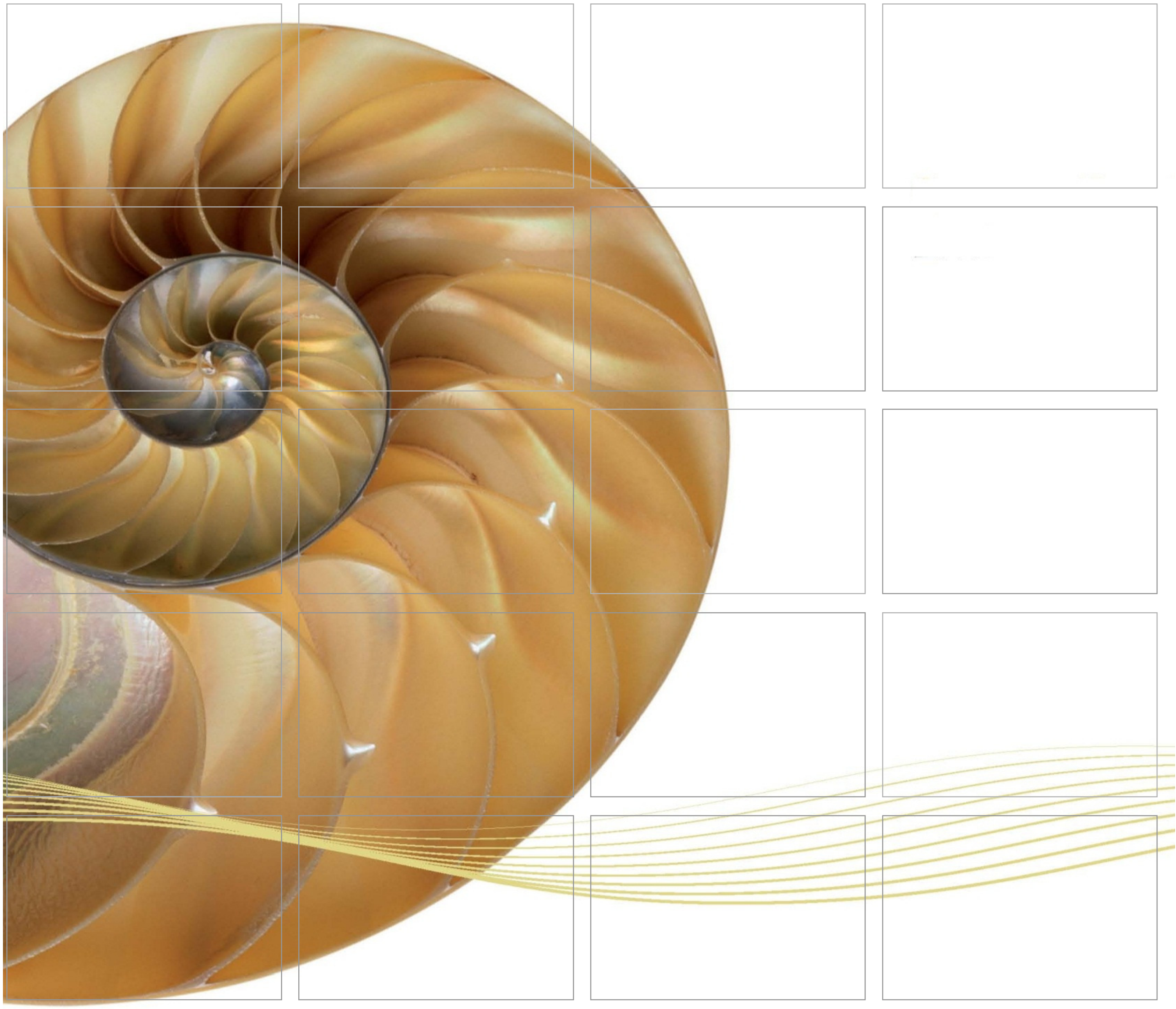
REPORT



Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

First Monthly EM&A Report

13 December 2013

Environmental Resources Management
16/F, DCH Commercial Centre
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Quarry Bay, Hong Kong
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First Monthly EM&A Report

Document Code: 0215660_1st Monthly EM&A_ Rev a_2013_12_13.pdf

Client:
Gammon

Project No:
0215660

Summary:

This document presents the First Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.

Date:
13 December 2013

Approved by:

Mr Craig Reid
Partner

Certified by:

Mr Jovy Tam
ET Leader

Rev a	First Monthly EM&A Report	CL	JT	CAR	13/12/13
Revision	Description	By	Checked	Approved	Date

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Ref.: HYDHZMBEEM00_0_1522L.13 16 December 2013

AECOM By Fax (2492 2057) and By Post
Supervising Officer Representative's Office
6 Hoi Kok Street,
Tsuen Wan, N.T.

Attention: Mr. Daniel Ip

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/2012/07 TM-CLKL Southern Connection Viaduct Section
Monthly EM&A Report for November 2013 (EP-354/2009/A)

Reference is made to the First Monthly Environmental Monitoring and Audit (EM&A) Report (for November 2013) Revision a certified by the ET Leader (ET's ref.: "0215660_1st Monthly EM&A_ Rev a_2013_12_13.pdf" dated 13 December 2013) and provided to us via email on 16 December 2013.

We are pleased to inform you that we have no adverse comments on the captioned monthly EM&A Report. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/A.

Thank you for your kind attention. Please do not hesitate to contact the undersigned or the ENPO Leader Mr. Y H Hui should you have any queries.

Yours sincerely,

Tony Cheng
Independent Environmental Checker
Tuen Mun – Chek Lap Kok Link

c.c. HyD – Mr. Stephen Chan (By Fax: 3188 6614)
HyD – Mr. Matthew Fung (By Fax: 3188 6614)
AECOM – Mr. Conrad Ng (By Fax: 3922 9797)
ERM – Mr. Jovy Tam (By Fax: 2723 5660)
Gammon – Mr. Roy Leung (By Fax: 2750 0922)

Internal: DY, YH, ENPO Site

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EXECUTIVE SUMMARY

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of the Tuen Mun – Chek Lap Kok Link Project (TM-CLK Link Project) while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). ENVIRON Hong Kong Ltd. was employed by the HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) in accordance with *Environmental Permit No. EP-354/2009/A*. .

The construction phase of the Contract commenced on 31 October 2013 and will be tentatively be completed by 2018. The impact monitoring of the EM&A programme, including air quality, noise, water quality and marine ecological monitoring as well as environmental site inspections, commenced on 31 October 2013.

This is the first monthly EM&A report presenting the EM&A works carried out during the period from 31 October to 30 November 2013 for the Southern Connection Viaduct Section in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

Marine-based Works

- Ground investigation (GI) work at marine piers;
- Survey towers erection; and
- Filling platform at seawall.

Land-based Works

- Additional GI fieldwork, laboratory testing and permitting;
- Application for tree felling and transplanting;
- Site office relocation;
- Fence relocation at Viaduct A, C and D;
- Site offices erection; and
- Temporary access bridge (TAB).

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

24-hour TSP monitoring	5 sessions
1-hour TSP monitoring	5 sessions
Noise monitoring	5 sessions
Impact Water Quality Monitoring	14 sessions

Impact dolphin monitoring	2 sessions
Joint Environmental site inspection	4 sessions

Daily marine mammal exclusion zone monitoring was undertaken. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* was recorded in November 2013 during the exclusion zone monitoring.

Breaches of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Levels was recorded for 1-hour and 24-hour TSP monitoring in the reporting month.

Breaches of Action and Limit Levels for Noise

No exceedance of Action and Limit Levels was recorded for construction noise monitoring in the reporting month.

Breaches of Action and Limit Levels for Water Quality

One (1) exceedance of Action Level in depth-averaged SS was recorded for impact water quality monitoring in the reporting month. The exceedance was considered not related to the construction works of this Contract upon further investigation.

Impact Dolphin Monitoring

During this month of dolphin monitoring, no adverse impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations. Due to monthly variation in dolphin occurrence within the study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Environmental Complaints, Non-compliance & Summons

One (1) complaint was referred by EPD on 12 November 2013 and was follow-up timely. The complaint was considered to be not related to this Contract.

No notification of summons and successful prosecution was received in the reporting month.

Reporting Change

There was no reporting change required in the reporting period.

Upcoming Works for the Next Reporting Period

Works to be undertaken in the next monitoring period of December 2013 include the following:

Marine Works

- GI works at marine piers;
- Filling Platform at seawall; and
- Marine foundation at Viaduct E2, E5-8 and E13.

Land-based Works

- Additional GI fieldwork, laboratory testing and permitting;
- Fence relocation at Viaduct A, C and D; and
- Site offices erection at WA2, WA3, WA5 and seawall.

Future Key Issues

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of December 2013 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

1 *INTRODUCTION*

1.1 *BACKGROUND*

According to the findings of the Northwest New Territories (NWNT) Traffic and Infrastructure Review conducted by the Transport Department, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway would be operating beyond capacity after 2016. This forecast has been based on the estimated increase in cross boundary traffic, developments in the Northwest New Territories (NWNT), and possible developments in North Lantau, including the Airport developments, the Lantau Logistics Park (LLP) and the Hong Kong – Zhuhai – Macao Bridge (HZMB). In order to cope with the anticipated traffic demand, two new road sections between NWNT and North Lantau – Tuen Mun – Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB) are proposed.

An Environmental Impact Assessment (EIA) of TM-CLKL (the Project) was prepared in accordance with the EIA Study Brief (No. ESB-175/2007) and the *Technical Memorandum of the Environmental Impact Assessment Process* (*EIAO-TM*). The EIA Report was submitted under the Environmental Impact Assessment Ordinance (EIAO) in August 2009. Subsequent to the approval of the EIA Report (EIAO Register Number AEIAR-145/2009), an Environmental Permit (EP-354/2009) for TM-CLKL was granted by the Director of Environmental Protection (DEP) on 4 November 2009, and EP variation (EP-354/2009A) was issued on 8 December 2010.

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of TM-CLKL ("the Contract") while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) in accordance with *Environmental Permit No. EP-354/2009/A*.

The construction phase of the Contract commenced on 31 October 2013 and will be tentatively be completed by 2018. The impact monitoring phase of the EM&A programme, including air quality, noise, water quality and marine ecological monitoring as well environmental site inspections, commenced on 31 October 2013.

1.2 Scope of Report

This is the first monthly EM&A Report under the *Contract No. HY/2012/07 Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.* This report presents a summary of the environmental monitoring and audit works in October and November 2013.

1.3 Organization Structure

The organization structure of the Contract is shown in *Appendix A*. The key personnel contact names and contact details are summarized in *Table 1.1* below.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Daniel Ip	3553 3800	2492 2057
ENPO / IEC (ENVIRON Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2888	3465 2899
	IEC	Tony Cheng	3465 2888	3465 2899
Contractor (Gammon Construction Limited)	Environmental Manager	Brian Kam	2750 0118	2750 0922
	Environmental Officer	Roy Leung	2750 0118	2750 0922
	24-hour Complaint Hotline		9738 4332	
ET (ERM-HK)	ET Leader	Jovy Tam	2271 3113	2723 5660

1.4 Summary of Construction Works

The construction phase of the Contract commenced on 31 October 2013. The three-month rolling construction programme is shown in *Appendix B*.

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

Marine-based Works

- Ground investigation (GI) work at marine piers;
- Survey towers erection; and
- Filling platform at seawall.

Land-based Works

- Additional GI fieldwork, laboratory testing and permitting;
- Application for tree felling and transplanting;

- Site office relocation;
- Fence relocation at Viaduct A, C and D;
- Site offices erection; and
- Temporary access bridge (TAB).

The general layout plan of the site showing the detailed works areas is shown in *Figure 1.1*.

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

1.5 SUMMARY OF EM&A PROGRAMME REQUIREMENTS

The EM&A programme required environmental monitoring for air quality, noise, water quality and marine ecology as well as environmental site inspections for air quality, noise, water quality, waste management, marine ecology and landscape and visual impacts. The EM&A requirements and related findings for each component are described in the following sections, which include:

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

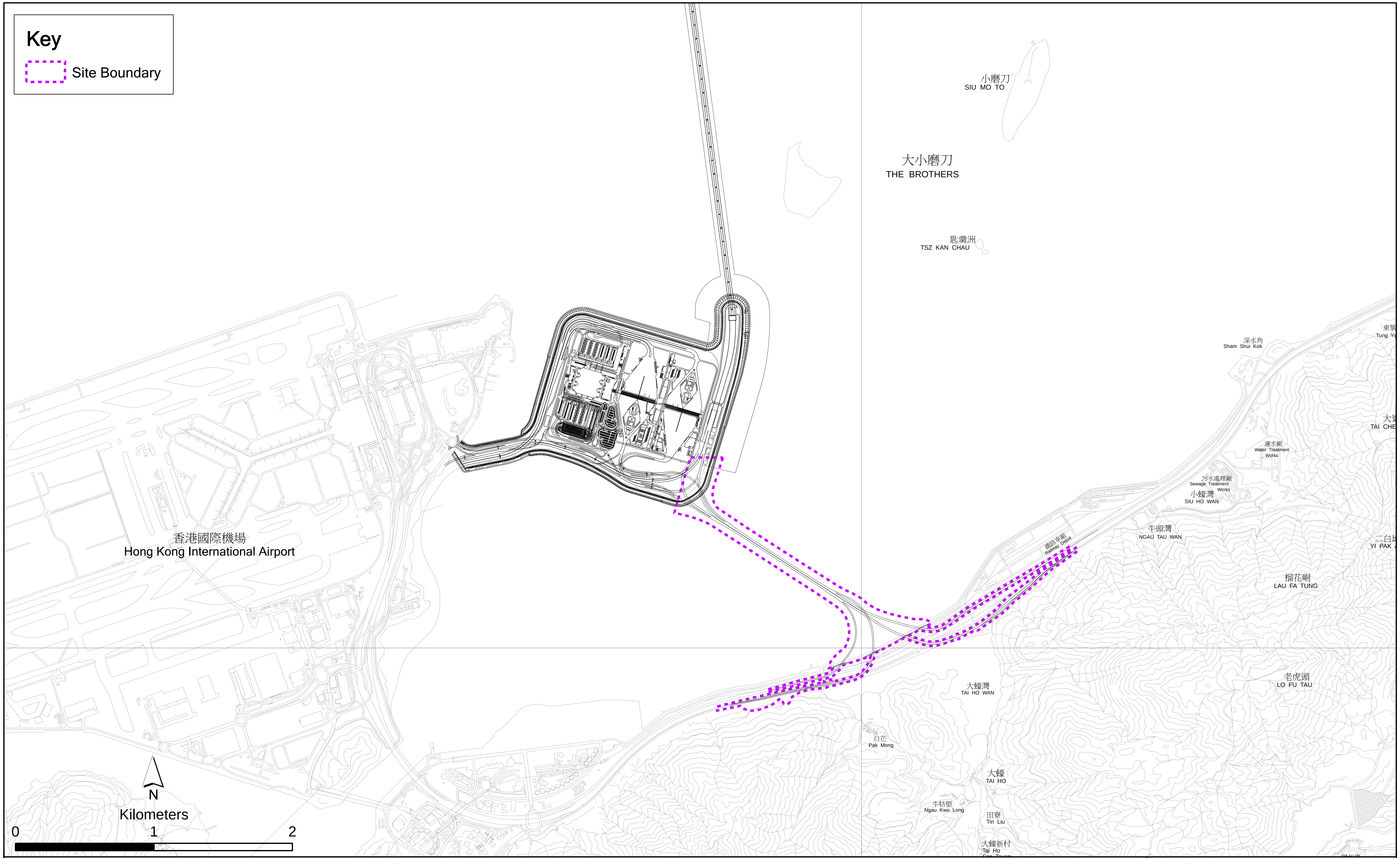

Figure 1.1

General Layout Plan of the Project

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2 AIR QUALITY

2.1 MONITORING REQUIREMENTS

In accordance with the Updated EM&A Manual, baseline 1-hour and 24-hour TSP levels at two (2) air quality monitoring stations were established. Impact 1-hour TSP monitoring was conducted three (3) times every six (6) days while the highest dust impact was expected. Impact 24-hour TSP monitoring was carried out once every six (6) days. The Action and Limit Level of the air quality monitoring is provided in *Appendix D.*

2.2 MONITORING EQUIPMENT

Portable direct reading dust meters were used to carry out the 1-hour TSP monitoring on 5, 11 and 15 November 2013. High Volume Samplers (HVSs) were used for carrying out 1-hour TSP monitoring on 21 and 27 November 2013 due to the change of monitoring locations from Siu Ho Wan MTR Depot to Pak Mong Village Watch Tower and Works Area 4 where more reliable power supply is available to power the HVS. 24-hour TSP air quality monitoring was performed using HVS located at each designated monitoring station. The HVS meets all requirements of the Updated EM&A Manual. Brand and model of the equipment is given in *Table 2.1*. Copies of the calibration certificates for the equipment are presented in *Appendix E.*

Wind data monitoring equipment was installed at fencing close to ASR9A (Siu Ho Wan MTRC Depot) since 5 November 2013. It was then installed at the rooftop of Pak Mong Village Watch Tower since 15 November 2013 for logging wind speed and wind direction. The wind sensor was setup such as it was clear of obstructions or turbulence caused by building. The wind data monitoring equipment is recalibrated at least once every six months.

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-3B)
High Volume Sampler (1-hour TSP and 24-hour TSP)	Tisch Environmental Mass Flow Controlled Total Suspended Particulate (TSP) High Volume Sampler (Model No. TE-5170)
Wind Sensor	Global Water WE550

2.3 MONITORING LOCATIONS

Monitoring locations ASR 9A and ASR 9C were set up at the proposed locations in Siu Ho Wan MTRC Depot in accordance with the Updated EM&A Manual. However, approval for carrying out impact monitoring within MTRC Depot could not be obtained. Air quality monitoring on 5 and 11 November 2013 was carried out just outside MTRC Depot at close proximity to the proposed locations, which was then temporarily relocated to the rooftop of Pak Mong Village Watch Tower (ASR 8) and Works Area 4 (ASR 8A). Same baseline and Action Level for air quality, as derived from the baseline monitoring data recorded at Siu Ho Wan MTRC Depot, were adopted for these temporary air quality locations.

Figure 2.1 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 Dates	Monitoring Station	Location	Description
5, 11 November 2013	ASR 9A	Siu Ho Wan MTRC Depot	On ground near security office
	ASR 9C	Siu Ho Wan MTRC Depot	On ground near staff canteen
15, 21, 27 November 2013	ASR 8	Pak Mong Village Watch Tower	Rooftop of the premise
	ASR 8A	Works Area 4	On ground at the Works Area

2.4 MONITORING PARAMETERS, FREQUENCY AND DURATION

Table 2.3 summarized 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

High Volume Sampler

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

- A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.

Key

● Original Monitoring Station

● Alternative Monitoring Station

▨ Site Boundary

AQMS	X	Y
ASR9A	815847.40	818508.64
ASR9C	816399.52	818946.65
ASR8	815059.45	817488.99
ASR8A	815856.14	818118.14

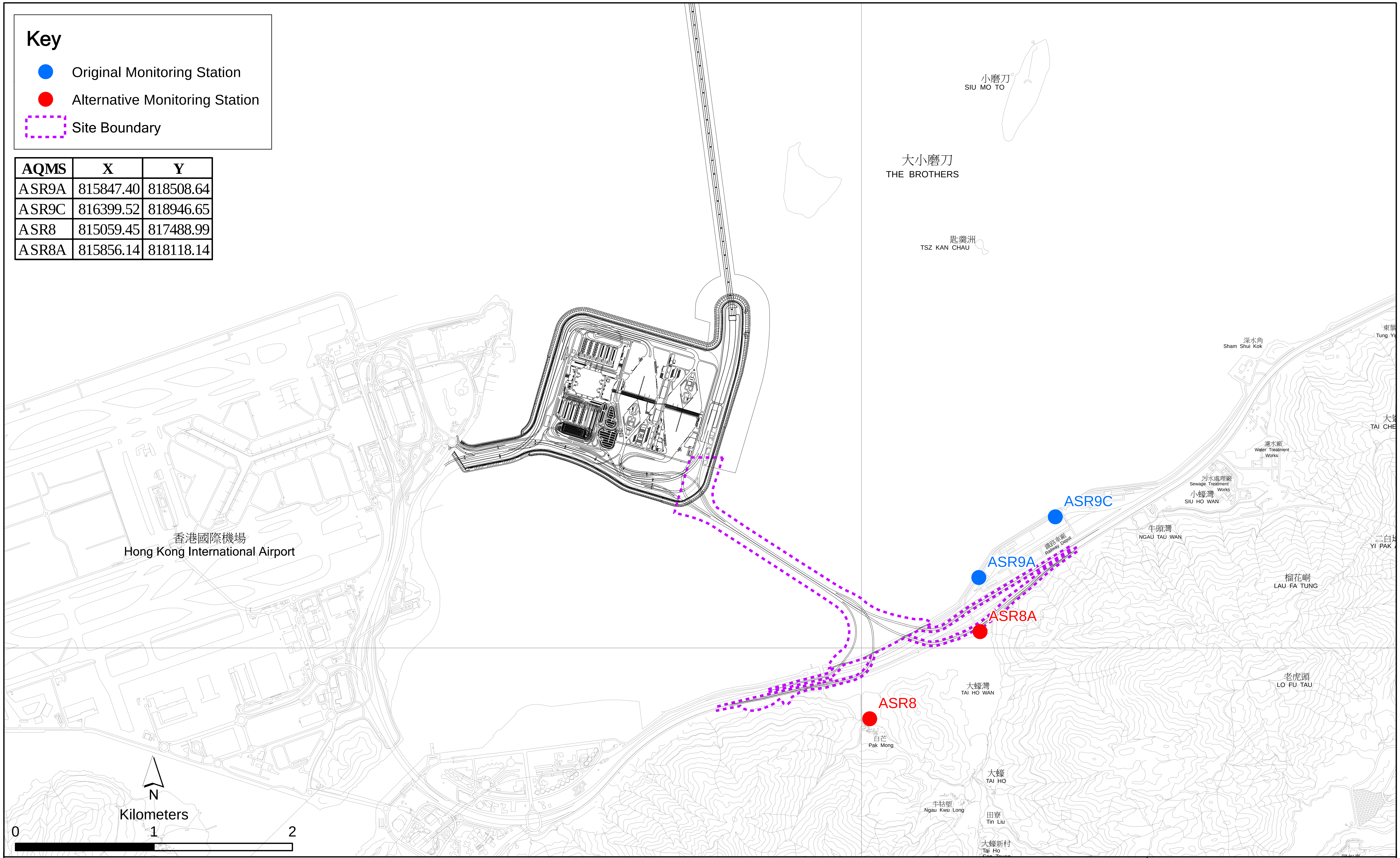

Figure 2.1

Locations of Air Quality Monitoring Stations

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- The distance between the HVS and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
- A minimum of 2m of separation from walls, parapets and penthouses was required for rooftop samples.
- A minimum of 2m separation from any supporting structure, measured horizontally was required.
- No furnaces or incineration flues were nearby.
- Airflow around the sampler was unrestricted.
- The samplers were more than 20m from the drip line.
- Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- Permission must be obtained to set up the samples and to obtain access to the monitoring stations.
- A secured supply of electricity is needed to operate the samplers.
- No two samplers should be placed less than 2 m apart.

(b) Preparation of Filter Papers

- Filter papers of size 8″x 10″ that were clean and without pinholes were selected.
- All filter papers were conditioned in a humidity controlled chamber for over 24-hour and be pre-weighed before use for sampling.
- 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

- The power supply was checked to ensure the HVS works properly.
- The filter holder and the area surrounding the filter were cleaned.
- 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.
- The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
- 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.
- Then the shelter lid was closed and was secured with the aluminum strip.
- The HVS was warmed up for about 5 minutes to establish run-temperature conditions.
- A new flow rate record sheet was set into the flow recorder.
- 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).
- The programmable digital timer was set for a sampling period of 1 hour or 24 hours, and the starting time, weather condition and the filter number were recorded.
- The initial elapsed time was recorded.
- 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.
- The final elapsed time was recorded.
- The sampled filter was removed carefully and folded in half-length so

that only surfaces with collected particulate matter were in contact.

- It was then placed in a clean plastic envelop and sealed.
- All monitoring information was recorded on a standard data sheet.
- Filters were then sent to ALS Technichem (HK) Pty Ltd. for analysis.

(d) Maintenance and Calibration

- The HVS and its accessories were maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
- All HVS were calibrated (five point calibration) using Calibration Kit prior to the commencement of the baseline monitoring and thereafter at bi-monthly intervals.

Dust Meter

(a) The measuring procedures of the 1-hour dust meter followed the Manufacturer's Instruction Manual as presented below:

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

(b) Maintenance and Calibration

- The 1-hour TSP meter was calibrated at 1-year interval against a continuous particulate TEOM Monitor. Calibration certificates of the Laser Dust Monitors are provided in *Appendix E*.
- 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*

The schedule for air quality monitoring in the reporting period is provided in *Appendix F*.

2.7 *RESULTS AND OBSERVATIONS*

The monitoring results for 1-hour TSP and 24-hour TSP are summarized in *Tables 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/m³)	Range (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m³)
ASR 9A (ASR 8A)	69.2	52 - 91	394	500
ASR 9C (ASR 8)	82.6	65 - 121	393	500

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

	Average (µg/m³)	Range (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m³)
ASR 9A (ASR 8A)	69.2	67 - 70	178	260
ASR 9C (ASR 8)	82.6	52 - 91	178	260

The major dust source in the reporting period included construction activities under the Contract as well as nearby traffic emissions.

All 1-hour and 24-hour TSP results were below the Action and Limit level at all monitoring locations in the reporting period. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L*.

Meteorological information collected from the wind station, including wind speed and wind direction, is provided in *Appendix H*.

3 NOISE MONITORING

3.1 MONITORING REQUIREMENTS

In accordance with the Updated EM&A Manual, impact noise monitoring was conducted once per week during the construction phase of the Contract. The Action and Limit level of the noise monitoring is provided in *Appendix D*.

3.2 MONITORING EQUIPMENT

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 provided in *Table 3.1*.

Table 3.1 Noise Monitoring Equipment

Equipment	Brand and Model
Integrated Sound Level Meter	Rion NL-31
Acoustic Calibrator	Rion NC-73

3.3 MONITORING LOCATIONS

Monitoring location was set up at NSR 1 in accordance with the Updated EM&A Manual. *Figure 3.1* shows the location of the monitoring station. *Table 3.2* describes the details of the monitoring station.

Table 3.2 Location of Impact Noise Monitoring Station

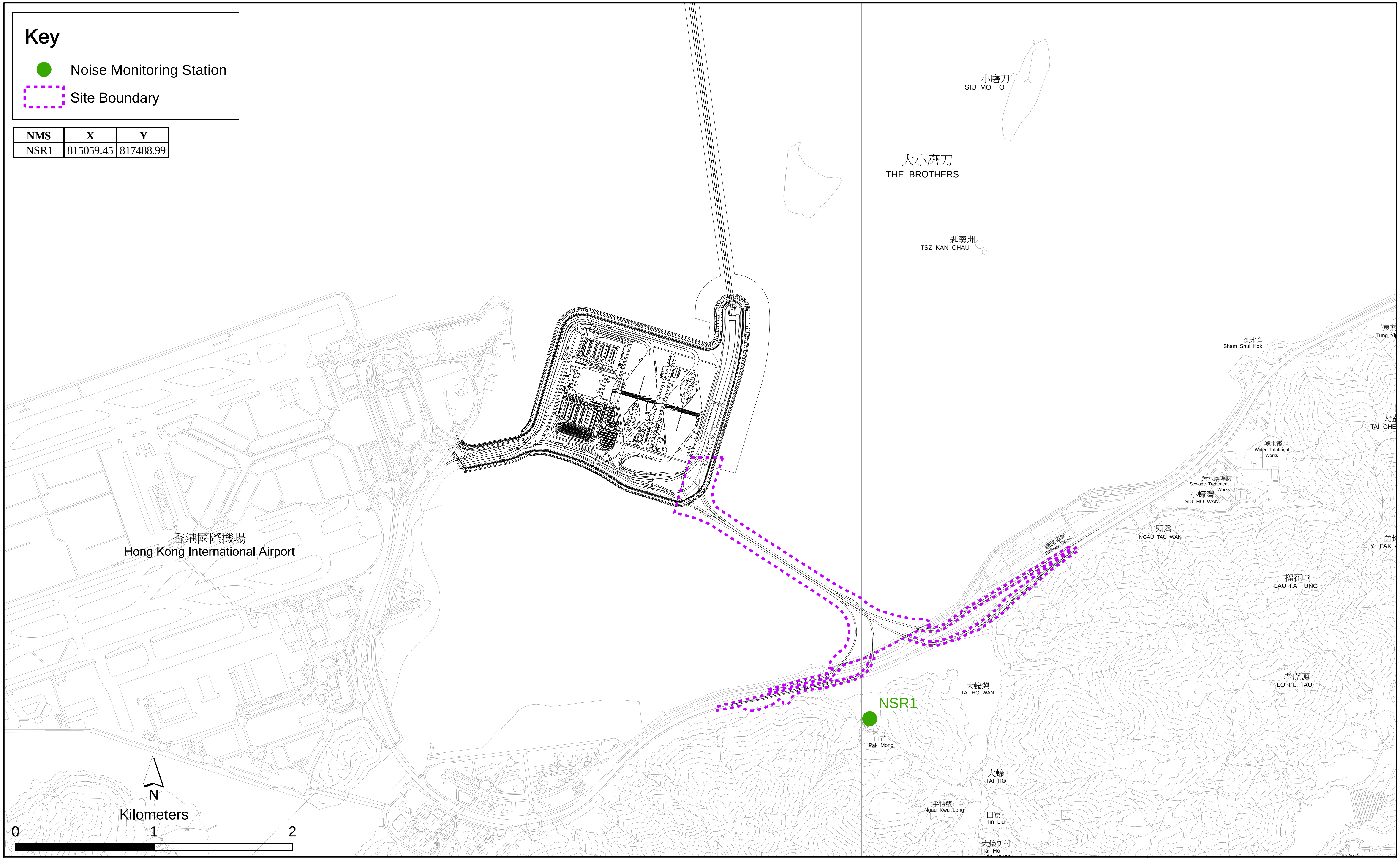
Monitoring Station	Location	Description
NSR 1	Pak Mong Village Watch Tower	Rooftop of the premise

3.4 MONITORING PARAMETERS, FREQUENCY AND DURATION

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



NMS	X	Y
NSR1	815059.45	817488.99

Figure 3.1

Locations of Noise Monitoring Stations

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3.5 *MONITORING METHODOLOGY*

Monitoring Procedures

- The microphone head of the sound level meter was positioned 1m exterior of the noise sensitive facade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters were set as follows:
    - frequency weighting: A
    - time weighting: Fast
    - time measurement: L_{eq}(30 min.) dB(A) (as six consecutive $L_{eq,\ 5min}$ readings) during non-restricted hours (i.e. 0700-1900 hrs on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- During the monitoring period, the L_{eq}, L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused temporarily during periods of high intrusive noise (eg dog barking, helicopter noise) if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain and wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Maintenance and Calibration

- The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- The meter and calibrator were sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.
- Calibration certificates of the sound level meters and acoustic calibrators are provided in Appendix E.

3.6 *MONITORING SCHEDULE FOR THE REPORTING MONTH*

The schedule for construction noise monitoring in the reporting period is provide in *Appendix F.*

3.7 *MONITORING RESULTS*

Results for noise monitoring 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), $L_{eq\ (30mins)}$	**Range, dB(A), $L_{eq\ (30mins)}$**	**Limit Level, dB(A), $L_{eq\ (30mins)}$**
NSR 1	57	56 - 59	75

No noise Action Level and Limit level exceedance was recorded at all monitoring stations in the reporting month. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L.*

Major noise sources during the noise monitoring included construction activities, nearby traffic noise and aircraft noise.

4 WATER QUALITY MONITORING

4.1 Monitoring Requirements

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. Impact water quality monitoring was undertaken three days per week during the construction period in accordance with the Updated EM&A Manual. The Action and Limit Level of the water quality monitoring is provided in *Appendix D*.

4.2 Monitoring equipment

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
DO, Temperature meter and Salinity	YSI Pro2030
Turbidimeter	HACH Model 2100Q
pH meter	HANNA HI8314
Positioning Equipment	Koden913MK2 with KBG-3 DGPS antenna
Water Depth Detector	Speedtech Instrument SM-5
Water Sampler	Kemmerer 1520 (1520-C25) 2.2L with messenger

4.3 Monitoring Parameters, Frequency and Duration

Table 4.2 summarizes the monitoring parameters, frequency and monitoring depths of impact water quality monitoring as required in the Updated EM&A Manual.

Table 4.2 Water Quality Monitoring Parameters and Frequency

Monitoring Stations	Parameters, unit	Frequency	Depth
Impact Stations: IS(Mf)9 IS(Mf)16 IS8 Sensitive Receivers: SR4	• Temperature(°C) • pH(pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L)	Impact monitoring: 3 days per week, at mid-flood and mid-ebb tides (within ±1.75 hour of the predicted time) during the construction period of the Contract	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed.

Monitoring Stations	Parameters, unit	Frequency	Depth
SR4a Control Stations: CS(Mf)3 CS(Mf)5			If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.

4.4 MONITORING LOCATIONS

The locations of the monitoring stations under the *Contract* are shown in *Figure 4.1* and detailed in *Table 4.3*.

Table 4.3 ***Locations of Impact Water Quality Monitoring Stations***

Station ID	Type	Coordinates	
		Easting	Northing
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497
IS8	Impact Station(Close to HKBCF construction site)	814251	818412
SR4	Sensitive receiver (Tai Ho Inlet)	814760	817867
SR4a	Sensitive receiver	815247	818067
CS(Mf)3	Control Station	809989	821117
CS(Mf)5	Control Station	817990	821129

Notes:
DO = Dissolved Oxygen
SS = Suspended Solid

4.5 MONITORING METHODOLOGY

4.5.1 Instrumentation

The *in-situ* water quality parameters, i.e. dissolved oxygen, temperature and salinity were measured by multi-parameter Water Quality System (Model YSI Pro2030).

Turbidity and pH were measured by HACH Model 2100Q and HANNAH HI8314, respectively.

4.5.2 Operating/ Analytical Procedures

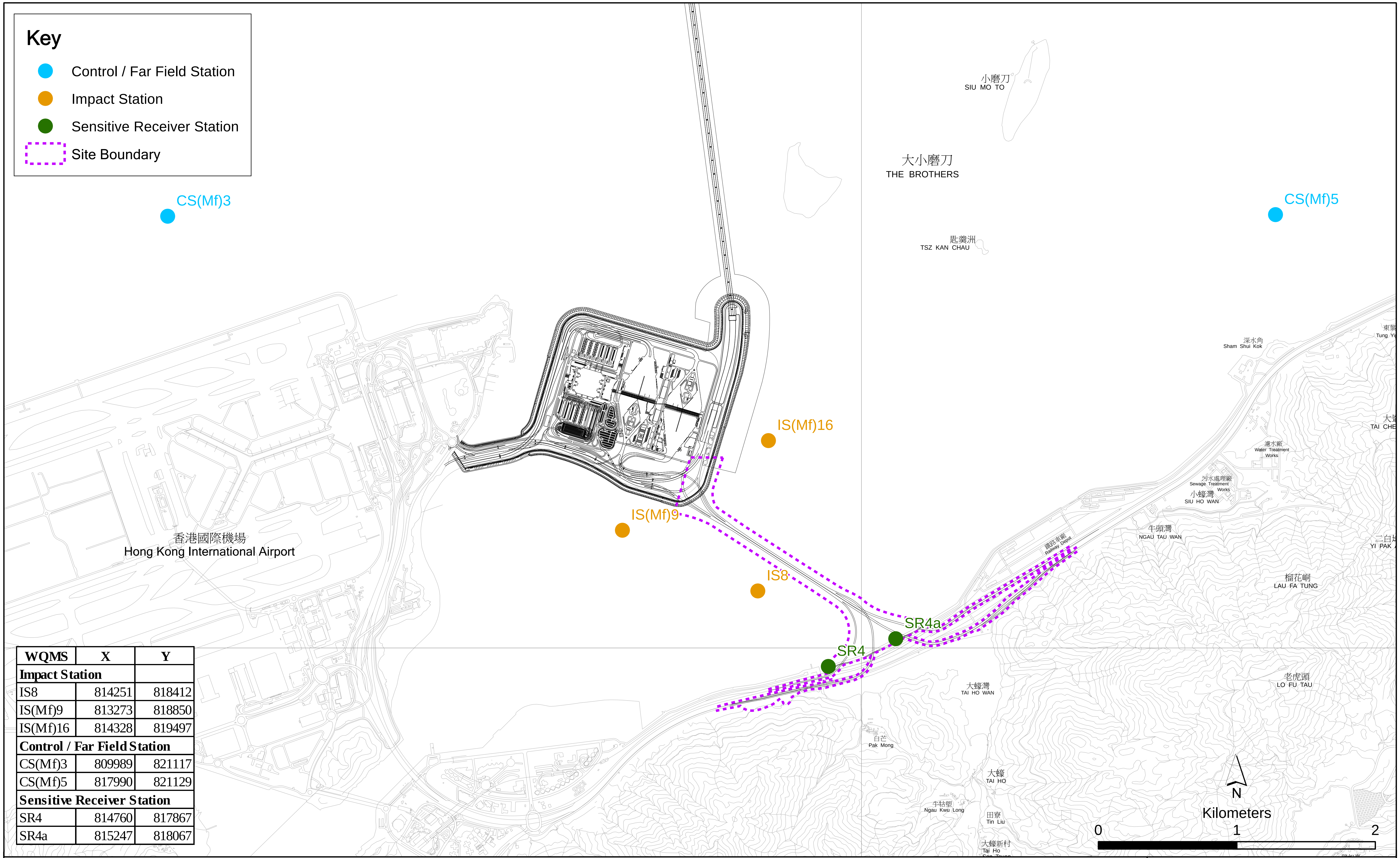
Digital Differential Global Positioning Systems (DGPS) were used to ensure that the correct location was selected prior to sample collection.

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

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

Key

- ● Control / Far Field Station
- ● Impact Station
- ● Sensitive Receiver Station
- ▭ Site Boundary



WQMS	X	Y
Impact Station		
IS8	814251	818412
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)3	809989	821117
CS(Mf)5	817990	821129
Sensitive Receiver Station		
SR4	814760	817867
SR4a	815247	818067

Figure 4.1

Locations of Water Quality Monitoring Stations

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less than 6 m, for which the mid-depth station was omitted. Should the water depth be less than 3 m, only the mid-depth station was monitored.

At each sampling depth, two consecutive *in-situ* measurements (DO concentration and saturation, temperature, turbidity, pH and salinity) and water samples for SS were taken. 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.

Duplicate samples were collected at each sampling depth for SS measurement in the laboratory. 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. Samples bottles were pre-rinsed with the same water samples. The sample bottles were then packed in cool-boxes (cooled at 4° C) without being frozen) and delivered to ALS Technichem (HK) Pty Ltd. for the analysis of SS 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 QA/QC programme. For QA/QC procedures, one sample of every batch of 20 samples was analyzed.

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)	Weighing	APHA 2540-D	0.5 mg/L	0.5 mg/L

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

All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring event.

For the on-site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, "Guide to on-site test methods for the analysis of waters" was observed. Copies of the calibration certificates are attached in *Appendix E*.

4.6 *MONITORING SCHEDULE FOR THE REPORTING MONTH*

The schedule for water quality monitoring in November 2013 is provided in *Appendix F*.

4.7 *RESULTS AND OBSERVATIONS*

Impact water quality monitoring was conducted at all designated monitoring stations in the reporting month. Impact water quality monitoring results and graphical presentations are provided in *Appendix J*.

Exceedances of the Action Levels of the depth-averaged SS was observed at SR4a during mid-ebb tide on 26 November 2013. It is considered that the exceedance of depth-averaged SS level at SR4a during mid-ebb tide on 26 November 2013 was likely due to sediment disturbance caused by water sampler touching seabed, contributing to an exceedance in SS for water sampled at bottom water depth. Thus, the observed SS exceedance was not considered to be project-related and not of environmental concern.

Should non-compliance of the criteria occur, action in accordance with the Event and Action Plan, as provided in *Appendix L* should be carried out.

5 DOLPHIN MONITORING

5.1 MONITORING REQUIREMENTS

Impact dolphin monitoring is required to be conducted by a qualified dolphin specialist team to evaluate whether there have been any effects on the dolphins. Dolphin monitoring works by line transect methodology is required to carry out in accordance with the Updated EM&A Manual of the TM-CLK Link Project. In order to fulfil the EM&A requirements and make good use of available resources, the on-going impact line transect dolphin monitoring data collected by HyD's *Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge. Hong Kong Link Road - Section between Scenic Hill and Hong Kong Boundary Crossing Facilities* on the monthly basis is adopted to avoid duplicates of survey effort.

5.2 MONITORING EQUIPMENT

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

Table 5.1 Dolphin Monitoring Equipment

Equipment	**Model**
Global Positioning System (GPS)	Garmin 18X-PC Geo One Phottix
Camera	Nikon D90 300m 2.8D fixed focus Nikon D90 20-300m zoom lens
Laser Binoculars	Infinitor LRF 1000
Marine Binocular	Bushell 7 x 50 marine binocular with compass and reticules
Vessel for Monitoring	65 foot single engine motor vessel with viewing platform 4.5m above water level

5.3 *MONITORING PARAMETER, FREQUENCIES AND DURATION*

Dolphin monitoring should cover all transect lines in Northeast Lantau (NEL) and the Northwest Lantau (NWL) survey areas twice per month throughout the entire construction period. The monitoring data should be compatible with, and should be made available for, long-term studies of small cetacean ecology in Hong Kong. In order to provide a suitable long-term dataset for comparison, identical methodology and line transects employed in baseline dolphin monitoring was followed in the impact dolphin monitoring.

5.4 *MONITORING LOCATION*

The impact dolphin monitoring was carried out in the NEL and NWL along the line transect as depicted in *Figure 5.1.* The co-ordinates of all transect lines are shown in *Table 5.2* below.

Table 5.2 Impact Dolphin Monitoring Line Transect Co-ordinates

Line No.		Easting	Northing		Line No.		Easting	Northing
1	Start Point	804671	814577		13	Start Point	816506	819480
1	End Point	804671	831404		13	End Point	816506	824859
2	Start Point	805475	815457		14	Start Point	817537	820220
2	End Point	805477	826654		14	End Point	817537	824613
3	Start Point	806464	819435		15	Start Point	818568	820735
3	End Point	806464	822911		15	End Point	818568	824433
4	Start Point	807518	819771		16	Start Point	819532	821420
4	End Point	807518	829230		16	End Point	819532	824209
5	Start Point	808504	820220		17	Start Point	820451	822125
5	End Point	808504	828602		17	End Point	820451	823671
6	Start Point	809490	820466		18	Start Point	821504	822371
6	End Point	809490	825352		18	End Point	821504	823761
7	Start Point	810499	820690		19	Start Point	822513	823268
7	End Point	810499	824613		19	End Point	822513	824321
8	Start Point	811508	820847		20	Start Point	823477	823402
8	End Point	811508	824254		20	End Point	823477	824613
9	Start Point	812516	820892		21	Start Point	805476	827081
9	End Point	812516	824254		21	End Point	805476	830562
10	Start Point	813525	820872		22	Start Point	806464	824033
10	End Point	813525	824657		22	End Point	806464	829598
11	Start Point	814556	818449		23	Start Point	814559	821739
11	End Point	814556	820992		23	End Point	814559	824768
12	Start Point	815542	818807					

Line No.		Easting	Northing		Line No.		Easting	Northing
12	End Point	815542	824882					

5.5 *MONITORING SCHEDULE FOR THE REPORTING MONTH*

Dolphin monitoring was carried out on 1, 5, 8 and 13 November 2013. The dolphin monitoring schedule for the reporting period is shown in *Appendix F*.

5.6 *RESULTS AND OBSERVATIONS*

A total of 268.17 km of survey effort was collected, with 100% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) during the November's surveys. Amongst the two areas, 98.97 km and 169.20 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 211.85 km and 56.32 km respectively. The survey efforts are summarized in *Appendix K*.

A total of twenty-one dolphins sighting were recorded during the two surveys. All sightings were made in NWL during the two sets of surveys in November, with no sightings made at all in NEL.

None of the 21 sightings was made in the proximity of this Project. The distribution of dolphin sightings during the reporting month is shown in *Figure 5.2*.

Encounter rates of Chinese White Dolphins are deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in November 2013 with the results presented in *Tables 5.3* and *5.4*.

Table 5.3 *Individual Survey Event Encounter Rates*

		Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	**Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)**
		Primary Lines Only	Primary Lines Only
NEL	Set 1: Nov 1st/5th	0.0	0.0
	Set 2: Nov 8th/13th	0.0	0.0
NWL	Set 1: Nov 1st/5th	10.3	50.0
	Set 2: Nov 8th/13th	16.1	76.1

Table 5.4 *Monthly Average Encounter Rates*

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	**Encounter rate (ANI)** (no. of dolphins from all on-effort sightings per 100 km of survey effort)

	Primary Lines Only	Both Primary and Secondary Lines	Primary Lines Only	Both Primary and Secondary Lines
Northeast Lantau	0.0	0.0	0.0	0.0
Northwest Lantau	13.2	11.2	63.1	53.2

Note: Overall dolphin encounter rates (sightings per 100km of survey effort) from all four surveys are conducted in November 2013 on primary lines only as well as both primary lines and secondary lines in Northeast and Northwest Lantau

The average group size of Chinese White Dolphins in November 2013 was 4.86 individuals per group. Twelve dolphin groups were composed of only 1-4 animals, while the other nine were larger groups with 5-11 animals per group.

During this month of dolphin monitoring, no adverse impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations

Due to monthly variation in dolphin occurrence within the Study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Taking into account of natural seasonal change in distribution patterns, which is also observed in baseline monitoring, it is suggested that a longer period of impact monitoring data should be obtained for comparison.

The Event Action Plan is provided in *Appendix L.*

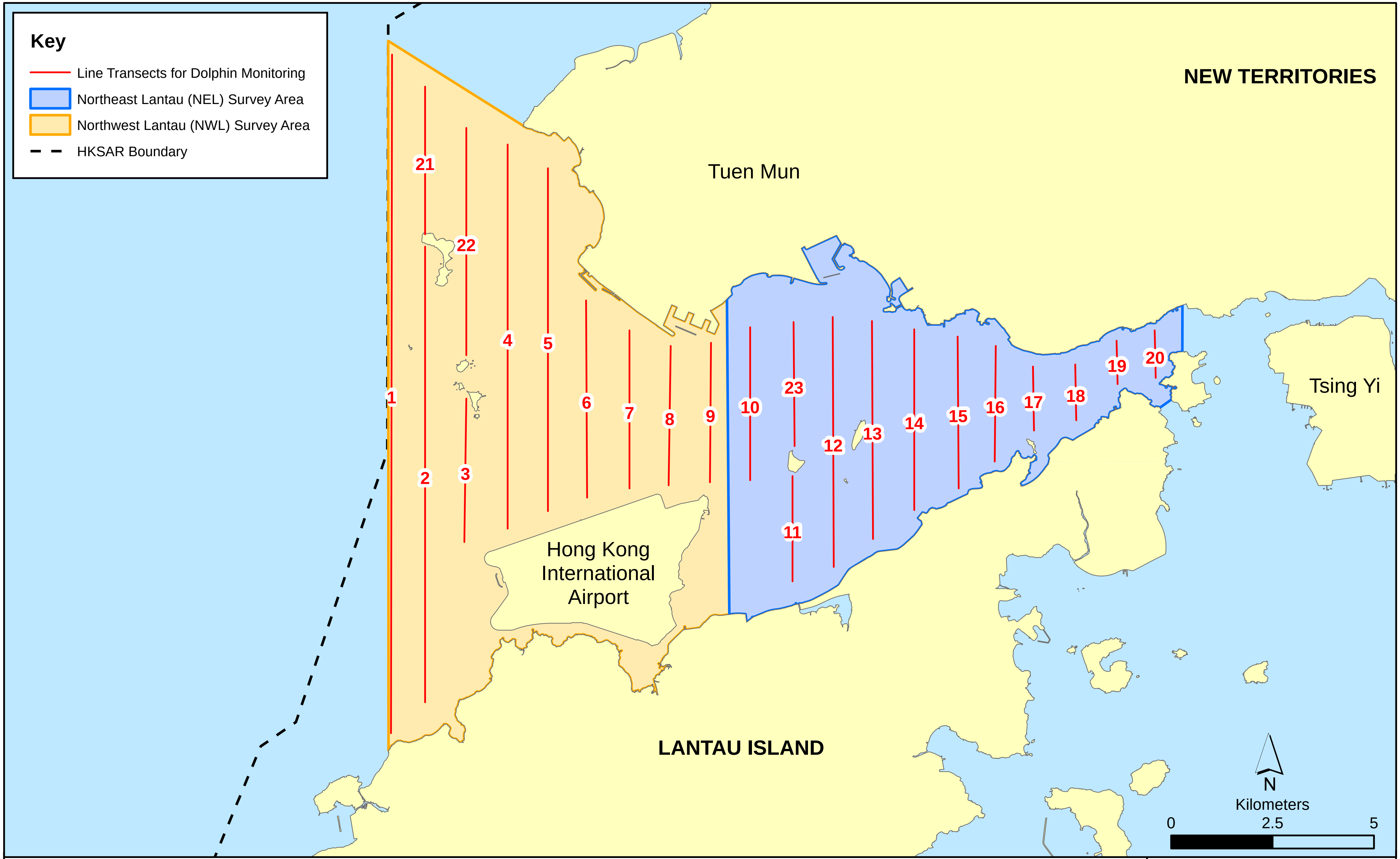

Figure 5.1

Layout of Transect Lines of Dolphin Monitoring in Northwest and Northeast Lantau Areas

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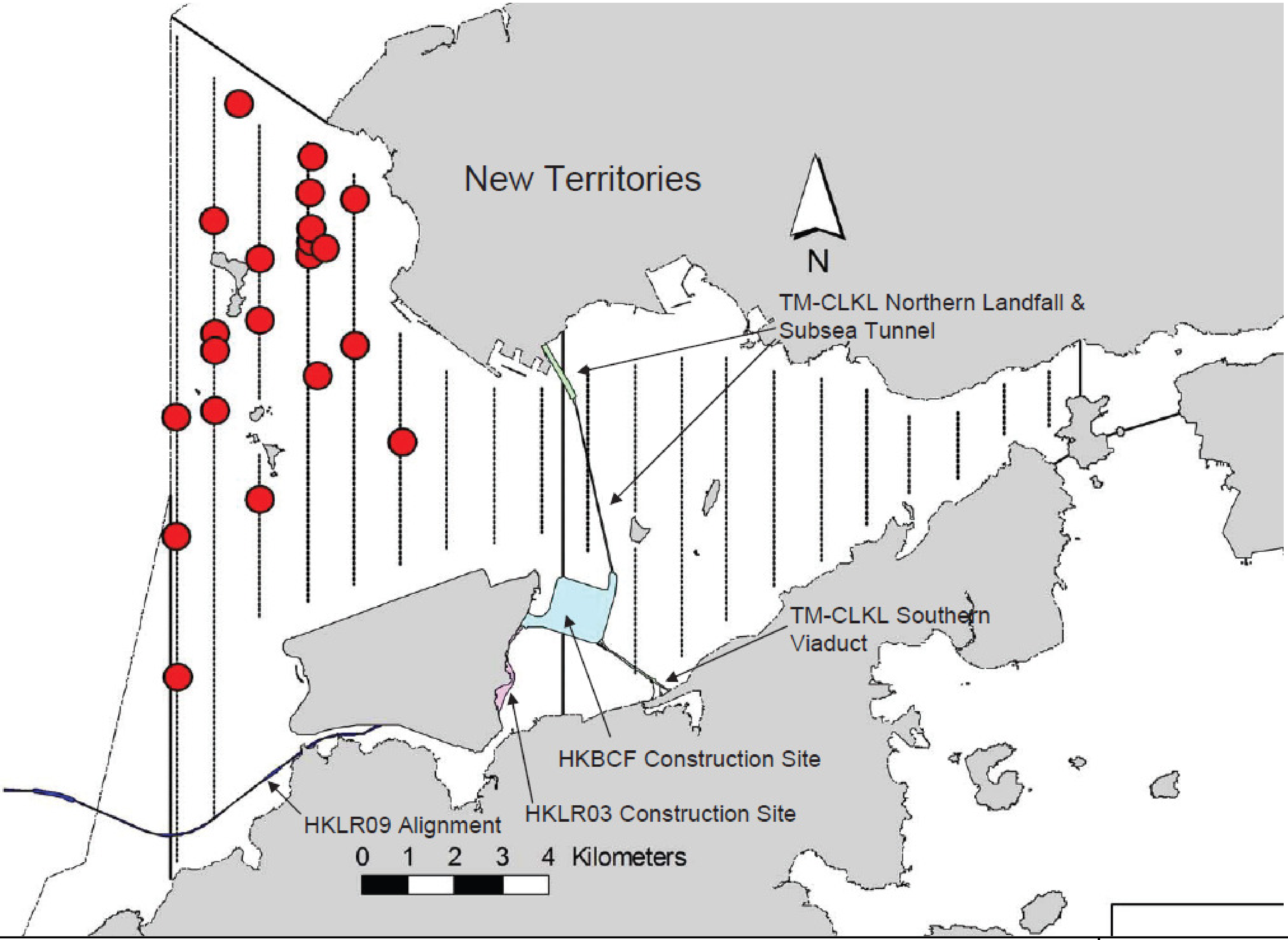

Figure 5.2

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HY/2012/07 TM-CLKL Southern Connection Viaduct Section
The distribution of dolphin sightings during the reporting period
(Source: Adopted from HKLR03 Monitoring Survey in November 2013)

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6 BORE PILING MONITORING

6.1 MONITORING REQUIREMENTS

Bore piling monitoring comprised land-based theodolite tracking, underwater noise monitoring and acoustic behavioural monitoring. Such monitoring is undertaken by qualified dolphin specialist, who has sufficient relevant post-graduate experience and publication in the respective aspects.

6.2 MONITORING FREQUENCIES

Table 6.1 summarizes the monitoring frequency of the bore piling monitoring as required in the Updated EM&A Manual.

Table 6.1 Bore Piling Monitoring Frequency

	Monitoring Frequency
Land-based Theodolite Tracking	As a minimum, 30 days before, 30 days during and 30 days after the bore piling works.
Underwater Noise Monitoring and Acoustic Behavioural Monitoring	30 days before and 30 days during the construction phase of the bore piling activities

6.3 MONITORING LOCATION

Table 6.2 summarizes the monitoring locations for bore piling monitoring.

Table 6.2 Bore Piling Monitoring Locations

Monitoring Component	Monitoring Locations
Land-based Theodolite Tracking	Pak Mong Station (*Figure 6.1*)
Underwater Noise Monitoring	Pier No. B1, B2, B3, B4, B5, and B6 (*Figure 6.2*)

Monitoring Component	Monitoring Locations
Acoustic Behavioural Monitoring	
Dipping Hydrophone	Predefined route in Northeast Lantau (overlapped with TM-CLKL alignment) and part of Northwest Lantau (Control Site) (*Figure 6.3*)
Ecological Acoustics Recorders (EARs)	Site C1 (within 500m of TM-CLKL alignment) and Site C2 (Control Site between Sha Chau and Lung Kwu Chau) (*Figure 6.3*)

6.4 *MONITORING METHODOLOGY*

Land-based Theodolite Tracking

The methodology of the present monitoring programme generally follows the one established under the Piwetz et al. 2012 (1) study, which is also part of the AFCD long-term marine mammal monitoring programme (ung 2012, 2013)(2)(3) . On each survey day, observers will

search systematically for Chinese white dolphins using the unaided eye and handheld binoculars (7 x 50) from the Pak Mong Station, overlooking the viaduct alignment to the northeast coast of Lantau Island, in particular the area around the six bored pile sites. Notably, all six bored piling sites were monitored during baseline phase, while three of these six sites will be chosen for construction phase and post-construction phase monitoring when the initial phase of the construction schedule is confirmed.

A theodolite tracking session will be initiated when an individual dolphin or group of dolphins is located, and focal follow methods will be used to track the dolphins. Within a group, a focal individual will be selected for the purposes of tracking the behaviour and movement of the group, based on its distinctive feature such as colouration or severe injury mark. The focal individual will then be tracked continuously via the theodolite, with positions recorded whenever the dolphin surfaces. If an individual cannot be positively distinguished from other members, the group will be tracked by

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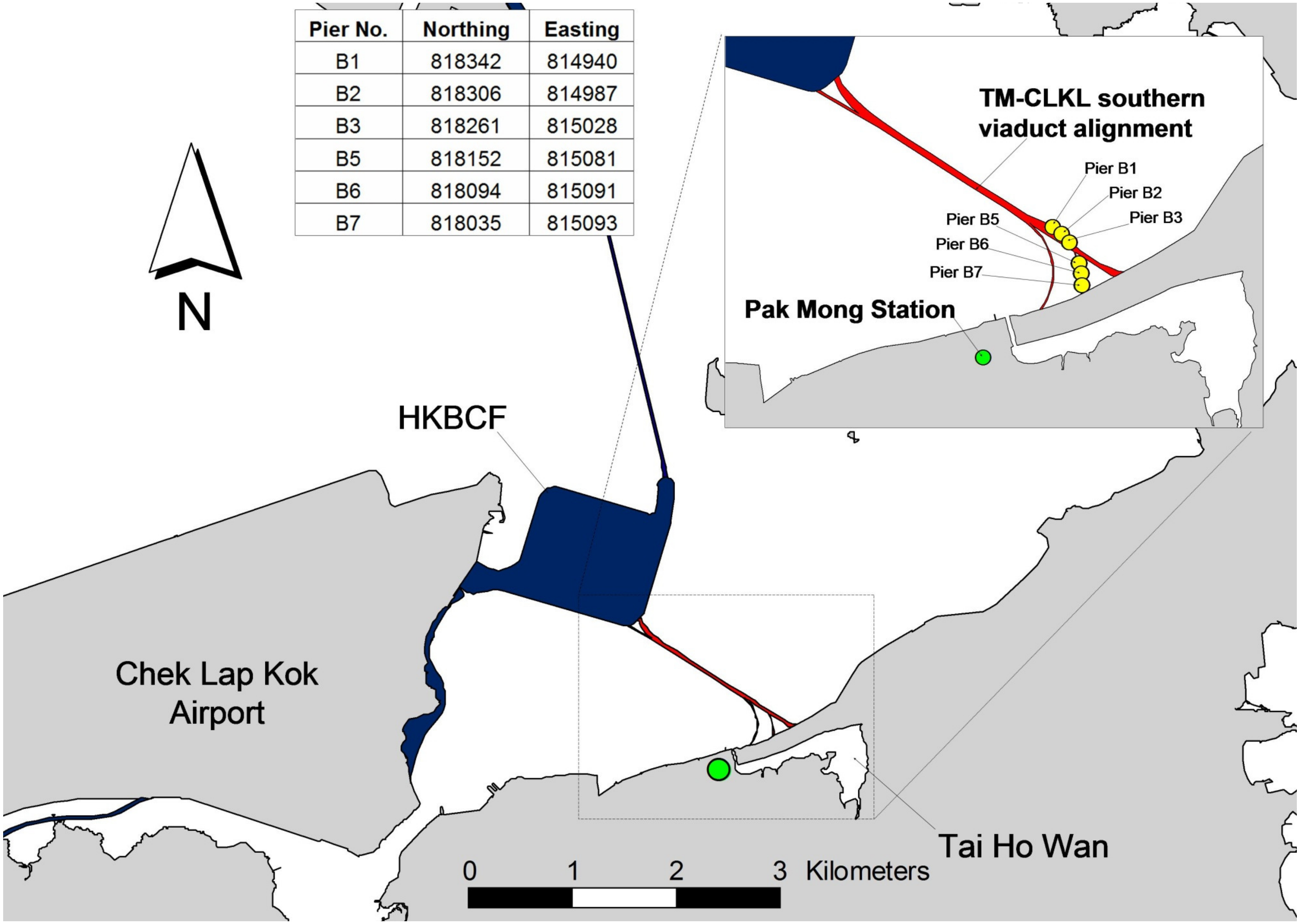
(1) Piwetz, S., Hung, S. K., Wang J. Y., Lundquist, D. and Würsig, B. 2012. Influence of vessel traffic on movements of Indo-Pacific humpback dolphins (Sousa chinensis) off Lantau Island, Hong Kong. Aquatic Mammals 38: 325-331.

(2) Hung, S. K. 2012. Monitoring of Marine Mammals in Hong Kong waters: final report (2011-12). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 171 pp.

(3) Hung, S. K. 2013. Monitoring of Marine Mammals in Hong Kong waters: final report (2012-13). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 168 pp.



Pier No.	Northing	Easting
B1	818342	814940
B2	818306	814987
B3	818261	815028
B5	818152	815081
B6	818094	815091
B7	818035	815093

Figure 6.1 Location of Pak Mong Station in NE Lantau with alignment of TM-CLKL Southern Connection Viaduct

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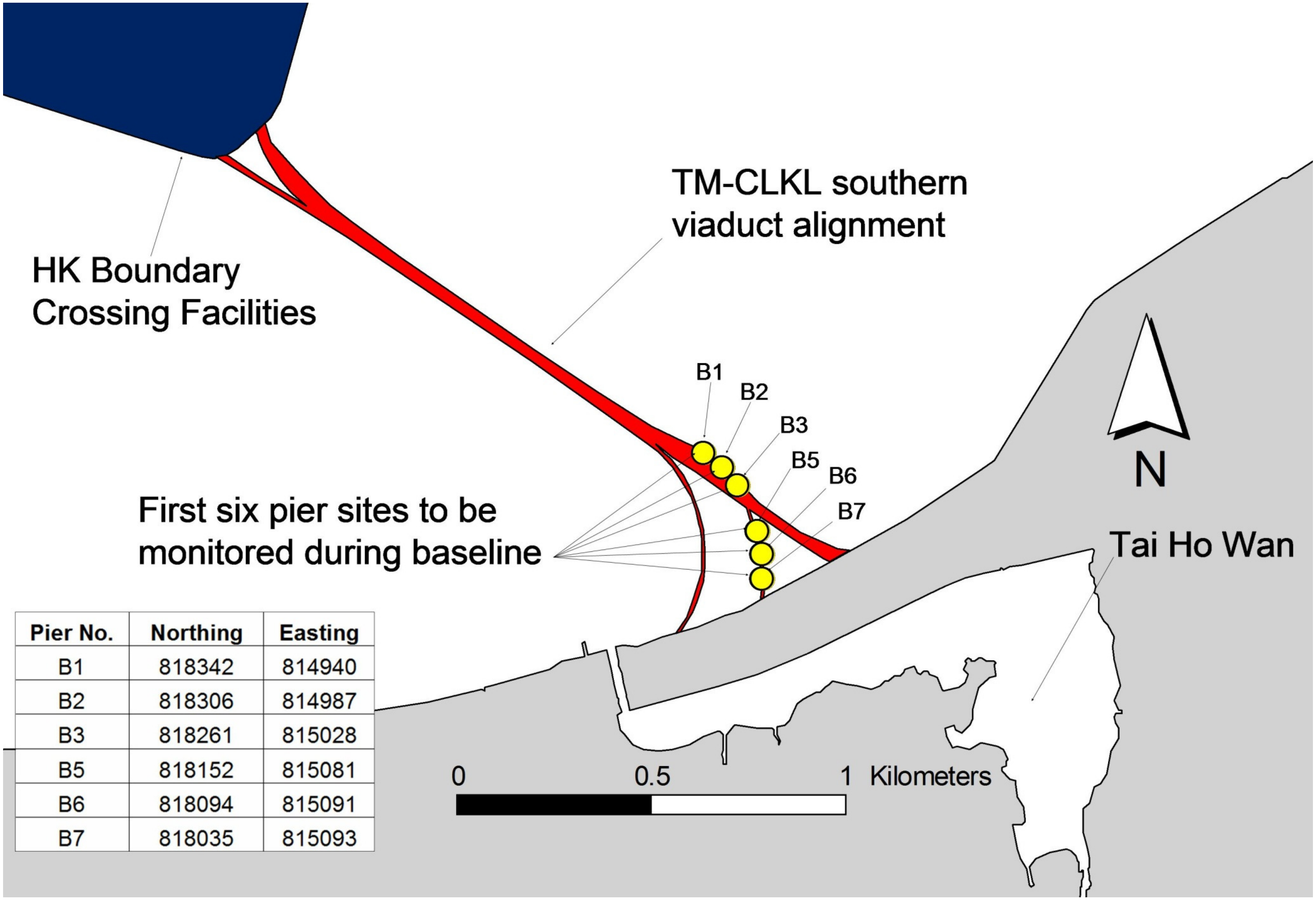

Pier No.	Northing	Easting
B1	818342	814940
B2	818306	814987
B3	818261	815028
B5	818152	815081
B6	818094	815091
B7	818035	815093

Figure 6.2 Location of the bored pile pier sites to be monitored for the underwater noise measurement study of TM-CLKL construction

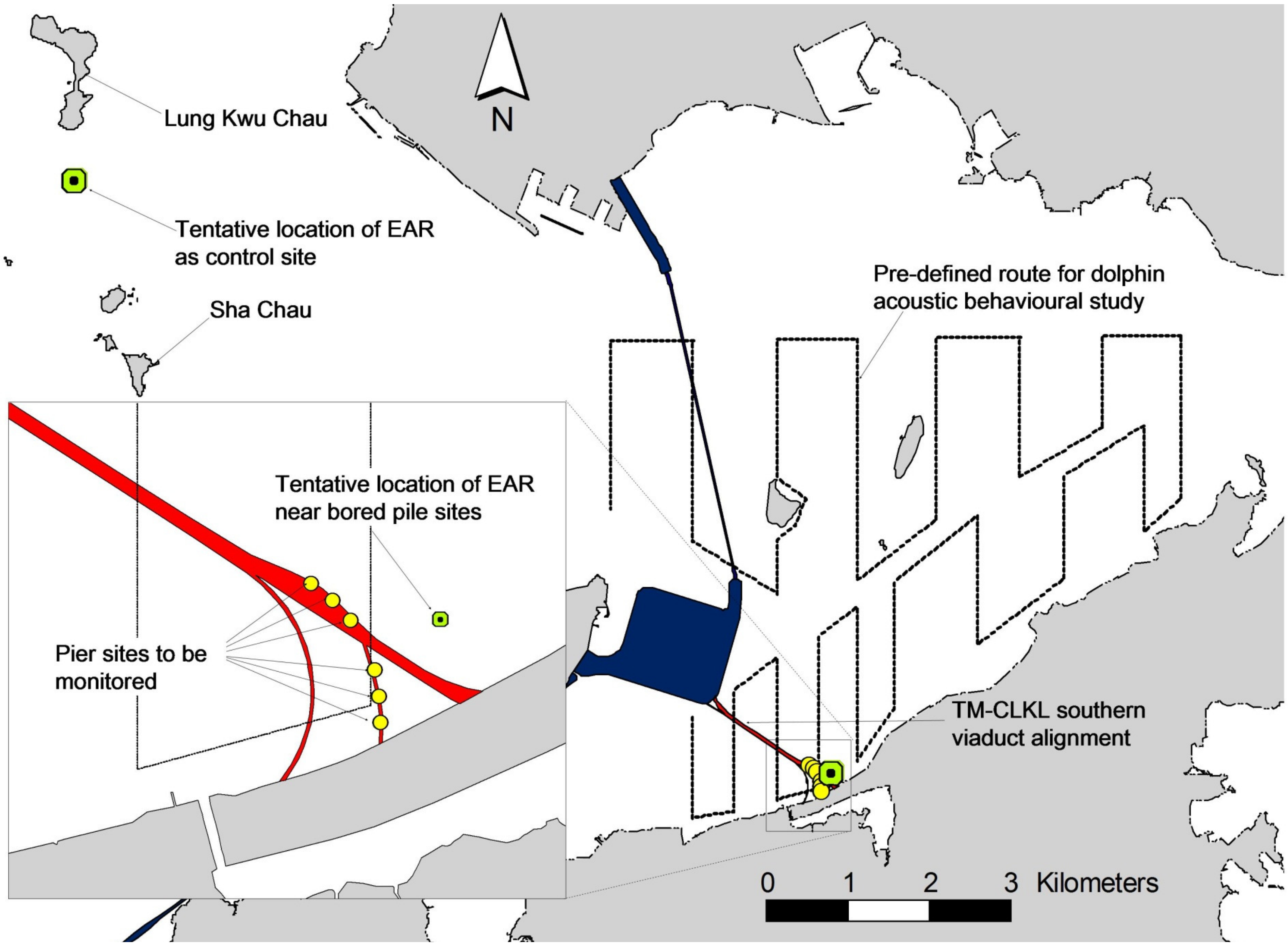

Figure 6.3 Map showing the tentative location of EAR deployments, pier sites to be monitored as well as pre-defined route for dolphin acoustic behavioural study

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recording positions based on a central point within the group when the dolphins surface.

Tracking will continue until animals are lost from view, move beyond the range of reliable visibility (>5 km), or when environmental conditions obstructed visibility (e.g. intense haze). Behavioural state data will also be recorded every 5 minutes for the focal individual or group. This interval is long enough to allow for determination of the behavioural state, and short enough to capture behavioural responses to the bored piling activities. Moreover, when multiple groups or individuals are present in the study area, attempts will be made to record the behaviours of all groups/individuals every 10 minutes, with spotters assisting in determining behaviour of the dolphins.

Positions of dolphins, boats and construction activities will be measured using a Sokkisha DT5 digital theodolite with ± 5-sec precision and 30-power magnification connected to a laptop computer running the program *Pythagoras* Version 1.2 (Gailey and Ortega-Ortiz 2002)(1) . This program calculates a real-time conversion of horizontal and vertical angles collected by the theodolite into geographic positions of latitude and longitude each time a fix is initiated. *Pythagoras* also displays positions, movements, and distances in real-time. When possible, the position of the focal dolphin will be recorded at every surfacing with use of *Pythagoras*. The position, type, and activity of all vessels within 5 km of the focal dolphin will also be recorded. An effort will be made to obtain at least several positions for each vessel, and additional positions will be acquired when vessels changed course or speed.

While the primary source of human disturbance to dolphins of interest in this study is bored piling works for the TM-CLKL Project, the presence of vessels may also have an effect on the behaviour and movement patterns of dolphins. Prior to the construction phase (i.e. baseline phase), the simultaneous tracking of dolphins and boats over time provides information on the speed and orientation of dolphins, as well as their movements in relation to vessel activities. Other construction activities and vessel movements in relation to the bored piling works will be recorded during the construction phase monitoring, and the same theodolite tracking and behavioural procedures will be followed as during baseline phase.

Underwater Noise Monitoring Study using Dipping Hydrophone

The underwater sound recording system consists of a high-sensitivity, high-bandwidth hydrophone (International Transducer Corporation ITC-6050c) and two-channel audio recorder (Sound Devices 702T). The hydrophone will be deployed from the stern of the research vessel, a deployment scheme sometimes referred to as a “dipping hydrophone”, approximately mid-water

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(1) Gailey, G. A. and Ortega-Ortiz J. 2002. A note on a computer-based system for theodolite tracking of cetaceans. Journal of Cetacean Research and Management 4: 213-218

column at a depth of 5 m beneath a 2 m spar buoy. The hydrophone cable is faired to streamline water flow around the cable, reducing pseudonoise and eliminating cable vibration. The vessel will "go quiet" (its engine, generator, bilge pump, and depth sounder turned off) and drift for the duration of each recording. The recording system and deployment method generally follow that of another well-established study of underwater sounds in Hong Kong waters (Würsig and Greene 2002)(1) .

The ITC-6050c is a wide-band hydrophone with a built-in, low-noise preamplifier for optimum noise performance. Its nominal operating band is 30 Hz to 70 kHz, and its self-noise level is well below Knudsen Sea State 0 up to 20 kHz. The hydrophone signal will be amplified as needed via a postamplifier with user-selectable gains from 0 to 60 dB in 10 dB increments. The audio recorder will be configured to sample 16-bit data received on each of its two channels at a rate of 192 kHz, thus allowing analysis of the acoustic data up to 96 kHz. According to Section 6.4.5 of the EM&A Manual, "the acoustic results of the monitoring should be analyzed in terms of both the broadband range (100 Hz to 25.6 kHz) and, also, the dolphin sensitive range (400 Hz to 12.6 kHz)." The acoustic data collected from the present underwater noise study was analyzed between 100 Hz and 50 kHz, in compliance with the EM&A Manual requirement.

Observers will log document the recording date, start and end times, hydrophone and water depths, Beaufort sea state, survey area, and postamplifier gain in each recording. Wind speed, often directly correlated with underwater levels, will be measured and documented in the survey team's logs. The wind speed measurements will be performed with a handheld Kestrel 1000 anemometer, containing an impeller with precision axle and low-friction bearings, providing 0.1 m/s resolution between 0.6–40.0 m/s and an accuracy (calculated using two standard deviations) of the larger of 3% of the reading, least significant digit, or 0.1 m/s.

Dolphin Acoustic Behavioural Study using Dipping Hydrophone

During dedicated acoustic surveys, the survey team of 2-3 HKCRP researchers will conduct systematic search for dolphins within the study area. The survey protocol to search for dolphins is similar to the line-transect survey methodology adopted in the vessel survey under the AFCD long-term marine mammal monitoring programme (Hung 2012, 2013)(2)(3) as well as various HZMB EM&A dolphin monitoring programmes. For each survey, a 15-m inboard vessel with an open upper deck will be used to make observations

(1) Würsig, B. and Greene, C. R., Jr. 2002. Underwater sounds near a fuel receiving facility in western Hong Kong: relevance to dolphins. Marine Environmental Research 54: 129–145

(2) Hung, S. K. 2012. Monitoring of Marine Mammals in Hong Kong waters: final report

(2011-12). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 171 pp.

(3) Hung, S. K. 2013. Monitoring of Marine Mammals in Hong Kong waters: final report

(2012-13). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 168 pp from the flying bridge area, at a visual height of 4-5 m above water surface. The two observers searched with unaided eyes and 7 x 50 marine binoculars ahead of the vessel (between 270° and 90° in relation to the bow, which is defined as 0°). The survey team will record effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance travelled in each series (a continuous period of search effort) with the assistance of a handheld GPS.

When dolphins are sighted, the survey team will end the search effort, and the research vessel will be diverted from its course to slowly approach the animals for group size estimation, assessment of group composition, and behavioural observations in the initial 5-10 minutes. The dipping hydrophone will then be deployed 3 to 7 metres below the sea surface by 2-metre long spar buoy from the stern of the research vessel, with vessel engine noise off and the vessel drifting. Broadband dolphin recordings will be made with the same set of underwater sound recording system as mentioned in Section 2.3.1 (see previous paragraph for detailed description). According to Section 6.4.5 of the EM&A Manual, "the acoustic results of the monitoring should be analyzed in terms of both the broadband range (100 Hz to 25.6 kHz) and, also, the dolphin sensitive range (400 Hz to 12.6 kHz)." Dolphin acoustic data collected from the recording system will be analyzed from 100 Hz and up to 40 kHz, which avoided a hydrophone resonance frequency at 50 kHz. This range would be sufficient to detect the presence of dolphin acoustic signals and their temporal parameters (e.g. click intervals), while it is also in compliance with the EM&A Manual requirement.

During the dipping hydrophone deployment, the date, start and end times, hydrophone and water depths, Beaufort sea state, survey area, locations, gain, event, and notes will be taken for each recording in five-minute intervals. Within each corresponding five-minute interval, observers will also note variables including the group size, group composition and general behaviour during the 5-minute period (i.e. feeding, socializing, travelling, resting, milling and any aerial activity). The number of vessels that passed within 500 m of the dolphin group will also be recorded during the same 5-minute interval, with special notes on close approaches by vessels within 100 m of dolphins, including the time of closest approach and any behavioural reaction being noted. Distances of vessels will be gathered by hand-held laser rangefinder (*Bushnell* Yardage Pro 800; maximum range of detection for most objects: 720 metres; ranging accuracy ± 2 metres under most circumstances). Also, notes will be made on the approximate distance (i.e. 0-250m, 250-500m, >500 m) of the dolphin groups to the hydrophone during the 5-minute interval. Notably, positions of dolphin group will be recorded continuously during the entire focal follow session to examine their movements in detail, especially when they occur in the vicinity of the TM-CLKL alignment.

Passive Acoustic Monitoring using Ecological Acoustic Recorders

Two sets of EARs will be deployed at two sites in North Lantau, one near the bored piling site and another at a control site between Sha Chau and Lung Kwu Chau. The EARs will be deployed and recovered by a professional dive team from Oceanway Corporation Limited. During each deployment, the EAR serial number, as well as the time and date of deployment will be recorded. Moreover, the GPS position, water depth and type of substrate at the deployment location will also be recorded.

The EARs will be programmed to record on a 20% duty cycle (1 minute “on” for every 5 minutes). Recordings will be from approximately 20 Hz at the low end to 32 kHz at the high end, which effectively covered a major part of the acoustic channel of the Chinese White Dolphins (Sims et al. 2011)(1) . Data from the EARs was downloaded onto a computer hard disk at the end of the baseline monitoring period, and will then be re-deployed at the same location before the start of bored piling works until the study is completed at the end of the 30 days of construction phase monitoring.

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(1) Sims, P. Q., Vaughn, R., Hung, S. K. and Würsig, B. 2011. Sounds of Indo-Pacific humpback

dolphins (Sousa chinensis) in West Hong Kong: A preliminary description. Journal of the Acoustical Society of America, EL48-EL53 (doi: 10.1121/1.3663281).

7 *ENVIRONMENTAL SITE INSPECTION AND AUDIT*

7.1 *SITE INSPECTION*

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, four (4) site inspections were carried out on 6, 13, 20 and 27 November 2013.

Particular observations during the site inspections are described below:

Air Quality

The Contractor was reminded to implement dust suppression measures more frequently, especially on water spraying at Works Area WA5.

Noise

No adverse observation was identified in the reporting month.

Water Quality

The Contractor was recommended to set up an appropriate wastewater treatment system in the work site.

Marine Ecology

Pre-translocation survey at Yam Tsai Wan was conducted on 19 October 2013 and the subsequent coral translocation and audit survey was carried out at Tai Ho Wan and Yam Tsai Wan on 24 October 2013. The post-translocation monitoring is scheduled in January 2014.

Daily 250 m marine mammal exclusion zone monitoring was undertaken within the reporting month. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* were recorded in November 2013 during the exclusion zone monitoring. In addition, acoustic decoupling monitoring and marine vessel control were implemented in this reporting month.

Chemical and Waste Management

The drip tray stopper was found missing for one of the generators in WA 5 which was then being rectified in timely-manner.

Landscape and Visual Impact

No adverse observation was identified in the reporting month.

Miscellaneous

The Environmental Permit was displayed at the site entrance.

The Contractor has rectified most of the observations as identified during environmental site inspection in the reporting month. Rectifications of remaining identified items are undertaken by the Contractor. Follow-up inspections on the status on provision of mitigation measures will be conducted to ensure all identified items are mitigated properly.

7.2 WASTE MANAGEMENT STATUS

The Contractor had submitted application form for registration as chemical waste producer under the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.

As advised by the Contractor, 560 m^3 of inert C&D Materials are generated and disposed of in the reporting period and 37 m^3 of inert C&D Materials are disposed of as public fill. 22.05 tonnes of general refuse were generated and disposed of in the reporting period. Monthly summary of waste flow table is detailed in *Appendix M*.

The Contractor is advised to properly maintain on site C&D materials and waste 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.

The Contractor is reminded that chemical waste containers 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, Labelling and Storage of Chemical Wastes.

7.3 ENVIRONMENTAL LICENSES AND PERMITS

The status of environmental licensing and permit is summarized in *Table 7.1* below.

Table 7.1 Summary of Environmental Licensing and Permit Status

Statutory Reference	License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
EIAO	Environmental Permit	EP-354/2009/A	8 Dec 2010	NA	HyD	Tuen Mun- Chek Lap Kok Link
NCO	Construction Dust Notification	361571	5 Jul 2013	NA	GCL	-
NCO	Construction Dust Notification	362093	17 Jul 2013	NA	GCL	Works Area 2 and 3
WDO	Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	NA	GCL	Chemical waste produced in Contract HY/2012/07
WDO	Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	NA	GCL	Chemical waste produced in Contract HY/2012/07
WDO	Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	NA	GCL	Chemical waste produced in Contract HY/2012/07
WDO	Construction Waste Disposal Account	7017735	10 Jul 2013	NA	GCL	Waste disposal in Contract HY/2012/07
WPCO	Waste Water Discharge License	Nil	Application in process	NA	GCL	Discharge of Construction Runoff
NCO	Construction Noise Permit	Nil	Application in process	NA	GCL	For Piling Works
NCO	Construction Noise Permit	GW-RW0660-13	27 Sep 2013	02 Feb 2014	GCL	For night works and works in general holidays

Statutory Reference	License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
NCO	Construction Noise Permit	GW-RS1129-13	31 Oct 2013	30 Apr 2014	GCL	For night works and works in general holidays
NCO	Construction Noise Permit	GW-RS1186-13	23 Oct 2013	24 Dec 2013	GCL	For night works and works in general holidays
NCO	Construction Noise Permit	GW-RS1187-13	24 Oct 2013	28 Feb 2014	GCL	For night

7.4 *IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES*

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

A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in *Appendix C*. The necessary mitigation measures were implemented properly for this Contract.

7.5 *SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT*

Results for 1-hour and 24-hour TSP monitoring and construction noise monitoring complied with the Action/ Limit levels in the reporting period. One (1) exceedance of Action Level for depth-averaged SS at SR4a was recorded in the reporting month. The exceedances were considered not related to the construction works of this Contract after further investigation.

Cumulative statistics on exceedances is provided in *Appendix N*.

7.6 *SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS*

The Environmental Complaint Handling Procedure is provided in *Figure 7.1*.

One (1) complaint was referred by EPD to various parties of the HZMB projects on 12 November 2013 regarding the noise nuisance arising from the operation or towing of barges by tug boats during restricted hours, particularly during the period from 23:00 to 07:00 of next day by HZMB Projects in the waters outside Tung Chung New Development Pier and near the barging point of CEDD's construction site of Site Formation at Tung Chung Areas 53 and 54.

With reference to the Contractor's site dairy of 12 November 2013, no site activity after 18:00 was undertaken on the concerned day. Thus, the noise complaint was considered as non-project related.

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

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

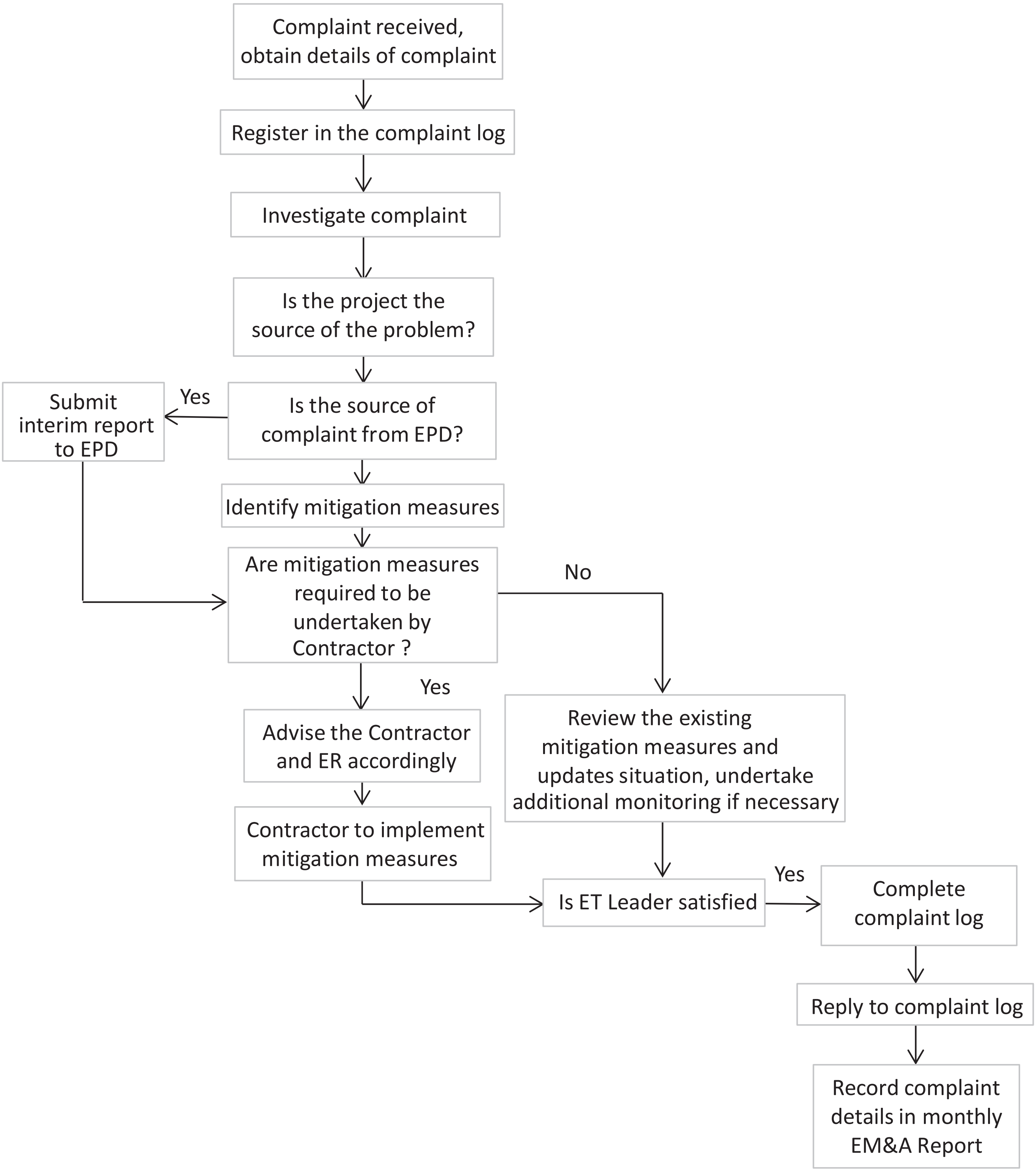

Figure 7.1 Environmental Complaint Handling Procedure

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DATE: 06/12/2013

Environmental
Resources
Management

ERM

8 FUTURE KEY ISSUES

8.1 CONSTRUCTION PROGRAMME FOR THE COMING MONTHS

As informed by the Contractor, the major works for the Contract in December 2013 and January 2014 will be:

Marine Works

- GI works at marine piers;
- Filling Platform at seawall; and
- Marine foundation at Viaduct E2, E5-8 and E13.

Land-based Works

- Additional GI fieldwork, Lab testing and permitting;
- Fence relocation at Viaduct A, C and D; and
- Site offices erection at WA2, WA3, WA5 and seawall.

8.2 KEY ISSUES FOR THE COMING MONTH

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of December 2013 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

8.3 MONITORING SCHEDULE FOR THE COMING MONTH

The tentative schedule for environmental monitoring in December 2013 is provided in *Appendix F*.

9 *CONCLUSIONS AND RECOMMENDATIONS*

9.1 *CONCLUSIONS*

The construction phase of the TM-CLKL Southern Connection Viaduct Section and the associated impact phase EM&A programme of the Project commenced on 31 October 2013.

1-hour TSP, 24-hour TSP, noise, water quality and dolphin monitoring were carried out in the reporting period.

Exceedance of Action Levels for depth-averaged SS level was recorded in one monitoring event in this reporting month. The review of monitoring data and works activities undertaken suggested that no marine works were being undertaken when exceedance was recorded and that construction activities have been proceeded in an environmentally acceptable manner.

Results for noise and air quality monitoring complied with the Action/ Limit levels in the reporting period.

A total of twenty-one dolphin s sighting were recorded during the two surveys. All sightings were made in NWL during the two sets of surveys with no sightings made at all in NEL in November 2013. None of the 21 sightings was made in the proximity of the TM-CLKL Southern Connection Viaduct Section. During this reporting period of dolphin monitoring, no adverse impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

Environmental site inspection was carried out four (4) times in November 2013. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

One (1) environmental complaint regarding noise nuisance was followed up and was considered to be not related to the Contract works.

9.2 *RECOMMENDATIONS*

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 by the Contractor to avoid dark smoke emission.
- Open stockpiles should be properly covered by the Contractor.

- The Contractor should provide water spraying to suppress fugitive dust for any dusty construction activity.

Construction Noise Impact

- Vessels and equipment operating should be checked regularly and properly maintained by the Contractor.

Water Quality Impact

- The Contractor should regularly review and maintain drainage systems to make sure they are functioning effectively.

- Proper drainage channels, bunds and set-up should be provided by the Contractor at the site to collect/ intercept the surface run-off or waste water generated from works area to ensure no direct discharge from site to surrounding water bodies.

Chemical and Waste Management

- All types of wastes should be collected and sorted accordingly and removed timely by the Contractor. They should be properly stored in designated areas within the works areas temporarily.

- All plants and vehicles on site should be properly maintained by the Contractor to prevent oil leakage.

- All drain holes of the drip trays within the works areas should be properly plugged by the Contractor to avoid any oil and chemical waste leakage.

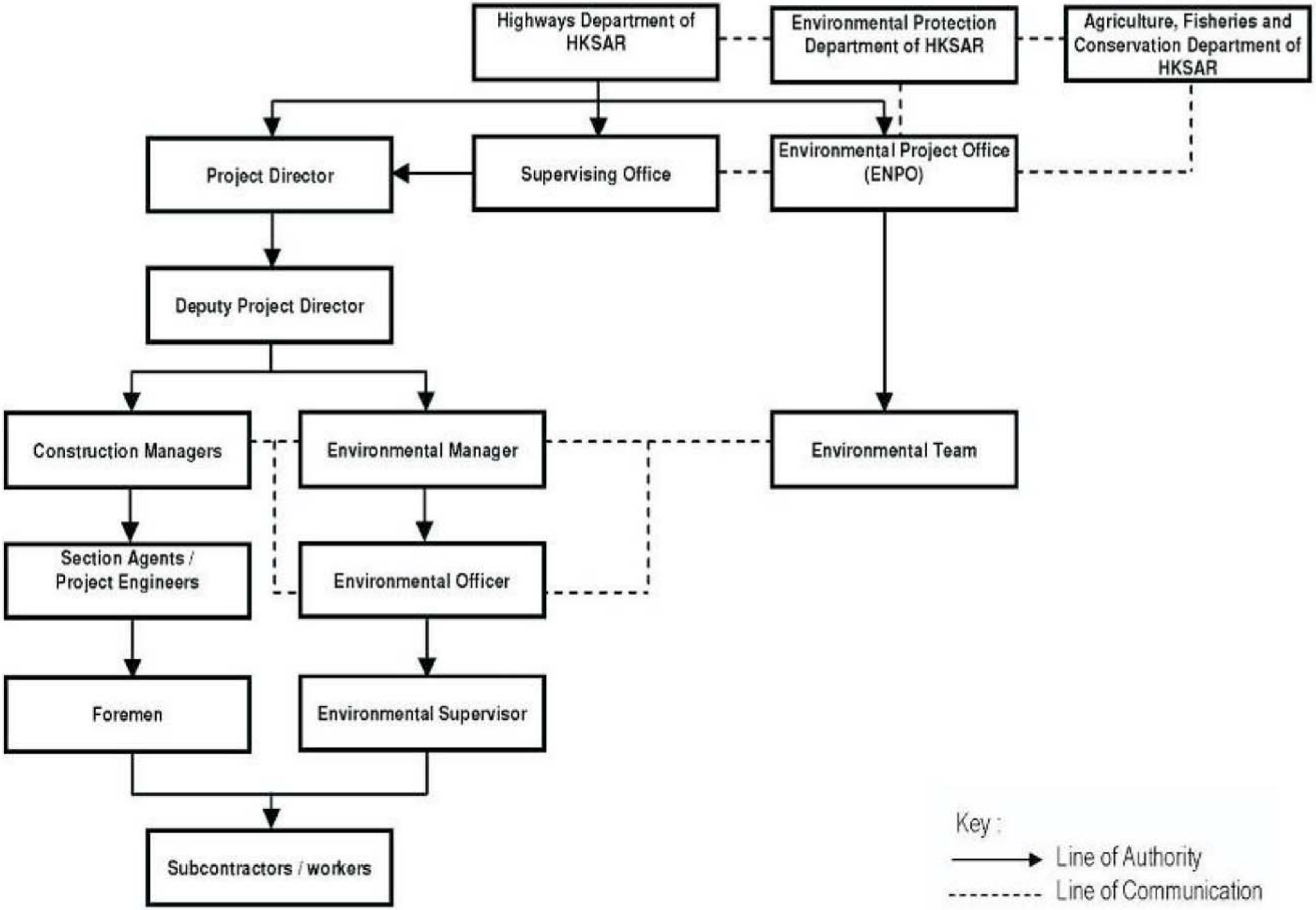
- Oil stains on soil surface should be cleared and disposed of as chemical waste by the Contractor.

Marine Mammal Exclusion Zone Monitoring

- Daily 250 m marine mammal exclusion zone monitoring was undertaken during the period in which marine works were being undertaken. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* were recorded in November 2013 during the exclusion zone monitoring.

