MTR Corporation Limited

South Island Line (East)

Monthly EM&A Report No. 2

September 2011

Verified by:

Thomas Chan

Independent Environmental Checker

Date:

9 September 2011

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Certified by:

Glenn Frommer

Dr. Glenn Frømmer

Environmental Team Leader

Date: - 9 SEP 2011

EXECUTIVE SUMMARY

With the main civil works contracts of the South Island Line (East) (SIL(E)) Project awarded in May 2011, the commencement date of construction of the Project was on 25 June 2011. The Environmental Monitoring and Audit (EM&A) programme of the Project also commenced on 25 June 2011. This is the second Monthly EM&A Report for SIL(E) Project. The Report presents the results of EM&A works undertaken during the period of 1 August 2011 to 31 August 2011. The major construction activities in the reporting period included site preparation, bored piling and slope stabilization works.

Impact monitoring for air quality and noise were conducted in the reporting period. No exceedance was found and there was no breach of Action / Limit Levels for air quality and noise. Impact water quality monitoring was undertaken at Aberdeen Channel in the reporting period. Exceedances in DO against Action/ Limit Levels were recorded and the exceedances were considered not related to the project works.

No environmental complaint, notification of summon or prosecution related to the environmental issue was received in the reporting period.

Regular site inspections were conducted by the Environmental Team (ET) to check the implementation of environmental mitigation measures. No non-conformance to the environmental requirements was identified in the reporting period.

Future key issues envisaged in the coming month include noise and dust emission from site works. The ET will continue the implementation of the EM&A programme in accordance to the EM&A Manual.

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1 INTRODUCTION

1.1 Project Background

The South Island Line (East) (SIL(E)) of 7.0km approximately is a new medium capacity railway with stations at South Horizons (SOH), Lei Tung (LET), Wong Chuk Hang (WCH), Ocean Park (OCP) and Admiralty (ADM), comprising underground and elevated structures. A depot is required at Wong Chuk Hang to provide maintenance support for the SIL(E).

1.2 Project Programme

Main civil works contracts of the SIL(E) was awarded in May 2011. The commencement date of construction of the Project was on 25 June 2011. The construction of the Project is expected to complete in 2015.

1.3 Coverage of EM&A Report

The Environmental Monitoring and Audit (EM&A) programme of the Project commenced on 25 June 2011. This is the second Monthly Environmental Monitoring and Audit (EM&A) Report for the Project. The Report presents the results of EM&A undertaken during the period of 1 to 31 August 2011.

2 PROJECT INFORMATION

2.1 Project Organization and Management Structure

The project organization is shown in **Appendix A1**. Contacts of key personnel of the Project are shown in **Appendix A2**.

2.2 Construction Activities in the Reporting Month

Major construction activities carried out by the respective SIL(E) civil works contractors during the reporting period include:

Contract No. 901

Site	Construction Activities
Harcourt Garden	- Site clearance and preparation, hoarding erection - Tree transplantation - Pre-drilling - EVA construction - Foundation works for FSD water tanks - Demolition of LCSD Office and CITIC footbridge staircase

Contract No. 902

Site	Construction Activities
Nam Fung Portal	- Site clearance and preparation, hoarding erection - Tree transplantation

Site	Construction Activities
	- Construction of temporary access road and platform for pipe piling - Pipe piling for ventilation building - Bored piling
Hong Kong Park Ventilation Shaft	- Site clearance and preparation - Fencing and hoarding erection - Tree transplantation
Chung Hom Shan Magazine	- Soil nailing - Mass concrete walls and concrete slab construction - Construction of magazine structures

Contract No. 903

Site	Construction Activities
New OCP Site Office	- Foundation works, pre-drilling and superstructure
WCH Station	- Pre-drilling / Ground Investigation - Excavation to formation level - Bored piling / installation of socket-H-pile - Pipe piling - Construction of new nullah wall
Zone B (Ex-Canadian Site to OCP Station)	- Site clearance and preparation - Tree transplantation - Pre-drilling / Ground investigation - Utility diversion - Bored piling
Zone C (OCP Station to WCH Station)	- Site preparation, hoarding erection - Tree transplantation - Pre-drilling / Ground investigation - Utility diversion - Bored piling
Zone D (WCH Station to WCH nullah)	- Site preparation, hoarding erection - Tree transplantation - Pre-drilling / Ground Investigation - Utility diversion - Soil nailing - Excavation and slope stabilisation
Zone E (Aberdeen Channel)	- Pre-drilling / Ground Investigation - Set up of temporary working platform for pier

Contract No. 904

Site	Construction Activities
Ex-Harbour Mission School	- Site clearance and preparation - Demolition of the school building
LET Station Entrance A	- Site clearance and preparation - Demolition of LCSD facilities and planters
LET Station Entrance B	- Site clearance and preparation - Trench excavation
South Horizons	- Site clearance and preparation - Trial trench at Lee Nam Rd and Yi Nam Rd
Ap Lei Chau Bridge Playground	- Erection of site office - Excavation for utility installation

Site	Construction Activities
Lee Wing Street	- Site clearance and preparation, hoarding erection - Slope excavation - Access road and retaining wall construction

Contract No. 907

Site	Construction Activities
WCH Depot	- Site preparation - Demolition of old foundation - Bored piling - Pipe piling - Construction of the bus terminus (EPIW)
Lee Nam Road Barging Facility	- Erection of tipping hall - Roundabout expansion

2.3 Construction Activities for the Coming Month

The scheduled major construction activities in the next reporting month are as follows:

Contract No. 901

Site	Construction Activities
Harcourt Garden	- EVA construction - Covered walkway installation - Installation of temporary FSD Water Tanks - Demolition of LCSD Office and CITIC footbridge staircase - Installation of bulkhead at Entrance E - Piling works

Contract No. 902

Site	Construction Activities
Nam Fung Portal	- Construction of temporary access road and platform for pipe piling - Pipe piling for ventilation building - Bored piling
Hong Kong Park Ventilation Shaft	- Fencing and hoarding erection - Tree transplantation - Demolition of LCSD structure - Trial pit excavation - Pipe piling / sheet piling
Chung Hom Shan Magazine	- Soil nailing and slope stabilization - Mass concrete walls and concrete slab construction - Construction of magazine structures

Contract No. 903

Site	Construction Activities
New OCP Site Office	- Superstructure construction and fitting out - Demolition of temporary site office - Pre-drilling / Ground investigation - Bored piling
WCH Station	- Pre-drilling / Ground investigation - Construction of footings / Bored piling

Site	Construction Activities
	- Installation of socket-H-pile - Pipe piling - Demolition of existing nullah wall & new south nullah wall excavation
Zone B (Ex-Canadian Site to OCP Station)	- Tree transplantation - Bored piling - Pile cap construction
Zone C (OCP Station to WCH Station)	- Pre-drilling / Ground investigation - Pipe piling - Bored piling - Construction of platform crossing nullah - Utility diversion
Zone D (WCH Station to WCH nullah)	- Pre-drilling / Ground investigation - Excavation - Slope stabilisation - Demolition of Cooked Food Market Kiosk
Zone E (Aberdeen Channel)	- Pre-drilling / Ground investigation from temporary working platform - Bored piling - Construction of pile cap

Contract No. 904

Site	Construction Activities
Ex-Harbour Mission School	- Pipe piling
Lei Tung Station Entrance A	- Site clearance and preparation - Demolition of LCSD facilities and planters - Pipe piling
Lei Tung Station Entrance B	- Site clearance and preparation - Tree transplantation - Trench excavation
South Horizons	- Site clearance and preparation - Trial trench at Lee Nam Rd and Yi Nam Rd - Installation of king post/soldier piles
Ap Lei Chau Bridge Playground	- Erection of site office - Excavation for utility installation
Lee Wing Street	- Slope excavation - Access road and retaining wall construction

Contract No. 907

Site	Construction Activities
WCH Depot	- Bored piling - Reconstruction of existing hoarding at project boundary - Formation of haul road - Construction of the bus terminus (EPIW)
Lee Nam Road Barging Facility	- Barging facility operation starts in Sept

2.4 Project Areas and Environmental Monitoring Locations

The works areas of the Project are shown in **Figures 1 and 2**.

The locations of environmental monitoring stations are shown in **Figures 3 to 9**. Tables 1 and 2 below shows the details of the active monitoring stations as reported in Sections 3.1 to 3.3 below.

Table 1 Summary of impact dust and noise monitoring stations

ID	Monitoring Station
Dust	
CD1	Wong Chuk Hang San Wai
CD2	Police College – Police Quarters
CD3	San Wui Commercial Society of HK Chan Pak Sha School
CD4	Shan On House
CD5*	South Horizons Phase IV – Block 25
Noise	
CN1	San Wui Commercial Society of HK Chan Pak Sha School (Educational Institution)
CN2	Holy Spirit Seminary (Education Institution)
CN3*	Shun Fung Building (Residential)
CN4*	South Horizons Phase IV – Block 25 Dover Court (Residential)
CN5*	TWGHs Jockey Club Rehabilitation Complex Block A (Convalescent Home)

* Location updated due to site access problem, or as per the agreement with the premises landlord, and agreed with EPD

Table 2 Summary of impact water quality monitoring stations

ID	Location	Easting	Northing
WM1	Aberdeen West Typhoon Shelter	833953	811923
WM2	Wong Chuk Hang Nullah	834547	811966
WM3	WSD Brick Hill Seawater Intake	834896	811567
WM4	Aberdeen South Typhoon Shelter	834761	811292
CS1	Control Station	832689	811967
CS2	Control Station	834852	810689

2.5 Summary of EM&A Requirements

The EM&A programme as specified in the EM&A Manual has been implemented during the construction stage.

In the reporting period, impact monitoring of LAeq, 30min noise levels was carried out at the monitoring locations as shown in Table 1 once every week. Also, 24-hour TSP monitoring was conducted at the monitoring locations as shown in Table 1 once every week.

Impact water quality monitoring at Aberdeen Channel was also undertaken at the monitoring locations as shown in Table 2 three working days per week at mid-ebb and mid-flood tides from 18 July 2011 onwards.

Action and Limit Levels for construction noise and air quality as well as water quality are shown in Appendices B1 and B2 respectively. Should non-compliance of the criteria occurs, action in accordance with the respective Event and Action Plans for construction noise, air quality and water quality in the EM&A Manual / Updated EM&A Manual should be carried out.

Monthly monitoring of the ardeid night roost location beside Wong Chuk Hang Nullah by qualified ecologist was also conducted.

In addition, regular site inspection to active works areas was carried out. The areas of inspection included the pollution control and mitigation measures within the site. Waste management and landscape and visual aspects were covered.

3 IMPACT MONITORING

3.1 Air Quality

Monitoring Methodology

24-hour TSP samples were collected by High Volume Sampler (Graseby-Andersen) following United Sates Environmental Protection Agency regulations.

The sampling procedure follows to that described in the App. B of Pt 50 in 40CFR Ch.1 (U.S. Environmental Protection Agency). TSP is sampled by drawing air through a conditioned, pre-weighed filter paper inside the high volume sampler at a controlled rate. After 24-hour sampling, the filter paper with retained particles is collected and returned to the laboratory for drying in a desiccators followed by weighing. TSP levels are calculated from the ratio of the mass of particulate retained on the filter paper to the total volume of air sampled.

The samplers have been properly maintained. Prior to dust monitoring commencing, appropriate checks have been made to ensure that all equipment and necessary power supply are in good working condition.

Calibration Requirements

The flow rate of the high volume sampler with mass flow controller is calibrated using an orifice calibrator. Initial calibration (five points) is conducted upon installation and prior to commissioning. Calibration will be carried out every six months. Calibration certificates are attached in **Appendix C**.

Monitoring Results

To examine the construction dust levels, 24-hour TSP monitoring was undertaken at the monitoring locations as shown in Table 1 according to the EM&A Manual.

Monitoring results are presented in the following table (see **Appendix D** for graphical plots). The 24-hour TSP levels were within the Action Level. No exceedance was found. This indicates that the construction activities did not have a noticeable adverse effect on the general air quality of the project areas.

Date	TSP (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)	Compliance (Yes/No)	Weather Condition
CD1 Wong Chuk Hang San Wai					
2-Aug	24.5	173	260	Yes	Fine
9-Aug	24.6	173	260	Yes	Cloudy
16-Aug	30.1	173	260	Yes	Fine
23-Aug	24.9	173	260	Yes	Fine
30-Aug	130.8	173	260	Yes	Fine
CD2 Police College – Police Quarters					
2-Aug	81.4	184	260	Yes	Fine
10-Aug	54.3	184	260	Yes	Cloudy
16-Aug	31.2	184	260	Yes	Fine
23-Aug	60.1	184	260	Yes	Fine
30-Aug	156.5	184	260	Yes	Fine
CD3 San Wui Commercial Society of HK Chan Pak Sha School					
2-Aug	25.4	169	260	Yes	Fine
9-Aug	21.8	169	260	Yes	Cloudy
16-Aug	22.4	169	260	Yes	Fine
23-Aug	29.7	169	260	Yes	Fine
30-Aug	121.6	169	260	Yes	Fine
CD4 Shan On House					
1-Aug	36.9	176	260	Yes	Fine
11-Aug	28.2	176	260	Yes	Fine
15-Aug	22.1	176	260	Yes	Fine
23-Aug	22.0	176	260	Yes	Fine
CD5 South Horizons Phase IV – Block 25					
1-Aug	31.7	169	260	Yes	Fine
11-Aug	36.5	169	260	Yes	Fine
15-Aug	34.4	169	260	Yes	Fine
23-Aug	27.8	169	260	Yes	Fine

3.2 Noise

Monitoring Methodology

Monitoring was conducted using B&K sound analysis equipment – B&K SLM 2250. Microphone was extended 1 meter from building facades and oriented towards the works area.

Calibration Requirements

B&K 2250 sound level meters and B&K 4231 calibrators which complied with the International Electrotechnical Commission Publication 651:1979 (Type 1) and 804:1985 (Type 1), specification as referred to in the Technical Memoranda to the NCO were used for the impact monitoring. The sound level meters and calibrators are verified by the certified laboratory or

manufacturer once every two years to ensure they perform to the same level of accuracy as stated in the manufacturer's specifications. Calibration certificates are attached in **Appendix C**.

Immediately prior to and following each set of measurements at any NSR, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. If the calibration levels before and after the measurement differs by more than 1.0dB, the measurement shall be repeated to obtain a reliable result (note: maximum deviation during this initial baseline monitoring period was 0.3dB). Periods of prolonged or repeated overloading of the sound level meter detector were avoided by setting the meter with adequate headroom prior to commencing measurements. Measurements were recorded to the nearest 0.1 dB, with values of 0.05 being rounded up.

Monitoring Results

Impact monitoring of LAeq, 30min noise levels was undertaken to measure construction noise levels in accordance with the Updated EM&A Manual at the monitoring locations as shown in Table 1.

Monitoring results are presented in the following table (see **Appendix D** for graphical plots). No exceedance was found.

Date	Time	LAeq (dBA)	Limit Level (dBA)	Compliance (Yes/No)	Weather Condition
CN1 San Wui Commercial Society of HK Chan Pak Sha School					
4-Aug	10:15	69.4	70	Yes	Fine
10-Aug	11:25	70.2	70	Yes	Cloudy
18-Aug	9:50	69.7	70	Yes	Fine
25-Aug	16:35	68.8	70	Yes	Fine
CN2 Holy Spirit Seminary					
3-Aug	11:15	65.3	70	Yes	Fine
11-Aug	10:20	66.0	70	Yes	Fine
18-Aug	11:05	65.5	70	Yes	Fine
24-Aug	10:45	66.8	70	Yes	Fine
CN3 Shun Fung Building					
1-Aug	16:20	66.5	75	Yes	Fine
11-Aug	17:05	67.3	75	Yes	Fine
15-Aug	16:20	68.9	75	Yes	Fine
22-Aug	16:50	66.2	75	Yes	Fine
29-Aug	17:15	70.4	75	Yes	Fine
CN4 South Horizons Phase IV – Block 25 Dover Court					
1-Aug	15:25	66.1	75	Yes	Fine
11-Aug	16:20	68.0	75	Yes	Fine
15-Aug	10:50	67.4	75	Yes	Fine
22-Aug	15:25	71.5	75	Yes	Fine
29-Aug	16:15	67.0	75	Yes	Fine
CN5 TWGHs Jockey Club Rehabilitation Complex Block A					
3-Aug	10:25	65.0	75	Yes	Fine
10-Aug	10:20	67.8	75	Yes	Cloudy
17-Aug	9:35	74.2	75	Yes	Fine
24-Aug	9:55	70.3	75	Yes	Fine

3.3 Water Quality

Monitoring Methodology

Water quality was monitored in terms of the following parameters: Dissolved Oxygen (DO, mg/L) and Dissolved Oxygen Saturation (DO %), temperature (^{o}C), pH, turbidity (NTU), salinity (ppt), suspended solids (mg/L) and water depth (m). All parameters were measured in-situ whereas SS shall be determined by the laboratory.

