

**Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link –
Northern Connection Sub-sea Tunnel
Section**

*Fourteenth Monthly Environmental Monitoring &
Audit (EM&A) Report*

12 January 2015

Environmental Resources Management
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Ref.: HYDHZMBEEM00_0_2616L.14

13 January 2015

AECOM
Supervising Officer Representative's Office
No. 8 Mong Fat Street, Tuen Mun,
New Territories, Hong Kong

By Fax (2293 6300) and By Post

Attention: Messrs Edwin Ching / Andy Westmoreland

Dear Sirs,

**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/2012/08 TM-CLKL Northern Connection Sub-sea Tunnel Section
Monthly EM&A Report for December 2014 (EP-354/2009/C)**

Reference is made to the Monthly Environmental Monitoring & Audit (EM&A) Report (for December 2014) certified by the ET Leader (ET's ref.: "0212330_14th Monthly EM&A_20150112.doc" dated 12 January 2015) provided to us via email on 12 January 2015.

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/C.

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,



F. C. Tsang
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)
Dragages – Bouygues JV – Mr. C. F. Kwong (By Fax: 2293 7499)

Internal: DY, YH, ENPO Site

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Contract No. HY/2012/08





Tuen Mun – Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section

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Fourteenth Monthly Environmental Monitoring & Audit (EM&A) Report

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Client: DBJV		Project No: 0212330			
Summary: This document presents the Fourteenth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link Northern Connection Sub-sea Tunnel Section.		Date: 12 January 2015			
		Approved by: 			
		Mr Craig Reid Partner			
		Certified by: 			
		Mr Jovy Tam ET Leader			
	14 th Monthly EM&A Report	VAR	JT	CAR	12/01/15
Revision	Description	By	Checked	Approved	Date
<p>This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.</p> <p>We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.</p>		<p>Distribution</p> <p><input type="checkbox"/> Internal</p> <p><input checked="" type="checkbox"/> Public</p> <p><input type="checkbox"/> Confidential</p>			
		 			

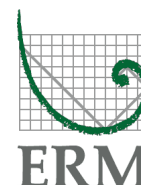


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EXECUTIVE SUMMARY

Under *Contract No. HY/2012/08*, Dragages – Bouygues Joint Venture (DBJV) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Northern Connection Sub-sea Tunnel 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) in accordance with *Environmental Permit No. EP-354/2009/A*. ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO). Subsequent applications for variation of environmental permits (VEP), *EP-354/2009/B* and *EP-354/2009/C*, were granted on 28 January 2014 and 10 December 2014, respectively.

The construction phase of the Project commenced on 1 November 2013 and will tentatively be completed by the end of 2018. The impact monitoring of the EM&A programme, including air quality, water quality, marine ecological monitoring and environmental site inspections, were commenced on 1 November 2013.

This is the Fourteenth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 31 December 2014 for the *Contract No. HY/2012/08 Northern Connection Sub-sea Tunnel Section* (the “Project”) 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

- Reclamation filling at Portion N-C.

Land-based Works

- Land Bored Piling Works at Works Area - Portion N-A;
- Surcharge set up at Works Area - Portion N-C;
- Formwork and Metal Scaffolding works at North Launching Shaft at Works Area – Portion N-A and,
- Set up of Slurry Treatment Plant at Works Area – Portion N-C.

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

24-hour TSP Monitoring	10 sessions
1-hour TSP Monitoring	10 sessions
Impact Water Quality Monitoring	13 sessions
Impact Dolphin Monitoring	2 sessions
Joint Environmental Site Inspection	5 sessions

Implementation of Marine Mammal Exclusion Zone

There was no dredging, reclamation or marine sheet piling works in open waters during this reporting period. Thus, Passive Acoustic Monitoring (PAM) and the day-time monitoring of Dolphin Exclusion Zone (DEZ) by dolphin observers were not in effect during the reporting period.

Summary of Breaches of Action/Limit Levels

Breaches of Action and Limit Levels for Air Quality

Two Action Level exceedances for 1-hr TSP were recorded from the air quality monitoring in this reporting period. No Limit Level exceedances for 1-hr TSP were recorded. No Action or Limit Level exceedances for 24-hr TSP were recorded. The exceedances were considered to be due to the sporadic events from cumulative anthropogenic activities in this area of Hong Kong upon further investigation.

Breaches of Action and Limit Levels for Water Quality

No Action Level or Limit Level of water quality exceedances were recorded in the water quality monitoring of this reporting month.

Environmental Complaints, Non-compliance & Summons

No non-compliance with EIA recommendations, EP conditions and other requirements associated with the construction of this Contract was recorded in this reporting period.

No environmental complaint was received in this reporting period.

No environmental summons was received in this reporting period.

Reporting Change

There was no reporting change required in the reporting period.

Upcoming Works for the Next Reporting Month

Works to be undertaken in the next monitoring period of January 2015 include the following:

Land-based Works

- Land Bored Piling Works at Works Area - Portion N-A;
- Surcharge set up at Works Area - Portion N-C;
- Formwork and Metal Scaffolding at North Launching Shaft at Works Area – Portion N-A and,
- Set up of Slurry Treatment Plant at Works Area – Portion N-C.

Marine-based Works

- Rock bund deposition for marine sheet pile remedial works at Marine Works Area – Portion N-A.

Future Key Issues

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of January 2015 are expected to be mainly associated with dust, marine water quality, marine ecology and waste management.

1.1

BACKGROUND

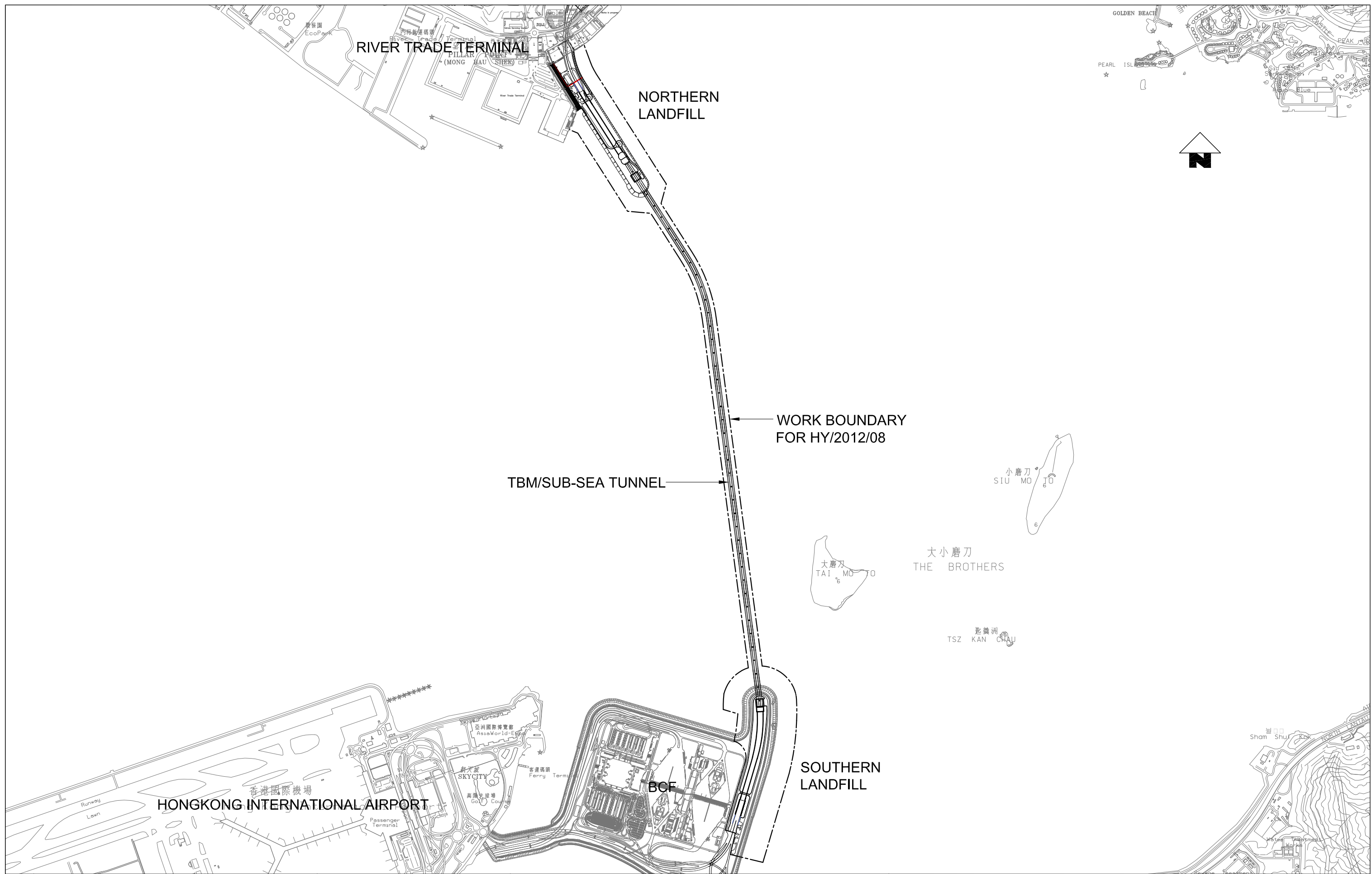
According to the findings of the Northwest New Territories (NWNT) Traffic and Infrastructure Review conducted by the Transport Department, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway would be operating beyond capacity after 2016. This forecast has been based on the estimated 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-146/2009), 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 (VEP) (EP-354/2009A) was issued on 8 December 2010. Subsequent applications for variation of environmental permits (VEPs), *EP-354/2009/B and EP-354/2009/C*, were granted on 28 January 2014 and 10 December 2014, respectively.

Under *Contract No. HY/2012/08*, Dragages – Bouygues Joint Venture (DBJV) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Northern Connection Sub-sea Tunnel Section of TM-CLKL 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).

Layout of the Contract components is presented in *Figure 1.1*.

The construction phase of the Contract commenced on 1 November 2013 and will tentatively be completed by 2018. The impact monitoring phase of the EM&A programme, including air quality, water quality, marine ecological monitoring and environmental site inspections, were commenced on 1 November 2013.



Designed By	PKV
Drawn By	DAI
Approved By	SPo
Date	11SEP2013
Rev.	Description
A	FIRST ISSUE
	11SEP13
	PKV
	Checked

Main Contractor


 A member of the Bouygues Construction group
 Dragages - Bouygues Joint Venture 寶嘉 - 布依格聯營

Client

 路政署
HIGHWAYS DEPARTMENT

Contractor's Designer

 Ove Arup & Partners
 Hong Kong Limited

Project
 Contract No. HY/2012/08
 Tuen Mun - Chek Lap Kok Link -
 Northern Connection Sub-Sea Tunnel Section
 Drawing Title
Figure 1.1

Drawing no.	TMCLKL8-DBJ-GEN-DWG-00174
Scale	1:25000 @ A3
CADD Ref.	TMCLKL8-DBJ-GEN-DWG-00174-DFT-A
Issue Status	DFT (DRAFT)
Revision	A

1.2 SCOPE OF REPORT

This is the Fourteenth Monthly EM&A Report under the *Contract No. HY/2012/08 Tuen Mun – Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section*. This report presents a summary of the environmental monitoring and audit works in December 2014.

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
Highways Department	Engr 16/HZMB	Kenneth Lee	2762 4996	3188 6614
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Edwin Ching	2293 6388	2293 6300
		Andrew Westmoreland	2293 6360	2293 6300
ENPO / IEC (ENVIRON Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2888	3465 2899
	IEC	Dr. F.C. Tsang	3465 2828	3465 2899
Contractor (Dragages – Bouygues Joint Venture)	Environmental Manager	C.F. Kwong	2293 7322	2670 2798
	Environmental Officer	Bryan Lee	2293 7323	2670 2798
	24-hour complaint hotline	Rachel Lam	2293 7342	
ET (ERM-HK)	ET Leader	Jovy Tam	2271 3113	2723 5660

1.4 SUMMARY OF CONSTRUCTION WORKS

The construction phase of this Contract was commenced on 1 November 2013. The construction programme is shown in *Appendix B*.

As per DBJV's information, details of major construction works carried out in this reporting period are summarized in *Table 1.2*.

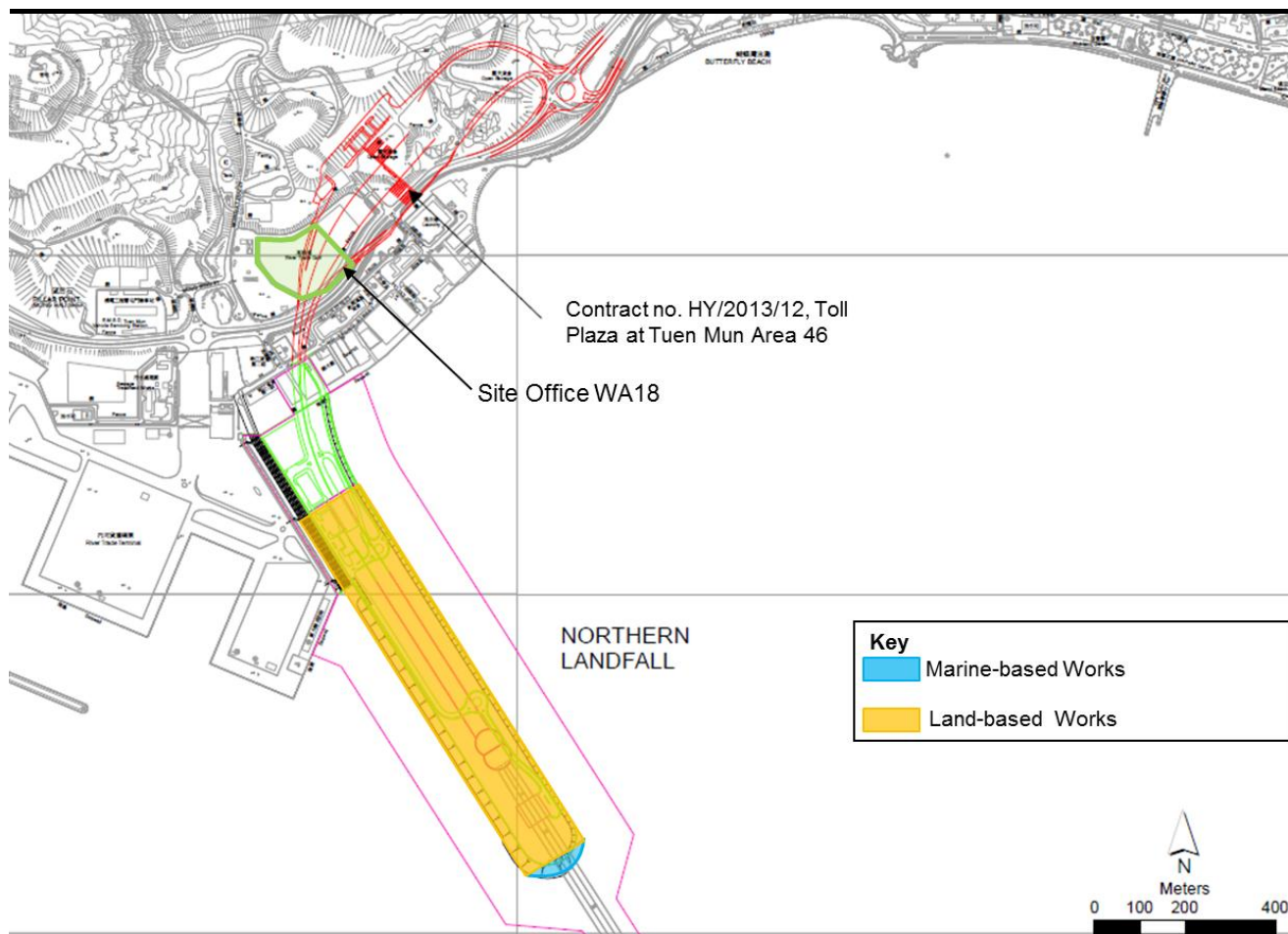
The general layout plan of the site showing the detailed works areas is shown in *Figure 1.2*. The Environmental Sensitive Receivers in the vicinity of the Project are shown in *Figure 1.3*.

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

Table 1.2 *Summary of Construction Activities Undertaken during the Reporting Period*

Construction Activities Undertaken
<i>Marine-based Works</i>
<ul style="list-style-type: none"> • Reclamation filling at Portion N-C; and
<i>Land-based Works</i>
<ul style="list-style-type: none"> • Land Bored Piling Works at Reclamation Works Area - Portion N-A; • Surcharge set up at Works Area - Portion N-C; • Formwork and Metal Scaffolding works at North Launching Shaft at Works Area - Portion N-A; and • Set up of Slurry Treatment Plant at Works Area - Portion N-C.

Figure 1.2 *Locations of Construction Activities -December 2014*



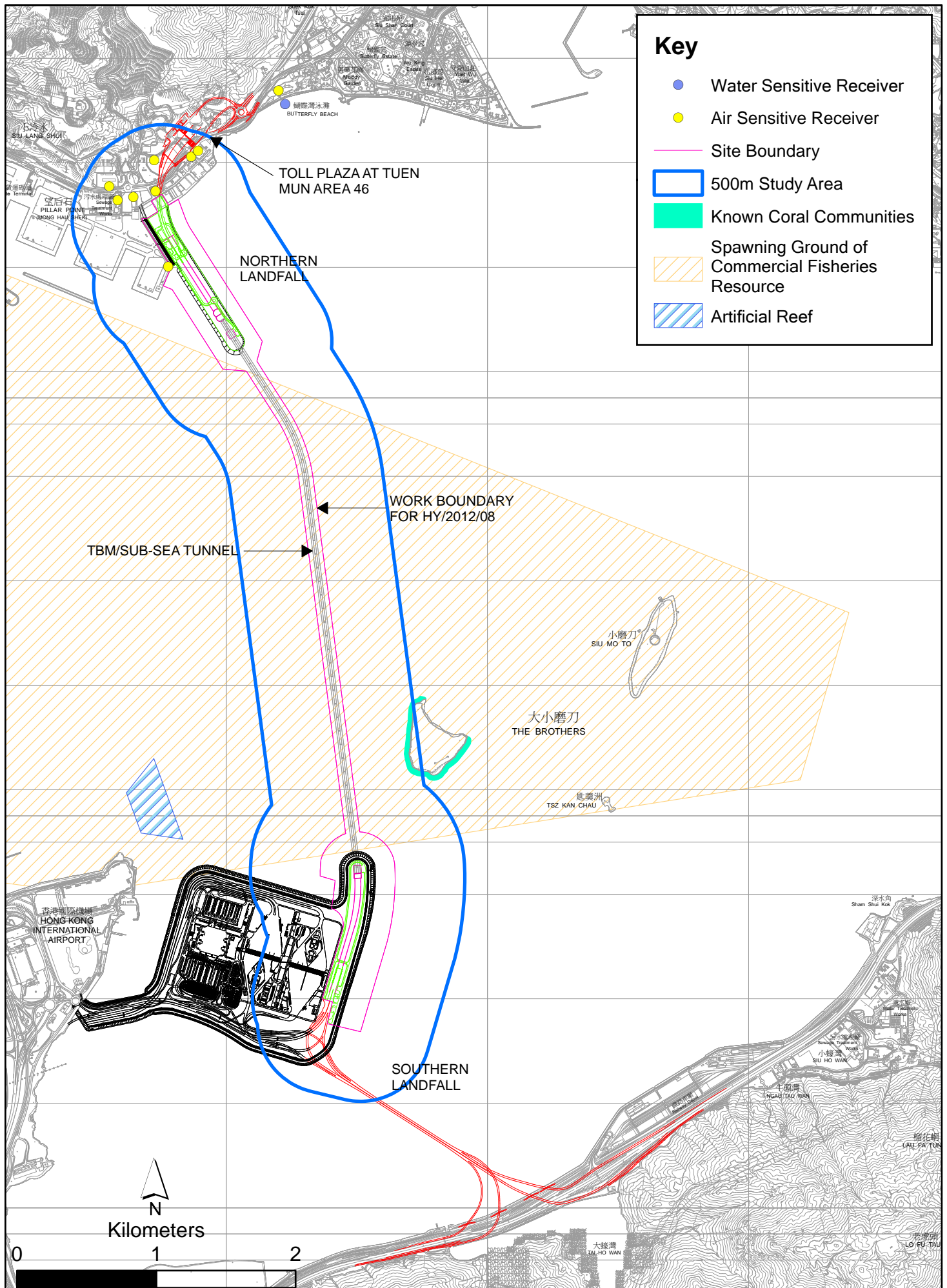


Figure 1.3 Environmental Sensitive Receivers in the vicinity of Contract No. HY/2012/08 Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-Sea Tunnel Section

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Date: 15/4/2014

The EM&A programme required environmental monitoring for air quality, 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 summarized in the following sections

2.1 AIR QUALITY

2.1.1 Monitoring Requirements and Equipment

In accordance with the Updated EM&A Manual and the Enhanced TSP Monitoring Plan, impact 1-hour TSP monitoring was conducted three (3) times every six (6) days and impact 24-hour TSP monitoring was carried out once every six (6) days when the highest dust impact was expected. 1-hr and 24-hr TSP monitoring frequency was increased to three times per day every three days and daily every three days, respectively, as excavation works for launching shaft commenced on 24 October 2014.

High volume samplers (HVSs) were used to carry out the 1-hour and 24-hour TSP monitoring on 2, 5, 8, 11, 14, 17, 20, 23, 26 and 29 December 2014 at the five (5) air quality monitoring stations in accordance with the requirements stipulated in the Updated EM&A Manual (*Figure 2.1; Table 2.1*). Wind meter was installed at the rooftop of ASR5 for logging wind speed and wind direction. Details of the equipment deployed are provided in *Table 2.2*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

Table 2.1 *Locations of Impact Air Quality Monitoring Stations and Monitoring Dates in this Reporting Period*

Monitoring Station	Monitoring Dates	Location	Description	Parameters & Frequency
ASR1	2, 5, 8, 11, 14, 17, 20, 23, 26 and 29 December 2014	Tuen Mun Fireboat Station	Office	TSP monitoring • 1-hour Total Suspended Particulates (1-hour TSP, $\mu\text{g}/\text{m}^3$), 3 times in every 6 days
ASR5		Pillar Point Fire Station	Office	• 24-hour Total Suspended Particulates (24-hour TSP, $\mu\text{g}/\text{m}^3$), daily for 24-hour in every 6 days
AQMS1		Previous River Trade Golf	Bare ground	Enhanced TSP monitoring (commenced on 24 October 2014)
ASR6		Butterfly Beach Laundry	Office	• 1-hour Total Suspended Particulates (1-hour TSP, $\mu\text{g}/\text{m}^3$), 3 times in every 3 days
ASR10		Butterfly Beach Park	Recreational uses	• 24-hour Total Suspended Particulates (24-hour TSP, $\mu\text{g}/\text{m}^3$), daily for 24-hour in every 3 days

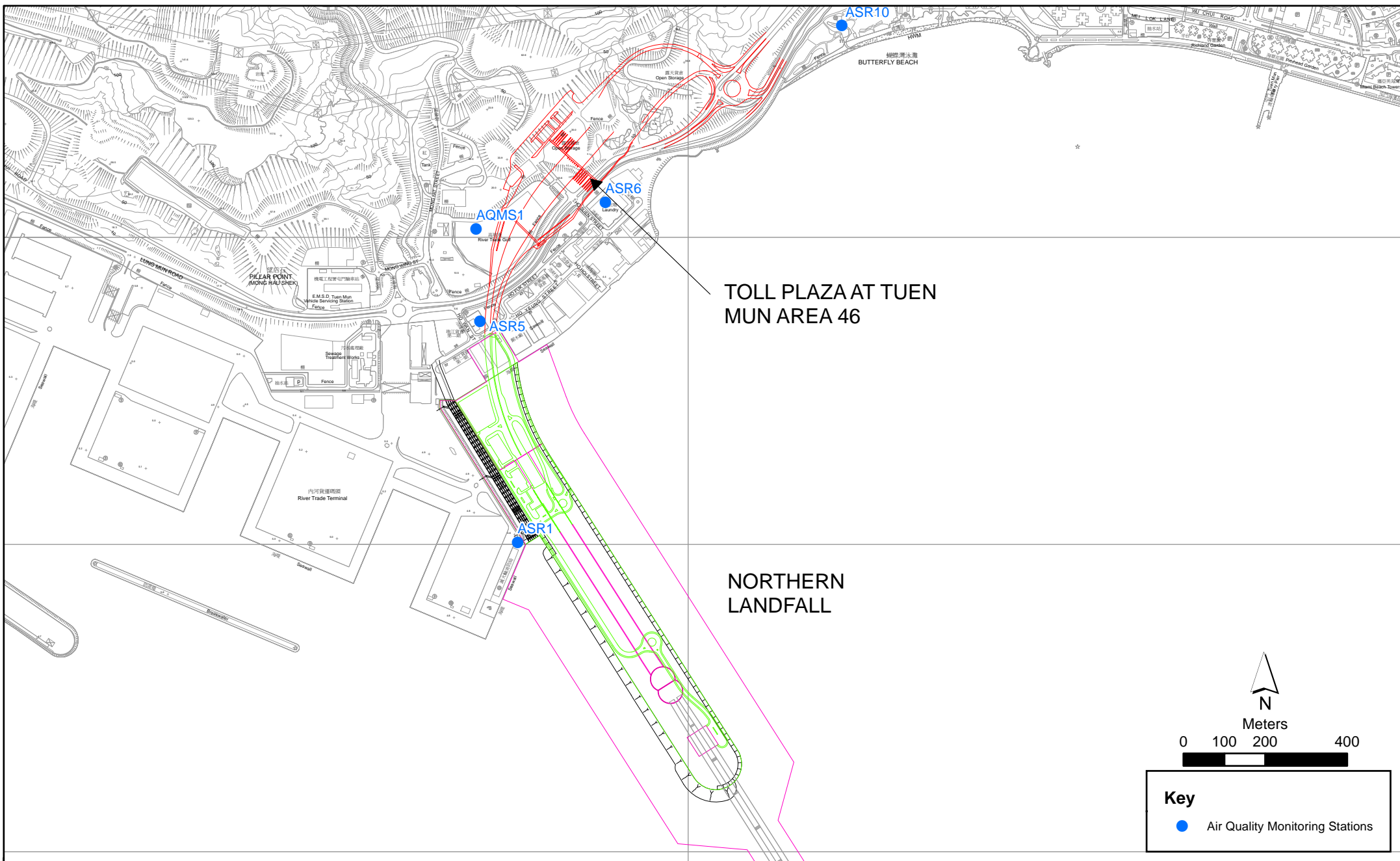


Figure 2.1

Air Quality Monitoring Stations for the Enhanced TSP Monitoring

Table 2.2 Air Quality Monitoring Equipment

Equipment	Brand and Model
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 Meter	Davis (Model: Weather Wizard III (S/N: WE90911A30)
Wind Anemometer for calibration	Lutron (Model No. AM-4201)

2.1.2 Action & Limit Levels

The Action and Limit Levels of the air quality monitoring is provided in *Appendix D*. The Event and Action plan is presented in *Appendix K*.

2.1.3 Monitoring Schedule for the Reporting Month

The schedule for air quality monitoring in December 2014 is provided in *Appendix F*.

2.1.4 Results and Observations

The monitoring results for 1-hour TSP and 24-hour TSP are summarized in *Tables 2.3 and 2.4*, respectively. Detailed impact air quality monitoring results and graphical presentations are presented in *Appendix G*.

Table 2.3 Summary of 1-hour TSP Monitoring Results in this Reporting Period

Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASR1	216	73 – 329	331	500
ASR5	207	95 – 346	340	500
AQMS1	152	84 – 348	335	500
ASR6	132	66 – 309	338	500
ASR10	108	58 – 245	337	500

Table 2.4 Summary of 24-hour TSP Monitoring Results in this Reporting Period

Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASR1	118	82 – 147	213	260
ASR5	116	93 – 151	238	260
AQMS1	103	71 – 155	213	260
ASR6	97	76 – 125	238	260
ASR10	78	59 – 106	214	260

The weather condition during the monitoring period varied from sunny to cloudy. The major dust sources in the reporting period include construction activities under the Contract as well as nearby traffic emissions.

A total of ten monitoring events were undertaken in which two Action Level exceedances of 1-hr TSP were recorded in this reporting month. No Limit

Level exceedances for 1-hr TSP were recorded. No Action or Limit Level exceedances for 24-hr TSP were recorded.

Meteorological information collected at the ASR5, including wind speed and wind direction, is provided in *Appendix H*.

2.2 WATER QUALITY MONITORING

2.2.1 Monitoring Requirements & Equipment

In accordance with the Updated EM&A Manual, impact water quality monitoring was carried out three days per week during the construction period at nine (9) water quality monitoring stations (*Figure 2.2; Table 2.5*).

Table 2.5 *Locations of Water Quality Monitoring Stations and the Corresponding Monitoring Requirements*

Station ID	Type	Coordinates		*Parameters, unit	Depth	Frequency
		Easting	Northing			
IS12	Impact Station	813218	823681	<ul style="list-style-type: none"> • Temperature(°C) • pH(pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) 	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted.	Impact monitoring: 3 days per week, at mid-flood and mid-ebb tides during the construction period of the Contract.
IS13	Impact Station	813667	824325			
IS14	Impact Station	812592	824172			
IS15	Impact Station	813356	825008			
CS4	Control / Far Field Station	810025	824004			
CS6	Control / Far Field Station	817028	823992			
SR8	Sensitive receiver (Gazettal beaches in Tuen Mun)	816306	825715			
SR9	Sensitive receiver (Butterfly Beach)	813601	825858			
SR10A	Sensitive receiver (Ma Wan FCZ)	823741	823495			

*Notes:

In addition to the parameters presented monitoring location/position, time, water depth, sampling depth, tidal stages, weather conditions and any special phenomena or works underway nearby were also recorded.

Table 2.6 summarizes the equipment used in the impact water quality monitoring programme. Copies of the calibration certificates are attached in *Appendix E*.

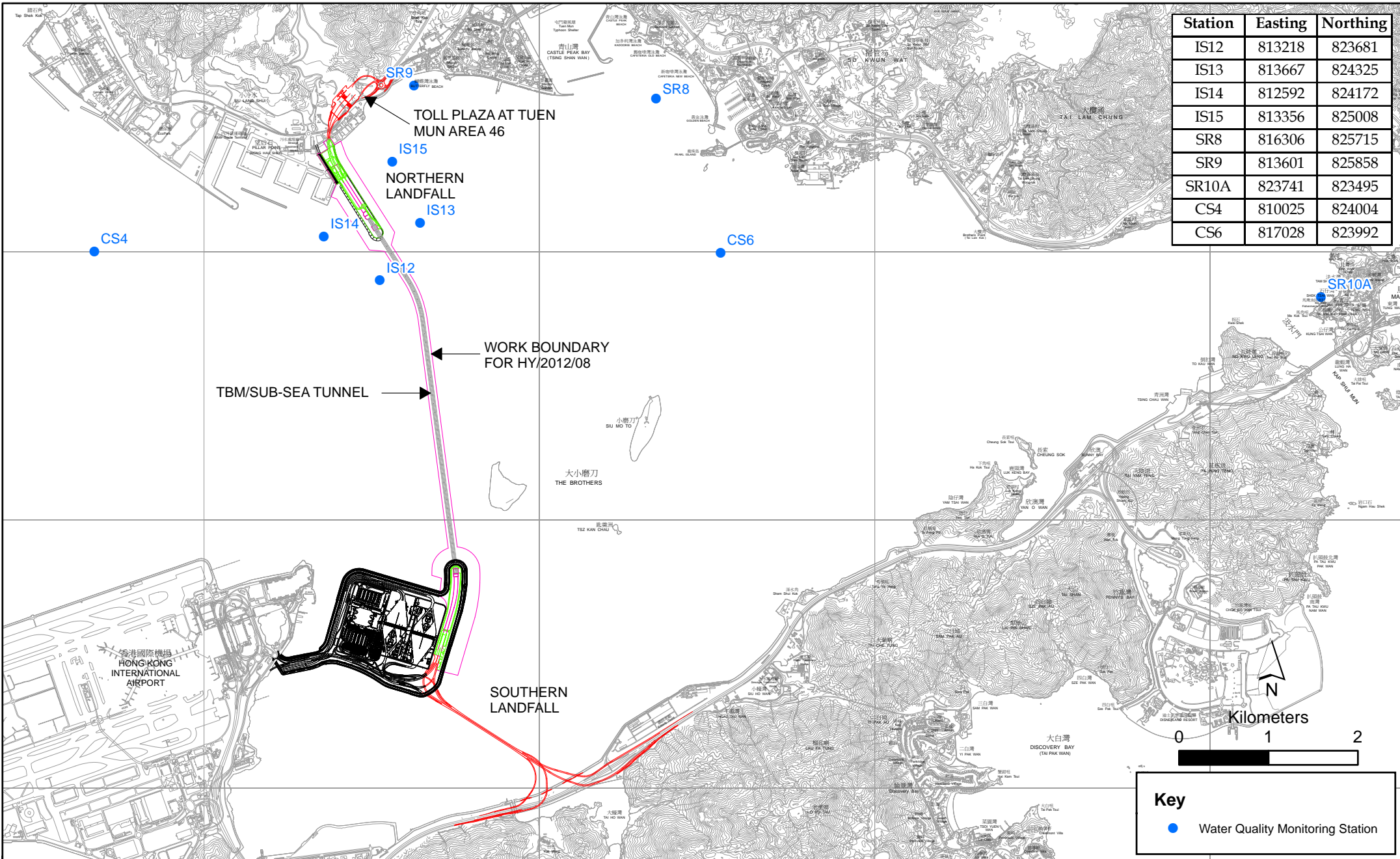


Figure 2.2

Water Quality Monitoring Station

Table 2.6 Water Quality Monitoring Equipment

Equipment	Model
Water Sampler	Kahlsico Water-Bottle Model 135DW 150
Dissolved Oxygen Meter	YSI Pro 2030
pH Meter	HANNA HI 8314
Turbidity Meter	HACH 2100Q
Monitoring Position	“Magellan” Handheld GPS Model explorer GC
Equipment	DGPS Kodon KGP913MK2 ⁽¹⁾

2.2.2 Action & Limit Levels

The Action and Limit levels of water quality impact monitoring are shown in *Appendix D*. The Event and Action plan is presented in *Appendix K*.

2.2.3 Monitoring Schedule for the Reporting Month

The schedule for water quality monitoring in December 2014 is provided in *Appendix F*. The water quality monitoring on 26 December 2014 was postponed to 29 December 2014 since no marine works was conducted between 25 and 26 December 2014.

2.2.4 Results and Observations

During this reporting period, major marine works included reclamation filling at Portion N-C. Reclamation filling was undertaken inside the fully enclosed seawall (+2.5mPD) using filling materials specified in the EP. It is useful to note that heavy marine traffic (not associated with the Project) was commonly observed nearby the Project site and its vicinity. On 8 December 2014, all reclamation filling has been completed in Phase-I.

Impact water quality monitoring was conducted at all designated monitoring stations in the reporting month. Results and graphical presentations of impact water quality monitoring are presented in *Appendix I*.

In this reporting period, a total of thirteen monitoring events were undertaken in which no Action Level or Limit Levels of exceedances for impact water quality monitoring was recorded.

2.3 DOLPHIN MONITORING

2.3.1 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. 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.

2.3.2 *Monitoring Equipment*

Table 2.7 summarises the equipment used for the impact dolphin monitoring.

Table 2.7 *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 Binocular	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

2.3.3 *Monitoring Parameter, Frequencies & 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.

2.3.4 *Monitoring Location*

The impact dolphin monitoring was carried out in the NEL and NWL along the line transect as depicted in Figure 2.3. The co-ordinates of all transect lines are shown in Table 2.8 below.

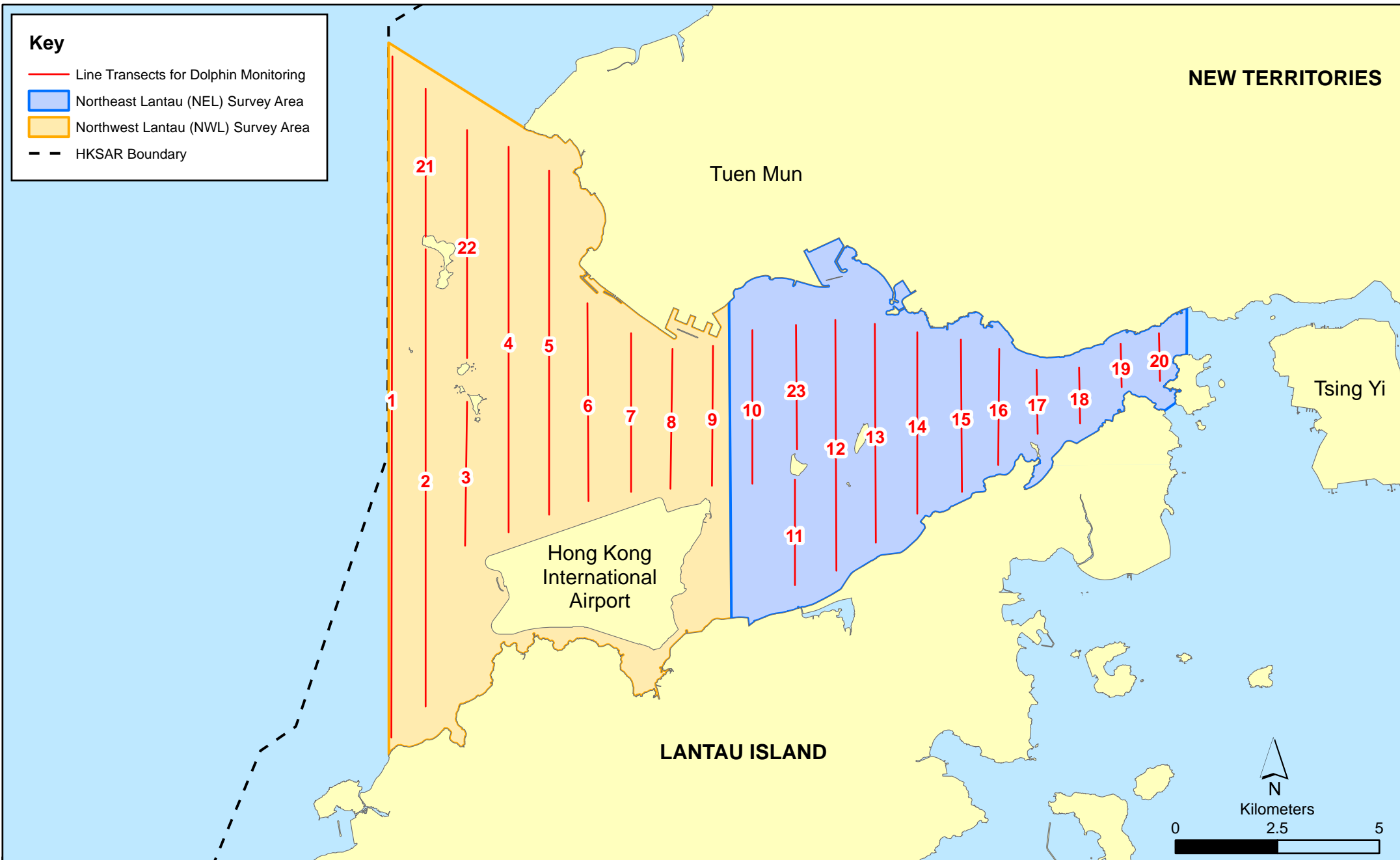


Figure 2.3

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

Table 2.8 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				
12	End Point	815542	824882				

2.3.5 Action & Limit Levels

The Action and Limit levels of impact dolphin monitoring are shown in *Appendix D*. The Event and Action plan is presented in *Appendix K*.

2.3.6 *Monitoring Schedule for the Reporting Month*

Dolphin monitoring was carried out on 2, 9, 15 and 23 December 2014. The dolphin monitoring schedule for the reporting month is shown in *Appendix F*.

2.3.7 *Results & Observations*

A total of 299.10 km of survey effort was collected, with 100% of the total survey effort being conducted under favourable weather conditions (ie Beaufort Sea State 3 or below with good visibility) in December 2014. Amongst the two areas, 115.70 km and 183.40 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 217.18 km and 81.92 km, respectively. The survey efforts are summarized in *Appendix J*.

A total of 3 groups of 5 Chinese White Dolphin sightings were recorded during the two sets of surveys in December 2014. All sighting were made in NWL during the two sets of surveys in December 2014, while no dolphin was sighted in NEL. All three sightings were made on primary lines during on-effort search, and none of the dolphin groups was associated with operating fishing vessel.

None of the sightings was made in the vicinity of the TM-CLKL Northern Connection Sub-sea Tunnel Section. The distribution of dolphin sightings during the reporting month is shown in *Figure 2.4*.

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 with good visibility) in December 2014 with the results present in *Tables 2.9 and 2.10*.

Table 2.9 *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: December 2 nd /9 th	0.0	0.0
	Set 2: December 15 th /23 rd	0.0	0.0
NWL	Set 1: December 2 nd /9 th	2.8	5.6
	Set 2: December 15 th /23 rd	1.4	1.4

Note: Dolphin Encounter Rates are deduced from the Two Sets of Surveys (Two Surveys in Each Set) in December 2014 in Northeast (NEL) and Northwest Lantau (NWL)

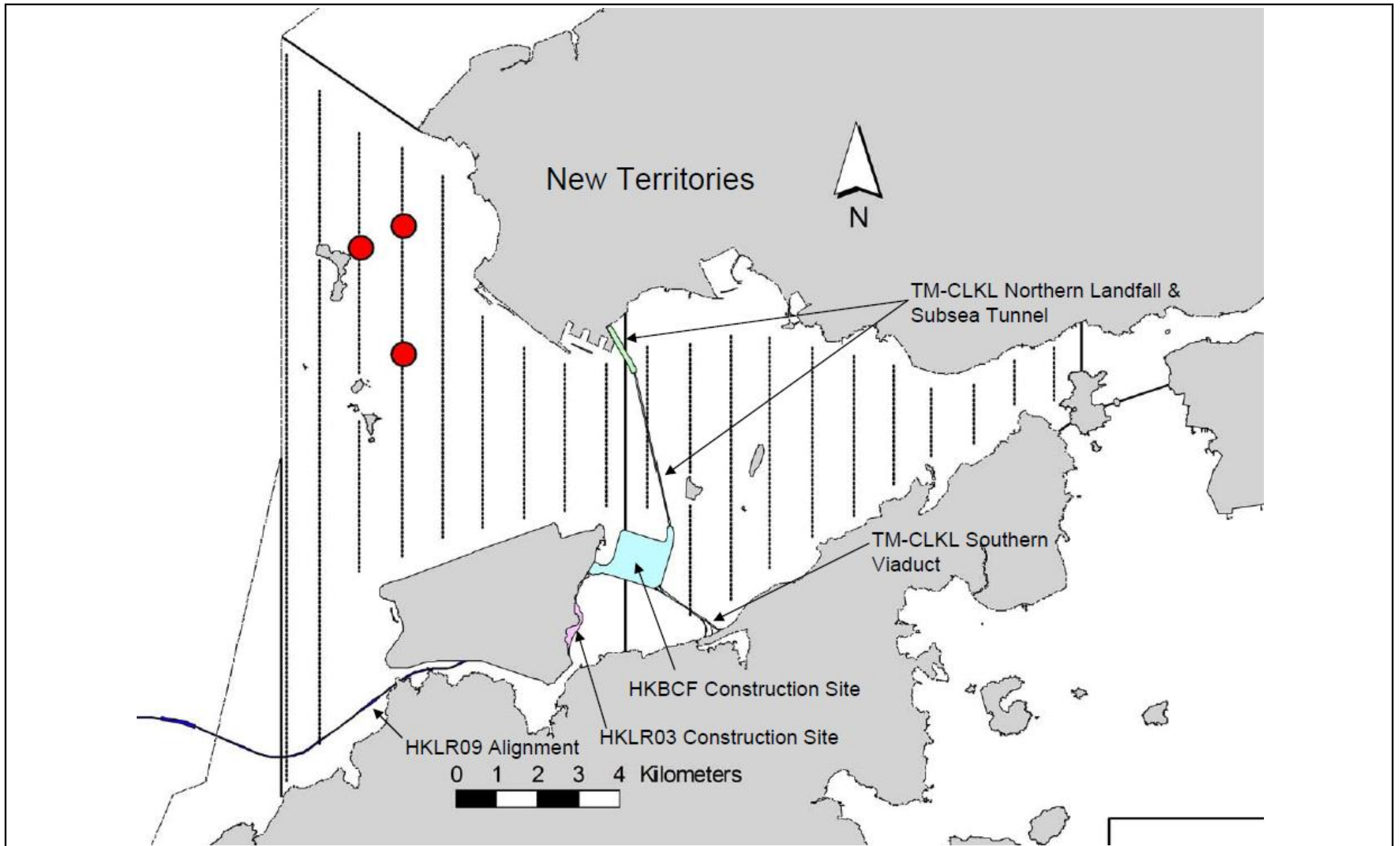


Figure 2.4

HY/2012/08 TM-CLKL Northern Connection Sub-sea Tunnel Section
 The distribution of dolphin sightings during the reporting period
 (Source: Adopted from HKLR03 Monitoring Survey in December 2014)

Table 2.10 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	2.1	1.6	3.5	2.7

Note: Overall dolphin encounter rates (sightings per 100 km of survey effort) from all four surveys are conducted in December 2014 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 December 2014 was 1.67 individuals per group. All three dolphin groups were composed of 1-3 animals.

Due to monthly variation in dolphin occurrence within the survey area, it would be more appropriate to draw conclusion on whether any unacceptable impacts on dolphins have been detected related to the construction activities of this Project 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.

2.3.8 Implementation of Marine Mammal Exclusion Zone

There was no dredging, reclamation or marine sheet piling works in open waters during this reporting period. Thus, Passive Acoustic Monitoring (PAM) and the day-time monitoring of Dolphin Exclusion Zone (DEZ) by dolphin observers were not in effect during the reporting period.

2.4 EM&A 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, five (5) site inspections were carried out on 3, 10, 17, 24 and 31 December 2014.

Key observations and recommendations during the site inspections in this reporting period are summarized in *Table 2.11*.

Table 2.11 *Specific Observations and Recommendations during the Weekly Site Inspection in this Reporting Month*

Inspection Date	Observations	Recommendations/ Remarks
3 December 2014	Reclamation Works Area - Portion N-B <ul style="list-style-type: none"> Accumulated general refuse was observed. Reclamation Works Area - Portion N-C <ul style="list-style-type: none"> Drip tray should be cleaned more frequently. 	Reclamation Works Area - Portion N-B <ul style="list-style-type: none"> The Contractor was reminded to clear the accumulated general refuse. Reclamation Works Area - Portion N-C <ul style="list-style-type: none"> The Contractor was reminded to clear oily water in the drip tray.
10 December 2014	Works Area - Portion N6 <ul style="list-style-type: none"> Drip tray should be cleaned more frequently. 	Works Area - Portion N6 <ul style="list-style-type: none"> The Contractor was reminded to clear the oily water in the drip tray.
17 December 2014	Reclamation Works Area - Portion N-C <ul style="list-style-type: none"> Stockpile of fill material was observed near the seawall. 	Reclamation Works Area - Portion N-C <ul style="list-style-type: none"> The Contractor was reminded to remove the fill material close to the seawall.
24 December 2014	Reclamation Works Area - Portion N-A <ul style="list-style-type: none"> Chemical container was observed without drip tray. 	Reclamation Works Area - Portion N-A <ul style="list-style-type: none"> The Contractor was reminded to remove the chemical container.
31 December 2014	Reclamation Works Area - Portion N-A <ul style="list-style-type: none"> Excess muddy water was observed. Reclamation Works Area - Portion N-B <ul style="list-style-type: none"> Accumulated general refuse was observed. 	Reclamation Works Area - Portion N-A <ul style="list-style-type: none"> The Contractor was reminded to clear the excess muddy water. Reclamation Works Area - Portion N-B <ul style="list-style-type: none"> The Contractor was reminded to clear the accumulated general refuse.

The Contractor has rectified all of the observations as identified during environmental site inspections in the reporting month.

2.5 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.

Wastes generated during this reporting period include mainly construction wastes (inert and non-inert) and imported fill. Reference has been made to the waste flow table prepared by the Contractor (*Appendix M*). The quantities of different types of wastes are summarized in *Table 2.12*.

Table 2.12 Quantities of Different Waste Generated in the Reporting Month

Month/Year	Inert Construction Waste ^(a) (tonnes)	Imported Fill (tonnes)	Inert Construction Waste Re-used (tonnes)	Non-inert Construction Waste ^(b) (tonnes)	Recyclable Materials ^(c) (kg)	Chemical Wastes (kg)	Marine Sediment (m ³)	
							Category L	Category M (M _p & M _f)
December 2014	10,151	108,279	0	49	0	0	0	0

Notes:

- (a) Inert construction wastes include hard rock and large broken concrete, and materials disposed as public fill.
- (b) Non-inert construction wastes include general refuse disposed at landfill.
- (c) Recyclable materials include metals, paper, cardboard, plastics, timber and others.

The Contractor was 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 was also reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

For chemical waste containers, the Contractor was reminded to treat properly and store 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.

2.6 ENVIRONMENTAL LICENSES AND PERMITS

The status of environmental licensing and permit is summarized in *Table 2.13* below.

Table 2.13 Summary of Environmental Licensing and Permit Status

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/C	28 January 2014	Throughout the Contract	HyD	Application for VEP on 10 December 2014 to replace EP-354/2009/B
Construction Dust Notification	363510	19 August 2013	Throughout the Contract	DBJV	-
Chemical Waste Registration	5213-422-D2516-01	10 September 2013	Throughout the Contract	DBJV	-
Construction Waste Disposal Account	7018108	19 August 2013	Throughout the Contract	DBJV	Waste disposal in Contract No. HY/2012/08
Waste Water Discharge License	WT00017707-2013	18 November 2013	30 November 2018	DBJV	For site WA18
Waste Water Discharge License	WT00018433-2014	5 June 2014	30 June 2019	DBJV	For site Portion N6 and Reclamation Area E
Construction Noise Permit	GW-RS0362-14	11 May 2014	10 May 2015	DBJV	For site WA23
Construction Noise Permit	GW-RW0706-14	29 September 2014	28 March 2015	DBJV	For Portion N6
Construction Noise Permit	GW-RW0550-14	25 July 2014	24 January 2015	DBJV	For Dredging and Reclamation Works
Construction Noise Permit	GW-RW0970-14	17 December 2014	14 May 2015	DBJV	For Dredging and Reclamation Works
Construction Noise Permit	GW-RW0674-14	18 September 2014	17 March 2015	DBJV	For GI Works at Southern Landfall
Construction Noise Permit	GW-RW0785-14	15 October 2014	31 December 2014	DBJV	For TM Area 38 barging Point
Marine Dumping Permit	EP/MD/15-142	7 November 2014	31 January 2015	DBJV	For Type 1 (Open Sea Disposal)
Marine Dumping Permit	EP/MD/15-100	20 October 2014	19 November 2015	DBJV	For Type 1 (Dedicated site) and Type 2 (Confined Marine Disposal)

Notes:

HyD = Highways Department

DBJV = Dragages - Bouygues Joint Venture

VEP = Variation of Environmental Permit

2.7 **IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES**

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

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

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

Two Action level exceedances of 1-hr TSP was recorded on 2 December 2014 and 17 December 2014. No Limit Level exceedances for 1-hr TSP were recorded. No Action or Limit Level exceedances for 24-hr TSP were recorded. Further to the investigation, the recorded exceedance for air quality monitoring was considered to be sporadic event from the cumulative anthropogenic activities (eg traffic emissions from River Trade Terminal) in this area of Hong Kong. The investigation findings are detailed in *Appendix L*.

No Action Level or Limit Level exceedances were recorded in the water quality monitoring of this reporting month.

Cumulative statistics are provided in *Appendix L*.

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

The Environmental Complaint Handling Procedure is provided in *Figure 2.5*.

No environmental complaint was received in the reporting period.

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

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

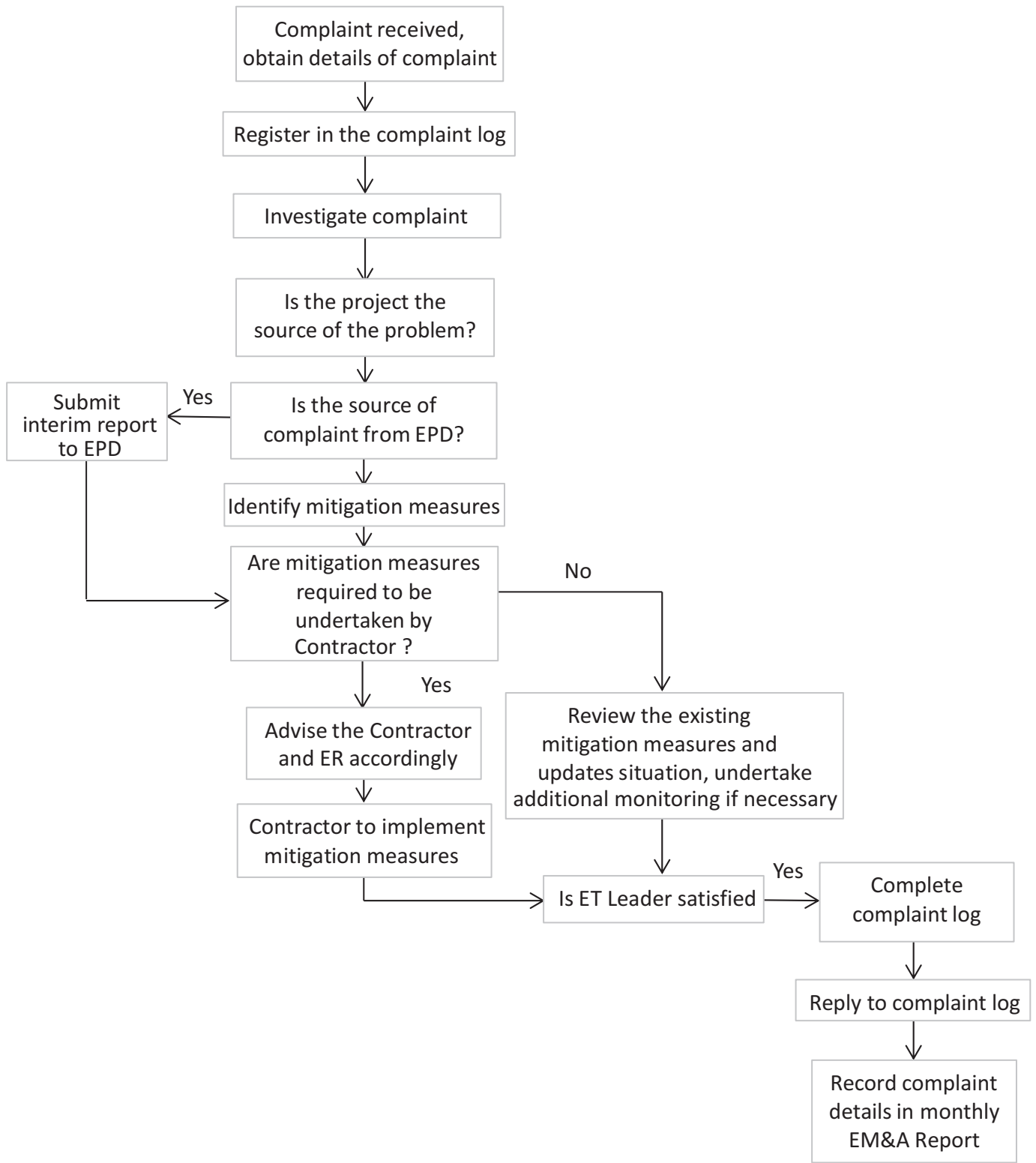


Figure 2.5

Environmental Complaint Handling Procedure

3 FUTURE KEY ISSUES

3.1 CONSTRUCTION ACTIVITIES FOR THE COMING MONTH

As informed by the Contractor, the major works for the Project in January 2015 are summarized in *Table 3.1*.

Table 3.1 Construction Works to Be Undertaken in the Coming Month

Works to be undertaken
<i>Land-based Works</i>
<ul style="list-style-type: none">• Land Bored Piling Works at Reclamation Works Area - Portion N-A;• Surcharge set up at Works Area - Portion N-C;• Formwork and Metal Scaffolding works at North Launching Shaft at Works Area - Portion N-A and,• Set up of Slurry Treatment Plant at Works Area - Portion N-C.
<i>Marine-based Works</i>
<ul style="list-style-type: none">• Rock bund deposition for marine sheet pile remedial works at Marine Works Area - Portion N-A.

3.2 KEY ISSUES FOR THE COMING MONTH

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of January 2015 are mainly associated with dust, marine water quality, marine ecology and waste management issues.

3.3 MONITORING SCHEDULE FOR THE COMING MONTH

The tentative schedule for environmental monitoring in January 2015 is provided in *Appendix F*.

4.1 CONCLUSIONS

This Fourteenth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 31 December 2014, in accordance with the Updated EM&A Manual and the requirements of EP-354/2009/C.

Air quality (including 1-hour TSP and 24-hour TSP), water quality and dolphin monitoring were carried out in this reporting month. No Action Level or Limit Level exceedances were recorded in the water quality monitoring of this reporting month. Two (2) Action Level exceedances of 1-hr TSP was record, whilst no Limit Level exceedances for 1-hr TSP were recorded in this reporting month. No Action or Limit Level exceedances for 24-hr TSP were record. Investigation findings suggested that the observed exceedances for air quality monitoring were considered to be sporadic event from the cumulative anthropogenic activities (eg traffic emissions from River Trade Terminal) in this area of Hong Kong. Nevertheless, the Contractor was reminded to ensure all dust mitigation measures are implemented at the construction site.

A total of three (3) groups of five (5) Chinese White Dolphin sightings were recorded during the two sets of surveys in December 2014. All sighting were made in NWL during the two sets of surveys in December 2014, while no dolphin was sighted in NEL. All three sightings were made on primary lines during on-effort search, and none of the dolphin groups was associated with operating fishing vessel. No unacceptable impact from the construction activities of the TM-CLKL Northern Connection Sub-sea Tunnel Section on Chinese White Dolphins was noticeable from general observations during the dolphin monitoring in this reporting month.

Environmental site inspection was carried out five (5) times in December 2014. Recommendations on remedial actions recommended for the deficiencies identified during the site audits were properly implemented by the Contractor.

No non-compliance event was recorded during the reporting period.

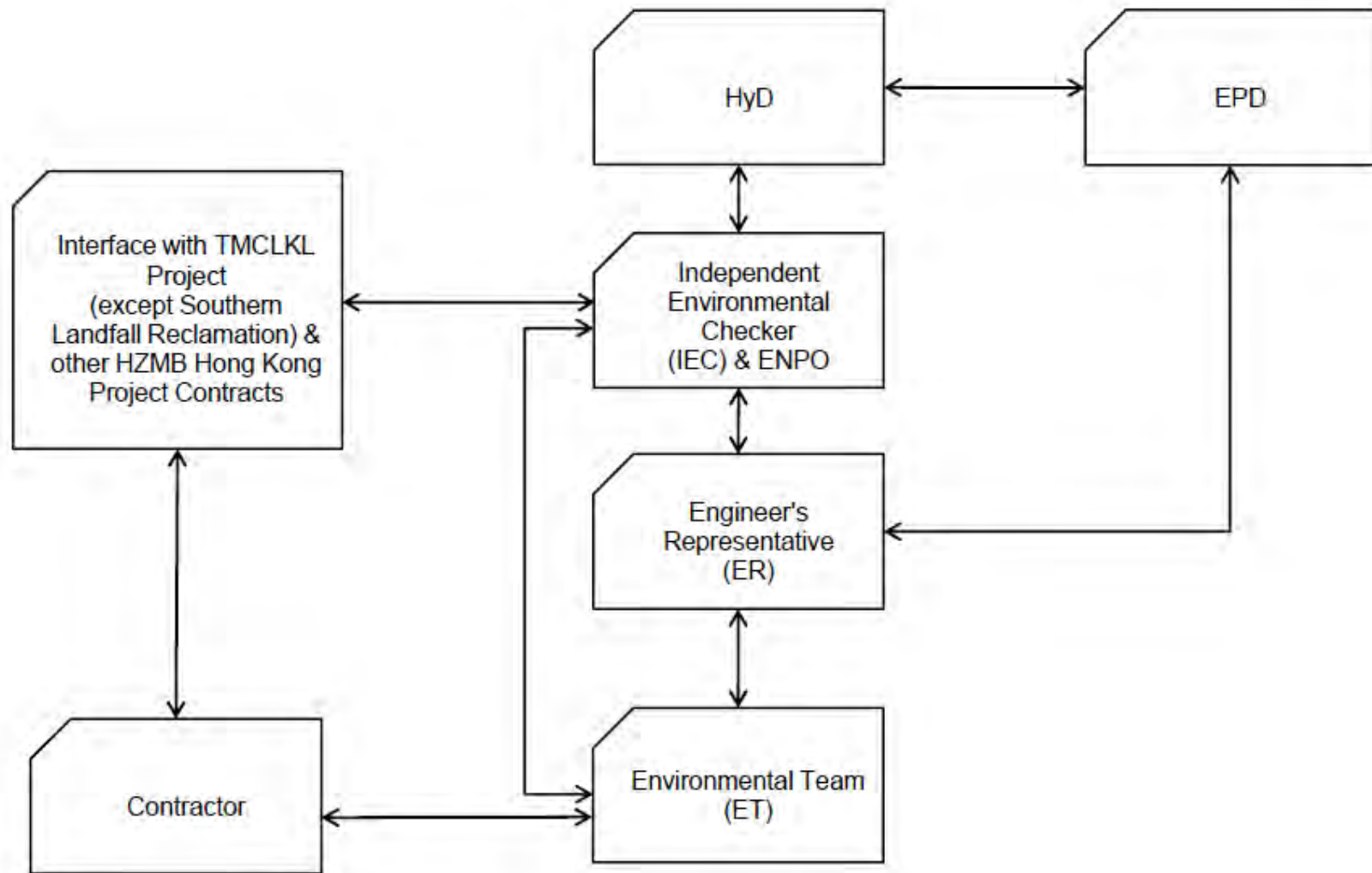
No environmental complaint was received during the reporting period.

No summons/ prosecution was received during the reporting period.

The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A

Project Organization for Environmental Works



↔ Line of Communication

Appendix B

Construction Programme

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015			
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
TMCLK - Northern Connection Sub-Sea Tunnel Section															
Contract Dates															
Handover Date															
HD010	Portions: WA18C	0		06-Jan-15		06-Jan-15*	0%								◆ Portions: WA18C
General Submissions															
Programme															
SCC0277	Detailed Works Programme - SCC27.2 - Approval by SO	30	11-Feb-14	12-Mar-14	29-Aug-14A	13-Nov-14A	100%								
General Design Submissions															
(A19) DDA for Roadworks & Project Alignment															
DD68310	IPs/ SO's Advance Comments/ ICE Comments	28	26-Jul-14	22-Aug-14	08-Sep-14A	13-Nov-14A	100%								IPs/ SO's Advance Comments/ ICE Comments
DD68320	Comments Received	0		22-Aug-14		13-Nov-14A	100%								Comments Received
DD68330	Designer to Reply RTC + Update Submission	21	23-Aug-14	17-Sep-14	14-Nov-14A	22-Dec-14A	100%								Designer to Reply RTC + Update Submission
DD68340	Submit Updated DDA to SO/ ICE/ IPs	0	18-Sep-14		22-Dec-14A		100%								◆ Submit Updated DDA to SO/ ICE/ IPs
DD68350	ICE Approval & Issue Check Cert	12	18-Sep-14	03-Oct-14	03-Sep-14A	02-Jan-15	83%								ICE Approval & Issue Check Cert
DD68360	Submit ICE Check Cert to SO	6	04-Oct-14	10-Oct-14	03-Jan-15	09-Jan-15	0%								Submit ICE Check Cert to SO
DD68370	SO's Review	35	18-Sep-14	22-Oct-14	31-Dec-14	03-Feb-15	0%								SO's Review
DD68380	SO Approval with Condition R received	0		22-Oct-14		03-Feb-15	0%								◆ SO Approval with Condition R received
(G6) IFA for Tunnel GBP															
DD70750	SO's Review	35	29-Apr-14	02-Jun-14	09-Aug-14A	30-Dec-14	94%								Review
DD70760	SO Approval with Condition R received	0		03-Jun-14		30-Dec-14	0%								Approval Received
Construction Supervision Plan															
GEO1115	2nd GEO Review	28	29-Mar-14	25-Apr-14	29-Mar-14A	30-Dec-14	93%								Review
Self contained Cat I/II supervising monthly report															
GEO1425	1st Submission GEO Review	28	31-May-14	27-Jun-14	15-Oct-14A	21-Nov-14A	100%								GEO Review
GEO1430	Received GEO Comment	0		27-Jun-14		21-Nov-14A	100%								Comment
GEO1435	Prepare Response to Comment	12	28-Jun-14	12-Jul-14	21-Nov-14A	21-Nov-14A	100%								Response to Comment
GEO1440	2nd Submission to GEO	0		12-Jul-14		21-Nov-14A	100%								Submission to GEO
GEO1445	2nd GEO Review	28	13-Jul-14	09-Aug-14	21-Nov-14A	21-Nov-14A	100%								GEO Review
Construction															
Northern Landfall															
North Reclamation (Phase 1)															
Design Submission															
(B4) DDA Construction Risk Assessment - Impact on North Landfall + Sub-sea Tunnel															
DD68410	SO's Comments for 1st Submission	35	01-Jun-14	05-Jul-14	27-Sep-14A	30-Dec-14	94%								Comments for 1st Submission
DD68420	Prepare Re-submission	10	07-Jul-14	17-Jul-14	31-Dec-14	12-Jan-15	0%								Re-submission
DD68430	2nd Submission	0		17-Jul-14		12-Jan-15	0%								Submission
DD68490	SO's Condition Approval	35	18-Jul-14	21-Aug-14	13-Jan-15	16-Feb-15	0%								SO's Condition Approval
Method Statement Submission															
Method Statement of Construction Methodology of Culvert Extension															
MS1800	Preparation Method Statement for Culvert Extension	25	24-Jun-14	23-Jul-14	29-Dec-14	27-Jan-15	0%								Preparation Method Statement for Culvert Extension
MS1810	Submit Method Statement to SO	0		23-Jul-14		27-Jan-15	0%								Method Statement to SO
MS1820	SO Reviews & Comments	28	24-Jul-14	20-Aug-14	28-Jan-15	24-Feb-15	0%								SO Reviews & Comments
MS1830	Re-submission	18	21-Aug-14	11-Sep-14	26-Feb-15	18-Mar-15	0%								Re-submission
Construction															
Milestones															
NRC13160	Completion of Zone D1 Reclamation up to +14.5mPD	0		18-Oct-14		31-Oct-14A	100%								◆ Completion of Zone D1 Reclamation up to +14.5mPD
NRC13180	Completion of Zone D2 Reclamation up to +14.5mPD	0		11-Nov-14		19-Nov-14A	100%								◆ Completion of Zone D2 Reclamation up to +14.5mPD
NRC13210	Completion of Zone C2 Reclamation up to +10mPD	0		17-Sep-14		06-Jan-15A	100%								◆ Completion of Zone C2 Reclamation up to +10mPD
NRC13240	Completion of Zone A1 Reclamation up to +10mPD	0		21-Oct-14		03-Feb-15	0%								◆ Completion of Zone A1 Reclamation up to +10mPD
NRC13250	Completion of Zone A2 Reclamation up to +10mPD (TBC)	0		10-Nov-14		12-Feb-15	0%								◆ Completion of Zone A2 Reclamation up to +10mPD (TBC)
Zone E															
Vertical Seawall															
NRC10480	VS - Mass Concrete Coping - Zone E - (CH0 to 50)	8	02-May-14	12-May-14	21-Jul-14A	14-Nov-14A	100%								Coping - Zone E - (CH0 to 50)
NRC10490	VS - Mass Concrete Coping - Zone E - (CH50 to 100)	8	13-May-14	21-May-14	23-Jul-14A	03-Nov-14A	100%								Coping - Zone E - (CH50 to 100)
NRC10500	VS - Mass Concrete Coping - Zone E - (CH100 to 150)	8	22-May-14	30-May-14	09-Jul-14A	12-Nov-14A	100%								Coping - Zone E - (CH100 to 150)
NRC10510	VS - Mass Concrete Coping - Zone E - (CH150 to 205)	11	31-May-14	13-Jun-14	16-Jul-14A	20-Nov-14A	100%								Coping - Zone E - (CH150 to 205)
Zone D1															
Vertical Seawall															
NRC11720	VS - Mass Concrete Coping - Zone D1 - (CH205 to 255)	15	02-May-14	20-May-14	22-Dec-14A	10-Jan-15	25%								Coping - Zone D1 - (CH205 to 255)
NRC11790	VS - Mass Concrete Coping - Zone D1 - (CH255 to 305)	8	21-May-14	29-May-14	12-Jan-15	20-Jan-15	0%								Coping - Zone D1 - (CH255 to 305)
NRC11860	VS - Mass Concrete Coping - Zone D1 - (CH305 to 355)	8	30-May-14	09-Jun-14	21-Jan-15	29-Jan-15	0%								Coping - Zone D1 - (CH305 to 355)
Sloping Seawall															
NRC120208	VS - Berm Stone - Zone D1 - RTT	2	20-Jun-14	21-Jun-14	01-Dec-14A	29-Dec-14	50%								Zone D1 - RTT
NRC120209	VS - Mass Concrete Coping - Zone D1 - RTT	4	26-Apr-14	02-May-14	12-Aug-14A	29-Dec-14	80%								Zone D1 - RTT
NRC14070	SS - Armour Rock - Zone D1 - (CH255 to 305)	4	03-Jan-14	07-Jan-14	02-Dec-14A	02-Dec-14A	100%								
NRC14080	SS - Armour Rock - Zone D1 - (CH305 to 355)	4	08-Jan-14	11-Jan-14	09-Dec-14A	12-Jan-15A	100%								




■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015						
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Reclamation																		
NRC13480	Public Fill - Zone D1 - (CH305 to 355) to +14.5mPD	11	07-Oct-14	18-Oct-14	19-Oct-14A	31-Oct-14A	100%											
NRC15190	Surcharge Period - Zone D1 - (CH305 to 355)	180	19-Oct-14	16-Apr-15	01-Nov-14A	03-May-15	33%											
Zone D2																		
Vertical Seawall																		
NRC11930	VS - Mass Concrete Coping - Zone D2 - (CH355 to 405)	8	12-May-14	21-May-14	29-Dec-14	07-Jan-15	0%											
NRC11980	VS - Mass Concrete Coping - Zone D2 - (CH405 to 443)	8	23-May-14	03-Jun-14	08-Jan-15	16-Jan-15	0%											
Sloping Seawall																		
NRC14090	SS - Armour Rock - Zone D2 - (CH355 to 405)	4	13-Jan-14	16-Jan-14	12-Dec-14A	15-Dec-14A	100%											
NRC14100	SS - Armour Rock - Zone D2 - (CH405 to 443)	4	17-Jan-14	21-Jan-14	15-Dec-14A	30-Dec-14	39%											
Reclamation																		
NRC13630	Public Fill - Zone D2 - (CH355 to 405) to +14.5mPD	11	20-Oct-14	31-Oct-14	02-Nov-14A	08-Nov-14A	100%											
NRC13640	Public Fill - Zone D2 - (CH405 to 443) to +14.5mPD	9	01-Nov-14	11-Nov-14	10-Nov-14A	19-Nov-14A	100%											
NRC15210	Surcharge Period - Zone D2 - (CH355 to 405)	180	01-Nov-14	29-Apr-15	09-Nov-14A	11-May-15	28%											
NRC15230	Surcharge Period - Zone D2 - (CH405 to 443)	180	12-Nov-14	10-May-15	19-Nov-14A	21-May-15	23%											
Zone C1																		
Vertical Seawall																		
NRC14700	VS - Mass Concrete Coping - Zone C1 - (CH443 to 493)	8	10-Jun-14	18-Jun-14	14-Nov-14A	24-Dec-14A	100%											
NRC14710	VS - Mass Concrete Coping - Zone C1 - (CH493 to 543)	8	19-Jun-14	27-Jun-14	14-Nov-14A	03-Feb-15	50%											
Sloping Seawall																		
NRC14830	SS - Armour Rock Underlayer - Zone C1 - (CH493 to 543)	5	12-Feb-14	17-Feb-14	12-Dec-14A	13-Dec-14A	100%											
NRC14850	SS - Armour Rock - Zone C1 - (CH443 to 493)	4	27-Feb-14	03-Mar-14	31-Dec-14	05-Jan-15	0%											
NRC14860	SS - Armour Rock - Zone C1 - (CH493 to 543)	4	04-Mar-14	07-Mar-14	06-Jan-15	09-Jan-15	0%											
NRC14880	SS - Mass Concrete Coping - Zone C1 - (CH443 to 493)	7	10-Jun-14	18-Jun-14	15-Dec-14A	20-Dec-14A	100%											
NRC14890	SS - Mass Concrete Coping - Zone C1 - (CH493 to 543)	7	18-Jun-14	25-Jun-14	20-Dec-14A	24-Dec-14A	100%											
Zone C2																		
Vertical Seawall																		
NRC14690	VS - Berm Stone - Zone C2 - (CH543 to 598)	3	19-Jul-14	22-Jul-14	03-Nov-14A	03-Nov-14A	100%											
NRC14720	VS - Mass Concrete Coping - Zone C2 - (CH543 to 598)	8	20-Jun-14	30-Jun-14	01-Nov-14A	02-Jan-15	50%											
Sloping Seawall																		
NRC14840	SS - Armour Rock Underlayer - Zone C2 - (CH543 to 598)	5	21-Feb-14	26-Feb-14	15-Dec-14A	15-Dec-14A	100%											
NRC14870	SS - Armour Rock - Zone C2 - (CH543 to 598)	4	08-Mar-14	12-Mar-14	10-Jan-15	14-Jan-15	0%											
NRC14900	SS - Mass Concrete Coping - Zone C2 - (CH543 to 598)	7	26-Jun-14	04-Jul-14	08-Dec-14A	09-Dec-14A	100%											
Zone B																		
Vertical Seawall																		
NRC11360	VS - Berm Stone - Zone B - (CH598 to 648)	3	23-Jul-14	25-Jul-14	05-Nov-14A	13-Nov-14A	100%											
NRC11370	VS - Berm Stone - Zone B - (CH648 to 698)	3	26-Jul-14	29-Jul-14	14-Nov-14A	20-Nov-14A	100%											
NRC11380	VS - Berm Stone - Zone B - (CH698 to 738)	3	30-Jul-14	01-Aug-14	19-Nov-14A	22-Nov-14A	100%											
NRC11400	VS - Mass Concrete Coping - Zone B - (CH598 to 648)	8	30-Jun-14	09-Jul-14	21-Oct-14A	07-Jan-15	50%											
NRC11410	VS - Mass Concrete Coping - Zone B - (CH648 to 698)	8	10-Jul-14	18-Jul-14	20-Nov-14A	12-Jan-15	33%											
NRC11420	VS - Mass Concrete Coping - Zone B - (CH698 to 738)	8	19-Jul-14	28-Jul-14	02-Dec-14A	17-Jan-15	33%											
Sloping Seawall																		
NRC11540	SS - Armour Rock Underlayer - Zone B - (CH598 to 648)	5	04-Mar-14	08-Mar-14	15-Oct-14A	03-Nov-14A	100%											
NRC11550	SS - Armour Rock Underlayer - Zone B - (CH648 to 698)	5	14-Mar-14	19-Mar-14	04-Nov-14A	16-Dec-14A	100%											
NRC11560	SS - Armour Rock Underlayer - Zone B - (CH698 to 738)	5	26-Mar-14	31-Mar-14	16-Dec-14A	18-Dec-14A	100%											
NRC11580	SS - Armour Rock - Zone B - (CH598 to 648)	4	01-Apr-14	04-Apr-14	15-Jan-15	19-Jan-15	0%											
NRC11590	SS - Armour Rock - Zone B - (CH648 to 698)	4	07-Apr-14	10-Apr-14	20-Jan-15	23-Jan-15	0%											
NRC11600	SS - Armour Rock - Zone B - (CH698 to 738)	4	11-Apr-14	15-Apr-14	24-Jan-15	28-Jan-15	0%											
NRC11620	SS - Mass Concrete Coping - Zone B - (CH648 to 698)	7	14-Jul-14	21-Jul-14	22-Oct-14A	05-Nov-14A	100%											
NRC11630	SS - Mass Concrete Coping - Zone B - (CH698 to 738)	7	22-Jul-14	29-Jul-14	06-Nov-14A	11-Nov-14A	100%											
Reclamation																		
NRC15360	Surcharge Removal - Zone B - (CH698 to 738)	10	12-Feb-15	02-Mar-15	18-May-15	29-May-15	0%											
Zone A1																		
Vertical Seawall																		
NRC12120	VS - Berm Stone - Zone A1 - (CH738 to 793)	3	02-Aug-14	05-Aug-14	22-Dec-14A	24-Dec-14A	100%											
NRC12130	VS - Mass Concrete Coping - Zone A1 - (CH738 to 793)	8	29-Jul-14	06-Aug-14	19-Dec-14A	23-Jan-15	33%											
Sloping Seawall																		
NRC12180	SS - Armour Rock Underlayer - Zone A1 - (CH738 to 793)	5	01-Apr-14	07-Apr-14	22-Dec-14A	31-Dec-14	40%											
NRC12190	SS - Armour Rock - Zone A1 - (CH738 to 793)	4	16-Apr-14	23-Apr-14	29-Jan-15	02-Feb-15	0%											
NRC12210	SS - Mass Concrete Coping - Zone A1 - (CH738 to 793)	7	30-Jul-14	06-Aug-14	06-Dec-14A	10-Dec-14A	100%											
Reclamation																		
NRC12340	Public Fill - Zone A1 - (CH738 to 793) to +10mPD	6	15-Oct-14	21-Oct-14	17-Nov-14A	24-Nov-14A	100%											
NRC15370	Surcharge Period - Zone A1 - (CH738 to 793)	180	22-Oct-14	19-Apr-15	25-Nov-14A	28-Jun-15	0%											
Zone A2																		
Vertical Seawall																		
NRC12490	VS - Rockfill Type A - Zone A2 - (CH843 to 893)	3	06-Jun-14	09-Jun-14	11-Oct-14A	05-Nov-14A	100%											