Appendix A

Project Organization for Environmental Works



Appendix A

HY/2012/07 TMCLKL Southern Connection Viaduct
Project Organisation

FILE: 0215660f3
DATE: 05/12/2013

Environmental
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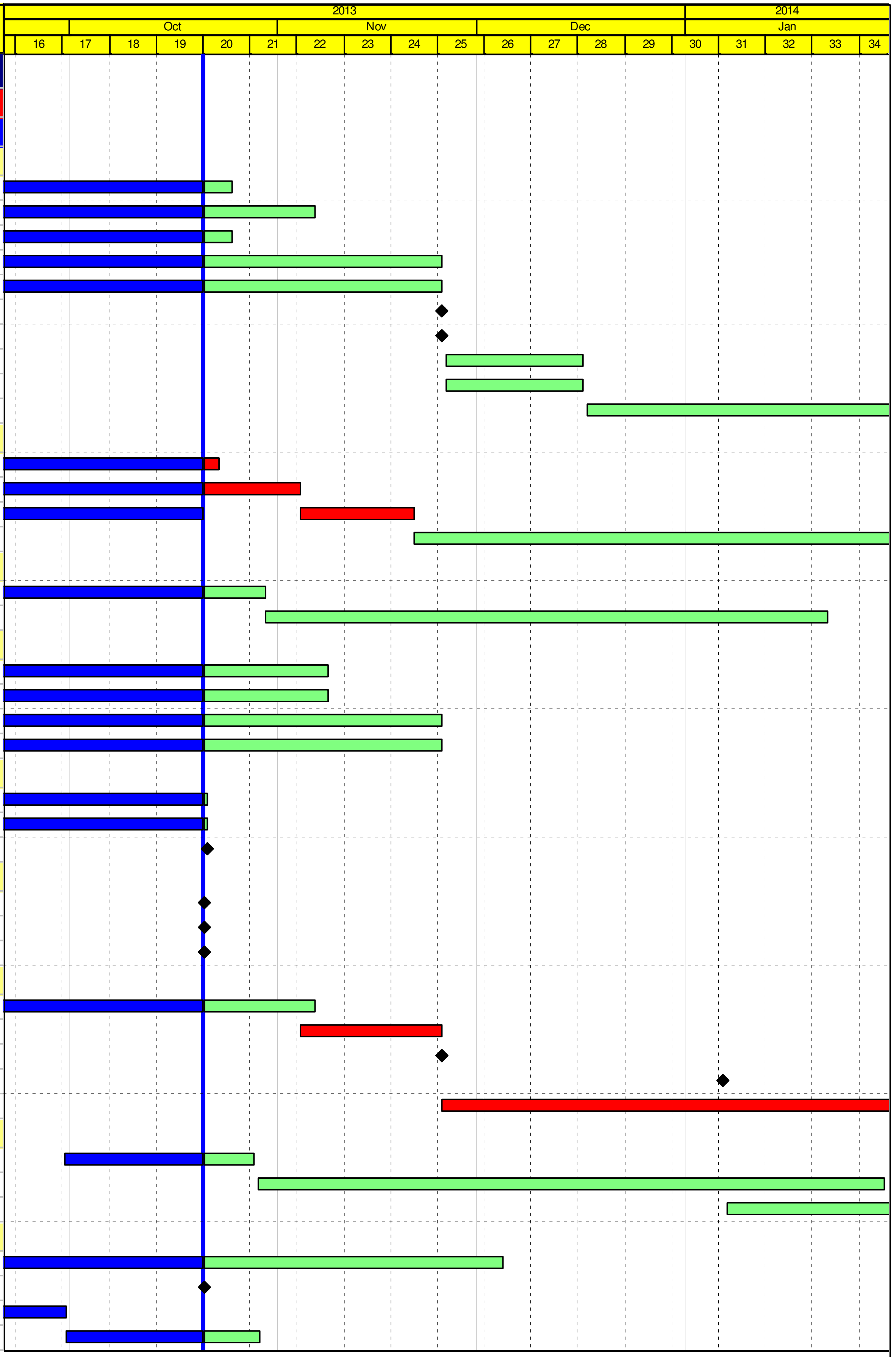
Appendix B

Three-Month Rolling Construction Programme

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
HY/2012/07 - Tuen Mun - Chek Lap Kok Southern Connection					
Preliminaries					
Design					
Ground Investigation					
AR0009	Consultation with GEO	4	29-Jul-13 A	25-Oct-13	78%
AR0010	IC/SO Approval of Ground Investigtaion Interpretative Report - AP03.00	13	29-Jul-13 A	6-Nov-13	83%
AR0012	IC/SO Approval of Additional GI Requirements	4	2-Aug-13 A	25-Oct-13	78%
AR0012a	Additional GI Fieldwork, Lab Testing and Permitting - E11 to E14 (E5-E8)	31	10-Sep-13 A	25-Nov-13	31%
AR0013	Additional GI Fieldwork, Lab Testing and Permitting - Other Areas	31	20-Aug-13 A	25-Nov-13	48%
AR0013a	Receipt of Additional Data - E11 to E14 (E5-E8)	0		25-Nov-13	0%
AR0014	Receipt of Additional Data - Other Areas	0		25-Nov-13	0%
AR0014a	E11 to E14 (E5-E8) Interpretation	15	26-Nov-13	16-Dec-13	0%
AR0015	Additional GI Interpretative Report - AP03.00	15	26-Nov-13	16-Dec-13	0%
AR0017	IC/SO Approval of Additional GI Interpretative Report - AP03.00	75	17-Dec-13	31-Mar-14	0%
Surveys and Investigations					
AR0021	Obtain Existing UU Records	2	24-Jun-13 A	23-Oct-13	88%
AR0022	Fieldwork and Permitting	11	8-Jul-13 A	4-Nov-13	82%
AR0023	Prepare Utility Report - AP04.00	13	19-Sep-13 A	21-Nov-13	15%
AR0024	IC/SO Approval of Utility Report - AP04.00	75	21-Nov-13	6-Mar-14	0%
Interface with BCF Contract					
AR0026	Develop Interface Matrix between Contracts	7	8-Jul-13 A	30-Oct-13	88%
AR0027	Finalise all Interface Details	60	30-Oct-13	22-Jan-14	0%
General Submissions					
AR0031	IC/SO Approval of Project Design Plan - AP01.00	15	29-Jul-13 A	8-Nov-13	80%
AR0033	IC/SO Approval of Design Memo - AP02.00	15	29-Jul-13 A	8-Nov-13	80%
AR0035	IC/SO Approval of Durability Assessment Report - AP06.00	26	2-Aug-13 A	25-Nov-13	65%
AR0037	IC/SO Approval of Seismic Impact Report - AP11.00 & AP12.00	26	19-Aug-13 A	25-Nov-13	65%
Overall Scheme Element Optimisation					
AR0054	Optimisation Studies	1	22-Jul-13 A	21-Oct-13	97%
AR0055	Selection of Optimisation Scheme	1	11-Sep-13 A	21-Oct-13	86%
AR0056	Confirm Design Optimisation Scheme	0		21-Oct-13	0%
GCL Erection Sequence and Method					
AR0060a	Receipt of Final Erection Sequence and Loads Bridge A	0		21-Oct-13*	0%
AR0060d	Receipt of Final Erection Sequence and Loads Bridge D	0		21-Oct-13*	0%
AR0061	Receipt of Final Erection Sequence and Loads optimised	0		21-Oct-13	0%
Gazette and Alignment (assume no gazette change)					
AR0068	IC/SO Approval of Alignment AIP - BP01.00	13	2-Aug-13 A	6-Nov-13	81%
AR0069	Finalise Alignment DDA	15	4-Nov-13	25-Nov-13	0%
AR0070	Submission of Alignment DDA - BP01.01	0		25-Nov-13	0%
AR0070a	Earliest IC Certificate for DDA - BP01.01	0		6-Jan-14	0%
AR0071	IC/SO Approval of Alignment DDA - BP01.01	75	25-Nov-13	10-Mar-14	0%
General Viaduct Submission					
AR0075	Preparation of Viaduct E&M Works AIP - BP21.00	6	30-Sep-13 A	28-Oct-13	70%
AR0076	IC/SO Approval of Viaduct E&M Works AIP - BP21.00	68	29-Oct-13	30-Jan-14	0%
AR0077	Preparation of Viaduct E&M Works DDA - BP21.01	30	7-Jan-14	17-Feb-14	0%
Viaduct B Workflow (assume update for optimisation + add'l GI)					
AR0089	IC/SO Approval of Viaduct B AIP - DP12.00	33	30-Aug-13 A	4-Dec-13	51%
AR0090	Receipt of Data for Final Analysis	0		21-Oct-13	0%
AR0091	Update Midas Model	0	11-Sep-13 A	30-Sep-13 A	100%
AR0092	Final Pile Loads and Global Analysis	7	30-Sep-13 A	29-Oct-13	35%



🟦 Actual Work
🟩 Planned Bar
🟥 Critical Bar
◆ ◆ Milestone

Date	Revision	Checked	Approved
28-Jun-13	3M-Rolling Program...	RT	
21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 1 of 8 Pages)

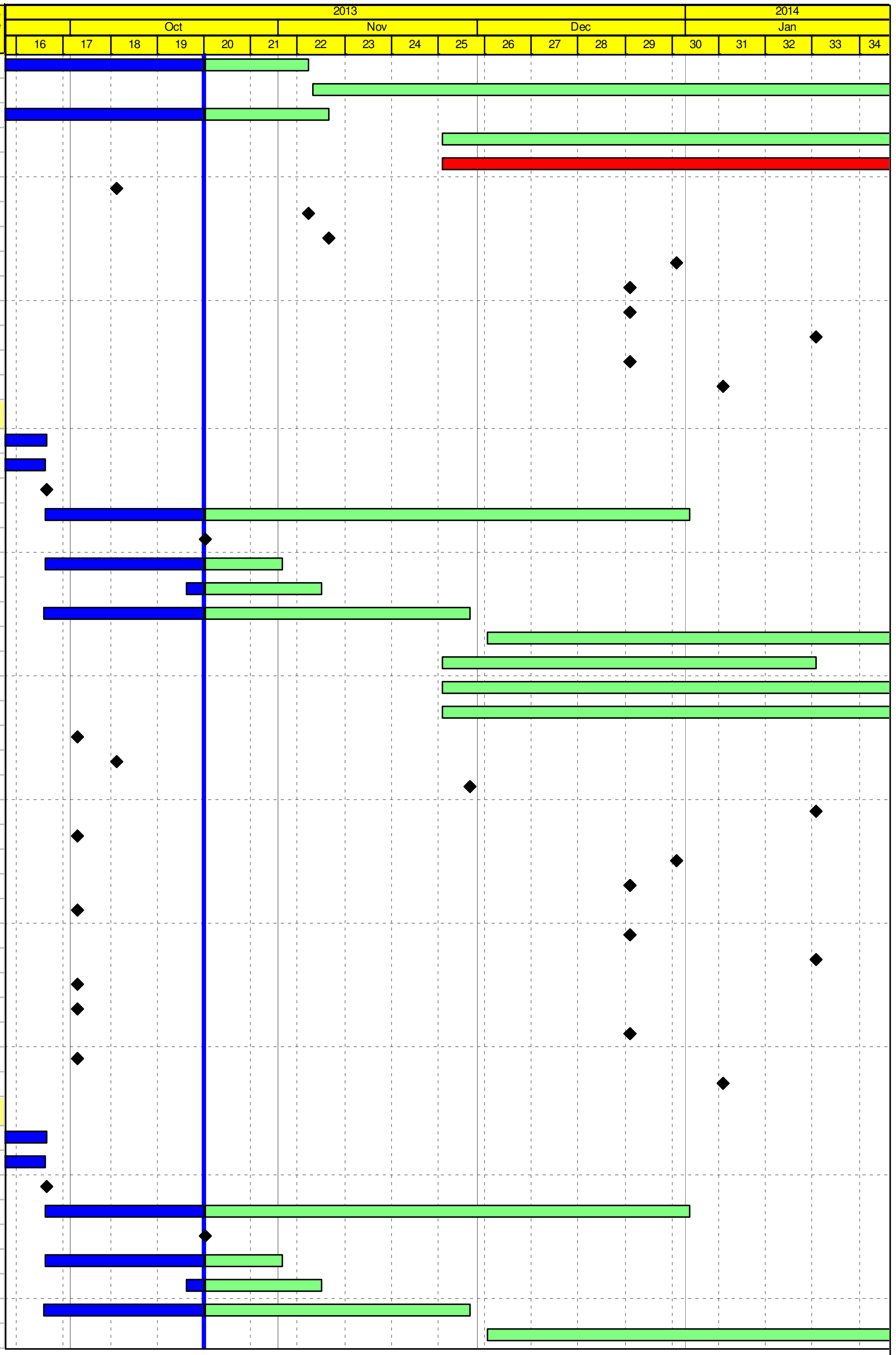
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
AR0093	Foundation DDA - DP12.01	12	11-Sep-13 A	5-Nov-13	70%
AR0094	IC/SO Approval of Foundation (Late) DDA - DP12.01	75	6-Nov-13	18-Feb-14	0%
AR0095	Preparation of Pilecap Precast Shells DDA	15	30-Aug-13 A	8-Nov-13	50%
AR0096	Preparation of Substructure DDA - DP12.02	50	25-Nov-13	3-Feb-14	0%
AR0097	Preparation of Superstructure DDA - DP12.03	70	25-Nov-13	3-Mar-14	0%
AR0103	Typical Pile Reinforcement - Stainless Rebar	0		8-Oct-13 A	100%
AR0104	Final Pile Reinforcement and Socket H Pile Details	0		5-Nov-13	0%
AR0105	Precast Pilecap Shell Shape and Reinforcement	0		8-Nov-13	0%
AR0107	Typical Pilecap Reinforcement - Stainless Steel Rebar	0		30-Dec-13	0%
AR0108	Typical Pilecap Reinforcement - Regular Rebar	0		23-Dec-13	0%
AR0112	Typical Segment Shapes for Moulds	0		23-Dec-13	0%
AR0113	Typical Segment Reinforcement	0		20-Jan-14	0%
AR0118	Final Bearing Schedule	0		23-Dec-13	0%
AR0120	Final Movement Joint Schedule	0		6-Jan-14	0%
Viaduct E11-E14 (E5 and E6)					
AR0138	Preparation of Foundation Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0139	Preparation of Sustructure and Superstructure Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0140	Submssion of Viaduct AIP - DP15.00	0		27-Sep-13 A	100%
AR0141	IC/SO Approval of Viaduct AIP - DP15.00	53	27-Sep-13 A	1-Jan-14	22%
AR0142	Receipt of Data for Final Analysis	0		21-Oct-13	0%
AR0143	Update Midas Model	10	27-Sep-13 A	1-Nov-13	55%
AR0144	Final Pile Loads and Global Analysis	14	18-Oct-13 A	7-Nov-13	7%
AR0145	Foundation DDA - DP15.07	30	27-Sep-13 A	29-Nov-13	33%
AR0146	IC/SO Approval of Foundation (Late) DDA - DP15.07	75	2-Dec-13	14-Mar-14	0%
AR0147	Preparation of Pilecap Precast Shells DDA	40	25-Nov-13	20-Jan-14	0%
AR0148	Preparation of Substructure DDA - DP15.08	60	25-Nov-13	17-Feb-14	0%
AR0149	Preparation of Superstructure DDA -DP15.09	90	25-Nov-13	31-Mar-14	0%
AR0153	Provisional Segment Types and Weights	0		2-Oct-13 A	100%
AR0155	Typical Pile Reinforcement - Stainless Rebar	0		8-Oct-13 A	100%
AR0156	Final Pile Reinforcement and Socket H Pile Details	0		29-Nov-13	0%
AR0157	Precast Pilecap Shell Shape and Reinforcement	0		20-Jan-14	0%
AR0158	Typical Pilecap Shapes for Formwork	0		2-Oct-13 A	100%
AR0159	Typical Pilecap Reinforcement - Stainless Steel Rebar	0		30-Dec-13	0%
AR0160	Typical Pilecap Reinforcement - Regular Rebar	0		23-Dec-13	0%
AR0162	Typical Pier Shapes for Formwork Planning	0		2-Oct-13 A	100%
AR0164	Typical Segment Shapes for Moulds	0		23-Dec-13	0%
AR0165	Typical Segment Reinforcement	0		20-Jan-14	0%
AR0167	Typical Anchorage and Tendon Types	0		2-Oct-13 A	100%
AR0169	Provisional Bearing Schedule	0		2-Oct-13 A	100%
AR0170	Final Bearing Schedule	0		23-Dec-13	0%
AR0171	Provisional Movement joint Schedule	0		2-Oct-13 A	100%
AR0172	Final Movement Joint Schedule	0		6-Jan-14	0%
Viaduct E11-E14 (E7 and E8)					
AR0184	Preparation of Foundation Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0185	Preparation of Substructure and Superstructure Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0186	Submssion of Viaduct AIP - DP15.00	0		27-Sep-13 A	100%
AR0187	IC/SO Approval of Viaduct AIP - DP15.00	53	27-Sep-13 A	1-Jan-14	22%
AR0188	Receipt of Data for Final Analysis	0		21-Oct-13	0%
AR0189	Update Midas Model	10	27-Sep-13 A	1-Nov-13	55%
AR0190	Final Pile Loads and Global Analysis	14	18-Oct-13 A	7-Nov-13	7%
AR0191	Foundation DDA - DP15.07	30	27-Sep-13 A	29-Nov-13	33%
AR0192	IC/SO Approval (Late) of Foundation DDA - DP15.07	75	2-Dec-13	14-Mar-14	0%



🟦 Actual Work
🟩 Planned Bar
🟥 Critical Bar
◆ ◆ Milestone

Date	Revision	Checked	Approved
28-Jun-13	3M-Rolling Program...	RT	
21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 2 of 8 Pages)

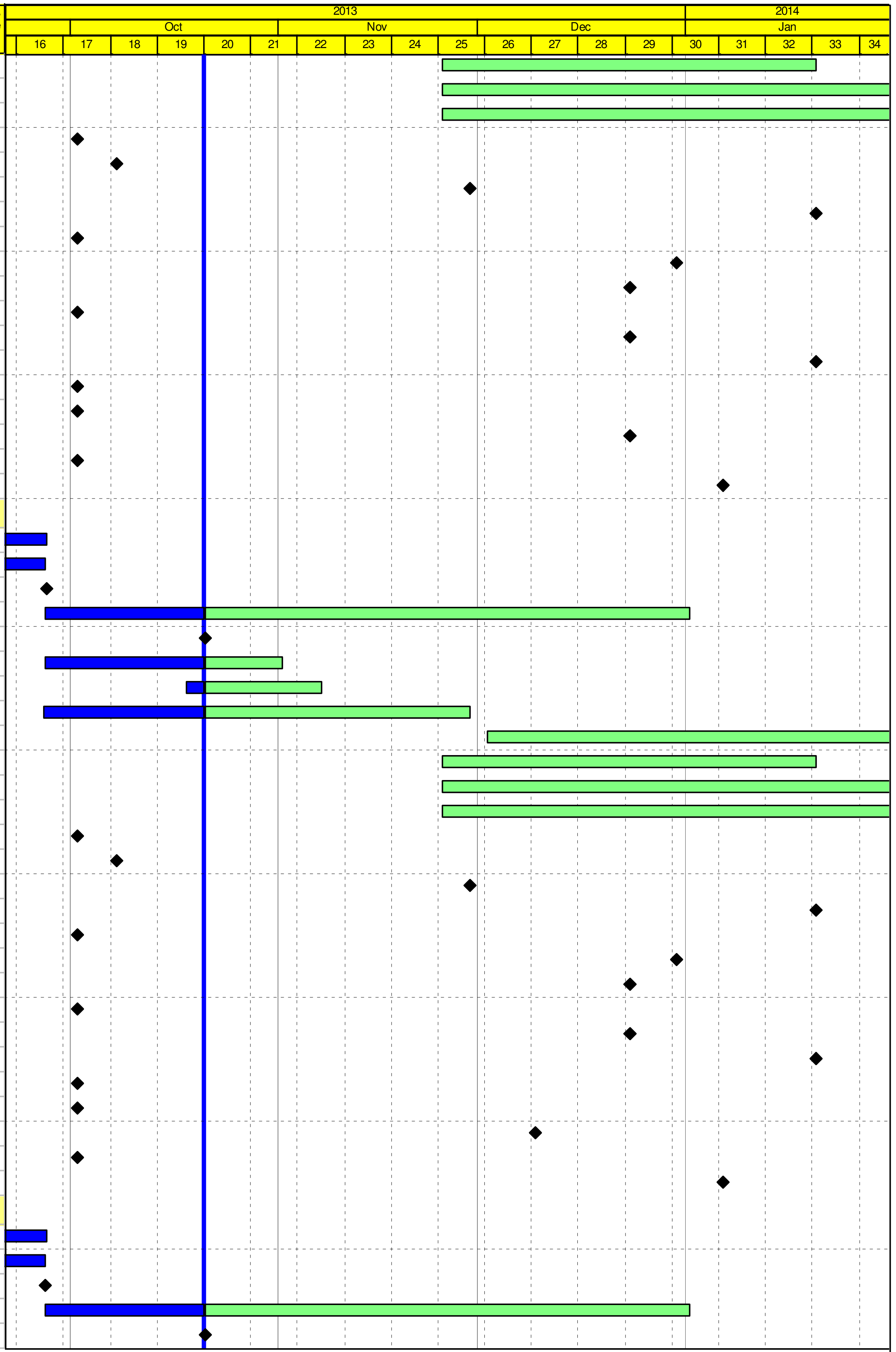
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
AR0193	Preparation of Pilecap Precast Shells DDA	40	25-Nov-13	20-Jan-14	0%
AR0194	Preparation of Substructure DDA - 15.08	60	25-Nov-13	17-Feb-14	0%
AR0195	Preparation of Superstructure DDA - DP15.09	90	25-Nov-13	31-Mar-14	0%
AR0199	Provisional Segment Types and Weights	0		2-Oct-13 A	100%
AR0201	Typical Pile Reinforcement - Stainless Rebar	0		8-Oct-13 A	100%
AR0202	Final Pile Reinforcement and Socket H Pile Details	0		29-Nov-13	0%
AR0203	Precast Pilecap Shell Shape and Reinforcement	0		20-Jan-14	0%
AR0204	Typical Pilecap Shapes for Formwork	0		2-Oct-13 A	100%
AR0205	Typical Pilecap Reinforcement - Stainless Steel Rebar	0		30-Dec-13	0%
AR0206	Typical Pilecap Reinforcement - Regular Rebar	0		23-Dec-13	0%
AR0208	Typical Pier Shapes for Formwork Planning	0		2-Oct-13 A	100%
AR0210	Typical Segment Shapes for Moulds	0		23-Dec-13	0%
AR0211	Typical Segment Reinforcement	0		20-Jan-14	0%
AR0213	Typical Anchorage and Tendon Types	0		2-Oct-13 A	100%
AR0215	Provisional Bearing Schedule	0		2-Oct-13 A	100%
AR0216	Final Bearing Schedule	0		23-Dec-13	0%
AR0217	Provisional Movement joint Schedule	0		2-Oct-13 A	100%
AR0218	Final Movement Joint Schedule	0		6-Jan-14	0%
Viaduct E2					
AR0231	Preparation of Foundation Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0232	Preparation of Sustructure and Superstructure Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0233	Submission of Viaduct AIP - DP15.00	0		27-Sep-13 A	100%
AR0234	IC/SO Approval of Viaduct AIP - DP15.00	53	27-Sep-13 A	1-Jan-14	22%
AR0235	Receipt of Data for Final Analysis	0		21-Oct-13	0%
AR0236	Update Midas Model	10	27-Sep-13 A	1-Nov-13	55%
AR0237	Final Pile Loads and Global Analysis	14	18-Oct-13 A	7-Nov-13	7%
AR0238	Foundation DDA - DP15.04	30	27-Sep-13 A	29-Nov-13	33%
AR0239	IC/SO Approval of Foundation (Late) DDA - DP15.04	75	2-Dec-13	14-Mar-14	0%
AR0240	Preparation of Pilecap Precast Shells DDA	40	25-Nov-13	20-Jan-14	0%
AR0241	Preparation of Substructure DDA - DP15.05	60	25-Nov-13	17-Feb-14	0%
AR0242	Preparation of Superstructure DDA - DP15.06	90	25-Nov-13	31-Mar-14	0%
AR0246	Provisional Segment Types and Weights	0		2-Oct-13 A	100%
AR0248	Typical Pile Reinforcement - Stainless Rebar	0		8-Oct-13 A	100%
AR0249	Final Pile Reinforcement and Socket H Pile Details	0		29-Nov-13	0%
AR0250	Precast Pilecap Shell Shape and Reinforcement	0		20-Jan-14	0%
AR0251	Typical Pilecap Shapes for Formwork	0		2-Oct-13 A	100%
AR0252	Typical Pilecap Reinforcement - Stainless Steel Rebar	0		30-Dec-13	0%
AR0253	Typical Pilecap Reinforcement - Regular Rebar	0		23-Dec-13	0%
AR0255	Typical Pier Shapes for Formwork Planning	0		2-Oct-13 A	100%
AR0257	Typical Segment Shapes for Moulds	0		23-Dec-13	0%
AR0258	Typical Segment Reinforcement	0		20-Jan-14	0%
AR0260	Typical Anchorage and Tendon Types	0		2-Oct-13 A	100%
AR0262	Provisional Bearing Schedule	0		2-Oct-13 A	100%
AR0263	Final Bearing Schedule	0		9-Dec-13	0%
AR0264	Provisional Movement joint Schedule	0		2-Oct-13 A	100%
AR0265	Final Movement Joint Schedule	0		6-Jan-14	0%
Viaduct E1					
AR0278	Preparation of Foundation Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0279	Preparation of Sustructure and Superstructure Scheme	0	19-Aug-13 A	27-Sep-13 A	100%
AR0280	Submssion of Viaduct AIP - DP15.00 Update	0		27-Sep-13 A	100%
AR0281	IC/SO Approval of Viaduct AIP -DP15.00	53	27-Sep-13 A	1-Jan-14	22%
AR0282	Receipt of Data for Final Analysis	0		21-Oct-13	0%



🟦	Actual Work
🟩	Planned Bar
🟥	Critical Bar
◆ ◆	Milestone

Date	Revision	Checked	Approved
28-Jun-13	3M-Rolling Program...	RT	
21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 3 of 8 Pages)

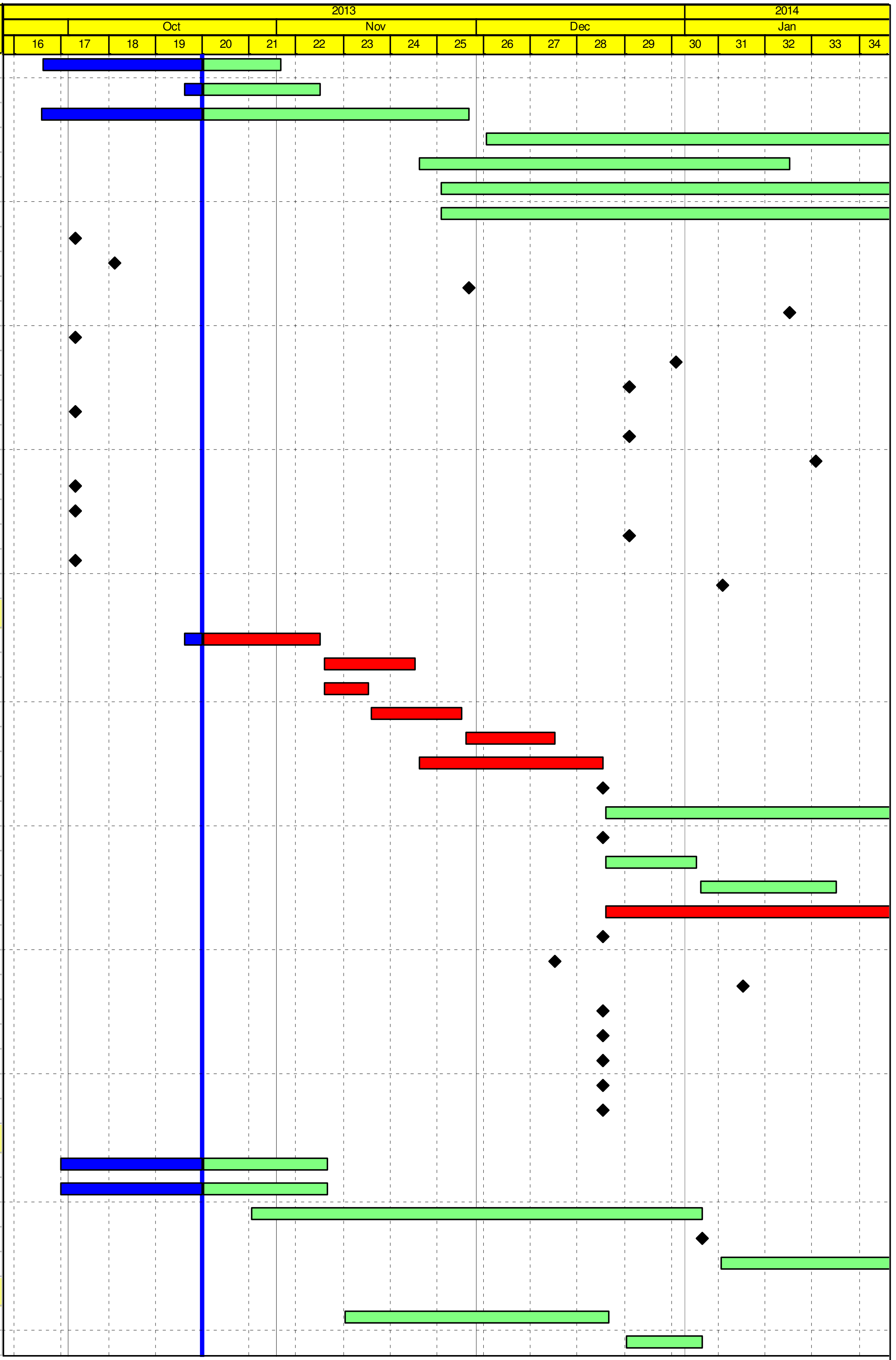
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
AR0283	Update Midas Model	10	27-Sep-13 A	1-Nov-13	55%
AR0284	Final Pile Loads and Global Analysis	14	18-Oct-13 A	7-Nov-13	7%
AR0285	Foundation DDA - DP15.01	30	27-Sep-13 A	29-Nov-13	33%
AR0286	IC/SO Approval of Foundation (Late) DDA - DP15.01	75	2-Dec-13	14-Mar-14	0%
AR0287	Preparation of Pilecap Precast Shells DDA	40	22-Nov-13	16-Jan-14	0%
AR0288	Preparation of Substructure DDA -DP15.02	50	25-Nov-13	3-Feb-14	0%
AR0289	Preparation of Superstructure DDA -DP15.03	70	25-Nov-13	3-Mar-14	0%
AR0293	Provisional Segment Types and Weights	0		2-Oct-13 A	100%
AR0295	Typical Pile Reinforcement - Stainless Rebar	0		8-Oct-13 A	100%
AR0296	Final Pile Reinforcement and Socket H Pile Details	0		29-Nov-13	0%
AR0297	Precast Pilecap Shell Shape and Reinforcement	0		16-Jan-14	0%
AR0298	Typical Pilecap Shapes for Formwork	0		2-Oct-13 A	100%
AR0299	Typical Pilecap Reinforcement - Stainless Steel Rebar	0		30-Dec-13	0%
AR0300	Typical Pilecap Reinforcement - Regular Rebar	0		23-Dec-13	0%
AR0302	Typical Pier Shapes for Formwork Planning	0		2-Oct-13 A	100%
AR0304	Typical Segment Shapes for Moulds	0		23-Dec-13	0%
AR0305	Typical Segment Reinforcement	0		20-Jan-14	0%
AR0307	Typical Anchorage and Tendon Types	0		2-Oct-13 A	100%
AR0309	Provisional Bearing Schedule	0		2-Oct-13 A	100%
AR0310	Final Bearing Schedule	0		23-Dec-13	0%
AR0311	Provisional Movement joint Schedule	0		2-Oct-13 A	100%
AR0312	Final Movement Joint Schedule	0		6-Jan-14	0%
Viaduct D					
AR0321	Setup Midas Model	14	18-Oct-13 A	7-Nov-13	6%
AR0322	Sectional and Segment Dimensional Analysis	10	8-Nov-13	21-Nov-13	0%
AR0323	Provisional Load Rundown and Global Analysis	5	8-Nov-13	14-Nov-13	0%
AR0324	Provisional Pile Loads	10	15-Nov-13	28-Nov-13	0%
AR0325	Preparation of Foundation AIP	10	29-Nov-13	12-Dec-13	0%
AR0326	Preparation of Substructure and Superstructure AIP	20	22-Nov-13	19-Dec-13	0%
AR0327	Submssion of Viaduct AIP - DP14.00	0		19-Dec-13	0%
AR0328	IC/SO Approval of Viaduct AIP - DP14.00	68	20-Dec-13	25-Mar-14	0%
AR0329	Receipt of Data for Final Analysis	0		19-Dec-13	0%
AR0330	Update Midas Model	10	20-Dec-13	2-Jan-14	0%
AR0331	Final Pile Loads and Global Analysis	15	3-Jan-14	23-Jan-14	0%
AR0332	Foundation DDA - DP14.01	45	20-Dec-13	20-Feb-14	0%
AR0340	Provisional Segment Types and Weights	0		19-Dec-13	0%
AR0341	Pile Spacing and Diameter for Temp Platform Design	0		12-Dec-13	0%
AR0342	Typical Pile Reinforcement - Stainless Rebar	0		9-Jan-14	0%
AR0345	Typical Pilecap Shapes for Formwork	0		19-Dec-13	0%
AR0349	Typical Pier Shapes for Formwork Planning	0		19-Dec-13	0%
AR0354	Typical Anchorage and Tendon Types	0		19-Dec-13	0%
AR0356	Provisional Bearing Schedule	0		19-Dec-13	0%
AR0358	Provisional Movement joint Schedule	0		19-Dec-13	0%
Parapet and Utility Trough					
AR0566	Preparation of Parapet Schemes	15	30-Sep-13 A	8-Nov-13	50%
AR0567	Preparation of Utility Trough Scheme	15	30-Sep-13 A	8-Nov-13	50%
AR0568	Preparation of Utility Truss Scheme	50	28-Oct-13	3-Jan-14	0%
AR0569	Submission of Parapet and Utility Trough AIP - DP30.00	0		3-Jan-14	0%
AR0570	IC/SO Approval of AIP - DP30.00	68	6-Jan-14	9-Apr-14	0%
TCSS Provisions					
AR0578	Identification of TCSS Civil Provisions	30	11-Nov-13	20-Dec-13	0%
AR0579	Preparation of AIP - BP10.00	10	23-Dec-13	3-Jan-14	0%



🟦	Actual Work
🟩	Planned Bar
🟥	Critical Bar
◆ ◆	Milestone

Date	Revision	Checked	Approved
28-Jun-13	3M-Rolling Program...	RT	
21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 4 of 8 Pages)

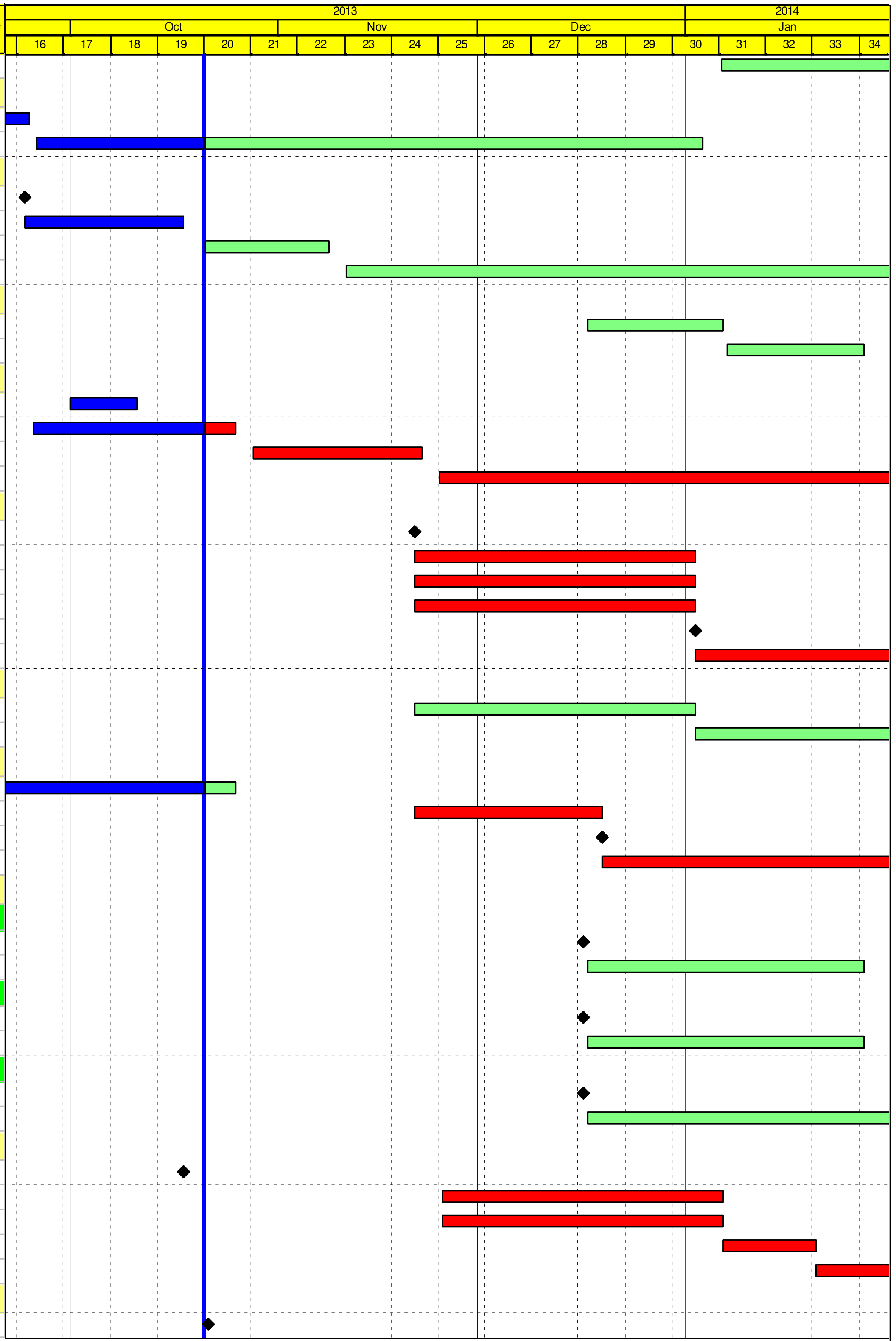
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
AR0580	IC/SO Approval of AIP - BP10.00	68	6-Jan-14	9-Apr-14	0%
Slopeworks: 9SE-B/C8, B/C9, B/F9, B/F85					
AR0588	Preparation of Slope Combined AIP/DDA - CP12.01	0	27-Aug-13 A	25-Sep-13 A	100%
AR0589	IC/SO Approval of Combined AIP/DDA-CP12.01	55	26-Sep-13 A	3-Jan-14	26%
Slopeworks: 10NW-C/C22, C/C26, C/C27, C/F13, C/F14, C/F15					
AR0594	Receipt of Ground Investigation	0	24-Sep-13 A		100%
AR0595	Slope Analysis	0	24-Sep-13 A	18-Oct-13 A	100%
AR0596	Preparation of Slope Combined AIP/DDA - CP13.01	15	21-Oct-13 A	8-Nov-13	25%
AR0597	IC/SO Approval of Combined AIP/DDA-CP13.01	75	11-Nov-13	21-Feb-14	0%
Slopeworks: 10NW-C/R4, C/F9, C/F10, C/F11, C/F17, C/F50					
AR0610	Receipt of Ground Investigation	15	17-Dec-13	6-Jan-14	0%
AR0611	Slope Analysis	15	7-Jan-14	27-Jan-14	0%
Natural Terrain					
AR0619	Site Survey and Investigation	0	1-Oct-13 A	11-Oct-13 A	100%
AR0620	Natural Terrain Hazard Analysis	5	25-Sep-13 A	25-Oct-13	75%
AR0621	Preparation of Combined AIP/DDA Submission - CP20.01, CP21.01	20	28-Oct-13	22-Nov-13	0%
AR0622	IC/SO Approval of Combined AIP/DDA - CP20.01, CP21.01	75	25-Nov-13	7-Mar-14	0%
Roadworks and Utility Diversions					
AR0627	Receipt of Topo and Utility Surveys	0	21-Nov-13		0%
AR0628	Preparation of Roadworks AIP - BP02.00	30	21-Nov-13	2-Jan-14	0%
AR0629	Preparation of Utility AIP - BP20.00	30	21-Nov-13	2-Jan-14	0%
AR0630	Preparation of Associated Miscellaneous Structures - ZP01.00	30	21-Nov-13	2-Jan-14	0%
AR0631	Submission of AIP	0	2-Jan-14		0%
AR0632	IC/SO Approval of AIP	40	2-Jan-14	27-Feb-14	0%
Reprovision Works					
AR0642	Preparation of Reprovisionings Works AIP - BP30.00	30	21-Nov-13	2-Jan-14	0%
AR0643	IC/SO Approval of AIP - BP30.00	68	2-Jan-14	8-Apr-14	0%
MTR Protection Works					
AR0651	Consultation with MTR	5	24-Jun-13 A	25-Oct-13	90%
AR0652	Support to GCL to Prepare E-Doc	20	21-Nov-13	19-Dec-13	0%
AR0653	Submission to MTR	0		19-Dec-13	0%
AR0654	MTR Approval of E-Doc	40	19-Dec-13	13-Feb-14	0%
Viaduct Approach Ramp Retaining Walls					
Approach Ramp D					
AR0658	Receipt of Topographic and Utility Survey	0		16-Dec-13	0%
AR0659	Preparation of AIP Submission - DP20.00 Update	30	17-Dec-13	27-Jan-14	0%
Approach Ramp B					
AR0670	Receipt of Topographic and Utility Survey	0		16-Dec-13	0%
AR0671	Preparation of AIP Submission - DP20.00 Update	30	17-Dec-13	27-Jan-14	0%
Approach Ramp F					
AR0682	Receipt of Topographic and Utility Survey	0		16-Dec-13	0%
AR0683	Preparation of AIP Submission -DP21.00 Update	40	17-Dec-13	10-Feb-14	0%
Signs, Markings and Street Furniture					
AR0689	Confirmation of Alignment	0		18-Oct-13 A	100%
AR0690	Preparation of Outline Sign and Markings Layout	30	25-Nov-13	6-Jan-14	0%
AR0691	Preparation of Typical Gantry Structure Design	30	25-Nov-13	6-Jan-14	0%
AR0692	Preparation of AIP Submission - BP03.00	10	6-Jan-14	20-Jan-14	0%
AR0693	IC/SO Approval of AIP - BP03.00	68	20-Jan-14	24-Apr-14	0%
Landscape					
AR0701	Confirn Acceptance of Reference Design LVIA	0		21-Oct-13	0%



🟦 Actual Work
🟩 Planned Bar
🟥 Critical Bar
◆ ◆ Milestone

Date	Revision	Checked	Approved
28-Jun-13	3M-Rolling Program...	RT	
21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 5 of 8 Pages)

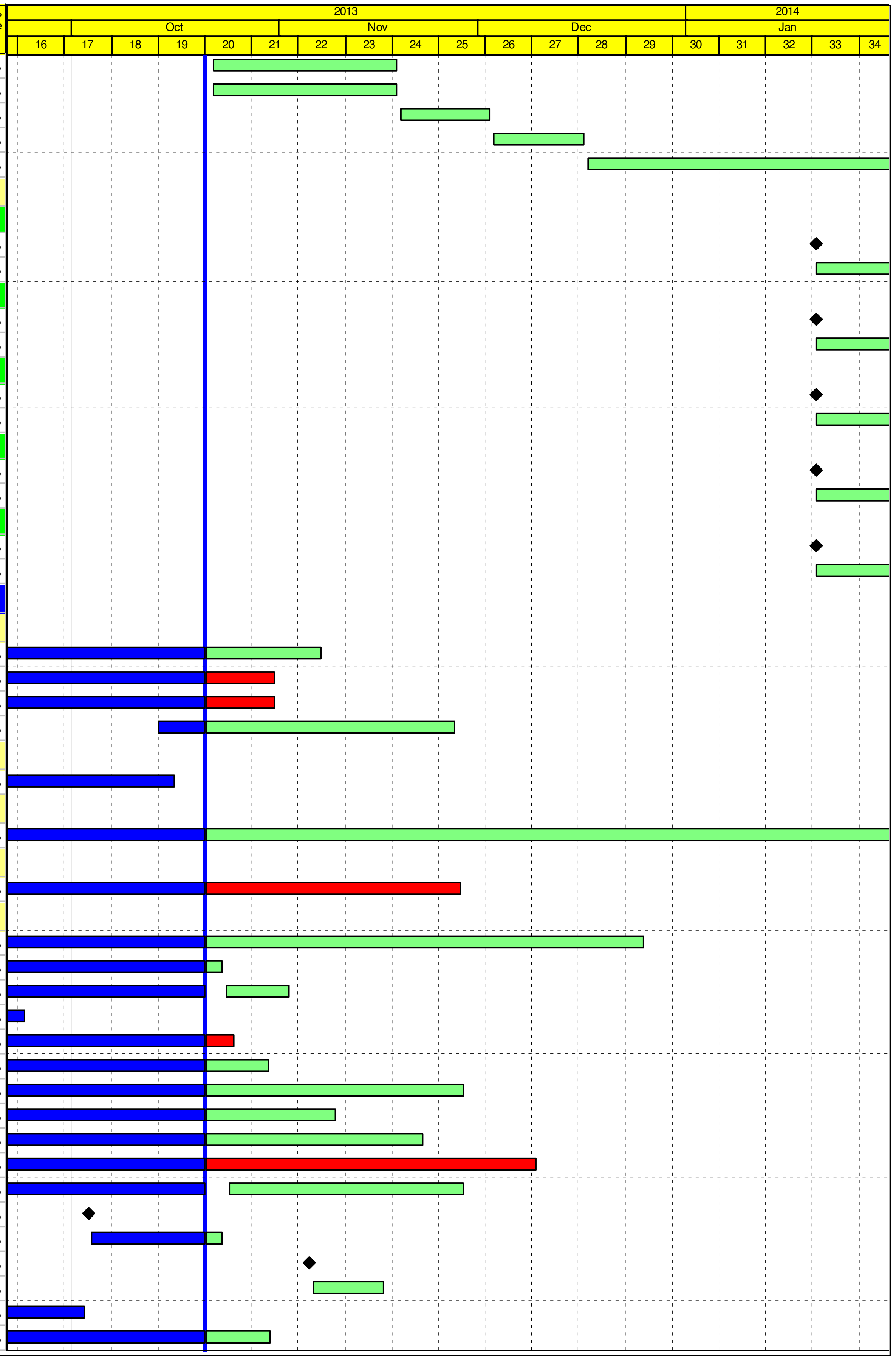
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
AR0702	Prepare Outline Planting Plans	20	22-Oct-13	18-Nov-13	0%
AR0703	Prepare Outline Irrigtaion Plans	20	22-Oct-13	18-Nov-13	0%
AR0704	Preparation of AIP Submission	10	19-Nov-13	2-Dec-13	0%
AR0705	Updated LVIA Submission to Gov't Depts	10	3-Dec-13	16-Dec-13	0%
AR0706	IC/SO Approval of AIP - BP22.00	68	17-Dec-13	20-Mar-14	0%
Segment Target Geometry and Erection Engineering					
Viaduct B					
AR0721	Confirmation of Erection Sequence from Freyssinet	0		20-Jan-14	0%
AR0722	Erection Sequence Analysis	20	20-Jan-14	17-Feb-14	0%
Viaduct E11-E14 (E5 and E6)					
AR0741	Confirmation of Erection Sequence from Freyssinet	0		20-Jan-14	0%
AR0742	Erection Sequence Analysis	30	20-Jan-14	3-Mar-14	0%
Viaduct E11-E14 (E7 and E8)					
AR0746	Confirmation of Erection Sequence from Freyssinet	0		20-Jan-14	0%
AR0747	Erection Sequence Analysis	30	20-Jan-14	3-Mar-14	0%
Viaduct E1					
AR0751	Confirmation of Erection Sequence from Freyssinet	0		20-Jan-14	0%
AR0752	Erection Sequence Analysis	30	20-Jan-14	3-Mar-14	0%
Viaduct E2					
AR0756	Confirmation of Erection Sequence from Freyssinet	0		20-Jan-14	0%
AR0757	Erection Sequence Analysis	30	20-Jan-14	3-Mar-14	0%
General Requirements					
General Management					
GR1000	General Mobilization	15	22-Jun-13 A	7-Nov-13	80%
PR01090	Produce the web pages for approval	11	20-Aug-13 A	31-Oct-13*	65%
PR01430	Produce interface management plan	11	23-Aug-13 A	31-Oct-13	65%
PR100	Initial Mobilization of Plant and Equipment for Piling Works	32	14-Oct-13 A	27-Nov-13	77%
Programmes					
PR00430	Detailed Initial Works Programme	0	8-Jul-13 A	16-Oct-13 A	100%
Commercial					
SC1000	Sub-Contract Procurement	473	22-Jun-13 A	28-May-15	21%
Temporary Works Design					
PR00120	Temporary Access Bridge and N.Lantau-Temporary Working Platform design and approval	38	29-Jul-13 A	28-Nov-13	65%
Land Works					
PR00460	Obtaining approval from HKCG with regard to diversion or disconnection of gas mains	66	22-Jun-13 A	25-Dec-13	64%
PR00520	Review/resubmit if necessary,Tree Removal Appl'n Reports w/ compensatory planting proposals	3	22-Jun-13 A	23-Oct-13	95%
PR00530	Application for tree felling and transplanting	10	18-Sep-13 A	2-Nov-13	74%
PR00940	Establish a Utilities Liaison Group for co-ordination/interf w/ utility undertakers	0	29-Jul-13 A	24-Sep-13 A	100%
PR01260	Record survey existg grnd/seabed levels w/in Site, photo survey/existg drain surveys prior to site clearan	4	15-Jul-13 A	25-Oct-13	71%
PR01270	Details of setting out control stations etc	10	22-Jun-13 A	30-Oct-13	92%
PR01290	EBS condition/structural surveys existing structures	39	29-Jul-13 A	28-Nov-13	68%
PR01300	Carry out investige/surveys to locate existing utilities/services	20	8-Jul-13 A	9-Nov-13	76%
PR01320	Condition survey of DN 1200 sewage rising main	33	9-Aug-13 A	22-Nov-13	61%
PR01520	Facilities for SO - procurement and erection of site offices	50	22-Jun-13 A	9-Dec-13*	73%
PR020	Site Survey/Ground Investigation/Install Geotechnical Instrumention	30	22-Jun-13 A	28-Nov-13	75%
PR03030	2nd TMLG	0		3-Oct-13 A	100%
PR03040	Roadwork Advice after 2nd TMLG	3	4-Oct-13 A	23-Oct-13	70%
PR03050	3rd TMLG	0		5-Nov-13*	0%
PR03060	Roadwork Advice after 3rd TMLG	10	6-Nov-13	16-Nov-13	0%
PR03080	PBH24, 26 and 43	0	23-Aug-13 A	3-Oct-13 A	100%
PR03090	Preparation for PBH36, 37	9	23-Aug-13 A	30-Oct-13	63%



🟦	Actual Work
🟩	Planned Bar
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21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 6 of 8 Pages)

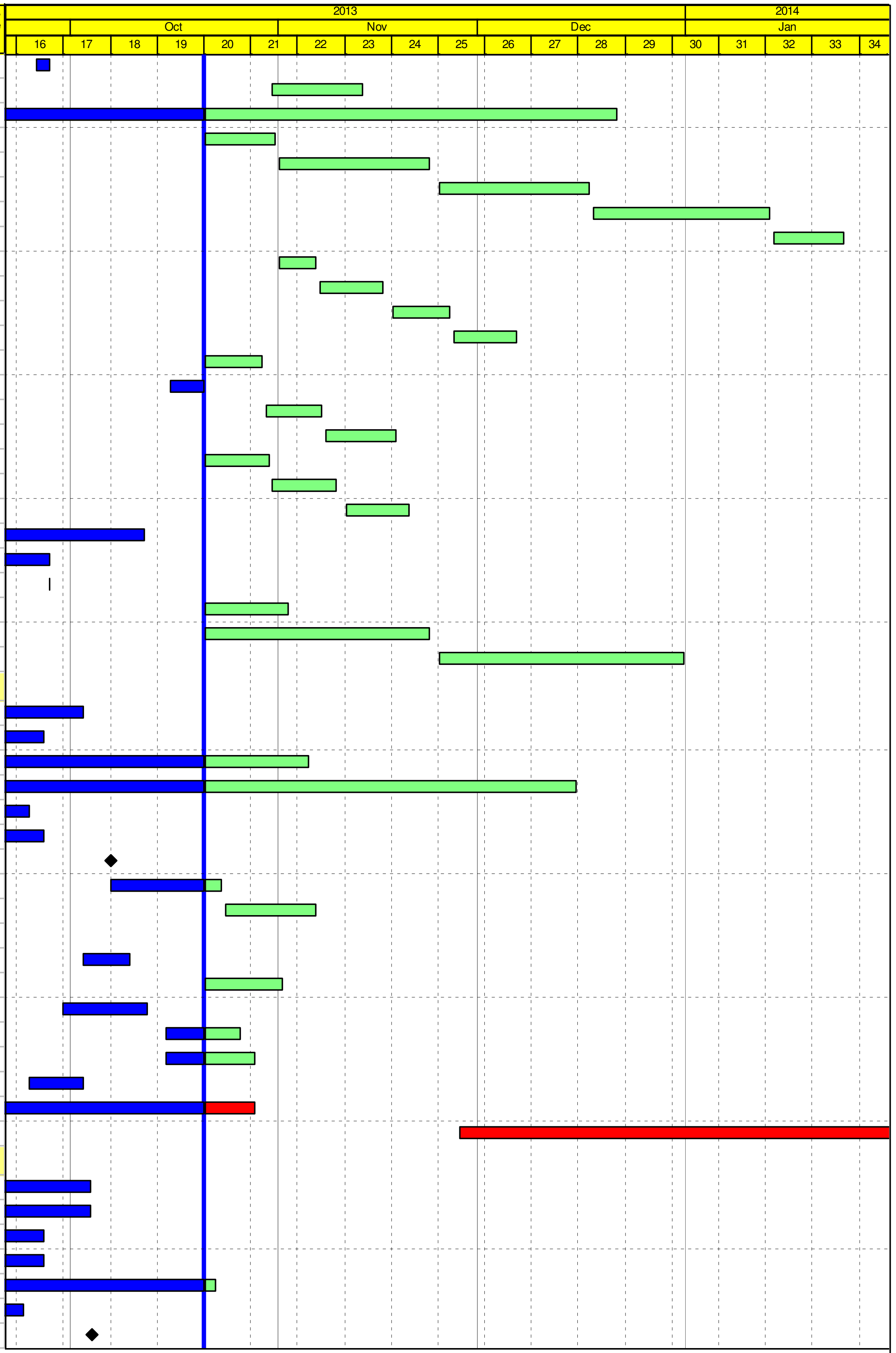
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
PR03095	PBH35	0	26-Sep-13 A	28-Sep-13 A	100%
PR03100	PBH36 and 37 (Helicopter access)	12	31-Oct-13	13-Nov-13	0%
PR03130	Apply for land between Viaduct C & D	54	15-Sep-13 A	21-Dec-13	28%
PR03140	Fence relocation Viaduct B	10	21-Oct-13	31-Oct-13	0%
PR03150	Fence relocation Viaduct D	20	1-Nov-13	23-Nov-13	0%
PR03160	Fence relocation Viaduct A	20	25-Nov-13	17-Dec-13	0%
PR03170	Fence relocation Viaduct C	20	18-Dec-13	13-Jan-14	0%
PR03180	Fencing connecting Viaduct C & D	10	14-Jan-14	24-Jan-14	0%
PR03189	Scaffold plaatform construction for PBH42	5	1-Nov-13*	6-Nov-13	0%
PR03190	PBH42 (Viaduct B) Rig #3	9	7-Nov-13	16-Nov-13	0%
PR03190-1	PBH23 (Viaduct C) Rig #3	8	18-Nov-13	26-Nov-13	0%
PR03190-2	PBH25 (Viaduct D) Rig #3	9	27-Nov-13	6-Dec-13	0%
PR03200	PBH29 (Viaduct D) Rig #1	8	21-Oct-13*	29-Oct-13	0%
PR03200-1	PBH30 (Viaduct D) Rig #1	0	16-Oct-13 A	21-Oct-13 A	100%
PR03200-2	PBH31 (Viaduct D) Rig #1	8	30-Oct-13	7-Nov-13	0%
PR03200-3	PBH36 (Viaduct D) Rig #1	9	8-Nov-13	18-Nov-13	0%
PR03210	PBH38 (Viaduct A) Rig #2	9	21-Oct-13*	30-Oct-13	0%
PR03210-1	PBH39 (Viaduct A) Rig #2	9	31-Oct-13	9-Nov-13	0%
PR03210-2	PBH40 (Viaduct A) Rig #2	9	11-Nov-13	20-Nov-13	0%
PR03316	Topographic Survey Slope Works 10NW-C/F13, F14, F15 (CTR) & assoc. work area	0	30-Aug-13 A	12-Oct-13 A	100%
PR03326	Topographic Survey Slope Works 10NW-C/F9, R4, F10 & F50 & assoc. works area	0	21-Sep-13 A	28-Sep-13 A	100%
PR03328	Proposed Viaduct C & associated works area	0	28-Sep-13 A	28-Sep-13 A	100%
PR03330	Topographic Survey Slope Works 9SE-B/FR8 & assoc. works area	12	21-Oct-13	2-Nov-13	0%
PR03334	Topographic Survey Natural Terrain at western end of CTR (above footpath)	30	21-Oct-13	23-Nov-13	0%
PR03338	Topographic Survey Natural Terrain at western end of CTR (above slope toe area)	30	25-Nov-13	31-Dec-13	0%
Marine Works					
PR00700	Marine travel routes for vessels moving to/from work sites	0	29-Jul-13 A	3-Oct-13 A	100%
PR01000	Join the MMWG marine mgt liaison grp establ/oprted under Cont#HY/2010/02 - Recl Works	0	7-Aug-13 A	27-Sep-13 A	100%
PR01030	Apply for permits/licences for cross-boundary disposal of Cat. Mp and Cat. L marine sediments	16	29-Jul-13 A	5-Nov-13	82%
PR01120	Apply for DASO permits for the dumping of sediments in Hong Kong waters	56	30-Aug-13 A	15-Dec-13	38%
PR01340	Hydrographic survey before any marine activities	0	21-Aug-13 A	25-Sep-13 A	100%
PR02130	Liaison with BCF Contract	0	16-Aug-13 A	27-Sep-13 A	100%
PR02140	GCL Additional GI Commencement	0	7-Oct-13 A		100%
PR02142	PBH21 (Pier E5E6a or E11-B)	3	7-Oct-13 A	23-Oct-13	80%
PR02142-1	PBH44 (Pier E7E8a or E11-A)	14	24-Oct-13	6-Nov-13	0%
PR02152	PBH15 (Pier E5c or E13-D)	0	10-Sep-13 A	21-Sep-13 A	100%
PR02152-1	PBH14 (Pier E5d or E14-D)	0	3-Oct-13 A	10-Oct-13 A	100%
PR02152-2	PBH20 (Pier E8b or E12-A)	12	21-Oct-13	1-Nov-13	0%
PR02153	PBH16 (Pier E6c or E13-C)	0	30-Sep-13 A	12-Oct-13 A	100%
PR02154	PBH17 (Pier E7c or E13-B)	5	15-Oct-13 A	26-Oct-13	44%
PR02154-1	PBH22 (D4d or D3)	8	15-Oct-13 A	28-Oct-13	44%
PR02155	PBH18 (Pier E8c or E13-A)	0	25-Sep-13 A	3-Oct-13 A	100%
PR070	MDN Application (for Marine Piling & Civil Works)	7	30-Aug-13 A	28-Oct-13	82%
PR080	Temporary Access Bridge and Working Platform (North Lantau)	74	28-Nov-13	1-Mar-14	0%
Environmental Management					
PR00560	Updated Environ Assessment Report for temp marine struct-then to Marine Consultant / EC	0	1-Aug-13 A	4-Oct-13 A	100%
PR00590	Baseline Environmental Monitoring Report	0	1-Aug-13 A	4-Oct-13 A	100%
PR00690	Spill Response Plan (SRP) for marine works	0	29-Jul-13 A	27-Sep-13 A	100%
PR00710	Waste Management Plan (WMP)	0	9-Aug-13 A	27-Sep-13 A	100%
PR030	Application of EPD Permits	2	15-Jul-13 A	22-Oct-13	98%
PR06010	Water Quality Monitoring	0	29-Aug-13 A	24-Sep-13 A	100%
PR06020	Submit Baseline Water Quality Monitoring Results	0		4-Oct-13 A	100%



🟦	Actual Work
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Date	Revision	Checked	Approved
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21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 7 of 8 Pages)

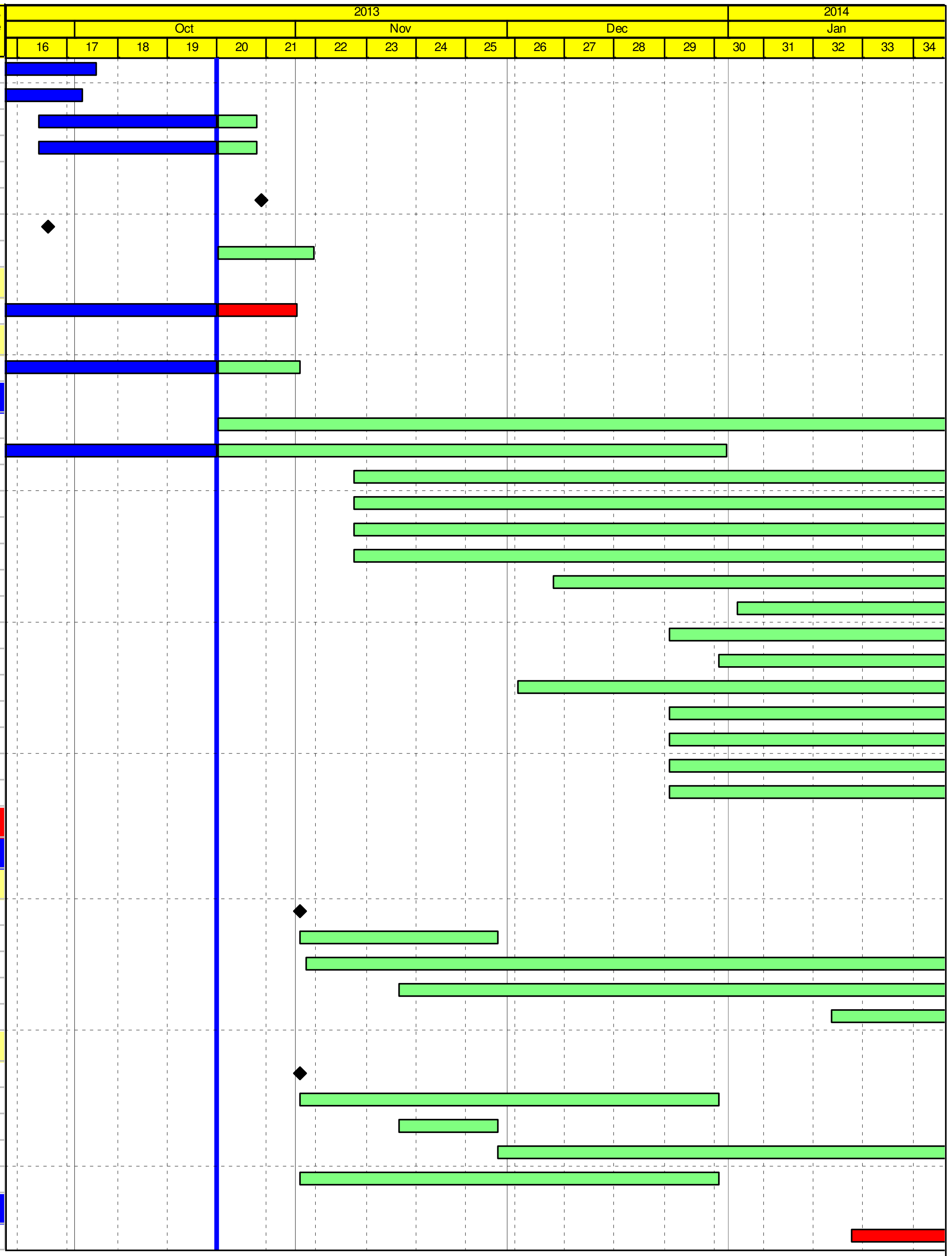
(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Activity ID	Activity Name	Remaining Duration	Start	Finish	Physical % Complete
PR06030	Ecological Baseline Walk-over Survey & Reporting	0	13-Sep-13 A	4-Oct-13 A	100%
PR06040	Bored Piling Monitoring Programme Specification	0	14-Aug-13 A	2-Oct-13 A	100%
PR06050	Underwater Noise Monitoring	6	26-Sep-13 A	26-Oct-13	87%
PR06060	Acoustic Monitoring	6	26-Sep-13 A	26-Oct-13	87%
PR06070	Land-based Theodolite Tracking	0	9-Sep-13 A	21-Sep-13 A	100%
PR06080	Submit Baseline Bored Piling Dolphin Monitoring results	0		27-Oct-13*	0%
PR06090	Detailed Coral Translocation Plan submit to EPD	0		27-Sep-13 A	100%
PR06100	Coral Translocation	14	21-Oct-13*	3-Nov-13	0%
Quality Mangement					
PR00380	Collation of Construction Permits	11	24-Jun-13 A	1-Nov-13	63%
Safety & Risk Management					
PR00910	Produce risk management plan & consolidate design, safety, commercial risk registers	12	8-Jul-13 A	1-Nov-13	80%
Precast Production					
PP1000	Design Preparation & Approval (pile cap shells)	256	21-Oct-13*	30-Aug-14	0%
PP1002	Accreditation application for MBEC's batching plant in Zhongshan	60	1-Aug-13 A	31-Dec-13	52%
PP1010	Modify existing casting yard and storage yard	99	9-Nov-13	11-Mar-14	0%
PP1012	Proposal for load out & delivery for precast shell from casting yard / storage area incl. sea fastening	123	9-Nov-13	9-Apr-14	0%
PP1020	Falsework and Formwork design for precast shell moulds incl 'Match joint casting'	101	9-Nov-13	13-Mar-14	0%
PP1040	Submit Method Statement for precast shell casting	74	9-Nov-13	10-Feb-14	0%
PP1045	Approve Method Statement for precast shell casting	50	7-Dec-13	10-Feb-14	0%
PP1060	Concrete trial mixes	45	2-Jan-14	26-Feb-14	0%
PP1070	Procurement of steel reinforcement	74	23-Dec-13	26-Mar-14	0%
PP1075	Procurement of Stainless Steel reinforcement	74	30-Dec-13	31-Mar-14	0%
PP3000	Design Preparation & Approval (segments)	295	2-Dec-13	29-Nov-14	0%
PP3090	Modify existing casting yard and storage yard	147	23-Dec-13	27-Jun-14	0%
PP3100	Falsework and Formwork design for precast segment moulds (based on shortbed match casting)	147	23-Dec-13	27-Jun-14	0%
PP3110	Prepare Shop Dwgs for each precast shell incl perm/temp cast-in inserts & PT ducting & anchors, etc.	123	23-Dec-13	29-May-14	0%
PP3120	Submit Method Statement for deck segment casting	72	23-Dec-13	24-Mar-14	0%
Construction					
Approach from Lantau					
Structure B1					
B000000	TTM Implementation	0	1-Nov-13		0%
B000010	Hoarding and Fencing	24	1-Nov-13	29-Nov-13	0%
B000020	Tree Survey, Tree Felling & Transplanting	101	2-Nov-13	7-Mar-14	0%
B000040	Temporary Piling Platforms at slopes	72	15-Nov-13	14-Feb-14	0%
B000050	Divert Roads & Utilities (IPA400/IPB500/HKBN/WTT/NWT/PCCW) for piling/cap	74	15-Jan-14	16-Apr-14	0%
Structure B2					
B200010	TTM Implementation	0	1-Nov-13*		0%
B200020	Hoarding and Fencing	48	1-Nov-13	30-Dec-13	0%
B200022	Tree Felling	12	15-Nov-13	29-Nov-13	0%
B200050	Temporary Piling Platforms at slopes	72	29-Nov-13	28-Feb-14	0%
B200060	New Sea wall retaining wall	48	1-Nov-13	30-Dec-13	0%
At grade Roadworks and Other Works along Cheung Tung Road					
B000100	West Natural Terrain Hazard Mitigation Measures (incl. Piling Works for Check Dams)	338	18-Jan-14	11-Mar-15	0%



🟦 Actual Work
🟩 Planned Bar
🟥 Critical Bar
◆ ◆ Milestone

Date	Revision	Checked	Approved
28-Jun-13	3M-Rolling Program...	RT	
21-Aug-13	3M-Rolling Progr Up...	RT	
21-Sep-13	3M-Rolling Progr Up...	RT	
21-Oct-13	3M-Rolling Progr Up...	RT	

8Tuen Mun - Chek Lap Kok Southern Connection

3-Months Rolling Programme (Page 8 of 8 Pages)

(21-Oct-13 to 20-Jan-14)

Gammon ARUP LAMBETH

DWG. No.:

J3518/GCL/PGM/3MRP-M05

Appendix C

Environmental Mitigation and Enhancement Measure Implementation Schedules

(Adopted from: CINOTECH (2011) Agreement No. CE35/2011 EP Baseline Environmental Monitoring for Hong Kong-Zhuhai-Macao BridgeTuen Mun-Chep Lap Kok Link – Investigation. UpdatedEM&A Manual for Tuen Mun-Chek Lap Kok Link)

Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link
Southern Connection Viaduct Section
Environmental Mitigation and Enhancement Measure Implementation Schedule

EIA Reference	**EM&A Manual Reference**	**Environmental Protection Measures**	**Location/ Timing**	**Implementation Agent**	**Relevant Standard or Requirement**	**Implementation Stages**			**Maintenance Agency**
						D	**C**	**O**	
AIR QUALITY									
4.8.1	3.8	An effective watering programme of eight daily watering with complete coverage, is estimated to reduce by 50%. This is recommended for all areas in order to reduce dust levels to a minimum;	All areas / throughout construction period	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		n/a
4.8.1	3.8	The Contractor shall, to the satisfaction of the Engineer, install effective dust suppression measures and take such other measures as may be necessary to ensure that at the Site boundary and any nearby sensitive receiver, dust levels are kept to acceptable levels.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.8.1	3.8	The Contractor shall not burn debris or other materials on the works areas.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.8. 1	3.8	In hot, dry or windy weather, the watering programme shall maintain all exposed road surfaces and dust sources wet.	All unpaved haul roads / throughout construction period in hot, dry or windy weather	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		n/a
4.8.1	3.8	Where breaking of oversize rock/concrete is required, watering shall be implemented to control dust. 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.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.8. 1	3.8	Open dropping heights for excavated materials shall be controlled to a maximum height of 2m to minimise the fugitive dust arising from unloading.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.8.1	3.8	During transportation by truck, materials shall not be loaded to a level higher than the side and tail boards, and	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
		shall be dampened or covered before transport.							
4.8.1	3.8	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.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.8.1	3.8	No earth, mud, debris, dust and the like shall be deposited on public roads. Wheel washing facility shall be usable prior to any earthworks excavation activity on the site.	All site exits / throughout construction period	Contractor	TMEIA Avoid dust		Y		n/a
4.8.1	3.8	Areas of exposed soil shall be minimised to areas in which works have been completed shall be restored as soon as is practicable.	All exposed surfaces / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.8.1	3.8	All stockpiles of aggregate or spoil shall be enclosed or covered and water applied in dry or windy condition.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		n/a
4.11	Section 3	EM&A in the form of 1 hour and 24 hour dust monitoring and site audit	All representative existing ASRs / throughout construction period	Contractor	EM&A Manual		Y		n/a
NOISE									
5.11	Section 4	Noise monitoring	All existing representative sensitive receivers / during North Lantau Viaduct construction	Contractor	EM&A Manual		Y		n/a
WATER QUALITY									
General Marine Works									
6.10	-	Bored piling to be undertaken within a metal casing.	Marine viaducts of TM-CLKL and HKLR/ bored piling	Contractor	TM-EIAO		Y		n/a
6.10	-	Barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
					permit conditions.				
6.10	-	Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		n/a
6.10	-	Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		n/a
6.10	-	Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		n/a
6.10	-	Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		n/a
6.10	-	All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		n/a
6.10	-	The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		n/a
Temporary Staging work									
	5.2	Regular inspection for the accumulation of floating refuse and collection of floating refuse if required	During temporary staging works	Contractor			Y		n/a
	5.2	Provision of temporary drainage system on the temporary staging for collection of construction site runoff to allow appropriate treatment before discharge into the sea	During temporary staging works	Contractor			Y		n/a
	5.2	Wastewater generated from construction works such as bored / drilling water will be collected, treated, neutralized and de-silted through silt trap or sedimentation tank before disposal	During temporary staging works	Contractor			Y		n/a

EIA Reference	**EM&A Manual Reference**	**Environmental Protection Measures**	**Location/ Timing**	**Implementation Agent**	**Relevant Standard or Requirement**	**Implementation Stages**			**Maintenance Agency**
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	5.2	One additional water quality monitoring station is proposed at station SR4a In case elevated SS or turbidity is identified during the water quality monitoring, the source of pollution will be tracked down and be removed as soon as possible. In case depletion of dissolved oxygen is identified, artificial aeration will be arranged at the monitoring station SR4a,	During temporary staging works	Contractor			Y		n/a
Land Works									
6.10	-	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Temporary access roads should be surfaced with crushed stone or gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
		system.							
6.10	-	Open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	5.8	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	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 off site disposal.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	The Contractor shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal	All areas/ throughout	Contractor	TM-EIAO Waste		Y		n/a

EIA Reference	**EM&A Manual Reference**	**Environmental Protection Measures**	**Location/ Timing**	**Implementation Agent**	**Relevant Standard or Requirement**	**Implementation Stages**			**Maintenance Agency**
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		Ordinance.	construction period		Disposal Ordinance				
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		n/a
6.10	-	Roadside gullies to trap silt and grit shall be provided prior to discharging the stormwater into the marine environment. The sumps will be maintained and cleaned at regular intervals.	Roadside/design and operation	Design Consultant/ Contractor	TM-EIAO	Y		Y	n/a
6.10	Section 5	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	All areas/ throughout construction period	Contractor	EM&A Manual		Y		n/a
Water Quality Monitoring									
6.10	Section 5	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen. Nutrients and metal parameters shall also be measured for Mf sediment operations (only HKBCF and HKLR required handling of Mf sediment) during baseline, backfilling and post construction period. One year operation phase water quality monitoring at designated stations	Designated monitoring stations as defined in EM&A Manual, Section 5/ Before, through-out marine construction period, post construction and monthly operational phase water quality monitoring for a year.	Contractor	EM&A Manual		Y	Y	n/a
ECOLOGY									
8.14	6.3	Specification for and implement pre, during and post construction dolphin abundance monitoring.	All Areas/Detailed Design/ during construction works/post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a
8.14	6.3	Specification for bored piling monitoring	Detailed Design	Design Consultant	TMEIA	Y			n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
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8.14	6.3	Implement any recommendations of the bored piling monitoring	Southern marine viaduct/Throughout construction during bored piling	Contractor	TMEIA		Y		n/a
8.14	6.3,6.5	Avoidance of peak CWD calving season in May and June for driving of metal caissons during bored piling works	Southern marine viaduct/ May and June during bored piling	Contractor	TMEIA		Y		n/a
8.14	6.3,6.5	Specification and implementation of 250m dolphin exclusion zone.	All marine bored piling and temporary staging works areas/Detailed Design/during all marine bored piling and temporary staging works	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.15	6.3, 6.5	Specification and deployment of an artificial reef of an area of 3,600m2 in an area where fishing activities are prohibited.	Area of prohibited fishing activities/Detailed Design/towards end of construction period	TM-CLKL/ HKBCF Design Consultant/ TM-CLKL/ HKBCF Contractor	TMEIA	Y		Y	AFCD
8.14	6.3, 6.5	Specification and implementation of marine vessel control specifications	All areas/Detailed Design/during construction works	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.14	6.3, 6.5	Design and implementation of acoustic decoupling methods for marine bored piling and the whole lifespan of temporary staging works.	All areas/ Detailed Design/during marine bored piling and temporary staging works	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.15	6.3, 6.4	Pre-construction phase survey and coral translocation	Tai Ho Wan (donar site) and Yam Tsui Wan (receptor site) /Detailed Design/Prior to construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.15	6.5	Audit coral translocation success	Yam Tsui Wan (receptor site)/Post translocation	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
7.13	6.5	Undertaken gabion wall works in Stream NL1 in the dry season	North Lantau slope works/dry season/construction phase	Contractor	TMEIA		Y		n/a
7.13	6.5	The loss of habitat shall be supplemented by enhancement planting in accordance with the landscape mitigation schedule.	All areas / As soon as accessible	Contractor	TMEIA		Y		AFCD/LCSD
7.13	6.5	Spoil heaps shall be covered at all times.	All areas / Throughout construction period	Contractor	TMEIA		Y		n/a
7.13	6.5	Avoid damage and disturbance to the remaining and surrounding natural habitat	All areas / Throughout construction period	Contractor	TMEIA		Y		n/a
7.13	6.5	Placement of equipment in designated areas within the existing disturbed land	All areas / Throughout construction period	Contractor	TMEIA		Y		n/a
7.13	6.5	Disturbed areas to be reinstated immediately after completion of the works.	All areas / Throughout construction period	Contractor	TMEIA		Y		n/a
7.13	6.5	Construction activities should be restricted to the proposed works boundary	All areas / Throughout construction period	Contractor	TMEIA		Y		n/a
LANDSCAPE AND VISUAL									
10.9	7.6	Round angle, patterned finishes, and oval shaped pier were considered in the viaduct design, and further details will be developed under ACABAS submission (DM3)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Details of the street furniture will be developed in the detailed design stage (DM4)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Aesthetic design of the viaduct, retaining wall and other structures will be developed under ACABAS submission (DM5)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
		prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage) (CM1)							
10.9	7.6	Trees unavoidably affected by the works shall be transplanted where practical. Trees will be transplanted straight to their final receptor site and not held in a temporary nursery. A detailed Tree Transplanting Specification shall be provided in the Contract Specification. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme (CM2)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Hillside and roadside screen planting to proposed roads, associated structures and slope works (CM3).	All areas/detailed design/ during construction/post construction	Design Consultant/	TMEIA	Y	Y		n/a
10.9	7.6	Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone) (CM4)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Screening of construction works by hoardings around works area in visually unobtrusive colours, to screen works (CM5)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Control night-time lighting and glare by hooding all lights (CM6)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Ensure no run-off into water body adjacent to the Project Area (CM7)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (CM8)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a

EIA Reference	**EM&A Manual Reference**	**Environmental Protection Measures**	**Location/ Timing**	**Implementation Agent**	**Relevant Standard or Requirement**	**Implementation Stages**			**Maintenance Agency**
						D	**C**	**O**	
10.9	7.6	Recycle/Reuse all felled trees and vegetation, e.g. mulching (CM9)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006 (CM10).	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	AFCD/HyD/ L CSD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	HyD/LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and minimise unnecessary light spill (OM3)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	HyD/LCSD
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement (OM4)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	HyD/LCSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	HyD
WASTE									

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
12.6		The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		n/a
12.6		The Contractor shall prepare and implement a Waste Management Plan which specifies procedures such as a ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of wastes does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposed. A recording system for the amount of waste generated, recycled and disposed (locations) should be established.	Contract mobilisation	Contractor	TMEIA, Works Branch Technical Circular No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material		Y		n/a
12.6		The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.		Y		n/a
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures including waste reduction, reuse and recycling.	Contract Mobilisation	Contractor	TMEIA		Y		n/a
12.6	8.1	The extent of cutting operation should be optimised where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Rock armour from the existing seawall should be reused on the new sloping seawall as far as possible	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
			construction period						
12.6	8.1	No waste shall be burnt on site.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Provisions to be made in contract documents to allow and promote the use of recycled aggregates where appropriate.	Detailed Design	Design Consultant	TMEIA	Y			n/a
12.6	8.1	The Contractor shall be prohibited from disposing of C&D materials at any sensitive locations. The Contractor should propose the final disposal sites in the EMP and WMP for approval before implementation.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust/ surface run off.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D materials arising. The use of more durable formwork/plastic facing for construction works should be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should avoid over-ordering and wastage.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	The Contractor should recycle as many C&D materials (this is a waste section) as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper	All areas / throughout construction period	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
		disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities.							
12.6	8.1	All falsework will be steel instead of wood.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Chemical waste producers should register with the EPD. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows: - suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; - Having a capacity of <450L unless the specifications have been approved by the EPD; and - Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. Clearly labelled and used solely for the storage of chemical wastes; - Enclosed with at least 3 sides; - Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest; - Adequate ventilation; - Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and - Incompatible materials are adequately	All areas / throughout construction period	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
		separated.							
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical 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. Burning of refuse on construction sites is prohibited.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	All waste containers shall be in a secure area on hardstanding;	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	All areas / throughout construction period	Contractor	TMEIA		Y		n/a
12.6	8.1	Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.	Site Offices/ throughout construction period	Contractor	TMEIA		Y		n/a

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
						D	C	O	
12.6	Section 8	EM&A of waste handling, storage, transportation, disposal procedures and documentation through the site audit programme shall be undertaken.	All areas / throughout construction period	Contractor	EM&A Manual		Y		n/a
CULTURAL HERITAGE									
11.8	Section 9	EM&A in the form of audit of the mitigation measures	All areas / throughout construction period	Highways Department	EIAO-TM		Y		n/a

Notes:

Legend: D=Design, C=Construction, O=Operation
Note: Funding Agent for all mitigation measures will be the Highways Department of the Hong Kong SAR Government

Appendix D

Summary of Action and Limit Levels

Table D1 *Action and Limit Levels for 1-hour and 24-hour TSP*

Parameters	Action	Limit
24 Hour TSP Level in µg/m³	ASR9A/ASR8A = 178 ASR9C/ASR8 = 178	260
1 Hour TSP Level in µg /m³	ASR9A/ASR8A = 394 ASR9C/ASR8 = 393	500

Table D2 *Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)*

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received	75* dB(A)

Table D3 *Action and Limit Levels for Water Quality*

Parameter	Action Level#	Limit Level#
DO in mg/L (a)	Surface and Middle **5.0 mg/L** Bottom **4.7 mg/L**	Surface and Middle **4.2 mg/L** Bottom **3.6 mg/L**
Turbidity in NTU (Depth-averaged (b), (c))	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., **27.5 NTU**	130% of upstream control station at the same tide of the same day and 99%-ile of baseline data, i.e., **47.0 NTU**
SS in mg/L (Depth-averaged (b), (c))	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., **23.5 mg/L**	130% of upstream control station at the same tide of the same day and 10mg/L for WSD Seawater Intakes at Tuen Mun and 99%-ile of baseline data, i.e., **34.4 mg/L**

Notes:

Baseline data: data from HKZMB Baseline Water Quality Monitoring between 6 and 31 October 2011.

(a) For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.

(b) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths

(c) For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

(d) All figures given in the table are used for reference only, and EPD may amend the figures whenever it is considered as necessary

Parameter	Action Level#	Limit Level#
(e) The 1%-ile of baseline data for surface and middle DO is 4.2 mg/L, whilst for bottom DO is 3.6 mg/L.		

Table D4 Action and Limit Levels for Impact Dolphin Monitoring

	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	

Notes:

1. STG means quarterly encounter rate of number of dolphin sightings, which is **6.00 in NEL** and **9.85 in NWL** during the baseline monitoring period
2. ANI means quarterly encounter rate of total number of dolphins, which is **22.19 in NEL** and **44.66 in NWL** during the baseline monitoring period
3. For North Lantau Social Cluster, AL will be trigger if NEL or NWL fall below the criteria; LL will be triggered if both NEL and NWL fall below the criteria.

Table D5 Derived Value of Action Level (AL) and Limit Level (LL)

	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]	

Appendix E

Calibration Certificates of Monitoring Equipments

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	**WORK ORDER**	: **HK1327471**
CLIENT	: **ENVIROTECH SERVICES CO.**		
ADDRESS	: SHOP 6, G/F. CASIO MANSION, 209 SHAUKEIWAN ROAD HONG KONG	SUB-BATCH DATE RECEIVED DATE OF ISSUE	: 1 : 7-OCT-2013 : 22-OCT-2013
PROJECT	: ----	NO. OF SAMPLES CLIENT ORDER	: 1 : ----

General Comments

- **Sample(s) were received in an ambient condition.**
- **Sample(s) analysed and reported on an as received basis.**
- **Calibration was subcontracted to and analysed by Action United Enviro Services.**

Signatories

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the Electronic Transactions Ordinance of Hong Kong, Chapter 553, Section 6.

Signatories	*Position*
Richard Fung	General Manager

This is the Final Report and supersedes any preliminary report with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1327471-001	S/N: IY5546	Equipment	07-OCT-2013	S/N: IY5546

Equipment Calibration Record

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-3B
Serial No. 1Y5546
Equipment Ref: Nil
Job Order HK1327471

Standard Equipment:

Standard Equipment: Higher Volume Sampler
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 8 October 2013

Equipment Calibration Results:

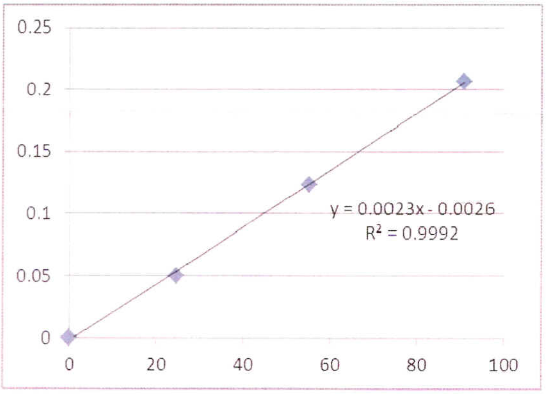
Calibration Date: 10 & 11 October 2013

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
1hr50min	12:00 ~ 13:50	27.0	1012.8	0.123	5911	55.0
4hr25min	13:55 ~ 18:20	27.0	1012.8	0.207	24157	90.9
16hr20min	18:25 ~ 10:45	27.0	1012.8	0.050	24112	24.7

Sensitivity Adjustment Scale Setting (Before Calibration) 629 (CPM)
Sensitivity Adjustment Scale Setting (After Calibration) 633 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0023
Correlation Coefficient 0.9992
Validity of Calibration Record 16 Oct 2013



Operator : Tung Chi Sun Signature : Sun Date : 16 October 2013

QC Reviewer : Ben Tam Signature : Date : 16 October 2013

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung
Location ID : Calibration Room

Date of Calibration: 8-Oct-13
Next Calibration Date: 8-Jan-14

CONDITIONS

Sea Level Pressure (hPa) 1008.1
Temperature (°C) 26.8

Corrected Pressure (mm Hg) 756.075
Temperature (K) 300

CALIBRATION ORIFICE

Make-> TISCH
Model-> 5025A
Calibration Date-> 9-Apr-13

Qstd Slope -> 2.11662
Qstd Intercept -> -0.01714
Expiry Date-> 9-Apr-14

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected
18	3.8	3.8	7.6	1.303	66	65.63
13	3	3	6.0	1.159	64	63.64
10	2.2	2.2	4.4	0.994	60	59.66
8	1.2	1.2	2.4	0.736	54	53.70
5	0.9	0.9	1.8	0.638	52	51.71

LINEAR REGRESSION

Slope = 21.6637
Intercept = 37.9417
Corr. coeff. = 0.9975

Calculations :

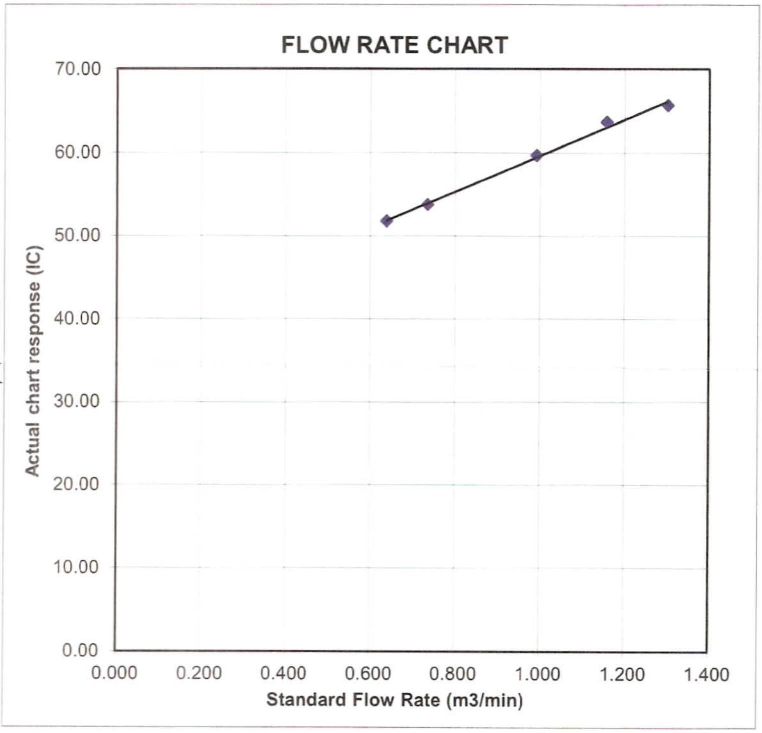
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K
Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: **HK1327473**
CLIENT	: **ENVIROTECH SERVICES CO.**		
ADDRESS	: SHOP 6, G/F. CASIO MANSION, 209 SHAUKEIWAN ROAD HONG KONG	SUB-BATCH DATE RECEIVED DATE OF ISSUE	: 1 : 7-OCT-2013 : 22-OCT-2013
PROJECT	: ----	NO. OF SAMPLES CLIENT ORDER	: 1 : ----

General Comments

- **Sample(s) were received in an ambient condition.**
- **Sample(s) analysed and reported on an as received basis.**
- **Calibration was subcontracted to and analysed by Action United Enviro Services.**

Signatories

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the Electronic Transactions Ordinance of Hong Kong, Chapter 553, Section 6.

Signatories	*Position*
Richard Fung	General Manager

This is the Final Report and supersedes any preliminary report with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1327473-001	S/N: 245834	Equipment	07-OCT-2013	S/N: 245834

Equipment Calibration Record

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-3B
Serial No. 245834
Equipment Ref: Nil
Job Order HK1327473

Standard Equipment:

Standard Equipment: Higher Volume Sampler
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 8 October 2013

Equipment Calibration Results:

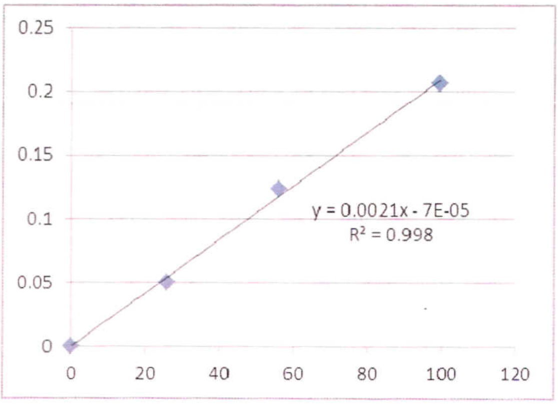
Calibration Date: 10 & 11 October 2013

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/60min)
1hr50min	12:00 ~ 13:50	27.0	1012.8	0.123	6013	56.0
4hr25min	13:55 ~ 18:20	27.0	1012.8	0.207	26441	99.5
16hr20min	18:25 ~ 10:45	27.0	1012.8	0.050	25113	25.7

Sensitivity Adjustment Scale Setting (Before Calibration) 765 (CPM)
Sensitivity Adjustment Scale Setting (After Calibration) 760 (CPM)

Linear Regression of Y or X

Slope (K-factor): 0.0021
Correlation Coefficient 0.9980
Validity of Calibration Record 16 Oct 2013



Operator : Tung Chi Sun Signature : Sun Date : 16 October 2013

QC Reviewer : Ben Tam Signature : Date : 16 October 2013

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Gold King Industrial Building, Kwai Chung
Location ID : Calibration Room

Date of Calibration: 8-Oct-13
Next Calibration Date: 8-Jan-14

CONDITIONS

Sea Level Pressure (hPa) 1008.1
Temperature (°C) 26.8

Corrected Pressure (mm Hg) 756.075
Temperature (K) 300

CALIBRATION ORIFICE

Make-> TISCH
Model-> 5025A
Calibration Date-> 9-Apr-13

Qstd Slope -> 2.11662
Qstd Intercept -> -0.01714
Expiry Date-> 9-Apr-14

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	3.8	3.8	7.6	1.303	66	65.63	Slope = 21.6637
13	3	3	6.0	1.159	64	63.64	Intercept = 37.9417
10	2.2	2.2	4.4	0.994	60	59.66	Corr. coeff. = 0.9975
8	1.2	1.2	2.4	0.736	54	53.70	
5	0.9	0.9	1.8	0.638	52	51.71	

Calculations :

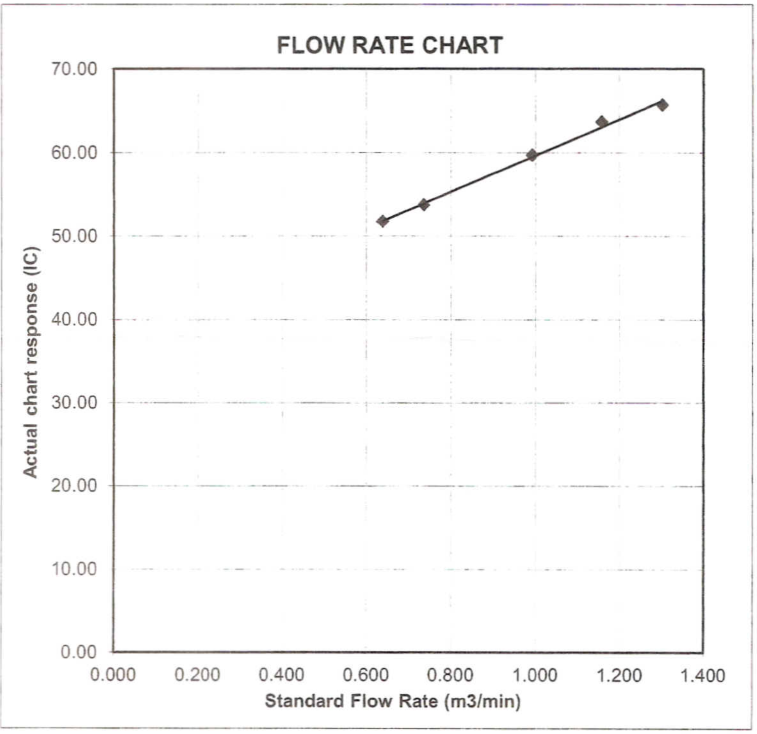
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K
Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Dec 26, 2012 Rootsmeter S/N 0438320 Ta (K) - 295
Operator Tisch Orifice I.D. - 2323 Pa (mm) - 753.11

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	1.4440	3.2	2.00
2	NA	NA	1.00	1.0240	6.4	4.00
3	NA	NA	1.00	0.9120	8.0	5.00
4	NA	NA	1.00	0.8720	8.8	5.50
5	NA	NA	1.00	0.7200	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9967	0.6902	1.4149		0.9957	0.6896	0.8851
0.9925	0.9693	2.0010		0.9915	0.9683	1.2517
0.9903	1.0858	2.2372		0.9893	1.0847	1.3995
0.9893	1.1345	2.3464		0.9883	1.1334	1.4678
0.9840	1.3666	2.8299		0.9830	1.3652	1.7702

Qstd slope (m) = 2.09107
intercept (b) = -0.02838
coefficient (r) = 0.99996

Qa slope (m) = 1.30939
intercept (b) = -0.01775
coefficient (r) = 0.99996

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}

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 9C
Calibrated by : P.F.Yeung
Date : 05/11/2013

Sampler
Model : TE-5170
Serial Number : S/N 3572

Calibration Orfice and Standard Calibration Relationship
Serial Number : 2323
Service Date : 26 Dec 2012
Slope (m) : 2.09107
Intercept (b) : -0.02838
Correlation Coefficient(r) : 0.99996

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1019
Ta(K) : 296

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.4	3.398	1.638	56	56.36
2	13 holes	9.0	3.019	1.457	50	50.32
3	10 holes	6.6	2.585	1.250	43	43.27
4	7 holes	4.2	2.062	0.100	36	36.23
5	5 holes	2.4	1.559	0.759	29	29.18

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m): 30.801 Intercept(b): 5.465 Correlation Coefficient(r): 0.9991

Checked by: Magnum Fan Date: 08/11/2013

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR9A
Calibrated by	:	P.F.Yeung
Date	:	05/11/2013

Sampler

Model	:	TE-5170
Serial Number	:	S/N 3573

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2323
Service Date	:	26 Dec 2012
Slope (m)	:	2.09107
Intercept (b)	:	-0.02838
Correlation Coefficient(r)	:	0.99996

Standard Condition

Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition

Pa (hpa)	:	1019
Ta(K)	:	296

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	10.5	3.261	1.573	60	60.38
2	13 holes	8.2	2.882	1.392	54	54.34
3	10 holes	6.0	2.465	1.192	49	49.31
4	7 holes	4.0	2.013	0.976	42	42.27
5	5 holes	2.6	1.623	0.790	37	37.23

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m): 29.442 Intercept(b): 13.831 Correlation Coefficient(r): 0.9992

Checked by: Magnum Fan Date: 08/11/2013

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C134307
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1709)

Description / 儀器名稱 : Sound Level Calibrator
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10997142
Supplied By / 委託者 : Envirotech Services Co.
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 12 July 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By : K C Lee
測試

Certified By : K M Wu
核證

Date of Issue : 15 July 2013
簽發日期

Certificate of Calibration
校正證書

Certificate No. : C134307
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C133632
CL281	Multifunction Acoustic Calibrator	DC130171
TST150A	Measuring Amplifier	C120886

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.7	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.988	1 kHz ± 2 %	± 1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

輝創工程
Sun Creation Engineering

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-1422)

Description / 儀器名稱 : Sound Level Meter
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-31
Serial No. / 編號 : 00410224
Supplied By / 委託者 : Envirotech Services Co.
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 June 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By 測試 : K C Lee

Certified By 核證 : K K Wong

Date of Issue 簽發日期 : 17 June 2013

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	93.6	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L_A	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	93.6	Ref.
			Slow			93.5	± 0.3

Certificate of Calibration
校正證書

Certificate No. : C133573
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.3	-26.2 ± 1.5
					125 Hz	77.3	-16.1 ± 1.5
					250 Hz	84.9	-8.6 ± 1.4
					500 Hz	90.3	-3.2 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	94.9	+1.2 ± 1.6
					4 kHz	94.8	+1.0 ± 1.6
					8 kHz	92.6	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	92.7	-0.8 ± 1.5
					125 Hz	93.4	-0.2 ± 1.5
					250 Hz	93.6	0.0 ± 1.4
					500 Hz	93.7	0.0 ± 1.4
					1 kHz	93.7	Ref.
					2 kHz	93.5	-0.2 ± 1.6
					4 kHz	93.0	-0.8 ± 1.6
					8 kHz	90.7	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 307154

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	63 Hz - 125 Hz	± 0.35 dB
	250 Hz - 500 Hz	± 0.30 dB
	1 kHz	± 0.20 dB
	2 kHz - 4 kHz	± 0.35 dB
	8 kHz	± 0.45 dB
	12.5 kHz	± 0.70 dB
104 dB	1 kHz	± 0.10 dB (Ref. 94 dB)
114 dB	1 kHz	± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/009

Manufacturer : HACH

Model No. : 2100Q

Serial No. : 11060 C 010010

Date of Calibration : 08/10/2013

Due Date : 07/01/2014

Gelex Vial Std	Theoretical Value (NTU)	Measured Value (NTU)	Difference %
0-10 NTU	5	5.2	3.92
10-100 NTU	50	5.19	3.73
100-1000 NTU	550	561	1.98

Acceptance Criteria

Difference : -5 % to 5%

The turbidity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by :

Approved by :

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Form E/CE/R/15/Issue 6 (1/1) [08/03]

Internal Calibration & Performance Check Report of pH Meter

Equipment Ref. No. : ET/EW/007/003
Manufacturer : HANNA
Model No. : HI 8314
Serial No. : 674469
Date of Calibration : 09/09/2013
Calibration Due Date : 08/10/2013

Liquid Junction Error

Primary Standard Solution Used : Phosphate
Ref No. of Primary Solution: 003/5.2/001/15
Temperature of Solution : 19.9
pH$_{½}$ = +0.08
pH value of diluted buffer : 6.8
pH (S) = 6.881
pH = pH(S) - pH of diluted buffer = 0.081 (Observed Deviation)
Liquid Junction Error (ΔpH_j) = pH - pH$_{½}$ = 0.001

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.89
Shift on stirring, $\Delta pH_s = pH_s - pH(S) - \Delta pH_j$ = 0.008

Noise

Noise, pH_n = difference between max and min reading : 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008
Temperature record from the reference thermometer (T_R): 20.0 °C
Temperature record from the ATC (T_{ATC}): 19.8 °C
Temperature Difference (T_R - T_{ATC}) 0.2 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	pHj	≤0.05
Shift on Stirring	pHs	≤0.02
Noise	pHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

The pH meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

* Delete as appropriate

Calibrated by :

Approved Signatory :

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW/007/003
Manufacturer : HANNA
Model No. : HI 8314
Serial No. : 674469
Date of Calibration : 09/10/2013
Calibration Due Date : 08/11/2013

Liquid Junction Error

Primary Standard Solution Used : Phosphate
Ref No. of Primary Solution: 003/5.2/001/15
Temperature of Solution : 20.0
$\Delta pH_{½}$ = +0.08
pH value of diluted buffer : 6.81
pH (S) = 6.881
ΔpH = pH(S) - pH of diluted buffer = 0.071 (Observed Deviation)
Liquid Junction Error (ΔpH_j) = $\Delta pH - \Delta pH_{½}$ = -0.009

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.88
Shift on stirring, $\Delta pH_s = pH_s - pH(S) - \Delta pH_j$ = 0.008

Noise

Noise, ΔpH_n = difference between max and min reading : 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008
Temperature record from the reference thermometer (T_R): 20.0 °C
Temperature record from the ATC (T_{ATC}): 19.7 °C
Temperature Difference, $|T_R - T_{ATC}|$ 0.3 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	ΔpHj	≤0.05
Shift on Stirring	ΔpHs	≤0.02
Noise	ΔpHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

The pH meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

* Delete as appropriate

Calibrated by :

Checked by :

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW/007/003
Manufacturer : HANNA
Model No. : HI 8314
Serial No. : 674469
Date of Calibration : 09/11/2013
Calibration Due Date : 08/12/2013

Liquid Junction Error

Primary Standard Solution Used : Phosphate
Ref No. of Primary Solution: 003/5.2/001/16
Temperature of Solution : 20.2
$\Delta pH_{½}$ = +0.08
pH value of diluted buffer : 6.80
pH (S) = 6.881
ΔpH = pH(S) - pH of diluted buffer = 0.081 (Observed Deviation)
Liquid Junction Error (ΔpH_j) = $\Delta pH - \Delta pH_{½}$ = 0.001

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.89
Shift on stirring, $\Delta pH_s = pH_s - pH(S) - \Delta pH_j$ = 0.008

Noise

Noise, ΔpH_n = difference between max and min reading : 0.00

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008
Temperature record from the reference thermometer (T_R): 20.2 °C
Temperature record from the ATC (T_{ATC}): 19.8 °C
Temperature Difference, $|T_R - T_{ATC}|$ 0.4 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	ΔpHj	≤0.05
Shift on Stirring	ΔpHs	≤0.02
Noise	ΔpHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

The pH meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

* Delete as appropriate

Calibrated by :

Checked by :

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Form E/CE/R/12 Issue 8 (1/2) [05/13]

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : ET/EW/008/005

Manufacturer : YSI

Model No. : Pro 2030

Serial No. : 12A 100353

Date of Calibration : 31/07/2013

Calibration Due Date : 30/10/2013

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/008

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	20.2	Corrected	19.8
DO Meter reading	Measured	19.8	Difference	0.0

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/7	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/001/20

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.10	0.00
Final Vol. of $Na_2S_2O_3$ (ml)	10.55	10.40
Vol. of $Na_2S_2O_3$ used (ml)	10.45	10.40
Normality of $Na_2S_2O_3$ solution (N)	0.02392	0.02404
Average Normality (**N**) of $Na_2S_2O_3$ solution (N)	0.02398	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, **N** = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.70	23.20	0.00	7.90	12.90
Final Vol. of $Na_2S_2O_3$ (ml)	11.70	23.20	31.20	7.90	12.90	18.00
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.70	11.50	8.00	7.90	5.00	5.10
Dissolved Oxygen (**DO**), mg/L	7.53	7.40	5.15	5.09	3.22	3.28
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7..44	7.65	7.65	7.53	7.40	7.47	2.38
5	5.30	5.22	5.26	5.15	5.09	5.12	2.70
10	3.20	3.11	3.16	3.22	3.28	3.25	2.81
Linear regression coefficient				0.9982			

Form E/CE/R/12 Issue 8 (2/2) [05/13]

Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/002/07	Reagent No. of NaCl (30ppt)	CPE/012/4.8/002/07

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	12.00	24.30	35.30
Final Vol. of $Na_2S_2O_3$ (ml)	12.00	24.30	35.30	46.40
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	12.00	12.30	11.00	11.10
Dissolved Oxygen (**DO**), mg/L	7.73	7.92	7.08	7.15
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.82	7.73	7.78	7.73	7.92	7.83	0.64
30	7.15	7.09	7.12	7.08	7.15	7.12	0.00

Acceptance Criteria

(1) Differenc between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C

(2) Linear regression coefficient : >0.99

(3) Zero checking: 0.0mg/L

(4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies # / ~~does not comply~~ # with the specified requirements and is deemed acceptable # / ~~unacceptable~~ # for use.