Water samples were taken with a water sampler, consisting of a transparent PVC cylinder of 2 litres that can be effectively sealed with cups at both ends. The water sampler has a positive latch system to keep it open and prevent premature closure until released by a messenger when the sampler arrives is at the pre-determined depth.

Measurement was taken at 3 water depths, namely, 1m below water surface, mid-depth and 1m above sea bed, except where the water depth less that 6m, the mid-depth station may be omitted. Should the water depth be less than 3m, only the mid-depth station was monitored.

Duplicate in-situ measurements and samples were collected and analyzed to ensure a robust statistically interpretable dataset. Where the difference in value between the first and second measurement of DO or turbidity parameters is more than 25% of the value of the first reading, the reading was discarded and further readings were taken.

Water samples for all monitoring parameters were collected, stored, preserved and analyzed according to APHA Standard Methods. Water samples were stored in high-density polythene bottles, packed in ice and delivered to the laboratory of ETS-Testconsult Limited, a HOKLAS accredited laboratory.

The SS determination work was start within 24 hours after collection of the water samples. The SS analyses followed the standard method APHA 2540D with a detection limit of 1mg/L as described in APHA Standard Methods for the Examination of Water and Wastewater.

A digital depth detector was employed to determine the water depth at selected stations when flows permit.

Calibration Requirements

On-site monitoring equipment namely the salinity meter, pH meter, turbidity meter, dissolved oxygen meter and temperature meter were calibrated before use. The methodologies for the calibration are referred to the instruction manual provided by the manufactures respectively. The calibration records are shown in **Appendix C**. Response of sensors and electrodes was checked with certified standard solutions before each use.

Monitoring Results

Impact water quality monitoring was undertaken in accordance with the EM&A Manual at the six designated monitoring locations at Aberdeen Channel as shown in Table 2 during the reporting period. Monitoring locations WM1-WM4 cover the Aberdeen West Typhoon Shelter, Wong Chuk Hang Nullah, WSD Brick Hill Seawater intake and Aberdeen South Typhoon Shelter while monitoring location CS1 and CS2 are the control stations. CS1 and CS2 are the upstream control stations for the Ebb and Flood tide conditions respectively.

Monitoring results and graphical plots are presented in **Appendix D**.

3.4 Action taken in Event of Exceedence

There was no exceedance in air quality and noise monitoring parameters recorded in the reporting period, therefore no action was taken.

Exceedances in DO against Action/ Limit Levels were recorded at monitoring stations WM1 to WM4 on 1st, 3rd, 5th, 8th, 10th, 12th, 15th, 17th, 19th, 22nd, 24th, 26th, 29th and 31st in the reporting month. The exceedances were considered not related to the project works. Please refer to **Appendix E** for the review of exceedance in water quality monitoring.

4 LANDSCAPE AND VISUAL

4.1 EM&A Requirements

The landscape and visual mitigation measures undertaken by the contractors during the construction phase have been audited on a regular basis according to the EM&A Manual.

4.2 Site Audit Results

Regular inspections and audits were conducted by the Certified Arborist as required by the EP and it was found that the transplanting works and the tree protection works being carried out by the civil works and transplantation contractors were in accordance with the EP/ EIA. No non compliance was identified in the reporting period.

Retained Trees

No immediate hazards were noted for any of the OVTs during reporting period.

Two retained trees, *Ficus elastica,* located at Wong Chuk Hang San Wai had been pruned in the reporting month to accommodate enough space for the construction of the viaduct pier. Prior approval on pruning of the concerned trees had been obtained from the concerned authority, and the tree pruning work was conducted by a contractor's landscape specialist in accordance with the government's guidelines. However, some of the tree branches were accidentally damaged during mobilization of the construction plant for the piling works next to the trees. Protection works are being implemented, these include adequate watering (depends on precipitation) and use of sand bags barriers at the perimeter of the trees to divert site runoff. Health condition of the trees is being monitored.

Transplanted Tree

Total of 306 trees of the SIL(E) had been transplanted as of the reporting month. They were mostly transplanted to the holding nursery at Chung Hom Shan as well as permanent receptor sites such as Lok Ma Chau or in-situ under project areas.

5 ECOLOGY

5.1 EM&A Requirements

Auditing of the ecological mitigation measures during the construction phase have been carried out on a regular basis according to the EM&A Manual.

5.2 Site Audit Results

Ardeid Night Roost

Regular inspections to the works areas around the ardeid night roost have been conducted by the ecologist to check the ecological mitigation measures with regard to the ardeids at Wong Chuk Hang Nullah. Inspections of the ardeid night roost have been made for any active ardeid nests. Whilst ardeids have never been recorded nesting at this site, precautionary checks for active nests or signs of breeding have been made.

Monthly monitoring of the ardeid night roost location was also conducted by the ecologist from a vantage point, the Ap Lei Chau Bridge (on the Wong Chuk Hang side), with an unobstructed view over the area. According to the EM&A Manual, the surveys have been commenced approximately one hour before sunset and continue for 20 minutes after sunset, or until nightfall, which comes sooner. Any aggregation of night roosting ardeid in the degraded woodland or adjacent area have been located and counted.

The monthly night ardeid survey was conducted on 17 August 2011 at 5:45 pm.. A total of 74 ardeids, all of which were Little Egrets, arrived at the roost location at Wong Chuk Hang Nullah and no ardeid breeding behaviour was recorded during the monitoring survey.

Proper tree protection measures have been implemented as practical as possible by the contractor to the current and potential roost trees retained on site. However, potential risks of some of these slope trees are noted and recommendation has been made to remove the these slope trees due to the safety concerns.

Plant Species of Conservation Interest

Detailed field survey led by the ecologist was undertaken in March and early May 2011 to ascertain the presence of any rare or protected flora species to be affected. The surveys covered all above ground works areas of the project and the survey results were presented in the Detailed Transplanting Baseline Survey Report submitted under the Environmental Permit.

As in the Detailed Transplantating Baseline Survey Report, two plant species of conservation interest recorded in the degraded woodland to the south of Wong Chuk Hang Nullah, namely herb *Houttuynia cordata* and tree *Aquilaria sinensis* (including seedlings), and planted young tree *Ailanthus fordii* (including seedlings) recorded in a plantation area near Hong Kong Park will be influenced by the project works. Other plant species of conservation interest identified will be protected on-site and appropriate tree protection measures would be established if needed. Health condition of the most plant species generally remained unchanged as in the Detailed Transplanting Baseline Survey Report. However, it is noted that health condition of *Ailanthus fordii* (tree no. OCP-T2231), which is outside the active works area at Wong Chuk Hang San Wai, was found to be declining.

Regular monitoring on the transplanted *H. cordata* has been conducted. The transplanted herb remained in good condition and the coverage has slightly increased indicating that the herb has adapted to the general condition of the receptor site. A protection fence has been maintained around the receptor site.

First stage root pruning of the two trees, *Aq sinensis*, was undertaken by the Transplantation Contractor on 23 August 2011 under the supervision of the ecologist. Root pruning was conducted on two sides of each tree. The root pruning work generally followed the

methodology as stipulated in the Transplantation Proposal. The root-pruned specimens were supported by guying to ensure their stability on the slope. Regular monitoring of the root-pruned specimens will be conducted.

6 WASTE MANAGEMENT

Mitigation measures on waste management have been implemented in accordance with the site waste management plans for the respective civil works contracts. The C&D materials have been disposed of at the public fill reception facilities while C&D wastes have been disposed of at the landfills. Quantities of wastes disposed in the reporting period are summarized in the following table:

Contract No	Inert C&D Materials Disposed at Public Fill (m^3)	Inert C&D Materials Reused (m^3)	Non-inert Waste Disposed at Landfill (m^3)	Chemical Waste to Designated Treatment Facility (litre)
Reporting Period: August 2011				
Contract 901	N/A	2,358	15	N/A
Contract 902	2,328	N/A	276	N/A
Contract 903	N/A	2,706	98	N/A
Contract 904	1,524	8	78	N/A
Contract 907	19,226	482	215	N/A

7 RECORD OF ENVIRONMENTAL COMPLAINTS

No public environmental complaint was received in the reporting period.

8 RECORD OF NON-COMPLIANCES

As detailed in S3.4, exceedances in water quality monitoring parameters against Action/ Limit Levels were recorded in the reporting month. The exceedances were considered not related to the project works. There was no other non-compliance identified in the reporting period.

9 RECORD OF NOTIFICATIONS OF SUMMONS AND PROSECUTIONS

No summon or prosecution related to environmental issue was received or made against the Project in the reporting period.

10 STATUS OF STATUTORY SUBMISSIONS

10.1 Submissions required under Environmental Permit

A summary of the status of submissions required under the SIL(E) Environmental Permit as of 31 August 2011 is shown below:

EP Clause No.	Description of Submission	Status
1.11	Commencement date of construction	Submitted on 25 May 2011
1.14	Commencement date of operation	To be submitted no later than 2 months prior to commencement of operation of the Project
2.1 & 2.2	Employment of IEC & ET	Submitted on 6 Apr 2011
2.3	Employment of Qualified Ecologist	Submitted on 6 Apr 2011
2.4	Employment of Certified Arborist	Submitted on 6 Apr 2011
2.5	Management organization of main construction companies	Submitted on 9 Jun 2011
2.6	Construction programme & EP submission schedule	Submitted on 10 Jun 2011
2.7	Set up of Community Liaison Group	Submitted on 20 Apr 2011
2.8	Updated EM&A Manual	Submitted on 16 May 2011
2.9	Construction noise mitigation measures plan	Contract 903: Resubmitted on 28 Jul 2011 Contract 907: Resubmitted on 5 Aug 2011 Contract 904 (South Horizons): Submitted on 8 Aug 2011 Comments received from EPD on 31 Aug 2011 and to be resubmitted within 1 month of receipt of comments Contract 904 (Lei Tung): Submitted on 17 Aug 2011
2.11	Construction & demolition materials management plan for barging points	Resubmitted on 12 Aug 2011
2.13 (a)	Ecological planting & landscape plan	Resubmitted on 12 Aug 2011 Further comments received on 25 Aug 2011 and to be resubmitted within 1 month of receipt of comments
2.13 (b)	As built drawings of ecological planting & landscape works	To be submitted no later than 1 month after completion of planting works (at Wong Chuk Hang nullah)
2.13 (c)	Final monitoring report of ecological planting & landscape works	To be submitted no later than 1 month after completion of the 3-year post planting care and maintenance period
2.14 (a)	Detailed transplanting baseline survey report for plant species of conservation interest	Resubmitted on 28 Jul 2011 Further comments received on 12 Aug 2011 and to be resubmitted within 1 month of receipt of comments

EP Clause No.	Description of Submission	Status
2.14 (b)	Transplantation proposal for plant species of conservation interest	H. cordata: Resubmitted on 12 Aug 2011 Further comments received on 25 Aug 2011 and to be resubmitted within 1 month of receipt of comments A. sinensis: Submitted on 11 Aug 2011 A. fordii: Submitted on 19 Aug 2011
2.14 (c)	As built drawings of transplanting works for plant species of conservation interest	H. cordata: Submitted on 12 Aug 2011 A. sinensis & A. fordii: To be submitted no later than 1 month after completion of transplanting works
2.15	Tree protection plan	EP Condition fulfilled dated 12 Aug 2011
2.16(a)	Silt curtain plan	EP Condition fulfilled dated 12 Aug 2011
2.19	Operational groundborne noise review plan	To be submitted no later than 1 month after completion of corresponding parts of tunnel excavation
2.20	Operational groundborne noise mitigation measures plan	To be submitted no later than 1 month prior to installation of rail tracks
2.21	As built drawings for operational groundborne noise mitigation measures	To be submitted no later than 1 month after completion of tracks installation
2.23	As built drawings for operational airborne noise mitigation measures on viaduct section	To be submitted no later than 1 month after completion of noise mitigation measures installation on viaduct section
2.24	Noise performance test report	To be submitted no later than 1 month prior to commencement of operation of the Project
2.25	Fixed plant noise audit report	To be submitted no later than 1 month prior to commencement of operation of the Project
2.26	Visual & landscape plan	To be submitted no later than 1 month before commencement of corresponding parts of landscape works

EP Clause No.	Description of Submission	Status
3.3	Baseline monitoring report	Resubmitted on 12 Aug 2011 Further comments received on 30 Aug 2011 and to be resubmitted within 1 month of receipt of comments
3.4	Monthly EM&A reports	Submit within 2 weeks after the end of the reporting month
4.2	Internet address of EM&A and project data	Submitted on 25 Jul 2011

10.2 Statutory Permits and Licenses

A summary of the status of all relevant environmental permit and licenses as of 31 July 2011 is shown below:

Description		Effective Date	Expiry Date
Environmental Permit for South Island Line (East)	EP-407/2010	8/12/2010	N/A
Contract 901			
Chemical Waste Producer Licence	5213-124-K3004-01	23/5/2011	N/A
Waste Disposal	7012859	1/6/2011	
Water Discharge Licence	WT00009466-2011	4/7/2011	30/7/2016
Construction Noise Permit (CNP) for Harcourt Road	GW-RS0739-11	11/8/2011	31/1/2012
Contract 902			
Chemical Waste Producer Licence	5213-175-N2206-12	24/6/2011	N/A
Waste Disposal	7012912	26/5/2011	N/A
Water Discharge Licence for HK Park	WT00009688-2011	22/7/2011	30/7/2016
Water Discharge Licence for Nam Fung Path	WT00009749-2011	22/7/2011	30/7/2016
CNP for Nam Fung Path	GW-RS0755-11	19/08/2011	19/1/2012
Contract 903			
Chemical Waste Producer Licence	5213-175-L2174-31	14/6/2011	N/A
Chemical Waste Producer Licence	5213-175-L2174-32	30/6/2011	N/A
Chemical Waste Producer Licence	5213-175-L2174-33	30/6/2011	N/A
Chemical Waste Producer Licence	5213-175-L2174-34	30/6/2011	N/A
Chemical Waste Producer Licence	5213-175-L2174-35	30/6/2011	N/A
Waste Disposal	7012721	12/5/2011	N/A
Water Discharge Licence for Ap Lei Chau (ALC) Bridge	WT00009838-2011	5/8/2011	31/8/2016
Water Discharge Licence for WCH Station	WT00009928-2011	16/8/2011	31/8/2016
Water Discharge Licence for Zone B	WT00009931-2011	16/8/2011	31/8/2016
Water Discharge Licence for OCP station	-	Application submitted on 14/6/2011	Pending
Water Discharge Licence for Zone D	-	Application submitted on 14/6/2011	Pending