 Planned Bar
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 Planned Milestone
 Progress bar
 Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015							
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
NRC12500	VS - Rockfill Type A - Zone A2 - (CH893 to 956)	7	10-Jun-14	17-Jun-14	11-Nov-14 A	23-Nov-14 A	100%	Zone A2 - (CH893 to 956)											
NRC12520	VS - Geotextile - Zone A2 - (CH843 to 893)	2	12-Jun-14	13-Jun-14	11-Oct-14 A	10-Nov-14 A	100%	A2 - (CH843 to 893)											
NRC12530	VS - Geotextile - Zone A2 - (CH893 to 956)	5	14-Jun-14	19-Jun-14	12-Nov-14 A	23-Nov-14 A	100%	e A2 - (CH893 to 956)											
NRC12550	VS - Granular Filter - Zone A2 - (CH843 to 893)	4	19-Jun-14	23-Jun-14	03-Nov-14 A	05-Nov-14 A	100%	- Zone A2 - (CH843 to 893)											
NRC12560	VS - Granular Filter - Zone A2 - (CH893 to 956)	10	24-Jun-14	05-Jul-14	05-Nov-14 A	23-Nov-14 A	100%	filter - Zone A2 - (CH893 to 956)											
NRC12570	VS - Berm Stone - Zone A2 - (CH793 to 843)	3	06-Aug-14	08-Aug-14	01-Dec-14 A	07-Dec-14 A	100%	Berm Stone - Zone A2 - (CH793 to 843)											
NRC12580	VS - Berm Stone - Zone A2 - (CH843 to 893)	3	09-Aug-14	12-Aug-14	08-Dec-14 A	10-Dec-14 A	100%	- Berm Stone - Zone A2 - (CH843 to 893)											
NRC12590	VS - Berm Stone - Zone A2 - (CH893 to 956)	7	13-Aug-14	20-Aug-14	11-Dec-14 A	14-Dec-14 A	100%	VS - Berm Stone - Zone A2 - (CH893 to 956)											
NRC12600	VS - Mass Concrete Coping - Zone A2 - (CH793 to 843)	8	07-Aug-14	15-Aug-14	31-Jan-15 A	31-Jan-15	18%	s - Mass Concrete Coping - Zone A2 - (CH793 to 843)											
NRC12610	VS - Mass Concrete Coping - Zone A2 - (CH843 to 893)	8	16-Aug-14	25-Aug-14	02-Feb-15	10-Feb-15	0%	VS - Mass Concrete Coping - Zone A2 - (CH843 to 893)											
NRC12620	VS - Mass Concrete Coping - Zone A2 - (CH893 to 956)	18	26-Aug-14	16-Sep-14	11-Feb-15	10-Mar-15	0%	VS - Mass Concrete Coping - Zone A2 - (CH893 to 956)											
Sloping Seawall																			
NRC12680	SS - Rock Grade 400 - Zone A2 - (CH893 to 956) to +2.5mPD (4k/d)	7	16-Apr-14	26-Apr-14	01-Sep-14 A	19-Nov-14 A	100%	93 to 956) to +2.5mPD (4k/d)											
NRC12720	SS - Armour Rock Underlayer - Zone A2 - (CH793 to 843)	5	09-Apr-14	14-Apr-14	02-Jan-15	07-Jan-15	0%	(CH793 to 843)											
NRC12730	SS - Armour Rock Underlayer - Zone A2 - (CH843 to 893)	5	16-Apr-14	24-Apr-14	08-Jan-15	13-Jan-15	0%	2 - (CH843 to 893)											
NRC12740	SS - Armour Rock Underlayer - Zone A2 - (CH893 to 956)	5	28-Apr-14	03-May-14	14-Jan-15	19-Jan-15	0%	e A2 - (CH893 to 956)											
NRC12750	SS - Armour Rock - Zone A2 - (CH793 to 843)	4	05-May-14	09-May-14	03-Feb-15	06-Feb-15	0%	793 to 843)											
NRC12760	SS - Armour Rock - Zone A2 - (CH843 to 893)	4	10-May-14	14-May-14	07-Feb-15	11-Feb-15	0%	H843 to 893)											
NRC12770	SS - Armour Rock - Zone A2 - (CH893 to 956)	4	15-May-14	19-May-14	12-Feb-15	16-Feb-15	0%	(CH893 to 956)											
NRC12780	SS - Mass Concrete Coping - Zone A2 - (CH793 to 843)	7	07-Aug-14	14-Aug-14	13-Dec-14 A	19-Dec-14 A	100%	s - Mass Concrete Coping - Zone A2 - (CH793 to 843)											
NRC12790	SS - Mass Concrete Coping - Zone A2 - (CH843 to 893)	7	15-Aug-14	22-Aug-14	20-Dec-14 A	06-Feb-15	44%	SS - Mass Concrete Coping - Zone A2 - (CH843 to 893)											
NRC12800	SS - Mass Concrete Coping - Zone A2 - (CH893 to 956)	7	23-Aug-14	30-Aug-14	07-Feb-15	14-Feb-15	0%	SS - Mass Concrete Coping - Zone A2 - (CH893 to 956)											
NRC12820	Sloping - Rockfill Type A - Zone A2 - (CH843 to 893)	1	16-Apr-14	16-Apr-14	08-Nov-14 A	13-Nov-14 A	100%	43 to 893)											
NRC12830	Sloping - Rockfill Type A - Zone A2 - (CH893 to 956)	1	28-Apr-14	28-Apr-14	21-Nov-14 A	21-Nov-14 A	100%	CH893 to 956)											
NRC12870	Sloping - Geotextile - Zone A2 - (CH893 to 956)	2	29-Apr-14	30-Apr-14	21-Nov-14 A	21-Nov-14 A	100%	93 to 956)											
NRC12880	Sloping - Granular Filter - Zone A2 - (CH793 to 843)	3	12-Apr-14	15-Apr-14	29-Oct-14 A	31-Oct-14 A	100%	93 to 843)											
NRC12890	Sloping - Granular Filter - Zone A2 - (CH843 to 893)	3	23-Apr-14	25-Apr-14	24-Oct-14 A	13-Nov-14 A	100%	H843 to 893)											
NRC12900	Sloping - Granular Filter - Zone A2 - (CH893 to 956)	3	02-May-14	05-May-14	22-Nov-14 A	22-Nov-14 A	100%	(CH893 to 956)											
Reclamation																			
NRC13020	Public Fill - Zone A2 - (CH843 to 893) to -2.5mPD	6	11-Jul-14	17-Jul-14	03-Oct-14 A	04-Nov-14 A	100%	Zone A2 - (CH843 to 893) to -2.5mPD											
NRC13030	Public Fill - Zone A2 - (CH893 to 956) to -2.5mPD	4	18-Jul-14	22-Jul-14	03-Nov-14 A	06-Dec-14 A	100%	- Zone A2 - (CH893 to 956) to -2.5mPD											
NRC13050	Public Fill - Zone A2 - (CH843 to 893) to +2.5mPD	7	11-Aug-14	18-Aug-14	24-Oct-14 A	14-Nov-14 A	100%	Public Fill - Zone A2 - (CH843 to 893) to +2.5mPD											
NRC13070	Public Fill - Zone A2 - (CH893 to 956) to +2.5mPD	6	19-Aug-14	25-Aug-14	13-Nov-14 A	10-Dec-14 A	100%	Public Fill - Zone A2 - (CH893 to 956) to +2.5mPD											
NRC13080	Public Fill - Zone A2 - (CH793 to 843) to +6.0mPD	7	11-Aug-14	18-Aug-14	18-Oct-14 A	31-Oct-14 A	100%	Public Fill - Zone A2 - (CH793 to 843) to +6.0mPD											
NRC13090	Public Fill - Zone A2 - (CH843 to 893) to +6.0mPD	7	19-Aug-14	26-Aug-14	02-Nov-14 A	13-Dec-14 A	100%	Public Fill - Zone A2 - (CH843 to 893) to +6.0mPD											
NRC13100	Public Fill - Zone A2 - (CH893 to 956) to +6.0mPD	6	27-Aug-14	02-Sep-14	02-Dec-14 A	09-Dec-14 A	100%	Public Fill - Zone A2 - (CH893 to 956) to +6.0mPD											
NRC13110	Public Fill - Zone A2 - (CH793 to 843) to +10mPD	6	22-Oct-14	28-Oct-14	13-Dec-14 A	15-Dec-14 A	100%	Public Fill - Zone A2 - (CH793 to 843) to +10mPD											
NRC13120	Public Fill - Zone A2 - (CH843 to 893) to +10mPD	7	29-Oct-14	05-Nov-14	20-Dec-14 A	07-Feb-15	43%	Public Fill - Zone A2 - (CH843 to 893) to +10mPD											
NRC13130	Public Fill - Zone A2 - (CH893 to 956) to +10mPD	4	06-Nov-14	10-Nov-14	09-Feb-15	12-Feb-15	0%	Public Fill - Zone A2 - (CH893 to 956) to +10mPD											
NRC15390	Surcharge Period - Zone A2 - (CH793 to 843)	180	11-Nov-14	09-May-15	13-Feb-15	11-Aug-15	0%	Surcharge Per											
NRC16960	NewActivity	0			29-Dec-14	30-Dec-14	0%												
Zone F																			
CH184 to CH231																			
A6416230	F - Anchor wall Installation - CH184 to CH231	4	10-Mar-14	13-Mar-14	29-Dec-14	02-Jan-15	0%												
A6416290	F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH184 to CH231	3	14-Mar-14	16-Mar-14	03-Jan-15	05-Jan-15	0%	or Wall - CH184 to CH231											
A6416295	F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH184 to CH231	2	17-Mar-14	18-Mar-14	06-Jan-15	07-Jan-15	0%	chor Wall - CH184 to CH231											
A6416300	F - Backfilling up to +6.0mPD to Anchor Wall - CH184 to CH231	2	19-Mar-14	20-Mar-14	08-Jan-15	09-Jan-15	0%	84 to CH231											
A6416400	F - Backfilling up to +6.0mPD to Existing Seawall - CH184 to CH231	1	21-Mar-14	21-Mar-14	10-Jan-15	10-Jan-15	0%	184 to CH231											
CH231 to CH278																			
A6416273	F - Backfilling up to +0.5mPD & T3 Installation - CH231 to CH278	6	28-Mar-14	02-Apr-14	13-Jan-15	18-Jan-15	0%	CH231 to CH278											
A6416278	F - Backfilling up to +3.0mPD - CH231 to CH278	2	03-Apr-14	04-Apr-14	19-Jan-15	20-Jan-15	0%	78											
A6416280	F - Backfilling up to +6.0mPD - CH231 to CH278	2	05-Apr-14	06-Apr-14	21-Jan-15	22-Jan-15	0%	278											
A6416310	F - Anchor wall Installation - CH231 to CH278	4	07-Apr-14	10-Apr-14	23-Jan-15	27-Jan-15	0%	8											
A6416480	F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH231 to CH278	3	11-Apr-14	13-Apr-14	28-Jan-15	30-Jan-15	0%	on to Anchor Wall - CH231 to CH278											
A6416490	F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH231 to CH278	2	14-Apr-14	15-Apr-14	31-Jan-15	01-Feb-15	0%	ation to Anchor Wall - CH231 to CH278											
A6416500	F - Backfilling up to +6.0mPD to Anchor Wall - CH231 to CH278	2	16-Apr-14	17-Apr-14	02-Feb-15	03-Feb-15	0%	all - CH231 to CH278											
A6416510	F - Backfilling up to +6.0mPD to Existing Seawall - CH231 to CH278	1	18-Apr-14	18-Apr-14	04-Feb-15	04-Feb-15	0%	wall - CH231 to CH278											
CH278 to CH327																			
A6416195	F - Marine Sheet Piling (H2) - CH278 to CH327	5	12-Mar-14	17-Mar-14	28-Oct-14 A	05-Nov-14 A	100%	h278 to CH327											
A6416200	F - Backfilling up to -3.5mPD & T2 Installation - CH278 to CH327	5	18-Mar-14	22-Mar-14	15-Dec-14 A	24-Dec-14 A	100%	h278 to CH327											
A6416210	F - Backfilling up to +0.5mPD - CH278 to CH327	4	23-Mar-14	26-Mar-14	09-Jan-15	12-Jan-15	0%												
A6416215	F - Backfilling up to +3.0mPD & T4 Installation - CH278 to CH327	5	27-Mar-14	31-Mar-14	14-Jan-15	18-Jan-15	0%	CH278 to CH327											
A6416220	F - Backfilling up to +6.0mPD - CH278 to CH327	2	01-Apr-14	02-Apr-14	19-Jan-15	20-Jan-15	0%	27											
A6416340	F - Anchor wall Installation - CH278 to CH327	4	11-Apr-14	15-Apr-14	28-Jan-15	31-Jan-15	0%	327											
A6416520	F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH278 to CH327	3	16-Apr-14	18-Apr-14	01-Feb-15	03-Feb-15	0%	ion to Anchor Wall - CH278 to CH327											
A6416530	F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH278 to CH327	3	19-Apr-14	21-Apr-14	04-Feb-15	06-Feb-15	0%	llation to Anchor Wall - CH278 to CH327											

- Planned Bar
- Planned Bar
- ◆ Planned Milestone
- Progress bar
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TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015			
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
A6416540	F - Backfilling up to +6.0mPD to Anchor Wall - CH278 to CH327	3	22-Apr-14	24-Apr-14	07-Feb-15	09-Feb-15	0%								
A6416550	F - Backfilling up to +6.0mPD to Existing Seawall - CH278 to CH327	1	25-Apr-14	25-Apr-14	10-Feb-15	10-Feb-15	0%								
CH327 to CH381															
A6416150	F - Backfilling up to -3.5mPD & T2 Installation - CH327 to CH381	4	12-Mar-14	15-Mar-14	08-Nov-14A	13-Dec-14A	100%								
A6416155	F - Backfilling up to +0.5mPD - CH327 to CH381	3	16-Mar-14	18-Mar-14	06-Jan-15	08-Jan-15	0%								
A6416160	F - Backfilling up to +3.0mPD & T4 Installation - CH327 to CH381	5	19-Mar-14	23-Mar-14	09-Jan-15	13-Jan-15	0%								
A6416170	F - Backfilling up to +6.0mPD - CH327 to CH381	3	24-Mar-14	26-Mar-14	14-Jan-15	16-Jan-15	0%								
A6416370	F - Anchor wall Installation - CH327 to CH381	3	16-Apr-14	22-Apr-14	02-Feb-15	04-Feb-15	0%								
A6416560	F - Backfilling up to 0.0mPD & G2 Installation to Anchor Wall - CH327 to CH381	3	23-Apr-14	25-Apr-14	05-Feb-15	07-Feb-15	0%								
A6416570	F - Backfilling up to +3.0mPD & G1 Installation to Anchor Wall - CH327 to CH381	3	26-Apr-14	28-Apr-14	08-Feb-15	10-Feb-15	0%								
A6416580	F - Backfilling up to +6.0mPD to Anchor Wall - CH327 to CH381	2	29-Apr-14	30-Apr-14	11-Feb-15	12-Feb-15	0%								
A6416590	F - Backfilling up to +6.0mPD to Existing Seawall - CH327 to CH381	1	01-May-14	01-May-14	13-Feb-15	13-Feb-15	0%								
Box Culvert Extension															
Construction															
CH000 to CH137															
A6416670	Bored Pile Construction - A43 to A62 (4 Rigs) & Land Sheet Piling	96	31-May-14	23-Sep-14	21-Jul-14A	14-Nov-14A	100%								
A6416680	Backfilling for Surcharge	18	24-Sep-14	16-Oct-14	29-Dec-14	19-Jan-15	0%								
A6416690	Surcharge Period	180	17-Oct-14	14-Apr-15	20-Jan-15	18-Jul-15	0%								
CH137 to CH184															
A6416610	Predrilling - CH137 to CH184	24	07-Feb-14	06-Mar-14	16-Oct-14A	07-Nov-14A	100%								
A6416720	Bored Pile Construction - A42 to A35	160	07-Mar-14	19-Sep-14	14-Jul-14A	19-Nov-14A	100%								
A6416770	Backfilling for Surcharge	12	20-Sep-14	06-Oct-14	29-Dec-14	12-Jan-15	0%								
A6416780	Surcharge Period	180	07-Oct-14	04-Apr-15	13-Jan-15	11-Jul-15	0%								
CH184 to CH231															
A6416620	Predrilling - CH184 to CH231	24	22-Mar-14	23-Apr-14	08-Nov-14A	29-Jan-15	33%								
A6416730	Bored Pile Construction - A34 to A27	156	22-Mar-14	30-Sep-14	30-Oct-14A	10-Jun-15	25%								
A6417160	Surcharge Removal - CH184 to CH231	6	27-Feb-15	05-Mar-15	31-Oct-15	06-Nov-15	0%								
CH231 to CH278															
A6416630	Predrilling - CH231 to CH278	24	22-Apr-14	21-May-14	05-Feb-15	11-Mar-15	0%								
A6416740	Bored Pile Construction - A26 to A19	143	22-Apr-14	13-Oct-14	05-Feb-15	06-Aug-15	0%								
A6417200	Surcharge Removal - CH231 to CH278	6	10-Feb-15	16-Feb-15	04-Dec-15	10-Dec-15	0%								
A6417210	Excavation down to S1 level - CH231 to CH278	8	17-Feb-15	04-Mar-15	11-Dec-15	19-Dec-15	0%								
CH278 to CH327															
A6416640	Predrilling - CH278 to CH327	24	26-Apr-14	26-May-14	11-Feb-15	17-Mar-15	0%								
A6416840	Surcharge Period	105	30-Oct-14	11-Feb-15	25-Aug-15	07-Dec-15	0%								
A6417240	Surcharge Removal - CH278 to CH327	6	12-Feb-15	18-Feb-15	08-Dec-15	14-Dec-15	0%								
A6417250	Excavation down to S1 level - CH278 to CH327	8	26-Feb-15	06-Mar-15	15-Dec-15	23-Dec-15	0%								
CH327 to CH381															
A6416650	Predrilling - CH327 to CH381	24	02-May-14	30-May-14	14-Feb-15	20-Mar-15	0%								
A6417280	Surcharge Removal - CH327 to CH381	6	09-Jan-15	15-Jan-15	05-Nov-15	11-Nov-15	0%								
A6417290	Excavation down to S1 level - CH327 to CH381	9	16-Jan-15	26-Jan-15	12-Nov-15	21-Nov-15	0%								
A6417300	S1 Installation - CH327 to CH381	9	27-Jan-15	05-Feb-15	23-Nov-15	02-Dec-15	0%								
A6417310	Excavation down to Formation level - CH327 to CH381	6	06-Feb-15	12-Feb-15	03-Dec-15	09-Dec-15	0%								
A6417320	Box Culvert Construction - CH327 to CH381	142	13-Feb-15	13-Aug-15	10-Dec-15	10-Jun-16	0%								
CH381 to CH399 (Box Culvert Connection)															
A6416660	F - Prebored H-piles for CKS Temporary Land Access	6	18-Feb-14	24-Feb-14	29-Dec-14	05-Jan-15	0%								
A6417000	F - Steel Bridge Installation for Land Access to Zone E	52	25-Feb-14	30-Apr-14	06-Jan-15	13-Mar-15	0%								
North Shafts Construction & Tunnel Structure															
Design Submission															
(C1) DDA for North C&C Tunnel Permanent Structure - NLS Base Slab															
DD00350	Designer to Reply RIC + Update Submission	15	13-May-14	30-May-14	23-Oct-14A	21-Nov-14A	100%								
DD00360	Submit Updated DDA to SO/ ICE/ IPs	0	30-May-14		21-Nov-14A		100%								
DD00370	ICE Approval & Issue Check Cert	18	30-May-14	21-Jun-14	28-Aug-14A	26-Nov-14A	100%								
DD00380	Submit ICE Check Cert to SO	0		21-Jun-14		26-Nov-14A	100%								
DD00390	IPs Review	28	30-May-14	27-Jun-14	21-Nov-14A	12-Dec-14A	100%								
DD00400	IPs No Objection Received	0		27-Jun-14		12-Dec-14A	100%								
DD00440	SO's Review	35	30-May-14	04-Jul-14	21-Nov-14A	12-Dec-14A	100%								
DD00450	SO Approval with Condition Received	0		04-Jul-14		12-Dec-14A	100%								
DD00670	Works Commencement - North C&C Tunnel Permanent Barette	0	07-Jul-14		12-Dec-14A		100%								
(C1) DDA for North Approach Ramp Permanent Structure															
DD70770	Preparation DDANorth Approach Ramp Permanent Structure	18	04-Jul-14	25-Jul-14	13-Dec-14A	16-Feb-15	12%								
DD70780	Review & Comment by JV	12	25-Jul-14	08-Aug-14	17-Feb-15	09-Mar-15	0%								
DD70820	Submit Updated DDA to SO/ ICE/ IPs	0	04-Nov-14		05-Jun-15		0%								
DD70830	ICE Approval & Issue Check Cert	18	04-Nov-14	25-Nov-14	05-Jun-15	27-Jun-15	0%								
DD70840	Submit ICE Check Cert to SO	0		25-Nov-14		27-Jun-15	0%								
DD70850	IPs Review	28	04-Nov-14	02-Dec-14	05-Jun-15	03-Jul-15	0%								

■ Planned Bar
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TMCLK - Northern Connection Sub-Sea Tunnel Section
 Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015								
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
DD70860	IPs No Objection Received	0		02-Dec-14		03-Jul-15	0%													
DD70870	SO's Review	35	04-Nov-14	09-Dec-14	05-Jun-15	10-Jul-15	0%													
DD70880	SO Approval with Condition Received	0		09-Dec-14		10-Jul-15	0%													
(D2) DDA Temp.works - North Ventilation Shaft ELS																				
DD03380	IPs/ SO's Advance Comments/ ICE Comments	28	09-Apr-14	06-May-14	03-Oct-14A	29-Oct-14A	100%													
DD03390	Comments Received	0		07-May-14		29-Oct-14A	100%													
DD03400	Designer to Reply RTC + Update Submission	21	07-May-14	30-May-14	29-Oct-14A	18-Nov-14A	100%													
DD03410	Submit Updated DDA to SO/ ICE/ IPs	0	31-May-14		18-Nov-14A		100%													
DD03420	ICE Approval & Issue Check Cert	12	31-May-14	14-Jun-14	29-Sep-14A	14-Nov-14A	100%													
DD03430	Submit ICE Check Cert to SO	6	16-Jun-14	21-Jun-14	15-Nov-14A	18-Nov-14A	100%													
DD03440	IPs Review	28	31-May-14	27-Jun-14	18-Nov-14A	10-Dec-14A	100%													
DD03450	IPs No Objection Received	0		27-Jun-14		10-Dec-14A	100%													
DD03490	SO's Review	35	31-May-14	04-Jul-14	18-Nov-14A	12-Dec-14A	100%													
DD03495	SO Approval with Condition Received	0		04-Jul-14		12-Dec-14A	100%													
DD03515	Works Commencement - TBM Change Diameter Shaft - 04Aug14	0	04-Aug-14		24-Nov-14A		100%													
Construction																				
North Launching Shaft ELS Foundation & Capping Beam (Cell 1 to 3)																				
NSH1360	E - Cell 1-3 - Capping beam Installation	18	08-Jul-14	28-Jul-14	25-Aug-14A	14-Nov-14A	100%													
NSH1370	E - Cell 1-3 - Instrumentation & Pump well Installation	6	31-Jul-14	06-Aug-14	23-Aug-14A	15-Nov-14A	100%													
NSH1430	E - Pumping Test for TBM Launching Shaft ELS - Cell 1-3	5	07-Aug-14	11-Aug-14	03-Nov-14A	12-Nov-14A	100%													
North Launching Shaft Excavation (Cell 1 to 3)																				
NSH1440	E - Cell 1 to 3 - Shaft Excavation	77	12-Aug-14	12-Nov-14	06-Oct-14A	06-Dec-14A	100%													
North Launching Shaft Base Slab for TBM Launching																				
NSH1455	E - Tympanum construction for TBM break-in	12	20-Nov-14	03-Dec-14	29-Dec-14	12-Jan-15	0%													
NSH1460	E - Cell 1 to 2 - Base Slab construction	22	13-Nov-14	08-Dec-14	01-Dec-14A	12-Jan-15	46%													
NSH1465	E - Cell 3 to 4 - Excavation to ML03 formation level	6	09-Dec-14	15-Dec-14	22-Dec-14A	22-Dec-14A	100%													
NSH1470	E - Cell 3 to 4 - ML3 Base Slab construction	12	16-Dec-14	31-Dec-14	22-Dec-14A	22-Dec-14A	100%													
NSH1480	E - Cell 5 - Temporary backfilling for ML03 logistic	6	02-Jan-15	08-Jan-15	22-Dec-14A	22-Dec-14A	100%													
NSH1490	E - Cell 3 to 4 - Excavation to ML02 formation level	6	02-Jan-15	08-Jan-15	22-Dec-14A	22-Dec-14A	100%													
NSH1500	E - Cell 3 to 4 - ML02 Base Slab construction	18	09-Jan-15	29-Jan-15	22-Dec-14A	22-Dec-14A	100%													
NSH1510	E - Cell 5 - Temporary backfilling for ML02 logistic	6	30-Jan-15	05-Feb-15	22-Dec-14A	22-Dec-14A	100%													
North Ventilation Shaft ELS Foundation & Capping Beam																				
A6415775	B - Setup for Shaft ELS Foundation	20	02-Aug-14	25-Aug-14	27-Oct-14A	31-Oct-14A	100%													
A6415780	B - Diaphragm Wall - Shaft ELS	81	26-Aug-14	01-Dec-14	01-Nov-14A	23-Mar-15	18%													
A6415790	B - Instrumentation & Pump well Installation	6	02-Dec-14	08-Dec-14	24-Mar-15	30-Mar-15	0%													
A6415795	B - Pumping Test for Excavation	7	09-Dec-14	15-Dec-14	31-Mar-15	06-Apr-15	0%													
North Ventilation Shaft Excavation & Base Slab																				
A6415800	B - Vent Shaft Excavation (+6.0 to +4.0mPD) - Reclaimed Fill	5	02-Dec-14	06-Dec-14	24-Mar-15	28-Mar-15	0%													
A6415810	B - Capping Beam Installation (+6.0mPD)	12	08-Dec-14	20-Dec-14	30-Mar-15	16-Apr-15	0%													
A6415820	B - Vent Shaft Excavation (+4.0 to -8.0mPD) - Reclaimed Fill	19	22-Dec-14	15-Jan-15	17-Apr-15	09-May-15	0%													
A6415830	B - Ring Beam Installation (-5.5mPD)	6	16-Jan-15	22-Jan-15	11-May-15	16-May-15	0%													
A6415840	B - Vent Shaft Excavation (-8.0 to -20.0mPD) - Fill/MD/ALLUVIUM	27	23-Jan-15	02-Mar-15	18-May-15	18-Jun-15	0%													
CLP Temporary Substation																				
Construction																				
DDP12800	1st Batch - CLP Installation & Commissioning	108	02-Jul-14	07-Nov-14	02-Jul-14A	03-Jan-15	95%													
DDP12810	11kV Equipment / Switch Room installation by JV	48	20-Aug-14	18-Oct-14	20-Aug-14A	31-Oct-14A	100%													
DDP12830	1st batch - Noise Measurement (deleted)	12	08-Nov-14	21-Nov-14	21-Nov-14A	21-Nov-14A	100%													
DDP12840	Final FS Installation by JV	6	08-Nov-14	14-Nov-14	05-Jan-15	10-Jan-15	0%													
DDP12850	FSD inspection for 1st Transformer Energization	12	15-Nov-14	28-Nov-14	12-Jan-15	24-Jan-15	0%													
DDP12860	1st Batch - Commissioning & Energization	0		28-Nov-14		24-Jan-15*	0%													
DDP12870	2nd Batch - CLP Installation & Commissioning	95	15-Oct-14	05-Feb-15	02-Jul-14A	03-Jan-15	95%													
DDP12880	FS Installation by JV	24	09-Jan-15	06-Feb-15	20-Sep-14A	15-Oct-14A	100%													
DDP12890	2nd Batch - Noise Measurement (to be clarified)	6	06-Feb-15	12-Feb-15	21-Nov-14A	21-Nov-14A	100%													
DDP12900	Final FS Installation by JV	6	06-Feb-15	12-Feb-15	05-Jan-15	10-Jan-15	0%													
DDP12910	FSD inspection for 2nd Transformer Energization	6	13-Feb-15	18-Feb-15	11-Jan-15	16-Jan-15	0%													
DDP12920	2nd Batch - Commissioning & Energization	0		18-Feb-15		16-Jan-15*	0%													
North Surface works for TBM Tunnelling																				
Design Submission																				
(D1) IFA for Temp. Access to Portion N8A, N8B & N8C incl. Temp. Lighting																				
AP01500	Preparation of AIP Temporary Access Road to N8	33	02-Jan-14	15-Feb-14	02-Jan-14A	30-Dec-14	94%													
AP01505	Review & Comment by JV	12	17-Feb-14	01-Mar-14	31-Dec-14	14-Jan-15	0%													
AP01510	Designer Prepare IFA	6	03-Mar-14	08-Mar-14	15-Jan-15	21-Jan-15	0%													
AP01515	Formal Submission of IFA to ICE/IPs	0		08-Mar-14		21-Jan-15	0%													
AP01520	Advanced Submission of IFA to SO	0		08-Mar-14		21-Jan-15	0%													
AP01525	Review & Comment by SO/ ICE/ IPs	28	09-Mar-14	05-Apr-14	22-Jan-15	18-Feb-15	0%													
AP01530	Advance Comments from SO/ Comments from ICE/ IPs Received	0		07-Apr-14		18-Feb-15	0%													

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TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme - Three months rolling programme



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Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015					
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
AP01535	Designer to Prepare RfC & Updated AIP	18	07-Apr-14	30-Apr-14	26-Feb-15	18-Mar-15	0%										
Construction																	
Zone E																	
A6416440	Zone E - Break-in Plug - CSM	38	18-Sep-14	03-Nov-14	01-Sep-14A	25-Nov-14A	100%										
A6416450	Zone E - Jet grouting	60	04-Nov-14	15-Jan-15	03-Sep-14A	16-Feb-15	30%										
Zone D1																	
NRC14020	Zone D1 - Ground Treatment for CP54	20	14-Jul-14	05-Aug-14	02-Sep-14A	02-Jan-15	60%										
Zone D2																	
NRC14110	Zone D2 - B/C Slurry Substitution for CP53	22	06-Aug-14	30-Aug-14	03-Jan-15	28-Jan-15	0%										
Zone C1																	
NRC1202130	Zone C1 - B/C Slurry Substitution for CP52	26	27-Aug-14	26-Sep-14	29-Dec-14	28-Jan-15	0%										
Zone C2																	
NRC1202150	Zone C2 - Drilling for Rock Fissure Grouting for CP51	21	03-Jul-14	26-Jul-14	06-Nov-14A	09-Jan-15	52%										
NRC1202155	Zone C2 - Rock Fissure Grouting for CP51	44	14-Jul-14	02-Sep-14	19-Nov-14A	27-Jan-15	43%										
NRC1202160	Zone C2 - Jet Grouting for CP51	18	20-Aug-14	10-Sep-14	14-Jan-15	03-Feb-15	0%										
Zone B																	
A6415895	Zone B - Unreinforced Separation D-wall	13	27-Aug-14	11-Sep-14	08-Jan-15	22-Jan-15	0%										
A6415897	Zone B - Unreinforced Separation D-wall	13	25-Jul-14	08-Aug-14	19-Nov-14A	07-Jan-15	40%										
A6415900	Zone B - Slurry Wall for TBM Break-out Plug	34	02-Dec-14	13-Jan-15	24-Mar-15	07-May-15	0%										
A6415910	Zone B - Slurry Wall - Toe Grouting	24	14-Jan-15	10-Feb-15	08-May-15	05-Jun-15	0%										
A6415920	Zone B - Ground Treatment for TBM Break-out Plug	58	11-Feb-15	30-Apr-15	06-Jun-15	14-Aug-15	0%										
Ground Treatment																	
A6417430	Zone A - B/C Slurry Substitution for CP49	30	22-Oct-14	25-Nov-14	04-Feb-15	17-Mar-15	0%										
A6417440	Zone A - Drilling for Rock Fissure Grouting for CP48	65	11-Nov-14	28-Jan-15	13-Feb-15	12-May-15	0%										
A6417450	Zone A - Rock Fissure Grouting for CP48	90	25-Nov-14	19-Mar-15	06-Mar-15	26-Jun-15	0%										
A6417460	Zone A - Jet Grouting for CP48	72	29-Jan-15	05-May-15	13-May-15	07-Aug-15	0%										
North Approach TBM Tunnelling & Cross Passage																	
Major Procurement																	
TBM at Northern Landfall																	
PO103080	S880 - 17.6m dia - TBM - Manufacturing - Cutterhead	198	25-Jan-14	30-Sep-14	25-Jan-14A	25-Nov-14A	100%										
PO103150	S880 - 17.6m dia - TBM - Workshop Assembly	138	07-May-14	20-Oct-14	04-Jun-14A	10-Dec-14A	100%										
PO103160	S880 - 17.6m dia - TBM - Workshop Acceptance Test	0		20-Oct-14		30-Oct-14A	100%										
PO103170	S880 - 17.6m dia - TBM - Disassembly and Packing for Transport	32	21-Oct-14	26-Nov-14	01-Nov-14A	10-Dec-14A	100%										
PO103180	S880 - 17.6m dia - TBM - Delivery	10	27-Nov-14	08-Dec-14	10-Dec-14A	18-Dec-14A	100%										
PO103190	S880 - 17.6m dia - TBM - Arrival to site	0		08-Dec-14		18-Dec-14A	100%										
PO103220	S882 - 13.6m dia - TBM - Manufacturing - Cutterhead	198	01-Mar-14	30-Oct-14	01-Mar-14A	10-Dec-14A	100%										
PO103290	S882 - 13.6m dia - TBM - Workshop Assembly	150	16-Jun-14	11-Dec-14	16-Jun-14A	18-Dec-14A	100%										
PO103300	S882 - 13.6m dia - TBM - Workshop Acceptance Test	0		11-Dec-14		18-Dec-14A	100%										
PO103310	S882 - 13.6m dia - TBM - Disassembly and Packing for Transport	28	12-Dec-14	16-Jan-15	12-Dec-14A	15-Jan-15	46%										
PO103320	S882 - 13.6m dia - TBM - Delivery	17	17-Jan-15	02-Feb-15	16-Jan-15	01-Feb-15	0%										
PO103330	S882 - 13.6m dia - TBM - Arrival to site	0		02-Feb-15		01-Feb-15	0%										
Precast Segment																	
Precast Segment ID12.40 - Production for SB North TBM Tunnel																	
A6418020	ID12.40 TBM Segment Ring Fabrication - 6 ring per day	6	29-Oct-14	04-Nov-14	11-Sep-14A	10-Oct-14A	100%										
A6418030	ID12.40 TBM Segment Ring Fabrication - 12 rings per day	15	05-Nov-14	21-Nov-14	11-Oct-14A	27-Dec-14A	100%										
Slurry Treatment Plant																	
A6415400	STP - Factory Testing and Commissioning	6	24-Sep-14	30-Sep-14	24-Sep-14A	20-Nov-14A	100%										
A6415440	STP - Dismantling, Packaging & Transport	4	03-Oct-14	07-Oct-14	20-Nov-14A	24-Nov-14A	100%										
A6415450	STP - Shipment to Hong Kong	20	08-Oct-14	30-Oct-14	24-Sep-14A	28-Nov-14A	100%										
Hyperbaric & Saturation																	
A6415140	Shuttle for Hyperbaric Saturation - Fabrication	128	07-May-14	08-Oct-14	21-Jun-14A	29-Nov-14A	100%										
A6415150	Shuttle for Hyperbaric Saturation - Delivery to TBM Factory	6	09-Oct-14	15-Oct-14	01-Dec-14A	10-Dec-14A	100%										
Design Submission																	
(D7) IFA Gantry Crane Supports/Foundation																	
DD69010	Review & Comment by JV	18	05-Mar-14	25-Mar-14	25-Jul-14A	30-Oct-14A	100%										
DD69020	Designer prepare IFA	10	26-Mar-14	07-Apr-14	31-Oct-14A	31-Oct-14A	100%										
DD69030	Formal Submission of IFA to ICE/ IPs	0		07-Apr-14		31-Oct-14A	100%										
DD69040	Advanced Submission to SO	0		07-Apr-14		31-Oct-14A	100%										
DD69050	IPs/ SO's Advance Comments/ ICE Comments	28	08-Apr-14	05-May-14	01-Nov-14A	03-Dec-14A	100%										
DD69060	Comments Received	0		05-May-14		03-Dec-14A	100%										
DD69070	Designer to Reply RfC + Update Submission	21	07-May-14	30-May-14	04-Dec-14A	30-Dec-14	90%										
DD69080	Submit Updated IFA to SO/ ICE/ IPs	0	31-May-14		23-Jan-15		0%										
DD69090	ICE Approval & Issue Check Cert	12	31-May-14	14-Jun-14	23-Jan-15	05-Feb-15	0%										
DD69100	IPs Review	28	31-May-14	27-Jun-14	23-Jan-15	19-Feb-15	0%										
DD69110	IPs No Objection Received	0		27-Jun-14		19-Feb-15	0%										
DD69120	SO's Review	35	31-May-14	04-Jul-14	23-Jan-15	26-Feb-15	0%										

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								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
DD69130	SO Approval with Condition Received	0		04-Jul-14		26-Feb-15	0%										
(D8) IFA Thrust Frame for TBM Launching																	
DD69160	Designer prepare IFA	10	12-May-14	22-May-14	25-Oct-14A	31-Oct-14A	100%										
DD69170	Formal Submission of IFA to ICE/ IPs	0		22-May-14		31-Oct-14A	100%										
DD69180	Advanced Submission to SO	0		22-May-14		31-Oct-14A	100%										
DD69190	IPs/ SO's Advance Comments/ ICE Comments	28	23-May-14	19-Jun-14	01-Nov-14A	30-Dec-14	93%										
DD69200	Comments Received	0		19-Jun-14		30-Dec-14	0%										
DD69210	Designer to Reply RTC + Update Submission	21	20-Jun-14	15-Jul-14	31-Dec-14	24-Jan-15	0%										
DD69220	Submit Updated IFA to SO/ ICE/ IPs	0	16-Jul-14		26-Jan-15		0%										
DD69230	ICE Approval & Issue Check Cert	12	16-Jul-14	29-Jul-14	26-Jan-15	07-Feb-15	0%										
DD69240	IPs Review	28	16-Jul-14	12-Aug-14	26-Jan-15	22-Feb-15	0%										
DD69250	IPs No Objection Received	0		12-Aug-14		22-Feb-15	0%										
DD69260	SO's Review	35	16-Jul-14	19-Aug-14	26-Jan-15	01-Mar-15	0%										
DD69580	Works Commencement - TBM Launching Thrust Frame Installation	0	12-Dec-14		29-Dec-14*		0%										
(G2) DDA for TBM Tunnel Lining Settlement Analysis & Confinement Pressure - North Approach																	
AN1070	DDANorth TBM Tunnel Lining Settlement Analysis & Confinement Pressure	142	22-Nov-13	23-May-14	22-Nov-13A	20-Nov-14A	100%										
DD00805	Review & Comment by JV	12	24-May-14	07-Jun-14	21-Nov-14A	30-Dec-14	83%										
DD00810	Designer prepare DDA	12	09-Jun-14	21-Jun-14	31-Dec-14	14-Jan-15	0%										
DD00815	Formal Submission of DDA to ICE/ IPs	0		21-Jun-14		14-Jan-15	0%										
DD00820	Advanced Submission to SO	0		21-Jun-14		14-Jan-15	0%										
DD00825	IPs/ SO's Advance Comments/ ICE Comments	28	22-Jun-14	19-Jul-14	15-Jan-15	11-Feb-15	0%										
DD00830	Comments Received	0		19-Jul-14		11-Feb-15	0%										
DD00835	Designer to Reply RTC + Update Submission	21	21-Jul-14	13-Aug-14	12-Feb-15	14-Mar-15	0%										
(G3) DDA for TBM Tunnel Internal Structures - North																	
DD6320	Designer to Reply RTC + Update Submission	21	21-Jun-14	16-Jul-14	09-Aug-14A	19-Nov-14A	100%										
DD6330	Submit Updated DDA to SO/ ICE/ IPs	0	17-Jul-14		19-Nov-14A		100%										
DD6360	IPs Review	28	17-Jul-14	13-Aug-14	19-Nov-14A	19-Dec-14A	100%										
DD6370	IPs No Objection Received	0		13-Aug-14		19-Dec-14A	100%										
DD6380	SO's Review	35	17-Jul-14	20-Aug-14	19-Nov-14A	19-Dec-14A	100%										
DD6390	SO Approval with Condition Received	0		20-Aug-14		19-Dec-14A	100%										
DD6420	Works Commencement - Precast mould Shop Drawing start	0	01-Sep-14		19-Dec-14A		100%										
ETWB TCW No 15/2005 - TBM Tunnel Works																	
GEO1230	2nd Submission to GEO	0		29-Oct-14		01-Jun-15	0%										
GEO1235	2nd GEO Review	28	30-Oct-14	26-Nov-14	02-Jun-15	29-Jun-15	0%										
(G5) DDA for Cross Passage - Permanent works - incl. Detailed Geotechnical Assessment - North																	
DD67448	Review & Comment by JV	6	24-Oct-14	30-Oct-14	22-Oct-14A	29-Oct-14A	100%										
DD67450	Designer prepare DDA	12	31-Oct-14	13-Nov-14	30-Oct-14A	05-Dec-14A	100%										
DD67458	Formal Submission of DDA to ICE/ IPs	0		13-Nov-14		05-Dec-14A	100%										
DD67460	Advanced Submission to SO	0		13-Nov-14		05-Dec-14A	100%										
DD67468	IPs/ SO's Advance Comments/ ICE Comments	28	14-Nov-14	11-Dec-14	05-Dec-14A	06-Jan-15	75%										
DD67470	Comments Received	0		11-Dec-14		13-Jan-15	0%										
DD67478	Designer to Reply RTC + Update Submission	21	12-Dec-14	08-Jan-15	14-Jan-15	06-Feb-15	0%										
DD67488	Submit Updated DDA to SO/ ICE/ IPs	0	09-Jan-15		07-Feb-15		0%										
DD67498	ICE Approval & Issue Check Cert	12	09-Jan-15	22-Jan-15	07-Feb-15	27-Feb-15	0%										
DD67508	Submit ICE Check Cert to SO	6	23-Jan-15	29-Jan-15	28-Feb-15	06-Mar-15	0%										
DD67518	IPs Review	28	09-Jan-15	05-Feb-15	07-Feb-15	06-Mar-15	0%										
DD67528	IPs No Objection Received	0		05-Feb-15		06-Mar-15	0%										
DD67609*	SO's Review	35	09-Jan-15	12-Feb-15	07-Feb-15	13-Mar-15	0%										
DD67610	SO Approval with Condition Received	0		12-Feb-15		13-Mar-15	0%										
(H2) DDA Temp. works for Cross Passages - North																	
DD06120	SO's Review	35	02-Aug-14	05-Sep-14	29-Aug-14A	30-Dec-14	94%										
DD06130	SO Approval with Condition Received	0		05-Sep-14		30-Dec-14	0%										
ETWB TCW No 15/2005 - Cross Passage Ground Treatment for TBM Tunnels in North Landfall																	
GEO1240	1st Submission to GEO - ETWB TCW No 15/2005 - Cross Passage Ground Treatment for TBM Tunnels in North Landfall	0		04-Aug-14		29-Dec-14	0%										
GEO1245	1st Submission GEO Review	28	04-Aug-14	31-Aug-14	29-Dec-14	25-Jan-15	0%										
GEO1250	Received GEO Comment	0		01-Sep-14		26-Jan-15	0%										
GEO1255	Prepare Response to Comment	12	01-Sep-14	15-Sep-14	26-Jan-15	07-Feb-15	0%										
GEO1260	2nd Submission to GEO	0		15-Sep-14		07-Feb-15	0%										
GEO1265	2nd GEO Review	28	16-Sep-14	13-Oct-14	08-Feb-15	07-Mar-15	0%										
Method Statement Submission																	
Method Statement of Construction Methodology of Cross Passage Excavation																	
MS1400	Preparation Method Statement for CP Excavation	25	03-Jan-15	31-Jan-15	16-Apr-15	15-May-15	0%										
MS1410	Submit Method Statement to SO	0		31-Jan-15		15-May-15	0%										
MS1420	SO Reviews & Comments	28	01-Feb-15	28-Feb-15	16-May-15	12-Jun-15	0%										
Construction																	
Northern Landfall Surface Setup for TBM operation																	

■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
 Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015									
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
A6415930	Gantry Setup at North TBM Launching Shaft	48	29-Jul-14	23-Sep-14	27-Feb-15	28-Apr-15	0%	Gantry Setup at North TBM Launching Shaft													
A6415937	Slurry Treatment Plant Foundation	25	15-Oct-14	12-Nov-14	20-Oct-14A	13-Feb-15	64%	Slurry Treatment Plant Foundation													
A6415940	Slurry Treatment Plant Setup at Northern Landfall	64	13-Nov-14	29-Jan-15	20-Nov-14A	16-Apr-15	33%	Slurry Treatment Plant Setup at Northern Landfall													
A6415950	Slurry Treatment Plant Commissioning	24	30-Jan-15	05-Mar-15	17-Apr-15	15-May-15	0%	Slurry Treatment Plant Commissioning													
S880 TBM Assembly at North TBM Launching Shaft																					
NSH1900	S880 - TBM Launching - Front Shield Assembly	3	09-Dec-14	11-Dec-14	29-Apr-15	01-May-15	0%	S880 - TBM Launching - Front Shield Assembly													
NSH1910	S880 - TBM Launching - Cutterhead Assembly	3	12-Dec-14	14-Dec-14	02-May-15	04-May-15	0%	S880 - TBM Launching - Cutterhead Assembly													
NSH1920	S880 - TBM Launching - Erector Assembly	3	15-Dec-14	17-Dec-14	05-May-15	07-May-15	0%	S880 - TBM Launching - Erector Assembly													
NSH1930	S880 - TBM Launching - Tail Skin Assembly	3	18-Dec-14	20-Dec-14	08-May-15	10-May-15	0%	S880 - TBM Launching - Tail Skin Assembly													
NSH1940	S880 - TBM Launching - Main Drive Connection	2	21-Dec-14	22-Dec-14	11-May-15	12-May-15	0%	S880 - TBM Launching - Main Drive Connection													
NSH1950	S880 - TBM Launching - Main Drive Shifting	2	23-Dec-14	24-Dec-14	13-May-15	14-May-15	0%	S880 - TBM Launching - Main Drive Shifting													
NSH1960	S880 - TBM Launching - Main Drive Thrust Frame Installation	14	25-Dec-14	07-Jan-15	16-May-15	29-May-15	0%	S880 - TBM Launching - Main Drive Thrust Frame Installation													
NSH1965	S880 - TBM Launching - Gantry 2 Assembly	3	25-Dec-14	27-Dec-14	16-May-15	18-May-15	0%	S880 - TBM Launching - Gantry 2 Assembly													
NSH1970	S880 - TBM Launching - Gantry 1 Assembly	3	28-Dec-14	30-Dec-14	19-May-15	21-May-15	0%	S880 - TBM Launching - Gantry 1 Assembly													
NSH1980	S880 - TBM Launching - Gantry 1 & Main Drive connection	3	08-Jan-15	10-Jan-15	30-May-15	01-Jun-15	0%	S880 - TBM Launching - Gantry 1 & Main Drive connection													
NSH1990	S880 - TBM Launching - Gantry 2 & Gantry 1 connection	3	11-Jan-15	13-Jan-15	02-Jun-15	04-Jun-15	0%	S880 - TBM Launching - Gantry 2 & Gantry 1 connection													
NSH2000	S880 - TBM Launching - Gantry 3 assembly	3	09-Jan-15	11-Jan-15	13-Jan-15	15-Jan-15	0%	S880 - TBM Launching - Gantry 3 assembly													
NSH2010	S880 - TBM Launching - Gantry 4 assembly	3	12-Jan-15	14-Jan-15	16-Jan-15	18-Jan-15	0%	S880 - TBM Launching - Gantry 4 assembly													
NSH2020	S880 - TBM Launching - Gantry 3 & Gantry 2 connection	3	14-Jan-15	16-Jan-15	05-Jun-15	07-Jun-15	0%	S880 - TBM Launching - Gantry 3 & Gantry 2 connection													
NSH2030	S880 - TBM Launching - Gantry 4 & Gantry 3 connection	3	17-Jan-15	19-Jan-15	08-Jun-15	10-Jun-15	0%	S880 - TBM Launching - Gantry 4 & Gantry 3 connection													
NSH2040	S880 - TBM Launching - Testing & Commissioning	24	20-Jan-15	12-Feb-15	11-Jun-15	05-Jul-15	0%	S880 - TBM Launching - Testing & Commissioning													
NSH2050	S880 - TBM Launching - Segment Ring Installation for Break-in	8	13-Feb-15	23-Feb-15	06-Jul-15	13-Jul-15	0%	S880 - TBM Launching - Segment Ring													
NSH2060	S880 - TBM Launching - Final commissioning & Break-in	10	24-Feb-15	05-Mar-15	14-Jul-15	24-Jul-15	0%	S880 - TBM Launching - Final commissioning													
S882 TBM Assembly at North TBM Launching Shaft																					
NSH206010	S882 - TBM Launching - Front Shield Assembly	3	13-Feb-15	15-Feb-15	06-Jul-15	08-Jul-15	0%	S882 - TBM Launching - Front Shield Assembly													
NSH206020	S882 - TBM Launching - Cutterhead Assembly	3	16-Feb-15	18-Feb-15	09-Jul-15	11-Jul-15	0%	S882 - TBM Launching - Cutterhead Assembly													
NSH206030	S882 - TBM Launching - Erector Assembly	3	22-Feb-15	24-Feb-15	12-Jul-15	14-Jul-15	0%	S882 - TBM Launching - Erector Assembly													
NSH206040	S882 - TBM Launching - Tail Skin Assembly	3	25-Feb-15	27-Feb-15	16-Jul-15	18-Jul-15	0%	S882 - TBM Launching - Tail Skin Assembly													
North Ventilation Building																					
Design Submission																					
(A1) Submissions to Design Advisory Panel of ArchSD																					
GS01730	Prepare Re-submission	18	19-May-14	09-Jun-14	22-Jul-14A	30-Dec-14	89%	Prepare Re-submission													
GS01740	ArchSD's comment	30	10-Jun-14	09-Jul-14	31-Dec-14	29-Jan-15	0%	ArchSD's comment													
(I1) DDA for North Vent. Bldgs. GBP & Arch. Submission																					
DD01200	Preparation of DDANth VB GBP & Arch Submission	18	17-Apr-14	13-May-14	04-Sep-14A	01-Dec-14A	100%	Preparation of DDANth VB GBP & Arch Submission													
DD01205	Review & Comment by JV	24	14-May-14	11-Jun-14	02-Dec-14A	03-Dec-14A	100%	Review & Comment by JV													
DD01210	Designer prepare DDA	15	12-Jun-14	28-Jun-14	04-Dec-14A	09-Dec-14A	100%	Designer prepare DDA													
DD01215	Formal Submission of DDA to ICE/ IPs	0		28-Jun-14		09-Dec-14A	100%	Formal Submission of DDA to ICE/ IPs													
DD01220	Advanced Submission to SO	0		28-Jun-14		09-Dec-14A	100%	Advanced Submission to SO													
DD01225	IPs/ SO's Advance Comments/ ICE Comments	28	29-Jun-14	26-Jul-14	10-Dec-14A	10-Jan-15	54%	IPs/ SO's Advance Comments/ ICE Comments													
DD01230	Comments Received	0		26-Jul-14		17-Jan-15	0%	Comments Received													
DD01235	Designer to Reply RTC + Update Submission	21	28-Jul-14	20-Aug-14	19-Jan-15	11-Feb-15	0%	Designer to Reply RTC + Update Submission													
DD01240	Submit Updated DDA to SO/ ICE/ IPs	0	21-Aug-14		12-Feb-15		0%	Submit Updated DDA to SO/ ICE/ IPs													
DD01245	ICE Approval & Issue Check Cert	12	21-Aug-14	03-Sep-14	12-Feb-15	04-Mar-15	0%	ICE Approval & Issue Check Cert													
DD01255	IPs Review	28	21-Aug-14	17-Sep-14	12-Feb-15	11-Mar-15	0%	IPs Review													
DD01265	SO's Review	35	21-Aug-14	24-Sep-14	12-Feb-15	18-Mar-15	0%	SO's Review													
(I1) DDA for North & South Vent. Bldg. ABWF works																					
DD67650	Designer prepare DDA	15	15-Nov-14	02-Dec-14	13-May-15	30-May-15	0%	Designer prepare DDA													
DD67658	Formal Submission of DDA to ICE/ IPs	0		02-Dec-14		30-May-15	0%	Formal Submission of DDA to ICE/ IPs													
DD67660	Advanced Submission to SO	0		02-Dec-14		30-May-15	0%	Advanced Submission to SO													
DD67668	IPs/ SO's Advance Comments/ ICE Comments	28	03-Dec-14	30-Dec-14	31-May-15	27-Jun-15	0%	IPs/ SO's Advance Comments/ ICE Comments													
DD67670	Comments Received	0		30-Dec-14		27-Jun-15	0%	Comments Received													
DD67678	Designer to Reply RTC + Update Submission	21	31-Dec-14	24-Jan-15	29-Jun-15	23-Jul-15	0%	Designer to Reply RTC + Update Submission													
DD67688	Submit Updated DDA to SO/ ICE/ IPs	0	26-Jan-15		24-Jul-15		0%	Submit Updated DDA to SO/ ICE/ IPs													
DD67698	ICE Approval & Issue Check Cert	18	26-Jan-15	14-Feb-15	24-Jul-15	13-Aug-15	0%	ICE Approval & Issue Check Cert													
DD67708	Submit ICE Check Cert to SO	6	16-Feb-15	28-Feb-15	14-Aug-15	20-Aug-15	0%	Submit ICE Check Cert to SO													
DD67718	IPs Review	28	26-Jan-15	22-Feb-15	24-Jul-15	20-Aug-15	0%	IPs Review													
DD67728	IPs No Objection Received	0		22-Feb-15		20-Aug-15	0%	IPs No Objection Received													
DD67738	SO's Review	35	26-Jan-15	01-Mar-15	24-Jul-15	27-Aug-15	0%	SO's Review													
(I2) AIP - North & South Ventilation Buildings - Foundation/Structural Design																					
AP00635	Designer to Prepare RTC & Updated AIP	18	19-Jun-14	10-Jul-14	06-Oct-14A	03-Nov-14A	100%	Designer to Prepare RTC & Updated AIP													
AP00640	Submission of AIP to SO/ ICE together with Reply To Comment (RTC)	0		10-Jul-14		03-Nov-14A	100%	Submission of AIP to SO/ ICE together with Reply To Comment (RTC)													
AP00645	Reply to IPs Comments in RTC	0		10-Jul-14		03-Nov-14A	100%	Reply to IPs Comments in RTC													
AP00660	No Objection or Further Minor Comments from IPs Received	0		31-Jul-14		28-Nov-14A	100%	No Objection or Further Minor Comments from IPs Received													
AP00680	SO Review (35 Days)	35	11-Jul-14	14-Aug-14	03-Nov-14A	02-Dec-14A	100%	SO Review (35 Days)													
AP00685	SO Approval with Condition Received	0		14-Aug-14		02-Dec-14A	100%	SO Approval with Condition Received													

■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015									
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun				
(I2) DDA for North Vent.Bldgs.Foundation Design																					
DD01300	Preparation of DDANth VB Foundation design	18	15-Aug-14	04-Sep-14	03-Dec-14A	24-Dec-14A	100%	Preparation of DDANth VB Foundation design													
DD01305	Review & Comment by JV	18	05-Sep-14	26-Sep-14	26-Dec-14A	19-Jan-15	11%	Review & Comment by JV													
DD01310	Designer prepare DDA	10	27-Sep-14	10-Oct-14	22-Jan-15	02-Feb-15	0%	Designer prepare DDA													
DD01315	Formal Submission of DDA to ICE/ IPs	0		10-Oct-14		02-Feb-15	0%	Formal Submission of DDA to ICE/ IPs													
DD01320	Advanced Submission to SO	0		10-Oct-14		02-Feb-15	0%	Advanced Submission to SO													
DD01325	IPs/ SO's Advance Comments/ ICE Comments	28	11-Oct-14	07-Nov-14	03-Feb-15	02-Mar-15	0%	IPs/ SO's Advance Comments/ ICE Comments													
DD01330	Comments Received	0		07-Nov-14		02-Mar-15	0%	Comments Received													
DD01335	Designer to Reply RTC + Update Submission	21	08-Nov-14	02-Dec-14	03-Mar-15	26-Mar-15	0%	Designer to Reply RTC + Update Submission													
DD01340	Submit Updated DDA to SO/ ICE/ IPs	0	03-Dec-14		27-Mar-15		0%	Submit Updated DDA to SO/ ICE/ IPs													
DD01345	ICE Approval & Issue Check Cert	12	03-Dec-14	16-Dec-14	27-Mar-15	14-Apr-15	0%	ICE Approval & Issue Check Cert													
DD01350	Submit ICE Check Cert to SO	6	17-Dec-14	23-Dec-14	15-Apr-15	21-Apr-15	0%	Submit ICE Check Cert to SO													
DD01355	IPs Review	28	03-Dec-14	30-Dec-14	27-Mar-15	23-Apr-15	0%	IPs Review													
DD01360	IPs No Objection Received	0		30-Dec-14		23-Apr-15	0%	IPs No Objection Received													
DD01380	SO's Review	35	03-Dec-14	06-Jan-15	27-Mar-15	30-Apr-15	0%	SO's Review													
DD01385	SO Approval with Condition Received	0		06-Jan-15		30-Apr-15	0%	SO Approval with Condition Received													
(I2) DDA for North Vent.Bldgs.Structural Design incl.Vent.Connections																					
DD68008	Preparation of DDANth VB Structural Design incl Vent conn	18	05-Sep-14	26-Sep-14	31-Dec-14	21-Jan-15	0%	Preparation of DDANth VB Structural Design incl Vent conn													
DD68018	Review & Comment by JV	18	27-Sep-14	20-Oct-14	22-Jan-15	11-Feb-15	0%	Review & Comment by JV													
DD68020	Designer prepare DDA	10	21-Oct-14	31-Oct-14	12-Feb-15	02-Mar-15	0%	Designer prepare DDA													
DD68028	Formal Submission of DDA to ICE/ IPs	0		31-Oct-14		02-Mar-15	0%	Formal Submission of DDA to ICE/ IPs													
DD68030	Advanced Submission to SO	0		31-Oct-14		02-Mar-15	0%	Advanced Submission to SO													
DD68038	IPs/ SO's Advance Comments/ ICE Comments	28	01-Nov-14	28-Nov-14	03-Mar-15	30-Mar-15	0%	IPs/ SO's Advance Comments/ ICE Comments													
DD68040	Comments Received	0		28-Nov-14		30-Mar-15	0%	Comments Received													
DD68048	Designer to Reply RTC + Update Submission	21	29-Nov-14	23-Dec-14	31-Mar-15	28-Apr-15	0%	Designer to Reply RTC + Update Submission													
DD68058	Submit Updated DDA to SO/ ICE/ IPs	0	24-Dec-14		29-Apr-15		0%	Submit Updated DDA to SO/ ICE/ IPs													
DD68068	ICE Approval & Issue Check Cert	12	24-Dec-14	09-Jan-15	29-Apr-15	13-May-15	0%	ICE Approval & Issue Check Cert													
DD68078	Submit ICE Check Cert to SO	6	10-Jan-15	16-Jan-15	14-May-15	20-May-15	0%	Submit ICE Check Cert to SO													
DD68088	IPs Review	28	24-Dec-14	20-Jan-15	29-Apr-15	26-May-15	0%	IPs Review													
DD68098	IPs No Objection Received	0		20-Jan-15		26-May-15	0%	IPs No Objection Received													
DD68210	SO's Review	35	24-Dec-14	27-Jan-15	29-Apr-15	02-Jun-15	0%	SO's Review													
DD68220	SO Approval with Condition Received	0		27-Jan-15		02-Jun-15	0%	SO Approval with Condition Received													
(I3) DDA for North & South Vent.Bldgs. Service and E&M Provision																					
DD01600	Preparation of DDANth VB Service and E&MS Provision	18	12-Sep-14	04-Oct-14	22-Aug-14A	30-Dec-14	89%	Preparation of DDANth VB Service and E&MS Provision													
DD01605	Review & Comment by JV	24	06-Oct-14	01-Nov-14	31-Dec-14	28-Jan-15	0%	Review & Comment by JV													
DD01610	Designer prepare DDA	15	03-Nov-14	19-Nov-14	29-Jan-15	14-Feb-15	0%	Designer prepare DDA													
DD01615	Formal Submission of DDA to ICE/ IPs	0		19-Nov-14		14-Feb-15	0%	Formal Submission of DDA to ICE/ IPs													
DD01620	Advanced Submission to SO	0		19-Nov-14		14-Feb-15	0%	Advanced Submission to SO													
DD01625	IPs/ SO's Advance Comments/ ICE Comments	28	20-Nov-14	17-Dec-14	15-Feb-15	14-Mar-15	0%	IPs/ SO's Advance Comments/ ICE Comments													
DD01630	Comments Received	0		17-Dec-14		14-Mar-15	0%	Comments Received													
DD01635	Designer to Reply RTC + Update Submission	21	18-Dec-14	14-Jan-15	16-Mar-15	13-Apr-15	0%	Designer to Reply RTC + Update Submission													
DD01640	Submit Updated DDA to SO/ ICE/ IPs	0	15-Jan-15		14-Apr-15		0%	Submit Updated DDA to SO/ ICE/ IPs													
DD01645	ICE Approval & Issue Check Cert	12	15-Jan-15	28-Jan-15	14-Apr-15	27-Apr-15	0%	ICE Approval & Issue Check Cert													
DD01650	Submit ICE Check Cert to SO	6	29-Jan-15	04-Feb-15	28-Apr-15	05-May-15	0%	Submit ICE Check Cert to SO													
DD01655	IPs Review	28	15-Jan-15	11-Feb-15	14-Apr-15	11-May-15	0%	IPs Review													
DD01660	IPs No Objection Received	0		11-Feb-15		11-May-15	0%	IPs No Objection Received													
DD01665	SO's Review	35	15-Jan-15	18-Feb-15	14-Apr-15	18-May-15	0%	SO's Review													
DD01670	SO Approval with Condition Received	0		18-Feb-15		18-May-15	0%	SO Approval with Condition Received													
(J1) AIP Temp.works for Construction of Nth.Vent.Bldg.																					
AP01825	Review & Comment by SO/ ICE/ IPs	28	27-Jun-14	24-Jul-14	27-Sep-14A	03-Dec-14A	100%	Review & Comment by SO/ ICE/ IPs													
AP01830	Advance Comments from SO/ Comments from ICE/ IPs Received	0		24-Jul-14		03-Dec-14A	100%	Advance Comments from SO/ Comments from ICE/ IPs Received													
AP01835	Designer to Prepare RTC & Updated AIP	18	25-Jul-14	14-Aug-14	04-Dec-14A	10-Dec-14A	100%	Designer to Prepare RTC & Updated AIP													
AP01840	Submission of AIP to SO/ ICE together with Reply To Comment (RTC)	0		14-Aug-14		10-Dec-14A	100%	Submission of AIP to SO/ ICE together with Reply To Comment (RTC)													
AP01845	Reply to IPs Comments in RTC	0		14-Aug-14		10-Dec-14A	100%	Reply to IPs Comments in RTC													
AP01850	ICE Approval & Issue of Design Check Cert.	18	15-Aug-14	04-Sep-14	21-Oct-14A	03-Dec-14A	100%	ICE Approval & Issue of Design Check Cert.													
AP01855	Check Cert to SO	0		04-Sep-14		03-Dec-14A	100%	Check Cert to SO													
AP01860	No Objection or Further Minor Comments from IPs Received	0		04-Sep-14		03-Dec-14A	100%	No Objection or Further Minor Comments from IPs Received													
AP01880	SO Review (35 Days)	35	15-Aug-14	18-Sep-14	10-Dec-14A	17-Jan-15	43%	SO Review (35 Days)													
AP01885	SO Approval with Condition Received	0		18-Sep-14		23-Jan-15	0%	SO Approval with Condition Received													
(J1) DDA Temp.works for Construction of Nth.Vent.Bldg.																					
DD04380	Preparation of DDANth VB & Trench ELS	18	19-Sep-14	11-Oct-14	24-Jan-15	13-Feb-15	0%	Preparation of DDANth VB & Trench ELS													
DD04390	Review & Comment by JV	18	13-Oct-14	01-Nov-14	14-Feb-15	13-Mar-15	0%	Review & Comment by JV													
DD04400	Designer prepare DDA	10	03-Nov-14	13-Nov-14	14-Mar-15	25-Mar-15	0%	Designer prepare DDA													
DD04410	Formal Submission of DDA to ICE/ IPs	0		13-Nov-14		25-Mar-15	0%	Formal Submission of DDA to ICE/ IPs													
DD04420	Advanced Submission to SO	0		13-Nov-14		25-Mar-15	0%	Advanced Submission to SO													
DD04430	IPs/ SO's Advance Comments/ ICE Comments	28	14-Nov-14	11-Dec-14	26-Mar-15	22-Apr-15	0%	IPs/ SO's Advance Comments/ ICE Comments													

■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015								
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
DD04440	Comments Received	0		11-Dec-14		22-Apr-15	0%													
DD04450	Designer to Reply RtC + Update Submission	21	12-Dec-14	08-Jan-15	23-Apr-15	18-May-15	0%													
DD04460	Submit Updated DDA to SO/ ICE/ IPs	0	09-Jan-15		19-May-15		0%													
DD04470	ICE Approval & Issue Check Cert	12	09-Jan-15	22-Jan-15	19-May-15	02-Jun-15	0%													
DD04480	Submit ICE Check Cert to SO	6	23-Jan-15	29-Jan-15	03-Jun-15	09-Jun-15	0%													
DD04490	IPs Review	28	09-Jan-15	05-Feb-15	19-May-15	15-Jun-15	0%													
DD04500	IPs No Objection Received	0		05-Feb-15		15-Jun-15	0%													
DD04540	SO's Review	35	09-Jan-15	12-Feb-15	19-May-15	22-Jun-15	0%													
DD04550	SO Approval with Condition R received	0		12-Feb-15		22-Jun-15	0%													
(C3) DDA for North Vent Shaft & Duct Permanent Structure																				
DD67268	Preparation of DD North Vent Shaft & Duct Perm Structure	18	07-Aug-14	27-Aug-14	31-Jul-14A	30-Dec-14	83%													
DD67278	Review & Comment by JV	18	28-Aug-14	18-Sep-14	31-Dec-14	21-Jan-15	0%													
DD67280	Designer prepare DDA	10	19-Sep-14	30-Sep-14	22-Jan-15	02-Feb-15	0%													
DD67288	Formal Submission of DDA to ICE/ IPs	0		30-Sep-14		02-Feb-15	0%													
DD67290	Advanced Submission to SO	0		30-Sep-14		02-Feb-15	0%													
DD67298	IPs/ SO's Advance Comments/ ICE Comments	28	01-Oct-14	28-Oct-14	03-Feb-15	02-Mar-15	0%													
DD67308	Designer to Reply RtC + Update Submission	21	29-Oct-14	21-Nov-14	03-Mar-15	26-Mar-15	0%													
DD67318	Submit Updated DDA to SO/ ICE/ IPs	0	22-Nov-14		27-Mar-15		0%													
DD67328	ICE Approval & Issue Check Cert	12	22-Nov-14	05-Dec-14	27-Mar-15	14-Apr-15	0%													
DD67338	Submit ICE Check Cert to SO	6	06-Dec-14	12-Dec-14	15-Apr-15	21-Apr-15	0%													
DD67348	IPs Review	28	22-Nov-14	19-Dec-14	27-Mar-15	23-Apr-15	0%													
DD67358	IPs No Objection Received	0		19-Dec-14		23-Apr-15	0%													
DD67368	SO's Review	35	22-Nov-14	26-Dec-14	27-Mar-15	30-Apr-15	0%													
DD67378	SO Approval with Condition R received	0		27-Dec-14		30-Apr-15	0%													
(D6) IFA Misc.Temp.Support for Excavation >2m depth																				
DD05180	Preparation of IFA Misc Temp Support for Excavation >2m depth	18	13-Dec-14	06-Jan-15	19-Mar-15	13-Apr-15	0%													
DD05190	Review & Comment by JV	18	07-Jan-15	27-Jan-15	14-Apr-15	05-May-15	0%													
DD05200	Designer prepare IFA	10	28-Jan-15	07-Feb-15	06-May-15	16-May-15	0%													
DD05210	Formal Submission of IFA to ICE/ IPs	0		07-Feb-15		16-May-15	0%													
DD05220	Advanced Submission to SO	0		07-Feb-15		16-May-15	0%													
DD05230	IPs/ SO's Advance Comments/ ICE Comments	28	08-Feb-15	07-Mar-15	17-May-15	13-Jun-15	0%													
(D9) AIP Temporary support and dewatering measures for Vent Duct ELS design for Northern Landfall																				
DD69280	Prepare AIP Temp Support & Dewatering measures for Vent Duct ELS at Northern Landfall	18	09-Dec-14	31-Dec-14	23-Jul-15	12-Aug-15	0%													
DD69290	Review & Comment by JV	18	02-Jan-15	22-Jan-15	13-Aug-15	02-Sep-15	0%													
DD69300	Designer prepare AIP	10	23-Jan-15	03-Feb-15	03-Sep-15	14-Sep-15	0%													
DD69310	Formal Submission of DDA to ICE/ IPs	0		03-Feb-15		14-Sep-15	0%													
DD69320	Advanced Submission to SO	0		03-Feb-15		14-Sep-15	0%													
DD69330	IPs/ SO's Advance Comments/ ICE Comments	28	04-Feb-15	03-Mar-15	15-Sep-15	12-Oct-15	0%													
North Surface Roadworks, Utility & Drainage works																				
Design Submission																				
(A20) DDA for Traffic Sign, Road Marking, Street Furnitures, Sign Gantry & etc																				
DD01705	Review & Comment by JV	18	15-Sep-14	07-Oct-14	17-Oct-14A	28-Nov-14A	100%													
DD01710	Designer prepare DDA	10	08-Oct-14	18-Oct-14	29-Nov-14A	12-Dec-14A	100%													
DD01715	Formal Submission of DDA to ICE/ IPs	0		18-Oct-14		12-Dec-14A	100%													
DD01720	Advanced Submission to SO	0		18-Oct-14		12-Dec-14A	100%													
DD01725	IPs/ SO's Advance Comments/ ICE Comments	28	19-Oct-14	15-Nov-14	12-Dec-14A	10-Jan-15	54%													
DD01730	Comments Received	0		15-Nov-14		17-Jan-15	0%													
DD01735	Designer to Reply RtC + Update Submission	21	17-Nov-14	10-Dec-14	19-Jan-15	11-Feb-15	0%													
DD01740	Submit Updated DDA to SO/ ICE/ IPs	0	11-Dec-14		12-Feb-15		0%													
DD01745	ICE Approval & Issue Check Cert	12	11-Dec-14	24-Dec-14	12-Feb-15	04-Mar-15	0%													
DD01750	Submit ICE Check Cert to SO	6	27-Dec-14	03-Jan-15	05-Mar-15	11-Mar-15	0%													
DD01755	SO's Review	35	11-Dec-14	14-Jan-15	12-Feb-15	18-Mar-15	0%													
DD01760	SO Approval with Condition R received	0		14-Jan-15		18-Mar-15	0%													
(C2) DDA for Sewerage, Drainage, Waterworks & Utility works for North Landfall																				
DD02105	Review & Comment by JV	18	14-Aug-14	03-Sep-14	10-Oct-14A	28-Nov-14A	100%													
DD02110	Designer prepare DDA	10	04-Sep-14	16-Sep-14	29-Nov-14A	12-Dec-14A	100%													
DD02115	Formal Submission of DDA to ICE/ IPs	0		16-Sep-14		12-Dec-14A	100%													
DD02120	Advanced Submission to SO	0		16-Sep-14		12-Dec-14A	100%													
DD02125	IPs/ SO's Advance Comments/ ICE Comments	28	17-Sep-14	14-Oct-14	12-Dec-14A	10-Jan-15	54%													
DD02130	Comments Received	0		14-Oct-14		17-Jan-15	0%													
DD02135	Designer to Reply RtC + Update Submission	21	15-Oct-14	07-Nov-14	19-Jan-15	11-Feb-15	0%													
DD02140	Submit Updated DDA to SO/ ICE/ IPs	0	08-Nov-14		12-Feb-15		0%													
DD02145	ICE Approval & Issue Check Cert	12	08-Nov-14	21-Nov-14	12-Feb-15	04-Mar-15	0%													
DD02150	Submit ICE Check Cert to SO	6	22-Nov-14	28-Nov-14	05-Mar-15	11-Mar-15	0%													
DD02155	IPs Review	28	08-Nov-14	05-Dec-14	12-Feb-15	11-Mar-15	0%													
DD02160	IPs No Objection Received	0		05-Dec-14		11-Mar-15	0%													

■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
 Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015					
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
DD02165	SO's Review	35	08-Nov-14	12-Dec-14	12-Feb-15	18-Mar-15	0%										
DD02170	SO Approval with Condition R received	0		12-Dec-14		18-Mar-15	0%										
Sub-sea Tunnel																	
Sub-sea TBM Tunnelling																	
Major Procurement																	
S881 -																	
PO103430	S881 - 13.6m dia - TBM - Workshop Assembly	70	02-Feb-15	06-May-15	12-May-15	04-Aug-15	0%										
Precast Segment ID12.40 - Production for Sub-sea TBM Tunnel																	
A6418040	ID12.40 TBM Segment Ring Fabrication - 12 rings per day	300	22-Nov-14	19-Dec-15	29-Dec-14	23-Feb-16	0%										
Design Submission																	
(A5) Ground Investigation Report - Phase 2 - Northern Landfall & Tunnel																	
GS00960	Preparation of Ground Investigation Report - Phase 2 - Northern Landfall & Tunnel	43	02-May-14	23-Jun-14	06-Jun-14A	30-Dec-14	95%										
GS00970	*1st Submission	0		23-Jun-14		30-Dec-14	0%										
GS00980	SO's Comments for 1st Submission	35	24-Jun-14	28-Jul-14	31-Dec-14	03-Feb-15	0%										
GS00990	Prepare Re-submission	10	29-Jul-14	08-Aug-14	04-Feb-15	14-Feb-15	0%										
GS00992	*2nd Submission	0		08-Aug-14		14-Feb-15	0%										
GS00994	SO's Condition Approval	35	09-Aug-14	12-Sep-14	15-Feb-15	21-Mar-15	0%										
(B6) Risk Assessment of Submarine Cable - Tunnelling Works																	
GS01400	Preparation of Risk Assessment of Submarine cables - Tunnelling Works	24	12-Dec-14	12-Jan-15	14-Apr-15	12-May-15	0%										
GS01405	1st Submission	0		12-Jan-15		12-May-15	0%										
GS01410	SO's Comments for 1st Submission	35	13-Jan-15	16-Feb-15	13-May-15	16-Jun-15	0%										
GS01420	CLP Review (4 weeks)	28	16-Jan-15	12-Feb-15	16-May-15	12-Jun-15	0%										
GS01425	CLP Comment Received	0		12-Feb-15		12-Jun-15	0%										
GS01430	Prepare Re-submission	12	17-Feb-15	09-Mar-15	17-Jun-15	02-Jul-15	0%										
(G1) IFA for Structural Health Monitoring System for TBM Tunnel																	
DD71000	IPs/ SO's Advance Comments/ ICE Comments	28	08-Apr-14	05-May-14	14-Jun-14A	12-Dec-14A	100%										
DD71010	Designer to Reply RIC + Update Submission	21	07-May-14	30-May-14	13-Dec-14A	23-Dec-14A	100%										
DD71020	Submit Updated IFA to SO/ ICE/ IPs	0	31-May-14		23-Dec-14A		100%										
DD71030	ICE Approval & Issue Check Cert	12	31-May-14	14-Jun-14	13-Jun-14A	22-Jan-15	80%										
DD71040	Submit ICE Check Cert to SO	6	16-Jun-14	21-Jun-14	23-Jan-15	29-Jan-15	0%										
DD71050	IPs Review	28	31-May-14	27-Jun-14	21-Jan-15	17-Feb-15	0%										
DD71060	IPs No Objection Received	0		27-Jun-14		17-Feb-15	0%										
DD71070	SO's Review	35	31-May-14	04-Jul-14	21-Jan-15	24-Feb-15	0%										
DD71080	SO Approval with Condition R received	0		04-Jul-14		26-Feb-15	0%										
DD71200	TBM Segment Mould Acceptance & Trial	0	11-Jul-14		26-Feb-15		0%										
(G1) DDA for TBM Tunnel Lining Structural Design - Sub-sea tunnel																	
DD6570	IPs Review	28	01-Aug-14	28-Aug-14	17-Oct-14A	11-Nov-14A	100%										
DD6580	IPs No Objection Received	0		28-Aug-14		11-Nov-14A	100%										
DD6630	SO's Review	35	01-Aug-14	04-Sep-14	17-Oct-14A	11-Nov-14A	100%										
DD6640	SO Approval with Condition R received	0		04-Sep-14		11-Nov-14A	100%										
DD6660	Sub-sea TBM Tunnel Segment - Precast Mould Fabrication	24	05-Sep-14	06-Oct-14	12-Nov-14A	12-Dec-14A	100%										
DD6670	Sub-sea TBM Tunnel Segment - Fabrication	265	07-Oct-14	31-Aug-15	29-Dec-14	23-Nov-15	0%										
(G1) DDA for TBM Tunnel Lining Settlement Analysis & Confinement Pressure - Sub-sea tunnel																	
AN1150	DDA Settlement Analysis & Confinement Pressure for Sub-sea Tunnel	246	21-Nov-13	24-Sep-14	21-Nov-13A	02-Jan-15	98%										
DD6690	Preparation of DDA TBM Confinement - Sub-sea tunnel	0	25-Sep-14	25-Sep-14	03-Jan-15	03-Jan-15	0%										
DD6700	Review & Comment by JV	12	25-Sep-14	10-Oct-14	03-Jan-15	16-Jan-15	0%										
DD6705	Designer prepare DDA	12	11-Oct-14	24-Oct-14	17-Jan-15	30-Jan-15	0%										
DD6710	Formal Submission of DDA to ICE/ IPs	0		24-Oct-14		30-Jan-15	0%										
DD6715	Advanced Submission to SO	0		24-Oct-14		30-Jan-15	0%										
DD6720	IPs/ SO's Advance Comments/ ICE Comments	28	25-Oct-14	21-Nov-14	31-Jan-15	27-Feb-15	0%										
DD67258	Comments Received	0		21-Nov-14		27-Feb-15	0%										
DD6730	Designer to Reply RIC + Update Submission	21	22-Nov-14	16-Dec-14	28-Feb-15	24-Mar-15	0%										
DD6740	Submit Updated DDA to SO/ ICE/ IPs	0	17-Dec-14		25-Mar-15		0%										
DD6750	ICE Approval & Issue Check Cert	12	17-Dec-14	02-Jan-15	25-Mar-15	11-Apr-15	0%										
DD6760	Submit ICE Check Cert to SO	6	03-Jan-15	09-Jan-15	13-Apr-15	18-Apr-15	0%										
DD6770	IPs Review	28	17-Dec-14	13-Jan-15	25-Mar-15	21-Apr-15	0%										
DD6780	IPs No Objection Received	0		13-Jan-15		21-Apr-15	0%										
DD6830	SO's Review	35	17-Dec-14	20-Jan-15	25-Mar-15	28-Apr-15	0%										
DD6840	SO Approval with Condition R received	0		20-Jan-15		28-Apr-15	0%										
(G3) DDA for TBM Tunnel Internal Structures (Sub-sea)																	
DD00905	Review & Comment by JV	14	25-Aug-14	10-Sep-14	28-Aug-14A	15-Nov-14A	100%										
DD00910	Designer prepare DDA	12	11-Sep-14	24-Sep-14	15-Nov-14A	21-Nov-14A	100%										
DD00915	Formal Submission of DDA to ICE/ IPs	0		24-Sep-14		21-Nov-14A	100%										
DD00920	Advanced Submission to SO	0		24-Sep-14		21-Nov-14A	100%										
DD00925	IPs/ SO's Advance Comments/ ICE Comments	28	25-Sep-14	22-Oct-14	21-Nov-14A	30-Dec-14	93%										
DD00930	Comments Received	0		22-Oct-14		30-Dec-14	0%										

■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
 Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015					
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
								DD00935	Designer to Reply RTC + Update Submission	21	23-Oct-14	15-Nov-14	31-Dec-14	24-Jan-15	0%		
DD00940	Submit Updated DDA to SO/ ICE/ IPs	0	17-Nov-14			26-Jan-15	0%										
DD00945	ICE Approval & Issue Check Cert	12	17-Nov-14	29-Nov-14	26-Jan-15	07-Feb-15	0%										
DD00950	Submit ICE Check Cert to SO	6	01-Dec-14	06-Dec-14	09-Feb-15	14-Feb-15	0%										
DD00955	IPs Review	28	17-Nov-14	14-Dec-14	26-Jan-15	22-Feb-15	0%										
DD00960	IPs No Objection Received	0		14-Dec-14		22-Feb-15	0%										
DD00980	SO's Review	35	17-Nov-14	21-Dec-14	26-Jan-15	01-Mar-15	0%										
DD00985	SO Approval with Condition Received	0		22-Dec-14		02-Mar-15	0%										
DD00995	Sub-sea Internal Structure - Precast Gallery Mould Design & Fabrication	24	22-Dec-14	21-Jan-15	02-Mar-15	28-Mar-15	0%										
DD01015	Sub-sea Tunnel - Precast Gallery Fabrication	244	22-Jan-15	21-Nov-15	30-Mar-15	23-Jan-16	0%										

Sub-sea Tunnel Cross Passage & Internal Structure

Design Submission

(G4) DDA for Cross Passage - Permanent works - incl. Geotechnical Assessment - Sub-sea tunnel

AN1175	Lab Test Result from Phase 2 GI	0		01-Dec-14		30-Nov-14A	100%										
AN1180	Early DDASub-sea Cross Passage Lining & CPOpening	151	03-Jun-14	29-Nov-14	03-Jun-14A	30-Dec-14	99%										
DD01100	Preparation of DDACross Passage incl. Detailed Geotechnical Assessment	0	01-Dec-14	01-Dec-14	31-Dec-14	31-Dec-14	0%										
DD01105	Review & Comment by JV	6	01-Dec-14	06-Dec-14	31-Dec-14	07-Jan-15	0%										
DD01110	Designer prepare DDA	12	08-Dec-14	20-Dec-14	08-Jan-15	21-Jan-15	0%										
DD01115	Formal Submission of DDA to ICE/ IPs	0		20-Dec-14		21-Jan-15	0%										
DD01120	Advanced Submission to SO	0		20-Dec-14		21-Jan-15	0%										
DD01125	IPs/ SO's Advance Comments/ ICE Comments	28	21-Dec-14	17-Jan-15	22-Jan-15	18-Feb-15	0%										
DD01130	Comments Received	0		17-Jan-15		18-Feb-15	0%										
DD01135	Designer to Reply RTC + Update Submission	21	19-Jan-15	11-Feb-15	26-Feb-15	21-Mar-15	0%										
DD01140	Submit Updated DDA to SO/ ICE/ IPs	0	12-Feb-15		23-Mar-15		0%										
DD01145	ICE Approval & Issue Check Cert	12	12-Feb-15	04-Mar-15	23-Mar-15	09-Apr-15	0%										
DD01155	IPs Review	28	12-Feb-15	11-Mar-15	23-Mar-15	19-Apr-15	0%										
DD01180	SO's Review	35	12-Feb-15	18-Mar-15	23-Mar-15	26-Apr-15	0%										