Delete as appropriate

Calibrated by :

Approved by :

Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/005

Manufacturer : YSI

Model No. : Pro 2030

Serial No. : 12A 100353

Date of Calibration : 31/07/2013

Due Date : 30/10/2013

Ref. No. of Salinity Standard used (30ppt)	S/001/4

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30.0	31.2	3.92

Acceptance Criteria

Difference : <10 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by : ____________

Approved by : ____________

Form E/CE/R/12 Issue 8 (1/2) [05/13]

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/005	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	12A 100353
Date of Calibration	:	29/10/2013	Calibration Due Date	:	28/01/2014

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/008

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	20.3	Corrected	19.9
DO Meter reading	Measured	19.8	Difference	0.1

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/7	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/001/22

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	1.00	12.00
Final Vol. of $Na_2S_2O_3$ (ml)	11.55	22.50
Vol. of $Na_2S_2O_3$ used (ml)	10.55	10.50
Normality of $Na_2S_2O_3$ solution (N)	0.02370	0.02381
Average Normality (**N**) of $Na_2S_2O_3$ solution (N)	0.02376	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, **N** = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.80	23.40	0.00	8.00	13.00
Final Vol. of $Na_2S_2O_3$ (ml)	11.80	23.40	31.50	8.00	13.00	18.10
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.80	11.60	8.10	8.00	5.00	5.10
Dissolved Oxygen (**DO**), mg/L	7.53	7.40	5.17	5.10	3.19	3.25
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.66	7.41	7.54	7.53	7.40	7.47	0.93
5	5.31	5.23	5.27	5.17	5.10	5.14	2.50
10	3.20	3.10	3.15	3.19	3.25	3.22	2.20
Linear regression coefficient				0.9987			

Form E/CE/R/12 Issue 8 (2/2) [05/13]

Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/002/11	Reagent No. of NaCl (30ppt)	CPE/012/4.8/002/11

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	12.40	24.50	35.80
Final Vol. of $Na_2S_2O_3$ (ml)	12.40	24.50	35.80	47.00
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	12.40	12.10	11.30	11.20
Dissolved Oxygen (**DO**), mg/L	7.91	7.72	7.21	7.14
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.82	7.63	7.73	7.91	7.72	7.82	1.16
30	7.22	7.16	7.19	7.21	7.14	7.18	0.14

Acceptance Criteria

(1) Differenc between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C

(2) Linear regression coefficient : >0.99

(3) Zero checking: 0.0mg/L

(4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies # / ~~does not comply~~ # with the specified requirements and is deemed acceptable # / ~~unacceptable~~ # for use.

\# Delete as appropriate

Calibrated by : ____________ Approved by : ____________

Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/005

Manufacturer : YSI

Model No. : Pro 2030

Serial No. : 12A 100353

Date of Calibration : 29/10/2013 ~~29/08/2013~~ 29/10/2013

Due Date : 28/01/2014

Ref. No. of Salinity Standard used (30ppt)	S/001/4

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30.0	30.8	2.63

Acceptance Criteria

Difference : <10 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by : ____________

Approved by : ____________

Appendix F

EM&A Monitoring Schedules

HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (31 Oct to 30 Nov 13)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Oct	28-Oct	29-Oct	30-Oct	31-Oct	01-Nov	02-Nov
				WQM Mid-Ebb 10:32 (08:47 - 12:17) Mid-Flood 16:51 (15:06 - 18:36)		**WQM** Mid-Ebb 11:58 (10:13 - 13:43) Mid-Flood 17:49 (16:04 - 19:34)
03-Nov	04-Nov	05-Nov	06-Nov	07-Nov	08-Nov	09-Nov
		WQM Mid-Ebb 14:14 (12:29 - 15:59) Mid-Flood 19:30 (17:45 - 21:15)		**WQM** Mid-Flood 10:20 (08:35 - 12:05) Mid-Ebb 15:51 (14:06 - 17:36)		**WQM** Mid-Flood 12:28 (10:43 - 14:13) Mid-Ebb 17:57 (16:12 - 19:42)
10-Nov	11-Nov	12-Nov	13-Nov	14-Nov	15-Nov	16-Nov
		WQM Mid-Ebb 8:22 (06:36 - 10:06) Mid-Flood 15:35 (13:50 - 17:20)		**WQM** Mid-Ebb 10:28 (08:43 - 12:13) Mid-Flood 16:49 (15:04 - 18:34)		**WQM** Mid-Ebb 12:02 (10:17 - 13:47) Mid-Flood 17:46 (16:01 - 19:31)
17-Nov	18-Nov	19-Nov	20-Nov	21-Nov	22-Nov	23-Nov
		WQM Mid-Ebb 13:56 (12:11 - 15:41) Mid-Flood 19:10 (17:25 - 20:55)		**WQM** Mid-Flood 9:53 (08:08 - 11:38) Mid-Ebb 15:02 (13:20 - 16:50)		**WQM** Mid-Flood 11:17 (09:32 - 13:02) Mid-Ebb 16:12 (14:35 - 17:50)
24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov
		WQM Mid-Flood 14:06 (12:21 - 15:51) Mid-Ebb 20:11 (18:26 - 21:56)		**WQM** Mid-Ebb 8:33 (06:48 - 10:18) Mid-Flood 15:19 (13:34 - 17:04)		**WQM** Mid-Ebb 10:42 (08:57 - 12:27) Mid-Flood 16:30 (14:45 - 18:15)

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Noise Monitoring Schedule (31 Oct to 30 Nov 2013)

Noise Monitoring at the rooftop of Pak Mong Village Watch Tower

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Oct	28-Oct	29-Oct	30-Oct	31-Oct	01-Nov	02-Nov
03-Nov	04-Nov	05-Nov	06-Nov	07-Nov	08-Nov	09-Nov
		Noise Monitoring				
10-Nov	11-Nov	12-Nov	13-Nov	14-Nov	15-Nov	16-Nov
	Noise Monitoring				Noise Monitoring	
17-Nov	18-Nov	19-Nov	20-Nov	21-Nov	22-Nov	23-Nov
				Noise Monitoring		
24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov
			Noise Monitoring			

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Air Quality Monitoring Schedule (31 Oct to 30 Nov 2013)

Air Quality Monitoring at Siu Ho Wan MTRC Depot

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27-Oct	28-Oct	29-Oct	30-Oct	31-Oct	01-Nov	02-Nov
03-Nov	04-Nov	05-Nov	06-Nov	07-Nov	08-Nov	09-Nov
		1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*				
10-Nov	11-Nov	12-Nov	13-Nov	14-Nov	15-Nov	16-Nov
	1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*				1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*	
17-Nov	18-Nov	19-Nov	20-Nov	21-Nov	22-Nov	23-Nov
				1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*		
24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov
			1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*			

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (Dec 13)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec
		WQM Mid-Ebb 13:15 (11:30 - 15:00) Mid-Flood 18:27 (16:42 - 20:12)		**WQM** Mid-Flood 9:23 (07:38 - 11:08) Mid-Ebb 14:52 (13:07 - 16:37)		**WQM** Mid-Flood 11:04 (09:19 - 12:49) Mid-Ebb 16:35 (14:51 - 18:21)
08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec
		WQM Mid-Flood 13:55 (12:10 - 15:40) Mid-Ebb 20:18 (18:33 - 22:03)		**WQM** Mid-Ebb 8:57 (07:12 - 10:42) Mid-Flood 15:28 (13:43 - 17:13)		**WQM** Mid-Ebb 11:05 (09:20 - 12:50) Mid-Flood 16:40 (14:55 - 18:25)
15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec
		WQM Mid-Ebb 13:03 (11:18 - 14:48) Mid-Flood 18:14 (16:29 - 19:59)		**WQM** Mid-Ebb 14:09 (12:24 - 15:54) Mid-Flood 19:18 (17:33 - 21:03)		**WQM** Mid-Flood 10:00 (08:15 - 11:45) Mid-Ebb 15:13 (13:28 - 16:58)
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec
		WQM Mid-Flood 11:53 (10:08 - 13:38) Mid-Ebb 17:33 (15:48 - 19:18)		**WQM** Mid-Flood 13:25 (11:40 - 15:10) Mid-Ebb 19:58 (18:13 - 21:43)		**WQM** Mid-Ebb 9:01 (07:16 - 10:46) Mid-Flood 14:59 (13:14 - 16:44)
29-Dec	30-Dec	31-Dec				
		WQM Mid-Ebb 12:15 (10:30 - 14:00) Mid-Flood 17:23 (15:38 - 19:08)				

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Noise Monitoring Schedule (1 Dec to 31 Dec 2013)

Noise Monitoring at the rooftop of Pak Mong Village Watch Tower

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec
		Noise Monitoring				
08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec
	Noise Monitoring				Noise Monitoring	
15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec
				Noise Monitoring		
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec
		Noise Monitoring				
29-Dec	30-Dec	31-Dec				
	Noise Monitoring					

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Air Quality Monitoring Schedule (1 Dec to 31 Dec 2013)

Air Quality Monitoring at WA4 and rooftop of Pak Mong Village Watch Tower

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec
		1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*				
08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec
	1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*				1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*	
15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec
				1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*		
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec
		1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*				
29-Dec	30-Dec	31-Dec				
	1-hour TSP - 3 times 24-hour TSP - 1 time *Impact AQM*					

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

Appendix G

Impact Air Quality Monitoring Results and Graphical Presentation

1-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9A

Project	Works	Date (yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2010/07	2013-11-05	ASR9A	9:30	1-hr TSP	120	394	500
TMCLKL	HY/2010/07	2013-11-05	ASR9A	10:30	1-hr TSP	126		
TMCLKL	HY/2010/07	2013-11-05	ASR9A	11:30	1-hr TSP	128		
TMCLKL	HY/2010/07	2013-11-11	ASR9A	9:35	1-hr TSP	84		
TMCLKL	HY/2010/07	2013-11-11	ASR9A	10:35	1-hr TSP	72		
TMCLKL	HY/2010/07	2013-11-11	ASR9A	11:35	1-hr TSP	70		
TMCLKL	HY/2010/07	2013-11-15	ASR9A	11:08	1-hr TSP	60		
TMCLKL	HY/2010/07	2013-11-15	ASR9A	12:08	1-hr TSP	62		
TMCLKL	HY/2010/07	2013-11-15	ASR9A	13:08	1-hr TSP	65		
TMCLKL	HY/2010/07	2013-11-21	ASR9A	8:26	1-hr TSP	115		
TMCLKL	HY/2010/07	2013-11-21	ASR9A	9:26	1-hr TSP	83		
TMCLKL	HY/2010/07	2013-11-21	ASR9A	10:26	1-hr TSP	114		
TMCLKL	HY/2010/07	2013-11-27	ASR9A	9:00	1-hr TSP	182		
TMCLKL	HY/2010/07	2013-11-27	ASR9A	10:02	1-hr TSP	138		
TMCLKL	HY/2010/07	2013-11-27	ASR9A	11:04	1-hr TSP	103		
					Average	101.4666667		
					Min.	60		
					Max.	182		

1-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9C

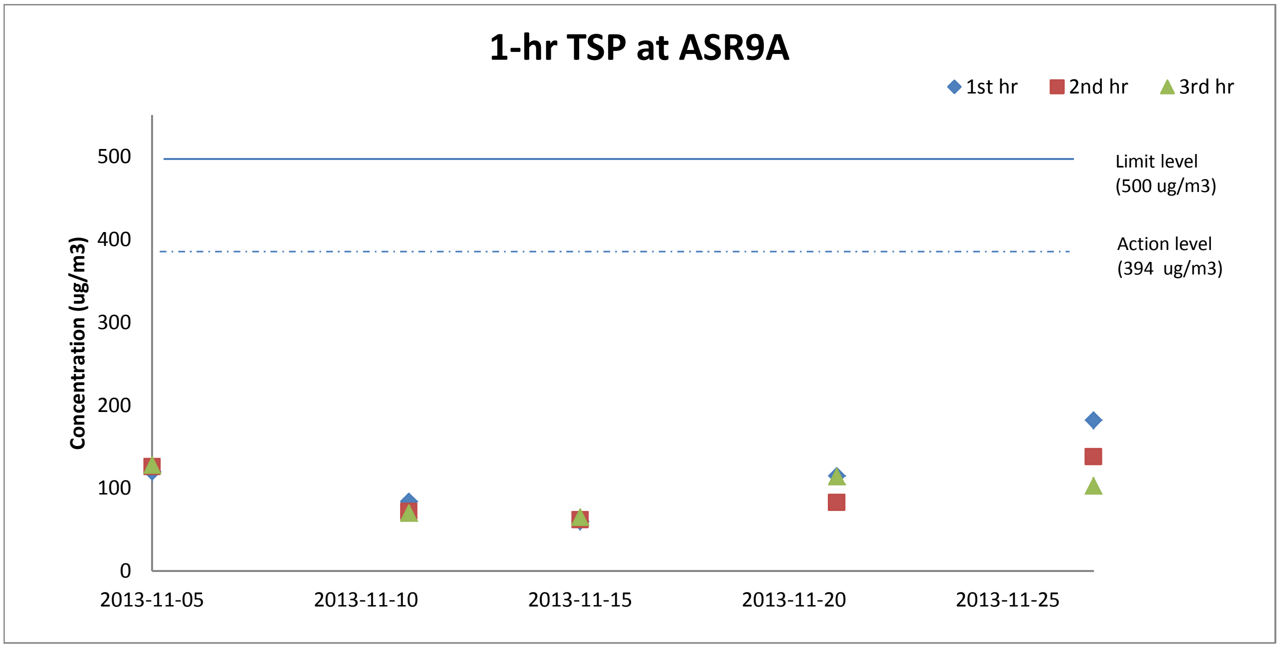
Project	Works	Date (yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2010/07	2013-11-05	ASR9C	9:38	1-hr TSP	131	393	500
TMCLKL	HY/2010/07	2013-11-05	ASR9C	10:38	1-hr TSP	124		
TMCLKL	HY/2010/07	2013-11-05	ASR9C	11:38	1-hr TSP	136		
TMCLKL	HY/2010/07	2013-11-11	ASR9C	9:40	1-hr TSP	68		
TMCLKL	HY/2010/07	2013-11-11	ASR9C	10:40	1-hr TSP	75		
TMCLKL	HY/2010/07	2013-11-11	ASR9C	11:40	1-hr TSP	63		
TMCLKL	HY/2010/07	2013-11-15	ASR9C	10:05	1-hr TSP	69		
TMCLKL	HY/2010/07	2013-11-15	ASR9C	11:05	1-hr TSP	63		
TMCLKL	HY/2010/07	2013-11-15	ASR9C	12:05	1-hr TSP	68		
TMCLKL	HY/2010/07	2013-11-21	ASR9C	8:35	1-hr TSP	117		
TMCLKL	HY/2010/07	2013-11-21	ASR9C	9:35	1-hr TSP	109		
TMCLKL	HY/2010/07	2013-11-21	ASR9C	10:35	1-hr TSP	156		
TMCLKL	HY/2010/07	2013-11-27	ASR9C	9:10	1-hr TSP	137		
TMCLKL	HY/2010/07	2013-11-27	ASR9C	10:12	1-hr TSP	117		
TMCLKL	HY/2010/07	2013-11-27	ASR9C	11:14	1-hr TSP	99		
					Average	102		
					Min.	63		
					Max.	156		

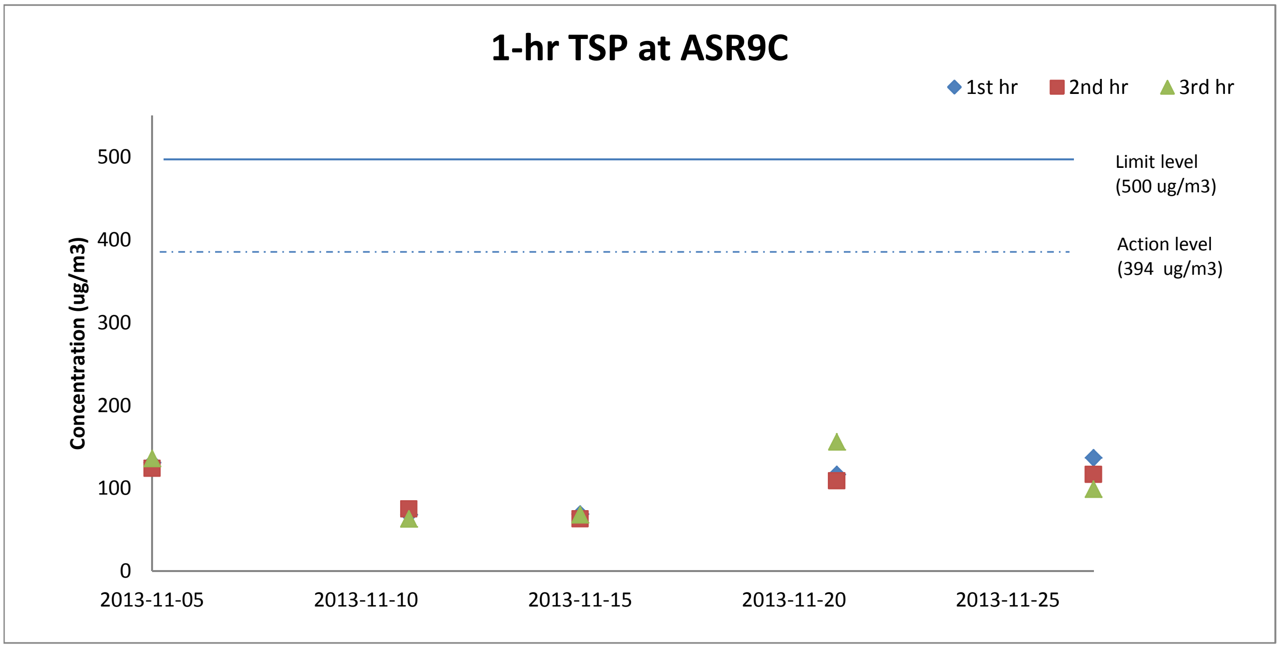
24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9A

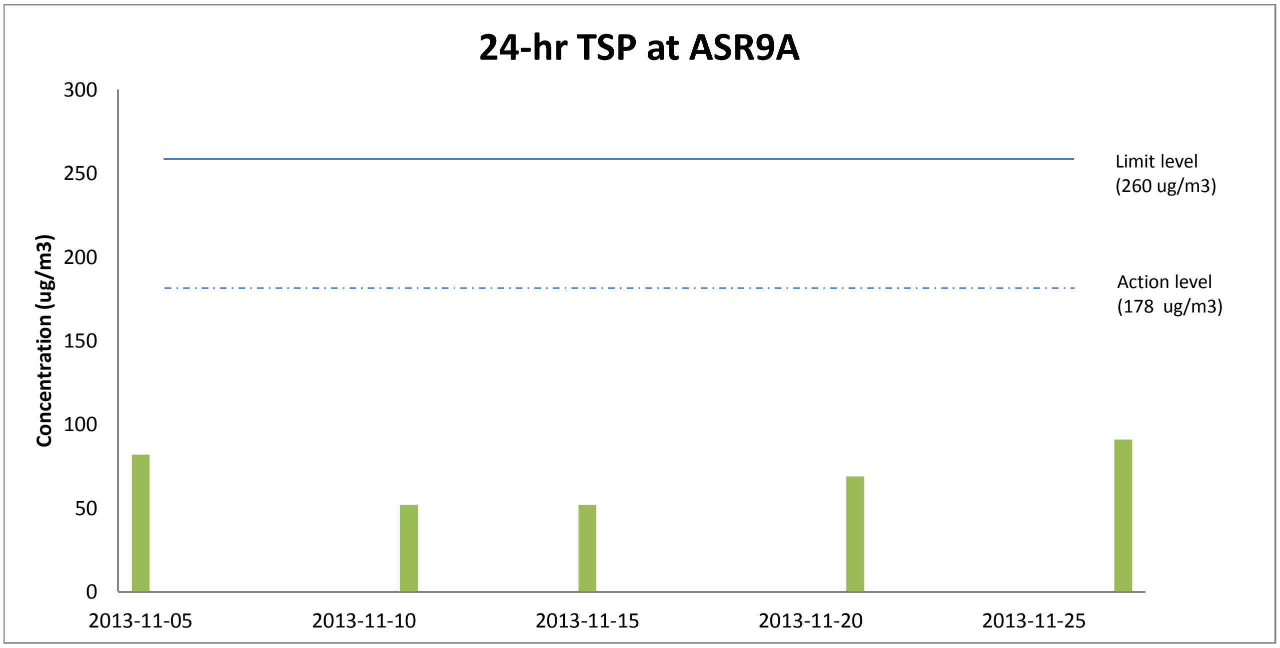
Project	Works	Date (yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2010/07	2013-11-05	ASR9A	15:45	24-hr TSP	82	178	260
TMCLKL	HY/2010/07	2013-11-11	ASR9A	10:05	24-hr TSP	52		
TMCLKL	HY/2010/07	2013-11-15	ASR9A	10:05	24-hr TSP	52		
TMCLKL	HY/2010/07	2013-11-21	ASR9A	11:32	24-hr TSP	69		
TMCLKL	HY/2010/07	2013-11-27	ASR9A	12:06	24-hr TSP	91		
					Average	69.2		
					Min.	66.64		
					Max.	69.568		

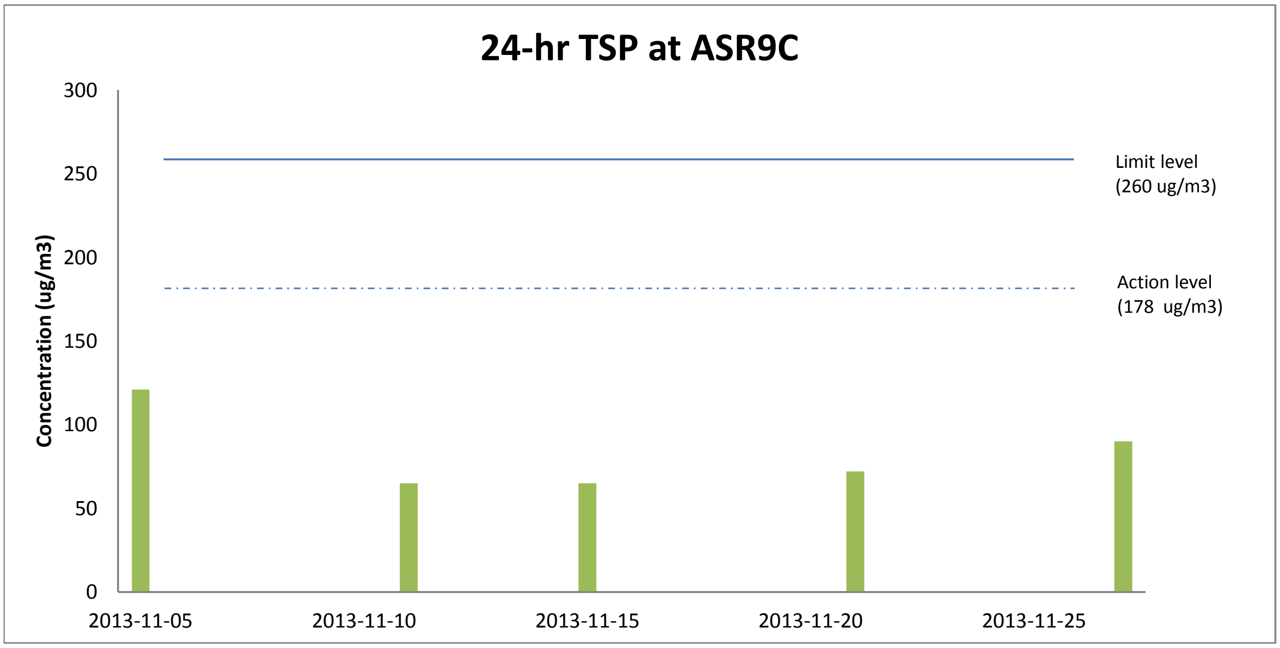
24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9C

Project	Works	Date (yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2010/07	2013-11-05	ASR9C	15:30	24-hr TSP	121	178	260
TMCLKL	HY/2010/07	2013-11-11	ASR9C	10:20	24-hr TSP	65		
TMCLKL	HY/2010/07	2013-11-15	ASR9C	10:20	24-hr TSP	65		
TMCLKL	HY/2010/07	2013-11-21	ASR9C	11:41	24-hr TSP	72		
TMCLKL	HY/2010/07	2013-11-27	ASR9C	12:16	24-hr TSP	90		
					Average	82.6		
					Min.	74.92		
					Max.	76.904		


1-hr TSP at ASR9A
1st hr
2nd hr
3rd hr
Concentration (ug/m3)
0
100
200
300
400
500
Limit level
(500 ug/m3)
Action level
(394 ug/m3)
2013-11-05
2013-11-10
2013-11-15
2013-11-20
2013-11-25


1-hr TSP at ASR9C
1st hr
2nd hr
3rd hr
Concentration (ug/m3)
0
100
200
300
400
500
Limit level
(500 ug/m3)
Action level
(394 ug/m3)
2013-11-05
2013-11-10
2013-11-15
2013-11-20
2013-11-25


24-hr TSP at ASR9A
Concentration (ug/m3)
300
250
200
150
100
50
0
2013-11-05
2013-11-10
2013-11-15
2013-11-20
2013-11-25
Limit level (260 ug/m3)
Action level (178 ug/m3)


24-hr TSP at ASR9C
Concentration (ug/m3)
300
250
200
150
100
50
0
2013-11-05
2013-11-10
2013-11-15
2013-11-20
2013-11-25
Limit level (260 ug/m3)
Action level (178 ug/m3)

Appendix H

Meteorological Data for the Reporting Month

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
05-11-2013	09:38:39	0.23	102.51
05-11-2013	09:43:39	0.02	79.11
05-11-2013	09:48:39	1.07	61.28
05-11-2013	09:53:39	0.02	50.92
05-11-2013	09:58:39	0.58	97.16
05-11-2013	10:03:39	0.86	76.77
05-11-2013	10:08:39	0.81	83.45
05-11-2013	10:13:39	0.21	91.48
05-11-2013	10:18:39	0.75	63.29
05-11-2013	10:23:39	0.09	88.13
05-11-2013	10:28:39	0.02	92.92
05-11-2013	10:33:39	0.02	72.87
05-11-2013	10:38:39	0.41	24.85
05-11-2013	10:43:39	1.19	29.75
05-11-2013	10:48:39	1.54	24.18
05-11-2013	10:53:39	1.7	29.08
05-11-2013	10:58:39	1.15	20.84
05-11-2013	11:03:39	1.41	36.21
05-11-2013	11:08:39	0.92	24.62
05-11-2013	11:13:39	1.44	1.11
05-11-2013	11:18:39	1.22	28.08
05-11-2013	11:23:39	0.92	23.06
05-11-2013	11:28:39	1.12	21.06
05-11-2013	11:33:39	0.2	22.84
05-11-2013	11:38:39	0.98	15.15
05-11-2013	11:43:39	1.27	-0.22
05-11-2013	11:48:39	0.35	24.18
05-11-2013	11:53:39	0.69	25.96
05-11-2013	11:58:39	0.66	0.22
05-11-2013	12:03:39	0.31	23.4
05-11-2013	12:08:39	0.18	357.44
05-11-2013	12:13:39	0.31	19.28
05-11-2013	12:18:39	0.55	24.51
05-11-2013	12:23:39	0.64	27.19
05-11-2013	12:28:39	0.49	23.73
05-11-2013	12:33:39	0.06	42.01
05-11-2013	12:38:39	0.37	32.76
05-11-2013	12:43:39	0.18	25.63
05-11-2013	12:48:39	0.26	24.74
05-11-2013	12:53:39	0.29	18.72
05-11-2013	12:58:39	0.76	32.87
05-11-2013	13:03:39	0.12	2.34
05-11-2013	13:08:39	0.02	23.51

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
05-11-2013	13:13:39	0.02	348.08
05-11-2013	13:18:39	0.58	343.62
05-11-2013	13:23:39	0.41	2.9
05-11-2013	13:28:39	0.86	25.07
05-11-2013	13:33:39	1.65	28.08
05-11-2013	13:38:39	1.07	21.28
05-11-2013	13:43:39	0.98	8.47
05-11-2013	13:48:39	1.41	26.85
05-11-2013	13:53:39	1.7	30.75
05-11-2013	13:58:39	1.27	19.16
05-11-2013	14:03:39	1.44	38.66
05-11-2013	14:08:39	1.64	18.94
05-11-2013	14:13:39	1.58	25.4
05-11-2013	14:18:39	1.32	31.42
05-11-2013	14:23:39	1.76	36.77
05-11-2013	14:28:39	0.87	30.64
05-11-2013	14:33:39	0.87	39.33
05-11-2013	14:38:39	0.69	25.29
05-11-2013	14:43:39	0.61	27.74
05-11-2013	14:48:39	1.33	20.06
05-11-2013	14:53:39	0.75	29.42
05-11-2013	14:58:39	0.5	18.27
05-11-2013	15:03:39	0.32	34.54
05-11-2013	15:08:39	0.73	15.15
05-11-2013	15:13:39	1.42	30.19
05-11-2013	15:18:39	2.16	17.6
05-11-2013	15:23:39	1.94	11.81
05-11-2013	15:28:39	1.41	12.48
05-11-2013	15:33:39	2.23	353.76
05-11-2013	15:38:39	0.49	0.22
05-11-2013	15:43:39	0.54	358.22
05-11-2013	15:48:39	1.09	348.41
05-11-2013	15:53:39	1.04	358.33
05-11-2013	15:58:39	0.4	357.21
05-11-2013	16:03:39	0.95	333.48
05-11-2013	16:08:39	0.95	336.94
05-11-2013	16:13:39	1.42	336.6
05-11-2013	16:18:39	2.05	330.7
05-11-2013	16:23:39	1.27	348.08
05-11-2013	16:28:39	1.84	351.75
05-11-2013	16:33:39	1.33	342.73
05-11-2013	16:38:39	2.69	357.1
05-11-2013	16:43:39	1.16	341.84

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
05-11-2013	16:48:39	1.32	347.52
05-11-2013	16:53:39	1.19	356.88
05-11-2013	16:58:39	1.1	0
05-11-2013	17:03:39	1.19	334.71
05-11-2013	17:08:39	0.83	346.41
05-11-2013	17:13:39	1.25	360.56
05-11-2013	17:18:39	0.81	356.88
05-11-2013	17:23:39	0.24	6.91
05-11-2013	17:28:39	0.78	21.28
05-11-2013	17:33:39	0.02	32.87
05-11-2013	17:38:39	0.38	19.83
05-11-2013	17:43:39	0.86	22.84
05-11-2013	17:48:39	0.02	75.54
05-11-2013	17:53:39	1.35	19.28
05-11-2013	17:58:39	0.41	43.45
05-11-2013	18:03:39	0.23	21.17
05-11-2013	18:08:39	0.32	22.28
05-11-2013	18:13:39	0.6	26.07
05-11-2013	18:18:39	0.03	40.78
05-11-2013	18:23:39	0.03	159.89
05-11-2013	18:28:39	0.03	193.76
05-11-2013	18:33:39	0.03	160.89
05-11-2013	18:38:39	0.03	160.89
05-11-2013	18:43:39	0.03	103.51
05-11-2013	18:48:39	0.02	51.7
05-11-2013	18:53:39	0.03	51.7
05-11-2013	18:58:39	0.03	51.7
05-11-2013	19:03:39	0.03	51.7
05-11-2013	19:08:39	0.03	63.73
05-11-2013	19:13:39	0.03	63.29
05-11-2013	19:18:39	0.03	87.91
05-11-2013	19:23:39	0.03	87.91
05-11-2013	19:28:39	0.03	87.91
05-11-2013	19:33:39	0.03	87.91
05-11-2013	19:38:39	0.03	87.91
05-11-2013	19:43:39	0.03	146.96
05-11-2013	19:48:39	0.03	199.44
05-11-2013	19:53:39	0.03	186.41
05-11-2013	19:58:39	0.03	204.46
05-11-2013	20:03:39	0.03	204.35
05-11-2013	20:08:39	0.03	202.56
05-11-2013	20:13:39	0.03	206.91
05-11-2013	20:18:39	0.03	163.9

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
05-11-2013	20:23:39	0.03	169.69
05-11-2013	20:28:39	0.03	159.44
05-11-2013	20:33:39	0.03	159.44
05-11-2013	20:38:39	0.03	159.44
05-11-2013	20:43:39	0.05	159.44
05-11-2013	20:48:39	0.05	159.44
05-11-2013	20:53:39	0.05	146.07
05-11-2013	20:58:39	0.05	146.18
05-11-2013	21:03:39	0.03	146.07
05-11-2013	21:08:39	0.03	163.12
05-11-2013	21:13:39	0.03	147.86
05-11-2013	21:18:39	0.03	150.19
05-11-2013	21:23:39	0.03	149.08
05-11-2013	21:28:39	0.05	167.58
05-11-2013	21:33:39	0.03	167.47
05-11-2013	21:38:39	0.05	167.47
05-11-2013	21:43:39	0.03	167.47
05-11-2013	21:48:39	0.03	151.53
05-11-2013	21:53:39	0.03	133.82
05-11-2013	21:58:39	0.03	161.45
05-11-2013	22:03:39	0.03	161.45
05-11-2013	22:08:39	0.03	161.45
05-11-2013	22:13:39	0.03	161.45
05-11-2013	22:18:39	0.03	139.16
05-11-2013	22:23:39	0.03	118.66
05-11-2013	22:28:39	0.03	42.79
05-11-2013	22:33:39	0.03	222.73
05-11-2013	22:38:39	0.03	172.14
05-11-2013	22:43:39	0.03	172.14
05-11-2013	22:48:39	0.03	172.14
05-11-2013	22:53:39	0.03	149.3
05-11-2013	22:58:39	0.05	149.3
05-11-2013	23:03:39	0.03	150.31
05-11-2013	23:08:39	0.03	150.42
05-11-2013	23:13:39	0.03	150.42
05-11-2013	23:18:39	0.03	171.59
05-11-2013	23:23:39	0.03	171.59
05-11-2013	23:28:39	0.03	171.48
05-11-2013	23:33:39	0.03	176.04
05-11-2013	23:38:39	0.03	176.04
05-11-2013	23:43:39	0.03	176.04
05-11-2013	23:48:39	0.03	175.82
05-11-2013	23:53:39	0.03	171.59

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
05-11-2013	23:58:39	0.03	171.59
11-11-2013	09:57:32	2.28	23.29
11-11-2013	10:02:32	4.3	136.27
11-11-2013	10:07:32	2.66	80.11
11-11-2013	10:12:32	3.38	151.31
11-11-2013	10:17:32	1.54	118.77
11-11-2013	10:22:32	2.11	131.25
11-11-2013	10:27:32	3.17	82.23
11-11-2013	10:32:32	2.11	146.74
11-11-2013	10:37:32	2.22	157.1
11-11-2013	10:42:32	3.79	115.32
11-11-2013	10:47:32	1.13	160.22
11-11-2013	10:52:32	2.98	123.9
11-11-2013	10:57:32	4.6	97.94
11-11-2013	11:02:32	5.84	135.82
11-11-2013	11:07:32	2.08	84.46
11-11-2013	11:12:32	2.92	164.01
11-11-2013	11:17:32	0.76	122.67
11-11-2013	11:22:32	1.09	131.81
11-11-2013	11:27:32	4.71	110.64
11-11-2013	11:32:32	2.43	126.35
11-11-2013	11:37:32	1.54	117.1
11-11-2013	11:42:32	2.17	99.28
11-11-2013	11:47:32	3.75	116.55
11-11-2013	11:52:32	2.91	144.4
11-11-2013	11:57:32	1.15	81.78
11-11-2013	12:02:32	3.17	143.96
11-11-2013	12:07:32	2.2	116.77
11-11-2013	12:12:32	2.98	51.48
11-11-2013	12:17:32	5.83	110.97
11-11-2013	12:22:32	1.54	180.61
11-11-2013	12:27:32	4.39	110.97
11-11-2013	12:32:32	5.12	126.13
11-11-2013	12:37:32	2.16	95.6
11-11-2013	12:42:32	4.47	131.7
11-11-2013	12:47:32	3.55	86.13
11-11-2013	12:52:32	2.49	112.2
11-11-2013	12:57:32	4.85	142.62
11-11-2013	13:02:32	2.54	130.7
11-11-2013	13:07:32	1.99	129.58
11-11-2013	13:12:32	2.75	114.65
11-11-2013	13:17:32	1.61	153.2
11-11-2013	13:22:32	0.81	145.29

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
11-11-2013	13:27:32	2.51	115.1
11-11-2013	13:32:32	3.43	136.82
11-11-2013	13:37:32	2.13	167.02
11-11-2013	13:42:32	1.67	186.41
11-11-2013	13:47:32	3.33	101.5
11-11-2013	13:52:32	2.42	115.21
11-11-2013	13:57:32	1.53	132.14
11-11-2013	14:02:32	3.12	89.14
11-11-2013	14:07:32	4.99	160.45
11-11-2013	14:12:32	2.78	128.13
11-11-2013	14:17:32	3.07	126.35
11-11-2013	14:22:32	3.87	121.23
11-11-2013	14:27:32	1.19	147.19
11-11-2013	14:32:32	3.35	77.33
11-11-2013	14:37:32	3.18	105.74
11-11-2013	14:42:32	2.55	120.45
11-11-2013	14:47:32	4.47	97.83
11-11-2013	14:52:32	4.7	138.05
11-11-2013	14:57:32	0.9	86.24
11-11-2013	15:02:32	3.01	113.98
11-11-2013	15:07:32	4.79	129.36
11-11-2013	15:12:32	3.7	100.61
11-11-2013	15:17:32	4.14	128.25
11-11-2013	15:22:32	4.8	122.9
11-11-2013	15:27:32	2	89.81
11-11-2013	15:32:32	2.97	135.71
11-11-2013	15:37:32	2.31	119.67
11-11-2013	15:42:32	6.61	98.83
11-11-2013	15:47:32	1.47	149.64
11-11-2013	15:52:32	1.99	150.19
11-11-2013	15:57:32	5.28	92.26
11-11-2013	16:02:32	5.37	110.64
11-11-2013	16:07:32	2.89	100.84
11-11-2013	16:12:32	3.96	168.02
11-11-2013	16:17:32	2.51	150.53
11-11-2013	16:22:32	3.04	141.06
11-11-2013	16:27:32	1.41	79
11-11-2013	16:32:32	4.96	133.7
11-11-2013	16:37:32	3.44	159.44
11-11-2013	16:42:32	3.56	113.43
11-11-2013	16:47:32	2.36	134.71
11-11-2013	16:52:32	4.51	133.82
11-11-2013	16:57:32	3.41	107.74

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
11-11-2013	17:02:32	5.4	136.38
11-11-2013	17:07:32	4.3	168.02
11-11-2013	17:12:32	2.11	124.23
11-11-2013	17:17:32	1.32	186.41
11-11-2013	17:22:32	3.81	139.94
11-11-2013	17:27:32	6.26	145.63
11-11-2013	17:32:32	4.53	161.23
11-11-2013	17:37:32	2.03	136.82
11-11-2013	17:42:32	4.11	128.69
11-11-2013	17:47:32	4.71	87.02
11-11-2013	17:52:32	2.88	101.17
11-11-2013	17:57:32	6.58	169.14
11-11-2013	18:02:32	1.9	175.15
11-11-2013	18:07:32	1.87	214.15
11-11-2013	18:12:32	2.66	146.07
11-11-2013	18:17:32	8.47	142.73
11-11-2013	18:22:32	3.72	110.75
11-11-2013	18:27:32	2.58	131.36
11-11-2013	18:32:32	4.3	159.44
11-11-2013	18:37:32	0.81	208.02
11-11-2013	18:42:32	0.83	119.89
11-11-2013	18:47:32	0.9	75.77
11-11-2013	18:52:32	1.99	107.52
11-11-2013	18:57:32	1.82	144.18
11-11-2013	19:02:32	1.96	188.41
11-11-2013	19:07:32	0.6	143.84
11-11-2013	19:12:32	1.36	166.46
11-11-2013	19:17:32	2.88	128.91
11-11-2013	19:22:32	2.51	195.32
11-11-2013	19:27:32	5.75	128.47
11-11-2013	19:32:32	3.55	134.71
11-11-2013	19:37:32	5.44	152.31
11-11-2013	19:42:32	3.61	87.02
11-11-2013	19:47:32	3.66	128.36
11-11-2013	19:52:32	3.26	103.73
11-11-2013	19:57:32	3.06	98.83
11-11-2013	20:02:32	2.68	111.42
11-11-2013	20:07:32	1.93	138.16
11-11-2013	20:12:32	2.78	116.77
11-11-2013	20:17:32	5.26	119.44
11-11-2013	20:22:32	2.14	128.69
11-11-2013	20:27:32	3.23	109.64
11-11-2013	20:32:32	2.88	81.45

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
11-11-2013	20:37:32	3.61	130.03
11-11-2013	20:42:32	6.65	113.98
11-11-2013	20:47:32	3.15	124.23
11-11-2013	20:52:32	4.76	117.99
11-11-2013	20:57:32	8.52	130.7
11-11-2013	21:02:32	2.49	135.38
11-11-2013	21:07:32	1.51	158.33
11-11-2013	21:12:32	2.43	105.96
11-11-2013	21:17:32	6.19	124.46
11-11-2013	21:22:32	2.65	134.82
11-11-2013	21:27:32	7.37	157.88
11-11-2013	21:32:32	3.93	135.04
11-11-2013	21:37:32	2.57	107.3
11-11-2013	21:42:32	3.18	138.05
11-11-2013	21:47:32	2.05	182.84
11-11-2013	21:52:32	3.85	171.14
11-11-2013	21:57:32	4.22	135.6
11-11-2013	22:02:32	2.45	159.44
11-11-2013	22:07:32	2	103.51
11-11-2013	22:12:32	2.14	103.73
11-11-2013	22:17:32	2.34	108.41
11-11-2013	22:22:32	3.23	134.37
11-11-2013	22:27:32	3.52	96.49
11-11-2013	22:32:32	4.92	134.6
11-11-2013	22:37:32	4.82	116.1
11-11-2013	22:42:32	2.89	144.18
11-11-2013	22:47:32	1.51	122.12
11-11-2013	22:52:32	1.77	134.37
11-11-2013	22:57:32	5.26	126.13
11-11-2013	23:02:32	1.5	71.31
11-11-2013	23:07:32	4.27	139.39
11-11-2013	23:12:32	1.42	143.84
11-11-2013	23:17:32	0.76	144.29
11-11-2013	23:22:32	3.18	120.33
11-11-2013	23:27:32	3.36	135.93
11-11-2013	23:32:32	1.47	136.94
11-11-2013	23:37:32	2.17	170.81
11-11-2013	23:42:32	1.24	129.47
11-11-2013	23:47:32	1.64	112.65
11-11-2013	23:52:32	1.67	112.2
11-11-2013	23:57:32	1.87	160.56
15-11-2013	00:02:32	1.76	331.59
15-11-2013	00:07:32	1.58	330.36

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	00:12:32	0.61	358.77
15-11-2013	00:17:32	1.16	359.67
15-11-2013	00:22:32	2.19	2.12
15-11-2013	00:27:32	1.51	334.93
15-11-2013	00:32:32	1.99	335.49
15-11-2013	00:37:32	0.93	333.82
15-11-2013	00:42:32	1.84	328.69
15-11-2013	00:47:32	1.38	349.08
15-11-2013	00:52:32	1.68	310.08
15-11-2013	00:57:32	1.8	338.61
15-11-2013	01:02:32	2.83	339.05
15-11-2013	01:07:32	1.8	329.58
15-11-2013	01:12:32	1.5	334.15
15-11-2013	01:17:32	2.37	353.65
15-11-2013	01:22:32	3.23	347.41
15-11-2013	01:27:32	1.77	333.15
15-11-2013	01:32:32	1.48	352.42
15-11-2013	01:37:32	2.45	344.85
15-11-2013	01:42:32	2.11	2.34
15-11-2013	01:47:32	1.77	10.58
15-11-2013	01:52:32	2.17	335.38
15-11-2013	01:57:32	2.54	355.21
15-11-2013	02:02:32	2.6	324.46
15-11-2013	02:07:32	2.36	348.41
15-11-2013	02:12:32	1.82	11.36
15-11-2013	02:17:32	2.39	334.48
15-11-2013	02:22:32	1.67	357.55
15-11-2013	02:27:32	2.28	358.55
15-11-2013	02:32:32	1.24	1
15-11-2013	02:37:32	1.77	5.24
15-11-2013	02:42:32	1.42	3.57
15-11-2013	02:47:32	3.14	1.34
15-11-2013	02:52:32	1.94	354.09
15-11-2013	02:57:32	3.18	350.19
15-11-2013	03:02:32	1.91	333.26
15-11-2013	03:07:32	1.12	330.58
15-11-2013	03:12:32	1.47	344.4
15-11-2013	03:17:32	1.1	317.66
15-11-2013	03:22:32	1.02	350.08
15-11-2013	03:27:32	1.1	303.84
15-11-2013	03:32:32	1.16	1.45
15-11-2013	03:37:32	1.27	21.06
15-11-2013	03:42:32	2.25	352.98

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	03:47:32	1.07	356.55
15-11-2013	03:52:32	1.25	8.58
15-11-2013	03:57:32	2.43	353.54
15-11-2013	04:02:32	1.42	1.56
15-11-2013	04:07:32	2	2.45
15-11-2013	04:12:32	1.9	3.23
15-11-2013	04:17:32	1.06	335.6
15-11-2013	04:22:32	2.11	354.43
15-11-2013	04:27:32	1.45	-47.24
15-11-2013	04:32:32	1.84	358.11
15-11-2013	04:37:32	1.47	344.51
15-11-2013	04:42:32	1.28	334.6
15-11-2013	04:47:32	1.42	357.99
15-11-2013	04:52:32	1.91	1.23
15-11-2013	04:57:32	1.62	351.87
15-11-2013	05:02:32	1.35	344.29
15-11-2013	05:07:32	3.67	322.56
15-11-2013	05:12:32	0.46	284.01
15-11-2013	05:17:32	1.5	12.48
15-11-2013	05:22:32	1.24	353.65
15-11-2013	05:27:32	2.55	6.24
15-11-2013	05:32:32	0.05	7.02
15-11-2013	05:37:32	0.06	127.69
15-11-2013	05:42:32	0.34	164.23
15-11-2013	05:47:32	0.06	128.13
15-11-2013	05:52:32	0.05	120.11
15-11-2013	05:57:32	0.06	120.11
15-11-2013	06:02:32	0.06	143.06
15-11-2013	06:07:32	0.06	134.71
15-11-2013	06:12:32	0.05	137.94
15-11-2013	06:17:32	0.06	137.05
15-11-2013	06:22:32	1.12	98.05
15-11-2013	06:27:32	0.26	145.29
15-11-2013	06:32:32	0.06	117.33
15-11-2013	06:37:32	0.29	258.94
15-11-2013	06:42:32	0.06	261.95
15-11-2013	06:47:32	1.22	269.53
15-11-2013	06:52:32	1.18	350.53
15-11-2013	06:57:32	1.38	354.65
15-11-2013	07:02:32	0.06	272.98
15-11-2013	07:07:32	0.09	300.28
15-11-2013	07:12:32	0.06	246.91
15-11-2013	07:17:32	0.37	9.58

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	07:22:32	1.27	313.87
15-11-2013	07:27:32	0.4	353.54
15-11-2013	07:32:32	0.06	344.29
15-11-2013	07:37:32	0.06	344.18
15-11-2013	07:42:32	0.06	344.18
15-11-2013	07:47:32	0.06	58.27
15-11-2013	07:52:32	0.06	314.87
15-11-2013	07:57:32	0.34	286.46
15-11-2013	08:02:32	0.12	294.26
15-11-2013	08:07:32	0.05	277.99
15-11-2013	08:12:32	0.05	277.99
15-11-2013	08:17:32	0.72	345.18
15-11-2013	08:22:32	0.05	346.41
15-11-2013	08:27:32	0.55	337.6
15-11-2013	08:32:32	0.05	-47.69
15-11-2013	08:37:32	0.15	347.63
15-11-2013	08:42:32	0.05	347.63
15-11-2013	08:47:32	0.05	291.14
15-11-2013	08:52:32	0.41	319.33
15-11-2013	08:57:32	0.66	352.2
15-11-2013	09:02:32	1.09	274.32
15-11-2013	09:07:32	1.53	291.25
15-11-2013	09:12:32	1.65	280
15-11-2013	09:17:32	1.67	260.72
15-11-2013	09:22:32	0.67	291.25
15-11-2013	09:27:32	0.05	274.99
15-11-2013	09:32:32	0.05	294.26
15-11-2013	09:37:32	0.26	302.84
15-11-2013	09:42:32	0.14	277.88
15-11-2013	09:47:32	0.81	286.57
15-11-2013	09:52:32	1.84	274.87
15-11-2013	09:57:32	0.32	251.14
15-11-2013	10:02:32	1.99	264.07
15-11-2013	10:07:32	2.52	275.77
15-11-2013	10:12:32	0.17	283.79
15-11-2013	10:17:32	1.58	276.21
15-11-2013	10:22:32	0.18	291.36
15-11-2013	10:27:32	0.03	300.17
15-11-2013	10:32:32	0.2	268.64
15-11-2013	10:37:32	0.52	270.31
15-11-2013	10:42:32	0.69	264.29
15-11-2013	10:47:32	1.64	339.28
15-11-2013	10:52:32	0.73	332.37

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	10:57:32	0.03	311.31
15-11-2013	11:02:32	0.14	292.48
15-11-2013	11:07:32	0.03	291.25
15-11-2013	11:12:32	0.03	312.98
15-11-2013	11:17:32	0.03	324.68
15-11-2013	11:22:32	0.03	353.98
15-11-2013	11:27:32	0.03	331.25
15-11-2013	11:32:32	0.03	296.49
15-11-2013	11:37:32	0.03	293.93
15-11-2013	11:42:32	0.03	276.43
15-11-2013	11:47:32	0.18	281.78
15-11-2013	11:52:32	0.03	270.08
15-11-2013	11:57:32	0.14	315.88
15-11-2013	12:02:32	0.37	289.69
15-11-2013	12:07:32	0.23	292.14
15-11-2013	12:12:32	0.03	307.52
15-11-2013	12:17:32	0.06	294.26
15-11-2013	12:22:32	0.29	286.69
15-11-2013	12:27:32	0.61	302.51
15-11-2013	12:32:32	0.38	310.86
15-11-2013	12:37:32	0.81	319
15-11-2013	12:42:32	0.81	322.12
15-11-2013	12:47:32	0.83	302.62
15-11-2013	12:52:32	0.54	294.82
15-11-2013	12:57:32	0.41	286.13
15-11-2013	13:02:32	0.31	286.24
15-11-2013	13:07:32	0.55	281.67
15-11-2013	13:12:32	1.04	293.26
15-11-2013	13:17:32	1.16	300.5
15-11-2013	13:22:32	1.1	287.69
15-11-2013	13:27:32	1.65	307.74
15-11-2013	13:32:32	1.12	286.35
15-11-2013	13:37:32	2.55	316.88
15-11-2013	13:42:32	2.95	301.62
15-11-2013	13:47:32	1.96	295.82
15-11-2013	13:52:32	1.94	294.82
15-11-2013	13:57:32	2.65	299.61
15-11-2013	14:02:32	1.41	302.84
15-11-2013	14:07:32	1.8	303.18
15-11-2013	14:12:32	2.02	305.74
15-11-2013	14:17:32	1.44	302.06
15-11-2013	14:22:32	2.42	301.73
15-11-2013	14:27:32	2.57	290.81

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	14:32:32	2.45	310.86
15-11-2013	14:37:32	2.26	293.82
15-11-2013	14:42:32	1.48	308.64
15-11-2013	14:47:32	2.28	287.35
15-11-2013	14:52:32	1.67	286.46
15-11-2013	14:57:32	2.55	288.13
15-11-2013	15:02:32	1.04	286.13
15-11-2013	15:07:32	2.08	312.98
15-11-2013	15:12:32	2.68	260.72
15-11-2013	15:17:32	2.43	296.27
15-11-2013	15:22:32	2.13	301.62
15-11-2013	15:27:32	2.45	310.19
15-11-2013	15:32:32	1.54	286.02
15-11-2013	15:37:32	2.16	305.07
15-11-2013	15:42:32	1.12	290.25
15-11-2013	15:47:32	2.77	316.77
15-11-2013	15:52:32	1.99	316.21
15-11-2013	15:57:32	2.17	312.09
15-11-2013	16:02:32	2.29	315.1
15-11-2013	16:07:32	1.79	292.7
15-11-2013	16:12:32	2.6	301.5
15-11-2013	16:17:32	1.93	290.47
15-11-2013	16:22:32	1.5	289.03
15-11-2013	16:27:32	1.36	283.23
15-11-2013	16:32:32	1.21	281.11
15-11-2013	16:37:32	1.99	292.37
15-11-2013	16:42:32	1.93	266.96
15-11-2013	16:47:32	1.33	266.96
15-11-2013	16:52:32	0.32	259.5
15-11-2013	16:57:32	0.05	243.23
15-11-2013	17:02:32	0.31	204.46
15-11-2013	17:07:32	0.05	257.94
15-11-2013	17:12:32	0.05	233.2
15-11-2013	17:17:32	0.05	191.42
15-11-2013	17:22:32	0.05	196.77
15-11-2013	17:27:32	0.06	196.77
15-11-2013	17:32:32	0.06	195.32
15-11-2013	17:37:32	0.05	153.65
15-11-2013	17:42:32	0.05	168.02
15-11-2013	17:47:32	0.05	175.6
15-11-2013	17:52:32	0.06	196.88
15-11-2013	17:57:32	0.06	168.36
15-11-2013	18:02:32	0.09	153.31

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	18:07:32	0.08	211.92
15-11-2013	18:12:32	0.06	238.11
15-11-2013	18:17:32	0.06	168.47
15-11-2013	18:22:32	0.06	142.62
15-11-2013	18:27:32	0.12	159.22
15-11-2013	18:32:32	0.06	150.86
15-11-2013	18:37:32	0.06	148.52
15-11-2013	18:42:32	0.06	162.34
15-11-2013	18:47:32	0.08	162.12
15-11-2013	18:52:32	0.06	162.23
15-11-2013	18:57:32	0.08	167.8
15-11-2013	19:02:32	0.09	167.91
15-11-2013	19:07:32	0.09	203.34
15-11-2013	19:12:32	0.09	141.39
15-11-2013	19:17:32	0.08	141.39
15-11-2013	19:22:32	0.06	206.69
15-11-2013	19:27:32	0.06	166.69
15-11-2013	19:32:32	0.06	166.8
15-11-2013	19:37:32	0.06	139.5
15-11-2013	19:42:32	0.08	139.94
15-11-2013	19:47:32	0.06	139.94
15-11-2013	19:52:32	0.08	139.94
15-11-2013	19:57:32	0.06	189.97
15-11-2013	20:02:32	0.06	200.11
15-11-2013	20:07:32	0.06	200.11
15-11-2013	20:12:32	0.06	171.25
15-11-2013	20:17:32	0.06	187.86
15-11-2013	20:22:32	0.06	149.86
15-11-2013	20:27:32	0.06	162.34
15-11-2013	20:32:32	0.06	175.04
15-11-2013	20:37:32	0.06	175.04
15-11-2013	20:42:32	0.08	174.26
15-11-2013	20:47:32	0.06	166.13
15-11-2013	20:52:32	0.08	162.56
15-11-2013	20:57:32	0.06	191.31
15-11-2013	21:02:32	0.08	191.53
15-11-2013	21:07:32	0.06	202.34
15-11-2013	21:12:32	0.06	142.51
15-11-2013	21:17:32	0.06	167.35
15-11-2013	21:22:32	0.06	175.04
15-11-2013	21:27:32	0.06	173.93
15-11-2013	21:32:32	0.06	173.93
15-11-2013	21:37:32	0.06	173.93

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
15-11-2013	21:42:32	0.08	173.93
15-11-2013	21:47:32	0.06	173.93
15-11-2013	21:52:32	0.06	173.93
15-11-2013	21:57:32	0.06	170.36
15-11-2013	22:02:32	0.06	170.36
15-11-2013	22:07:32	0.08	170.36
15-11-2013	22:12:32	0.06	168.13
15-11-2013	22:17:32	0.06	200.22
15-11-2013	22:22:32	0.09	200.33
15-11-2013	22:27:32	0.06	185.07
15-11-2013	22:32:32	0.06	163.34
15-11-2013	22:37:32	0.06	223.29
15-11-2013	22:42:32	0.05	157.66
15-11-2013	22:47:32	0.06	202.79
15-11-2013	22:52:32	0.06	168.8
15-11-2013	22:57:32	0.06	162.01
15-11-2013	23:02:32	0.06	153.54
15-11-2013	23:07:32	0.06	193.87
15-11-2013	23:12:32	0.06	186.63
15-11-2013	23:17:32	0.06	145.18
15-11-2013	23:22:32	0.06	253.37
15-11-2013	23:27:32	0.06	219.16
15-11-2013	23:32:32	0.06	180.5
15-11-2013	23:37:32	0.06	196.43
15-11-2013	23:42:32	0.06	197.44
15-11-2013	23:47:32	0.06	197.33
15-11-2013	23:52:32	0.08	197.44
15-11-2013	23:57:32	0.83	6.35
21-11-2013	00:02:32	0.06	157.44
21-11-2013	00:07:32	0.05	157.44
21-11-2013	00:12:32	0.05	157.44
21-11-2013	00:17:32	0.05	184.4
21-11-2013	00:22:32	0.05	184.51
21-11-2013	00:27:32	0.05	219.39
21-11-2013	00:32:32	0.05	219.39
21-11-2013	00:37:32	0.05	219.39
21-11-2013	00:42:32	0.05	219.39
21-11-2013	00:47:32	0.05	219.39
21-11-2013	00:52:32	0.05	214.37
21-11-2013	00:57:32	0.05	166.57
21-11-2013	01:02:32	0.06	166.57
21-11-2013	01:07:32	0.06	166.57
21-11-2013	01:12:32	0.06	167.58

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	01:17:32	0.05	151.53
21-11-2013	01:22:32	0.05	151.53
21-11-2013	01:27:32	0.05	222.06
21-11-2013	01:32:32	0.05	222.17
21-11-2013	01:37:32	0.05	246.46
21-11-2013	01:42:32	0.05	302.84
21-11-2013	01:47:32	0.05	150.31
21-11-2013	01:52:32	0.05	150.31
21-11-2013	01:57:32	0.05	182.06
21-11-2013	02:02:32	0.05	183.06
21-11-2013	02:07:32	0.05	171.03
21-11-2013	02:12:32	0.05	171.14
21-11-2013	02:17:32	0.05	171.03
21-11-2013	02:22:32	1.51	141.17
21-11-2013	02:27:32	0.05	130.58
21-11-2013	02:32:32	0.05	206.91
21-11-2013	02:37:32	0.05	270.75
21-11-2013	02:42:32	0.05	162.79
21-11-2013	02:47:32	0.05	234.65
21-11-2013	02:52:32	0.05	310.08
21-11-2013	02:57:32	0.05	195.21
21-11-2013	03:02:32	0.05	210.92
21-11-2013	03:07:32	0.06	225.96
21-11-2013	03:12:32	0.05	157.44
21-11-2013	03:17:32	0.05	170.7
21-11-2013	03:22:32	0.06	157.55
21-11-2013	03:27:32	0.05	162.23
21-11-2013	03:32:32	0.06	133.82
21-11-2013	03:37:32	0.06	133.82
21-11-2013	03:42:32	0.05	133.93
21-11-2013	03:47:32	0.05	140.39
21-11-2013	03:52:32	0.06	159.44
21-11-2013	03:57:32	0.06	148.75
21-11-2013	04:02:32	0.06	165.79
21-11-2013	04:07:32	0.06	169.25
21-11-2013	04:12:32	0.09	155.54
21-11-2013	04:17:32	0.06	186.96
21-11-2013	04:22:32	0.06	218.83
21-11-2013	04:27:32	0.06	191.75
21-11-2013	04:32:32	0.06	136.82
21-11-2013	04:37:32	0.06	190.75
21-11-2013	04:42:32	0.06	151.42
21-11-2013	04:47:32	0.06	165.13

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	04:52:32	0.57	149.42
21-11-2013	04:57:32	0.06	151.64
21-11-2013	05:02:32	0.06	140.28
21-11-2013	05:07:32	0.32	171.48
21-11-2013	05:12:32	0.06	174.04
21-11-2013	05:17:32	0.06	286.35
21-11-2013	05:22:32	0.09	156.55
21-11-2013	05:27:32	0.06	158.66
21-11-2013	05:32:32	0.06	145.74
21-11-2013	05:37:32	0.06	141.17
21-11-2013	05:42:32	0.06	141.39
21-11-2013	05:47:32	0.06	153.54
21-11-2013	05:52:32	0.06	153.54
21-11-2013	05:57:32	0.06	152.87
21-11-2013	06:02:32	0.06	155.88
21-11-2013	06:07:32	0.06	151.64
21-11-2013	06:12:32	0.06	174.93
21-11-2013	06:17:32	0.06	145.96
21-11-2013	06:22:32	0.08	137.94
21-11-2013	06:27:32	0.08	137.94
21-11-2013	06:32:32	0.08	159.44
21-11-2013	06:37:32	0.09	161.11
21-11-2013	06:42:32	0.08	150.97
21-11-2013	06:47:32	0.08	143.73
21-11-2013	06:52:32	0.08	143.84
21-11-2013	06:57:32	0.08	100.06
21-11-2013	07:02:32	0.08	192.65
21-11-2013	07:07:32	0.08	171.03
21-11-2013	07:12:32	0.08	171.03
21-11-2013	07:17:32	0.09	158.33
21-11-2013	07:22:32	0.08	160.11
21-11-2013	07:27:32	0.08	160.11
21-11-2013	07:32:32	0.08	160.11
21-11-2013	07:37:32	0.08	149.19
21-11-2013	07:42:32	0.08	102.51
21-11-2013	07:47:32	0.08	149.19
21-11-2013	07:52:32	0.06	163.57
21-11-2013	07:57:32	0.02	113.54
21-11-2013	08:02:32	0.02	131.7
21-11-2013	08:07:32	0.02	152.87
21-11-2013	08:12:32	0.02	152.98
21-11-2013	08:17:32	0.02	150.86
21-11-2013	08:49:43	0.02	126.57

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	08:54:43	0.03	112.09
21-11-2013	08:59:43	0.11	162.45
21-11-2013	09:04:43	0.24	113.76
21-11-2013	09:09:43	0.72	156.66
21-11-2013	09:14:43	0.14	51.25
21-11-2013	09:19:43	0.11	134.48
21-11-2013	09:24:43	0.89	67.41
21-11-2013	09:29:43	0.29	2.9
21-11-2013	09:34:43	0.63	164.46
21-11-2013	09:39:43	0.4	189.97
21-11-2013	09:44:43	0.02	146.07
21-11-2013	09:49:43	0.6	163.57
21-11-2013	09:54:43	0.69	64.18
21-11-2013	09:59:43	0.02	62.95
21-11-2013	10:04:43	0.18	116.88
21-11-2013	10:09:43	0.02	105.52
21-11-2013	10:14:43	0.02	136.71
21-11-2013	10:19:43	0.05	95.71
21-11-2013	10:24:43	0.02	197.33
21-11-2013	10:29:43	0.54	162.01
21-11-2013	10:34:43	0.02	169.36
21-11-2013	10:39:43	0.02	132.48
21-11-2013	10:44:43	0.09	136.6
21-11-2013	10:49:43	0.02	196.66
21-11-2013	10:54:43	0.05	236.43
21-11-2013	10:59:43	1.42	145.85
21-11-2013	11:04:43	0.02	49.47
21-11-2013	11:09:43	0.11	123.68
21-11-2013	11:14:43	0.21	23.06
21-11-2013	11:19:43	0	110.08
21-11-2013	11:24:43	0.21	116.99
21-11-2013	11:29:43	0.02	7.24
21-11-2013	11:34:43	0.6	51.81
21-11-2013	11:39:43	0.29	48.25
21-11-2013	11:44:43	0.12	136.04
21-11-2013	11:49:43	0.02	226.63
21-11-2013	11:54:43	0.67	73.31
21-11-2013	11:59:43	0.18	142.17
21-11-2013	12:04:43	0.02	332.59
21-11-2013	12:09:43	0.02	226.41
21-11-2013	12:14:43	0.81	98.5
21-11-2013	12:19:43	0.12	148.3
21-11-2013	12:24:43	1.01	70.19

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	12:29:43	0.02	86.46
21-11-2013	12:34:43	0.02	177.72
21-11-2013	12:39:43	0.02	60.39
21-11-2013	12:44:43	0.12	57.94
21-11-2013	12:49:43	2.29	78.22
21-11-2013	12:54:43	0.49	152.87
21-11-2013	12:59:43	0.05	54.71
21-11-2013	13:04:43	0.32	59.94
21-11-2013	13:09:43	0.32	125.79
21-11-2013	13:14:43	0.02	169.25
21-11-2013	13:19:43	0.02	164.35
21-11-2013	13:24:43	0.2	106.18
21-11-2013	13:29:43	0.81	71.53
21-11-2013	13:34:43	0.26	135.15
21-11-2013	13:39:43	0.02	86.91
21-11-2013	13:44:43	0.02	57.27
21-11-2013	13:49:43	0.26	89.47
21-11-2013	13:54:43	0.23	176.49
21-11-2013	13:59:43	0.76	142.95
21-11-2013	14:04:43	0.67	189.75
21-11-2013	14:09:43	0.02	66.07
21-11-2013	14:14:43	0.02	41.11
21-11-2013	14:19:43	0.47	157.55
21-11-2013	14:24:43	0.02	114.32
21-11-2013	14:29:43	0.02	72.65
21-11-2013	14:34:43	0.02	128.13
21-11-2013	14:39:43	0.02	72.2
21-11-2013	14:44:43	0.03	162.45
21-11-2013	14:49:43	0.02	150.08
21-11-2013	14:54:43	0.18	197.1
21-11-2013	14:59:43	0.02	52.03
21-11-2013	15:04:43	0.02	147.63
21-11-2013	15:09:43	0.02	139.5
21-11-2013	15:14:43	0.02	172.81
21-11-2013	15:19:43	0.02	199.55
21-11-2013	15:24:43	0.02	145.85
21-11-2013	15:29:43	0.02	116.21
21-11-2013	15:34:43	0.02	82.79
21-11-2013	15:39:43	0	197.77
21-11-2013	15:44:43	0.02	154.65
21-11-2013	15:49:43	0.35	141.62
21-11-2013	15:54:43	0.02	129.36
21-11-2013	15:59:43	0.02	140.06

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	16:04:43	0.02	28.41
21-11-2013	16:09:43	0.02	132.26
21-11-2013	16:14:43	0.2	191.42
21-11-2013	16:19:43	0.02	55.49
21-11-2013	16:24:43	0.02	162.79
21-11-2013	16:29:43	0.15	63.62
21-11-2013	16:34:43	0.02	221.39
21-11-2013	16:39:43	0.02	142.28
21-11-2013	16:44:43	0.02	131.81
21-11-2013	16:49:43	0.02	182.4
21-11-2013	16:54:43	0.02	191.53
21-11-2013	16:59:43	0.92	230.08
21-11-2013	17:04:43	0.02	202.67
21-11-2013	17:09:43	0.02	99.5
21-11-2013	17:14:43	0.02	200.22
21-11-2013	17:19:43	0.02	144.18
21-11-2013	17:24:43	0.02	167.24
21-11-2013	17:29:43	0.67	74.43
21-11-2013	17:34:43	0.02	177.83
21-11-2013	17:39:43	0.02	147.74
21-11-2013	17:44:43	0.02	70.08
21-11-2013	17:49:43	0.44	154.87
21-11-2013	17:54:43	0.02	62.84
21-11-2013	17:59:43	0.02	70.97
21-11-2013	18:04:43	0.02	118.44
21-11-2013	18:09:43	0.02	80.33
21-11-2013	18:14:43	0.02	70.19
21-11-2013	18:19:43	0.02	182.84
21-11-2013	18:24:43	0.02	186.85
21-11-2013	18:29:43	0.02	90.58
21-11-2013	18:34:43	0.02	130.14
21-11-2013	18:39:43	0.09	153.87
21-11-2013	18:44:43	0.47	203.12
21-11-2013	18:49:43	0.02	129.25
21-11-2013	18:54:43	0.02	153.54
21-11-2013	18:59:43	0.02	196.55
21-11-2013	19:04:43	0.03	174.15
21-11-2013	19:09:43	0.02	121.56
21-11-2013	19:14:43	0.02	117.66
21-11-2013	19:19:43	0.02	118.55
21-11-2013	19:24:43	0.09	137.38
21-11-2013	19:29:43	0.02	77.21
21-11-2013	19:34:43	0.02	118.33

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Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	19:39:43	0.02	95.71
21-11-2013	19:44:43	0.02	146.96
21-11-2013	19:49:43	0.02	144.74
21-11-2013	19:54:43	0.02	82.56
21-11-2013	19:59:43	0.02	103.4
21-11-2013	20:04:43	0.02	122.01
21-11-2013	20:09:43	0.02	97.83
21-11-2013	20:14:43	0.02	100.61
21-11-2013	20:19:43	0.02	100.5
21-11-2013	20:24:43	0.02	103.84
21-11-2013	20:29:43	0.02	103.62
21-11-2013	20:34:43	0.02	205.46
21-11-2013	20:39:43	0.02	218.94
21-11-2013	20:44:43	0.02	174.48
21-11-2013	20:49:43	0.02	128.25
21-11-2013	20:54:43	0.02	170.14
21-11-2013	20:59:43	0.02	197.21
21-11-2013	21:04:43	0.02	94.04
21-11-2013	21:09:43	0.02	168.25
21-11-2013	21:14:43	0.41	134.93
21-11-2013	21:19:43	0.02	233.76
21-11-2013	21:24:43	0.02	134.04
21-11-2013	21:29:43	0.02	80.56
21-11-2013	21:34:43	0.02	103.96
21-11-2013	21:39:43	0.02	112.98
21-11-2013	21:44:43	0.02	163.01
21-11-2013	21:49:43	0.02	163.01
21-11-2013	21:54:43	0.02	114.76
21-11-2013	21:59:43	0.02	98.83
21-11-2013	22:04:43	0.02	130.92
21-11-2013	22:09:43	0.02	73.87
21-11-2013	22:14:43	0.02	127.69
21-11-2013	22:19:43	0.02	121.67
21-11-2013	22:24:43	0.02	140.72
21-11-2013	22:29:43	0.02	111.87
21-11-2013	22:34:43	0.17	203.34
21-11-2013	22:39:43	0.02	199.78
21-11-2013	22:44:43	0.02	351.42
21-11-2013	22:49:43	0.02	138.27
21-11-2013	22:54:43	0.02	68.3
21-11-2013	22:59:43	1.87	72.98
21-11-2013	23:04:43	2.66	134.6
21-11-2013	23:09:43	0.72	178.05

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
21-11-2013	23:14:43	0.02	209.92
21-11-2013	23:19:43	0.02	128.8
21-11-2013	23:24:43	0.03	180.95
21-11-2013	23:29:43	0.02	118.11
21-11-2013	23:34:43	0.02	308.75
21-11-2013	23:39:43	0.02	131.36
21-11-2013	23:44:43	0.02	134.26
21-11-2013	23:49:43	0.02	122.45
21-11-2013	23:54:43	0.02	202.56
21-11-2013	23:59:43	0.58	118.22
27-11-2013	00:04:43	0.54	207.69
27-11-2013	00:09:43	0.02	101.62
27-11-2013	00:14:43	0.02	167.02
27-11-2013	00:19:43	0.02	66.63
27-11-2013	00:24:43	0.02	211.03
27-11-2013	00:29:43	1.79	167.47
27-11-2013	00:34:43	0.02	10.7
27-11-2013	00:39:43	2.57	173.48
27-11-2013	00:44:43	1.38	148.08
27-11-2013	00:49:43	1.27	189.53
27-11-2013	00:54:43	1.07	174.48
27-11-2013	00:59:43	0.44	212.14
27-11-2013	01:04:43	0.23	59.72
27-11-2013	01:09:43	0.05	357.66
27-11-2013	01:14:43	0.92	159
27-11-2013	01:19:43	0.76	124.46
27-11-2013	01:24:43	0.26	150.53
27-11-2013	01:29:43	0.89	157.88
27-11-2013	01:34:43	0.26	174.04
27-11-2013	01:39:43	0.76	157.88
27-11-2013	01:44:43	0.41	229.97
27-11-2013	01:49:43	0.02	48.58
27-11-2013	01:54:43	0.02	144.96
27-11-2013	01:59:43	0.02	110.08
27-11-2013	02:04:43	0.29	225.29
27-11-2013	02:09:43	0.46	96.16
27-11-2013	02:14:43	0.02	36.88
27-11-2013	02:19:43	0.02	140.95
27-11-2013	02:24:43	0.02	134.37
27-11-2013	02:29:43	0.02	117.55
27-11-2013	02:34:43	0.02	109.97
27-11-2013	02:39:43	0.02	191.98
27-11-2013	02:44:43	0.02	41.78

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
27-11-2013	02:49:43	0.02	89.25
27-11-2013	02:54:43	0.02	151.98
27-11-2013	02:59:43	0.02	169.47
27-11-2013	03:04:43	0.02	152.98
27-11-2013	03:09:43	0.2	93.93
27-11-2013	03:14:43	0.02	124.9
27-11-2013	03:19:43	0.02	113.65
27-11-2013	03:24:43	0.02	56.04
27-11-2013	03:29:43	0.02	180.84
27-11-2013	03:34:43	0.02	94.48
27-11-2013	03:39:43	0.03	215.6
27-11-2013	03:44:43	0.02	145.74
27-11-2013	03:49:43	0.05	127.69
27-11-2013	03:54:43	0.46	77.33
27-11-2013	03:59:43	0.17	160.56
27-11-2013	04:04:43	0.02	43.45
27-11-2013	04:09:43	0.02	254.04
27-11-2013	04:14:43	0.03	100.06
27-11-2013	04:19:43	0.02	14.93
27-11-2013	04:24:43	0.02	154.54
27-11-2013	04:29:43	0.02	46.35
27-11-2013	04:34:43	0.02	256.27
27-11-2013	04:39:43	0.02	195.54
27-11-2013	04:44:43	0.02	67.41
27-11-2013	04:49:43	0.12	197.66
27-11-2013	04:54:43	0.02	94.71
27-11-2013	04:59:43	0.02	120.89
27-11-2013	05:04:43	0.02	204.68
27-11-2013	05:09:43	0.02	183.73
27-11-2013	05:14:43	0.02	215.82
27-11-2013	05:19:43	0.24	39.55
27-11-2013	05:24:43	0.02	114.65
27-11-2013	05:29:43	0.12	63.29
27-11-2013	05:34:43	0.72	158.66
27-11-2013	05:39:43	0.02	14.37
27-11-2013	05:44:43	0.02	175.26
27-11-2013	05:49:43	0.02	136.16
27-11-2013	05:54:43	0.02	106.63
27-11-2013	05:59:43	0.02	265.74
27-11-2013	06:04:43	0.02	87.24
27-11-2013	06:09:43	0.03	164.23
27-11-2013	06:14:43	0.02	93.7
27-11-2013	06:19:43	0.38	92.81

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
27-11-2013	06:24:43	0.02	30.42
27-11-2013	06:29:43	0.02	136.16
27-11-2013	06:34:43	0.02	53.15
27-11-2013	06:39:43	0.02	145.4
27-11-2013	06:44:43	0.02	183.51
27-11-2013	06:49:43	0.78	40
27-11-2013	06:54:43	0.02	145.85
27-11-2013	06:59:43	0.2	137.94
27-11-2013	07:04:43	0.12	131.14
27-11-2013	07:09:43	0.02	96.94
27-11-2013	07:14:43	0.02	154.99
27-11-2013	07:19:43	0.03	299.5
27-11-2013	07:24:43	0.21	64.96
27-11-2013	07:29:43	0.02	151.87
27-11-2013	07:34:43	0.02	172.14
27-11-2013	07:39:43	0.02	340.06
27-11-2013	07:44:43	0.02	83.68
27-11-2013	07:49:43	0.37	201.45
27-11-2013	07:54:43	0.02	122.34
27-11-2013	07:59:43	0.03	285.46
27-11-2013	08:04:43	0.02	200.22
27-11-2013	08:09:43	1.65	162.23
27-11-2013	08:14:43	0.02	137.49
27-11-2013	08:19:43	0.89	131.81
27-11-2013	08:24:43	0.02	138.61
27-11-2013	08:29:43	0.02	72.87
27-11-2013	08:34:43	0.02	46.13
27-11-2013	08:39:43	0.02	54.15
27-11-2013	08:44:43	0.17	40.22
27-11-2013	08:49:43	0.02	159.33
27-11-2013	08:54:43	0.02	159.55
27-11-2013	08:59:43	0.02	184.74
27-11-2013	09:04:43	0.35	63.96
27-11-2013	09:09:43	0.02	155.88
27-11-2013	09:14:43	0.02	60.5
27-11-2013	09:19:43	0.02	55.6
27-11-2013	09:24:43	0.03	212.37
27-11-2013	09:29:43	0.02	103.62
27-11-2013	09:34:43	0.02	241.89
27-11-2013	09:39:43	0.02	263.29
27-11-2013	09:44:43	0	284.12
27-11-2013	09:49:43	0.54	102.51
27-11-2013	09:54:43	1.62	57.49

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
27-11-2013	09:59:43	0.02	8.02
27-11-2013	10:04:43	0.02	44.9
27-11-2013	10:09:43	0.18	93.37
27-11-2013	10:14:43	0.02	174.15
27-11-2013	10:19:43	1.93	81.67
27-11-2013	10:24:43	0.02	100.72
27-11-2013	10:29:43	0.02	182.84
27-11-2013	10:34:43	0.32	129.69
27-11-2013	10:39:43	0.02	150.64
27-11-2013	10:44:43	0.02	260.06
27-11-2013	10:49:43	0.06	117.66
27-11-2013	10:54:43	0.05	161.89
27-11-2013	10:59:43	2.05	139.05
27-11-2013	11:04:43	0.31	181.73
27-11-2013	11:09:43	0.02	57.27
27-11-2013	11:14:43	0.49	63.84
27-11-2013	11:19:43	0.49	4.01
27-11-2013	11:24:43	0.02	200
27-11-2013	11:29:43	0.02	271.64
27-11-2013	11:34:43	0.02	262.95
27-11-2013	11:39:43	0.02	338.94
27-11-2013	11:44:43	0.02	245.79
27-11-2013	11:49:43	0.02	337.05
27-11-2013	11:54:43	0.02	213.04
27-11-2013	11:59:43	0.02	299.83
27-11-2013	12:04:43	0.38	239.11
27-11-2013	12:09:43	0.31	250.47
27-11-2013	12:14:43	0.02	269.42
27-11-2013	12:19:43	0.02	183.06
27-11-2013	12:24:43	0.02	215.38
27-11-2013	12:29:43	0.02	261.39
27-11-2013	12:34:43	0.14	248.69
27-11-2013	12:39:43	0.02	4.57
27-11-2013	12:44:43	0.02	147.97
27-11-2013	12:49:43	0.02	269.97
27-11-2013	12:54:43	0.02	44.9
27-11-2013	12:59:43	0.02	271.75
27-11-2013	13:04:43	0.57	270.86
27-11-2013	13:09:43	0.02	7.47
27-11-2013	13:14:43	0.23	344.51
27-11-2013	13:19:43	0.02	77.88
27-11-2013	13:24:43	0.02	41.89
27-11-2013	13:29:43	0.02	349.97

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
27-11-2013	13:34:43	0.02	262.62
27-11-2013	13:39:43	0.28	274.21
27-11-2013	13:44:43	0.89	252.37
27-11-2013	13:49:43	0.02	314.76
27-11-2013	13:54:43	0.32	325.68
27-11-2013	13:59:43	2.26	9.03
27-11-2013	14:04:43	2.16	16.71
27-11-2013	14:09:43	0.78	334.6
27-11-2013	14:14:43	0.09	1.67
27-11-2013	14:19:43	0.02	337.38
27-11-2013	14:24:43	0.02	267.08
27-11-2013	14:29:43	0.17	190.53
27-11-2013	14:34:43	0.02	266.52
27-11-2013	14:39:43	0.02	244.35
27-11-2013	14:44:43	0.02	244.9
27-11-2013	14:49:43	0.02	315.99
27-11-2013	14:54:43	0.02	272.09
27-11-2013	14:59:43	0.02	185.18
27-11-2013	15:04:43	0.02	276.77
27-11-2013	15:09:43	0.98	224.18
27-11-2013	15:14:43	0.28	250.03
27-11-2013	15:19:43	0.02	315.77
27-11-2013	15:24:43	0.17	231.64
27-11-2013	15:29:43	0.02	287.91
27-11-2013	15:34:43	0.24	221.39
27-11-2013	15:39:43	0.02	267.97
27-11-2013	15:44:43	0.32	293.37
27-11-2013	15:49:43	0.02	275.54
27-11-2013	15:54:43	1.1	8.69
27-11-2013	15:59:43	0.02	250.47
27-11-2013	16:04:43	0.02	236.99
27-11-2013	16:09:43	0.02	284.35
27-11-2013	16:14:43	0.02	257.27
27-11-2013	16:19:43	0.02	240
27-11-2013	16:24:43	0.02	355.77
27-11-2013	16:29:43	0.02	22.17
27-11-2013	16:34:43	0.47	276.66
27-11-2013	16:39:43	0.38	352.87
27-11-2013	16:44:43	0.02	245.13
27-11-2013	16:49:43	0.02	281.11
27-11-2013	16:54:43	0.02	293.15
27-11-2013	16:59:43	0.02	248.91
27-11-2013	17:04:43	0.09	287.13

Appendix H Meteorological Data for Impact Monitoring in the reporting period

Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
27-11-2013	17:09:43	0.02	271.64
27-11-2013	17:14:43	0.03	246.13
27-11-2013	17:19:43	0.02	249.69
27-11-2013	17:24:43	0.02	279.11
27-11-2013	17:29:43	0.02	244.35
27-11-2013	17:34:43	0.02	209.36
27-11-2013	17:39:43	0.02	289.14
27-11-2013	17:44:43	0.02	317.44
27-11-2013	17:49:43	0.02	5.01
27-11-2013	17:54:43	0.02	294.04
27-11-2013	17:59:43	0.02	227.08
27-11-2013	18:04:43	0.02	214.82
27-11-2013	18:09:43	0.26	323.45
27-11-2013	18:14:43	0.02	261.95
27-11-2013	18:19:43	0.02	209.47
27-11-2013	18:24:43	0.02	345.74
27-11-2013	18:29:43	0.05	325.46
27-11-2013	18:34:43	0.02	15.6
27-11-2013	18:39:43	0.05	3.34
27-11-2013	18:44:43	0.87	1.34
27-11-2013	18:49:43	0.41	356.43
27-11-2013	18:54:43	0.67	351.53
27-11-2013	18:59:43	0.38	257.27
27-11-2013	19:04:43	1.09	6.69
27-11-2013	19:09:43	0.69	9.81
27-11-2013	19:14:43	0.21	39.33
27-11-2013	19:19:43	0.34	352.53
27-11-2013	19:24:43	0.02	350.19
27-11-2013	19:29:43	0.7	2.23
27-11-2013	19:34:43	0.02	304.51
27-11-2013	19:39:43	0.43	213.48
27-11-2013	19:44:43	0.02	10.36
27-11-2013	19:49:43	1.93	332.14
27-11-2013	19:54:43	0.02	246.57
27-11-2013	19:59:43	0.02	229.86
27-11-2013	20:04:43	0.12	213.7
27-11-2013	20:09:43	0.02	313.2
27-11-2013	20:14:43	0.28	290.81
27-11-2013	20:19:43	0.02	314.99
27-11-2013	20:24:43	0.02	320.56
27-11-2013	20:29:43	1.88	357.77
27-11-2013	20:34:43	0.02	22.62
27-11-2013	20:39:43	1.25	347.19

Appendix H Meteorological Data for Impact Monitoring in the reporting period

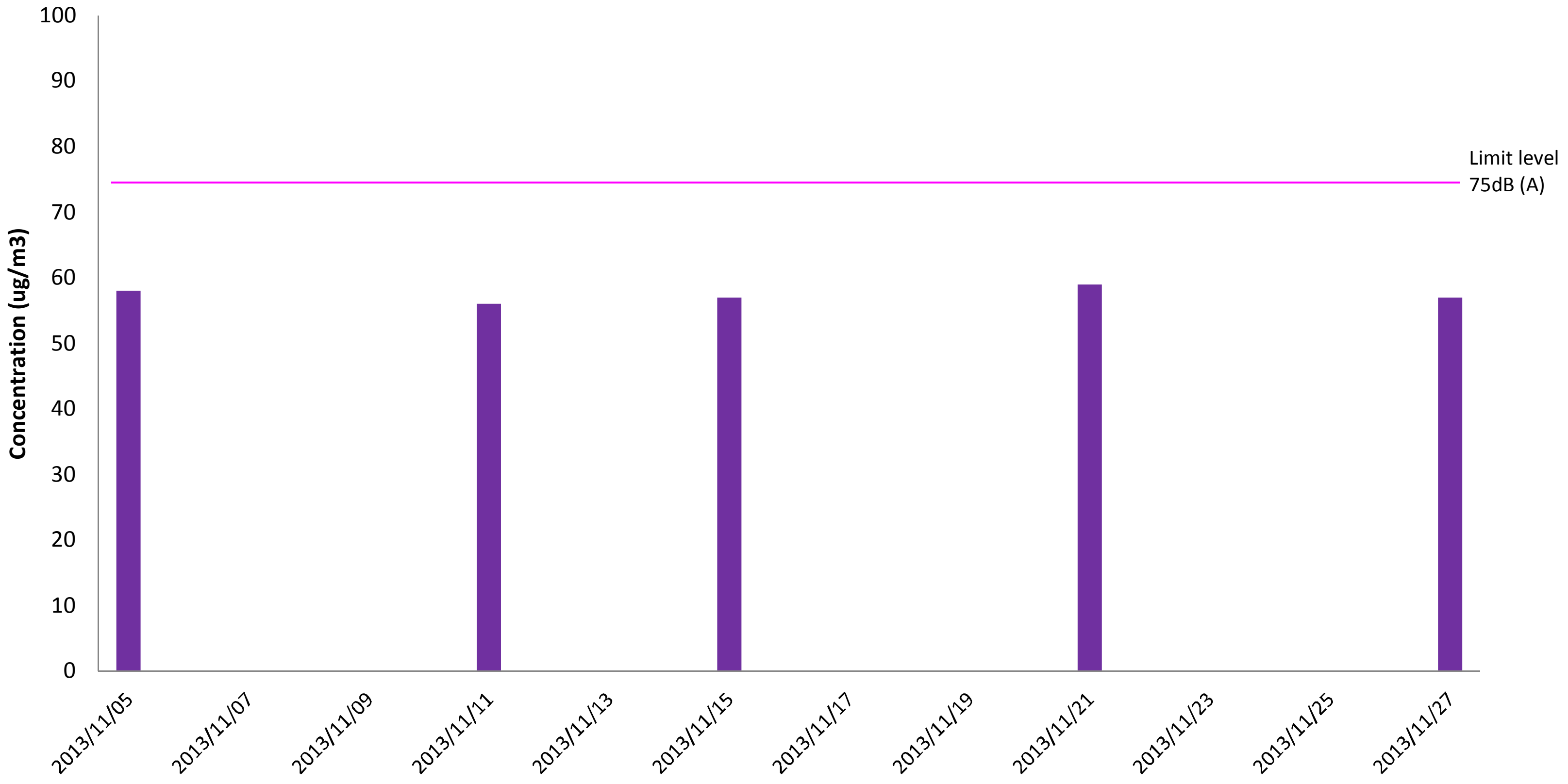
Date	Time (24hrs)	Wind Speed (m/s)	Wind Direction (degree)
27-11-2013	20:44:43	0.02	291.36
27-11-2013	20:49:43	0.06	46.91
27-11-2013	20:54:43	0.03	113.09
27-11-2013	20:59:43	1.01	67.63
27-11-2013	21:04:43	0.02	54.48
27-11-2013	21:09:43	0.02	21.17
27-11-2013	21:14:43	0.02	338.5
27-11-2013	21:19:43	0.46	60.84
27-11-2013	21:24:43	0.55	36.66
27-11-2013	21:29:43	1.5	4.35
27-11-2013	21:34:43	3.95	34.32
27-11-2013	21:39:43	0.02	291.14
27-11-2013	21:44:43	0.02	49.69
27-11-2013	21:49:43	0.54	352.42
27-11-2013	21:54:43	0.9	349.97
27-11-2013	21:59:43	0.63	66.52
27-11-2013	22:04:43	0.02	343.96
27-11-2013	22:09:43	0.72	64.4
27-11-2013	22:14:43	0.02	48.8
27-11-2013	22:19:43	0.02	258.83
27-11-2013	22:24:43	1.01	8.02
27-11-2013	22:29:43	0.02	276.99
27-11-2013	22:34:43	0.02	244.57
27-11-2013	22:39:43	0.02	258.38
27-11-2013	22:44:43	0.02	354.09
27-11-2013	22:49:43	0.02	271.75
27-11-2013	22:54:43	0.02	229.64
27-11-2013	22:59:43	0.26	351.98
27-11-2013	23:04:43	1.19	356.88
27-11-2013	23:09:43	0.2	352.76
27-11-2013	23:14:43	0.02	352.31
27-11-2013	23:19:43	0.02	10.81
27-11-2013	23:24:43	0.02	24.74
27-11-2013	23:29:43	0.02	221.73
27-11-2013	23:34:43	0.09	221.39
27-11-2013	23:39:43	0.18	29.86
27-11-2013	23:44:43	0.02	358.55
27-11-2013	23:49:43	0.02	250.03
27-11-2013	23:54:43	0.02	254.48
27-11-2013	23:59:43	0.02	1.45

Appendix I

Impact Noise Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-dd)	Station	Weather Condition	Time (hh:mm, 24hour)	Noise Level for 30-min, dB(A)			Limit Level dB(A)	Temp (° C)	Wind Speed (m/s)	Noise Meter Model/ID	Calibrator Model/ID
						Leq	L10	L90					
TMCLKL	HY/2012/07	2013-11-05	NSR1	Sunny	13:00	58	61	52	75	23	0.3	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2013-11-11	NSR1	Sunny	11:07	56	59	49	75	24	0.3	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2013-11-15	NSR1	Sunny	11:20	57	60	50	75	24	0.8	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2013-11-21	NSR1	Sunny	9:42	59	62	52	75	22	0.6	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2013-11-27	NSR1	Sunny	10:17	57	61	52	75	23	0.6	RION NL31 (S/N 00410224)	RION NC73 (S/N 10997142)
					Min.	56							
					Max.	59							

Noise Monitoring Results at NSR 1 ($L_{eq,\ 30min}$)



Appendix J

Impact Water Quality Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)5	Surface	1	1	15:06	15:25	25.1	6.8	24.5	7.79	2.2	2.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)5	Surface	1	2	15:06	15:25	25.0	6.8	24.6	7.81	2.1	3.0
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)5	Middle	2	1	15:06	15:25	25.4	6.7	25.5	6.47	2.8	4.0
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)5	Middle	2	2	15:06	15:25	25.4	6.7	25.4	6.49	1.8	4.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)5	Bottom	3	1	15:06	15:25	25.4	6.7	25.6	6.29	2.6	4.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)5	Bottom	3	2	15:06	15:25	25.3	6.7	25.7	6.31	2.8	4.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4a	Surface	1	1	15:35	15:54	25.0	6.6	24.6	8.02	2.7	3.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4a	Surface	1	2	15:35	15:54	25.0	6.6	24.5	8.04	2.5	3.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4a	Middle	2	1	15:35	15:54						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4a	Middle	2	2	15:35	15:54						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4a	Bottom	3	1	15:35	15:54	24.9	6.6	25.0	7.89	5.4	5.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4a	Bottom	3	2	15:35	15:54	25.0	6.7	24.9	7.90	3.6	5.6
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4	Surface	1	1	16:00	16:18	25.1	6.6	24.6	8.11	2.7	5.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4	Surface	1	2	16:00	16:18	25.2	6.6	24.7	8.13	3.1	4.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4	Middle	2	1	16:00	16:18						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4	Middle	2	2	16:00	16:18						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4	Bottom	3	1	16:00	16:18	25.1	6.5	24.7	7.64	5.4	11.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	SR4	Bottom	3	2	16:00	16:18	25.1	6.5	24.8	7.66	6.7	12.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS8	Surface	1	1	16:24	16:42	25.2	6.5	24.6	8.29	2.4	2.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS8	Surface	1	2	16:24	16:42	25.2	6.6	24.5	8.31	3.1	3.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS8	Middle	2	1	16:24	16:42						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS8	Middle	2	2	16:24	16:42						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS8	Bottom	3	1	16:24	16:42	25.0	6.6	24.8	8.09	5.0	8.6
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS8	Bottom	3	2	16:24	16:42	25.1	6.6	24.8	8.11	3.1	9.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)16	Surface	1	1	16:50	17:09	25.1	6.6	24.7	8.25	3.5	6.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)16	Surface	1	2	16:50	17:09	25.2	6.6	24.7	8.27	3.4	5.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)16	Middle	2	1	16:50	17:09	25.1	6.7	24.9	8.11	3.9	5.6
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)16	Middle	2	2	16:50	17:09	25.6	6.7	25.0	8.12	4.1	6.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)16	Bottom	3	1	16:50	17:09	25.0	6.6	25.0	7.74	6.0	13.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)16	Bottom	3	2	16:50	17:09	25.0	6.6	24.9	7.77	6.3	14.6
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)9	Surface	1	1	17:17	17:40	25.4	6.7	24.8	8.55	11.6	13.8
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)9	Surface	1	2	17:17	17:40	25.4	6.8	24.9	8.57	9.5	13.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)9	Middle	2	1	17:17	17:40						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)9	Middle	2	2	17:17	17:40						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)9	Bottom	3	1	17:17	17:40	25.3	6.7	25.0	8.42	10.9	17.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	IS(Mf)9	Bottom	3	2	17:17	17:40	25.4	6.7	25.1	8.44	13.1	17.2
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)3	Surface	1	1	17:55	18:36	25.6	6.6	22.5	8.79	3.0	3.4
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)3	Surface	1	2	17:55	18:36	25.6	6.6	22.4	8.81	2.1	2.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)3	Middle	2	1	17:55	18:36	25.5	6.6	23.3	8.84	2.8	2.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)3	Middle	2	2	17:55	18:36	25.4	6.6	23.3	8.86	3.1	2.8
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)3	Bottom	3	1	17:55	18:36	25.3	6.6	23.7	8.74	2.5	2.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Flood	CS(Mf)3	Bottom	3	2	17:55	18:36	25.2	6.6	23.8	8.76	2.7	2.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)3	Surface	1	1	11:50	12:12	25.0	6.7	24.5	7.68	4.5	3.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)3	Surface	1	2	11:50	12:12	24.9	6.7	24.5	7.72	4.8	3.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)3	Middle	2	1	11:50	12:12	25.3	6.6	25.5	6.39	5.2	2.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)3	Middle	2	2	11:50	12:12	25.4	6.6	25.4	6.41	6.3	3.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)3	Bottom	3	1	11:50	12:12	25.4	6.7	25.6	6.23	7.3	3.4
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)3	Bottom	3	2	11:50	12:12	25.5	6.7	25.6	6.20	6.9	2.6
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4a	Surface	1	1	11:13	11:31	25.1	6.7	24.6	7.96	5.5	4.0
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4a	Surface	1	2	11:13	11:31	25.1	6.7	24.6	7.99	5.7	3.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4a	Middle	2	1	11:13	11:31						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4a	Middle	2	2	11:13	11:31						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4a	Bottom	3	1	11:13	11:31	25.0	6.6	25.0	78.60	5.9	4.6
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4a	Bottom	3	2	11:13	11:31	25.0	6.6	25.0	78.00	6.0	5.2
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4	Surface	1	1	10:48	11:06	25.2	6.5	24.7	8.04	4.7	3.8
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4	Surface	1	2	10:48	11:06	25.1	6.6	24.7	8.07	4.6	3.4
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4	Middle	2	1	10:48	11:06						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4	Middle	2	2	10:48	11:06						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4	Bottom	3	1	10:48	11:06	25.1	6.6	24.8	7.56	11.8	11.4
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	SR4	Bottom	3	2	10:48	11:06	25.1	6.6	24.8	7.60	12.4	12.0
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS8	Surface	1	1	10:23	10:40	25.1	6.5	24.5	8.23	4.6	4.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS8	Surface	1	2	10:23	10:40	25.1	6.5	24.6	8.25	4.7	4.2
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS8	Middle	2	1	10:23	10:40						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS8	Middle	2	2	10:23	10:40						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS8	Bottom	3	1	10:23	10:40	25.0	6.5	24.9	8.07	5.5	5.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS8	Bottom	3	2	10:23	10:40	25.0	6.5	24.8	8.03	5.8	6.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)16	Surface	1	1	09:56	10:14	25.1	6.5	24.8	8.17	5.2	5.8
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)16	Surface	1	2	09:56	10:14	25.2	6.6	24.7	8.20	5.7	4.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)16	Middle	2	1	09:56	10:14	25.1	6.6	24.9	8.01	8.8	5.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)16	Middle	2	2	09:56	10:14	25.0	6.6	24.9	8.04	7.5	5.0
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)16	Bottom	3	1	09:56	10:14	25.0	6.6	25.0	7.68	10.4	7.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)16	Bottom	3	2	09:56	10:14	25.0	6.6	25.0	7.63	9.4	7.3
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)9	Surface	1	1	09:24	09:45	25.3	6.7	24.9	8.45	16.7	16.1
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)9	Surface	1	2	09:24	09:45	25.4	6.7	24.8	8.41	16.9	17.4
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)9	Middle	2	1	09:24	09:45						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)9	Middle	2	2	09:24	09:45						
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)9	Bottom	3	1	09:24	09:45	25.4	6.7	24.9	8.33	15.0	15.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	IS(Mf)9	Bottom	3	2	09:24	09:45	25.4	6.8	25.0	8.38	15.5	15.5
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)5	Surface	1	1	08:50	09:10	25.6	6.6	22.4	8.71	3.4	3.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)5	Surface	1	2	08:50	09:10	25.5	6.6	22.5	8.68	3.4	3.7
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)5	Middle	2	1	08:50	09:10	25.4	6.6	23.3	8.80	3.4	4.8
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)5	Middle	2	2	08:50	09:10	25.4	6.6	23.2	8.77	3.7	3.9
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)5	Bottom	3	1	08:50	09:10	25.3	6.5	23.8	8.70	3.4	6.4
TM-CLK Southern	HY/2012/07	2013-10-31	Mid-Ebb	CS(Mf)5	Bottom	3	2	08:50	09:10	25.3	6.5	23.8	8.66	3.3	5.4