Description		Effective Date	Expiry Date
Water Discharge Licence for Zone C	-	Application submitted on 23/6/2011	Pending
CNP for WCH station	GW-RS0674-11	29/7/2011	28/1/2012
CNP for OCP station	GW-RS0750-11	12/8/2011	11/2/2012
CNP for Zone E	GW-RS0747-11	16/8/2011	15/2/2012
CNP for Zone C	GW-RS0786-11	23/8/2011	16/10/2011
CNP for WCH station	GW-RS0799-11	30/8/2011	14/10/2011
CNP for Zone C	-	Application submitted on 19/8/2011	Pending
CNP for Zone C	-	Application submitted on 24/8/2011	Pending
CNP for Zone E	-	Application submitted on 31/8/2011	Pending
Contract 904			
Chemical Waste Producer License for ALC Bridge Rd near Sham Wan Towers	5111-174-L2758-04	4/8/2011	N/A
Chemical Waste Producer License for ALC Bridge Rd near Harbour Mission School	5111-174-L2758-03	4/8/2011	N/A
Chemical Waste Producer License for ALC Main Street near Sunny Court	5111-174-L2758-05	4/8/2011	N/A
Chemical Waste Producer License for Lei Tung Estate Rd near Kaifong Primary School	5111-174-L2758-02	4/8/2011	N/A
Chemical Waste Producer License for Lee Nam Rd Sitting Out Area	5111-174-L2758-01	4/8/2011	N/A
Chemical Waste Producer License for Lee Nam Rd Sitting Out Area No. 2	5111-174-L2758-07	4/8/2011	N/A
Chemical Waste Producer License for Yi Nam Rd intersect with Lee Nam Rd & SOH Drive	5111-174-L2758-06	4/8/2011	N/A
Waste Disposal	7012979	25/6/2011	N/A
Water Discharge License for ALC Bridge Rd near Sham Wan Towers	WT00009781-2011	5/8/2011	31/8/2016
Water Discharge License for ALC Bridge Rd near Harbour Mission School	WT00009778-2011	5/8/2011	31/8/2016
Water Discharge License for ALC Main Street near Sunny Court	WT00009777-2011	5/8/2011	31/8/2016
Water Discharge License for Lei Tung Estate Rd near Kaifong Primary School	WT00009780-2011	5/8/2011	31/8/2016
Water Discharge License for Lee Nam Rd Sitting Out Area	WT00009779-2011	5/8/2011	31/8/2016
Water Discharge License for Lee Nam Rd Sitting Out Area No. 2	WT00009783-2011	5/8/2011	31/8/2016
Water Discharge License for Yi Nam Rd intersect with Lee Nam Rd & SOH Drive	WT00009775-2011	5/8/2011	31/8/2016
CNP for ALC Bridge Playground	GW-RS0700-11	5/8/2011	4/2/2012

Description		Effective Date	Expiry Date
Contract 907			
Chemical Waste Producer Licence	5113-175-C3675-01	24/6/2011	N/A
Waste Disposal	7012950	31/5/2011	N/A
Water Discharge Licence for barging point	WT00009896-2011	11/8/2011	31/8/2016
Water Discharge Licence for WCH Depot	-	Application submitted on 24/5/2011	Pending
Water Discharge Licence for bus terminus	-	Application submitted on 24/5/2011	Pending
CNP for WCH Depot	-	Application submitted on 27/7/2011	Rejected
CNP for bus terminus	-	Application submitted on 27/7/2011	Rejected
CNP for WCH Depot	-	Application submitted on 19/8/2011	Pending
CNP for barging point	-	Application submitted on 19/8/2011	Pending

11 SITE INSPECTIONS

11.1 Implementation of Environmental Mitigation Measures

Regular site inspections were undertaken by the ET in accordance with the EM&A Manual to check the implementation of environmental mitigation measures in the EIA. The contractors' performance on environmental matters was assessed. The environmental mitigation measures are being implemented by the civil works contractors where appropriate.

11.2 Observations

The findings from the site inspections and the associated recommendations on improvement to the environmental protection and pollution control works were raised to the contractors for reference and/ or action. Observations against the implementation of the mitigation measures recommended in the EP/ EIA are summarized as follows:

Item	Description	Follow up Status
	Contract 901	
1	The contractor was reminded to provide drip trays for chemicals.	Ongoing
2	The contractor was reminded to carry out equipment maintenance works with care and avoid contamination of useful materials. The contractor was reminded to set up chemical waste store.	Ongoing
3	The contractor was reminded to clear the deposited silt at U-channel / sedimentation tanks regularly and improve the site drainage system.	Ongoing
4	The contractor was reminded to regularly clear the septic tanks and avoid overflowing of sewage.	Ongoing
5	The contractor was reminded to keep the trunks of protected trees free of stockpiles or other C&D materials.	Ongoing
6	The contractor was reminded to cover the stockpiles properly.	Ongoing
	Contract 902	
1	The contractor was reminded to provide drip trays for chemicals.	Improved and the standard to be maintained continuously
2	The contractor was reminded to properly maintain the site drainage system and provide adequate silt removal facilities.	Improved and the standard to be maintained continuously
3	The contractor was reminded to properly maintain the tree protection zone.	Improved and the standard to be maintained continuously
4	The contractor was reminded to spray water to the haul road and during handling of dusty materials for dust suppression.	Improved and the standard to be maintained continuously
5	The contractor is reminded to provide adequate temporary noise mitigation measures.	Ongoing
	Contract 903	
1	The contractor was reminded to provide drip tray for chemicals.	Ongoing
2	The contractor was reminded to provide appropriate labels for the chemical waste in the chemical waste store.	Ongoing
3	Measures have been proposed on site at WCH San Wai to prevent discharge of muddy water into public drainage:- existing U-channels within the works area had been covered with steel plate; most of the works area had been concrete paved; new U-channels are being constructed along the side adjacent to San Wai to collect runoff from works area.	N/A
4	The contractor was reminded to improve the tree protection works.	Ongoing
5	The contractor was reminded to cover properly bags of cement materials and the exposed earth works surface.	Improved and the standard to be maintained continuously
6	The contractor was reminded to provide watering / implement other dust mitigation measures during soil nailing works.	Ongoing
7	The contractor was reminded to improve housekeeping of the site.	Improved and the standard to be maintained continuously

Item	Description	Follow up Status
	Contract 904	
1	The contractor was reminded to provide drip trays for chemicals.	Ongoing
2	The contractor was reminded to properly maintain the site drainage system and provide adequate silt removal facilities.	Ongoing
3	The contractor was reminded to provide adequate temporary noise barrier.	Ongoing
4	The contractor was reminded to maintain good housekeeping.	Improved and the standard to be maintained continuously
	Contract 907	
1	The contractor was reminded to provide drip tray for chemicals.	Ongoing
2	The contractor was reminded to provide drip tray / tarpaulin sheet during equipment maintenance works to prevent oil leakage.	Ongoing
3	The contractor was reminded to provide appropriate labels for the chemical waste in the chemical waste store.	Improved and the standard to be maintained continuously
4	The contractor was reminded to increase the watering frequency for dust suppression.	Improved and the standard to be maintained continuously
5	The contractor was reminded to provide sufficient temporary noise mitigation measures.	Ongoing
6	The contractor was reminded to maintain good housekeeping.	Ongoing

11.3 Solid and Liquid Waste Management Status

Base on the findings of the site inspections, the Contractors' performance in solid and liquid waste management were acceptable and compliance with the EIA requirements were demonstrated. The current management standard should be maintained.

11.4 Other Notable Events

IEC Site Inspections

The IEC conducted site inspections for respective works areas on 3, 15, 17, 18, 19 and 23 August 2011. Minor irregularities were observed during the site inspections. Follow up actions had been taken by the respective civil works contractors.

12 FUTURE KEY ISSUES

Future key issues envisaged in the coming month include noise and dust emission from site works, disposal of C&D wastes arising as well as tree protection on site. The ET will continue the implementation of the EM&A programme in accordance to the EM&A Manual.

13 CONCLUSIONS

It is concluded from the environmental monitoring and audit works for the SIL(E) Project that the construction works were undertaken in an appropriately environmentally sensitive manner in the reporting period. The environmental protection and pollution control measures provided by the respective civil works contractors were generally acceptable apart from some minor irregularities which were rectified timely by the contractors.

The ET will continue the implementation of the EM&A programme in accordance to the EM&A Manual and to a level consistent with MTRCL's Corporate Sustainability Policy.

FIGURES

Figures 1 to 2
Works Areas of the Project

Figures 3 to 6
Location of Construction Air Quality Monitoring Stations

Figures 7 to 8
Location of Construction Noise Monitoring Stations

Figure 9
Location of Water Quality Monitoring Stations

Figure 1 – Works Areas of the Project (1 of 2)

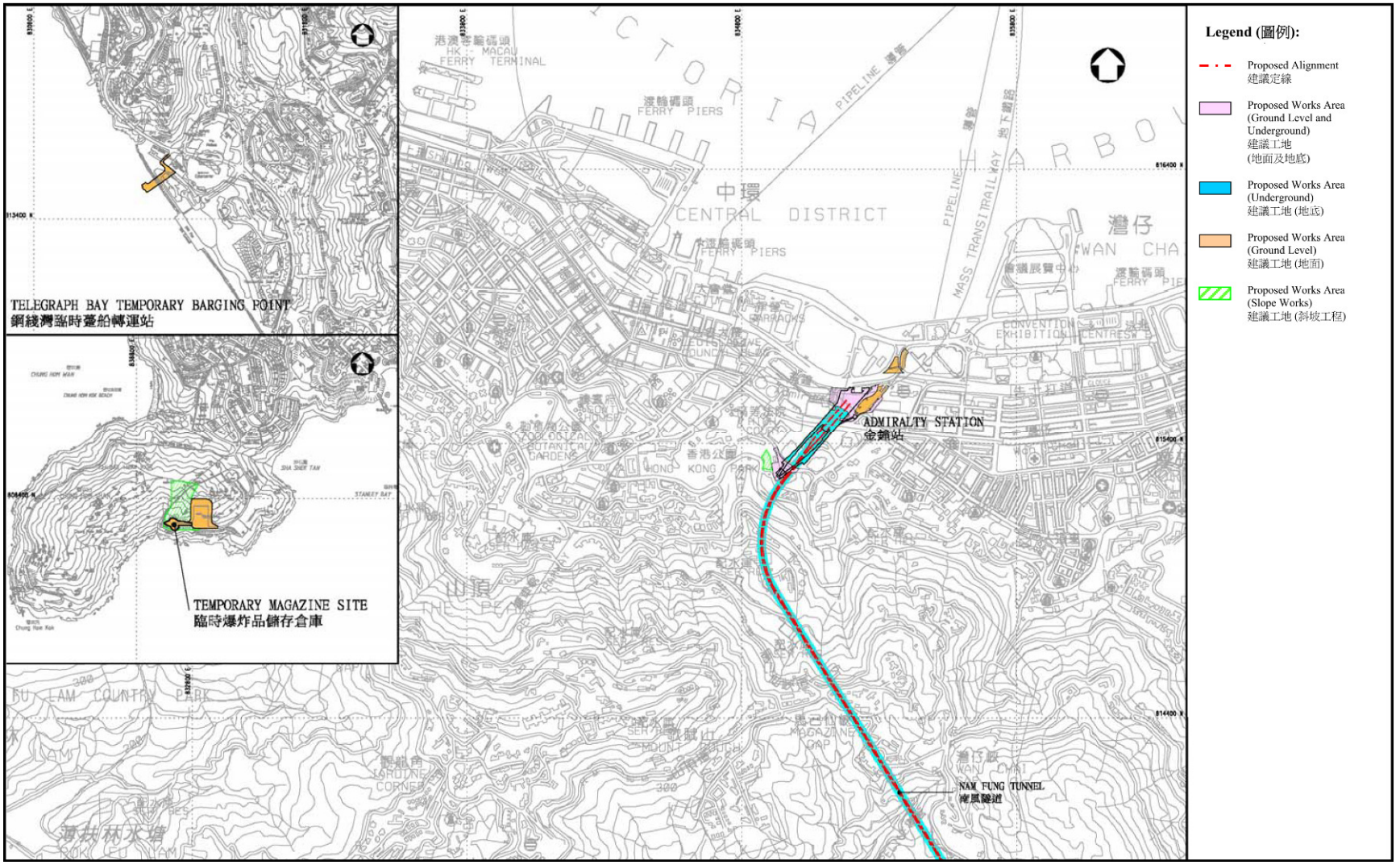


Figure 2 – Works Areas of the Project (2 of 2)

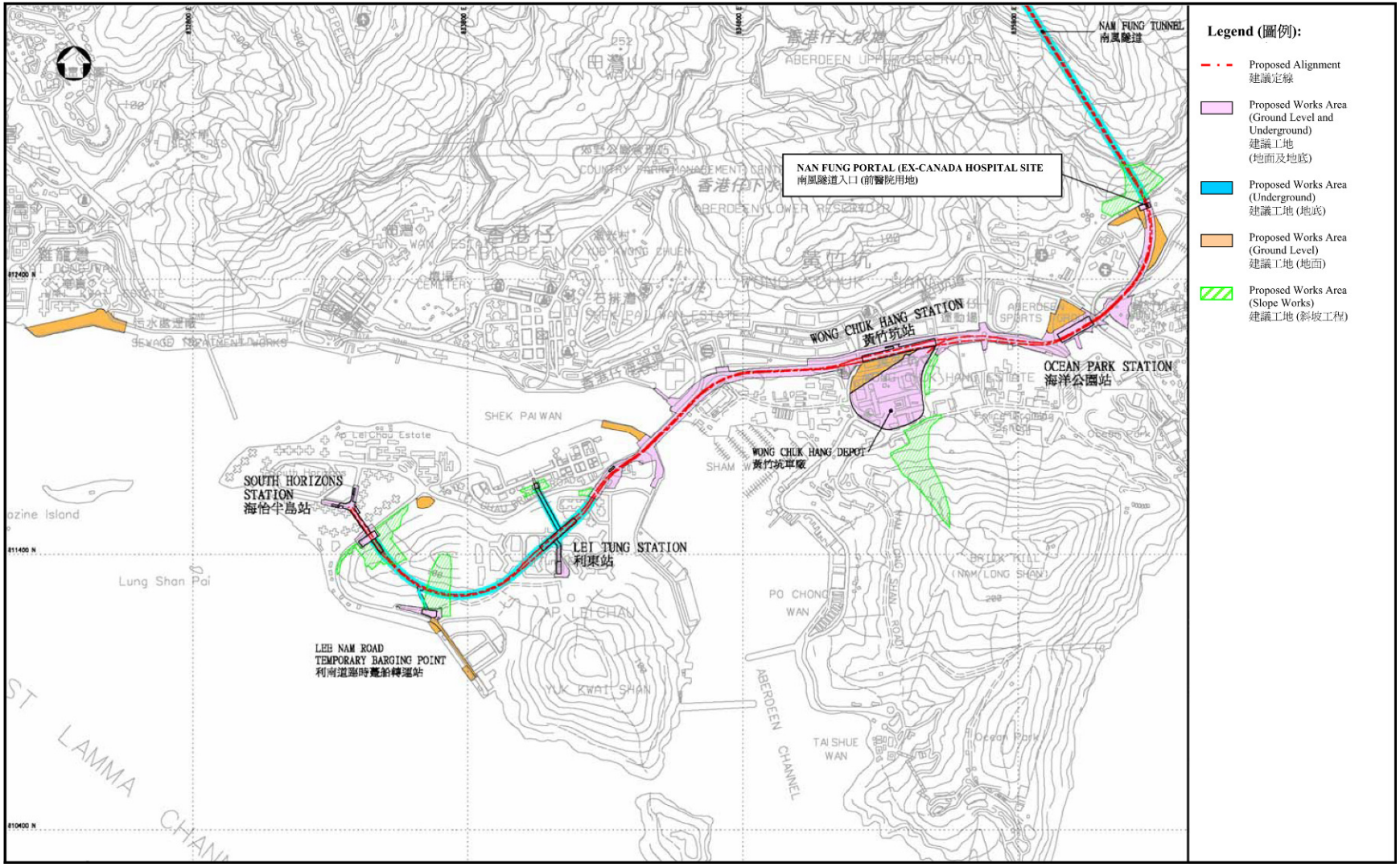


Figure 3 – Location of Construction Air Quality Monitoring Stations (1 of 4)

