect Layout Map

AECOM

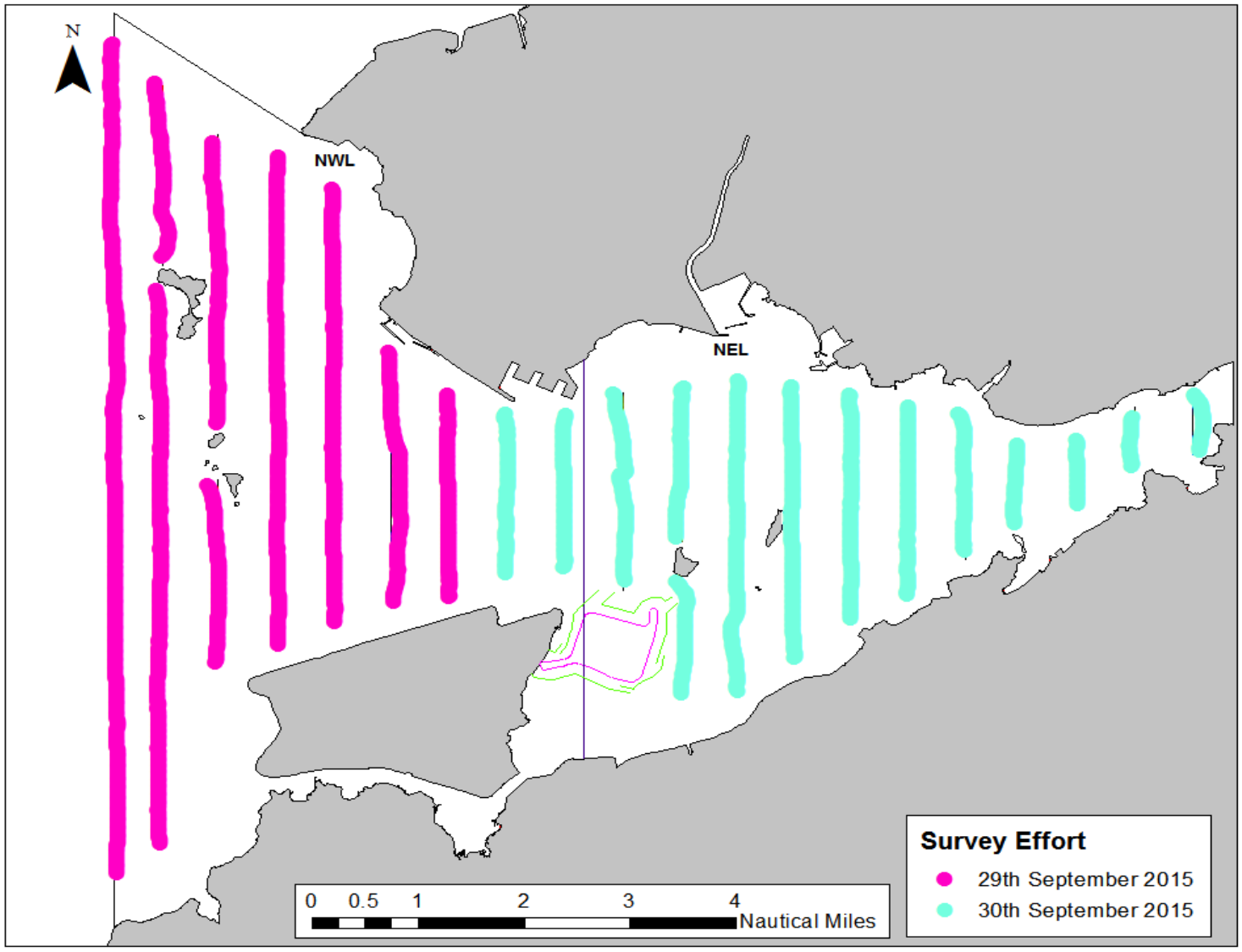
Figure 4



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

Impact Dolphin Monitoring Survey Efforts on 7 and 8 September 2015