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)5	Surface	1	1	16:04	16:24	25.2	6.8	24.4	7.69	5.8	4.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)5	Surface	1	2	16:04	16:24	25.3	6.8	24.5	7.71	5.7	4.1
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)5	Middle	2	1	16:04	16:24	25.5	6.7	25.6	6.48	5.9	4.6
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)5	Middle	2	2	16:04	16:24	25.4	6.7	25.6	6.46	6.4	4.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)5	Bottom	3	1	16:04	16:24	25.5	6.6	25.7	6.30	7.3	7.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)5	Bottom	3	2	16:04	16:24	25.4	6.7	25.8	6.32	6.9	6.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4a	Surface	1	1	16:38	16:53	25.0	6.6	24.7	7.99	6.0	5.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4a	Surface	1	2	16:38	16:53	25.1	6.7	24.8	8.01	5.6	4.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4a	Middle	2	1	16:38	16:53						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4a	Middle	2	2	16:38	16:53						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4a	Bottom	3	1	16:38	16:53	25.0	6.7	24.8	7.79	7.8	8.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4a	Bottom	3	2	16:38	16:53	24.9	6.7	24.9	7.81	7.9	7.9
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4	Surface	1	1	17:08	17:28	25.2	6.7	24.6	8.08	5.8	4.1
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4	Surface	1	2	17:08	17:28	25.3	6.7	24.7	8.10	5.0	4.8
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4	Middle	2	1	17:08	17:28						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4	Middle	2	2	17:08	17:28						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4	Bottom	3	1	17:08	17:28	25.1	6.5	24.7	7.65	5.8	5.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	SR4	Bottom	3	2	17:08	17:28	25.1	6.5	24.8	7.64	6.7	4.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS8	Surface	1	1	17:43	17:58	25.3	6.5	24.6	8.27	5.3	3.8
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS8	Surface	1	2	17:43	17:58	25.2	6.5	24.5	8.25	5.1	3.5
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS8	Middle	2	1	17:43	17:58						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS8	Middle	2	2	17:43	17:58						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS8	Bottom	3	1	17:43	17:58	25.0	6.6	24.8	8.08	5.5	4.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS8	Bottom	3	2	17:43	17:58	25.1	6.7	24.9	8.05	5.8	3.8
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)16	Surface	1	1	18:12	18:27	25.2	6.6	24.6	8.22	7.4	7.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)16	Surface	1	2	18:12	18:27	25.3	6.6	24.7	8.20	7.6	6.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)16	Middle	2	1	18:12	18:27	25.2	6.6	24.9	8.10	7.4	7.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)16	Middle	2	2	18:12	18:27	25.1	6.6	24.8	8.08	7.8	7.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)16	Bottom	3	1	18:12	18:27	25.0	6.7	25.0	7.75	5.7	6.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)16	Bottom	3	2	18:12	18:27	25.1	6.7	25.1	7.77	6.7	7.1
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)9	Surface	1	1	18:41	18:56	25.6	6.7	25.0	8.43	8.5	7.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)9	Surface	1	2	18:41	18:56	25.5	6.7	25.1	8.46	8.5	7.6
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)9	Middle	2	1	18:41	18:56						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)9	Middle	2	2	18:41	18:56						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)9	Bottom	3	1	18:41	18:56	25.4	6.8	25.2	8.35	8.7	7.5
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	IS(Mf)9	Bottom	3	2	18:41	18:56	25.3	6.8	25.2	8.37	8.6	7.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)3	Surface	1	1	19:11	19:34	25.6	6.6	22.5	8.75	5.7	4.9
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)3	Surface	1	2	19:11	19:34	25.7	6.6	22.6	8.77	5.4	3.6
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)3	Middle	2	1	19:11	19:34	25.5	6.7	23.3	8.69	5.2	4.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)3	Middle	2	2	19:11	19:34	25.4	6.7	23.4	8.67	5.7	3.9
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)3	Bottom	3	1	19:11	19:34	25.4	6.6	23.9	8.73	5.0	3.9
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Flood	CS(Mf)3	Bottom	3	2	19:11	19:34	25.3	6.6	23.8	8.75	5.5	3.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)3	Surface	1	1	10:13	10:35	25.5	6.5	22.5	8.69	5.7	5.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)3	Surface	1	2	10:13	10:35	25.6	6.6	22.5	8.71	5.4	4.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)3	Middle	2	1	10:13	10:35	25.4	6.7	23.2	8.63	5.2	3.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)3	Middle	2	2	10:13	10:35	25.4	6.6	23.3	8.61	5.8	4.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)3	Bottom	3	1	10:13	10:35	25.3	6.6	23.7	8.67	5.0	5.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)3	Bottom	3	2	10:13	10:35	25.2	6.6	23.8	8.69	5.6	4.5
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4a	Surface	1	1	12:38	13:00	25.1	6.6	24.6	7.94	6.0	6.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4a	Surface	1	2	12:38	13:00	25.0	6.7	24.7	7.96	5.6	5.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4a	Middle	2	1	12:38	13:00						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4a	Middle	2	2	12:38	13:00						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4a	Bottom	3	1	12:38	13:00	25.0	6.7	24.9	7.73	7.8	6.5
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4a	Bottom	3	2	12:38	13:00	24.9	6.7	24.9	7.75	8.9	5.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4	Surface	1	1	12:10	12:32	25.2	6.7	24.5	8.02	5.8	6.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4	Surface	1	2	12:10	12:32	25.2	6.7	24.6	8.04	5.1	5.9
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4	Middle	2	1	12:10	12:32						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4	Middle	2	2	12:10	12:32						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4	Bottom	3	1	12:10	12:32	25.1	6.5	24.7	7.59	5.8	5.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	SR4	Bottom	3	2	12:10	12:32	25.0	6.5	24.7	7.57	6.7	5.1
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS8	Surface	1	1	11:42	12:04	25.1	6.5	24.5	8.21	5.3	4.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS8	Surface	1	2	11:42	12:04	25.2	6.5	24.5	8.19	5.1	3.8
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS8	Middle	2	1	11:42	12:04						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS8	Middle	2	2	11:42	12:04						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS8	Bottom	3	1	11:42	12:04	25.1	6.6	24.8	8.02	5.5	3.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS8	Bottom	3	2	11:42	12:04	25.1	6.6	24.7	8.00	5.9	3.5
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)16	Surface	1	1	11:13	11:35	25.1	6.6	24.7	8.16	7.5	6.1
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)16	Surface	1	2	11:13	11:35	25.1	6.6	24.6	8.14	7.6	6.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)16	Middle	2	1	11:13	11:35	25.1	6.6	24.9	8.04	7.5	7.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)16	Middle	2	2	11:13	11:35	25.0	6.6	24.9	8.02	7.9	7.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)16	Bottom	3	1	11:13	11:35	24.9	6.6	24.9	7.69	8.2	8.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)16	Bottom	3	2	11:13	11:35	25.0	6.7	25.0	7.71	7.5	7.7
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)9	Surface	1	1	10:44	11:06	25.5	6.7	24.9	8.37	8.5	7.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)9	Surface	1	2	10:44	11:06	25.4	6.7	25.0	8.40	8.6	8.3
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)9	Middle	2	1	10:44	11:06						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)9	Middle	2	2	10:44	11:06						
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)9	Bottom	3	1	10:44	11:06	25.3	6.8	25.1	8.29	8.7	7.2
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	IS(Mf)9	Bottom	3	2	10:44	11:06	25.3	6.8	25.0	8.31	8.7	6.0
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)5	Surface	1	1	13:15	13:43	25.2	6.8	24.5	7.63	5.9	5.4
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)5	Surface	1	2	13:15	13:43	25.1	6.8	24.5	7.65	5.8	4.1
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)5	Middle	2	1	13:15	13:43	25.4	6.7	25.6	6.42	6.0	7.5
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)5	Middle	2	2	13:15	13:43	25.3	6.7	25.5	6.40	6.5	8.8
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)5	Bottom	3	1	13:15	13:43	25.4	6.6	25.7	6.24	7.4	8.8
TM-CLK Southern	HY/2012/07	2013-11-02	Mid-Ebb	CS(Mf)5	Bottom	3	2	13:15	13:43	25.4	6.6	25.7	6.26	7.0	8.9

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)5	Surface	1	1	17:45	18:13	23.7	6.6	24.3	6.73	7.1	12.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)5	Surface	1	2	17:45	18:13	23.7	6.6	24.4	6.70	6.0	11.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)5	Middle	2	1	17:45	18:13	23.6	6.6	24.8	6.64	16.2	24.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)5	Middle	2	2	17:45	18:13	23.6	6.6	24.7	6.65	14.8	23.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)5	Bottom	3	1	17:45	18:13	23.5	6.6	25.0	6.58	8.8	23.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)5	Bottom	3	2	17:45	18:13	23.5	6.6	25.1	6.56	10.9	23.3
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4a	Surface	1	1	18:30	18:48	23.7	6.6	24.3	6.56	8.7	8.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4a	Surface	1	2	18:30	18:48	23.6	6.6	24.3	6.58	9.1	8.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4a	Middle	2	1	18:30	18:48						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4a	Middle	2	2	18:30	18:48						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4a	Bottom	3	1	18:30	18:48	23.5	6.6	24.7	6.63	8.8	8.2
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4a	Bottom	3	2	18:30	18:48	23.4	6.6	24.8	6.60	8.8	8.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4	Surface	1	1	18:56	19:13	23.6	6.6	24.3	6.58	9.1	12.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4	Surface	1	2	18:56	19:13	23.6	6.6	24.3	6.56	11.4	11.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4	Middle	2	1	18:56	19:13						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4	Middle	2	2	18:56	19:13						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4	Bottom	3	1	18:56	19:13	23.4	6.6	24.6	6.52	10.0	14.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	SR4	Bottom	3	2	18:56	19:13	23.4	6.5	24.6	6.50	11.8	13.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS8	Surface	1	1	19:19	19:35	23.5	6.6	24.3	6.52	18.6	11.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS8	Surface	1	2	19:19	19:35	23.5	6.6	24.3	6.50	19.8	10.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS8	Middle	2	1	19:19	19:35						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS8	Middle	2	2	19:19	19:35						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS8	Bottom	3	1	19:19	19:35	23.4	6.5	24.5	6.47	8.8	12.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS8	Bottom	3	2	19:19	19:35	23.3	6.6	24.6	6.44	8.8	11.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)16	Surface	1	1	19:43	20:08	23.5	6.6	24.2	6.43	9.4	13.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)16	Surface	1	2	19:43	20:08	23.4	6.6	24.3	6.45	10.7	14.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)16	Middle	2	1	19:43	20:08	23.4	6.6	24.6	6.37	9.6	11.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)16	Middle	2	2	19:43	20:08	23.3	6.5	24.6	6.38	10.3	10.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)16	Bottom	3	1	19:43	20:08	23.3	6.5	24.7	6.34	16.3	14.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)16	Bottom	3	2	19:43	20:08	23.3	6.5	24.7	6.30	14.9	14.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)9	Surface	1	1	20:21	20:37	23.5	6.6	24.9	6.40	15.2	19.2
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)9	Surface	1	2	20:21	20:37	23.5	6.6	24.8	6.36	16.0	20.3
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)9	Middle	2	1	20:21	20:37						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)9	Middle	2	2	20:21	20:37						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)9	Bottom	3	1	20:21	20:37	23.4	6.6	25.0	6.34	15.0	19.5
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	IS(Mf)9	Bottom	3	2	20:21	20:37	23.4	6.6	25.0	6.36	11.8	19.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)3	Surface	1	1	20:51	21:15	23.5	6.6	24.7	6.53	10.6	14.2
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)3	Surface	1	2	20:51	21:15	23.4	6.6	24.6	6.55	9.7	12.3
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)3	Middle	2	1	20:51	21:15	23.4	6.6	24.7	6.52	10.9	14.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)3	Middle	2	2	20:51	21:15	23.4	6.6	24.8	6.50	12.1	14.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)3	Bottom	3	1	20:51	21:15	23.4	6.6	24.8	6.50	9.2	15.2
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Flood	CS(Mf)3	Bottom	3	2	20:51	21:15	23.3	6.6	24.9	6.47	11.0	14.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)3	Surface	1	1	12:30	12:48	24.8	6.4	25.5	6.65	8.3	14.3
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)3	Surface	1	2	12:30	12:48	24.9	6.4	25.4	6.68	8.5	13.5
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)3	Middle	2	1	12:30	12:48	24.8	6.5	25.6	6.51	8.5	13.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)3	Middle	2	2	12:30	12:48	24.8	6.5	25.7	6.48	8.4	14.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)3	Bottom	3	1	12:30	12:48	24.8	6.5	25.9	6.32	8.8	13.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)3	Bottom	3	2	12:30	12:48	24.7	6.6	25.8	6.35	7.8	13.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4a	Surface	1	1	14:45	15:03	24.8	6.7	24.4	6.58	9.7	8.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4a	Surface	1	2	14:45	15:03	24.9	6.7	24.3	6.61	9.4	9.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4a	Middle	2	1	14:45	15:03						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4a	Middle	2	2	14:45	15:03						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4a	Bottom	3	1	14:45	15:03	24.8	6.6	24.6	6.53	8.9	9.2
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4a	Bottom	3	2	14:45	15:03	24.8	6.6	24.7	6.50	8.9	9.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4	Surface	1	1	14:20	14:37	24.9	6.5	24.4	6.62	9.3	10.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4	Surface	1	2	14:20	14:37	24.9	6.4	24.4	6.58	8.5	9.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4	Middle	2	1	14:20	14:37						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4	Middle	2	2	14:20	14:37						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4	Bottom	3	1	14:20	14:37	24.9	6.5	24.5	6.50	9.8	16.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	SR4	Bottom	3	2	14:20	14:37	25.0	6.5	24.6	6.47	10.0	15.5
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS8	Surface	1	1	13:58	14:14	24.8	6.4	24.3	6.53	13.4	10.5
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS8	Surface	1	2	13:58	14:14	24.9	6.4	24.4	6.56	13.7	9.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS8	Middle	2	1	13:58	14:14						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS8	Middle	2	2	13:58	14:14						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS8	Bottom	3	1	13:58	14:14	24.9	6.4	24.6	6.49	7.2	9.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS8	Bottom	3	2	13:58	14:14	24.9	6.4	24.6	6.47	7.6	9.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)16	Surface	1	1	13:31	13:50	24.8	6.4	24.4	6.38	8.4	14.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)16	Surface	1	2	13:31	13:50	24.8	6.4	24.5	6.41	8.3	14.7
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)16	Middle	2	1	13:31	13:50	24.8	6.5	24.6	6.33	7.1	15.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)16	Middle	2	2	13:31	13:50	24.9	6.5	24.6	6.31	7.2	14.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)16	Bottom	3	1	13:31	13:50	24.9	6.4	24.6	6.17	9.2	19.4
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)16	Bottom	3	2	13:31	13:50	25.0	6.4	24.7	6.19	7.1	18.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)9	Surface	1	1	13:02	13:18	24.9	6.7	25.3	6.24	15.9	15.9
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)9	Surface	1	2	13:02	13:18	24.9	6.7	25.3	6.27	12.7	15.6
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)9	Middle	2	1	13:02	13:18						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)9	Middle	2	2	13:02	13:18						
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)9	Bottom	3	1	13:02	13:18	24.9	6.7	25.3	6.30	16.4	20.8
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	IS(Mf)9	Bottom	3	2	13:02	13:18	24.8	6.7	25.4	6.29	16.8	19.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)5	Surface	1	1	15:20	15:48	24.9	6.6	24.2	6.83	5.9	14.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)5	Surface	1	2	15:20	15:48	24.8	6.6	24.3	6.78	5.8	15.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)5	Middle	2	1	15:20	15:48	24.8	6.5	24.7	6.73	7.3	21.1
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)5	Middle	2	2	15:20	15:48	24.8	6.6	24.6	6.71	8.0	19.5
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)5	Bottom	3	1	15:20	15:48	24.7	6.6	25.1	6.56	7.9	21.0
TM-CLK Southern	HY/2012/07	2013-11-05	Mid-Ebb	CS(Mf)5	Bottom	3	2	15:20	15:48	24.7	6.6	25.2	6.60	6.5	20.1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)5	Surface	1	1	08:35	08:59	24.9	6.6	24.4	6.94	7.7	5.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)5	Surface	1	2	08:35	08:59	24.9	6.6	24.3	6.96	8.0	5.9
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)5	Middle	2	1	08:35	08:59	24.8	6.5	24.6	6.77	7.7	5.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)5	Middle	2	2	08:35	08:59	24.9	6.5	24.6	6.79	8.0	4.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)5	Bottom	3	1	08:35	08:59	24.7	6.5	24.9	6.64	9.1	8.3
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)5	Bottom	3	2	08:35	08:59	24.8	6.6	25.0	6.66	9.1	8.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4a	Surface	1	1	09:06	09:30	24.8	6.7	24.4	6.67	15.2	12.6
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4a	Surface	1	2	09:06	09:30	24.7	6.7	24.4	6.69	12.4	12.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4a	Middle	2	1	09:06	09:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4a	Middle	2	2	09:06	09:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4a	Bottom	3	1	09:06	09:30	24.7	6.6	24.7	6.57	16.8	15.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4a	Bottom	3	2	09:06	09:30	24.7	6.6	24.8	6.59	18.2	15.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4	Surface	1	1	09:36	10:00	24.9	6.6	24.3	6.68	20.2	20.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4	Surface	1	2	09:36	10:00	25.0	6.6	24.4	6.70	20.0	20.3
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4	Middle	2	1	09:36	10:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4	Middle	2	2	09:36	10:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4	Bottom	3	1	09:36	10:00	24.8	6.5	24.6	6.56	21.0	20.3
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	SR4	Bottom	3	2	09:36	10:00	24.9	6.6	24.7	6.58	19.8	20.3
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS8	Surface	1	1	10:06	10:30	24.9	6.4	24.4	6.64	18.9	19.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS8	Surface	1	2	10:06	10:30	24.8	6.5	24.4	6.66	19.4	19.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS8	Middle	2	1	10:06	10:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS8	Middle	2	2	10:06	10:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS8	Bottom	3	1	10:06	10:30	24.7	6.4	24.7	6.51	18.8	20.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS8	Bottom	3	2	10:06	10:30	24.8	6.4	24.7	6.50	18.3	22.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)16	Surface	1	1	10:36	11:00	24.9	6.5	24.4	6.47	14.3	12.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)16	Surface	1	2	10:36	11:00	24.9	6.5	24.3	6.49	12.6	12.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)16	Middle	2	1	10:36	11:00	24.8	6.4	24.6	6.39	14.8	12.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)16	Middle	2	2	10:36	11:00	24.8	6.4	24.7	6.41	13.4	12.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)16	Bottom	3	1	10:36	11:00	24.7	6.5	24.7	6.25	12.2	12.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)16	Bottom	3	2	10:36	11:00	24.8	6.5	24.8	6.27	11.9	11.2
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)9	Surface	1	1	11:06	11:30	24.8	6.7	25.4	6.34	14.9	15.0
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)9	Surface	1	2	11:06	11:30	24.8	6.8	25.5	6.35	16.3	17.3
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)9	Middle	2	1	11:06	11:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)9	Middle	2	2	11:06	11:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)9	Bottom	3	1	11:06	11:30	24.7	6.5	25.5	6.39	22.5	21.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	IS(Mf)9	Bottom	3	2	11:06	11:30	24.8	6.6	25.5	6.41	20.3	20.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)3	Surface	1	1	11:36	12:05	24.9	6.5	25.3	6.73	14.8	17.9
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)3	Surface	1	2	11:36	12:05	24.8	6.5	25.4	6.70	15.1	17.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)3	Middle	2	1	11:36	12:05	24.8	6.5	25.7	6.56	24.0	26.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)3	Middle	2	2	11:36	12:05	24.8	6.6	25.8	6.58	25.5	27.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)3	Bottom	3	1	11:36	12:05	24.8	6.6	25.9	6.42	22.5	29.9
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Flood	CS(Mf)3	Bottom	3	2	11:36	12:05	24.9	6.6	25.9	6.40	24.3	28.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)3	Surface	1	1	14:06	14:30	25.2	6.4	25.4	6.63	6.8	15.6
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)3	Surface	1	2	14:06	14:30	25.0	6.5	25.2	6.65	8.3	15.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)3	Middle	2	1	14:06	14:30	25.2	6.5	25.7	6.52	22.3	23.9
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)3	Middle	2	2	14:06	14:30	25.2	6.5	25.9	6.55	20.9	23.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)3	Bottom	3	1	14:06	14:30	25.3	6.5	25.7	6.30	25.2	31.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)3	Bottom	3	2	14:06	14:30	25.2	6.5	26.0	6.33	21.8	30.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4a	Surface	1	1	16:36	17:00	24.8	6.7	24.4	6.56	7.9	15.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4a	Surface	1	2	16:36	17:00	24.9	6.7	24.5	6.57	6.1	14.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4a	Middle	2	1	16:36	17:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4a	Middle	2	2	16:36	17:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4a	Bottom	3	1	16:36	17:00	24.9	6.6	24.6	6.48	9.5	19.6
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4a	Bottom	3	2	16:36	17:00	25.2	6.6	24.8	6.49	8.8	18.3
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4	Surface	1	1	16:06	16:30	25.6	6.5	24.3	6.51	10.6	21.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4	Surface	1	2	16:06	16:30	25.8	6.5	24.2	6.52	10.8	22.2
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4	Middle	2	1	16:06	16:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4	Middle	2	2	16:06	16:30						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4	Bottom	3	1	16:06	16:30	25.7	6.5	24.4	6.40	11.8	22.2
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	SR4	Bottom	3	2	16:06	16:30	25.8	6.5	24.5	6.41	11.1	23.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS8	Surface	1	1	15:36	16:00	25.1	6.4	24.4	6.52	11.0	18.1
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS8	Surface	1	2	15:36	16:00	25.2	6.5	24.5	6.53	9.7	17.0
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS8	Middle	2	1	15:36	16:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS8	Middle	2	2	15:36	16:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS8	Bottom	3	1	15:36	16:00	25.2	6.5	24.5	6.52	11.6	18.2
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS8	Bottom	3	2	15:36	16:00	25.3	6.5	24.6	6.50	11.6	17.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)16	Surface	1	1	15:06	15:30	25.2	6.5	24.5	6.39	11.5	12.6
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)16	Surface	1	2	15:06	15:30	25.5	6.5	24.3	6.40	11.6	11.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)16	Middle	2	1	15:06	15:30	25.3	6.4	24.6	6.32	11.5	13.0
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)16	Middle	2	2	15:06	15:30	25.4	6.4	24.8	6.33	10.5	12.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)16	Bottom	3	1	15:06	15:30	25.3	6.5	24.5	6.18	11.3	12.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)16	Bottom	3	2	15:06	15:30	25.4	6.5	24.6	6.20	11.8	13.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)9	Surface	1	1	14:36	15:00	25.1	6.7	25.3	6.23	9.8	16.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)9	Surface	1	2	14:36	15:00	25.2	6.7	25.4	6.24	10.6	18.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)9	Middle	2	1	14:36	15:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)9	Middle	2	2	14:36	15:00						
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)9	Bottom	3	1	14:36	15:00	25.2	6.6	25.6	6.33	10.9	20.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	IS(Mf)9	Bottom	3	2	14:36	15:00	25.3	6.6	25.5	6.34	10.8	20.4
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)5	Surface	1	1	17:06	17:36	25.0	6.6	24.3	6.79	7.8	6.6
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)5	Surface	1	2	17:06	17:36	24.9	6.6	24.3	6.80	7.9	6.5
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)5	Middle	2	1	17:06	17:36	24.8	6.5	24.5	6.69	7.8	5.9
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)5	Middle	2	2	17:06	17:36	24.8	6.6	24.6	6.67	8.0	5.8
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)5	Bottom	3	1	17:06	17:36	24.7	6.4	24.8	6.58	9.1	7.7
TM-CLK Southern	HY/2012/07	2013-11-07	Mid-Ebb	CS(Mf)5	Bottom	3	2	17:06	17:36	24.6	6.4	24.9	6.59	9.2	8.2

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)5	Surface	1	1	10:43	11:07	25.3	7.1	25.3	6.30	8.4	6.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)5	Surface	1	2	10:43	11:07	25.3	7.1	25.2	6.27	8.4	5.7
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)5	Middle	2	1	10:43	11:07	25.2	7.1	25.3	6.19	8.3	8.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)5	Middle	2	2	10:43	11:07	25.3	7.1	25.3	6.17	8.3	6.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)5	Bottom	3	1	10:43	11:07	25.2	7.1	25.4	6.10	10.7	9.7
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)5	Bottom	3	2	10:43	11:07	25.2	7.1	25.3	6.14	10.3	10.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4a	Surface	1	1	11:14	11:33	25.3	7.0	25.1	6.46	12.0	7.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4a	Surface	1	2	11:14	11:33	25.4	7.0	25.0	6.40	12.4	6.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4a	Middle	2	1	11:14	11:33						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4a	Middle	2	2	11:14	11:33						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4a	Bottom	3	1	11:14	11:33	25.3	7.1	25.2	6.37	12.4	11.2
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4a	Bottom	3	2	11:14	11:33	25.2	7.1	25.3	6.35	12.8	12.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4	Surface	1	1	11:40	12:04	25.2	7.0	25.4	6.35	11.1	7.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4	Surface	1	2	11:40	12:04	25.3	7.0	25.5	6.37	11.9	7.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4	Middle	2	1	11:40	12:04						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4	Middle	2	2	11:40	12:04						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4	Bottom	3	1	11:40	12:04	25.2	7.0	25.3	6.46	9.5	7.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	SR4	Bottom	3	2	11:40	12:04	25.1	7.0	25.4	6.40	9.5	7.6
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS8	Surface	1	1	12:08	12:30	25.2	7.1	25.4	6.18	10.9	8.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS8	Surface	1	2	12:08	12:30	25.3	7.1	25.4	6.20	10.1	9.6
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS8	Middle	2	1	12:08	12:30						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS8	Middle	2	2	12:08	12:30						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS8	Bottom	3	1	12:08	12:30	25.2	7.1	25.5	6.12	17.1	9.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS8	Bottom	3	2	12:08	12:30	25.2	7.1	25.5	6.10	17.3	10.3
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)16	Surface	1	1	12:38	13:02	25.1	7.1	25.1	6.39	11.9	8.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)16	Surface	1	2	12:38	13:02	25.2	7.1	25.2	6.40	11.5	8.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)16	Middle	2	1	12:38	13:02	25.1	7.1	25.2	6.40	14.8	9.2
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)16	Middle	2	2	12:38	13:02	25.1	7.1	25.3	6.44	14.0	9.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)16	Bottom	3	1	12:38	13:02	25.1	7.2	25.2	6.44	13.6	10.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)16	Bottom	3	2	12:38	13:02	25.0	7.2	25.2	6.46	13.8	9.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)9	Surface	1	1	13:15	13:38	25.2	7.0	25.2	6.39	15.9	8.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)9	Surface	1	2	13:15	13:38	25.3	7.0	25.3	6.42	15.7	8.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)9	Middle	2	1	13:15	13:38						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)9	Middle	2	2	13:15	13:38						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)9	Bottom	3	1	13:15	13:38	25.2	7.1	25.2	6.43	9.8	9.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	IS(Mf)9	Bottom	3	2	13:15	13:38	25.2	7.1	25.3	6.47	9.9	9.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)3	Surface	1	1	13:48	14:13	25.2	7.1	25.1	6.24	8.4	9.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)3	Surface	1	2	13:48	14:13	25.3	7.1	25.1	6.20	8.4	7.6
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)3	Middle	2	1	13:48	14:13	25.1	7.2	25.1	6.34	14.0	11.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)3	Middle	2	2	13:48	14:13	25.1	7.2	25.2	6.37	13.4	10.7
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)3	Bottom	3	1	13:48	14:13	25.0	7.2	25.1	6.16	16.1	12.5
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Flood	CS(Mf)3	Bottom	3	2	13:48	14:13	25.0	7.2	25.1	6.20	16.5	13.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)3	Surface	1	1	16:12	16:36	25.3	7.1	25.2	6.20	8.5	8.2
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)3	Surface	1	2	16:12	16:36	25.4	7.1	25.2	6.18	8.5	9.3
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)3	Middle	2	1	16:12	16:36	25.2	7.2	25.0	6.30	13.2	10.6
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)3	Middle	2	2	16:12	16:36	25.2	7.2	25.2	6.34	13.4	10.3
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)3	Bottom	3	1	16:12	16:36	25.1	7.2	25.1	6.20	16.6	12.5
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)3	Bottom	3	2	16:12	16:36	25.0	7.2	25.1	6.16	16.0	13.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4a	Surface	1	1	18:42	19:06	25.4	7.0	25.2	6.36	12.8	8.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4a	Surface	1	2	18:42	19:06	25.4	7.0	25.0	6.33	12.6	9.2
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4a	Middle	2	1	18:42	19:06						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4a	Middle	2	2	18:42	19:06						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4a	Bottom	3	1	18:42	19:06	25.3	7.2	25.3	6.30	12.6	10.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4a	Bottom	3	2	18:42	19:06	25.3	7.1	25.3	6.34	12.5	9.6
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4	Surface	1	1	18:12	18:36	25.2	7.0	25.4	6.30	11.3	6.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4	Surface	1	2	18:12	18:36	25.3	7.0	25.4	6.36	11.7	8.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4	Middle	2	1	18:12	18:36						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4	Middle	2	2	18:12	18:36						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4	Bottom	3	1	18:12	18:36	25.2	7.0	25.3	6.40	9.6	12.7
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	SR4	Bottom	3	2	18:12	18:36	25.2	7.0	25.4	6.34	9.6	11.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS8	Surface	1	1	17:42	18:06	25.3	7.1	25.4	6.16	10.6	8.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS8	Surface	1	2	17:42	18:06	25.3	7.1	25.4	6.14	10.9	9.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS8	Middle	2	1	17:42	18:06						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS8	Middle	2	2	17:42	18:06						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS8	Bottom	3	1	17:42	18:06	25.3	7.2	25.6	6.06	18.1	11.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS8	Bottom	3	2	17:42	18:06	25.2	7.2	25.5	6.10	17.5	11.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)16	Surface	1	1	17:12	17:36	25.2	7.1	25.3	6.33	11.6	9.9
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)16	Surface	1	2	17:12	17:36	25.2	7.1	25.3	6.28	11.3	8.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)16	Middle	2	1	17:12	17:36	25.3	7.1	25.2	6.36	14.6	9.3
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)16	Middle	2	2	17:12	17:36	25.2	7.1	25.3	6.38	15.0	9.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)16	Bottom	3	1	17:12	17:36	25.3	7.2	25.3	6.39	13.9	12.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)16	Bottom	3	2	17:12	17:36	25.2	7.2	25.2	6.42	14.2	12.6
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)9	Surface	1	1	16:42	17:06	25.3	7.0	24.8	6.41	15.6	9.2
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)9	Surface	1	2	16:42	17:06	25.3	7.0	25.0	6.43	15.3	8.4
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)9	Middle	2	1	16:42	17:06						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)9	Middle	2	2	16:42	17:06						
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)9	Bottom	3	1	16:42	17:06	25.2	7.1	25.1	6.15	10.1	11.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	IS(Mf)9	Bottom	3	2	16:42	17:06	25.2	7.1	25.1	6.11	9.9	10.5
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)5	Surface	1	1	19:12	19:42	25.3	7.1	25.3	6.28	8.5	6.2
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)5	Surface	1	2	19:12	19:42	25.4	7.1	25.3	6.24	8.4	6.0
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)5	Middle	2	1	19:12	19:42	25.3	7.1	25.2	6.14	8.4	6.5
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)5	Middle	2	2	19:12	19:42	25.2	7.1	25.2	6.14	8.3	7.8
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)5	Bottom	3	1	19:12	19:42	25.2	7.1	25.4	6.08	10.5	10.1
TM-CLK Southern	HY/2012/07	2013-11-09	Mid-Ebb	CS(Mf)5	Bottom	3	2	19:12	19:42	25.1	7.1	25.4	6.05	10.6	9.7

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)5	Surface	1	1	13:50	14:11	25.1	7.1	25.0	6.37	2.8	5.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)5	Surface	1	2	13:50	14:11	25.0	7.2	24.9	6.35	2.9	4.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)5	Middle	2	1	13:50	14:11	25.0	7.1	25.2	6.22	2.9	4.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)5	Middle	2	2	13:50	14:11	24.9	7.1	25.1	6.24	3.0	4.5
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)5	Bottom	3	1	13:50	14:11	24.9	7.2	25.3	6.08	2.6	6.1
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)5	Bottom	3	2	13:50	14:11	24.8	7.2	25.3	6.10	2.7	4.1
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4a	Surface	1	1	14:20	14:42	25.1	7.0	24.9	6.49	3.7	7.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4a	Surface	1	2	14:20	14:42	25.1	7.0	25.0	6.51	3.8	9.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4a	Middle	2	1	14:20	14:42						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4a	Middle	2	2	14:20	14:42						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4a	Bottom	3	1	14:20	14:42	25.0	7.1	25.1	6.39	3.1	7.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4a	Bottom	3	2	14:20	14:42	25.1	7.1	25.1	6.41	3.2	7.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4	Surface	1	1	14:52	15:13	25.1	7.0	25.0	6.42	2.8	4.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4	Surface	1	2	14:52	15:13	25.1	7.1	24.9	6.44	2.9	4.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4	Middle	2	1	14:52	15:13						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4	Middle	2	2	14:52	15:13						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4	Bottom	3	1	14:52	15:13	25.0	7.1	25.1	6.51	4.1	5.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	SR4	Bottom	3	2	14:52	15:13	24.9	7.1	25.0	6.54	4.1	7.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS8	Surface	1	1	15:23	15:44	25.0	7.1	25.0	6.24	5.5	5.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS8	Surface	1	2	15:23	15:44	25.1	7.1	25.0	6.22	5.6	5.3
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS8	Middle	2	1	15:23	15:44						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS8	Middle	2	2	15:23	15:44						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS8	Bottom	3	1	15:23	15:44	25.0	7.1	25.1	6.17	5.1	7.3
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS8	Bottom	3	2	15:23	15:44	25.0	7.1	25.2	6.20	5.1	6.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)16	Surface	1	1	15:54	16:15	25.0	7.1	24.9	6.37	6.1	8.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)16	Surface	1	2	15:54	16:15	24.9	7.1	25.0	6.39	6.1	9.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)16	Middle	2	1	15:54	16:15	24.9	7.2	25.1	6.46	6.2	6.8
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)16	Middle	2	2	15:54	16:15	24.8	7.2	25.0	6.48	6.3	8.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)16	Bottom	3	1	15:54	16:15	24.8	7.2	25.2	6.40	5.7	7.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)16	Bottom	3	2	15:54	16:15	24.8	7.3	25.2	6.38	5.7	7.6
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)9	Surface	1	1	16:25	16:48	25.0	7.0	25.1	6.36	4.7	10.3
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)9	Surface	1	2	16:25	16:48	25.0	7.0	25.0	6.38	4.7	9.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)9	Middle	2	1	16:25	16:48						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)9	Middle	2	2	16:25	16:48						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)9	Bottom	3	1	16:25	16:48	24.9	7.1	25.2	6.44	4.5	8.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	IS(Mf)9	Bottom	3	2	16:25	16:48	25.0	7.1	25.1	6.47	4.5	9.3
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)3	Surface	1	1	16:58	17:20	25.1	7.2	25.0	6.28	2.9	4.8
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)3	Surface	1	2	16:58	17:20	25.0	7.2	24.9	6.30	2.9	5.3
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)3	Middle	2	1	16:58	17:20	24.9	7.2	25.0	6.39	2.9	3.5
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)3	Middle	2	2	16:58	17:20	25.0	7.2	25.1	6.41	2.9	5.4
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)3	Bottom	3	1	16:58	17:20	24.8	7.2	25.2	6.23	2.7	5.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Flood	CS(Mf)3	Bottom	3	2	16:58	17:20	24.9	7.2	25.2	6.24	2.7	5.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)3	Surface	1	1	06:36	07:00	25.0	7.2	25.0	6.13	3.2	5.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)3	Surface	1	2	06:36	07:00	25.0	7.2	25.1	6.17	3.3	3.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)3	Middle	2	1	06:36	07:00	24.9	7.2	25.1	6.20	2.9	7.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)3	Middle	2	2	06:36	07:00	24.9	7.2	25.1	6.15	2.9	5.6
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)3	Bottom	3	1	06:36	07:00	24.9	7.1	25.2	6.17	2.5	7.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)3	Bottom	3	2	06:36	07:00	24.8	7.1	25.2	6.19	2.5	6.4
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4a	Surface	1	1	09:07	09:32	25.1	7.1	25.0	6.38	5.8	4.8
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4a	Surface	1	2	09:07	09:32	25.1	7.1	25.0	6.40	5.8	6.4
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4a	Middle	2	1	09:07	09:32						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4a	Middle	2	2	09:07	09:32						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4a	Bottom	3	1	09:07	09:32	25.0	7.0	25.0	6.24	3.6	6.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4a	Bottom	3	2	09:07	09:32	25.0	7.0	25.1	6.20	3.7	6.6
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4	Surface	1	1	08:36	08:59	25.0	7.0	25.0	6.40	3.7	4.5
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4	Surface	1	2	08:36	08:59	25.0	7.1	25.0	6.44	3.7	5.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4	Middle	2	1	08:36	08:59						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4	Middle	2	2	08:36	08:59						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4	Bottom	3	1	08:36	08:59	24.9	7.1	25.1	6.49	3.3	6.1
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	SR4	Bottom	3	2	08:36	08:59	24.8	7.2	25.0	6.41	3.4	4.8
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS8	Surface	1	1	08:07	08:31	25.0	7.1	25.0	6.18	3.9	3.4
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS8	Surface	1	2	08:07	08:31	25.0	7.1	25.1	6.14	3.9	3.7
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS8	Middle	2	1	08:07	08:31						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS8	Middle	2	2	08:07	08:31						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS8	Bottom	3	1	08:07	08:31	25.0	7.1	25.1	6.20	3.4	5.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS8	Bottom	3	2	08:07	08:31	25.0	7.1	25.0	6.15	3.3	6.4
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)16	Surface	1	1	07:36	08:00	24.9	7.1	24.9	6.25	4.6	9.1
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)16	Surface	1	2	07:36	08:00	24.9	7.1	25.0	6.21	4.6	8.1
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)16	Middle	2	1	07:36	08:00	24.9	7.1	25.0	6.30	4.7	7.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)16	Middle	2	2	07:36	08:00	24.9	7.1	25.0	6.24	4.8	7.8
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)16	Bottom	3	1	07:36	08:00	24.9	7.2	25.1	6.35	4.1	7.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)16	Bottom	3	2	07:36	08:00	24.9	7.2	25.2	6.34	4.1	8.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)9	Surface	1	1	07:06	07:30	25.1	7.0	25.0	6.23	4.6	10.4
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)9	Surface	1	2	07:06	07:30	25.1	7.0	24.9	6.21	4.5	10.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)9	Middle	2	1	07:06	07:30						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)9	Middle	2	2	07:06	07:30						
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)9	Bottom	3	1	07:06	07:30	25.0	7.1	25.0	6.29	4.8	8.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	IS(Mf)9	Bottom	3	2	07:06	07:30	24.9	7.1	25.0	6.31	4.7	7.9
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)5	Surface	1	1	09:40	10:06	25.1	7.2	25.0	6.22	2.8	4.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)5	Surface	1	2	09:40	10:06	25.1	7.2	25.1	6.28	2.9	4.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)5	Middle	2	1	09:40	10:06	25.0	7.1	25.1	6.14	2.6	6.0
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)5	Middle	2	2	09:40	10:06	25.0	7.1	25.1	6.16	2.6	5.5
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)5	Bottom	3	1	09:40	10:06	24.9	7.2	25.2	6.10	5.7	7.2
TM-CLK Southern	HY/2012/07	2013-11-12	Mid-Ebb	CS(Mf)5	Bottom	3	2	09:40	10:06	24.9	7.2	25.3	6.18	5.6	7.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)5	Surface	1	1	15:04	15:21	25.1	7.3	25.1	6.22	7.2	4.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)5	Surface	1	2	15:04	15:21	25.0	7.3	25.2	6.18	7.3	4.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)5	Middle	2	1	15:04	15:21	25.0	7.3	25.0	6.10	7.4	4.5
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)5	Middle	2	2	15:04	15:21	25.0	7.3	25.2	6.06	7.5	4.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)5	Bottom	3	1	15:04	15:21	25.0	7.3	25.3	6.04	7.1	4.3
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)5	Bottom	3	2	15:04	15:21	25.0	7.3	25.2	6.10	7.1	5.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4a	Surface	1	1	15:30	15:52	25.1	7.2	25.2	6.34	14.8	10.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4a	Surface	1	2	15:30	15:52	25.1	7.2	25.2	6.30	14.3	9.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4a	Middle	2	1	15:30	15:52						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4a	Middle	2	2	15:30	15:52						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4a	Bottom	3	1	15:30	15:52	25.2	7.2	25.3	6.18	14.0	12.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4a	Bottom	3	2	15:30	15:52	25.0	7.2	25.2	6.22	14.4	12.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4	Surface	1	1	16:02	16:22	25.1	7.2	25.3	6.38	15.0	14.5
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4	Surface	1	2	16:02	16:22	25.0	7.2	25.2	6.34	15.4	14.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4	Middle	2	1	16:02	16:22						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4	Middle	2	2	16:02	16:22						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4	Bottom	3	1	16:02	16:22	25.0	7.2	25.2	6.44	18.4	16.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	SR4	Bottom	3	2	16:02	16:22	25.2	7.3	25.2	6.46	18.0	14.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS8	Surface	1	1	16:33	16:53	25.0	7.2	25.2	6.10	16.4	12.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS8	Surface	1	2	16:33	16:53	25.1	7.2	25.2	6.15	15.8	13.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS8	Middle	2	1	16:33	16:53						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS8	Middle	2	2	16:33	16:53						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS8	Bottom	3	1	16:33	16:53	25.0	7.2	25.1	6.14	16.6	15.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS8	Bottom	3	2	16:33	16:53	25.2	7.3	25.2	6.09	16.2	13.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)16	Surface	1	1	17:03	17:23	25.0	7.2	25.0	6.18	6.5	4.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)16	Surface	1	2	17:03	17:23	25.0	7.3	25.2	6.14	6.5	5.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)16	Middle	2	1	17:03	17:23	24.9	7.2	25.2	6.22	6.5	3.7
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)16	Middle	2	2	17:03	17:23	25.0	7.2	25.3	6.20	6.5	4.8
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)16	Bottom	3	1	17:03	17:23	25.0	7.3	25.2	6.26	6.6	4.8
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)16	Bottom	3	2	17:03	17:23	25.0	7.3	25.2	6.22	6.6	5.8
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)9	Surface	1	1	17:34	17:55	25.1	7.1	25.2	6.10	10.8	7.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)9	Surface	1	2	17:34	17:55	25.1	7.1	25.2	6.14	10.4	7.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)9	Middle	2	1	17:34	17:55						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)9	Middle	2	2	17:34	17:55						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)9	Bottom	3	1	17:34	17:55	25.0	7.2	25.3	6.18	10.0	8.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	IS(Mf)9	Bottom	3	2	17:34	17:55	25.1	7.3	25.3	6.16	10.2	8.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)3	Surface	1	1	18:08	18:28	25.0	7.3	25.2	6.04	6.9	4.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)3	Surface	1	2	18:08	18:28	25.1	7.3	25.2	6.00	6.9	5.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)3	Middle	2	1	18:08	18:28	25.1	7.4	25.0	6.14	6.6	3.9
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)3	Middle	2	2	18:08	18:28	25.0	7.4	25.0	6.08	6.7	3.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)3	Bottom	3	1	18:08	18:28	24.9	7.3	25.2	6.10	6.4	5.8
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Flood	CS(Mf)3	Bottom	3	2	18:08	18:28	25.1	7.2	25.3	6.06	6.4	6.7
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)3	Surface	1	1	08:43	09:07	24.8	7.3	25.1	6.04	6.9	6.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)3	Surface	1	2	08:43	09:07	24.9	7.3	25.0	6.08	6.9	7.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)3	Middle	2	1	08:43	09:07	24.8	7.4	25.1	6.11	6.6	5.9
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)3	Middle	2	2	08:43	09:07	24.7	7.4	25.1	6.06	6.7	4.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)3	Bottom	3	1	08:43	09:07	24.8	7.2	25.2	6.13	6.4	7.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)3	Bottom	3	2	08:43	09:07	24.8	7.3	25.3	6.11	6.3	5.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4a	Surface	1	1	11:14	11:39	24.9	7.2	25.0	6.29	14.6	12.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4a	Surface	1	2	11:14	11:39	25.0	7.2	25.1	6.32	14.4	11.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4a	Middle	2	1	11:14	11:39						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4a	Middle	2	2	11:14	11:39						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4a	Bottom	3	1	11:14	11:39	24.9	7.2	25.1	6.15	14.2	15.5
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4a	Bottom	3	2	11:14	11:39	24.8	7.2	25.2	6.12	14.1	14.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4	Surface	1	1	10:43	11:06	25.0	7.2	25.1	6.31	15.4	10.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4	Surface	1	2	10:43	11:06	24.9	7.2	25.0	6.35	15.5	12.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4	Middle	2	1	10:43	11:06						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4	Middle	2	2	10:43	11:06						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4	Bottom	3	1	10:43	11:06	24.9	7.3	25.1	6.40	18.1	16.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	SR4	Bottom	3	2	10:43	11:06	24.9	7.3	25.2	6.32	17.8	15.5
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS8	Surface	1	1	10:14	10:38	24.9	7.2	25.0	6.09	16.0	12.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS8	Surface	1	2	10:14	10:38	24.9	7.2	25.1	6.05	15.7	12.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS8	Middle	2	1	10:14	10:38						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS8	Middle	2	2	10:14	10:38						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS8	Bottom	3	1	10:14	10:38	24.7	7.3	25.2	6.06	16.5	14.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS8	Bottom	3	2	10:14	10:38	24.8	7.3	25.2	6.11	16.6	14.9
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)16	Surface	1	1	09:43	10:07	24.9	7.3	24.9	6.16	6.5	5.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)16	Surface	1	2	09:43	10:07	24.8	7.3	25.0	6.12	6.6	6.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)16	Middle	2	1	09:43	10:07	24.8	7.2	25.1	6.21	6.5	3.8
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)16	Middle	2	2	09:43	10:07	24.9	7.2	25.0	6.15	6.5	5.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)16	Bottom	3	1	09:43	10:07	24.8	7.3	25.1	6.26	6.6	6.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)16	Bottom	3	2	09:43	10:07	24.7	7.3	25.2	6.24	6.6	6.5
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)9	Surface	1	1	09:13	09:37	25.0	7.1	25.1	6.14	10.6	8.6
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)9	Surface	1	2	09:13	09:37	24.9	7.2	25.2	6.12	10.8	7.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)9	Middle	2	1	09:13	09:37						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)9	Middle	2	2	09:13	09:37						
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)9	Bottom	3	1	09:13	09:37	24.8	7.3	25.3	6.22	10.2	9.4
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	IS(Mf)9	Bottom	3	2	09:13	09:37	24.9	7.3	25.3	6.20	9.8	10.7
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)5	Surface	1	1	11:47	12:13	25.0	7.3	25.0	6.13	7.2	5.1
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)5	Surface	1	2	11:47	12:13	24.9	7.3	24.9	6.19	7.3	2.8
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)5	Middle	2	1	11:47	12:13	24.9	7.3	25.0	6.05	7.5	5.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)5	Middle	2	2	11:47	12:13	24.8	7.3	25.1	6.07	7.5	4.0
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)5	Bottom	3	1	11:47	12:13	24.8	7.3	25.2	6.01	7.0	6.2
TM-CLK Southern	HY/2012/07	2013-11-14	Mid-Ebb	CS(Mf)5	Bottom	3	2	11:47	12:13	24.7	7.4	25.2	6.08	7.0	3.8

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)5	Surface	1	1	16:01	16:21	24.8	7.2	25.3	6.27	6.5	6.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)5	Surface	1	2	16:01	16:21	24.7	7.2	25.3	6.33	6.6	5.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)5	Middle	2	1	16:01	16:21	24.7	7.2	25.3	6.19	7.0	10.3
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)5	Middle	2	2	16:01	16:21	24.7	7.2	25.4	6.21	7.1	10.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)5	Bottom	3	1	16:01	16:21	24.6	7.3	25.4	6.15	8.0	10.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)5	Bottom	3	2	16:01	16:21	24.5	7.3	25.3	6.17	8.1	10.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4a	Surface	1	1	16:28	16:48	24.0	7.1	25.2	6.43	8.4	7.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4a	Surface	1	2	16:28	16:48	24.0	7.2	25.3	6.45	8.5	6.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4a	Middle	2	1	16:28	16:48						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4a	Middle	2	2	16:28	16:48						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4a	Bottom	3	1	16:28	16:48	24.6	7.1	25.4	6.26	9.0	10.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4a	Bottom	3	2	16:28	16:48	24.7	7.1	25.4	6.29	9.0	9.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4	Surface	1	1	16:58	17:18	24.7	7.1	25.3	6.28	7.8	6.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4	Surface	1	2	16:58	17:18	24.8	7.1	25.2	6.32	7.8	7.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4	Middle	2	1	16:58	17:18						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4	Middle	2	2	16:58	17:18						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4	Bottom	3	1	16:58	17:18	24.7	7.2	25.4	6.37	8.0	9.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	SR4	Bottom	3	2	16:58	17:18	24.6	7.2	25.4	6.29	8.0	7.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS8	Surface	1	1	17:28	17:53	24.7	7.2	25.2	6.24	6.9	7.4
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS8	Surface	1	2	17:28	17:53	24.6	7.2	25.3	6.20	7.0	8.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS8	Middle	2	1	17:28	17:53						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS8	Middle	2	2	17:28	17:53						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS8	Bottom	3	1	17:28	17:53	24.6	7.2	25.4	6.25	7.2	8.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS8	Bottom	3	2	17:28	17:53	24.5	7.2	25.3	6.21	7.2	9.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)16	Surface	1	1	18:02	18:27	24.8	7.2	25.2	6.26	6.0	6.4
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)16	Surface	1	2	18:02	18:27	24.7	7.2	25.1	6.30	6.1	5.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)16	Middle	2	1	18:02	18:27	24.7	7.2	25.2	6.35	6.9	6.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)16	Middle	2	2	18:02	18:27	24.7	7.1	25.1	6.30	6.9	5.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)16	Bottom	3	1	18:02	18:27	24.6	7.2	25.3	6.38	7.3	8.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)16	Bottom	3	2	18:02	18:27	24.5	7.3	25.2	6.39	7.3	7.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)9	Surface	1	1	18:36	19:01	24.7	7.1	25.2	6.29	8.5	6.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)9	Surface	1	2	18:36	19:01	24.8	7.1	25.2	6.27	8.6	6.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)9	Middle	2	1	18:36	19:01						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)9	Middle	2	2	18:36	19:01						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)9	Bottom	3	1	18:36	19:01	24.8	7.2	25.3	6.37	9.9	8.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	IS(Mf)9	Bottom	3	2	18:36	19:01	24.7	7.2	25.2	6.39	9.6	7.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)3	Surface	1	1	19:12	19:31	24.7	7.2	25.2	6.21	7.0	6.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)3	Surface	1	2	19:12	19:31	24.7	7.3	25.3	6.25	7.0	4.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)3	Middle	2	1	19:12	19:31	24.6	7.3	25.3	6.28	7.6	8.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)3	Middle	2	2	19:12	19:31	24.7	7.3	25.4	6.23	7.4	6.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)3	Bottom	3	1	19:12	19:31	24.6	7.2	25.4	6.30	8.1	6.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Flood	CS(Mf)3	Bottom	3	2	19:12	19:31	24.5	7.2	25.4	6.32	8.1	7.4
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)3	Surface	1	1	10:17	10:31	24.3	7.2	25.1	6.12	7.1	5.1
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)3	Surface	1	2	10:17	10:31	24.8	7.2	25.2	6.16	7.1	6.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)3	Middle	2	1	10:17	10:31	24.7	7.3	25.2	6.19	7.7	7.4
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)3	Middle	2	2	10:17	10:31	24.6	7.3	25.1	6.14	7.4	7.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)3	Bottom	3	1	10:17	10:31	24.7	7.1	25.3	6.21	8.2	7.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)3	Bottom	3	2	10:17	10:31	24.7	7.1	25.3	6.23	8.1	8.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4a	Surface	1	1	12:28	12:58	24.8	7.1	25.1	6.37	8.5	4.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4a	Surface	1	2	12:28	12:58	24.9	7.1	25.2	6.40	8.6	6.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4a	Middle	2	1	12:28	12:58						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4a	Middle	2	2	12:28	12:58						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4a	Bottom	3	1	12:28	12:58	24.8	7.1	25.3	6.23	9.1	9.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4a	Bottom	3	2	12:28	12:58	24.7	7.1	25.3	6.20	9.1	9.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4	Surface	1	1	11:57	12:20	24.8	7.1	25.2	6.22	7.8	6.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4	Surface	1	2	11:57	12:20	24.9	7.1	25.1	6.26	7.9	5.3
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4	Middle	2	1	11:57	12:20						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4	Middle	2	2	11:57	12:20						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4	Bottom	3	1	11:57	12:20	24.8	7.2	25.2	6.31	8.1	7.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	SR4	Bottom	3	2	11:57	12:20	24.7	7.2	25.3	6.23	8.1	6.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS8	Surface	1	1	11:28	11:52	24.8	7.2	25.1	6.18	7.0	5.7
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS8	Surface	1	2	11:28	11:52	24.7	7.2	25.2	6.14	7.0	6.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS8	Middle	2	1	11:28	11:52						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS8	Middle	2	2	11:28	11:52						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS8	Bottom	3	1	11:28	11:52	24.6	7.2	25.2	6.19	7.3	7.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS8	Bottom	3	2	11:28	11:52	24.7	7.2	25.2	6.15	7.2	8.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)16	Surface	1	1	11:07	11:21	24.8	7.1	25.1	6.20	6.1	5.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)16	Surface	1	2	11:07	11:21	24.7	7.2	25.1	6.24	6.1	6.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)16	Middle	2	1	11:07	11:21	24.7	7.1	25.2	6.29	7.0	6.2
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)16	Middle	2	2	11:07	11:21	24.8	7.1	25.1	6.23	7.0	5.4
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)16	Bottom	3	1	11:07	11:21	24.7	7.2	25.2	6.32	7.4	9.1
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)16	Bottom	3	2	11:07	11:21	24.7	7.2	25.3	6.34	7.4	7.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)9	Surface	1	1	10:37	11:01	24.8	7.0	25.2	6.23	8.6	6.0
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)9	Surface	1	2	10:37	11:01	24.9	7.0	25.1	6.21	8.7	6.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)9	Middle	2	1	10:37	11:01						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)9	Middle	2	2	10:37	11:01						
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)9	Bottom	3	1	10:37	11:01	24.7	7.2	25.4	6.31	9.9	7.9
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	IS(Mf)9	Bottom	3	2	10:37	11:01	24.8	7.2	25.3	6.33	9.7	9.4
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)5	Surface	1	1	13:20	13:47	24.9	7.2	25.1	6.21	6.6	6.8
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)5	Surface	1	2	13:20	13:47	24.9	7.2	25.2	6.27	6.7	7.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)5	Middle	2	1	13:20	13:47	24.8	7.2	25.1	6.13	7.1	7.1
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)5	Middle	2	2	13:20	13:47	24.7	7.2	25.2	6.15	7.2	5.5
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)5	Bottom	3	1	13:20	13:47	24.7	7.2	25.2	6.09	8.1	9.6
TM-CLK Southern	HY/2012/07	2013-11-16	Mid-Ebb	CS(Mf)5	Bottom	3	2	13:20	13:47	24.6	7.2	25.3	6.11	8.1	9.6

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)5	Surface	1	1	17:25	17:43	23.1	7.2	25.3	6.42	14.5	14.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)5	Surface	1	2	17:25	17:43	23.1	7.2	25.3	6.40	14.3	15.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)5	Middle	2	1	17:25	17:43	23.1	7.4	25.4	6.32	13.8	14.9
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)5	Middle	2	2	17:25	17:43	23.0	7.4	25.4	6.38	13.2	13.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)5	Bottom	3	1	17:25	17:43	23.0	7.4	25.3	6.22	15.8	19.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)5	Bottom	3	2	17:25	17:43	23.0	7.4	25.4	6.20	15.2	19.3
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4a	Surface	1	1	17:58	18:18	23.1	7.2	25.2	6.47	12.8	8.7
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4a	Surface	1	2	17:58	18:18	23.1	7.2	25.3	6.48	12.9	10.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4a	Middle	2	1	17:58	18:18						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4a	Middle	2	2	17:58	18:18						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4a	Bottom	3	1	17:58	18:18	23.1	7.4	25.3	6.40	11.7	11.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4a	Bottom	3	2	17:58	18:18	23.0	7.4	25.4	6.36	11.1	10.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4	Surface	1	1	18:38	18:59	23.1	7.3	25.3	6.47	13.0	13.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4	Surface	1	2	18:38	18:59	23.2	7.3	25.3	6.43	13.8	13.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4	Middle	2	1	18:38	18:59						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4	Middle	2	2	18:38	18:59						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4	Bottom	3	1	18:38	18:59	23.0	7.4	25.4	6.53	11.2	12.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	SR4	Bottom	3	2	18:38	18:59	23.1	7.4	25.3	6.57	11.8	12.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS8	Surface	1	1	19:20	19:38	23.1	7.4	25.3	6.27	11.4	12.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS8	Surface	1	2	19:20	19:38	23.1	7.4	25.3	6.30	11.6	10.7
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS8	Middle	2	1	19:20	19:38						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS8	Middle	2	2	19:20	19:38						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS8	Bottom	3	1	19:20	19:38	23.1	7.4	25.4	6.29	14.0	13.9
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS8	Bottom	3	2	19:20	19:38	23.1	7.4	25.5	6.31	14.8	12.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)16	Surface	1	1	19:45	20:03	23.2	7.4	25.2	6.38	13.4	11.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)16	Surface	1	2	19:45	20:03	23.2	7.4	25.3	6.40	13.5	12.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)16	Middle	2	1	19:45	20:03	23.1	7.3	25.3	6.35	12.2	14.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)16	Middle	2	2	19:45	20:03	23.1	7.4	25.4	6.36	12.8	15.9
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)16	Bottom	3	1	19:45	20:03	23.1	7.4	25.4	6.55	14.3	16.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)16	Bottom	3	2	19:45	20:03	23.0	7.4	25.5	6.50	14.7	17.7
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)9	Surface	1	1	20:10	20:28	23.2	7.3	25.3	6.47	12.1	10.5
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)9	Surface	1	2	20:10	20:28	23.2	7.3	25.3	6.49	12.9	12.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)9	Middle	2	1	20:10	20:28						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)9	Middle	2	2	20:10	20:28						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)9	Bottom	3	1	20:10	20:28	23.1	7.4	25.3	6.39	11.0	13.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	IS(Mf)9	Bottom	3	2	20:10	20:28	23.1	7.4	25.4	6.41	11.5	13.7
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)3	Surface	1	1	20:35	20:55	23.1	7.3	25.3	6.40	10.3	8.6
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)3	Surface	1	2	20:35	20:55	23.1	7.3	25.2	6.38	10.1	7.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)3	Middle	2	1	20:35	20:55	23.0	7.3	25.4	6.50	9.5	10.6
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)3	Middle	2	2	20:35	20:55	23.0	7.3	25.4	6.46	9.6	9.6
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)3	Bottom	3	1	20:35	20:55	22.9	7.2	25.5	6.33	11.9	10.6
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Flood	CS(Mf)3	Bottom	3	2	20:35	20:55	22.9	7.2	25.4	6.30	11.7	10.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)3	Surface	1	1	12:11	12:31	23.0	7.3	25.1	6.30	9.9	7.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)3	Surface	1	2	12:11	12:31	23.1	7.3	25.2	6.34	9.4	7.3
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)3	Middle	2	1	12:11	12:31	23.0	7.3	25.3	6.37	9.7	8.7
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)3	Middle	2	2	12:11	12:31	23.0	7.3	25.3	6.32	9.9	9.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)3	Bottom	3	1	12:11	12:31	22.9	7.2	25.4	6.39	11.4	12.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)3	Bottom	3	2	12:11	12:31	23.0	7.2	25.3	6.41	10.2	12.5
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4a	Surface	1	1	14:51	15:01	23.0	7.2	25.1	6.46	12.4	10.7
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4a	Surface	1	2	14:51	15:01	22.9	7.3	25.1	6.49	12.1	10.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4a	Middle	2	1	14:51	15:01						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4a	Middle	2	2	14:51	15:01						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4a	Bottom	3	1	14:51	15:01	23.1	7.2	25.3	6.32	11.8	13.5
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4a	Bottom	3	2	14:51	15:01	23.1	7.2	25.2	6.29	12.1	12.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4	Surface	1	1	14:16	14:31	23.0	7.3	25.2	6.37	12.9	12.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4	Surface	1	2	14:16	14:31	22.9	7.3	25.3	6.41	12.0	14.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4	Middle	2	1	14:16	14:31						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4	Middle	2	2	14:16	14:31						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4	Bottom	3	1	14:16	14:31	23.0	7.3	25.3	6.46	11.8	10.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	SR4	Bottom	3	2	14:16	14:31	23.1	7.4	25.4	6.38	11.1	11.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS8	Surface	1	1	13:46	14:01	23.0	7.3	25.2	6.33	10.7	10.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS8	Surface	1	2	13:46	14:01	23.1	7.4	25.2	6.29	11.9	10.9
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS8	Middle	2	1	13:46	14:01						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS8	Middle	2	2	13:46	14:01						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS8	Bottom	3	1	13:46	14:01	23.0	7.4	25.3	6.34	13.1	11.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS8	Bottom	3	2	13:46	14:01	22.9	7.4	25.2	6.30	13.8	13.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)16	Surface	1	1	13:16	13:31	23.1	7.3	25.1	6.35	12.2	12.5
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)16	Surface	1	2	13:16	13:31	23.0	7.3	25.2	6.39	13.7	13.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)16	Middle	2	1	13:16	13:31	23.1	7.3	25.3	6.44	13.2	15.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)16	Middle	2	2	13:16	13:31	23.1	7.3	25.2	6.41	13.6	14.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)16	Bottom	3	1	13:16	13:31	23.1	7.4	25.3	6.47	14.6	18.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)16	Bottom	3	2	13:16	13:31	23.0	7.4	25.3	6.48	14.7	20.1
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)9	Surface	1	1	12:41	13:01	23.1	7.2	25.2	6.38	12.7	12.9
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)9	Surface	1	2	12:41	13:01	23.1	7.2	25.1	6.36	13.8	12.9
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)9	Middle	2	1	12:41	13:01						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)9	Middle	2	2	12:41	13:01						
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)9	Bottom	3	1	12:41	13:01	23.0	7.4	25.2	6.46	11.9	13.5
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	IS(Mf)9	Bottom	3	2	12:41	13:01	23.1	7.3	25.3	6.48	11.4	14.2
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)5	Surface	1	1	15:21	15:41	23.0	7.2	25.2	6.30	13.4	11.3
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)5	Surface	1	2	15:21	15:41	23.1	7.2	25.1	6.36	13.7	13.4
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)5	Middle	2	1	15:21	15:41	23.0	7.3	25.2	6.22	14.8	13.3
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)5	Middle	2	2	15:21	15:41	23.0	7.3	25.2	6.24	13.5	12.8
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)5	Bottom	3	1	15:21	15:41	23.0	7.4	25.3	6.18	15.1	17.0
TM-CLK Southern	HY/2012/07	2013-11-19	Mid-Ebb	CS(Mf)5	Bottom	3	2	15:21	15:41	23.1	7.4	25.4	6.20	15.9	17.9

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)5	Surface	1	1	08:08	08:32	22.9	7.4	24.2	7.37	7.4	8.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)5	Surface	1	2	08:08	08:32	22.8	7.4	24.1	7.39	7.5	9.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)5	Middle	2	1	08:08	08:32	22.9	7.3	24.2	7.11	8.0	10.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)5	Middle	2	2	08:08	08:32	23.0	7.3	24.3	7.13	8.1	11.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)5	Bottom	3	1	08:08	08:32	23.0	7.4	24.4	6.92	7.3	10.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)5	Bottom	3	2	08:08	08:32	22.9	7.4	24.3	6.94	7.3	10.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4a	Surface	1	1	08:38	09:02	22.8	7.4	24.1	7.34	10.8	14.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4a	Surface	1	2	08:38	09:02	22.8	7.4	24.1	7.36	11.0	12.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4a	Middle	2	1	08:38	09:02						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4a	Middle	2	2	08:38	09:02						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4a	Bottom	3	1	08:38	09:02	22.9	7.4	24.2	7.24	10.3	12.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4a	Bottom	3	2	08:38	09:02	22.8	7.4	24.3	7.26	10.6	12.7
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4	Surface	1	1	09:08	09:31	22.9	7.2	24.1	7.16	9.3	12.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4	Surface	1	2	09:08	09:31	23.0	7.3	24.2	7.18	9.4	13.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4	Middle	2	1	09:08	09:31						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4	Middle	2	2	09:08	09:31						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4	Bottom	3	1	09:08	09:31	23.0	7.2	24.3	6.99	10.2	12.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	SR4	Bottom	3	2	09:08	09:31	23.0	7.2	24.4	7.01	10.6	12.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS8	Surface	1	1	09:37	10:01	22.9	7.3	24.1	7.36	7.9	13.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS8	Surface	1	2	09:37	10:01	22.9	7.4	24.1	7.38	7.9	13.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS8	Middle	2	1	09:37	10:01						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS8	Middle	2	2	09:37	10:01						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS8	Bottom	3	1	09:37	10:01	23.0	7.4	24.2	7.11	8.8	15.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS8	Bottom	3	2	09:37	10:01	23.1	7.4	24.3	7.13	8.9	15.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)16	Surface	1	1	10:07	10:32	23.0	7.1	24.1	7.12	9.6	11.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)16	Surface	1	2	10:07	10:32	23.0	7.1	24.2	7.13	9.7	11.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)16	Middle	2	1	10:07	10:32	22.9	7.2	24.3	6.82	11.7	14.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)16	Middle	2	2	10:07	10:32	23.0	7.2	24.2	6.84	11.9	14.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)16	Bottom	3	1	10:07	10:32	23.0	7.1	24.5	6.89	22.1	19.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)16	Bottom	3	2	10:07	10:32	23.1	7.1	24.4	6.91	21.7	30.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)9	Surface	1	1	10:38	11:02	22.9	7.4	24.1	7.22	13.5	17.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)9	Surface	1	2	10:38	11:02	22.9	7.4	24.2	7.24	14.2	15.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)9	Middle	2	1	10:38	11:02						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)9	Middle	2	2	10:38	11:02						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)9	Bottom	3	1	10:38	11:02	23.0	7.3	24.2	7.04	13.1	17.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	IS(Mf)9	Bottom	3	2	10:38	11:02	22.9	7.4	24.3	7.06	12.8	17.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)3	Surface	1	1	11:08	11:38	22.9	7.6	24.2	7.29	8.5	8.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)3	Surface	1	2	11:08	11:38	23.0	7.6	24.2	7.31	8.5	7.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)3	Middle	2	1	11:08	11:38	23.0	7.4	24.4	6.99	8.4	8.7
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)3	Middle	2	2	11:08	11:38	23.1	7.4	24.3	7.01	8.4	10.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)3	Bottom	3	1	11:08	11:38	23.1	7.4	24.5	6.84	8.1	11.2
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Flood	CS(Mf)3	Bottom	3	2	11:08	11:38	23.0	7.5	24.4	6.82	8.1	10.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)3	Surface	1	1	13:20	13:44	22.8	7.4	24.3	7.20	8.6	11.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)3	Surface	1	2	13:20	13:44	22.9	7.4	24.2	7.24	8.5	10.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)3	Middle	2	1	13:20	13:44	23.0	7.4	24.3	6.94	7.7	10.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)3	Middle	2	2	13:20	13:44	23.0	7.4	24.3	6.91	7.7	10.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)3	Bottom	3	1	13:20	13:44	23.0	7.4	24.5	6.73	8.2	10.2
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)3	Bottom	3	2	13:20	13:44	23.0	7.4	24.5	6.76	8.1	11.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4a	Surface	1	1	15:49	16:13	22.9	7.3	24.1	7.29	11.0	11.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4a	Surface	1	2	15:49	16:13	22.8	7.3	24.0	7.21	11.8	11.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4a	Middle	2	1	15:49	16:13						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4a	Middle	2	2	15:49	16:13						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4a	Bottom	3	1	15:49	16:13	23.0	7.4	24.2	7.17	9.9	14.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4a	Bottom	3	2	15:49	16:13	22.9	7.4	24.3	7.13	10.0	15.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4	Surface	1	1	15:20	15:43	22.8	7.2	24.2	7.09	9.8	10.2
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4	Surface	1	2	15:20	15:43	22.9	7.2	24.1	7.10	9.8	11.0
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4	Middle	2	1	15:20	15:43						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4	Middle	2	2	15:20	15:43						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4	Bottom	3	1	15:20	15:43	22.9	7.2	24.4	6.93	9.7	12.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	SR4	Bottom	3	2	15:20	15:43	23.0	7.2	24.4	6.91	9.7	10.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS8	Surface	1	1	14:49	15:13	23.0	7.3	24.2	7.26	8.8	8.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS8	Surface	1	2	14:49	15:13	23.0	7.3	24.1	7.30	8.9	9.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS8	Middle	2	1	14:49	15:13						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS8	Middle	2	2	14:49	15:13						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS8	Bottom	3	1	14:49	15:13	23.1	7.3	24.3	7.06	10.2	10.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS8	Bottom	3	2	14:49	15:13	23.0	7.3	24.4	7.04	10.8	11.2
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)16	Surface	1	1	14:20	14:44	22.9	7.2	24.2	7.01	11.5	16.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)16	Surface	1	2	14:20	14:44	22.9	7.2	24.1	7.09	11.7	16.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)16	Middle	2	1	14:20	14:44	23.0	7.2	24.2	6.72	13.9	13.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)16	Middle	2	2	14:20	14:44	23.0	7.2	24.3	6.78	14.2	13.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)16	Bottom	3	1	14:20	14:44	22.9	7.1	24.3	6.88	17.2	20.9
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)16	Bottom	3	2	14:20	14:44	23.0	7.2	24.3	6.82	17.8	20.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)9	Surface	1	1	13:50	14:14	23.0	7.4	24.2	7.11	10.7	7.4
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)9	Surface	1	2	13:50	14:14	22.9	7.4	24.2	7.17	11.0	7.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)9	Middle	2	1	13:50	14:14						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)9	Middle	2	2	13:50	14:14						
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)9	Bottom	3	1	13:50	14:14	23.0	7.4	24.3	7.00	13.2	11.7
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	IS(Mf)9	Bottom	3	2	13:50	14:14	23.1	7.4	24.2	6.98	13.7	12.1
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)5	Surface	1	1	16:26	16:50	22.8	7.5	24.1	7.32	8.6	7.3
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)5	Surface	1	2	16:26	16:50	22.8	7.5	24.1	7.30	8.6	7.6
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)5	Middle	2	1	16:26	16:50	22.9	7.4	24.2	7.02	9.0	6.2
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)5	Middle	2	2	16:26	16:50	22.9	7.4	24.2	7.03	8.9	7.8
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)5	Bottom	3	1	16:26	16:50	23.0	7.4	24.3	6.87	8.6	7.5
TM-CLK Southern	HY/2012/07	2013-11-21	Mid-Ebb	CS(Mf)5	Bottom	3	2	16:26	16:50	23.0	7.4	24.3	6.88	8.7	8.2

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)5	Surface	1	1	09:32	09:50	22.6	7.6	22.8	6.51	6.6	9.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)5	Surface	1	2	09:32	09:50	22.6	7.6	22.8	6.54	6.6	9.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)5	Middle	2	1	09:32	09:50	22.5	7.6	23.3	6.48	6.8	11.5
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)5	Middle	2	2	09:32	09:50	22.5	7.6	23.2	6.44	6.9	11.8
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)5	Bottom	3	1	09:32	09:50	22.5	7.6	23.6	6.49	5.9	10.8
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)5	Bottom	3	2	09:32	09:50	22.5	7.6	23.6	6.52	6.0	11.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4a	Surface	1	1	10:00	10:15	22.1	7.7	24.5	6.33	17.6	14.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4a	Surface	1	2	10:00	10:15	22.1	7.7	24.5	6.36	17.6	13.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4a	Middle	2	1	10:00	10:15						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4a	Middle	2	2	10:00	10:15						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4a	Bottom	3	1	10:00	10:15	22.1	7.7	24.5	6.42	19.7	13.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4a	Bottom	3	2	10:00	10:15	22.1	7.7	24.8	6.38	19.7	13.5
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4	Surface	1	1	10:18	10:34	22.3	8.0	24.4	6.15	13.0	13.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4	Surface	1	2	10:18	10:34	22.3	8.1	24.4	6.12	12.9	14.3
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4	Middle	2	1	10:18	10:34						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4	Middle	2	2	10:18	10:34						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4	Bottom	3	1	10:18	10:34	22.3	8.1	24.4	6.17	17.1	13.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	SR4	Bottom	3	2	10:18	10:34	22.3	8.1	24.4	6.12	17.1	13.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS8	Surface	1	1	10:40	10:57	22.3	8.0	24.4	6.20	10.4	14.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS8	Surface	1	2	10:40	10:57	22.4	8.0	24.4	6.17	10.4	14.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS8	Middle	2	1	10:40	10:57						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS8	Middle	2	2	10:40	10:57						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS8	Bottom	3	1	10:40	10:57	22.3	8.1	24.5	6.15	15.3	16.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS8	Bottom	3	2	10:40	10:57	22.4	8.1	24.5	6.11	15.2	15.8
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)16	Surface	1	1	11:17	11:37	22.4	8.1	24.4	6.13	7.8	12.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)16	Surface	1	2	11:17	11:37	22.4	8.1	24.3	6.15	7.7	11.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)16	Middle	2	1	11:17	11:37	22.3	8.1	24.4	6.10	6.1	14.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)16	Middle	2	2	11:17	11:37	22.4	8.1	24.3	6.07	6.2	14.8
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)16	Bottom	3	1	11:17	11:37	22.5	8.1	24.5	6.11	6.6	26.3
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)16	Bottom	3	2	11:17	11:37	22.4	8.1	24.5	6.04	6.7	26.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)9	Surface	1	1	12:00	12:20	22.6	8.0	24.4	6.12	11.6	18.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)9	Surface	1	2	12:00	12:20	22.6	8.0	24.4	6.15	11.6	16.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)9	Middle	2	1	12:00	12:20						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)9	Middle	2	2	12:00	12:20						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)9	Bottom	3	1	12:00	12:20	22.6	8.0	24.5	6.04	12.9	18.7
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	IS(Mf)9	Bottom	3	2	12:00	12:20	22.6	8.1	24.5	6.07	12.8	18.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)3	Surface	1	1	12:40	13:02	22.7	8.1	24.3	6.17	12.5	9.7
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)3	Surface	1	2	12:40	13:02	22.7	8.1	24.3	6.19	12.5	8.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)3	Middle	2	1	12:40	13:02	22.6	8.1	24.4	6.18	13.2	9.5
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)3	Middle	2	2	12:40	13:02	22.6	8.1	24.4	6.15	13.2	11.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)3	Bottom	3	1	12:40	13:02	22.6	8.1	24.5	6.09	12.6	12.0
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Flood	CS(Mf)3	Bottom	3	2	12:40	13:02	22.6	8.1	24.5	6.06	12.6	11.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)3	Surface	1	1	14:35	14:55	22.8	8.1	24.4	6.08	12.8	11.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)3	Surface	1	2	14:35	14:55	22.7	8.1	24.3	6.11	12.9	11.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)3	Middle	2	1	14:35	14:55	22.7	8.1	24.4	6.09	13.5	11.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)3	Middle	2	2	14:35	14:55	22.6	8.1	24.5	6.06	13.6	10.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)3	Bottom	3	1	14:35	14:55	22.5	8.1	24.5	6.00	12.9	11.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)3	Bottom	3	2	14:35	14:55	22.4	8.1	24.6	5.97	12.8	11.0
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4a	Surface	1	1	17:05	17:25	22.2	7.8	24.6	6.27	17.8	12.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4a	Surface	1	2	17:05	17:25	22.1	7.8	24.5	6.30	18.0	12.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4a	Middle	2	1	17:05	17:25						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4a	Middle	2	2	17:05	17:25						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4a	Bottom	3	1	17:05	17:25	22.2	7.8	24.8	6.36	19.9	11.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4a	Bottom	3	2	17:05	17:25	22.3	7.8	24.8	6.32	20.2	11.7
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4	Surface	1	1	16:35	16:55	22.3	8.1	24.5	6.09	13.5	11.0
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4	Surface	1	2	16:35	16:55	22.4	8.1	24.6	6.06	13.6	11.8
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4	Middle	2	1	16:35	16:55						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4	Middle	2	2	16:35	16:55						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4	Bottom	3	1	16:35	16:55	22.5	8.1	24.6	6.11	17.7	13.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	SR4	Bottom	3	2	16:35	16:55	22.5	8.1	24.6	6.07	17.9	11.3
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS8	Surface	1	1	16:05	16:25	22.4	8.1	24.5	6.14	10.9	9.3
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS8	Surface	1	2	16:05	16:25	22.4	8.1	24.4	6.11	10.8	10.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS8	Middle	2	1	16:05	16:25						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS8	Middle	2	2	16:05	16:25						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS8	Bottom	3	1	16:05	16:25	22.4	8.1	24.5	6.09	15.8	11.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS8	Bottom	3	2	16:05	16:25	22.5	8.1	24.6	6.05	15.7	12.0
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)16	Surface	1	1	15:35	15:55	22.4	8.1	24.4	6.05	7.8	15.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)16	Surface	1	2	15:35	15:55	22.5	8.1	24.5	6.07	7.8	15.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)16	Middle	2	1	15:35	15:55	22.5	8.1	24.5	6.02	6.1	14.7
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)16	Middle	2	2	15:35	15:55	22.4	8.1	24.6	5.99	6.2	14.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)16	Bottom	3	1	15:35	15:55	22.6	8.1	24.6	6.03	6.7	21.7
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)16	Bottom	3	2	15:35	15:55	22.6	8.1	24.7	6.06	6.7	21.1
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)9	Surface	1	1	15:05	15:25	22.7	8.1	24.5	6.03	11.9	8.2
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)9	Surface	1	2	15:05	15:25	22.7	8.1	24.4	6.06	11.8	8.3
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)9	Middle	2	1	15:05	15:25						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)9	Middle	2	2	15:05	15:25						
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)9	Bottom	3	1	15:05	15:25	22.6	8.1	24.6	5.95	13.1	12.5
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	IS(Mf)9	Bottom	3	2	15:05	15:25	22.6	8.1	24.7	5.98	13.3	12.9
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)5	Surface	1	1	17:35	17:50	22.7	7.6	22.8	6.45	6.7	7.5
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)5	Surface	1	2	17:35	17:50	22.6	7.6	22.9	6.48	6.7	8.4
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)5	Middle	2	1	17:35	17:50	22.6	7.6	23.4	6.42	6.9	9.0
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)5	Middle	2	2	17:35	17:50	22.5	7.6	23.3	6.38	7.0	8.6
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)5	Bottom	3	1	17:35	17:50	22.4	7.7	23.6	6.43	6.0	8.3
TM-CLK Southern	HY/2012/07	2013-11-23	Mid-Ebb	CS(Mf)5	Bottom	3	2	17:35	17:50	22.3	7.7	23.7	6.46	6.1	9.0

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)5	Surface	1	1	12:21	12:45	22.2	7.6	23.3	6.89	4.7	5.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)5	Surface	1	2	12:21	12:45	22.2	7.6	23.3	6.86	4.7	5.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)5	Middle	2	1	12:21	12:45	22.3	7.6	23.9	6.57	4.4	5.8
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)5	Middle	2	2	12:21	12:45	22.3	7.6	23.9	6.55	4.3	6.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)5	Bottom	3	1	12:21	12:45	22.5	7.6	24.0	6.35	5.4	8.8
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)5	Bottom	3	2	12:21	12:45	22.5	7.6	24.0	6.31	5.3	7.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4a	Surface	1	1	12:55	13:09	22.2	7.6	23.3	6.84	5.5	6.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4a	Surface	1	2	12:55	13:09	22.2	7.6	23.3	6.80	5.4	5.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4a	Middle	2	1	12:55	13:09						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4a	Middle	2	2	12:55	13:09						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4a	Bottom	3	1	12:55	13:09	22.3	7.7	23.5	6.60	14.6	11.2
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4a	Bottom	3	2	12:55	13:09	22.3	7.6	23.5	6.57	14.6	11.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4	Surface	1	1	13:20	13:36	22.1	7.7	23.3	6.86	6.0	8.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4	Surface	1	2	13:20	13:36	22.1	7.7	23.3	6.83	6.1	8.6
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4	Middle	2	1	13:20	13:36						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4	Middle	2	2	13:20	13:36						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4	Bottom	3	1	13:20	13:36	22.6	7.7	23.8	6.13	14.9	16.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	SR4	Bottom	3	2	13:20	13:36	22.6	7.7	23.8	6.16	14.9	16.6
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS8	Surface	1	1	13:46	14:03	22.1	7.7	23.3	6.83	6.0	6.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS8	Surface	1	2	13:46	14:03	22.1	7.7	23.3	6.79	5.9	4.5
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS8	Middle	2	1	13:46	14:03						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS8	Middle	2	2	13:46	14:03						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS8	Bottom	3	1	13:46	14:03	22.4	7.7	23.6	6.42	12.7	12.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS8	Bottom	3	2	13:46	14:03	22.4	7.7	23.6	6.39	12.7	13.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)16	Surface	1	1	14:16	14:36	22.2	7.7	23.3	6.77	10.6	12.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)16	Surface	1	2	14:16	14:36	22.2	7.7	23.3	6.75	10.6	11.9
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)16	Middle	2	1	14:16	14:36	22.4	7.7	23.8	6.30	13.2	14.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)16	Middle	2	2	14:16	14:36	22.4	7.7	23.7	6.25	13.2	13.8
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)16	Bottom	3	1	14:16	14:36	22.5	7.7	23.9	6.14	17.5	18.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)16	Bottom	3	2	14:16	14:36	22.5	7.7	23.9	6.17	17.6	16.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)9	Surface	1	1	14:46	15:04	22.2	7.7	23.3	6.59	6.6	6.6
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)9	Surface	1	2	14:46	15:04	22.2	7.7	23.3	6.57	6.5	6.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)9	Middle	2	1	14:46	15:04						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)9	Middle	2	2	14:46	15:04						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)9	Bottom	3	1	14:46	15:04	22.5	7.7	23.7	6.32	13.9	13.2
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	IS(Mf)9	Bottom	3	2	14:46	15:04	22.5	7.7	23.7	6.29	13.8	13.8
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)3	Surface	1	1	15:19	15:51	22.2	7.7	23.7	6.64	4.5	4.6
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)3	Surface	1	2	15:19	15:51	22.2	7.7	23.7	6.61	4.6	3.6
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)3	Middle	2	1	15:19	15:51	22.1	7.7	24.0	6.40	4.6	4.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)3	Middle	2	2	15:19	15:51	22.1	7.7	24.0	6.36	4.6	4.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)3	Bottom	3	1	15:19	15:51	22.5	7.7	24.8	6.02	5.3	6.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Flood	CS(Mf)3	Bottom	3	2	15:19	15:51	22.4	7.7	24.8	6.05	5.4	5.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)3	Surface	1	1	18:26	18:50	22.3	7.7	23.7	6.67	5.1	4.6
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)3	Surface	1	2	18:26	18:50	22.2	7.7	23.7	6.61	5.0	5.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)3	Middle	2	1	18:26	18:50	22.1	7.8	24.1	6.31	5.4	4.2
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)3	Middle	2	2	18:26	18:50	22.1	7.8	24.0	6.34	5.5	5.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)3	Bottom	3	1	18:26	18:50	22.4	7.8	24.7	6.04	5.2	7.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)3	Bottom	3	2	18:26	18:50	22.4	7.7	24.7	6.02	5.3	8.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4a	Surface	1	1	20:57	21:21	22.2	7.7	23.4	6.63	6.3	7.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4a	Surface	1	2	20:57	21:21	22.1	7.7	23.3	6.67	6.7	9.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4a	Middle	2	1	20:57	21:21						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4a	Middle	2	2	20:57	21:21						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4a	Bottom	3	1	20:57	21:21	22.4	7.7	23.6	6.47	13.4	46.8
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4a	Bottom	3	2	20:57	21:21	22.4	7.7	23.7	6.49	13.0	43.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4	Surface	1	1	20:22	20:46	22.2	7.6	23.3	6.72	6.0	11.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4	Surface	1	2	20:22	20:46	22.1	7.6	23.2	6.78	6.0	13.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4	Middle	2	1	20:22	20:46						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4	Middle	2	2	20:22	20:46						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4	Bottom	3	1	20:22	20:46	22.5	7.7	23.7	6.23	17.0	19.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	SR4	Bottom	3	2	20:22	20:46	22.4	7.7	27.8	6.20	16.6	17.5
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS8	Surface	1	1	19:53	20:17	22.2	7.7	23.3	6.82	6.0	8.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS8	Surface	1	2	19:53	20:17	22.2	7.7	23.4	6.81	6.1	7.9
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS8	Middle	2	1	19:53	20:17						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS8	Middle	2	2	19:53	20:17						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS8	Bottom	3	1	19:53	20:17	22.4	7.7	23.6	6.34	13.9	14.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS8	Bottom	3	2	19:53	20:17	22.4	7.7	23.6	6.36	14.1	15.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)16	Surface	1	1	19:24	19:48	22.3	7.7	23.4	6.71	9.2	11.5
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)16	Surface	1	2	19:24	19:48	22.2	7.7	23.4	6.73	9.3	12.2
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)16	Middle	2	1	19:24	19:48	22.2	7.7	23.5	6.59	12.6	13.3
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)16	Middle	2	2	19:24	19:48	22.3	7.8	23.6	6.62	12.9	13.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)16	Bottom	3	1	19:24	19:48	22.5	7.8	23.7	6.07	18.6	31.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)16	Bottom	3	2	19:24	19:48	22.4	7.8	23.8	6.10	19.0	30.7
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)9	Surface	1	1	18:55	19:19	22.2	7.7	23.8	6.50	5.4	4.8
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)9	Surface	1	2	18:55	19:19	22.3	7.7	23.7	6.58	5.4	5.1
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)9	Middle	2	1	18:55	19:19						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)9	Middle	2	2	18:55	19:19						
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)9	Bottom	3	1	18:55	19:19	22.4	7.9	24.8	6.27	15.8	6.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	IS(Mf)9	Bottom	3	2	18:55	19:19	22.4	7.9	24.7	6.30	16.1	7.5
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)5	Surface	1	1	21:32	21:56	22.3	7.6	23.4	6.59	4.9	4.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)5	Surface	1	2	21:32	21:56	22.3	7.6	23.5	6.61	4.9	4.4
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)5	Middle	2	1	21:32	21:56	22.2	7.7	23.5	6.54	5.6	4.9
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)5	Middle	2	2	21:32	21:56	22.3	7.7	23.6	6.50	5.7	5.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)5	Bottom	3	1	21:32	21:56	22.4	7.7	23.8	6.11	6.0	7.0
TM-CLK Southern	HY/2012/07	2013-11-26	Mid-Ebb	CS(Mf)5	Bottom	3	2	21:32	21:56	22.5	7.7	23.8	6.13	6.1	6.4

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)5	Surface	1	1	13:34	13:54	21.7	7.4	24.7	6.42	4.9	5.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)5	Surface	1	2	13:34	13:54	21.6	7.4	24.6	6.43	4.9	4.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)5	Middle	2	1	13:34	13:54	21.5	7.6	24.8	6.42	5.6	5.8
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)5	Middle	2	2	13:34	13:54	21.5	7.6	24.9	6.48	5.8	5.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)5	Bottom	3	1	13:34	13:54	21.7	7.5	24.8	6.41	5.6	5.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)5	Bottom	3	2	13:34	13:54	21.7	7.6	24.8	6.39	5.6	7.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4a	Surface	1	1	14:05	14:25	21.6	7.8	24.3	6.20	5.2	6.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4a	Surface	1	2	14:05	14:25	21.6	7.8	24.4	6.24	5.2	7.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4a	Middle	2	1	14:05	14:25						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4a	Middle	2	2	14:05	14:25						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4a	Bottom	3	1	14:05	14:25	21.7	7.6	24.8	6.17	7.9	8.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4a	Bottom	3	2	14:05	14:25	21.8	7.6	24.7	6.19	8.0	7.9
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4	Surface	1	1	14:35	14:55	21.5	7.4	24.7	6.93	5.9	4.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4	Surface	1	2	14:35	14:55	21.6	7.3	24.9	6.91	5.9	4.3
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4	Middle	2	1	14:35	14:55						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4	Middle	2	2	14:35	14:55						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4	Bottom	3	1	14:35	14:55	21.5	7.6	24.8	6.63	5.4	5.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	SR4	Bottom	3	2	14:35	14:55	21.5	7.6	24.7	6.71	4.9	6.5
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS8	Surface	1	1	15:05	15:25	21.6	7.6	24.7	6.76	7.3	6.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS8	Surface	1	2	15:05	15:25	21.6	7.6	24.6	6.82	7.4	7.8
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS8	Middle	2	1	15:05	15:25						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS8	Middle	2	2	15:05	15:25						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS8	Bottom	3	1	15:05	15:25	21.6	7.7	24.8	6.50	5.1	7.5
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS8	Bottom	3	2	15:05	15:25	21.6	7.7	24.8	6.48	5.2	8.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)16	Surface	1	1	15:35	15:55	21.5	7.7	24.6	6.17	5.7	5.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)16	Surface	1	2	15:35	15:55	21.6	7.7	24.6	6.20	5.9	4.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)16	Middle	2	1	15:35	15:55	21.7	7.6	24.7	6.71	5.5	6.5
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)16	Middle	2	2	15:35	15:55	21.7	7.7	24.6	6.79	5.5	6.0
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)16	Bottom	3	1	15:35	15:55	21.7	7.8	24.7	6.38	5.5	8.0
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)16	Bottom	3	2	15:35	15:55	21.7	7.8	24.7	6.32	5.4	5.9
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)9	Surface	1	1	16:05	16:25	21.5	7.8	24.6	6.75	5.0	6.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)9	Surface	1	2	16:05	16:25	21.6	7.8	24.5	6.76	5.1	5.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)9	Middle	2	1	16:05	16:25						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)9	Middle	2	2	16:05	16:25						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)9	Bottom	3	1	16:05	16:25	21.7	7.9	24.7	6.52	7.9	8.0
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	IS(Mf)9	Bottom	3	2	16:05	16:25	21.7	7.9	24.6	6.58	7.9	8.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)3	Surface	1	1	16:35	17:04	21.5	7.7	24.7	6.83	5.2	4.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)3	Surface	1	2	16:35	17:04	21.6	7.8	24.6	6.87	5.3	6.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)3	Middle	2	1	16:35	17:04	21.7	7.7	24.7	6.28	5.2	4.8
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)3	Middle	2	2	16:35	17:04	21.8	7.8	24.8	6.30	5.2	5.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)3	Bottom	3	1	16:35	17:04	27.8	7.8	24.7	6.10	5.7	4.8
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Flood	CS(Mf)3	Bottom	3	2	16:35	17:04	27.8	7.8	24.7	6.19	5.8	4.5
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)3	Surface	1	1	07:28	07:40	21.6	7.6	24.6	6.62	4.4	4.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)3	Surface	1	2	07:28	07:40	21.7	7.7	24.5	6.56	4.4	6.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)3	Middle	2	1	07:28	07:40	21.7	7.8	24.6	6.25	4.3	5.9
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)3	Middle	2	2	07:28	07:40	21.8	7.8	24.7	6.29	4.4	5.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)3	Bottom	3	1	07:28	07:40	21.8	7.7	24.7	6.09	4.8	5.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)3	Bottom	3	2	07:28	07:40	21.8	7.7	24.8	6.07	4.8	5.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4a	Surface	1	1	09:18	09:30	21.4	7.7	24.5	6.58	5.3	6.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4a	Surface	1	2	09:18	09:30	21.5	7.6	24.4	6.62	5.4	8.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4a	Middle	2	1	09:18	09:30						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4a	Middle	2	2	09:18	09:30						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4a	Bottom	3	1	09:18	09:30	21.5	7.7	24.6	6.42	8.1	7.5
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4a	Bottom	3	2	09:18	09:30	21.6	7.7	24.6	6.44	8.2	9.3
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4	Surface	1	1	08:48	09:08	21.6	7.6	24.4	6.81	0.1	8.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4	Surface	1	2	08:48	09:08	21.5	7.6	24.4	6.78	6.1	6.8
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4	Middle	2	1	08:48	09:08						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4	Middle	2	2	08:48	09:08						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4	Bottom	3	1	08:48	09:08	21.6	7.6	24.5	6.18	5.7	9.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	SR4	Bottom	3	2	08:48	09:08	21.7	7.6	24.6	6.21	5.8	9.9
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS8	Surface	1	1	08:30	08:40	21.6	7.6	24.4	6.78	7.4	5.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS8	Surface	1	2	08:30	08:40	21.6	7.6	24.5	6.74	7.5	5.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS8	Middle	2	1	08:30	08:40						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS8	Middle	2	2	08:30	08:40						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS8	Bottom	3	1	08:30	08:40	21.7	7.7	24.7	6.37	5.2	8.3
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS8	Bottom	3	2	08:30	08:40	21.7	7.6	24.6	6.34	5.3	6.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)16	Surface	1	1	08:08	08:24	21.6	7.6	24.5	6.72	5.7	6.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)16	Surface	1	2	08:08	08:24	21.7	7.6	24.5	6.70	5.1	6.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)16	Middle	2	1	08:08	08:24	21.8	7.7	24.6	6.35	4.6	3.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)16	Middle	2	2	08:08	08:24	21.7	7.7	24.7	6.30	5.0	3.0
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)16	Bottom	3	1	08:08	08:24	21.8	7.7	24.8	6.19	4.6	7.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)16	Bottom	3	2	08:08	08:24	21.9	7.7	24.7	6.22	4.6	6.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)9	Surface	1	1	07:48	08:00	21.5	7.7	24.5	6.45	5.6	8.5
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)9	Surface	1	2	07:48	08:00	21.6	7.7	24.4	6.53	5.7	7.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)9	Middle	2	1	07:48	08:00						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)9	Middle	2	2	07:48	08:00						
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)9	Bottom	3	1	07:48	08:00	21.7	7.9	24.6	6.22	8.0	7.4
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	IS(Mf)9	Bottom	3	2	07:48	08:00	21.7	7.9	24.6	6.25	8.1	8.6
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)5	Surface	1	1	09:53	10:18	21.5	7.6	24.4	6.54	3.9	5.1
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)5	Surface	1	2	09:53	10:18	21.4	7.6	24.5	6.56	3.9	4.9
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)5	Middle	2	1	09:53	10:18	21.6	7.6	24.6	6.49	4.7	3.0
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)5	Middle	2	2	09:53	10:18	21.6	7.6	24.5	6.45	4.7	2.7
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)5	Bottom	3	1	09:53	10:18	21.6	7.7	24.7	6.16	4.6	4.2
TM-CLK Southern	HY/2012/07	2013-11-28	Mid-Ebb	CS(Mf)5	Bottom	3	2	09:53	10:18	21.7	7.7	24.7	6.18	4.6	5.9