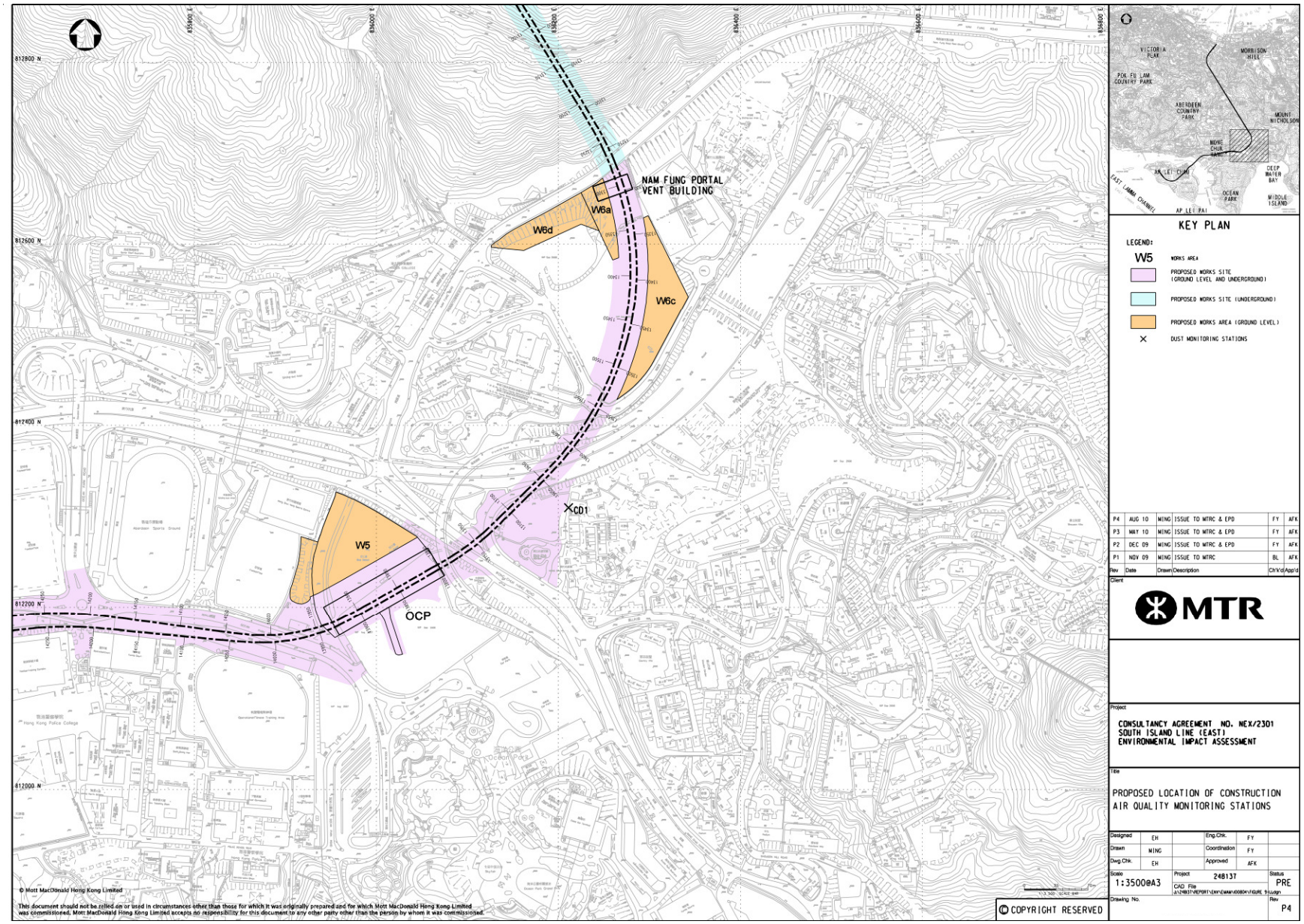


Figure 4 – Location of Construction Air Quality Monitoring Stations (2 of 4)

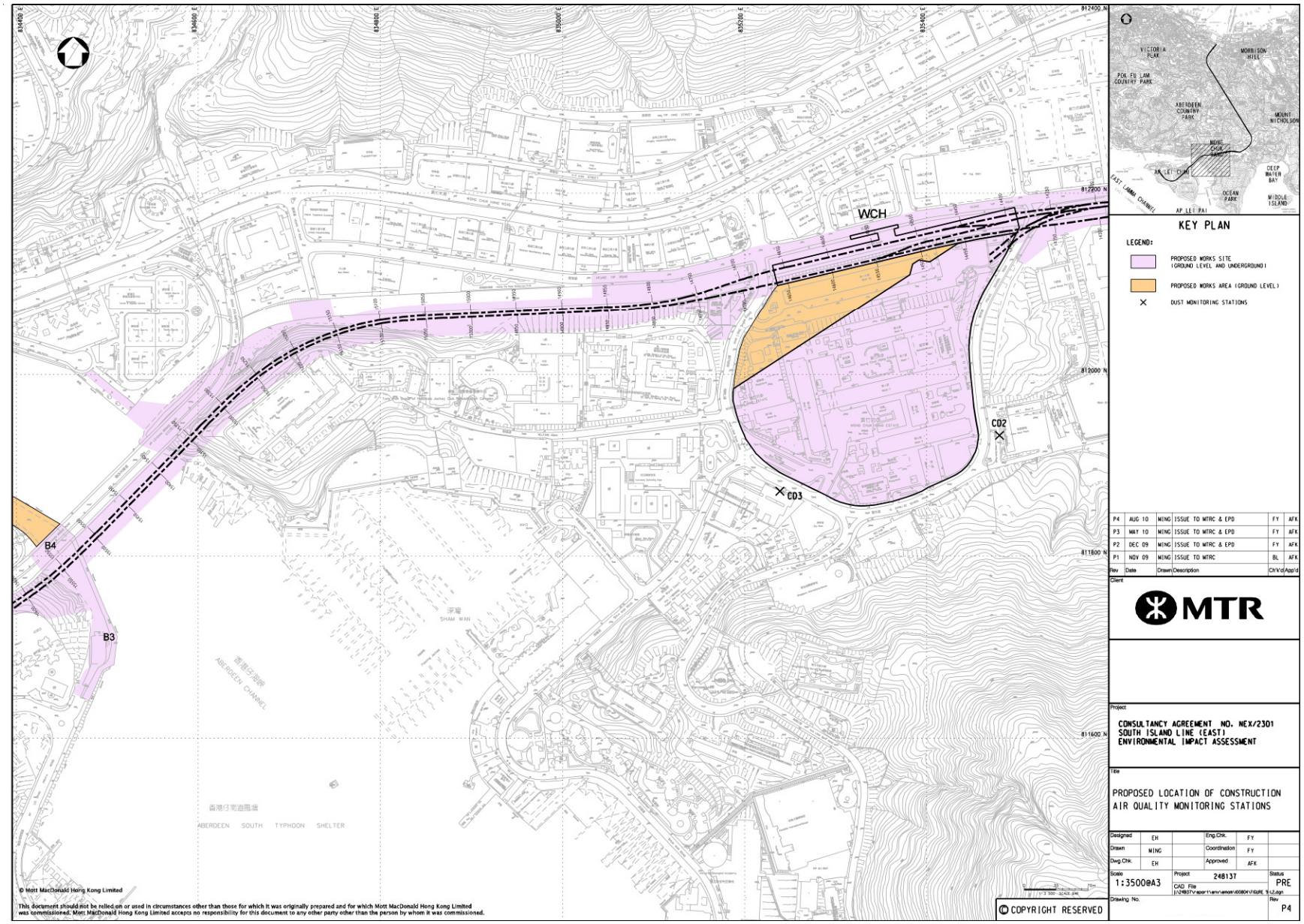


Figure 5 – Location of Construction Air Quality Monitoring Stations (3 of 4)

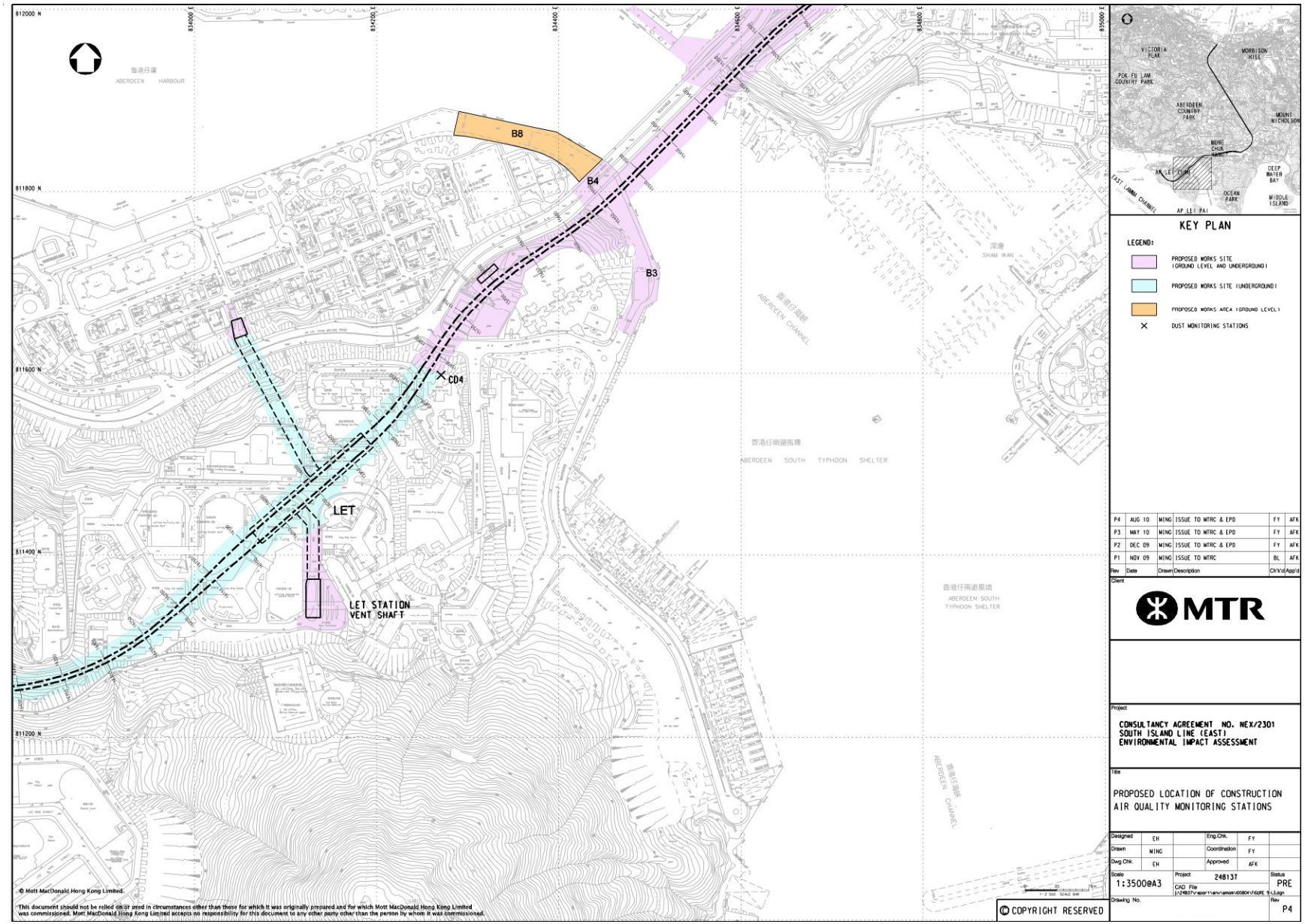


Figure 6 – Location of Construction Air Quality Monitoring Stations (4 of 4)

Figure 7 – Location of Construction Noise Monitoring Stations (1 of 2)

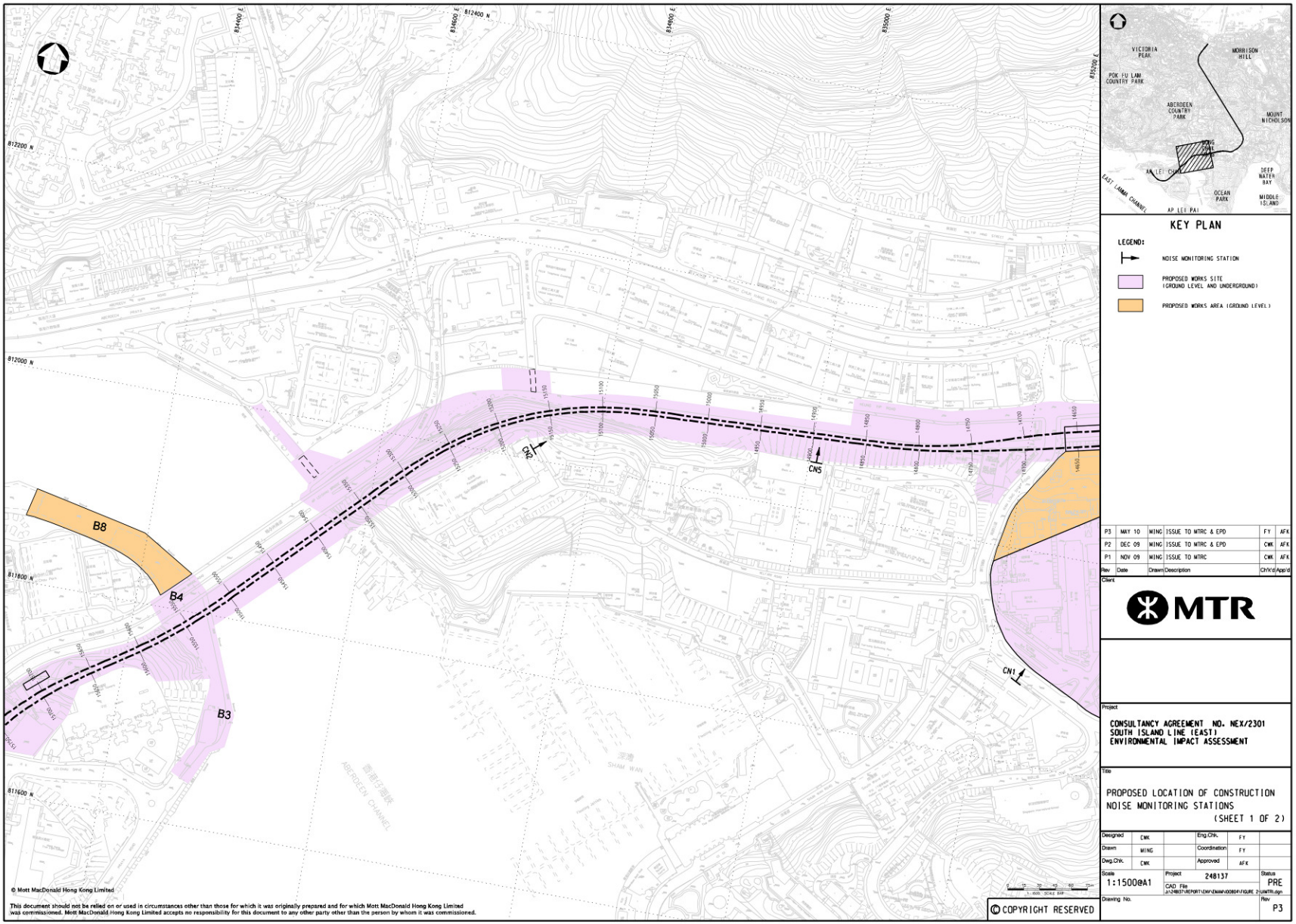


Figure 8 – Location of Construction Noise Monitoring Stations (2 of 2)