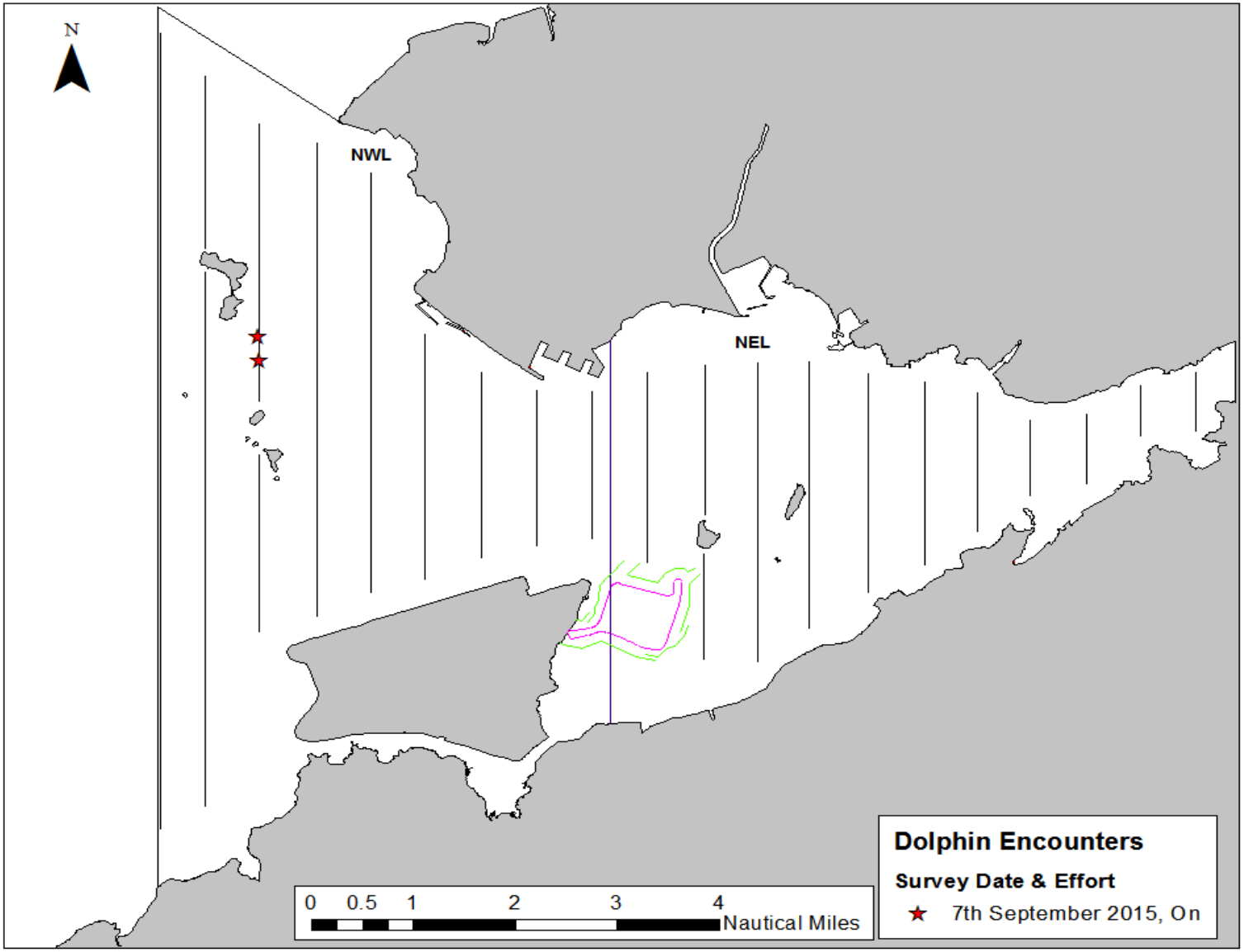
Figure 5a



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

Impact Dolphin Monitoring Survey Efforts on 29 and 30 September 2015