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Level	Lev_Cod	Replicate	Start Time	End Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)5	Surface	1	1	14:45	15:05	20.8	8.0	25.8	6.51	9.1	7.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)5	Surface	1	2	14:45	15:05	20.7	8.0	25.7	6.52	9.1	7.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)5	Middle	2	1	14:45	15:05	20.8	8.0	25.9	6.54	9.3	8.3
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)5	Middle	2	2	14:45	15:05	20.9	8.1	25.8	6.57	9.2	8.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)5	Bottom	3	1	14:45	15:05	21.0	8.2	26.0	6.50	9.9	8.4
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)5	Bottom	3	2	14:45	15:05	21.1	8.2	26.1	6.48	9.9	9.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4a	Surface	1	1	15:15	15:35	20.7	8.0	25.6	6.29	10.5	9.3
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4a	Surface	1	2	15:15	15:35	20.8	8.0	25.7	6.33	10.9	8.4
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4a	Middle	2	1	15:15	15:35						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4a	Middle	2	2	15:15	15:35						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4a	Bottom	3	1	15:15	15:35	20.9	8.2	25.9	6.26	12.2	9.9
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4a	Bottom	3	2	15:15	15:35	20.8	8.2	26.0	6.28	12.4	9.4
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4	Surface	1	1	15:45	16:05	20.9	8.0	25.7	6.90	6.7	6.9
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4	Surface	1	2	15:45	16:05	21.0	8.1	25.7	6.89	6.8	6.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4	Middle	2	1	15:45	16:05						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4	Middle	2	2	15:45	16:05						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4	Bottom	3	1	15:45	16:05	21.0	8.3	25.8	6.95	7.5	8.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	SR4	Bottom	3	2	15:45	16:05	21.1	8.3	25.7	6.98	7.2	8.7
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS8	Surface	1	1	16:15	16:35	20.9	7.9	25.6	6.85	12.4	8.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS8	Surface	1	2	16:15	16:35	20.8	8.0	25.7	6.91	12.5	8.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS8	Middle	2	1	16:15	16:35						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS8	Middle	2	2	16:15	16:35						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS8	Bottom	3	1	16:15	16:35	21.0	8.2	25.9	6.59	10.5	9.7
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS8	Bottom	3	2	16:15	16:35	21.1	8.2	25.8	6.57	10.8	10.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)16	Surface	1	1	16:45	17:05	20.8	8.0	25.7	6.26	9.9	6.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)16	Surface	1	2	16:45	17:05	20.9	8.1	25.6	6.28	9.8	6.3
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)16	Middle	2	1	16:45	17:05	20.9	8.1	25.8	6.80	9.9	7.6
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)16	Middle	2	2	16:45	17:05	20.8	8.1	25.8	6.88	10.0	8.6
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)16	Bottom	3	1	16:45	17:05	21.0	8.2	25.9	6.47	9.3	8.7
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)16	Bottom	3	2	16:45	17:05	21.1	8.2	26.0	6.41	9.3	8.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)9	Surface	1	1	17:15	17:35	20.8	8.0	25.8	6.84	10.1	7.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)9	Surface	1	2	17:15	17:35	20.7	8.0	25.9	6.86	10.0	8.5
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)9	Middle	2	1	17:15	17:35						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)9	Middle	2	2	17:15	17:35						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)9	Bottom	3	1	17:15	17:35	20.9	8.1	26.1	6.61	9.8	8.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	IS(Mf)9	Bottom	3	2	17:15	17:35	21.0	8.1	26.0	6.67	9.8	8.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)3	Surface	1	1	17:55	18:15	20.9	8.0	25.8	6.92	10.9	7.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)3	Surface	1	2	17:55	18:15	20.8	8.0	25.7	6.96	11.1	8.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)3	Middle	2	1	17:55	18:15	20.9	8.1	25.8	6.37	8.7	6.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)3	Middle	2	2	17:55	18:15	21.0	8.1	25.9	6.39	8.7	7.5
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)3	Bottom	3	1	17:55	18:15	21.1	8.2	26.1	6.21	8.5	7.4
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Flood	CS(Mf)3	Bottom	3	2	17:55	18:15	21.0	8.1	26.2	6.24	8.5	9.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)3	Surface	1	1	08:57	09:17	20.9	8.0	25.8	6.76	11.4	7.9
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)3	Surface	1	2	08:57	09:17	20.9	8.0	25.9	6.78	11.3	8.3
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)3	Middle	2	1	08:57	09:17	21.0	8.0	26.0	6.21	8.8	7.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)3	Middle	2	2	08:57	09:17	20.9	8.0	26.1	6.22	8.8	8.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)3	Bottom	3	1	08:57	09:17	21.0	8.1	26.2	6.09	8.6	9.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)3	Bottom	3	2	08:57	09:17	21.1	8.2	26.1	6.10	8.6	7.5
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4a	Surface	1	1	11:30	11:55	20.6	8.0	25.7	6.11	11.1	10.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4a	Surface	1	2	11:30	11:55	20.7	8.0	25.8	6.10	11.2	10.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4a	Middle	2	1	11:30	11:55						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4a	Middle	2	2	11:30	11:55						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4a	Bottom	3	1	11:30	11:55	20.8	8.1	25.9	6.15	12.9	11.5
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4a	Bottom	3	2	11:30	11:55	20.9	8.1	26.1	6.17	13.0	12.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4	Surface	1	1	10:57	11:17	20.8	7.9	25.8	6.81	6.8	5.7
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4	Surface	1	2	10:57	11:17	20.9	8.1	26.1	6.80	6.9	5.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4	Middle	2	1	10:57	11:17						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4	Middle	2	2	10:57	11:17						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4	Bottom	3	1	10:57	11:17	21.0	8.3	26.3	6.86	7.6	6.4
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	SR4	Bottom	3	2	10:57	11:17	21.0	8.3	26.4	6.89	7.1	6.3
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS8	Surface	1	1	10:27	10:47	20.9	7.9	25.5	6.74	13.1	10.9
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS8	Surface	1	2	10:27	10:47	21.0	7.9	25.6	6.76	13.2	9.9
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS8	Middle	2	1	10:27	10:47						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS8	Middle	2	2	10:27	10:47						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS8	Bottom	3	1	10:27	10:47	21.1	8.2	25.8	6.47	11.5	11.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS8	Bottom	3	2	10:27	10:47	21.1	8.2	25.8	6.49	11.5	11.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)16	Surface	1	1	09:57	10:17	20.7	8.0	25.5	6.11	10.0	9.5
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)16	Surface	1	2	09:57	10:17	20.8	8.0	25.6	6.10	10.0	9.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)16	Middle	2	1	09:57	10:17	20.8	8.0	25.8	6.74	10.0	10.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)16	Middle	2	2	09:57	10:17	20.9	8.0	25.9	6.73	10.1	10.6
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)16	Bottom	3	1	09:57	10:17	21.0	8.2	26.0	6.24	9.4	11.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)16	Bottom	3	2	09:57	10:17	21.0	8.2	26.1	6.21	9.4	11.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)9	Surface	1	1	09:27	09:47	20.8	8.0	25.6	6.61	10.9	9.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)9	Surface	1	2	09:27	09:47	20.8	8.0	25.7	6.63	10.8	9.1
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)9	Middle	2	1	09:27	09:47						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)9	Middle	2	2	09:27	09:47						
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)9	Bottom	3	1	09:27	09:47	20.9	8.1	25.9	6.45	9.9	9.2
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	IS(Mf)9	Bottom	3	2	09:27	09:47	21.0	8.2	26.0	6.47	9.9	9.0
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)5	Surface	1	1	12:05	12:25	20.7	8.0	25.9	6.41	9.2	6.7
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)5	Surface	1	2	12:05	12:25	20.6	8.0	25.8	6.42	9.2	7.4
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)5	Middle	2	1	12:05	12:25	20.8	8.0	25.9	6.47	9.4	7.8
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)5	Middle	2	2	12:05	12:25	20.8	8.0	26.0	6.49	9.4	8.7
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)5	Bottom	3	1	12:05	12:25	21.1	8.2	25.9	6.41	10.1	10.9
TM-CLK Southern	HY/2012/07	2013-11-30	Mid-Ebb	CS(Mf)5	Bottom	3	2	12:05	12:25	21.0	8.1	26.1	6.40	10.3	9.7

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 31-10-2013 Weather Condition : Fine Ambient Temperature (°C) : 25 Sea Conditions: [✓ Calm] / Small Wave / Great Wave Tide Mode: **Flood Tide** Direction of water current: **From CS(Mf)5 to CS(Mf)3**

Station: CS(Mf)5 (Upstream Control Station) Duration: 15:06 to 15:25 Depth of Water (meter): 9.8 Wet bulb calibration for DO meter: 7.97 mg/L (99.0 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.9			8.8					
Temp. (°C)	:	25.1	25.0	Ave.: 25.1	25.4	25.4	Ave.: 25.4	25.4	25.3	Ave.: 25.4			
pH	:	6.77	6.75	Ave.: 6.76	6.67	6.69	Ave.: 6.68	6.69	6.68	Ave.: 6.69			
Salinity (ppt)	:	24.5	24.6	Ave.: 24.6	25.5	25.4	Ave.: 25.5	25.6	25.7	Ave.: 25.7			
D.O. (mg/L)	:	7.79	7.81	Ave.: 7.80	6.47	6.49	Ave.: 6.48	6.29	6.31	Ave.: 6.30			
D.O.S. (%)	:	108.2	108.5	Ave.: 108.4	89.8	90.1	Ave.: 90.0	87.3	87.6	Ave.: 87.5		120%	130%
Turbidity (NTU)	:	2.20	2.11	Ave.: 2.16	2.76	183	Ave.: 2.30	2.61	2.77	Ave.: 2.69	2.38	2.86	3.09
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: ~~IS(Mf)16~~ SR4a Duration: 15:35 to 15:54 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 79.95 mg/L (98.6 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.0	25.0	Ave.: 25.0										24.9	25.0	Ave.: 25.0										
pH	:	6.62	6.60	Ave.: 6.61										6.64	6.66	Ave.: 6.65										
Salinity (ppt)	:	24.6	24.5	Ave.: 24.6						Ave.:				25.0	24.9	Ave.: 25.0										
D.O. (mg/L)	:	8.02	8.04	Ave.: 8.03	5.0	4.2	✓			Ave.:	5.0	4.2		7.89	7.90	Ave.: 7.90	4.7	2.0	✓							
D.O.S. (%)	:	111.4	111.7	Ave.: 111.6						Ave.:				109.6	109.7	Ave.: 109.7										
Turbidity (NTU)	:	2.70	2.54	Ave.: 2.62						Ave.:				5.41	3.57	Ave.: 4.49				3.56	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: ~~IS(Mf)9~~ SR4 Duration: 16:00 to 16:18 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 79.3 mg/L (98.4 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	25.1	25.2	Ave.: 25.2										25.1	25.1	Ave.: 25.1										
pH	:	6.62	6.64	Ave.: 6.63										6.53	6.51	Ave.: 6.52										
Salinity (ppt)	:	24.6	24.7	Ave.: 24.6						Ave.:				24.7	24.8	Ave.: 24.8										
D.O. (mg/L)	:	8.11	8.13	Ave.: 8.12	5.0	4.2	✓			Ave.:	5.0	4.2		7.64	7.66	Ave.: 7.65	4.7	2.0	✓							
D.O.S. (%)	:	112.6	112.8	Ave.: 112.7						Ave.:				106.1	106.4	Ave.: 106.3										
Turbidity (NTU)	:	2.65	3.12	Ave.: 2.89						Ave.:				5.42	6.70	Ave.: 6.06				4.47	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 16:24 to 16:42 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 79.2 mg/L (98.4 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	25.2	25.2	Ave.: 25.2										25.0	25.1	Ave.: 25.1										
pH	:	6.53	6.55	Ave.: 6.54										6.55	6.57	Ave.: 6.56										
Salinity (ppt)	:	24.6	24.5	Ave.: 24.6						Ave.:				24.8	24.8	Ave.: 24.8										
D.O. (mg/L)	:	8.29	8.31	Ave.: 8.30	5.0	4.2	✓			Ave.:	5.0	4.2		8.09	8.11	Ave.: 8.10	4.7	2.0	✓							
D.O.S. (%)	:	115.1	115.3	Ave.: 115.2						Ave.:				112.4	112.6	Ave.: 112.5										
Turbidity (NTU)	:	2.37	3.13	Ave.: 2.75						Ave.:				4.99	3.10	Ave.: 4.05				3.40	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: ~~SR4~~ IS(Mf)16 Duration: 16:50 to 17:09 Depth of Water (meter): 7.0 Wet bulb calibration for DO meter: 79.1 mg/L (98.3 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.5						6.0												
Temp. (°C)	:	25.1	25.2	Ave.: 25.2				25.1	25.0	25.1				25.0	25.0	Ave.: 25.0										
pH	:	6.63	6.64	Ave.: 6.64				6.67	6.69	6.68				6.59	6.61	Ave.: 6.60										
Salinity (ppt)	:	24.7	24.7	Ave.: 24.7				24.9	25.0	Ave.: 25.0				25.0	24.9	Ave.: 25.0										
D.O. (mg/L)	:	8.25	8.27	Ave.: 8.26	5.0	4.2	✓	8.11	8.12	Ave.: 8.12	5.0	4.2	✓	7.74	7.77	Ave.: 7.76	4.7	2.0	✓							
D.O.S. (%)	:	114.7	114.9	Ave.: 114.8				112.8	112.9	Ave.: 112.9				107.6	108.0	Ave.: 107.8										
Turbidity (NTU)	:	3.53	3.43	Ave.: 3.48				3.89	4.06	Ave.: 3.98				6.03	6.30	Ave.: 6.17				4.54	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: ~~SR4a~~ IS(Mf)9 Duration: 17:17 to 17:40 Depth of Water (meter): 4.2 Wet bulb calibration for DO meter: 8.05 mg/L (99.9 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.2												
Temp. (°C)	:	25.4	25.4	Ave.: 25.4										25.3	25.4	Ave.: 25.4										
pH	:	6.74	6.76	Ave.: 6.75										6.69	6.67	Ave.: 6.68										
Salinity (ppt)	:	24.8	24.9	Ave.: 24.9						Ave.:				25.0	25.1	Ave.: 25.1										
D.O. (mg/L)	:	8.55	8.57	Ave.: 8.56	5.0	4.2	✓			Ave.:	5.0	4.2		8.42	8.44	Ave.: 8.43	4.7	2.0	✓							
D.O.S. (%)	:	118.7	119.0	Ave.: 118.9						Ave.:				116.7	117.1	Ave.: 116.9										
Turbidity (NTU)	:	11.6	9.48	Ave.: 10.5						Ave.:				10.9	13.1	Ave.: 12.0				11.27	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 17:55 to 18:36 Depth of Water (meter): 8.7 Wet bulb calibration for DO meter: 8.04 mg/L (99.8 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.4			7.7				
Temp. (°C)	:	25.6	25.6	Ave.: 25.6	25.5	25.4	Ave.: 25.5	25.3	25.2	Ave.: 25.3		
pH	:	6.64	6.62	Ave.: 6.63	6.61	6.63	Ave.: 6.62	6.56	6.58	Ave.: 6.57		
Salinity (ppt)	:	22.5	22.4	Ave.: 22.5	23.3	23.3	Ave.: 23.3	23.7	23.8	Ave.: 23.8		
D.O. (mg/L)	:	8.79	8.81	Ave.: 8.80	8.84	8.86	Ave.: 8.85	8.74	8.76	Ave.: 8.75		
D.O.S. (%)	:	122.2	122.5	Ave.: 122.4	123.0	123.2	Ave.: 123.1	121.6	121.9	Ave.: 121.8		
Turbidity (NTU)	:	2.97	2.12	Ave.: 2.55	2.83	3.07	Ave.: 2.95	2.50	2.71	Ave.: 2.61	2.70	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows: ____

Any notable pollutant by others near monitoring site ? ~~Y~~/N If yes, elaboration is as follows : ____

Field Operator	Tong Chung Hang	Checked by		Laboratory Staff		Checked by	
Date	31-10-2013	Date	31/10/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date 31.10.13 Weather Condition : Fine Ambient Temperature (°C) : 24°C Sea Conditions: [✓ Calm] / Small Wave / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 11:50 to 12:12 Depth of Water (meter): 9.6 Wet bulb calibration for DO meter: 8.45 mg/L (99.7 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.8			8.6				
Temp. (°C)	:	25.0	24.9	Ave.: 25.0	25.3	25.4	Ave.: 25.4	25.4	25.5	Ave.: 25.5		
pH	:	6.68	6.71	Ave.: 6.70	6.63	6.64	Ave.: 6.64	6.72	6.73	Ave.: 6.73		
Salinity (ppt)	:	24.5	24.5	Ave.: 24.5	25.5	25.4	Ave.: 25.5	25.6	25.6	Ave.: 25.6		
D.O. (mg/L)	:	7.68	7.72	Ave.: 7.70	6.39	6.41	Ave.: 6.40	6.23	6.20	Ave.: 6.22		
D.O.S. (%)	:	106.6	107.3	Ave.: 107.0	88.7	89.0	Ave.: 88.9	86.5	86.1	Ave.: 86.3		
Turbidity (NTU)	:	4.53	4.75	Ave.: 4.64	5.24	6.32	Ave.: 5.78	7.34	6.86	Ave.: 7.10	5.84	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: ~~IS(Mf)16~~ SR4a Duration: 11:13 to 11:31 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.42 mg/L (99.5 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	25.0	Ave.: 25.0										
pH	:	6.74	6.70	Ave.: 6.72										6.59	6.62	Ave.: 6.61										
Salinity (ppt)	:	24.6	24.6	Ave.: 24.6						Ave.:				25.0	25.0	Ave.: 25.0										
D.O. (mg/L)	:	7.96	7.99	Ave.: 7.98	5.0	4.2	√			Ave.:	5.0	4.2		7.86	7.80	Ave.: 7.83	4.7	2.0	√							
D.O.S. (%)	:	110.6	111.0	Ave.: 110.8						Ave.:				109.2	108.3	Ave.: 108.8										
Turbidity (NTU)	:	5.53	5.67	Ave.: 5.60						Ave.:				5.87	5.95	Ave.: 5.91				5.76	√	27.5 and 120% of CS(Mf)3		47.0 and 130% of CS(Mf)3		
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: ~~IS(Mf9)~~ SR4 Duration: 10:48 to 11:06 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.38 mg/L (99.4 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	25.2	25.1	Ave.: 25.2										25.1	25.1	Ave.: 25.1										
pH	:	6.54	6.57	Ave.: 6.56										6.59	6.61	Ave.: 6.60										
Salinity (ppt)	:	24.7	24.7	Ave.: 24.7						Ave.:				24.8	24.8	Ave.: 24.8										
D.O. (mg/L)	:	8.04	8.07	Ave.: 8.06	5.0	4.2				Ave.:	5.0	4.2		7.56	7.60	Ave.: 7.58	4.7	2.0	✓							
D.O.S. (%)	:	111.6	112.1	Ave.: 111.9						Ave.:				105.1	105.6	Ave.: 105.4										
Turbidity (NTU)	:	4.73	4.56	Ave.: 4.65						Ave.:				11.8	12.4	Ave.: 12.1				8.38	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 10:23 to 10:40 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.43 mg/L (98.4 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	25.0	Ave.: 25.0										
pH	:	6.49	6.51	Ave.: 6.50										6.50	6.52	Ave.: 6.51										
Salinity (ppt)	:	24.5	24.6	Ave.: 24.6						Ave.:				24.9	24.8	Ave.: 24.9										
D.O. (mg/L)	:	8.23	8.25	Ave.: 8.24	5.0	4.2	✓			Ave.:	5.0	4.2		8.07	8.03	Ave.: 8.05	4.7	2.0	✓							
D.O.S. (%)	:	113.9	114.5	Ave.: 114.2						Ave.:				112.2	111.6	Ave.: 111.9										
Turbidity (NTU)	:	4.59	4.67	Ave.: 4.63						Ave.:				5.45	5.79	Ave.: 5.62				5.13	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: ~~SR4~~ IS(Mf16) Duration: 9:56 to 10:14 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.38 mg/L (99.7 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	25.1	25.2	Ave.: 25.2				25.1	25.0	25.1				25.0	25.0	Ave.: 25.0										
pH	:	6.54	6.58	Ave.: 6.56				6.61	6.60	6.61				6.64	6.63	Ave.: 6.64										
Salinity (ppt)	:	24.8	24.7	Ave.: 24.8				24.9	24.9	Ave.: 24.9				25.0	25.0	Ave.: 25.0										
D.O. (mg/L)	:	8.17	8.20	Ave.: 8.19	5.0	4.2	✓	8.01	8.04	Ave.: 8.03	5.0	4.2	✓	7.68	7.63	Ave.: 7.66	4.7	2.0	✓							
D.O.S. (%)	:	113.5	113.9	Ave.: 113.7				111.3	111.7	Ave.: 111.5				106.6	106.1	Ave.: 106.4										
Turbidity (NTU)	:	5.23	5.70	Ave.: 5.47				8.84	7.48	Ave.: 8.16				10.4	9.41	Ave.: 9.91				7.85	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: ~~SR1a~~ IS(Mf)9. Duration: 9:24 to 9:42 Depth of Water (meter): 4.0 Wet bulb calibration for DO meter: 8.34 mg/L (99.8 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.0												
Temp. (°C)	:	25.3	25.4	Ave.: 25.4										25.4	25.4	Ave.: 25.4										
pH	:	6.71	6.68	Ave.: 6.70										6.74	6.77	Ave.: 6.76										
Salinity (ppt)	:	24.9	24.8	Ave.: 24.9						Ave.:				24.9	25.0	Ave.: 25.0										
D.O. (mg/L)	:	8.45	8.41	Ave.: 8.43	5.0	4.2	✓			Ave.:	5.0	4.2		8.33	8.38	Ave.: 8.36	4.7	2.0	✓							
D.O.S. (%)	:	117.4	116.8	Ave.: 117.1						Ave.:				115.7	116.4	Ave.: 116.1										
Turbidity (NTU)	:	16.7	17.9	Ave.: 17.3						Ave.:				15.0	15.5	Ave.: 15.3				16.3	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 8:50 to 9:10 Depth of Water (meter): 8.4 Wet bulb calibration for DO meter: 8.35 mg/L (99.9 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.2			7.4					
Temp. (°C)	:	25.6	25.5	Ave.: 25.6	25.4	25.4	Ave.: 25.4	25.3	25.3	Ave.: 25.3			
pH	:	6.58	6.56	Ave.: 6.57	6.57	6.58	Ave.: 6.58	6.52	6.53	Ave.: 6.53			
Salinity (ppt)	:	22.4	22.5	Ave.: 22.5	23.3	23.2	Ave.: 23.3	23.8	23.8	Ave.: 23.8			
D.O. (mg/L)	:	8.71	8.68	Ave.: 8.70	8.80	8.77	Ave.: 8.79	8.70	8.66	Ave.: 8.68			
D.O.S. (%)	:	121.0	120.5	Ave.: 120.8	122.2	121.8	Ave.: 122.0	120.9	120.3	Ave.: 120.6		120%	130%
Turbidity (NTU)	:	3.35	3.41	Ave.: 3.38	3.43	3.65	Ave.: 3.54	3.37	3.32	Ave.: 3.35	3.42	4.1	4.45
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y [✓ N] If yes, elaboration is as follows: ____________

Any notable pollutant by others near monitoring site ? Y [✓ N] If yes, elaboration is as follows : ____________

Field Operator	K.M.Kwan	Checked by		Laboratory Staff		Checked by	
Date	30.10.2013	Date	31/10/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conaition)**

Sampling Date : 2-11-2013 Weather Condition : Fine Ambient Temperature (°C) : 25 Sea Conditions: [✓ Calm] / Small Wave / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 13:15 to 13:43 Depth of Water (meter): 9.5 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.8			8.5				
Temp. (°C)	:	25.2	25.1	Ave.: 25.2	25.4	25.3	Ave.: 25.4	25.4	25.4	Ave.: 25.4		
pH	:	6.81	6.82	Ave.: 6.82	6.72	6.70	Ave.: 6.71	6.64	6.62	Ave.: 6.63		
Salinity (ppt)	:	24.5	24.5	Ave.: 24.5	25.6	25.5	Ave.: 25.6	25.7	25.7	Ave.: 25.7		
D.O. (mg/L)	:	7.63	7.65	Ave.: 7.64	6.42	6.40	Ave.: 6.41	6.24	6.26	Ave.: 6.25		
D.O.S. (%)	:	105.8	106.0	Ave.: 105.9	89.1	88.8	Ave.: 89.0	86.7	87.0	Ave.: 86.9		
Turbidity (NTU)	:	5.89	5.77	Ave.: 5.83	6.01	6.48	Ave.: 6.25	7.41	6.78	Ave.: 7.20	6.42	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: ~~IS(Mf)16~~ SR4a Duration: 12:38 to 13:00 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.40 mg/L (99.8 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	25.1	25.0	Ave.: 25.1										25.0	24.9	Ave.: 25.0										
pH	:	6.64	6.66	Ave.: 6.65										6.69	6.71	Ave.: 6.70										
Salinity (ppt)	:	24.6	24.7	Ave.: 24.7						Ave.:				24.9	24.9	Ave.: 24.9										
D.O. (mg/L)	:	7.94	7.96	Ave.: 7.95	5.0	4.2	✓			Ave.:	5.0	4.2		7.73	7.75	Ave.: 7.74	4.7	2.0	✓							
D.O.S. (%)	:	110.1	110.4	Ave.: 110.3						Ave.:				107.3	107.6	Ave.: 107.5										
Turbidity (NTU)	:	602	5.61	Ave.: 5.82						Ave.:				7.84	8.91	Ave.: 8.38				7.10	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conaition)**

Station: ~~IS(Mf)9~~ SR4 Duration: 12:10 to 12:32 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.43 mg/L (99.6 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	25.2	25.2	Ave.: 25.2										25.1	25.0	Ave.: 25.1										
pH	:	6.69	6.71	Ave.: 6.70										6.47	6.49	Ave.: 6.48										
Salinity (ppt)	:	24.5	24.6	Ave.: 24.6						Ave.:				24.7	24.7	Ave.: 24.7										
D.O. (mg/L)	:	8.02	8.04	Ave.: 8.03	5.0	4.2	✓			Ave.:	5.0	4.2		7.59	7.57	Ave.: 7.58	4.7	2.0	✓							
D.O.S. (%)	:	111.2	111.4	Ave.: 111.3						Ave.:				105.3	105.0	Ave.: 105.2										
Turbidity (NTU)	:	5.81	5.07	Ave.: 5.44						Ave.:				5.81	6.70	Ave.: 6.26				5.85	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 11:42 to 12:04 Depth of Water (meter): 4.5 Wet bulb calibration for DO meter: 8.39 mg/L (99.9 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.5												
Temp. (°C)	:	25.1	25.2	Ave.: 25.2										25.1	25.1	Ave.: 25.1										
pH	:	6.49	6.47	Ave.: 6.48										6.62	6.64	Ave.: 6.63										
Salinity (ppt)	:	24.5	24.5	Ave.: 24.5						Ave.:				24.8	24.7	Ave.: 24.8										
D.O. (mg/L)	:	8.21	8.19	Ave.: 8.20	5.0	4.2	✓			Ave.:	5.0	4.2		8.02	8.00	Ave.: 8.01	4.7	2.0	✓							
D.O.S. (%)	:	113.8	113.5	Ave.: 113.7						Ave.:				111.2	111.0	Ave.: 111.1										
Turbidity (NTU)	:	5.32	5.14	Ave.: 5.23						Ave.:				5.50	5.93	Ave.: 5.72				5.47	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: ~~SR4~~ IS(Mf)16 Duration: 11:13 to 11:35 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.39 mg/L (99.9 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1				25.1	25.0	25.1				24.9	25.0	Ave.: 25.0										
pH	:	6.59	6.57	Ave.: 6.58				6.59	6.61	6.60				6.64	6.66	Ave.: 6.65										
Salinity (ppt)	:	24.7	24.6	Ave.: 24.7				24.9	24.9	Ave.: 24.9				24.9	25.0	Ave.: 25.0										
D.O. (mg/L)	:	8.16	8.14	Ave.: 8.15	5.0	4.2	✓	8.04	8.02	Ave.: 8.03	5.0	4.2		7.69	7.71	Ave.: 7.70	4.7	2.0	✓							
D.O.S. (%)	:	113.3	113.0	Ave.: 113.2				111.5	111.2	Ave.: 111.4				106.7	107.0	Ave.: 106.9										
Turbidity (NTU)	:	7.51	7.62	Ave.: 7.57				7.46	7.85	Ave.: 7.66				8.16	7.45	Ave.: 7.81				7.68	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: ~~SR4a~~ IS(Mf)9 Duration: 10:44 to 11:06 Depth of Water (meter): 4.1 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.1												
Temp. (°C)	:	25.5	25.4	Ave.: 25.5										25.3	25.3	Ave.: 25.3										
pH	:	6.69	6.71	Ave.: 6.70										6.77	6.79	Ave.: 6.18										
Salinity (ppt)	:	24.9	25.0	Ave.: 25.0						Ave.:				25.1	25.0	Ave.: 25.1										
D.O. (mg/L)	:	8.37	8.40	Ave.: 8.39	5.0	4.2	✓			Ave.:	5.0	4.2		8.29	8.31	Ave.: 8.30	4.7	2.0	✓							
D.O.S. (%)	:	116.6	117.0	Ave.: 116.8						Ave.:				115.2	115.5	Ave.: 115.4										
Turbidity (NTU)	:	8.52	8.55	Ave.: 8.54						Ave.:				8.68	8.69	Ave.: 8.69				8.61	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 10:13 to 10:35 Depth of Water (meter): 8.5 Wet bulb calibration for DO meter: 8.39 mg/L (99.4 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.3			7.5					
Temp. (°C)	:	25.5	25.6	Ave.: 25.6	25.4	25.4	Ave.: 25.4	25.3	25.2	Ave.: 25.3			
pH	:	6.54	6.57	Ave.: 6.56	6.66	6.64	Ave.: 6.65	6.59	6.61	Ave.: 6.60			
Salinity (ppt)	:	22.5	22.5	Ave.: 22.5	23.2	23.3	Ave.: 23.3	23.7	23.8	Ave.: 23.8			
D.O. (mg/L)	:	8.69	8.71	Ave.: 8.70	8.63	8.61	Ave.: 8.62	8.67	8.69	Ave.: 8.68			
D.O.S. (%)	:	119.7	119.9	Ave.: 119.8	118.7	118.5	Ave.: 118.6	119.6	119.4	Ave.: 119.7		120%	130%
Turbidity (NTU)	:	5.70	5.40	Ave.: 5.56	5.24	5.82	Ave.: 5.53	5.01	5.58	Ave.: 5.30	5.46	6.55	7.10
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ?~~Y~~/ N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ?~~Y~~/ N If yes, elaboration is as follows :

ld Operator	Tong Chung Hang	Checked by		Laboratory Staff		Checked by	
te	2-11-2013	Date	2/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 2.11.2013 Weather Condition : Fine Ambient Temperature (°C) : 25 Sea Conditions: Calm / ~~Small Wave~~ / ~~Great Wave~~ Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 16:04 to 16:24 Depth of Water (meter): 9.8 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.9			8.8					
Temp. (°C)	:	25.2	25.3	Ave.: 25.3	25.5	25.4	Ave.: 25.5	25.5	25.4	Ave.: 25.5			
pH	:	6.82	6.83	Ave.: 6.83	6.70	6.71	Ave.: 6.71	6.63	6.65	Ave.: 6.64			
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5	25.6	25.6	Ave.: 25.6	25.7	25.8	Ave.: 25.8			
D.O. (mg/L)	:	7.69	7.71	Ave.: 7.70	6.48	6.46	Ave.: 6.47	6.30	6.32	Ave.: 6.31			
D.O.S. (%)	:	106.7	107.0	Ave.: 106.9	90.0	89.7	Ave.: 89.9	87.6	87.9	Ave.: 87.8		120%	130%
Turbidity (NTU)	:	5.80	5.68	Ave.: 5.74	5.93	6.40	Ave.: 6.17	7.33	6.90	Ave.: 7.11	6.34	7.61	8.24
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: IS~~(Mf)~~16 SR4a Duration: 16:38 to 16:53 Depth of Water (meter): 54 Wet bulb calibration for DO meter: 8.60 mg/L (99.3 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	25.0	25.1	Ave.: 25.1										25.0	24.9	Ave.: 25.0										
pH	:	6.63	6.67	Ave.: 6.65										6.70	6.71	Ave.: 6.71										
Salinity (ppt)	:	24.7	24.8	Ave.: 24.8						Ave.:				24.8	24.9	Ave.: 24.9										
D.O. (mg/L)	:	7.99	8.01	Ave.: 8.00	5.0	4.2	✓			Ave.:	5.0	4.2		7.79	7.81	Ave.: 7.80	4.7	2.0	✓							
D.O.S. (%)	:	110.9	111.2	Ave.: 111.1						Ave.:				108.2	108.5	Ave.: 108.4										
Turbidity (NTU)	:	5.97	5.59	Ave.: 5.78						Ave.:				7.79	7.85	Ave.: 7.82				6.8	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: ~~IS(Mf)9~~ SR4 Duration: 17:08 to 17:28 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.43 mg/L (99.6 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	25.2	25.3	Ave.: 25.3										25.1	25.1	Ave.: 25.1										
pH	:	6.71	6.72	Ave.: 6.72										6.48	6.49	Ave.: 6.49										
Salinity (ppt)	:	24.6	24.7	Ave.: 24.7						Ave.:				24.7	24.8	Ave.: 24.8										
D.O. (mg/L)	:	8.08	8.10	Ave.: 8.09	5.0	4.2	✓			Ave.:	5.0	4.2		7.65	7.64	Ave.: 7.65	4.7	2.0	✓							
D.O.S. (%)	:	112.2	112.3	Ave.: 112.3						Ave.:				106.2	106.0	Ave.: 106.1										
Turbidity (NTU)	:	5.77	5.01	Ave.: 5.39						Ave.:				5.75	6.65	Ave.: 6.20				5.80	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 17:43 to 17:58 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.39 mg/L (99.9 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.3	25.2	Ave.: 25.3										25.0	25.1	Ave.: 25.1										
pH	:	6.51	6.49	Ave.: 6.50										6.63	6.65	Ave.: 6.64										
Salinity (ppt)	:	24.6	24.5	Ave.: 24.6						Ave.:				24.8	24.9	Ave.: 24.9										
D.O. (mg/L)	:	8.27	8.25	Ave.: 8.26	5.0	4.2	✓			Ave.:	5.0	4.2		8.08	8.05	Ave.: 8.07	4.7	2.0	✓							
D.O.S. (%)	:	114.7	114.4	Ave.: 114.6						Ave.:				112.0	111.7	Ave.: 111.9										
Turbidity (NTU)	:	5.28	5.11	Ave.: 5.20						Ave.:				5.49	5.81	Ave.: 5.65				5.42	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: ~~SR4~~ IS(Mf)16 Duration: 18:12 to 18:27 Depth of Water (meter): 7.2 Wet bulb calibration for DO meter: 8.39 mg/L (99.9 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0																								
Temp. (°C)	:	25.2	25.3	Ave.: 25.3				25.2	25.1	25.2				25.0	25.1	Ave.: 25.1										
pH	:	6.60	6.57	Ave.: 6.59				6.61	6.63	6.62				6.65	6.67	Ave.: 6.66										
Salinity (ppt)	:	24.6	24.7	Ave.: 24.7				24.9	24.8	Ave.: 24.9				25.0	25.1	Ave.: 25.1										
D.O. (mg/L)	:	8.22	8.20	Ave.: 8.21	5.0	4.2	✓	8.10	8.08	Ave.: 8.09	5.0	4.2	✓	7.75	7.77	Ave.: 7.76	4.7	2.0	✓							
D.O.S. (%)	:	114.2	114.0	Ave.: 114.1				112.4	112.2	Ave.: 112.3				107.6	108.0	Ave.: 107.8										
Turbidity (NTU)	:	7.44	7.59	Ave.: 7.52				7.40	7.81	Ave.: 7.61				5.73	6.66	Ave.: 6.20				7.11	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Conaition)**

Station: IS(Mf)9 ~~SR4a~~ Duration: 18:41 to 18:56 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.34 mg/L (99.8 %)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	25.6	25.5	Ave.: 25.6										25.4	25.3	Ave.: 25.4										
pH	:	6.70	6.72	Ave.: 6.71										6.78	6.79	Ave.: 6.79										
Salinity (ppt)	:	25.0	25.1	Ave.: 25.1						Ave.:				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	8.43	8.46	Ave.: 8.45	5.0	4.2	✓			Ave.:	5.0	4.2		8.35	8.37	Ave.: 8.36	4.7	2.0	✓							
D.O.S. (%)	:	117.5	117.9	Ave.: 117.7						Ave.:				116.1	116.4	Ave.: 116.3										
Turbidity (NTU)	:	8.49	8.51	Ave.: 8.50						Ave.:				8.66	8.60	Ave.: 8.63				8.57	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 19:11 to 19:34 Depth of Water (meter): 8.8 Wet bulb calibration for DO meter: 8.35 mg/L (99.5 %)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.4			7.8				
Temp. (°C)	:	25.6	25.7	Ave.: 25.7	25.5	25.4	Ave.: 25.5	25.4	25.3	Ave.: 25.4		
pH	:	6.56	6.59	Ave.: 6.58	6.67	6.66	Ave.: 6.67	6.60	6.59	Ave.: 6.60		
Salinity (ppt)	:	22.5	22.6	Ave.: 22.6	23.3	23.4	Ave.: 23.4	23.9	23.8	Ave.: 23.9		
D.O. (mg/L)	:	8.75	8.77	Ave.: 8.76	8.69	8.67	Ave.: 8.68	8.73	8.75	Ave.: 8.74		
D.O.S. (%)	:	120.5	120.9	Ave.: 120.7	120.0	119.4	Ave.: 119.7	120.5	120.8	Ave.: 120.7		
Turbidity (NTU)	:	5.70	5.35	Ave.: 5.53	5.19	5.74	Ave.: 5.47	4.99	5.51	Ave.: 5.25	5.41	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows: __________

Any notable pollutant by others near monitoring site ?~~Y~~/N If yes, elaboration is as follows : __________

Field Operator	Jacky Cheung	Checked by		Laboratory Staff		Checked by	
Date	2. 11. 2013	Date	2/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 5-11-2013 Weather Condition : cloudy Ambient Temperature (°C) : 24°C Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 15:20 to 15:48 Depth of Water (meter): 9.4 Wet bulb calibration for DO meter: 8.46 mg/L (99.7 %) (23.6 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.7			8.4				
Temp. (°C)	:	24.9	24.8	Ave.: 24.9	24.8	24.8	Ave.: 24.8	24.7	24.7	Ave.: 24.7		
pH	:	6.59	6.61	Ave.: 6.60	6.54	6.55	Ave.: 6.54	6.63	6.61	Ave.: 6.62		
Salinity (ppt)	:	24.2	24.3	Ave.: 24.3	24.7	24.6	Ave.: 24.7	25.1	25.2	Ave.: 25.2		
D.O. (mg/L)	:	6.83	6.78	Ave.: 6.81	6.73	6.71	Ave.: 6.72	6.56	6.60	Ave.: 6.58		
D.O.S. (%)	:	95.1	94.4	Ave.: 94.8	93.7	93.4	Ave.: 93.6	91.3	91.9	Ave.: 91.6		
Turbidity (NTU)	:	5.93	5.78	Ave.: 5.86	7.27	7.96	Ave.: 7.62	7.88	6.51	Ave.: 7.20	6.89	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 14:45 to 15:03 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.45 mg/L (99.5 %) (23.7 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION	LIMIT	REMARK
Depth (meter)	:	1.0												3.8										
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.8	24.8	Ave.: 24.8								
pH	:	6.65	6.66	Ave.: 6.66										6.62	6.63	Ave.: 6.63								
Salinity (ppt)	:	24.4	24.3	Ave.: 24.4						Ave.:				24.6	24.7	Ave.: 24.7								
D.O. (mg/L)	:	6.58	6.61	Ave.: 6.60	5.0	4.2	✓			Ave.:	5.0	4.2		6.53	6.50	Ave.: 6.52	4.7	2.0	✓					
D.O.S. (%)	:	91.5	92.0	Ave.: 91.8						Ave.:				90.9	90.5	Ave.: 90.7								
Turbidity (NTU)	:	9.65	9.44	Ave.: 9.						Ave.:				8.93	8.78	Ave.:						27.5 and 120% of CS(Mf)3	47.0 and 130% of CS(Mf)3	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3	34.4 and 130% of CS(Mf)3	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 14:20 to 14:37 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.43 mg/L (99.4 %) (23.7 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												~~2.6~~ 3.6												
Temp. (°C)	:	24.9	24.9	Ave.: 24.9										24.9	25.0	Ave.: 25.0										
pH	:	6.45	6.43	Ave.: 6.44										6.48	6.50	Ave.: 6.49										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.5	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.62	6.58	Ave.: 6.60	5.0	4.2	✓			Ave.:	5.0	4.2		6.50	6.47	Ave.: 6.49	4.7	2.0	✓							
D.O.S. (%)	:	92.1	91.5	Ave.: 91.8						Ave.:				90.5	90.1	Ave.: 90.3										
Turbidity (NTU)	:	9.27	8.52	Ave.: 8.90						Ave.:				9.77	9.98	Ave 9.88				9.39	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 13:58 to 14:14 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.51 mg/L (99.7 %) (23.5 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.9	24.9	Ave.: 24.9										
pH	:	6.35	6.37	Ave.: 6.36										6.39	6.41	Ave.: 6.40										
Salinity (ppt)	:	24.3	24.4	Ave.: 24.4						Ave.:				24.6	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.53	6.56	Ave.: 6.55	5.0	4.2	✓			Ave.:	5.0	4.2		6.49	6.47	Ave.: 6.48	4.7	2.0	✓							
D.O.S. (%)	:	90.8	91.3	Ave.: 91.1						Ave.:				90.3	90.0	Ave.: 90.2										
Turbidity (NTU)	:	13.4	13.7	Ave.: 13.6						Ave.:				7.16	7.58	Ave.: 7.37				10.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 13:31 to 13:50 Depth of Water (meter): 6.6 Wet bulb calibration for DO meter: ~~23~~ 8.44 mg/L (99.1 %) (23.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.3						5.6												
Temp. (°C)	:	24.8	24.8	Ave.: 24.8				24.8	24.9	24.9				24.9	25.0	Ave.: 25.0										
pH	:	6.41	6.39	Ave.: 6.40				6.45	6.47	6.46				6.42	6.43	Ave.: 6.43										
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5				24.6	24.6	Ave.: 24.6				24.6	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.38	6.41	Ave.: 6.40	5.0	4.2	✓	6.33	6.31	Ave.: 6.32	5.0	4.2	✓	6.17	6.19	Ave.: 6.18	4.7	2.0	✓							
D.O.S. (%)	:	88.8	89.2	Ave.: 89.0				88.1	87.8	Ave.: 88.0				85.8	86.2	Ave.: 85.9										
Turbidity (NTU)	:	8.44	8.31	Ave.: 8.38				7.05	7.23	Ave.: 7.14				9.23	7.14	Ave 8.19				7.90	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**
Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 13:02 to 13:18 Depth of Water (meter): 4.2 Wet bulb calibration for DO meter: 8.41 mg/L (98.3 %) (23.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.2												
Temp. (°C)	:	24.9	24.9	Ave.: 24.9										24.9	24.8	Ave.: 24.9										
pH	:	6.67	6.65	Ave.: 6.66										6.68	6.69	Ave.: 6.69										
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3						Ave.:				25.3	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.24	6.27	Ave.: 6.26	5.0	4.2	✓			Ave.:	5.0	4.2		6.30	6.29	Ave.: 6.30	4.7	2.0	✓							
D.O.S. (%)	:	86.8	87.2	Ave.: 87.0						Ave.:				87.6	87.4	Ave.: 87.5										
Turbidity (NTU)	:	15.9	12.7	Ave.: 14.3						Ave.:				16.4	16.8	Ave.: 16.6				15.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 12:30 to 12:48 Depth of Water (meter): 8.6 Wet bulb calibration for DO meter: 8.34 mg/L (98.2 %) (23.5 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.3			7.6					
Temp. (°C)	:	24.8	24.8	Ave.: 24.9	24.8	24.8	Ave.: 24.8	24.8	24.7	Ave.: 24.8			
pH	:	6.41	6.43	Ave.: 6.42	6.46	6.47	Ave.: 6.47	6.52	6.55	Ave.: 6.54			
Salinity (ppt)	:	25.5	25.4	Ave.: 25.5	25.6	25.7	Ave.: 25.7	25.9	25.8	Ave.: 25.9			
D.O. (mg/L)	:	6.65	6.68	Ave.: 6.67	6.51	6.48	Ave.: 6.50	6.32	6.35	Ave.: 6.34			
D.O.S. (%)	:	92.7	93.1	Ave.: 92.9	90.7	90.2	Ave.: 90.5	88.0	88.5	Ave.: 88.3		120%	130%
Turbidity (NTU)	:	8.30	8.47	Ave.: 8.39	8.46	8.38	Ave.: 8.42	8.82	7.76	Ave.: 8.29	8.37	10.0	10.9
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y / [✓ N] If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows :

Field Operator	K. M. Kwan	Checked by		Laboratory Staff		Checked by	
Date	5-11-2013	Date	5/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 5-11-2013 Weather Condition : cloudy Ambient Temperature (°C) : 23 Sea Conditions: Calm/ [✓ Small Wave] /Great Wave Tide Mode: **Flood Tide** Direction of water current: **From CS(Mf)5 to CS(Mf)3**

Station: CS(Mf)5 (Upstream Control Station) Duration: 17:45 to 1813 Depth of Water (meter): 9.8 Wet bulb calibration for DO meter: 8.45 mg/L (99.5 %) (23.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.9			8.8					
Temp. (°C)	:	23.7	23.7	Ave.: 23.7	23.6	23.6	Ave.: 23.6	23.5	23.5	Ave.: 23.5			
pH	:	6.58	6.60	Ave.: 6.59	6.57	6.59	Ave.: 6.58	6.60	6.60	Ave.: 6.60			
Salinity (ppt)	:	24.3	24.4	Ave.: 24.4	24.8	24.7	Ave.: 24.7	25.0	25.1	Ave.: 25.1			
D.O. (mg/L)	:	6.73	6.70	Ave.: 6.72	6.64	6.65	Ave.: 6.65	6.58	6.56	Ave.: 6.57			
D.O.S. (%)	:	93.5	93.1	Ave.: 93.2	92.3	92.4	Ave.: 92.4	91.5	91.2	Ave.: 91.4		**120%**	**130%**
Turbidity (NTU)	:	7.10	5.99	Ave.: 6.55	16.2	14.8	Ave.: 15.5	8.84	10.9	Ave.: 9.87	10.6	12.7	13.8
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 1830 to 1848 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.43 mg/L (99.6 %) (23.7 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	23.7	23.6	Ave.: 23.7										23.5	23.4	Ave.: 23.5										
pH	:	6.57	6.58	Ave.: 6.58										6.58	6.57	Ave.: 6.58										
Salinity (ppt)	:	24.3	24.3	Ave.: 24.3						Ave.:				24.7	24.8	Ave.: 24.8										
D.O. (mg/L)	:	6.56	6.58	Ave.: 6.57	5.0	4.2	√			Ave.:	5.0	4.2		6.63	6.60	Ave.: 6.62	4.7	2.0	√							
D.O.S. (%)	:	91.2	91.5	Ave.: 91.4						Ave.:				92.2	91.7	Ave.: 92.0										
Turbidity (NTU)	:	8.72	9.12	Ave.: 8.92						Ave.:				8.81	7.79	Ave.: 8.30				8.61	√	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 1856 to 1913 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.48 mg/L (98.6 %) (23.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	23.6	23.6	Ave.: 23.6										23.4	23.4	Ave.: 23.4										
pH	:	6.55	6.56	Ave.: 6.56										6.55	6.54	Ave.: 6.55										
Salinity (ppt)	:	24.3	24.3	Ave.: 24.3						Ave.:				24.6	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.58	6.56	Ave.: 6.57	5.0	4.2	✓			Ave.:	5.0	4.2		6.52	6.50	Ave.: 6.51	4.7	2.0	✓							
D.O.S. (%)	:	91.5	91.2	Ave.: 91.4						Ave.:				90.6	90.4	Ave.: 90.5										
Turbidity (NTU)	:	9.08	11.4	Ave.: 10.2						Ave.:				10.0	11.8	Ave.: 10.9				10.6	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 1918 to 1935 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.44 mg/L (98.5 %) (23.5 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	23.5	23.5	Ave.: 23.5										23.4	23.3	Ave.: 23.4										
pH	:	6.56	6.56	Ave.: 6.56										6.54	6.55	Ave.: 6.55										
Salinity (ppt)	:	24.3	24.3	Ave.: 24.3						Ave.:				24.5	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.52	6.50	Ave.: 6.51	5.0	4.2	✓			Ave.:	5.0	4.2		6.47	6.44	Ave.: 6.46	4.7	2.0	✓							
D.O.S. (%)	:	90.6	90.4	Ave.: 90.5						Ave.:				88.8	88.5	Ave.: 88.7										
Turbidity (NTU)	:	18.6	18.8	Ave.: 18.2						Ave.:				8.75	8.83	Ave.: 8.79				14.0	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 1943 to 2008 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.48 mg/L (98.7 %) (23.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	23.5	23.4	Ave.: 23.4				23.4	23.3	23.3				23.3	23.3	Ave.: 23.3										
pH	:	6.56	6.55	Ave.: 6.56				6.55	6.54	6.54				6.54	6.54	Ave.: 6.54										
Salinity (ppt)	:	24.2	24.3	Ave.: 24.3				24.6	24.6	Ave.: 24.6				24.7	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.43	6.44	Ave.: 6.44	5.0	4.2	✓	6.37	6.38	Ave.: 6.38	5.0	4.2	✓	6.34	6.30	Ave.: 6.32	4.7	2.0	✓							
D.O.S. (%)	:	89.4	89.7	Ave.: 89.6				88.5	88.7	Ave.: 88.6				88.1	87.8	Ave.: 88.0										
Turbidity (NTU)	:	9.35	10.7	Ave.: 10.0				9.59	10.3	Ave.: 9.95				16.3	14.8	Ave.: 15.6				11.8	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: IS(Mf)9 Duration: 2021 to 2037 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.46 mg/L (98.5 %) (23.5 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	23.5	23.5	Ave.: 23.5										23.4	23.4	Ave.: 23.4										
pH	:	6.59	6.58	Ave.: 6.59										6.58	6.59	Ave.: 6.59										
Salinity (ppt)	:	24.9	24.8	Ave.: 24.9						Ave.:				25.0	25.0	Ave.: 25.0										
D.O. (mg/L)	:	6.40	6.36	Ave.: 6.38	5.0	4.2	✓			Ave.:	5.0	4.2		6.34	6.36	Ave.: 6.35	4.7	2.0	✓							
D.O.S. (%)	:	89.0	88.4	Ave.: 88.7						Ave.:				88.1	88.4	Ave.: 88.3										
Turbidity (NTU)	:	15.2	16.0	Ave.: 15.6						Ave.:				15.0	11.8	Ave.: 13.9				15.8	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 2051 to 2113 Depth of Water (meter): 9.0 Wet bulb calibration for DO meter: 8.45 mg/L (98.6 %) (23.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.5			8.0				
Temp. (°C)	:	23.5	23.4	Ave.: 23.5	23.4	23.4	Ave.: 23.4	23.4	23.3	Ave.: 23.4		
pH	:	6.57	6.58	Ave.: 6.58	6.56	6.57	Ave.: 6.57	6.58	6.58	Ave.: 6.58		
Salinity (ppt)	:	24.7	24.6	Ave.: 24.7	24.7	24.8	Ave.: 24.8	24.8	24.9	Ave.: 24.9		
D.O. (mg/L)	:	6.53	6.55	Ave.: 6.54	6.52	6.50	Ave.: 6.51	6.50	6.47	Ave.: 6.49		
D.O.S. (%)	:	90.8	91.0	Ave.: 90.9	90.6	90.4	Ave.: 90.5	90.4	90.0	Ave.: 90.2		
Turbidity (NTU)	:	10.6	9.67	Ave.: 10.1	10.9	12.1	Ave.: 11.5	9.23	11.0	Ave.: 10.1	10.8	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y [✓ N] If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ? Y [✓ N] If yes, elaboration is as follows :

Field Operator		Checked by		Laboratory Staff		Checked by	
Date	5.11.13	Date	5/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 7-11-2013 Weather Condition : Cloudy Ambient Temperature (°C) : 25 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 08:35 to 08:59 Depth of Water (meter): 9.7 Wet bulb calibration for DO meter: 8.43 mg/L (99.2 %) (23.6 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.9			8.7					
Temp. (°C)	:	24.9	24.9	Ave.: 24.9	24.8	24.9	Ave.: 24.9	24.7	24.8	Ave.: 24.8			
pH	:	6.64	6.62	Ave.: 6.63	6.49	6.51	Ave.: 6.50	6.54	6.56	Ave.: 6.55			
Salinity (ppt)	:	24.4	24.3	Ave.: 24.4	24.6	24.6	Ave.: 24.6	24.9	25.0	Ave.: 25.0			
D.O. (mg/L)	:	6.94	6.96	Ave.: 6.95	6.77	6.79	Ave.: 6.78	6.64	6.66	Ave.: 6.65			
D.O.S. (%)	:	96.5	96.7	Ave.: 96.6	95.5	95.7	Ave.: 95.6	93.0	93.2	Ave.: 93.1		120%	130%
Turbidity (NTU)	:	7.73	7.98	Ave.: 7.86	7.71	8.01	Ave.: 7.86	9.05	9.12	Ave.: 9.09	8.27	9.92	10.75
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 09:06 to 09:30 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.49 mg/L (99.6 %) (23.5 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	24.8	24.7	Ave.: 24.8										24.7	24.7	Ave.: 24.7										
pH	:	6.73	6.71	Ave.: 6.72										6.59	6.61	Ave.: 6.60										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.7	24.8	Ave.: 24.8										
D.O. (mg/L)	:	6.67	6.69	Ave.: 6.68	5.0	4.2	✓			Ave.:	5.0	4.2		6.57	6.59	Ave.: 6.58	4.7	2.0	✓							
D.O.S. (%)	:	92.7	93.0	Ave.: 92.9						Ave.:				92.6	92.9	Ave.: 92.8										
Turbidity (NTU)	:	15.2	12.4	Ave.: 13.8						Ave.:				16.8	18.2	Ave.: 17.5				15.7	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 09:36 to 10:00 Depth of Water (meter): 4.9 Wet bulb calibration for DO meter: 8.45 mg/L (99.3 %) (23.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.9												
Temp. (°C)	:	24.9	25.0	Ave.: 25.0										24.8	24.9	Ave.: 24.9										
pH	:	6.55	6.57	Ave.: 6.56										6.54	6.57	Ave.: 6.56										
Salinity (ppt)	:	24.3	24.4	Ave.: 24.4						Ave.:				24.6	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.68	6.70	Ave.: 6.69	5.0	4.2	✓			Ave.:	5.0	4.2		6.56	6.58	Ave.: 6.57	4.7	2.0	✓							
D.O.S. (%)	:	92.9	93.1	Ave.: 93.0						Ave.:				91.8	92.1	Ave.: 92.0										
Turbidity (NTU)	:	20.2	20.0	Ave.: 20.1						Ave.:				21.0	19.8	Ave.: 20.4				20.3	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 10:06 to 10:30 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.52 mg/L (99.7 %) (23.5 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	24.9	24.8	Ave.: 24.9										24.7	24.8	Ave.: 24.8										
pH	:	6.44	6.46	Ave.: 6.45										6.36	6.38	Ave.: 6.37										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.7	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.64	6.66	Ave.: 6.65	5.0	4.2	✓			Ave.:	5.0	4.2		6.51	6.50	Ave.: 6.51	4.7	2.0	✓							
D.O.S. (%)	:	92.3	92.6	Ave.: 92.5						Ave.:				91.8	92.3	Ave.: 92.1										
Turbidity (NTU)	:	18.9	19.4	Ave.: 19.2						Ave.:				18.8	18.3	Ave.: 18.6				18.9	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 10:36 to 11:00 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.54 mg/L (99.8 %) (23.7 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	24.9	24.9	Ave.: 24.9				24.8	24.8	24.8				24.7	24.8	Ave.: 24.8										
pH	:	6.51	6.53	Ave.: 6.52				6.42	6.44	6.43				6.45	6.47	Ave.: 6.46										
Salinity (ppt)	:	24.4	24.3	Ave.: 24.4				24.6	24.7	Ave.: 24.7				24.7	24.8	Ave.: 24.8										
D.O. (mg/L)	:	6.47	6.49	Ave.: 6.48	5.0	4.2	✓	6.39	6.41	Ave.: 6.40	5.0	4.2	✓	6.25	6.27	Ave.: 6.26	4.7	2.0	✓							
D.O.S. (%)	:	89.9	90.2	Ave.: 90.1				89.1	89.4	Ave.: 89.3				89.4	89.7	Ave.: 89.6										
Turbidity (NTU)	:	14.3	12.6	Ave.: 13.5				14.8	13.4	Ave.: 14.1				12.2	11.9	Ave.: 12.1				13.2	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: IS(Mf)9 Duration: 11:06 to 11:30 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.47 mg/L (99.8 %) (23.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	24.8	24.8	Ave.: 24.8										24.7	24.8	Ave.: 24.8										
pH	:	6.73	6.75	Ave.: 6.74										6.54	6.57	Ave.: 6.56										
Salinity (ppt)	:	25.4	25.5	Ave.: 25.5						Ave.:				25.5	25.5	Ave.: 25.5										
D.O. (mg/L)	:	6.34	6.35	Ave.: 6.35	5.0	4.2	✓			Ave.:	5.0	4.2		6.39	6.41	Ave.: 6.40	4.7	2.0	✓							
D.O.S. (%)	:	88.6	88.7	Ave.: 88.7						Ave.:				89.3	89.6	Ave.: 89.5										
Turbidity (NTU)	:	14.9	16.3	Ave.: 15.6						Ave.:				22.5	20.3	Ave.: 21.4				18.5	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 11:36 to 12:05 Depth of Water (meter): 8.8 Wet bulb calibration for DO meter: 8.52 mg/L (99.7 %) (23.7 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.4			7.8				
Temp. (°C)	:	24.9	24.8	Ave.: 24.9	24.8	24.8	Ave.: 24.8	24.8	24.9	Ave.: 24.9		
pH	:	6.45	6.48	Ave.: 6.47	6.52	6.55	Ave.: 6.54	6.59	6.60	Ave.: 6.60		
Salinity (ppt)	:	25.3	25.4	Ave.: 25.4	25.7	25.8	Ave.: 25.8	25.9	25.9	Ave.: 25.9		
D.O. (mg/L)	:	6.73	6.70	Ave.: 6.72	6.56	6.58	Ave.: 6.57	6.42	6.40	Ave.: 6.41		
D.O.S. (%)	:	94.0	93.5	Ave.: 93.8	91.8	92.1	Ave.: 92.0	90.1	89.9	Ave.: 90.0		
Turbidity (NTU)	:	14.8	15.1	Ave.: 15.0	24.0	25.5	Ave.: 24.8	22.5	24.3	Ave.: 23.4	21.0	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y/ [✓ N] If yes, elaboration is as follows: ____________

Any notable pollutant by others near monitoring site ? Y/ [✓ N] If yes, elaboration is as follows : ____________

Field Operator	Tang Chung Hong	Checked by		Laboratory Staff		Checked by	
Date	7-11-2013	Date	7/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 7/4/2013 Weather Condition : cloudy Ambient Temperature (°C) : 25 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 17:06 to 17:36 Depth of Water (meter): 9.6 Wet bulb calibration for DO meter: 8.01 mg/L (99.7 %) (26.6 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.8			8.6				
Temp. (°C)	:	25.0	24.9	Ave.: 25.0	24.8	24.8	Ave.: 24.8	24.7	24.6	Ave.: 24.7		
pH	:	6.58	6.59	Ave.: 6.59	6.50	6.55	Ave.: 6.52	6.37	6.39	Ave.: 6.38		
Salinity (ppt)	:	24.3	24.3	Ave.: 24.3	24.5	24.6	Ave.: 24.6	24.8	24.9	Ave.: 24.9		
D.O. (mg/L)	:	6.79	6.80	Ave.: 6.80	6.69	6.67	Ave.: 6.68	6.58	6.59	Ave.: 6.59		
D.O.S. (%)	:	94.4	94.5	Ave.: 94.5	93.0	92.7	Ave.: 92.9	91.5	91.6	Ave.: 91.6		
Turbidity (NTU)	:	7.82	7.86	Ave.: 7.84	7.83	8.03	Ave.: 7.93	9.11	9.18	Ave.: 9.15	8.3	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 16:36 to 17:00 Depth of Water (meter): 4.7 Wet bulb calibration for DO meter: 7.95 mg/L (99.2 %) (26.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						[illegible] 2.4						3.7												
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.9	25.2	Ave.: 25.0										
pH	:	6.68	6.69	Ave.: 6.69										6.62	6.63	Ave.: 6.63										
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5						Ave.:				24.6	24.8	Ave.: 24.7										
D.O. (mg/L)	:	6.56	6.57	Ave.: 6.57	5.0	4.2	✓			Ave.:	5.0	4.2		6.48	6.49	Ave.: 6.49	4.7	2.0	✓							
D.O.S. (%)	:	91.1	91.3	Ave.: 91.2						Ave.:				90.1	90.2	Ave.: 90.2										
Turbidity (NTU)	:	7.9	6.1	Ave.: 7.0						Ave.:				9.5	8.8	Ave.: 9.1				8.0	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 16:06 to 16:30 Depth of Water (meter): 4.7 Wet bulb calibration for DO meter: 7.86 mg/L (98.2 %) (26.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.7												
Temp. (°C)	:	25.6	25.8	Ave.: 25.7										25.7	25.8	Ave.: 25.8										
pH	:	6.48	6.50	Ave.: 6.49										6.49	6.50	Ave.: 6.50										
Salinity (ppt)	:	24.3	24.2	Ave.: 24.3						Ave.:				24.4	24.5	Ave.: 24.5										
D.O. (mg/L)	:	6.51	6.52	Ave.: 6.52	5.0	4.2	✓			Ave.:	5.0	4.2		6.40	6.41	Ave.: 6.41	4.7	2.0	✓							
D.O.S. (%)	:	90.5	90.7	Ave.: 90.6						Ave.:				89.0	89.1	Ave.: 89.1										
Turbidity (NTU)	:	10.6	10.8	Ave.: 10.7						Ave.:				11.8	11.1	Ave.: 11.5				11.1	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 15:36 to 16:00 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 7.78 mg/L (97.3 %) (26.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.1	25.2	Ave.: 25.2										25.2	25.3	Ave.: 25.3										
pH	:	6.43	6.47	Ave.: 6.45										6.45	6.48	Ave.: 6.47										
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5						Ave.:				24.5	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.52	6.53	Ave.: 6.53	5.0	4.2	✓			Ave.:	5.0	4.2		6.52	6.50	Ave.: 6.51	4.7	2.0	✓							
D.O.S. (%)	:	90.6	90.8	Ave.: 90.7						Ave.:				90.6	90.3	Ave.: 90.5										
Turbidity (NTU)	:	11.0	9.7	Ave.: 10.4						Ave.:				11.6	11.6	Ave.: 11.6				11.0	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 15:06 to 15:30 Depth of Water (meter): 6.7 Wet bulb calibration for DO meter: 7.96 mg/L (98.6 %) (26.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.7												
Temp. (°C)	:	25.2	25.5	Ave.: 25.4				25.3	25.4	25.4				25.3	25.4	Ave.: 25.4										
pH	:	6.53	6.54	Ave.: 6.54				6.40	6.43	6.41				6.49	6.51	Ave.: 6.50										
Salinity (ppt)	:	24.5	24.3	Ave.: 24.4				24.6	24.8	Ave.: 24.7				24.5	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.39	6.40	Ave.: 6.40	5.0	4.2	✓	6.32	6.33	Ave.: 6.33	5.0	4.2		6.18	6.20	Ave.: 6.19	4.7	2.0	✓							
D.O.S. (%)	:	88.8	88.9	Ave.: 88.9				87.8	87.9	Ave.: 87.9				85.9	86.1	Ave.: 86.0										
Turbidity (NTU)	:	11.5	11.6	Ave.: 11.6				11.5	10.5	Ave.: 11.0				11.3	11.8	Ave.: 11.6				11.4	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**
Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 1436 to 15:00 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 7.77 mg/L (97.0 %) (26.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	25.1	28.2	Ave.: 25.2										25.2	25.3	Ave.: 25.3										
pH	:	6.72	6.74	Ave.: 6.73										6.56	6.58	Ave.: 6.57										
Salinity (ppt)	:	25.3	25.4	Ave.: 25.4						Ave.:				25.6	25.5	Ave.: 25.5										
D.O. (mg/L)	:	6.23	6.24	Ave.: 6.24	5.0	4.2	✓			Ave.:	5.0	4.2		6.33	6.34	Ave.: 6.34	4.7	2.0	✓							
D.O.S. (%)	:	87.1	87.2	Ave.: 87.2						Ave.:				88.5	88.6	Ave.: 88.6										
Turbidity (NTU)	:	9.83	10.6	Ave.: 10.2						Ave.:				10.9	10.8	Ave.: 10.9				10.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 14:06 to 14:30 Depth of Water (meter): 8.6 Wet bulb calibration for DO meter: 7.81 mg/L (98.1 %) (26.6 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.3			7.6					
Temp. (°C)	:	25.2	25.0	Ave.: 25.1	25.2	25.2	Ave.: 25.2	25.3	25.2	Ave.: 25.3			
pH	:	6.44	6.48	Ave.: 6.46	6.49	6.53	Ave.: 6.51	6.53	6.54	Ave.: 6.54			
Salinity (ppt)	:	25.4	25.2	Ave.: 25.3	25.7	25.9	Ave.: 25.8	25.7	26.0	Ave.: 25.9			
D.O. (mg/L)	:	6.63	6.65	Ave.: 6.64	6.52	6.55	Ave.: 6.53	6.30	6.33	Ave.: 6.31			
D.O.S. (%)	:	92.6	92.9	Ave.: 92.8	91.1	91.5	Ave.: 91.3	88.0	88.4	Ave.: 88.2		120%	130%
Turbidity (NTU)	:	6.81	8.33	Ave.: 7.6	22.3	20.9	Ave.: 21.6	25.2	21.8	Ave.: 23.5	17.6	21.0	228
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y / [✓ N] If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows :

Field Operator	Wong Chun Lung	Checked by		Laboratory Staff		Checked by	
Date	7/11/2013	Date	7/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Co..dition)**

Sampling Date : 9-11-2013 Weather Condition : cloudy Ambient Temperature (°C) : 27 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: **Flood Tide** Direction of water current: **From CS(Mf)5 to CS(Mf)3**

Station: CS(Mf)5 (Upstream Control Station) Duration: 10:43 to 11:07 Depth of Water (meter): 9.6 Wet bulb calibration for DO meter: 8.40 mg/L (99.4 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.8			8.6					
Temp. (°C)	:	25.3	25.3	Ave.: 25.3	25.2	25.3	Ave.: 25.3	25.2	25.2	Ave.: 25.2			
pH	:	7.09	7.08	Ave.: 7.09	7.12	7.17	Ave.: 7.152	7.10	7.11	Ave.: 7.11			
Salinity (ppt)	:	25.3	25.2	Ave.: 25.3	25.3	25.3	Ave.: 25.3	25.4	25.3	Ave.: 25.4			
D.O. (mg/L)	:	6.30	6.27	Ave.: 6.29	6.19	6.17	Ave.: 6.18	6.10	6.14	Ave.: 6.12			
D.O.S. (%)	:	88.1	87.6	Ave.: 87.9	86.5	86.2	Ave.: 86.4	85.3	85.8	Ave.: 85.6		120%	130%
Turbidity (NTU)	:	8.43	8.37	Ave.: 8.40	8.33	8.31	Ave.: 8.32	10.7	10.3	Ave.: 10.5	9.07	10.9	11.8
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 11:14 to 11:33 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.48 mg/L (99.7 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.3	25.4	Ave.: 25.4										25.3	25.2	Ave.: 25.3										
pH	:	7.01	7.02	Ave.: 7.02										7.11	7.10	Ave.: 7.11										
Salinity (ppt)	:	25.1	25.0	Ave.: 25.1						Ave.:				25.2	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.46	6.40	Ave.: 6.43	5.0	4.2	✓			Ave.:	5.0	4.2		6.37	6.35	Ave.: 6.36	4.7	2.0	✓							
D.O.S. (%)	:	90.5	89.5	Ave.: 90.0						Ave.:				89.4	88.8	Ave.: 89.1										
Turbidity (NTU)	:	12.0	12.4	Ave.: 12.2						Ave.:				12.4	12.8	Ave.: 12.6				12.4	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Co... dition)**

Station: SR4 Duration: 11:40 to 12:04 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.39 mg/L (99.9 %) (25.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.2	25.3	Ave.: 25.3										25.2	25.1	Ave.: 25.2										
pH	:	6.98	6.99	Ave.: 6.99										7.01	7.01	Ave.: 7.01										
Salinity (ppt)	:	25.4	25.5	Ave.: 25.5						Ave.:				25.3	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.35	6.37	Ave.: 6.36	5.0	4.2	✓			Ave.:	5.0	4.2		6.46	6.40	Ave.: 6.43	4.7	2.0	✓							
D.O.S. (%)	:	89.0	89.3	Ave.: 89.2						Ave.:				90.6	89.5	Ave.: 90.1										
Turbidity (NTU)	:	11.1	11.9	Ave.: 11.5						Ave.:				9.50	9.54	Ave.: 9.52				10.5	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 12:08 to 12:30 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (25.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	25.2	25.3	Ave.: 25.3										25.2	25.2	Ave.: 25.2										
pH	:	7.11	7.11	Ave.: 7.11										7.14	7.14	Ave.: 7.14										
Salinity (ppt)	:	25.4	25.4	Ave.: 25.4						Ave.:				25.5	25.5	Ave.: 25.5										
D.O. (mg/L)	:	6.18	6.20	Ave.: 6.19	5.0	4.2	✓			Ave.:	5.0	4.2		6.12	6.10	Ave.: 6.11	4.7	2.0	✓							
D.O.S. (%)	:	86.4	86.7	Ave.: 86.6						Ave.:				85.5	85.3	Ave.: 85.4										
Turbidity (NTU)	:	10.9	10.1	Ave.: 10.5						Ave.:				17.1	17.3	Ave.: 17.2				13.9	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 12:38 to 13:02 Depth of Water (meter): 7.8 Wet bulb calibration for DO meter: 8.41 mg/L (99.4 %) (25.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.9						6.8												
Temp. (°C)	:	25.1	25.2	Ave.: 25.2				25.1	25.1	25.1				25.1	25.0	Ave.: 25.0										
pH	:	7.10	7.10	Ave.: 7.10				7.13	7.13	7.13				7.20	7.19	Ave.: 7.20										
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2				25.2	25.3	Ave.: 25.3				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.39	6.40	Ave.: 6.40	5.0	4.2	✓	6.40	6.44	Ave.: 6.42	5.0	4.2	✓	6.44	6.46	Ave.: 6.45	4.7	2.0	✓							
D.O.S. (%)	:	89.4	89.5	Ave.: 89.5				89.6	90.0	Ave.: 89.8				90.1	90.3	Ave.: 90.2										
Turbidity (NTU)	:	11.9	11.5	Ave.: 11.7				14.8	14.0	Ave.: 14.4				13.6	13.8	Ave.: 13.7				13.3	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Co...dition)**

Station: IS(Mf)9 Duration: 13:15 to 13:38 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (25.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	25.2	25.3	Ave.: 25.3										25.2	25.2	Ave.: 25.2										
pH	:	6.99	7.01	Ave.: 7.00										7.10	7.11	Ave.: 7.11										
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3						Ave.:				25.2	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.39	6.42	Ave.: 6.41	5.0	4.2	✓			Ave.:	5.0	4.2		6.43	6.47	Ave.: 6.45	4.7	2.0	✓							
D.O.S. (%)	:	89.5	89.9	Ave.: 89.7						Ave.:				90.3	90.9	Ave.: 90.6										
Turbidity (NTU)	:	15.9	15.7	Ave.: 15.8						Ave.:				9.80	9.88	Ave.: 9.84				12.8	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 13:48 to 14:13 Depth of Water (meter): 9.0 Wet bulb calibration for DO meter: 8.41 mg/L (99.5 %) (25.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.5			8.0				
Temp. (°C)	:	25.2	25.3	Ave.: 25.3	25.1	25.1	Ave.: 25.1	25.0	25.0	Ave.: 25.0		
pH	:	7.12	7.13	Ave.: 7.13	7.20	7.20	Ave.: 7.20	7.19	7.19	Ave.: 7.19		
Salinity (ppt)	:	25.1	25.1	Ave.: 25.1	25.1	25.2	Ave.: 25.2	25.1	25.1	Ave.: 25.1		
D.O. (mg/L)	:	6.24	6.20	Ave.: 6.22	6.34	6.37	Ave.: 6.36	6.16	6.20	Ave.: 6.18		
D.O.S. (%)	:	87.4	86.8	Ave.: 87.1	88.7	89.1	Ave.: 88.9	86.1	86.7	Ave.: 86.4		
Turbidity (NTU)	:	8.40	8.42	Ave.: 8.41	14.0	13.4	Ave.: 13.7	16.1	16.5	Ave.: 16.3	12.8	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y/[✓ N] If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ? Y/[✓ N] If yes, elaboration is as follows :

Field Operator	S.H. Lam	Checked by		Laboratory Staff		Checked by	
Date	9-11-2013	Date	9/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Con ion)**

Sampling Date : 9/1/2013 Weather Condition : Fine Ambient Temperature (°C) : 29 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 19:12 to 19:42 Depth of Water (meter): ~~[illegible]~~ 9.5 Wet bulb calibration for DO meter: 8.40 mg/L (99.4 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.8			8.5				
Temp. (°C)	:	25.3	25.4	Ave.: 25.4	25.3	25.2	Ave.: 25.3	25.2	25.1	Ave.: 25.2		
pH	:	7.06	7.09	Ave.: 7.08	7.14	7.12	Ave.: 7.13	7.11	7.14	Ave.: 7.13		
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3	25.2	25.2	Ave.: 25.2	25.4	25.4	Ave.: 25.4		
D.O. (mg/L)	:	6.28	6.24	Ave.: 6.26	6.14	6.14	Ave.: 6.14	6.08	6.05	Ave.: 6.07		
D.O.S. (%)	:	87.9	87.4	Ave.: 87.7	86.0	86.0	Ave.: 86.0	85.1	84.7	Ave.: 84.9		
Turbidity (NTU)	:	8.48	8.42	Ave.: 8.45	8.38	8.33	Ave.: 8.36	10.5	10.6	Ave.: 10.6	9.14	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 18:42 to 19:06 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.40 mg/L (99.4 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	25.4	25.4	Ave.: 25.4										25.3	25.3	Ave.: 25.3										
pH	:	7.02	7.00	Ave.: 7.01										7.16	7.14	Ave.: 7.15										
Salinity (ppt)	:	25.2	25.0	Ave.: 25.1						Ave.:				25.3	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.36	6.33	Ave.: 6.35	5.0	4.2	✓			Ave.:	5.0	4.2		6.30	6.34	Ave.: 6.32	4.7	2.0	✓							
D.O.S. (%)	:	89.0	88.6	Ave.: 88.8						Ave.:				88.4	89.0	Ave.: 88.7										
Turbidity (NTU)	:	12.8	12.6	Ave.: 12.7						Ave.:				12.6	12.5	Ave.: 12.6				12.7 ~~[illegible]~~	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 18:12 to 18:36 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.41 mg/L (99.4 %) (25.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	25.2	25.3	Ave.: 25.3										25.2	25.2	Ave.: 25.2										
pH	:	6.96	6.98	Ave.: 6.97										7.02	7.02	Ave.: 7.02										
Salinity (ppt)	:	25.4	25.4	Ave.: 25.4						Ave.:				25.3	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.30	6.36	Ave.: 6.33	5.0	4.2	✓			Ave.:	5.0	4.2		6.40	6.34	Ave.: 6.37	4.7	2.0	✓							
D.O.S. (%)	:	88.3	89.1	Ave.: 88.7						Ave.:				~~4~~90.5	88.8	Ave.: 89.7										
Turbidity (NTU)	:	11.3	11.7	Ave.: 11.5						Ave.:				9.58	9.64	Ave.: 9.61				10.6	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 17:42 to 18:06 Depth of Water (meter): 5.1 Wet bulb calibration for DO meter: 8.41 mg/L (99.4 %) (25.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.1												
Temp. (°C)	:	25.3	25.3	Ave.: 25.3										25.3	25.2	Ave.: 25.3										
pH	:	7.12	7.10	Ave.: 7.11										7.15	7.15	Ave.: 7.15										
Salinity (ppt)	:	25.4	25.4	Ave.: 25.4						Ave.:				25.6	25.5	Ave.: 25.6										
D.O. (mg/L)	:	6.16	6.14	Ave.: 6.15	5.0	4.2	✓			Ave.:	5.0	4.2		6.06	6.10	Ave.: 6.08	4.7	2.0	✓							
D.O.S. (%)	:	86.2	86.0	Ave.: 86.1						Ave.:				84.8	85.4	Ave.: 85.1										
Turbidity (NTU)	:	10.6	10.9	Ave.: 10.8						Ave.:				18.1	17.5	Ave.: 17.8				14.3	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 17:12 to 17:36 Depth of Water (meter): 6.6 Wet bulb calibration for DO meter: 8.39 mg/L (99.9 %) (25.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.3						5.6												
Temp. (°C)	:	25.2	25.2	Ave.: 25.2				25.3	25.2	25.3				25.3	25.2	Ave.: 25.3										
pH	:	7.11	7.14	Ave.: 7.13				7.14	7.12	7.13				7.18	7.19	Ave.: 7.19										
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3				25.2	25.3	Ave.: 25.3				25.3	25.2	Ave.: 25.3										
D.O. (mg/L)	:	6.33	6.28	Ave.: 6.31	5.0	4.2	✓	6.36	6.38	Ave.: 6.37	5.0	4.2	✓	6.39	6.42	Ave.: 6.41	4.7	2.0	✓							
D.O.S. (%)	:	88.6	87.9	Ave.: 88.3				88.0	88.3	Ave.: 88.2				89.4	89.9	Ave.: 89.7										
Turbidity (NTU)	:	11.6	11.3	Ave.: 11.5				14.6	15.0	Ave.: 14.8				13.9	14.2	Ave.: 14.1				13.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 16:42 to 17:06 Depth of Water (meter): 4.3 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (25.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.3												
Temp. (°C)	:	25.3	25.3	Ave.: 25.3										25.2	25.2	Ave.: 25.2										
pH	:	7.02	7.00	Ave.: 7.01										7.12	7.11	Ave.: 7.12										
Salinity (ppt)	:	24.8	25.0	Ave.: 24.9						Ave.:				25.1	25.1	Ave.: 25.1										
D.O. (mg/L)	:	6.41	6.43	Ave.: 6.42	5.0	4.2	✓			Ave.:	5.0	4.2		6.15	6.11	Ave.: 6.13	4.7	2.0	✓							
D.O.S. (%)	:	89.9	90.2	Ave.: 90.1						Ave.:				86.1	85.5	Ave.: 85.8										
Turbidity (NTU)	:	15.6	15.3	Ave.: 15.5						Ave.:				10.1	9.92	Ave.: 10.0				12.8	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 16:12 to 16:36 Depth of Water (meter): 8.4 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (25.3 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.2			7.4					
Temp. (°C)	:	25.3	25.4	Ave.: 25.4	25.2	25.2	Ave.: 25.2	25.1	25.0	Ave.: 25.1			
pH	:	7.14	7.12	Ave.: 7.13	7.22	7.20	Ave.: 7.21	7.20	7.20	Ave.: 7.20			
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2	25.0	25.2	Ave.: 25.1	25.1	25.1	Ave.: 25.1			
D.O. (mg/L)	:	6.20	6.18	Ave.: 6.19	6.30	6.34	Ave.: 6.32	6.20	6.16	Ave.: 6.18			
D.O.S. (%)	:	86.8	86.5	Ave.: 86.7	88.2	88.8	Ave.: 88.5	86.7	86.6	Ave.: 86.7		120%	130%
Turbidity (NTU)	:	8.54	8.48	Ave.: 8.51	13.2	13.4	Ave.: 13.3	16.6	16.0	Ave.: 16.3	12.7	15.2	16.5
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y / [✓ N] If yes, elaboration is as follows: __________

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows : __________

Field Operator	Lee Kwai Leung	Checked by		Laboratory Staff		Checked by	
Date	9/11/2013	Date	9/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 12-11-2013 *Weather Condition :* cloudy *Ambient Temperature (°C) :* 24 *Sea Conditions:* Calm / Small Wave / [✓ Great Wave] *Tide Mode:* Ebb Tide *Direction of water current: From CS(Mf)3 to CS(Mf)5*

Station: CS(Mf)5 *Duration:* 9:40 *to* 10:06 *Depth of Water (meter):* 9.4 *Wet bulb calibration for DO meter:* 8.43 *mg/L (* 99.4 *%) (* 25.0 *°C)*

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.7			8.4				
Temp. (°C)	:	25.1	25.1	Ave.: 25.1	25.0	25.0	Ave.: 25.0	24.9	24.9	Ave.: 24.9		
pH	:	7.15	7.16	Ave.: 7.16	7.12	7.13	Ave.: 7.13	7.19	7.18	Ave.: 7.19		
Salinity (ppt)	:	25.0	25.1	Ave.: 25.1	25.1	25.1	Ave.: 25.1	25.2	25.3	Ave.: 25.3		
D.O. (mg/L)	:	6.22	6.28	Ave.: 6.25	6.14	6.16	Ave.: 6.15	6.10	6.18	Ave.: 6.14		
D.O.S. (%)	:	86.5	87.3	Ave.: 86.9	85.9	86.2	Ave.: 86.1	85.4	86.5	Ave.: 86.1		
Turbidity (NTU)	:	2.84	2.88	Ave.: 2.86	2.60	2.64	Ave.: 2.62	5.68	5.62	Ave.: 5.65	3.71	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a *Duration:* 9:07 *to* 9:32 *Depth of Water (meter):* 5.0 *Wet bulb calibration for DO meter:* 8.40 *mg/L (* 99.2 *%) (* 25.1 *°C)*

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	25.0	Ave.: 25.0										
pH	:	7.05	7.05	Ave.: 7.05										7.01	7.01	Ave.: 7.01										
Salinity (ppt)	:	25.0	25.0	Ave.: 25.0						Ave.:				25.0	25.1	Ave.: 25.1										
D.O. (mg/L)	:	6.38	6.40	Ave.: 6.39	5.0	4.2	✓			Ave.:	5.0	4.2		6.24	6.20	Ave.: 6.22	4.7	2.0	✓							
D.O.S. (%)	:	88.7	88.9	Ave.: 88.8						Ave.:				87.4	86.8	Ave.: 87.1										
Turbidity (NTU)	:	5.80	5.82	Ave.: 5.81						Ave.:				3.64	3.70	Ave.: 3.67				4.74	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 8:36 to 8:59 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	25.0	25.0	Ave.: 25.0										24.9	24.8	Ave.: 24.8										
pH	:	7.04	7.05	Ave.: 7.05										7.10	7.18	Ave.: 7.14										
Salinity (ppt)	:	25.0	25.0	Ave.: 25.0						Ave.:				25.1	25.0	Ave.: 25.1										
D.O. (mg/L)	:	6.40	6.44	Ave.: 6.42	5.0	4.2	✓			Ave.:	5.0	4.2		6.49	6.41	Ave.: 6.45	4.7	2.0	✓							
D.O.S. (%)	:	88.9	89.5	Ave.: 89.2						Ave.:				90.2	89.1	Ave.: 89.7										
Turbidity (NTU)	:	3.74	3.70	Ave.: 3.72						Ave.:				3.30	3.38	Ave.: 3.34				3.53	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 8:07 to 8:31 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.38 mg/L (99.2 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	25.0	25.0	Ave.: 25.0										25.0	25.0	Ave.: 25.0										
pH	:	7.08	7.07	Ave.: 7.08										7.09	7.11	Ave.: 7.10										
Salinity (ppt)	:	25.0	25.1	Ave.: 25.1						Ave.:				25.1	25.0	Ave.: 25.1										
D.O. (mg/L)	:	6.18	6.14	Ave.: 6.16	5.0	4.2	✓			Ave.:	5.0	4.2		6.20	6.15	Ave.: 6.18	4.7	2.0	✓							
D.O.S. (%)	:	85.9	85.3	Ave.: 85.6						Ave.:				86.2	85.5	Ave.: 85.8										
Turbidity (NTU)	:	3.88	3.86	Ave.: 3.87						Ave.:				3.39	3.31	Ave.: 3.35				3.61	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 7:36 to 8:00 Depth of Water (meter): 6.4 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.2						5.4												
Temp. (°C)	:	24.9	24.9	Ave.: 24.9				24.9	24.9	24.9				24.9	24.9	Ave.: 24.9										
pH	:	7.10	7.11	Ave.: 7.11				7.08	7.08	7.08				7.16	7.17	Ave.: 7.17										
Salinity (ppt)	:	24.9	25.0	Ave.: 25.0				25.0	25.0	Ave.: 25.0				25.1	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.25	6.21	Ave.: 6.23	5.0	4.2	✓	6.30	6.24	Ave.: 6.27	5.0	4.2	✓	6.35	6.34	Ave.: 6.35	4.7	2.0	✓							
D.O.S. (%)	:	86.9	86.3	Ave.: 86.6				88.2	87.4	Ave.: 87.8				88.9	88.8	Ave.: 88.9										
Turbidity (NTU)	:	4.56	4.60	Ave.: 4.58				4.71	4.79	Ave.: 4.75				4.05	4.07	Ave.: 4.06				4.46	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 7:06 to 7:30 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.30 mg/L (99.4 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	24.9	Ave.: 25.0										
pH	:	6.99	7.00	Ave.: 7.00										7.10	7.11	Ave.: 7.11										
Salinity (ppt)	:	25.0	24.9	Ave.: 25.0						Ave.:				25.0	25.0	Ave.: 25.0										
D.O. (mg/L)	:	6.23	6.21	Ave.: 6.22	5.0	4.2	√			Ave.:	5.0	4.2		6.29	6.31	Ave.: 6.30	4.7	2.0	√							
D.O.S. (%)	:	86.6	86.3	Ave.: 86.5						Ave.:				88.1	88.3	Ave.: 88.2										
Turbidity (NTU)	:	4.59	4.51	Ave.: 4.55						Ave.:				4.79	4.71	Ave.: 4.75				4.65	√	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 6:36 to 7:00 Depth of Water (meter): 8.2 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.1			7.2					
Temp. (°C)	:	25.0	25.0	Ave.: 25.0	24.9	24.9	Ave.: 24.9	24.9	24.8	Ave.: 24.9			
pH	:	7.19	7.19	Ave.: 7.19	7.22	7.23	Ave.: 7.23	7.09	7.10	Ave.: 7.10			
Salinity (ppt)	:	25.0	25.1	Ave.: 25.1	25.1	25.1	Ave.: 25.1	25.2	25.2	Ave.: 25.2			
D.O. (mg/L)	:	6.13	6.17	Ave.: 6.15	6.20	6.15	Ave.: 6.18	6.17	6.19	Ave.: 6.18			
D.O.S. (%)	:	85.2	85.8	Ave.: 85.5	86.8	86.1	Ave.: 86.5	86.4	86.7	Ave.: 86.6		120%	130%
Turbidity (NTU)	:	3.23	3.27	Ave.: 3.25	2.91	2.93	Ave.: 2.92	2.51	2.53	Ave.: 2.52	2.90	3.48	3.77
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y/[✓ N] If yes, elaboration is as follows: ____________________

Any notable pollutant by others near monitoring site ? Y/[✓ N] If yes, elaboration is as follows : ____________________

Field Operator	S.H. Lam	Checked by		Laboratory Staff		Checked by	
Date	12-11-2013	Date	12/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 12 - 11 - 2013 Weather Condition : Cloudy Ambient Temperature (°C) : 24 Sea Conditions: Calm / Small Wave / [✓ Great Wave] Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 13:50 to 14:11 Depth of Water (meter): 9.7 Wet bulb calibration for DO meter: 8.44 mg/L (99.5 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.9			8.7					
Temp. (°C)	:	25.1	25.0	Ave.: 25.1	25.0	24.9	Ave.: 25.0	24.9	24.8	Ave.: 24.9			
pH	:	7.14	7.16	Ave.: 7.15	7.11	7.09	Ave.: 7.10	7.20	7.23	Ave.: 7.22			
Salinity (ppt)	:	25.0	24.9	Ave.: 25.0	25.2	25.1	Ave.: 25.2	25.3	25.3	Ave.: 25.3			
D.O. (mg/L)	:	6.37	6.35	Ave.: 6.36	6.22	6.24	Ave.: 6.23	6.08	6.10	Ave.: 6.09			
D.O.S. (%)	:	88.8	88.6	Ave.: 88.7	86.8	87.1	Ave.: 87.0	84.9	85.2	Ave.: 85.1		120%	130%
Turbidity (NTU)	:	2.83	2.93	Ave.: 2.88	2.93	2.96	Ave.: 2.95	2.61	2.69	Ave.: 2.65	2.83	3.39	3.67
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 14:20 to 14:42 Depth of Water (meter): 5.1 Wet bulb calibration for DO meter: 8.47 mg/L (99.6 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.1												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	25.1	Ave.: 25.1										
pH	:	7.04	7.02	Ave.: 7.03										7.09	7.11	Ave.: 7.10										
Salinity (ppt)	:	24.9	25.0	Ave.: 25.0						Ave.:				25.1	25.1	Ave.: 25.1										
D.O. (mg/L)	:	6.49	6.51	Ave.: 6.50	5.0	4.2	✓			Ave.:	5.0	4.2		6.39	6.41	Ave.: 6.40	4.7	2.0	✓							
D.O.S. (%)	:	90.5	90.8	Ave.: 90.7						Ave.:				89.1	89.4	Ave.: 89.3										
Turbidity (NTU)	:	3.65	3.79	Ave.: 3.72						Ave.:				3.11	3.17	Ave.: 3.14				3.43	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 14:52 to 15:13 Depth of Water (meter): 5.3 Wet bulb calibration for DO meter: 8.41 mg/L (100.0 %) (25.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.3												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	24.9	Ave.: 25.0										
pH	:	7.02	7.05	Ave.: 7.04										7.11	7.08	Ave.: 7.10										
Salinity (ppt)	:	25.0	24.9	Ave.: 25.0						Ave.:				25.1	25.0	Ave.: 25.1										
D.O. (mg/L)	:	6.42	6.44	Ave.: 6.43	5.0	4.2	✓			Ave.:	5.0	4.2		6.51	6.54	Ave.: 6.53	4.7	2.0	✓							
D.O.S. (%)	:	89.6	89.8	Ave.: 89.7						Ave.:				90.9	91.3	Ave.: 91.1										
Turbidity (NTU)	:	2.80	2.94	Ave.: 2.87						Ave.:				4.10	4.14	Ave.: 4.12				3.50	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 15:23 to 15:44 Depth of Water (meter): 5.3 Wet bulb calibration for DO meter: 8.46 mg/L (99.9 %) (25.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												5.3												
Temp. (°C)	:	25.0	25.1	Ave.: 25.1										25.0	25.0	Ave.: 25.0										
pH	:	7.05	7.07	Ave.: 7.06										7.11	7.13	Ave.: 7.12										
Salinity (ppt)	:	25.0	25.0	Ave.: 25.0						Ave.:				25.1	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.24	6.22	Ave.: 6.23	5.0	4.2	✓			Ave.:	5.0	4.2		6.17	6.20	Ave.: 6.14	4.7	2.0	✓							
D.O.S. (%)	:	87.0	86.7	Ave.: 86.9						Ave.:				86.1	86.5	Ave.: 86.3										
Turbidity (NTU)	:	5.48	5.59	Ave.: 5.54						Ave.:				5.09	5.13	Ave.: 5.11				5.32	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 15:54 to 16:15 Depth of Water (meter): 7.7 Wet bulb calibration for DO meter: 8.40 mg/L (99.9 %) (25.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.9						6.7												
Temp. (°C)	:	25.0	24.9	Ave.: 25.0				24.9	24.8	24.9				24.8	24.8	Ave.: 24.8										
pH	:	7.05	7.08	Ave.: 7.07				7.17	7.15	7.16				7.22	7.25	Ave.: 7.24										
Salinity (ppt)	:	24.9	25.0	Ave.: 25.0				25.1	25.0	Ave.: 25.1				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.37	6.39	Ave.: 6.38	5.0	4.2	✓	6.46	6.48	Ave.: 6.47	5.0	4.2	✓	6.40	6.38	Ave.: 6.39	4.7	2.0	✓							
D.O.S. (%)	:	88.9	89.1	Ave.: 89.0				90.0	90.3	Ave.: 90.2				89.3	89.1	Ave.: 89.2										
Turbidity (NTU)	:	6.07	6.11	Ave.: 6.09				6.22	6.25	Ave.: 6.24				5.68	5.73	Ave.: 5.71				6.01	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: IS(Mf)9 Duration: 16:25 to 16:48 Depth of Water (meter): 5.1 Wet bulb calibration for DO meter: 8.36 mg/L (99.4 %) (25.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.1												
Temp. (°C)	:	25.0	25.0	Ave.: 25.0										24.9	25.0	Ave.: 25.0										
pH	:	6.97	6.99	Ave.: 6.98										7.07	7.09	Ave.: 7.08										
Salinity (ppt)	:	25.1	25.0	Ave.: 25.1						Ave.:				25.2	25.1	Ave.: 25.2										
D.O. (mg/L)	:	6.36	6.38	Ave.: 6.37	5.0	4.2	✓			Ave.:	5.0	4.2		6.44	6.47	Ave.: 6.46	4.7	2.0	✓							
D.O.S. (%)	:	88.7	89.0	Ave.: 88.9						Ave.:				89.1	90.2	Ave.: 90.0										
Turbidity (NTU)	:	4.68	4.71	Ave.: 4.70						Ave.:				4.48	4.49	Ave.: 4.49				4.59	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 16:58 to 17:20 Depth of Water (meter): 8.9 Wet bulb calibration for DO meter: 8.39 mg/L (99.5 %) (25.3 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.5			7.9				
Temp. (°C)	:	25.1	25.0	Ave.: 25.1	24.9	25.0	Ave.: 25.0	24.8	24.9	Ave.: 24.9		
pH	:	7.15	7.17	Ave.: 7.16	7.22	7.20	Ave.: 7.21	7.16	7.18	Ave.: 7.17		
Salinity (ppt)	:	25.0	24.9	Ave.: 25.0	25.0	25.1	Ave.: 25.1	25.2	25.2	Ave.: 25.2		
D.O. (mg/L)	:	6.28	6.30	Ave.: 6.29	6.39	6.41	Ave.: 6.40	6.23	6.24	Ave.: 6.24		
D.O.S. (%)	:	87.6	87.9	Ave.: 87.8	89.0	89.4	Ave.: 89.2	86.7	86.8	Ave.: 86.8		
Turbidity (NTU)	:	2.88	2.91	Ave.: 2.90	2.88	2.92	Ave.: 2.90	2.65	2.73	Ave.: 2.69	2.83	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y / [✓ N] If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows :

Field Operator	Tong Chung Hong	Checked by		Laboratory Staff		Checked by	
Date	12 - 11 - 2013	Date	12/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Cond. n)**

Sampling Date : 14.11.2013 Weather Condition : cloudy Ambient Temperature (°C) : 24 Sea Conditions: Calm / Small Wave / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 11:47 to 12:13 Depth of Water (meter): 9.2 Wet bulb calibration for DO meter: 8.43 mg/L (99.4 %) (25 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.6			8.2				
Temp. (°C)	:	25.0	24.9	Ave.: 25.0	24.9	24.8	Ave.: 24.9	24.8	24.7	Ave.: 24.8		
pH	:	7.31	7.32	Ave.: 7.31	7.27	7.28	Ave.: 7.28	7.34	7.36	Ave.: 7.35		
Salinity (ppt)	:	25.0	24.9	Ave.: 25.0	25.0	25.1	Ave.: 25.1	25.2	25.2	Ave.: 25.2		
D.O. (mg/L)	:	6.13	6.19	Ave.: 6.16	6.05	6.07	Ave.: 6.06	6.01	6.08	Ave.: 6.05		
D.O.S. (%)	:	85.2	86.0	Ave.: 85.6	84.6	84.9	Ave.: 84.8	84.1	85.1	Ave.: 84.6		
Turbidity (NTU)	:	7.24	7.25	Ave.: 7.25	7.48	7.50	Ave.: 7.49	7.01	7.04	Ave.: 7.03	7.25	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 11:14 to 11:39 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.40 mg/L (99.2 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	24.9	25.0	Ave.: 25.0										24.9	24.8	Ave.: 24.9										
pH	:	7.20	7.21	Ave.: 7.21										7.16	7.18	Ave.: 7.17										
Salinity (ppt)	:	25.0	25.1	Ave.: 25.1						Ave.:				25.1	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.29	6.32	Ave.: 6.31	5.0	4.2	✓			Ave.:	5.0	4.2		6.15	6.12	Ave.: 6.14	4.7	2.0	✓							
D.O.S. (%)	:	87.5	87.7	Ave.: 87.6						Ave.:				86.1	85.7	Ave.: 85.9										
Turbidity (NTU)	:	14.6	14.4	Ave.: 14.5						Ave.:				14.2	14.1	Ave.: 14.2				14.3	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conditi**