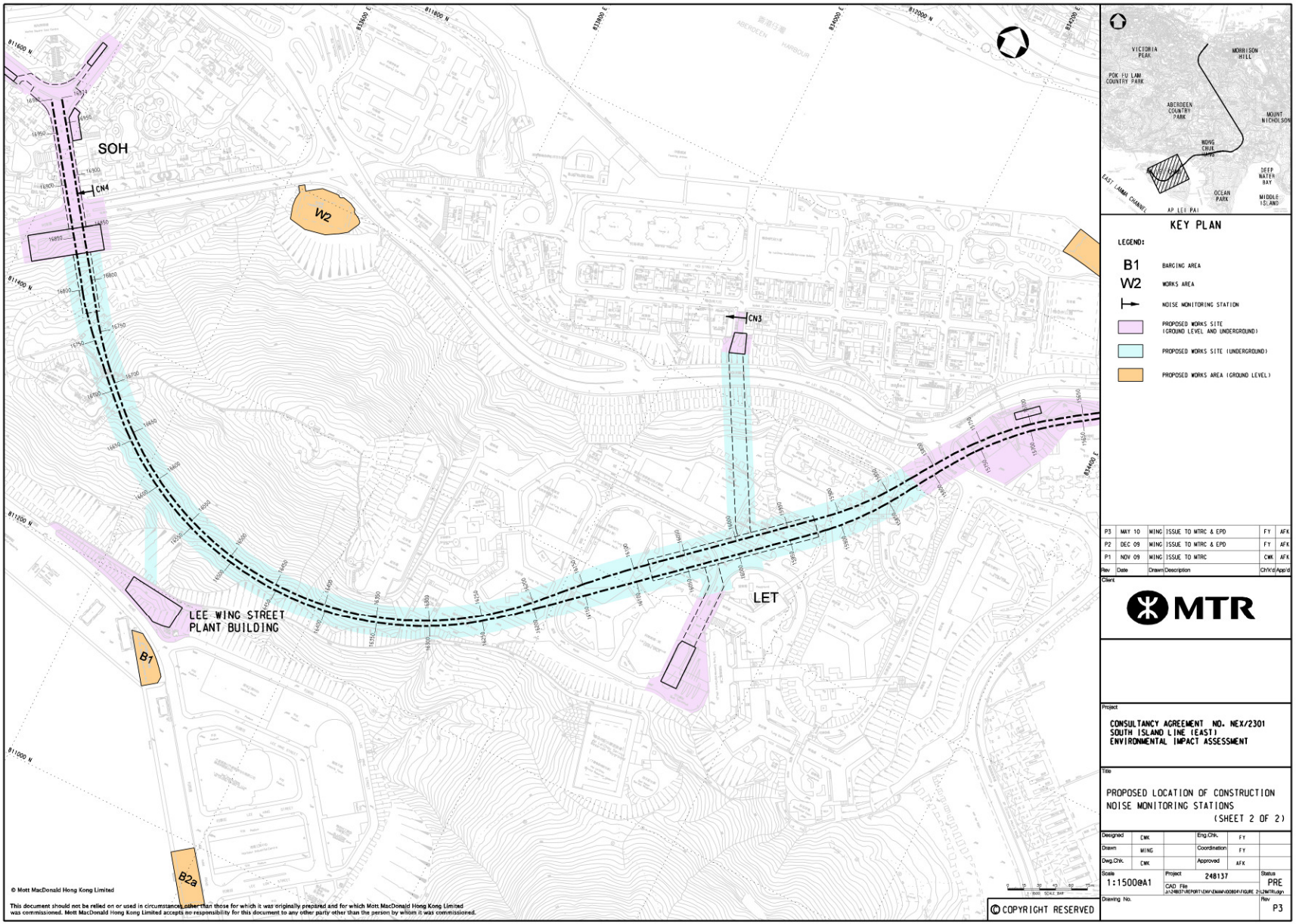
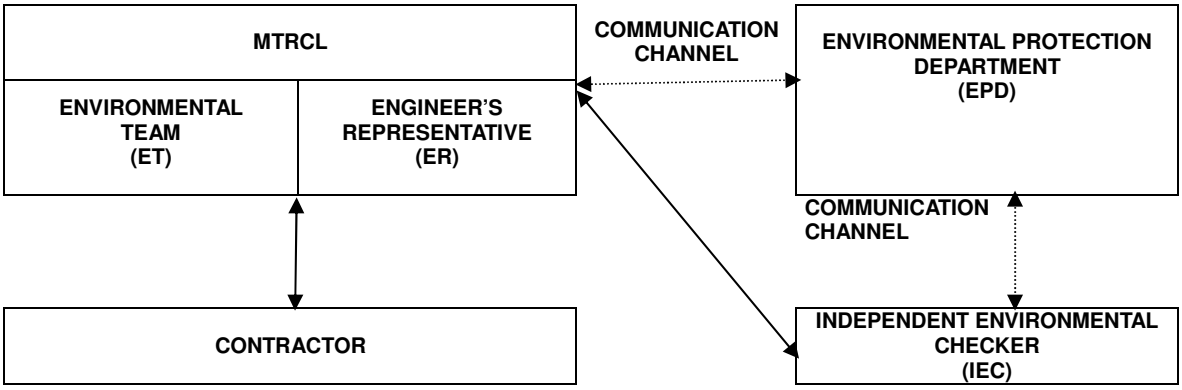


Figure 9 – Location of Water Quality Monitoring Stations

APPENDIX A1

Project Organization

Appendix A1
Project Organization and Lines of Communications



APPENDIX A2

Contact List of Key Personal of the Project

Appendix A2
Contact List of Key Personnel

Table A2.1 Contact List of Key Personnel of Project Management

Organization	Name	Telephone
Independent Environmental Checker	Mr. Thomas Chan	2268 3093
Environmental Team Leader	Dr. Glenn Frommer	2688 1552
Engineer's Representative		
Project Manager – SIL Civil	Mr. Mark Cuzner	3987 8288
Construction Manager – SIL (901)	Mr. Neil Smith	2206 8688
Construction Manager – SIL (902 / 904)	Mr. Ken Wong	3987 8388
Construction Manager – SIL (903 / 907 / 908)	Mr. Kit Chan	2871 5888
Contract No. 901 **Admiralty Integrated Station and SCL Enabling Works** Main Contractor: Kier – Laing O'Rourke – Kaden Joint Venture		
Project Director	Mr. Matthew Bowe	9726 6117
QA & Environmental Manager	Mr. Ronald Fung	9777 7667
Contract No. 902 **Nam Fung Tunnel and Ventilation Buildings** Main Contractor: Nishimatsu Construction Co., Ltd.		
Contractors Representative	Mr. Colin Birky	9641 2485
Project Manager	Mr. Kozo Suguta	9227 9717
Contract No. 903 **Ocean Park Station, Wong Chuk Hang Station, Viaduct and Aberdeen Channel Bridge** Main Contractor: Leighton Contractors (Asia) Ltd.		
Project Director	Mr. Paul Freeman	9856 1988
Project Manager, Stations and Nullah	Mr. Ian Rawsthorne	9383 0735
Project Manager, Viaducts, Bridge and Precast	Mr. Jon Kitching	9101 9013
Contract No. 904 **Lei Tung Station, South Horizons Station and Tunnels** Main Contractor: Leighton – John Holland Joint Venture		
Operation Manager	Mr. Brain Gillon	2823 1178
Project Manager	Mr. Ken Henderson	2823 1134

Organization	Name	Telephone
Contract No. 907 **Wong Chuk Hang Depot Site Formation and Piling** Main Contractor: Chun Wo – Hip Hing Joint Venture		
Construction Manager	Mr. Wallace Yeung	9773 9711
Project Manager	Mr. Patrick Wong	9465 1064

Table A2.2 Contact List of Key Personnel of EPD

Organization	Name	Telephone
EPD		
Sr Env Protection Offr (Metro Assessment)	Mr. Steve Li	2835 1142
Sr Env Protection Offr (Regional S)	Mr. YK Chan	2516 1802
Sr Env Protection Offr (Regional S)	Mr. Sean Law	2516 1806

APPENDIX B1

Action and Limit Levels for Construction Noise and Air Quality

Appendix B1
Action and Limit Levels for Construction Noise and Air Quality

Action and Limit Levels for 24-hours TSP

Table B1.1 Action and Limit Levels for 24-hour TSP

ID	Description	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
CD1	Wong Chuk Hang San Wai	173	260
CD2	Police College – Police Quarters	184	260
CD3	San Wui Commercial Society of HK Chan Pak Sha School	169	260
CD4	Shan On House	176	260
CD5	South Horizons Phase IV – Block 25	169	260

Note: TSP levels are to the nearest whole number, with values of 0.5 rounded up

Action and Limit Levels for 1-hour TSP

Table B1.2 Action and Limit Levels for 1-hour TSP

ID	Description	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
CD1	Wong Chuk Hang San Wai	315	500
CD2	Police College – Police Quarters	311	500
CD3	San Wui Commercial Society of HK Chan Pak Sha School	322	500
CD4	Shan On House	318	500
CD5	South Horizons Phase IV – Block 25	336	500

Note: 1-hour TSP criterion recommended in the EIAO-TM
TSP levels are to the nearest whole number, with values of 0.5 rounded up

Action and Limit Levels for Construction Noise

Table B1.3 Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
Daytime (0700-1900), Monday through Saturday excluding Public Holidays	When one document complaint received.	$L_{Aeq\ 30mins}$75dB(A)[(1)(2)]
All evenings (1900-2300)		Subject to control under the Noise Control Ordinance
General Holidays (including all Sundays) during the daytime and evening (0700-2300)		Subject to control under the Noise Control Ordinance
All night time periods (2300-0700)		Subject to control under the Noise Control Ordinance

(1) 70dB(A) for schools and 65dB(A) during school examination periods.
(2) Updated prediction of noise levels as contained in the construction noise mitigation measures plan.

APPENDIX B2

Action and Limit Levels for Water Quality

Appendix B2
Action and Limit Levels for Water Quality

Table B2.1 Action and Limit Levels for Ebb Condition

Tide: **Ebb** Location: **WM1**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	5.9	Surface	5.5
	Middle	6.0	Middle	5.6
	Bottom	6.0	Bottom	5.7
SS in mg/L (depth averaged)	14.9 and 120% of upstream control station of the same day		16.4 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	4.4 and 120% of upstream control station of the same day		5.2 and 130% of upstream control station of the same day	
Tide: **Ebb** Location: **WM2**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	5.9	Surface	5.5
	Middle	NA	Middle	NA
	Bottom	6.0	Bottom	5.7
SS in mg/L (depth averaged)	14.7 and 120% of upstream control station of the same day		15.5 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	5.5 and 120% of upstream control station of the same day		7.0 and 130% of upstream control station of the same day	

Tide: **Ebb** Location: **WM3**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	6.1	Surface	5.7
	Middle	6.1	Middle	5.7
	Bottom	6.3	Bottom	5.9
SS in mg/L (depth averaged)	14.4 and 120% of upstream control station of the same day		16.0 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	3.4 and 120% of upstream control station of the same day		3.8 and 130% of upstream control station of the same day	
Tide: **Ebb** Location: **WM4**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	6.1	Surface	5.8
	Middle	6.3	Middle	6.0
	Bottom	6.5	Bottom	6.2
SS in mg/L (depth averaged)	14.0 and 120% of upstream control station of the same day		15.5 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	3.0 and 120% of upstream control station of the same day		3.2 and 130% of upstream control station of the same day	

Table B2.2 Action and Limit Levels for Flood Condition

Tide: **Flood** Location: **WM1**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	5.9	Surface	5.6
	Middle	6.1	Middle	5.7
	Bottom	6.2	Bottom	5.8
SS in mg/L (depth averaged)	12.7 and 120% of upstream control station of the same day		12.9 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	3.8 and 120% of upstream control station of the same day		4.0 and 130% of upstream control station of the same day	

Tide: **Flood** Location: **WM2**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	6.0	Surface	5.7
	Middle	NA	Middle	NA
	Bottom	6.1	Bottom	5.8
SS in mg/L (depth averaged)	12.8 and 120% of upstream control station of the same day		13.6 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	3.5 and 120% of upstream control station of the same day		3.9 and 130% of upstream control station of the same day	
Tide: **Flood** Location: **WM3**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	6.0	Surface	5.7
	Middle	6.2	Middle	5.8
	Bottom	6.2	Bottom	5.9
SS in mg/L (depth averaged)	11.5 and 120% of upstream control station of the same day		11.5 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	3.1 and 120% of upstream control station of the same day		3.2 and 130% of upstream control station of the same day	
Tide: **Flood** Location: **WM4**				
Parameters	Action Level		Limit Level	
DO in mg/L	Surface	6.0	Surface	5.8
	Middle	6.2	Middle	5.8
	Bottom	6.3	Bottom	6.1
SS in mg/L (depth averaged)	13.4 and 120% of upstream control station of the same day		15.6 and 130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	2.7 and 120% of upstream control station of the same day		2.8 and 130% of upstream control station of the same day	

APPENDIX C

Calibration Details

Summary of Calibration Certificate

Noise Equipment

Model	Serial Number	Calibration Date	Expiry Date	Remark
B&K 2250L	2741137	21 Jan 2011	21 Jan 2013 *	
B&K 2250	2551244	25 Jan 2011	25 Jan 2013 *	
B&K 4231 Calibrator	2725557	15 Jun 2011	15 Jun 2013 *	
B&K 4231 Calibrator	2309393	15 Jun 2011	15 Jun 2013 *	

High Volume Sampler

Model	Sampler	Calibration Date	Expiry Date	Remark
Graseby-Andersen	694-0661	5 Aug 2011	5 Feb 2012	
Graseby-Andersen	894-0833	5 Aug 2011	5 Feb 2012	
Graseby-Andersen	994-0878	8 Aug 2011	8 Feb 2012	
Graseby-Andersen	1294-1104	8 Aug 2011	8 Feb 2012	
Graseby-Andersen	1294-1111	5 Aug 2011	5 Feb 2012	

Water Quality Monitoring Equipment

Model	Serial Number	Calibration Date	Expiry Date	Remark
Turbidimeter				
HACH 2100P	06070C018334	29 Jul 2011	29 Oct 2011 *	
HACH 2100P	080600030281	13 Jul 2011	13 Oct 2011 *	
pH Meter				
HANNA HI8314	674469	16 Jul 2011	15 Aug 2011 *	
HANNA HI8314	674469	16 Aug 2011	15 Sep 2011	
Multimeter for Temperature / Dissolved Oxygen / Salinity				
YSI 85D	082100716	27 Jun 2011	26 Sep 2011 *	

Note: * Calibration certificates refer to Appendix C of EM&A report for August 2011.

ANDERSEN INSTRUMENTS INC.

GS2310 Series Sampler Calibration

(Dickson Recorder)

Customer -> MTRC SITE

Location -> Police College- Police Quart Date -> 5-Aug-11

Sampler -> 694-0661 Tech -> Chan Kin Fung

CONDITIONS

Sea Level Pressure	(hpa)	1002	Sampler Elevation	(feet)	60
Sea Level Pressure	(in Hg)	29.59	Corrected Pressure	(mm Hg)	749.98
Temperature	(deg C)	31	Temperature	(deg K)	304.00
Seasonal SL Pressure	(in Hg)	29.59	Corrected Seasonal	(mm Hg)	749.98
Seasonal Temperature	(deg C)	31.00	Seasonal Temperature	(deg K)	304.00

CALIBRATION ORIFICE

Make -> Andersen Instruments Inc. Qstd Slope -> 2.0075

Model -> G25A Qstd Intercept -> -0.038138

Serial# -> 1436 Date Certified ->

CALIBRATION

	Plate or Test #	H_2O (in)	Qstd (M^3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
1	18	11.8	1.702	64	62.946	Slope =	37.8156
2	13	9.5	1.529	57	56.062	Intercept =	-1.6154
3	10	7.3	1.343	50	49.177	Corr. Coeff. =	0.9998
4	7	4.8	1.092	40	39.341		
5	5	3	0.868	32	31.473		

Calculations

Qstd = 1/m [Sqrt (H_2O (Pa/Pstd) (Tstd/Ta)) - b]

IC = I [Sqrt (Pa/Pstd) (Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

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

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

This is to certify that the above equipment has been calibrated in accordance with manufacturer's procedure.

ANDERSEN INSTRUMENTS INC.

GS2310 Series Sampler Calibration

(Dickson Recorder)

Customer -> MTRC SITE

Location -> Chan Pak Sha School Date -> 5-Aug-11

Sampler -> 894-0833 Tech -> Chan Kin Fung

CONDITIONS

Sea Level Pressure	(hpa)	1001.5	Sampler Elevation	(feet)	60
Sea Level Pressure	(in Hg)	29.57	Corrected Pressure	(mm Hg)	749.61
Temperature	(deg C)	32	Temperature	(deg K)	305.00
Seasonal SL Pressure	(in Hg)	29.57	Corrected Seasonal	(mm Hg)	749.61
Seasonal Temperature	(deg C)	32.00	Seasonal Temperature	(deg K)	305.00

CALIBRATION ORIFICE

Make -> Andersen Instruments Inc. Qstd Slope -> 2.0075

Model -> G25A Qstd Intercept -> -0.038138

Serial# -> 1436 Date Certified ->

CALIBRATION

	Plate or Test #	H_2O (in)	Qstd (M^3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
1	18	11.8	1.699	60	58.901	Slope =	31.0714
2	13	9.6	1.534	55	53.992	Intercept =	6.2403
3	10	7.6	1.367	50	49.084	Corr. Coeff. =	0.9994
4	7	5	1.112	41	40.249		
5	5	3	0.866	34	33.377		

Calculations

Qstd = 1/m [Sqrt (H_2O (Pa/Pstd) (Tstd/Ta)) - b]

IC = I [Sqrt (Pa/Pstd) (Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

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

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

This is to certify that the above equipment has been calibrated in accordance with manufacturer's procedure.