(H1) DDA Temp.works for Cross Passages - Sub-sea tunnel (Type A)

AN1210	DDACP Freezing design (Structural & thermal analysis of the ice ring)	176	25-Jul-14	28-Feb-15	18-Jun-14A	30-Dec-14	99%										
DD05000	Preparation of DDACross Passages Ground Freezing (TypeA)	18	02-Mar-15	21-Mar-15	31-Dec-14	21-Jan-15	0%										
DD05010	Review & Comment by JV	18	23-Mar-15	16-Apr-15	22-Jan-15	11-Feb-15	0%										
DD05020	Designer prepare DDA	10	17-Apr-15	28-Apr-15	12-Feb-15	02-Mar-15	0%										

Method Statement Submission

Method Statement of Cross Passage Ground Freezing

MS1300	Preparation Method Statement for CP Ground Freezing	25	17-Sep-14	17-Oct-14	29-Dec-14	27-Jan-15	0%										
MS1310	Submit Method Statement to SO/ ICE	0		17-Oct-14		27-Jan-15	0%										
MS1320	SO Reviews & Comments/ ICE Comments	28	18-Oct-14	14-Nov-14	28-Jan-15	24-Feb-15	0%										
MS1330	Re-submission	18	15-Nov-14	05-Dec-14	26-Feb-15	18-Mar-15	0%										
MS1340	ICE Approval & Issue Check Cert.	18	06-Dec-14	29-Dec-14	19-Mar-15	13-Apr-15	0%										
MS1350	SO's Review	28	06-Dec-14	02-Jan-15	19-Mar-15	15-Apr-15	0%										
MS1360	SO's Approval	0		02-Jan-15		15-Apr-15	0%										

Southern Landfall

South Retrieval Shaft

Design Submission

(A4) Additional Ground Investigation Plan - Phase 3 - Southen Landfall

GS2870	Preparation of Additional Ground Investigation (Phase 3)	11	15-Jan-15	27-Jan-15	15-Jan-15*	27-Jan-15	0%										
GS2880	1st Submission	0		27-Jan-15		27-Jan-15	0%										
GS2905	SO's Comments for 1st Submission	35	28-Jan-15	03-Mar-15	28-Jan-15	03-Mar-15	0%										

(B5) AIP Construction Risk Assessment - Impact on South Landfall

GS01200	Preparation of Construction Risk Assessment - Impact on South Landfall	36	30-Oct-14	10-Dec-14	13-Jun-15	27-Jul-15	0%										
GS01205	1st Submission	0		10-Dec-14		27-Jul-15	0%										
GS01210	SO's Comments for 1st Submission	35	11-Dec-14	14-Jan-15	28-Jul-15	31-Aug-15	0%										
GS01215	Prepare Re-submission	10	15-Jan-15	26-Jan-15	01-Sep-15	11-Sep-15	0%										
GS01220	2nd Submission	0		26-Jan-15		11-Sep-15	0%										
GS01225	ICE Cert. Issue	6	27-Jan-15	02-Feb-15	12-Sep-15	18-Sep-15	0%										
GS01250	SO's Condition Approval	35	27-Jan-15	02-Mar-15	12-Sep-15	16-Oct-15	0%										

(F1) AIP Temp.works - Retrieval Shaft on Southern Landfall inc. break-out

AP01615	Formal Submission of AIP to ICE/IPs	0		01-Nov-14		16-Apr-15	0%										
AP01620	Advanced Submission of AIP to SO	0		01-Nov-14		16-Apr-15	0%										
AP01625	Review & Comment by SO/ ICE/ IPs	28	01-Nov-14	29-Nov-14	17-Apr-15	14-May-15	0%										
AP01630	Advance Commants from SO/ Comments from ICE/ IPs Received	0		29-Nov-14		14-May-15	0%										
AP01635	Designer to Prepare RTC & Updated AIP	18	29-Nov-14	20-Dec-14	15-May-15	05-Jun-15	0%										
AP01640	Submission of AIP to SO/ ICE together with Reply To Comment (RTC)	0		20-Dec-14		05-Jun-15	0%										
AP01645	Reply to IPs Comments in RTC	0		20-Dec-14		05-Jun-15	0%										
AP01650	ICE Approval & Issue of Design Check Cert.	18	20-Dec-14	14-Jan-15	06-Jun-15	27-Jun-15	0%										
AP01655	Check Cert to SO	0		14-Jan-15		27-Jun-15	0%										



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015					
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
AP01660	No Objection or Further Minor Comments from IPs Received	0		14-Jan-15		27-Jun-15	0%					◆	No Objection or Further Minor Comments from IPs Received				
AP01680	SO Review (35 Days)	35	22-Dec-14	26-Jan-15	06-Jun-15	10-Jul-15	0%					■	SO Review (35 Days)				
AP01685	SO Approval with Condition Received	0		26-Jan-15		10-Jul-15	0%					◆	SO Approval with Condition Received				
(F2) AIP Temp works of Ground Treatment for TBMs passing under Southern Landfall																	
AP01915	Formal Submission of AIP to ICE/IPs	0		29-Oct-14		10-Jun-15	0%					◆	Formal Submission of AIP to ICE/IPs				
AP01920	Advanced Submission of AIP to SO	0		29-Oct-14		10-Jun-15	0%					◆	Advanced Submission of AIP to SO				
AP01925	Review & Comment by SO/ ICE/ IPs	28	30-Oct-14	26-Nov-14	11-Jun-15	08-Jul-15	0%					■	Review & Comment by SO/ ICE/ IPs				
AP01930	Advance Comments from SO/ Comments from ICE/ IPs Received	0		26-Nov-14		08-Jul-15	0%					◆	Advance Comments from SO/ Comments from ICE/ IPs Received				
AP01935	Designer to Prepare RTC & Updated AIP	18	27-Nov-14	17-Dec-14	09-Jul-15	29-Jul-15	0%					■	Designer to Prepare RTC & Updated AIP				
AP01940	Submission of AIP to SO/ ICE together with Reply To Comment (RTC)	0		17-Dec-14		29-Jul-15	0%					◆	Submission of AIP to SO/ ICE together with Reply To Comment				
AP01945	Reply to IPs Comments in RTC	0		17-Dec-14		29-Jul-15	0%					◆	Reply to IPs Comments in RTC				
AP01950	ICE Approval & Issue of Design Check Cert.	18	18-Dec-14	10-Jan-15	30-Jul-15	19-Aug-15	0%					■	ICE Approval & Issue of Design Check Cert.				
AP01955	Check Cert to SO	0		10-Jan-15		19-Aug-15	0%					◆	Check Cert to SO				
AP01960	No Objection or Further Minor Comments from IPs Received	0		10-Jan-15		19-Aug-15	0%					◆	No Objection or Further Minor Comments from IPs Received				
AP01980	SO Review (35 Days)	35	19-Dec-14	22-Jan-15	30-Jul-15	02-Sep-15	0%					■	SO Review (35 Days)				
AP01985	SO Approval with Condition Received	0		22-Jan-15		02-Sep-15	0%					◆	SO Approval with Condition Received				
South Cut & Cover Tunnel																	
Design Submission																	
(E2) AIP for South Approach Ramp & C&C Box																	
AP3120	Designer to Prepare RTC & Updated AIP	18	25-Sep-14	18-Oct-14	28-Oct-14A	02-Dec-14A	100%					■	Designer to Prepare RTC & Updated AIP				
AP3150	Check Cert to SO	0		08-Nov-14		02-Dec-14A	100%					◆	Check Cert to SO				
AP3170	No Objection or Further Minor Comments from IPs Received	0		08-Nov-14		02-Dec-14A	100%					◆	No Objection or Further Minor Comments from IPs Received				
AP3210	SO Review (35 Days)	35	18-Oct-14	22-Nov-14	03-Dec-14A	21-Mar-15	66%					■	SO Review (35 Days)				
AP3220	SO Approval with Condition Received	0		22-Nov-14		28-Mar-15	0%					◆	SO Approval with Condition Received				
AP3630	Preparation of AIP for South C&C Box	0			05-Jan-15	17-Jan-15	0%										
AP3640	Review & Comment by JV	0			19-Jan-15	31-Jan-15	0%										
AP3650	Prepare submission to SO	0			02-Feb-15	07-Feb-15	0%										
AP3660	Formal Submission of AIP to ICE/IPs	0				07-Feb-15	0%										
AP3670	Advanced Submission of AIP to SO	0				07-Feb-15	0%										
AP3680	Review & Comment by SO/ ICE/ IPs	0			08-Feb-15	08-Mar-15	0%										
(E2) DDA for South C&C Box & Approach Ramp																	
DD00460	Preparation DDA Sth C&C Box and Approach Ramp	18	22-Nov-14	13-Dec-14	30-Mar-15	23-Apr-15	0%					■	Preparation DDA Sth C&C Box and Approach Ramp				
DD00470	Review & Comment by JV	18	13-Dec-14	07-Jan-15	24-Apr-15	15-May-15	0%					■	Review & Comment by JV				
DD00480	Designer prepare DDA	10	07-Jan-15	19-Jan-15	16-May-15	28-May-15	0%					■	Designer prepare DDA				
DD00490	Formal Submission of DDA to ICE/ IPs	0		19-Jan-15		28-May-15	0%					◆	Formal Submission of DDA to ICE/ IPs				
DD00500	Advanced Submission to SO	0		19-Jan-15		28-May-15	0%					◆	Advanced Submission to SO				
DD00510	IPs/ SO's Advance Comments/ ICE Comments	28	19-Jan-15	16-Feb-15	29-May-15	25-Jun-15	0%					■	IPs/ SO's Advance Comments/ ICE Comments				
DD00520	Comments Received	0		16-Feb-15		25-Jun-15	0%					◆	Comments Received				
DD00530	Designer to Reply RTC + Update Submission	21	16-Feb-15	19-Mar-15	26-Jun-15	21-Jul-15	0%					■	Designer to Reply RTC + Update Submission				
(F3) AIP Temp. Support for South C&C, Portal & ELS																	
DD69610	Designer prepare AIP	10	08-Nov-14	20-Nov-14	24-Apr-15	06-May-15	0%					■	Designer prepare AIP				
DD69620	Formal Submission of AIP to ICE/ IPs	0		20-Nov-14		06-May-15	0%					◆	Formal Submission of AIP to ICE/ IPs				
DD69630	Advanced Submission to SO	0		20-Nov-14		06-May-15	0%					◆	Advanced Submission to SO				
DD69640	IPs/ SO's Advance Comments/ ICE Comments	28	20-Nov-14	18-Dec-14	07-May-15	03-Jun-15	0%					■	IPs/ SO's Advance Comments/ ICE Comments				
DD69650	Comments Received	0		18-Dec-14		03-Jun-15	0%					◆	Comments Received				
DD69660	Designer to Reply RTC + Update Submission	21	18-Dec-14	15-Jan-15	04-Jun-15	29-Jun-15	0%					■	Designer to Reply RTC + Update Submission				
DD69670	Submit Updated AIP to SO/ ICE/ IPs	0		15-Jan-15		30-Jun-15	0%					◆	Submit Updated AIP to SO/ ICE/ IPs				
DD69680	ICE Approval & Issue Check Cert	12	15-Jan-15	29-Jan-15	30-Jun-15	14-Jul-15	0%					■	ICE Approval & Issue Check Cert				
DD69690	IPs Review	28	15-Jan-15	12-Feb-15	30-Jun-15	27-Jul-15	0%					■	IPs Review				
DD69700	IPs No Objection Received	0		12-Feb-15		27-Jul-15	0%					◆	IPs No Objection Received				
DD69710	SO's Review	35	15-Jan-15	19-Feb-15	30-Jun-15	03-Aug-15	0%					■	SO's Review				
DD69720	SO Approval with Condition Received	0		26-Feb-15		03-Aug-15	0%					◆	SO Approval with Condition Received				
South Ventilation Building																	
Design Submission																	
(I1) DDA for South Vent. Bldg. GBP & Arch. Submission																	
DD01400	Preparation of DDA Sth VB GBP & Arch Submission	18	21-Aug-14	11-Sep-14	12-Feb-15	11-Mar-15	0%					■	Preparation of DDA Sth VB GBP & Arch Submission				
DD01415	Formal Submission of DDA to ICE/ IPs	0		29-Oct-14		30-Apr-15	0%					◆	Formal Submission of DDA to ICE/ IPs				
DD01420	Advanced Submission to SO	0		29-Oct-14		30-Apr-15	0%					◆	Advanced Submission to SO				
DD01425	IPs/ SO's Advance Comments/ ICE Comments	28	30-Oct-14	26-Nov-14	01-May-15	28-May-15	0%					■	IPs/ SO's Advance Comments/ ICE Comments				
DD01430	Comments Received	0		26-Nov-14		28-May-15	0%					◆	Comments Received				
DD01435	Designer to Reply RTC + Update Submission	21	27-Nov-14	20-Dec-14	29-May-15	23-Jun-15	0%					■	Designer to Reply RTC + Update Submission				
DD01440	Submit Updated DDA to SO/ ICE/ IPs	0		22-Dec-14		24-Jun-15	0%					◆	Submit Updated DDA to SO/ ICE/ IPs				
DD01445	ICE Approval & Issue Check Cert	18	22-Dec-14	14-Jan-15	24-Jun-15	15-Jul-15	0%					■	ICE Approval & Issue Check Cert				
DD01450	Submit ICE Check Cert to SO	6	15-Jan-15	21-Jan-15	16-Jul-15	22-Jul-15	0%					■	Submit ICE Check Cert to SO				
DD01455	IPs Review	28	22-Dec-14	18-Jan-15	24-Jun-15	21-Jul-15	0%					■	IPs Review				
DD01460	IPs No Objection Received	0		18-Jan-15		21-Jul-15	0%					◆	IPs No Objection Received				

■ Planned Bar
■ Planned Bar
◆ Planned Milestone
■ Progress bar
◆ Progress Milestone



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Current Start	Current Finish	14W51 % Comp	2014				2015					
								Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
								DD01465	SO's Review	35	22-Dec-14	25-Jan-15	24-Jun-15	28-Jul-15	0%		
DD01470	SO Approval with Condition R received	0		26-Jan-15		28-Jul-15	0%										
(I2) DDA for South Vent.Bldg.Structural Design incl.Vent.Connections																	
DD67808	Preparation of DDA Sth VB Structural Design incl. Vent Conn	18	28-Jan-15	17-Feb-15	29-Jul-15	18-Aug-15	0%										
DD67818	Review & Comment by JV	18	18-Feb-15	17-Mar-15	19-Aug-15	08-Sep-15	0%										
South Surface Roadworks, Utility & Drainage works																	
Design Submission																	
(E3) DDA for Sewerage, Drainage, Waterworks & Utility works for South Landfall																	
DD05810	Preparation of DDA Sewerage & Drainage works for Sth Landfall	18	08-Nov-14	28-Nov-14	12-Feb-15	11-Mar-15	0%										
DD05820	Review & Comment by JV	18	29-Nov-14	19-Dec-14	12-Mar-15	01-Apr-15	0%										
DD05830	Designer prepare DDA	10	20-Dec-14	03-Jan-15	02-Apr-15	17-Apr-15	0%										
DD05840	Advanced Submission to SO	0		03-Jan-15		17-Apr-15	0%										
DD05850	Formal Submission of DDA to ICE/ IPs	0		03-Jan-15		17-Apr-15	0%										
DD05860	IPs/ SO's Advance Comments/ ICE Comments	28	04-Jan-15	31-Jan-15	18-Apr-15	15-May-15	0%										
DD05870	Comments Received	0		31-Jan-15		15-May-15	0%										
DD05880	Designer to Reply RtC + Update Submission	21	02-Feb-15	04-Mar-15	16-May-15	10-Jun-15	0%										

- Planned Bar
- Planned Bar
- Planned Milestone
- Progress bar
- Progress Milestone

TMCLK - Northern Connection Sub-Sea Tunnel Section
Detailed Works Programme - Three months rolling programme



Date	Revision	Checked	Approved
21-Feb-14	TMCLK/DBJ/GEN/PR...	SPa	WYu

Appendix C

Environmental Mitigation
and Enhancement Measure
Implementation Schedules

*Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
Air Quality									
4.8.1	3.8	An effective watering programme of twice 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		✓
4.8.1	3.8	Watering of the construction sites in Lantau for 8 times/day and in Tuen Mun for 12 times/day to reduce dust emissions by 87.5% and 91.7% respectively and shall be undertaken.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
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		✓
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		✓
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		✓
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		✓
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		✓
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 shall be dampened or covered before transport.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓

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

Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
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		✓
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		✓
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		✓
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		✓
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		✓
WATER QUALITY									
<i>Marine Works (Sequence A)</i>									
6.1	Annex A	Construction of seawalls to be advanced by at least 200m before the main reclamation dredging and filling can commence. The protection by advanced seawall is a dynamic process depending on the progress of the construction activities and the stage when such protection could be realised is illustrated in Figure 6.2a and detailed in Appendix D6a. The part of the works where such measures can be undertaken for the majority of the time includes the following locations: - TM-CLKL northern reclamation;	All areas/ prior to dredging and backfilling works	Contractor	TM-EIAO		Y		✓
6.1	-	a maximum of 50% public fill to be used for all seawall filling below +2.5mPD for TM-CLKL southern and northern landfalls.	TM-CLKL seawall filling	Contractor	TM-EIAO		Y		✓

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Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
6.1	-	a maximum of 30% public fill to be used for reclamation filling below +2.5mPD for TM-CLKL southern landfall	TM-CLKL southern landfall reclamation filling	Contractor	TM-EIAO		Y		N/A
6.1	-	a maximum of 100% public fill to be used for reclamation filling below +2.5mPD for TM-CLKL northern landfall	TM-CLKL northern landfall reclamation filling	Contractor	TM-EIAO		Y		✓
6.1	-	Use of cage type silt curtains round allgrab dredgers during the HKBCF, HKLR and TM-CLKL southern reclamation works.	All areas dredging works	Contractor	TM-EIAO		Y		✓
	Figure 1.1 of Annex C	A layer of floating type silt curtain will be applied when dredging and reclamation works are being undertaken at Portion N-a as shown in Figure 1.1 of Annex C of the EM&A Manual.	All areas/ through out marine works	Contractor	TM-EIAO		Y		✓
6.1	-	Trailer suction hopper dredgers shall not allow mud to overflow.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.1	-	The use of Lean Material Overboard (LMOB) systems shall be prohibited.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓

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*Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
6.1 Figure 6.2b Appendix D6b	Annex A	For other parts of the reclamation works construction of seawalls to be advanced by at least 200m before the main reclamation dredging and filling can commence. It should be noted that the protection by advanced seawall is a dynamic process depending on the progress of the construction activities and the stage when such protection could be realised is illustrated in Figure 6.2b and detailed in Appendices D6b. The part of the works where such measures can be undertaken for the majority of the time includes the following locations: - TM-CLKL northern reclamation; - Reclamation filling for Portion D of HKBCF; Reclamation filling for FSD berth of HKBCF; and - Reclamation dredging and filling for Portion 1 of HKLR;	TM-CLKL northern landfall, Portion D of HKBCF and HKLR	Contractor	TM-EIAO		Y		✓
6.1	-	The filling material for the other parts of the works are the same as Sequence A;	All other areas/backfilling works	Contractor	TM-EIAO		Y		N/A
6.1	5.7	Cage type silt curtain (with steel enclosure) shall be used for grab dredgers working in the site of HKBCF and TM- CLKL southern reclamation. Cage type silt curtains will be applied round all grab dredgers at other works area.	HKBCF, HKLR and TM-CLKL grab dredging	Contractor	TM-EIAO		Y		✓
6.1	Annex A	A layer of floating type silt curtain will be applied around all works as defined in Appendix D6b.	All areas/ through out marine works	Contractor	TM-EIAO		Y		✓
6.1	-	TM-CLKL northern landfall: - Reclamation filling shall not proceed until at least 200m section of leading seawall at both the east and west sides of the reclamation are formed above +2.5 mPD, except for 100m gaps for marine access;	All areas/ through out marine works	Contractor	TM-EIAO		Y		✓

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Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
<i>General Marine Works</i>									
6.1	-	Use of TBM for the construction of the submarine tunnel.	Tunnel works / Construction phase	Contractor	TM-EIAO		Y		N/A
6.1	-	Export dredged spoils from NWWCZ.	All areas as much as possible / dredging activities	Contractor	DASO Permit conditions		Y		✓
6.1	-	Where public fill is proposed for filling below +2.5mPD, the fine content in the public fill will be controlled to 25%	All areas/ backfilling works	Contractor	TM-EIAO		Y		N/A
6.1	-	Where sand fill is proposed for filling below +2.5mPD, the fine content in the sand fill will be controlled to 5%.	All areas/ backfilling works	Contractor	TM-EIAO		Y		N/A
6.1	-	Mechanical grabs shall be designed and maintained to avoid spillage and should seal tightly while being lifted.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.1	-	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 permit conditions.		Y		✓
6.1	-	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		✓
6.1	-	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		✓

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Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
6.1	-	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		✓
6.1	-	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
6.1	-	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
6.1	-	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		✓
6.1	5.2	Silt curtain shall have proved effectiveness from the producer and shall be fully maintained throughout the works by the contractor.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.1	-	The daily maximum production rates shall not exceed those assumed in the water quality assessment.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.1	-	The dredging and filling works shall be scheduled to spread the works evenly over a working day.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓

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Contract No. HY/2012/08
Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
<i>Land Works</i>									
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	Temporary access roads should be surfaced with crushed stone or gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.1	-	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		✓
6.1	-	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<>
6.1	-	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		✓
6.1	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		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	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
6.1	-	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		✓
6.1	-	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	All areas/ throughout construction period	Contractor	TM-EIAO Waste Disposal Ordinance		Y		✓
6.1	-	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		✓
6.1	-	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		✓
6.1	-	Roadside gullies to trap silt and grit shall be provided prior to	Roadside/ design and operation	Design	TM-EIAO	Y		Y	✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
		discharging the stormwater into the marine environment. The sumps will be maintained and cleaned at regular intervals.		Consultant/ Contractor					
6.1	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		✓
<i>Water Quality Monitoring</i>									
6.1	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	✓
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	✓
8.14	6.3,6.5	Specification and implementation of 250m dolphin exclusion zone.	All dredging and reclamation areas/Detailed Design/ during all reclamation and dredging works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.3, 6.5	Specification and deployment of an artificial reef of an area of 3,600m ² 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	N/A. To be implemented by 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		✓
8.14	6.3, 6.5	Design and implementation of acoustic decoupling methods for dredging and reclamation works	All areas/ Detailed Design/ during dredging and reclamation works	Design Consultant/ Contractor	TMEIA	Y	Y		✓

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Tuen Mun – Chek Lap Kok Link
Northern Connection Sub-sea Tunnel 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			Status *
						D	C	O	
8.15	6.3, 6.4	Pre-construction phase survey and coral translocation	Detailed Design/Prior to construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.5	Audit coral translocation success	Post translocation	Contractor	TMEIA		Y		✓
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		N/A
7.13	6.5	Spoil heaps shall be covered at all times.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Avoid damage and disturbance to the remaining and surrounding natural habitat	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Placement of equipment in designated areas within the existing disturbed land	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Disturbed areas to be reinstated immediately after completion of the works.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Construction activities should be restricted to the proposed works boundary.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
LANDSCAPE AND VISUAL									
10.9	7.6	The colour and shape of the toll control buildings, ventilation building and administration building shall adopt a design which could blend it into the vicinity elements, and the details will be developed in detailed design stage (DM2)	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	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		✓
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		✓
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		✓

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						D	C	O	
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities (OM5)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (OM6)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A
WASTE									
12.6		The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		✓
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		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
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		✓
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		✓
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		✓
12.6	8.1	The surplus surcharge should be transferred to a fill bank	Reclamation areas / after surcharge works	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		✓
12.6	8.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	No waste shall be burnt on site.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
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			✓
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		✓
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		✓

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
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		✓
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		✓
12.6	8.1	Dredged marine mud shall be disposed of in a gazetted marine disposal ground under the requirements of the Dumping at Seas Ordinance.	Reclamation areas / throughout dredging works	Contractor	TMEIA		Y		✓
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		✓
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 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.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All falsework will be steel instead of wood.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
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: if suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed;	All areas / throughout construction period	Contractor	TMEIA		Y		<>

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
		<ul style="list-style-type: none"> f Having a capacity of <450L unless the specifications have been approved by the EPD; and f Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. f Clearly labelled and used solely for the storage of chemical wastes; f Enclosed with at least 3 sides; f 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; f Adequate ventilation; f Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and f Incompatible materials are adequately 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		✓
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		✓
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A

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EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status *
						D	C	O	
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		<>
12.6	8.1	All waste containers shall be in a secure area on hardstanding;	All areas / throughout construction period	Contractor	TMEIA		Y		✓
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		✓
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		✓
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		✓
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

*** Remarks:**

- ✓ Compliance of Mitigation Measures
- <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- ▲ Non-compliance of Mitigation Measures but rectified by Contractor
- Δ Deficiency of Mitigation Measures but rectified by Contractor
- N/A Not Applicable in Reporting Period

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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 $\mu\text{g}/\text{m}^3$	ASR1 = 213 ASR5 = 238 AQMS1 = 213 ASR6 = 238 ASR10 = 214	260
1 Hour TSP Level in $\mu\text{g}/\text{m}^3$	ASR1 = 331 ASR5 = 340 AQMS1 = 335 ASR6 = 338 ASR10 = 337	500

Table D2 Action and Limit Levels for Water Quality

Parameter	Action Level#	Limit Level#
DO in mg/L ^(a)	<u>Surface and Middle</u> 5.0 mg/L	<u>Surface and Middle</u> 4.2 mg/L
	<u>Bottom</u> 4.7 mg/L	<u>Bottom</u> 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
- (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 D3 *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 D4 *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	NEL = [STG < 2.4 & ANI < 8.9] and NWL = [STG < 3.9 & ANI < 17.9]	

Appendix E

Copies of Calibration
Certificates for Air Quality
and Water Quality
Monitoring

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 5
 Calibrated by : P.F. Yeung
 Date : 10/10/2014

Sampler

Model : TE-5170
 Serial Number : S/N 0816

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1010
 Ta(K) : 301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.5	3.502	1.688	55	54.48
2	13 holes	10.2	3.164	1.524	50	49.53
3	10 holes	7.1	2.639	1.272	42	41.60
4	7 holes	4.9	2.193	1.057	36	35.66
5	5 holes	2.8	1.658	0.799	28	27.74

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 30.005 Intercept(b): 3.758 Correlation Coefficient(r): 0.9998

Checked by: Magnum Fan

Date: 14/10/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR10
 Calibrated by : P.F. Yeung
 Date : 10/10/2014

Sampler

Model : TE-5170
 Serial Number : S/N 8162

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1010
 Ta(K) : 301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.2	3.325	1.602	56	55.64
2	13 holes	9.4	3.046	1.468	51	50.67
3	10 holes	7.0	2.629	1.267	44	43.72
4	7 holes	4.8	2.177	1.049	37	36.76
5	5 holes	2.8	1.662	0.801	29	28.81

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 33.346 Intercept(b): 1.856 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan

Date: 14/10/14

High-Volume TSP Sampler
5-Point Calibration Record

Location : AQMS1
 Calibrated by : P.F. Yeung
 Date : 10/10/2014

Sampler

Model : TE-5170
 Serial Number : S/N 1253

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1010
 Ta(K) : 301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.6	3.527	1.699	58	57.62
2	13 holes	10.0	3.142	1.514	51	50.67
3	10 holes	7.2	2.666	1.285	43	42.72
4	7 holes	4.9	2.199	1.060	36	35.77
5	5 holes	2.9	1.692	0.816	27	26.83

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 34.415 Intercept(b): 1.146 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan

Date: 14/10/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 1
 Calibrated by : P.F.Yeung
 Date : 10/10/2014

Sampler

Model : TE-5170
 Serial Number : S/N 0146

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1010
 Ta(K) : 301

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	12.6	3.516	1.694	55	54.48
2 13 holes	9.8	3.101	1.494	48	47.55
3 10 holes	7.0	2.621	1.263	40	39.62
4 7 holes	5.0	2.215	1.067	34	33.68
5 5 holes	2.9	1.687	0.813	26	25.75

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 32.562 Intercept(b): -1.019 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan

Date: 16/10/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 6
 Calibrated by : P.F. Yeung
 Date : 10/10/2014

Sampler

Model : TE-5170
 Serial Number : S/N 3957

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.05818
 Intercept (b) : 0.01929
 Correlation Coefficient(r) : 0.99991

Standard Condition

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

Calibration Condition

Pa (hpa) : 1010
 Ta(K) : 301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.4	3.488	1.681	57	56.46
2	13 holes	9.9	3.117	1.502	50	49.53
3	10 holes	7.2	2.658	1.281	43	42.59
4	7 holes	4.8	2.170	1.046	35	34.67
5	5 holes	2.8	1.659	0.799	25	24.76

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 31.290 Intercept(b): 3.173 Correlation Coefficient(r): 0.9990

Checked by: Magnum Fan

Date: 14/10/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 5
 Calibrated by : P.F. Yeung
 Date : 10/12/2014

Sampler

Model : TE-5170
 Serial Number : S/N 0816

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1019
 Ta(K) : 293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.475	1.674	54	54.62
2	13 holes	9.4	3.101	1.494	47	47.54
3	10 holes	7.0	2.676	1.290	40	40.46
4	7 holes	4.8	2.216	1.068	32	32.37
5	5 holes	2.9	1.722	0.830	24	24.28

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 35.842 Intercept(b): -5.713 Correlation Coefficient(r): 0.9997

Checked by: Magnum Fan

Date: 17/12/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR10
 Calibrated by : P.F. Yeung
 Date : 10/12/2014

Sampler

Model : TE-5170
 Serial Number : S/N 8162

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1019
 Ta(K) : 293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.6	3.590	1.730	62	62.71
2	13 holes	9.2	3.068	1.478	52	52.60
3	10 holes	7.0	2.676	1.290	45	45.52
4	7 holes	4.6	2.169	1.047	36	36.41
5	5 holes	2.8	1.693	0.816	28	28.32

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 37.576 Intercept(b): -2.680 Correlation Coefficient(r): 0.9997

Checked by: Magnum Fan

Date: 17/12/14

High-Volume TSP Sampler
5-Point Calibration Record

Location : AQMS1
 Calibrated by : P.F. Yeung
 Date : 10/12/2014

Sampler

Model : TE-5170
 Serial Number : S/N 1253

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1019
 Ta(K) : 293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	13.0	3.647	1.757	56	56.64
2	13 holes	10.2	3.230	1.557	50	50.57
3	10 holes	7.8	2.825	1.361	45	45.52
4	7 holes	5.0	2.262	1.090	37	37.42
5	5 holes	3.0	1.752	0.844	31	31.36

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 27.785 Intercept(b): 7.574 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan

Date: 17/12/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 1
 Calibrated by : P.F.Yeung
 Date : 10/12/2014

Sampler

Model : TE-5170
 Serial Number : S/N 0146

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.07593
 Intercept (b) : -0.00102
 Correlation Coefficient(r) : 0.99996

Standard Condition

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

Calibration Condition

Pa (hpa) : 1019
 Ta(K) : 293

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	11.8	3.475	1.674	52	52.60
2 13 holes	9.6	3.134	1.510	47	47.54
3 10 holes	7.0	2.676	1.290	38	38.44
4 7 holes	4.6	2.169	1.046	30	30.34
5 5 holes	2.8	1.693	0.816	22	22.25

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 35.713 Intercept(b): -7.017 Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan

Date: 17/12/2014

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR 6
 Calibrated by : P.F. Yeung
 Date : 10/12/2014

Sampler

Model : TE-5170
 Serial Number : S/N 3957

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 14 Mar 2014
 Slope (m) : 2.05818
 Intercept (b) : 0.01929
 Correlation Coefficient(r) : 0.99991

Standard Condition

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

Calibration Condition

Pa (hpa) : 1019
 Ta(K) : 293

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	12.6	3.590	1.730	53	53.61
2 13 holes	9.6	3.134	1.510	46	46.53
3 10 holes	7.2	2.714	1.308	39	39.45
4 7 holes	4.4	2.122	1.023	31	31.36
5 5 holes	3.0	1.752	0.844	25	25.29

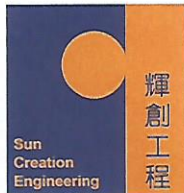
Notes: $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$, $X = Z/m - b$, $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

Sampler Calibration Relationship (Linear Regression)

Slope(m): 31.736 Intercept(b): -1.473 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan

Date: 17/12/2014



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. : C146966

證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC14-2877) Date of Receipt / 收件日期 : 12 November 2014

Description / 儀器名稱 : Anemometer

Manufacturer / 製造商 : Lutron

Model No. / 型號 : AM-4201

Serial No. / 編號 : AF.27513

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 November 2014

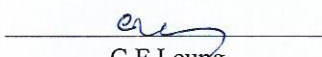
TEST RESULTS / 測試結果

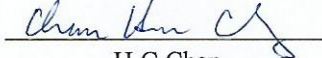
The results apply to the particular unit-under-test only.

The results are detailed in the subsequent page(s).

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

- Testo Industrial Services GmbH, Germany

Tested By : 
測試 : C F Leung
Project Engineer

Certified By : 
核證 : H C Chan
Engineer

Date of Issue : 18 November 2014
簽發日期

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

輝創工程有限公司 – 校正及檢測實驗室

c/o 香港新界屯門興安里一號青山灣機樓四樓

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Website/網址: www.suncreation.com

Page 1 of 2

Certificate of Calibration

校正證書

Certificate No. : C146966

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 10 measurements at each calibration point.
3. Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL386	Multi-function Measuring Instrument	S12109

4. Test procedure : MA130N.

5. Results :

Air Velocity

Applied Value (m/s)	UUT Reading (m/s)	Measured Correction		
		Value (m/s)	Measurement Uncertainty	
			Expanded Uncertainty (m/s)	Coverage Factor
2.0	1.7	+0.3	0.2	2.0
4.1	3.8	+0.3	0.3	2.0
6.1	5.8	+0.3	0.3	2.0
8.0	7.8	+0.2	0.3	2.0
10.0	9.9	+0.1	0.4	2.0

Remarks : - The Measured Corrections are defined as :
Value = Applied Value - UUT Reading

- The expanded uncertainties are for a level of confidence of 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.

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室所書面批准。

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輝創工程有限公司 – 校正及檢測實驗室

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Website/網址: www.suncreation.com

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 29 June 2014

Brand of Test Meter: Davis

Model: Weather Wizard III (s/n: WE90911A30)

Location : ASR5

Procedures :

- 1. Wind Still Test: The wind speed sensor was hold by hand until it keep still
- 2. Wind Speed Test: The wind meter was on-site calibrated against the Anemometer
- 3. Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

Davis (m/s)	Anemomete (m/s)
1.2	1.1
2.3	2.5
1.7	1.9

Wind Direction Test

Davis (o)	Marine Compass (o)
271	270
0	0
90	90
181	180

Calibrated by: Fai
Yeung Ping Fai
(Technical Officer)

Checked by : Fat
Ho Kam Fat
(Senior Technical Officer)

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 29 December 2014

Brand of Test Meter: Davis

Model: Weather Wizard III (s/n: WE90911A30)

Location : ASR5

Procedures :

- 1. Wind Still Test: The wind speed sensor was hold by hand until it keep still
- 2. Wind Speed Test: The wind meter was on-site calibrated against the Anemometer
- 3. Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

Davis (m/s)	Anemomete (m/s)
1.4	1.6
1.9	1.7
2.4	2.5

Wind Direction Test

Davis (o)	Marine Compass (o)
271	270
0	0
91	90
179	180

Calibrated by: Fai
Yeung Ping Fai
(Technical Officer)

Checked by : Fat
Ho Kam Fat
(Senior Technical Officer)



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : <u>ET/EW/008/006</u>	Manufacturer : <u>YSI</u>
Model No. : <u>Pro 2030</u>	Serial No. : <u>12A 100554</u>
Date of Calibration : <u>17/09/2014</u>	Calibration Due Date : <u>16/12/2014</u>

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/008
 Ref. No. of Water Bath : ---

Reference Thermometer reading	Temperature (°C)			
	Measured	20.6	Corrected	20.0
DO Meter reading	Measured	19.8	Difference	0.2

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na ₂ S ₂ O ₃ titrant	CPE/012/4.5/001/8	Reagent No. of 0.025N K ₂ Cr ₂ O ₇	CPE/012/4.4/001/27
		Trial 1	Trial 2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)		0.00	10.40
Final Vol. of Na ₂ S ₂ O ₃ (ml)		10.40	20.80
Vol. of Na ₂ S ₂ O ₃ used (ml)		10.40	10.40
Normality of Na ₂ S ₂ O ₃ solution (N)		0.02404	0.02404
Average Normality (N) of Na ₂ S ₂ O ₃ solution (N)		0.02404	
Acceptance criteria, Deviation		Less than ± 0.001N	

Calculation: Normality of Na₂S₂O₃, N = 0.25 / ml Na₂S₂O₃ used

Linearity Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	11.90	23.60	0.00	6.60	10.10
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.90	23.60	30.20	6.60	10.10	13.60
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.90	11.70	6.60	6.60	3.50	3.50
Dissolved Oxygen (DO), mg/L	7.68	7.55	4.26	4.26	2.26	2.26
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	7.71	7.67	7.69	7.68	7.55	7.62	0.91
5	4.20	4.18	4.19	4.26	4.26	4.26	1.66
10	2.36	2.38	2.37	2.26	2.26	2.26	4.75
Linear regression coefficient				0.9988			



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/012/4.7/002/25	Reagent No. of NaCl (30ppt)	CPE/012/4.8/002/25
-----------------------------	--------------------	-----------------------------	--------------------

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
	1	2	1	2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	12.20	24.50	35.40
Final Vol. of Na ₂ S ₂ O ₃ (ml)	12.20	24.50	35.40	46.30
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	12.20	12.30	10.90	10.90
Dissolved Oxygen (DO), mg/L	7.87	7.94	7.03	7.03
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	7.79	7.81	7.8	7.87	7.94	7.91	1.40
30	6.92	6.94	6.93	7.03	7.03	7.03	1.43

Acceptance Criteria

- (1) Difference 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 :



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : <u>ET/EW/008/006</u>	Manufacturer : <u>YSI</u>
Model No. : <u>Pro 2030</u>	Serial No. : <u>12A 100554</u>
Date of Calibration : <u>17/12/2014</u>	Calibration Due Date : <u>16/03/2015</u>

Temperature Verification

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

Ref. No. of Water Bath : ---

		Temperature (°C)		
Reference Thermometer reading	Measured	20.0	Corrected	19.4
DO Meter reading	Measured	19.4	Difference	0.0

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na ₂ S ₂ O ₃ titrant	CPE/012/4.5/001/9	Reagent No. of 0.025N K ₂ Cr ₂ O ₇	CPE/012/4.4/001/32
		Trial 1	Trial 2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)		0.00	10.15
Final Vol. of Na ₂ S ₂ O ₃ (ml)		10.15	20.35
Vol. of Na ₂ S ₂ O ₃ used (ml)		10.15	10.20
Normality of Na ₂ S ₂ O ₃ solution (N)		0.02463	0.02451
Average Normality (N) of Na ₂ S ₂ O ₃ solution (N)		0.02457	
Acceptance criteria, Deviation		Less than ± 0.001N	

Calculation: Normality of Na₂S₂O₃, N = 0.25 / ml Na₂S₂O₃ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Trial						
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	11.40	22.80	0.00	6.60	10.30
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.40	22.80	29.30	6.60	10.30	14.00
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.40	11.40	6.50	6.60	3.70	3.70
Dissolved Oxygen (DO), mg/L	7.52	7.52	4.29	4.35	2.44	2.44
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	7.61	7.20	7.41	7.52	7.52	7.52	1.47
5	4.28	4.75	4.52	4.29	4.35	4.32	4.52
10	2.50	2.49	2.50	2.44	2.44	2.44	2.43
Linear regression coefficient				0.9978			



Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/006 Manufacturer : YSI
Model No. : Pro 2030 Serial No. : 12A 100554
Date of Calibration : 17/09/2014 Due Date : 16/12/2014

Ref. No. of Salinity Standard used (30ppt)

S/001/5

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30.0	30.3	1.0

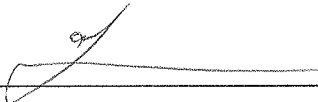
(*) Difference (%) = (Measured Salinity – Salinity Standard value) / Salinity Standard value x 100

Acceptance Criteria

Difference : -10 % to 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 : 



Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW/007/005 Manufacturer : HANNA
 Model No. : HI 8314 Serial No. : 8246095
 Date of Calibration : 07/11/2014 Calibration Due Date : 06/12/2014

Liquid Junction Error

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/001/20
 Temperature of Solution : 20.0 $\Delta\text{pH}_{1/2} = \underline{+0.08}$
 pH value of diluted buffer : 6.79 pH (S) = 6.881
 $\Delta\text{pH} = \text{pH(S)} - \text{pH of diluted buffer} = \underline{0.091}$ (Observed Deviation)
 Liquid Junction Error (ΔpH_j) = $\Delta\text{pH} - \Delta\text{pH}_{1/2} = \underline{0.011}$

Shift on Stirring

pH of buffer solution (with stirring), $\text{pH}_s = \underline{6.90}$
 Shift on stirring, $\Delta\text{pH}_s = \text{pH}_s - \text{pH(S)} - \Delta\text{pH}_j = \underline{0.008}$

Noise

Noise, $\Delta\text{pH}_n = \text{difference between max and min reading} : \underline{0.00}$

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008
 Temperature record from the reference thermometer (T_R): 19.4 °C
 Temperature record from the ATC (T_{ATC}): 19.3 °C
 Temperature Difference, $|T_R - T_{ATC}|$: 0.1 °C

Acceptance Criteria

Performance Characteristic	Acceptable Range
Liquid Junction Error ΔpH_j	≤ 0.05
Shift on Stirring ΔpH_s	≤ 0.02
Noise ΔpH_n	≤ 0.02
Verification of ATC Temperature Difference	$\leq 0.5^\circ\text{C}$

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/007/005 Manufacturer : HANNA
 Model No. : HI 8314 Serial No. : 8246095
 Date of Calibration : 07/12/2014 Calibration Due Date : 06/01/2015

Liquid Junction Error

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/001/20
 Temperature of Solution : 20.0 $\Delta\text{pH}_{1/2} = \underline{+0.08}$
 pH value of diluted buffer : 6.76 pH (S) = 6.881
 $\Delta\text{pH} = \text{pH(S)} - \text{pH of diluted buffer} = \underline{0.121}$ (Observed Deviation)
 Liquid Junction Error (ΔpH_j) = $\Delta\text{pH} - \Delta\text{pH}_{1/2} = \underline{0.041}$

Shift on Stirring

pH of buffer solution (with stirring), $\text{pH}_s = \underline{6.94}$
 Shift on stirring, $\Delta\text{pH}_s = \text{pH}_s - \text{pH(S)} - \Delta\text{pH}_j = \underline{0.018}$

Noise

Noise, $\Delta\text{pH}_n = \text{difference between max and min reading} : \underline{0.00}$

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008
 Temperature record from the reference thermometer (T_R): 19.9 °C
 Temperature record from the ATC (T_{ATC}): 19.8 °C
 Temperature Difference, $|T_R - T_{ATC}|$: 0.1 °C

Acceptance Criteria

Performance Characteristic	Acceptable Range
Liquid Junction Error ΔpH_j	≤ 0.05
Shift on Stirring ΔpH_s	≤ 0.02
Noise ΔpH_n	≤ 0.02
Verification of ATC Temperature Difference	$\leq 0.5^\circ\text{C}$

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 : 



Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/010 Manufacturer : HACH

Model No. : 2100Q Serial No. : 11110 C 014260

Date of Calibration : 06/10/2014 Due Date : 05/01/2015

Ref. No. of Turbidity Standard used (4000NTU)

005/6.1/001/7

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.6	3.00
100	102	2.00
800	790	-1.25

(*) Difference = (Measured Value – Theoretical Value) / Theoretical Value x 100

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.

Prepared by : hw

Checked by : 1266

Appendix F

EM&A Monitoring Schedules

**HY/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
***** Air Quality Impact Monitoring Schedule - December 2014**

Air quality monitoring stations: ASR1, ASR5, ASR6, ASR10, AQMS1

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

**HY/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Tentative Air Quality Impact Monitoring Schedule - January 2015**

Air quality monitoring stations: ASR1, ASR5, ASR6, ASR10, AQMS1

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				public holiday 1-Jan	2-Jan	3-Jan
				1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM		
4-Jan	5-Jan	6-Jan	7-Jan	8-Jan	9-Jan	10-Jan
1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM
11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan
		1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM	
18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan
	1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM		
25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan
1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			1-hour TSP - 3 times 24-hour TSP - 1 time Impact AQM			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/2012/08 - Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-sea Tunnel Section
Impact Marine Water Quality Monitoring (WQM) Schedule (December 14)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec
	WQM Mid-Ebb 8:02 (06:17 - 09:47) Mid-Flood 15:02 (13:17 - 16:47)		WQM Mid-Ebb 10:14 (08:29 - 11:59) Mid-Flood 16:23 (14:38 - 18:08)		WQM Mid-Ebb 12:01 (10:16 - 13:46) Mid-Flood 17:35 (15:50 - 19:20)	
07-Dec	08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec
	WQM Mid-Ebb 14:04 (12:19 - 15:49) Mid-Flood 19:16 (17:31 - 21:01)		WQM Mid-Flood 10:09 (08:24 - 11:54) Mid-Ebb 15:18 (13:33 - 17:03)		WQM Mid-Flood 11:28 (09:43 - 13:13) Mid-Ebb 16:40 (14:55 - 18:25)	
14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec
	WQM Mid-Flood 13:45 (12:00 - 15:30) Mid-Ebb 20:15 (18:30 - 22:00)		WQM Mid-Ebb 8:46 (07:01 - 10:31) Mid-Flood 15:06 (13:21 - 16:51)		WQM Mid-Ebb 10:53 (09:08 - 12:38) Mid-Flood 16:23 (14:38 - 18:08)	
21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec
	WQM Mid-Ebb 13:13 (11:28 - 14:58) Mid-Flood 18:27 (16:42 - 20:12)		WQM Mid-Flood 9:18 (07:33 - 11:03) Mid-Ebb 14:43 (12:58 - 16:28)			
28-Dec	29-Dec	30-Dec	31-Dec	01-Jan	02-Jan	03-Jan
	WQM Mid-Flood 13:19 (11:34 - 15:04) Mid-Ebb 19:57 (18:12 - 21:42)		WQM Mid-Ebb 8:41 (06:56 - 10:26) Mid-Flood 15:00 (13:15 - 16:45)			

Remarks: WQM on 26 December 2014 was postponed to 29 December 2014 since no marine works was conducted on 25 and 26 December 2014.

**HY/2012/08 - Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-sea Tunnel Section
Tentative Impact Marine Water Quality Monitoring (WQM) Schedule (January 15)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				01-Jan	02-Jan	03-Jan
					WQM Mid-Ebb 11:02 (09:17 - 12:47) Mid-Flood 16:29 (14:44 - 18:14)	
04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan
	WQM Mid-Ebb 13:09 (11:24 - 14:54) Mid-Flood 18:25 (16:40 - 20:10)		WQM Mid-Flood 9:04 (07:19 - 10:49) Mid-Ebb 14:18 (12:33 - 16:03)		WQM Mid-Flood 9:59 (08:14 - 11:44) Mid-Ebb 15:21 (13:36 - 17:06)	
11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan
	WQM Mid-Flood 11:36 (09:51 - 13:21) Mid-Ebb 17:35 (15:50 - 19:20)		WQM Mid-Flood 13:04 (11:19 - 14:49) Mid-Ebb 20:05 (18:20 - 21:50)		WQM Mid-Ebb 9:19 (07:34 - 11:04) Mid-Flood 14:49 (13:04 - 16:34)	
18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan
	WQM Mid-Ebb 12:13 (10:28 - 13:58) Mid-Flood 17:26 (16:13 - 19:43)		WQM Mid-Ebb 13:42 (11:57 - 15:27) Mid-Flood 19:04 (17:19 - 20:49)		WQM Mid-Flood 9:33 (07:48 - 11:18) Mid-Ebb 15:11 (13:26 - 16:56)	
25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan
	WQM Mid-Flood 11:34 (09:49 - 13:19) Mid-Ebb 17:58 (16:13 - 19:43)		WQM Mid-Flood 13:09 (11:24 - 14:54) Mid-Ebb 20:31 (18:46 - 22:16)		WQM Mid-Ebb 9:47 (08:20 - 11:15) Mid-Flood 15:04 (13:19 - 16:49)	

**HY/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
***** Impact Dolphin Monitoring Survey Monitoring Schedule - December 2014**

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

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/2012/08 - Tuen Mun - Chek Lap Kok Link
Northern Connection Sub-sea Tunnel Section
Tentative Impact Dolphin Monitoring Survey Monitoring Schedule - January 2015**

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

Appendix G

Impact Air Quality Monitoring Results

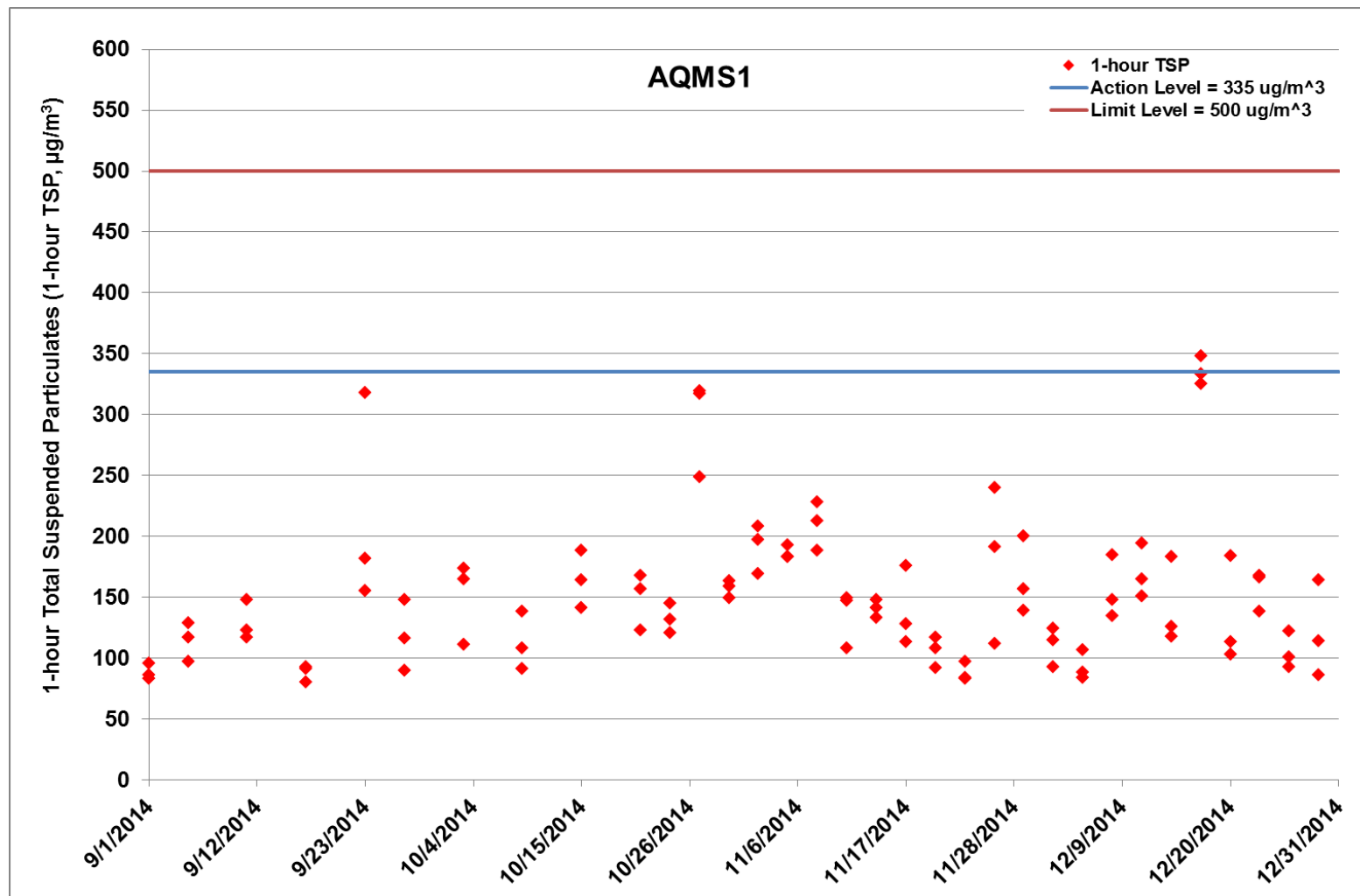


Figure G.1 Impact Monitoring – 1-hour Total Suspended Particulates (µg/m³) at AQMS1 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area – Portion N-A (1/9/2014 – 30/11/2014), Excavation for Launching Shaft (24/10/2014 – 30/11/2014) and Land Bored Piling Works (1/9/2014 – 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



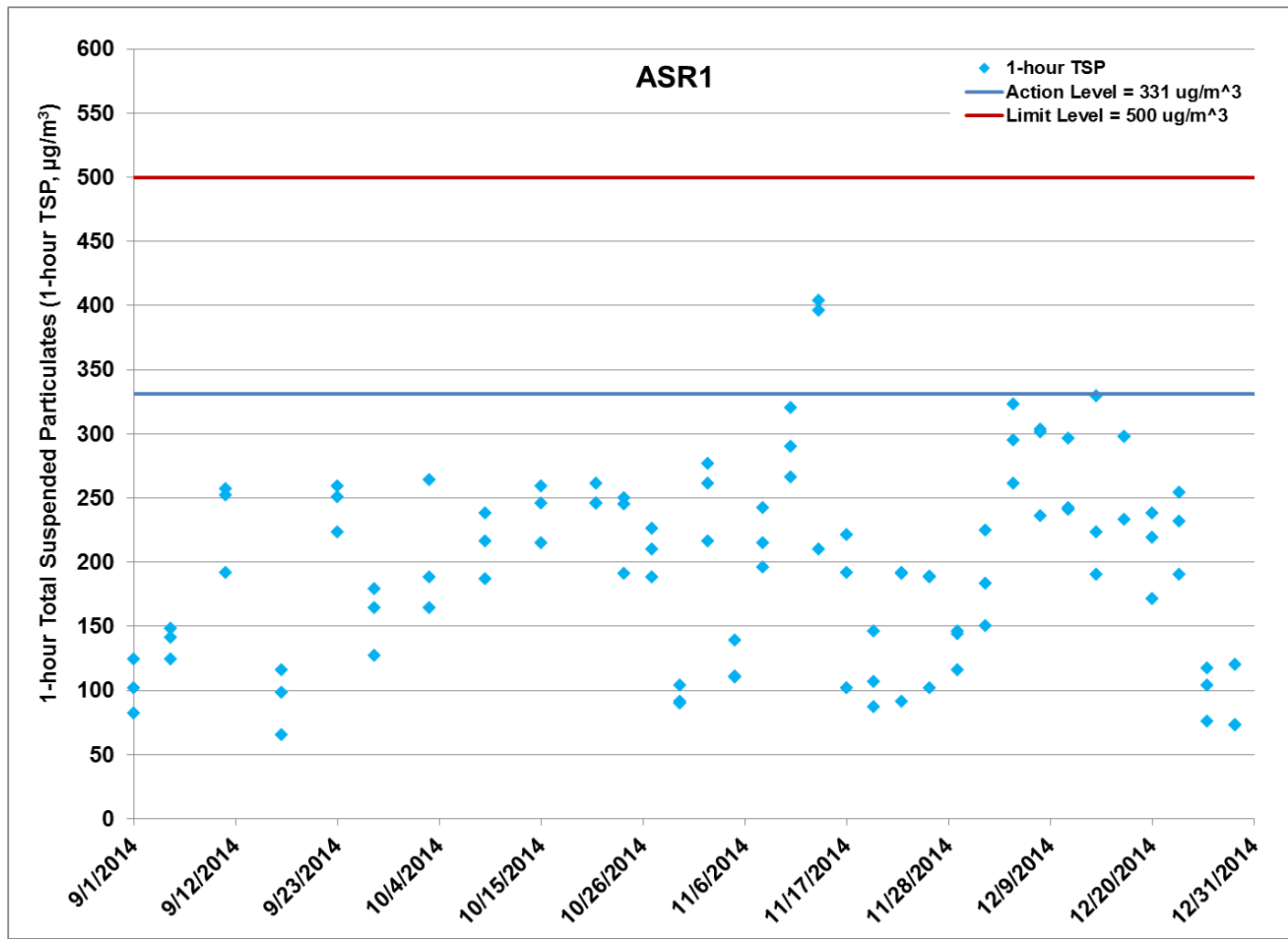


Figure G.3 Impact Monitoring - 1-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR1 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



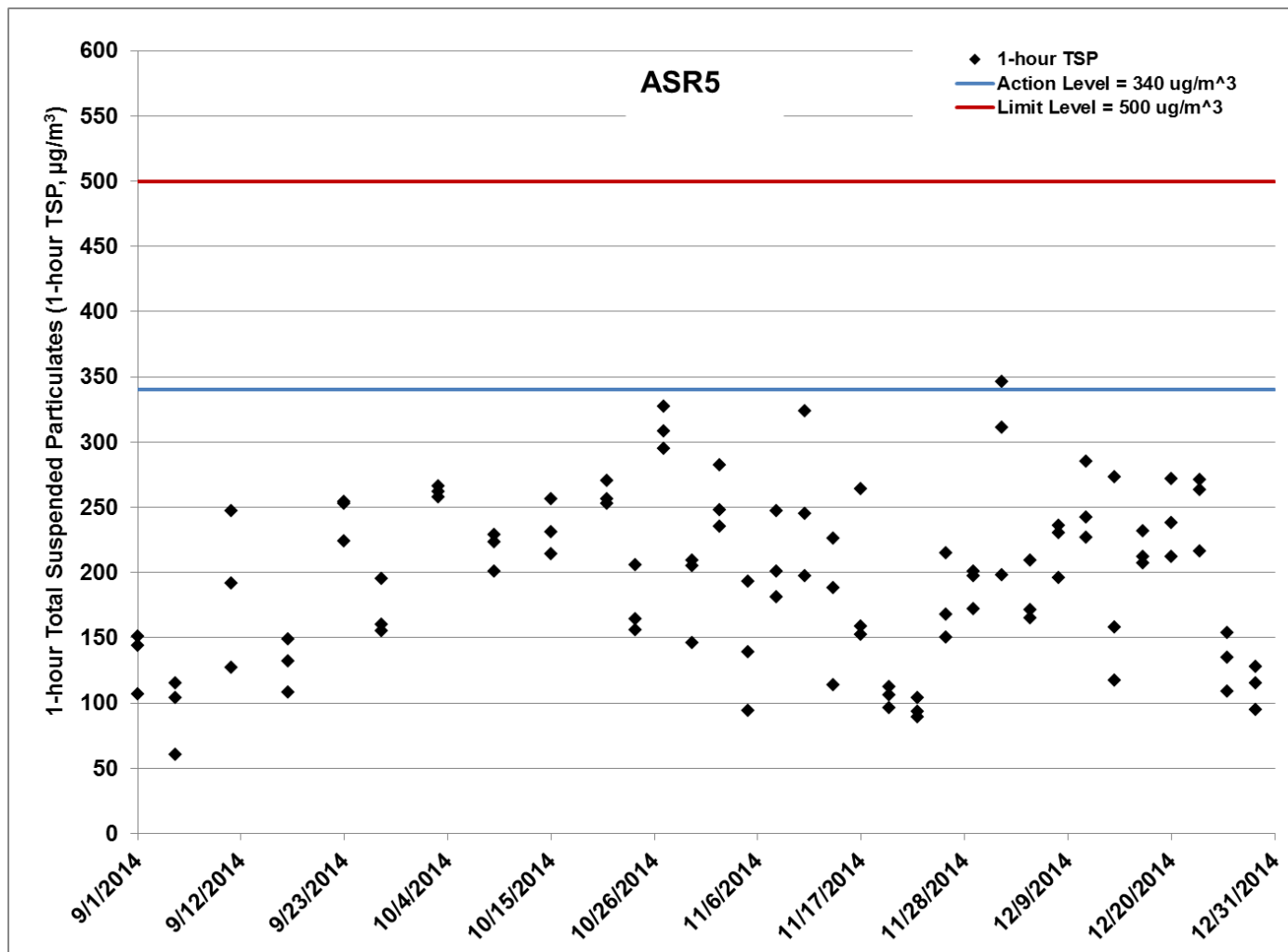


Figure G.4 Impact Monitoring - 1-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR5 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



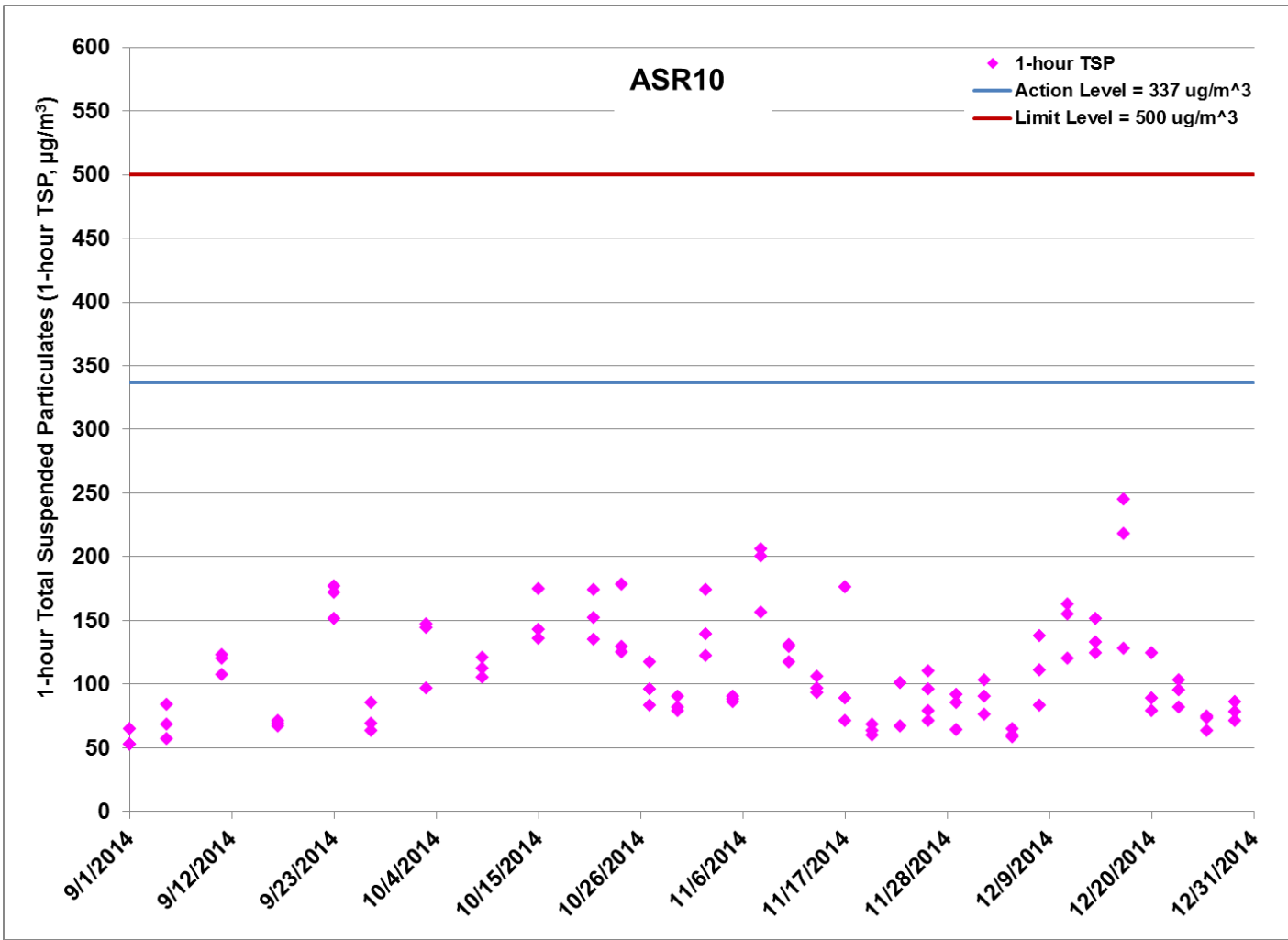


Figure G.5 Impact Monitoring - 1-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR10 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



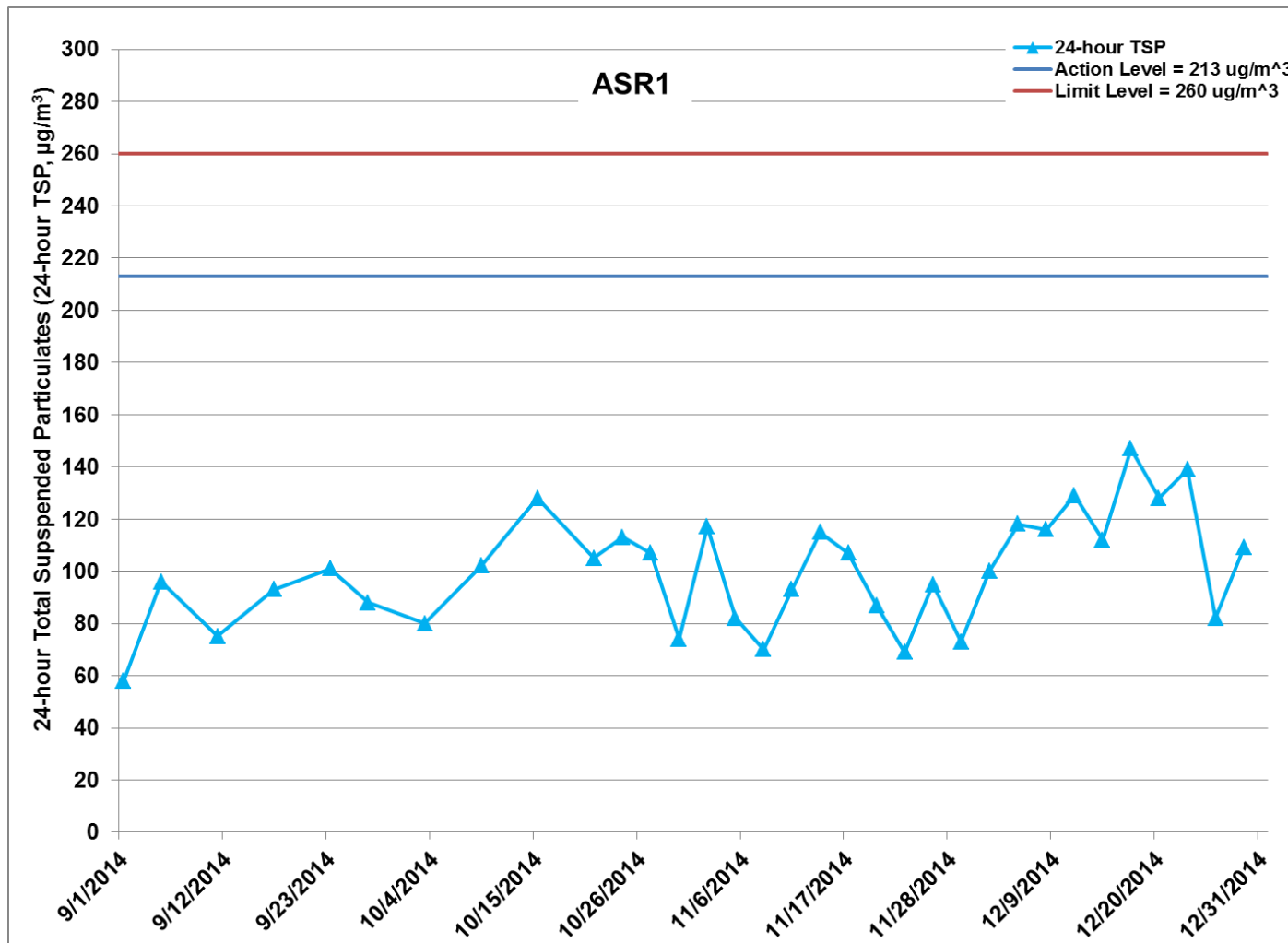


Figure G.6 Impact Monitoring - 24-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR1 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



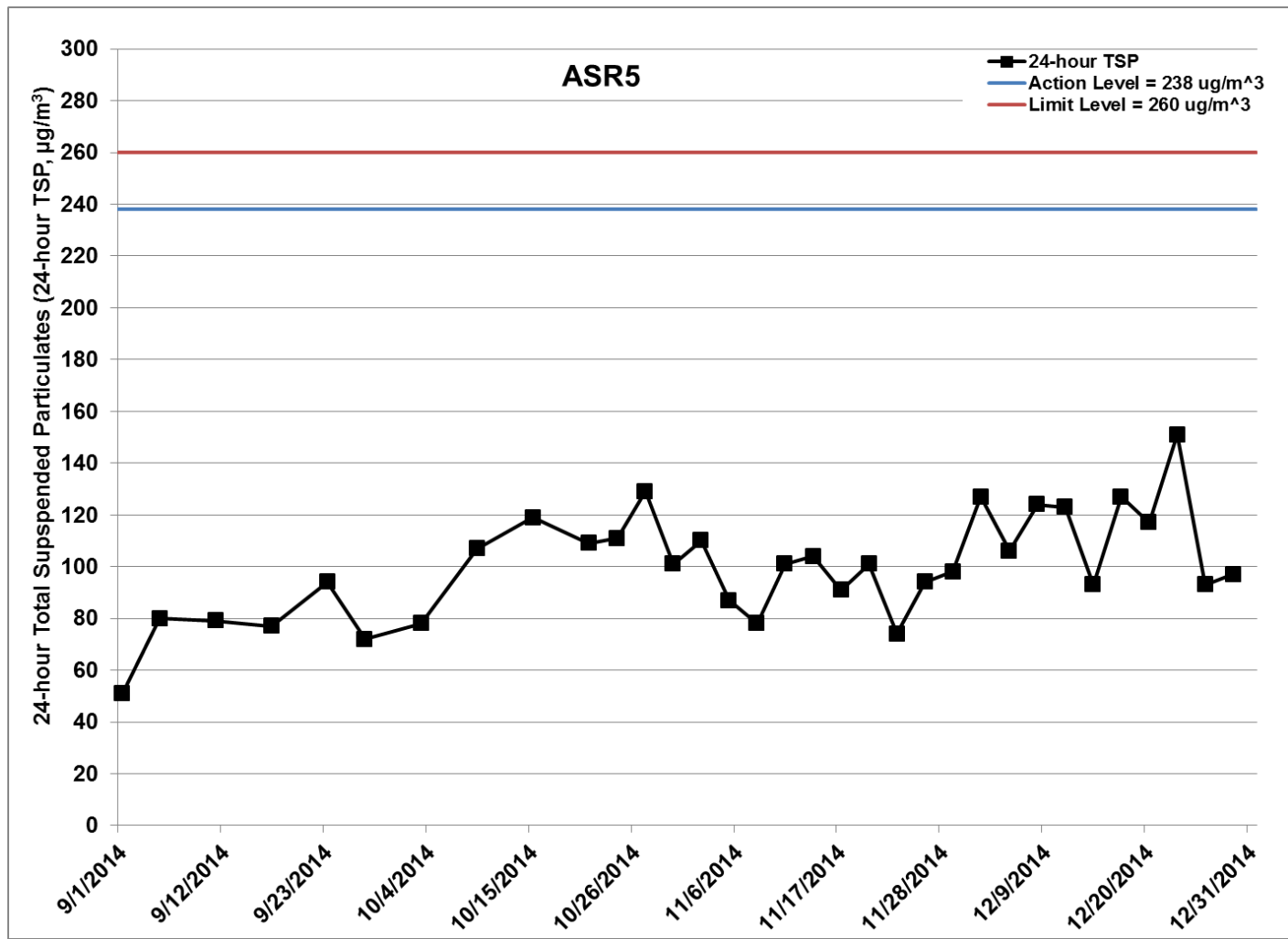


Figure G.7 Impact Monitoring - 24-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR5 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



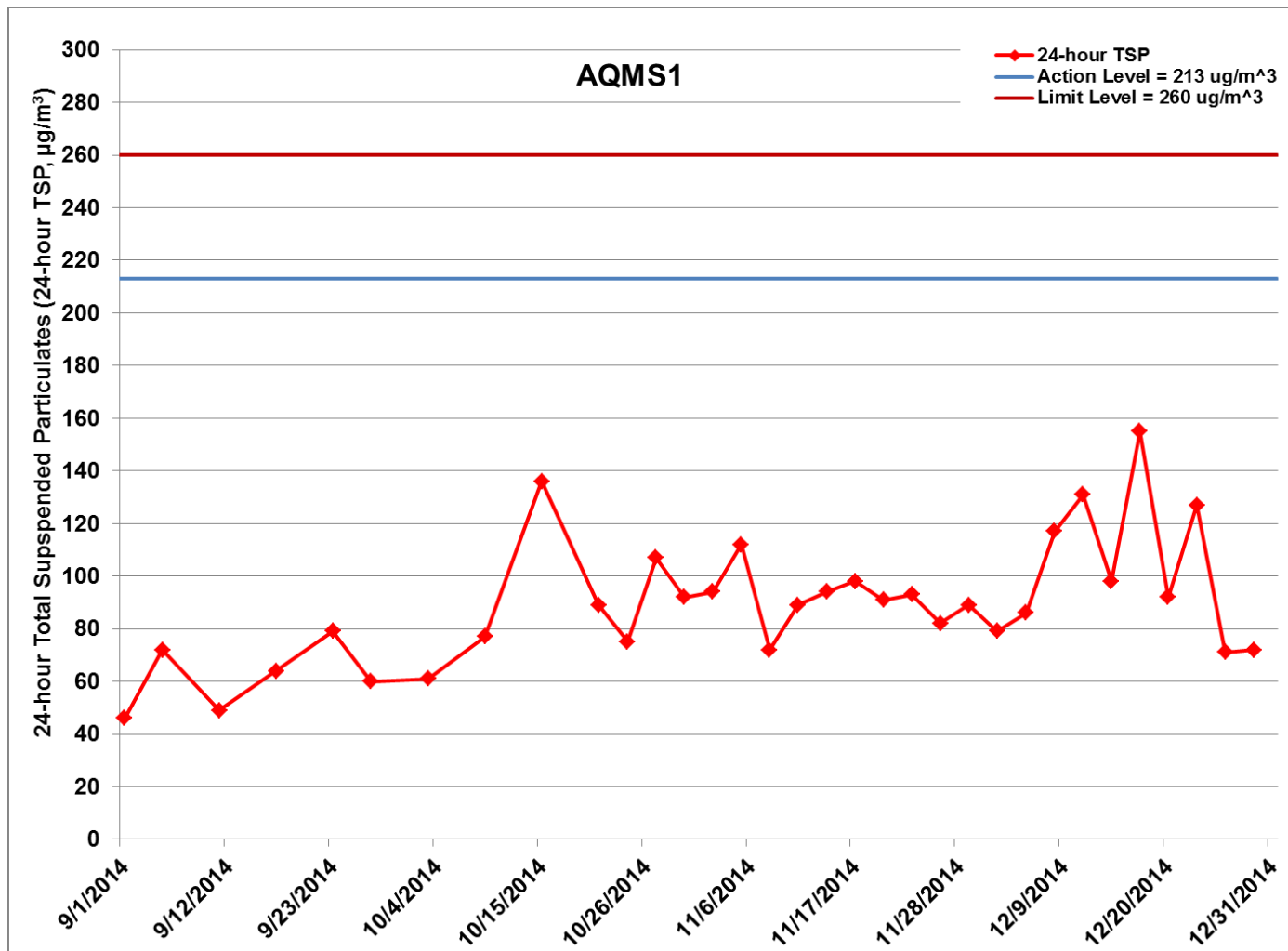


Figure G.8 Impact Monitoring - 24-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at AQMS1 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



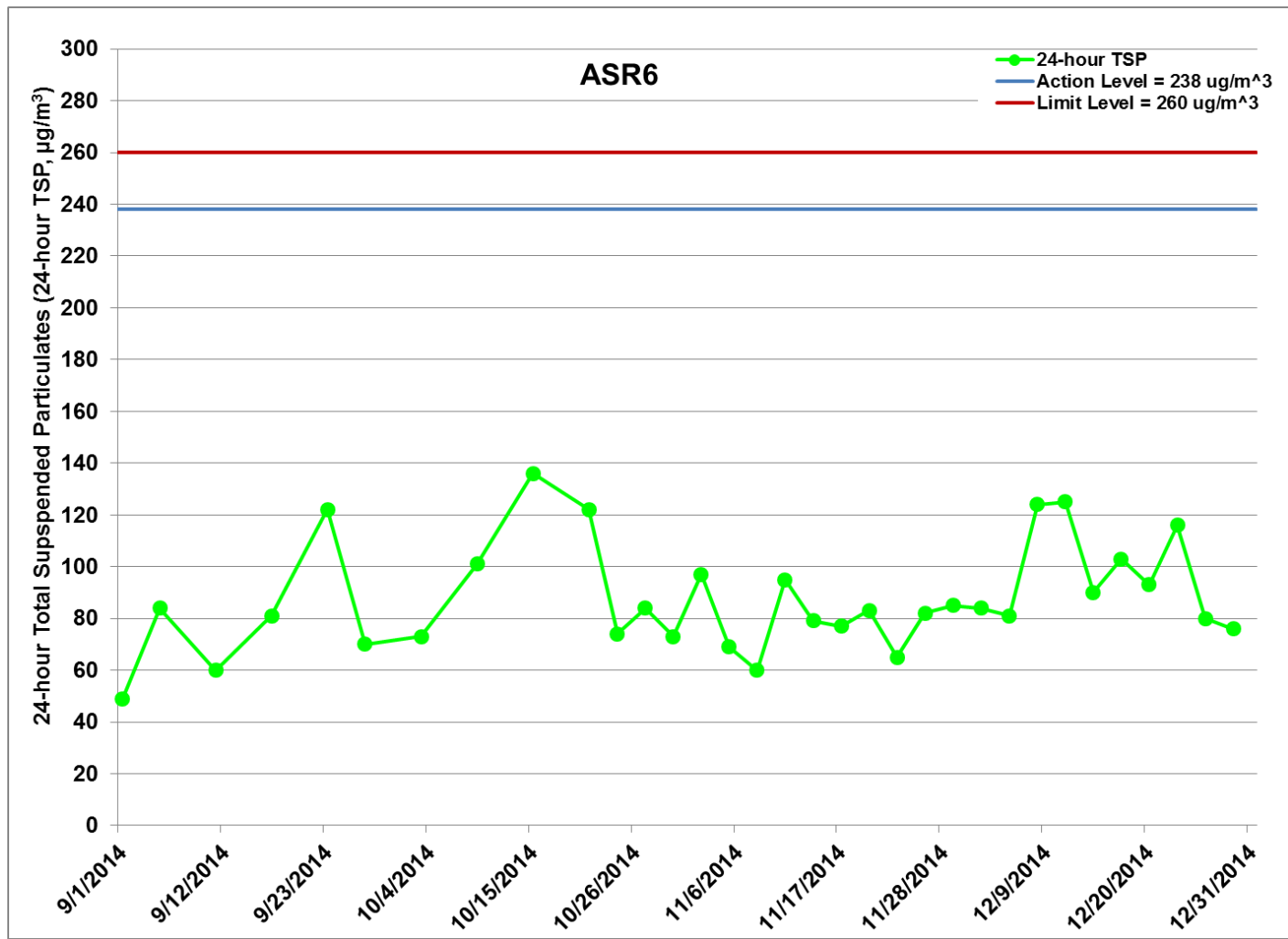


Figure G.9 Impact Monitoring - 24-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR6 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area - Portion N-A (1/9/2014 - 30/11/2014), Excavation for Launching Shaft (24/10/2014 - 30/11/2014) and Land Bored Piling Works (1/9/2014 - 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



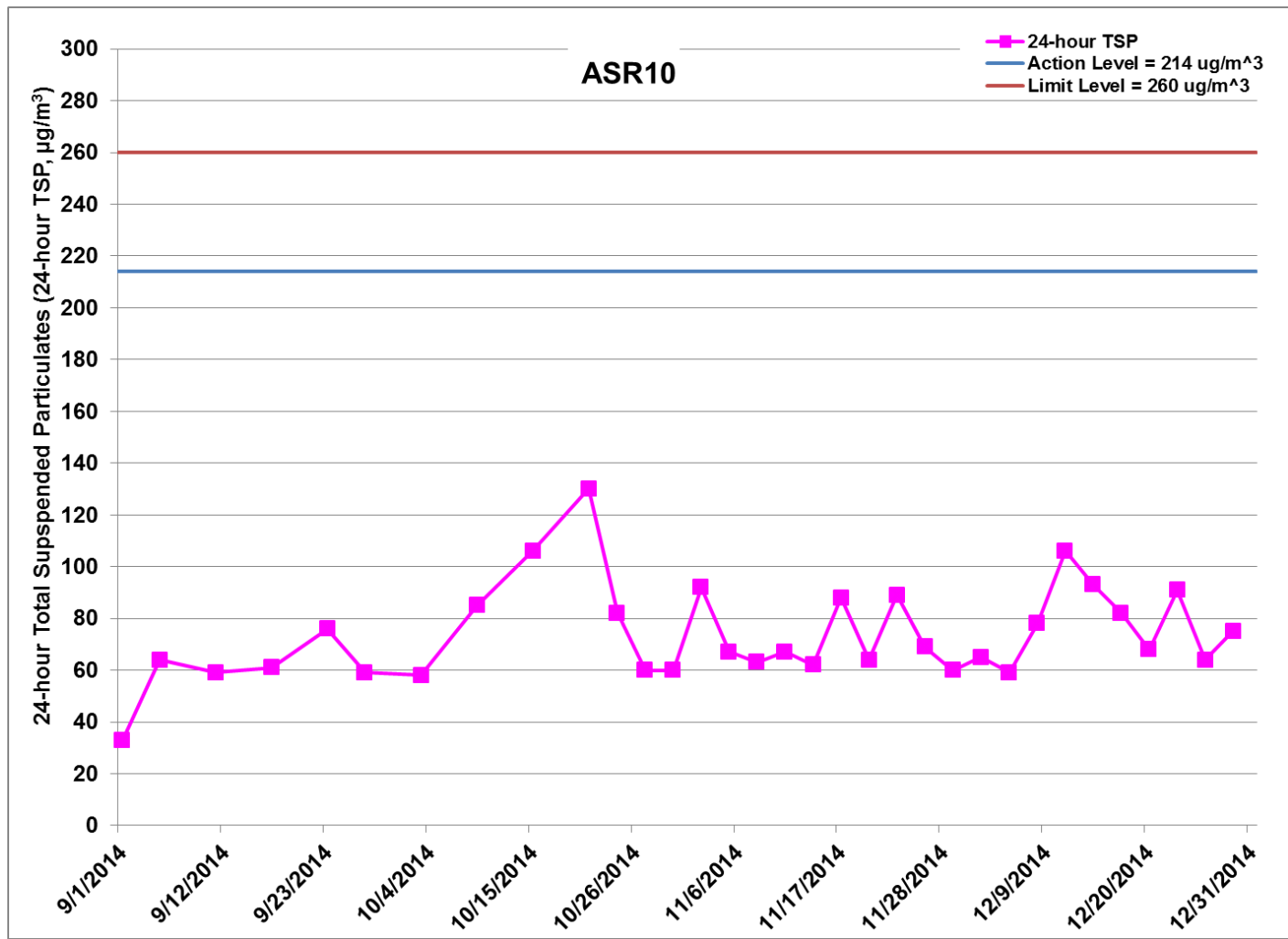


Figure G.10 Impact Monitoring – 24-hour Total Suspended Particulates ($\mu\text{g}/\text{m}^3$) at ASR10 between 1 September 2014 and 31 December 2014 during impact monitoring period. The weather conditions during the monitoring period varied from sunny to cloudy. Major land-based construction activities included: Diaphragm Wall Construction at Reclamation Area – Portion N-A (1/9/2014 – 30/11/2014), Excavation for Launching Shaft (24/10/2014 – 30/11/2014) and Land Bored Piling Works (1/9/2014 – 31/12/2014).