Station: SR4 Duration: 10:43 to 11:06 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	25.0	24.9	Ave.: 25.0										24.9	24.9	Ave.: 24.9										
pH	:	7.19	7.20	Ave.: 7.20										7.25	7.31	Ave.: 7.28										
Salinity (ppt)	:	25.1	25.0	Ave.: 25.1						Ave.:				25.1	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.31	6.35	Ave.: 6.33	5.0	4.2	✓			Ave.:	5.0	4.2		6.40	6.32	Ave.: 6.36	4.7	2.0	✓							
D.O.S. (%)	:	87.6	88.2	Ave.: 87.9						Ave.:				88.9	87.8	Ave.: 88.4										
Turbidity (NTU)	:	15.4	15.5	Ave.: 15.5						Ave.:				18.1	17.8	Ave.: 18.0				16.7	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 10:14 to 10:38 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.38 mg/L (99.2 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.7	24.8	Ave.: 24.8										
pH	:	7.23	7.24	Ave.: 7.24										7.26	7.27	Ave.: 7.27										
Salinity (ppt)	:	25.0	25.1	Ave.: 25.1						Ave.:				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.09	6.05	Ave.: 6.07	5.0	4.2	✓			Ave.:	5.0	4.2		6.06	6.11	Ave.: 6.09	4.7	2.0	✓							
D.O.S. (%)	:	84.6	84.0	Ave.: 84.3						Ave.:				84.2	84.9	Ave.: 84.6										
Turbidity (NTU)	:	16.0	15.7	Ave.: 15.9						Ave.:				16.5	16.6	Ave.: 16.6				16.2	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 09:43 to 10:07 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	24.9	24.8	Ave.: 24.9				24.8	24.9	24.9				24.8	24.7	Ave.: 24.8										
pH	:	7.25	7.26	Ave.: 7.26				7.23	7.24	7.34				7.31	7.34	Ave.: 7.33										
Salinity (ppt)	:	24.9	25.0	Ave.: 26.0				25.1	25.0	Ave.: 25.1				25.1	25.2	Ave.: 26.2										
D.O. (mg/L)	:	6.16	6.12	Ave.: 6.14	5.0	4.2	✓	6.21	6.15	Ave.: 6.18	5.0	4.2	✓	6.26	6.24	Ave.: 6.25	4.7	2.0	✓							
D.O.S. (%)	:	86.6	85.1	Ave.: 85.4				86.9	86.1	Ave.: 86.5				87.6	87.4	Ave.: 87.5										
Turbidity (NTU)	:	6.54	6.57	Ave.: 6.56				6.48	6.52	Ave.: 6.50				6.60	6.63	Ave.: 6.62				6.56	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conditio..)**

Station: IS(Mf)9 Duration: 09:13 to 09:37 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.30 mg/L (99.4 %) (25 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	25.0	24.9	Ave.: 25.0										24.8	24.9	Ave.: 24.9										
pH	:	7.14	7.15	Ave.: 7.15										7.25	7.27	Ave.: 7.26										
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2						Ave.:				25.3	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.14	6.12	Ave.: 6.13	5.0	4.2	✓			Ave.:	5.0	4.2		6.22	6.20	Ave.: 6.21	4.7	2.0	✓							
D.O.S. (%)	:	85.3	85.1	Ave.: 85.2						Ave.:				87.0	86.8	Ave.: 86.9										
Turbidity (NTU)	:	10.6	10.8	Ave.: 10.7						Ave.:				10.2	9.8	Ave.: 10.0				10.4	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 08:43 to 09:07 Depth of Water (meter): 9.2 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.6			8.2					
Temp. (°C)	:	24.8	24.9	Ave.: 24.9	24.8	24.7	Ave.: 24.8	24.8	24.8	Ave.: 24.8			
pH	:	7.34	7.32	Ave.: 7.33	7.37	7.38	Ave.: 7.38	7.24	7.25	Ave.: 7.25			
Salinity (ppt)	:	25.1	25.0	Ave.: 25.1	25.1	25.1	Ave.: 25.1	25.2	25.3	Ave.: 25.3			
D.O. (mg/L)	:	6.04	6.08	Ave.: 6.06	6.11	6.06	Ave.: 6.09	6.13	6.11	Ave.: 6.12			
D.O.S. (%)	:	83.9	84.5	Ave.: 84.2	85.5	84.8	Ave.: 85.2	85.2	85.5	Ave.: 85.4		120%	130%
Turbidity (NTU)	:	6.86	6.88	Ave.: 6.87	6.63	6.65	Ave.: 6.64	6.36	6.33	Ave.: 6.35	6.62	7.94	8.60
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? ~~Y~~/ N If yes, elaboration is as follows: ____________

Any notable pollutant by others near monitoring site ? ~~Y~~/ N If yes, elaboration is as follows : ____________

Field Operator	Jacky Cheung	Checked by		Laboratory Staff		Checked by	
Date	14. 11. 2013	Date	14/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 14/11/2013 Weather Condition : Sunny Ambient Temperature (°C) : 23 Sea Conditions: Calm / Small Wave / [✓ Great Wave] Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 15:04 to 15:21 Depth of Water (meter): 9.8 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.9			8.8					
Temp. (°C)	:	25.1	25.0	Ave.: 25.1	25.0	25.0	Ave.: 25.0	25.0	25.0	Ave.: 25.0			
pH	:	7.30	7.34	Ave.: 7.32	7.28	7.30	Ave.: 7.29	7.30	7.34	Ave.: 7.32			
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2	25.0	25.2	Ave.: 25.1	25.3	25.2	Ave.: 25.3			
D.O. (mg/L)	:	6.22	6.18	Ave.: 6.20	6.10	6.06	Ave.: 6.08	6.04	6.10	Ave.: 6.07			
D.O.S. (%)	:	86.5	85.9	Ave.: 86.2	84.9	84.4	Ave.: 84.7	84.2	85.0	Ave.: 84.6		120%	130%
Turbidity (NTU)	:	7.18	7.26	Ave.: 7.22	7.44	7.52	Ave.: 7.48	7.11	7.07	Ave.: 7.09	7.26	8.7	9.4
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 15:30 to 15:52 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.2	25.0	Ave.: 25.1										
pH	:	7.24	7.20	Ave.: 7.22										7.18	7.23	Ave.: 7.21										
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2						Ave.:				25.3	25.2	Ave.: 25.3										
D.O. (mg/L)	:	6.34	6.30	Ave.: 6.32	5.0	4.2	✓			Ave.:	5.0	4.2		6.18	6.22	Ave.: 6.20	4.7	2.0	✓							
D.O.S. (%)	:	88.2	87.7	Ave.: 88.0						Ave.:				86.1	86.7	Ave.: 86.4										
Turbidity (NTU)	:	14.8	14.3	Ave.: 14.6						Ave.:				14.0	14.4	Ave.: 14.2				14.4	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

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Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condiuon)**

Station: SR4 Duration: 16:02 to 16:22 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	25.1	25.0	Ave.: 25.1										25.0	25.2	Ave.: 25.1										
pH	:	7.22	7.24	Ave.: 7.23										7.24	7.26	Ave.: 7.25										
Salinity (ppt)	:	25.3	25.2	Ave.: 25.3						Ave.:				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.38	6.34	Ave.: 6.36	5.0	4.2	✓			Ave.:	5.0	4.2		6.44	6.46	Ave.: 6.45	4.7	2.0	✓							
D.O.S. (%)	:	88.9	88.4	Ave.: 88.7						Ave.:				89.7	90.0	Ave.: 89.9										
Turbidity (NTU)	:	15.0	15.4	Ave.: 15.2						Ave.:				18.4	18.0	Ave.: 18.2				16.7	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 16:33 to 16:53 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	25.0	25.1	Ave.: 25.1										25.0	25.2	Ave.: 25.1										
pH	:	7.20	7.22	Ave.: 7.21										7.24	7.28	Ave.: 7.26										
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2						Ave.:				25.1	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.10	6.15	Ave.: 6.13	5.0	4.2	✓			Ave.:	5.0	4.2		6.14	6.09	Ave.: 6.12	4.7	2.0	✓							
D.O.S. (%)	:	85.0	85.7	Ave.: 85.4						Ave.:				85.6	84.9	Ave.: 85.3										
Turbidity (NTU)	:	16.4	15.8	Ave.: 16.1						Ave.:				16.6	16.2	Ave.: 16.4				16.3	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 17:03 to 17:23 Depth of Water (meter): 7.8 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.9						6.8												
Temp. (°C)	:	25.0	25.0	Ave.: 25.0				24.9	25.0	25.0				25.0	25.0	Ave.: 25.0										
pH	:	7.23	7.25	Ave.: 7.24				7.22	7.19	7.21				7.30	7.28	Ave.: 7.29										
Salinity (ppt)	:	25.0	25.2	Ave.: 25.1				25.2	25.3	Ave.: 25.3				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.18	6.14	Ave.: 6.16	5.0	4.2	✓	6.22	6.20	Ave.: 6.21	5.0	4.2	✓	6.26	6.22	Ave.: 6.24	4.7	2.0	✓							
D.O.S. (%)	:	86.1	85.6	Ave.: 85.9				86.7	86.4	Ave.: 86.6				87.2	86.7	Ave.: 87.0										
Turbidity (NTU)	:	6.48	6.54	Ave.: 6.51				6.50	6.54	Ave.: 6.52				6.64	6.58	Ave.: 6.61				6.55	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condi..on)**

Station: IS(Mf)9 Duration: 17:34 to 17:55 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	25.1	25.1	Ave.: 25.1										25.0	25.1	Ave.: 25.1										
pH	:	7.10	7.14	Ave.: 7.12										7.22	7.25	Ave.: 7.24										
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2						Ave.:				25.3	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.10	6.14	Ave.: 6.12	5.0	4.2	✓			Ave.:	5.0	4.2		6.18	6.16	Ave.: 6.17	4.7	2.0	✓							
D.O.S. (%)	:	85.0	85.5	Ave.: 85.3						Ave.:				86.1	85.8	Ave.: 86.0										
Turbidity (NTU)	:	10.8	10.4	Ave.: 10.6						Ave.:				10.0	10.2	Ave.: 10.1				10.4	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 18:08 to 18:28 Depth of Water (meter): 9.0 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.5			8.0				
Temp. (°C)	:	25.0	25.1	Ave.: 25.1	25.1	25.0	Ave.: 25.1	24.9	25.1	Ave.: 25.0		
pH	:	7.30	7.33	Ave.: 7.32	7.36	7.40	Ave.: 7.38	7.26	7.23	Ave.: 7.25		
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2	25.0	25.0	Ave.: 25.0	25.2	25.3	Ave.: 25.3		
D.O. (mg/L)	:	6.04	6.00	Ave.: 6.02	6.14	6.08	Ave.: 6.11	6.10	6.06	Ave.: 6.08		
D.O.S. (%)	:	84.2	83.6	Ave.: 83.9	85.6	84.7	Ave.: 85.2	85.0	84.4	Ave.: 84.7		
Turbidity (NTU)	:	6.90	6.86	Ave.: 6.88	6.64	6.68	Ave.: 6.66	6.36	6.44	Ave.: 6.40	6.65	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y [✓ N] If yes, elaboration is as follows: __________

Any notable pollutant by others near monitoring site ? Y [✓ N] If yes, elaboration is as follows : __________

Field Operator	Lee Kwai Cheung	Checked by		Laboratory Staff		Checked by	
Date	14/11/2013	Date	14/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**
Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 16.11.2013   Weather Condition : Fine   Ambient Temperature (°C) : 24   Sea Conditions: ~~Calm~~ / [✓ Small Wave] / ~~Great~~ Wave   Tide Mode: Ebb Tide   Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5   Duration: 13:20 to 13:47   Depth of Water (meter): 9.4   Wet bulb calibration for DO meter: 8.43 mg/L (99.4 %) (25 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.7			8.4				
Temp. (°C)	:	24.9	24.9	Ave.: 24.9	24.8	24.7	Ave.: 24.8	24.7	24.6	Ave.: 24.7		
pH	:	7.20	7.21	Ave.: 7.21	7.16	7.17	Ave.: 7.17	7.23	7.24	Ave.: 7.24		
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2	25.1	25.2	Ave.: 25.2	25.2	25.3	Ave.: 25.3		
D.O. (mg/L)	:	6.21	6.27	Ave.: 6.24	6.13	6.15	Ave.: 6.14	6.09	6.11	Ave.: 6.10		
D.O.S. (%)	:	86.2	87.0	Ave.: 86.6	85.2	85.5	Ave.: 85.4	84.7	84.9	Ave.: 84.8		
Turbidity (NTU)	:	6.59	6.71	Ave.: 6.65	7.11	7.19	Ave.: 7.15	8.06	8.14	Ave.: 8.10	7.30	-
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a   Duration: 12:28 to 12:58   Depth of Water (meter): 4.6   Wet bulb calibration for DO meter: 8.40 mg/L (99.2 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.8	24.7	Ave.: 24.8										
pH	:	7.09	7.10	Ave.: 7.10										7.09	7.07	Ave.: 7.08										
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2						Ave.:				25.3	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.37	6.40	Ave.: 6.39	5.0	4.2	✓			Ave.:	5.0	4.2		6.23	6.20	Ave.: 6.22	4.7	2.0	✓							
D.O.S. (%)	:	88.5	89.0	Ave.: 88.8						Ave.:				87.2	86.7	Ave.: 87.0										
Turbidity (NTU)	:	8.49	8.55	Ave.: 8.52						Ave.:				9.11	9.08	Ave.: 9.10				8.81	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conu..ion)**

Station: SR4 Duration: 11:57 to 12:20 Depth of Water (meter): 4.2 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.2												
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.8	24.7	Ave.: 24.8										
pH	:	7.08	7.09	Ave.: 7.09										7.16	7.20	Ave.: 7.18										
Salinity (ppt)	:	25.2	25.1	Ave.: 25.2						Ave.:				25.2	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.22	6.26	Ave.: 6.24	5.0	4.2	✓			Ave.:	5.0	4.2		6.31	6.23	Ave.: 6.27	4.7	2.0	✓							
D.O.S. (%)	:	86.3	86.9	Ave.: 86.6						Ave.:				87.6	86.5	Ave.: 87.1										
Turbidity (NTU)	:	7.84	7.89	Ave.: 7.87						Ave.:				8.10	8.12	Ave.: 8.11				7.99	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 11:28 to 11:52 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.38 mg/L (99.2 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	24.8	24.7	Ave.: 24.8										24.6	24.7	Ave.: 24.7										
pH	:	7.16	7.18	Ave.: 7.17										7.21	7.19	Ave.: 7.20										
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2						Ave.:				25.2	25.2	Ave.: 25.2										
D.O. (mg/L)	:	6.18	6.14	Ave.: 6.16	5.0	4.2	✓			Ave.:	5.0	4.2		6.19	6.15	Ave.: 6.17	4.7	2.0	✓							
D.O.S. (%)	:	85.8	85.2	Ave.: 85.5						Ave.:				85.9	85.4	Ave.: 85.7										
Turbidity (NTU)	:	7.01	7.04	Ave.: 7.03						Ave.:				7.28	7.24	Ave.: 7.26				7.14	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 11:07 to 11:21 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	24.8	24.7	Ave.: 24.8				24.7	24.8	24.8				24.7	24.7	Ave.: 24.7										
pH	:	7.14	7.15	Ave.: 7.15				7.12	7.13	7.13				7.20	7.23	Ave.: 7.22										
Salinity (ppt)	:	25.1	25.1	Ave.: 25.1				25.2	25.1	Ave.: 25.2				25.2	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.20	6.24	Ave.: 6.22	5.0	4.2	✓	6.29	6.23	Ave.: 6.26	5.0	4.2	✓	6.32	6.34	Ave.: 6.33	4.7	2.0	✓							
D.O.S. (%)	:	86.1	86.7	Ave.: 86.4				87.4	86.5	Ave.: 87.0				87.8	88.1	Ave.: 88.0										
Turbidity (NTU)	:	6.13	6.14	Ave.: 6.14				6.99	7.01	Ave.: 7.00				7.39	7.36	Ave.: 7.37				6.84	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

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Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 10:37 to 11:01 Depth of Water (meter): 4.2 Wet bulb calibration for DO meter: 8.30 mg/L (99.4 %) (25 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.2												
Temp. (°C)	:	24.8	24.9	Ave.: 24.9										24.7	24.8	Ave.: 24.8										
pH	:	7.03	7.02	Ave.: 7.03										7.17	7.16	Ave.: 7.17										
Salinity (ppt)	:	25.2	25.1	Ave.: 25.2						Ave.:				25.4	25.3	Ave.: 25.4										
D.O. (mg/L)	:	6.23	6.21	Ave.: 6.22	5.0	4.2	✓			Ave.:	5.0	4.2		6.31	6.33	Ave.: 6.32	4.7	2.0	✓							
D.O.S. (%)	:	86.5	86.2	Ave.: 86.4						Ave.:				87.6	88.0	Ave.: 87.8										
Turbidity (NTU)	:	8.60	8.71	Ave.: 8.66						Ave.:				9.94	9.69	Ave.: 9.82				9.24	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 10:17 to 10:31 Depth of Water (meter): 9.0 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.5			8.0					
Temp. (°C)	:	24.7	24.8	Ave.: 24.8	24.7	24.6	Ave.: 24.7	24.7	24.7	Ave.: 24.7			
pH	:	7.21	7.23	Ave.: 7.22	7.25	7.26	Ave.: 7.25	7.12	7.14	Ave.: 7.13			
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2	25.2	25.1	Ave.: 25.2	25.3	25.3	Ave.: 25.3			
D.O. (mg/L)	:	6.12	6.16	Ave.: 6.14	6.19	6.14	Ave.: 6.17	6.21	6.23	Ave.: 6.22			
D.O.S. (%)	:	84.9	85.4	Ave.: 85.2	86.0	85.3	Ave.: 85.7	86.2	86.6	Ave.: 86.4		**120%**	**130%**
Turbidity (NTU)	:	7.08	7.12	Ave.: 7.10	7.73	7.44	Ave.: 7.59	8.20	8.13	Ave.: 8.17	7.62	9.14	9.90
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? ~~Y~~ / N If yes, elaboration is as follows: ______

Any notable pollutant by others near monitoring site ? ~~Y~~ / N If yes, elaboration is as follows : ______

Field Operator	Jacky Cheung / Leung	Checked by		Laboratory Staff		Checked by	
Date	16. 11. 2013	Date	16/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

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Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 16.11.2013 Weather Condition : Fine Ambient Temperature (°C) : 24 Sea Conditions: ~~Calm~~ / Small Wave / ~~Great Wave~~ Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 16:01 to 16:21 Depth of Water (meter): 9.8 Wet bulb calibration for DO meter: 8.43 mg/L (99.4 %) (25 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0											
Temp. (°C)	:	24.8	24.7	Ave.: 24.8	24.7	24.7	Ave.: 24.7	24.6	24.5	Ave.: 24.6			
pH	:	7.22	7.24	Ave.: 7.23	7.20	7.21	Ave.: 7.21	7.26	7.28	Ave.: 7.27			
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3	25.3	25.4	Ave.: 25.4	25.4	25.3	Ave.: 25.4			
D.O. (mg/L)	:	6.27	6.33	Ave.: 6.30	6.19	6.21	Ave.: 6.20	6.15	6.17	Ave.: 6.16			
D.O.S. (%)	:	87.0	87.9	Ave.: 87.5	86.0	86.3	Ave.: 86.2	85.5	85.7	Ave.: 85.6		120%	130%
Turbidity (NTU)	:	6.51	6.62	Ave.: 6.57	7.03	7.11	Ave.: 7.07	7.97	8.05	Ave.: 8.01	7.22	8.66	9.38
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 16:28 to 16:48 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.40 mg/L (99.2 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	24.	24.	Ave.: 24.										24.6	24.7	Ave.: 24.7										
pH	:	7.13	7.20	Ave.: 7.17										7.14	7.13	Ave.: 7.14										
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3						Ave.:				25.4	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.43	6.45	Ave.: 6.44	5.0	4.2	✓			Ave.:	5.0	4.2		6.26	6.29	Ave.: 6.28	4.7	2.0	✓							
D.O.S. (%)	:	89.2	89.5	Ave.:						Ave.:				87.5	87.9	Ave.: 87.7										
Turbidity (NTU)	:	8.41	8.46	Ave.: 8.44						Ave.:				9.02	8.99	Ave.: 9.01				8.72	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 16:58 to 17:18 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	24.7	24.8	Ave.: 24.8										24.7	24.6	Ave.: 24.7										
pH	:	7.11	7.13	Ave.: 7.12										7.19	7.22	Ave.: 7.21										
Salinity (ppt)	:	25.3	25.2	Ave.: 25.3						Ave.:				25.4	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.28	6.32	Ave.: 6.30	5.0	4.2	✓			Ave.:	5.0	4.2		6.37	6.29	Ave.: 6.33	4.7	2.0	✓							
D.O.S. (%)	:	87.0	87.5	Ave.: 87.3						Ave.:				88.4	87.2	Ave.: 87.8										
Turbidity (NTU)	:	7.75	7.79	Ave.: 7.77						Ave.:				8.01	8.04	Ave.: 8.03				7.90	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 17:28 to 17:53 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.38 mg/L (99.2 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	24.7	24.6	Ave.: 24.7										24.6	24.5	Ave.: 24.6										
pH	:	7.19	7.20	Ave.: 7.20										7.24	7.21	Ave.: 7.23										
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3						Ave.:				25.4	25.3	Ave.: 25.4										
D.O. (mg/L)	:	6.24	6.20	Ave.: 6.22	5.0	4.2	✓			Ave.:	5.0	4.2		6.25	6.21	Ave.: 6.23	4.7	2.0	✓							
D.O.S. (%)	:	86.5	86.0	Ave.:						Ave.:				86.7	86.2	Ave.: 86.5										
Turbidity (NTU)	:	6.92	6.95	Ave.: 6.94						Ave.:				7.22	7.18	Ave.: 7.20				7.07	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 18:02 to 18:27 Depth of Water (meter): 7.2 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0																								
Temp. (°C)	:	24.8	24.7	Ave.: 24.8				24.7	24.7	24.7				24.6	24.5	Ave.: 24.6										
pH	:	7.17	7.18	Ave.: 7.18				7.15	7.14	7.15				7.23	7.25	Ave.: 7.24										
Salinity (ppt)	:	25.2	25.1	Ave.: 25.2				25.2	25.1	Ave.: 25.2				25.3	25.2	Ave.: 25.3										
D.O. (mg/L)	:	6.26	6.30	Ave.: 6.28	5.0	4.2	✓	6.35	6.30	Ave.: 6.33	5.0	4.2	✓	6.38	6.39	Ave.: 6.39	4.7	2.0	✓							
D.O.S. (%)	:	86.9	87.4	Ave.: 87.2				88.1	87.4	Ave.: 87.8				88.6	88.7	Ave.: 88.7										
Turbidity (NTU)	:	6.04	6.05	Ave.: 6.05				6.91	6.92	Ave.: 6.92				7.30	7.26	Ave.: 7.28				6.75	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Co..dition)**

Station: IS(Mf)9 Duration: 18:36 to 19:01 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.30 mg/L (99.4 %) (25. °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	24.7	24.8	Ave.: 24.8										24.8	24.7	Ave.: 24.7										
pH	:	7.06	7.08	Ave.: 7.07										7.20	7.19	Ave.: 7.20										
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2						Ave.:				25.3	25.2	Ave.: 25.3										
D.O. (mg/L)	:	6.29	6.27	Ave.: 6.28	5.0	4.2	✓			Ave.:	5.0	4.2		6.37	6.39	Ave.: 6.38	4.7	2.0	✓							
D.O.S. (%)	:	87.2	87.0	Ave.: 87.1						Ave.:				88.4	88.7	Ave.: 88.6										
Turbidity (NTU)	:	8.51	8.62	Ave.: 8.57						Ave.:				9.85	9.60	Ave.: 9.73				9.15	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 19:12 to 19:31 Depth of Water (meter): 9.4 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.7			8.4				
Temp. (°C)	:	24.7	24.7	Ave.: 24.7	24.6	24.7	Ave.: 24.6	24.6	24.5	Ave.: 24.6		
pH	:	7.04	7.26	Ave.: 7.25	7.28	7.29	Ave.: 7.29	7.15	7.16	Ave.: 7.16		
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3	25.3	25.4	Ave.: 25.4	25.4	25.4	Ave.: 25.4		
D.O. (mg/L)	:	6.21	6.25	Ave.: 6.23	6.28	6.23	Ave.: 6.26	6.30	6.32	Ave.: 6.31		
D.O.S. (%)	:	86.2	86.7	Ave.: 86.5	87.2	86.5	Ave.: 86.9	87.4	87.8	Ave.: 87.6		
Turbidity (NTU)	:	6.99	7.04	Ave.: 7.02	7.64	7.35	Ave.: 7.50	8.11	8.05	Ave.: 8.08	7.53	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? ~~Y~~ / N If yes, elaboration is as follows: ____________

Any notable pollutant by others near monitoring site ? ~~Y~~ / N If yes, elaboration is as follows : ____________

Field Operator	Jacky Chaing / Cang	Checked by		Laboratory Staff		Checked by	
Date	16.11.2013	Date	16/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Cond. on)**

Sampling Date : 19.11.2013 Weather Condition : cloudy Ambient Temperature (°C) : 24 Sea Conditions: ~~Calm~~ / Small Wave / ~~Great Wave~~ Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 15:21 to 15:41 Depth of Water (meter): 9.4 Wet bulb calibration for DO meter: 8.43 mg/L (99.4 %) (25 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.7			8.4				
Temp. (°C)	:	23.0	23.1	Ave.: 23.1	23.0	23.0	Ave.: 23.0	23.0	23.1	Ave.: 23.1		
pH	:	7.18	7.17	Ave.: 7.18	7.31	7.32	Ave.: 7.32	7.38	7.39	Ave.: 7.39		
Salinity (ppt)	:	25.2	25.1	Ave.: 25.2	25.2	25.2	Ave.: 25.2	25.3	25.4	Ave.: 25.4		
D.O. (mg/L)	:	6.30	6.36	Ave.: 6.33	6.22	6.24	Ave.: 6.23	6.18	6.20	Ave.: 6.19		
D.O.S. (%)	:	85.1	85.9	Ave.: 85.5	84.0	84.2	Ave.: 84.1	83.4	83.6	Ave.: 83.5		
Turbidity (NTU)	:	13.4	13.7	Ave.: 13.6	14.8	13.5	Ave.: 14.2	15.1	15.9	Ave.: 15.5	14.4	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 14:51 to 15:01 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.40 mg/L (99.2 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	23.0	22.9	Ave.: 23.0										23.1	23.1	Ave.: 23.1										
pH	:	7.24	7.25	Ave.: 7.25										7.24	7.22	Ave.: 7.23										
Salinity (ppt)	:	25.1	25.1	Ave.: 25.1						Ave.:				25.3	25.2	Ave.: 25.3										
D.O. (mg/L)	:	6.46	6.49	Ave.: 6.48	5.0	4.2	✓			Ave.:	5.0	4.2		6.32	6.29	Ave.: 6.31	4.7	2.0	✓							
D.O.S. (%)	:	87.3	87.6	Ave.: 87.5						Ave.:				85.3	84.9	Ave.: 85.1										
Turbidity (NTU)	:	12.4	12.1	Ave.: 12.3						Ave.:				11.8	12.1	Ave.: 12.0				✓	27.5	27.5 and 120% of CS(Mf)3	47.0	47.0 and 130% of CS(Mf)3	✓	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conc on)**

Station: SR4 Duration: 14:16 to 14:31 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	23.0	22.9	Ave.: 23.0										23.0	23.1	Ave.: 23.1										
pH	:	7.26	7.28	Ave.: 7.27										7.34	7.37	Ave.: 7.36										
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3						Ave.:				25.3	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.37	6.41	Ave.: 6.39	5.0	4.2	✓			Ave.:	5.0	4.2		6.46	6.38	Ave.: 6.42	4.7	2.0	✓							
D.O.S. (%)	:	86.0	86.5	Ave.: 86.3						Ave.:				87.1	86.1	Ave.: 86.6										
Turbidity (NTU)	:	12.9	12.0	Ave.: 12.5						Ave.:				11.8	11.1	Ave.: 11.5				12.0	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 13:46 to 14:01 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.38 mg/L (99.2 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	23.0	23.1	Ave.: 23.0										23.0	22.9	Ave.: 23.0										
pH	:	7.34	7.35	Ave.: 7.35										7.39	7.36	Ave.: 7.38										
Salinity (ppt)	:	25.2	25.2	Ave.: 25.2						Ave.:				25.3	25.2	Ave.: 25.3										
D.O. (mg/L)	:	6.33	6.29	Ave.: 6.31	5.0	4.2	✓			Ave.:	5.0	4.2		6.34	6.30	Ave.: 6.32	4.7	2.0	✓							
D.O.S. (%)	:	85.5	84.9	Ave.: 85.2						Ave.:				85.5	85.1	Ave.: 85.3										
Turbidity (NTU)	:	10.7	11.9	Ave.: 11.3						Ave.:				13.1	13.8	Ave.: 13.5				12.4	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 13:16 to 13:31 Depth of Water (meter): 7.4 Wet bulb calibration for DO meter: 8 mg/L (99.5 %) (25.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.7						6.4												
Temp. (°C)	:	23.1	23.0	Ave.: 23.1				23.1	23.1	23.1				23.1	23.0	Ave.: 23.0										
pH	:	7.32	7.33	Ave.: 7.33				7.30	7.29	7.30				7.38	7.40	Ave.: 7.39										
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2				25.3	25.2	Ave.: 25.2				25.3	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.35	6.39	Ave.: 6.37	5.0	4.2	✓	6.44	6.41	Ave.: 6.43	5.0	4.2	✓	6.47	6.48	Ave.: 6.48	4.7	2.0	✓							
D.O.S. (%)	:	85.7	86.2	Ave.: 86.0				86.9	86.5	Ave.: 86.7				87.3	87.4	Ave.: 87.4										
Turbidity (NTU)	:	12.2	13.7	Ave.: 13.0				13.2	12.6	Ave.: 12.9				14.6	14.7	Ave.: 14.7				13.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conc. on)**

Station: IS(Mf)9 Duration: 12:41 to 13:01 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.30 mg/L (99.4 %) (25 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	23.1	23.1	Ave.: 23.1										23.0	23.1	Ave.: 23.1										
pH	:	7.21	7.24	Ave.: 7.23										7.35	7.34	Ave.: 7.35										
Salinity (ppt)	:	25.2	25.1	Ave.: 25.2						Ave.:				25.2	25.3	Ave.: 25.3										
D.O. (mg/L)	:	6.38	6.36	Ave.: 6.37	5.0	4.2	✓			Ave.:	5.0	4.2		6.46	6.48	Ave.: 6.47	4.7	2.0	✓							
D.O.S. (%)	:	86.1	85.9	Ave.: 86.0						Ave.:				87.1	87.5	Ave.: 87.3										
Turbidity (NTU)	:	12.7	13.8	Ave.: 13.3						Ave.:				11.9	11.4	Ave.: 11.7				12.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 12:11 to 12:31 Depth of Water (meter): 9.2 Wet bulb calibration for DO meter: 8.36 mg/L (99.2 %) (25.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.6			8.2					
Temp. (°C)	:	23.0	23.1	Ave.: 23.1	23.0	23.0	Ave.: 23.0	22.9	23.0	Ave.: 23.0			
pH	:	7.27	7.29	Ave.: 7.28	7.31	7.32	Ave.: 7.32	7.18	7.19	Ave.: 7.19			
Salinity (ppt)	:	25.1	25.2	Ave.: 25.2	25.3	25.3	Ave.: 25.3	25.4	25.3	Ave.: 25.4			
D.O. (mg/L)	:	6.30	6.34	Ave.: 6.32	6.37	6.32	Ave.: 6.35	6.39	6.41	Ave.: 6.40			
D.O.S. (%)	:	85.1	85.7	Ave.: 85.4	86.1	85.4	Ave.: 85.8	86.5	86.7	Ave.: 86.6		120%	130%
Turbidity (NTU)	:	9.94	9.38	Ave.: 9.66	9.72	9.90	Ave.: 9.81	11.4	10.2	Ave.: 10.8	10.1	12.1	13.1
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site ? ~~Y~~/N If yes, elaboration is as follows :

Field Operator	Jacky Cheung	Checked by		Laboratory Staff		Checked by	
Date	19 . 11 . 2013	Date	19/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 19-11-2013 Weather Condition : cloudy Ambient Temperature (°C) : 23 Sea Conditions: Calm / [✓ Small] Wave / Great Wave Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 17:25 to 17:43 Depth of Water (meter): 10.0 Wet bulb calibration for DO meter: 8.41 mg/L (99.0 %) (24.9 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			5.0			9.0					
Temp. (°C)	:	23.1	23.1	Ave.: 23.1	23.1	23.0	Ave.: 23.0	23.0	23.0	Ave.: 23.0			
pH	:	7.20	7.18	Ave.: 7.19	7.39	7.37	Ave.: 7.38	7.41	7.42	Ave.: 7.42			
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3	25.4	25.4	Ave.: 25.4	25.3	25.4	Ave.: 25.4			
D.O. (mg/L)	:	6.42	6.40	Ave.: 6.41	6.32	6.38	Ave.: 6.35	6.22	6.20	Ave.: 6.21			
D.O.S. (%)	:	86.7	86.4	Ave.: 86.6	85.3	86.1	Ave.: 85.7	84.0	83.7	Ave.: 83.9		120%	130%
Turbidity (NTU)	:	14.5	14.3	Ave.: 14.4	13.8	13.2	Ave.: 13.5	15.8	15.2	Ave.: 15.5	14.46	17.35	18.80
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 17:58 to 18:18 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.42 mg/L (99.3 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	23.1	23.1	Ave.: 23.1										23.1	23.0	Ave.: 23.1										
pH	:	7.21	7.22	Ave.: 7.22										7.39	7.38	Ave.: 7.39										
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3						Ave.:				25.3	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.47	6.48	Ave.: 6.48	5.0	4.2	✓			Ave.:	5.0	4.2		6.40	6.36	Ave.: 6.38	4.7	2.0	✓							
D.O.S. (%)	:	87.3	87.5	Ave.: 87.4						Ave.:				86.4	85.9	Ave.: 86.2										
Turbidity (NTU)	:	12.8	12.9	Ave.: 12.9						Ave.:				11.7	11.1	Ave.: 11.4				12.2	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 18:38 to 19:59 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.38 mg/L (99.2 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	23.1	23.2	Ave.: 23.2										23.0	23.1	Ave.: 23.1										
pH	:	7.30	7.31	Ave.: 7.31										7.39	7.38	Ave.: 7.39										
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3						Ave.:				25.4	25.3	Ave.: 25.4										
D.O. (mg/L)	:	6.47	6.43	Ave.: 6.45	5.0	4.2	✓			Ave.:	5.0	4.2		6.53	6.57	Ave.: 6.55	4.7	2.0	✓							
D.O.S. (%)	:	87.3	86.8	Ave.: 87.1						Ave.:				88.2	88.7	Ave.: 88.5										
Turbidity (NTU)	:	13.0	13.8	Ave.: 13.4						Ave.:				11.2	11.8	Ave.: 11.5				12.45	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 19:20 to 19:38 Depth of Water (meter): 5.6 Wet bulb calibration for DO meter: 8.36 mg/L (99.0 %) (24.9 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.6												
Temp. (°C)	:	23.1	23.1	Ave.: 23.1										23.1	23.1	Ave.: 23.1										
pH	:	7.39	7.41	Ave.: 7.40										7.41	7.42	Ave.: 7.42										
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3						Ave.:				25.4	25.5	Ave.: 25.5										
D.O. (mg/L)	:	6.27	6.30	Ave.: 6.29	5.0	4.2	✓			Ave.:	5.0	4.2		6.29	6.31	Ave.: 6.30	4.7	2.0	✓							
D.O.S. (%)	:	84.6	85.1	Ave.: 84.9						Ave.:				84.9	85.2	Ave.: 85.1										
Turbidity (NTU)	:	11.4	11.6	Ave.: 11.5						Ave.:				14.0	14.8	Ave.: 14.4				12.95	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 19:45 to 20:03 Depth of Water (meter): 7.8 Wet bulb calibration for DO meter: 8.39 mg/L (99.3 %) (25.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.9						6.8												
Temp. (°C)	:	23.2	23.2	Ave.: 23.2				23.1	23.1	23.1				23.1	23.0	Ave.: 23.1										
pH	:	7.42	7.41	Ave.: 7.42				7.34	7.35	7.35				7.40	7.41	Ave.: 7.41										
Salinity (ppt)	:	25.2	25.3	Ave.: 25.3				25.3	25.4	Ave.: 25.4				25.4	25.5	Ave.: 25.5										
D.O. (mg/L)	:	6.38	6.40	Ave.: 6.39	5.0	4.2	✓	6.35	6.36	Ave.: 6.36	5.0	4.2	✓	6.55	6.50	Ave.: 6.53	4.7	2.0	✓							
D.O.S. (%)	:	86.1	86.4	Ave.: 86.3				85.7	85.9	Ave.: 85.8				88.4	87.8	Ave.: 88.1										
Turbidity (NTU)	:	13.4	13.5	Ave.: 13.5				12.2	12.8	Ave.: 12.5				14.3	14.7	Ave.: 14.5				13.5	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condi‿n)**

Station: IS(Mf)9 Duration: 20:10 to 20:28 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.33 mg/L (99.6 %) (25 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	23.2	23.2	Ave.: 23.2										23.1	23.1	Ave.: 23.1										
pH	:	7.30	7.29	Ave.: 7.30										7.40	7.41	Ave.: 7.41										
Salinity (ppt)	:	25.3	25.3	Ave.: 25.3						Ave.:				25.3	25.4	Ave.: 25.4										
D.O. (mg/L)	:	6.47	6.49	Ave.: 6.48	5.0	4.2	✓			Ave.:	5.0	4.2		6.39	6.41	Ave.: 6.40	4.7	2.0	✓							
D.O.S. (%)	:	87.3	87.6	Ave.: 87.5						Ave.:				86.3	86.5	Ave.: 86.4										
Turbidity (NTU)	:	12.1	12.9	Ave.: 12.5						Ave.:				11.0	11.5	Ave.: 11.3				11.9	✓	27.5 and 120% of CS(Mf)5	✓	47.0 and 130% of CS(Mf)5	✓	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 20:35 to 20:55 Depth of Water (meter): 10.0 Wet bulb calibration for DO meter: 8.34 mg/L (99.7 %) (25.0 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			5.0			9.0				
Temp. (°C)	:	23.1	23.1	Ave.: 23.1	23.0	23.0	Ave.: 23.0	22.9	22.9	Ave.: 22.9		
pH	:	7.28	7.30	Ave.: 7.29	7.32	7.31	Ave.: 7.32	7.20	7.20	Ave.: 7.20		
Salinity (ppt)	:	25.3	25.2	Ave.: 25.3	25.4	25.4	Ave.: 25.4	25.5	25.4	Ave.: 25.5		
D.O. (mg/L)	:	6.40	6.38	Ave.: 6.39	6.50	6.46	Ave.: 6.48	6.33	6.30	Ave.: 6.32		
D.O.S. (%)	:	86.4	86.1	Ave.: 86.3	87.8	87.2	Ave.: 87.5	85.5	85.1	Ave.: 85.3		
Turbidity (NTU)	:	10.3	10.1	Ave.: 10.2	9.53	9.61	Ave.: 9.57	11.9	11.7	Ave.: 11.8	10.5	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y/[✓ N] If yes, elaboration is as follows: ________

Any notable pollutant by others near monitoring site ? Y/[✓ N] If yes, elaboration is as follows : ________

Field Operator	S.H. Lam	Checked by		Laboratory Staff		Checked by	
Date	19-11-2013	Date	19/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date 21-11-2017 Weather Condition : Cloudy Ambient Temperature (°C) : 23 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 8:08 to 8:32 Depth of Water (meter): 10.1 Wet bulb calibration for DO meter: 8.33 mg/L (99.8 %) (24.7 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			5.1			9.1					
Temp. (°C)	:	22.9	22.8	Ave.: 22.9	22.9	23.0	Ave.: 23.0	23.0	22.9	Ave.: 23.0			
pH	:	7.42	7.44	Ave.: 7.43	7.32	7.34	Ave.: 7.33	7.39	7.41	Ave.: 7.40			
Salinity (ppt)	:	24.2	24.1	Ave.: 24.2	24.2	24.3	Ave.: 24.3	24.4	24.3	Ave.: 24.4			
D.O. (mg/L)	:	7.37	7.39	Ave.: 7.38	7.11	7.13	Ave.: 7.12	6.92	6.94	Ave.: 6.93			
D.O.S. (%)	:	98.6	98.8	Ave.: 98.7	95.0	95.3	Ave.: 95.2	92.7	92.9	Ave.: 92.8		120%	130%
Turbidity (NTU)	:	7.42	7.47	Ave.: 7.45	8.00	8.06	Ave.: 8.03	7.27	7.30	Ave.: 7.29	7.59	9.10	9.86
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 8:38 to 9:02 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.32 mg/L (99.8 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	22.8	22.8	Ave.: 22.8										22.9	22.8	Ave.: 22.9										
pH	:	7.35	7.37	Ave.: 7.36										7.40	7.42	Ave.: 7.41										
Salinity (ppt)	:	24.1	24.1	Ave.: 24.1						Ave.:				24.2	24.3	Ave.: 24.3										
D.O. (mg/L)	:	7.34	7.36	Ave.: 7.35	5.0	4.2	✓			Ave.:	5.0	4.2		7.24	7.26	Ave.: 7.25	4.7	2.0	✓							
D.O.S. (%)	:	98.1	98.4	Ave.: 98.3						Ave.:				96.9	97.1	Ave.: 97.0										
Turbidity (NTU)	:	10.8	11.0	Ave.: 10.9						Ave.:				10.3	10.6	Ave.: 10.5				10.7	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Con ion)**

Station: SR4 Duration: 9:08 to 9:31 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.42 mg/L (99.5 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	22.9	23.0	Ave.: 23.0										23.0	23.0	Ave.: 23.0										
pH	:	7.24	7.26	Ave.: 7.25										7.19	7.18	Ave.: 7.19										
Salinity (ppt)	:	24.1	24.2	Ave.: 24.2						Ave.:				24.3	24.4	Ave.: 24.4										
D.O. (mg/L)	:	7.16	7.18	Ave.: 7.17	5.0	4.2	✓			Ave.:	5.0	4.2		6.99	7.01	Ave.: 7.00	4.7	2.0	✓							
D.O.S. (%)	:	95.7	95.9	Ave.: 95.8						Ave.:				93.5	93.8	Ave.: 93.7										
Turbidity (NTU)	:	9.31	9.37	Ave.: 9.34						Ave.:				10.2	10.6	Ave.: 10.4				9.87	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 9:37 to 10:01 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.44 mg/L (99.8 %) (24.7 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	22.9	22.9	Ave.: 22.9										23.0	23.1	Ave.: 23.1										
pH	:	7.33	7.35	Ave.: 7.34										7.36	7.37	Ave.: 7.37										
Salinity (ppt)	:	24.1	24.1	Ave.: 24.1						Ave.:				24.2	24.3	Ave.: 24.3										
D.O. (mg/L)	:	7.36	7.38	Ave.: 7.37	5.0	4.2	✓			Ave.:	5.0	4.2		7.11	7.13	Ave.: 7.12	4.7	2.0	✓							
D.O.S. (%)	:	98.4	98.7	Ave.: 98.6						Ave.:				95.1	95.4	Ave.: 95.3										
Turbidity (NTU)	:	7.85	7.90	Ave.: 7.88						Ave.:				8.84	8.90	Ave.: 8.87				8.37	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 10:07 to 10:32 Depth of Water (meter): 7.0 Wet bulb calibration for DO meter: 8.43 mg/L (99.8 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.5						6.0												
Temp. (°C)	:	23.0	23.0	Ave.: 23.0				22.9	23.0	23.0				23.0	23.1	Ave.: 23.1										
pH	:	7.12	7.14	Ave.: 7.13				7.19	7.21	7.20				7.11	7.09	Ave.: 7.10										
Salinity (ppt)	:	24.1	24.2	Ave.: 24.2				24.3	24.2	Ave.: 24.3				24.5	24.4	Ave.: 24.5										
D.O. (mg/L)	:	7.12	7.13	Ave.: 7.13	5.0	4.2	✓	6.82	6.84	Ave.: 6.83	5.0	4.2	✓	6.89	6.91	Ave.: 6.90	4.7	2.0	✓							
D.O.S. (%)	:	95.2	95.4	Ave.: 95.3				91.2	91.5	Ave.: 91.4				92.3	92.5	Ave.: 92.4										
Turbidity (NTU)	:	9.62	9.67	Ave.: 9.65				11.7	11.9	Ave.: 11.8				22.1	21.7	Ave.: 21.9				14.4	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: IS(Mf)9 Duration: 10:38 to 11:02 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.37 mg/L (99.5 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	22.9	22.9	Ave.: 22.9										23.0	22.9	Ave.: 23.0										
pH	:	7.42	7.44	Ave.: 7.43										7.34	7.36	Ave.: 7.35										
Salinity (ppt)	:	24.1	24.2	Ave.: 24.2						Ave.:				24.2	24.3	Ave.: 24.3										
D.O. (mg/L)	:	7.22	7.24	Ave.: 7.23	5.0	4.2	✓			Ave.:	5.0	4.2		7.04	7.06	Ave.: 7.05	4.7	2.0	✓							
D.O.S. (%)	:	96.6	96.9	Ave.: 96.8						Ave.:				94.1	94.4	Ave.: 94.3										
Turbidity (NTU)	:	13.5	14.2	Ave.: 13.9						Ave.:				13.1	12.8	Ave.: 13.0				13.4	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 11:08 to 11:38 Depth of Water (meter): 9.1 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (24.8 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.6			8.1				
Temp. (°C)	:	22.9	23.0	Ave.: 23.0	23.0	23.1	Ave.: 23.1	23.1	23.0	Ave.: 23.1		
pH	:	7.56	7.58	Ave.: 7.57	7.39	7.41	Ave.: 7.40	7.43	7.45	Ave.: 7.44		
Salinity (ppt)	:	24.2	24.2	Ave.: 24.2	24.4	24.3	Ave.: 24.4	24.5	24.4	Ave.: 24.5		
D.O. (mg/L)	:	7.29	7.31	Ave.: 7.30	6.99	7.01	Ave.: 7.00	6.84	6.82	Ave.: 6.83		
D.O.S. (%)	:	97.5	97.8	Ave.: 97.7	93.5	93.8	Ave.: 93.7	91.4	91.2	Ave.: 91.3		
Turbidity (NTU)	:	8.46	8.52	Ave.: 8.49	8.37	8.41	Ave.: 8.39	8.06	8.10	Ave.: 8.08	8.32	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows: ____________

Any notable pollutant by others near monitoring site ? ~~Y~~/N If yes, elaboration is as follows : ____________

Field Operator	Tang Chung Hong	Checked by		Laboratory Staff		Checked by	
Date	21-11-2013	Date	21/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 21-11-2013 Weather Condition : cloudy Ambient Temperature (°C) : 22 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 16:26 to 16:50 Depth of Water (meter): 9.8 Wet bulb calibration for DO meter: 8.31 mg/L (99.7 %) (24.7 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.9			8.8				
Temp. (°C)	:	22.8	22.8	Ave.: 22.8	22.9	22.9	Ave.: 22.9	23.0	23.0	Ave.: 23.0		
pH	:	7.46	7.48	Ave.: 7.47	7.38	7.39	Ave.: 7.39	7.35	7.36	Ave.: 7.36		
Salinity (ppt)	:	24.1	24.1	Ave.: 24.1	24.2	24.2	Ave.: 24.2	24.3	24.3	Ave.: 24.3		
D.O. (mg/L)	:	7.32	7.30	Ave.: 7.31	7.02	7.03	Ave.: 7.03	6.87	6.88	Ave.: 6.88		
D.O.S. (%)	:	97.1	96.8	Ave.: 97.0	93.9	94.1	Ave.: 94.0	91.9	92.1	Ave.: 92.0		
Turbidity (NTU)	:	8.58	8.60	Ave.: 8.59	8.99	8.91	Ave.: 8.95	8.60	8.66	Ave.: 8.63	8.72	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 15:49 to 16:13 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.34 mg/L (99.8 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	22.9	22.8	Ave.: 22.9										23.0	22.9	Ave.: 23.0										
pH	:	7.30	7.31	Ave.: 7.31										7.37	7.39	Ave.: 7.38										
Salinity (ppt)	:	24.1	24.0	Ave.: 24.1						Ave.:				24.2	24.3	Ave.: 24.3										
D.O. (mg/L)	:	7.29	7.21	Ave.: 7.25	5.0	4.2	✓			Ave.:	5.0	4.2		7.17	7.13	Ave.: 7.15	4.7	2.0	✓							
D.O.S. (%)	:	97.6	96.5	Ave.: 97.1						Ave.:				95.9	95.5	Ave.: 95.7										
Turbidity (NTU)	:	11.0	11.8	Ave.: 11.4						Ave.:				9.91	9.97	Ave.: 9.94				10.7	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condi[illegible]n)**

Station: SR4 Duration: 15:20 to 15:43 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.41 mg/L (99.4 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	22.8	22.9	Ave.: 22.9										22.9	23.0	Ave.: 23.0										
pH	:	7.19	7.18	Ave.: 7.19										7.21	7.21	Ave.: 7.21										
Salinity (ppt)	:	24.2	24.1	Ave.: 24.2						Ave.:				24.4	24.4	Ave.: 24.4										
D.O. (mg/L)	:	7.09	7.10	Ave.: 7.10	5.0	4.2	✓			Ave.:	5.0	4.2		6.93	6.91	Ave.: 6.92	4.7	2.0	✓							
D.O.S. (%)	:	94.9	95.1	Ave.: 95.0						Ave.:				92.8	92.5	Ave.: 92.7										
Turbidity (NTU)	:	9.81	9.83	Ave.: 9.82						Ave.:				9.69	9.11	Ave.: 9.10				9.76	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 14:49 to 15:13 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.42 mg/L (99.9 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	23.0	23.0	Ave.: 23.9										23.1	23.0	Ave.: 23.1										
pH	:	7.27	7.28	Ave.: 7.28										7.30	7.29	Ave.: 7.30										
Salinity (ppt)	:	24.2	24.1	Ave.: 24.2						Ave.:				24.3	24.4	Ave.: 24.4										
D.O. (mg/L)	:	7.26	7.30	Ave.: 7.28	5.0	4.2	✓			Ave.:	5.0	4.2		7.06	7.04	Ave.: 7.05	4.7	2.0	✓							
D.O.S. (%)	:	97.2	97.7	Ave.: 97.5						Ave.:				94.6	94.3	Ave.: 94.4										
Turbidity (NTU)	:	8.82	8.86	Ave.: 8.84						Ave.:				10.2	10.8	Ave.: 10.5				9.67	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 14:20 to 14:44 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.44 mg/L (99.8 %) (24.7 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	22.9	22.9	Ave.: 22.9				23.0	23.0	23.0				22.9	23.0	Ave.: 23.0										
pH	:	7.15	7.16	Ave.: 7.16				7.22	7.23	7.23				7.14	7.18	Ave.: 7.16										
Salinity (ppt)	:	24.2	24.1	Ave.: 24.1				24.2	24.3	Ave.: 24.3				24.3	24.3	Ave.: 24.3										
D.O. (mg/L)	:	7.01	7.09	Ave.: 7.05	5.0	4.2	✓	6.72	6.78	Ave.: 6.75	5.0	4.2	✓	6.88	6.82	Ave.: 6.85	4.7	2.0	✓							
D.O.S. (%)	:	93.9	94.9	Ave.: 9.44				89.9	90.8	Ave.: 90.4				92.1	91.3	Ave.: 91.7										
Turbidity (NTU)	:	11.5	11.7	Ave.: 11.6				13.9	14.2	Ave.: 14.0				17.2	17.8	Ave.: 17.5				14.4	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Conditi…)**

Station: IS(Mf)9 Duration: 13:50 to 14:14 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (24.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	23.0	22.9	Ave.: 23.0										23.0	23.1	Ave.: 23.1										
pH	:	7.36	7.37	Ave.: 7.37										7.40	7.40	Ave.: 7.40										
Salinity (ppt)	:	24.2	24.2	Ave.: 24.2						Ave.:				24.3	24.2	Ave.: 24.3										
D.O. (mg/L)	:	7.11	7.17	Ave.: 7.14	5.0	4.2	✓			Ave.:	5.0	4.2		7.00	6.98	Ave.: 6.99	4.7	2.0	✓							
D.O.S. (%)	:	95.2	96.0	Ave.: 95.6						Ave.:				93.7	93.5	Ave.: 93.6										
Turbidity (NTU)	:	10.7	11.0	Ave.: 10.9						Ave.:				13.2	13.7	Ave.: 13.5				12.2	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 13:20 to 13:44 Depth of Water (meter): 8.8 Wet bulb calibration for DO meter: 8.39 mg/L (99.7 %) (24.9 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.4			7.8					
Temp. (°C)	:	22.8	22.9	Ave.: 22.9	23.0	23.0	Ave.: 23.0	23.0	23.0	Ave.: 23.0			
pH	:	7.41	7.42	Ave.: 7.42	7.38	7.37	Ave.: 7.38	7.40	7.42	Ave.: 7.41			
Salinity (ppt)	:	24.3	24.2	Ave.: 24.3	24.3	24.3	Ave.: 24.3	24.5	24.5	Ave.: 24.5			
D.O. (mg/L)	:	7.20	7.24	Ave.: 7.22	6.94	6.91	Ave.: 6.93	6.73	6.76	Ave.: 6.75			
D.O.S. (%)	:	96.4	96.9	Ave.: 96.7	92.9	92.5	Ave.: 92.7	90.1	90.5	Ave.: 90.3		120%	130%
Turbidity (NTU)	:	8.55	8.53	Ave.: 8.54	7.65	7.66	Ave.: 7.66	8.16	8.10	Ave.: 8.13	8.11	9.73	10.5
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y/[✓ N] If yes, elaboration is as follows: ______

Any notable pollutant by others near monitoring site ? Y/[✓ N] If yes, elaboration is as follows : ______

Field Operator	S.H. Lam	Checked by		Laboratory Staff		Checked by	
Date	21-11-2013	Date	21/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 23/11/13 Weather Condition : Cloudy Ambient Temperature (°C) : 22°C Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 9:32 to 9:50 Depth of Water (meter): 9.0 Wet bulb calibration for DO meter: 8.88 mg/L (99.8 %) (21.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.5			8.0					
Temp. (°C)	:	22.6	22.6	Ave.: 22.6	22.5	22.5	Ave.: 22.5	22.5	22.5	Ave.: 22.5			
pH	:	7.59	7.59	Ave.: 7.59	7.60	7.59	Ave.: 7.60	7.61	7.61	Ave.: 7.61			
Salinity (ppt)	:	22.8	22.8	Ave.: 22.8	23.3	23.2	Ave.: 23.3	23.6	23.6	Ave.: 23.6			
D.O. (mg/L)	:	6.51	6.54	Ave.: 6.53	6.48	6.44	Ave.: 6.46	6.49	6.52	Ave.: 6.51			
D.O.S. (%)	:	86.0	86.4	Ave.: 86.2	85.6	85.1	Ave.: 85.4	85.7	86.1	Ave.: 85.9		120%	130%
Turbidity (NTU)	:	6.63	6.60	Ave.: 6.62	6.80	6.87	Ave.: 6.84	5.92	5.97	Ave.: 5.95	6.47	7.76	8.41
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 10:00 to 10:15 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.85 mg/L (99.4 %) (20.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	22.1	22.1	Ave.: 22.1										22.1	22.1	Ave.: 22.1										
pH	:	7.73	7.74	Ave.: 7.74										7.74	7.74	Ave.: 7.74										
Salinity (ppt)	:	24.5	24.5	Ave.: 24.5						Ave.:				24.5	24.8	Ave.: 24.8										
D.O. (mg/L)	:	6.33	6.36	Ave.: 6.35	5.0	4.2	✓			Ave.:	5.0	4.2		6.42	6.38	Ave.: 6.40	4.7	2.0	✓							
D.O.S. (%)	:	83.4	83.8	Ave.: 83.6						Ave.:				84.8	84.3	Ave.: 84.6										
Turbidity (NTU)	:	17.6	17.6	Ave.: 17.6						Ave.:				19.7	19.7	Ave.: 19.7				18.7	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 10:18 to 10:34 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.48 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	22.3	22.3	Ave.: 22.3										22.3	22.3	Ave.: 22.3										
pH	:	8.04	8.05	Ave.: 8.05										8.09	8.08	Ave.: 8.09										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.4	24.4	Ave.: 24.4										
D.O. (mg/L)	:	6.15	6.12	Ave.: 6.14	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.17	6.12	Ave.: 6.15	4.7	2.0	✓							
D.O.S. (%)	:	81.4	81.0	Ave.: 81.2						Ave.:				81.6	80.9	Ave.: 81.3										
Turbidity (NTU)	:	13.0	12.9	Ave.: 13.0						Ave.:				17.1	17.1	Ave.: 17.1				15.1	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 10:40 to 10:57 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	22.3	22.4	Ave.: 22.4										22.3	22.4	Ave.: 22.4										
pH	:	8.03	8.04	Ave.: 8.04										8.07	8.07	Ave.: 8.07										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.5	24.5	Ave.: 24.5										
D.O. (mg/L)	:	6.20	6.17	Ave.: 6.19	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.15	6.11	Ave.: 6.13	4.7	2.0	✓							
D.O.S. (%)	:	82.0	81.6	Ave.: 81.8						Ave.:				81.2	80.7	Ave.: 81.0										
Turbidity (NTU)	:	10.4	10.4	Ave.: 10.4						Ave.:				15.3	15.2	Ave.: 15.3				12.9	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 11:17 to 11:37 Depth of Water (meter): 7.2 Wet bulb calibration for DO meter: 8.44 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.6						6.2												
Temp. (°C)	:	22.4	22.4	Ave.: 22.4				22.3	22.4	22.4				22.5	22.4	Ave.: 22.5										
pH	:	8.05	8.05	Ave.: 805				8.08	8.08	808				8.09	8.09	Ave.: 8.09										
Salinity (ppt)	:	24.4	24.3	Ave.: 24.4				24.4	24.3	Ave.: 24.4				24.5	24.5	Ave.: 24.5										
D.O. (mg/L)	:	6.13	6.15	Ave.: 6.14	5.0	4.2	✓	6.10	6.07	Ave.: 6.09	5.0	4.2	✓	6.11	6.14	Ave.: 6.13	4.7	2.0	✓							
D.O.S. (%)	:	81.1	81.4	Ave.: 81.3				80.8	80.4	Ave.: 80.6				80.9	81.3	Ave.: 81.1										
Turbidity (NTU)	:	7.76	7.71	Ave.: 7.74				6.09	6.15	Ave.: 6.12				6.63	6.68	Ave.: 6.66				6.34	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: IS(Mf)9 Duration: 12:00 to 12:20 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.44 mg/L (99.5 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	22.6	22.6	Ave.: 22.6										22.6	22.6	Ave.: 22.6										
pH	:	8.04	8.04	Ave.: 8.04										8.04	8.05	Ave.: 8.05										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.5	24.5	Ave.: 24.5										
D.O. (mg/L)	:	6.12	6.15	Ave.: 6.14	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.04	6.07	Ave.: 6.06	4.7	2.0	✓							
D.O.S. (%)	:	81.1	81.5	Ave.: 81.3						Ave.:				80.0	80.4	Ave.: 80.2										
Turbidity (NTU)	:	11.6	11.6	Ave.: 11.6						Ave.:				12.9	12.8	Ave.: 12.9				12.3	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 12:40 to 13:02 Depth of Water (meter): 11.2 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.0 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			5.6			10.2				
Temp. (°C)	:	22.7	22.7	Ave.: 22.7	22.6	22.6	Ave.: 22.6	22.6	22.6	Ave.: 22.6		
pH	:	8.06	8.05	Ave.: 8.06	8.06	8.06	Ave.: 8.06	8.06	8.07	Ave.: 8.07		
Salinity (ppt)	:	24.3	24.3	Ave.: 24.3	24.4	24.4	Ave.: 24.4	24.5	24.5	Ave.: 24.5		
D.O. (mg/L)	:	6.17	6.19	Ave.: 6.18	6.18	6.15	Ave.: 6.17	6.09	6.06	Ave.: 6.08		
D.O.S. (%)	:	82.3	82.6	Ave.: 82.5	82.5	82.1	Ave.: 82.3	81.2	80.8	Ave.: 81.0		
Turbidity (NTU)	:	12.5	12.5	Ave.: 12.5	13.2	13.2	Ave.: 13.2	12.6	12.6	Ave.: 12.6	12.8	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y / [✓ N] If yes, elaboration is as follows: ________

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows : ________

Field Operator	Mak Lei Wai	Checked by		Laboratory Staff		Checked by	
Date	23/11/13	Date	23/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 23.11.2013 Weather Condition : cloudy Ambient Temperature (°C) : 22 Sea Conditions: [✓ Calm] / Small Wave / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 17:35 to 17:50 Depth of Water (meter): 8.6 Wet bulb calibration for DO meter: 8.83 mg/L (99.8 %) (21.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.3			7.6				
Temp. (°C)	:	22.7	22.6	Ave.: 22.7	22.6	22.5	Ave.: 22.6	22.4	22.3	Ave.: 22.4		
pH	:	7.63	7.62	Ave.: 7.63	7.63	7.64	Ave.: 7.64	7.66	7.65	Ave.: 7.66		
Salinity (ppt)	:	22.8	22.9	Ave.: 22.9	23.4	23.3	Ave.: 23.4	23.6	23.7	Ave.: 23.7		
D.O. (mg/L)	:	6.45	6.48	Ave.: 6.47	6.42	6.38	Ave.: 6.40	6.43	6.46	Ave.: 6.45		
D.O.S. (%)	:	85.3	85.7	Ave.: 85.5	84.9	84.3	Ave.: 84.6	84.9	85.4	Ave.: 85.2		
Turbidity (NTU)	:	6.72	6.69	Ave.: 6.71	6.89	6.96	Ave.: 6.93	6.01	6.06	Ave.: 6.04	6.56	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 17:05 to 17:25 Depth of Water (meter): 4.0 Wet bulb calibration for DO meter: 8.85 mg/L (93.4 %) (20.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.0												
Temp. (°C)	:	22.2	22.1	Ave.: 22.2										22.2	22.3	Ave.: 22.3										
pH	:	7.79	7.80	Ave.: 7.80										7.77	7.78	Ave.: 7.78										
Salinity (ppt)	:	24.6	24.5	Ave.: 24.6						Ave.:				24.8	24.8	Ave.: 24.8										
D.O. (mg/L)	:	6.27	6.30	Ave.: 6.29	5.0	4.2	✓			Ave.:	5.0	4.2		6.36	6.32	Ave.: 6.34	4.7	2.0	✓							
D.O.S. (%)	:	82.7	83.1	Ave.: 82.9						Ave.:				84.1	83.6	Ave.: 83.9										
Turbidity (NTU)	:	17.8	18.0	Ave.: 17.9						Ave.:				19.9	20.2	Ave.: 20.1				19.0	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 16:35 to 16:55 Depth of Water (meter): 4.2 Wet bulb calibration for DO meter: 8.48 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.2												
Temp. (°C)	:	22.3	22.4	Ave.: 22.4										22.5	22.5	Ave.: 22.5										
pH	:	8.06	8.07	Ave.: 8.07										8.11	8.10	Ave.: 8.11										
Salinity (ppt)	:	24.5	24.6	Ave.: 24.6						Ave.:				24.6	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.09	6.06	Ave.: 6.08	5.0	4.2	✓			Ave.:	5.0	4.2		6.11	6.07	Ave.: 6.09	4.7	2.0	✓							
D.O.S. (%)	:	80.7	80.3	Ave.: 80.5						Ave.:				80.9	80.4	Ave.: 80.7										
Turbidity (NTU)	:	13.5	13.6	Ave.: 13.6						Ave.:				17.7	17.9	Ave.: 17.8				15.7	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 16:05 to 16:25 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	22.4	22.4	Ave.: 22.4										22.4	22.5	Ave.: 22.5										
pH	:	8.06	8.07	Ave.: 8.07										8.10	8.09	Ave.: 8.10										
Salinity (ppt)	:	24.5	24.4	Ave.: 24.5						Ave.:				24.5	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.14	6.11	Ave.: 6.13	5.0	4.2	✓			Ave.:	5.0	4.2		6.09	6.05	Ave.: 6.07	4.7	2.0	✓							
D.O.S. (%)	:	81.2	80.9	Ave.: 81.1						Ave.:				80.5	79.9	Ave.: 80.2										
Turbidity (NTU)	:	10.9	10.8	Ave.: 10.9						Ave.:				15.8	15.7	Ave.: 15.8				13.3	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 15:35 to 15:55 Depth of Water (meter): 6.8 Wet bulb calibration for DO meter: 8.44 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.4						5.8												
Temp. (°C)	:	22.4	22.5	Ave.: 22.5				22.5	22.4	22.5				22.6	22.6	Ave.: 22.6										
pH	:	8.08	8.07	Ave.: 8.08				8.10	8.11	8.11				8.14	8.13	Ave.: 8.14										
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5				24.5	24.6	Ave.: 24.6				24.6	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.05	6.07	Ave.: 6.06	5.0	4.2	✓	6.02	5.99	Ave.: 6.01	5.0	4.2	✓	6.03	6.06	Ave.: 6.05	4.7	2.0	✓							
D.O.S. (%)	:	80.1	80.4	Ave.: 80.3				79.8	79.5	Ave.: 79.7				79.9	80.4	Ave.: 80.2										
Turbidity (NTU)	:	7.81	7.76	Ave.: 7.79				6.14	6.20	Ave.: 6.17				6.69	6.74	Ave.: 6.72				6.89	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 15:05 to 15:25 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.44 mg/L (99.5 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	22.7	22.7	Ave.: 22.7										22.5	22.6	Ave.: 22.6										
pH	:	8.07	8.06	Ave.: 8.07										8.08	8.09	Ave.: 8.09										
Salinity (ppt)	:	24.5	24.4	Ave.: 24.5						Ave.:				24.6	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.03	6.06	Ave.: 6.05	5.0	4.2	✓			Ave.:	5.0	4.2		5.95	5.98	Ave.: 5.97	4.7	2.0	✓							
D.O.S. (%)	:			Ave.:						Ave.:						Ave.:										
Turbidity (NTU)	:	11.9	11.8	Ave.: 11.8						Ave.:				13.1	13.3	Ave.: 13.2				12.5	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 14:35 to 14:55 Depth of Water (meter): 10.8 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.0 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			5.4			9.8					
Temp. (°C)	:	22.8	22.7	Ave.: 22.8	22.7	22.6	Ave.: 22.7	22.5	22.4	Ave.: 22.5			
pH	:	8.08	8.07	Ave.: 8.08	8.07	8.07	Ave.: 8.07	8.07	8.08	Ave.: 8.08			
Salinity (ppt)	:	24.4	24.3	Ave.: 24.4	24.4	24.5	Ave.: 24.5	24.5	24.6	Ave.: 24.6			
D.O. (mg/L)	:	6.08	6.11	Ave.: 6.10	6.09	6.06	Ave.: 6.08	6.00	5.97	Ave.: 5.99			
D.O.S. (%)	:	81.2	81.6	Ave.: 81.4	81.4	81.0	Ave.: 81.2	80.0	79.6	Ave.: 79.8		120%	130%
Turbidity (NTU)	:	12.8	12.9	Ave.: 12.9	13.5	13.6	Ave.: 13.6	12.9	12.8	Ave.: 12.9	13.1	15.7	17.0
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows: ____

Any notable pollutant by others near monitoring site ? ~~Y~~/N If yes, elaboration is as follows : ____

Field Operator	Jacky Cheung	Checked by		Laboratory Staff		Checked by	
Date	23.11.2013	Date	23/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 26/11/13 Weather Condition : Fine Ambient Temperature (°C) : 20°C Sea Conditions: Calm / Small Wave / Great Wave Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 12:21 to 12:45 Depth of Water (meter): 9.6 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (21.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.8			8.6					
Temp. (°C)	:	22.2	22.2	Ave.: 22.2	22.3	22.3	Ave.: 22.3	22.5	22.5	Ave.: 22.5			
pH	:	7.60	7.61	Ave.: 7.61	7.61	7.62	Ave.: 7.62	7.62	7.62	Ave.: 7.62			
Salinity (ppt)	:	23.3	23.3	Ave.: 23.3	23.9	23.9	Ave.: 23.9	24.0	24.0	Ave.: 24.0			
D.O. (mg/L)	:	6.89	6.86	Ave.: 6.88	6.57	6.55	Ave.: 6.56	6.35	6.31	Ave.: 6.33			
D.O.S. (%)	:	90.6	90.2	Ave.: 90.4	86.5	86.2	Ave.: 86.4	83.8	83.2	Ave.: 83.5		120%	130%
Turbidity (NTU)	:	4.65	4.69	Ave.: 4.67	4.36	4.32	Ave.: 4.34	5.36	5.31	Ave.: 5.34	4.78	5.74	6.21
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 12:55 to 13:09 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (21.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:													4.2												
Temp. (°C)	:	22.2	22.2	Ave.: 22.2										22.3	22.3	Ave.: 22.3										
pH	:	7.64	7.64	Ave.: 7.64										7.65	7.64	Ave.: 7.65										
Salinity (ppt)	:	23.3	23.3	Ave.: 23.3						Ave.:				23.5	23.5	Ave.: 23.5										
D.O. (mg/L)	:	6.84	6.80	Ave.: 6.82	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.60	6.57	Ave.: 6.59	4.7	2.0	✓							
D.O.S. (%)	:	89.9	90.5	Ave.: 90.2						Ave.:				87.1	86.7	Ave.: 86.9										
Turbidity (NTU)	:	5.47	5.42	Ave.: 5.45						Ave.:				14.6	14.6	Ave.: 14.6				10.0	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 13:20 to 13:36 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.46 mg/L (99.7 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	22.1	22.1	Ave.: 22.1										22.6	22.6	Ave.: 22.6										
pH	:	7.66	7.66	Ave.: 7.66										7.67	7.67	Ave.: 7.67										
Salinity (ppt)	:	23.3	23.3	Ave.: 23.3						Ave.:				23.8	23.8	Ave.: 23.6										
D.O. (mg/L)	:	6.86	6.83	Ave.: 6.85	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.13	6.16	Ave.: 6.15	4.7	2.0	✓							
D.O.S. (%)	:	90.1	89.7	Ave.: 89.9						Ave.:				81.0	81.4	Ave.: 81.2										
Turbidity (NTU)	:	6.00	6.07	Ave.: 6.04						Ave.:				14.9	14.9	Ave.: 14.9				10.5	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 13:46 to 14:03 Depth of Water (meter): 5.4 Wet bulb calibration for DO meter: 8.44 mg/L (99.6 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.4												
Temp. (°C)	:	22.1	22.1	Ave.: 22.1										22.4	22.4	Ave.: 22.4										
pH	:	7.68	7.68	Ave.: 7.68										7.69	7.69	Ave.: 7.69										
Salinity (ppt)	:	23.3	23.3	Ave.: 23.3						Ave.:				23.6	23.6	Ave.: 23.6										
D.O. (mg/L)	:	6.83	6.79	Ave.: 6.81	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.42	6.39	Ave.: 6.41	4.7	2.0	✓							
D.O.S. (%)	:	89.7	89.2	Ave.: 89.5						Ave.:				84.8	84.4	Ave.: 84.6										
Turbidity (NTU)	:	5.97	5.91	Ave.: 5.94						Ave.:				12.7	12.7	Ave.: 12.7				9.32	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 14:16 to 14:36 Depth of Water (meter): 7.8 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.9						6.8												
Temp. (°C)	:	22.2	22.2	Ave.: 22.7				22.4	22.4	22.4				22.5	22.5	Ave.: 22.5										
pH	:	7.69	7.69	Ave.: 7.69				7.70	7.70	7.70				7.70	7.70	Ave.: 7.70										
Salinity (ppt)	:	23.3	23.3	Ave.: 23.3				23.8	23.7	Ave.: 23.8				23.9	23.9	Ave.: 23.9										
D.O. (mg/L)	:	6.77	6.75	Ave.: 6.76	5.0	4.2	✓	6.38	6.25	Ave.: 6.28	5.0	4.2	✓	6.14	6.17	Ave.: 6.16	4.7	2.0	✓							
D.O.S. (%)	:	89.0	88.7	Ave.: 88.				83.2	82.6	Ave.: 82.9				81.3	81.7	Ave.: 81.5										
Turbidity (NTU)	:	10.6	10.6	Ave.: 10.6				13.2	13.2	Ave.: 13.2				17.5	17.6	Ave.: 17.6				13.8	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: IS(Mf)9 Duration: 14:46 to 15:04 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.39 mg/L (99.7 %) (21.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	22.2	22.2	Ave.: 22.2										22.5	22.5	Ave.: 22.5										
pH	:	7.66	7.66	Ave.: 7.66										7.67	7.67	Ave.: 7.67										
Salinity (ppt)	:	23.3	23.3	Ave.: 23.3						Ave.:				23.7	23.7	Ave.: 23.7										
D.O. (mg/L)	:	6.59	6.57	Ave.: 6.58	5.0	4.2	✓			Ave.:	5.0	4.2	✓	6.32	6.29	Ave.: 6.31	4.7	2.0	✓							
D.O.S. (%)	:	86.8	86.5	Ave.: 86.7						Ave.:				83.3	82.9	Ave.: 83.1										
Turbidity (NTU)	:	6.57	6.52	Ave.: 6.55						Ave.:				13.9	13.8	Ave.: 13.9				10.2	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 15:19 to 15:51 Depth of Water (meter): 9.0 Wet bulb calibration for DO meter: 8.40 mg/L (99.8 %) (21.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			4.5			8.0				
Temp. (°C)	:	22.2	22.2	Ave.: 22.2	22.1	22.1	Ave.: 22.1	22.5	22.4	Ave.: 22.5		
pH	:	7.68	7.68	Ave.: 7.68	7.68	7.67	Ave.: 7.68	7.69	7.69	Ave.: 7.69		
Salinity (ppt)	:	23.7	23.7	Ave.: 23.7	24.0	24.0	Ave.: 24.0	24.8	24.8	Ave.: 24.8		
D.O. (mg/L)	:	6.64	6.61	Ave.: 6.63	6.40	6.36	Ave.: 6.38	6.02	6.05	Ave.: 6.04		
D.O.S. (%)	:	87.5	87.1	Ave.: 87.3	84.4	83.9	Ave.: 84.2	80.5	80.9	Ave.: 80.7		
Turbidity (NTU)	:	4.51	4.59	Ave.: 4.55	4.58	4.63	Ave.: 4.61	5.28	5.35	Ave.: 5.32	4.83	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y / [✓ N] If yes, elaboration is as follows: ________

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows : ________

Field Operator	Mak Kei Wai	Checked by		Laboratory Staff		Checked by	
Date	26/11/13	Date	26/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 26-11-2013 Weather Condition : Cloudy Ambient Temperature (°C) : 22 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 21:32 to 21:56 Depth of Water (meter): 10.4 Wet bulb calibration for DO meter: 8.42 mg/L (99.4 %) (21.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			5.2			9.4				
Temp. (°C)	:	22.3	22.3	Ave.: 22.3	22.2	22.3	Ave.: 22.3	22.4	22.5	Ave.: 22.5		
pH	:	7.63	7.64	Ave.: 7.64	7.71	7.73	Ave.: 7.72	7.70	7.72	Ave.: 7.71		
Salinity (ppt)	:	23.4	23.5	Ave.: 23.5	23.5	23.6	Ave.: 23.6	23.8	23.8	Ave.: 23.8		
D.O. (mg/L)	:	6.59	6.61	Ave.: 6.60	6.54	6.50	Ave.: 6.52	6.11	6.13	Ave.: 6.12		
D.O.S. (%)	:	86.6	86.8	Ave.: 86.7	85.9	85.4	Ave.: 85.7	80.2	80.5	Ave.: 80.4		
Turbidity (NTU)	:	4.86	4.88	Ave.: 4.87	5.60	5.68	Ave.: 5.64	6.02	6.08	Ave.: 6.05	5.52	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 20:57 to 21:21 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	22.2	22.1	Ave.: 22.2										22.4	22.4	Ave.: 22.4										
pH	:	7.68	7.67	Ave.: 7.68										7.70	7.71	Ave.: 7.71										
Salinity (ppt)	:	23.4	23.3	Ave.: 23.4						Ave.:				23.6	23.7	Ave.: 23.7										
D.O. (mg/L)	:	6.63	6.67	Ave.: 6.65	5.0	4.2	√			Ave.:	5.0	4.2		6.47	6.49	Ave.: 6.48	4.7	2.0	√							
D.O.S. (%)	:	87.1	87.6	Ave.: 87.4						Ave.:				84.9	85.2	Ave.: 85.1										
Turbidity (NTU)	:	6.32	6.37	Ave.: 6.35						Ave.:				13.4	13.0	Ave.: 13.2				9.78	√	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 20:22 to 20:46 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %) (21.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	22.2	22.1	Ave.: 22.2										22.5	22.4	Ave.: 22.5										
pH	:	7.60	7.61	Ave.: 7.61										7.68	7.70	Ave.: 7.69										
Salinity (ppt)	:	23.3	23.2	Ave.: 23.3						Ave.:				23.7	27.8	Ave.: 27.8										
D.O. (mg/L)	:	6.72	6.78	Ave.: 6.75	5.0	4.2	✓			Ave.:	5.0	4.2		6.23	6.20	Ave.: 6.22	4.7	2.0	✓							
D.O.S. (%)	:	88.3	89.0	Ave.: 88.7						Ave.:				82.3	81.9	Ave.: 82.1										
Turbidity (NTU)	:	5.95	6.02	Ave.: 5.99						Ave.:				17.0	16.6	Ave.: 16.8				11.4	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 19:53 to 20:17 Depth of Water (meter): 5.0 Wet bulb calibration for DO meter: 8.44 mg/L (99.8 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.0												
Temp. (°C)	:	22.2	22.2	Ave.: 22.2										22.4	22.4	Ave.: 22.4										
pH	:	7.67	7.69	Ave.: 7.68										7.72	7.74	Ave.: 7.73										
Salinity (ppt)	:	23.3	23.4	Ave.: 23.4						Ave.:				23.6	23.6	Ave.: 23.6										
D.O. (mg/L)	:	6.82	6.81	Ave.: 6.82	5.0	4.2	✓			Ave.:	5.0	4.2		6.34	6.36	Ave.: 6.35	4.7	2.0	✓							
D.O.S. (%)	:	89.6	89.4	Ave.: 89.5						Ave.:				83.8	84.0	Ave.: 83.9										
Turbidity (NTU)	:	6.03	6.07	Ave.: 6.05						Ave.:				13.9	14.1	Ave.: 14.0				10.0	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 19:24 to 19:48 Depth of Water (meter): 6.6 Wet bulb calibration for DO meter: 8.46 mg/L (99.9 %) (21.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.3						5.6												
Temp. (°C)	:	22.3	22.2	Ave.: 22.2				22.2	22.3	22.3				22.5	22.4	Ave.: 22.5										
pH	:	7.69	7.71	Ave.: 7.70				7.74	7.76	7.75				7.80	7.78	Ave.: 7.79										
Salinity (ppt)	:	23.4	23.4	Ave.: 23.4				23.5	23.6	Ave.: 23.6				23.7	23.8	Ave.: 23.8										
D.O. (mg/L)	:	6.71	6.73	Ave.: 6.72	5.0	4.2	✓	6.59	6.62	Ave.: 6.61	5.0	4.2	✓	6.07	6.10	Ave.: 6.09	4.7	2.0	✓							
D.O.S. (%)	:	88.1	88.4	Ave.: 88.3				86.6	86.9	Ave.: 86.8				80.2	80.6	Ave.: 80.4										
Turbidity (NTU)	:	9.23	9.27	Ave.: 9.25				12.6	12.9	Ave.: 12.8				18.6	19.0	Ave.: 18.8				13.6	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 18:55 to 19:19 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.44 mg/L (99.7 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	22.2	22.3	Ave.: 22.3										22.4	22.4	Ave.: 22.4										
pH	:	7.73	7.71	Ave.: 7.72										7.86	7.90	Ave.: 7.88										
Salinity (ppt)	:	23.8	23.7	Ave.: 23.8						Ave.:				24.8	24.7	Ave.: 24.8										
D.O. (mg/L)	:	6.50	6.58	Ave.: 6.54	5.0	4.2	✓			Ave.:	5.0	4.2		6.27	6.30	Ave.: 6.29	4.7	2.0	✓							
D.O.S. (%)	:	85.7	86.7	Ave.: 86.2						Ave.:				83.8	84.2	Ave.: 84.0										
Turbidity (NTU)	:	5.38	5.42	Ave.: 5.40						Ave.:				16.8	16.1	Ave.: 16.5				11.0	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 18:26 to 18:50 Depth of Water (meter): 8.4 Wet bulb calibration for DO meter: 8.43 mg/L (99.6 %) (21.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			4.2			7.4					
Temp. (°C)	:	22.3	22.2	Ave.: 22.3	22.1	22.1	Ave.: 22.1	22.4	22.4	Ave.: 22.4			
pH	:	7.72	7.74	Ave.: 7.73	7.77	7.79	Ave.: 7.18	7.76	7.74	Ave.: 7.75			
Salinity (ppt)	:	23.7	23.7	Ave.: 23.7	24.1	24.0	Ave.: 24.1	24.7	24.7	Ave.: 24.7			
D.O. (mg/L)	:	6.67	6.61	Ave.: 6.64	6.31	6.34	Ave.: 6.33	6.04	6.02	Ave.: 6.03			
D.O.S. (%)	:	87.9	87.1	Ave.: 87.5	83.2	83.5	Ave.: 83.4	80.8	80.5	Ave.: 80.7		120%	130%
Turbidity (NTU)	:	5.07	5.03	Ave.: 5.05	5.40	5.48	Ave.: 5.44	5.20	5.25	Ave.: 5.23	5.24	6.29	6.81
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y/ [✓ N] If yes, elaboration is as follows: __________

Any notable pollutant by others near monitoring site ? Y/ [✓ N] If yes, elaboration is as follows : __________

Field Operator	S.H. Lam	Checked by		Laboratory Staff		Checked by	
Date	26-11-2013	Date	26/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Co tion)**

Sampling Date : 28.11.2013 Weather Condition : cloudy Ambient Temperature (°C) : 20 Sea Conditions: ~~Calm~~ / Small Wave / ~~Great Wave~~ Tide Mode: **Ebb Tide** Direction of water current: **From CS(Mf)3 to CS(Mf)5**

Station: CS(Mf)5 Duration: 09:53 to 10:18 Depth of Water (meter): 10.2 Wet bulb calibration for DO meter: 8.42 mg/L (99.4 %) (21.4 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			5.1			9.2				
Temp. (°C)	:	21.5	21.4	Ave.: 21.5	21.6	21.6	Ave.: 21.6	21.6	21.7	Ave.: 21.7		
pH	:	7.61	7.62	Ave.: 7.62	7.64	7.63	Ave.: 7.64	7.65	7.66	Ave.: 7.66		
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5	24.6	24.5	Ave.: 24.6	24.7	24.7	Ave.: 24.7		
D.O. (mg/L)	:	6.54	6.56	Ave.: 6.55	6.49	6.45	Ave.: 6.47	6.16	6.18	Ave.: 6.17		
D.O.S. (%)	:	85.5	86.8	Ave.: 85.7	84.8	84.3	Ave.: 84.6	80.6	80.9	Ave.: 80.8		
Turbidity (NTU)	:	3.91	3.94	Ave.: 3.93	4.71	4.74	Ave.: 4.73	4.61	4.63	Ave.: 4.62	4.42	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 09:18 to 09:30 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.3 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	21.4	21.5	Ave.: 21.5										21.5	21.6	Ave.: 21.6										
pH	:	7.65	7.64	Ave.: 7.64										7.66	7.66	Ave.: 7.66										
Salinity (ppt)	:	24.5	24.4	Ave.: 24.5						Ave.:				24.6	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.58	6.62	Ave.: 6.60	5.0	4.2	✓			Ave.:	5.0	4.2		6.42	6.44	Ave.: 6.43	4.7	2.0	✓							
D.O.S. (%)	:	86.0	86.5	Ave.: 86.3						Ave.:				83.9	84.2	Ave.: 84.1										
Turbidity (NTU)	:	5.32	5.40	Ave.: 5.36						Ave.:				8.05	8.15	Ave.: 8.10				6.73	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Co ition)**

Station: SR4 Duration: 08:48 to 09:08 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.46 mg/L (99.7 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	21.6	21.5	Ave.: 21.6										21.6	21.7	Ave.: 21.7										
pH	:	7.63	7.62	Ave.: 7.63										7.63	7.64	Ave.: 7.64										
Salinity (ppt)	:	24.4	24.4	Ave.: 24.4						Ave.:				24.5	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.81	6.78	Ave.: 6.80	5.0	4.2	✓			Ave.:	5.0	4.2		6.18	6.21	Ave.: 6.20	4.7	2.0	✓							
D.O.S. (%)	:	89.0	88.5	Ave.: 88.8						Ave.:				80.8	81.3	Ave.: 81.1										
Turbidity (NTU)	:	6.05	6.09	Ave.: 6.07						Ave.:				5.68	5.75	Ave.: 5.72				5.89	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 08:30 to 08:40 Depth of Water (meter): 5.2 Wet bulb calibration for DO meter: 8.44 mg/L (99.6 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.2												
Temp. (°C)	:	21.6	21.6	Ave.: 21.6										21.7	21.7	Ave.: 21.7										
pH	:	7.63	7.64	Ave.: 7.64										7.65	7.64	Ave.: 7.65										
Salinity (ppt)	:	24.4	24.5	Ave.: 24.5						Ave.:				24.7	24.6	Ave.: 24.7										
D.O. (mg/L)	:	6.78	6.74	Ave.: 6.76	5.0	4.2	✓			Ave.:	5.0	4.2		6.37	6.34	Ave.: 6.36	4.7	2.0	✓							
D.O.S. (%)	:	88.6	88.0	Ave.: 88.3						Ave.:				83.3	82.9	Ave.: 83.1										
Turbidity (NTU)	:	7.44	7.49	Ave.: 7.47						Ave.:				5.19	5.25	Ave.: 5.22				6.34	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 08:08 to 08:14 Depth of Water (meter): 7.6 Wet bulb calibration for DO meter: 8.45 mg/L (99.8 %) (21.6 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						3.8						6.6												
Temp. (°C)	:	21.6	21.7	Ave.: 21.7				21.8	21.7	21.8				21.8	21.9	Ave.: 21.9										
pH	:	7.64	7.63	Ave.: 7.64				7.65	7.65	7.65				7.65	7.66	Ave.: 7.66										
Salinity (ppt)	:	24.5	24.5	Ave.: 24.5				24.6	24.7	Ave.: 24.7				24.8	24.7	Ave.: 24.8										
D.O. (mg/L)	:	6.72	6.70	Ave.: 6.71	5.0	4.2	✓	6.35	6.30	Ave.: 6.33	5.0	4.2	✓	6.19	6.22	Ave.: 6.21	4.7	2.0	✓							
D.O.S. (%)	:	87.8	87.6	Ave.: 87.7				83.0	82.3	Ave.: 82.7				81.0	81.4	Ave.: 81.2										
Turbidity (NTU)	:	5.73	5.11	Ave.: 5.42				4.55	5.01	Ave.: 4.78				4.59	4.63	Ave.: 4.61				4.94	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Co… …ition)**

Station: IS(Mf)9 Duration: 07:48 to 08:00 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.44 mg/L (99.7 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	21.5	21.6	Ave.: 21.6										21.7	21.7	Ave.: 21.7										
pH	:	7.73	7.70	Ave.: 7.72										7.86	7.88	Ave.: 7.87										
Salinity (ppt)	:	24.5	24.4	Ave.: 24.5						Ave.:				24.6	24.6	Ave.: 24.6										
D.O. (mg/L)	:	6.45	6.53	Ave.: 6.39	5.0	4.2	✓			Ave.:	5.0	4.2		6.22	6.25	Ave.: 6.24	4.7	2.0	✓							
D.O.S. (%)	:	84.3	85.4	Ave.: 84.9						Ave.:				81.4	81.8	Ave.: 81.6										
Turbidity (NTU)	:	5.58	5.68	Ave.: 5.63						Ave.:				7.99	8.05	Ave.: 8.02				6.83	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: CS(Mf)3 (Upstream Control Station) Duration: 07:28 to 07:40 Depth of Water (meter): 6.0 Wet bulb calibration for DO meter: 8.38 mg/L (99.6 %) (21.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			3.0			5.0					
Temp. (°C)	:	21.6	21.7	Ave.: 21.7	21.7	21.8	Ave.: 21.8	21.8	21.8	Ave.: 21.8			
pH	:	7.64	7.65	Ave.: 7.65	7.77	7.78	Ave.: 7.78	7.70	7.71	Ave.: 7.71			
Salinity (ppt)	:	24.6	24.5	Ave.: 24.6	24.6	24.7	Ave.: 24.7	24.7	24.8	Ave.: 24.8			
D.O. (mg/L)	:	6.62	6.56	Ave.: 6.59	6.25	6.29	Ave.: 6.27	6.09	6.07	Ave.: 6.08			
D.O.S. (%)	:	86.5	85.7	Ave.: 86.1	81.8	82.2	Ave.: 82.0	79.7	79.4	Ave.: 79.6		120%	130%
Turbidity (NTU)	:	4.37	4.41	Ave.: 4.39	4.29	4.37	Ave.: 4.33	4.75	4.81	Ave.: 4.78	4.50	5.40	5.85
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows: ____________

Any notable pollutant by others near monitoring site ? ~~Y~~/N If yes, elaboration is as follows : ____________

Field Operator	Jacky Chang	Checked by		Laboratory Staff		Checked by	
Date	28. 11. 2013	Date	28/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 28-11-2013 Weather Condition : cloudy Ambient Temperature (°C) : 21 Sea Conditions: Calm / [✓ Small Wave] / Great Wave Tide Mode: **Flood Tide** Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 13:34 to 13:54 Depth of Water (meter): 10.8 Wet bulb calibration for DO meter: 8.38 mg/L (99.4 %) (21.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			5.4			9.8					
Temp. (°C)	:	21.7	21.6	Ave.: 21.7	21.5	21.5	Ave.: 21.5	21.7	21.7	Ave.: 21.7			
pH	:	7.42	7.43	Ave.: 7.43	7.60	7.61	Ave.: 7.61	7.53	7.57	Ave.: 7.55			
Salinity (ppt)	:	24.7	24.6	Ave.: 24.7	24.8	24.9	Ave.: 24.9	24.8	24.8	Ave.: 24.8			
D.O. (mg/L)	:	6.42	6.43	Ave.: 6.43	6.42	6.48	Ave.: 6.45	6.41	6.39	Ave.: 6.40			
D.O.S. (%)	:	83.9	84.1	Ave.: 84.0	83.9	84.8	Ave.: 84.4	83.8	83.6	Ave.: 83.7		120%	130%
Turbidity (NTU)	:	4.88	4.90	Ave.: 4.89	5.64	5.79	Ave.: 5.72	557	5.61	Ave.: 5.59	5.40	6.48	7.02
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 14:05 to 14:25 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %) (21.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	21.6	21.6	Ave.: 21.6										21.7	21.8	Ave.: 21.8										
pH	:	7.81	7.80	Ave.: 7.81										7.62	7.64	Ave.: 7.63										
Salinity (ppt)	:	24.3	24.4	Ave.: 24.4						Ave.:				24.8	24.7	Ave.: 24.8										
D.O. (mg/L)	:	6.20	6.24	Ave.: 6.22	5.0	4.2	✓			Ave.:	5.0	4.2		6.17	6.19	Ave.: 6.18	4.7	2.0	✓							
D.O.S. (%)	:	81.1	81.6	Ave.: 81.4						Ave.:				80.7	80.9	Ave.: 80.8										
Turbidity (NTU)	:	5.16	5.20	Ave.: 5.18						Ave.:				7.91	7.99	Ave.: 7.95				6.51	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood C..idition)**

Station: SR4 Duration: 14.35 to 14.55 Depth of Water (meter): 4.4 Wet bulb calibration for DO meter: 8.45 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.4												
Temp. (°C)	:	21.5	21.6	Ave.: 21.6										21.5	21.5	Ave.: 21.5										
pH	:	7.39	7.34	Ave.: 7.37										7.57	7.59	Ave.: 7.58										
Salinity (ppt)	:	24.7	24.7	Ave.: 24.7						Ave.:				24.8	24.7	Ave.: 24.8										
D.O. (mg/L)	:	6.93	6.91	Ave.: 6.92	5.0	4.2	✓			Ave.:	5.0	4.2		6.63	6.71	Ave.: 6.67	4.7	2.0	✓							
D.O.S. (%)	:	90.7	90.5	Ave.: 90.6						Ave.:				86.9	87.8	Ave.: 87.4										
Turbidity (NTU)	:	5.93	5.91	Ave.: 5.92						Ave.:				5.42	4.90	Ave.: 5.16				5.31	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 15:05 to 15:25 Depth of Water (meter): 5.6 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %) (21.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.6												
Temp. (°C)	:	21.6	21.6	Ave.: 21.6										21.6	21.6	Ave.: 21.6										
pH	:	7.61	7.62	Ave.: 7.62										7.71	7.73	Ave.: 7.72										
Salinity (ppt)	:	24.7	24.6	Ave.: 24.7						Ave.:				24.8	24.8	Ave.: 24.8										
D.O. (mg/L)	:	6.96	6.62	Ave.: 6.79	5.0	4.2	✓			Ave.:	5.0	4.2		6.50	6.48	Ave.: 6.49	4.7	2.0	✓							
D.O.S. (%)	:	88.4	89.2	Ave.: 88.8						Ave.:				85.0	84.8	Ave.: 84.9										
Turbidity (NTU)	:	7.32	7.38	Ave.: 7.35						Ave.:				5.11	5.19	Ave.: 5.15				6.25	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 15:35 to 15:55 Depth of Water (meter): 8.0 Wet bulb calibration for DO meter: 8.43 mg/L (99.5 %) (21.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						4.0						7.0												
Temp. (°C)	:	21.5	21.6	Ave.: 21.6				21.7	21.7	27.1				21.7	21.7	Ave.: 21.7										
pH	:	7.71	7.74	Ave.: 7.73				7.62	7.68	7.65				7.76	7.75	Ave.: 7.76										
Salinity (ppt)	:	24.6	24.6	Ave.: 24.6				24.7	24.6	Ave.: 24.7				24.7	24.7	Ave.: 24.7										
D.O. (mg/L)	:	6.17	6.20	Ave.: 6.19	5.0	4.2	✓	6.71	6.79	Ave.: 6.75	5.0	4.2	✓	6.38	6.32	Ave.: 6.35	4.7	2.0	✓							
D.O.S. (%)	:	80.7	81.1	Ave.: 80.9				87.8	88.8	Ave.: 88.3				83.5	82.7	Ave.: 83.1										
Turbidity (NTU)	:	5.66	5.91	Ave.: 5.79				5.47	5.50	Ave.: 5.49				5.45	5.41	Ave.: 5.43				5.57	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood C ndition)**

Station: IS(Mf)9 Duration: 16:05 to 16:25 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.50 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	21.5	21.6	Ave.: 21.6										21.7	21.7	Ave.: 21.7										
pH	:	7.82	7.80	Ave.: 7.81										7.90	7.88	Ave.: 7.89										
Salinity (ppt)	:	24.6	24.5	Ave.: 24.6						Ave.:				24.7	24.6	Ave.: 24.7										
D.O. (mg/L)	:	6.75	6.76	Ave.: 6.76	5.0	4.2	✓			Ave.:	5.0	4.2		6.52	6.58	Ave.: 6.55	4.7	2.0	✓							
D.O.S. (%)	:	88.3	88.4	Ave.: 88.4						Ave.:				85.3	86.1	Ave.: 85.7										
Turbidity (NTU)	:	5.00	5.08	Ave.: 5.04						Ave.:				7.94	7.90	Ave.: 7.92				6.48	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: CS(Mf)3 Duration: 16:35 to 17:04 Depth of Water (meter): 6.6 Wet bulb calibration for DO meter: 8.47 mg/L (99.8 %) (21.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			3.3			5.6				
Temp. (°C)	:	21.5	21.6	Ave.: 21.6	21.7	21.8	Ave.: 21.8	27.8	27.8	Ave.: 27.8		
pH	:	7.72	7.78	Ave.: 7.75	7.74	7.75	Ave.: 7.75	7.84	7.82	Ave.: 7.83		
Salinity (ppt)	:	24.7	24.6	Ave.: 24.7	24.7	24.8	Ave.: 24.8	24.7	24.7	Ave.: 24.7		
D.O. (mg/L)	:	6.83	6.87	Ave.: 6.85	6.28	6.30	Ave.: 6.29	6.10	6.19	Ave.: 6.15		
D.O.S. (%)	:	89.3	89.9	Ave.: 89.6	82.1	82.4	Ave.: 82.3	79.8	80.9	Ave.: 80.4		
Turbidity (NTU)	:	5.23	5.27	Ave.: 5.25	5.18	5.22	Ave.: 5.20	5.72	5.78	Ave.: 5.75	5.40	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? Y/[✓ N] If yes, elaboration is as follows: ____________________