ANDERSEN INSTRUMENTS INC.

GS2310 Series Sampler Calibration

(Dickson Recorder)

Customer -> MTRC SITE

Location -> Shan On House (YOC) Date -> 8-Aug-11

Sampler -> 994-0878 Tech -> Chan Kin Fung

CONDITIONS

Sea Level Pressure	(hpa)	1011.5	Sampler Elevation	(feet)	130
Sea Level Pressure	(in Hg)	29.87	Corrected Pressure	(mm Hg)	755.34
Temperature	(deg C)	30	Temperature	(deg K)	303.00
Seasonal SL Pressure	(in Hg)	29.87	Corrected Seasonal	(mm Hg)	755.34
Seasonal Temperature	(deg C)	30.00	Seasonal Temperature	(deg K)	303.00

CALIBRATION ORIFICE

Make -> Andersen Instruments Inc. Qstd Slope -> 2.0075

Model -> G25A Qstd Intercept -> -0.038138

Serial# -> 1436 Date Certified ->

CALIBRATION

	Plate or Test #	H_2O (in)	Qstd (M^3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
1	18	11.9	1.718	64	63.275	Slope =	40.3633
2	13	9.7	1.553	57	56.354	Intercept =	-6.0225
3	10	7.7	1.386	51	50.422	Corr. Coeff. =	0.9997
4	7	5.1	1.131	40	39.547		
5	5	3.1	0.886	30	29.660		

Calculations

Qstd = 1/m [Sqrt (H_2O (Pa/Pstd) (Tstd/Ta)) - b]

IC = I [Sqrt (Pa/Pstd) (Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

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

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

This is to certify that the above equipment has been calibrated in accordance with manufacturer's procedure.

ANDERSEN INSTRUMENTS INC.

GS2310 Series Sampler Calibration

(Dickson Recorder)

Customer -> MTRC SITE

Location -> South Horizons Date -> 8-Aug-11

Sampler -> 1294-1104 Tech -> Chan Kin Fung

CONDITIONS

Sea Level Pressure	(hpa)	1012	Sampler Elevation	(feet)	90
Sea Level Pressure	(in Hg)	29.88	Corrected Pressure	(mm Hg)	756.73
Temperature	(deg C)	30.5	Temperature	(deg K)	303.50
Seasonal SL Pressure	(in Hg)	29.88	Corrected Seasonal	(mm Hg)	756.73
Seasonal Temperature	(deg C)	30.50	Seasonal Temperature	(deg K)	303.50

CALIBRATION ORIFICE

Make -> Andersen Instruments Inc. Qstd Slope -> 2.0075

Model -> G25A Qstd Intercept -> -0.038138

Serial# -> 1436 Date Certified ->

CALIBRATION

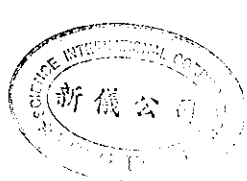
	Plate or Test #	H_2O (in)	Qstd (M^3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
1	18	12.5	1.760	60	59.326	Slope =	30.7880
2	13	9.9	1.569	55	54.382	Intercept =	5.6140
3	10	7.9	1.403	50	49.438	Corr. Coeff. =	0.9981
4	7	5.1	1.131	40	39.550		
5	5	3.2	0.900	34	33.618		

Calculations

Qstd = 1/m [Sqrt (H_2O (Pa/Pstd) (Tstd/Ta)) - b]

IC = I [Sqrt (Pa/Pstd) (Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m ((I) [Sqrt (298/Tav) (Pav/760)] - b)



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

This is to certify that the above equipment has been calibrated in accordance with manufacturer's procedure.

ANDERSEN INSTRUMENTS INC.

GS2310 Series Sampler Calibration

(Dickson Recorder)

Customer -> MTRC SITE

Location -> Wong Chuk Hang San Wai Date -> 5-Aug-11

Sampler -> 1294-1111 Tech -> Chan Kin Fung

CONDITIONS

Sea Level Pressure	(hpa)	1002	Sampler Elevation	(feet)	40
Sea Level Pressure	(in Hg)	29.59	Corrected Pressure	(mm Hg)	750.49
Temperature	(deg C)	30	Temperature	(deg K)	303.00
Seasonal SL Pressure	(in Hg)	29.59	Corrected Seasonal	(mm Hg)	750.49
Seasonal Temperature	(deg C)	30.00	Seasonal Temperature	(deg K)	303.00

CALIBRATION ORIFICE

Make -> Andersen Instruments Inc. Qstd Slope -> 2.0075

Model -> G25A Qstd Intercept -> -0.038138

Serial# -> 1436 Date Certified ->

CALIBRATION

	Plate or Test #	H_2O (in)	Qstd (M^3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
1	18	11.9	1.712	60	59.129	Slope =	31.1218
2	13	9.7	1.548	54	53.216	Intercept =	5.4602
3	10	7.7	1.381	49	48.289	Corr. Coeff. =	0.9996
4	7	5	1.117	41	40.405		
5	5	3	0.869	33	32.521		

Calculations

Qstd = 1/m [Sqrt (H_2O (Pa/Pstd) (Tstd/Ta)) - b]

IC = I [Sqrt (Pa/Pstd) (Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

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

m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure

This is to certify that the above equipment has been calibrated in accordance with manufacturer's procedure.

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

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

Internal Calibration & Performance Check Report of pH Meter

Equipment Ref. No. : ET/EW/007/003 Manufacturer : HANNA
Model No. : HI 8314 Serial No. : 674469
Date of Calibration : 16/8/11 Calibration Due Date : 15/9/11

Liquid Junction Error

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/S.2/001/6
Temperature of Solution : 20.1 pH ½ = 7.08
pH value of diluted buffer : 6.76 pH (S) = 6.881
pH = pH(S) - pH of diluted buffer = 0.121 (Observed Deviation)
Liquid Junction Error (pH_j) = pH - $pH_{½}$ = 0.041

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.93
Shift on stirring, $pH_s = pH_s - pH(S) - pH_j$ = 0.008

Noise

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

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/001
Temperature record from the reference thermometer (T_R): 20.1 °C
Temperature record from the ATC (T_{ATC}): 20.0 °C
Temperature Difference ($T_R - T_{ATC}$) 0.1 °C

Acceptance Criteria

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

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

* Delete as appropriate

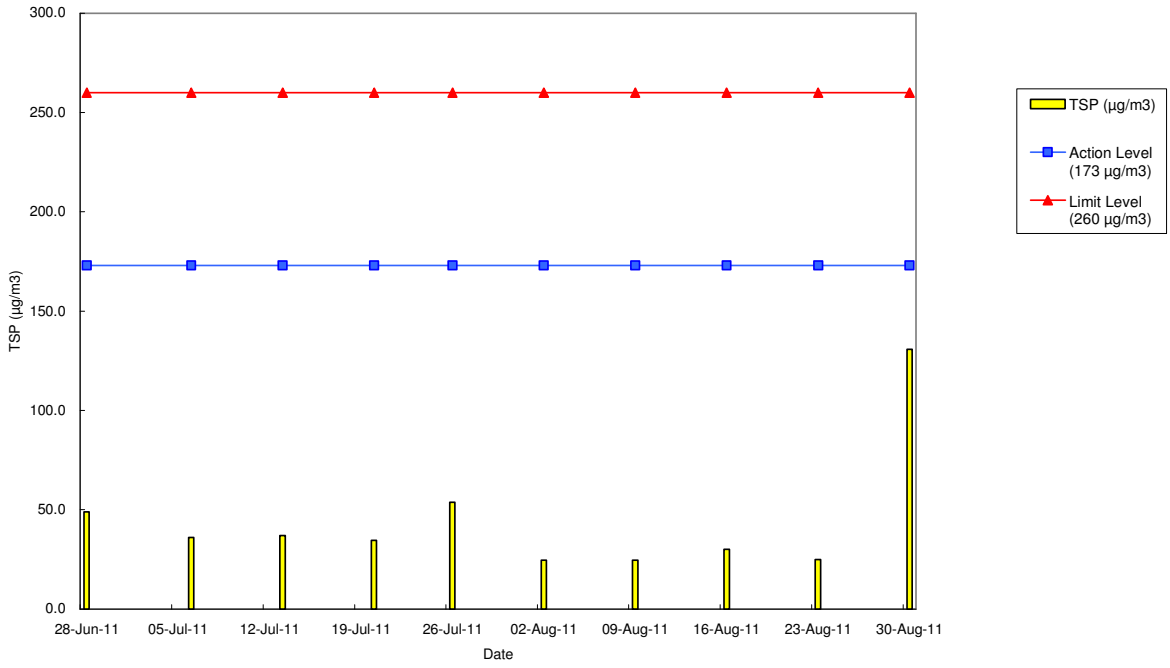
Calibrated by : Approved by :

APPENDIX D

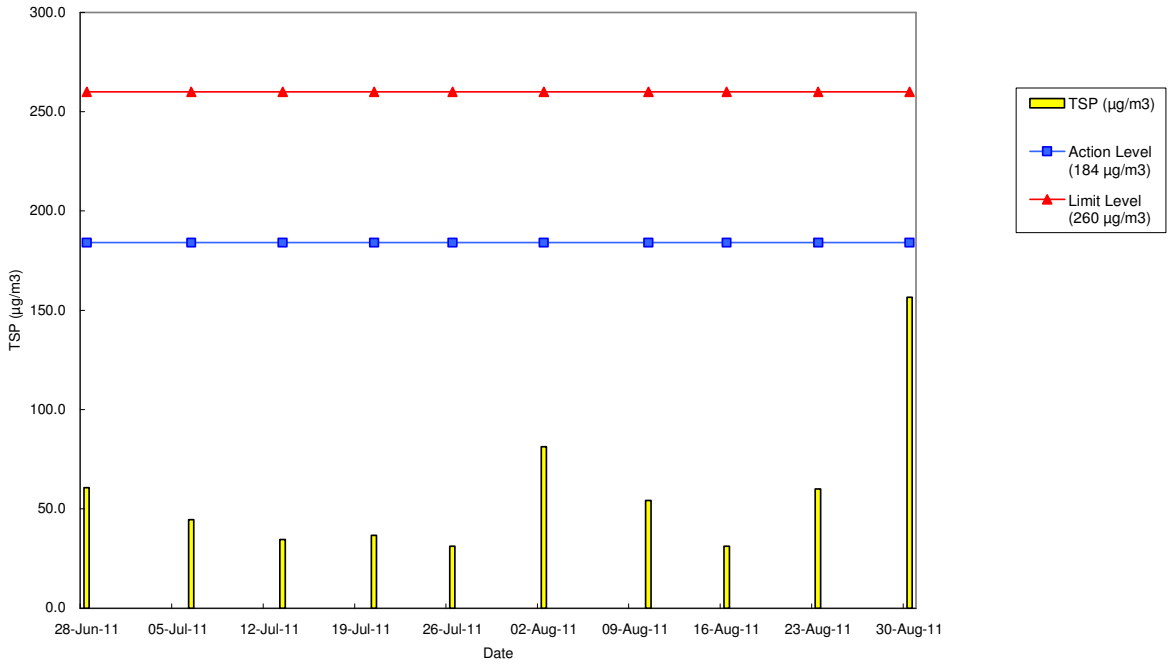
Graphical Plots of Air Quality, Noise & Water Quality Impact Monitoring and Monitoring Results for Water Quality