Ref: 0212330_Impact AQM graphs_Dec 2014_REV a.xlsx



Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-02	ASR6	Cloudy	12:55	1-hour TSP	73	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR6	Cloudy	13:57	1-hour TSP	105	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR6	Cloudy	14:59	1-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR10	Cloudy	12:43	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR10	Cloudy	13:45	1-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR10	Cloudy	14:47	1-hour TSP	90	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR5	Cloudy	13:06	1-hour TSP	198	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR5	Cloudy	14:08	1-hour TSP	311	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR5	Cloudy	15:10	1-hour TSP	346	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR1	Cloudy	13:17	1-hour TSP	225	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR1	Cloudy	14:19	1-hour TSP	150	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR1	Cloudy	15:21	1-hour TSP	183	ug/m3
TMCLKL	HY/2012/08	2014-12-02	AQMS1	Cloudy	13:29	1-hour TSP	115	ug/m3
TMCLKL	HY/2012/08	2014-12-02	AQMS1	Cloudy	14:31	1-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2014-12-02	AQMS1	Cloudy	15:33	1-hour TSP	124	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR1	Cloudy	08:38	1-hour TSP	323	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR1	Cloudy	09:40	1-hour TSP	261	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR1	Cloudy	10:42	1-hour TSP	295	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR5	Cloudy	08:27	1-hour TSP	209	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR5	Cloudy	09:29	1-hour TSP	165	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR5	Cloudy	10:31	1-hour TSP	171	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR6	Cloudy	08:16	1-hour TSP	90	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR6	Cloudy	09:18	1-hour TSP	79	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR6	Cloudy	10:20	1-hour TSP	98	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR10	Cloudy	08:05	1-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR10	Cloudy	09:07	1-hour TSP	60	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR10	Cloudy	10:09	1-hour TSP	58	ug/m3
TMCLKL	HY/2012/08	2014-12-05	AQMS1	Cloudy	08:50	1-hour TSP	107	ug/m3
TMCLKL	HY/2012/08	2014-12-05	AQMS1	Cloudy	09:52	1-hour TSP	88	ug/m3
TMCLKL	HY/2012/08	2014-12-05	AQMS1	Cloudy	10:54	1-hour TSP	84	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-08	AQMS1	Cloudy	14:19	1-hour TSP	135	ug/m3
TMCLKL	HY/2012/08	2014-12-08	AQMS1	Cloudy	15:21	1-hour TSP	185	ug/m3
TMCLKL	HY/2012/08	2014-12-08	AQMS1	Cloudy	16:23	1-hour TSP	148	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR1	Cloudy	14:08	1-hour TSP	301	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR1	Cloudy	15:10	1-hour TSP	303	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR1	Cloudy	16:12	1-hour TSP	236	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR5	Cloudy	13:56	1-hour TSP	236	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR5	Cloudy	14:58	1-hour TSP	230	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR5	Cloudy	16:00	1-hour TSP	196	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR6	Cloudy	13:46	1-hour TSP	132	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR6	Cloudy	14:48	1-hour TSP	167	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR6	Cloudy	15:50	1-hour TSP	195	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR10	Cloudy	13:35	1-hour TSP	83	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR10	Cloudy	14:37	1-hour TSP	111	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR10	Cloudy	15:39	1-hour TSP	138	ug/m3
TMCLKL	HY/2012/08	2014-12-11	AQMS1	Sunny	14:44	1-hour TSP	194	ug/m3
TMCLKL	HY/2012/08	2014-12-11	AQMS1	Sunny	15:46	1-hour TSP	151	ug/m3
TMCLKL	HY/2012/08	2014-12-11	AQMS1	Sunny	16:48	1-hour TSP	165	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR1	Sunny	14:32	1-hour TSP	242	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR1	Sunny	15:34	1-hour TSP	241	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR1	Sunny	16:36	1-hour TSP	296	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR5	Sunny	14:22	1-hour TSP	285	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR5	Sunny	15:24	1-hour TSP	242	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR5	Sunny	16:26	1-hour TSP	227	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR6	Sunny	14:11	1-hour TSP	309	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR6	Sunny	15:13	1-hour TSP	246	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR6	Sunny	16:15	1-hour TSP	208	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR10	Sunny	14:00	1-hour TSP	120	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR10	Sunny	15:02	1-hour TSP	163	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR10	Sunny	16:04	1-hour TSP	155	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-14	AQMS1	Sunny	08:45	1-hour TSP	183	ug/m3
TMCLKL	HY/2012/08	2014-12-14	AQMS1	Sunny	09:47	1-hour TSP	118	ug/m3
TMCLKL	HY/2012/08	2014-12-14	AQMS1	Sunny	10:49	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR1	Sunny	08:34	1-hour TSP	329	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR1	Sunny	09:36	1-hour TSP	223	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR1	Sunny	10:38	1-hour TSP	190	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR5	Sunny	08:23	1-hour TSP	273	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR5	Sunny	09:25	1-hour TSP	158	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR5	Sunny	10:27	1-hour TSP	117	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR6	Sunny	08:12	1-hour TSP	177	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR6	Sunny	09:14	1-hour TSP	109	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR6	Sunny	10:16	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR10	Sunny	08:00	1-hour TSP	151	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR10	Sunny	09:02	1-hour TSP	124	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR10	Sunny	10:04	1-hour TSP	133	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR10	Sunny	12:57	1-hour TSP	218	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR10	Sunny	13:59	1-hour TSP	245	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR10	Sunny	15:01	1-hour TSP	128	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR6	Sunny	13:09	1-hour TSP	100	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR6	Sunny	14:11	1-hour TSP	91	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR6	Sunny	15:13	1-hour TSP	181	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR5	Sunny	13:20	1-hour TSP	207	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR5	Sunny	14:22	1-hour TSP	212	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR5	Sunny	15:24	1-hour TSP	232	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR1	Sunny	13:30	1-hour TSP	298	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR1	Sunny	14:32	1-hour TSP	298	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR1	Sunny	15:34	1-hour TSP	233	ug/m3
TMCLKL	HY/2012/08	2014-12-17	AQMS1	Sunny	13:42	1-hour TSP	325	ug/m3
TMCLKL	HY/2012/08	2014-12-17	AQMS1	Sunny	14:44	1-hour TSP	348	ug/m3
TMCLKL	HY/2012/08	2014-12-17	AQMS1	Sunny	15:46	1-hour TSP	333	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-20	ASR10	Sunny	08:00	1-hour TSP	124	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR10	Sunny	09:02	1-hour TSP	79	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR10	Sunny	10:04	1-hour TSP	89	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR6	Sunny	08:10	1-hour TSP	159	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR6	Sunny	09:12	1-hour TSP	117	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR6	Sunny	10:14	1-hour TSP	81	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR5	Sunny	08:23	1-hour TSP	272	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR5	Sunny	09:25	1-hour TSP	238	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR5	Sunny	10:27	1-hour TSP	212	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR1	Sunny	08:33	1-hour TSP	238	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR1	Sunny	09:35	1-hour TSP	219	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR1	Sunny	10:37	1-hour TSP	171	ug/m3
TMCLKL	HY/2012/08	2014-12-20	AQMS1	Sunny	08:45	1-hour TSP	184	ug/m3
TMCLKL	HY/2012/08	2014-12-20	AQMS1	Sunny	09:47	1-hour TSP	113	ug/m3
TMCLKL	HY/2012/08	2014-12-20	AQMS1	Sunny	10:49	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR10	Cloudy	13:00	1-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR10	Cloudy	14:02	1-hour TSP	82	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR10	Cloudy	15:04	1-hour TSP	95	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR6	Cloudy	13:13	1-hour TSP	141	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR6	Cloudy	14:15	1-hour TSP	180	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR6	Cloudy	15:17	1-hour TSP	151	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR5	Cloudy	13:24	1-hour TSP	216	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR5	Cloudy	14:26	1-hour TSP	263	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR5	Cloudy	15:28	1-hour TSP	271	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR1	Cloudy	13:35	1-hour TSP	232	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR1	Cloudy	14:37	1-hour TSP	254	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR1	Cloudy	15:39	1-hour TSP	190	ug/m3
TMCLKL	HY/2012/08	2014-12-23	AQMS1	Cloudy	13:46	1-hour TSP	168	ug/m3
TMCLKL	HY/2012/08	2014-12-23	AQMS1	Cloudy	14:48	1-hour TSP	138	ug/m3
TMCLKL	HY/2012/08	2014-12-23	AQMS1	Cloudy	15:50	1-hour TSP	166	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-26	ASR10	Cloudy	08:18	1-hour TSP	73	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR10	Cloudy	09:20	1-hour TSP	63	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR10	Cloudy	10:22	1-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR6	Cloudy	08:29	1-hour TSP	104	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR6	Cloudy	09:31	1-hour TSP	83	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR6	Cloudy	10:33	1-hour TSP	116	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR5	Cloudy	08:42	1-hour TSP	154	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR5	Cloudy	09:44	1-hour TSP	109	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR5	Cloudy	10:46	1-hour TSP	135	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR1	Cloudy	08:54	1-hour TSP	117	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR1	Cloudy	09:56	1-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR1	Cloudy	10:58	1-hour TSP	104	ug/m3
TMCLKL	HY/2012/08	2014-12-26	AQMS1	Cloudy	09:05	1-hour TSP	122	ug/m3
TMCLKL	HY/2012/08	2014-12-26	AQMS1	Cloudy	10:07	1-hour TSP	101	ug/m3
TMCLKL	HY/2012/08	2014-12-26	AQMS1	Cloudy	11:09	1-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR10	Sunny	14:00	1-hour TSP	86	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR10	Sunny	15:02	1-hour TSP	71	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR10	Sunny	16:04	1-hour TSP	78	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR6	Sunny	14:11	1-hour TSP	85	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR6	Sunny	15:13	1-hour TSP	66	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR6	Sunny	16:15	1-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR5	Sunny	14:23	1-hour TSP	95	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR5	Sunny	15:25	1-hour TSP	115	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR5	Sunny	16:27	1-hour TSP	128	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR1	Sunny	14:35	1-hour TSP	73	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR1	Sunny	15:37	1-hour TSP	73	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR1	Sunny	16:39	1-hour TSP	120	ug/m3
TMCLKL	HY/2012/08	2014-12-29	AQMS1	Sunny	14:46	1-hour TSP	86	ug/m3
TMCLKL	HY/2012/08	2014-12-29	AQMS1	Sunny	15:48	1-hour TSP	114	ug/m3
TMCLKL	HY/2012/08	2014-12-29	AQMS1	Sunny	16:50	1-hour TSP	164	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-02	ASR6	Cloudy	16:01	24-hour TSP	84	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR10	Cloudy	15:49	24-hour TSP	65	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR5	Cloudy	16:02	24-hour TSP	127	ug/m3
TMCLKL	HY/2012/08	2014-12-02	ASR1	Cloudy	16:23	24-hour TSP	100	ug/m3
TMCLKL	HY/2012/08	2014-12-02	AQMS1	Cloudy	16:35	24-hour TSP	79	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR1	Cloudy	11:44	24-hour TSP	118	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR5	Cloudy	11:33	24-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR6	Cloudy	11:22	24-hour TSP	81	ug/m3
TMCLKL	HY/2012/08	2014-12-05	ASR10	Cloudy	11:11	24-hour TSP	59	ug/m3
TMCLKL	HY/2012/08	2014-12-05	AQMS1	Cloudy	11:56	24-hour TSP	86	ug/m3
TMCLKL	HY/2012/08	2014-12-08	AQMS1	Cloudy	17:25	24-hour TSP	117	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR1	Cloudy	17:14	24-hour TSP	116	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR5	Cloudy	17:02	24-hour TSP	124	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR6	Cloudy	16:52	24-hour TSP	124	ug/m3
TMCLKL	HY/2012/08	2014-12-08	ASR10	Cloudy	16:41	24-hour TSP	78	ug/m3
TMCLKL	HY/2012/08	2014-12-11	AQMS1	Sunny	17:50	24-hour TSP	131	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR1	Sunny	17:38	24-hour TSP	129	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR5	Sunny	17:28	24-hour TSP	123	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR6	Sunny	17:17	24-hour TSP	125	ug/m3
TMCLKL	HY/2012/08	2014-12-11	ASR10	Sunny	17:06	24-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	2014-12-14	AQMS1	Sunny	11:51	24-hour TSP	98	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR1	Sunny	11:40	24-hour TSP	112	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR5	Sunny	11:29	24-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR6	Sunny	11:18	24-hour TSP	90	ug/m3
TMCLKL	HY/2012/08	2014-12-14	ASR10	Sunny	11:06	24-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR10	Sunny	16:03	24-hour TSP	82	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR6	Sunny	16:15	24-hour TSP	103	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR5	Sunny	16:26	24-hour TSP	127	ug/m3
TMCLKL	HY/2012/08	2014-12-17	ASR1	Sunny	16:36	24-hour TSP	147	ug/m3
TMCLKL	HY/2012/08	2014-12-17	AQMS1	Sunny	16:48	24-hour TSP	155	ug/m3

Project	Works	Date	Station	Weather	Start time	Parameters	Results	units
TMCLKL	HY/2012/08	2014-12-20	ASR10	Sunny	11:06	24-hour TSP	68	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR6	Sunny	11:16	24-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR5	Sunny	11:29	24-hour TSP	117	ug/m3
TMCLKL	HY/2012/08	2014-12-20	ASR1	Sunny	11:39	24-hour TSP	128	ug/m3
TMCLKL	HY/2012/08	2014-12-20	AQMS1	Sunny	11:51	24-hour TSP	92	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR10	Cloudy	16:06	24-hour TSP	91	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR6	Cloudy	16:19	24-hour TSP	116	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR5	Cloudy	16:30	24-hour TSP	151	ug/m3
TMCLKL	HY/2012/08	2014-12-23	ASR1	Cloudy	16:41	24-hour TSP	139	ug/m3
TMCLKL	HY/2012/08	2014-12-23	AQMS1	Cloudy	16:52	24-hour TSP	127	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR10	Cloudy	11:24	24-hour TSP	64	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR6	Cloudy	11:35	24-hour TSP	80	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR5	Cloudy	11:48	24-hour TSP	93	ug/m3
TMCLKL	HY/2012/08	2014-12-26	ASR1	Cloudy	12:00	24-hour TSP	82	ug/m3
TMCLKL	HY/2012/08	2014-12-26	AQMS1	Cloudy	12:11	24-hour TSP	71	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR10	Sunny	17:06	24-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR6	Sunny	17:17	24-hour TSP	76	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR5	Sunny	17:29	24-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	2014-12-29	ASR1	Sunny	17:41	24-hour TSP	109	ug/m3
TMCLKL	HY/2012/08	2014-12-29	AQMS1	Sunny	17:52	24-hour TSP	72	ug/m3

Appendix H

Meteorological Data

Meteorological Data for Impact Monitoring in the reporting period

Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/02	0:00	3.1	45
14/12/02	1:00	2.2	43
14/12/02	2:00	3.1	36
14/12/02	3:00	3.1	32
14/12/02	4:00	3.1	21
14/12/02	5:00	4	24
14/12/02	6:00	4	28
14/12/02	7:00	3.1	25
14/12/02	8:00	3.1	23
14/12/02	9:00	3.6	33
14/12/02	10:00	3.1	32
14/12/02	11:00	2.7	38
14/12/02	12:00	2.2	33
14/12/02	13:00	1.8	19
14/12/02	14:00	1.8	25
14/12/02	15:00	2.2	34
14/12/02	16:00	1.8	62
14/12/02	17:00	2.2	65
14/12/02	18:00	2.2	68
14/12/02	19:00	2.2	61
14/12/02	20:00	2.2	54
14/12/02	21:00	2.2	39
14/12/02	22:00	2.2	51
14/12/02	23:00	2.7	57
14/12/03	0:00	2.7	30
14/12/03	1:00	2.2	55
14/12/03	2:00	2.2	50
14/12/03	3:00	1.8	64
14/12/03	4:00	1.3	27
14/12/03	5:00	1.3	51
14/12/03	6:00	0.9	32
14/12/03	7:00	0.9	44
14/12/03	8:00	1.3	47
14/12/03	9:00	1.3	58
14/12/03	10:00	1.3	62
14/12/03	11:00	1.3	27
14/12/03	12:00	1.8	116
14/12/03	13:00	2.2	124
14/12/03	14:00	1.3	113
14/12/03	15:00	1.3	103
14/12/03	16:00	0.9	127
14/12/03	17:00	1.3	140
14/12/03	18:00	0.4	122
14/12/05	0:00	2.2	42
14/12/05	1:00	3.6	38
14/12/05	2:00	3.6	44
14/12/05	3:00	3.6	41
14/12/05	4:00	2.7	33
14/12/05	5:00	2.7	29
14/12/05	6:00	1.8	62
14/12/05	7:00	2.2	51
14/12/05	8:00	3.1	54
14/12/05	9:00	2.7	55
14/12/05	10:00	1.8	56

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/05	11:00	2.2	37
14/12/05	12:00	2.7	40
14/12/05	13:00	2.2	42
14/12/05	14:00	2.2	41
14/12/05	15:00	0.9	49
14/12/05	16:00	0.4	223
14/12/05	17:00	0.4	91
14/12/05	18:00	0.9	10
14/12/05	19:00	0.4	15
14/12/05	20:00	0.4	13
14/12/05	21:00	0.4	22
14/12/05	22:00	0.4	63
14/12/05	23:00	0.4	100
14/12/06	0:00	0.4	95
14/12/06	1:00	1.8	32
14/12/06	2:00	1.8	45
14/12/06	3:00	1.8	41
14/12/06	4:00	1.3	50
14/12/06	5:00	2.2	52
14/12/06	6:00	2.7	53
14/12/06	7:00	2.7	61
14/12/06	8:00	1.8	54
14/12/06	9:00	1.8	57
14/12/06	10:00	1.8	77
14/12/06	11:00	3.1	123
14/12/06	12:00	3.1	140
14/12/06	13:00	3.6	131
14/12/06	14:00	3.6	119
14/12/06	15:00	3.6	128
14/12/06	16:00	3.6	143
14/12/06	17:00	3.1	122
14/12/06	18:00	3.1	119
14/12/06	19:00	2.2	124
14/12/06	20:00	1.8	101
14/12/06	21:00	1.8	93
14/12/06	22:00	2.7	71
14/12/06	23:00	3.1	105
14/12/08	0:00	1.3	356
14/12/08	1:00	0.9	9
14/12/08	2:00	1.3	48
14/12/08	3:00	0.9	10
14/12/08	4:00	1.3	39
14/12/08	5:00	0.9	44
14/12/08	6:00	0.4	37
14/12/08	7:00	1.8	51
14/12/08	8:00	1.8	53
14/12/08	9:00	0.9	20
14/12/08	10:00	1.3	39
14/12/08	11:00	1.8	61
14/12/08	12:00	1.8	55
14/12/08	13:00	1.3	7
14/12/08	14:00	0.9	116
14/12/08	15:00	0.9	226
14/12/08	16:00	0.9	325

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/08	17:00	0.4	323
14/12/08	18:00	0.4	354
14/12/08	19:00	0.4	356
14/12/08	20:00	0.4	5
14/12/08	21:00	0.4	11
14/12/08	22:00	0	9
14/12/08	23:00	1.3	14
14/12/09	0:00	0.9	77
14/12/09	1:00	1.8	85
14/12/09	2:00	1.8	93
14/12/09	3:00	2.2	135
14/12/09	4:00	0.9	42
14/12/09	5:00	0.4	35
14/12/09	6:00	0.4	33
14/12/09	7:00	0.4	94
14/12/09	8:00	0.4	10
14/12/09	9:00	0.9	96
14/12/09	10:00	1.3	41
14/12/09	11:00	1.3	38
14/12/09	12:00	1.3	168
14/12/09	13:00	0.9	171
14/12/09	14:00	0.4	166
14/12/09	15:00	0.9	265
14/12/09	16:00	0.9	24
14/12/09	17:00	1.3	251
14/12/09	18:00	0.4	246
14/12/09	19:00	2.2	221
14/12/09	20:00	2.7	117
14/12/09	21:00	1.8	102
14/12/09	22:00	0.9	89
14/12/09	23:00	0.4	47
14/12/11	0:00	0.4	351
14/12/11	1:00	0.4	55
14/12/11	2:00	0.4	39
14/12/11	3:00	0.4	5
14/12/11	4:00	0	335
14/12/11	5:00	0.4	326
14/12/11	6:00	0.4	358
14/12/11	7:00	0.9	39
14/12/11	8:00	0.9	32
14/12/11	9:00	0.9	44
14/12/11	10:00	1.8	51
14/12/11	11:00	1.8	56
14/12/11	12:00	1.8	59
14/12/11	13:00	1.8	60
14/12/11	14:00	1.8	41
14/12/11	15:00	1.8	473
14/12/11	16:00	1.8	38
14/12/11	17:00	2.7	35
14/12/11	18:00	2.2	39
14/12/11	19:00	2.2	62
14/12/11	20:00	2.2	64
14/12/11	21:00	2.2	22
14/12/11	22:00	1.8	5

Meteorological Data for Impact Monitoring in the reporting period

Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/11	23:00	1.3	36
14/12/12	0:00	0.9	34
14/12/12	1:00	1.8	52
14/12/12	2:00	1.8	58
14/12/12	3:00	1.3	71
14/12/12	4:00	0.9	55
14/12/12	5:00	0.4	271
14/12/12	6:00	0.9	349
14/12/12	7:00	0.9	352
14/12/12	8:00	0.9	344
14/12/12	9:00	1.3	359
14/12/12	10:00	1.3	5
14/12/12	11:00	1.3	1
14/12/12	12:00	1.3	6
14/12/12	13:00	2.2	357
14/12/12	14:00	3.1	351
14/12/12	15:00	2.2	5
14/12/12	16:00	1.3	3
14/12/12	17:00	1.8	50
14/12/12	18:00	0.4	11
14/12/12	19:00	2.2	8
14/12/12	20:00	2.7	19
14/12/12	21:00	4.5	33
14/12/12	22:00	3.1	21
14/12/12	23:00	3.1	25
14/12/14	0:00	0	10
14/12/14	1:00	0	357
14/12/14	2:00	1.8	33
14/12/14	3:00	3.1	41
14/12/14	4:00	3.1	46
14/12/14	5:00	3.6	51
14/12/14	6:00	3.6	39
14/12/14	7:00	3.6	40
14/12/14	8:00	3.1	25
14/12/14	9:00	3.1	33
14/12/14	10:00	1.8	95
14/12/14	11:00	1.3	124
14/12/14	12:00	1.3	109
14/12/14	13:00	0.4	226
14/12/14	14:00	1.3	230
14/12/14	15:00	0.9	268
14/12/14	16:00	0.4	271
14/12/14	17:00	0.4	233
14/12/14	18:00	0.4	171
14/12/14	19:00	2.7	162
14/12/14	20:00	0.4	94
14/12/14	21:00	0	3
14/12/14	22:00	0.9	51
14/12/14	23:00	1.3	100
14/12/15	0:00	0.4	32
14/12/15	1:00	1.3	61
14/12/15	2:00	0.9	51
14/12/15	3:00	1.3	-
14/12/15	4:00	0.9	44

Meteorological Data for Impact Monitoring in the reporting period

Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/15	5:00	0.9	40
14/12/15	6:00	1.8	52
14/12/15	7:00	1.3	63
14/12/15	8:00	1.8	67
14/12/15	9:00	1.8	58
14/12/15	10:00	1.3	44
14/12/15	11:00	0.9	39
14/12/15	12:00	1.3	67
14/12/15	13:00	1.8	49
14/12/15	14:00	1.8	21
14/12/15	15:00	1.8	63
14/12/15	16:00	1.8	55
14/12/15	17:00	1.3	54
14/12/15	18:00	0.9	38
14/12/15	19:00	0.4	44
14/12/15	20:00	0	42
14/12/15	21:00	0.9	49
14/12/15	22:00	0	5
14/12/15	23:00	0.9	8
14/12/17	0:00	4.5	48
14/12/17	1:00	5.4	45
14/12/17	2:00	4.9	41
14/12/17	3:00	5.4	42
14/12/17	4:00	5.8	50
14/12/17	5:00	4.9	15
14/12/17	6:00	5.8	19
14/12/17	7:00	4.9	20
14/12/17	8:00	5.8	25
14/12/17	9:00	6.3	36
14/12/17	10:00	6.7	51
14/12/17	11:00	5.4	44
14/12/17	12:00	4	48
14/12/17	13:00	3.1	52
14/12/17	14:00	3.1	59
14/12/17	15:00	2.7	56
14/12/17	16:00	2.7	60
14/12/17	17:00	2.2	47
14/12/17	18:00	1.8	13
14/12/17	19:00	0	53
14/12/17	20:00	0.9	5
14/12/17	21:00	1.3	11
14/12/17	22:00	1.3	14
14/12/17	23:00	4	37
14/12/18	0:00	4	38
14/12/18	1:00	4	58
14/12/18	2:00	4	60
14/12/18	3:00	3.1	59
14/12/18	4:00	3.1	52
14/12/18	5:00	3.6	47
14/12/18	6:00	3.6	41
14/12/18	7:00	4	40
14/12/18	8:00	4	51
14/12/18	9:00	3.6	50
14/12/18	10:00	3.1	39

Meteorological Data for Impact Monitoring in the reporting period

Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/18	11:00	3.1	37
14/12/18	12:00	2.7	62
14/12/18	13:00	2.2	65
14/12/18	14:00	1.8	64
14/12/18	15:00	1.8	44
14/12/18	16:00	1.8	49
14/12/18	17:00	1.8	18
14/12/18	18:00	1.8	36
14/12/18	19:00	0.9	5
14/12/18	20:00	1.3	47
14/12/18	21:00	1.3	52
14/12/18	22:00	2.2	66
14/12/18	23:00	1.8	77
14/12/20	0:00	1.3	32
14/12/20	1:00	1.3	29
14/12/20	2:00	1.3	65
14/12/20	3:00	2.2	77
14/12/20	4:00	1.8	98
14/12/20	5:00	2.2	45
14/12/20	6:00	2.7	44
14/12/20	7:00	4	39
14/12/20	8:00	4.5	36
14/12/20	9:00	4.5	52
14/12/20	10:00	4	47
14/12/20	11:00	2.2	69
14/12/20	12:00	1.8	100
14/12/20	13:00	0.9	256
14/12/20	14:00	0.4	238
14/12/20	15:00	0.9	271
14/12/20	16:00	0.4	171
14/12/20	17:00	1.8	169
14/12/20	18:00	3.1	132
14/12/20	19:00	0.9	95
14/12/20	20:00	0.9	46
14/12/20	21:00	0.9	52
14/12/20	22:00	1.3	39
14/12/20	23:00	1.8	34
14/12/21	0:00	1.8	62
14/12/21	1:00	1.3	58
14/12/21	2:00	1.3	49
14/12/21	3:00	1.8	51
14/12/21	4:00	2.2	58
14/12/21	5:00	2.2	62
14/12/21	6:00	3.1	67
14/12/21	7:00	4	43
14/12/21	8:00	2.7	44
14/12/21	9:00	2.7	74
14/12/21	10:00	2.2	42
14/12/21	11:00	1.8	33
14/12/21	12:00	1.8	35
14/12/21	13:00	1.3	41
14/12/21	14:00	1.8	2
14/12/21	15:00	2.2	35
14/12/21	16:00	2.2	39

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/21	17:00	1.8	5
14/12/21	18:00	1.8	12
14/12/21	19:00	2.2	5
14/12/21	20:00	1.8	358
14/12/21	21:00	1.3	354
14/12/21	22:00	1.8	46
14/12/21	23:00	1.8	51
14/12/23	0:00	0	7
14/12/23	1:00	1.3	33
14/12/23	2:00	1.8	39
14/12/23	3:00	1.3	51
14/12/23	4:00	1.3	57
14/12/23	5:00	1.8	63
14/12/23	6:00	1.3	52
14/12/23	7:00	1.3	41
14/12/23	8:00	1.8	33
14/12/23	9:00	2.7	39
14/12/23	10:00	2.7	48
14/12/23	11:00	2.7	51
14/12/23	12:00	2.2	58
14/12/23	13:00	2.2	62
14/12/23	14:00	2.7	39
14/12/23	15:00	2.2	41
14/12/23	16:00	2.2	40
14/12/23	17:00	2.2	35
14/12/23	18:00	1.8	60
14/12/23	19:00	2.2	57
14/12/23	20:00	2.2	61
14/12/23	21:00	2.7	31
14/12/23	22:00	2.2	32
14/12/23	23:00	2.7	29
14/12/24	0:00	1.8	52
14/12/24	1:00	1.8	34
14/12/24	2:00	2.7	51
14/12/24	3:00	1.3	68
14/12/24	4:00	0.9	96
14/12/24	5:00	1.8	47
14/12/24	6:00	2.2	82
14/12/24	7:00	1.3	74
14/12/24	8:00	1.8	66
14/12/24	9:00	1.8	51
14/12/24	10:00	0.9	54
14/12/24	11:00	0.4	252
14/12/24	12:00	0.9	219
14/12/24	13:00	1.3	245
14/12/24	14:00	1.3	252
14/12/24	15:00	0.4	236
14/12/24	16:00	0.4	228
14/12/24	17:00	0	254
14/12/24	18:00	0	225
14/12/24	19:00	0	229
14/12/24	20:00	0	247
14/12/24	21:00	0	216
14/12/24	22:00	0	247

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/24	23:00	0	252
14/12/26	0:00	0.4	113
14/12/26	1:00	1.3	121
14/12/26	2:00	0.4	124
14/12/26	3:00	0.4	116
14/12/26	4:00	1.3	167
14/12/26	5:00	1.3	156
14/12/26	6:00	0.9	164
14/12/26	7:00	1.8	118
14/12/26	8:00	2.2	121
14/12/26	9:00	0.9	95
14/12/26	10:00	0.9	46
14/12/26	11:00	2.7	123
14/12/26	12:00	3.1	114
14/12/26	13:00	2.7	131
14/12/26	14:00	1.8	50
14/12/26	15:00	1.8	129
14/12/26	16:00	2.2	170
14/12/26	17:00	0.9	168
14/12/26	18:00	0.4	4
14/12/26	19:00	0	38
14/12/26	20:00	0.4	49
14/12/26	21:00	0.4	125
14/12/26	22:00	0	105
14/12/26	23:00	0.4	94
14/12/27	0:00	0.9	39
14/12/27	1:00	0.4	51
14/12/27	2:00	0.9	48
14/12/27	3:00	0.4	88
14/12/27	4:00	0.4	47
14/12/27	5:00	1.3	100
14/12/27	6:00	1.3	95
14/12/27	7:00	0.4	16
14/12/27	8:00	0.4	40
14/12/27	9:00	0.4	41
14/12/27	10:00	0.9	52
14/12/27	11:00	0.9	55
14/12/27	12:00	1.8	59
14/12/27	13:00	1.8	61
14/12/27	14:00	2.2	41
14/12/27	15:00	2.2	38
14/12/27	16:00	2.2	46
14/12/27	17:00	2.2	44
14/12/27	18:00	1.8	37
14/12/27	19:00	0.9	53
14/12/27	20:00	1.3	62
14/12/27	21:00	1.3	14
14/12/27	22:00	1.3	42
14/12/27	23:00	1.3	40
14/12/29	0:00	0.4	225
14/12/29	1:00	0.4	351
14/12/29	2:00	0	297
14/12/29	3:00	0	-
14/12/29	4:00	0.4	312

Meteorological Data for Impact Monitoring in the reporting period			
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction (degree)
14/12/29	5:00	0.4	305
14/12/29	6:00	0	281
14/12/29	7:00	0	351
14/12/29	8:00	0.9	349
14/12/29	9:00	1.8	5
14/12/29	10:00	1.3	3
14/12/29	11:00	1.8	51
14/12/29	12:00	2.7	36
14/12/29	13:00	3.1	39
14/12/29	14:00	2.7	47
14/12/29	15:00	2.2	52
14/12/29	16:00	1.3	44
14/12/29	17:00	0.4	181
14/12/29	18:00	0.4	224
14/12/29	19:00	0.4	308
14/12/29	20:00	0.9	5
14/12/29	21:00	0.9	9
14/12/29	22:00	0.9	11
14/12/29	23:00	0.4	23
14/12/30	0:00	0.9	12
14/12/30	1:00	0.4	14
14/12/30	2:00	0.4	18
14/12/30	3:00	0.4	16
14/12/30	4:00	0.9	14
14/12/30	5:00	0.9	7
14/12/30	6:00	0.4	6
14/12/30	7:00	0.4	5
14/12/30	8:00	0	5
14/12/30	9:00	0.9	116
14/12/30	10:00	2.2	46
14/12/30	11:00	1.8	49
14/12/30	12:00	0.9	225
14/12/30	13:00	1.3	242
14/12/30	14:00	0.9	165
14/12/30	15:00	0.9	273
14/12/30	16:00	0.4	300
14/12/30	17:00	0.4	171

Remarks: "-" means data unavailable.

Appendix I

Impact Water Quality Monitoring Results

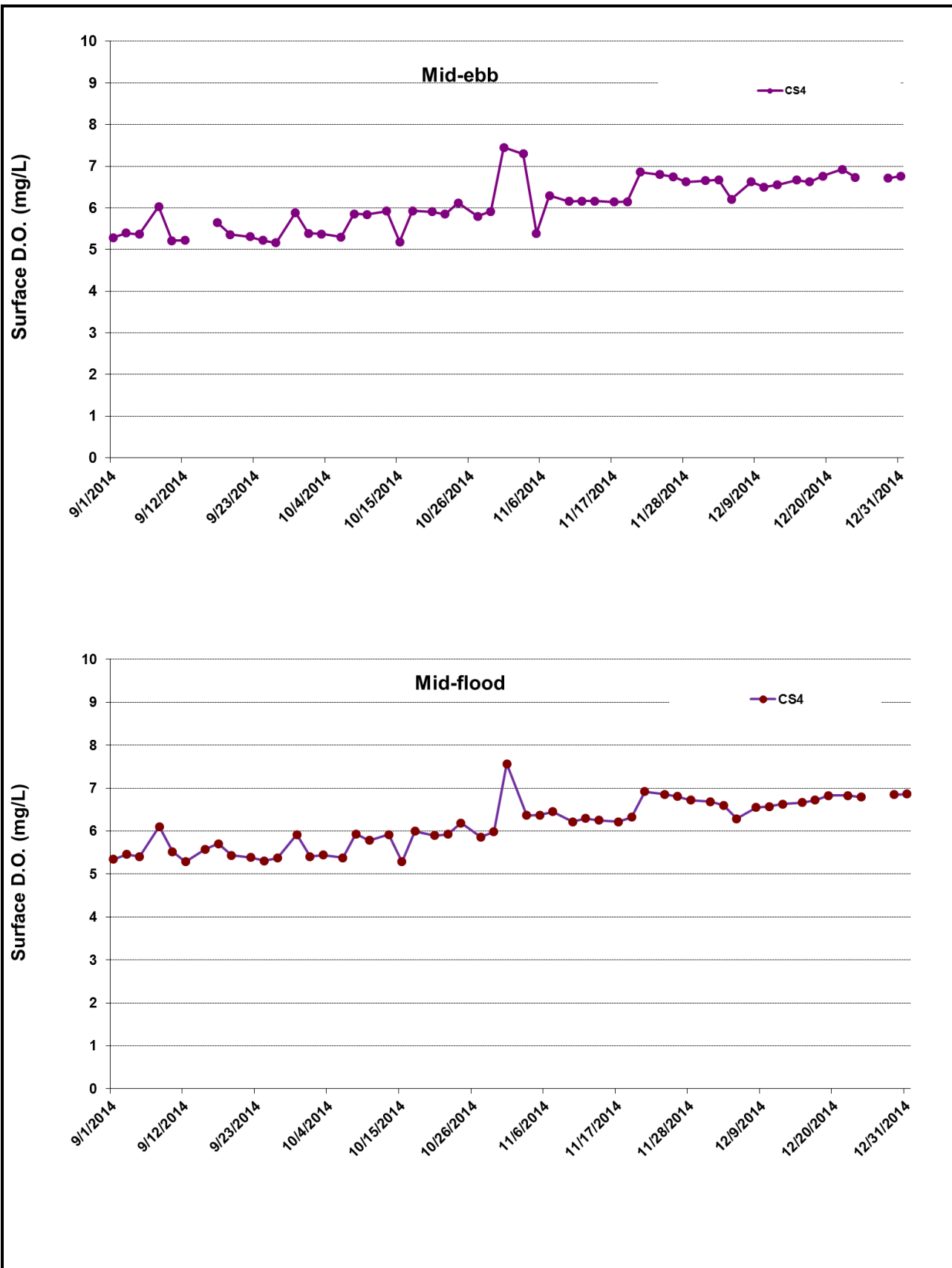


Figure I1 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.
 Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



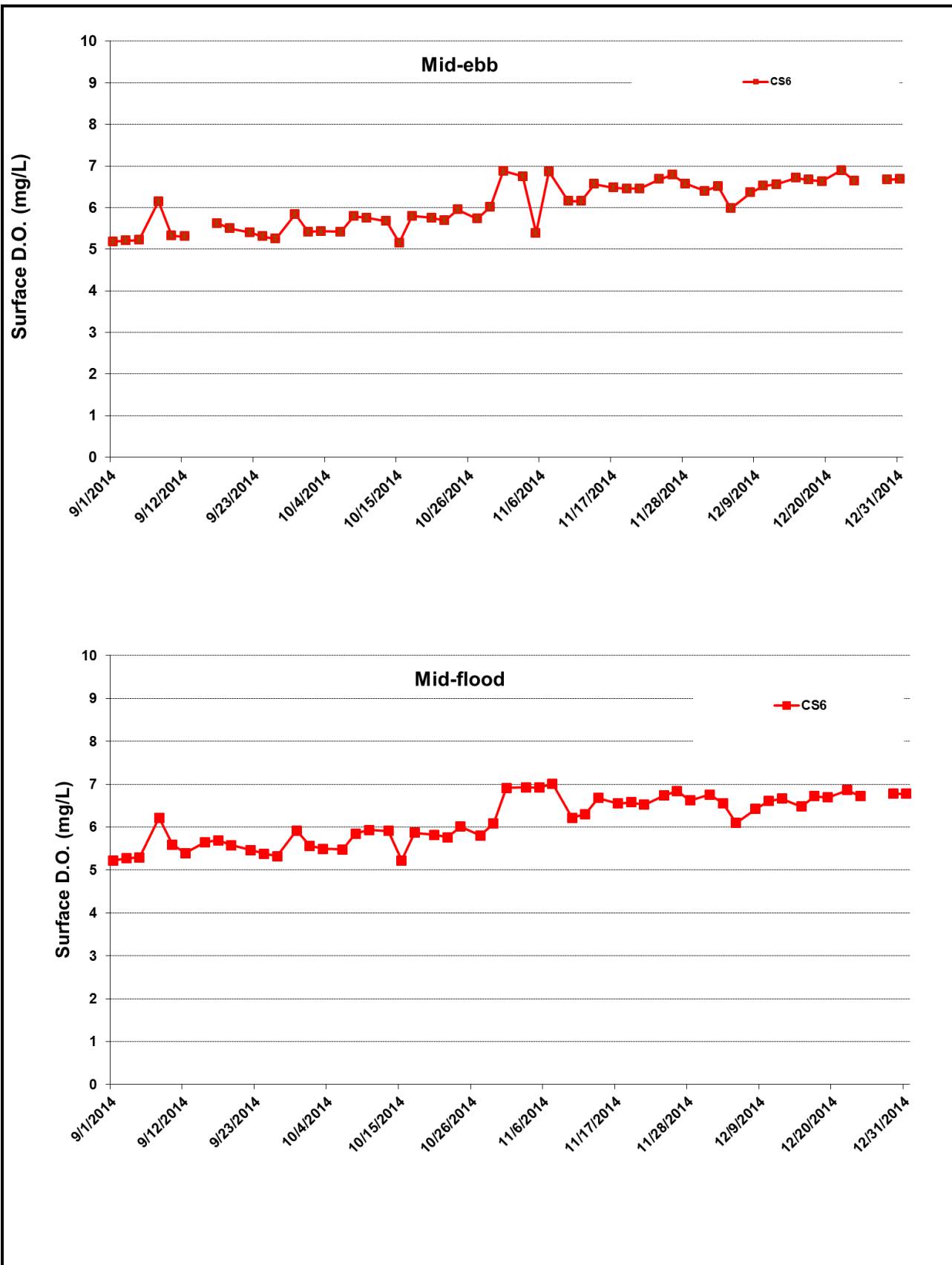


Figure I2 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.
 Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



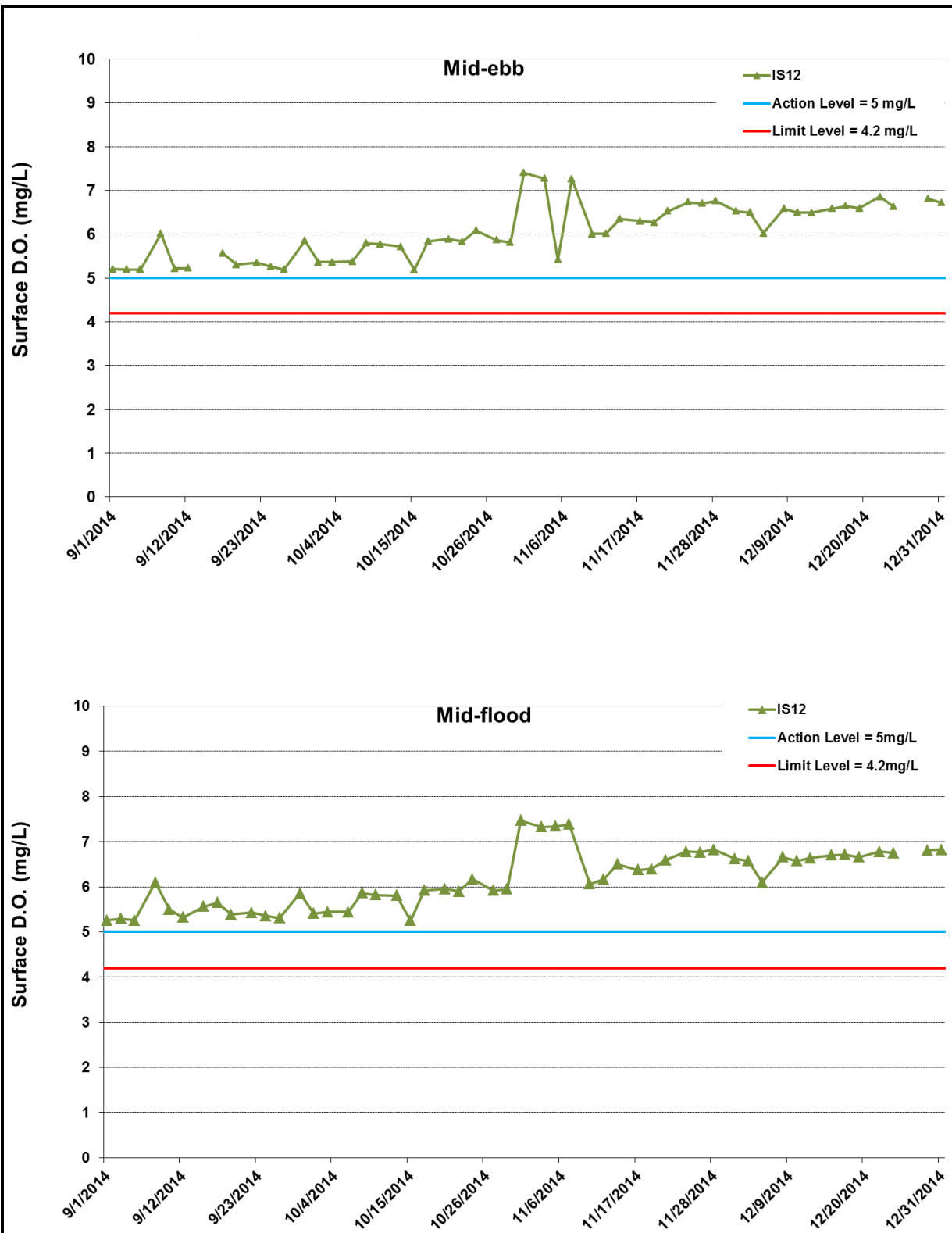


Figure I3 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



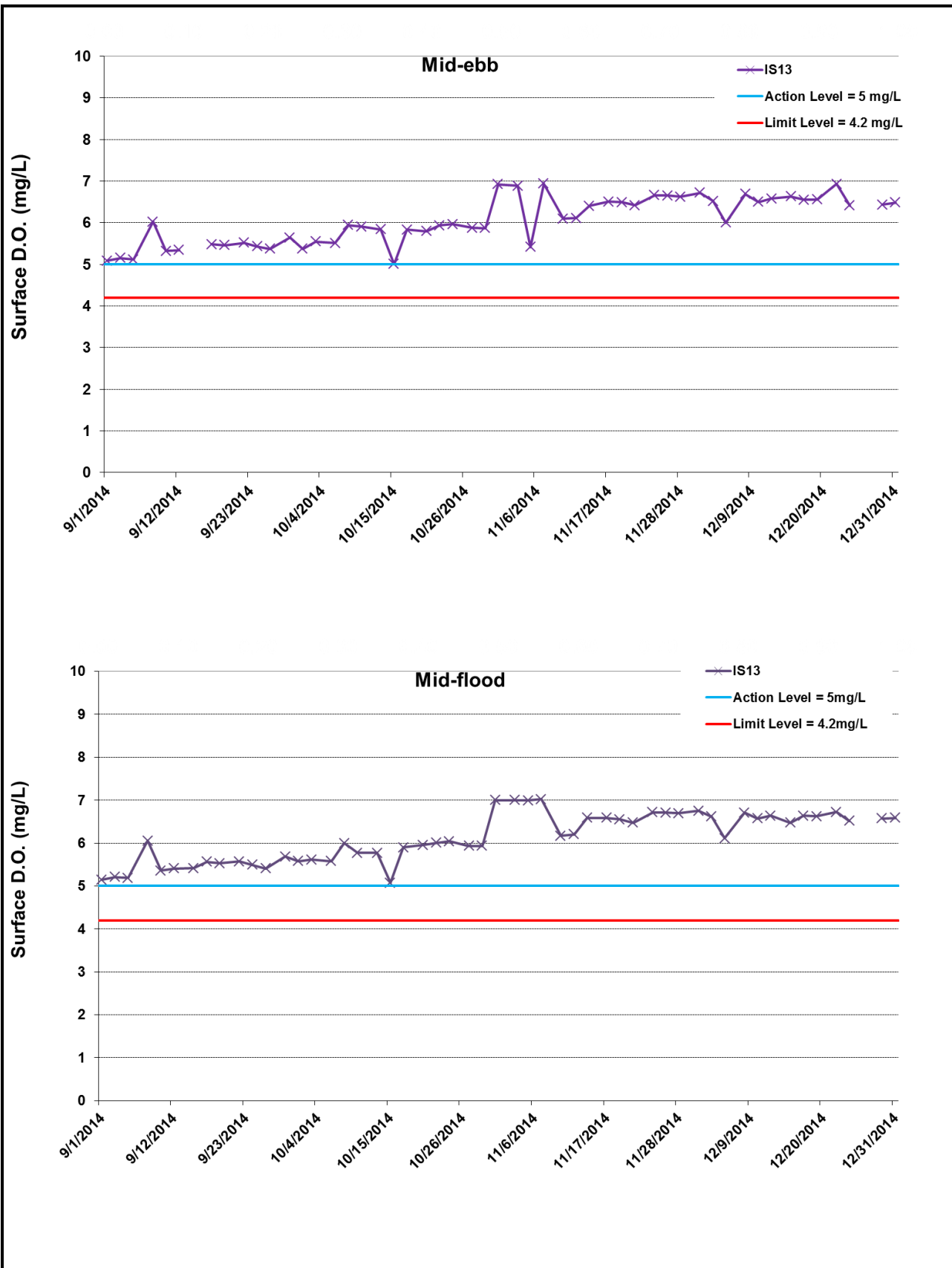
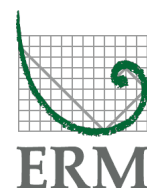


Figure I4 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



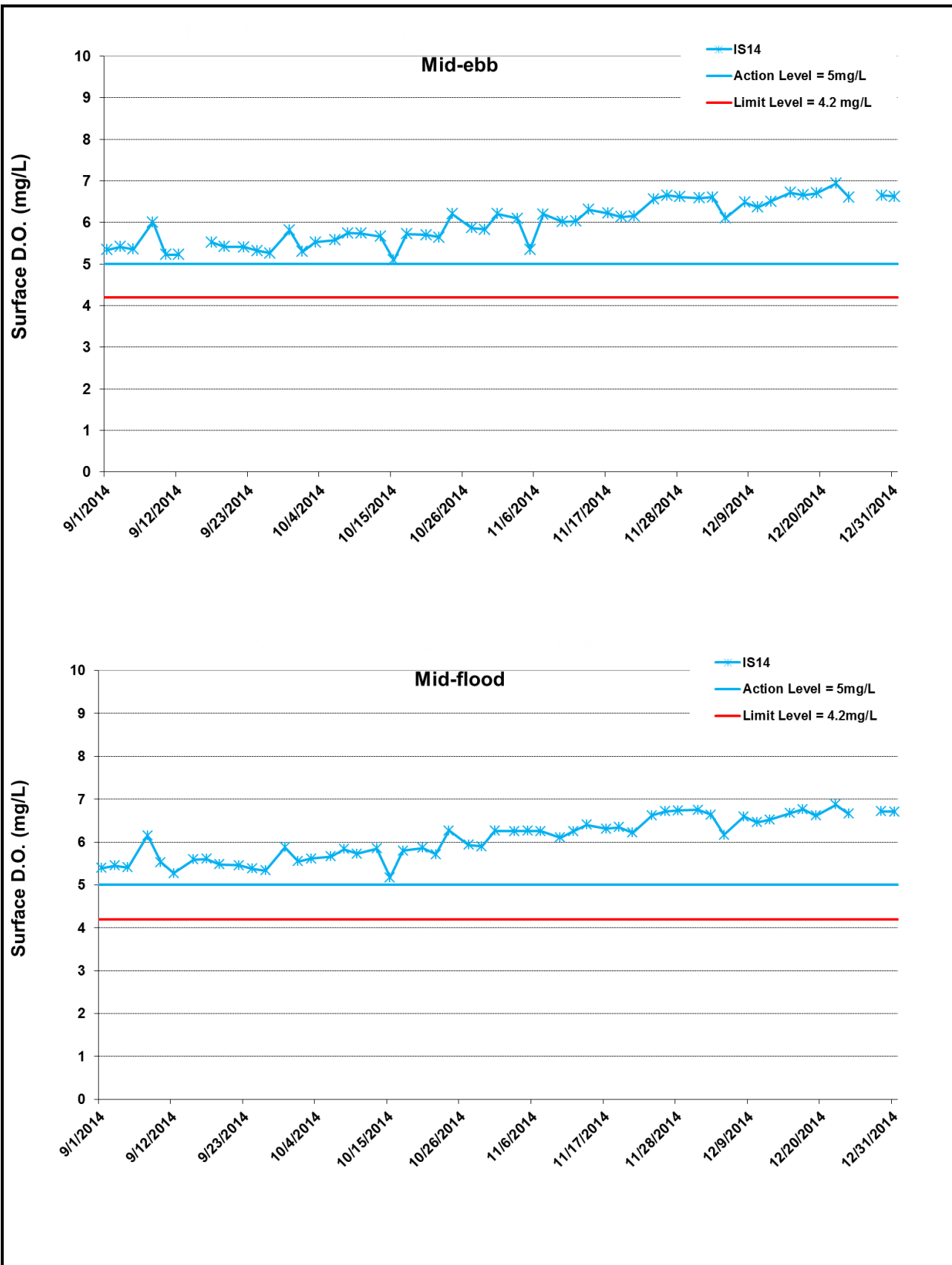


Figure I5 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



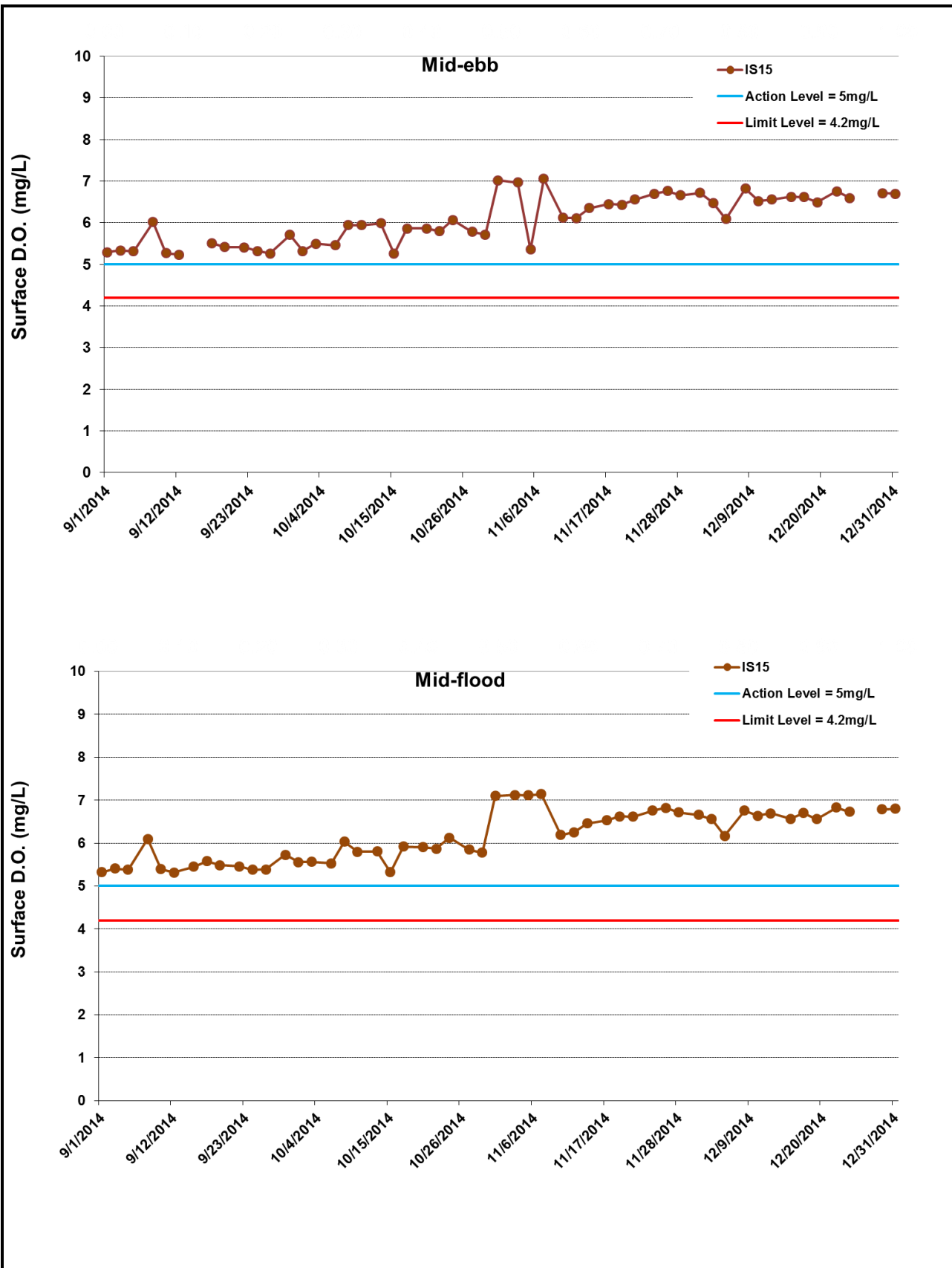
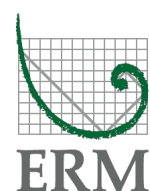


Figure I6 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



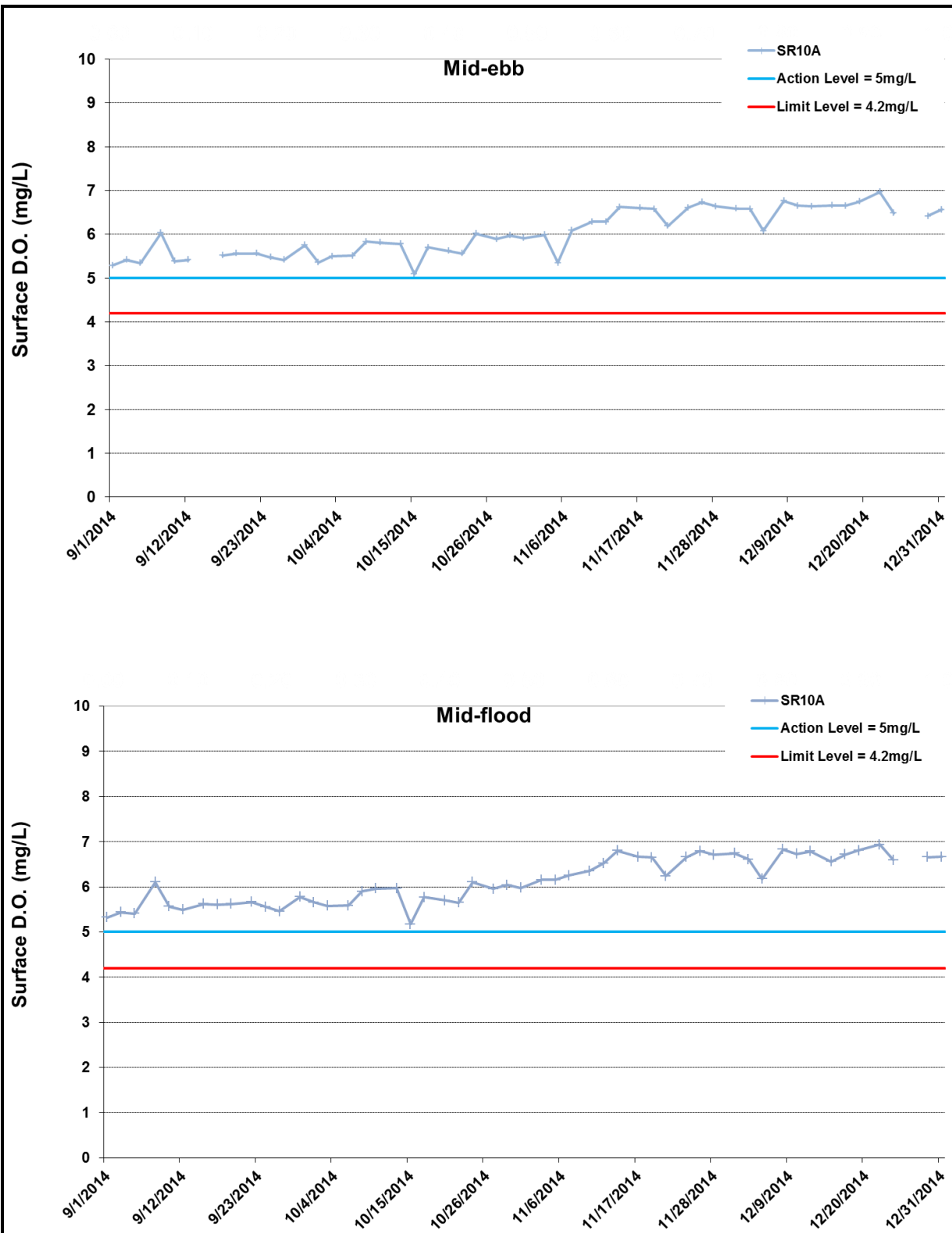


Figure I7 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



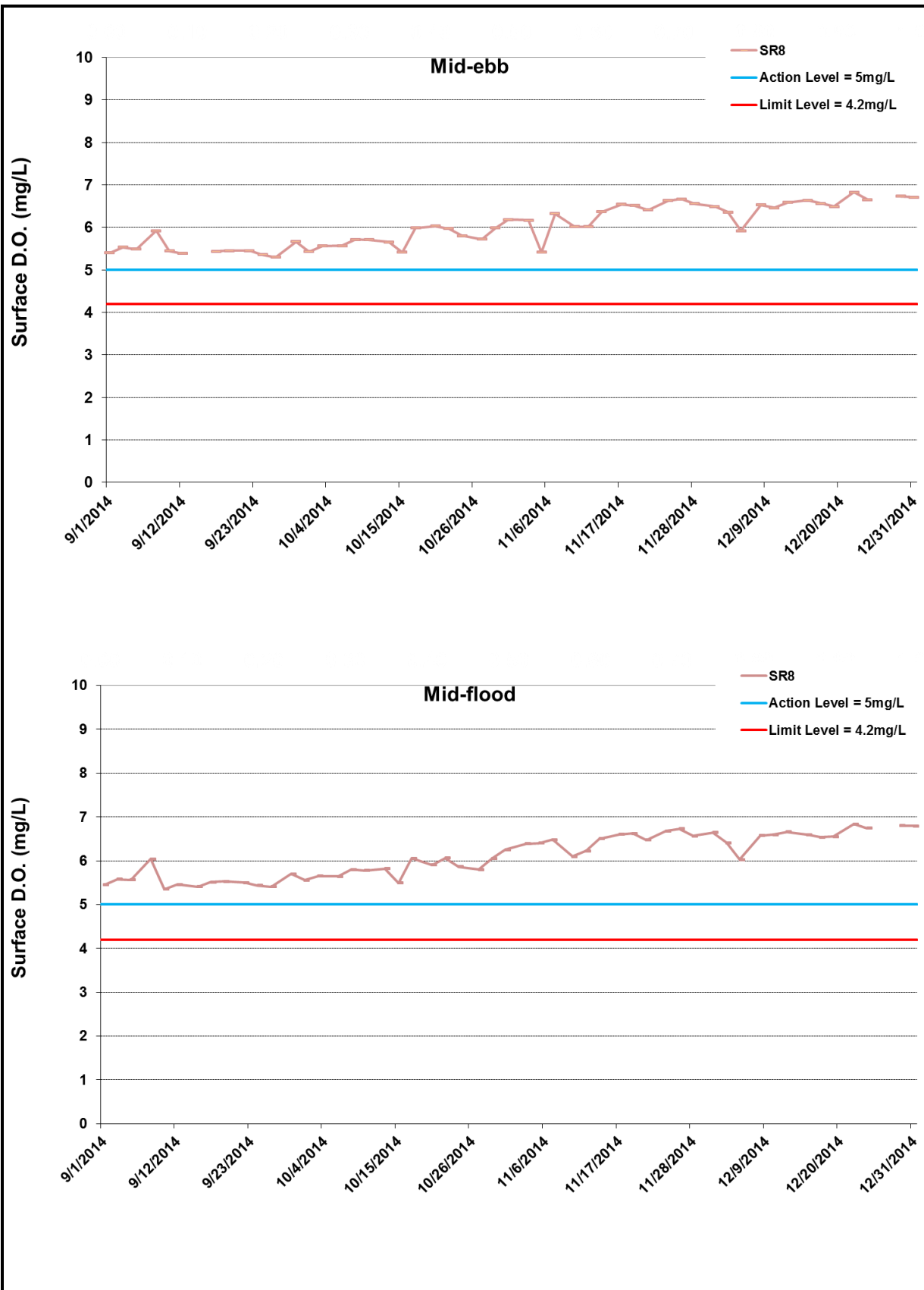
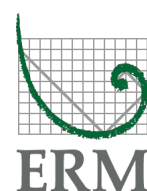


Figure I8 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



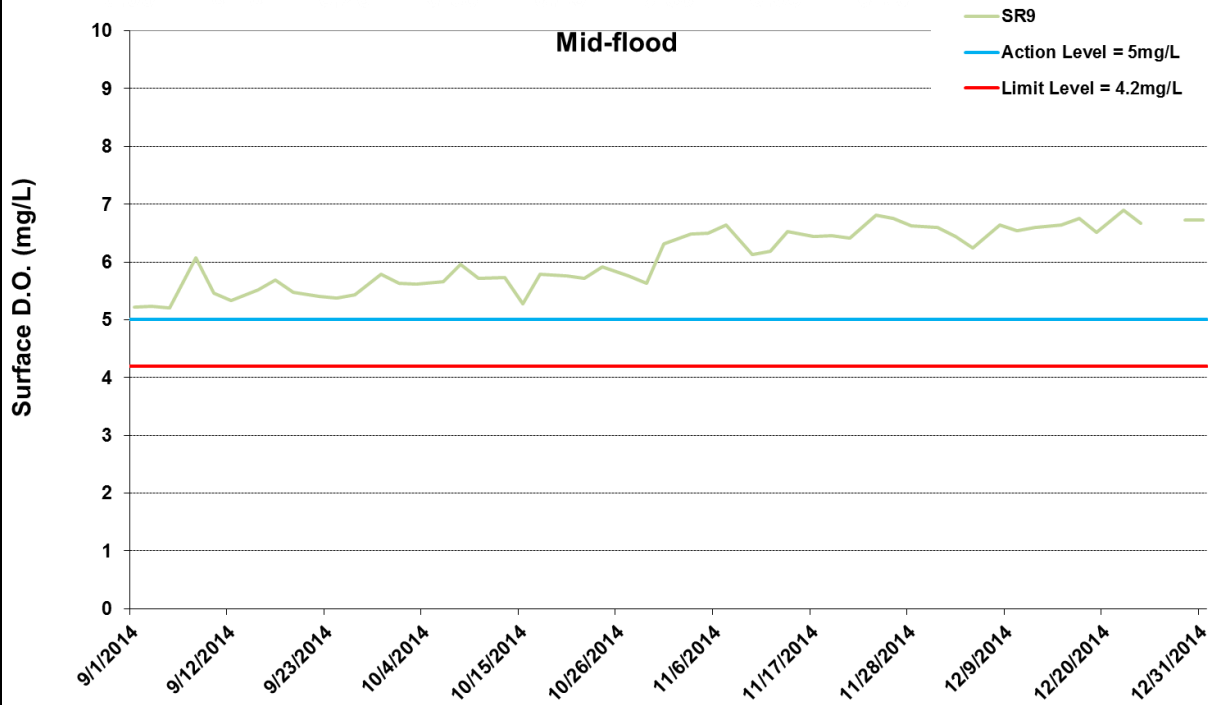
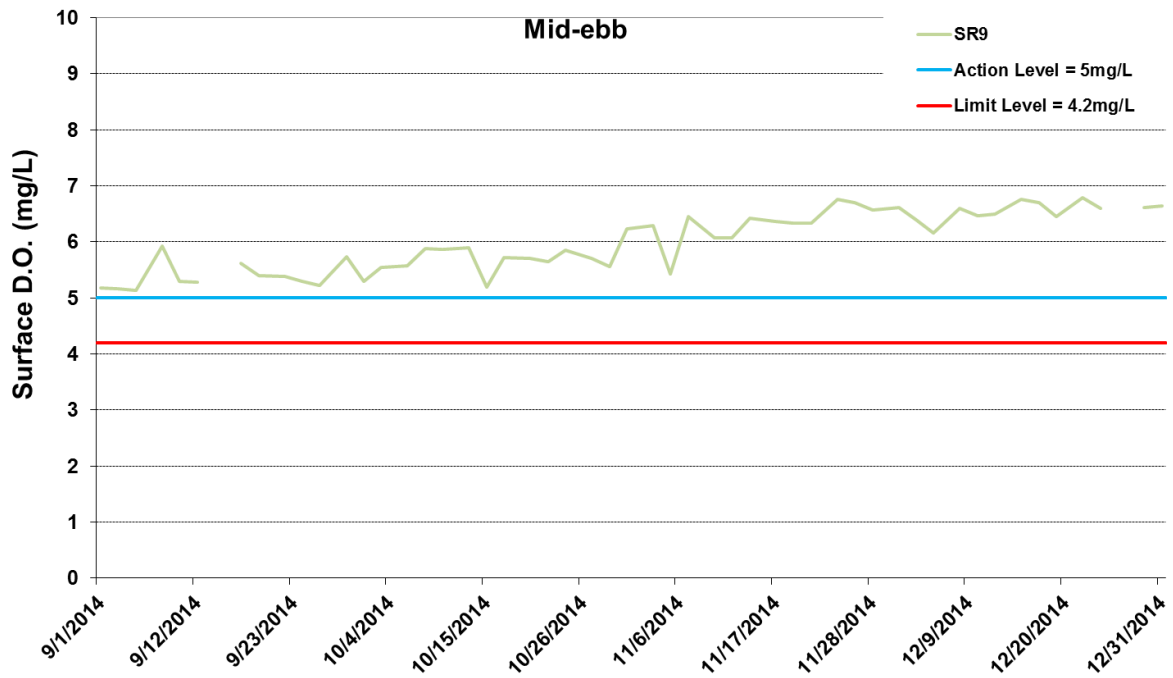
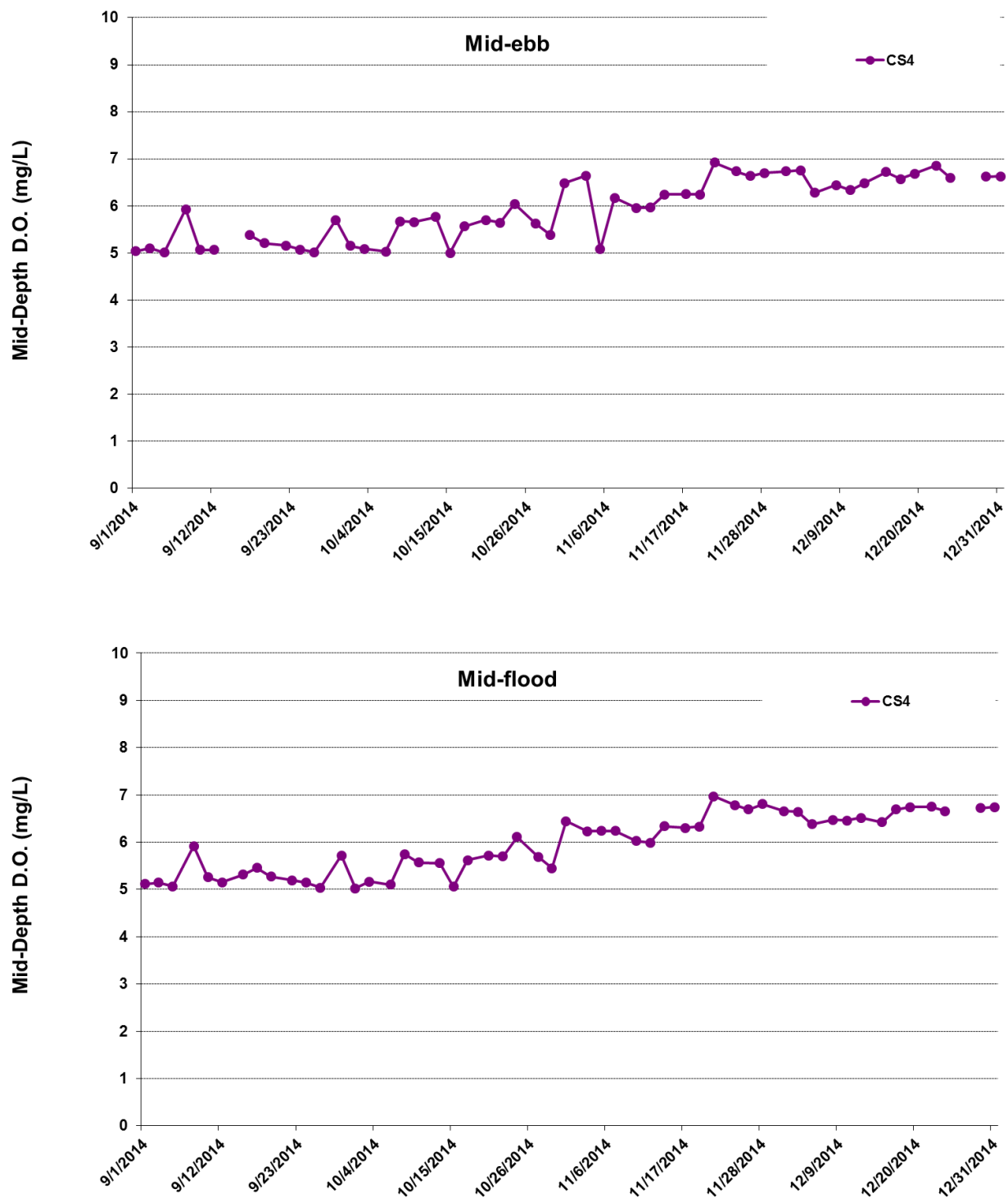


Figure I9 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters between 1 September 2014 and 31 December 2014 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.
 Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls

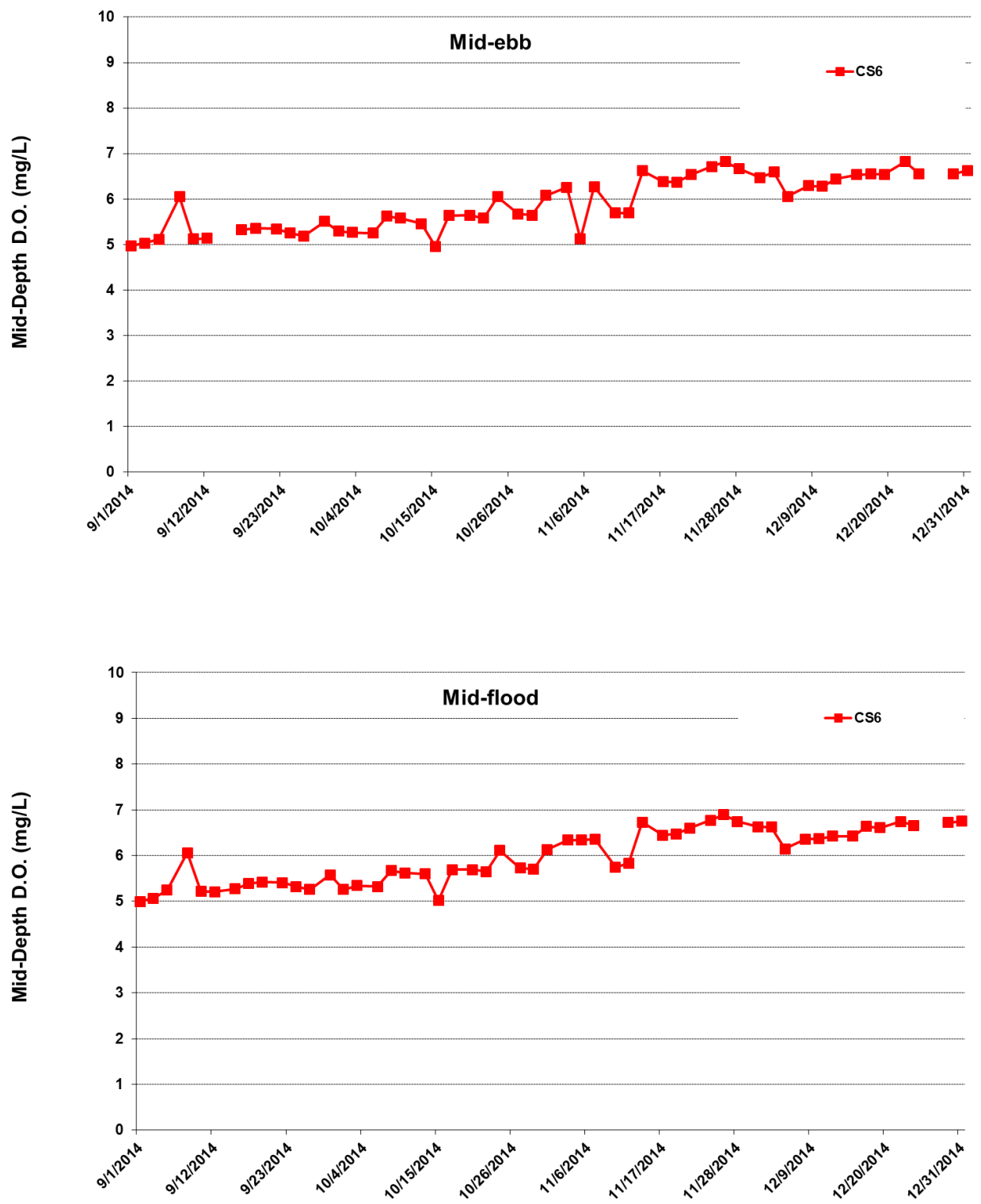




*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I10 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