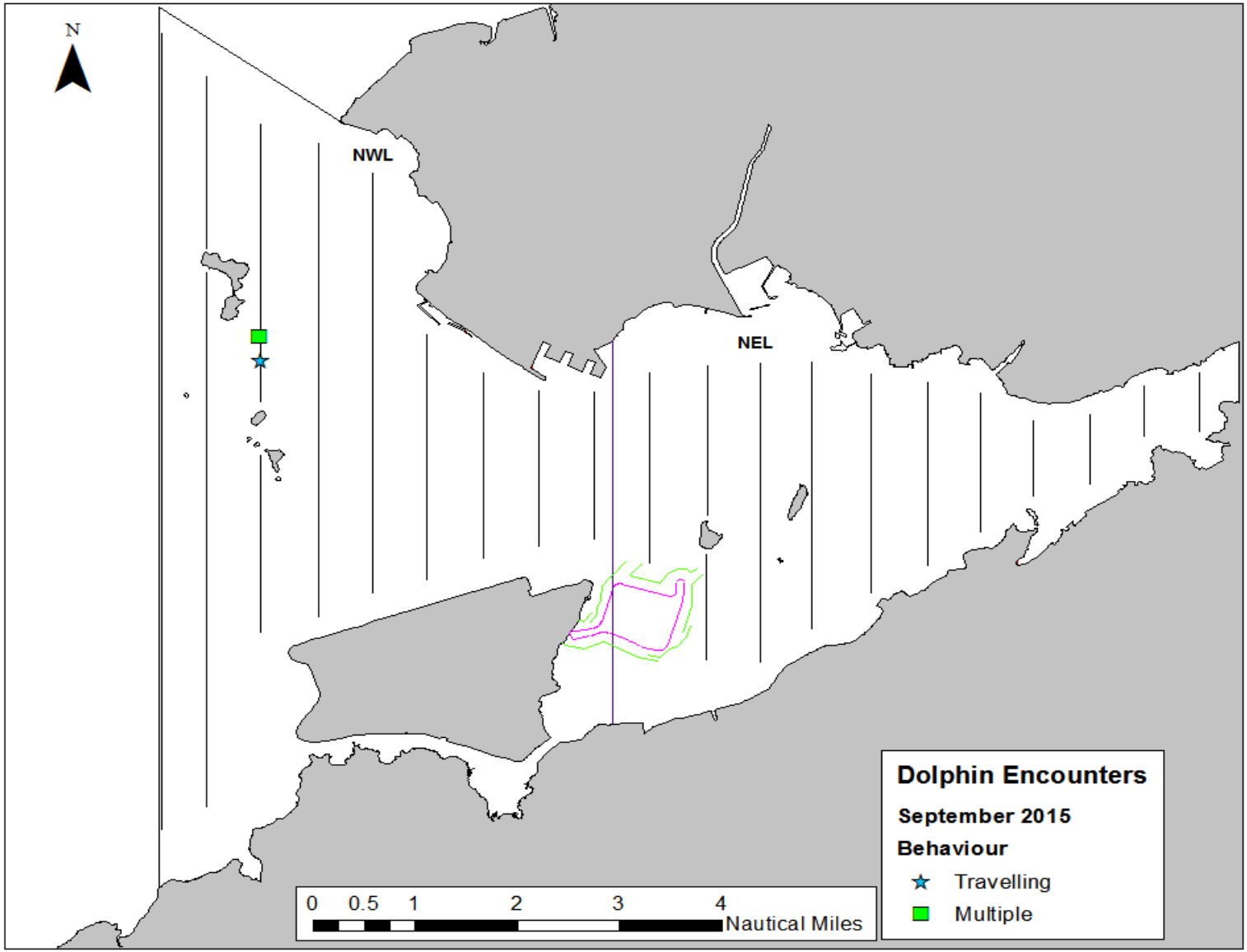
Figure 5b



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

Impact Dolphin Monitoring Survey
Sightings in September 2015

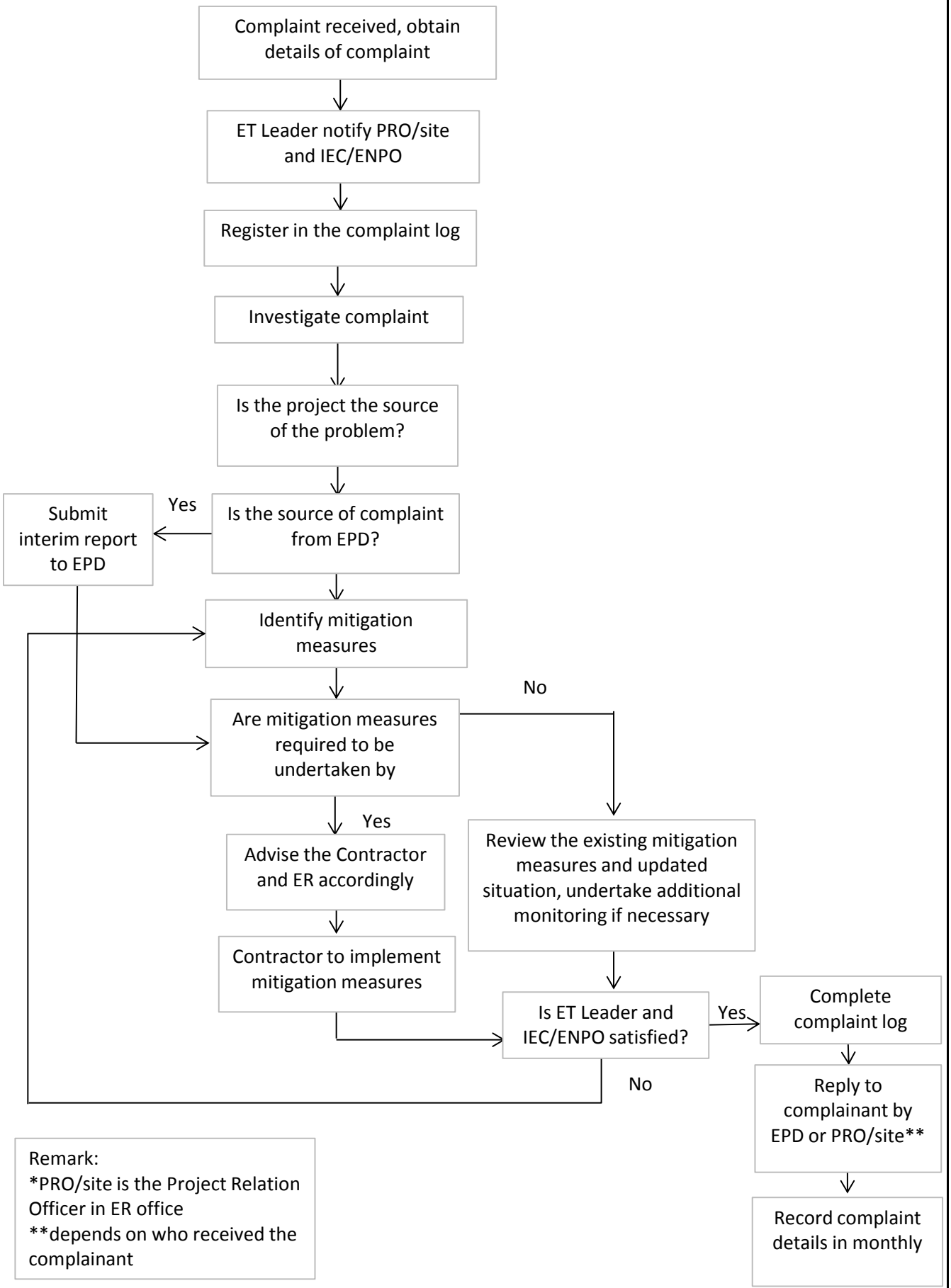
Figure 5c



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

Impact Dolphin Monitoring Survey
Behaviour Map in September 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**