Graphical Plots of Air Quality Monitoring Results

24-hr TSP Level at CD1 Wong Chuk Hang San Wai

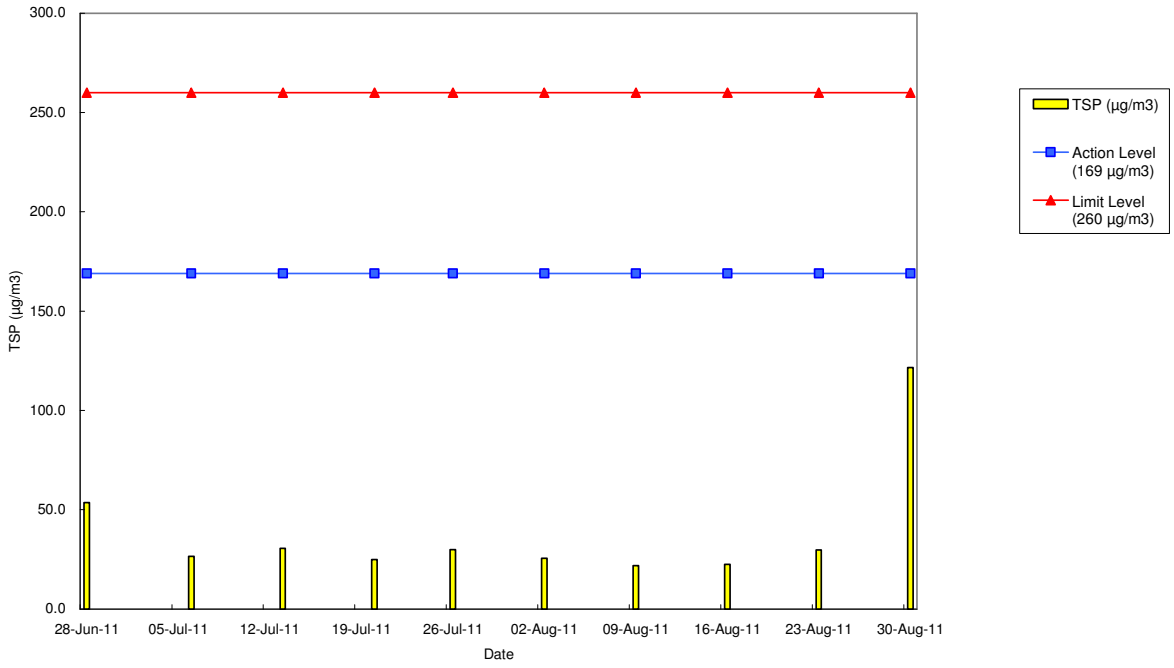


24-hr TSP Level at CD2 Police College - Police Quaeters

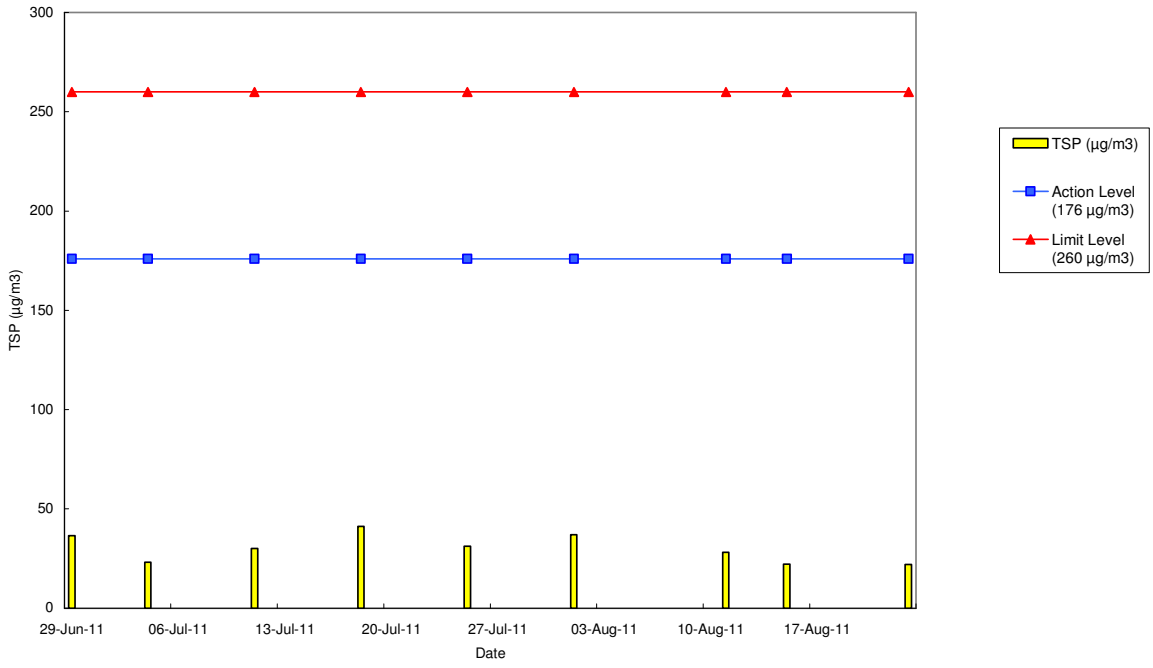


Graphical Plots of Air Quality Monitoring Results

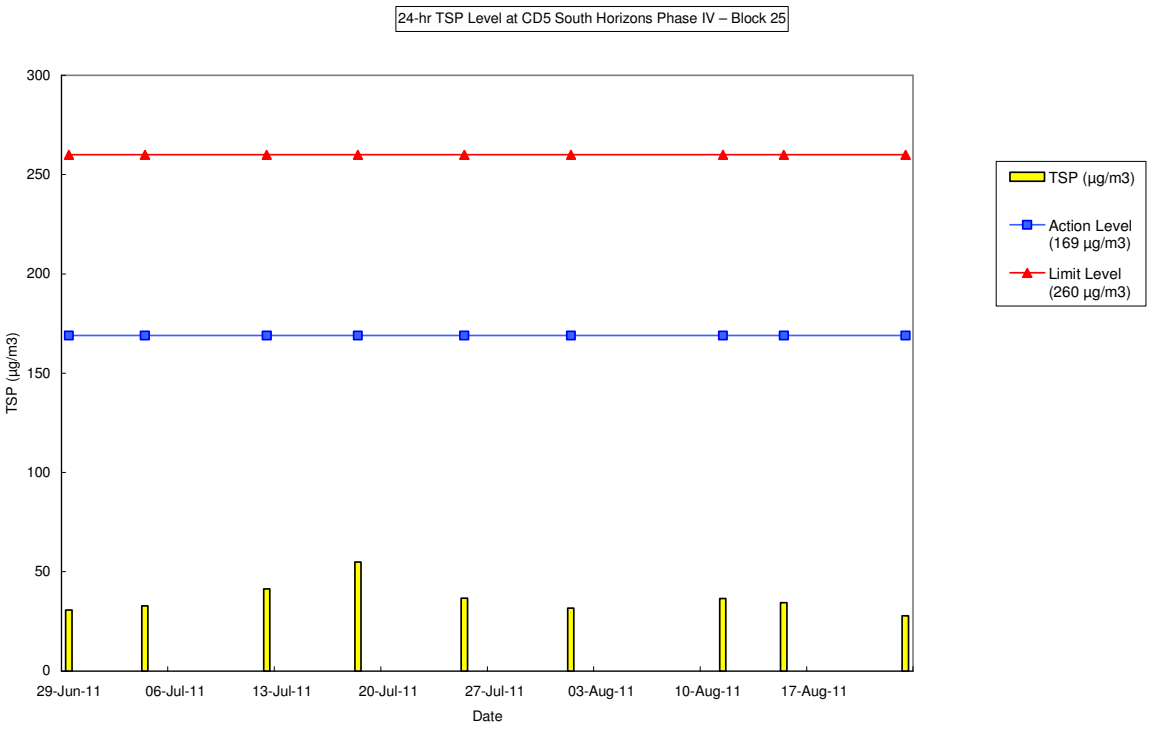
24-hr TSP Level at CD3 San Wui Commercial Society of HK Chan Pak Sha School



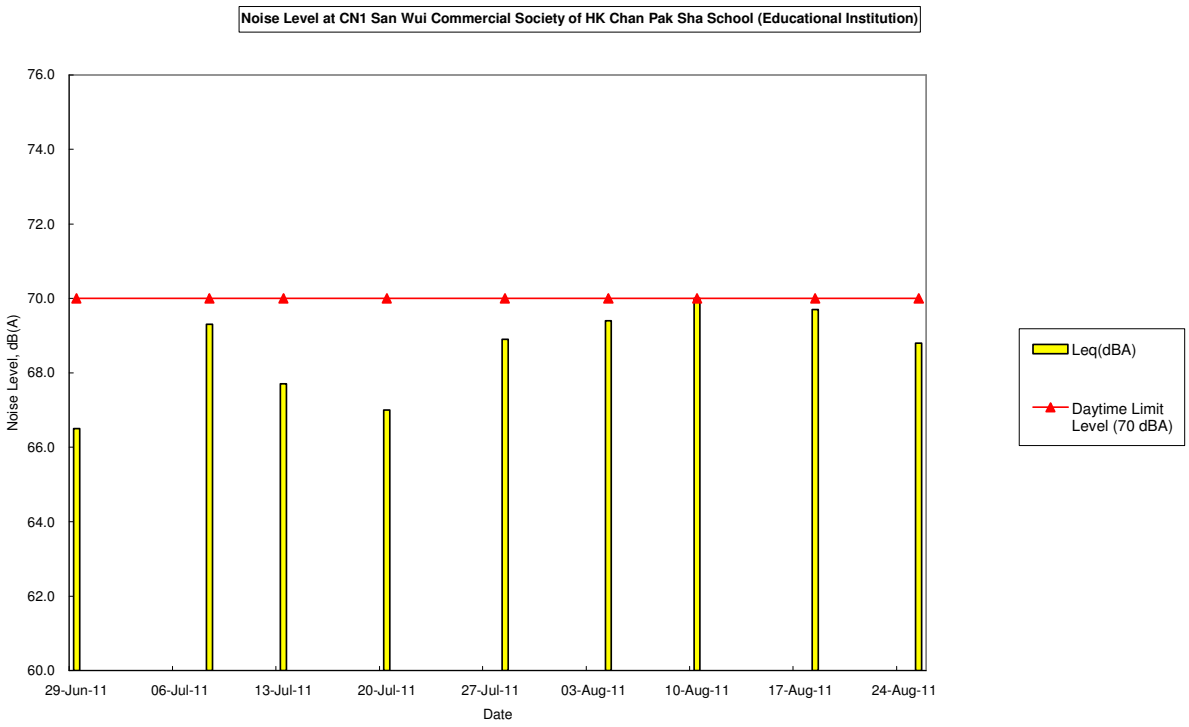
24-hr TSP Level at CD4 Shan On House

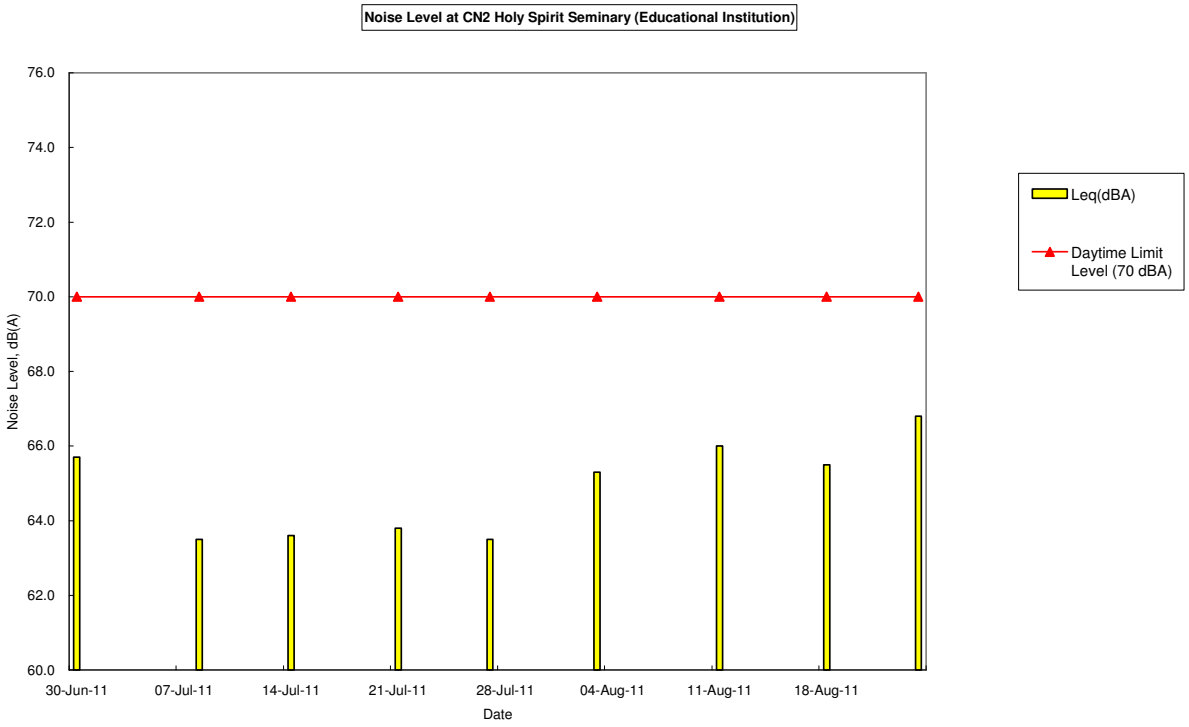


Graphical Plots of Air Quality Monitoring Results



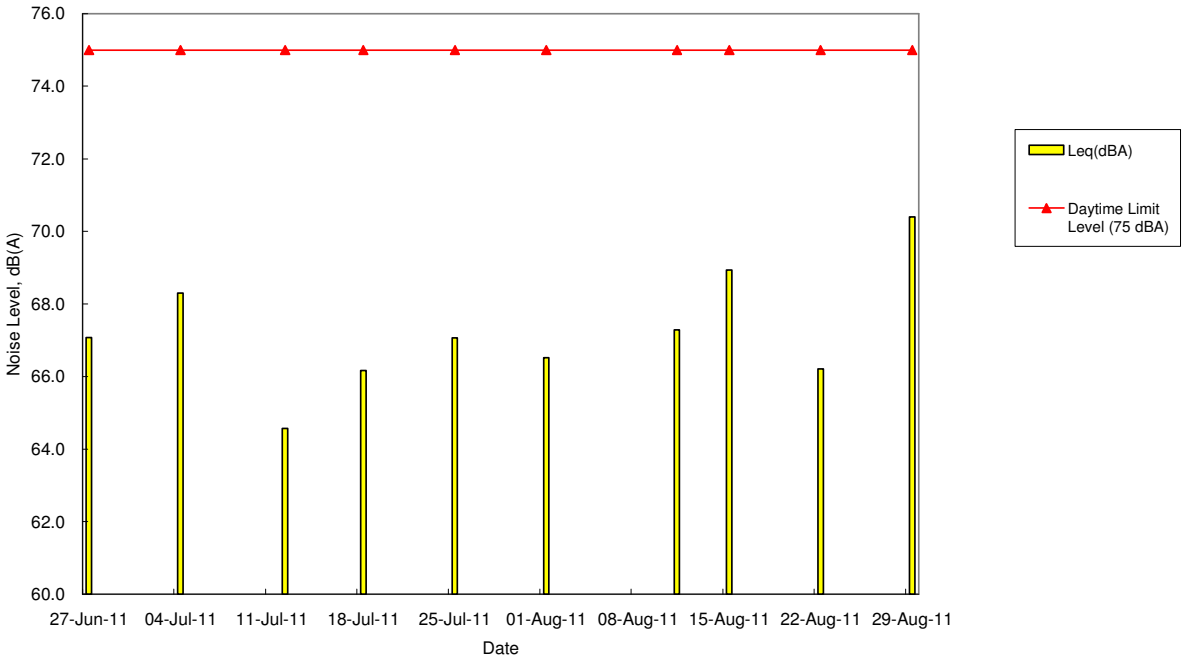
Graphical Plots of Noise Monitoring Results



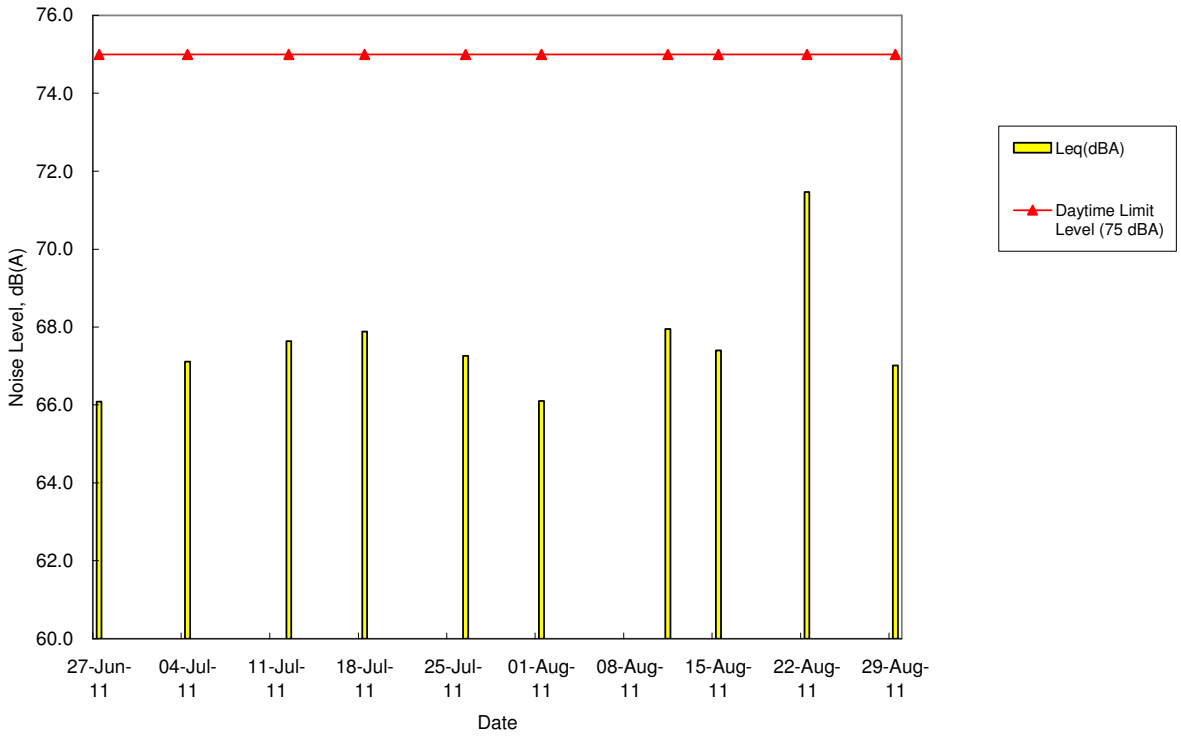


Graphical Plots of Noise Monitoring Results

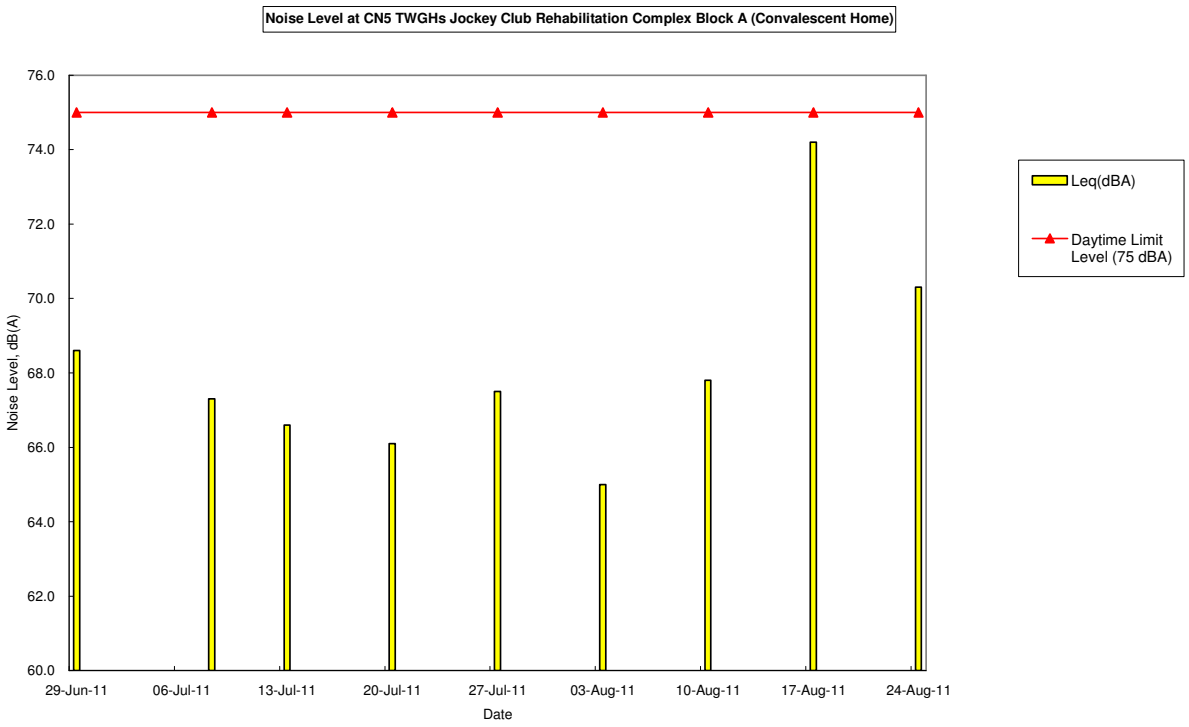
Noise Level at CN3 Shun Fung Building (Residential)