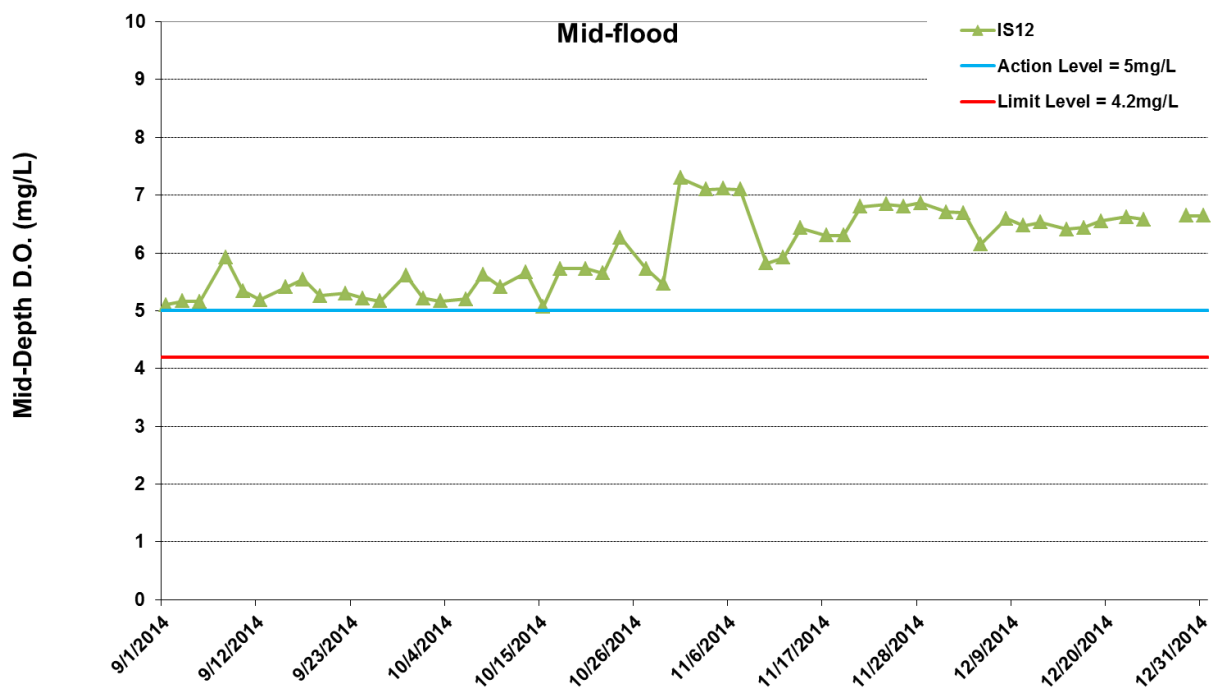
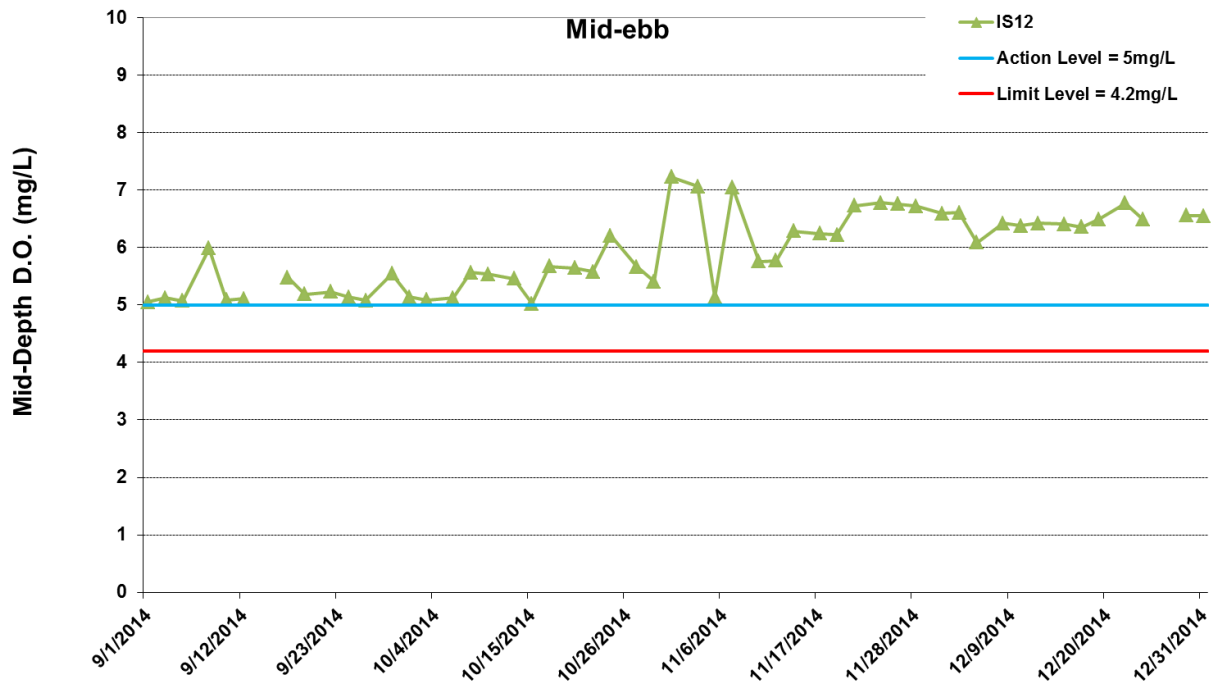


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I11 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls

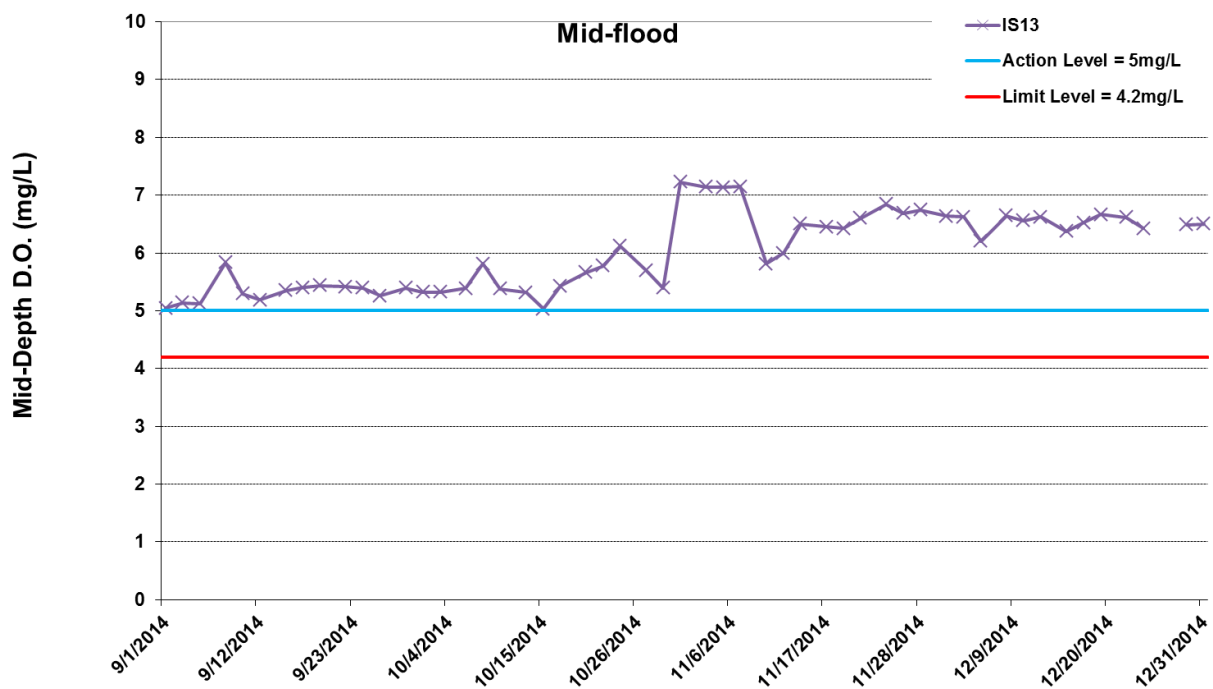
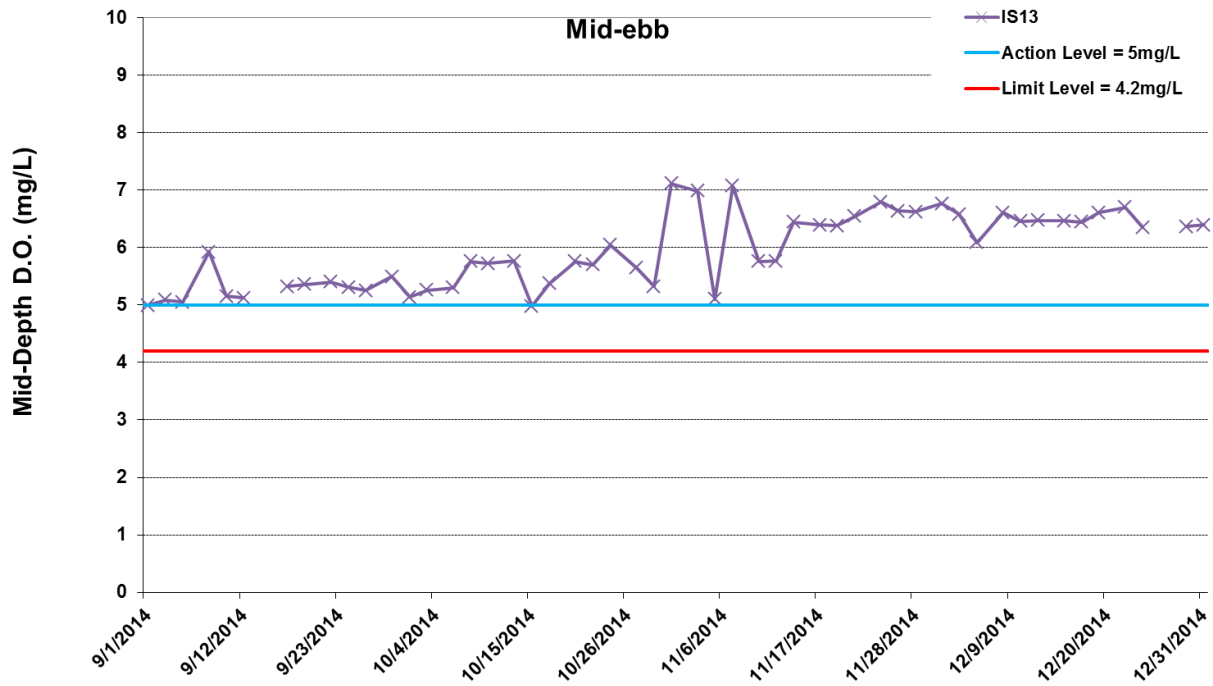


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I12 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



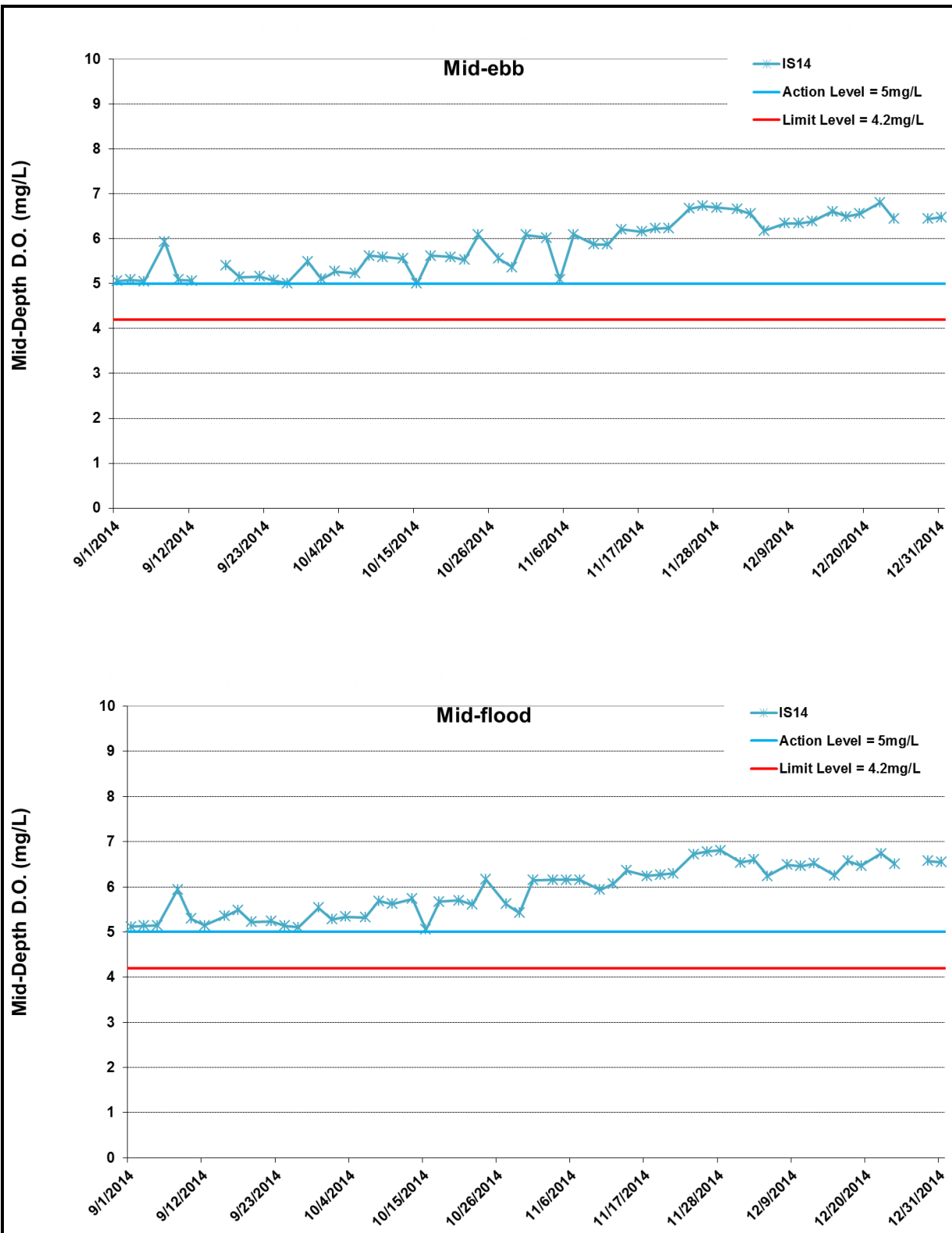


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I13 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref:0212330_Impact-WQM_December2014_graphs_Rev a.xls



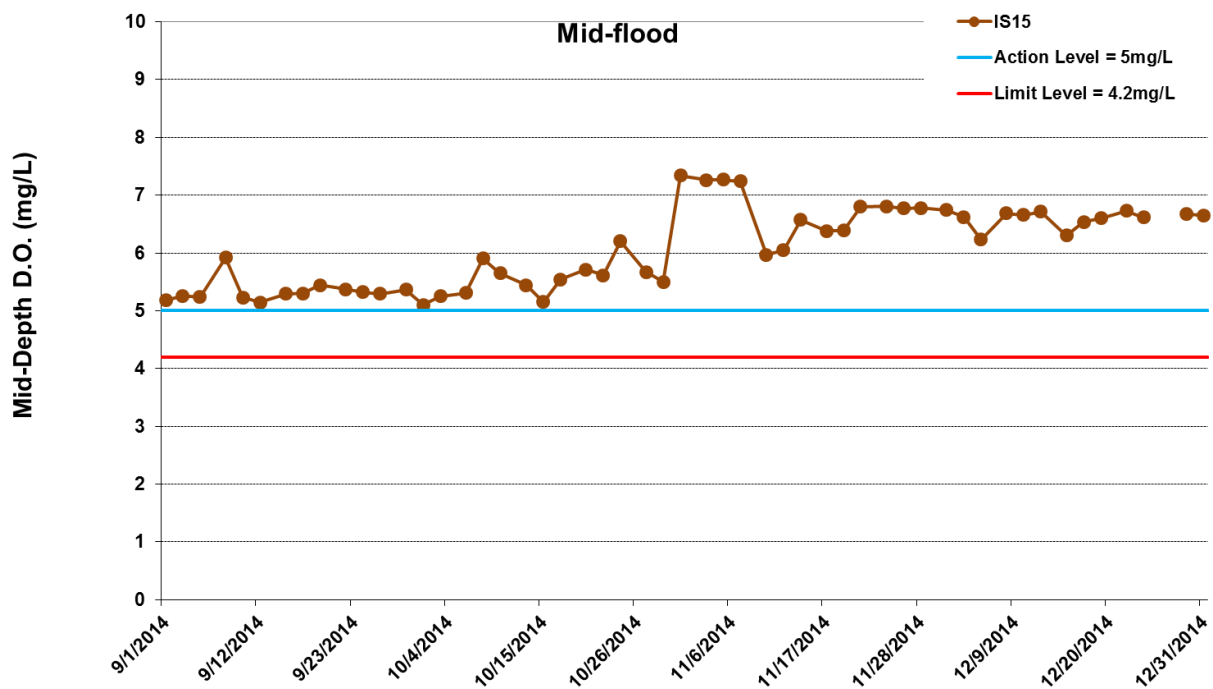
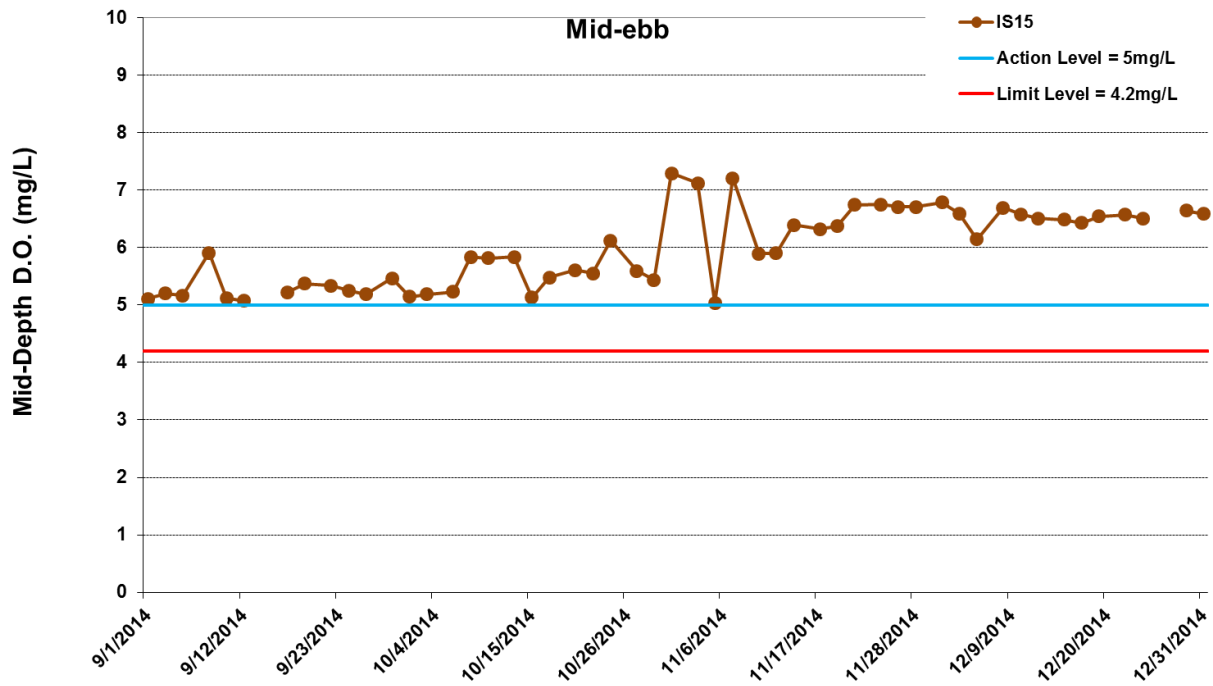


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I14 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



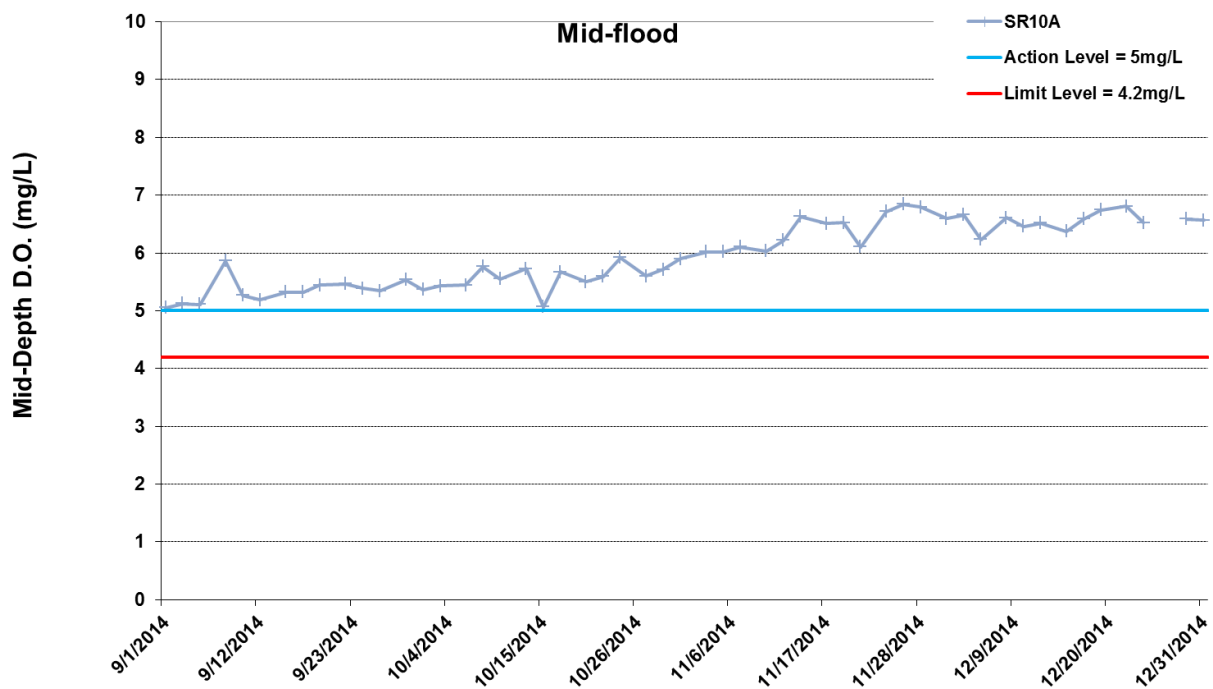
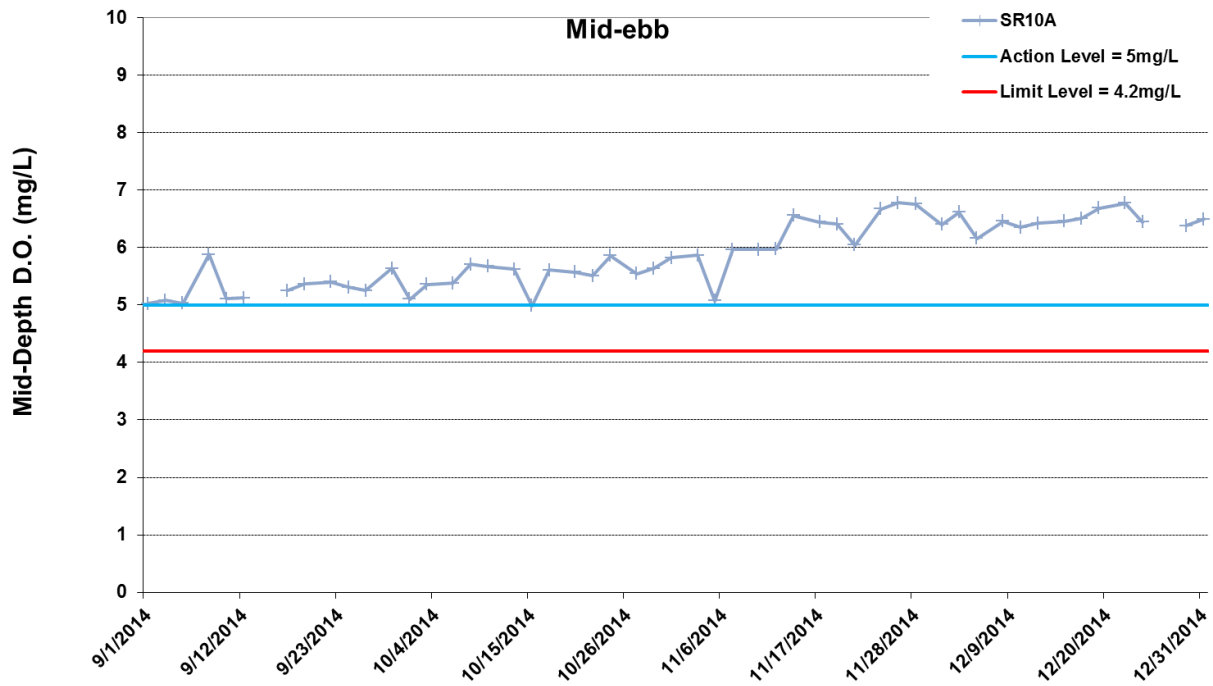


*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I15 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls





*No data for Stations SR8 and SR9 due to shallow water depth (< 6m).

Figure I16 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters between 1 September 2014 and 31 December 2014 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



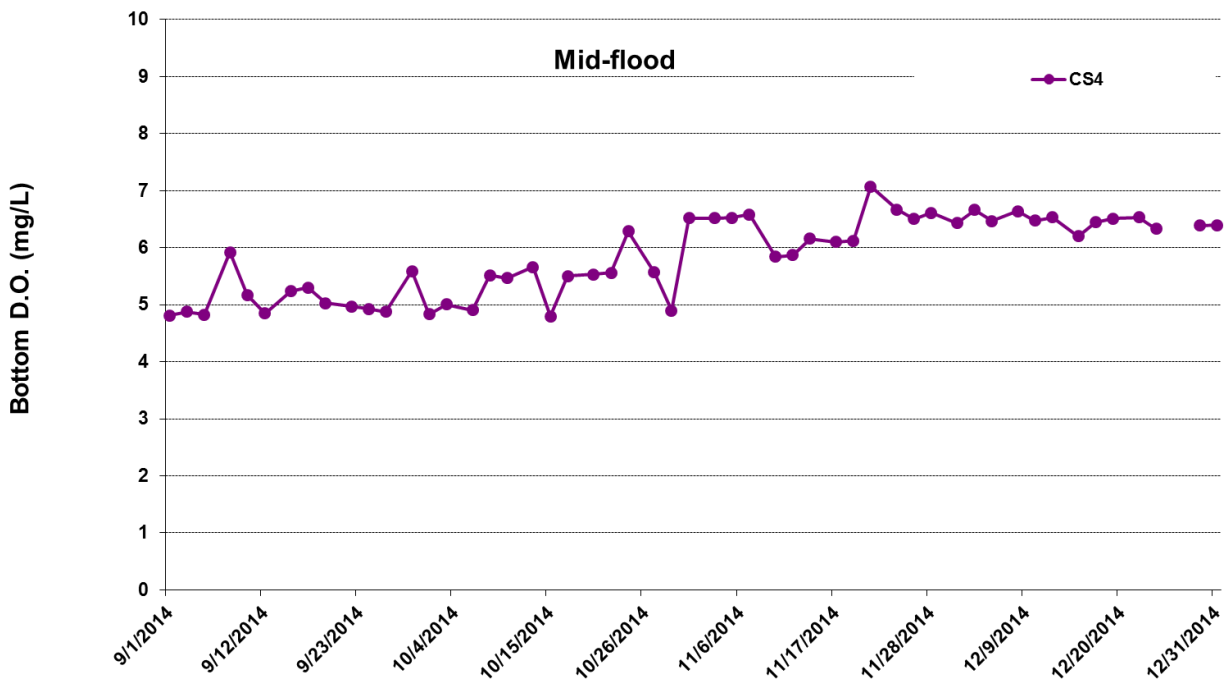
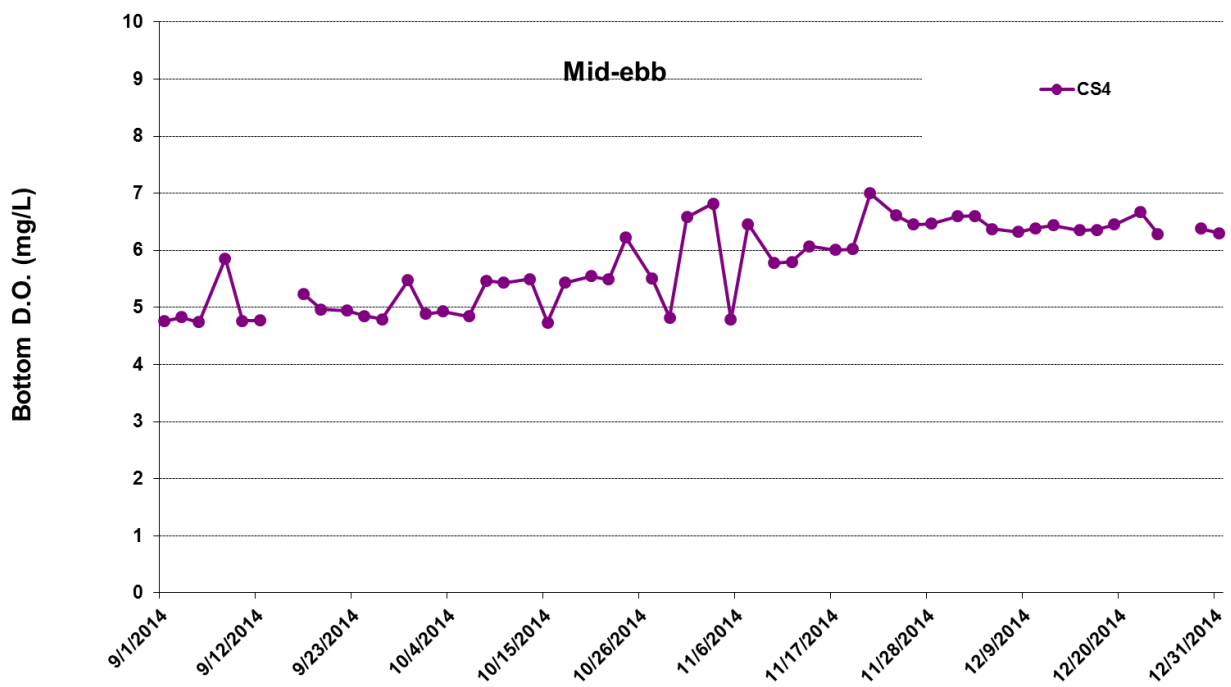


Figure I17 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



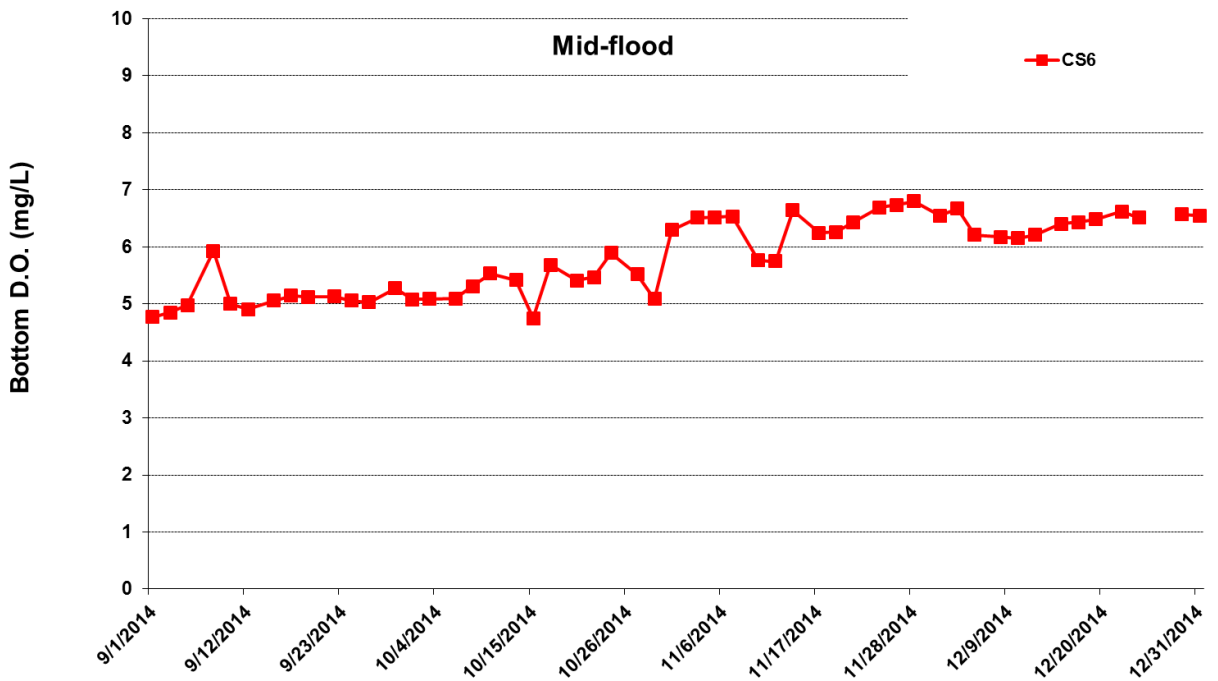
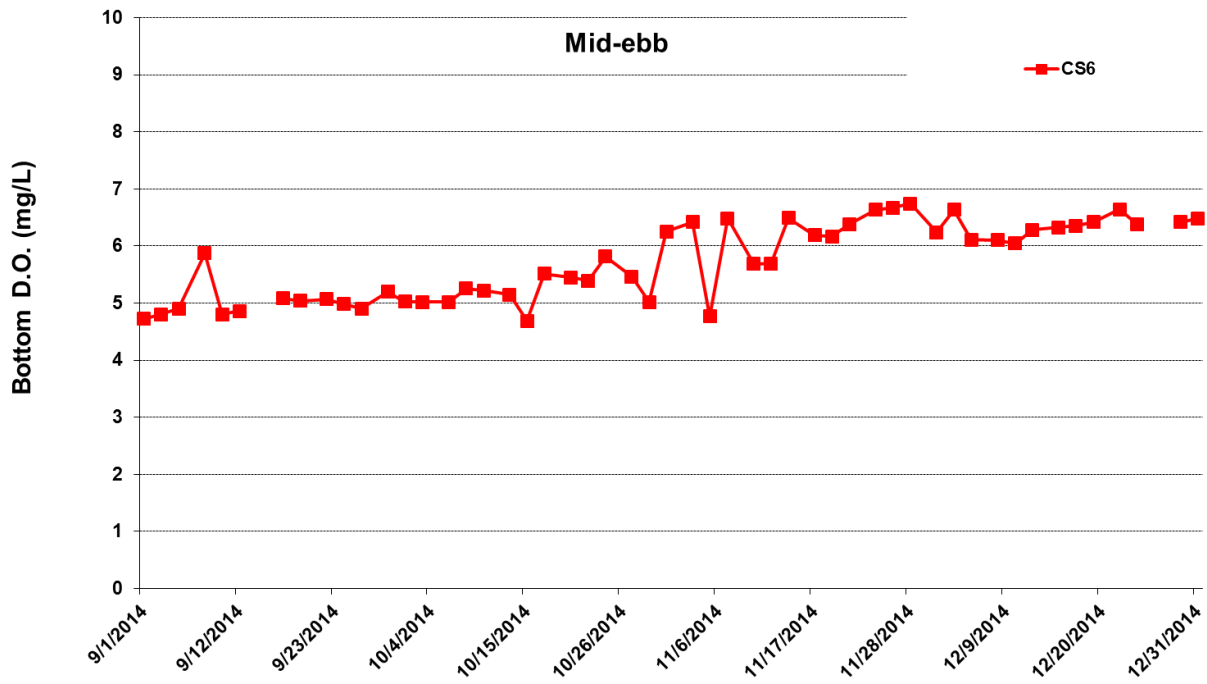


Figure I18 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



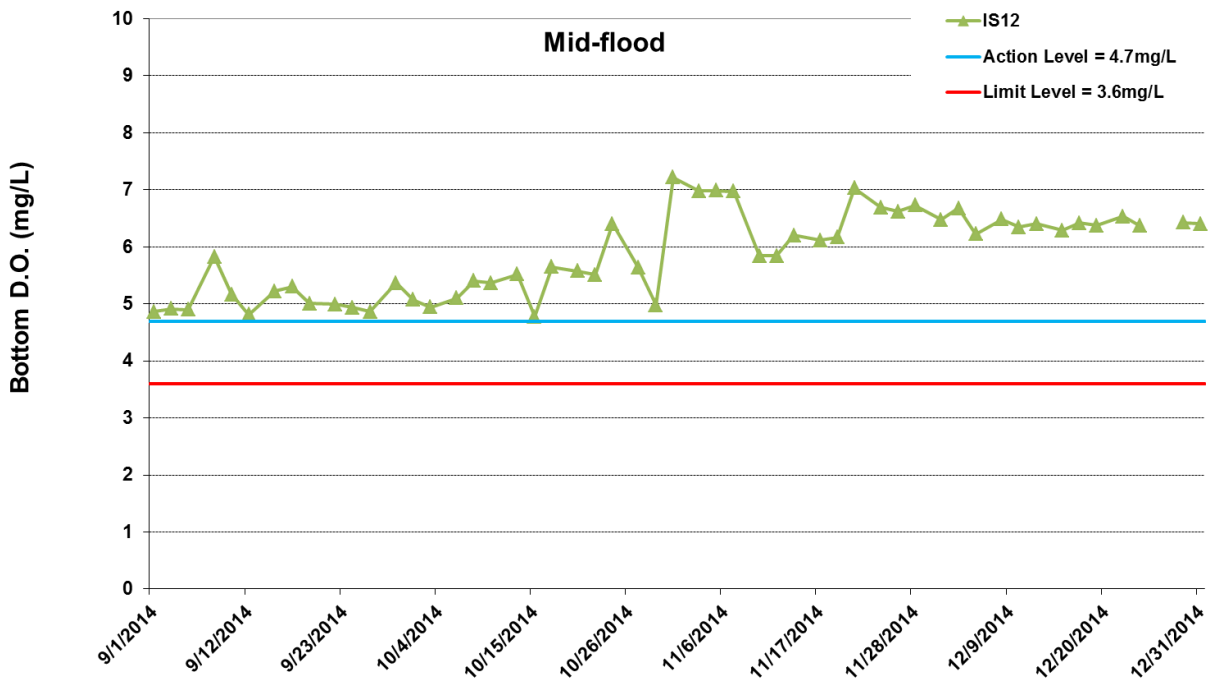
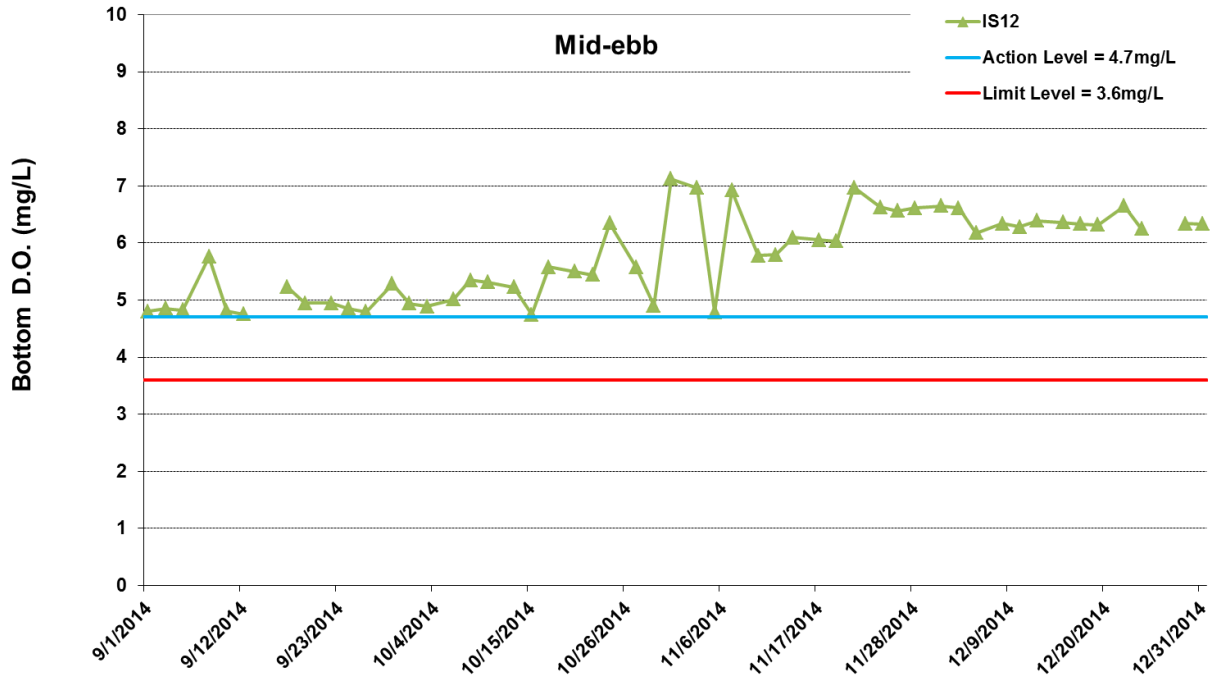


Figure I19 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



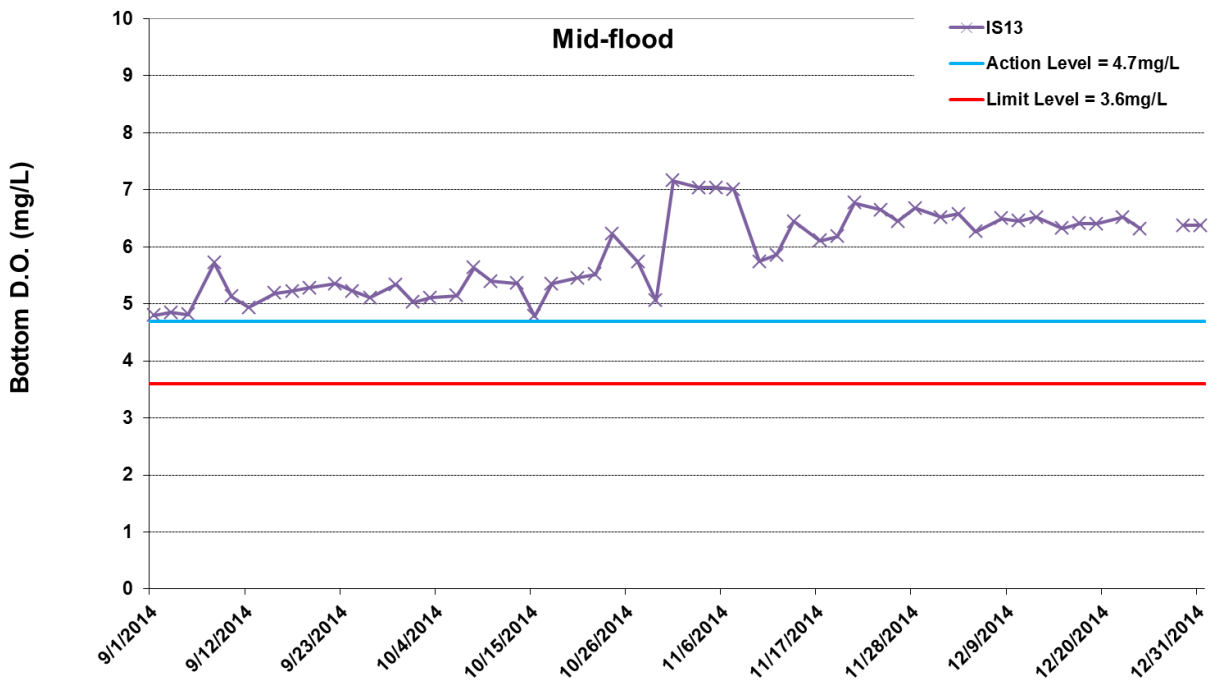
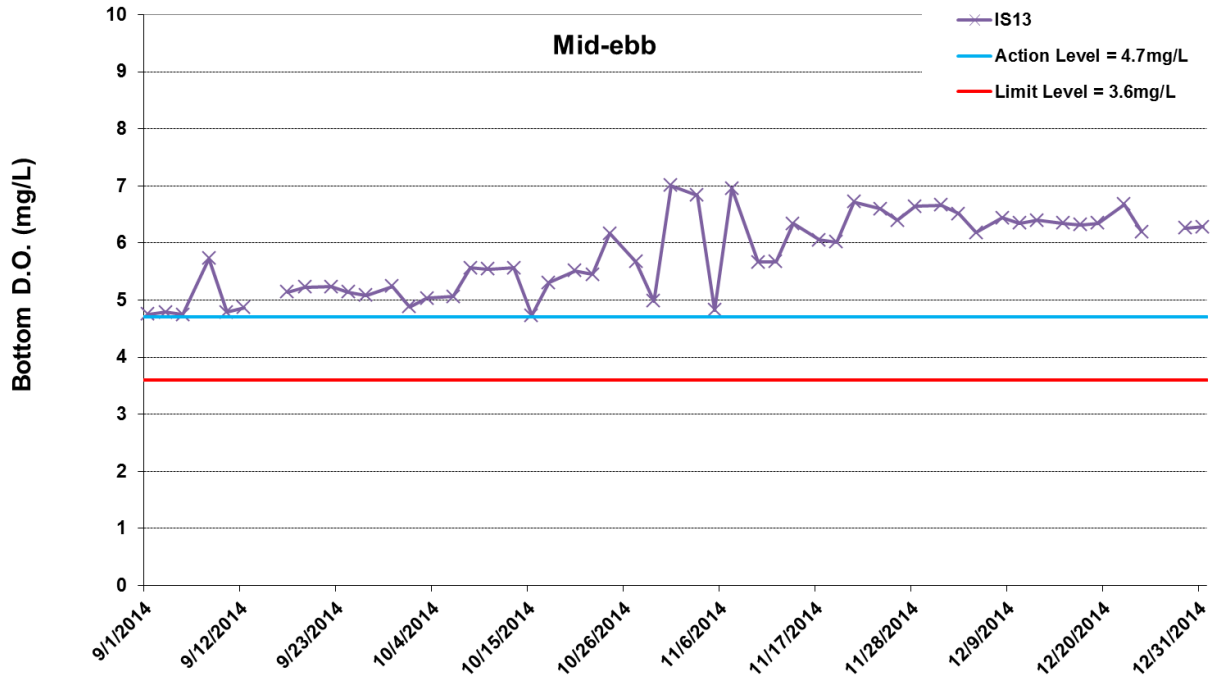


Figure I20 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



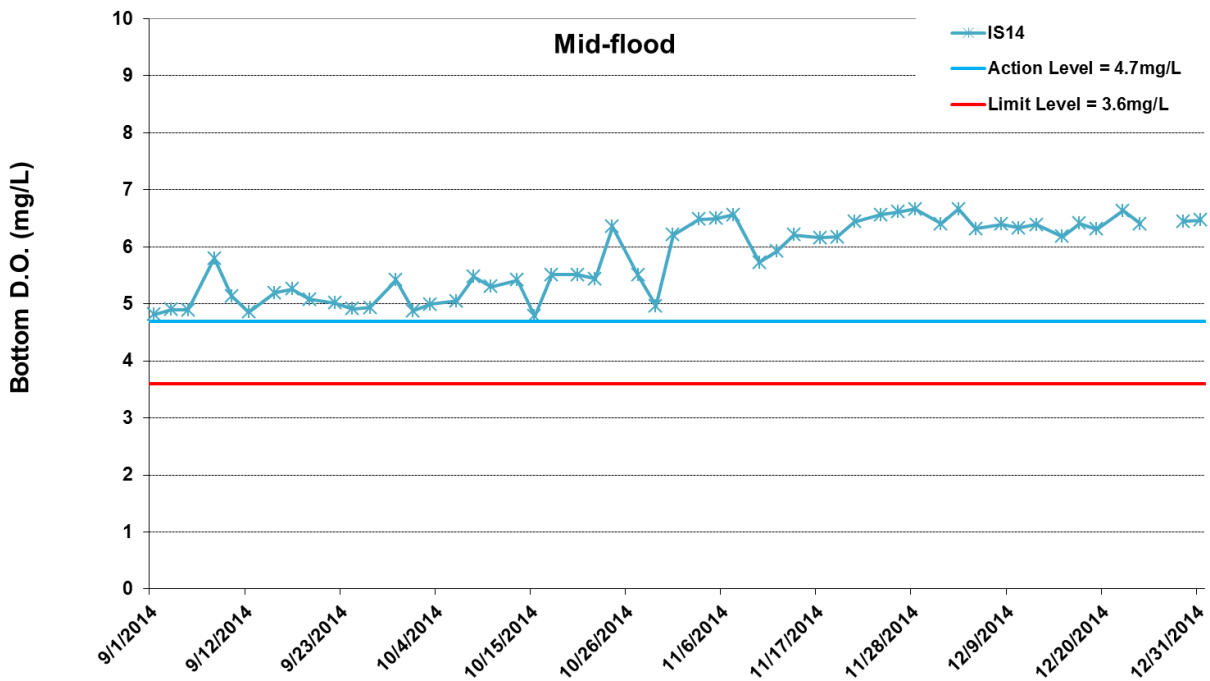
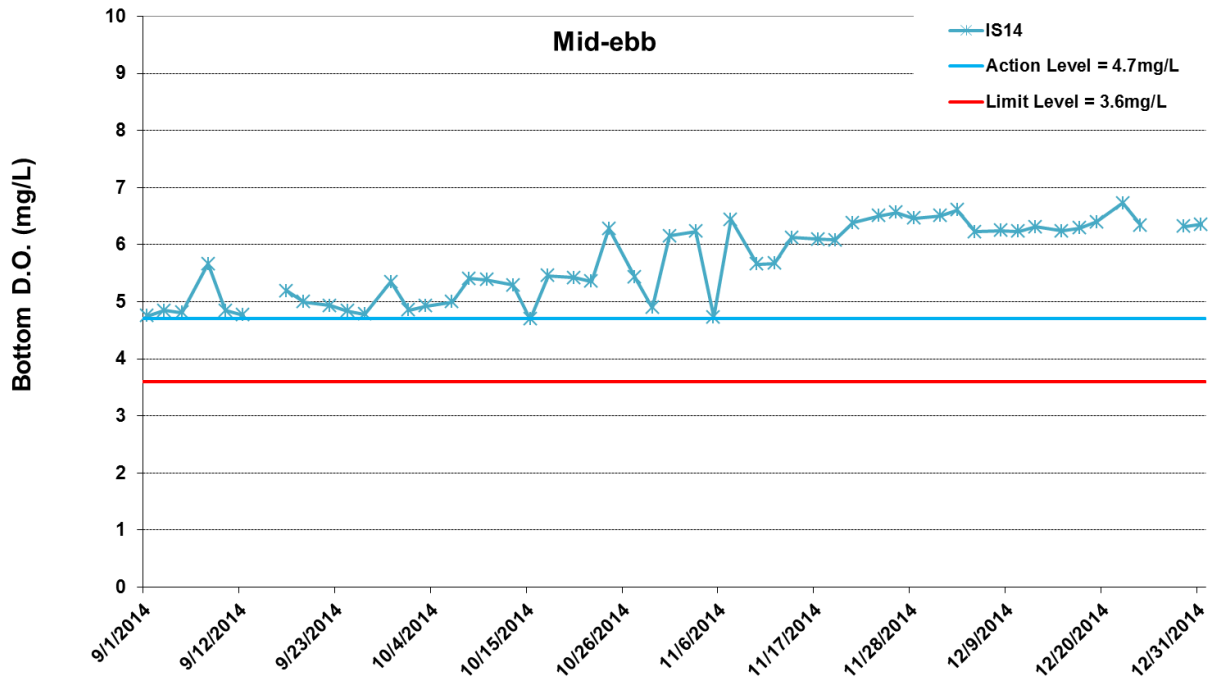


Figure I21 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.

Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



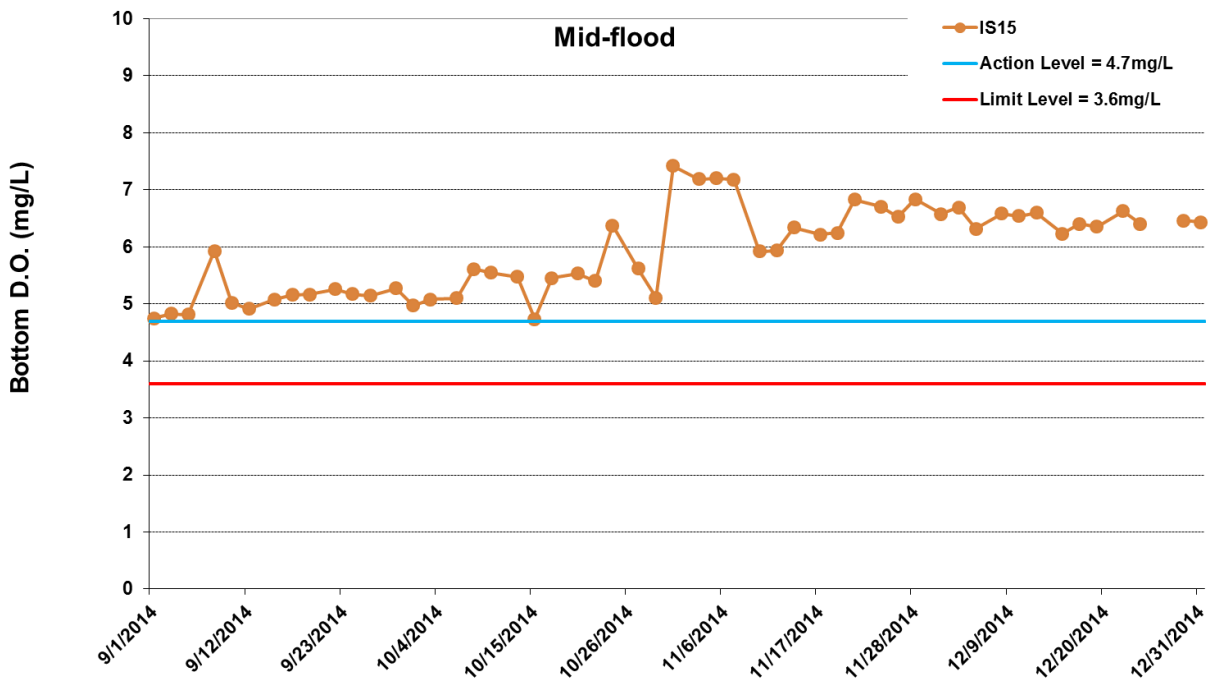
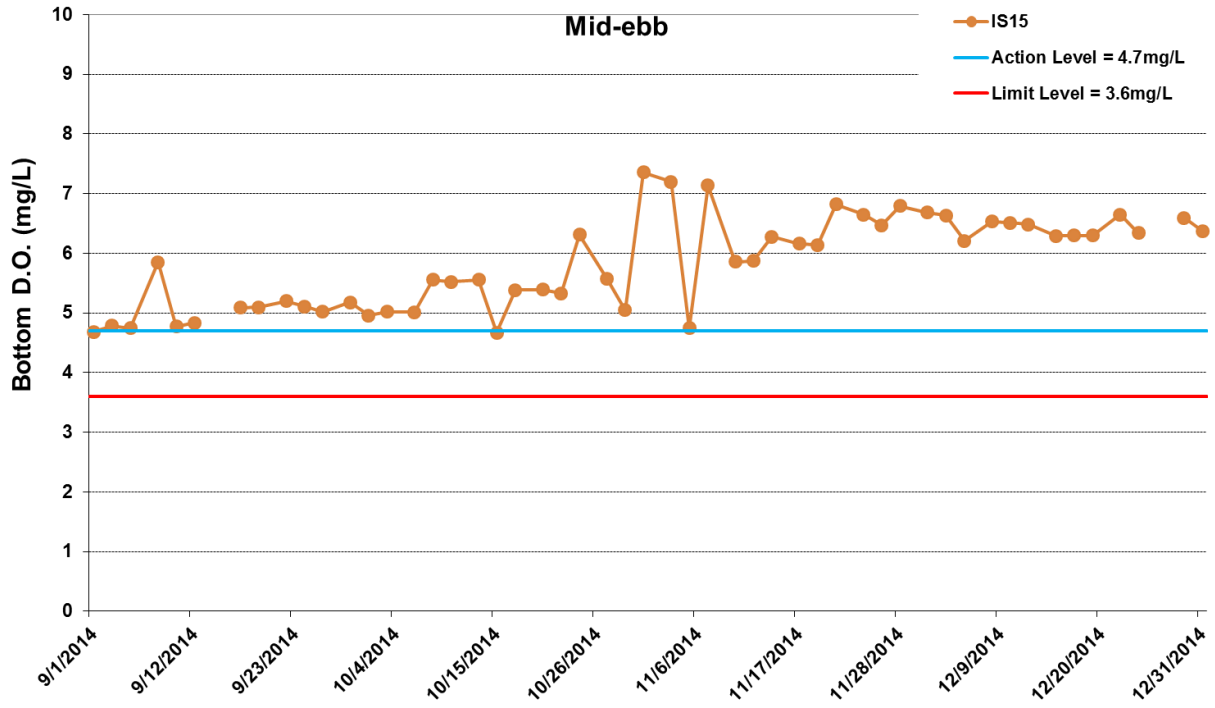


Figure I22 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



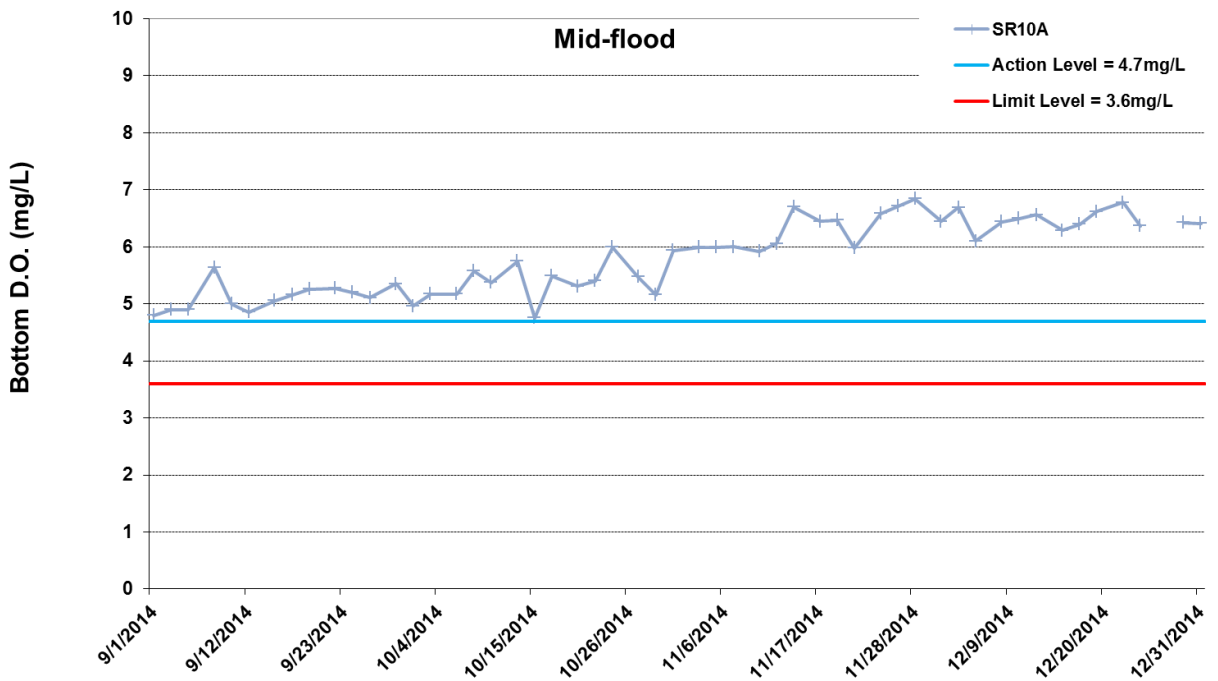
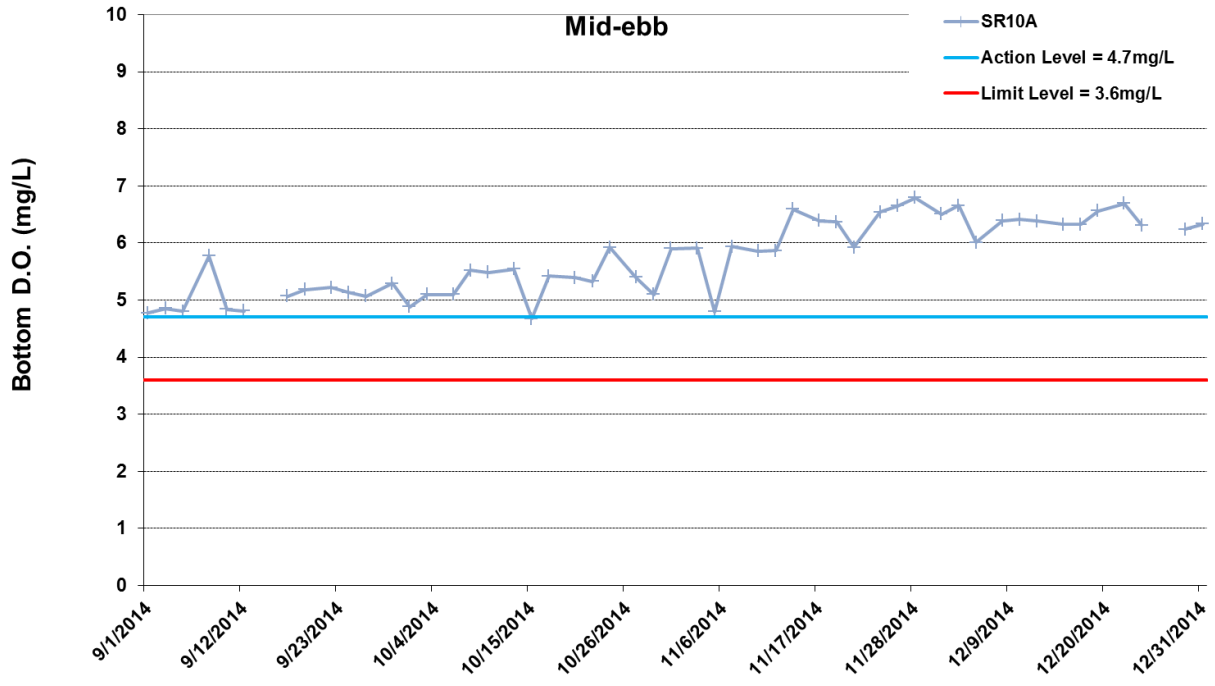


Figure I23 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



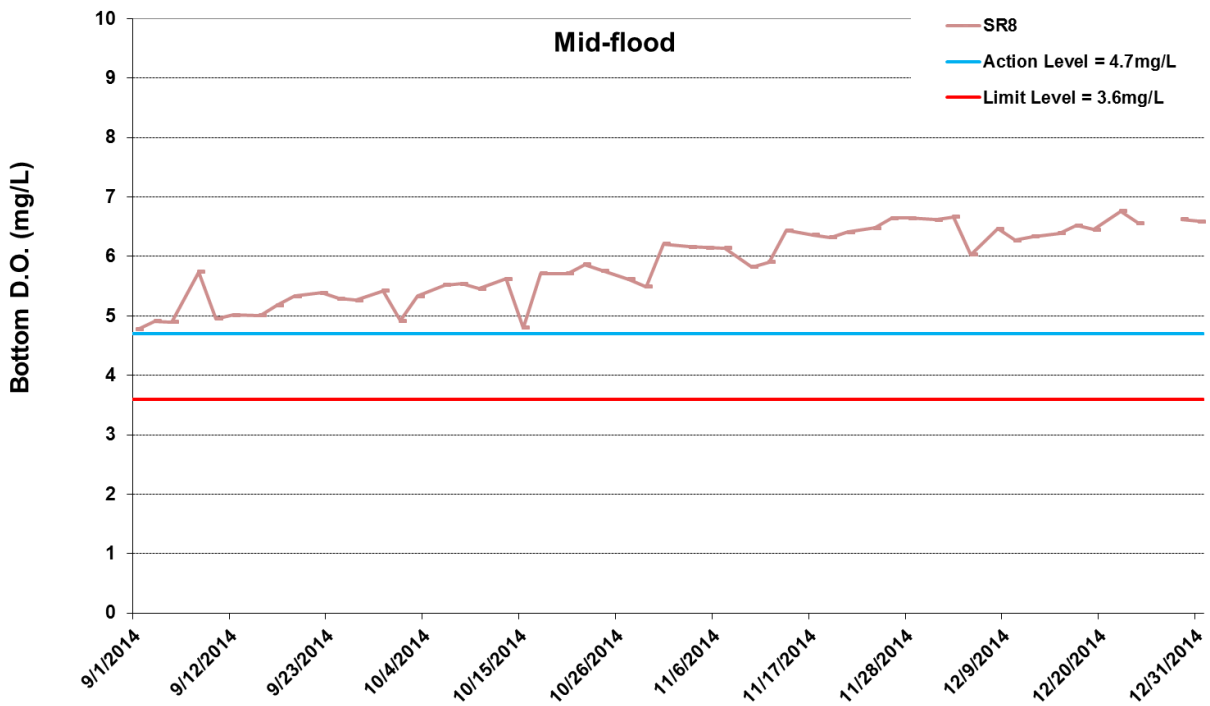
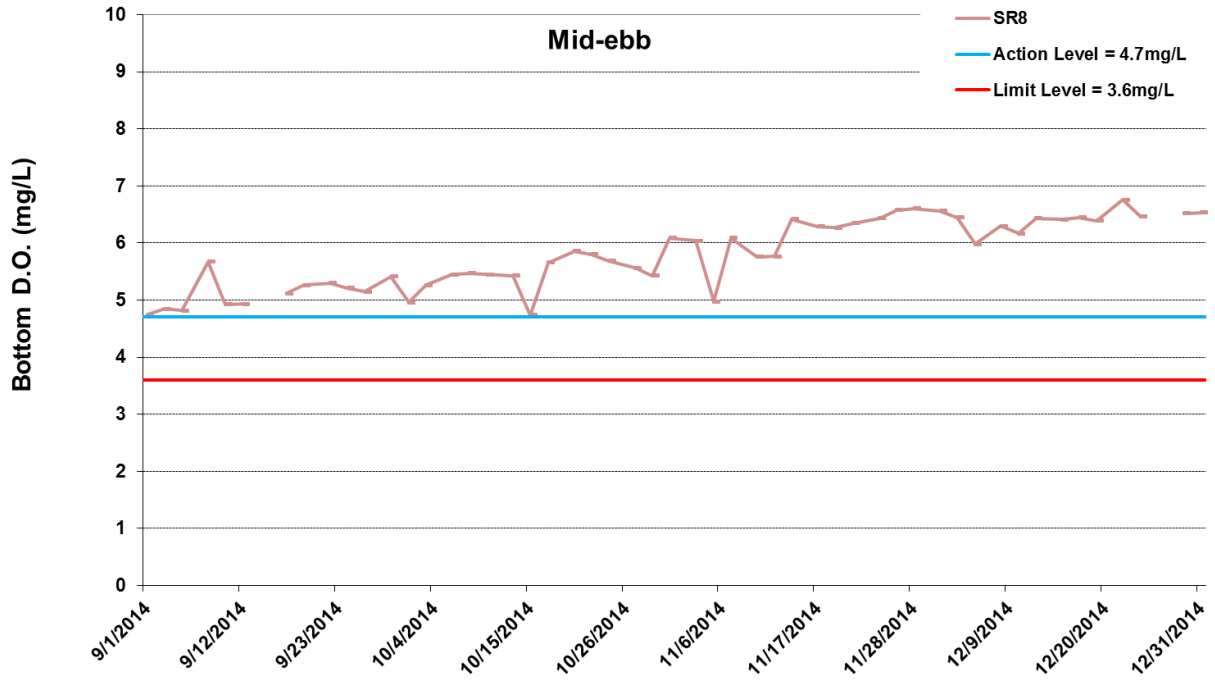


Figure I24 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



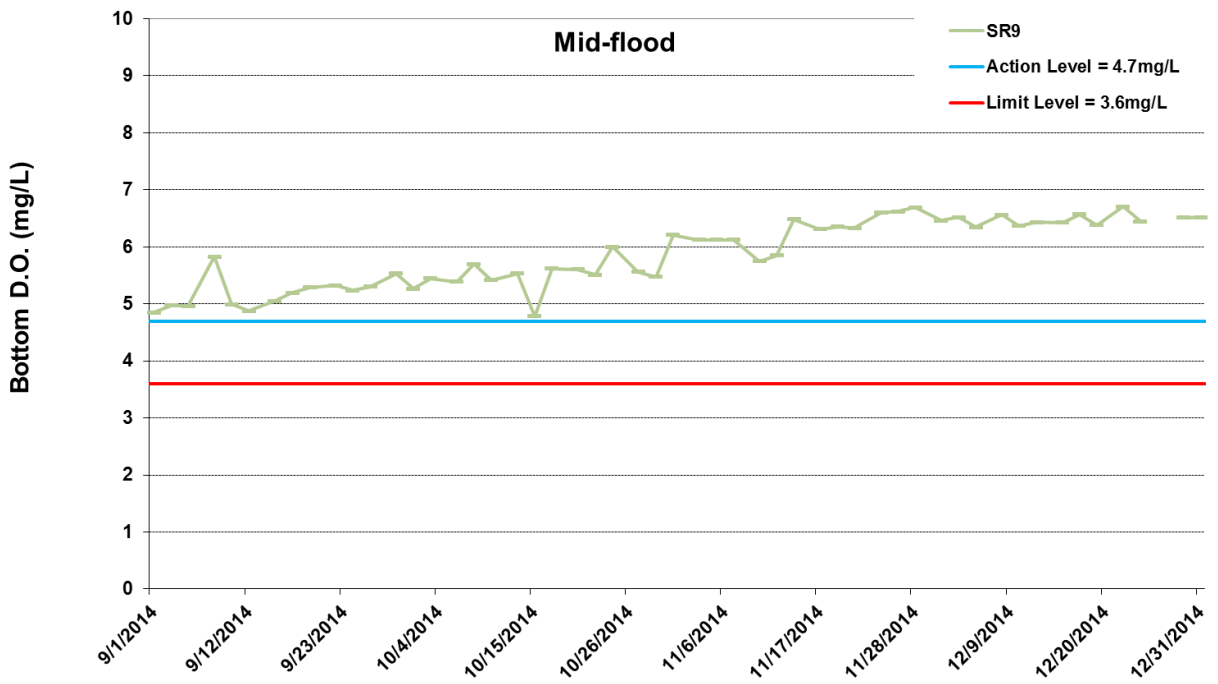
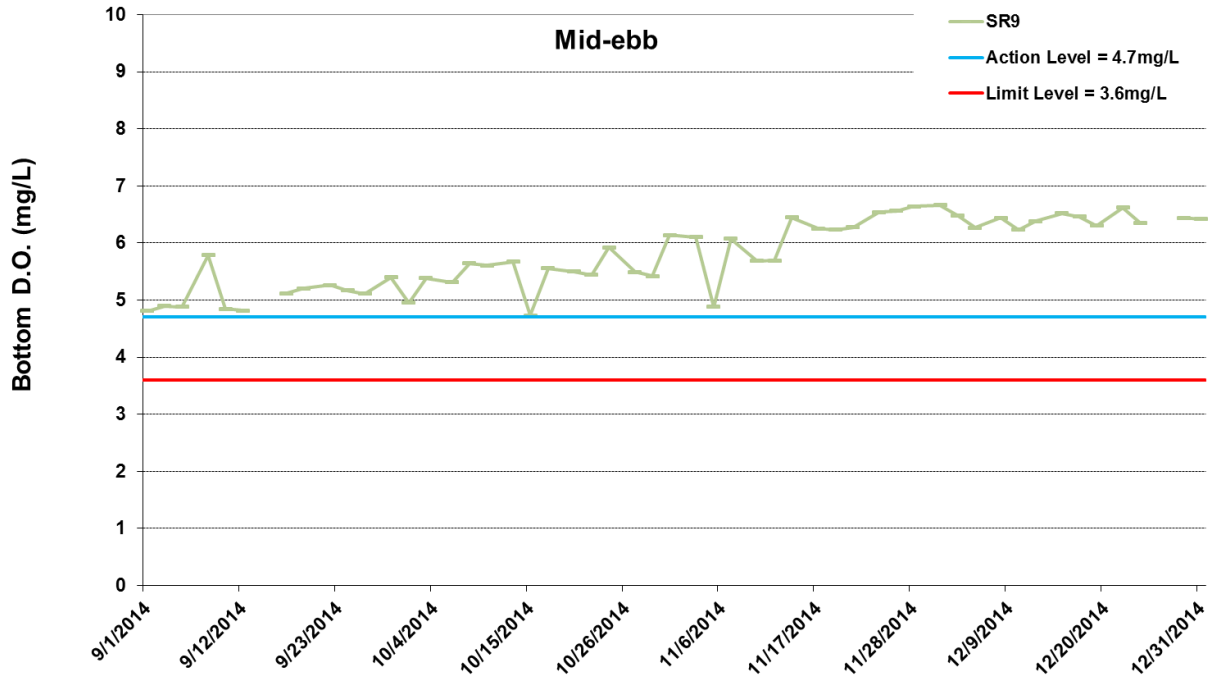


Figure I25 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom water between 1 September 2014 and 31 December 2014 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014. Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls



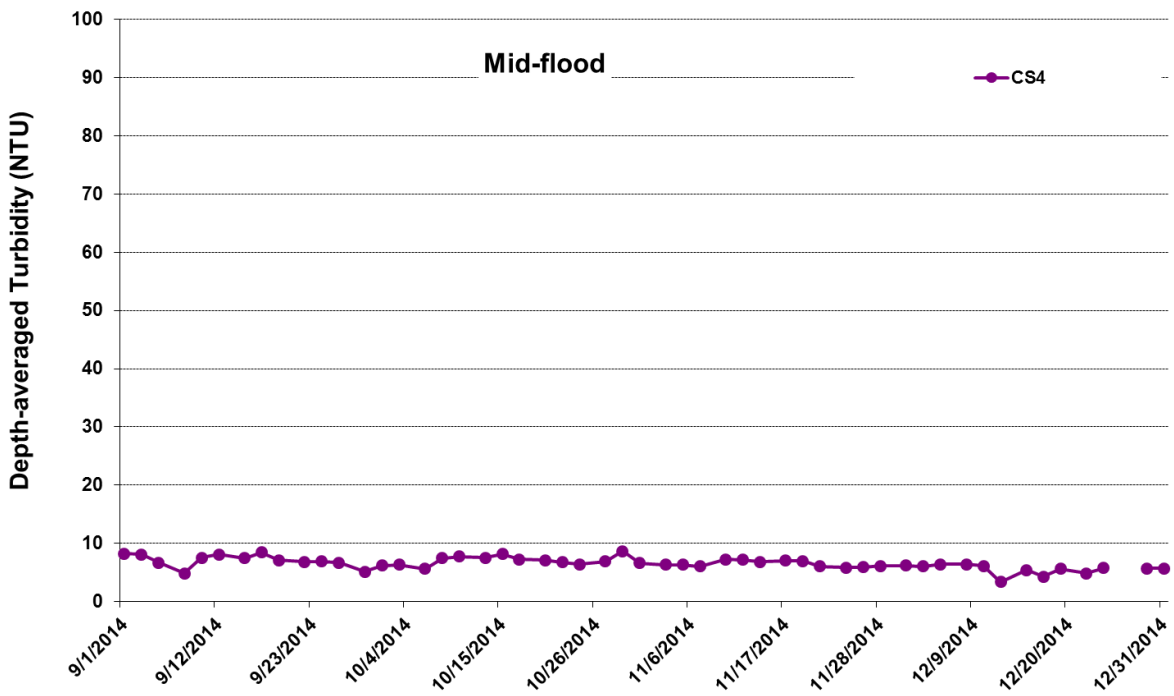
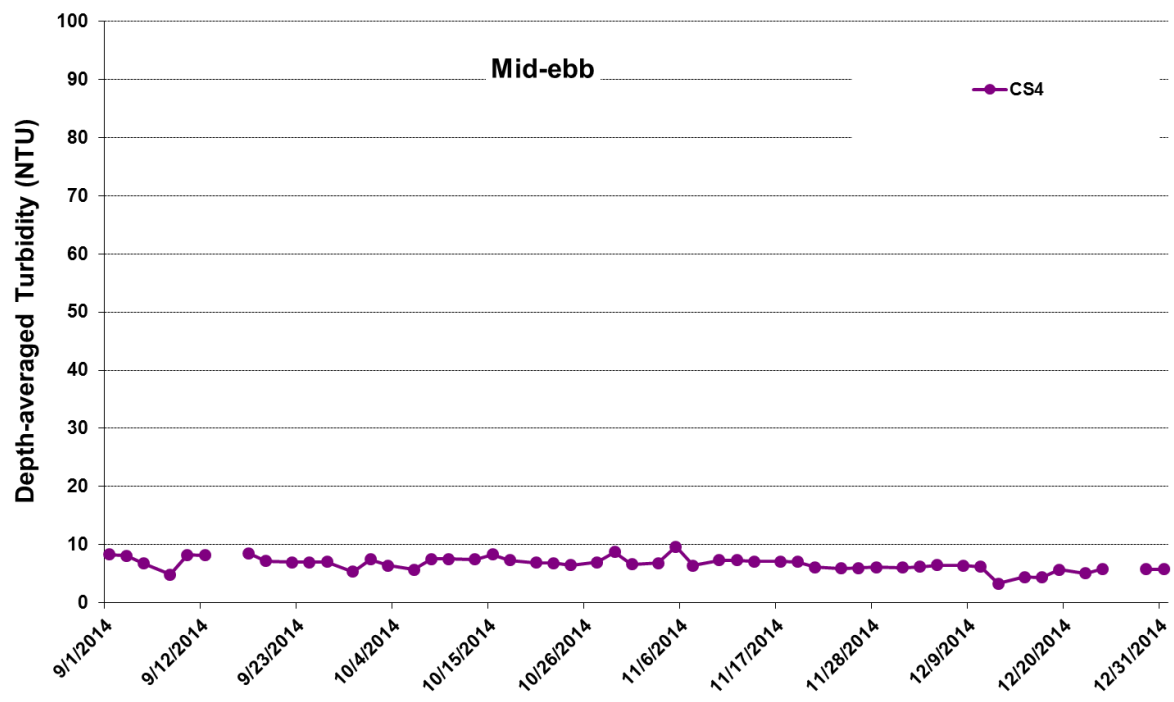


Figure I26 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



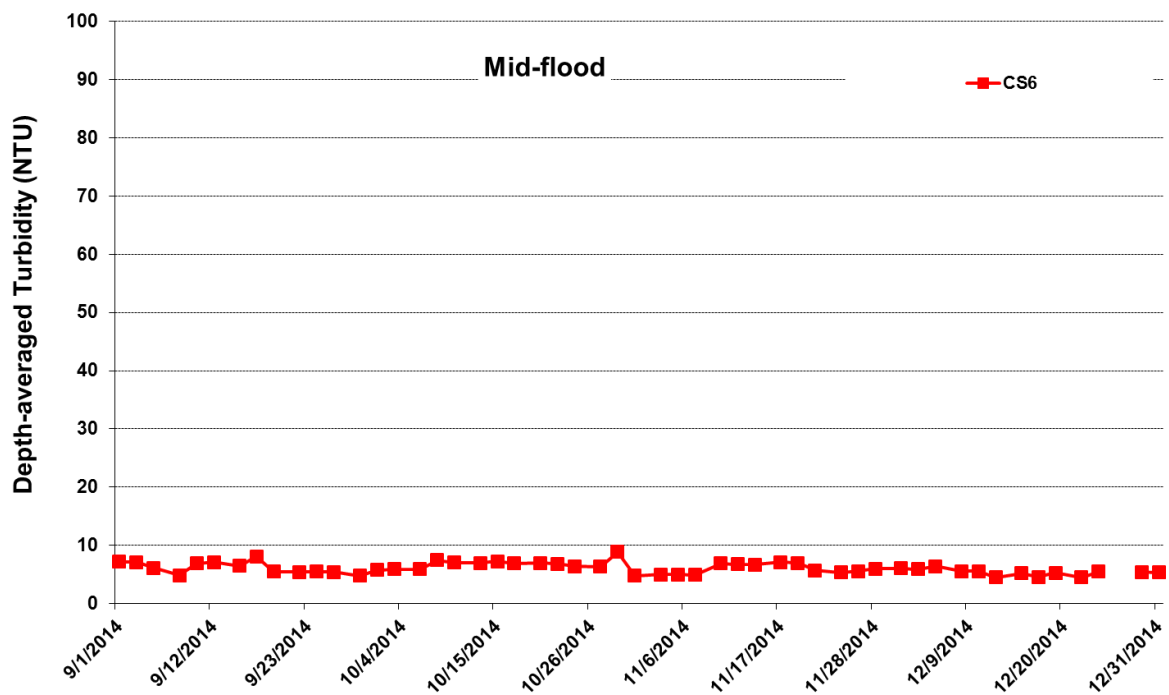
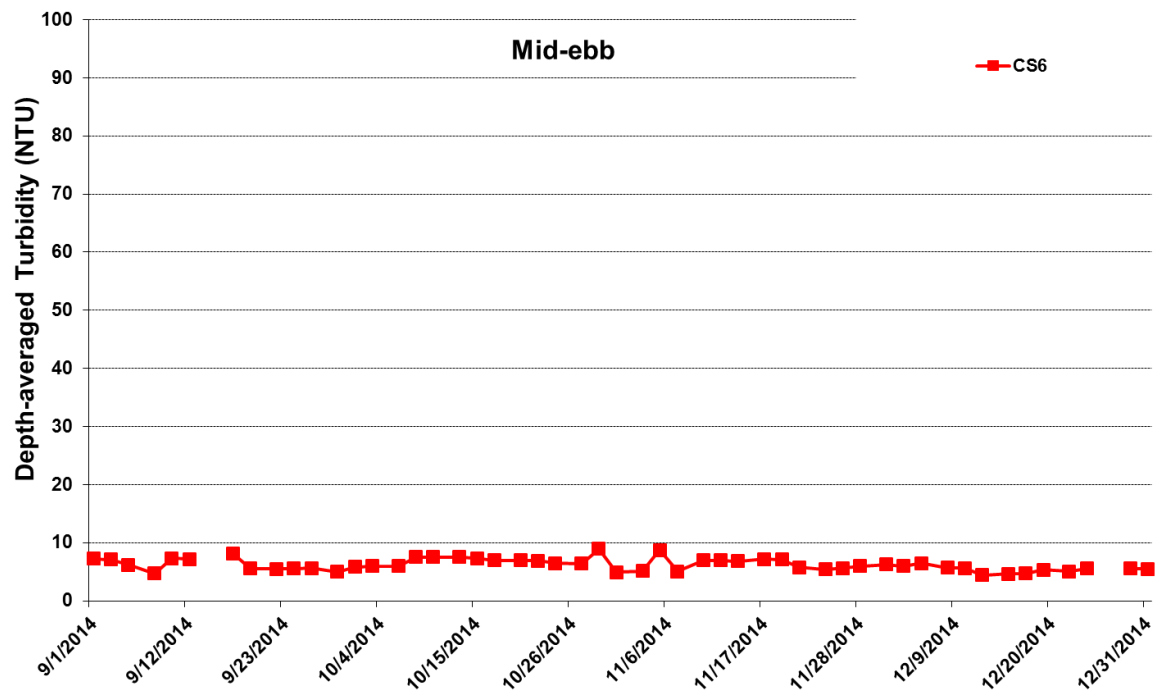