Any notable pollutant by others near monitoring site ? Y/[✓ N] If yes, elaboration is as follows : ____________________

Field Operator	S.H. Lam	Checked by		Laboratory Staff		Checked by	
Date	28-11-2013	Date	28/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Sampling Date : 30.11.2015 Weather Condition : Fine Ambient Temperature (°C) : 20 Sea Conditions: [✓ Calm] / Small Wave / Great Wave Tide Mode: Ebb Tide Direction of water current: From CS(Mf)3 to CS(Mf)5

Station: CS(Mf)5 Duration: 12:05 to 12:25 Depth of Water (meter): 10.1 Wet bulb calibration for DO meter: 8.39 mg/L (99.5 %) (21.1 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			5.1			9.1				
Temp. (°C)	:	20.7	20.6	Ave.: 20.7	20.8	20.8	Ave.: 20.8	21.1	21.0	Ave.: 21.1		
pH	:	7.97	7.95	Ave.: 7.96	8.01	8.00	Ave.: 8.01	8.15	8.14	Ave.: 8.15		
Salinity (ppt)	:	25.9	25.8	Ave.: 25.9	25.9	26.0	Ave.: 26.0	25.9	26.1	Ave.: 26.0		
D.O. (mg/L)	:	6.41	6.42	Ave.: 6.42	6.47	6.49	Ave.: 6.48	6.41	6.40	Ave.: 6.41		
D.O.S. (%)	:	83.7	83.8	Ave.: 83.8	84.6	84.8	Ave.: 84.7	83.8	83.7	Ave.: 83.8		
Turbidity (NTU)	:	9.18	9.19	Ave.: 9.19	9.35	9.37	Ave.: 9.36	10.1	10.3	Ave.: 10.2		
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Station: SR4a Duration: 11:30 to 11:55 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.42 mg/L (99.6 %) (21.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	20.6	20.7	Ave.: 20.7										20.8	20.9	Ave.: 20.9										
pH	:	7.97	8.01	Ave.: 7.99										8.13	8.14	Ave.: 8.14										
Salinity (ppt)	:	25.7	25.8	Ave.: 25.8						Ave.:				25.9	26.1	Ave.: 26.0										
D.O. (mg/L)	:	6.11	6.10	Ave.: 6.11	5.0	4.2	✓			Ave.:	5.0	4.2		6.15	6.17	Ave.: 6.16	4.7	2.0	✓							
D.O.S. (%)	:	79.7	79.6	Ave.: 79.7						Ave.:				80.5	80.8	Ave.: 80.7										
Turbidity (NTU)	:	11.1	11.2	Ave.: 11.2						Ave.:				12.9	13.0	Ave.: 13.0				12.1	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: SR4 Duration: 10:57 to 11:17 Depth of Water (meter): 4.7 Wet bulb calibration for DO meter: 8.46 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.7												
Temp. (°C)	:	20.8	20.9	Ave.: 20.9										21.0	21.0	Ave.: 21.0										
pH	:	7.93	8.11	Ave.: 8.02										8.25	8.32	Ave.: 8.29										
Salinity (ppt)	:	25.8	26.1	Ave.: 25.9						Ave.:				26.3	26.4	Ave.: 26.4										
D.O. (mg/L)	:	6.81	6.80	Ave.: 6.81	5.0	4.2	✓			Ave.:	5.0	4.2		6.86	6.89	Ave.: 6.88	4.7	2.0	✓							
D.O.S. (%)	:	88.9	88.7	Ave.: 88.8						Ave.:				89.8	90.3	Ave.: 90.1										
Turbidity (NTU)	:	6.78	6.91	Ave.: 6.85						Ave.:				7.57	7.09	Ave.: 7.33				7.09	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS8 Duration: 10:27 to 10:47 Depth of Water (meter): 5.5 Wet bulb calibration for DO meter: 8.40 mg/L (99.5 %) (21.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.5												
Temp. (°C)	:	20.9	21.0	Ave.: 21.0										21.1	21.1	Ave.: 21.1										
pH	:	7.91	7.90	Ave.: 7.91										8.16	8.17	Ave.: 8.17										
Salinity (ppt)	:	25.5	25.6	Ave.: 25.6						Ave.:				25.8	25.8	Ave.: 25.8										
D.O. (mg/L)	:	6.74	6.76	Ave.: 6.75	5.0	4.2	✓			Ave.:	5.0	4.2		6.47	6.49	Ave.: 6.48	4.7	2.0	✓							
D.O.S. (%)	:	88.0	88.2	Ave.: 88.1						Ave.:				84.7	85.0	Ave.: 84.9										
Turbidity (NTU)	:	13.1	13.2	Ave.: 13.2						Ave.:				11.5	11.5	Ave.: 11.5				12.3	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Station: IS(Mf)16 Duration: 9:57 to 10:17 Depth of Water (meter): 8.3 Wet bulb calibration for DO meter: 8.47 mg/L (99.6 %) (21.4 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0						4.2						7.3												
Temp. (°C)	:	20.7	20.8	Ave.: 20.8				20.8	20.9	20.9				21.0	21.0	Ave.: 21.0										
pH	:	7.97	7.96	Ave.: 7.97				8.01	8.02	8.02				8.17	8.18	Ave.: 8.18										
Salinity (ppt)	:	25.5	25.6	Ave.: 25.6				25.8	25.9	Ave.: 25.9				26.0	26.1	Ave.: 26.1										
D.O. (mg/L)	:	6.11	6.10	Ave.: 6.11	5.0	4.2	✓	6.74	6.73	Ave.: 6.74	5.0	4.2	✓	6.24	6.21	Ave.: 6.23	4.7	2.0	✓							
D.O.S. (%)	:	79.8	79.7	Ave.: 79.8				88.2	88.0	Ave.: 88.1				81.7	81.4	Ave.: 81.6										
Turbidity (NTU)	:	9.98	9.99	Ave.: 9.99				10.0	10.1	Ave.: 10.1				9.39	9.41	Ave 9.40				9.81	✓	27.5 and 120% of CS(Mf)3	27.5	47.0 and 130% of CS(Mf)3	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3		34.4 and 130% of CS(Mf)3		

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Ebb Condition)**

Station: IS(Mf)9 Duration: 9:27 to 9:47 Depth of Water (meter): 4.7 Wet bulb calibration for DO meter: 8.51 mg/L (99.8 %) (21.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION	LIMIT	REMARK
Depth (meter)	:	1.0												3.7										
Temp. (°C)	:	20.8	20.8	Ave.: 20.8										20.9	21.0	Ave.: 21.0								
pH	:	7.99	8.00	Ave.: 8.00										8.14	8.15	Ave.: 8.15								
Salinity (ppt)	:	25.6	25.7	Ave.: 25.7						Ave.:				25.9	26.0	Ave.: 26.0								
D.O. (mg/L)	:	6.61	6.63	Ave.: 6.62	5.0	4.2	✓			Ave.:	5.0	4.2		6.45	6.47	Ave.: 6.46	4.7	2.0	✓					
D.O.S. (%)	:	86.3	86.5	Ave.: 86.4						Ave.:				84.5	84.8	Ave.: 84.7								
Turbidity (NTU)	:	10.9	10.8	Ave.: 10.9						Ave.:				9.88	9.87	Ave.: 9.88				10.36	✓	27.5 and 120% of CS(Mf)3 27.5	47.0 and 130% of CS(Mf)3 47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)3	34.4 and 130% of CS(Mf)3	

Station: CS(Mf)3 (Upstream Control Station) Duration: 8:57 to 9:17 Depth of Water (meter): 7.0 Wet bulb calibration for DO meter: 8.46 mg/L (99.7 %) (21.0 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			3.5			6.0					
Temp. (°C)	:	20.9	20.9	Ave.: 20.9	21.0	20.9	Ave.: 21.0	21.0	21.1	Ave.: 21.1			
pH	:	8.00	7.99	Ave.: 8.00	8.03	8.02	Ave.: 8.03	8.14	8.16	Ave.: 8.15			
Salinity (ppt)	:	25.8	25.9	Ave.: 25.9	26.0	26.1	Ave.: 26.1	26.2	26.1	Ave.: 26.2			
D.O. (mg/L)	:	6.76	6.78	Ave.: 6.77	6.21	6.22	Ave.: 6.22	6.09	6.10	Ave.: 6.10			
D.O.S. (%)	:	88.2	88.5	Ave.: 88.4	81.2	81.3	Ave.: 81.3	79.7	79.9	Ave.: 79.8		120%	130%
Turbidity (NTU)	:	11.4	11.3	Ave.: 11.4	8.78	8.76	Ave.: 8.77	8.63	8.64	Ave.: 8.64	9.59	11.5	12.5
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Any notable discoloration of water ? Y [✓ N] If yes, elaboration is as follows: ________

Any notable pollutant by others near monitoring site ? Y / [✓ N] If yes, elaboration is as follows : ________

Field Operator	Sunny Tang	Checked by		Laboratory Staff		Checked by	
Date	30. 11. 2013	Date	30/11/13	Date		Date	

Tuen Mun – Chek Lap Kok Link – **Southern**

Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Sampling Date : 30.11.2013 Weather Condition : Fine Ambient Temperature (°C) : 20 Sea Conditions: ~~Calm~~ / Small Wave / ~~Great Wave~~ Tide Mode: Flood Tide Direction of water current: From CS(Mf)5 to CS(Mf)3

Station: CS(Mf)5 (Upstream Control Station) Duration: 14:45 to 15:05 Depth of Water (meter): 10.4 Wet bulb calibration for DO meter: 8.38 mg/L (99.4 %) (21.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK	
Depth (meter)	:	1.0			5.2			9.4					
Temp. (°C)	:	20.8	20.7	Ave.: 20.8	20.8	20.9	Ave.: 20.9	21.0	21.1	Ave.: 21.1			
pH	:	7.98	7.96	Ave.: 7.97	8.02	8.06	Ave.: 8.04	8.19	8.20	Ave.: 8.20			
Salinity (ppt)	:	25.8	25.7	Ave.: 25.8	25.9	25.8	Ave.: 25.9	26.0	26.1	Ave.: 26.1			
D.O. (mg/L)	:	6.51	6.52	Ave.: 6.52	6.54	6.57	Ave.: 6.54	6.50	6.48	Ave.: 6.49			
D.O.S. (%)	:	85.1	85.2	Ave.: 85.2	85.5	85.9	Ave.: 85.7	85.0	84.8	Ave.: 84.9		120%	130%
Turbidity (NTU)	:	9.09	9.11	Ave.: 9.10	9.26	9.21	Ave.: 9.24	9.92	9.89	Ave.: 9.91	9.41	11.3	12.2
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:			

Station: SR4a Duration: 15:15 to 15:35 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %) (21.1 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	20.7	20.8	Ave.: 20.8										20.9	20.8	Ave.: 20.9										
pH	:	7.98	8.03	Ave.: 8.01										8.18	8.22	Ave.: 8.20										
Salinity (ppt)	:	25.6	25.7	Ave.: 25.7						Ave.:				25.9	26.0	Ave.: 26.0										
D.O. (mg/L)	:	6.29	6.33	Ave.: 6.31	5.0	4.2	✓			Ave.:	5.0	4.2		6.26	6.28	Ave.: 6.27	4.7	2.0	✓							
D.O.S. (%)	:	82.1	82.7	Ave.: 82.4						Ave.:				81.9	82.1	Ave.: 82.0										
Turbidity (NTU)	:	10.5	10.9	Ave.: 10.7						Ave.:				12.2	12.4	Ave.: 12.3						27.5 and 120% of CS(Mf)5		47.0 and 130% of CS(Mf)5		
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

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Impact Water Quality Monitoring - Data Record Sheet **(Flood Condition)**

Station: SR4 Duration: 15:45 to 16:05 Depth of Water (meter): 4.6 Wet bulb calibration for DO meter: 8.45 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.6												
Temp. (°C)	:	20.9	21.0	Ave.: 21.0										21.0	21.1	Ave.: 21.1										
pH	:	7.96	8.14	Ave.: 8.05										8.28	8.34	Ave.: 8.31										
Salinity (ppt)	:	25.7	25.7	Ave.: 25.7						Ave.:				25.8	25.7	Ave.: 25.8										
D.O. (mg/L)	:	6.90	6.89	Ave.: 6.90	5.0	4.2	✓			Ave.:	5.0	4.2		6.95	6.98	Ave.: 6.97	4.7	2.0	✓							
D.O.S. (%)	:	90.0	89.9	Ave.: 90.0						Ave.:				91.0	91.4	Ave.: 91.2										
Turbidity (NTU)	:	6.69	6.82	Ave.: 6.76						Ave.:				7.48	7.16	Ave.: 7.32				7.04	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS8 Duration: 16:15 to 16:35 Depth of Water (meter): 5.8 Wet bulb calibration for DO meter: 8.41 mg/L (99.6 %) (21.2 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												4.8												
Temp. (°C)	:	20.9	20.8	Ave.: 20.9										21.0	21.1	Ave.: 21.1										
pH	:	7.93	7.95	Ave.: 7.94										8.19	8.15	Ave.: 8.17										
Salinity (ppt)	:	25.6	25.7	Ave.: 25.7						Ave.:				25.9	25.8	Ave.: 25.9										
D.O. (mg/L)	:	6.85	6.91	Ave.: 6.88	5.0	4.2	✓			Ave.:	5.0	4.2		6.59	6.57	Ave.: 6.58	4.7	2.0	✓							
D.O.S. (%)	:	89.5	90.2	Ave.: 89.9						Ave.:				86.3	86.0	Ave.: 86.2										
Turbidity (NTU)	:	12.4	12.5	Ave.: 12.5						Ave.:				10.5	10.8	Ave.: 10.7				11.6	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

Station: IS(Mf)16 Duration: 16:45 to 17:05 Depth of Water (meter): 8.4 Wet bulb calibration for DO meter: 8.43 mg/L (99.5 %) (21.8 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0																								
Temp. (°C)	:	20.8	20.9	Ave.: 20.9				20.9	20.8	20.9				21.0	21.1	Ave.: 21.1										
pH	:	7.98	8.05	Ave.: 8.02				8.09	8.12	8.11				8.21	8.23	Ave.: 8.22										
Salinity (ppt)	:	25.7	25.6	Ave.: 25.7				25.8	25.8	Ave.: 25.8				25.9	26.0	Ave.: 26.0										
D.O. (mg/L)	:	6.26	6.28	Ave.: 6.27	5.0	4.2	✓	6.80	6.88	Ave.: 6.84	5.0	4.2	✓	6.47	6.41	Ave.: 6.44	4.7	2.0	✓							
D.O.S. (%)	:	81.8	82.1	Ave.: 8.				89.0	90.1	Ave.: 90.0				84.8	83.9	Ave.: 84.4										
Turbidity (NTU)	:	9.89	9.81	Ave.: 9.85				9.90	9.95	Ave.: 9.93				9.34	9.28	Ave.: 9.31				9.70	✓	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

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Impact Water Quality Monitoring - Data Record Sheet **(Flood Conu.tion)**

Station: IS(Mf)9 Duration: 17:15 to 17:35 Depth of Water (meter): 4.8 Wet bulb calibration for DO meter: 8.50 mg/L (99.7 %) (21.0 °C)

		SURFACE (S)			Action	Limit	√/A/L	MIDDLE (M)			Action	Limit	√/A/L	BOTTOM (B)			Action	Limit	√/A/L	DEPTH AVE.	√/A/L	ACTION		LIMIT		REMARK
Depth (meter)	:	1.0												3.8												
Temp. (°C)	:	20.8	20.7	Ave.: 20.8										20.9	21.0	Ave.: 21.0										
pH	:	8.02	8.04	Ave.: 8.03										8.13	8.14	Ave.: 8.14										
Salinity (ppt)	:	25.8	25.9	Ave.: 25.9						Ave.:				26.1	26.0	Ave.: 26.1										
D.O. (mg/L)	:	6.84	6.86	Ave.: 6.85	5.0	4.2	√			Ave.:	5.0	4.2		6.61	6.67	Ave.: 6.64	4.7	2.0	√							
D.O.S. (%)	:	89.4	89.7	Ave.: 89.6						Ave.:				86.7	87.4	Ave.: 87.1										
Turbidity (NTU)	:	10.1	9.96	Ave.: 10.0						Ave.:				9.79	9.82	Ave.: 9.81				9.91	√	27.5 and 120% of CS(Mf)5	27.5	47.0 and 130% of CS(Mf)5	47.0	
S.S. (mg/L)	:			Ave.:						Ave.:						Ave.:						23.5 and 120% of CS(Mf)5		34.4 and 130% of CS(Mf)5		

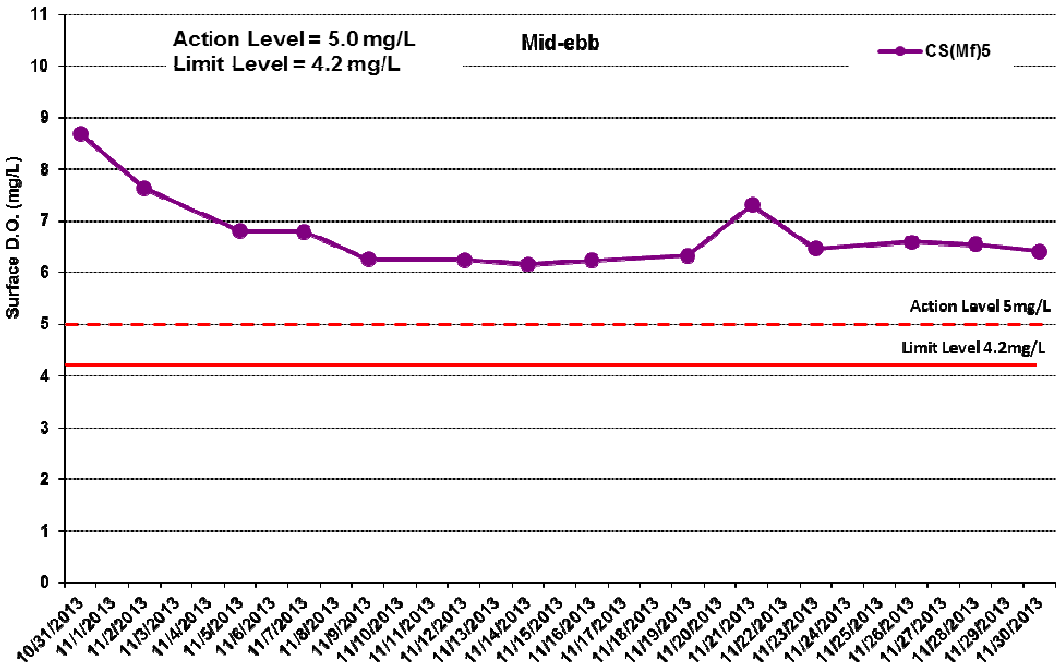
Station: CS(Mf)3 Duration: 17:55 to 18:15 Depth of Water (meter): 7.2 Wet bulb calibration for DO meter: 8.47 mg/L (99.8 %) (21.2 °C)

		SURFACE			MIDDLE			BOTTOM			DEPTH AVERAGE	REMARK
Depth (meter)	:	1.0			3.6			6.2				
Temp. (°C)	:	20.9	20.8	Ave.: 20.9	20.9	21.0	Ave.: 21.0	21.1	21.0	Ave.: 21.1		
pH	:	8.01	7.99	Ave.: 8.00	8.05	8.08	Ave.: 8.07	8.16	8.11	Ave.: 8.14		
Salinity (ppt)	:	25.8	25.7	Ave.: 25.8	25.8	25.9	Ave.: 25.9	26.1	26.2	Ave.: 26.2		
D.O. (mg/L)	:	6.92	6.96	Ave.: 6.94	6.37	6.39	Ave.: 6.38	6.21	6.24	Ave.: 6.23		
D.O.S. (%)	:	90.4	90.9	Ave.: 90.7	83.4	83.7	Ave.: 83.6	81.3	81.7	Ave.: 81.5		
Turbidity (NTU)	:	10.9	11.1	Ave.: 11.0	8.66	8.69	Ave.: 8.68	8.54	8.49	Ave.: 8.52	9.40	
S.S. (mg/L)	:			Ave.:			Ave.:			Ave.:		

Any notable discoloration of water ? ~~Y~~/N If yes, elaboration is as follows: ______

Any notable pollutant by others near monitoring site ? ~~Y~~/N If yes, elaboration is as follows : ______

Field Operator	Jacky Cheung	Checked by		Laboratory Staff		Checked by	
Date	30. 11. 2013	Date	30/11/13	Date		Date	



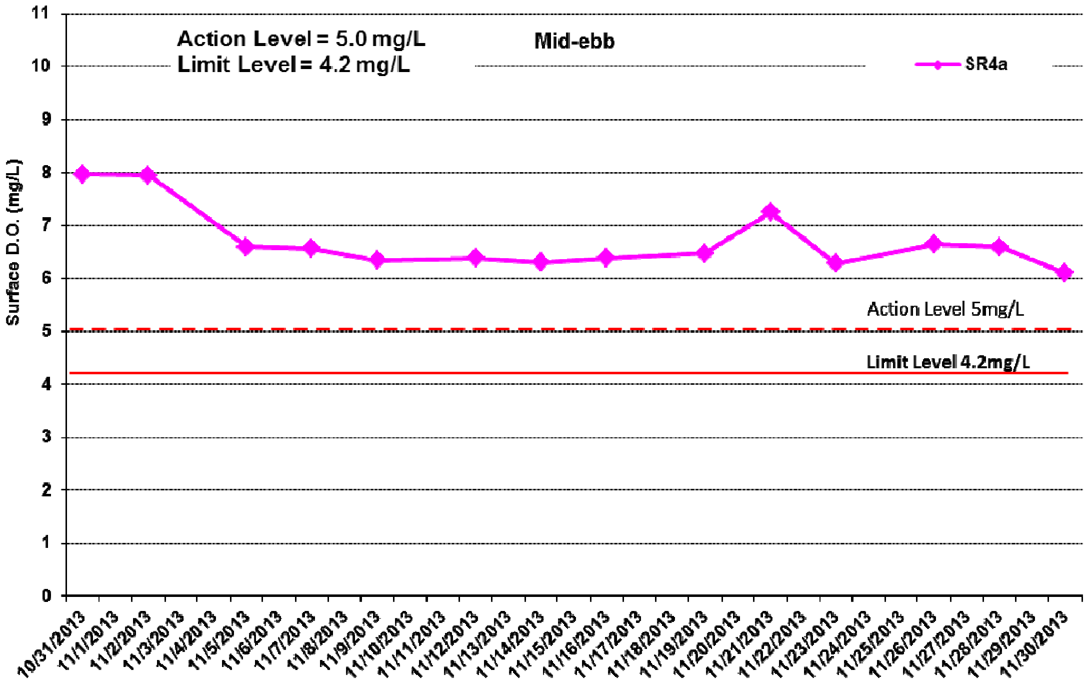


Figure J1 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)6 and SR4a.

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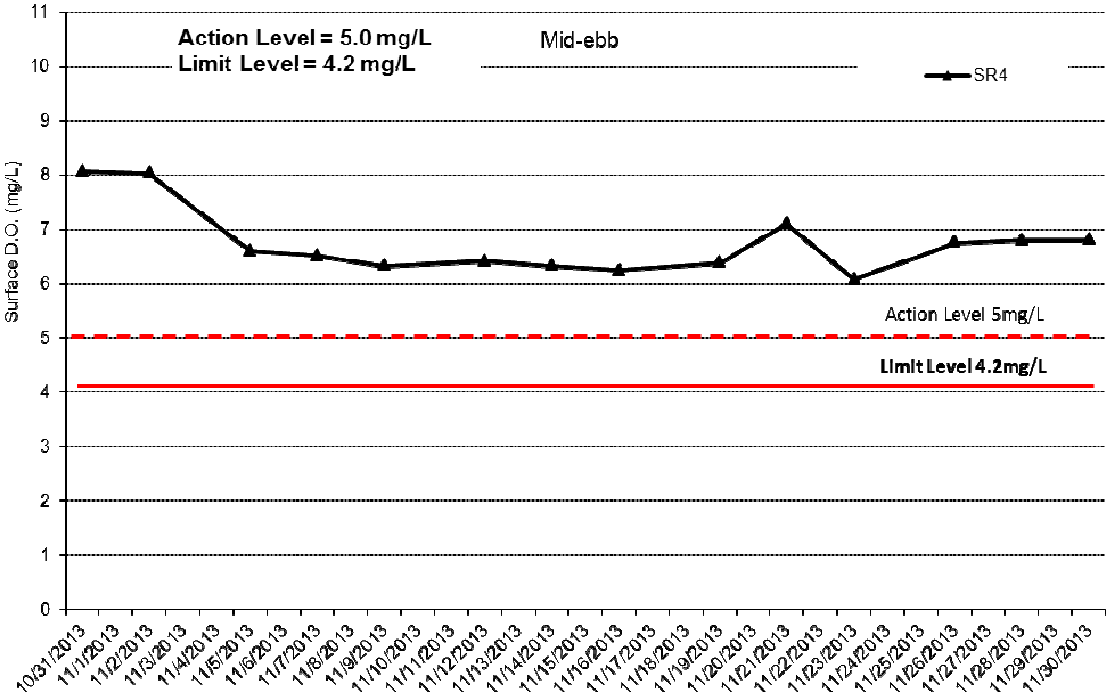

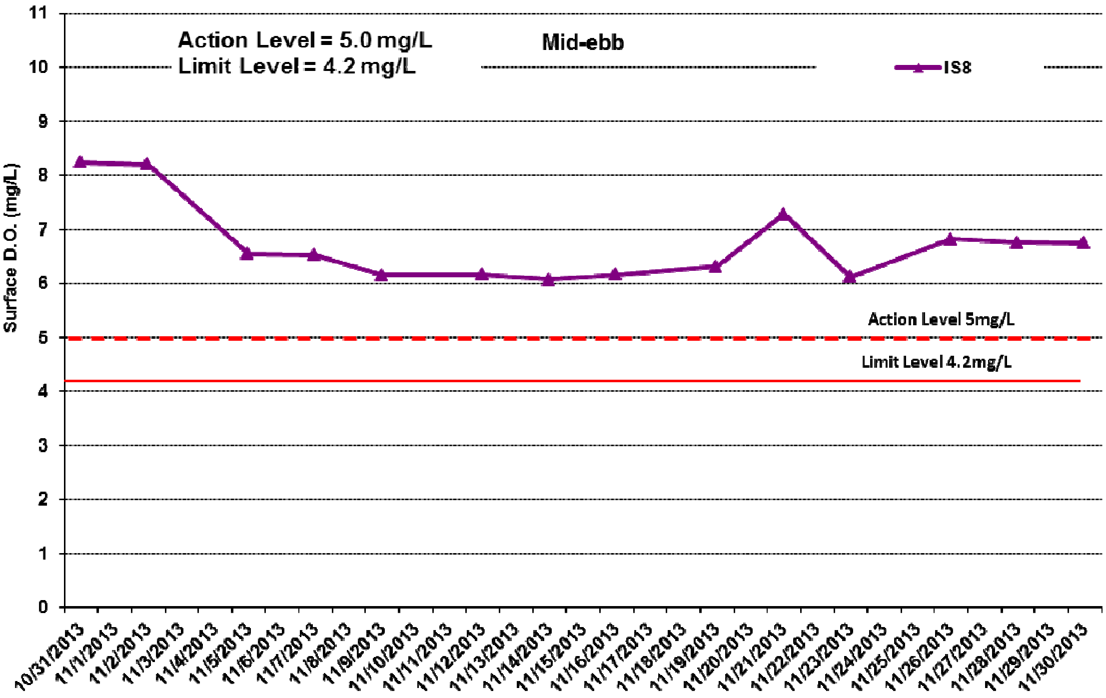

Figure J2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 31 October and 30 November 2013 at SR4 and IS8.

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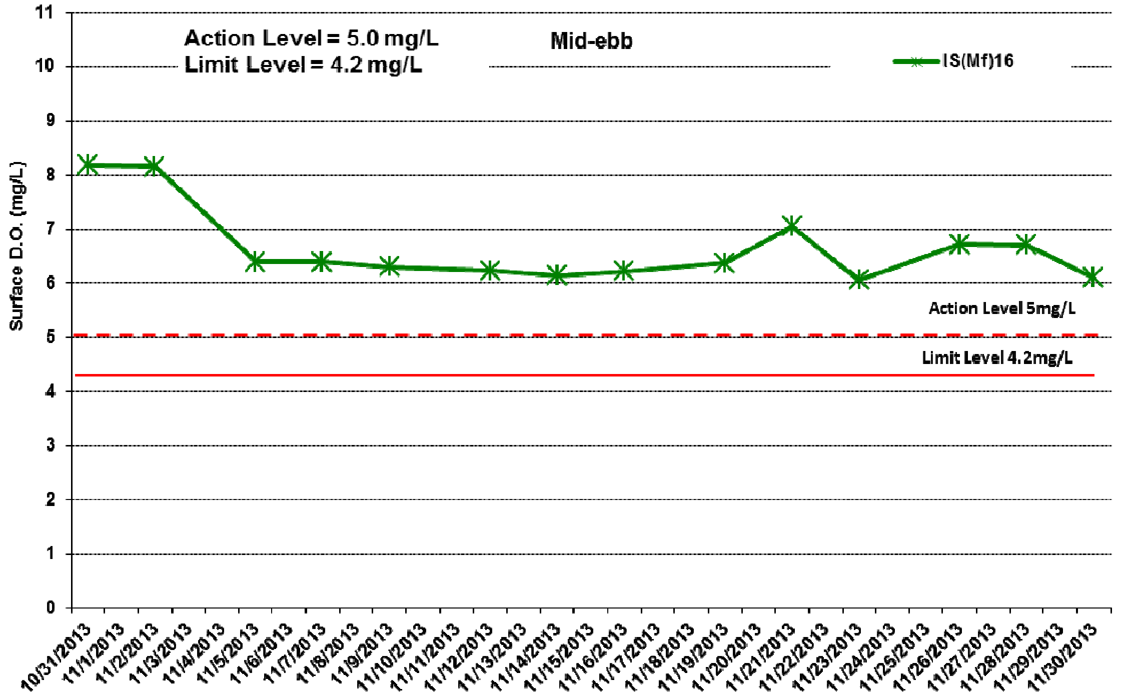

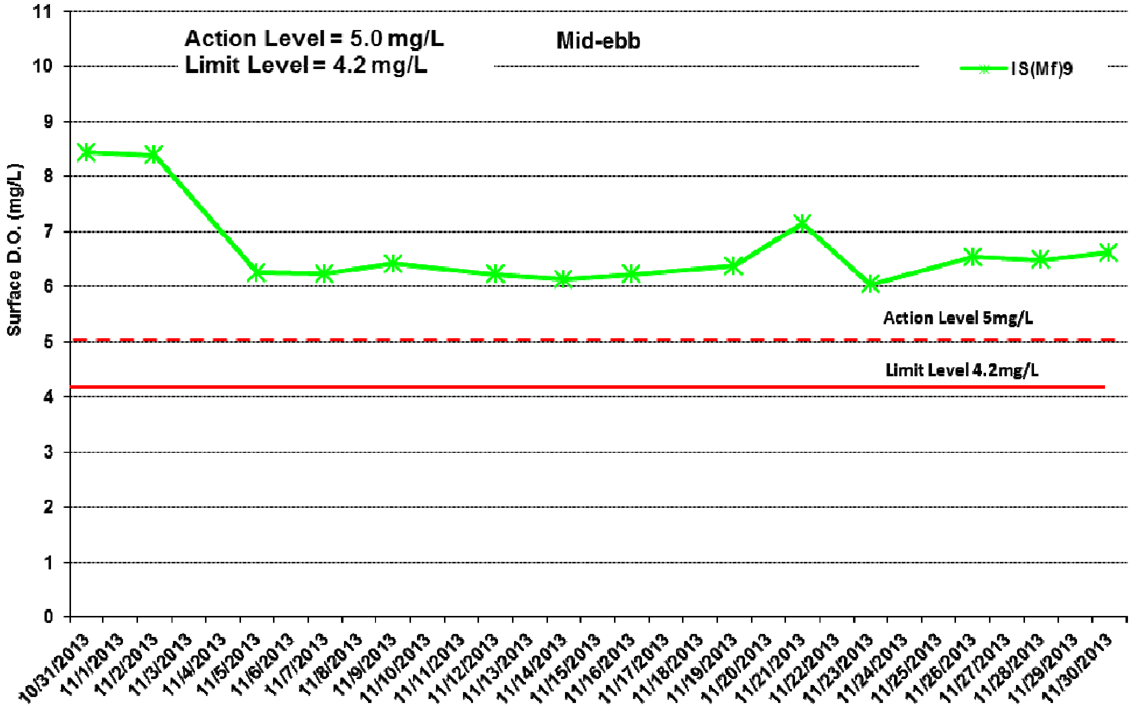

Figure J3 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

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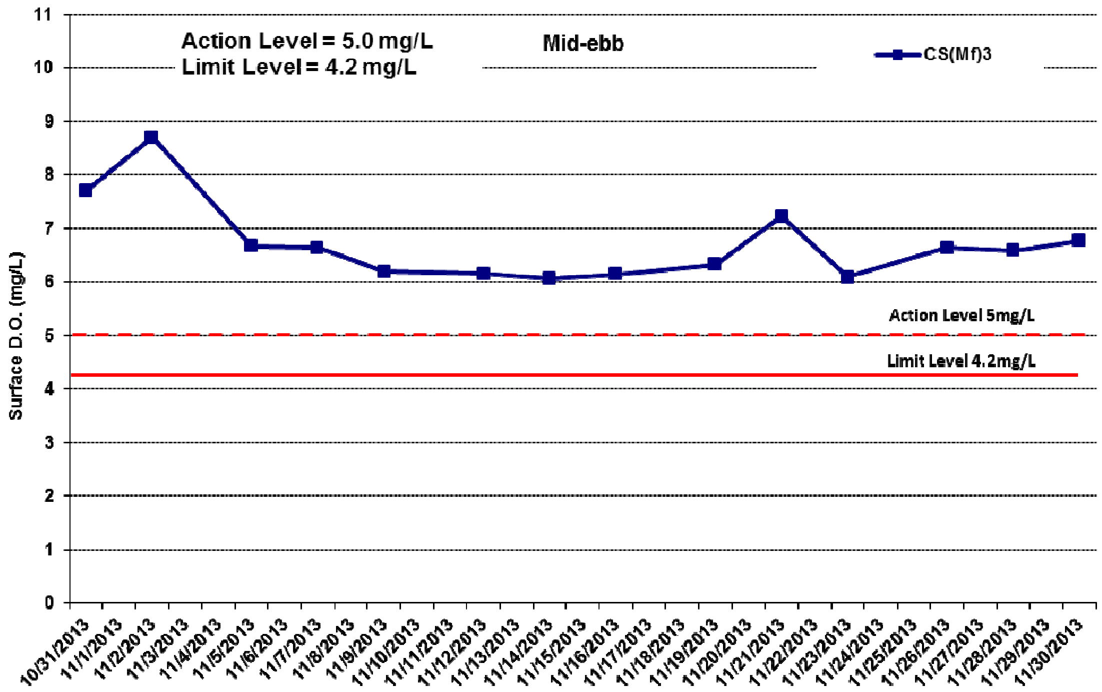

Figure J4 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)3.

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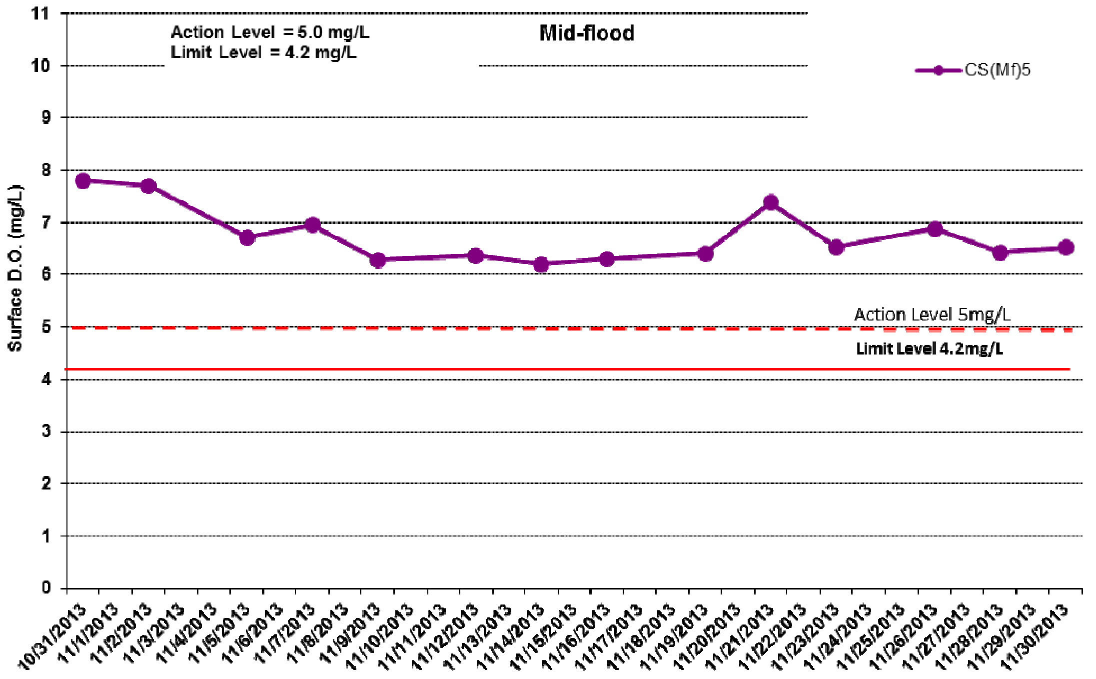

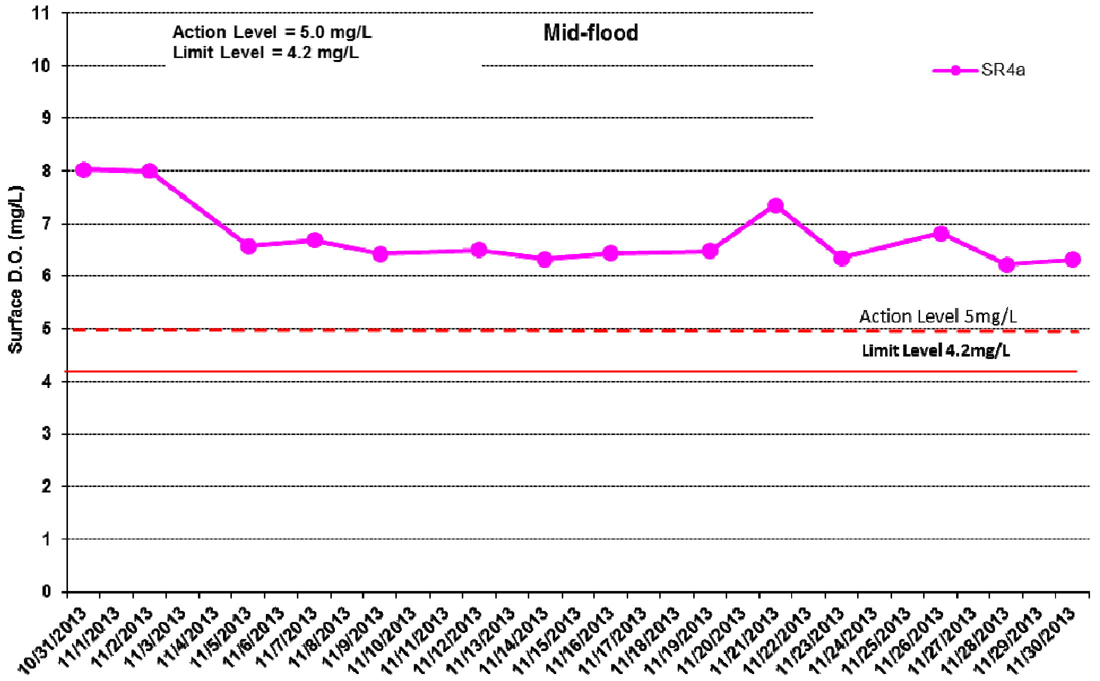

Figure J5 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)5 and SR4a.

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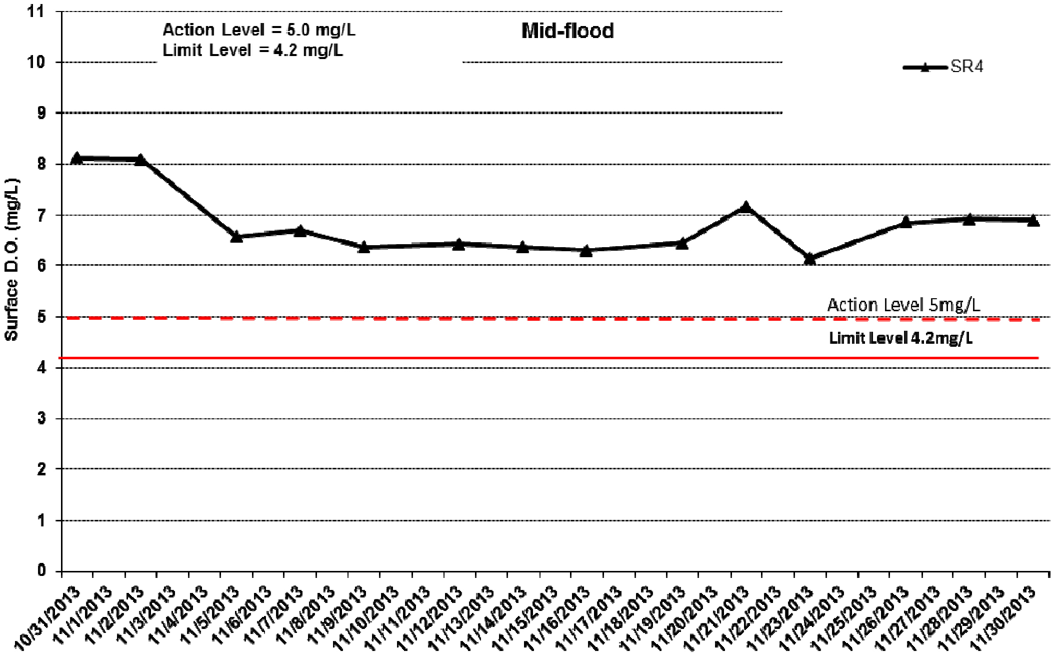

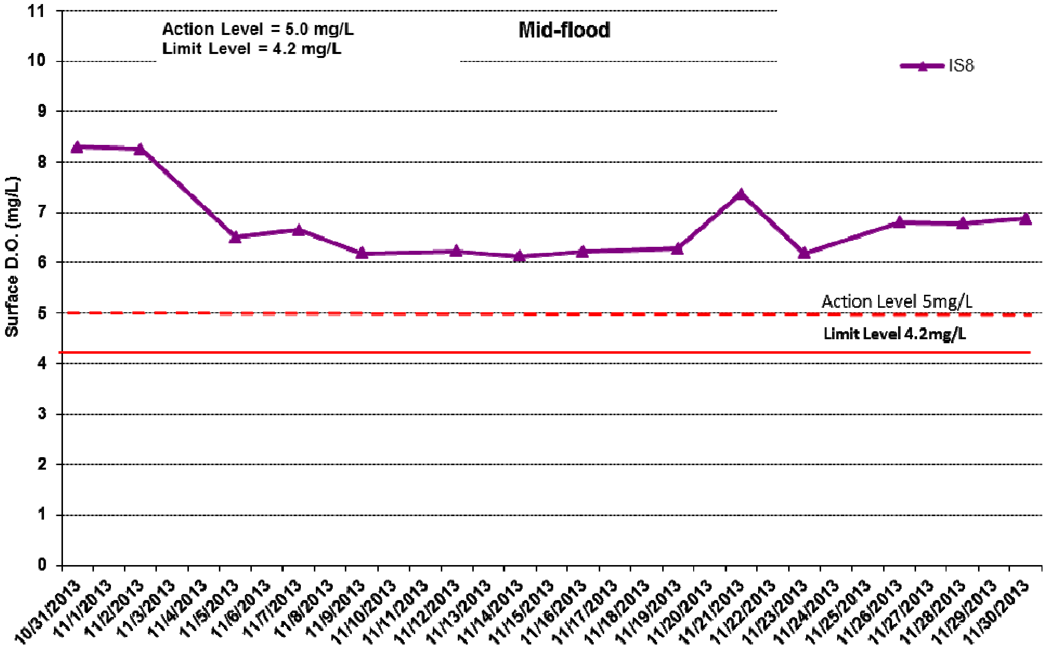

Figure J6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 31 October and 30 November 2013 at SR4 and IS8.

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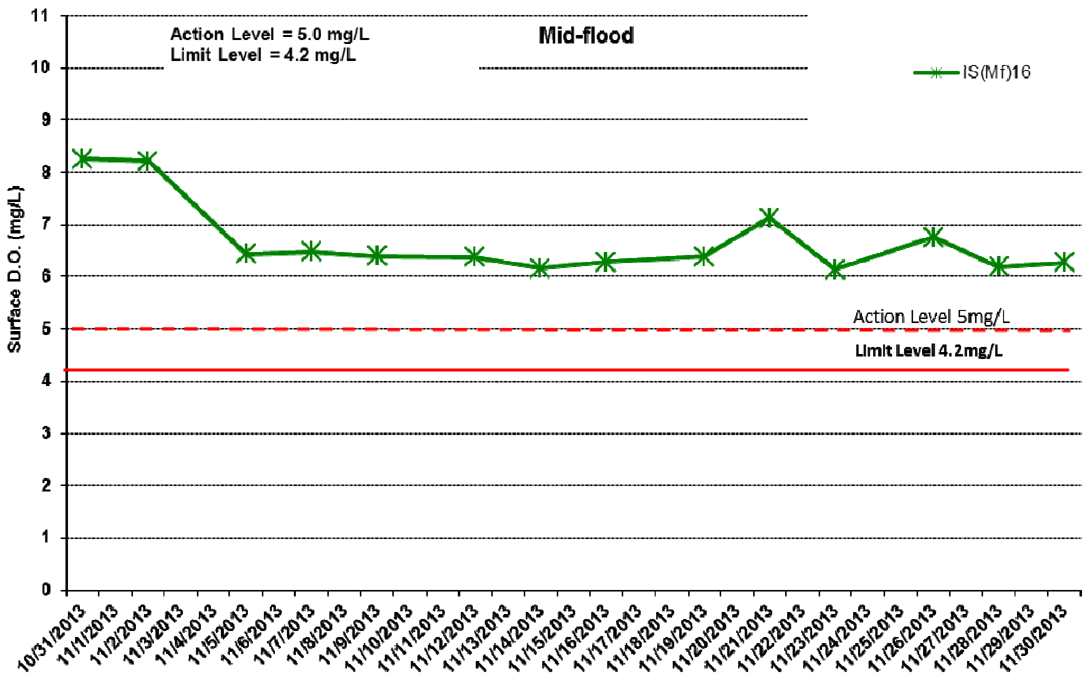

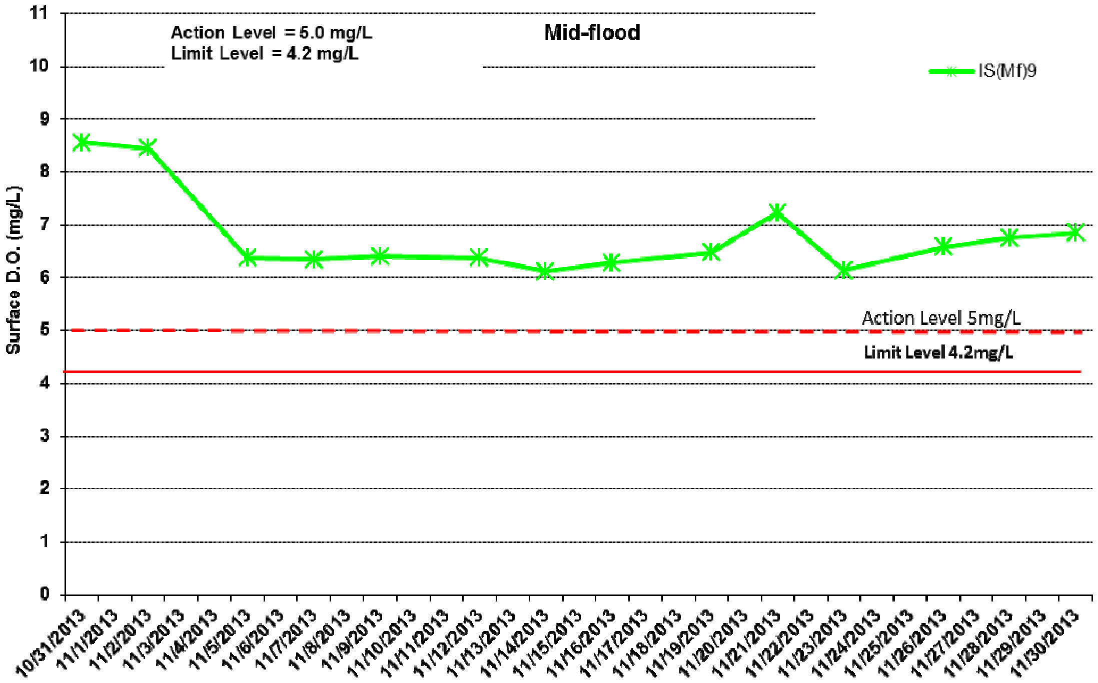

Figure J7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

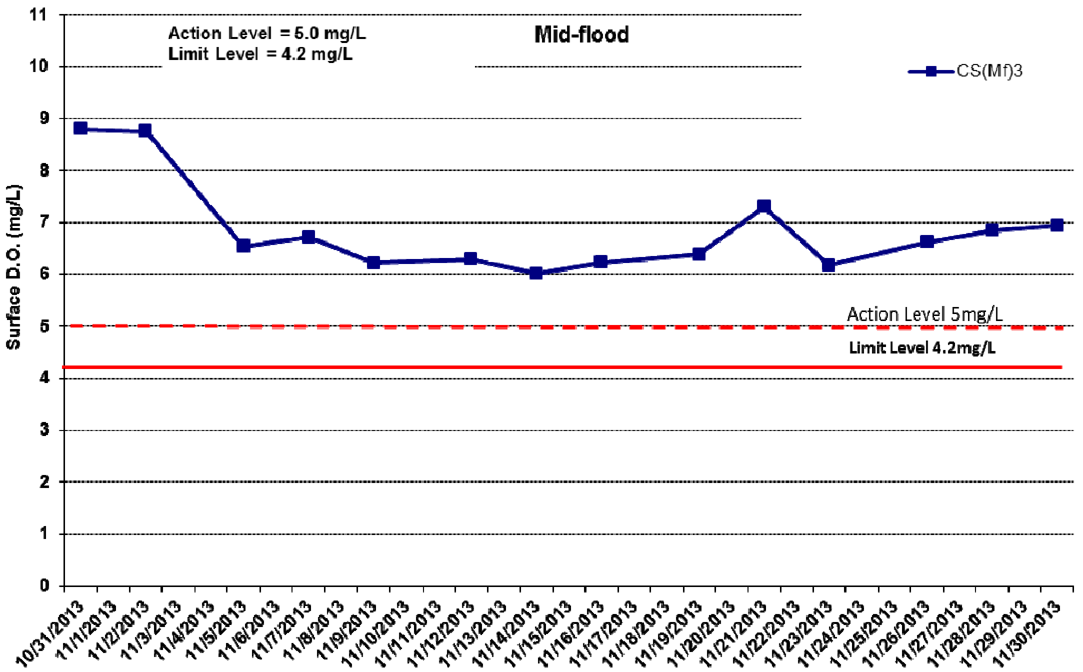

Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)3.	**Environmental Resources Management**

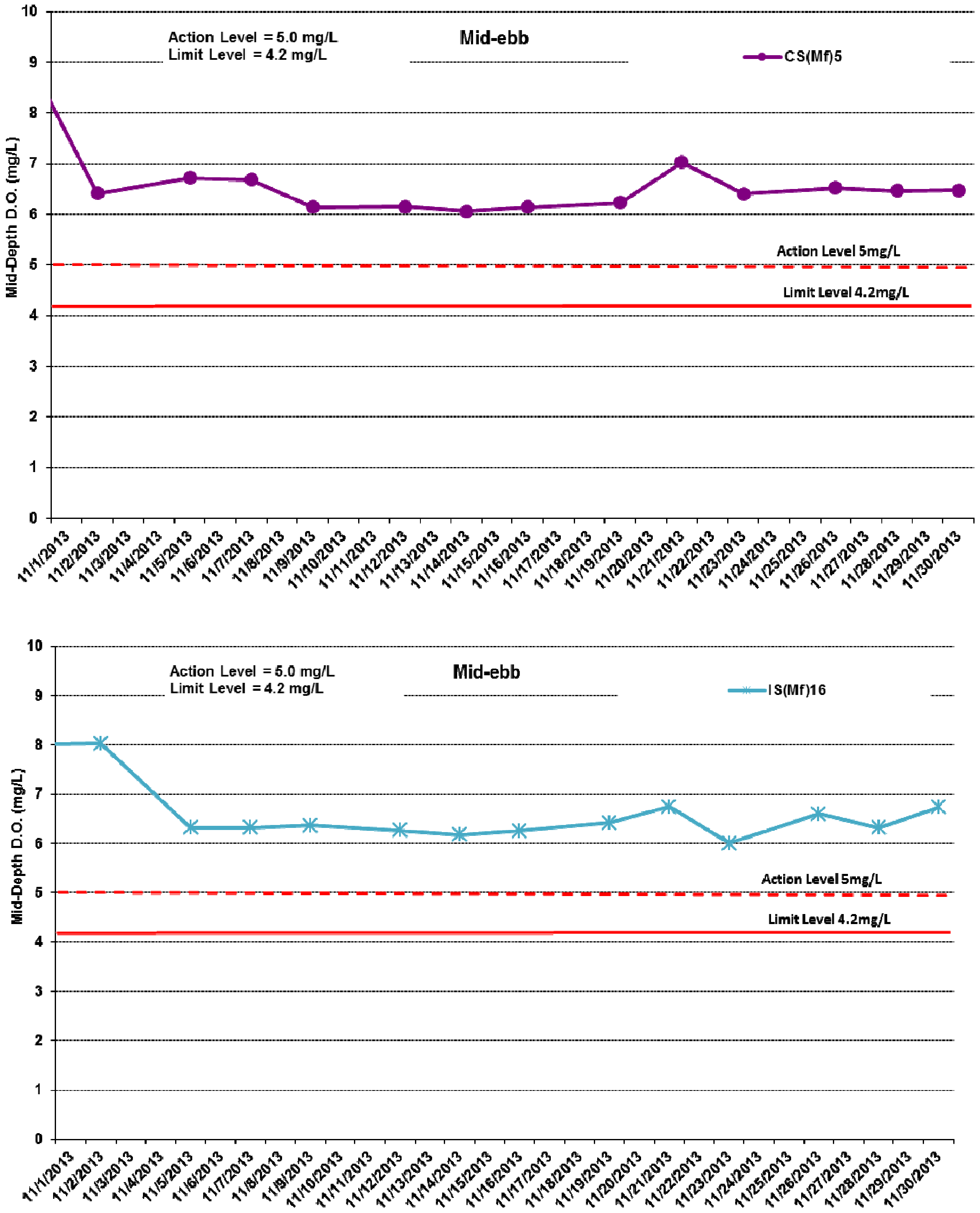

Figure J9 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)5 and IS(Mf)16.

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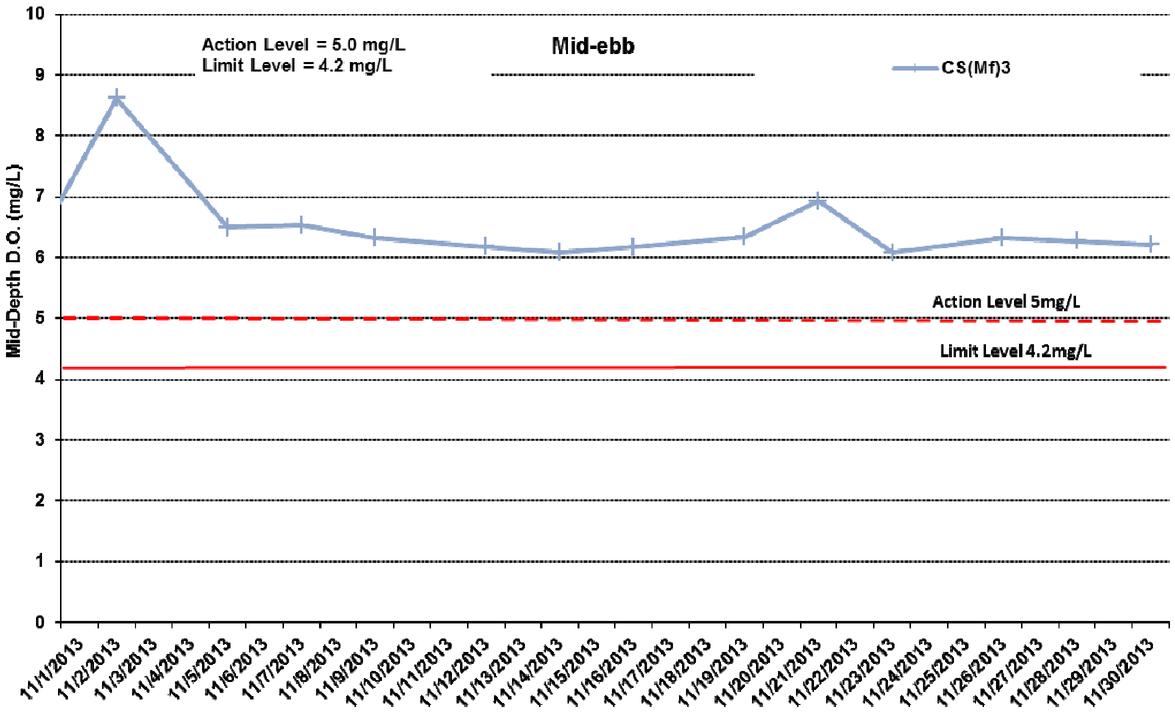

Figure J10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)3.

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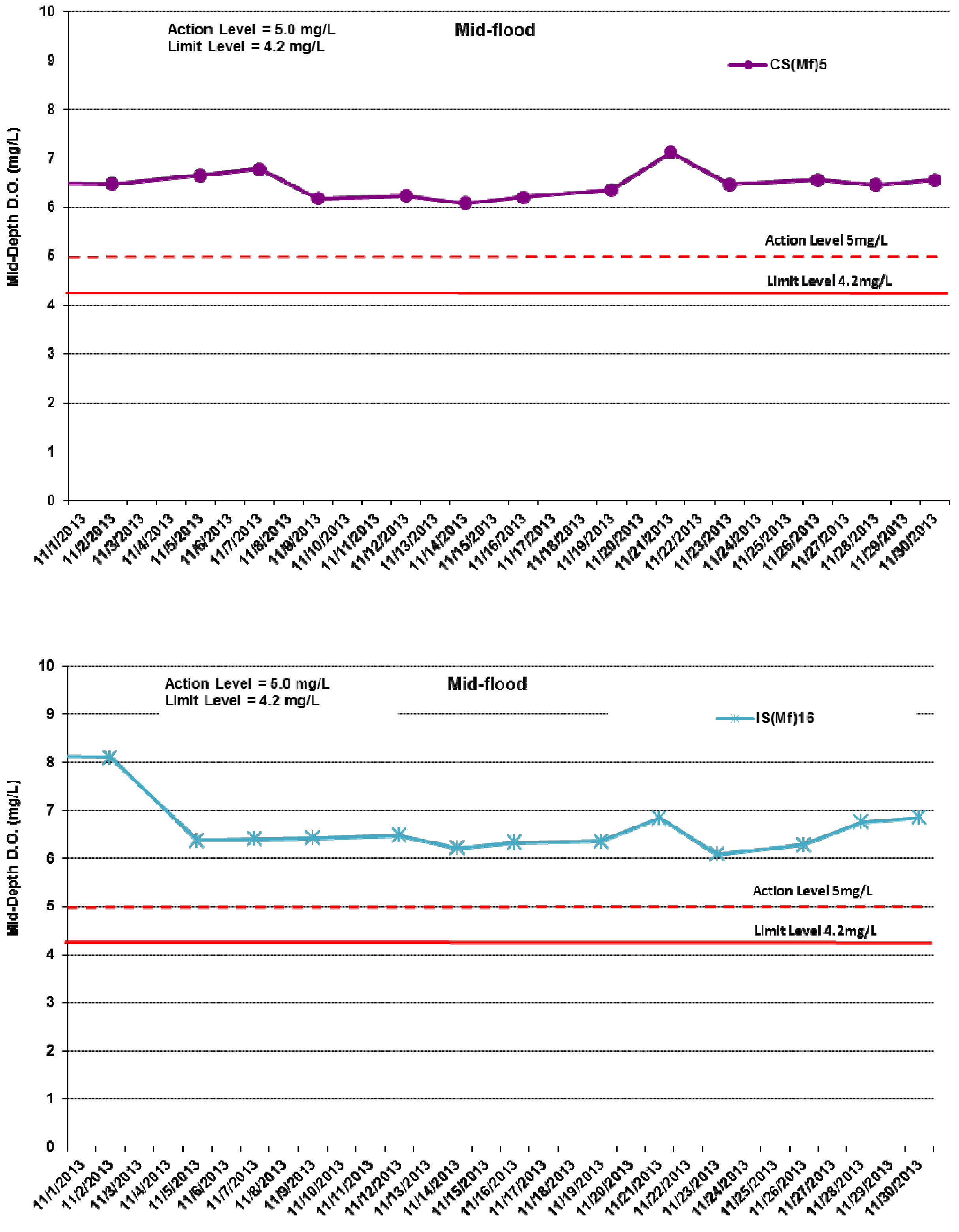

Figure J11 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)5 and IS(Mf)16.

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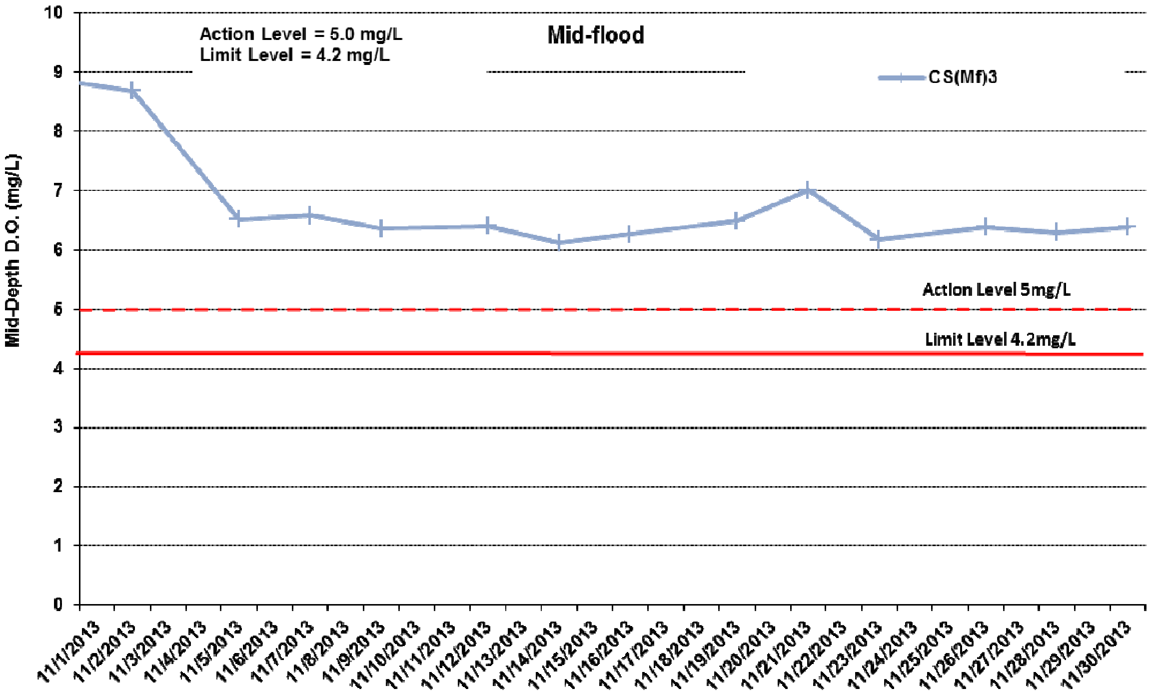

Figure J12 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)3.

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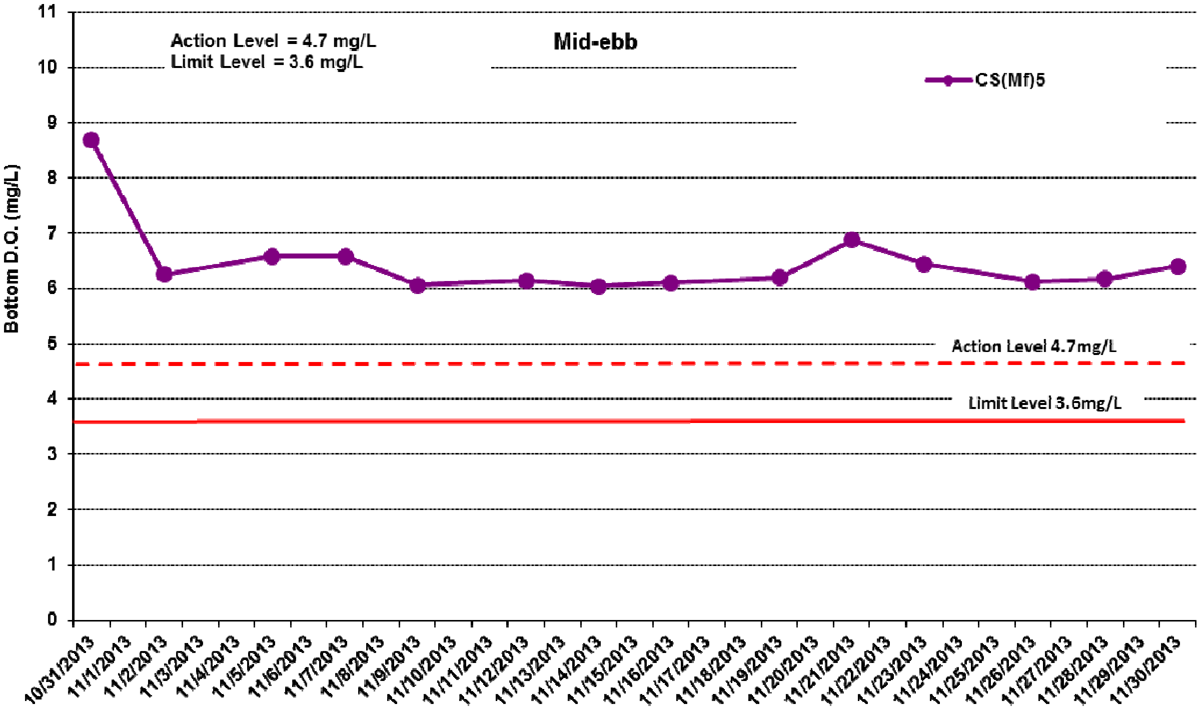

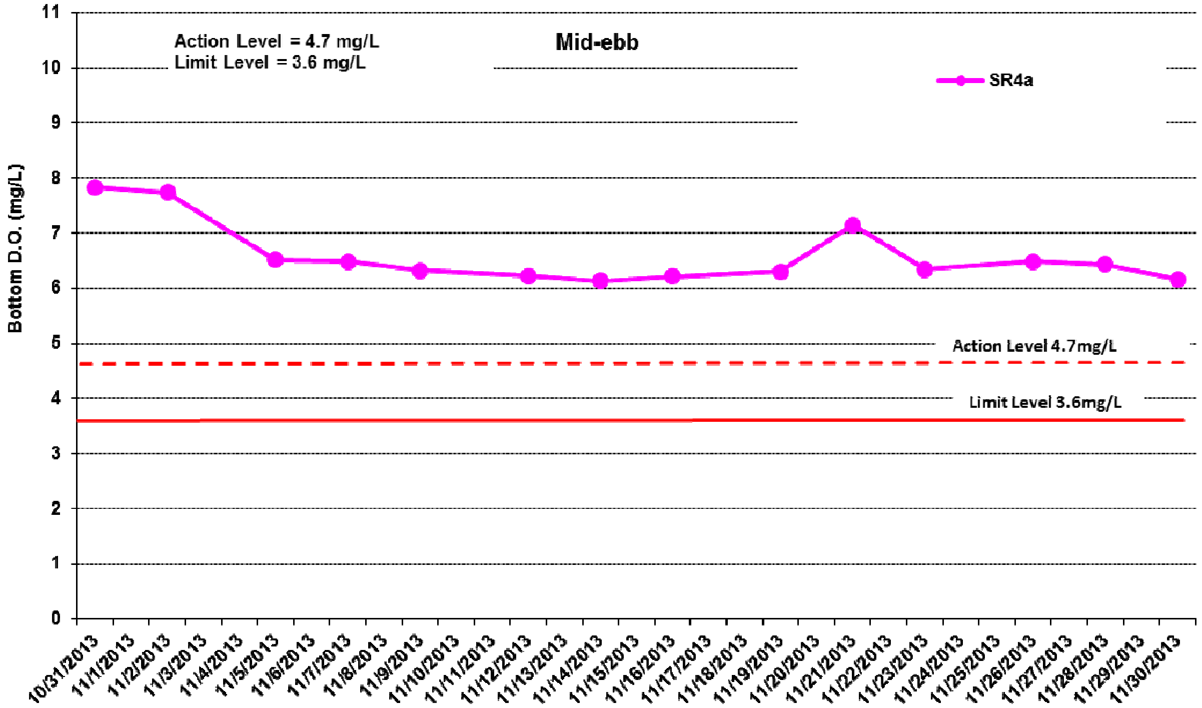

Figure J13 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 31 October and 30 November 2013 at IS(Mf)5 and SR4a.

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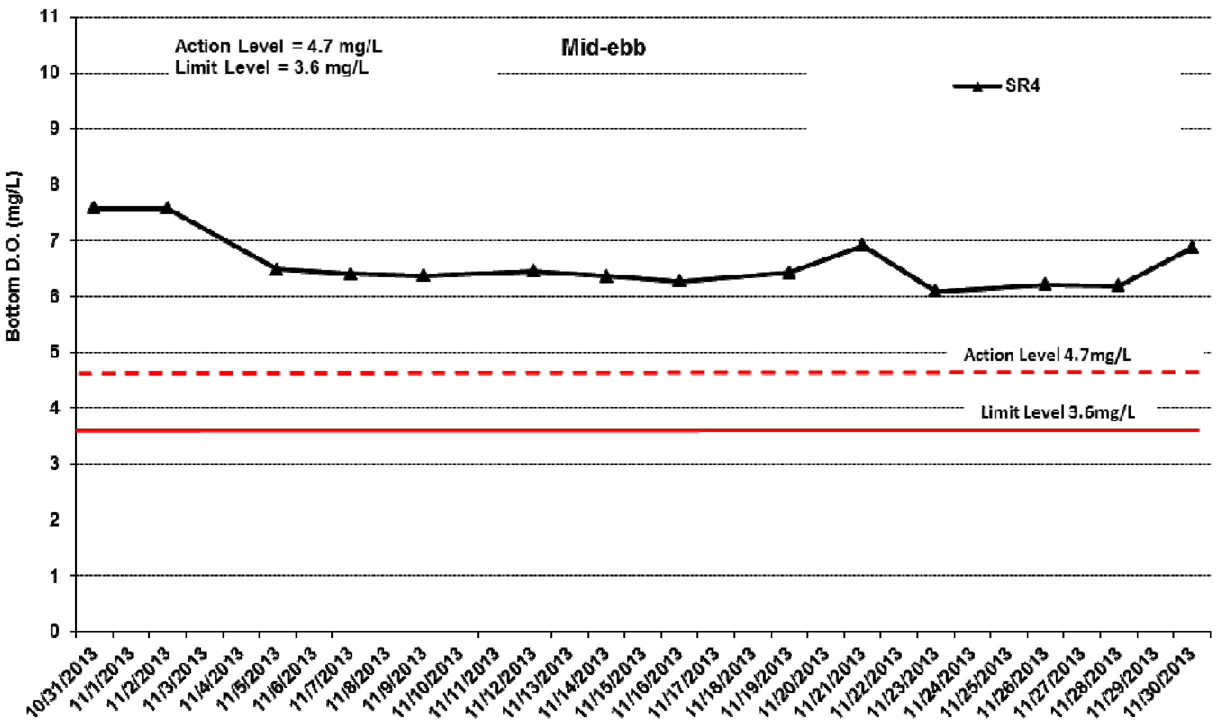

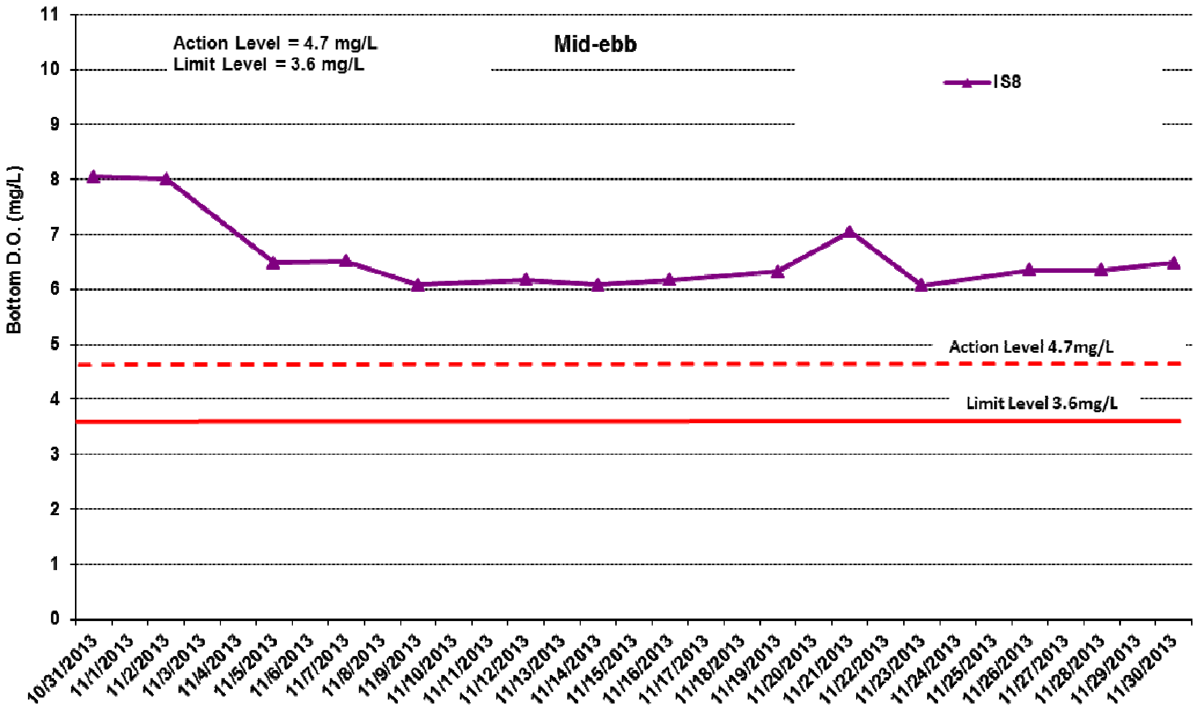

Figure J14 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 31 October and 30 November 2013 at SR4a and IS8.

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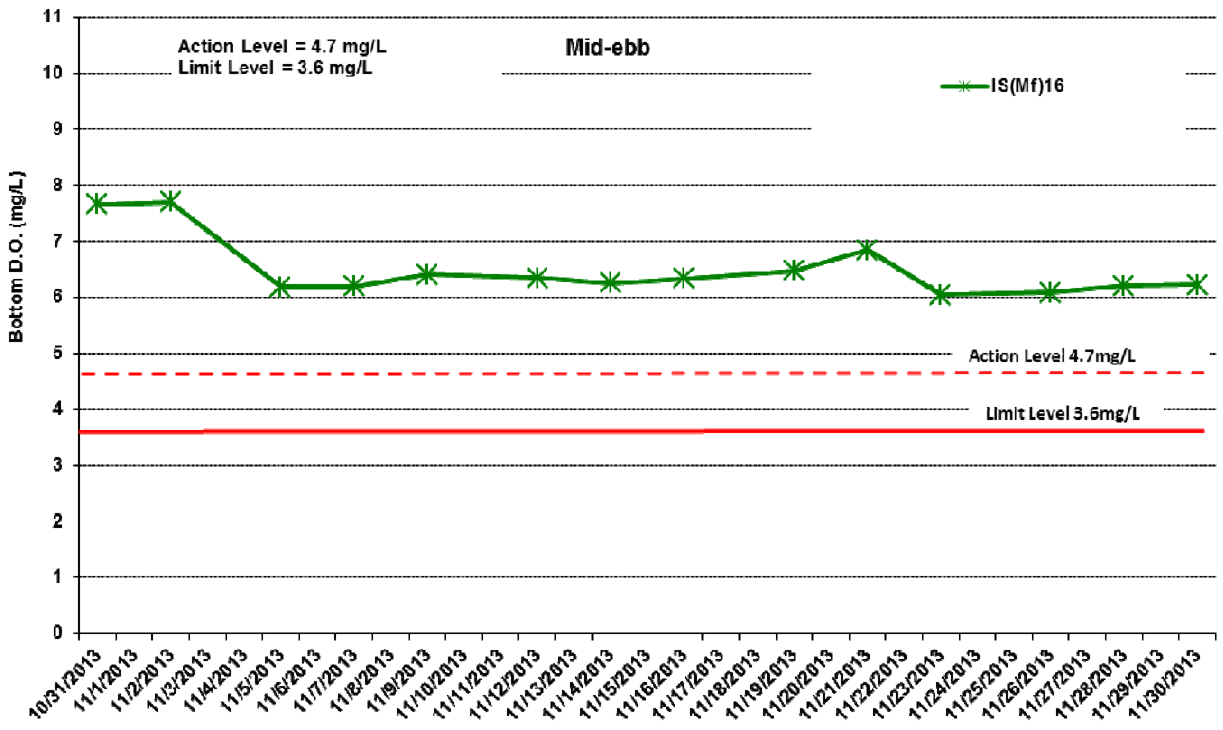

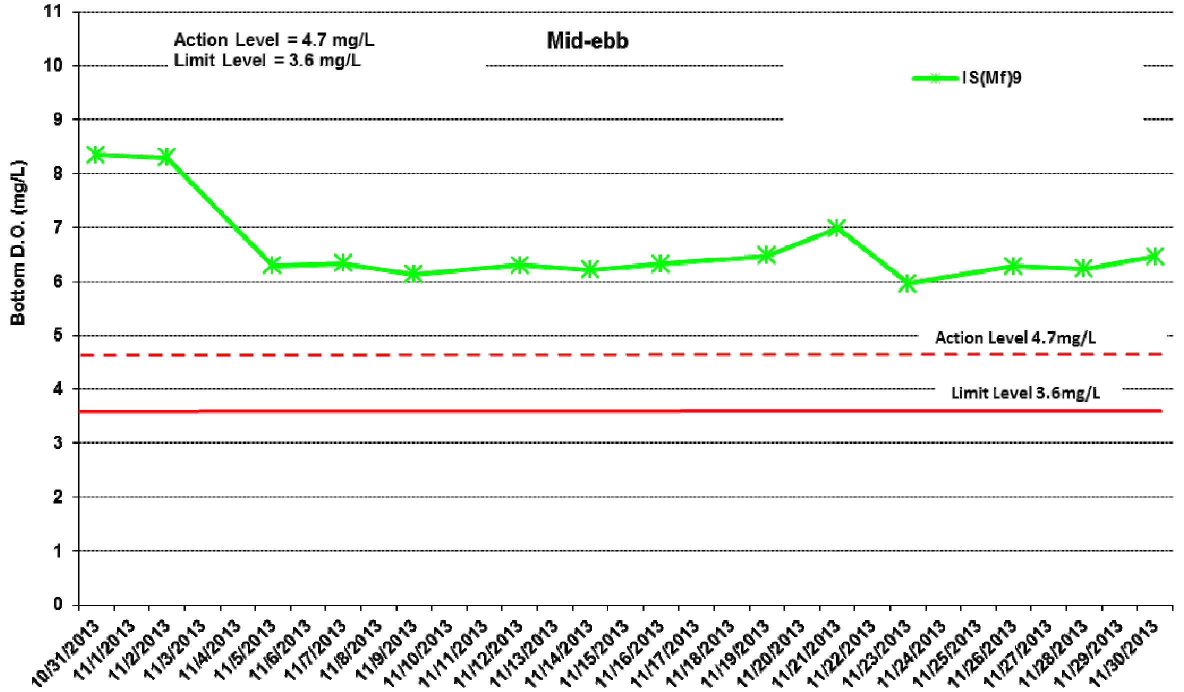

Figure J15 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

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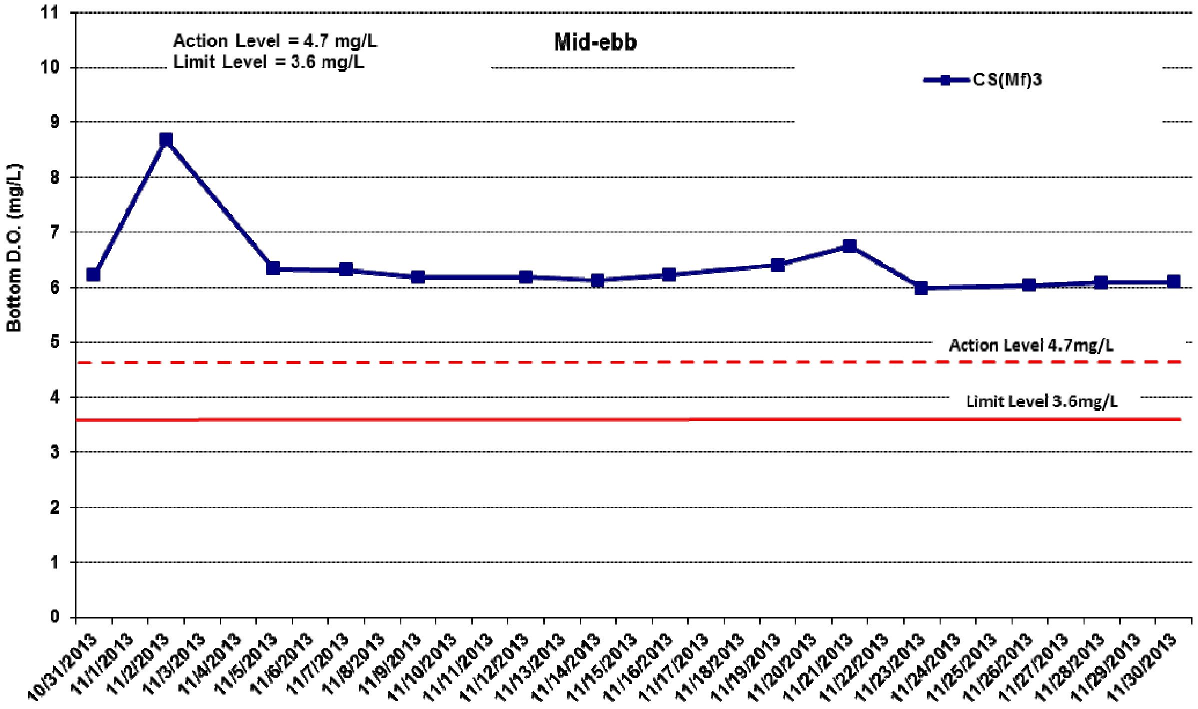

Figure J16 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)3.

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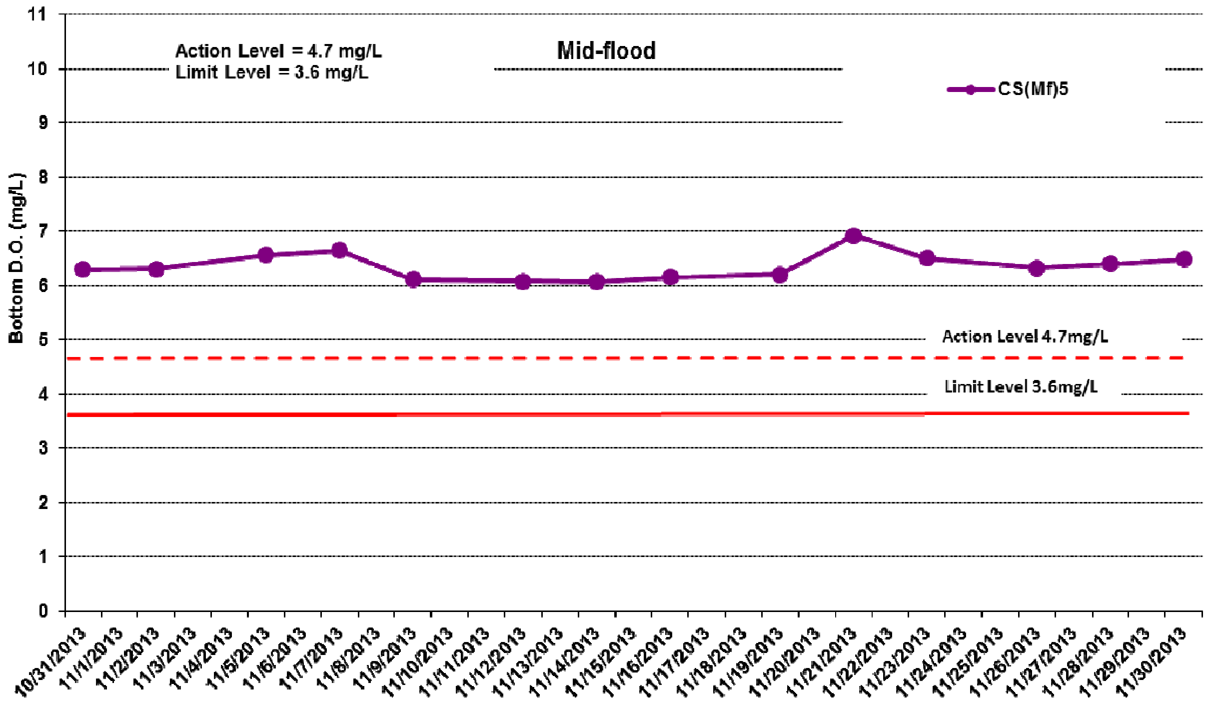


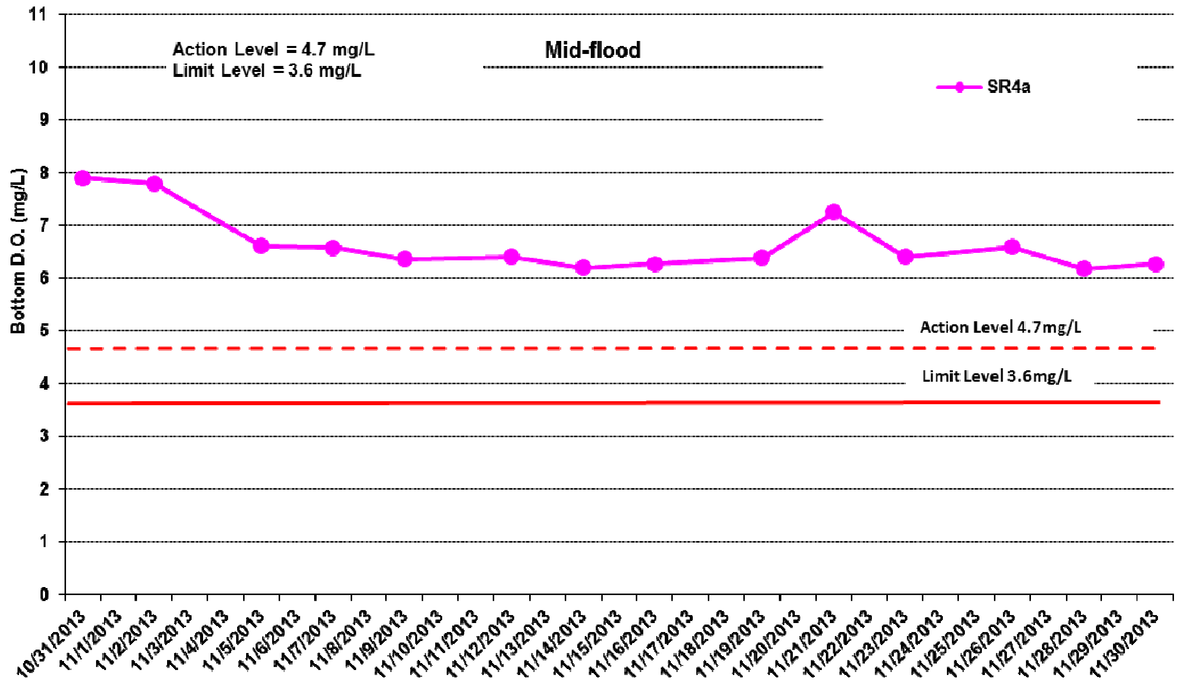
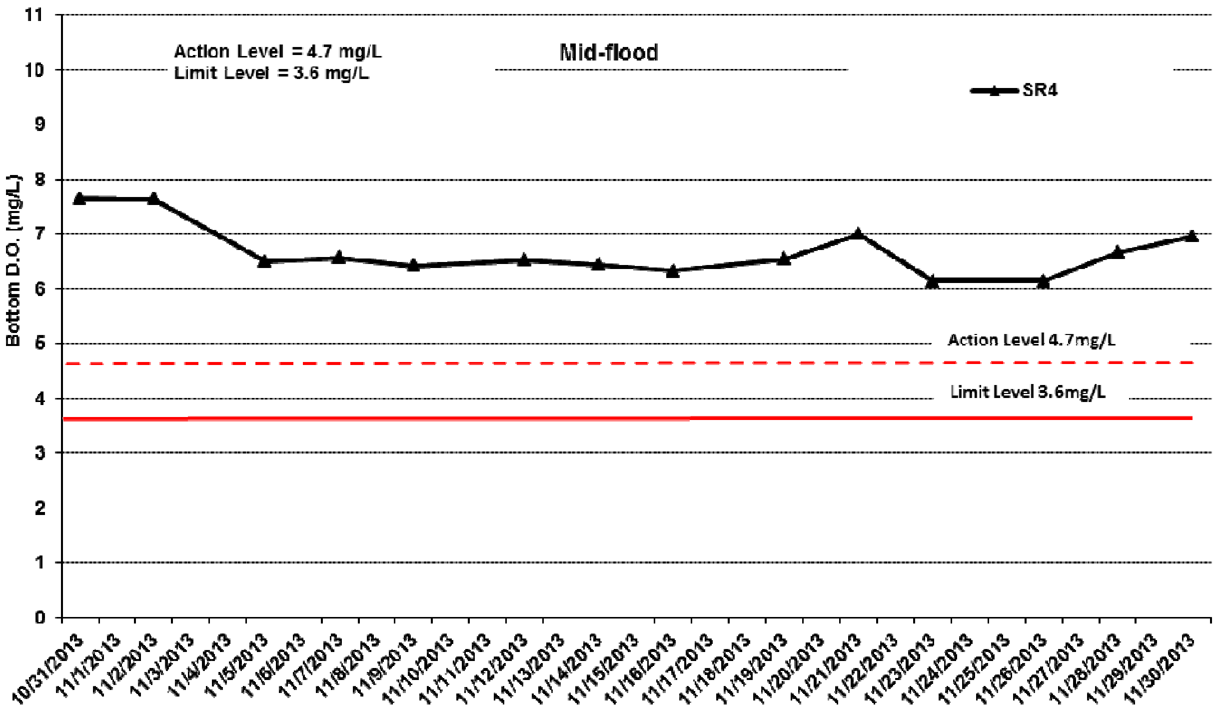


Figure J17 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)6 and SR4a.



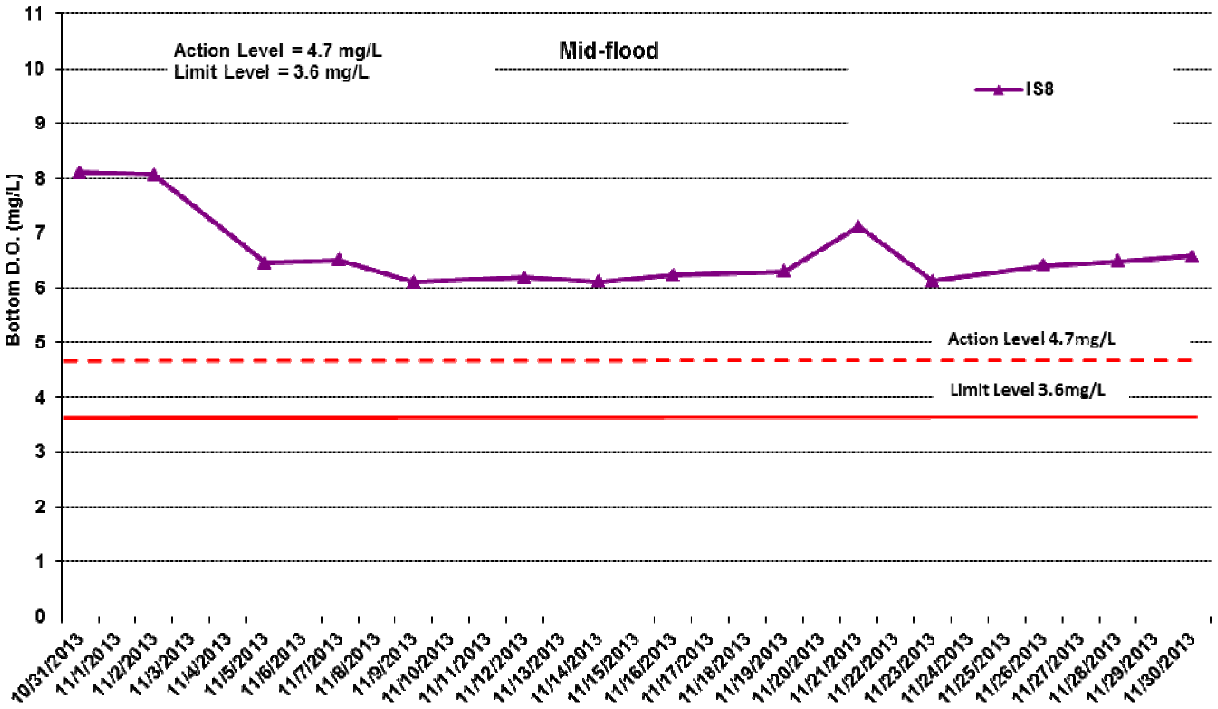


Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 31 October and 30 November 2013 at SR4 and IS8.