Figure I27 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



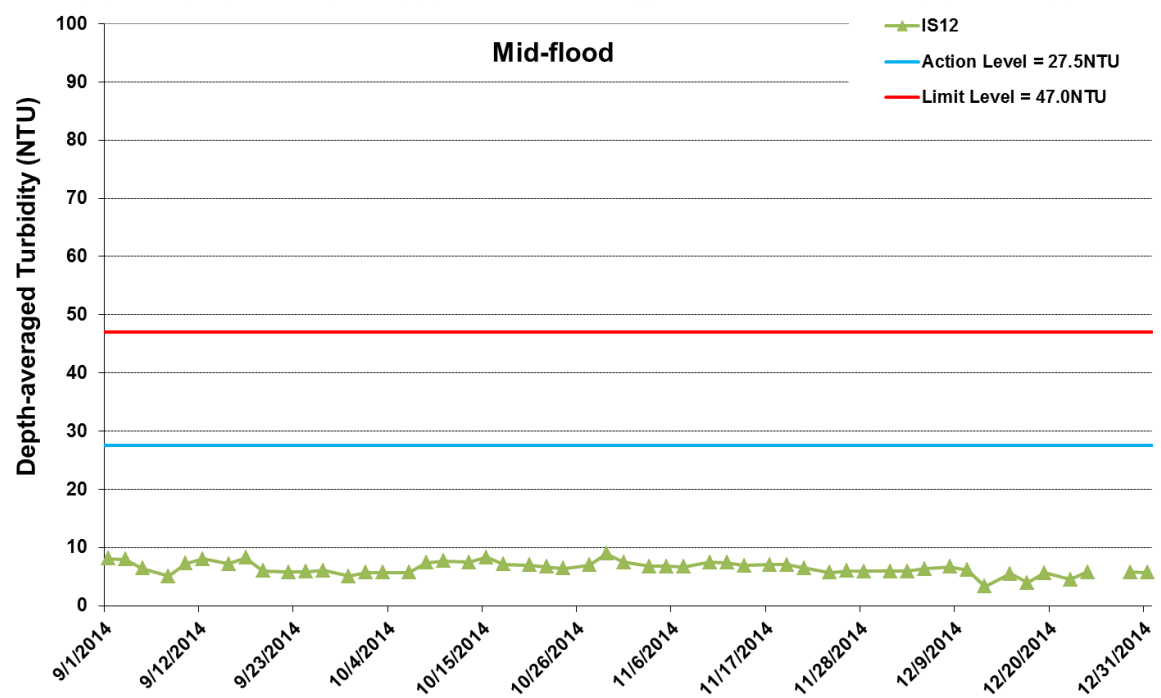
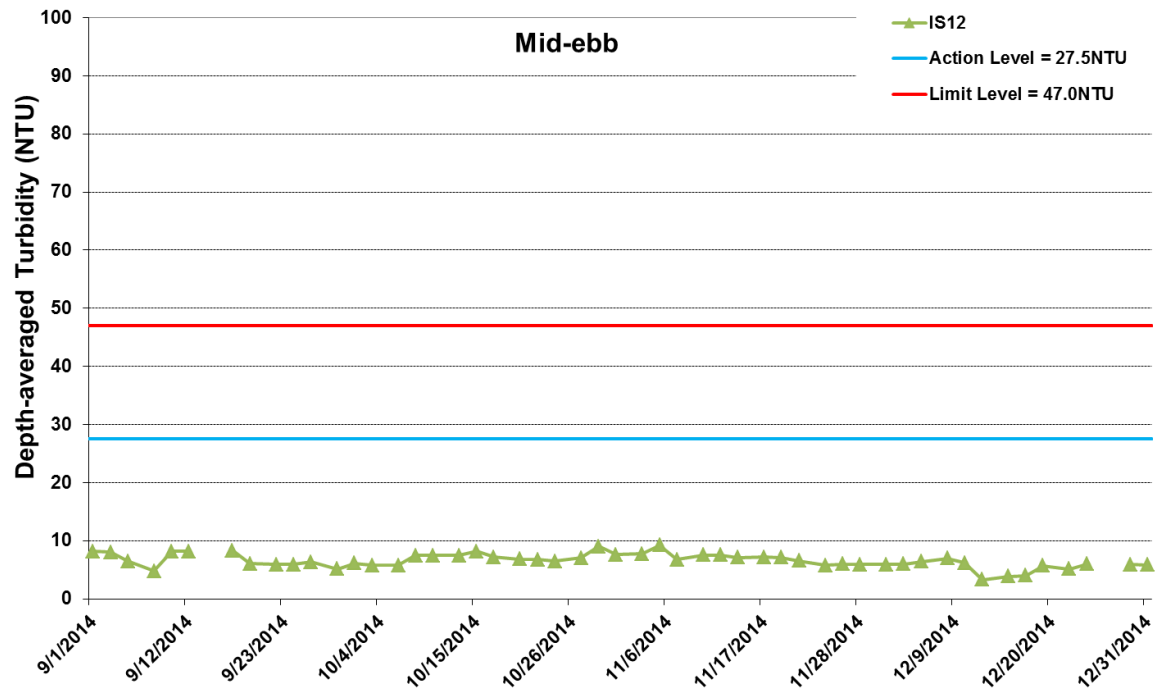


Figure I28 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



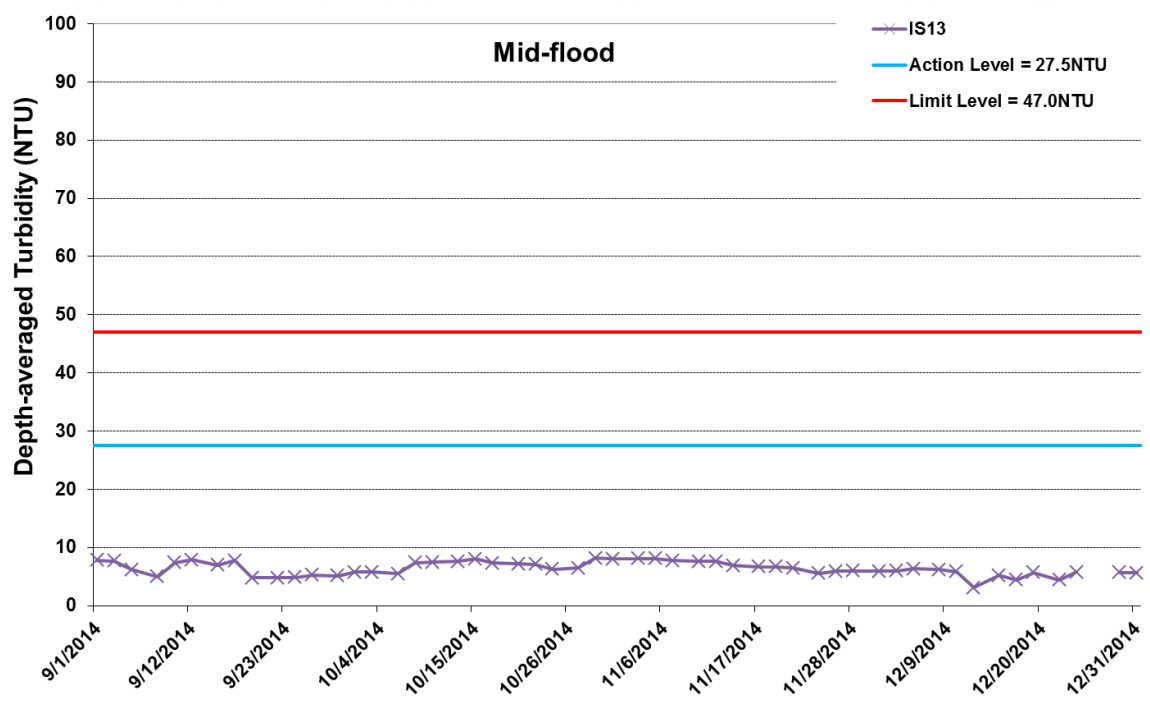
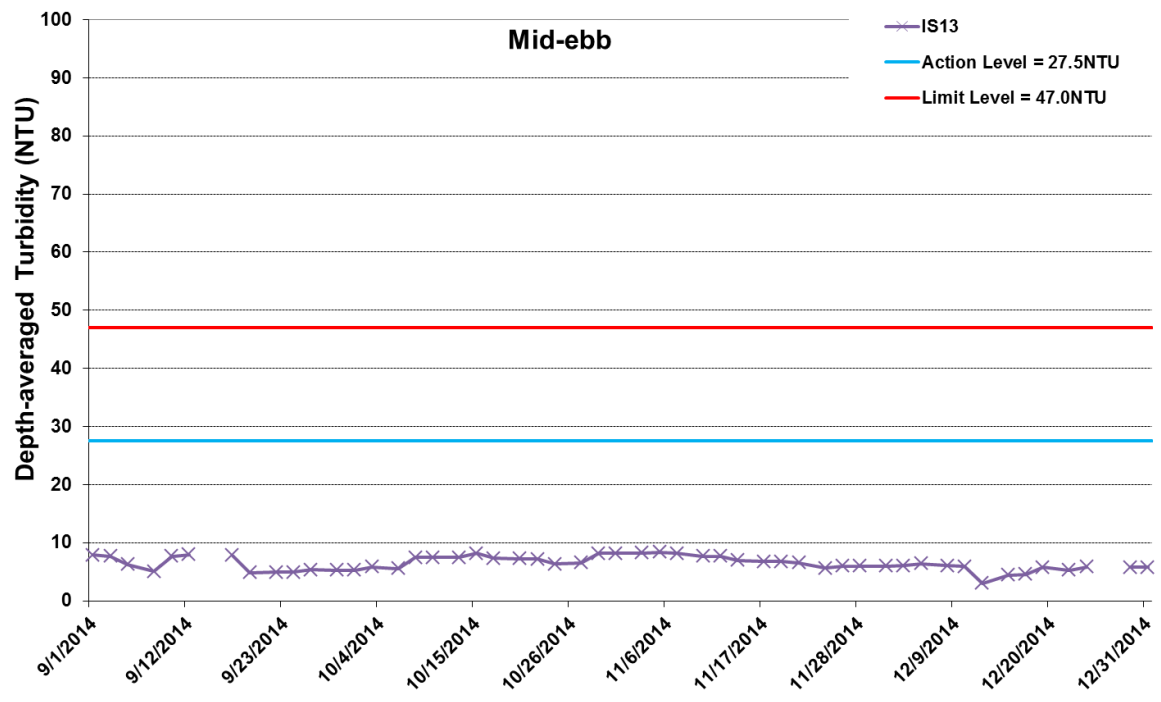


Figure I29 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



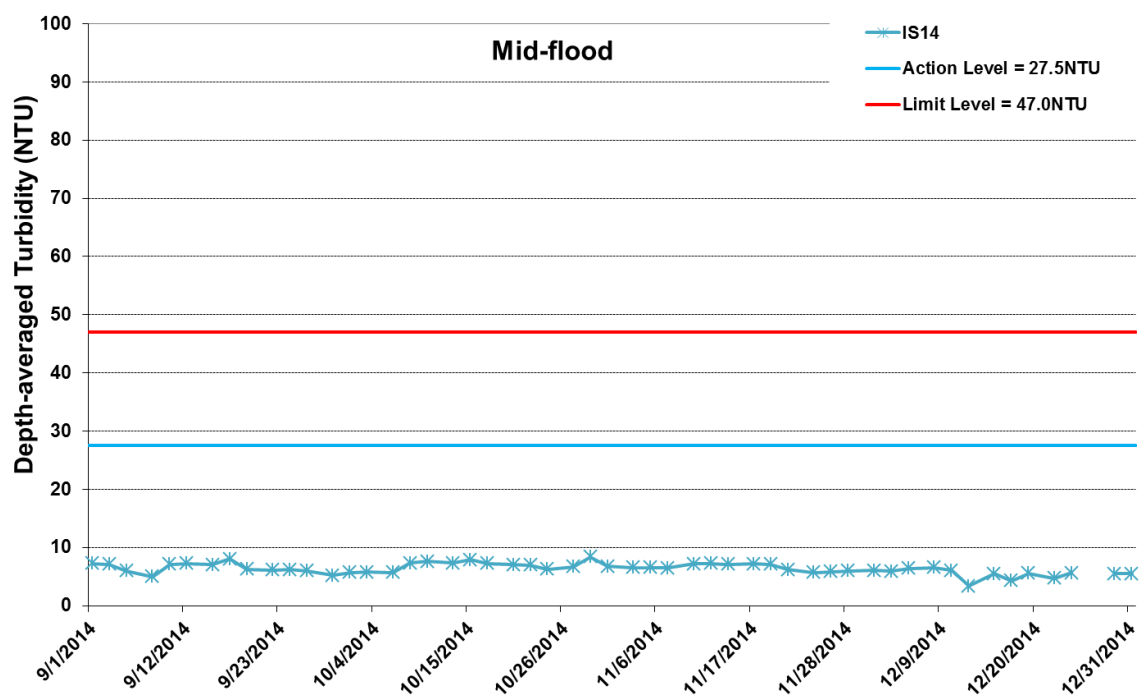
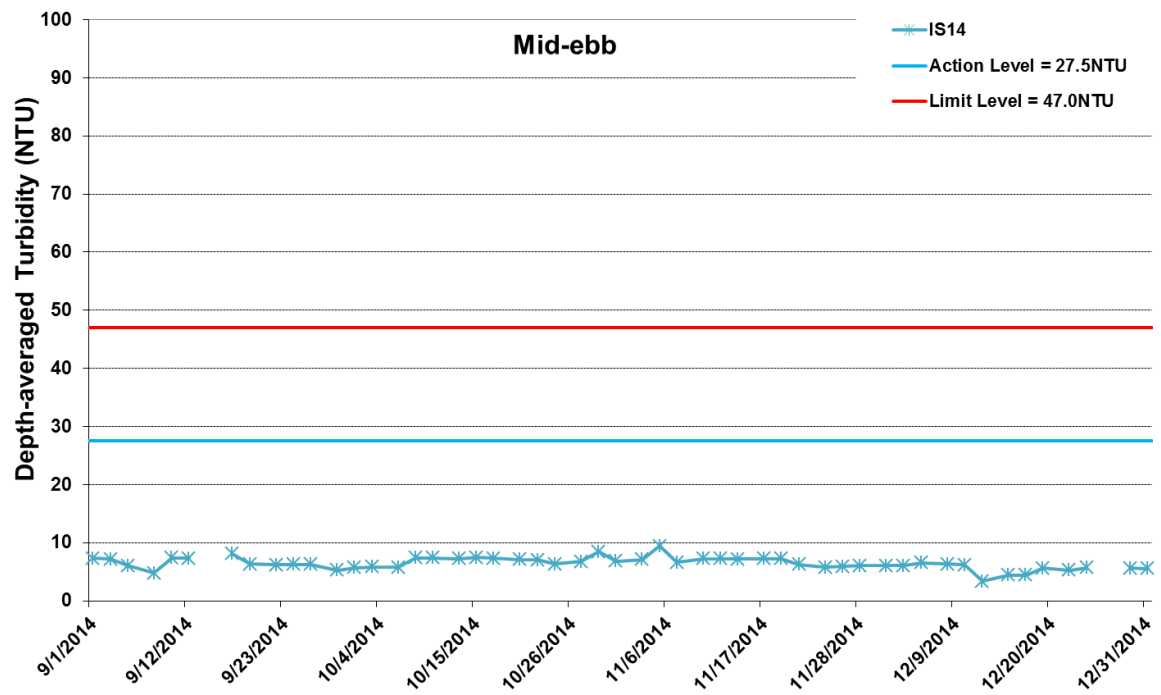


Figure I30 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



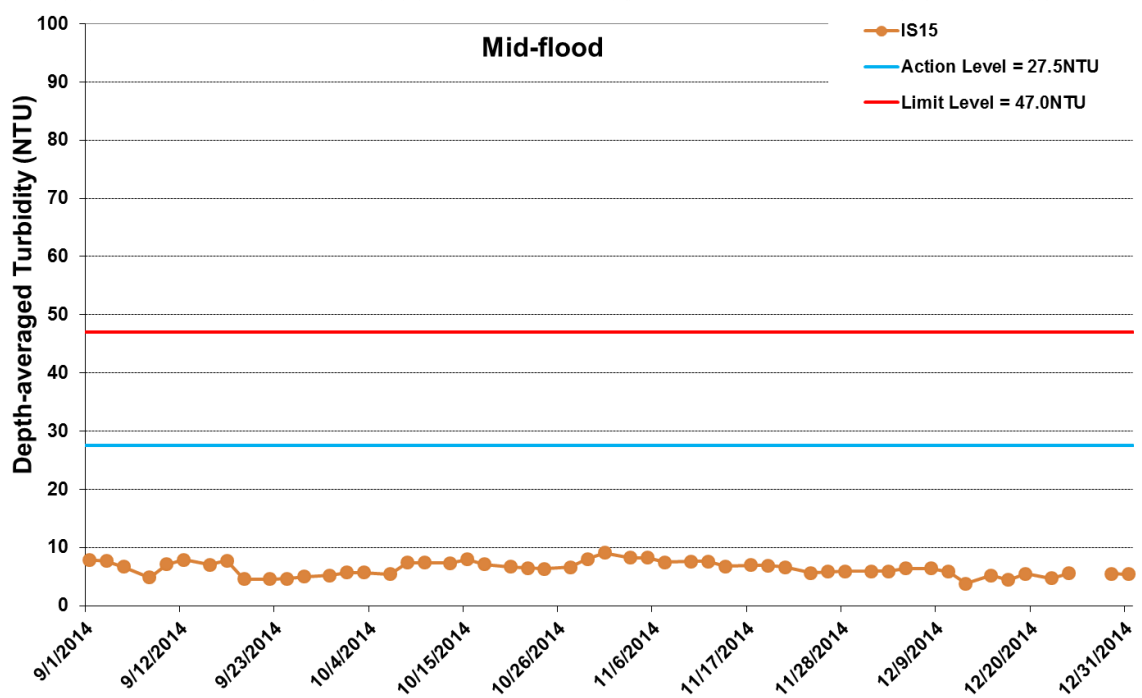
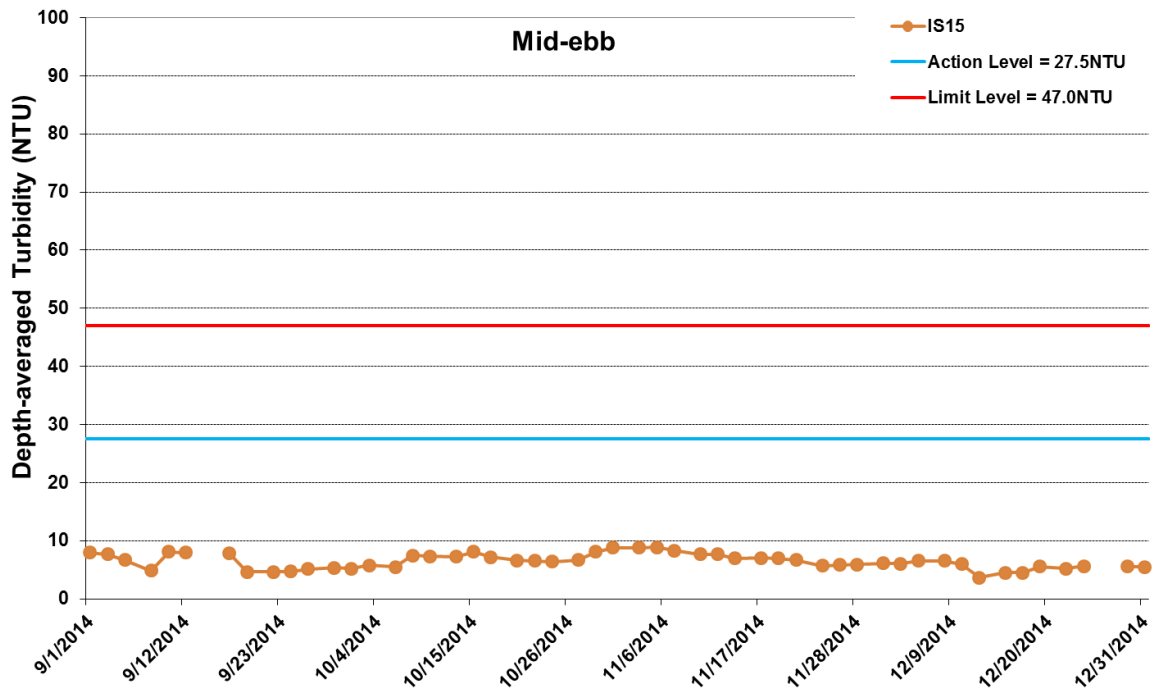


Figure I31 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



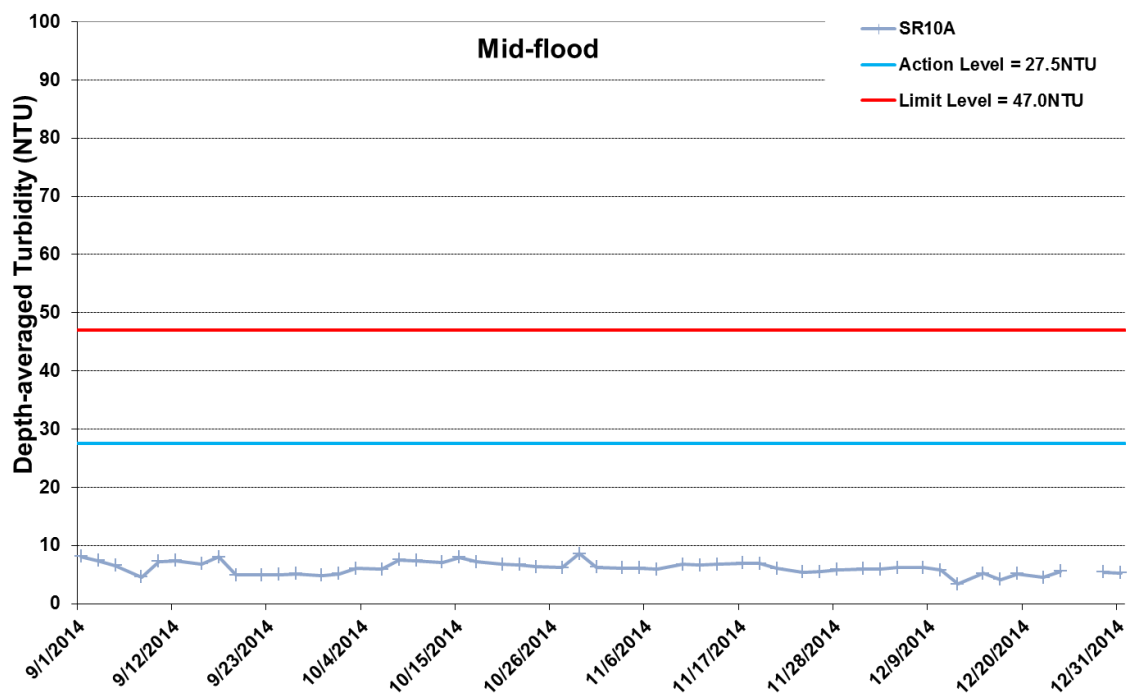
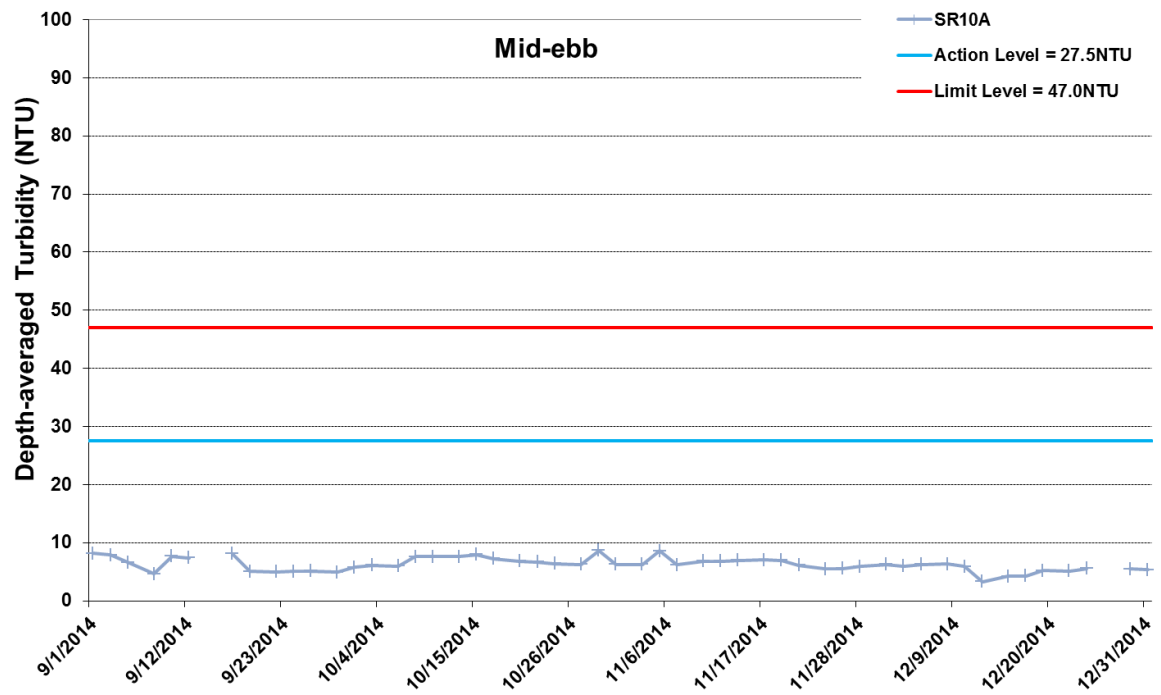


Figure I32 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



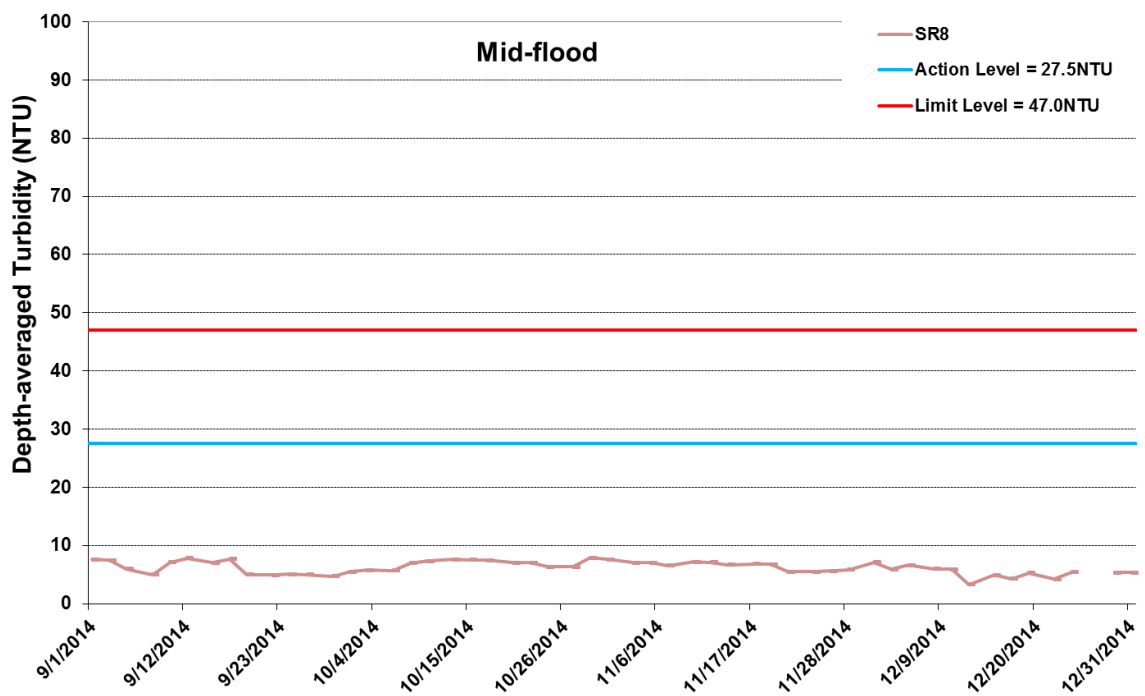
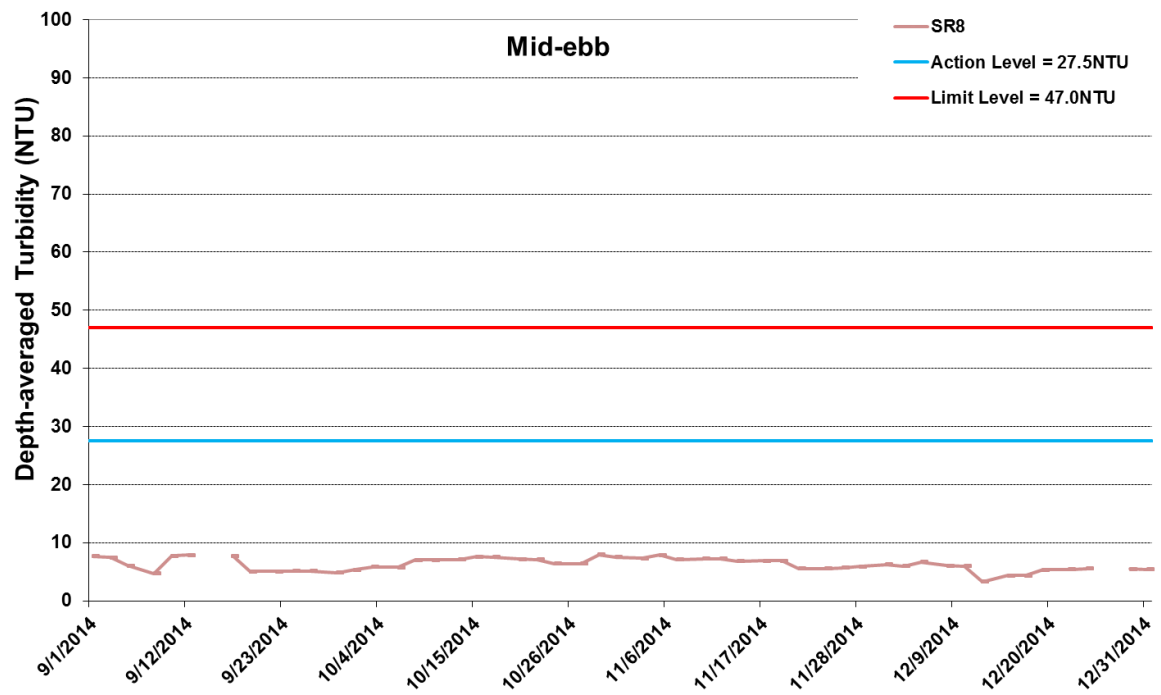


Figure I33 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



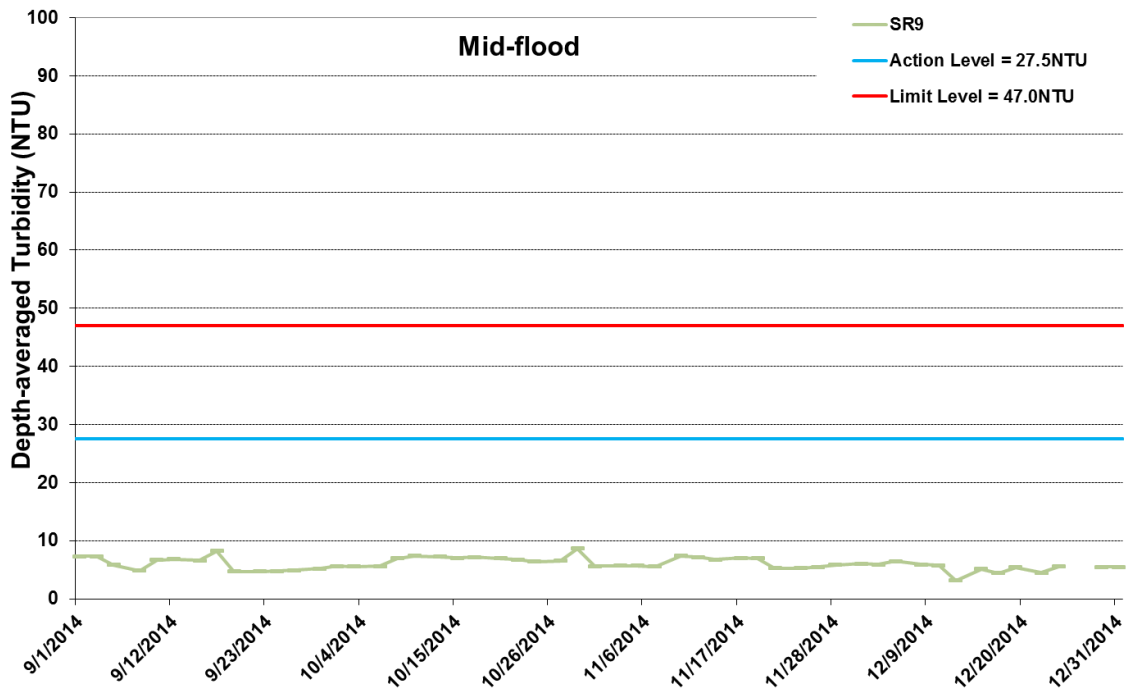
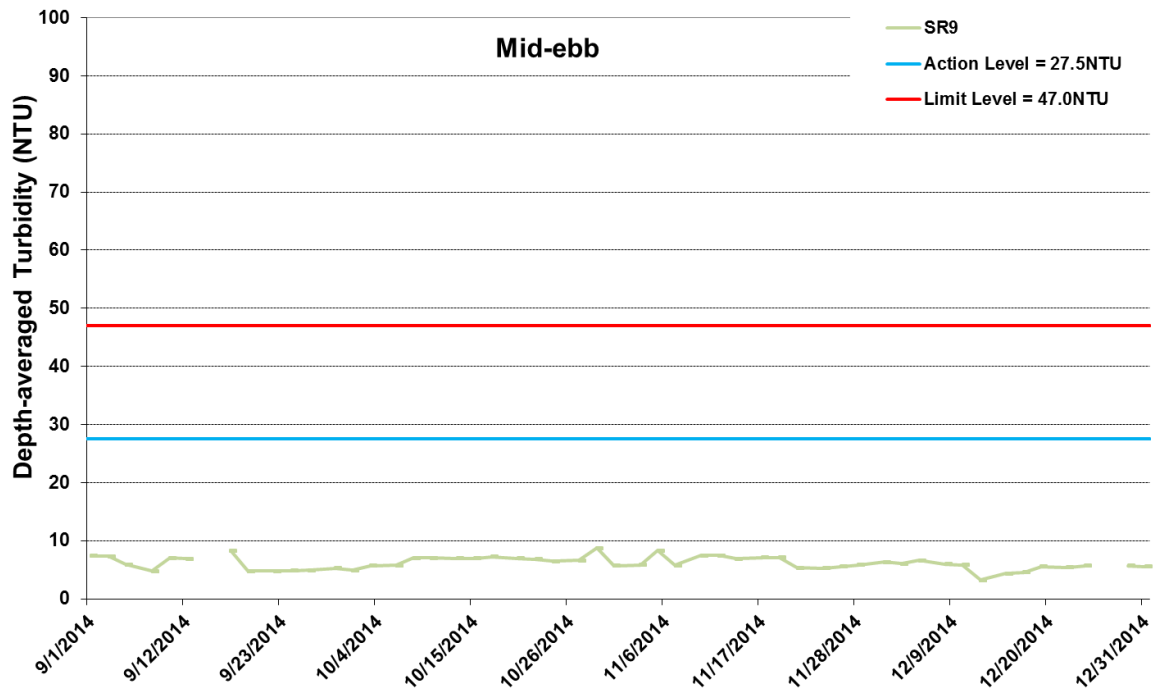


Figure I34 Impact Monitoring - Mean Depth-averaged Level of Turbidity (NTU) between 1 September 2014 and 31 December 2014 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



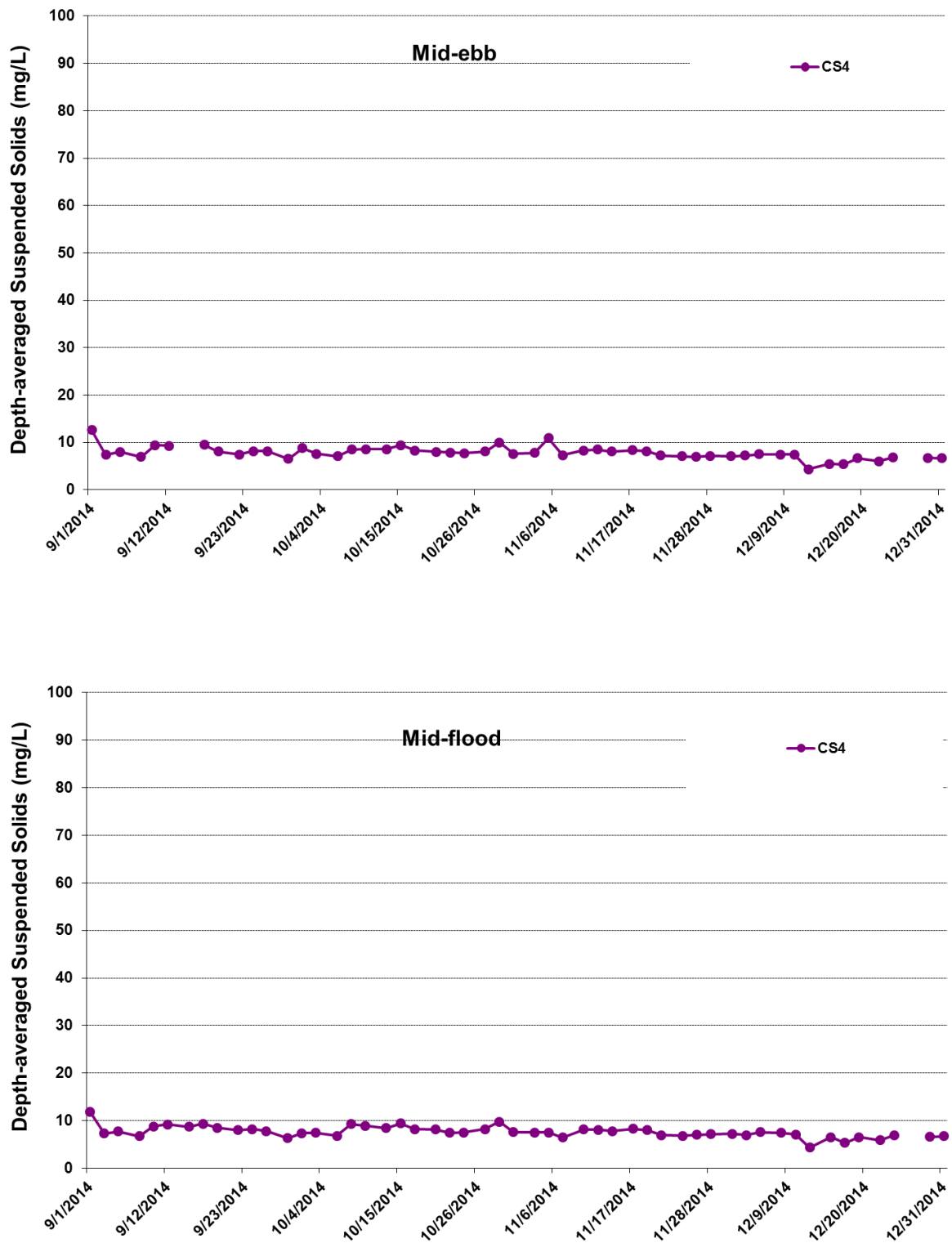


Figure I35 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at CS4. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



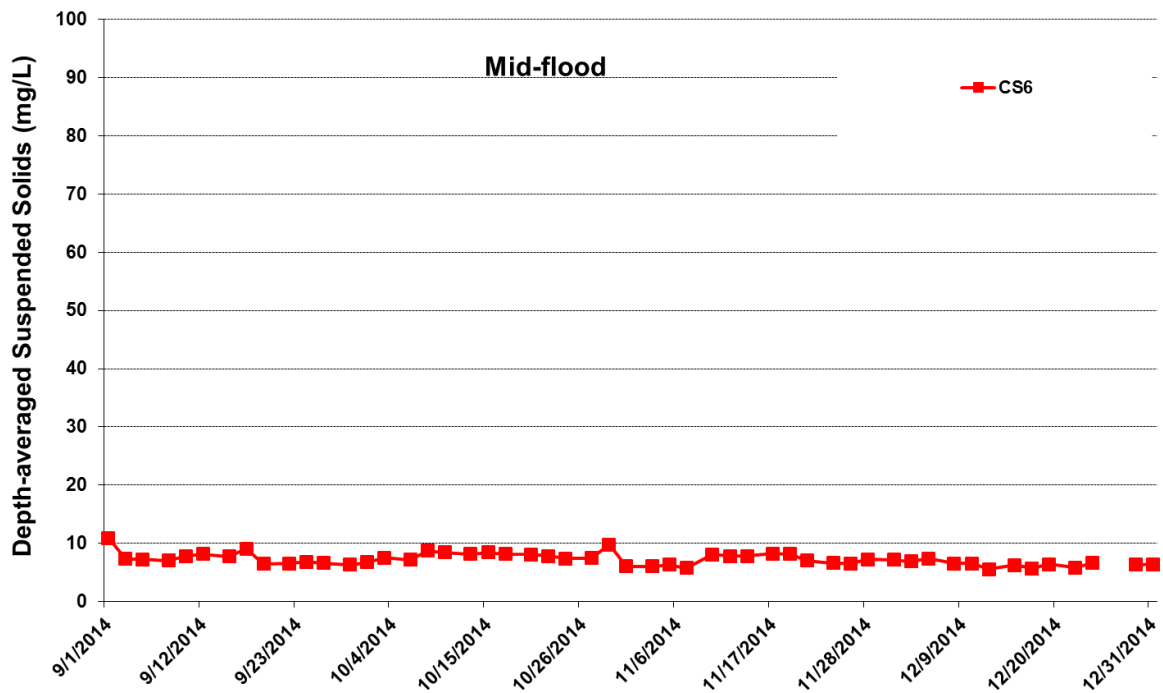
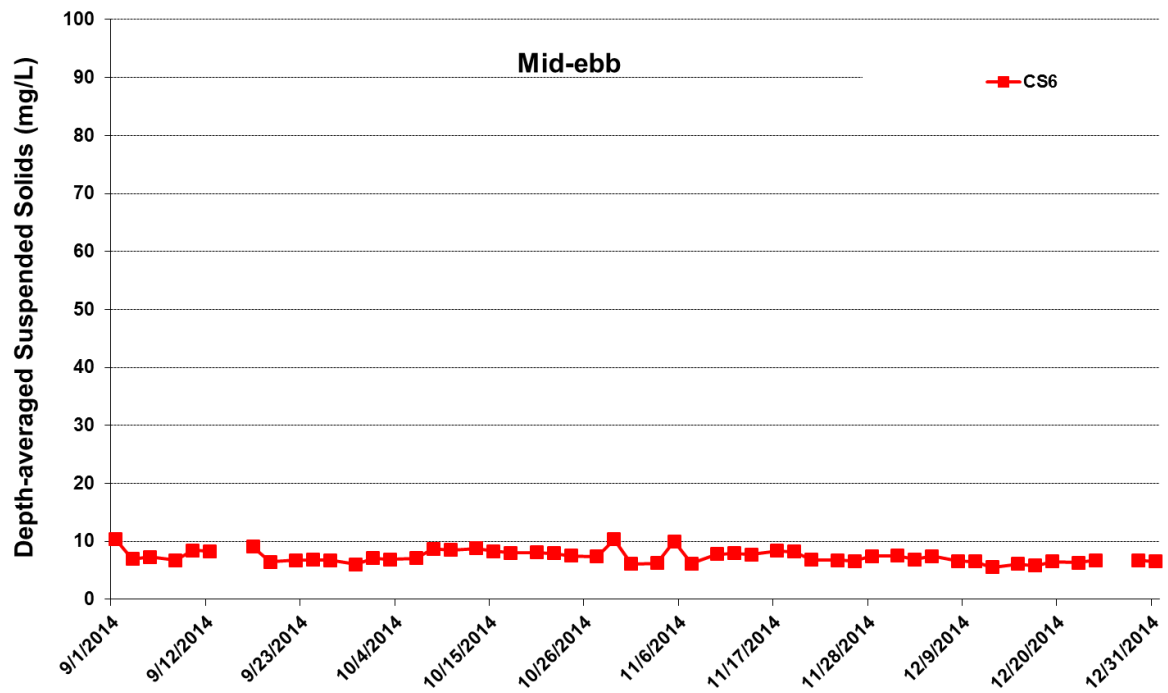


Figure I36 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at CS6. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



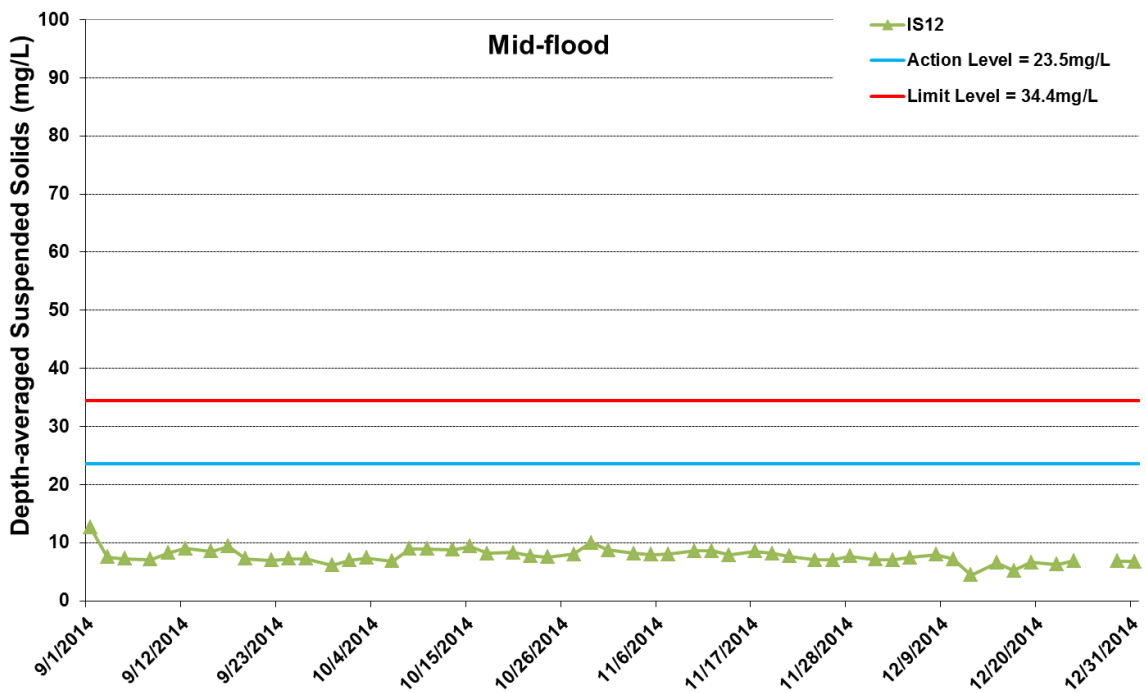
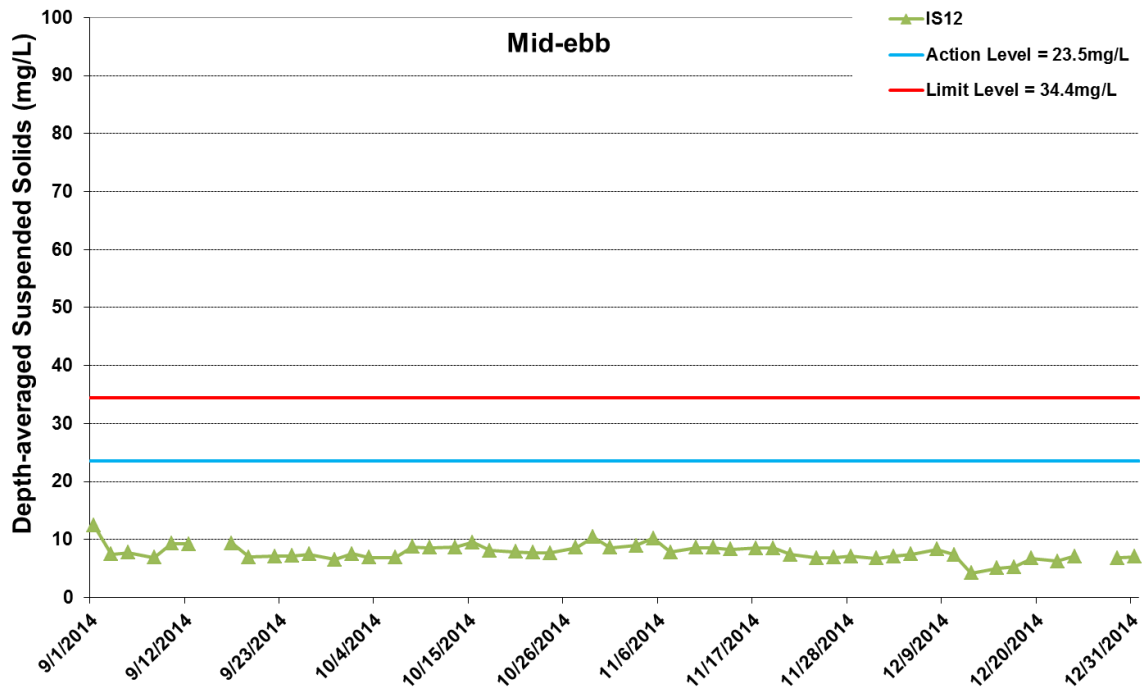


Figure I37 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at IS12. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



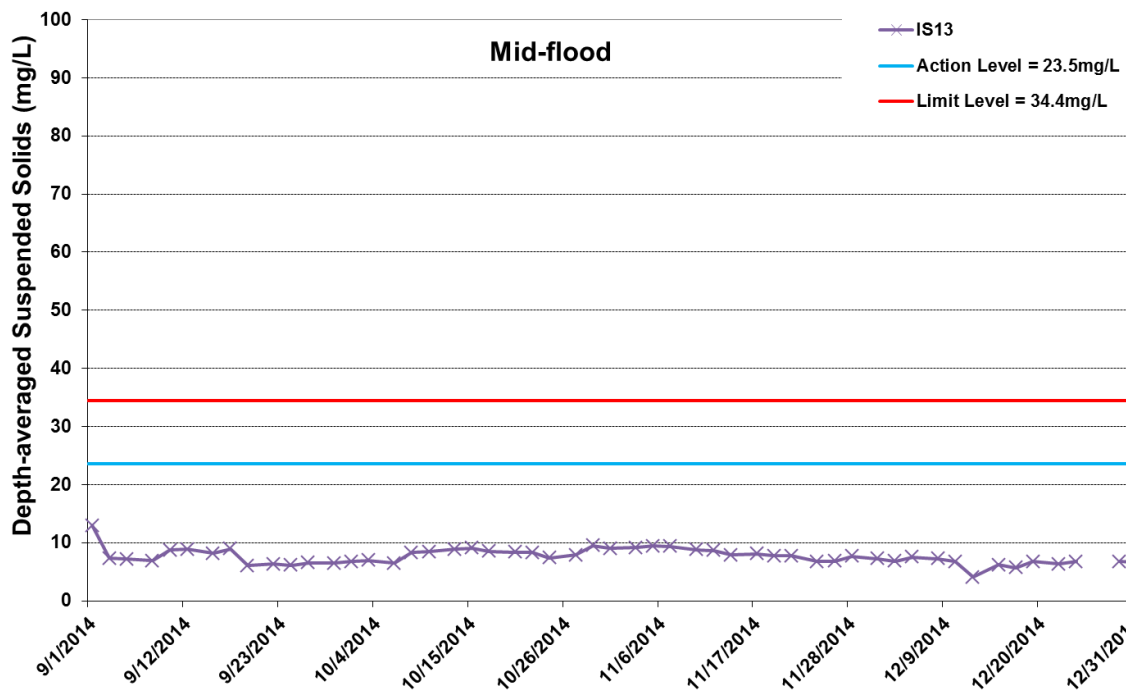
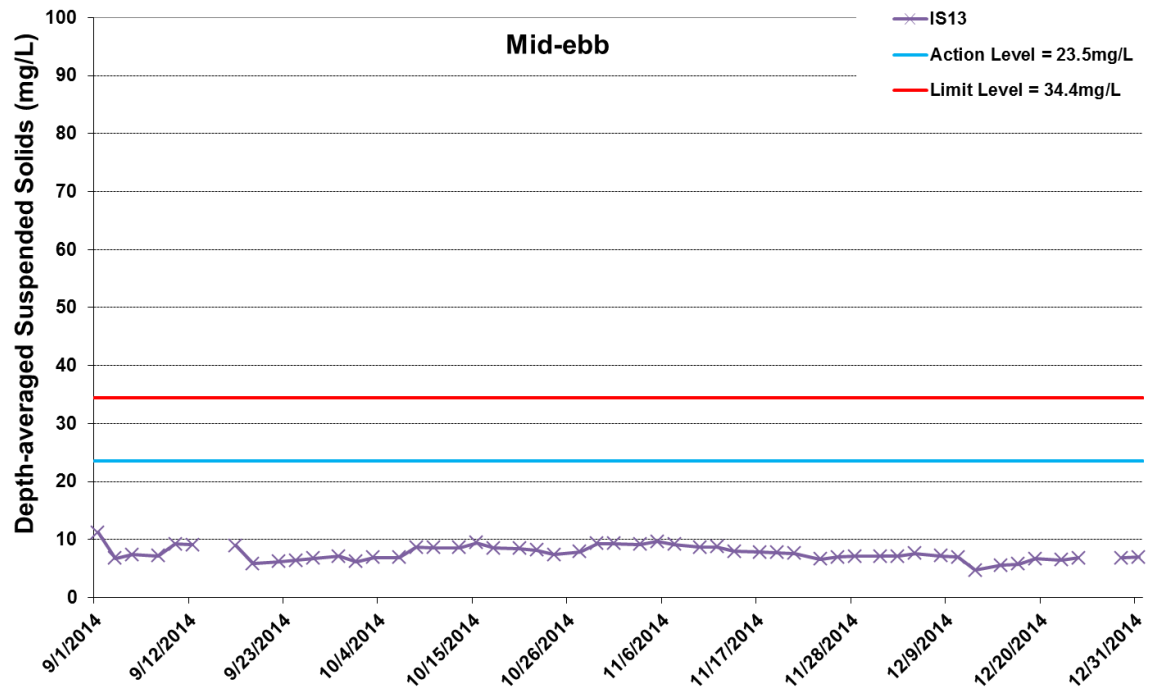


Figure I38 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at IS13. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



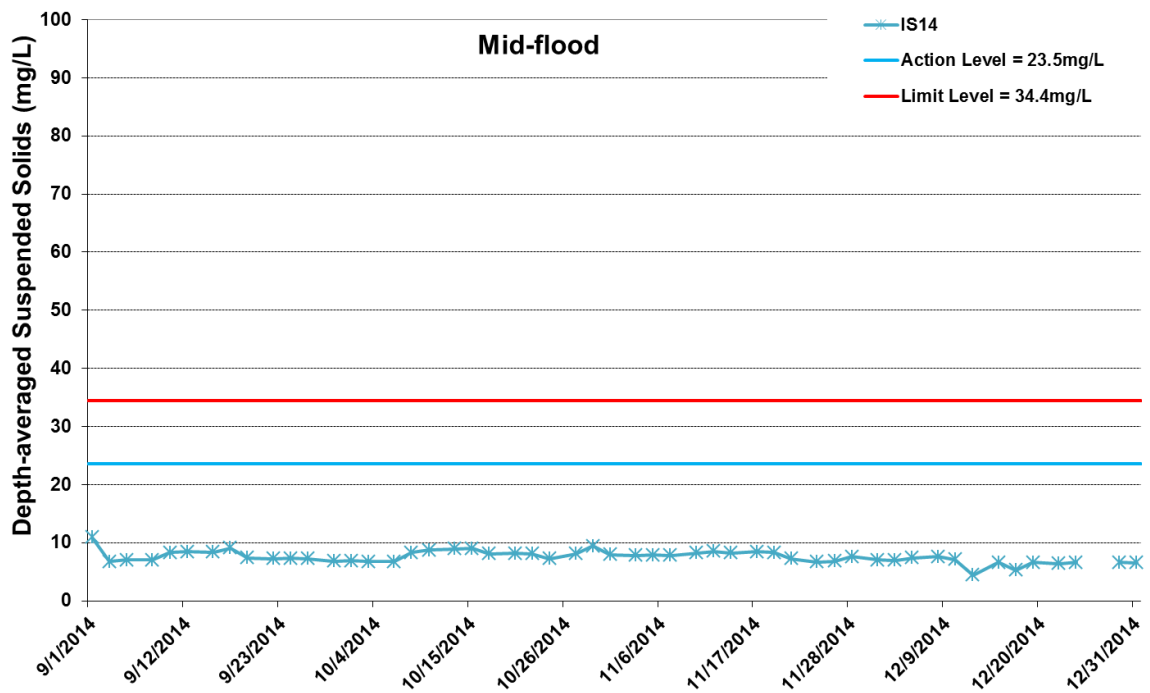
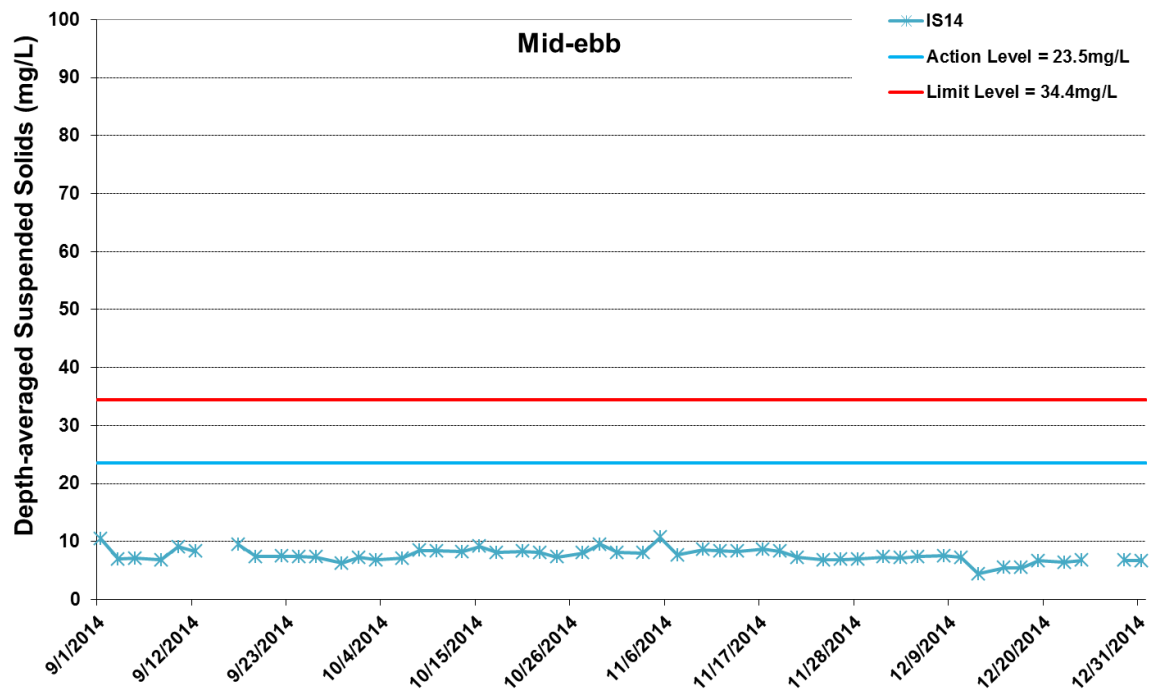


Figure I39 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at IS14. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



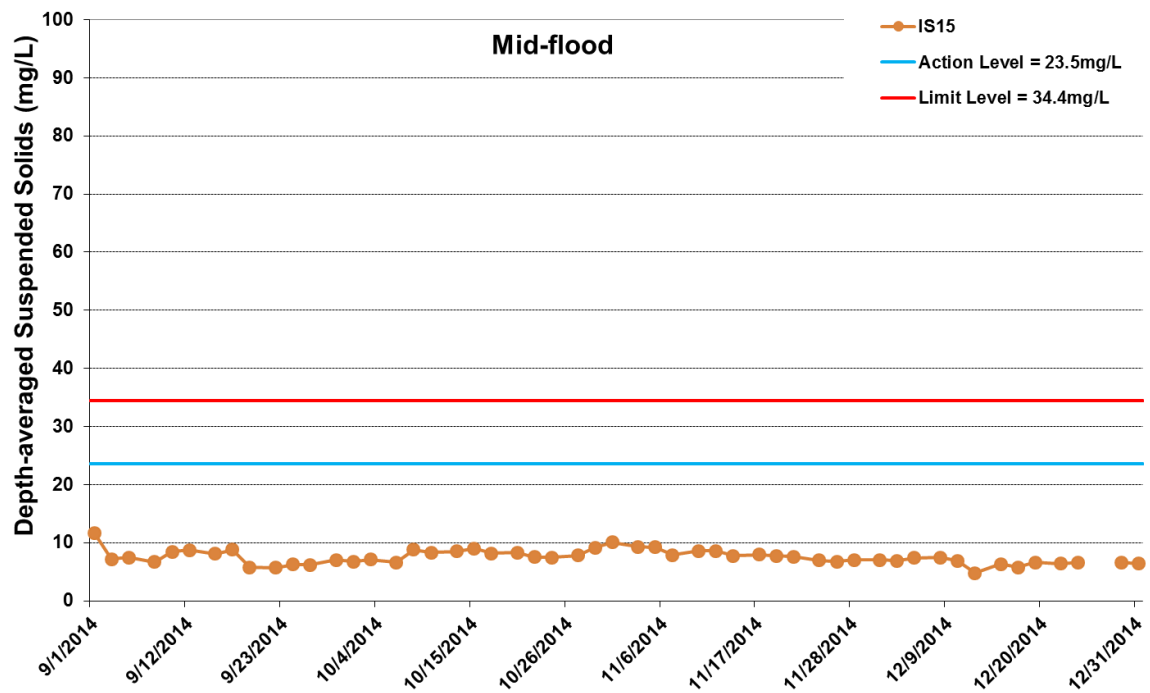
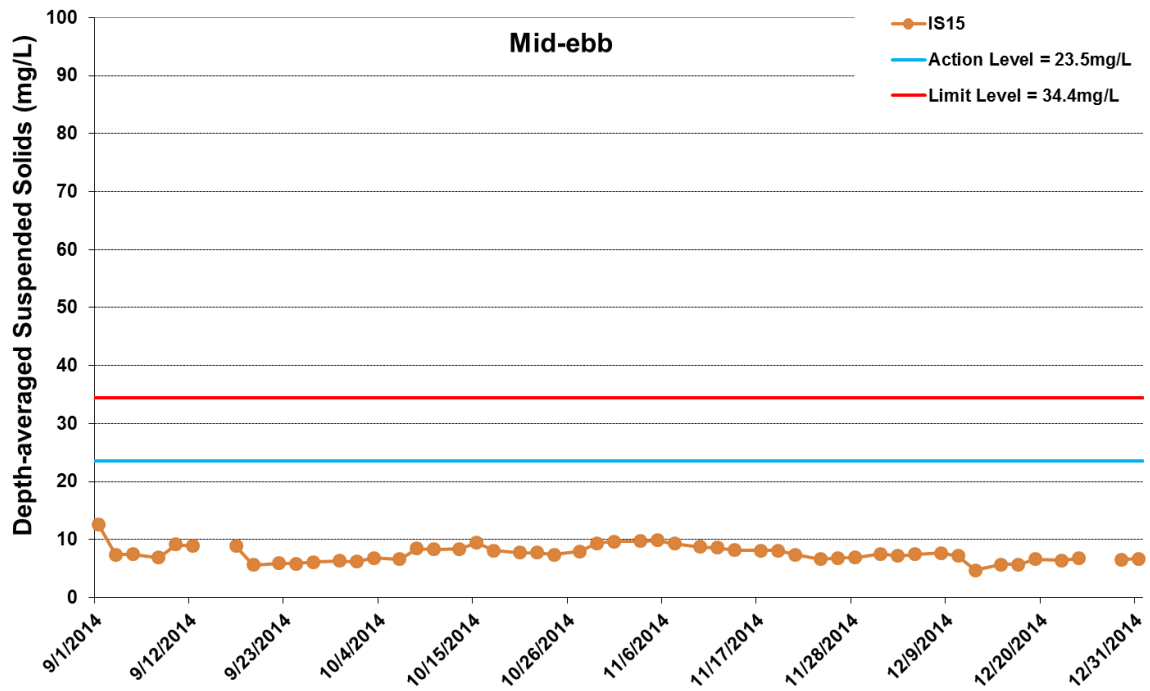


Figure I40 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at IS15. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



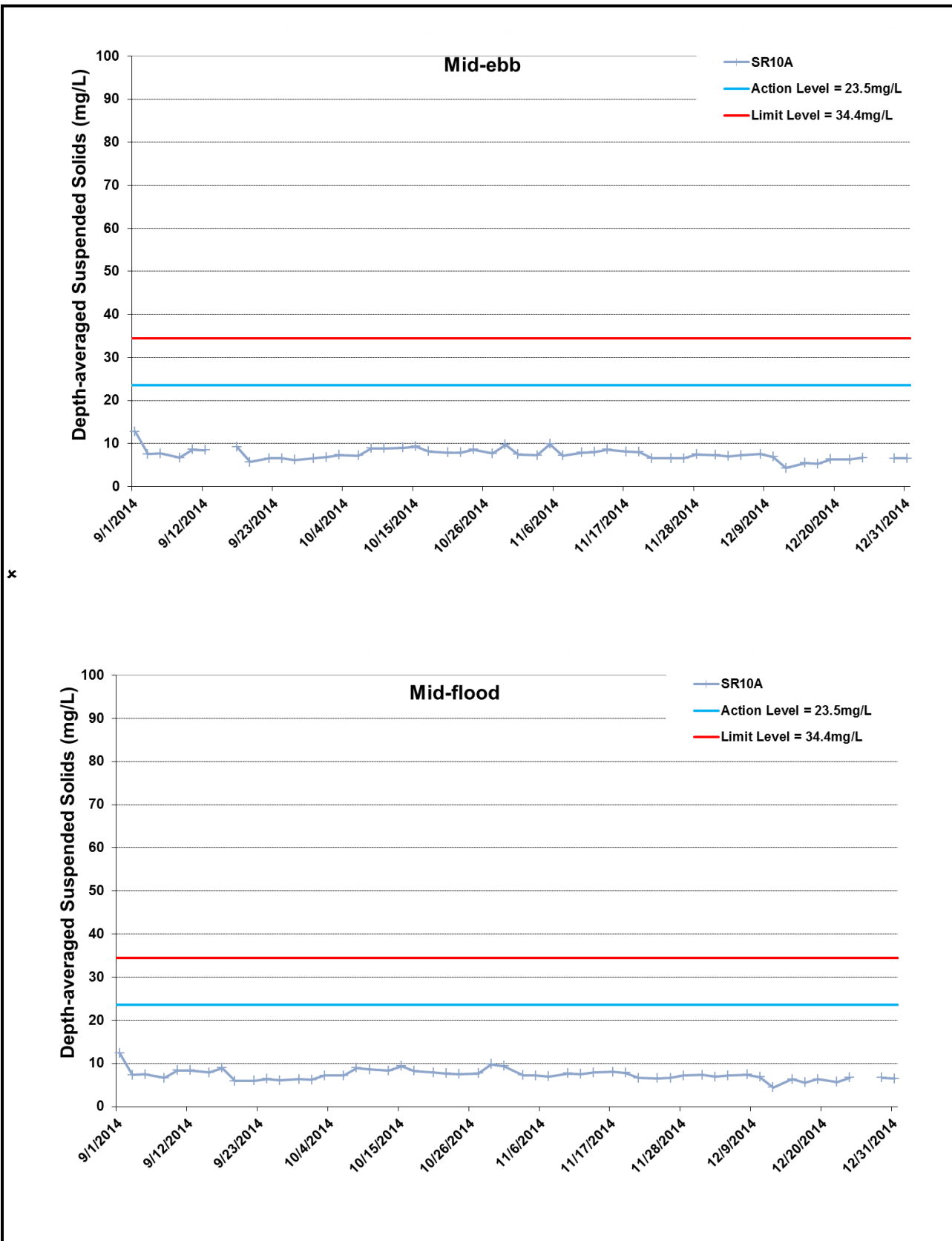


Figure I41 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at SR10A. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



Ref: 0212330_Impact-WQM_December2014_graphs_Rev a.xls

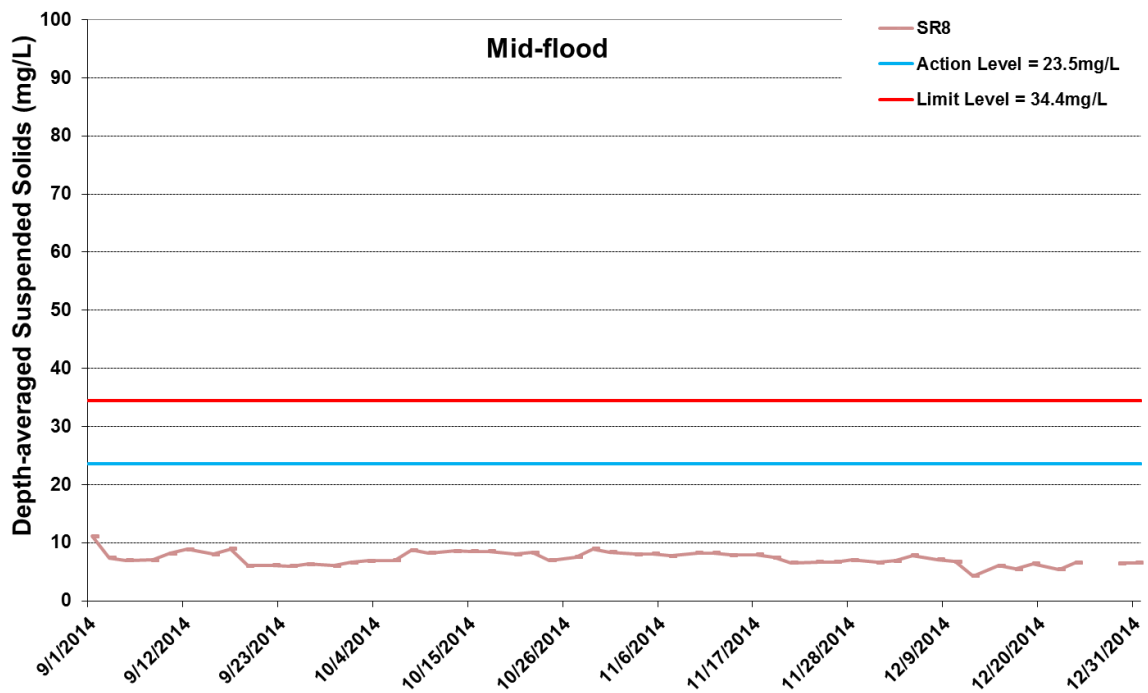
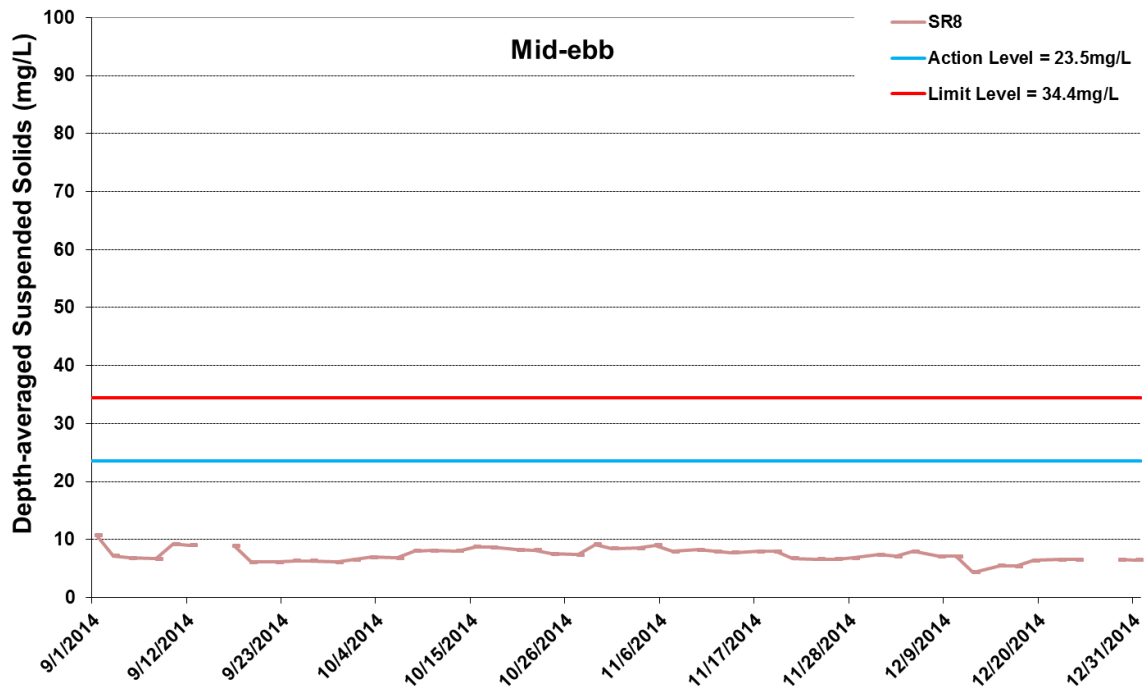


Figure I42 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at SR8. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



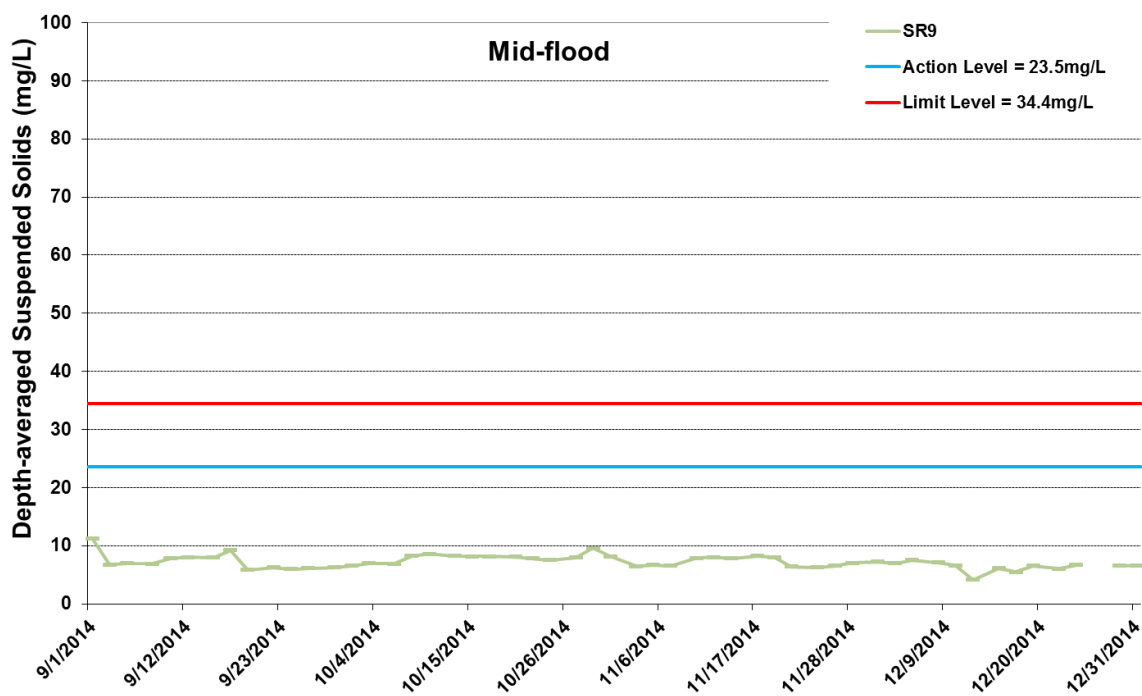
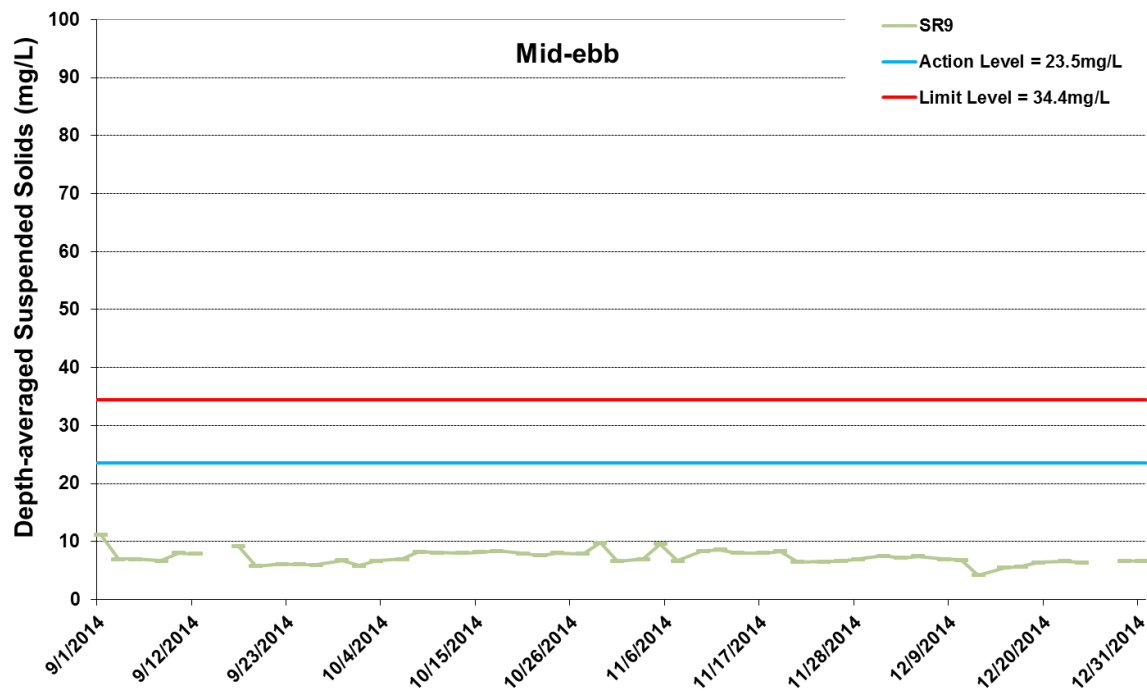


Figure I43 Impact Monitoring - Mean Depth-averaged Level of Suspended Solids (mg/L) between 1 September 2014 and 31 December 2014 at SR9. The weather conditions during the monitoring period varied mostly from sunny to cloudy. Major marine construction activities included: Construction of Temporary Seawalls (9/1/2014 - 11/20/2014); Sheet Piling (9/1/2014 - 11/20/2014); Filling (9/1/2014 - 11/20/2014). Please note WQM Mid-Ebb on 15-Sep was cancelled due to adverse weather. WQM on 26 December 2014 was postponed to 29 December 2014.



Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	15:58	23.9	7.97	27.2	6.67	5.97	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	15:58	24	7.95	27.3	6.7	6.02	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.7	2	1	15:58	24.2	7.98	27.5	6.68	6.14	7.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.7	2	2	15:58	24.2	8	27.4	6.64	6.19	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.3	3	1	15:58	24.3	8.01	27.6	6.46	6.27	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.3	3	2	15:58	24.3	8.03	27.6	6.4	6.31	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	13:17	23.9	8.01	27.2	6.74	5.42	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	13:17	23.9	8.02	27.3	6.78	5.49	6.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.3	2	1	13:17	24.2	8.05	27.3	6.61	6.21	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.3	2	2	13:17	24.3	8.07	27.4	6.65	6.27	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.6	3	1	13:17	24.3	8.09	27.4	6.53	6.34	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.6	3	2	13:17	24.4	8.1	27.5	6.57	6.36	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	15:19	24	7.98	27.3	6.64	5.42	6.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	15:19	24.1	8.01	27.2	6.6	5.38	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.8	2	1	15:19	24.2	8	27.5	6.73	6.12	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.8	2	2	15:19	24.2	8.05	27.4	6.69	6.07	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.6	3	1	15:19	24.3	8.03	27.6	6.46	6.22	7.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.6	3	2	15:19	24.2	8.01	27.7	6.49	6.27	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	14:57	23.9	8.02	27.2	6.76	5.79	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	14:57	24	8.05	27.3	6.74	5.9	7.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.3	2	1	14:57	24.2	8	27.5	6.6	5.68	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.3	2	2	14:57	24.3	8.03	27.4	6.67	5.71	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.5	3	1	14:57	24.3	8.04	27.6	6.5	6.14	7.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.5	3	2	14:57	24.3	8.05	27.5	6.53	6.17	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	15:39	24	7.95	27.3	6.72	5.86	6.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	15:39	24	7.98	27.3	6.78	5.8	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.3	2	1	15:39	24.3	8	27.4	6.57	5.99	7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.3	2	2	15:39	24.3	7.99	27.4	6.51	6.03	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.6	3	1	15:39	24.4	8.01	27.6	6.38	6.16	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.6	3	2	15:39	24.4	8.03	27.7	6.42	6.19	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	14:36	23.9	7.98	27.2	6.63	6.42	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	14:36	23.9	7.96	27.3	6.69	6.48	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS15	Middle	5.8	2	1	14:36	24.2	8	27.4	6.73	5.73	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS15	Middle	5.8	2	2	14:36	24.2	8.01	27.4	6.75	5.76	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	10.5	3	1	14:36	24.3	8.08	27.6	6.59	5.42	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	10.5	3	2	14:36	24.4	8.09	27.5	6.56	5.48	6.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	13:59	23.9	8.07	27.3	6.62	8.48	6.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	13:59	23.9	8.09	27.3	6.67	8.51	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	13:59						
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	13:59						
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.3	3	1	13:59	24.3	8.1	27.4	6.6	5.62	6.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.3	3	2	13:59	24.2	8.11	27.4	6.63	5.67	6.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	14:17	23.9	7.99	27.2	6.57	5.76	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	14:17	24	8.01	27.3	6.61	5.73	6.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	14:17						
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	14:17						
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.4	3	1	14:17	24.3	8.07	27.6	6.48	6.32	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.4	3	2	14:17	24.4	8.09	27.7	6.44	6.36	7.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	13:40	24	8.02	27.3	6.72	5.72	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	13:40	23.9	8.05	27.3	6.77	5.77	7.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6	2	1	13:40	24.2	8.08	27.4	6.58	6.04	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6	2	2	13:40	24.2	8.07	27.4	6.61	6.08	7.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11	3	1	13:40	24.4	8.1	27.5	6.42	6.16	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11	3	2	13:40	24.4	8.09	27.5	6.47	6.21	7.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS4	Surface	1	1	1	06:17	24.2	8.07	27.6	6.67	5.97	6.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS4	Surface	1	1	2	06:17	24.3	8.08	27.7	6.64	6.04	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS4	Middle	10.5	2	1	06:17	24.3	8.09	27.8	6.72	5.82	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS4	Middle	10.5	2	2	06:17	24.4	8.1	27.9	6.75	5.88	6.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS4	Bottom	20	3	1	06:17	24.4	8.12	28	6.61	6.24	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS4	Bottom	20	3	2	06:17	24.5	8.13	28	6.58	6.35	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS6	Surface	1	1	1	08:39	24.3	8.12	27.5	6.42	6.02	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS6	Surface	1	1	2	08:39	24.3	8.13	27.5	6.37	6.07	7.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS6	Middle	6.1	2	1	08:39	24.3	8.1	27.5	6.46	6.16	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS6	Middle	6.1	2	2	08:39	24.3	8.11	27.6	6.48	6.22	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS6	Bottom	11.2	3	1	08:39	24.3	8.15	27.7	6.23	6.53	7.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	CS6	Bottom	11.2	3	2	08:39	24.4	8.16	27.7	6.25	6.44	7.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS12	Surface	1	1	1	07:03	24.2	8.08	27.4	6.54	5.87	6.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS12	Surface	1	1	2	07:03	24.3	8.09	27.5	6.51	5.96	6.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS12	Middle	7.5	2	1	07:03	24.3	8.1	27.6	6.58	5.8	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS12	Middle	7.5	2	2	07:03	24.3	8.11	27.7	6.6	5.75	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS12	Bottom	14	3	1	07:03	24.3	8.11	27.8	6.63	6.03	7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS12	Bottom	14	3	2	07:03	24.3	8.12	27.8	6.67	5.97	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS13	Surface	1	1	1	07:24	24.3	8.1	27.7	6.74	5.98	6.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS13	Surface	1	1	2	07:24	24.2	8.09	27.8	6.7	6.04	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS13	Middle	6	2	1	07:24	24.3	8.07	27.8	6.76	5.9	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS13	Middle	6	2	2	07:24	24.3	8.08	27.8	6.77	5.86	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS13	Bottom	11	3	1	07:24	24.3	8.09	27.8	6.68	6.07	7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS13	Bottom	11	3	2	07:24	24.4	8.1	27.9	6.65	6.13	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS14	Surface	1	1	1	06:41	24.2	8.05	27.6	6.57	6.14	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS14	Surface	1	1	2	06:41	24.2	8.06	27.6	6.6	6.07	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS14	Middle	8.1	2	1	06:41	24.2	8.08	27.8	6.64	5.96	6.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS14	Middle	8.1	2	2	06:41	24.3	8.09	27.8	6.67	5.91	6.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS14	Bottom	15.2	3	1	06:41	24.3	8.1	27.8	6.52	6.05	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS14	Bottom	15.2	3	2	06:41	24.4	8.11	27.9	6.49	6.09	7.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS15	Surface	1	1	1	07:44	24.2	8.04	27.8	6.71	6.15	7.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS15	Surface	1	1	2	07:44	24.3	8.05	27.8	6.73	6.1	7.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS15	Middle	5.9	2	1	07:44	24.3	8.07	27.8	6.77	6.02	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS15	Middle	5.9	2	2	07:44	24.3	8.08	27.8	6.8	5.96	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS15	Bottom	10.8	3	1	07:44	24.3	8.1	27.9	6.7	6.32	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	IS15	Bottom	10.8	3	2	07:44	24.4	8.12	28	6.67	6.26	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR8	Surface	1	1	1	08:22	24.2	8.14	27.5	6.48	6.09	6.8
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR8	Surface	1	1	2	08:22	24.2	8.15	27.6	6.51	6.14	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR8	Middle		2	1	08:22						
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR8	Middle		2	2	08:22						
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR8	Bottom	4.4	3	1	08:22	24.2	8.12	27.6	6.55	6.28	7.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR8	Bottom	4.4	3	2	08:22	24.3	8.13	27.7	6.57	6.34	7.9
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR9	Surface	1	1	1	08:05	24.2	8.1	27.8	6.63	6.24	7.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR9	Surface	1	1	2	08:05	24.2	8.11	27.9	6.6	6.29	7.5
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR9	Middle		2	1	08:05						
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR9	Middle		2	2	08:05						
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR9	Bottom	4.6	3	1	08:05	24.2	8.12	28	6.65	6.41	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR9	Bottom	4.6	3	2	08:05	24.3	8.13	28	6.67	6.36	7.7
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR10A	Surface	1	1	1	09:08	24.2	8.1	27.6	6.57	6.23	7.1
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR10A	Surface	1	1	2	09:08	24.3	8.11	27.6	6.61	6.18	7.3
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR10A	Middle	6.2	2	1	09:08	24.3	8.12	27.6	6.38	6.11	7.4
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR10A	Middle	6.2	2	2	09:08	24.3	8.12	27.7	6.42	6.05	7.6
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR10A	Bottom	11.4	3	1	09:08	24.3	8.13	27.7	6.49	6.42	7.2
TMCLKL	HY/2012/08	2014-12-01	Mid-Ebb	Drizzle	Small Wave	SR10A	Bottom	11.4	3	2	09:08	24.4	8.12	27.7	6.52	6.37	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	17:17	23	8.1	28.9	6.58	5.88	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	17:17	22.9	8.11	29	6.62	5.86	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.8	2	1	17:17	23	8.13	29.1	6.65	5.97	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.8	2	2	17:17	23	8.14	29.1	6.63	6.04	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.5	3	1	17:17	23.1	8.12	29.2	6.64	6.3	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.5	3	2	17:17	23.2	8.14	29.1	6.68	6.34	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	14:38	23.4	8.05	28.9	6.54	5.88	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	14:38	23.3	8.03	29	6.58	5.84	6.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.4	2	1	14:38	23.4	8.08	29.1	6.61	5.74	6.6
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.4	2	2	14:38	23.5	8.06	29.2	6.64	5.7	6.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.7	3	1	14:38	23.5	8.13	29.2	6.68	6.14	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.7	3	2	14:38	23.4	8.12	29.3	6.66	6.16	7.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	16:38	23.2	8.16	29.2	6.6	5.8	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	16:38	23.2	8.15	29.1	6.55	5.84	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.9	2	1	16:38	23.1	8.13	29.1	6.68	5.9	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.9	2	2	16:38	23.2	8.14	29.2	6.7	5.94	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.7	3	1	16:38	23.2	8.16	29.2	6.66	5.92	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.7	3	2	16:38	23.3	8.16	29.2	6.7	5.96	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	16:17	23.1	8.1	29	6.64	5.96	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	16:17	23.2	8.08	29.1	6.59	5.99	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.3	2	1	16:17	23.2	8.13	29.2	6.6	5.85	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.3	2	2	16:17	23.1	8.12	29.2	6.64	5.86	6.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.5	3	1	16:17	23.2	8.14	29.3	6.61	6.04	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.5	3	2	16:17	23.3	8.14	29.3	6.54	6.06	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	16:57	23	8.14	29	6.64	5.82	6.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	16:57	23.1	8.15	29.1	6.63	5.85	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.4	2	1	16:57	23	8.12	29.2	6.58	5.94	7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.4	2	2	16:57	23.1	8.16	29.1	6.62	5.97	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.7	3	1	16:57	23.2	8.16	29.2	6.67	6.01	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.7	3	2	16:57	23.3	8.17	29.2	6.65	5.96	7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	15:57	23.2	8.14	29.1	6.54	5.94	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	15:57	23.1	8.13	29.1	6.58	5.91	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.2	2	1	15:57	23.2	8.15	29.2	6.61	5.88	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.2	2	2	15:57	23.3	8.15	29.2	6.63	5.84	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.3	3	1	15:57	23.3	8.14	29.3	6.68	5.96	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.3	3	2	15:57	23.3	8.16	29.2	6.7	5.98	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	15:26	23.3	8.13	28.8	6.44	5.94	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	15:26	23.2	8.11	28.9	6.38	5.92	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	15:26						
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	15:26						
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.9	3	1	15:26	23.3	8.14	29.1	6.84	5.82	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.9	3	2	15:26	23.3	8.15	29	6.49	5.85	7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	15:42	23.2	8.1	28.9	6.43	5.98	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	15:42	23.1	8.12	28.9	6.46	6.03	7.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	15:42						
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	15:42						
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.9	3	1	15:42	23.2	8.14	29.1	6.53	5.82	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.9	3	2	15:42	23.2	8.14	29	6.5	5.84	6.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	15:02	23.3	8.08	29.1	6.62	5.98	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	15:02	23.3	8.1	29	6.6	5.92	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.5	2	1	15:02	23.4	8.12	29.2	6.64	5.76	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.5	2	2	15:02	23.3	8.13	29.2	6.67	5.74	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.9	3	1	15:02	23.4	8.12	29.3	6.7	5.96	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.9	3	2	15:02	23.4	8.1	29.3	6.68	5.92	7.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	08:29	22.8	8.12	29.4	6.68	5.94	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	08:29	22.9	8.13	29.3	6.67	5.97	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.2	2	1	08:29	22.9	8.12	29.3	6.73	6.09	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.2	2	2	08:29	22.9	8.14	29.4	6.78	6.13	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	19.4	3	1	08:29	22.9	8.15	29.4	6.59	6.43	7.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	19.4	3	2	08:29	23.1	8.14	29.5	6.61	6.49	7.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	11:13	23.1	8.04	29.1	6.52	5.94	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	11:13	23.2	8.06	29.2	6.51	5.91	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	5.8	2	1	11:13	23.2	8.07	29.2	6.6	5.78	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	5.8	2	2	11:13	23.3	8.08	29.3	6.58	5.81	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	10.7	3	1	11:13	23.4	8.12	29.4	6.64	6.19	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	10.7	3	2	11:13	23.4	8.14	29.3	6.63	6.22	7.4

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	09:10	23	8.16	29.5	6.47	5.93	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	09:10	23.1	8.17	29.3	6.53	5.97	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.2	2	1	09:10	23.1	8.14	29.3	6.63	6.01	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.2	2	2	09:10	23.1	8.14	29.4	6.58	5.98	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	13.4	3	1	09:10	23.1	8.17	29.4	6.6	6.03	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	13.4	3	2	09:10	23.2	8.18	29.3	6.63	6.05	7.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	09:31	22.9	8.11	29.3	6.51	6.07	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	09:31	23	8.12	29.4	6.53	6.02	7
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	5.9	2	1	09:31	23	8.13	29.3	6.57	5.94	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	5.9	2	2	09:31	23.1	8.14	29.5	6.59	5.91	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	10.8	3	1	09:31	23.2	8.14	29.4	6.5	6.13	7.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	10.8	3	2	09:31	23.2	8.15	29.5	6.52	6.11	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	08:50	22.8	8.16	29.3	6.62	5.87	6.7
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	08:50	22.9	8.17	29.2	6.6	5.93	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	7.8	2	1	08:50	22.9	8.16	29.4	6.54	6.07	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	7.8	2	2	08:50	23	8.17	29.5	6.58	6.12	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	14.5	3	1	08:50	23.1	8.17	29.4	6.6	6.13	7.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	14.5	3	2	08:50	23.2	8.19	29.2	6.62	6.15	7.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	09:51	23	8.14	29.3	6.47	6.01	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	09:51	23.1	8.15	29.4	6.49	6.04	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.7	2	1	09:51	23.1	8.16	29.3	6.58	5.91	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.7	2	2	09:51	23.2	8.16	29.5	6.6	5.94	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	10.3	3	1	09:51	23.2	8.15	29.4	6.62	6.08	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	10.3	3	2	09:51	23.3	8.17	29.5	6.65	6.03	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	10:32	23.1	8.12	29.1	6.35	6.07	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	09:51	23.2	8.13	29	6.37	6.01	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	09:51						
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	09:51						
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	3.8	3	1	09:51	23.2	8.15	29.1	6.43	5.93	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	3.8	3	2	09:51	23.2	8.16	29.2	6.46	5.89	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	10:12	23	8.11	29.2	6.38	6.07	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	10:12	23.1	8.12	29.3	6.41	6.13	7.4
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	10:12						
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	10:12						
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	3.6	3	1	10:12	23.1	8.15	29.3	6.47	5.91	6.9
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	3.6	3	2	10:12	23.1	8.15	29.4	6.5	5.94	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	10:53	22.9	8.09	29.2	6.57	6.07	7.1
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	10:53	23	8.1	29.1	6.59	6.01	7.3
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	5.9	2	1	10:53	22.9	8.13	29.2	6.6	5.84	6.5
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	5.9	2	2	10:53	23.1	8.14	29.3	6.63	5.81	6.8
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	10.7	3	1	10:53	23	8.11	29.3	6.64	6.07	7.2
TMCLKL	HY/2012/08	2014-12-03	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	10.7	3	2	10:53	23.1	8.12	29.5	6.67	6.01	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	18:43	22.3	7.98	27.7	6.3	6.55	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	18:43	22.3	7.99	27.7	6.28	6.49	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.6	2	1	18:43	22.4	8.01	27.8	6.37	6.28	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.6	2	2	18:43	22.4	8	27.7	6.39	6.29	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.2	3	1	18:43	22.5	8.04	28	6.45	6.36	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.2	3	2	18:43	22.5	8.03	28	6.48	6.39	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	15:50	22.3	8.09	27.8	6.08	6.43	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	15:50	22.3	8.08	27.9	6.11	6.39	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.4	2	1	15:50	22.3	8.1	27.9	6.13	6.53	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.4	2	2	15:50	22.4	8.1	27.9	6.16	6.51	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.8	3	1	15:50	22.4	8.11	27.9	6.22	6.26	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.8	3	2	15:50	22.4	8.12	28	6.2	6.27	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	18:03	22.4	8	27.7	6.11	6.46	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	18:03	22.4	8.01	27.7	6.08	6.53	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.8	2	1	18:03	22.5	8.03	27.8	6.14	6.34	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.8	2	2	18:03	22.5	8.04	27.7	6.16	6.3	7.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.6	3	1	18:03	22.6	8.03	27.9	6.21	6.02	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.6	3	2	18:03	22.6	8.02	27.9	6.23	6.06	6.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	17:43	22.3	8	27.7	6.12	6.28	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	17:43	22.4	8.01	27.8	6.1	6.33	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.1	2	1	17:43	22.4	8.05	27.8	6.19	6.21	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.1	2	2	17:43	22.5	8.03	27.9	6.21	6.24	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.2	3	1	17:43	22.5	8.05	27.9	6.28	6.37	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.2	3	2	17:43	22.5	8.05	28	6.26	6.41	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	18:23	22.3	7.99	27.8	6.14	6.62	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	18:23	22.3	8	27.7	6.19	6.57	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.4	2	1	18:23	22.4	8	27.9	6.22	6.31	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.4	2	2	18:23	22.4	8.02	27.9	6.25	6.34	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.8	3	1	18:23	22.5	8.02	28	6.31	6.2	6.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.8	3	2	18:23	22.5	8.04	28.1	6.33	6.23	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	17:23	22.3	8.04	27.7	6.14	6.51	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	17:23	22.3	8.05	27.7	6.19	6.53	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.2	2	1	17:23	22.3	8.07	27.7	6.21	6.31	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.2	2	2	17:23	22.4	8.07	27.8	6.25	6.34	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.3	3	1	17:23	22.4	8.09	27.9	6.33	6.33	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.3	3	2	17:23	22.5	8.1	28	6.31	6.39	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	16:42	22.3	8.06	27.8	6.04	6.52	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	16:42	22.3	8.07	27.9	6.01	6.48	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	16:42						
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	16:42						
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.9	3	1	16:42	22.3	8.09	28	6.02	6.67	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.9	3	2	16:42	22.4	8.1	27.9	6.04	6.72	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	17:02	22.4	7.99	27.7	6.23	6.38	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	17:02	22.3	8	27.8	6.26	6.41	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	17:02						
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	17:02						
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.9	3	1	17:02	22.4	8.01	27.8	6.33	6.49	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.9	3	2	17:02	22.5	8.02	27.9	6.36	6.51	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	16:17	22.3	8.08	27.8	6.16	6.19	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	16:17	22.3	8.07	27.8	6.19	6.22	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.5	2	1	16:17	22.3	8.1	27.9	6.21	6.31	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.5	2	2	16:17	22.4	8.09	27.8	6.25	6.34	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.9	3	1	16:17	22.4	8.07	28.1	6.11	5.98	6.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.9	3	2	16:17	22.4	8.08	28	6.09	5.97	6.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	10:16	22.4	7.97	27.8	6.23	6.64	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	10:16	22.4	7.98	27.9	6.18	6.58	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.4	2	1	10:16	22.4	7.99	27.9	6.27	6.34	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.4	2	2	10:16	22.5	8.01	28	6.29	6.37	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	19.8	3	1	10:16	22.5	8.04	28.1	6.36	6.44	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	19.8	3	2	10:16	22.6	8.05	28.2	6.39	6.49	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	12:36	22.3	8.09	28	5.96	6.53	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	12:36	22.3	8.1	28	6	6.46	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.2	2	1	12:36	22.3	8.11	28	6.04	6.64	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.2	2	2	12:36	22.3	8.12	28.1	6.07	6.59	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.4	3	1	12:36	22.3	8.13	28.1	6.12	6.33	7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.4	3	2	12:36	22.4	8.12	28.1	6.1	6.38	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	10:56	22.4	7.99	27.8	6.04	6.54	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	10:56	22.4	8	27.9	6.01	6.6	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.6	2	1	10:56	22.4	8.02	27.9	6.07	6.41	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.6	2	2	10:56	22.4	8.03	28	6.1	6.39	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.2	3	1	10:56	22.5	8.01	28	6.16	6.11	7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.2	3	2	10:56	22.5	8.02	28.1	6.19	6.15	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	11:16	22.3	8.01	27.9	6.03	6.39	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	11:16	22.4	8.02	28	5.98	6.44	7.4

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	5.9	2	1	11:16	22.4	8.05	28	6.07	6.3	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	5.9	2	2	11:16	22.4	8.06	28	6.1	6.35	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	10.8	3	1	11:16	22.5	8.07	28	6.17	6.49	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	10.8	3	2	11:16	22.5	8.08	28.1	6.2	6.54	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	10:36	22.3	7.98	27.9	6.09	6.71	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	10:36	22.4	7.99	27.9	6.12	6.66	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.2	2	1	10:36	22.4	8.01	28	6.16	6.43	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.2	2	2	10:36	22.4	8.02	28.1	6.19	6.48	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.4	3	1	10:36	22.5	8.03	28.1	6.24	6.32	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.4	3	2	10:36	22.5	8.04	28.2	6.21	6.38	6.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	11:37	22.3	8.05	27.8	6.07	6.58	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	11:37	22.3	8.06	27.9	6.11	6.64	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6	2	1	11:37	22.3	8.07	27.9	6.13	6.47	7.6
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6	2	2	11:37	22.4	8.08	27.9	6.16	6.42	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	12	3	1	11:37	22.4	8.1	28	6.22	6.45	7.4
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	12	3	2	11:37	22.4	8.11	28.1	6.2	6.53	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	12:16	22.3	8.07	28	5.94	6.63	7.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	12:16	22.3	8.08	28	5.9	6.56	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	12:16						
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	12:16						
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.6	3	1	12:16	22.3	8.1	28.1	5.97	6.72	8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.6	3	2	12:16	22.3	8.11	28	5.99	6.8	8.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	11:56	22.3	8.01	27.9	6.14	6.49	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	11:56	22.4	8.02	27.9	6.17	6.53	7.2
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	11:56						
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	11:56						
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.5	3	1	11:56	22.4	8.02	27.9	6.25	6.59	7.8
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.5	3	2	11:56	22.4	8.03	28	6.28	6.65	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	13:01	22.3	8.09	27.9	6.07	6.27	7.1
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	13:01	22.4	8.1	28	6.1	6.33	7.3
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.3	2	1	13:01	22.3	8.11	28	6.14	6.45	7.7
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.3	2	2	13:01	22.3	8.12	28	6.17	6.39	7.5
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.6	3	1	13:01	22.4	8.08	28.1	6.03	6.08	6.9
TMCLKL	HY/2012/08	2014-12-05	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.6	3	2	13:01	22.3	8.09	28.2	5.99	6.02	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	20:12	21.2	7.69	27.1	6.54	6.23	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	20:12	21.3	7.7	27.2	6.56	6.27	7.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.7	2	1	20:12	21.3	7.71	27.3	6.5	6.39	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.7	2	2	20:12	21.4	7.72	27.4	6.45	6.45	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.4	3	1	20:12	21.5	7.73	27.5	6.63	6.53	7.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.4	3	2	20:12	21.6	7.74	27.6	6.65	6.61	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	17:31	21.2	7.67	27.1	6.44	5.53	6.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	17:31	21.2	7.68	27.2	6.41	5.59	6.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.2	2	1	17:31	21.2	7.65	27.2	6.37	5.4	6.6
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.2	2	2	17:31	21.3	7.66	27.3	6.35	5.36	6.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.4	3	1	17:31	21.4	7.64	27.4	6.16	5.69	6.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.4	3	2	17:31	21.5	7.65	27.5	6.19	5.75	6.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	19:34	21.3	7.78	27.1	6.67	6.41	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	19:34	21.3	7.79	27.1	6.64	6.48	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.7	2	1	19:34	21.3	7.79	27.2	6.58	6.62	7.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.7	2	2	19:34	21.4	7.8	27.2	6.6	6.67	8.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.4	3	1	19:34	21.5	7.74	27.3	6.47	6.81	8.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.4	3	2	19:34	21.5	7.75	27.4	6.5	6.88	8.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	19:15	21.2	7.72	27.1	6.72	5.94	6.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	19:15	21.2	7.73	27.2	6.7	6.02	6.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.2	2	1	19:15	21.2	7.74	27.2	6.65	6.18	7.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.2	2	2	19:15	21.3	7.75	27.2	6.63	6.24	7.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.4	3	1	19:15	21.4	7.76	27.3	6.51	6.42	7.6
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.4	3	2	19:15	21.4	7.77	27.4	6.48	6.38	7.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	19:52	21.3	7.8	27.2	6.61	6.29	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	19:52	21.3	7.81	27.2	6.58	6.34	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.3	2	1	19:52	21.4	7.81	27.2	6.5	6.51	7.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.3	2	2	19:52	21.4	7.82	27.3	6.47	6.56	7.6
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.6	3	1	19:52	21.4	7.79	27.4	6.38	6.67	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.6	3	2	19:52	21.4	7.8	27.5	6.41	6.7	8
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	18:56	21.2	7.68	27.2	6.77	6.34	7.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	18:56	21.2	7.69	27.2	6.74	6.27	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS15	Middle	5.9	2	1	18:56	21.2	7.64	27.2	6.7	6.4	7.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS15	Middle	5.9	2	2	18:56	21.3	7.65	27.3	6.67	6.35	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	10.8	3	1	18:56	21.3	7.66	27.4	6.6	6.51	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	10.8	3	2	18:56	21.4	7.67	27.4	6.56	6.59	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	18:27	21.3	7.8	27.1	6.59	5.83	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	18:27	21.4	7.81	27.1	6.56	5.9	6.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	18:27						
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	18:27						
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.4	3	1	18:27	21.4	7.81	27.1	6.48	6.06	7.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.4	3	2	18:27	21.4	7.82	27.2	6.45	6.11	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	18:41	21.2	7.78	27.1	6.63	5.76	6.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	18:41	21.3	7.79	27.2	6.65	5.81	6.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	18:41						
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	18:41						
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.8	3	1	18:41	21.3	7.75	27.2	6.57	5.97	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.8	3	2	18:41	21.3	7.76	27.2	6.55	6.04	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	17:58	21.2	7.77	27.2	6.84	6.08	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	17:58	21.3	7.78	27.2	6.81	6.01	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.3	2	1	17:58	21.3	7.78	27.2	6.63	6.13	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.3	2	2	17:58	21.3	7.79	27.3	6.59	6.17	7.6
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.6	3	1	17:58	21.5	7.75	27.5	6.46	6.36	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.6	3	2	17:58	21.5	7.76	27.6	6.42	6.4	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	12:19	21	7.63	27	6.61	6.17	7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	12:19	21.1	7.65	27.1	6.63	6.19	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.6	2	1	12:19	21.2	7.84	27.2	6.43	6.32	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.6	2	2	12:19	21.3	7.86	27.3	6.45	6.34	7.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.2	3	1	12:19	21.4	7.73	27.5	6.33	6.58	7.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.2	3	2	12:19	21.4	7.75	27.4	6.31	6.6	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	15:30	21	7.63	27	6.37	5.47	6.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	15:30	21.1	7.65	27.1	6.35	5.49	6.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.1	2	1	15:30	21.2	7.66	27.2	6.28	5.63	6.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.1	2	2	15:30	21.3	7.68	27.3	6.3	5.65	6.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.1	3	1	15:30	21.4	7.74	27.4	6.09	5.89	6.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.1	3	2	15:30	21.5	7.76	27.4	6.11	5.91	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	13:02	21	7.76	27	6.58	6.75	7.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	13:02	21.1	7.78	27	6.6	6.73	8.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.6	2	1	13:02	21.2	7.67	27.1	6.41	6.99	8.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.6	2	2	13:02	21.3	7.69	27.2	6.43	7.01	8.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.2	3	1	13:02	21.4	7.61	27.3	6.33	7.08	8.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.2	3	2	13:02	21.4	7.63	27.4	6.35	7.1	8.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	13:23	21	7.79	27	6.68	5.83	6.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	13:23	21.1	7.81	27.1	6.7	5.85	6.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.1	2	1	13:23	21.2	7.84	27.2	6.62	6.11	7.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.1	2	2	13:23	21.2	7.86	27.3	6.6	6.13	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11.1	3	1	13:23	21.3	7.66	27.4	6.43	6.24	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11.1	3	2	13:23	21.4	7.64	27.4	6.45	6.22	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	12:40	21.1	7.83	27.1	6.47	6.23	7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	12:40	21.2	7.81	27.2	6.5	6.25	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.2	2	1	12:40	21.3	7.67	27.3	6.33	6.31	7.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.2	2	2	12:40	21.3	7.68	27.3	6.35	6.39	7.4

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.3	3	1	12:40	21.4	7.74	27.4	6.26	6.44	8
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.3	3	2	12:40	21.5	7.76	27.5	6.24	6.43	7.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	13:44	21	7.66	27.1	6.81	6.43	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	13:44	21.1	7.68	27.2	6.83	6.41	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.8	2	1	13:44	21.2	7.74	27.3	6.7	6.55	7.7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.8	2	2	13:44	21.3	7.76	27.3	6.68	6.57	7.6
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	10.6	3	1	13:44	21.4	7.81	27.4	6.52	6.68	7.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	10.6	3	2	13:44	21.5	7.83	27.5	6.54	6.7	8.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	14:20	21.3	7.83	27	6.54	5.94	7
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	14:20	21.2	7.81	27	6.52	5.96	6.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	14:20						
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	14:20						
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.2	3	1	14:20	21.4	7.69	27.1	6.31	6.11	7.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.2	3	2	14:20	21.4	7.71	27.2	6.29	6.13	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	14:05	21.1	7.76	27	6.59	5.92	6.8
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	14:05	21.2	7.78	27.1	6.61	5.94	6.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	14:05						
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	14:05						
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.8	3	1	14:05	21.3	7.65	27.2	6.43	6.04	7.1
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.8	3	2	14:05	21.4	7.63	27.3	6.45	6.06	7.3
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	14:50	21.2	7.74	27.1	6.75	6.11	7.2
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	14:50	21.2	7.76	27.1	6.77	6.13	7.5
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.1	2	1	14:50	21.3	7.83	27.2	6.45	6.26	7.4
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.1	2	2	14:50	21.3	7.81	27.3	6.47	6.28	7.6
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.2	3	1	14:50	21.4	7.63	27.4	6.38	6.55	7.9
TMCLKL	HY/2012/08	2014-12-08	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.2	3	2	14:50	21.5	7.65	27.5	6.4	6.57	7.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	11:40	20.2	7.68	27.2	6.56	5.97	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	11:40	20.3	7.65	27.2	6.58	6.03	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.9	2	1	11:40	20.4	7.72	27.3	6.44	6.16	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.9	2	2	11:40	20.3	7.75	27.4	6.47	6.1	7.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.7	3	1	11:40	20.4	7.7	27.5	6.46	6.14	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.7	3	2	11:40	20.4	7.71	27.5	6.49	6.18	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	08:24	20.3	7.7	27.2	6.62	5.44	6.6
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	08:24	20.4	7.69	27.3	6.59	5.46	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS6	Middle	5.7	2	1	08:24	20.4	7.61	27.4	6.38	5.55	6.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS6	Middle	5.7	2	2	08:24	20.4	7.65	27.5	6.35	5.53	6.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.4	3	1	08:24	20.5	7.71	27.4	6.14	5.6	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.4	3	2	08:24	20.4	7.74	27.4	6.16	5.66	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	10:54	20.3	7.75	27.1	6.56	5.83	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	10:54	20.3	7.78	27.2	6.59	5.87	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.9	2	1	10:54	20.4	7.72	27.2	6.49	6.21	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.9	2	2	10:54	20.3	7.74	27.3	6.45	6.24	7.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.7	3	1	10:54	20.4	7.65	27.4	6.37	6.17	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.7	3	2	10:54	20.5	7.64	27.4	6.32	6.15	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	10:31	20.3	7.7	27.1	6.56	5.66	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	10:31	20.4	7.71	27.2	6.59	5.68	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.2	2	1	10:31	20.3	7.71	27.3	6.57	5.79	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.2	2	2	10:31	20.2	7.73	27.3	6.55	5.85	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.4	3	1	10:31	20.4	7.61	27.3	6.47	5.89	6.9
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	11.4	3	2	10:31	20.5	7.66	27.4	6.44	5.9	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	11:17	20.2	7.7	27.2	6.48	6.03	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	11:17	20.3	7.74	27.2	6.44	6.07	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.3	2	1	11:17	20.3	7.68	27.3	6.47	6.12	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.3	2	2	11:17	20.3	7.67	27.4	6.44	6.11	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.6	3	1	11:17	20.4	7.71	27.4	6.35	6.03	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.6	3	2	11:17	20.5	7.73	27.5	6.31	6.05	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	10:08	20.3	7.58	27.1	6.62	5.78	6.9
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	10:08	20.4	7.62	27.1	6.65	5.79	6.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6	2	1	10:08	20.4	7.68	27.2	6.64	5.83	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6	2	2	10:08	20.2	7.71	27.3	6.67	5.86	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	10.9	3	1	10:08	20.4	7.75	27.3	6.56	5.89	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	10.9	3	2	10:08	20.5	7.79	27.2	6.52	5.94	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	09:24	20.3	7.71	27.1	6.61	5.76	6.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	09:24	20.4	7.7	27.3	6.58	5.79	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	09:24						
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	09:24						
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.5	3	1	09:24	20.4	7.72	27.1	6.29	5.97	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.5	3	2	09:24	20.5	7.74	27	6.26	6.03	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	09:44	20.3	7.8	27.1	6.52	5.76	6.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	09:44	20.3	7.82	27.2	6.55	5.71	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	09:44						
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	09:44						
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	5.1	3	1	09:44	20.3	7.63	27.2	6.35	5.75	6.6
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	5.1	3	2	09:44	20.4	7.63	27.3	6.39	5.77	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	08:54	20.3	7.72	27.2	6.71	5.57	6.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	08:54	20.3	7.74	27.2	6.74	5.6	6.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	5.8	2	1	08:54	20.3	7.79	27.3	6.46	5.77	6.9
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	5.8	2	2	08:54	20.4	7.82	27.4	6.45	5.81	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.5	3	1	08:54	20.4	7.69	27.4	6.51	5.95	7.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.5	3	2	08:54	20.4	7.7	27.4	6.49	5.99	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	13:33	20.5	7.7	27.4	6.48	6.08	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	13:33	20.4	7.66	27.3	6.52	6.11	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.7	2	1	13:33	20.4	7.74	27.5	6.31	6.24	7.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.7	2	2	13:33	20.4	7.76	27.5	6.36	6.19	7.6
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.3	3	1	13:33	20.5	7.71	27.6	6.38	6.28	7.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.3	3	2	13:33	20.5	7.74	27.5	6.4	6.25	7.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	16:00	20.4	7.74	27.4	6.54	5.51	6.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	16:00	20.5	7.46	27.5	6.5	5.54	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6	2	1	16:00	20.6	7.64	27.6	6.3	5.61	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6	2	2	16:00	20.5	7.68	27.5	6.26	5.6	6.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11	3	1	16:00	20.5	7.75	27.4	6.05	5.68	6.9
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11	3	2	16:00	20.5	7.78	27.5	6.04	5.74	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	14:09	20.5	7.78	27.3	6.48	5.94	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	14:09	20.4	7.81	27.4	6.52	5.99	7.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.7	2	1	14:09	20.4	7.74	27.3	6.4	6.34	7.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.7	2	2	14:09	20.5	7.76	27.4	6.36	6.28	7.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.3	3	1	14:09	20.4	7.68	27.5	6.3	6.24	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.3	3	2	14:09	20.4	7.65	27.4	6.26	6.28	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	14:27	20.5	7.72	27.3	6.48	5.74	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	14:27	20.4	7.75	27.3	6.52	5.77	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6	2	1	14:27	20.4	7.74	27.3	6.48	5.88	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6	2	2	14:27	20.4	7.76	27.4	6.43	5.92	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11	3	1	14:27	20.6	7.64	27.5	6.33	5.98	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11	3	2	14:27	20.6	7.68	27.4	6.36	5.96	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	13:51	20.4	7.73	27.4	6.39	6.11	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	13:51	20.4	7.76	27.3	6.35	6.14	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.1	2	1	13:51	20.5	7.69	27.5	6.33	6.22	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.1	2	2	13:51	20.4	7.66	27.4	6.36	6.14	7.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.2	3	1	13:51	20.4	7.74	27.5	6.22	6.1	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.2	3	2	13:51	20.5	7.7	27.6	6.25	6.14	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	14:44	20.5	7.6	27.3	6.54	5.89	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	14:44	20.4	7.64	27.2	6.5	5.87	7.1
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.8	2	1	14:44	20.4	7.7	27.3	6.56	5.94	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.8	2	2	14:44	20.4	7.74	27.4	6.6	5.97	7.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	10.5	3	1	14:44	20.5	7.78	27.3	6.48	5.99	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	10.5	3	2	14:44	20.5	7.81	27.4	6.54	6.03	7.2

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	15:22	20.5	7.74	27.4	6.5	5.82	7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	15:22	20.4	7.7	27.3	6.42	5.78	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	15:22						
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	15:22						
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.1	3	1	15:22	20.5	7.75	27.3	6.2	6.04	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.1	3	2	15:22	20.4	7.78	27.2	6.14	6.12	7.4
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	15:01	20.5	7.82	27.3	6.44	5.84	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	15:01	20.4	7.85	27.3	6.48	5.78	6.5
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	15:01						
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	15:01						
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.7	3	1	15:01	20.4	7.65	27.4	6.27	5.89	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.7	3	2	15:01	20.4	7.66	27.4	6.2	5.84	7.3
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	15:40	20.5	7.76	27.3	6.64	5.66	6.6
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	15:40	20.4	7.78	27.4	6.66	5.69	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.1	2	1	15:40	20.4	7.82	27.5	6.38	5.84	6.8
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.1	2	2	15:40	20.5	7.86	27.4	6.32	5.9	6.7
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.1	3	1	15:40	20.4	7.72	27.4	6.44	6.04	7.2
TMCLKL	HY/2012/08	2014-12-10	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.1	3	2	15:40	20.4	7.73	27.4	6.39	6.08	7.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	12:55	20.3	7.74	27.3	6.62	2.88	3.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	12:55	20.4	7.71	27.4	6.64	2.94	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11	2	1	12:55	20.6	7.78	27.4	6.5	3.07	4.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11	2	2	12:55	20.5	7.81	27.5	6.53	3.01	4.3
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.4	3	1	12:55	20.6	7.76	27.6	6.52	4.05	5.2
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.4	3	2	12:55	20.5	7.77	27.5	6.55	4.09	5.3
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	09:43	20.4	7.76	27.3	6.68	3.35	4.2
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	09:43	20.3	7.75	27.4	6.65	3.37	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.4	2	1	09:43	20.5	7.67	27.5	6.44	4.46	5.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.4	2	2	09:43	20.6	7.71	27.4	6.41	4.44	5.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.8	3	1	09:43	20.6	7.77	27.5	6.2	5.51	6.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	11.8	3	2	09:43	20.5	7.8	27.6	6.22	5.57	6.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	12:07	20.3	7.81	27.3	6.62	2.74	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	12:07	20.4	7.84	27.2	6.65	2.73	3.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.9	2	1	12:07	20.5	7.78	27.3	6.55	3.12	4.4
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.9	2	2	12:07	20.5	7.8	27.2	6.51	3.15	4.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.8	3	1	12:07	20.5	7.71	27.4	6.43	4.08	5.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.8	3	2	12:07	20.6	7.7	27.5	6.38	4.06	5.4
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	11:43	20.4	7.76	27.2	6.62	2.57	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	11:43	20.3	7.77	27.3	6.65	2.59	3.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.6	2	1	11:43	20.5	7.77	27.4	6.63	2.7	4
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.6	2	2	11:43	20.4	7.79	27.3	6.61	2.76	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	12.2	3	1	11:43	20.5	7.67	27.4	6.53	3.8	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	12.2	3	2	11:43	20.6	7.72	27.5	6.5	3.81	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	12:31	20.2	7.76	27.2	6.54	2.94	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	12:31	20.4	7.8	27.3	6.5	2.98	4.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.6	2	1	12:31	20.4	7.74	27.3	6.53	3.03	4.4
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.6	2	2	12:31	20.3	7.73	27.4	6.5	3.02	4.3
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	16.2	3	1	12:31	20.4	7.77	27.5	6.41	3.98	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	16.2	3	2	12:31	20.5	7.79	27.6	6.37	3.96	5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	11:19	20.5	7.64	27.1	6.68	2.69	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	11:19	20.4	7.68	27.2	6.71	2.7	3.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.2	2	1	11:19	20.5	7.74	27.3	6.7	3.74	4.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.2	2	2	11:19	20.5	7.77	27.2	6.73	3.77	4.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.4	3	1	11:19	20.6	7.81	27.4	6.62	4.8	5.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.4	3	2	11:19	20.5	7.85	27.3	6.58	4.85	5.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	10:31	20.4	7.77	27.2	6.67	2.67	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	10:31	20.5	7.76	27.3	6.64	2.7	3.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	10:31						
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	10:31						

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.6	3	1	10:31	20.6	7.78	27.3	6.35	3.88	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.6	3	2	10:31	20.6	7.8	27.4	6.32	3.94	5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	10:55	20.4	7.86	27.2	6.58	2.67	3.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	10:55	20.3	7.88	27.3	6.61	2.62	3.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	10:55						
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	10:55						
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.2	3	1	10:55	20.4	7.69	27.4	6.41	3.66	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.2	3	2	10:55	20.5	7.7	27.3	6.45	3.71	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	10:07	20.3	7.78	27.2	6.77	2.48	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	10:07	20.4	7.8	27.3	6.8	2.51	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.2	2	1	10:07	20.4	7.85	27.4	6.52	3.68	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.2	2	2	10:07	20.4	7.88	27.3	6.51	3.72	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.4	3	1	10:07	20.5	7.75	27.4	6.57	3.86	5
TMCLKL	HY/2012/08	2014-12-12	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	11.4	3	2	10:07	20.4	7.76	27.5	6.55	3.9	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	14:55	20.3	7.76	27.3	6.56	2.88	3.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	14:55	20.4	7.76	27.3	6.54	2.94	4.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.7	2	1	14:55	20.4	7.77	27.5	6.5	3.06	4.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.7	2	2	14:55	20.4	7.77	27.4	6.47	3.03	4.3
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.4	3	1	14:55	20.3	7.78	27.6	6.42	4	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.4	3	2	14:55	20.4	7.77	27.6	6.45	3.92	5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	17:18	20.3	7.78	27.3	6.58	3.52	4.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	17:18	20.3	7.77	27.4	6.54	3.47	4.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.2	2	1	17:18	20.3	7.74	27.4	6.46	4.26	5.4
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.2	2	2	17:18	20.4	7.75	27.4	6.42	4.32	5.3
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.4	3	1	17:18	20.4	7.76	27.5	6.26	5.42	6.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.4	3	2	17:18	20.4	7.76	27.6	6.3	5.44	6.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	15:36	20.3	7.78	27.2	6.48	2.84	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	15:36	20.4	7.8	27.2	6.5	2.86	3.4
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.7	2	1	15:36	20.5	7.79	27.3	6.44	3.04	4.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.7	2	2	15:36	20.4	7.79	27.4	6.4	3.08	4.3
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.4	3	1	15:36	20.6	7.78	27.4	6.38	4	5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.4	3	2	15:36	20.6	7.78	27.5	6.4	3.96	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	15:56	20.5	7.78	27.3	6.56	2.48	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	15:56	20.5	7.78	27.3	6.6	2.46	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.4	2	1	15:56	20.5	7.77	27.3	6.47	2.84	4.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.4	2	2	15:56	20.5	7.78	27.4	6.47	2.8	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11.8	3	1	15:56	20.6	7.79	27.6	6.42	3.74	5.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11.8	3	2	15:56	20.6	7.79	27.6	6.38	3.7	5.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	15:15	20.2	7.76	27.2	6.5	2.98	4.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	15:15	20.3	7.78	27.2	6.52	3.02	4
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.3	2	1	15:15	20.3	7.77	27.4	6.37	3.14	4.2
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.3	2	2	15:15	20.3	7.78	27.4	6.4	3.06	4
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.6	3	1	15:15	20.3	7.78	27.4	6.32	3.86	4.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.6	3	2	15:15	20.3	7.78	27.5	6.3	3.9	5.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	16:18	20.3	7.77	27.3	6.54	2.74	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	16:18	20.4	7.78	27.2	6.58	2.72	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.1	2	1	16:18	20.4	7.78	27.4	6.52	3.64	4.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.1	2	2	16:18	20.5	7.79	27.4	6.5	3.6	4.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	11.2	3	1	16:18	20.6	7.79	27.5	6.47	4.65	5.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	11.2	3	2	16:18	20.6	7.8	27.6	6.49	4.6	5.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	16:48	20.4	7.76	27.3	6.58	2.74	3.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	16:48	20.4	7.76	27.3	6.6	2.78	3.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	16:48						
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	16:48						
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.4	3	1	16:48	20.5	7.77	27.4	6.42	3.8	4.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.4	3	2	16:48	20.5	7.77	27.5	6.44	3.86	5.1
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	16:38	20.4	7.78	27.2	6.48	2.58	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	16:38	20.4	7.79	27.3	6.5	2.62	3.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	16:38						
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	16:38						
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4	3	1	16:38	20.5	7.77	27.4	6.37	3.8	4.9
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4	3	2	16:38	20.6	7.77	27.4	6.4	3.76	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	17:00	20.3	7.76	27.2	6.62	2.56	3.6
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	17:00	20.3	7.77	27.3	6.66	2.58	3.7
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.1	2	1	17:00	20.4	7.75	27.3	6.44	3.45	4.2
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.1	2	2	17:00	20.4	7.76	27.4	6.4	3.5	4.5
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.2	3	1	17:00	20.4	7.78	27.5	6.37	3.74	4.8
TMCLKL	HY/2012/08	2014-12-12	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.2	3	2	17:00	20.4	7.78	27.5	6.4	3.8	5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	15:00	20.2	7.8	29.5	6.65	5.11	6.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	15:00	20.2	7.8	29.5	6.68	5.16	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11.4	2	1	15:00	20.3	7.79	29.6	6.4	5.44	6.9
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11.4	2	2	15:00	20.4	7.8	29.6	6.44	5.49	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.8	3	1	15:00	20.4	7.81	29.7	6.22	5.69	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.8	3	2	15:00	20.3	7.8	29.6	6.18	5.65	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	12:00	20.1	7.76	29.4	6.49	4.72	5.8
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	12:00	20.1	7.77	29.4	6.47	4.75	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.6	2	1	12:00	20.2	7.77	29.5	6.41	5.39	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.6	2	2	12:00	20.2	7.77	29.5	6.44	5.31	6.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	12.2	3	1	12:00	20.2	7.78	29.5	6.38	5.57	6.7
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	12.2	3	2	12:00	20.1	7.77	29.5	6.42	5.5	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	14:21	20.2	7.8	29.5	6.72	5.02	6.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	14:21	20.2	7.81	29.5	6.68	5.06	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8.1	2	1	14:21	20.3	7.81	29.6	6.39	5.87	6.9
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8.1	2	2	14:21	20.4	7.82	29.6	6.43	5.81	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15.2	3	1	14:21	20.4	7.82	29.7	6.31	5.64	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15.2	3	2	14:21	20.4	7.81	29.6	6.27	5.6	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	13:38	20.2	7.79	29.5	6.5	4.92	5.8
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	13:38	20.2	7.79	29.5	6.45	4.86	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.9	2	1	13:38	20.3	7.8	29.6	6.39	5.12	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS13	Middle	6.9	2	2	13:38	20.2	7.8	29.6	6.35	5.16	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	12.8	3	1	13:38	20.3	7.79	29.6	6.31	5.57	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	12.8	3	2	13:38	20.3	7.8	29.5	6.34	5.61	6.7
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	14:39	20.2	7.79	29.5	6.69	4.95	6.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	14:39	20.1	7.8	29.4	6.65	4.91	5.8
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.7	2	1	14:39	20.4	7.8	29.5	6.27	5.54	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.7	2	2	14:39	20.3	7.81	29.6	6.24	5.5	6.7
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	16.4	3	1	14:39	20.4	7.81	29.7	6.17	5.95	7
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	16.4	3	2	14:39	20.4	7.81	29.7	6.19	5.9	7.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	13:20	20.1	7.77	29.4	6.58	4.83	6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	13:20	20.2	7.78	29.5	6.55	4.8	6.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.4	2	1	13:20	20.2	7.79	29.5	6.32	5.29	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.4	2	2	13:20	20.3	7.78	29.4	6.29	5.25	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.8	3	1	13:20	20.3	7.79	29.6	6.26	5.44	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.8	3	2	13:20	20.4	7.8	29.5	6.2	5.49	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	12:50	20.1	7.78	29.4	6.62	4.86	5.9
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	12:50	20.1	7.79	29.4	6.57	4.8	5.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	12:50						
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	12:50						
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.8	3	1	12:50	20.1	7.78	29.5	6.41	5.01	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.8	3	2	12:50	20.1	7.79	29.5	6.37	5.07	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	13:05	20.1	7.79	29.4	6.62	4.77	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	13:05	20	7.79	29.3	6.65	4.72	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	13:05						
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	13:05						
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.4	3	1	13:05	20.4	7.79	29.5	6.41	5.5	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.4	3	2	13:05	20.3	7.79	29.5	6.44	5.54	6.8

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	12:25	20.1	7.78	29.4	6.58	5.04	6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	12:25	20.1	7.78	29.3	6.54	5.08	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.8	2	1	12:25	20.1	7.78	29.5	6.39	5.17	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.8	2	2	12:25	20.2	7.79	29.5	6.35	5.23	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	12.6	3	1	12:25	20.2	7.79	29.6	6.3	5.33	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	12.6	3	2	12:25	20.2	7.79	29.6	6.27	5.3	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	18:30	20.3	7.85	29.4	6.65	3.88	4.8
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	18:30	20.2	7.88	29.3	6.69	3.91	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.9	2	1	18:30	20.3	7.74	29.4	6.74	4.21	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.9	2	2	18:30	20.4	7.73	29.4	6.7	4.25	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.7	3	1	18:30	20.5	7.8	29.5	6.32	4.99	6.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.7	3	2	18:30	20.4	7.79	29.5	6.38	5.01	6.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	21:18	20.1	7.73	29.4	6.72	4.24	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	21:18	20.1	7.72	29.4	6.7	4.3	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.1	2	1	21:18	20.2	7.8	29.5	6.52	4.51	6.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.1	2	2	21:18	20.3	7.81	29.5	6.55	4.56	6.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.1	3	1	21:18	20.4	7.79	29.6	6.31	5.02	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	11.1	3	2	21:18	20.3	7.75	29.6	6.34	5.07	6.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	19:05	20.3	7.82	29.4	6.57	3.27	4.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	19:05	20.2	7.8	29.3	6.61	3.3	4.5
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.9	2	1	19:05	20.4	7.76	29.4	6.42	4.01	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.9	2	2	19:05	20.4	7.79	29.5	6.4	4.05	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.8	3	1	19:05	20.5	7.75	29.6	6.37	4.27	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.8	3	2	19:05	20.6	7.74	29.6	6.35	4.33	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	19:48	20.2	7.75	29.3	6.6	4.05	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	19:48	20.2	7.77	29.4	6.66	4.07	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.3	2	1	19:48	20.3	7.8	29.4	6.45	4.12	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.3	2	2	19:48	20.4	7.82	29.5	6.48	4.15	5.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11.5	3	1	19:48	20.4	7.74	29.5	6.33	5.01	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	11.5	3	2	19:48	20.4	7.76	29.6	6.37	5.06	6.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	18:47	20.2	7.79	29.3	6.73	4.22	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	18:47	20.2	7.75	29.3	6.71	4.24	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8	2	1	18:47	20.4	7.78	29.5	6.59	3.95	4.9
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8	2	2	18:47	20.5	7.8	29.5	6.62	3.96	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15	3	1	18:47	20.5	7.81	29.6	6.21	5.04	6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15	3	2	18:47	20.5	7.82	29.5	6.27	5.06	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	20:05	20.2	7.72	29.4	6.61	4	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	20:05	20.3	7.7	29.5	6.64	4.05	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.3	2	1	20:05	20.4	7.81	29.5	6.47	4.28	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.3	2	2	20:05	20.3	7.82	29.5	6.5	4.3	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	11.6	3	1	20:05	20.5	7.84	29.6	6.27	5.02	6.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	11.6	3	2	20:05	20.4	7.85	29.5	6.31	5.07	6.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	20:41	20.1	7.75	29.4	6.63	4.24	5.4
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	20:41	20.1	7.77	29.4	6.65	4.28	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	20:41						
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	20:41						
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4	3	1	20:41	20.3	7.73	29.5	6.42	4.37	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4	3	2	20:41	20.3	7.75	29.6	6.4	4.34	5.7
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	20:23	20.2	7.76	29.4	6.75	4.21	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	20:23	20.1	7.76	29.4	6.78	4.22	5.2
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	20:23						
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	20:23						
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.1	3	1	20:23	20.4	7.71	29.5	6.54	4.52	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.1	3	2	20:23	20.5	7.7	29.5	6.5	4.54	5.9
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	21:00	20.1	7.75	29.3	6.68	4	5.1
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	21:00	20.2	7.78	29.4	6.64	4.05	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.3	2	1	21:00	20.3	7.82	29.5	6.48	4.18	5.3
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.3	2	2	21:00	20.2	7.83	29.5	6.44	4.24	5.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.5	3	1	21:00	20.4	7.72	29.5	6.32	4.37	5.6
TMCLKL	HY/2012/08	2014-12-15	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.5	3	2	21:00	20.4	7.74	29.6	6.33	4.4	5.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS4	Surface	1	1	1	15:12	19	7.9	29.3	6.73	3.86	4.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS4	Surface	1	1	2	15:12	19.1	7.92	29.3	6.71	3.82	4.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS4	Middle	11	2	1	15:12	19	7.85	29.3	6.7	4.06	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS4	Middle	11	2	2	15:12	18.9	7.87	29.4	6.68	4.09	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS4	Bottom	21	3	1	15:12	18.9	7.88	29.5	6.44	4.79	5.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS4	Bottom	21	3	2	15:12	18.9	7.88	29.6	6.46	4.83	6.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS6	Surface	1	1	1	13:21	19.1	7.78	29.7	6.71	4.27	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS6	Surface	1	1	2	13:21	19.2	7.77	29.6	6.73	4.25	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS6	Middle	6.3	2	1	13:21	19.1	7.86	29.6	6.63	4.37	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS6	Middle	6.3	2	2	13:21	19	7.86	29.6	6.64	4.39	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS6	Bottom	11.6	3	1	13:21	19	7.84	29.7	6.41	5.01	6.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	CS6	Bottom	11.6	3	2	13:21	19	7.85	29.8	6.45	5.04	6.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS12	Surface	1	1	1	14:30	19	7.8	29.3	6.71	3.54	4.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS12	Surface	1	1	2	14:30	19	7.78	29.4	6.72	3.5	4.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS12	Middle	8.1	2	1	14:30	19	7.77	29.4	6.41	4.06	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS12	Middle	8.1	2	2	14:30	18.9	7.79	29.4	6.46	4.05	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS12	Bottom	15.1	3	1	14:30	18.8	7.8	29.5	6.4	4.27	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS12	Bottom	15.1	3	2	14:30	18.9	7.82	29.6	6.43	4.23	5.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS13	Surface	1	1	1	16:10	18.8	7.76	29.6	6.63	4.02	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS13	Surface	1	1	2	16:10	18.7	7.77	29.5	6.64	4.05	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS13	Middle	6.5	2	1	16:10	18.9	7.85	29.6	6.51	4.15	5.5
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS13	Middle	6.5	2	2	16:10	18.8	7.86	29.7	6.54	4.17	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS13	Bottom	12	3	1	16:10	19	7.81	29.7	6.42	4.91	6.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS13	Bottom	12	3	2	16:10	18.9	7.78	29.7	6.4	4.96	6.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS14	Surface	1	1	1	14:51	19	7.76	29.2	6.79	4.06	4.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS14	Surface	1	1	2	14:51	18.9	7.76	29.3	6.74	4.1	5
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS14	Middle	8.2	2	1	14:51	18.8	7.84	29.3	6.55	3.98	4.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS14	Middle	8.2	2	2	14:51	18.9	7.83	29.4	6.59	4.01	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS14	Bottom	15.4	3	1	14:51	18.7	7.86	29.4	6.42	4.73	5.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS14	Bottom	15.4	3	2	14:51	18.9	7.88	29.6	6.4	4.8	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS15	Surface	1	1	1	15:51	18.8	7.75	29.6	6.71	4.05	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS15	Surface	1	1	2	15:51	18.9	7.77	29.5	6.69	4.06	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS15	Middle	6.6	2	1	15:51	18.8	7.86	29.8	6.53	4.25	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS15	Middle	6.6	2	2	15:51	18.7	7.87	29.8	6.55	4.21	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS15	Bottom	12.1	3	1	15:51	18.8	7.82	29.7	6.39	4.97	6.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	IS15	Bottom	12.1	3	2	15:51	18.8	7.81	29.8	6.42	4.99	6.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR8	Surface	1	1	1	14:09	19	7.77	29.6	6.43	4.23	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR8	Surface	1	1	2	14:09	18.9	7.78	29.7	6.64	4.18	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR8	Middle		2	1	14:09						
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR8	Middle		2	2	14:09						
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR8	Bottom	4.5	3	1	14:09	19	7.78	29.5	6.51	4.32	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR8	Bottom	4.5	3	2	14:09	19	7.76	29.6	6.53	4.35	5.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR9	Surface	1	1	1	15:32	18.9	7.73	29.5	6.77	4.13	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR9	Surface	1	1	2	15:32	18.9	7.76	29.6	6.75	4.19	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR9	Middle		2	1	15:32						
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR9	Middle		2	2	15:32						
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR9	Bottom	4.6	3	1	15:32	19	7.83	29.7	6.56	4.71	5.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR9	Bottom	4.6	3	2	15:32	19.1	7.84	29.8	6.58	4.73	5.5
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR10A	Surface	1	1	1	13:45	19.1	7.81	29.7	6.7	4.02	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR10A	Surface	1	1	2	13:45	19.1	7.82	29.8	6.73	4.05	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR10A	Middle	6.5	2	1	13:45	19	7.86	29.7	6.59	4.04	5.5
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR10A	Middle	6.5	2	2	13:45	19.1	7.88	29.7	6.58	4.07	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR10A	Bottom	12	3	1	13:45	19.1	7.78	29.7	6.41	4.35	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Flood	Fine	Great Wave	SR10A	Bottom	12	3	2	13:45	19	7.78	29.6	6.38	4.37	5.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS4	Surface	1	1	1	07:39	18.8	7.91	29.5	6.63	3.94	4.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS4	Surface	1	1	2	07:39	18.9	7.92	29.4	6.62	3.9	5.1

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS4	Middle	10.8	2	1	07:39	18.8	7.82	29.5	6.6	4.11	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS4	Middle	10.8	2	2	07:39	18.9	7.84	29.5	6.54	4.16	5.5
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS4	Bottom	20.6	3	1	07:39	18.8	7.84	29.6	6.38	4.87	6.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS4	Bottom	20.6	3	2	07:39	18.8	7.85	29.7	6.34	4.95	5.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS6	Surface	1	1	1	10:14	19	7.76	29.5	6.65	4.36	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS6	Surface	1	1	2	10:14	18.9	7.75	29.6	6.68	4.34	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS6	Middle	6.1	2	1	10:14	19.1	7.82	29.5	6.54	4.46	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS6	Middle	6.1	2	2	10:14	19.1	7.84	29.6	6.56	4.5	5.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS6	Bottom	11.2	3	1	10:14	19.1	7.81	29.7	6.34	5.13	6.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	CS6	Bottom	11.2	3	2	10:14	19	7.83	29.6	6.37	5.17	6.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS12	Surface	1	1	1	08:25	18.9	7.78	29.5	6.64	3.62	4.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS12	Surface	1	1	2	08:25	18.9	7.76	29.4	6.65	3.53	4.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS12	Middle	7.9	2	1	08:25	18.8	7.75	29.5	6.34	4.13	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS12	Middle	7.9	2	2	08:25	18.8	7.78	29.5	6.37	4.16	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS12	Bottom	14.7	3	1	08:25	18.9	7.79	29.6	6.32	4.34	5.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS12	Bottom	14.7	3	2	08:25	18.9	7.82	29.7	6.34	4.3	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS13	Surface	1	1	1	08:44	18.7	7.74	29.4	6.54	4.11	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS13	Surface	1	1	2	08:44	18.7	7.76	29.5	6.56	4.14	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS13	Middle	6.3	2	1	08:44	18.8	7.82	29.6	6.43	4.24	5.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS13	Middle	6.3	2	2	08:44	18.7	7.84	29.6	6.45	4.28	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS13	Bottom	11.6	3	1	08:44	18.8	7.79	29.6	6.3	5.14	6.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS13	Bottom	11.6	3	2	08:44	18.9	7.76	29.6	6.34	5.19	6.6
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS14	Surface	1	1	1	07:58	18.8	7.74	29.4	6.68	4.14	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS14	Surface	1	1	2	07:58	18.9	7.76	29.3	6.64	4.18	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS14	Middle	8	2	1	07:58	18.7	7.83	29.5	6.48	4.03	4.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS14	Middle	8	2	2	07:58	18.7	7.82	29.6	6.51	4.08	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS14	Bottom	15	3	1	07:58	18.9	7.85	29.6	6.3	5.02	6.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS14	Bottom	15	3	2	07:58	18.8	7.87	29.6	6.28	4.97	6
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS15	Surface	1	1	1	09:03	18.8	7.74	29.5	6.64	4.14	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS15	Surface	1	1	2	09:03	18.7	7.76	29.4	6.6	4.18	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS15	Middle	6.4	2	1	09:03	18.7	7.84	29.7	6.45	4.34	5.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS15	Middle	6.4	2	2	09:03	18.7	7.85	29.6	6.41	4.28	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS15	Bottom	11.7	3	1	09:03	18.9	7.8	29.7	6.32	5.08	6.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	IS15	Bottom	11.7	3	2	09:03	18.9	7.79	29.7	6.27	5.05	6.4
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR8	Surface	1	1	1	09:36	18.9	7.74	29.5	6.54	4.3	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR8	Surface	1	1	2	09:36	18.8	7.76	29.6	6.59	4.26	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR8	Middle		2	1	09:36						
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR8	Middle		2	2	09:36						
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR8	Bottom	4.1	3	1	09:36	18.9	7.76	29.4	6.44	4.44	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR8	Bottom	4.1	3	2	09:36	18.9	7.73	29.4	6.46	4.46	5.5
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR9	Surface	1	1	1	09:21	18.8	7.7	29.4	6.68	4.22	5.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR9	Surface	1	1	2	09:21	18.7	7.74	29.5	6.72	4.26	5.5
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR9	Middle		2	1	09:21						
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR9	Middle		2	2	09:21						
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR9	Bottom	4.2	3	1	09:21	18.9	7.8	29.6	6.45	4.84	6.1
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR9	Bottom	4.2	3	2	09:21	19	7.82	29.6	6.47	4.8	5.9
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR10A	Surface	1	1	1	09:54	19	7.79	29.5	6.63	4.14	5
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR10A	Surface	1	1	2	09:54	19	7.81	29.6	6.67	4.17	4.8
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR10A	Middle	6.3	2	1	09:54	19.1	7.84	29.6	6.52	4.18	5.2
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR10A	Middle	6.3	2	2	09:54	19	7.86	29.6	6.5	4.16	5.3
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR10A	Bottom	11.6	3	1	09:54	19	7.76	29.6	6.35	4.43	5.7
TMCLKL	HY/2012/08	2014-12-17	Mid-Ebb	Sunny	Great Wave	SR10A	Bottom	11.6	3	2	09:54	19	7.79	29.6	6.3	4.46	5.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	17:20	19.9	8.27	29.6	6.84	5.4	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	17:20	20	8.25	29.7	6.81	5.46	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.7	2	1	17:20	20	8.21	29.8	6.75	5.55	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS4	Middle	10.7	2	2	17:20	20.1	8.22	29.7	6.74	5.62	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.4	3	1	17:20	20.2	8.25	29.8	6.53	5.79	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	20.4	3	2	17:20	20.3	8.26	29.9	6.49	5.84	6.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	14:38	20	8.19	29.6	6.71	5.1	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	14:38	20.1	8.2	29.7	6.67	5.06	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS6	Middle	5.8	2	1	14:38	20.2	8.2	29.7	6.62	5.21	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS6	Middle	5.8	2	2	14:38	20.1	8.21	29.8	6.59	5.14	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	10.6	3	1	14:38	20.2	8.23	29.8	6.5	5.52	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	10.6	3	2	14:38	20.2	8.24	29.9	6.46	5.47	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	16:38	19.9	8.22	29.4	6.63	5.22	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	16:38	20	8.23	29.5	6.68	5.29	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.6	2	1	16:38	20	8.21	29.6	6.56	5.67	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS12	Middle	7.6	2	2	16:38	20.1	8.22	29.7	6.54	5.75	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.2	3	1	16:38	20.1	8.23	29.8	6.39	5.8	7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	14.2	3	2	16:38	20.2	8.24	29.9	6.36	5.86	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	16:18	19.9	8.22	29.4	6.64	5.33	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	16:18	20	8.23	29.5	6.6	5.4	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS13	Middle	5.7	2	1	16:18	20	8.23	29.6	6.67	5.64	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS13	Middle	5.7	2	2	16:18	20.1	8.24	29.5	6.66	5.7	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	10.4	3	1	16:18	20.2	8.24	29.6	6.42	5.89	7.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	10.4	3	2	16:18	20.1	8.25	29.6	6.39	5.95	7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	16:58	19.8	8.18	29.5	6.6	5.15	6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	16:58	19.9	8.19	29.6	6.63	5.24	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.4	2	1	16:58	19.9	8.21	29.7	6.48	5.49	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.4	2	2	16:58	20	8.22	29.6	6.45	5.55	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.8	3	1	16:58	20.1	8.23	29.7	6.32	5.96	7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	15.8	3	2	16:58	20	8.22	29.8	6.3	5.9	7.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	15:58	20	8.19	29.3	6.57	5.17	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	15:58	19.9	8.2	29.4	6.54	5.24	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS15	Middle	5.4	2	1	15:58	20.1	8.21	29.5	6.61	5.45	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS15	Middle	5.4	2	2	15:58	20	8.22	29.4	6.59	5.41	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	9.8	3	1	15:58	20.1	8.23	29.5	6.37	5.67	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	9.8	3	2	15:58	20	8.24	29.6	6.34	5.72	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	15:18	20	8.24	29.6	6.57	5.09	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	15:18	19.9	8.25	29.7	6.53	5.15	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	15:18						
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	15:18						
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	3.8	3	1	15:18	20.1	8.26	29.7	6.46	5.37	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	3.8	3	2	15:18	20	8.27	29.8	6.44	5.43	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	15:38	20	8.23	29.4	6.52	5.25	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	15:38	20.1	8.24	29.5	6.49	5.33	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	15:38						
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	15:38						
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.6	3	1	15:38	20.1	8.22	29.6	6.35	5.52	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.6	3	2	15:38	20.2	8.23	29.5	6.41	5.6	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	14:58	20.1	8.2	29.6	6.79	4.84	5.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	14:58	20.1	8.21	29.5	6.82	4.93	5.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.6	2	1	14:58	20.1	8.21	29.6	6.76	5.02	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	6.6	2	2	14:58	20	8.22	29.7	6.73	5.08	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	12.2	3	1	14:58	20.2	8.24	29.9	6.64	5.29	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	12.2	3	2	14:58	20.1	8.25	29.8	6.6	5.34	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	09:18	19.8	8.21	29.5	6.78	5.49	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	09:18	19.9	8.19	29.6	6.75	5.55	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.6	2	1	09:18	19.9	8.15	29.6	6.69	5.64	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	10.6	2	2	09:18	20	8.16	29.7	6.68	5.71	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.2	3	1	09:18	20.1	8.19	29.8	6.47	5.88	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	20.2	3	2	09:18	20.2	8.2	29.8	6.43	5.93	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	11:36	20	8.13	29.4	6.65	5.09	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	11:36	19.9	8.14	29.5	6.61	5.14	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	5.6	2	1	11:36	20	8.14	29.5	6.56	5.3	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	5.6	2	2	11:36	20	8.15	29.6	6.53	5.23	6.7

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	10.2	3	1	11:36	20.1	8.17	29.7	6.44	5.61	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	10.2	3	2	11:36	20.1	8.18	29.8	6.4	5.56	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	10:00	19.8	8.16	29.3	6.57	5.31	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	10:00	19.9	8.17	29.4	6.62	5.38	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.4	2	1	10:00	19.9	8.15	29.5	6.5	5.76	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.4	2	2	10:00	20	8.16	29.6	6.48	5.84	7.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	13.8	3	1	10:00	20	8.17	29.7	6.33	5.89	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	13.8	3	2	10:00	20.1	8.18	29.7	6.3	5.95	7.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	10:20	19.9	8.16	29.3	6.58	5.42	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	10:20	19.9	8.17	29.4	6.54	5.49	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	5.6	2	1	10:20	19.9	8.15	29.4	6.61	5.73	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	5.6	2	2	10:20	20	8.16	29.4	6.6	5.79	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	10.2	3	1	10:20	20	8.18	29.5	6.36	5.98	7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	10.2	3	2	10:20	20.1	8.19	29.5	6.33	6.04	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	09:40	19.8	8.12	29.4	6.69	5.24	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	09:40	19.8	8.13	29.5	6.72	5.33	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.3	2	1	09:40	19.9	8.15	29.6	6.57	5.58	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.3	2	2	09:40	19.9	8.16	29.6	6.54	5.64	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.6	3	1	09:40	19.9	8.17	29.7	6.41	6.05	7.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	15.6	3	2	09:40	20	8.17	29.7	6.38	5.99	7.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	10:41	19.9	8.13	29.2	6.51	5.26	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	10:41	20	8.14	29.3	6.48	5.33	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.3	2	1	10:41	20	8.15	29.3	6.55	5.54	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	5.3	2	2	10:41	20	8.16	29.4	6.53	5.5	6.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	9.6	3	1	10:41	20	8.17	29.5	6.31	5.76	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	9.6	3	2	10:41	20	8.18	29.5	6.28	5.81	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	11:18	19.9	8.18	29.6	6.51	5.18	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	11:18	20	8.19	29.6	6.47	5.24	6.3
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	11:18						
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	11:18						
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	3.4	3	1	11:18	20	8.2	29.6	6.4	5.46	6.7
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	3.4	3	2	11:18	20	8.21	29.7	6.38	5.52	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	11:01	20	8.17	29.4	6.46	5.34	5.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	11:01	20	8.18	29.4	6.43	5.42	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	11:01						
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	11:01						
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.4	3	1	11:01	20	8.16	29.4	6.29	5.61	6.6
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.4	3	2	11:01	20	8.17	29.4	6.32	5.69	6.8
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	12:06	20	8.14	29.5	6.73	4.93	5.9
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	12:06	20	8.15	29.6	6.76	5.02	6.1
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.4	2	1	12:06	20	8.15	29.6	6.7	5.11	6.2
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.4	2	2	12:06	20	8.16	29.6	6.67	5.17	6.5
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.8	3	1	12:06	20	8.18	29.7	6.58	5.38	6.4
TMCLKL	HY/2012/08	2014-12-19	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	11.8	3	2	12:06	20.1	8.19	29.8	6.54	5.43	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS4	Surface	1	1	1	19:08	17.4	8.23	28.9	6.82	5.02	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS4	Surface	1	1	2	19:08	17.4	8.21	28.9	6.83	5.06	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS4	Middle	10.5	2	1	19:08	17.6	8.21	29.1	6.76	4.82	6.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS4	Middle	10.5	2	2	19:08	17.5	8.22	29.1	6.74	4.8	5.8
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS4	Bottom	20	3	1	19:08	17.8	8.21	29.4	6.52	4.72	5.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS4	Bottom	20	3	2	19:08	17.8	8.22	29.4	6.54	4.7	5.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS6	Surface	1	1	1	16:42	17.5	8.21	28.9	6.84	4.21	5.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS6	Surface	1	1	2	16:42	17.6	8.18	28.9	6.88	4.25	5.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS6	Middle	6	2	1	16:42	17.7	8.17	29.1	6.73	4.36	5.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS6	Middle	6	2	2	16:42	17.8	8.15	29.2	6.75	4.4	5.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS6	Bottom	10.9	3	1	16:42	17.8	8.1	29.4	6.64	4.92	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	CS6	Bottom	10.9	3	2	16:42	17.8	8.15	29.3	6.6	4.9	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS12	Surface	1	1	1	18:34	17.4	8.24	28.9	6.76	4.15	5.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS12	Surface	1	1	2	18:34	17.4	8.26	28.9	6.79	4.2	5.9

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS12	Middle	7.8	2	1	18:34	17.5	8.19	29.2	6.6	4.37	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS12	Middle	7.8	2	2	18:34	17.5	8.17	29.2	6.64	4.39	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS12	Bottom	14.5	3	1	18:34	17.7	8.22	29.3	6.51	4.78	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS12	Bottom	14.5	3	2	18:34	17.7	8.24	29.3	6.56	4.81	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS13	Surface	1	1	1	18:16	17.4	8.22	28.9	6.74	4.21	6.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS13	Surface	1	1	2	18:16	17.4	8.2	29	6.7	4.25	5.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS13	Middle	5.9	2	1	18:16	17.7	8.22	29.2	6.61	4.31	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS13	Middle	5.9	2	2	18:16	17.6	8.25	29.1	6.62	4.35	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS13	Bottom	10.7	3	1	18:16	17.8	8.25	29.3	6.54	4.72	6.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS13	Bottom	10.7	3	2	18:16	17.8	8.24	29.3	6.5	4.77	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS14	Surface	1	1	1	18:51	17.4	8.25	28.8	6.89	4.27	5.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS14	Surface	1	1	2	18:51	17.5	8.22	28.9	6.85	4.3	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS14	Middle	8.2	2	1	18:51	17.6	8.18	29.2	6.72	4.78	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS14	Middle	8.2	2	2	18:51	17.5	8.15	29.2	6.75	4.76	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS14	Bottom	15.3	3	1	18:51	17.8	8.25	29.3	6.62	5.02	6.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS14	Bottom	15.3	3	2	18:51	17.7	8.2	29.4	6.65	5.04	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS15	Surface	1	1	1	17:56	17.5	8.2	29	6.81	5.02	5.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS15	Surface	1	1	2	17:56	17.4	8.21	28.9	6.84	5.07	5.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS15	Middle	5.6	2	1	17:56	17.6	8.19	29.2	6.71	4.57	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS15	Middle	5.6	2	2	17:56	17.5	8.22	29.2	6.74	4.58	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS15	Bottom	10.1	3	1	17:56	17.8	8.2	29.4	6.65	4.34	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	IS15	Bottom	10.1	3	2	17:56	17.7	8.22	29.3	6.6	4.38	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR8	Surface	1	1	1	17:18	17.5	8.19	28.9	6.81	4.12	5.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR8	Surface	1	1	2	17:18	17.6	8.18	29	6.86	4.17	5.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR8	Middle		2	1	17:18						
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR8	Middle		2	2	17:18						
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR8	Bottom	3.7	3	1	17:18	17.8	8.19	29.4	6.75	4.28	5.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR8	Bottom	3.7	3	2	17:18	17.8	8.2	29.4	6.77	4.3	5.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR9	Surface	1	1	1	17:37	17.4	8.19	28.9	6.9	4.42	5.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR9	Surface	1	1	2	17:37	17.5	8.2	28.9	6.88	4.45	5.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR9	Middle		2	1	17:37						
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR9	Middle		2	2	17:37						
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR9	Bottom	4.2	3	1	17:37	17.8	8.13	29.1	6.69	4.52	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR9	Bottom	4.2	3	2	17:37	17.7	8.17	29.2	6.72	4.57	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR10A	Surface	1	1	1	17:00	17.4	8.22	28.9	6.92	4.05	5.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR10A	Surface	1	1	2	17:00	17.5	8.23	29	6.95	4.07	5.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR10A	Middle	6.8	2	1	17:00	17.6	8.2	29.2	6.8	4.24	5.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR10A	Middle	6.8	2	2	17:00	17.6	8.23	29.3	6.82	4.3	5.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR10A	Bottom	12.5	3	1	17:00	17.7	8.18	29.3	6.79	5.02	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Flood	Fine	Small Wave	SR10A	Bottom	12.5	3	2	17:00	17.8	8.17	29.4	6.76	5.03	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS4	Surface	1	1	1	11:28	17.8	8.13	28.9	6.94	4.87	5.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS4	Surface	1	1	2	11:28	17.7	8.14	28.9	6.9	4.82	5.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS4	Middle	10.7	2	1	11:28	17.9	8.14	29.3	6.84	4.93	6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS4	Middle	10.7	2	2	11:28	17.9	8.14	29.2	6.87	4.95	5.8
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS4	Bottom	20.4	3	1	11:28	17.9	8.15	29.4	6.69	5.29	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS4	Bottom	20.4	3	2	11:28	17.9	8.14	29.4	6.65	5.22	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS6	Surface	1	1	1	13:56	17.8	8.16	29.2	6.91	4.71	5.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS6	Surface	1	1	2	13:56	17.8	8.15	29.2	6.88	4.75	5.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS6	Middle	5.7	2	1	13:56	17.8	8.16	29.4	6.84	5.21	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS6	Middle	5.7	2	2	13:56	17.7	8.17	29.4	6.8	5.27	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS6	Bottom	10.4	3	1	13:56	17.9	8.17	29.5	6.66	5.17	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	CS6	Bottom	10.4	3	2	13:56	17.8	8.16	29.5	6.62	5.14	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS12	Surface	1	1	1	12:08	17.7	8.15	29.1	6.87	4.99	6.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS12	Surface	1	1	2	12:08	17.7	8.14	29.1	6.84	4.92	6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS12	Middle	7.4	2	1	12:08	17.8	8.16	29.4	6.79	5.12	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS12	Middle	7.4	2	2	12:08	17.8	8.16	29.4	6.75	5.16	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS12	Bottom	13.8	3	1	12:08	17.9	8.16	29.4	6.63	5.27	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS12	Bottom	13.8	3	2	12:08	17.9	8.17	29.4	6.67	5.33	6.5