Environmental
Resources
Management

ERM

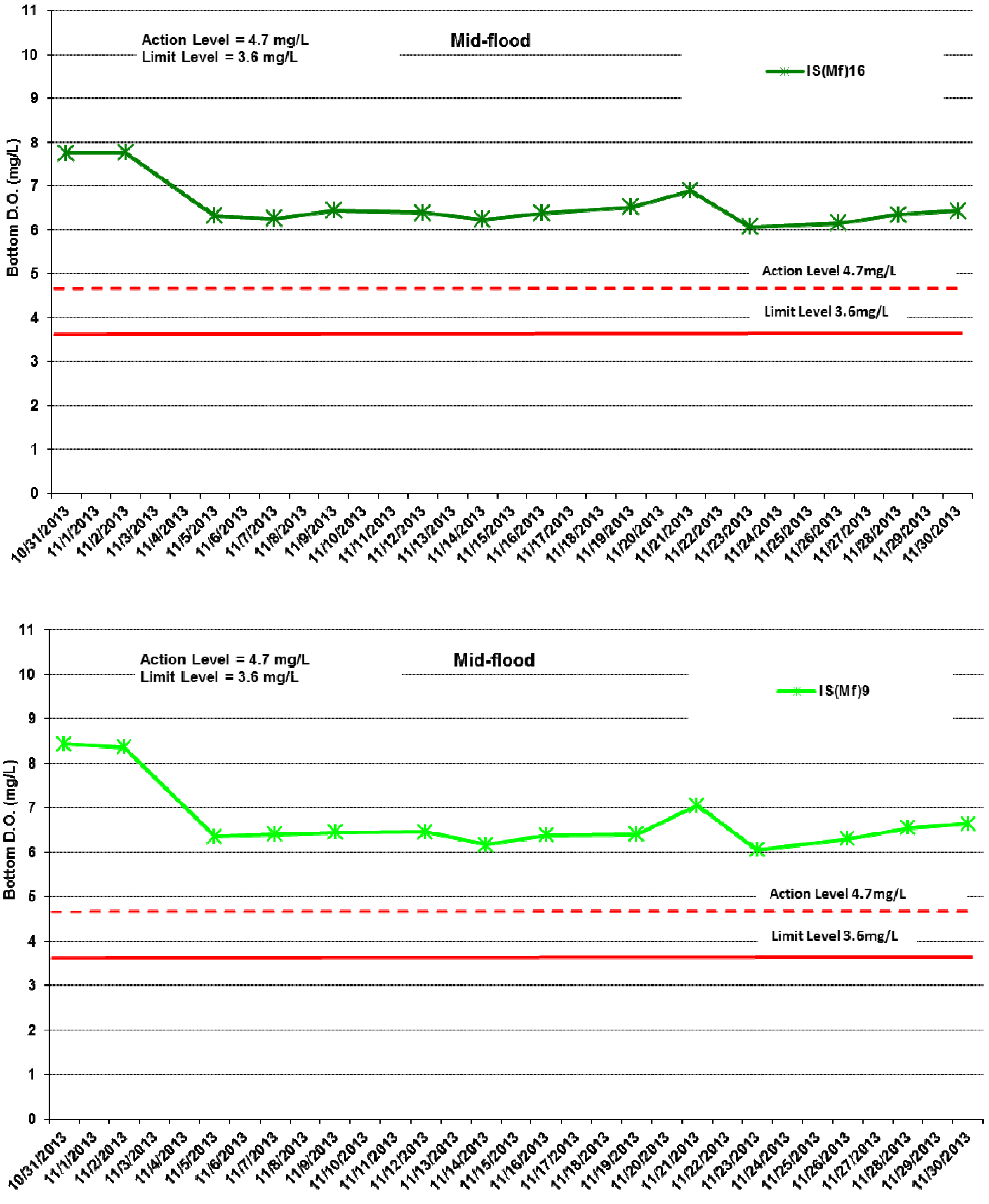


Figure J19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

Environmental
Resources
Management

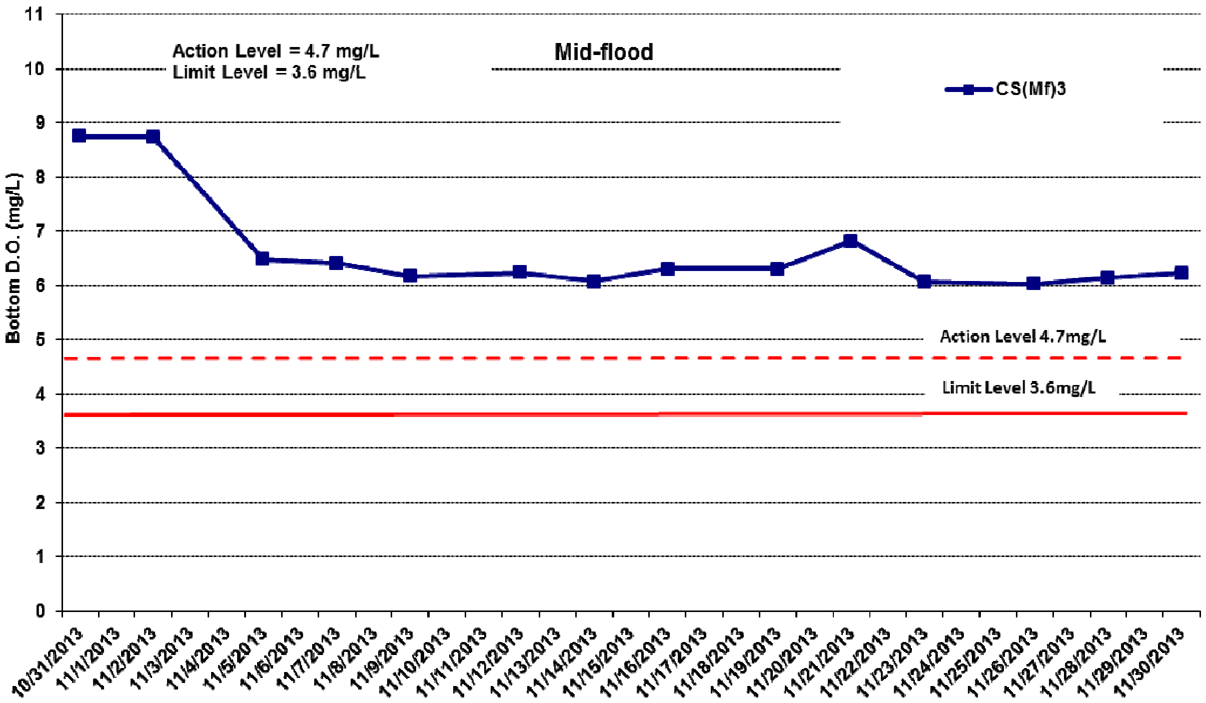
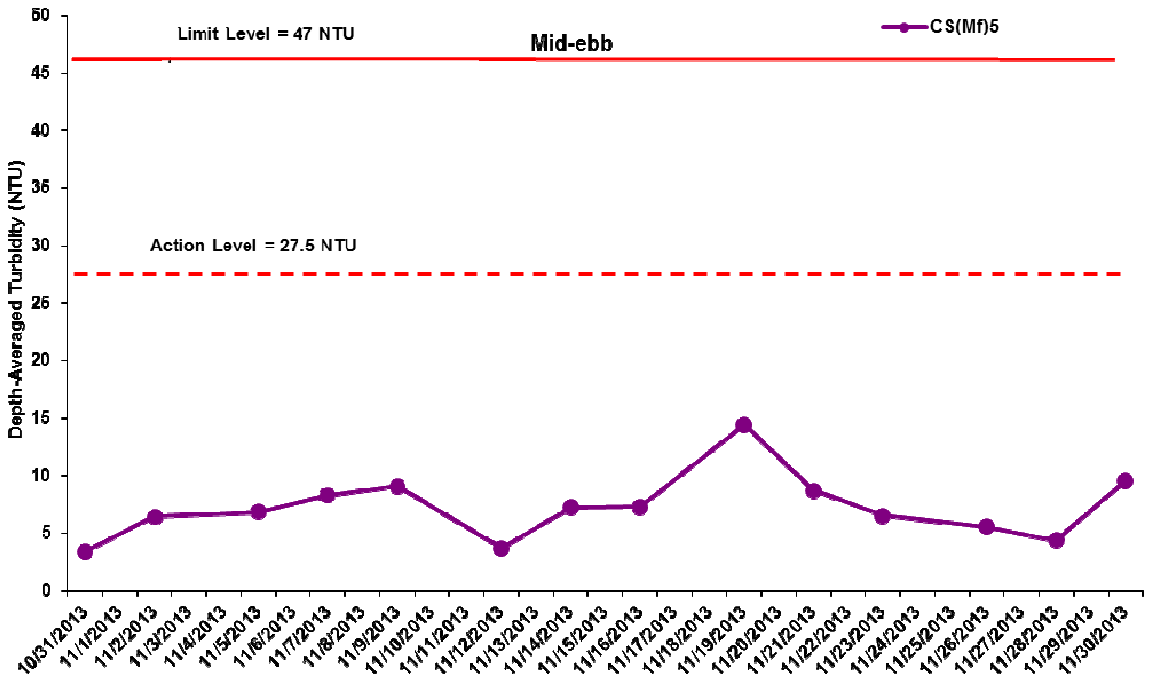


Figure J20 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)3.

Environmental
Resources
Management

ERM



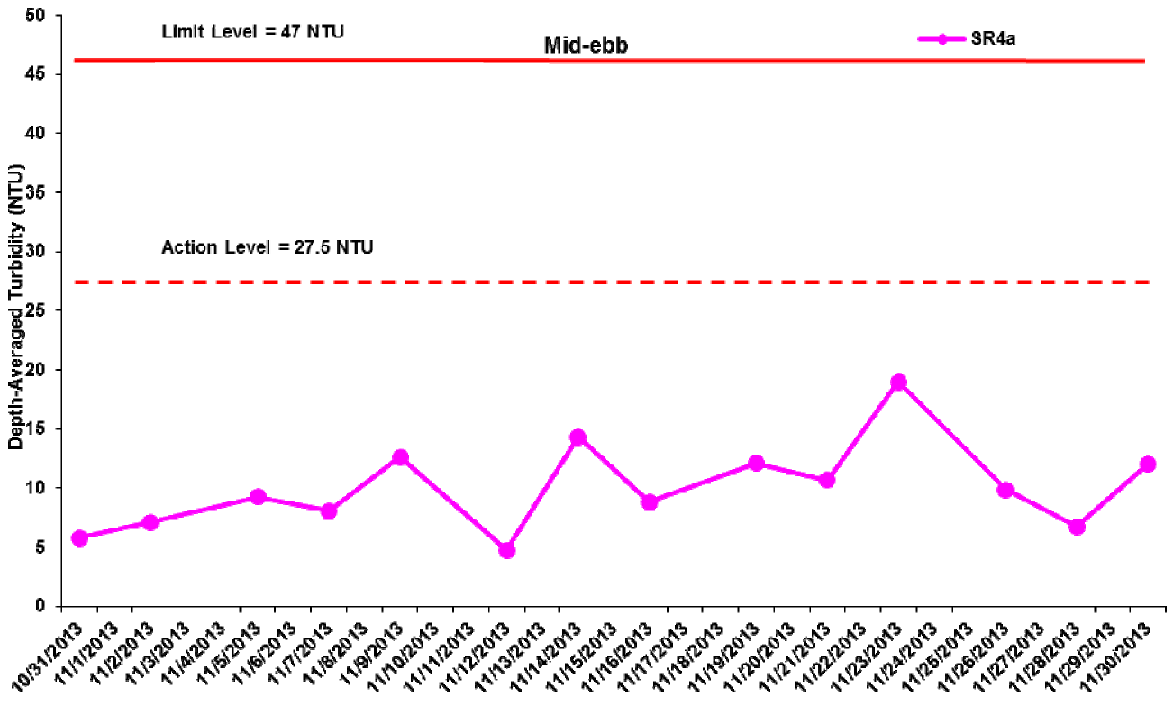
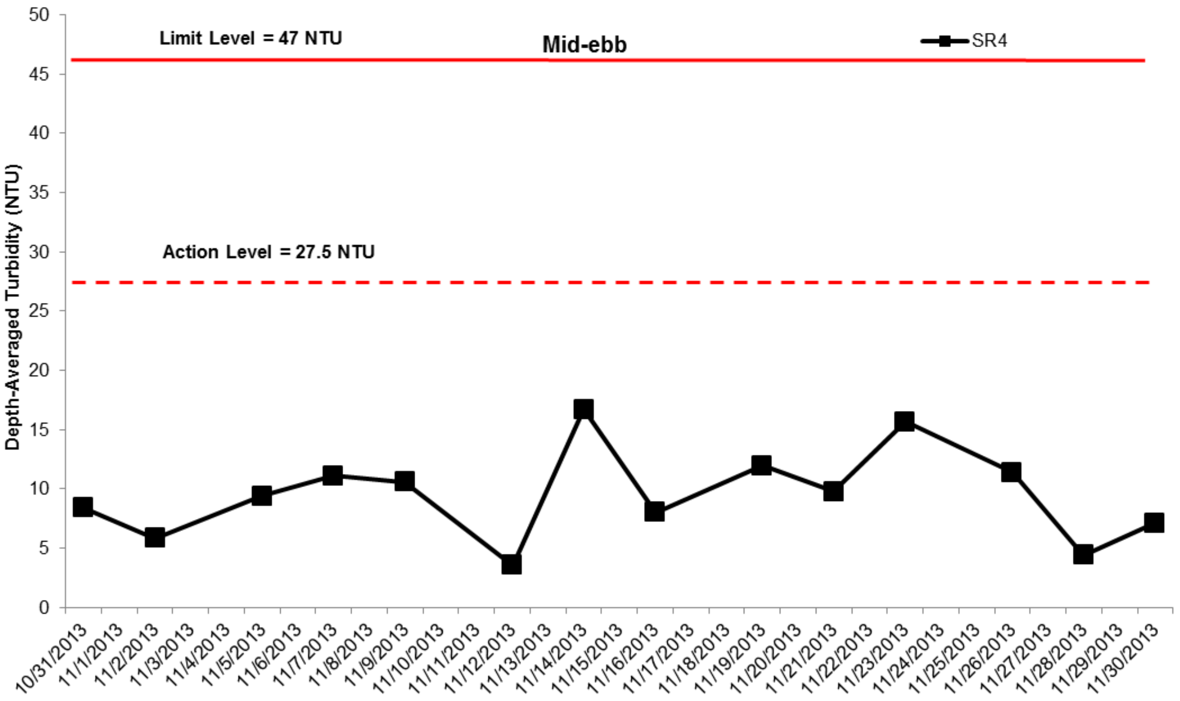


Figure J21 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)5 and SR4a.

Environmental
Resources
Management

ERM



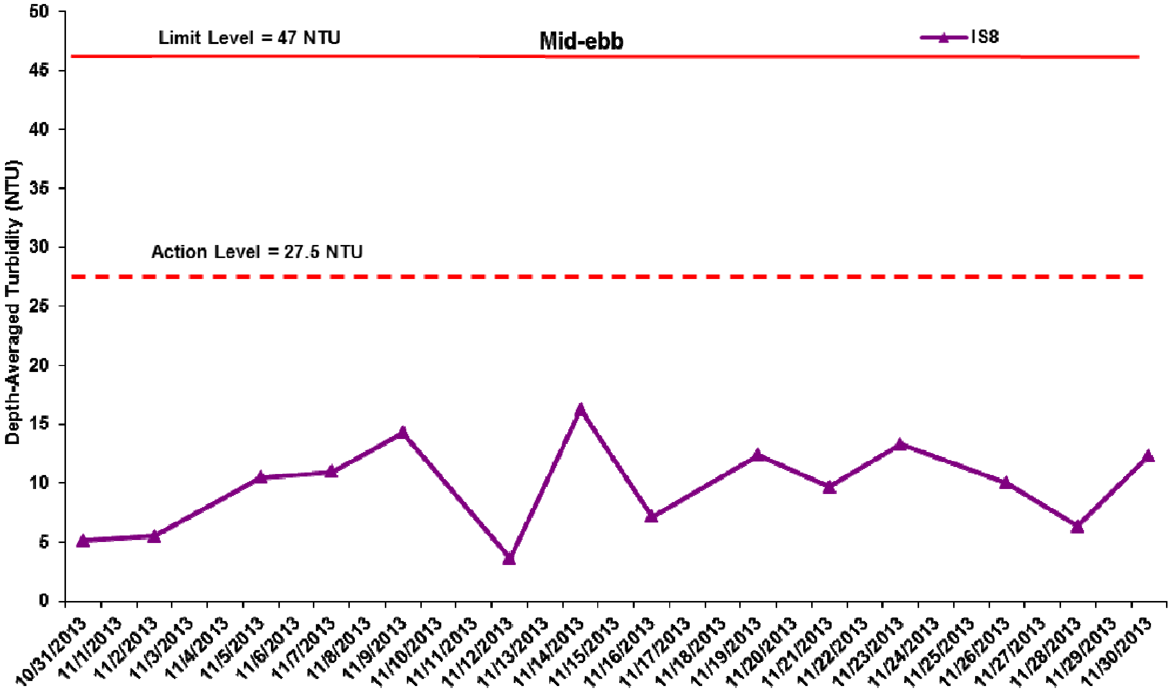
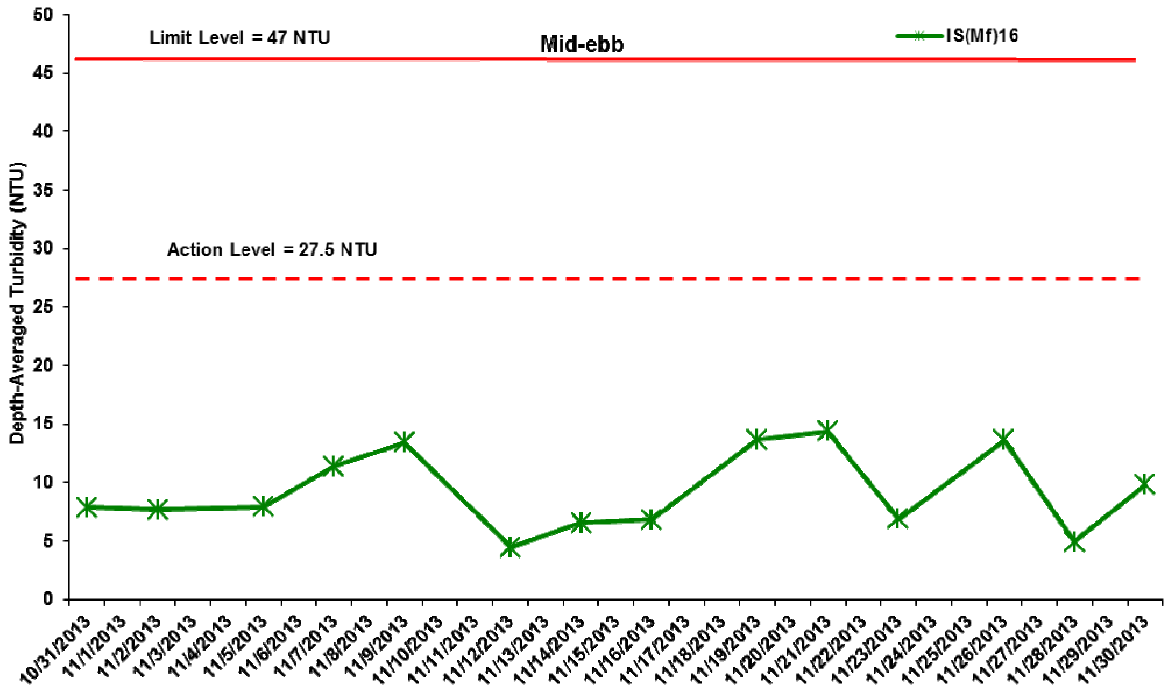


Figure J22 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 31 October and 30 November 2013 at SR4 and IS8.

Environmental
Resources
Management

ERM



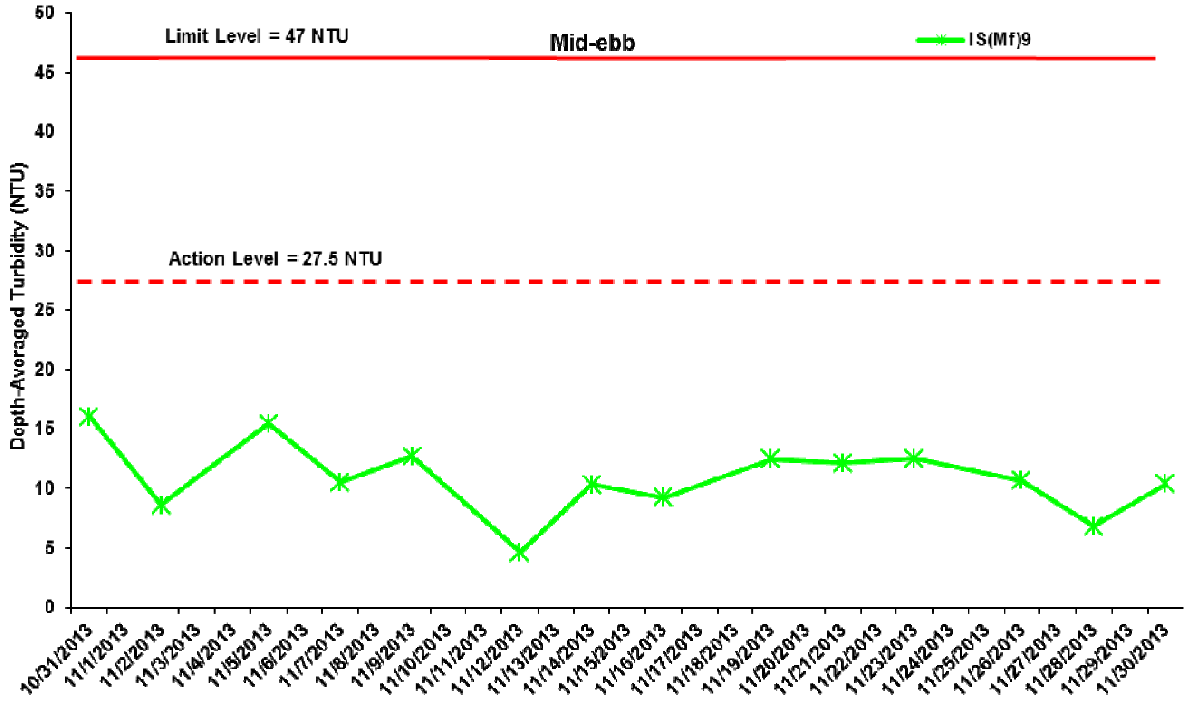


Figure J23 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9 .

Environmental
Resources
Management

ERM

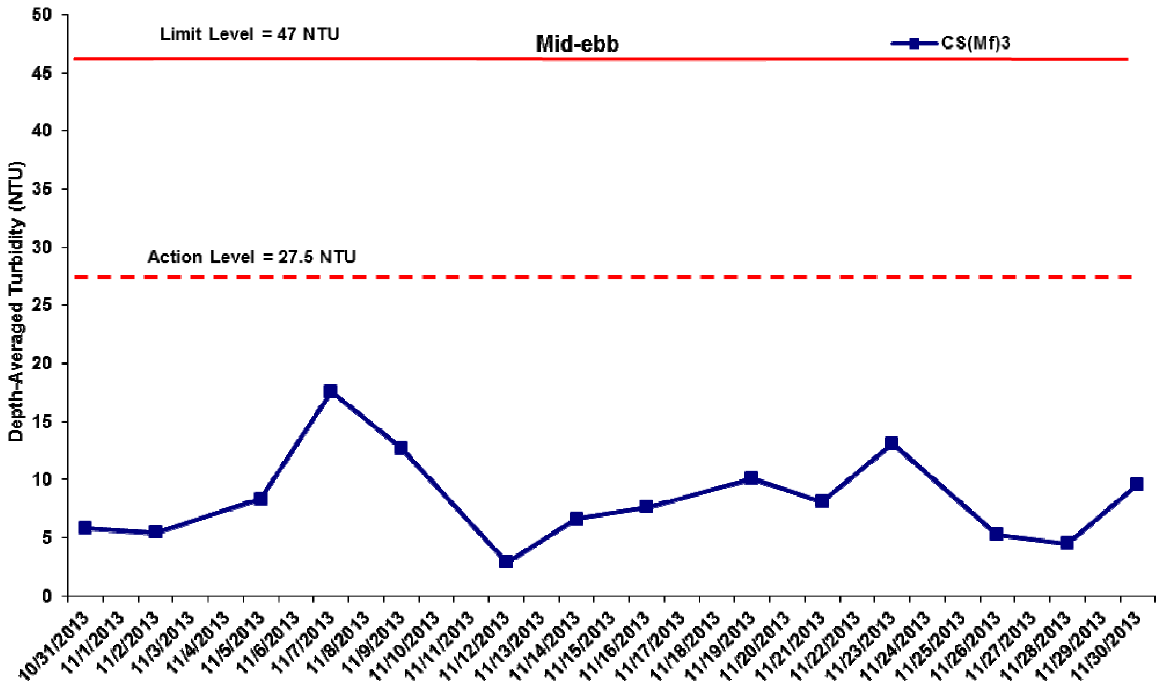
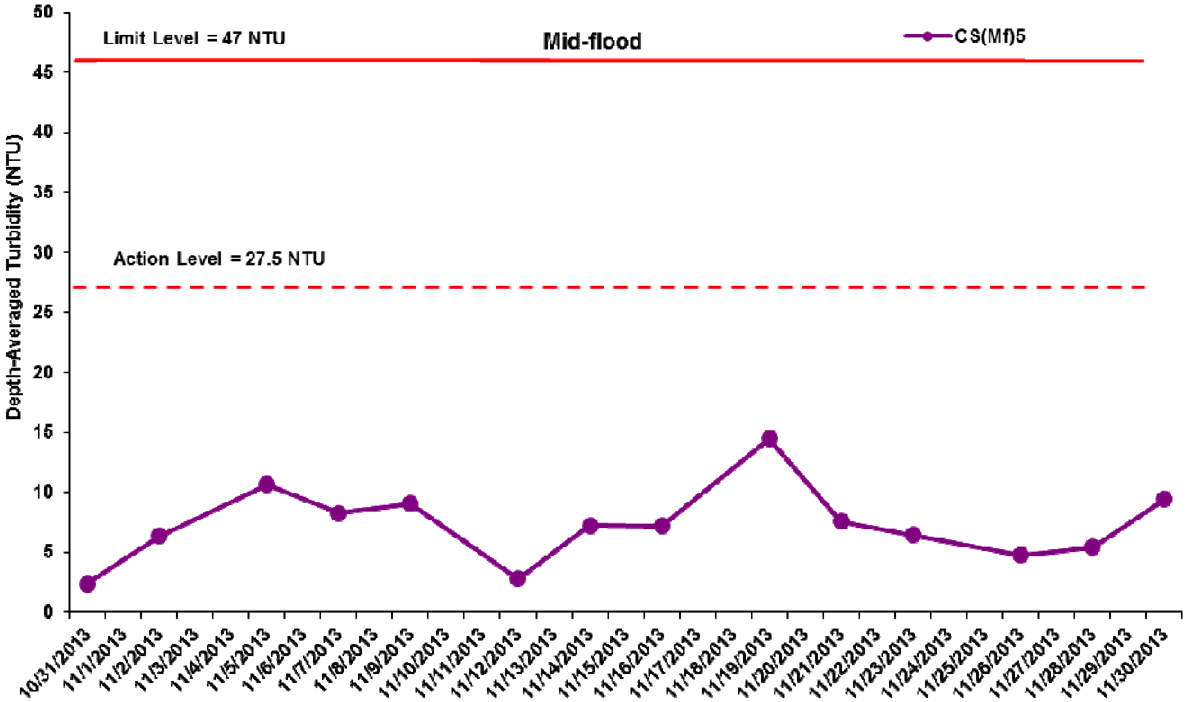


Figure J24 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)3.

Environmental
Resources
Management

ERM



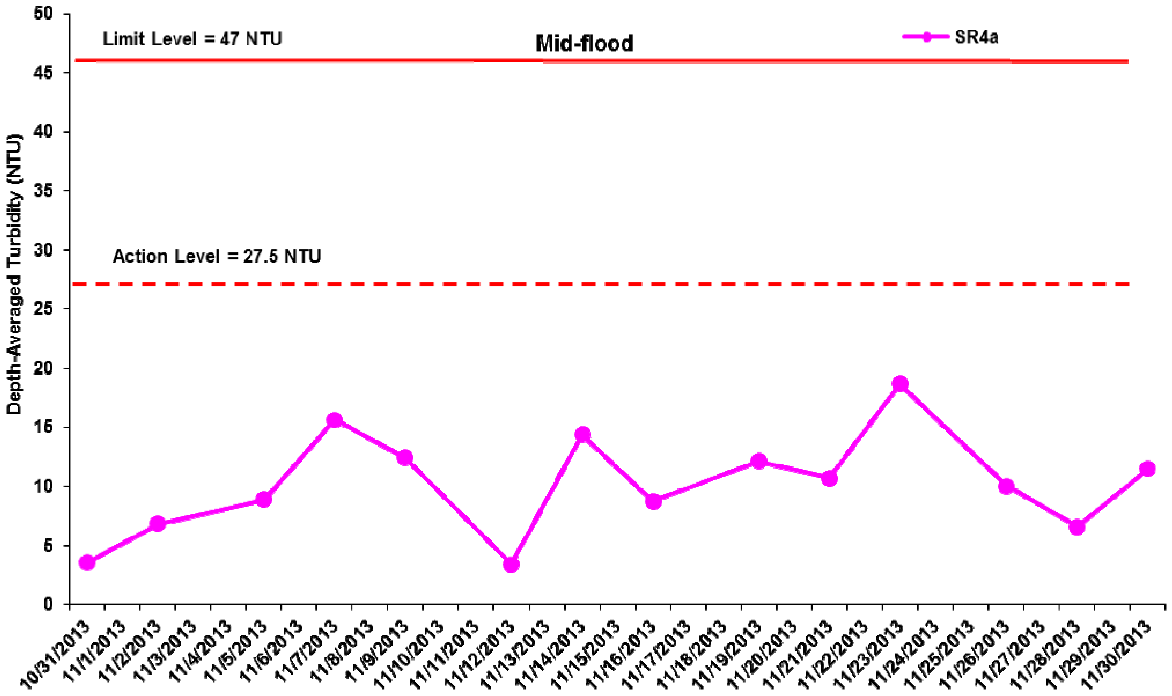
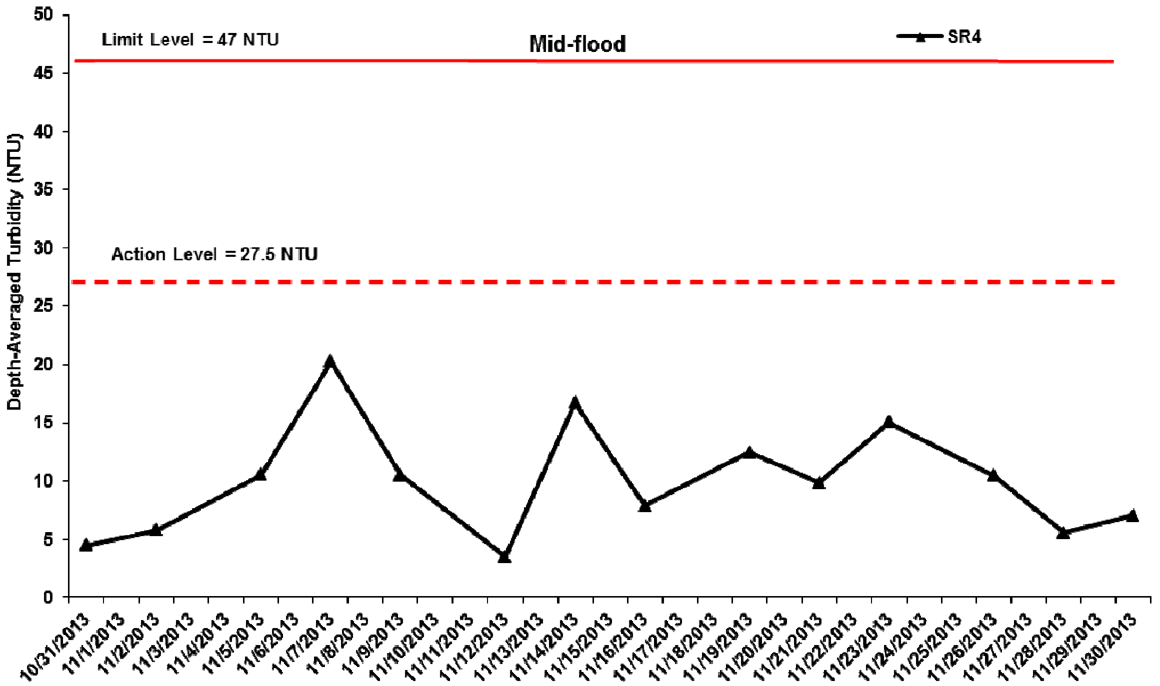


Figure J25 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)5 and SR4a.

Environmental
Resources
Management



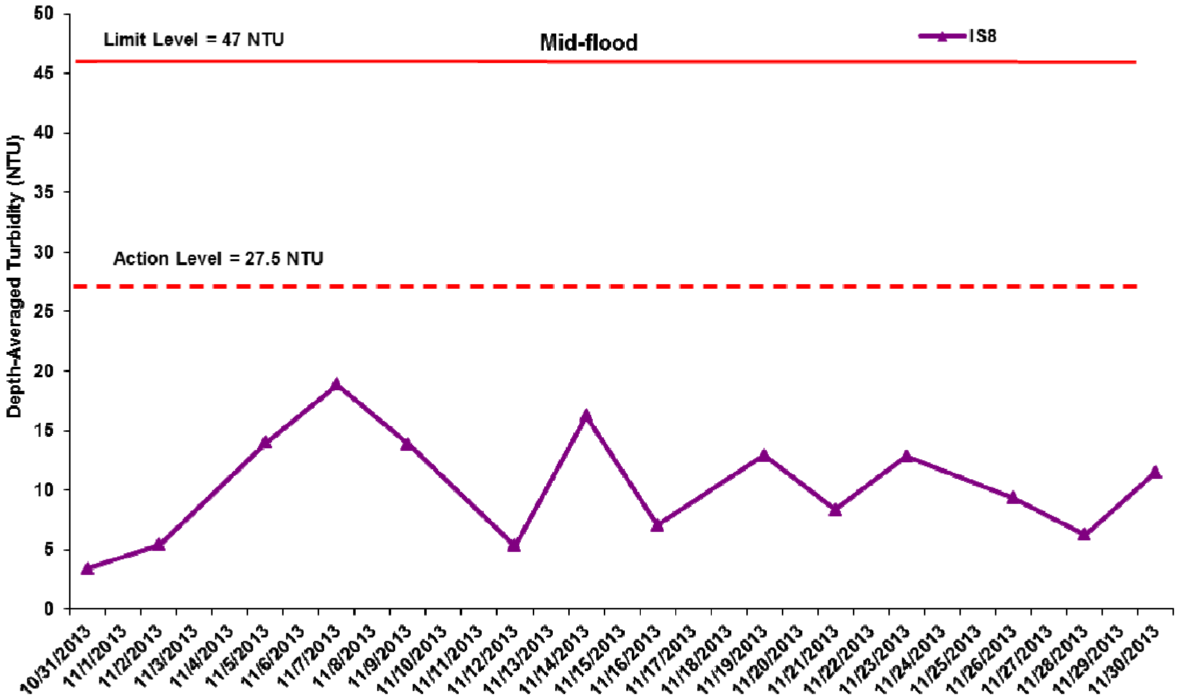
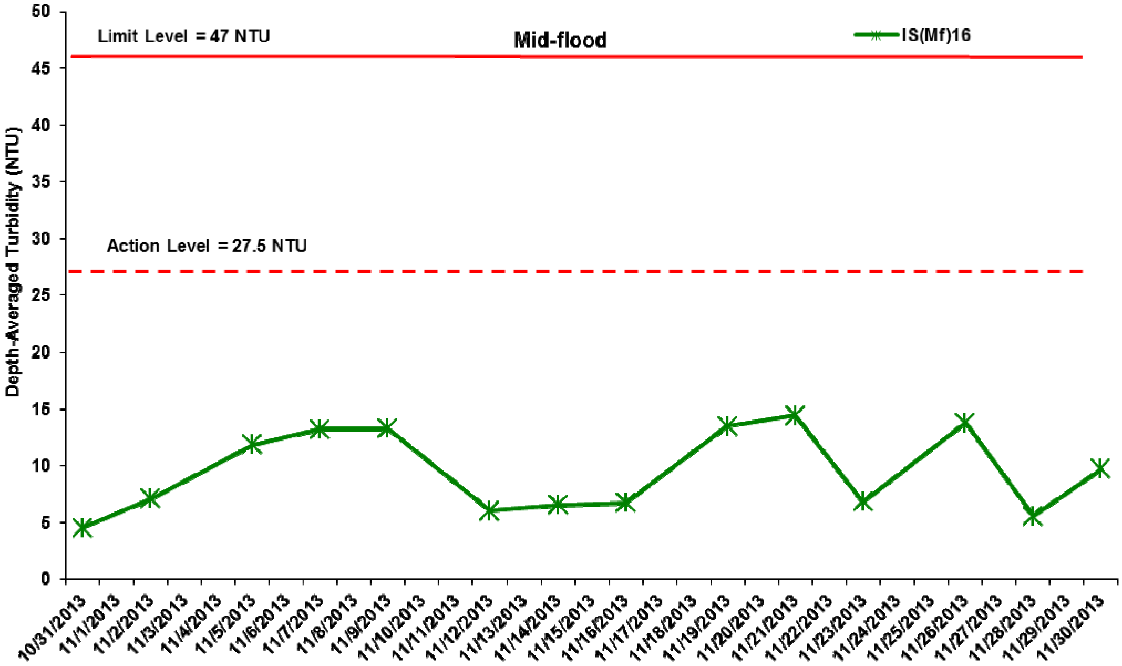


Figure J26 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 31 October and 30 November 2013 at SR4 and IS8.

Environmental
Resources
Management



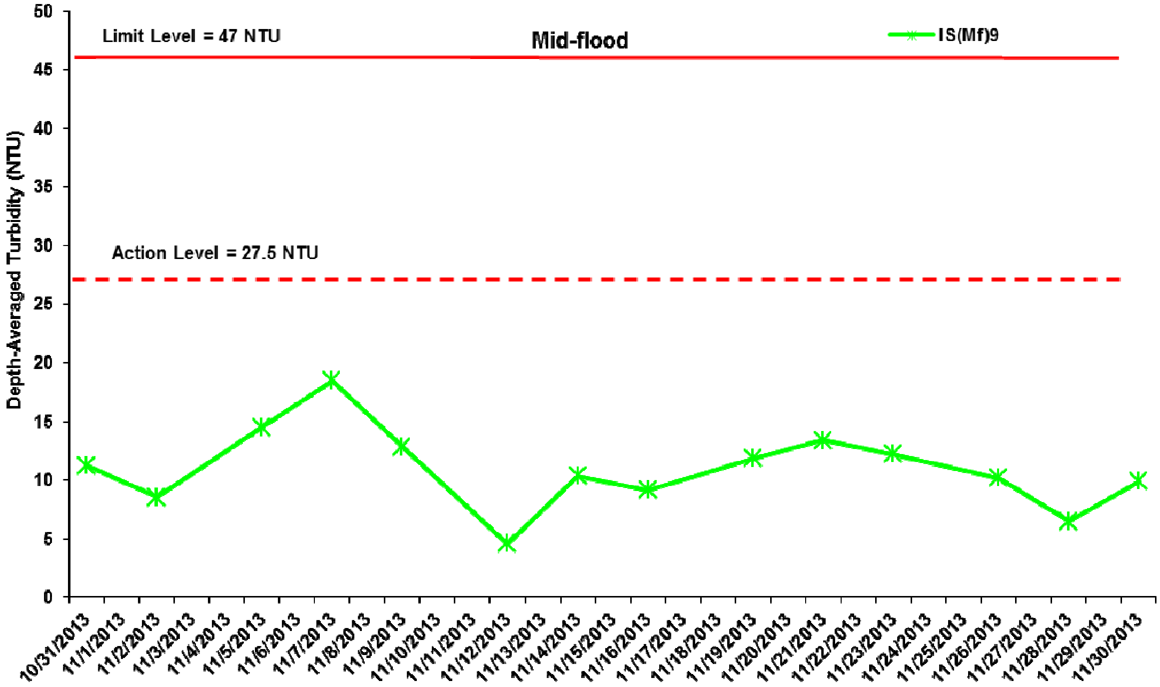


Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

Environmental
Resources
Management

ERM

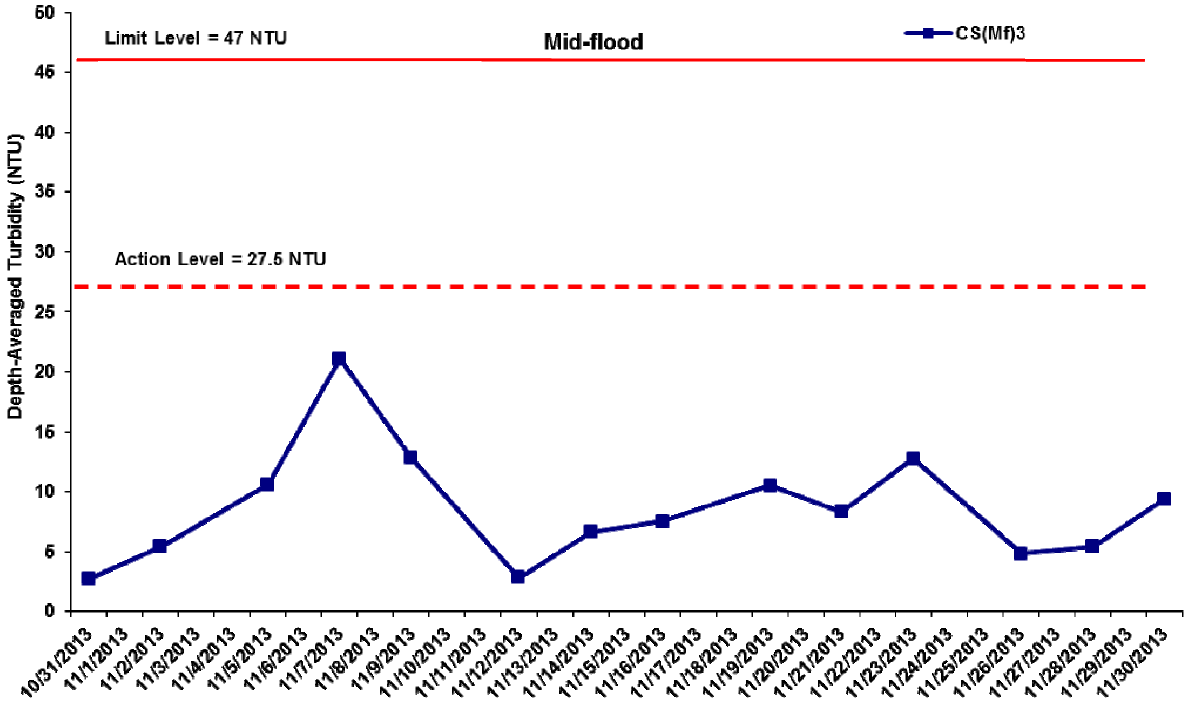


Figure J28 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)3.

Environmental Resources Management

ERM

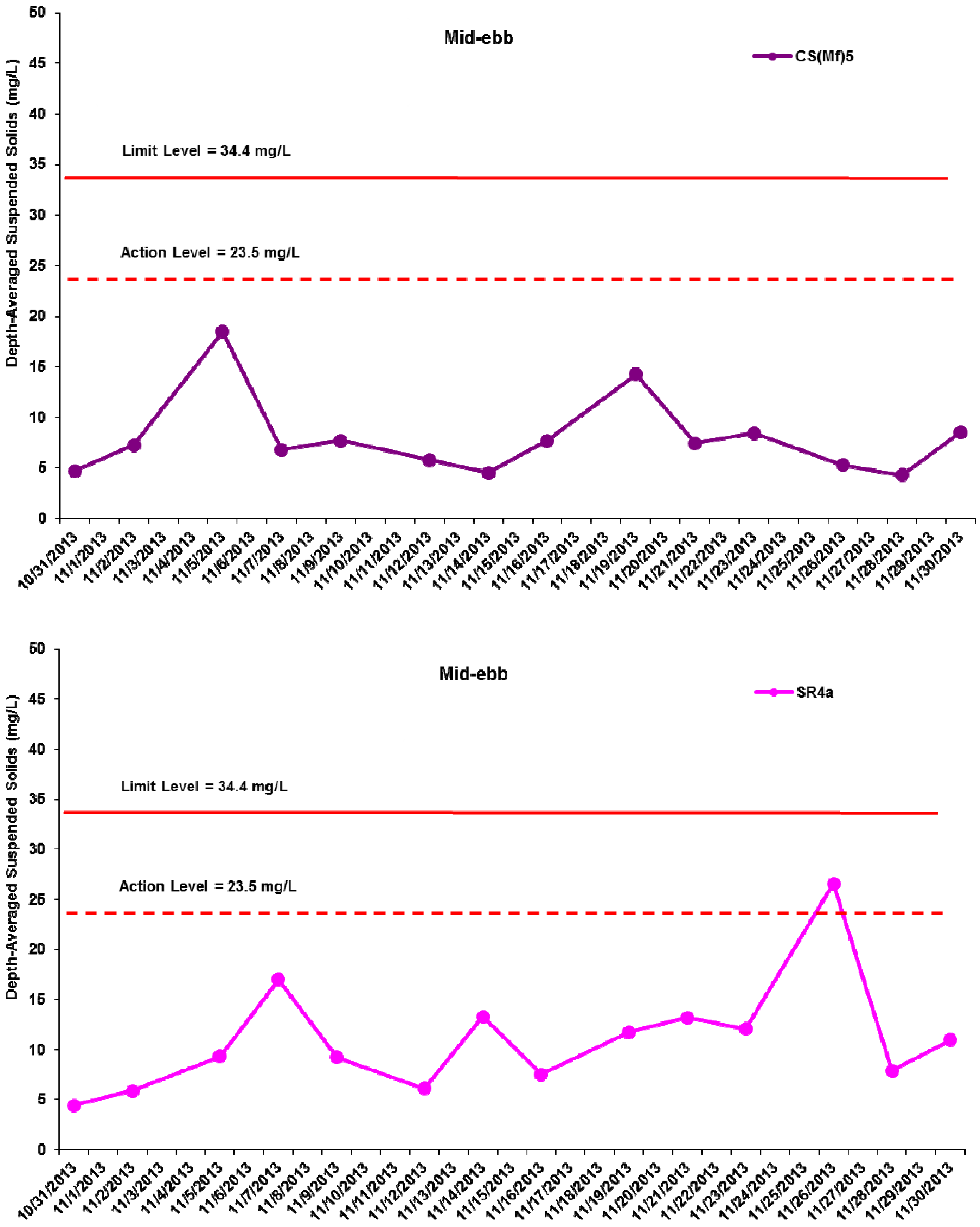


Figure J29 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)5 and SR4a.

Environmental
Resources
Management

ERM

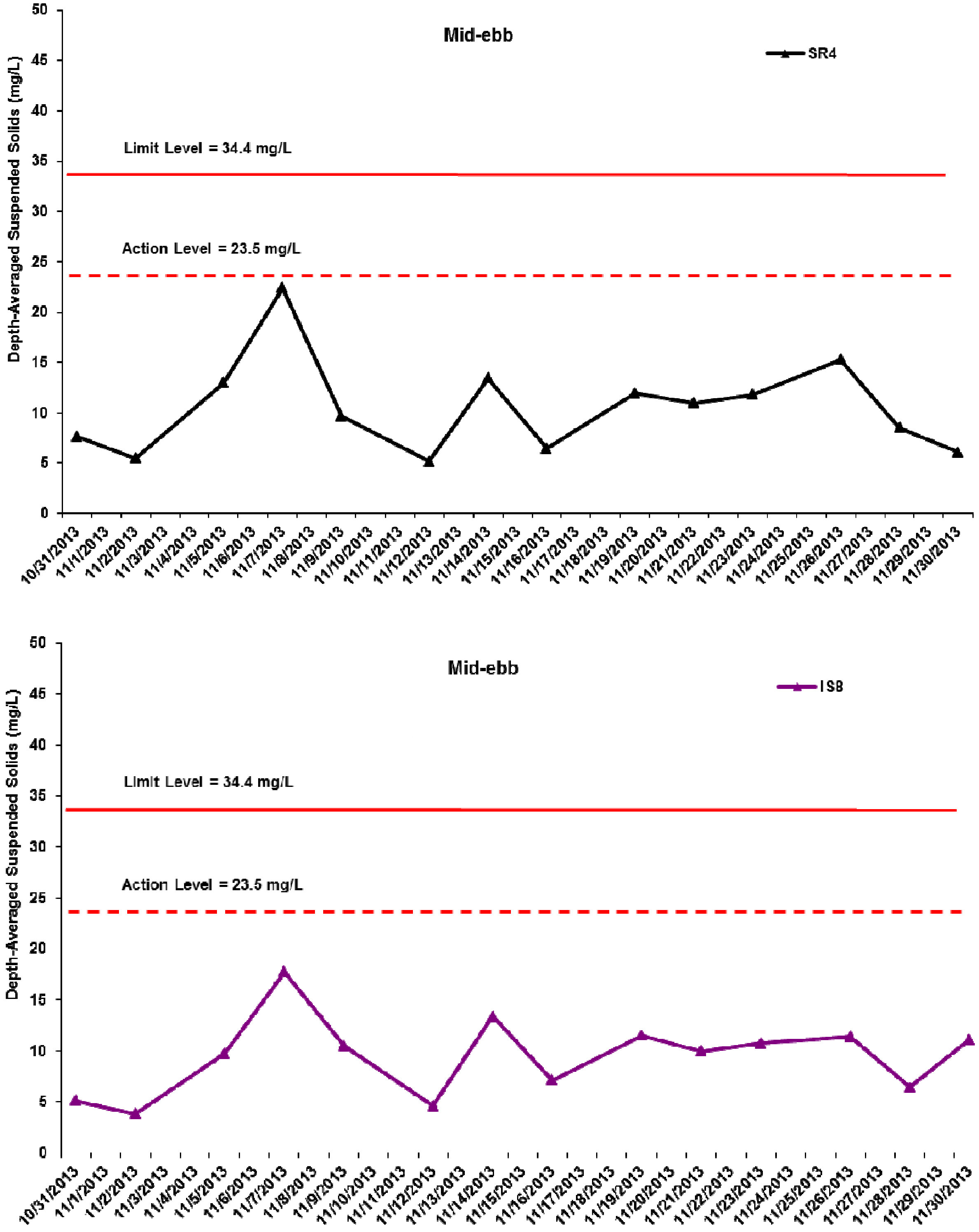
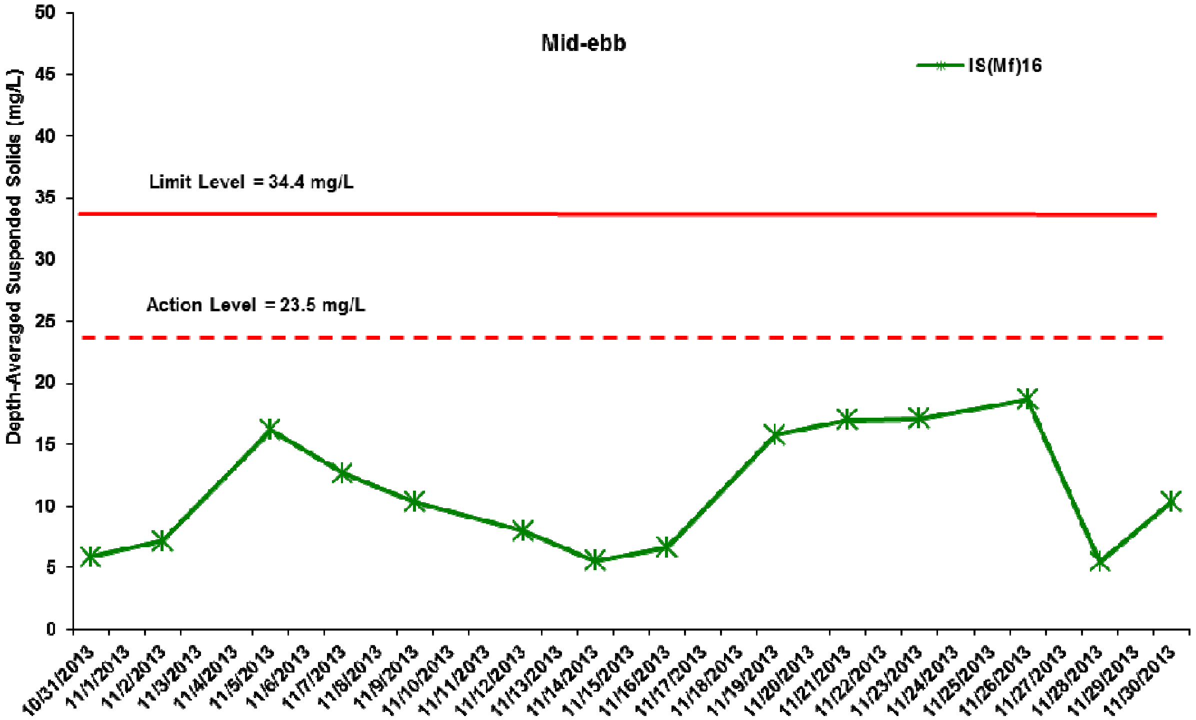


Figure J30 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-ebb tide between 31 October and 30 November 2013 at SR4 and IS8.

Environmental
Resources
Management



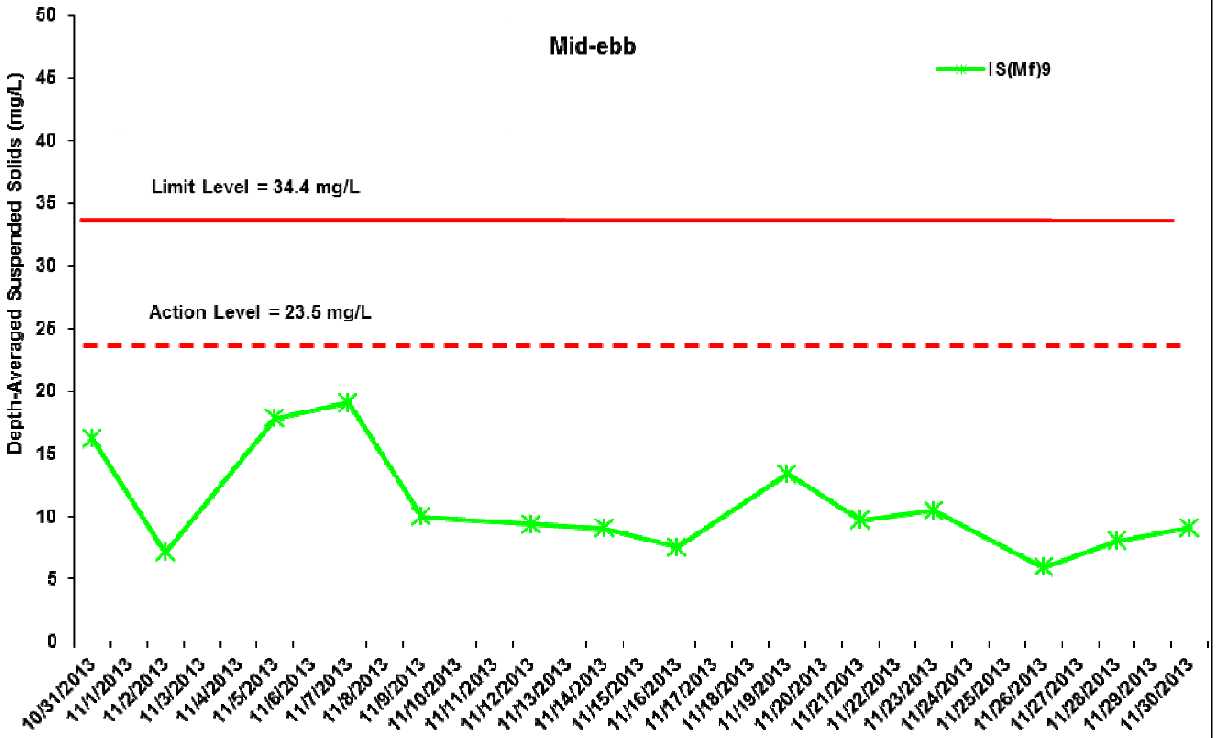


Figure J31 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-ebb tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

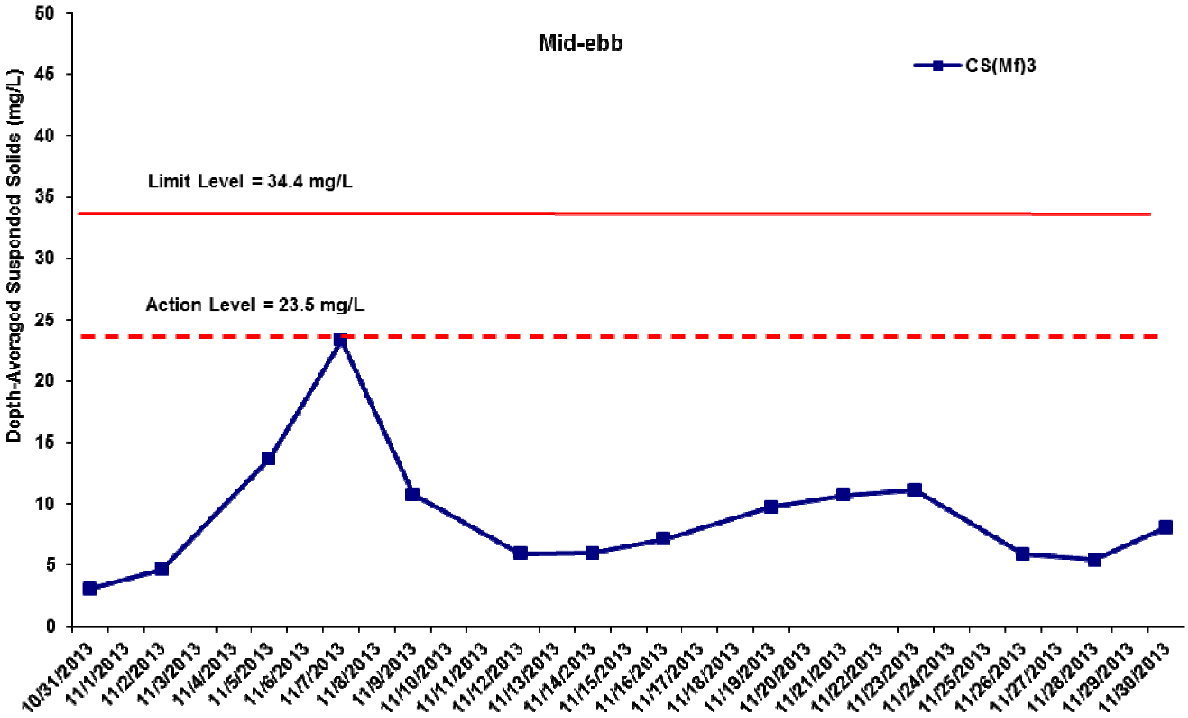


Figure J32 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-ebb tide between 31 October and 30 November 2013 at CS(Mf)3.

Environmental
Resources
Management

ERM

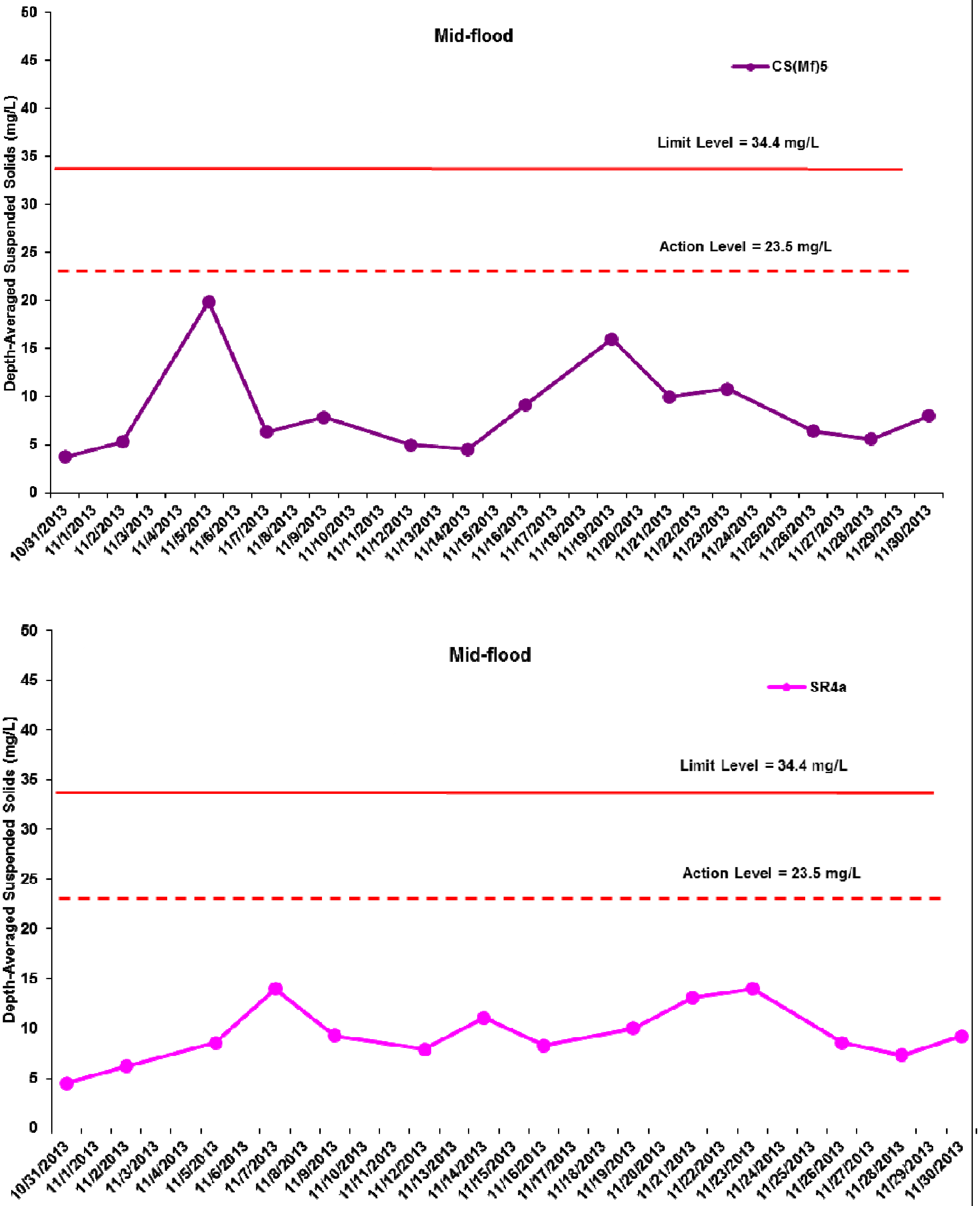
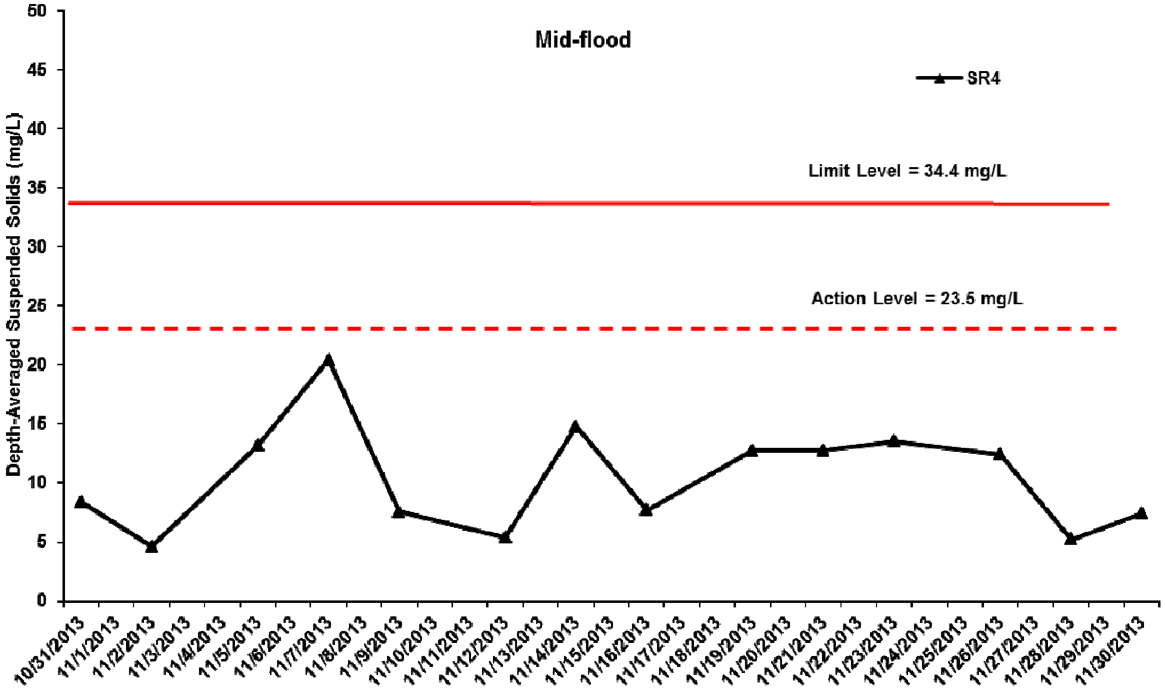


Figure J33 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)5 and SR4a.

Environmental
Resources
Management



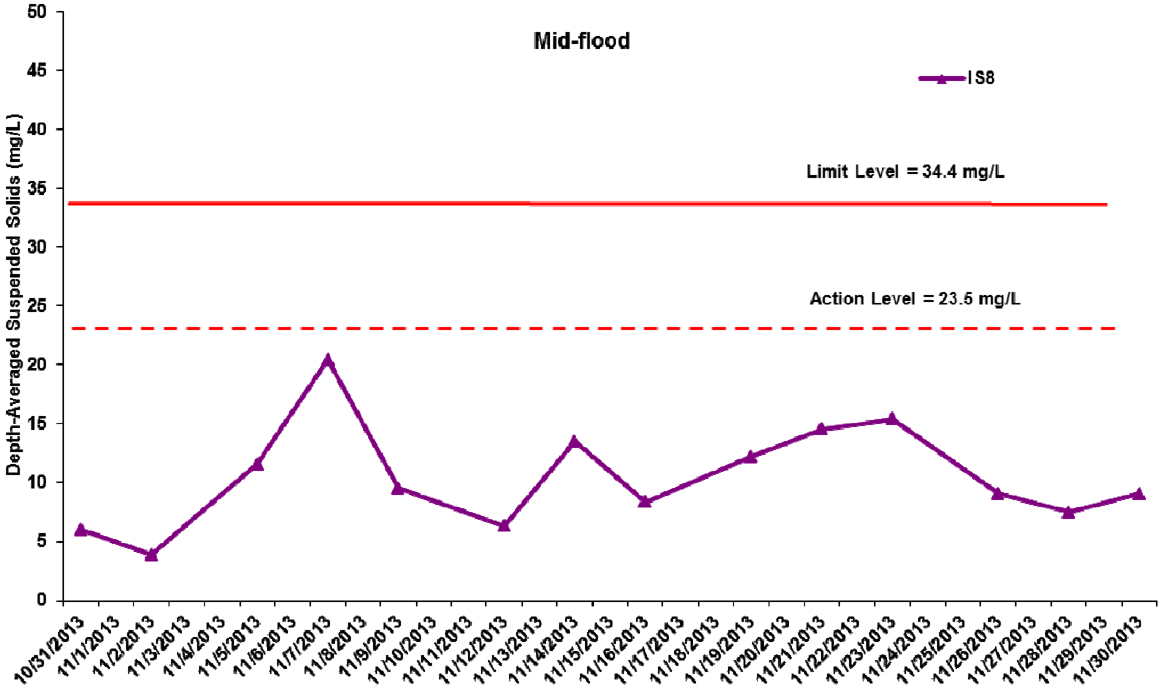


Figure J34 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-flood tide between 31 October and 30 November 2013 at SR4 and IS8 .

Environmental
Resources
Management

ERM

Figure J35 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-flood tide between 31 October and 30 November 2013 at IS(Mf)16 and IS(Mf)9.

Environmental Resources Management

ERM

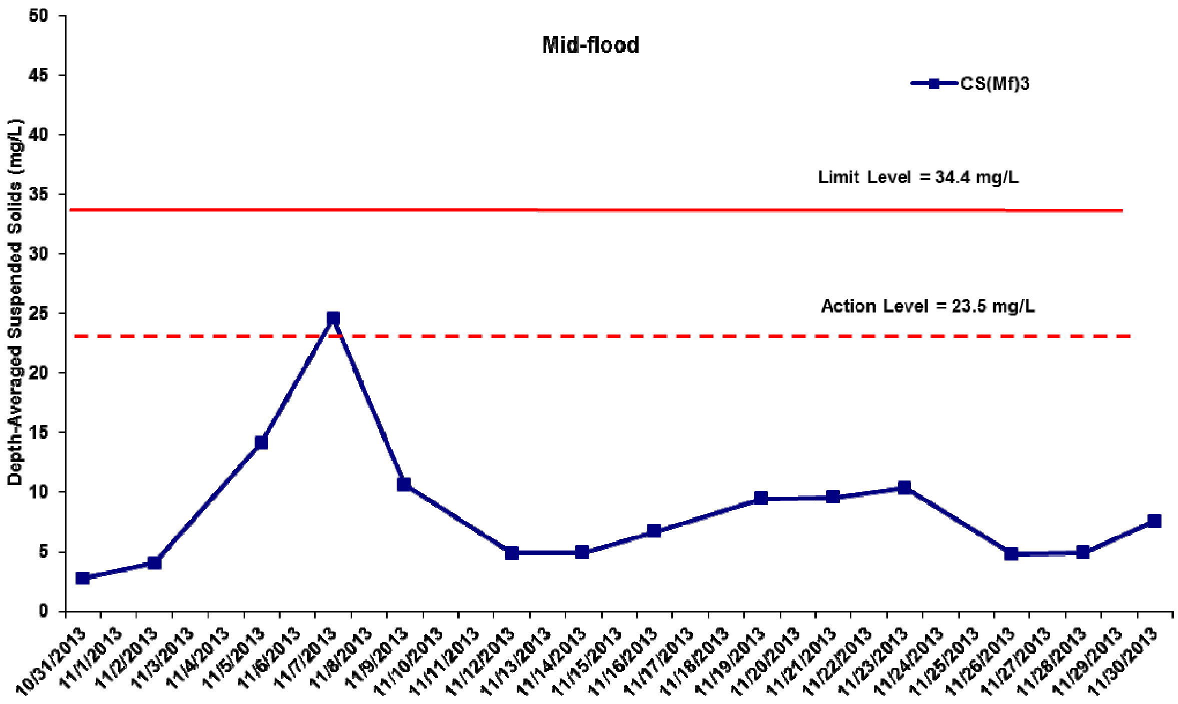


Figure J36 Impact Monitoring – Mean Level of depth-averaged Suspended Solids (mg/L) during mid-flood tide between 31 October and 30 November 2013 at CS(Mf)3.

Environmental
Resources
Management

ERM

Appendix K

Impact Dolphin Monitoring Survey Results

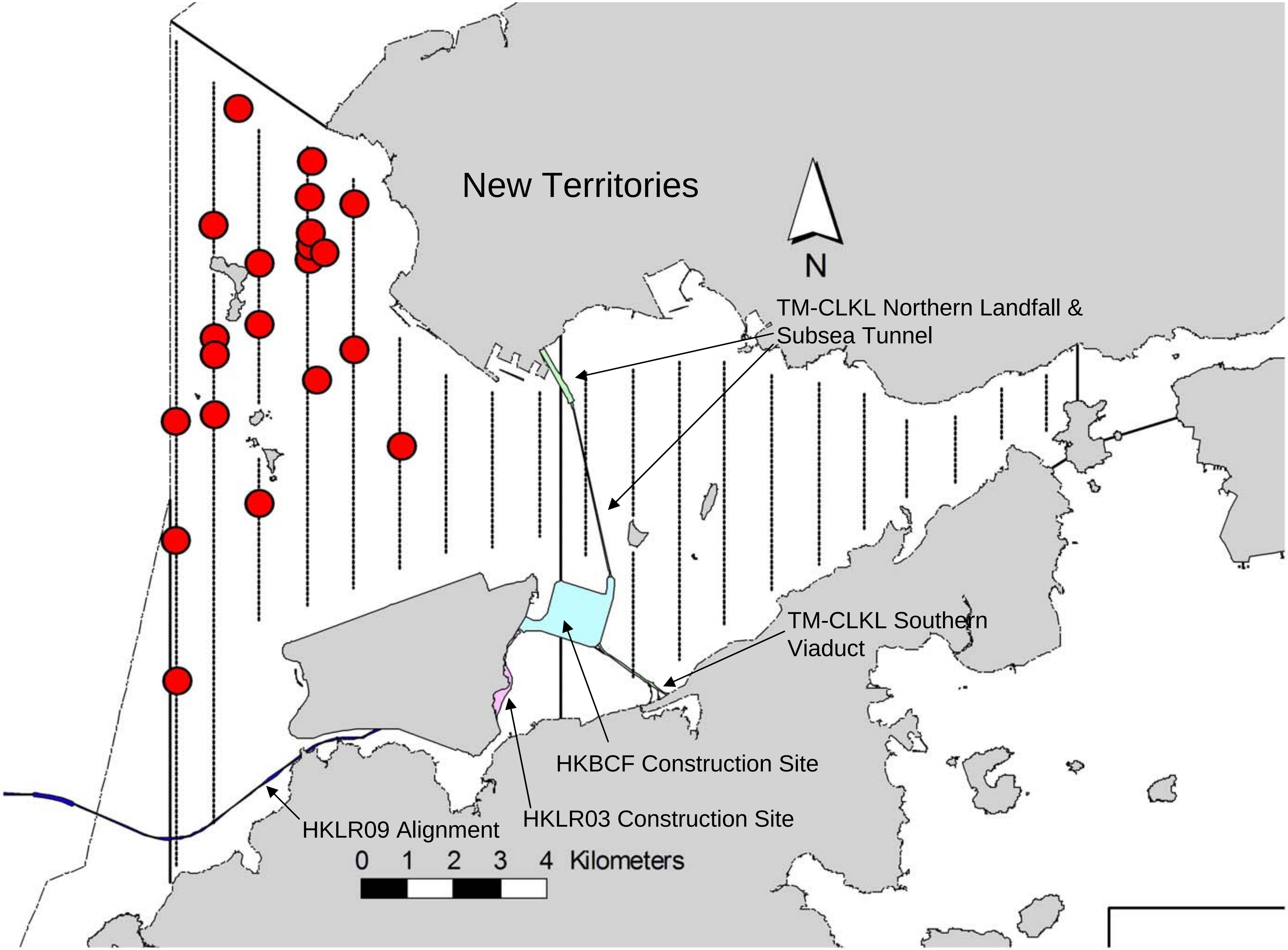


Figure 6. Distribution of Chinese White Dolphin Sightings During November 2013 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (November 2013)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
1-Nov-13	NW LANTAU	1	6.43	AUTUMN	STANDARD31516	HKLR	P
1-Nov-13	NW LANTAU	2	28.32	AUTUMN	STANDARD31516	HKLR	P
1-Nov-13	NW LANTAU	3	19.23	AUTUMN	STANDARD31516	HKLR	P
1-Nov-13	NW LANTAU	1	2.25	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NW LANTAU	2	5.73	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NW LANTAU	3	4.87	AUTUMN	STANDARD31516	HKLR	S
1-Nov-13	NE LANTAU	2	3.67	AUTUMN	STANDARD31516	HKLR	P
5-Nov-13	NE LANTAU	2	34.75	AUTUMN	STANDARD31516	HKLR	P
5-Nov-13	NE LANTAU	2	10.65	AUTUMN	STANDARD31516	HKLR	S
5-Nov-13	NW LANTAU	2	13.99	AUTUMN	STANDARD31516	HKLR	P
5-Nov-13	NW LANTAU	2	6.61	AUTUMN	STANDARD31516	HKLR	S
8-Nov-13	NW LANTAU	0	1.73	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	1	10.57	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	2	39.88	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	3	1.50	AUTUMN	STANDARD31516	HKLR	P
8-Nov-13	NW LANTAU	1	1.29	AUTUMN	STANDARD31516	HKLR	S
8-Nov-13	NW LANTAU	2	5.53	AUTUMN	STANDARD31516	HKLR	S
8-Nov-13	NW LANTAU	3	2.36	AUTUMN	STANDARD31516	HKLR	S
13-Nov-13	NE LANTAU	1	5.70	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NE LANTAU	2	21.79	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NE LANTAU	3	9.60	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NE LANTAU	2	11.71	AUTUMN	STANDARD31516	HKLR	S
13-Nov-13	NE LANTAU	3	1.10	AUTUMN	STANDARD31516	HKLR	S
13-Nov-13	NW LANTAU	1	1.93	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NW LANTAU	2	5.89	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NW LANTAU	3	6.87	AUTUMN	STANDARD31516	HKLR	P
13-Nov-13	NW LANTAU	2	4.22	AUTUMN	STANDARD31516	HKLR	S

Appendix II. HKLR03 Chinese White Dolphin Sighting Database (November 2013)

(Abberviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance;
BOAT ASSOC. = Fishing Boat Association, P/S: Sighting Made on Primary/Secondary Lines)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
1-Nov-13	1	1049	4	NW LANTAU	2	74	ON	HKLR	823145	809509	AUTUMN	NONE	P
1-Nov-13	2	1152	3	NW LANTAU	3	214	ON	HKLR	826947	807517	AUTUMN	NONE	P
1-Nov-13	3	1203	7	NW LANTAU	3	159	ON	HKLR	827235	807539	AUTUMN	NONE	P
1-Nov-13	4	1225	1	NW LANTAU	2	137	ON	HKLR	827490	807539	AUTUMN	NONE	P
1-Nov-13	5	1236	3	NW LANTAU	2	358	ON	HKLR	828232	807530	AUTUMN	NONE	P
1-Nov-13	6	1252	7	NW LANTAU	2	ND	OFF	HKLR	828941	807583	AUTUMN	NONE	
1-Nov-13	7	1312	4	NW LANTAU	2	72	ON	HKLR	830018	805999	AUTUMN	NONE	S
1-Nov-13	8	1458	11	NW LANTAU	3	60	ON	HKLR	821228	804642	AUTUMN	NONE	P
5-Nov-13	1	1421	5	NW LANTAU	2	378	ON	HKLR	828097	808508	AUTUMN	NONE	P
8-Nov-13	1	1041	4	NW LANTAU	1	302	ON	HKLR	824489	807678	AUTUMN	NONE	P
8-Nov-13	2	1103	8	NW LANTAU	2	694	ON	HKLR	827091	807858	AUTUMN	NONE	P
8-Nov-13	3	1152	7	NW LANTAU	3	299	ON	HKLR	827660	805459	AUTUMN	NONE	P
8-Nov-13	4	1215	9	NW LANTAU	2	756	ON	HKLR	825357	805465	AUTUMN	NONE	P
8-Nov-13	5	1232	5	NW LANTAU	2	ND	OFF	HKLR	825025	805464	AUTUMN	NONE	
8-Nov-13	6	1249	4	NW LANTAU	2	7	ON	HKLR	823806	805462	AUTUMN	NONE	P
8-Nov-13	7	1400	2	NW LANTAU	2	155	ON	HKLR	818382	804657	AUTUMN	NONE	P
8-Nov-13	8	1426	8	NW LANTAU	2	149	ON	HKLR	823675	804648	AUTUMN	NONE	P
8-Nov-13	9	1526	1	NW LANTAU	2	45	ON	HKLR	826872	806446	AUTUMN	NONE	P
8-Nov-13	10	1536	4	NW LANTAU	1	225	ON	HKLR	825643	806454	AUTUMN	NONE	P
8-Nov-13	11	1606	4	NW LANTAU	2	223	ON	HKLR	821988	806457	AUTUMN	NONE	P
13-Nov-13	1	1451	1	NW LANTAU	3	343	ON	HKLR	825118	808482	AUTUMN	NONE	P

Appendix L

Event Action Plan

Appendix L1 Event/ Action Plan for Air Quality

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

Appendix L2 Event/ Action Plan for Construction Noise

	ACTION			
EVENT	**ET**	**IEC**	**SOR**	**Contractor**
Action Level	1. Notify the IEC and the Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC and the 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 SOR accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the 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. Notify the IEC, the SOR, the DEP and the Contractor. 2. Identify the source. 3. Repeat measurement 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 the IEC, the SOR and the DEP the causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results. 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst the SOR, the ET and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity 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 activity of works as determined by the SOR until the exceedance is abated.

Appendix L3 Event/ Action Plan for Water Quality

Event	ET Leader	IEC	SOR	Contractor
Action level being exceeded by one sampling day	Repeat in situ measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor and SOR; Check monitoring data, all plant, equipment and Contractor's working methods.	Check monitoring data submitted by ET and Contractor's working methods.	Confirm receipt of notification of non-compliance in writing; Notify Contractor.	Inform the SOR and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, SOR and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, SOR and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Action level;	Check monitoring data submitted by ET and Contractor's working method; Discuss with ET and Contractor on possible remedial actions; Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly; Supervise the implementation of mitigation measures.	Discuss with IEC on the proposed mitigation measures; Ensure mitigation measures are properly implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Supervising Officer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Submit proposal of additional mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, SOR and EPD;	Check monitoring data submitted by ET and Contractor's working method; Discuss with ET and Contractor on possible remedial actions;	Confirm receipt of notification of failure in writing; Discuss with IEC, ET and Contractor on the proposed mitigation measures;	Inform the SOR and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment

Event	ET Leader	IEC	SOR	Contractor
	Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, SOR and Contractor;	Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly.	Request Contractor to review the working methods.	and consider changes of working methods; Submit proposal of mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR.
Limit level being exceeded by two or more consecutive sampling days	Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, SOR and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, SOR and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days;	Check monitoring data submitted by ET and Contractor’s working method; Discuss with ET and Contractor on possible remedial actions; Review the Contractor’s mitigation measures whenever necessary to assure their effectiveness and advise the SOR accordingly; Supervise the implementation of mitigation measures.	Discuss with IEC, ET and Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Ensure mitigation measures are properly implemented; 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.	Take immediate action to avoid further exceedance; Submit proposal of mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; Implement the agreed mitigation measures; Resubmit proposals of mitigation measures if problem still not under control; As directed by the Supervising Officer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Appendix L4 Implementation of Event-Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	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, 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 findings with the ET and the Contractor.	1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If SOR is satisfied with the proposal of any other measures, SOR to signify the agreement in writing on the measures to be implemented.	1. Inform the 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 SOR; 3. Implement the agreed measures.

Event	ET Leader	IEC	SOR	Contractor
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 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.	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 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.	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 of additional monitoring and/or any other mitigation measures.	1. Inform the ER/SOR and confirm notification of the non- compliance in writing; 2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures; 3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary; 4. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.

Appendix L5 Event and Action Plan on Dolphin Acoustic Behaviour

EVENT	**ACTION**			
	ET Leader	**IEC**	**SO**	**Contractor**
<u>Action Level</u>				
With the numerical values presented in *Table 5.7*, when any of the response variable for dolphin acoustic behaviour recorded in the construction phase monitoring is 20% lower or higher than that recorded in the baseline monitoring (see *Table5.8*), or when there is a difference of 20% in dolphin acoustic signal detection at nighttime period at Site C1 only, the action level should be triggered	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data to ascertain if differences are as a result of natural variation or seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, SO and Contractor; 5. Check monitoring data; 6. Carry out audit to ensure all dolphin protective measures are implemented fully and additional measures be proposed if necessary	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring with the ET and the Contractor;	1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET; 2. Make agreement on measures to be implemented.	1. Inform the SO 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 SO; 3. Implement the agreed measures.

EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
Limit Level				
With the numerical values presented in Table 5.7, when any of the response variable for dolphin acoustic behaviour recorded in the construction phase monitoring is 40% lower or higher than that recorded in the baseline monitoring (see Table 5.8), or when there is a difference of 40% in dolphin acoustic signal detection at nighttime at Site C1 only, the limit level should be triggered	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data to ascertain if differences are as a result of natural variation or seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, SO and Contractor; 5. Check monitoring data; 6. Carry out audit to ensure all dolphin protective measures are implemented fully and additional measures be proposed if necessary 7. Discuss additional dolphin monitoring and any other potential mitigation measures (eg consider to temporarily stop relevant portion of construction activity) with the IEC and Contractor.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring with the ET and the Contractor; 3. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise ER accordingly.	1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET; 2. Make agreement on measures to be implemented.	1. Inform the SO 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 SO; 3. Implement the agreed measures.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, SO – Supervising Office

Appendix M

Monthly Summary of Waste Flow Table

Contract No. : HY/2012/07
Tuen Mun Chek Lap Kok Link – Southern Connection Viaduct Section
Monthly Summary Waste Flow Table for 2013 (Year)

Month\Material	Actual Quantities of Inert C&D Materials Generation						Actual Quantities of C&D wastes Generation					Actual Quantities of Recyclables Generation		
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Marine Sediment, Cat. L	Marine Sediment, Cat. Mp	Marine Sediment, Cat. Mf	Chemical Waste	General Refuse	Metals	Paper/ cardboard packaging	Plastics
Unit	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	0	0	0	0	0	0	-	-	-	0	0	0	0	0
SUB-TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	322.89	0	0	0
Sep	0.004	0.004	0	0	0.004	0	0	0	0	0	412.86	0	0	0
Oct	0.044	0.018	0	0	0.044	0	0	0	0	0	27.63	0	0	0
Nov	0.597	0	0.560	0	0.037	0	0	0	0	0	22.05	0	0	0
Dec														
TOTAL	**0.645**	**0.022**	**0.560**	**-**	**0.085**	**-**	**-**	**-**	**-**	**-**	**785.43**	**-**	**-**	**-**

Notes :

1 - The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

2 - Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

3 - Broken concrete for recycling into aggregates.

Appendix N

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

Appendix N1 Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	**Total No. recorded since project commencement**
1-Hr TSP	Action	0	0
	Limit	0	0
24-Hr TSP	Action	0	0
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	1	1
	Limit	0	0

Appendix N2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	**Cumulative Statistics**		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (Nov 2013)	1	0	0
Total No. received since project commencement	1	0	0

Email
message

Environmental
Resources
Management

16/F DCH Commercial Centre,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com

To ENVIRON – Hong Kong, Limited (ENPO)

From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

Subject Notification of Exceedance for Marine Water Quality Impact Monitoring

Date 26 November 2013

Dear Sir/ Madam,

Please find attached the Notification of Exceedance (NOE) of the following Log no.:

0215660_26 November 2013_SS_ME_SR4a

Recorded on 11 December 2013.

Regards,

Mr Jovy Tam
Environmental Team Leader

ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/07
TUEN MUN – CHEK LAP KOK LINK –
SOUTHERN CONNECTION VIADUCT SECTION

Marine Water Quality Impact Monitoring

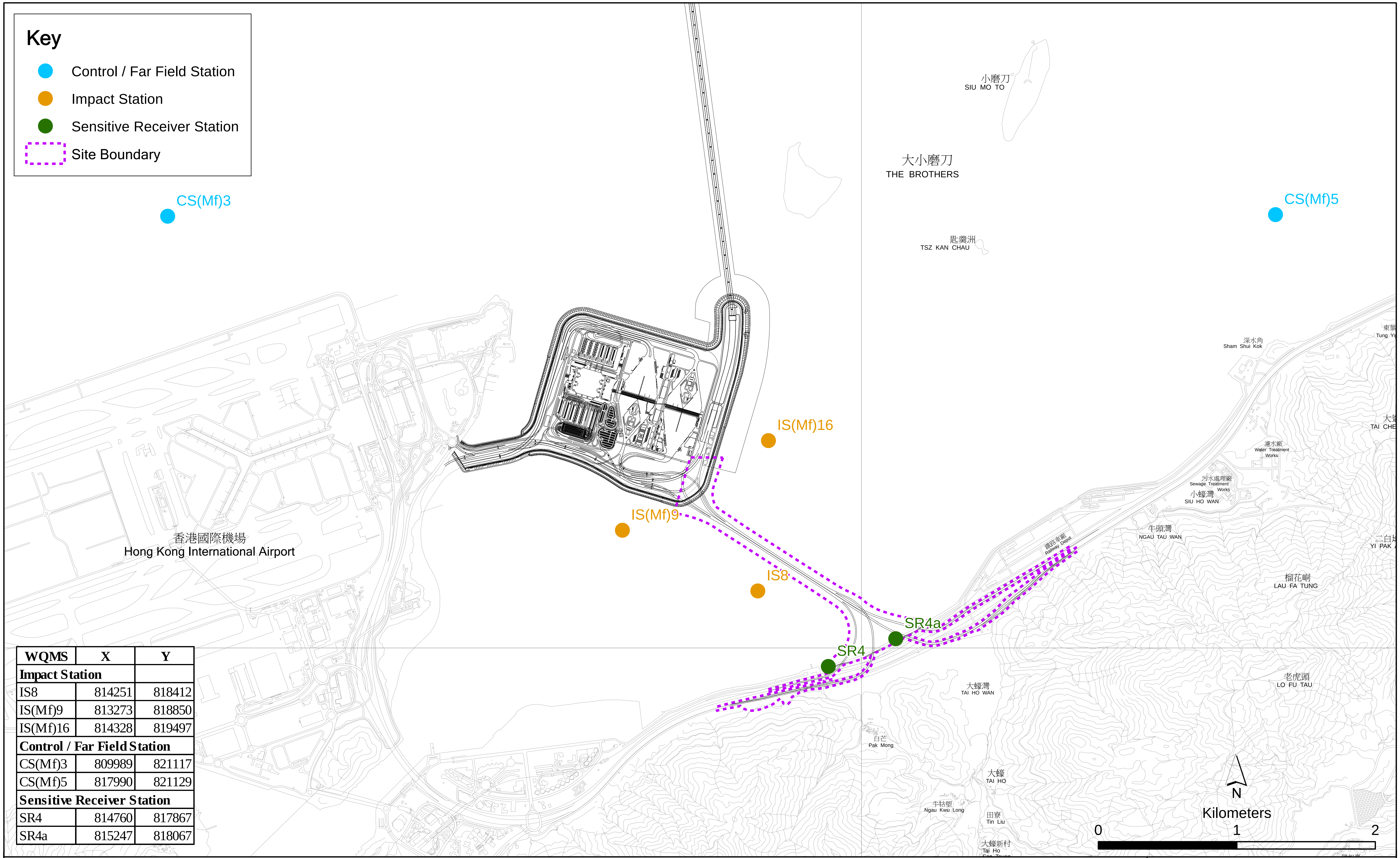
Notification of Exceedance

Log No.	**0215660_26November2013_SS_ME_SR4a** **[Total No. of Exceedances = 1]**	
Date	26 November 2013 (Measured) 27 November 2013 (*In situ* results received by ERM) 10 December 2013 (Laboratory results received by ERM)	
Monitoring Station	CS(Mf)5, SR4a, SR4, IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3	
Parameter(s) with Exceedance(s)	Depth-averaged Suspended Solids (SS)	
Action Levels	SS	23.5
Limit Levels	SS	34.4
Measured Levels	Action Level Exceedance is observed at SR4a (26.6 mg/L) during mid-ebb tide.	
Works Undertaken (at the time of monitoring event)	On 26 November 2013, marine works (ie rock grabbing by Barge Yu Fat No. B21494V from 08:00 to 17:30 and Survey Tower Installation at G28 from 08:00 to 17:30) were being carried out. After examination of the marine works record, it is confirmed that no marine works were being carried out when exceedance of depth-averaged SS level was recorded at SR4a during mid-ebb tide (18:26-21:56).	
Possible Reason for Action or Limit Level Exceedance(s)	The exceedance of depth-averaged SS at SR4a during mid-ebb tide is unlikely to be due to the Project, in view of the following: • Suspended solid level at surface water depth at SR4a was 8 mg/L. The Action Level exceedance of depth-averaged SS was due to the exceedance of SS level at bottom water depth. Since SR4a is located in shallow waters (~ 4.7 m), such exceedance was likely due to sediment disturbance cauased by water sampler touching seabed.	
Actions Taken / To Be Taken	No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	
Remarks	The monitoring results and the locations of water quality monitoring stations are attached.	

Date	Tidal Level	Sea Condition	Station	Monitoring Period	Depth + Replicate No.	Replicate	Depth (m)	Water Temp (℃)	Salinity (ppt)	D.O. (mg/L)	Turbidity (NTU)	SS (mg/L)	Ave. D.O. (mg/L) S, M, B	Turbidity (Depth-ave.) (NTU)	SS (Depth-ave.) (mg/L)
26-11-13	**Mid-Flood**	Moderate	CS(Mf)5	12:21-12:45	S1	R1	1.0	22.2	23.3	6.89	4.65	5.3	6.88	4.78	6.4
					S2	R2		22.2	23.3	6.86	4.69	5.3			
					M1	R1	4.8	22.3	23.9	6.57	4.36	5.8	6.56		
					M2	R2		22.3	23.9	6.55	4.32	6.3			
					B1	R1	8.6	22.5	24	6.35	5.36	8.8	6.33		
					B2	R2		22.5	24	6.31	5.31	7.1			
			SR4a	12:55-13:09	S1	R1	1.0	22.2	23.3	6.84	5.47	6.4	6.82	10.02	8.6
					S2	R2		22.2	23.3	6.8	5.42	5			
					M1	R1									
					M2	R2									
					B1	R1	4.2	22.3	23.5	6.6	14.6	11.2	6.59		
					B2	R2		22.3	23.5	6.57	14.6	11.7			
			SR4	13:20-13:26	S1	R1	1.0	22.1	23.3	6.86	6	8.4	6.85	10.47	12.4
					S2	R2		22.1	23.3	6.83	6.07	8.6			
					M1	R1									
					M2	R2									
					B1	R1	4.2	22.6	23.8	6.13	14.9	16.1	6.15		
					B2	R2		22.6	23.8	6.16	14.9	16.6			
			IS8	13:46-14:03	S1	R1	1.0	22.1	23.3	6.83	5.97	6	6.81	9.32	9.1
					S2	R2		22.1	23.3	6.79	5.91	4.5			
					M1	R1									
					M2	R2									
					B1	R1	4.4	22.4	23.6	6.42	12.7	12	6.41		
					B2	R2		22.4	23.6	6.39	12.7	13.7			
			IS(Mf)16	14:16-14:36	S1	R1	1.0	22.2	23.3	6.77	10.6	12	6.76	13.78	14.5
					S2	R2		22.2	23.3	6.75	10.6	11.9			
					M1	R1	3.9	22.4	23.8	6.3	13.2	14.7	6.28		
					M2	R2		22.4	23.7	6.25	13.2	13.8			
					B1	R1	6.8	22.5	23.9	6.14	17.5	18	6.16		
					B2	R2		22.5	23.9	6.17	17.6	16.3			
			IS(Mf)9	14:46-15:04	S1	R1	1.0	22.2	23.3	6.59	6.57	6.6	6.58	10.20	9.9
					S2	R2		22.2	23.3	6.57	6.52	6			
					M1	R1									
					M2	R2									
					B1	R1	4.0	22.5	23.7	6.32	13.9	13.2	6.31		
					B2	R2		22.5	23.7	6.29	13.8	13.8			
			CS(Mf)3	15:19-15:51	S1	R1	1.0	22.2	23.7	6.64	4.51	4.6	6.63	4.82	4.8
					S2	R2		22.2	23.7	6.61	4.59	3.6			
					M1	R1	4.5	22.1	24	6.4	4.58	4.7	6.38		
					M2	R2		22.1	24	6.36	4.63	4			
					B1	R1	8.0	22.5	24.8	6.02	5.28	6.1	6.04		
					B2	R2		22.4	24.8	6.05	5.35	5.7			

Date	Tidal Level	Sea Condition	Station	Monitoring Period	Depth + Replicate No.	Replicate	Depth (m)	Water Temp (℃)	Salinity (ppt)	D.O. Saturation (%)	D.O. (mg/L)	Turbidity (NTU)	Ave. D.O. (mg/L) S, M, B	Turbidity (Depth-ave.) (NTU)	SS (Depth-ave.) (mg/L)
26-11-13	**Mid-Ebb**	Moderate	CS(Mf)3	18:26-18:50	S1	R1	1.0	22.3	23.7	6.67	5.07	4.6	6.64	5.24	5.9
					S2	R2		22.2	23.7	6.61	5.03	5.1			
					M1	R1	4.2	22.1	24.1	6.31	5.4	4.2	6.33		
					M2	R2		22.1	24	6.34	5.48	5.7			
					B1	R1	7.4	22.4	24.7	6.04	5.2	7.4	6.03		
					B2	R2		22.4	24.7	6.02	5.25	8.4			
			SR4a	20:57-21:21	S1	R1	1.0	22.2	23.4	6.63	6.32	7	6.65	9.85	26.6
					S2	R2		22.1	23.3	6.67	6.67	9			
					M1	R1									
					M2	R2									
					B1	R1	3.6	22.4	23.6	6.47	13.4	46.8	6.48		
					B2	R2		22.4	23.7	6.49	13	43.4			
			SR4	20:22-20:46	S1	R1	1.0	22.2	23.3	6.72	5.95	11.3	6.75	11.39	15.3
					S2	R2		22.1	23.2	6.78	6.02	13			
					M1	R1									
					M2	R2									
					B1	R1	3.6	22.5	23.7	6.23	17	19.3	6.22		
					B2	R2		22.4	23.8	6.2	16.6	17.5			
			IS8	19:53-20:17	S1	R1	1.0	22.2	23.3	6.82	6.03	8.1	6.82	10.03	11.4
					S2	R2		22.2	23.4	6.81	6.07	7.9			
					M1	R1									
					M2	R2									
					B1	R1	5.0	22.4	23.6	6.34	13.9	14.4	6.35		
					B2	R2		22.4	23.6	6.36	14.1	15.1			
			IS(Mf)16	19:24-19:48	S1	R1	1.0	22.3	23.4	6.71	9.23	11.5	6.72	13.60	18.7
					S2	R2		22.2	23.4	6.73	9.27	12.2			
					M1	R1	3.3	22.2	23.5	6.59	12.6	13.3	6.61		
					M2	R2		22.3	23.6	6.62	12.9	13.1			
					B1	R1	5.6	22.5	23.7	6.07	18.6	31.1	6.09		
					B2	R2		22.4	23.8	6.1	19	30.7			
			IS(Mf)9	18:55-19:19	S1	R1	1.0	22.2	23.8	6.5	5.38	4.8	6.54	10.68	6.0
					S2	R2		22.3	23.7	6.58	5.42	5.1			
					M1	R1									
					M2	R2									
					B1	R1	3.6	22.4	24.8	6.27	15.8	6.4	6.29		
					B2	R2		22.4	24.7	6.3	16.1	7.5			
			CS(Mf)5	21:32-21:56	S1	R1	1.0	22.3	23.4	6.59	4.86	4	6.60	5.52	5.3
					S2	R2		22.3	23.5	6.61	4.88	4.4			
					M1	R1	5.2	22.2	23.5	6.54	5.6	4.9	6.52		
					M2	R2		22.3	23.6	6.5	5.68	5			
					B1	R1	9.4	22.4	23.8	6.11	6.02	7	6.12		
					B2	R2		22.5	23.8	6.13	6.08	6.4			

Note: (1) Indicates Exceedance of Action Level
Indicates Exceedance of Limit Level



WQMS	X	Y
Impact Station		
IS8	814251	818412
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)3	809989	821117
CS(Mf)5	817990	821129
Sensitive Receiver Station		
SR4	814760	817867
SR4a	815247	818067

Figure 4.1

Locations of Water Quality Monitoring Stations

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_WQMS.mxd
Date: 6/12/2013

Environmental Resources Management

ERM

Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link –
Southern Connection Viaduct Section

COMPLAINT INVESITGATION REPORT

Basic Information of Complaint

Reference Number:	**EP3/N09/RS/00026142-13**
Date of Complaint Received	19 November 2013
Location of Complaint	Tung Chung New Development Pier
Nature of Complaint	Noise generated from a barge which is moving through the southern channel of HyD's construction site in Lantau
Complaint Received by	Environmental Protection Department (EPD)
Complainant	A local resident living in Tung Chung town

Details of Complaint

On 11 November 2013, a complaint was received by the EPD regarding the noise nuisance generated by a barge moving through the southern channel of HyD's construction site in the vicinity of the Tung Chung New Development Pier after 23:00 on 8 November 2013. The Contractor received the complaint notification on 18 November 2013.

Investigation Report

Upon receiving the complaint notification from EPD on 18 November 2013, the Contractor had promptly checked the works summary and had notified SOR on 19 November that no site activities were taken place after 18:00 for the date concerned.

Based on the works summary, activities conducted under this Contract strictly followed the conditions stated in the approved Construction Noise Permits (CNPs). In addition, the main site activities were located near Tai Ho Wan which is more than 2km from the concerned location the complaint referred to. Therefore, any noise generated from this Contract's work should be acceptable and should be insignificant after distance attenuation.

Based on the above, the concerned noise nuisance was considered not related to this Contract's work.

Mitigation Measures and Follow-Up Actions Recommended to Contractor

The Contractor was reminded to adhere strictly to the Construction Noise Mitigation Plan and to implement all relevant noise mitigation measures recommended or specified in the EIA Report, EM&A Manual, EMP, Method Statements, General and Particular Specifications of this Contract to avoid causing noise nuisance.

The Contractor is also reminded to ensure that the construction plant deployed for the works during restricted hours is in strict compliance with the relevant CNP granted.

Date of File Closed : 19 November 2013

Approved and Filed by:

(Jovy Tam, ET Leader)
Date: 19 November 2013