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS13	Surface	1	1	1	12:25	17.7	8.15	29.1	6.95	5.03	6.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS13	Surface	1	1	2	12:25	17.6	8.16	29.2	6.91	4.98	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS13	Middle	5.4	2	1	12:25	17.8	8.16	29.2	6.72	5.27	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS13	Middle	5.4	2	2	12:25	17.7	8.16	29.3	6.68	5.21	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS13	Bottom	9.8	3	1	12:25	17.9	8.16	29.3	6.67	5.58	6.6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS13	Bottom	9.8	3	2	12:25	17.9	8.16	29.3	6.69	5.52	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS14	Surface	1	1	1	11:50	17.7	8.14	29	6.92	5.07	6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS14	Surface	1	1	2	11:50	17.7	8.15	29	6.95	5.01	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS14	Middle	8.1	2	1	11:50	17.8	8.15	29.2	6.82	5.15	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS14	Middle	8.1	2	2	11:50	17.8	8.16	29.2	6.79	5.11	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS14	Bottom	15.2	3	1	11:50	17.9	8.16	29.3	6.71	5.64	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS14	Bottom	15.2	3	2	11:50	17.9	8.15	29.3	6.75	5.6	6.8
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS15	Surface	1	1	1	12:42	17.8	8.15	29	6.77	4.87	5.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS15	Surface	1	1	2	12:42	17.8	8.15	29	6.74	4.8	5.8
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS15	Middle	5.2	2	1	12:42	17.9	8.15	29.3	6.59	5.44	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS15	Middle	5.2	2	2	12:42	17.9	8.14	29.2	6.55	5.4	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS15	Bottom	9.4	3	1	12:42	17.9	8.16	29.4	6.63	5.37	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	IS15	Bottom	9.4	3	2	12:42	17.9	8.17	29.4	6.66	5.42	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR8	Surface	1	1	1	13:13	17.7	8.16	29.1	6.85	5.05	6.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR8	Surface	1	1	2	13:13	17.8	8.16	29	6.81	5.09	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR8	Middle		2	1	13:13						
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR8	Middle		2	2	13:13						
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR8	Bottom	4.2	3	1	13:13	17.8	8.17	29.3	6.77	5.67	6.7
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR8	Bottom	4.2	3	2	13:13	17.8	8.18	29.3	6.74	5.65	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR9	Surface	1	1	1	12:59	17.8	8.16	29.1	6.8	5.27	6.3
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR9	Surface	1	1	2	12:59	17.7	8.16	29	6.77	5.34	6.5
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR9	Middle		2	1	12:59						
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR9	Middle		2	2	12:59						
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR9	Bottom	4.2	3	1	12:59	17.9	8.17	29.2	6.6	5.51	6.8
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR9	Bottom	4.2	3	2	12:59	17.9	8.17	29.2	6.64	5.55	6.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR10A	Surface	1	1	1	13:28	17.8	8.15	29.1	6.98	4.93	5.9
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR10A	Surface	1	1	2	13:28	17.7	8.14	29.1	6.95	4.95	6.1
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR10A	Middle	6.6	2	1	13:28	17.8	8.17	29.3	6.79	5.08	6
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR10A	Middle	6.6	2	2	13:28	17.9	8.17	29.3	6.75	5.02	6.2
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR10A	Bottom	12.2	3	1	13:28	17.9	8.16	29.4	6.71	5.43	6.4
TMCLKL	HY/2012/08	2014-12-22	Mid-Ebb	Fine	Small Wave	SR10A	Bottom	12.2	3	2	13:28	17.9	8.17	29.4	6.68	5.4	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS4	Surface	1	1	1	10:50	19.9	7.87	29.7	6.81	5.48	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS4	Surface	1	1	2	10:50	19.8	7.88	29.8	6.77	5.56	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS4	Middle	11.3	2	1	10:50	19.9	7.89	29.9	6.69	5.73	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS4	Middle	11.3	2	2	10:50	20	7.9	30	6.63	5.8	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS4	Bottom	21.6	3	1	10:50	20.1	7.85	30.1	6.35	5.99	7.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS4	Bottom	21.6	3	2	10:50	20.2	7.86	30.2	6.31	6.08	7.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS6	Surface	1	1	1	08:08	19.8	7.84	29.5	6.73	5.07	6.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS6	Surface	1	1	2	08:08	19.9	7.85	29.6	6.71	5.14	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS6	Middle	6.7	2	1	08:08	19.9	7.83	29.6	6.67	5.48	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS6	Middle	6.7	2	2	08:08	19.9	7.84	29.7	6.65	5.53	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS6	Bottom	12.4	3	1	08:08	19.9	7.87	29.8	6.49	5.82	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	CS6	Bottom	12.4	3	2	08:08	20	7.88	29.8	6.53	5.77	7.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	10:15	19.8	7.78	29.8	6.76	5.61	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	10:15	19.9	7.79	29.8	6.74	5.67	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8	2	1	10:15	19.9	7.81	29.8	6.59	5.83	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8	2	2	10:15	20	7.82	29.9	6.57	5.59	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15	3	1	10:15	20	7.85	29.9	6.35	6.04	7.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15	3	2	10:15	20.1	7.86	30	6.38	5.96	7.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS13	Surface	1	1	1	09:58	19.9	7.81	29.7	6.53	5.48	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS13	Surface	1	1	2	09:58	19.9	7.82	29.8	6.5	5.56	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS13	Middle	6.9	2	1	09:58	19.9	7.85	29.8	6.44	5.72	6.6
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS13	Middle	6.9	2	2	09:58	19.9	7.86	29.8	6.41	5.79	6.8

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS13	Bottom	12.8	3	1	09:58	19.9	7.88	29.9	6.34	5.96	7.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS13	Bottom	12.8	3	2	09:58	20	7.89	29.9	6.29	6.01	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS14	Surface	1	1	1	10:32	19.9	7.81	29.8	6.67	5.24	6.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS14	Surface	1	1	2	10:32	19.9	7.82	29.8	6.64	5.31	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS14	Middle	8.7	2	1	10:32	19.9	7.84	29.9	6.53	5.6	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS14	Middle	8.7	2	2	10:32	20	7.85	29.9	6.49	5.69	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS14	Bottom	16.4	3	1	10:32	20.1	7.89	30	6.4	5.84	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS14	Bottom	16.4	3	2	10:32	20.1	7.9	30.1	6.37	5.88	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS15	Surface	1	1	1	09:38	19.8	7.83	29.7	6.74	5.22	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS15	Surface	1	1	2	09:38	19.9	7.84	29.7	6.71	5.3	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS15	Middle	6.5	2	1	09:38	19.9	7.87	29.7	6.6	5.51	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS15	Middle	6.5	2	2	09:38	19.9	7.88	29.8	6.63	5.58	6.6
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS15	Bottom	12	3	1	09:38	19.9	7.86	29.8	6.39	5.83	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	IS15	Bottom	12	3	2	09:38	20	7.87	29.9	6.41	5.76	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR8	Surface	1	1	1	09:05	19.8	7.87	29.5	6.76	5.23	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR8	Surface	1	1	2	09:05	19.9	7.88	29.6	6.72	5.29	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR8	Middle		2	1	09:05						
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR8	Middle		2	2	09:05						
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR8	Bottom	4.7	3	1	09:05	19.9	7.89	29.6	6.58	5.6	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR8	Bottom	4.7	3	2	09:05	19.9	7.9	29.7	6.55	5.54	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR9	Surface	1	1	1	09:21	19.8	7.87	29.6	6.68	5.44	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR9	Surface	1	1	2	09:21	19.8	7.88	29.7	6.65	5.37	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR9	Middle		2	1	09:21						
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR9	Middle		2	2	09:21						
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR9	Bottom	4.6	3	1	09:21	19.8	7.87	29.7	6.47	5.76	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR9	Bottom	4.6	3	2	09:21	19.8	7.86	29.7	6.43	5.69	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR10A	Surface	1	1	1	08:36	19.8	7.89	29.6	6.58	5.26	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR10A	Surface	1	1	2	08:36	19.8	7.9	29.7	6.61	5.31	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR10A	Middle	6.9	2	1	08:36	19.9	7.91	29.7	6.54	5.5	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR10A	Middle	6.9	2	2	08:36	19.9	7.92	29.7	6.51	5.59	6.6
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR10A	Bottom	12.8	3	1	08:36	19.9	7.93	29.7	6.38	5.71	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Flood	cloudy	Small Wave	SR10A	Bottom	12.8	3	2	08:36	19.9	7.93	29.8	6.35	5.77	7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	CS4	Surface	1	1	1	12:58	20.1	7.9	29.8	6.76	5.53	6.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	CS4	Surface	1	1	2	12:58	20.2	7.91	29.9	6.71	5.62	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	CS4	Middle	11.2	2	1	12:58	20	7.91	30.1	6.62	5.84	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	CS4	Middle	11.2	2	2	12:58	20.1	7.92	30	6.57	5.81	7.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	CS4	Bottom	21.3	3	1	12:58	20.2	7.87	30.3	6.3	6.07	7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	CS4	Bottom	21.3	3	2	12:58	20.2	7.89	30.2	6.27	6.14	7.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	15:18	19.9	7.86	29.6	6.62	5.17	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	15:18	20	7.85	29.7	6.66	5.23	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.6	2	1	15:18	20	7.84	29.8	6.59	5.57	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.6	2	2	15:18	20.1	7.85	29.7	6.52	5.6	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	12.2	3	1	15:18	20.1	7.89	29.9	6.35	5.89	7.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	12.2	3	2	15:18	20.2	7.9	30.1	6.41	5.88	7.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS12	Surface	1	1	1	13:39	19.9	7.79	29.9	6.62	5.72	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS12	Surface	1	1	2	13:39	19.8	7.8	30	6.64	5.77	6.6
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS12	Middle	7.8	2	1	13:39	20	7.83	30	6.51	5.94	7.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS12	Middle	7.8	2	2	13:39	20	7.82	29.9	6.48	5.99	7.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS12	Bottom	14.6	3	1	13:39	20.2	7.87	30.1	6.28	6.16	7.6
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS12	Bottom	14.6	3	2	13:39	20.3	7.88	30	6.21	6.19	7.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS13	Surface	1	1	1	14:01	20	7.82	29.8	6.42	5.53	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS13	Surface	1	1	2	14:01	20	7.83	29.9	6.4	5.64	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS13	Middle	6.2	2	1	14:01	20.1	7.87	29.9	6.38	5.82	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS13	Middle	6.2	2	2	14:01	20	7.86	29.9	6.32	5.86	7.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS13	Bottom	12.4	3	1	14:01	20	7.9	30	6.22	6.07	7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS13	Bottom	12.4	3	2	14:01	20.2	7.89	30.1	6.17	6.12	7.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	13:15	20	7.83	29.9	6.61	5.31	6.4
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	13:15	20.1	7.83	30	6.59	5.36	6.3

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.6	2	1	13:15	20.1	7.86	30.1	6.48	5.67	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.6	2	2	13:15	20.2	7.87	30.2	6.41	5.77	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	16.2	3	1	13:15	20.1	7.91	30.2	6.36	5.96	7.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	16.2	3	2	13:15	20.2	7.9	30.1	6.32	5.91	7.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS15	Surface	1	1	1	14:26	19.9	7.84	29.8	6.62	5.36	6.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS15	Surface	1	1	2	14:26	19.9	7.85	29.9	6.57	5.32	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS15	Middle	6.4	2	1	14:26	20	7.89	29.8	6.52	5.58	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS15	Middle	6.4	2	2	14:26	20.1	7.88	29.9	6.49	5.62	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS15	Bottom	11.8	3	1	14:26	20.1	7.87	29.9	6.32	5.91	7.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	IS15	Bottom	11.8	3	2	14:26	20.2	7.9	30	6.36	5.86	7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR8	Surface	1	1	1	15:02	19.9	7.88	29.6	6.7	5.34	6.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR8	Surface	1	1	2	15:02	19.9	7.89	29.7	6.61	5.38	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR8	Middle		2	1	15:02						
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR8	Middle		2	2	15:02						
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR8	Bottom	4.7	3	1	15:02	20.1	7.9	29.8	6.5	5.69	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR8	Bottom	4.7	3	2	15:02	20	7.91	29.8	6.43	5.63	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR9	Surface	1	1	1	14:44	19.9	7.88	29.8	6.62	5.49	6.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR9	Surface	1	1	2	14:44	19.8	7.89	29.7	6.58	5.52	6.1
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR9	Middle		2	1	14:44						
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR9	Middle		2	2	14:44						
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR9	Bottom	4.2	3	1	14:44	19.9	7.88	29.9	6.38	5.85	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR9	Bottom	4.2	3	2	14:44	20	7.87	29.8	6.32	5.78	6.5
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR10A	Surface	1	1	1	15:40	19.9	7.9	29.8	6.46	5.38	6.2
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR10A	Surface	1	1	2	15:40	19.8	7.91	29.7	6.51	5.43	6.3
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR10A	Middle	6.8	2	1	15:40	20	7.92	29.8	6.48	5.61	6.7
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR10A	Middle	6.8	2	2	15:40	20	7.93	29.9	6.41	5.68	6.9
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR10A	Bottom	12.6	3	1	15:40	20.1	7.94	29.8	6.32	5.78	6.8
TMCLKL	HY/2012/08	2014-12-24	Mid-Ebb	cloudy	Small Wave	SR10A	Bottom	12.6	3	2	15:40	20.2	7.95	29.9	6.3	5.56	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	14:48	19.8	7.93	29.8	6.87	5.39	6.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	14:48	19.7	7.94	29.9	6.83	5.47	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11.4	2	1	14:48	19.8	7.95	29.9	6.75	5.64	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11.4	2	2	14:48	19.9	7.96	30	6.69	5.71	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.8	3	1	14:48	20	7.91	30.1	6.41	5.9	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.8	3	2	14:48	20.1	7.92	30.2	6.37	5.99	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	12:04	19.8	7.9	29.6	6.79	4.98	5.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	12:04	19.7	7.91	29.7	6.77	5.05	5.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.9	2	1	12:04	19.7	7.89	29.8	6.73	5.39	6.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.9	2	2	12:04	19.8	7.9	29.7	6.71	5.44	6.4
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	12.8	3	1	12:04	19.8	7.93	29.8	6.55	5.73	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	12.8	3	2	12:04	19.9	7.94	29.9	6.59	5.68	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	14:04	19.7	7.84	29.8	6.82	5.52	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	14:04	19.8	7.85	29.7	6.8	5.58	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8.2	2	1	14:04	19.9	7.87	29.8	6.65	5.74	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8.2	2	2	14:04	19.8	7.88	29.9	6.63	5.8	6.4
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15.4	3	1	14:04	19.9	7.91	29.9	6.41	5.95	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15.4	3	2	14:04	20	7.92	30	6.44	5.87	7.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	13:44	19.8	7.87	29.8	6.59	5.39	6.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	13:44	19.8	7.88	29.9	6.56	5.47	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS13	Middle	7.2	2	1	13:44	19.8	7.91	29.9	6.5	5.63	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS13	Middle	7.2	2	2	13:44	19.7	7.92	29.8	6.47	5.7	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	13.4	3	1	13:44	19.8	7.94	29.9	6.4	5.87	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	13.4	3	2	13:44	19.9	7.95	30	6.35	5.92	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	14:24	19.8	7.87	29.8	6.73	5.15	6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	14:24	19.8	7.88	29.9	6.7	5.22	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.9	2	1	14:24	19.8	7.9	29.9	6.59	5.51	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.9	2	2	14:24	19.9	7.91	30	6.55	5.6	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	16.8	3	1	14:24	20	7.95	30.2	6.46	5.75	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	16.8	3	2	14:24	19.9	7.96	30.1	6.43	5.79	7

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	13:24	19.7	7.89	29.7	6.8	5.13	6.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	13:24	19.6	7.9	29.8	6.77	5.21	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.6	2	1	13:24	19.7	7.93	29.8	6.66	5.42	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.6	2	2	13:24	19.8	7.94	29.9	6.69	5.49	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	12.2	3	1	13:24	19.8	7.92	29.9	6.45	5.74	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	12.2	3	2	13:24	19.9	7.93	30	6.47	5.67	7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	12:44	19.7	7.93	29.6	6.82	5.14	6.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	12:44	19.8	7.94	29.7	6.78	5.2	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	12:44						
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	12:44						
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.6	3	1	12:44	19.9	7.95	29.7	6.64	5.51	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.6	3	2	12:44	19.8	7.96	29.8	6.61	5.45	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	13:04	19.6	7.93	29.7	6.74	5.35	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	13:04	19.7	7.94	29.8	6.71	5.28	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	13:04						
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	13:04						
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.8	3	1	13:04	19.7	7.93	29.8	6.53	5.67	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.8	3	2	13:04	19.8	7.92	29.9	6.49	5.6	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	12:24	19.7	7.95	29.7	6.64	5.17	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	12:24	19.7	7.96	29.8	6.67	5.22	6.4
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	7.1	2	1	12:24	19.8	7.97	29.8	6.6	5.41	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	7.1	2	2	12:24	19.7	7.98	29.9	6.57	5.5	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	13.2	3	1	12:24	19.8	7.99	29.9	6.44	5.62	7
TMCLKL	HY/2012/08	2014-12-29	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	13.2	3	2	12:24	19.9	7.98	29.8	6.41	5.68	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	18:12	19.6	7.74	29.5	6.72	5.47	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	18:12	19.6	7.76	29.4	6.7	5.49	6.4
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	11.3	2	1	18:12	19.7	8.13	29.6	6.63	5.72	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	11.3	2	2	18:12	19.8	8.11	29.7	6.61	5.7	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	21.6	3	1	18:12	19.9	8.24	29.8	6.37	6.03	7.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	21.6	3	2	18:12	20	8.22	29.8	6.39	6.05	7.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	21:05	19.6	8.14	29.5	6.66	5.11	6
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	21:05	19.7	8.16	29.6	6.68	5.13	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.8	2	1	21:05	19.8	7.97	29.7	6.54	5.47	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.8	2	2	21:05	19.8	7.97	29.8	6.56	5.49	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	12.5	3	1	21:05	19.9	7.82	29.9	6.43	6.03	7.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	12.5	3	2	21:05	20	7.84	29.9	6.41	6.05	7.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	18:57	19.6	7.98	29.5	6.83	5.63	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	18:57	19.7	7.99	29.5	6.8	5.65	6.4
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	8.1	2	1	18:57	19.8	8.14	29.6	6.57	5.92	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	8.1	2	2	18:57	19.8	8.17	29.7	6.55	5.94	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	15.1	3	1	18:57	19.9	8.25	29.8	6.33	6.02	7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	15.1	3	2	18:57	20	8.23	29.9	6.35	6.04	7.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	19:19	19.5	7.74	29.6	6.42	5.47	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	19:19	19.6	7.76	29.7	6.44	5.49	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	7.1	2	1	19:19	19.7	7.88	29.8	6.37	5.72	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	7.1	2	2	19:19	19.7	7.9	29.8	6.36	5.7	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	13.1	3	1	19:19	19.9	7.93	30	6.25	5.99	7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	13.1	3	2	19:19	19.8	7.91	29.9	6.27	6.01	7.2
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	18:34	19.5	7.83	29.6	6.66	5.37	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	18:34	19.6	7.85	29.7	6.64	5.4	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.8	2	1	18:34	19.7	8.03	29.8	6.43	5.56	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.8	2	2	18:34	19.7	8.05	29.8	6.45	5.58	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	16.5	3	1	18:34	19.9	8.17	29.9	6.33	5.88	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	16.5	3	2	18:34	19.8	8.15	30	6.31	5.9	7.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	19:40	19.6	8.14	29.5	6.72	5.24	6.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	19:40	19.7	8.12	29.5	6.7	5.26	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.5	2	1	19:40	19.8	8.25	29.7	6.63	5.55	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.5	2	2	19:40	19.8	8.23	29.6	6.65	5.57	6.6

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	12	3	1	19:40	19.9	7.96	29.9	6.6	5.83	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	12	3	2	19:40	20	7.98	29.9	6.58	5.81	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	20:20	19.5	7.83	29.5	6.74	5.24	6.4
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	20:20	19.6	7.81	29.6	6.72	5.26	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	20:20						
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	20:20						
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.3	3	1	20:20	19.7	7.96	29.7	6.51	5.63	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.3	3	2	20:20	19.7	7.98	29.8	6.53	5.61	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	20:00	19.5	7.92	29.6	6.61	5.62	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	20:00	19.5	7.9	29.7	6.63	5.6	6.5
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	20:00						
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	20:00						
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.5	3	1	20:00	19.7	8.04	29.8	6.45	5.77	6.6
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.5	3	2	20:00	19.8	8.06	29.9	6.43	5.79	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	20:45	19.7	7.92	29.6	6.43	5.26	6.1
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	20:45	19.7	7.94	29.7	6.41	5.28	6.3
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	7	2	1	20:45	19.8	8.11	29.8	6.37	5.56	6.7
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	7	2	2	20:45	19.9	8.09	29.8	6.39	5.58	6.9
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	13	3	1	20:45	20	7.85	29.9	6.25	5.63	6.8
TMCLKL	HY/2012/08	2014-12-29	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	13	3	2	20:45	19.9	7.87	30	6.23	5.65	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	1	15:58	19.8	7.99	29.9	6.84	5.37	6.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS4	Surface	1	1	2	15:58	19.9	8.02	30.1	6.89	5.44	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11.3	2	1	15:58	19.7	8.03	30.1	6.72	5.63	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS4	Middle	11.3	2	2	15:58	19.8	8.02	30.2	6.76	5.67	6.9
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.6	3	1	15:58	19.7	7.98	30.4	6.38	5.86	7.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS4	Bottom	21.6	3	2	15:58	19.7	7.99	30.3	6.41	5.94	7.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	1	13:15	19.8	7.97	29.8	6.76	5.01	6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS6	Surface	1	1	2	13:15	19.8	7.98	29.9	6.79	5.04	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.7	2	1	13:15	19.8	7.96	29.9	6.72	5.33	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS6	Middle	6.7	2	2	13:15	19.9	7.97	30	6.78	5.42	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	12.4	3	1	13:15	20	7.99	30.1	6.52	5.64	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	CS6	Bottom	12.4	3	2	13:15	19.9	8.01	30	6.58	5.68	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	1	15:22	19.8	7.92	29.9	6.85	5.46	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS12	Surface	1	1	2	15:22	19.8	7.91	29.9	6.79	5.51	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8.1	2	1	15:22	19.9	7.93	30	6.62	5.72	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS12	Middle	8.1	2	2	15:22	19.8	7.95	30.1	6.67	5.79	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15.1	3	1	15:22	19.7	7.98	30.2	6.39	5.9	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS12	Bottom	15.1	3	2	15:22	19.8	7.99	30.3	6.42	5.87	6.9
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	1	15:01	19.8	7.94	30.1	6.57	5.38	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS13	Surface	1	1	2	15:01	19.7	7.95	30	6.6	5.41	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS13	Middle	7.1	2	1	15:01	19.8	7.98	30.2	6.48	5.53	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS13	Middle	7.1	2	2	15:01	19.9	7.99	30.1	6.52	5.64	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	13.1	3	1	15:01	19.8	8.01	30.2	6.36	5.84	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS13	Bottom	13.1	3	2	15:01	19.8	8.02	30.3	6.39	5.81	7.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	1	15:39	19.8	7.94	30	6.69	5.13	6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS14	Surface	1	1	2	15:39	19.7	7.95	30.1	6.73	5.17	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.7	2	1	15:39	19.9	7.98	30.2	6.58	5.43	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS14	Middle	8.7	2	2	15:39	19.9	7.97	30	6.51	5.51	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	13.4	3	1	15:39	19.7	8.03	30.2	6.45	5.73	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS14	Bottom	13.4	3	2	15:39	19.8	8.02	30.3	6.49	5.76	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	1	14:34	19.7	7.95	29.9	6.78	5.11	5.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS15	Surface	1	1	2	14:34	19.6	7.96	30	6.82	5.16	5.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.4	2	1	14:34	19.7	8	30	6.62	5.43	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS15	Middle	6.4	2	2	14:34	19.8	8.01	30.1	6.68	5.4	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.8	3	1	14:34	19.7	8.01	30.1	6.39	5.71	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	IS15	Bottom	11.8	3	2	14:34	19.6	8.02	30.2	6.47	5.7	6.9
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	1	14:00	19.8	8.01	29.8	6.78	5.13	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR8	Surface	1	1	2	14:00	19.7	8	29.9	6.81	5.18	6.2

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	1	14:00						
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR8	Middle		2	2	14:00						
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.6	3	1	14:00	19.9	8.02	29.9	6.58	5.48	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR8	Bottom	4.6	3	2	14:00	19.9	8.03	30	6.6	5.42	6.9
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	1	14:19	19.7	8.01	29.9	6.71	5.36	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR9	Surface	1	1	2	14:19	19.6	8	30	6.75	5.26	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	1	14:19						
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR9	Middle		2	2	14:19						
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.6	3	1	14:19	19.6	8.02	29.9	6.49	5.62	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR9	Bottom	4.6	3	2	14:19	19.5	8.02	30.1	6.54	5.57	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	1	13:34	19.6	8.02	29.7	6.65	5.06	6.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR10A	Surface	1	1	2	13:34	19.7	8.03	29.8	6.68	5.02	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	7.1	2	1	13:34	19.8	8.04	29.9	6.57	5.28	6.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR10A	Middle	7.1	2	2	13:34	19.7	8.05	30	6.56	5.33	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	13.1	3	1	13:34	19.8	8.06	30	6.39	5.48	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Flood	Cloudy	Small Wave	SR10A	Bottom	13.1	3	2	13:34	19.8	8.07	30	6.43	5.51	6.9
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	1	07:45	19.6	7.99	29.9	6.78	5.45	6.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS4	Surface	1	1	2	07:45	19.7	8	30	6.74	5.53	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	11.2	2	1	07:45	19.7	8.01	30.1	6.66	5.7	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS4	Middle	11.2	2	2	07:45	19.8	8.02	30	6.6	5.77	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	21.4	3	1	07:45	20	7.97	30.2	6.32	5.96	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS4	Bottom	21.4	3	2	07:45	19.9	7.98	30.3	6.28	6.05	7.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	1	10:13	19.7	7.96	29.7	6.7	5.04	6
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS6	Surface	1	1	2	10:13	19.6	7.97	29.8	6.68	5.11	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.6	2	1	10:13	19.7	7.95	29.8	6.64	5.45	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS6	Middle	6.6	2	2	10:13	19.8	7.96	29.9	6.62	5.5	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	12.2	3	1	10:13	19.9	7.99	29.9	6.46	5.79	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	CS6	Bottom	12.2	3	2	10:13	19.9	8	30	6.5	5.74	6.9
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	1	08:21	19.7	7.9	29.8	6.73	5.58	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS12	Surface	1	1	2	08:21	19.6	7.91	29.9	6.71	5.64	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.9	2	1	08:21	19.8	7.93	29.9	6.56	5.8	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS12	Middle	7.9	2	2	08:21	19.7	7.94	30	6.54	5.86	7.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.8	3	1	08:21	19.8	7.97	30.1	6.32	6.01	7.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS12	Bottom	14.8	3	2	08:21	19.9	7.98	30	6.35	5.93	7.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	1	08:39	19.7	7.93	29.9	6.5	5.45	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS13	Surface	1	1	2	08:39	19.6	7.94	30	6.47	5.53	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.9	2	1	08:39	19.7	7.97	30	6.41	5.69	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS13	Middle	6.9	2	2	08:39	19.7	7.98	30.1	6.38	5.76	7.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	12.8	3	1	08:39	19.7	8	30.1	6.31	5.93	7.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS13	Bottom	12.8	3	2	08:39	19.8	8.01	30	6.26	5.98	7.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	1	08:03	19.7	7.93	29.9	6.64	5.21	6.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS14	Surface	1	1	2	08:03	19.6	7.94	30	6.61	5.28	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.6	2	1	08:03	19.8	7.96	30.1	6.5	5.57	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS14	Middle	8.6	2	2	08:03	19.7	7.97	30	6.46	5.66	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	16.2	3	1	08:03	19.9	8.01	30.1	6.37	5.81	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS14	Bottom	16.2	3	2	08:03	19.9	8.02	30.2	6.34	5.85	7.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	1	09:09	19.6	7.95	29.8	6.71	5.19	6.2
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS15	Surface	1	1	2	09:09	19.5	7.96	29.9	6.68	5.27	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.2	2	1	09:09	19.6	7.99	29.9	6.57	5.48	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS15	Middle	6.2	2	2	09:09	19.7	8	30	6.6	5.55	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	11.4	3	1	09:09	19.8	7.98	30	6.36	5.8	7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	IS15	Bottom	11.4	3	2	09:09	19.7	7.99	30.1	6.38	5.73	7.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	1	09:33	19.6	7.99	29.7	6.73	5.2	6.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR8	Surface	1	1	2	09:33	19.7	8	29.8	6.69	5.26	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	1	09:33						
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR8	Middle		2	2	09:33						
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.2	3	1	09:33	19.8	8.01	29.8	6.55	5.57	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR8	Bottom	4.2	3	2	09:33	19.7	8.02	29.9	6.52	5.51	6.8

Project	Works	Date	Tide	Weather	Sea Condition	Stat	Level	Water Depth	Lev_Cod	Replicate	Time	Temp(°C)	pH	Salinity(ppt)	DO(mg/L)	Turbidity(NTU)	SS(mg/L)
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	1	09:15	19.6	7.99	29.8	6.65	5.41	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR9	Surface	1	1	2	09:15	19.5	8	29.9	6.62	5.34	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	1	09:15						
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR9	Middle		2	2	09:15						
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.4	3	1	09:15	19.7	7.99	29.9	6.44	5.73	6.8
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR9	Bottom	4.4	3	2	09:15	19.7	7.98	30	6.4	5.66	6.5
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	1	09:51	19.5	8.01	29.7	6.55	5.08	6.1
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR10A	Surface	1	1	2	09:51	19.6	8.02	29.6	6.58	5.13	6.3
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.9	2	1	09:51	19.7	8.03	29.8	6.51	5.32	6.4
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR10A	Middle	6.9	2	2	09:51	19.6	8.04	29.7	6.48	5.42	6.7
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	12.8	3	1	09:51	19.7	8.05	29.8	6.35	5.53	6.6
TMCLKL	HY/2012/08	2014-12-31	Mid-Ebb	Cloudy	Small Wave	SR10A	Bottom	12.8	3	2	09:51	19.8	8.04	29.9	6.32	5.59	6.9

Appendix J

Impact Dolphin Monitoring Survey

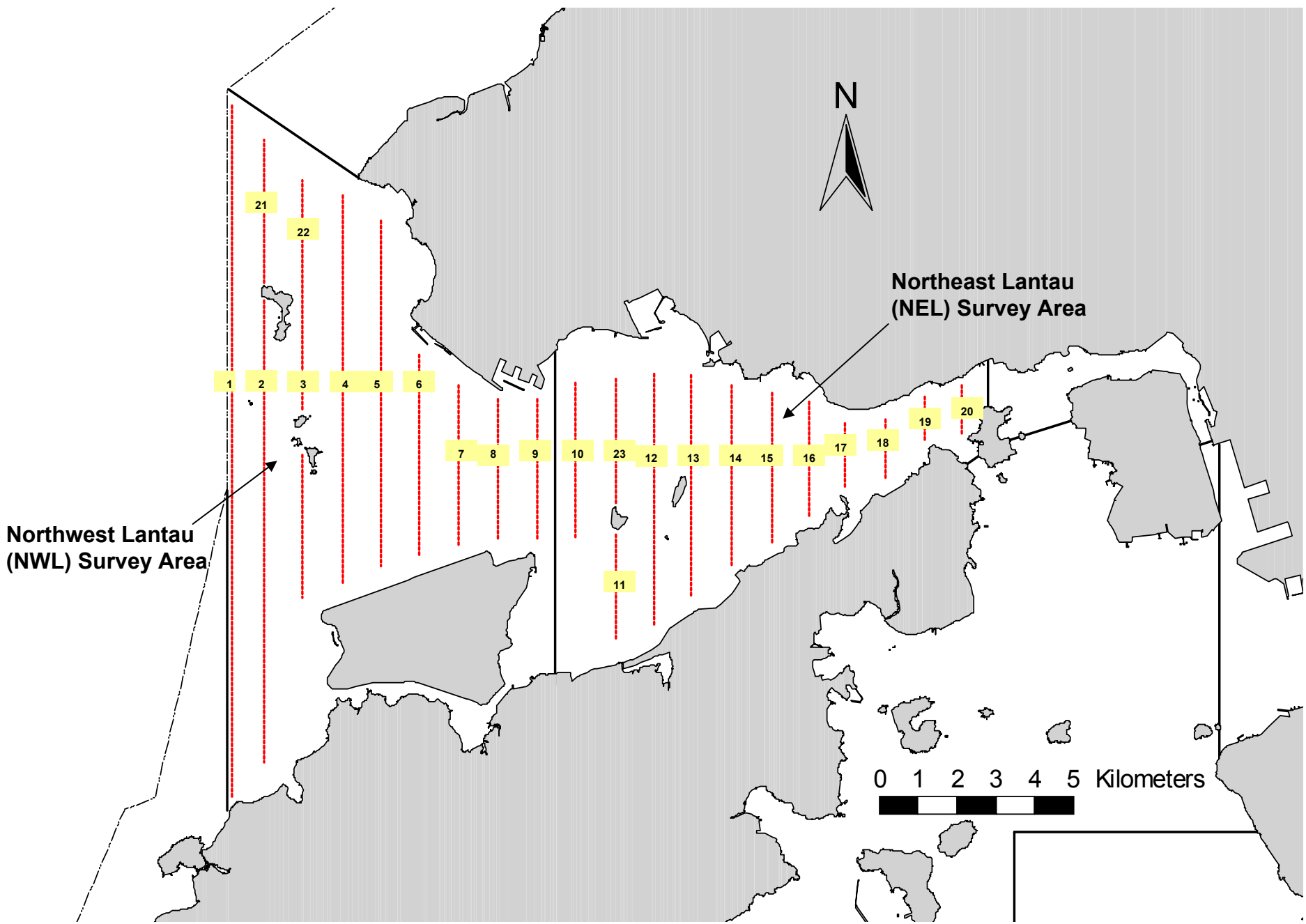


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

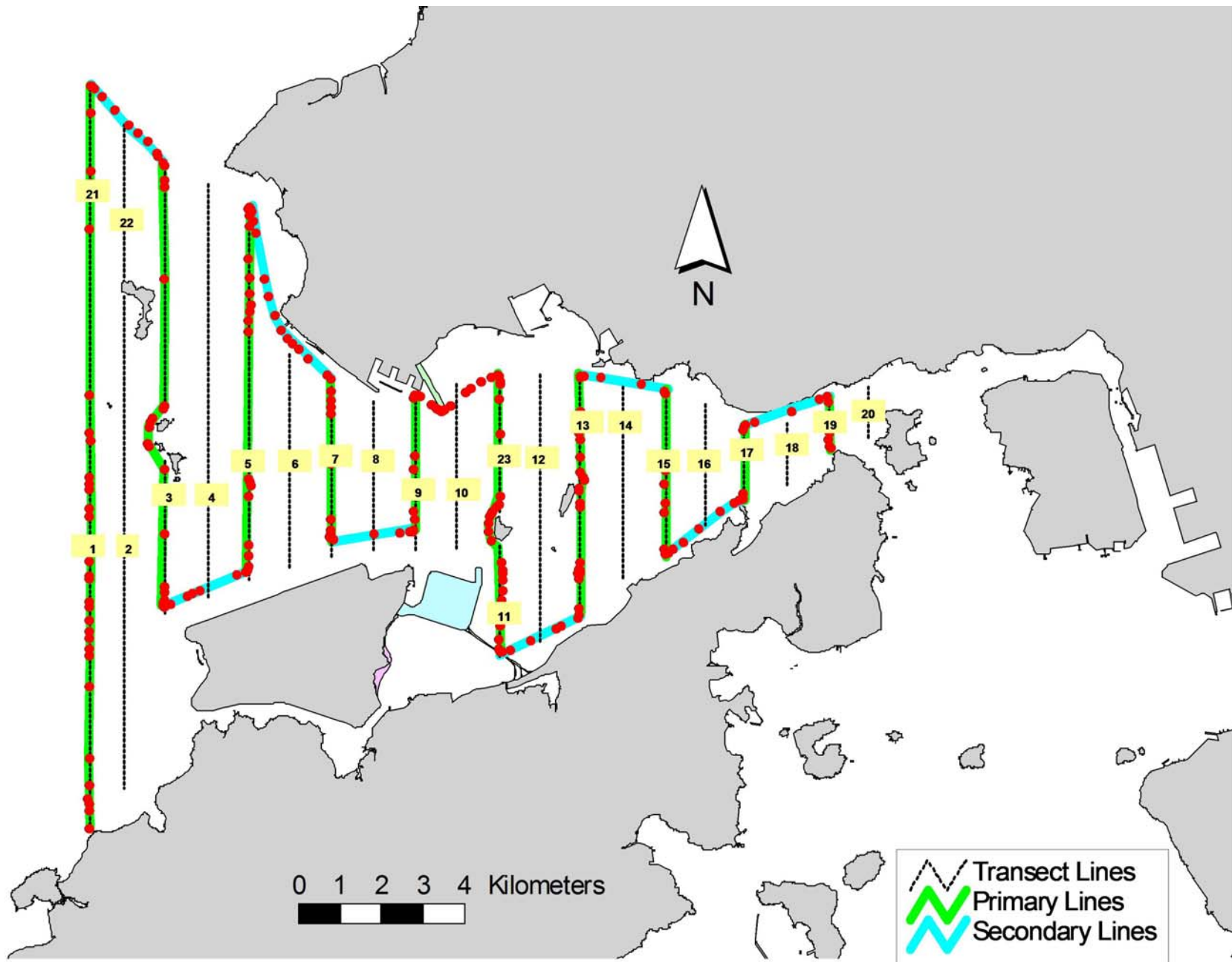


Figure 2. Survey Route on December 2nd, 2014 (from HKLR03 project)

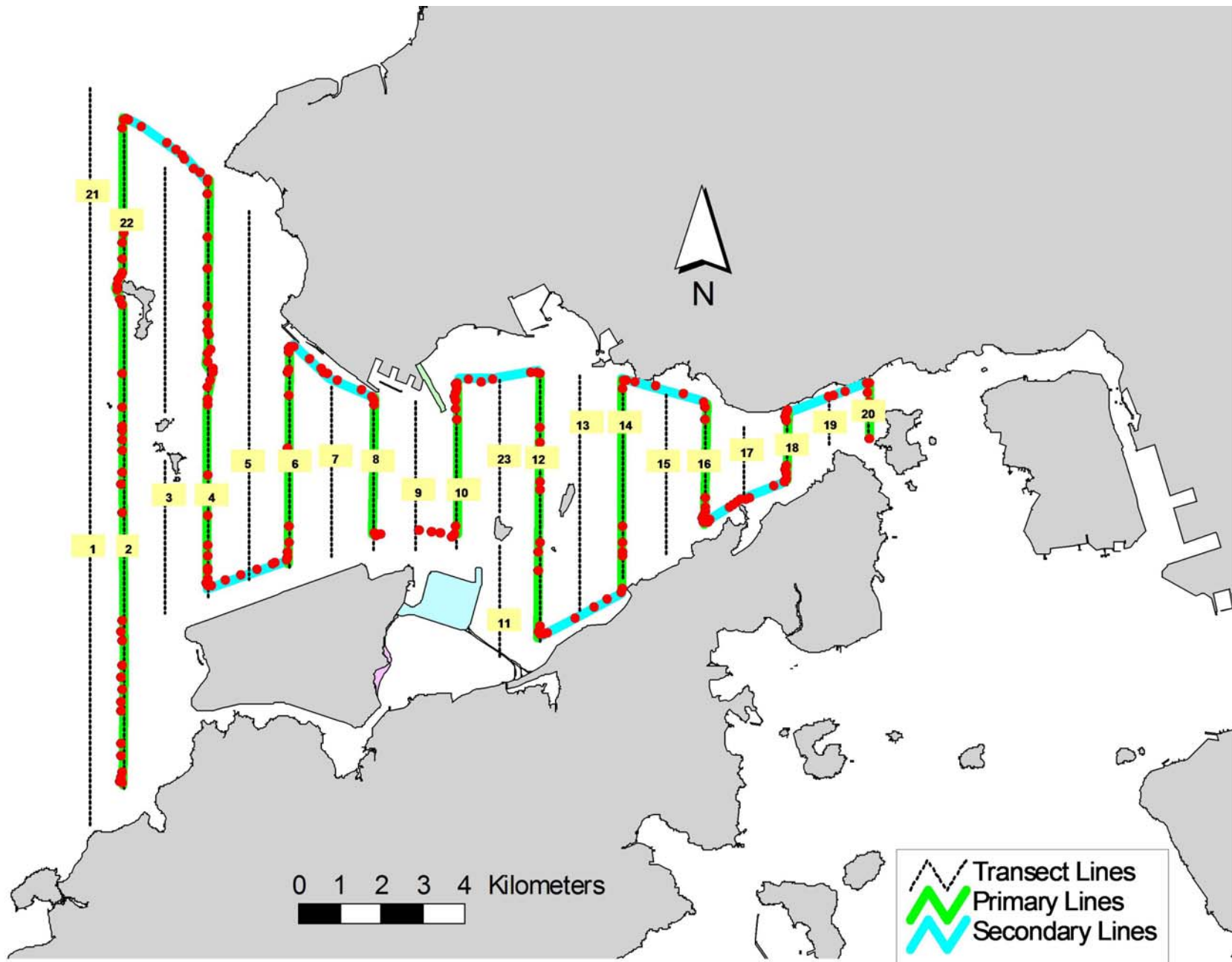


Figure 3. Survey Route on December 9th, 2014 (from HKLR03 project)

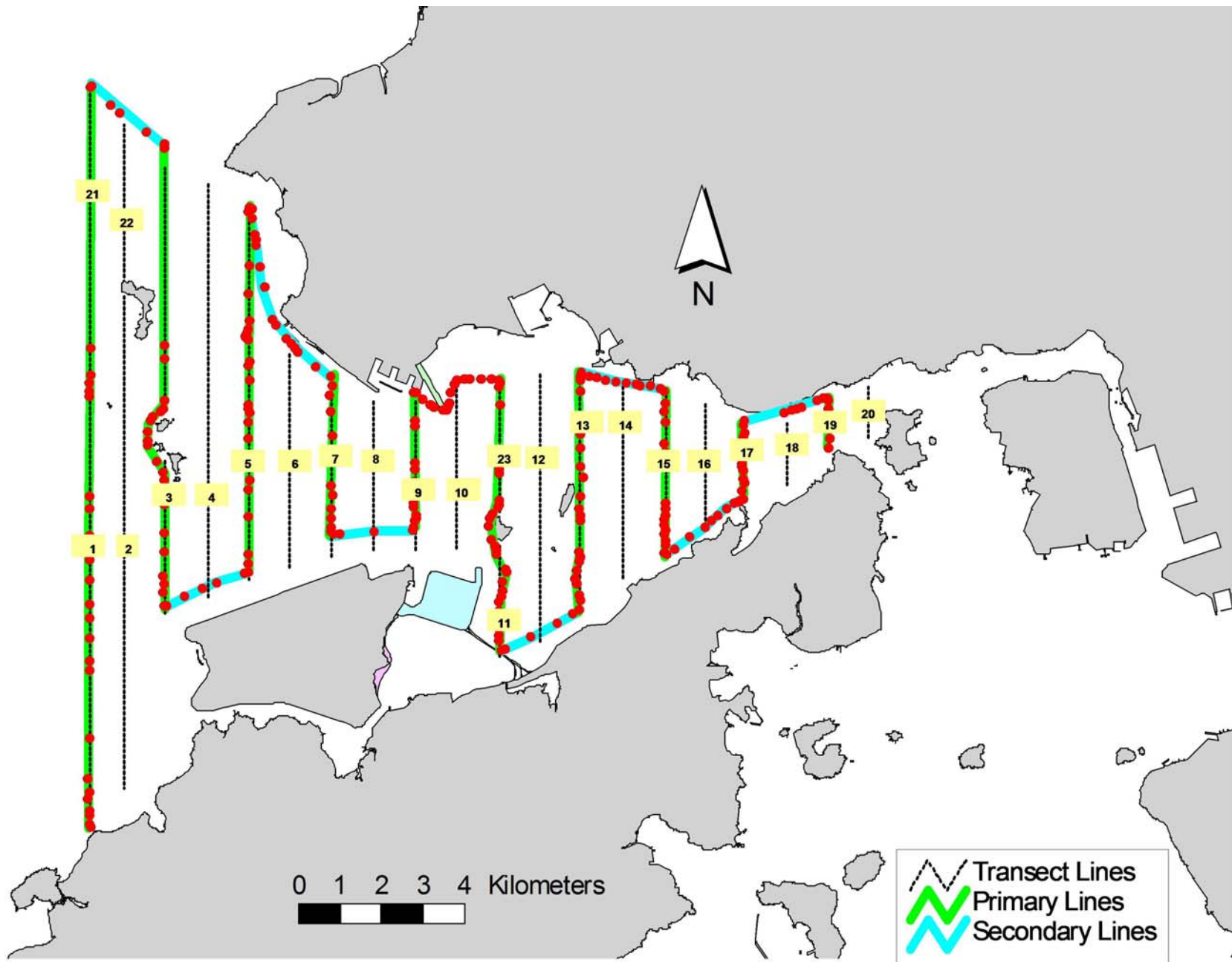


Figure 4. Survey Route on December 15th, 2014 (from HKLR03 project)

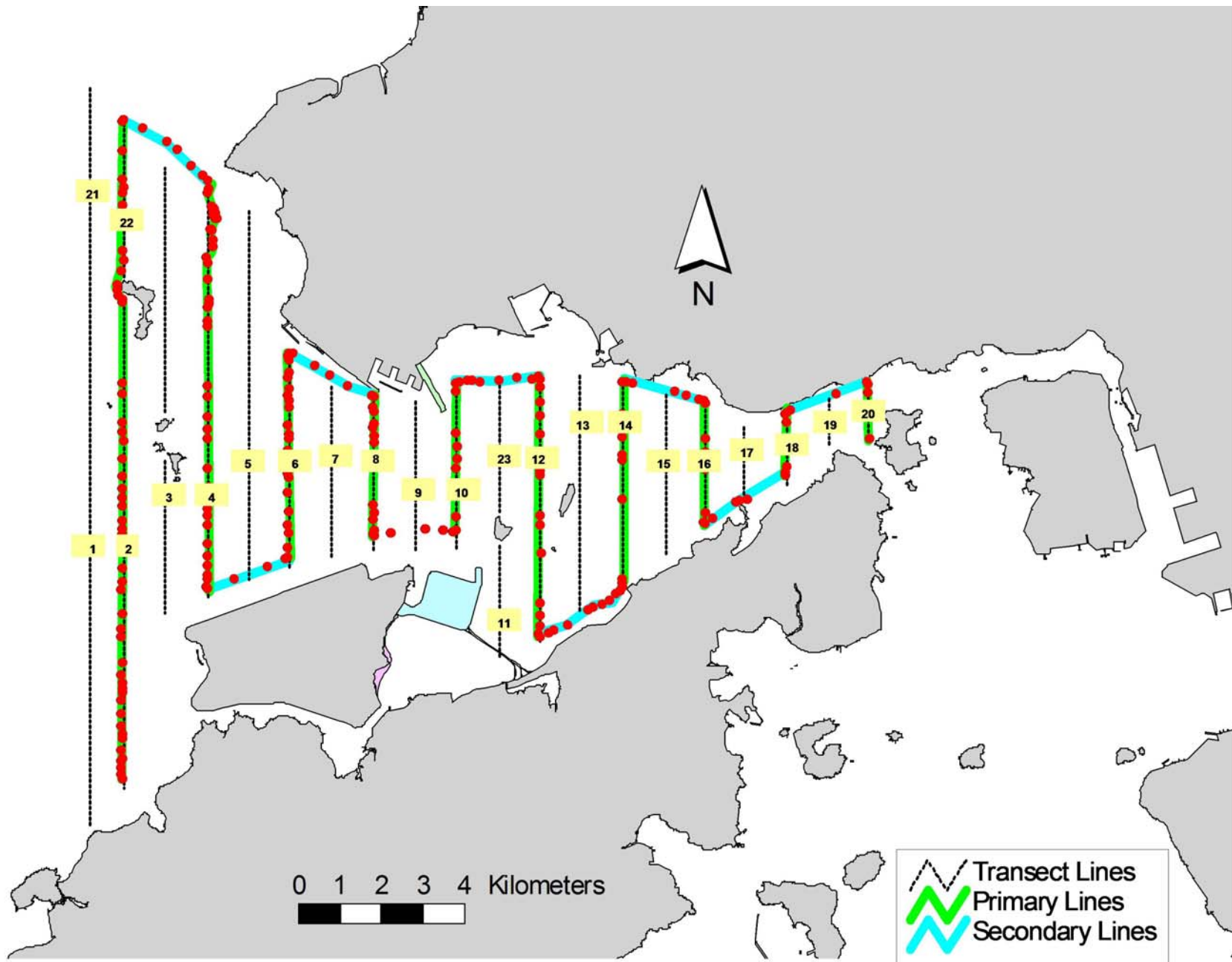


Figure 5. Survey Route on December 23rd, 2014 (from HKLR03 project)

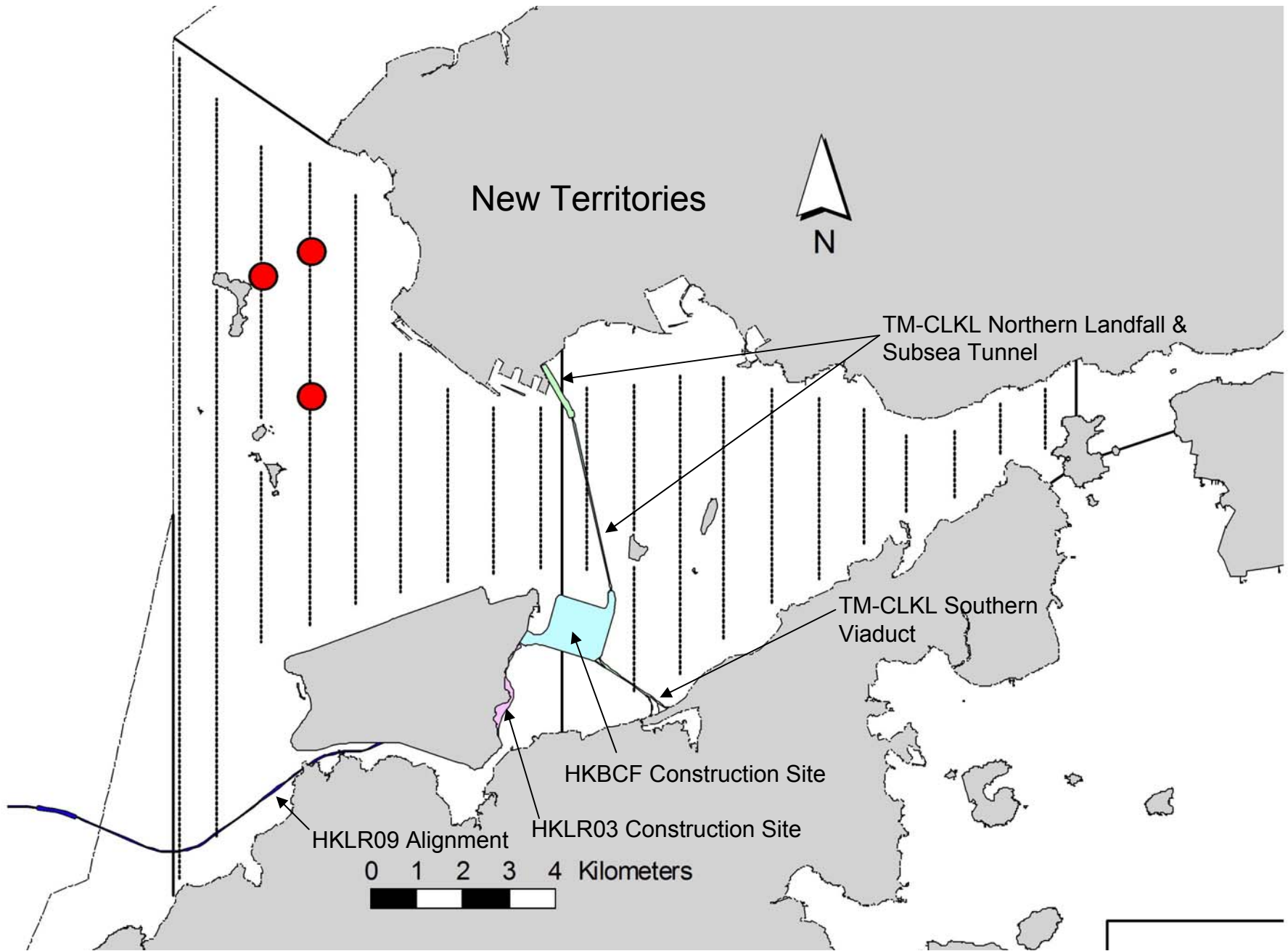


Figure 6. Distribution of Chinese White Dolphin Sightings During December 2014 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (December 2014)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
2-Dec-14	NE LANTAU	2	15.30	WINTER	STANDARD31516	HKLR	P
2-Dec-14	NE LANTAU	3	2.28	WINTER	STANDARD31516	HKLR	P
2-Dec-14	NE LANTAU	2	7.54	WINTER	STANDARD31516	HKLR	S
2-Dec-14	NE LANTAU	3	2.28	WINTER	STANDARD31516	HKLR	S
2-Dec-14	NW LANTAU	2	18.17	WINTER	STANDARD31516	HKLR	P
2-Dec-14	NW LANTAU	3	23.09	WINTER	STANDARD31516	HKLR	P
2-Dec-14	NW LANTAU	2	10.54	WINTER	STANDARD31516	HKLR	S
2-Dec-14	NW LANTAU	3	2.10	WINTER	STANDARD31516	HKLR	S
9-Dec-14	NE LANTAU	1	5.79	WINTER	STANDARD31516	HKLR	P
9-Dec-14	NE LANTAU	2	14.41	WINTER	STANDARD31516	HKLR	P
9-Dec-14	NE LANTAU	1	2.20	WINTER	STANDARD31516	HKLR	S
9-Dec-14	NE LANTAU	2	8.30	WINTER	STANDARD31516	HKLR	S
9-Dec-14	NW LANTAU	1	2.11	WINTER	STANDARD31516	HKLR	P
9-Dec-14	NW LANTAU	2	28.31	WINTER	STANDARD31516	HKLR	P
9-Dec-14	NW LANTAU	2	5.13	WINTER	STANDARD31516	HKLR	S
9-Dec-14	NW LANTAU	3	2.45	WINTER	STANDARD31516	HKLR	S
15-Dec-14	NW LANTAU	2	31.56	WINTER	STANDARD31516	HKLR	P
15-Dec-14	NW LANTAU	3	9.34	WINTER	STANDARD31516	HKLR	P
15-Dec-14	NW LANTAU	2	12.90	WINTER	STANDARD31516	HKLR	S
15-Dec-14	NE LANTAU	1	3.57	WINTER	STANDARD31516	HKLR	P
15-Dec-14	NE LANTAU	2	13.37	WINTER	STANDARD31516	HKLR	P
15-Dec-14	NE LANTAU	1	3.76	WINTER	STANDARD31516	HKLR	S
15-Dec-14	NE LANTAU	2	6.50	WINTER	STANDARD31516	HKLR	S
23-Dec-14	NE LANTAU	2	19.81	WINTER	STANDARD31516	HKLR	P
23-Dec-14	NE LANTAU	2	9.69	WINTER	STANDARD31516	HKLR	S
23-Dec-14	NE LANTAU	3	0.90	WINTER	STANDARD31516	HKLR	S
23-Dec-14	NW LANTAU	2	13.36	WINTER	STANDARD31516	HKLR	P
23-Dec-14	NW LANTAU	3	16.71	WINTER	STANDARD31516	HKLR	P
23-Dec-14	NW LANTAU	2	5.81	WINTER	STANDARD31516	HKLR	S
23-Dec-14	NW LANTAU	3	1.82	WINTER	STANDARD31516	HKLR	S

Appendix II. HKLR03 Chinese White Dolphin Sighting Database (December 2014)

(Abbreviations: 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 Line)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
02-Dec-14	1	1428	1	NW LANTAU	3	207	ON	HKLR	826916	806457	WINTER	NONE	P
09-Dec-14	1	1315	3	NW LANTAU	2	280	ON	HKLR	824445	807513	WINTER	NONE	P
23-Dec-14	1	1335	1	NW LANTAU	3	151	ON	HKLR	827424	807518	WINTER	NONE	P

Appendix III. Individual dolphins identified during HKLR03 monitoring surveys in December 2014

ID#	DATE	STG#	AREA
NL48	23/12/14	1	NW LANTAU
NL136	02/12/14	1	NW LANTAU
NL214	09/12/14	1	NW LANTAU
NL220	09/12/14	1	NW LANTAU
NL307	09/12/14	1	NW LANTAU

NL136_20141202_1



NL214_20141209_1



NL220_20141209_1



NL307_20141209_1



NL48_20141223_1



Appendix IV. Photographs of Identified Individual Dolphins in December 2014 (HKLR03)

Appendix K

Event and Action Plan

Event and Action Plan for Impact Air Monitoring

Action Level	Action			
	ET (a)	IEC (a)	SOR (a)	Contractor(s)
Exceedance recorded	<ol style="list-style-type: none"> 1. Identify the source. 2. Repeat measurement to confirm finding. If two consecutive measurements exceed Action Level, the exceedance is then confirmed. 3. Inform the IEC and the SOR. 4. Investigate the cause of exceedance and check Contractor's working procedures to determine possible mitigation to be implemented. 5. If the exceedance is confirmed to be Project related after investigation, increase monitoring frequency to daily. 6. Discuss with the IEC and the Contractor on remedial actions required. 7. If exceedance continues, arrange meeting with the IEC and the SOR. 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET. 2. Check the Contractor's working method. 3. If the exceedance is confirmed to be Project related after investigation, 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice 2. Amend working methods if appropriate 3. If the exceedance is confirmed to be Project related, submit proposals for remedial actions to IEC within 3 working days of notification 4. Implement the agreed proposals 5. Amend proposal if appropriate

	Action			
	ET (a)	IEC (a)	SOR (a)	Contractor(s)
Limit Level				
Exceedance recorded	<ol style="list-style-type: none"> 1. Identify the source. 2. Repeat measurement to confirm finding. If two consecutive measurements exceed Limit Level, the exceedance is then confirmed. 3. Inform the IEC, the SOR, the DEP and the Contractor. 4. Investigate the cause of exceedance and check Contractor's working procedures to determine possible mitigation to be implemented. 5. If the exceedance is confirmed to be Project related after investigation, increase monitoring frequency to daily. 6. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 7. Arrange meeting with the IEC and the SOR to discuss the remedial actions to be taken. 8. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results. 9. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET. 2. Check Contractor's working method. 3. If the exceedance is confirmed to be Project related after investigation, 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. If the exceedance is confirmed to be Project related after investigation, in consultation with the IEC, agree with the Contractor on the remedial measures to be implemented. 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. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. If the exceedance is confirmed to be Project related after investigation, submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Amend proposal if appropriate. 5. Stop the relevant activity of works as determined by the SOR until the exceedance is abated.

Note: (a) ET – Environmental Team; IEC – Independent Environmental Checker; SOR – Supervising Officer's Representative

Event & Action Plan for Water Quality

Event	ET Leader	IEC	SOR	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> Repeat <i>in situ</i> 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. 	<ol style="list-style-type: none"> Check monitoring data submitted by ET and Contractor's working methods. 	<ol style="list-style-type: none"> Confirm receipt of notification of non-compliance in writing; Notify Contractor. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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; 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures; Ensure mitigation measures are properly implemented; Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> Repeat measurement on next day of exceedance to confirm findings; 	<ol style="list-style-type: none"> Check monitoring data submitted by ET and 	<ol style="list-style-type: none"> Confirm receipt of notification of failure in 	<ol style="list-style-type: none"> Inform the SOR and confirm notification of the

Event	ET Leader	IEC	SOR	Contractor
	<ol style="list-style-type: none"> 2. Identify source(s) of impact; 3. Inform IEC, contractor, SOR and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SOR and Contractor; 6. 	<ol style="list-style-type: none"> 1. Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly. 	<ol style="list-style-type: none"> writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to review the working methods. 	<ol style="list-style-type: none"> non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of mitigation measures to 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	<ol style="list-style-type: none"> 1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, SOR and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SOR and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days; 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor's working method; 2. Discuss with ET and Contractor on possible remedial actions; 3. Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the SOR accordingly; 4. Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. 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. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposal of mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; 5. 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.

Note: ET – Environmental Team, IEC – Independent Environmental Checker, SOR – Supervising Officer's Representative

Event / Action Plan for Impact Dolphin Monitoring

EVENT	ACTION*			
	ET	IEC	SOR	Contractor
Action Level	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and finding with the ET and the Contractor. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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.
Limit Level	<ol style="list-style-type: none"> 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; 	<ol style="list-style-type: none"> 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, SOR and 	<ol style="list-style-type: none"> 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 SOR is satisfied with the 	<ol style="list-style-type: none"> 1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Attend the meeting to discuss with ET, IEC and SOR the necessity of additional dolphin monitoring and any other

EVENT	ACTION*			
	ET	IEC	SOR	Contractor
	<ol style="list-style-type: none"> 3. Identify source(s) of impact; 4. Inform the IEC, 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, 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. 	<p>Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures.</p> <ol style="list-style-type: none"> 4. Review proposals for additional monitoring and any other mitigation measures submitted by ET and Contractor and advise SOR of the results and findings accordingly. 5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise SOR the results and findings accordingly. 	<p>proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, SOR to signify the agreement in writing on such proposals and any other mitigation measures.</p> <ol style="list-style-type: none"> 3. Supervise the implementation of additional monitoring and/or any other mitigation measures. 	<p>potential mitigation measures.</p> <ol style="list-style-type: none"> 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 L

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

Table L1 *Cumulative Statistics on Exceedances*

Parameters	Level of Exceedance	Total No. recorded in this reporting month	Total No. recorded since project commencement
1-hr TSP	Action	2	30
	Limit	0	2
24-hr TSP	Action	0	5
	Limit	0	1
Water Quality	Action	0	6
	Limit	0	1
Impact Dolphin Monitoring	Action	0	7
	Limit	0	0

Table L2 *Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (December 2014)	0	0	0
Total No. received since project commencement	4	0	0

Email
message

**Environmental
Resources
Management**

To ENVIRON - Hong Kong, Limited (ENPO)

From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun-Chek Lap
Kok Link-Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Air Quality
Impact Monitoring

Date 12 December 2014

16/F Berkshire House,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com



ERM

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

0212330_2December2014_1hrTSP_Station ASR5

A total of one Action Level Exceedance was recorded on 2 December 2014.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam'.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/08
 TUEN MUN – CHEK LAP KOK LINK –
 NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

Air Quality Impact Monitoring
 Notification of Exceedance

Log No.	0212330_2December2014_1hrTSP_Station ASR5 [Total No. of Exceedances = 1]	
Date	2 December 2014 (Measured) 11 December 2014 (Laboratory results received by ERM)	
Monitoring Station	ASR1, ASR5, ASR6, ASR10 and AQMS1	
Parameter(s) with Exceedance(s)	1-hr TSP	
Action Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR5 = 340
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR5 = 238
Limit Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	500
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	260
Measured Levels	Action Level Exceedance for 1-hr TSP is observed at ASR5 ($346 \mu\text{g}/\text{m}^3$) during 1510 - 1610 hrs.	
Works Undertaken (at the time of monitoring event)	On 2 December 2014, Excavation Works for launching shaft were carried out at Reclamation Works Area Portion N-A; Land Bored Piling Works at Reclamation Works Area Portion N-A and Surcharge Set Up at Reclamation Works Area Portions N-B and N-C.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance(s) are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • Considering the relatively higher levels of 1-hour TSP between 1500 and 1700 hrs at most monitoring stations, it is probably unlikely that the level of land-based construction works under this Contract can cause increase in 1-hour TSP of this magnitude and scale. It is considered that the observed exceedances for 1-hour TSP at ASR5 may represent sporadic event associated with traffic emissions and anthropogenic activities during afternoon rush hour at River Trade Terminal. • According to the construction information provided by the Contractor, the majority of construction works on 2 December 2014 were Excavation Works for launching shaft at Reclamation Works Area Portion N-A; Land Bored Piling Works at Reclamation Works Area Portion N-A and Surcharge Set Up at Reclamation Works Area Portions N-B and N-C. During the period of the land-based construction works, the Contractor has implemented the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual (e.g. water spraying by water trucks on exposed soil within the Project site and associated work areas; use of wheel washing facilities; hydro-seeding of area where works have been completed). • Whilst exceedances of Action Level were observed at ASR5, the 24-hr TSP level at the monitoring station (ASR1 = 127 µg/m³) on 2 December 2014 were in compliance with the Action and Limit Levels. • Same level and extent of construction works were carried out at the same works area on 29th November and 5th December whilst no exceedance was recorded. • With reference to the recorded wind direction (ranged between 34° and 65°, blowing from a North-Easterly direction) during the period of the observed 1-hr TSP exceedances, Station ASR5 is located upstream to the land-based construction activities at the Reclamation Works Area, thus the observed exceedance should not be affected by the dust, if any, generated by the construction activities under this Contract. • As stated in the EIA report (Section 4.2.3), the background TSP level of Tuen Mun is higher than the other region of Hong Kong, thus the exceedances may be also contributed cumulatively by the other construction works / traffic within the Tuen Mun Area rather than causing by the construction works of the Project.
Actions Taken / To Be Taken	<p>Based on the record of subsequent weekly site inspection on 3 December 2014, no dust nuisance was recorded at the Reclamation Works Area and activities conducted in this Contract's work has strictly followed the requirements stated in the EP (EP-354/2009/B) (see photo records on <i>Annex A</i>). In addition, the Contractor has implemented the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual (e.g. watering at least 12 times per day on all exposed soil within the Project site and associated work areas; use of wheel washing facilities; hydro-seeding of area where works have been completed) throughout the construction period, no additional mitigation is deemed necessary. The Enhanced TSP Monitoring has commenced on 24 October 2014, the ET will monitor for future trends in exceedances.</p>
Remarks	<p>The monitoring results and the locations of air quality monitoring stations are attached.</p>

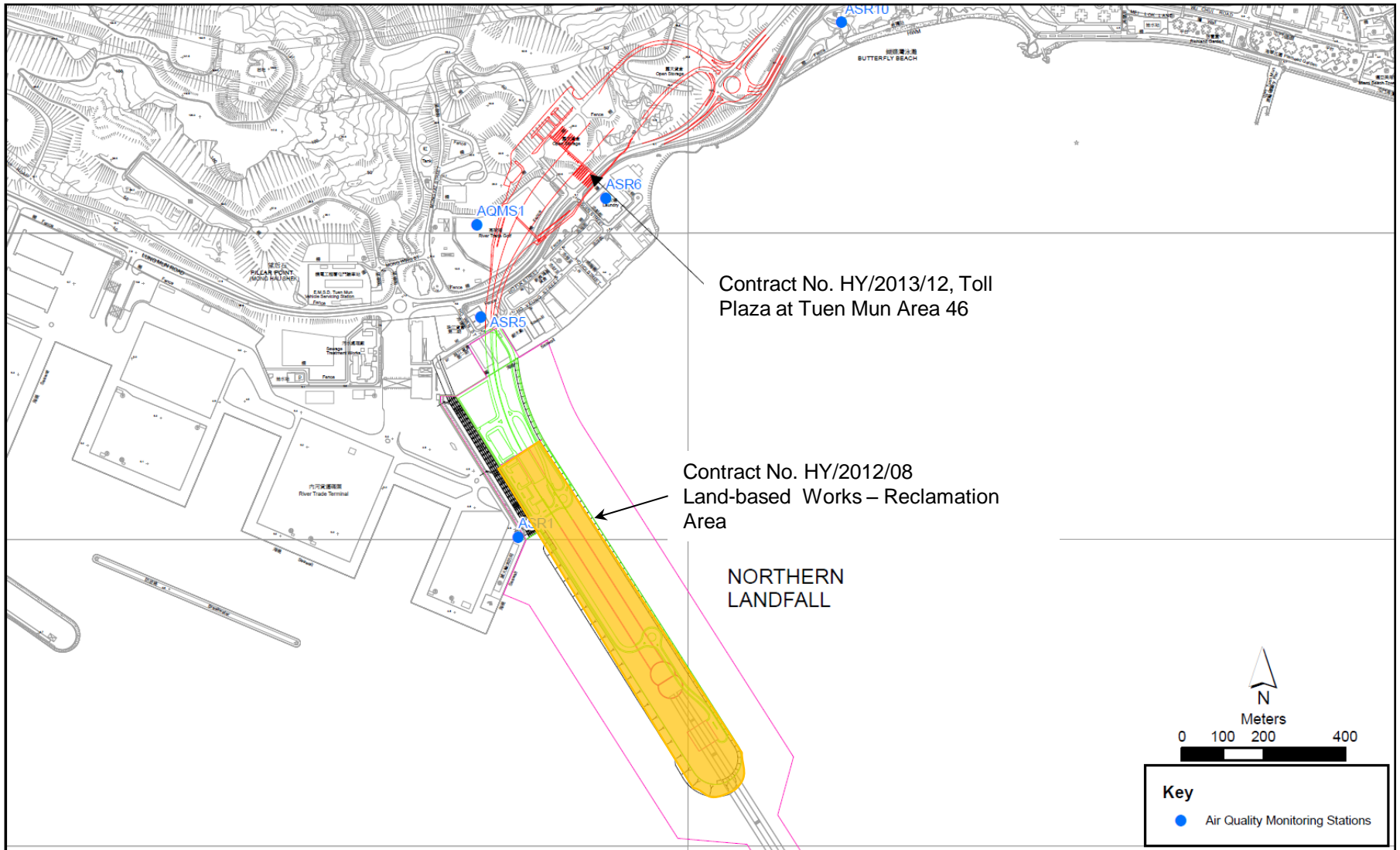


Figure 1

Indicative Construction Works Area on 2 December 2014



Annex A Photo Records taken during Weekly Site Inspection

*Note: Photos taken on 3/12/2014



Hydro-seeding of area where works have been completed. (Reclamation Works Area)

Email
message

Environmental
Resources
Management

To ENVIRON - Hong Kong, Limited (ENPO)

From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun-Chek Lap
Kok Link-Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Air Quality
Impact Monitoring

Date 29 December 2014

16/F Berkshire House,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com



ERM

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

0212330_17December2014_1hrTSP_Station AQMS1

A total of one Action Level Exceedance was recorded on 17 December 2014.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam'.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

**CONTRACT NO. HY/2012/08
TUEN MUN – CHEK LAP KOK LINK –
NORTHERN CONNECTION SUB-SEA TUNNEL SECTION**

**Air Quality Impact Monitoring
Notification of Exceedance**

Log No.	0212330_17December2014_1hrTSP_Station AQMS1 [Total No. of Exceedances = 1]	
Date	17 December 2014 (Measured) 24 December 2014 (Laboratory results received by ERM)	
Monitoring Station	ASR1, ASR5, ASR6, ASR10 and AQMS1	
Parameter(s) with Exceedance(s)	1-hr TSP	
Action Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	AQMS1 = 335
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	AQMS1 = 213
Limit Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	500
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	260
Measured Levels	Action Level Exceedance for 1-hr TSP is observed at AQMS1 ($348 \mu\text{g}/\text{m}^3$) during 1444 - 1544 hrs.	
Works Undertaken (at the time of monitoring event)	On 17 December 2014, Land Bored Piling Works were carried out at Reclamation Works Area Portion N-A and Surcharge Set Up at Reclamation Works Area Portions N-B and N-C.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance(s) are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • According to the construction information provided by the Contractor, the majority of construction works on 17 December 2014 were Land Bored Piling Works at Reclamation Works Area Portion N-A and Surcharge Set Up at Reclamation Works Area Portions N-B and N-C. During the period of the land-based construction works, the Contractor has implemented the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual (e.g. water spraying by water trucks on exposed soil within the Project site and associated work areas; use of wheel washing facilities; hydro-seeding of area where works have been completed). • Whilst exceedances of Action Level were observed at AQMS1, the 24-hr TSP level at the monitoring station (AQMS1 = $155 \mu\text{g}/\text{m}^3$) on 17 December 2014 were in compliance with the Action and Limit Levels. • Same level and extent of construction works were carried out at the same works area on 14th December and 20th December whilst no exceedance was recorded. It is thus considered that the observed exceedances for 1-hour TSP at AQMS1 may represent sporadic event associated with traffic emissions and anthropogenic activities during afternoon rush hour at Lung Mun Road. • With reference to the recorded wind direction (ranged between 44° and 60°, blowing from a North-Easterly direction) and wind speed (ranged from 2.7 to 5.4 m/s) during the period of the observed 1-hr TSP exceedances, Station AQMS1 is located upstream to the land-based construction activities at the Reclamation Works Area, thus the observed exceedance should not be affected by the dust, if any, generated by the construction activities under this Contract. • As stated in the EIA report (Section 4.2.3), the background TSP level of Tuen Mun is higher than the other region of Hong Kong, thus the exceedances may be also contributed cumulatively by the other construction works / traffic within the Tuen Mun Area rather than causing by the construction works of the Project. 	

Actions Taken/ To Be Taken	Based on the record of weekly site inspection on 17 December 2014, no dust nuisance was recorded at the Reclamation Works Area and activities conducted in this Contract's work has strictly followed the requirements stated in the EP (EP-354/2009/C) (see photo records on <i>Annex A</i>). In addition, the Contractor has implemented the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual (e.g. use of water truck on exposed soil within the Project site and associated work areas; use of wheel washing facilities; hydro-seeding of area where works have been completed) throughout the construction period, no additional mitigation is deemed necessary. The Enhanced TSP Monitoring has commenced on 24 October 2014, the ET will monitor for future trends in exceedances.
Remarks	The monitoring results and the locations of air quality monitoring stations are attached.

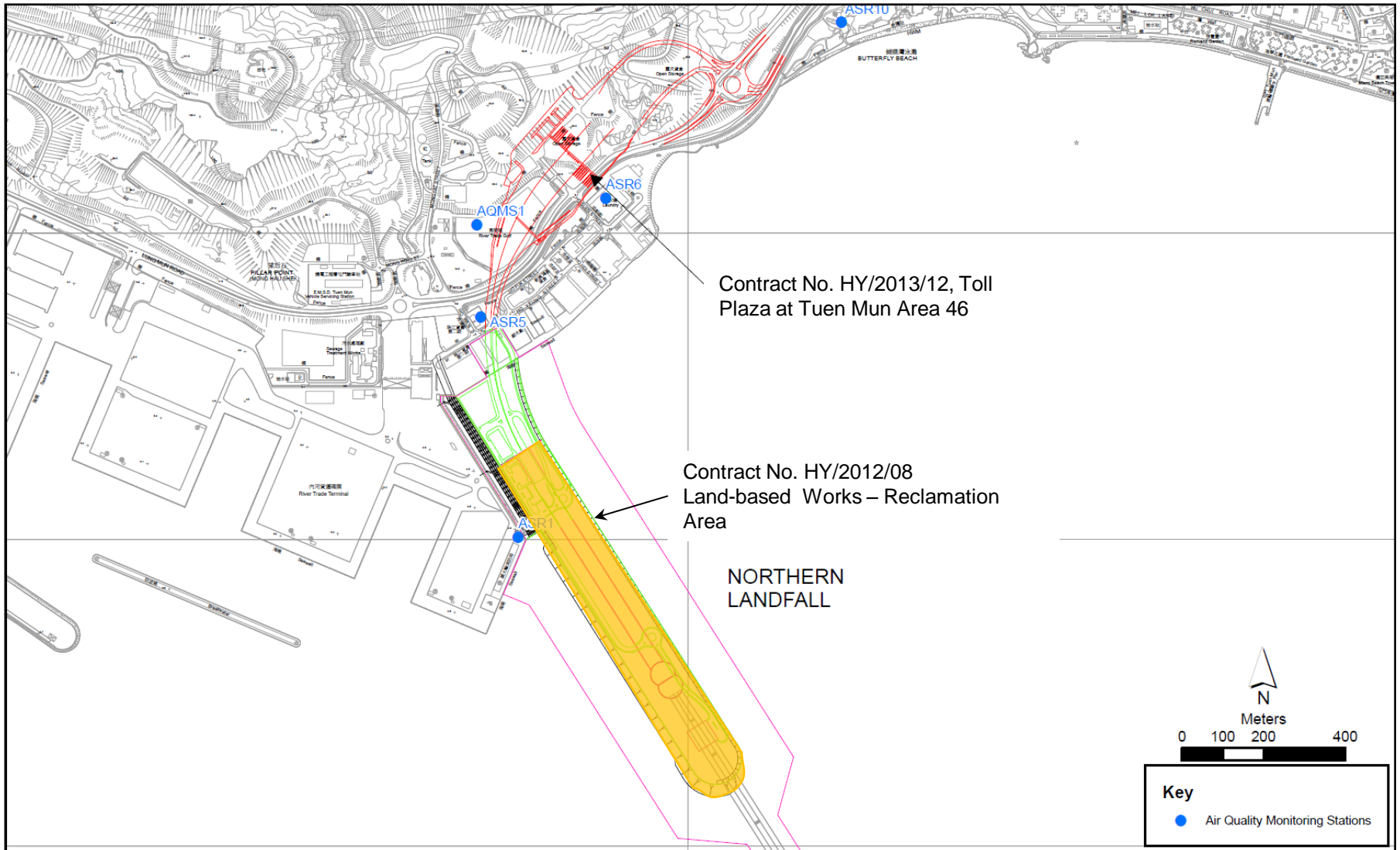


Figure 1

Indicative Construction Works Area on 17 December 2014



Annex A Photo Records taken during Weekly Site Inspection

*Note: Photos taken on 17/12/2014



Hydro-seeding of area where works have been completed. (Reclamation Works Area)



Use of water truck on exposed soil within the Project site and associated work areas. (Reclamation Works Area)

Appendix M

Waste Flow Table

Appendix D – Monthly Summary Waste Flow Table

Name of Department: HyD

Contract No. / Works Order No.: HY/2012/08

Monthly Summary Waste Flow Table for December 2014 [to be submitted not later than the 15th day of each month following reporting month] (All quantities shall be rounded off to 3 decimal places.)

Month	Monthly Break-down of <u>Inert</u> Construction & Demolition Materials (i.e. Public Fill Materials)				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Hard Rock and Large Broken Concrete	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)
2013 Sub-total	3.718	0.000	0.000	0.000	3.718
Jan-2014	9.012	0.000	0.000	0.000	9.012
Feb-2014	0.000	0.000	0.000	0.000	0.000
Mar-2014	0.105	0.000	0.000	0.000	0.105
Apr-2014	0.022	0.000	0.000	0.000	0.022
May-2014	1.016	0.000	0.000	0.000	1.016
Jun-2014	4.393	0.000	0.000	0.000	4.393
Half Year Sub-total	14.548	0.000	0.000	0.000	14.548
Jul-2014	14.405	0.000	0.000	0.000	14.405
Aug-2014	12.728	0.000	0.000	0.000	12.728
Sep-2014	6.843	0.000	0.000	0.000	6.843
Oct-2014	1.228	0.000	0.000	0.000	1.228
Nov-2014	0.595	0.000	0.000	0.000	0.595
Dec-2014	10.151	0.000	0.000	0.000	10.151
Project Total Quantities	64.216	0.000	0.000	0.000	64.216

Month	Monthly Construction & Demolition Material Movements (Import Fill Materials & Marine Mud Disposal)							
	Imported Fill to WA 23 & Reclamation Area (Rockfill 400)	Imported Fill to WA 23 & Reclamation Area (Rockfill 200)	Imported Fill to WA 23 & Reclamation Area (Rockfill Type A)	Imported Fill to Reclamation Area (Public Fill) (by Barge)	* Imported Fill to Reclamation Area (Public Fill)(From Rambler Channel) (by Truck)	* Imported Fill to Reclamation Area (From RTT Barging Point) (by Truck)	Marine Disposal (Cat. L)	Marine Disposal (Cat. M _P & M _F)
	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 m ³)	(in '000 m ³)
2013 Sub-total	211.541	2.508	19.460	0.000	0.000	45.472	61.600	18.200
Jan-2014	177.300	4.050	8.544	0.000	0.000	124.412	34.000	12.500
Feb-2014	143.891	27.825	5.371	0.000	0.000	81.296	18.500	24.500
Mar-2014	257.304	53.388	27.958	113.789	0.000	63.961	37.300	40.450
Apr-2014	198.245	10.186	41.702	191.094	0.000	26.640	28.600	15.400
May-2014	236.816	4.612	65.308	150.749	43.718	15.165	18.700	29.150
Jun-2014	233.430	2.856	37.103	108.667	25.433	0.000	40.700	7.700
Half Year Sub-total	1246.986	102.917	185.986	564.299	69.151	311.474	177.800	129.700
Jul-2014	177.859	0.000	65.758	161.817	22.958	0.000	37.950	7.150
Aug-2014	174.710	23.110	33.127	351.703	40.379	0.000	12.100	0.000
Sep-2014	124.251	28.994	23.424	476.618	22.932	0.000	0.000	0.000
Oct-2014	22.217	22.729	17.547	481.962	0.000	0.000	0.000	0.000
Nov-2014	25.889	22.640	16.268	175.370	0.000	0.000	2.320	0.000
Dec-2014	23.498	2.830	1.431	80.520	0.000	0.000	0.000	0.000
Project Total Quantities	2006.951	205.728	363.001	2292.289	155.420	356.946	291.770	155.050

• Fields under review. These are good imported purchased material, not wastes generated from the site.

Month	Actual Quantities of <u>Non-inert</u> Construction Waste Generated Monthly								
	Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Others, e.g. General Refuse disposed at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000ton)
	generated	recycled	generated	recycled	generated	recycled	generated	Disposed	generated
2013 Sub-total	0.000	0.000	0.380	0.380	0.000	0.000	0.000	0.000	0.172
Jan-2014	0.000	0.000	0.130	0.130	0.000	0.000	0.000	0.000	0.045
Feb-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	0.028
Mar-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036
Apr-2014	0.000	0.000	0.160	0.160	0.000	0.000	0.000	0.000	0.026
May-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042
Jun-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.030	0.030
Half Year Sub-total	0.000	0.000	0.290	0.290	0.000	0.000	0.050	0.050	0.207
Jul-2014	0.000	0.000	0.300	0.300	0.000	0.000	0.000	0.000	0.033
Aug-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022
Sep-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039
Oct-2014	0.000	0.000	0.080	0.080	0.000	0.000	0.060	0.060	0.033
Nov-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
Dec-2014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049
Project Total Quantities	0.000	0.000	1.050	1.050	0.000	0.000	0.110	0.110	0.605

Forecast of Total Quantities of Construction and Demolition Materials to be Generated from the Contract*							
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed of as Public Fill	Imported Fill	Marine Disposal (Cat. L)	Marine Disposal (Cat. M)
(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 ton)	(in '000 m ³)	(in '000 m ³)
5.000	0.000	0.000	0.000	5.000	180.000	5.000	40.000

Forecast of Total Quantities of Construction and Demolition Materials to be Generated from the Contract*				
Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	General Refuse disposed of at Landfill
(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
0.000	0.050	0.000	0.000	0.100

- Notes:
- (1) The performance targets are given in the **ER Appendix 8J Clause 14** and the EM & A Manual(s).
 - (2) The waste flow table shall also include C&D materials to be imported for use at the Site.
 - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
 - (4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m³. (**ER Part 8 Clause 8.8.5 (d) (ii)** refers).