Noise Level at CN4 South Horizons Phase IV – Block 25 Dover Court (Residential)

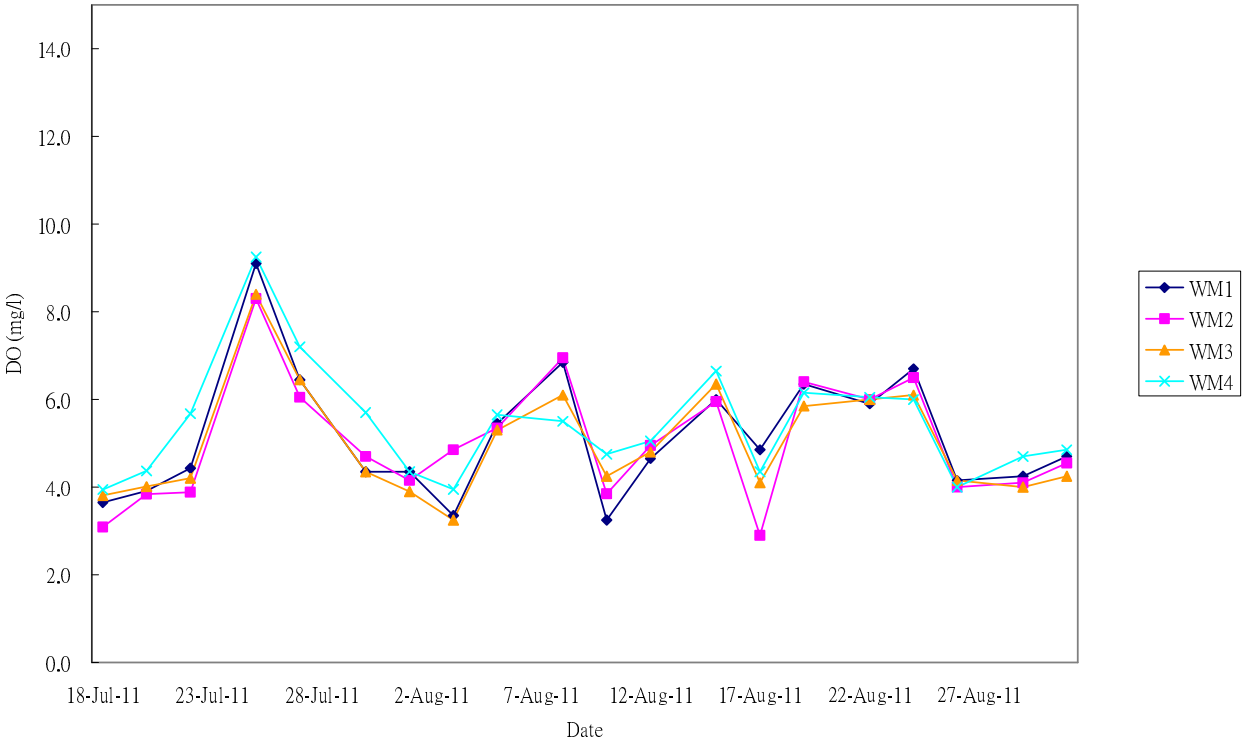


Graphical Plots of Noise Monitoring Results

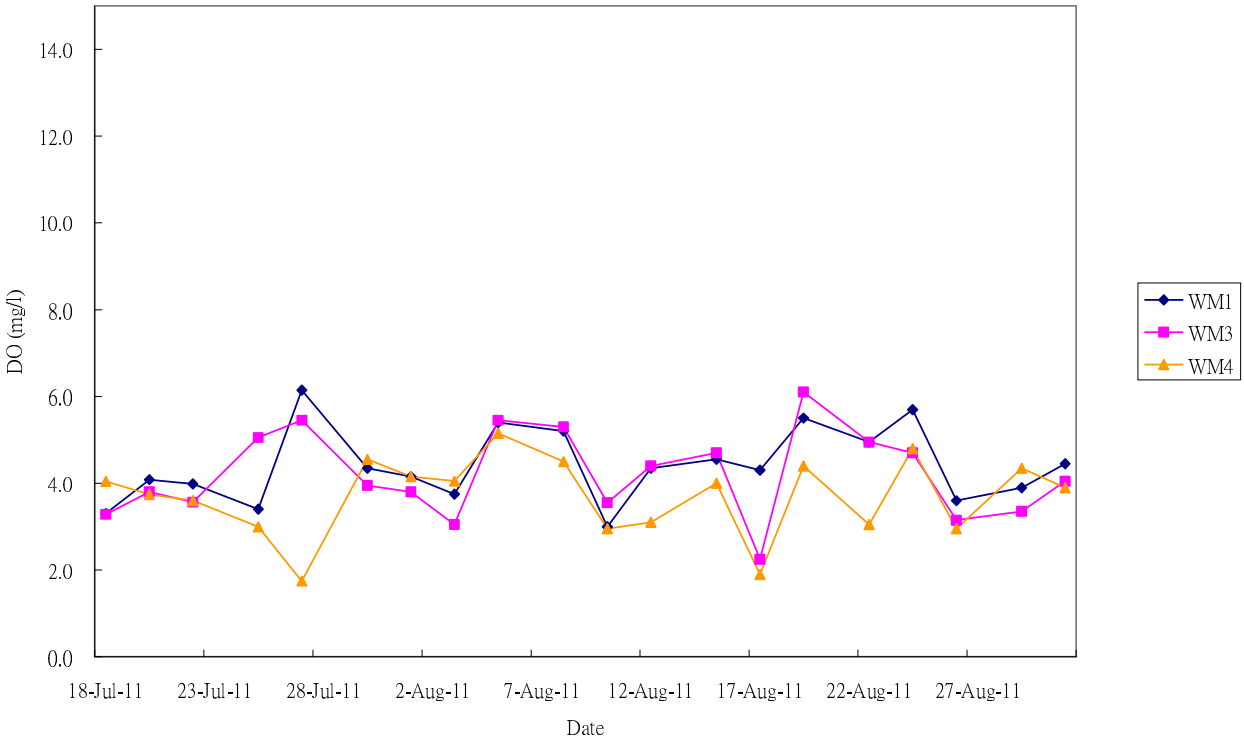


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Dissolved Oxygen in Flood Tide - Surface Level

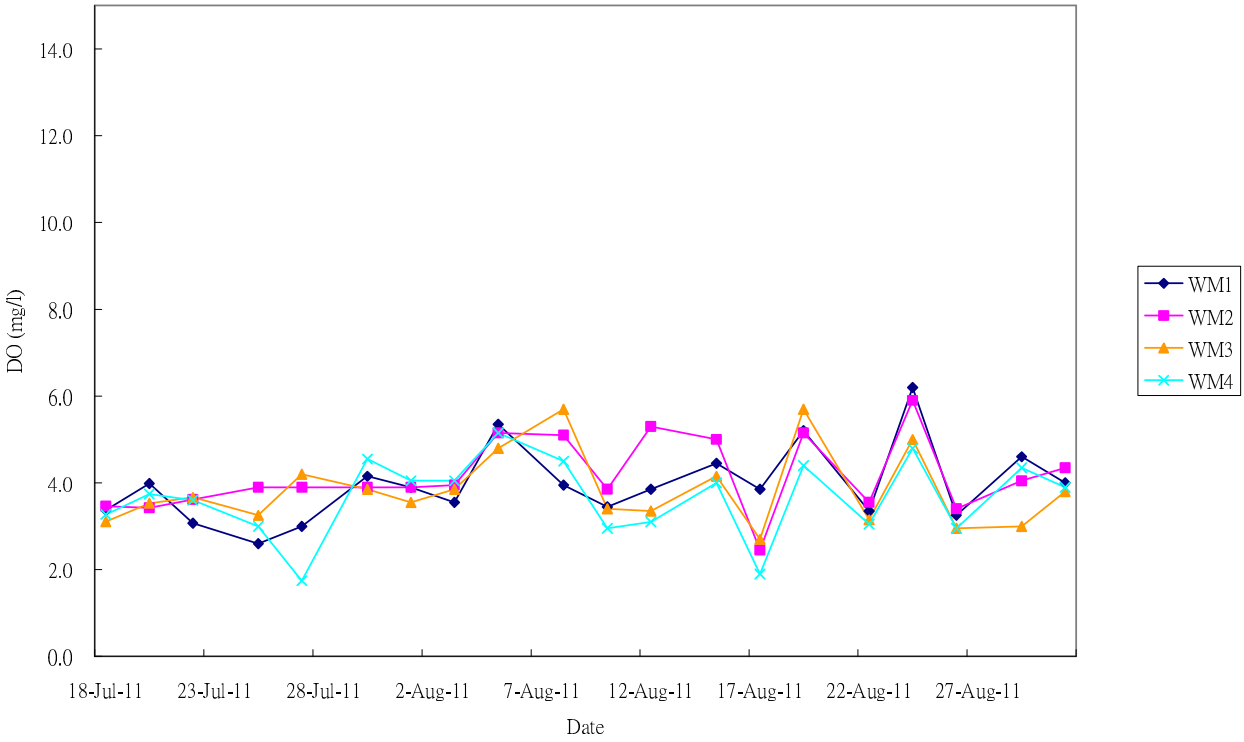


Monitoring Results for Dissolved Oxygen in Flood Tide - Middle Level

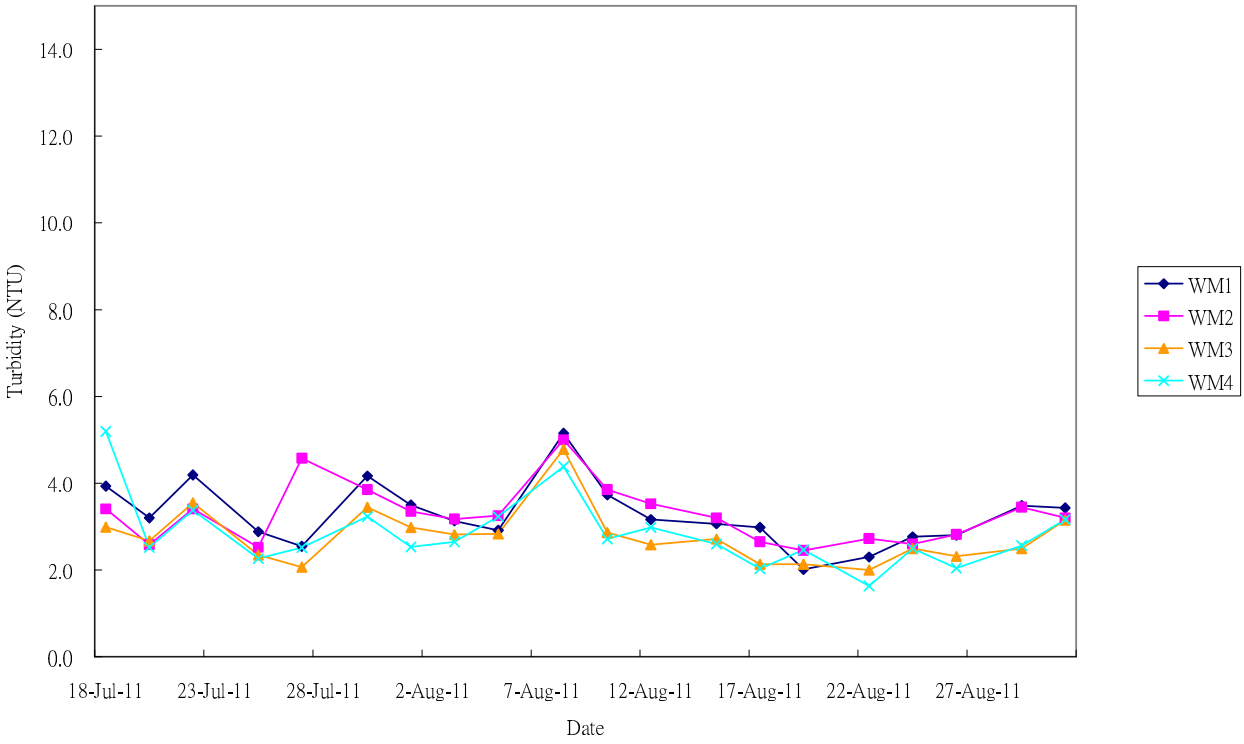


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Dissolved Oxygen in Flood Tide - Bottom Level

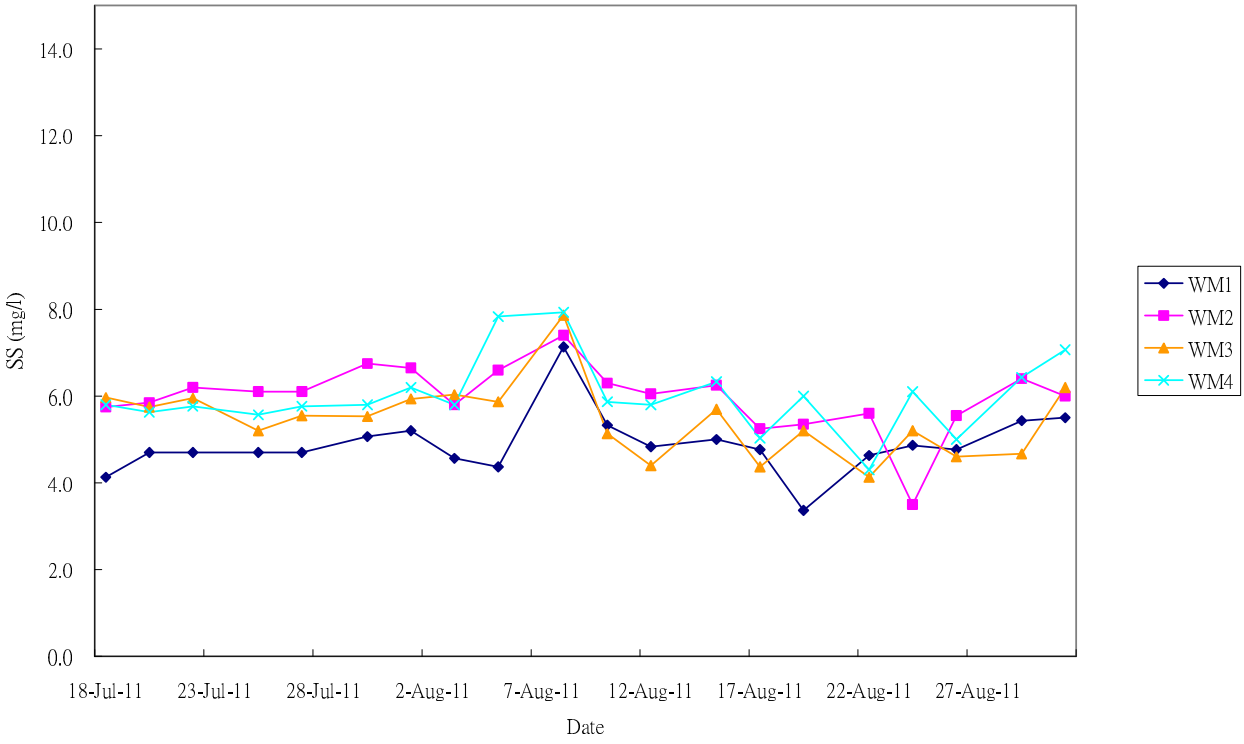


Monitoring Results for Turbidity in Flood Tide - Depth Average

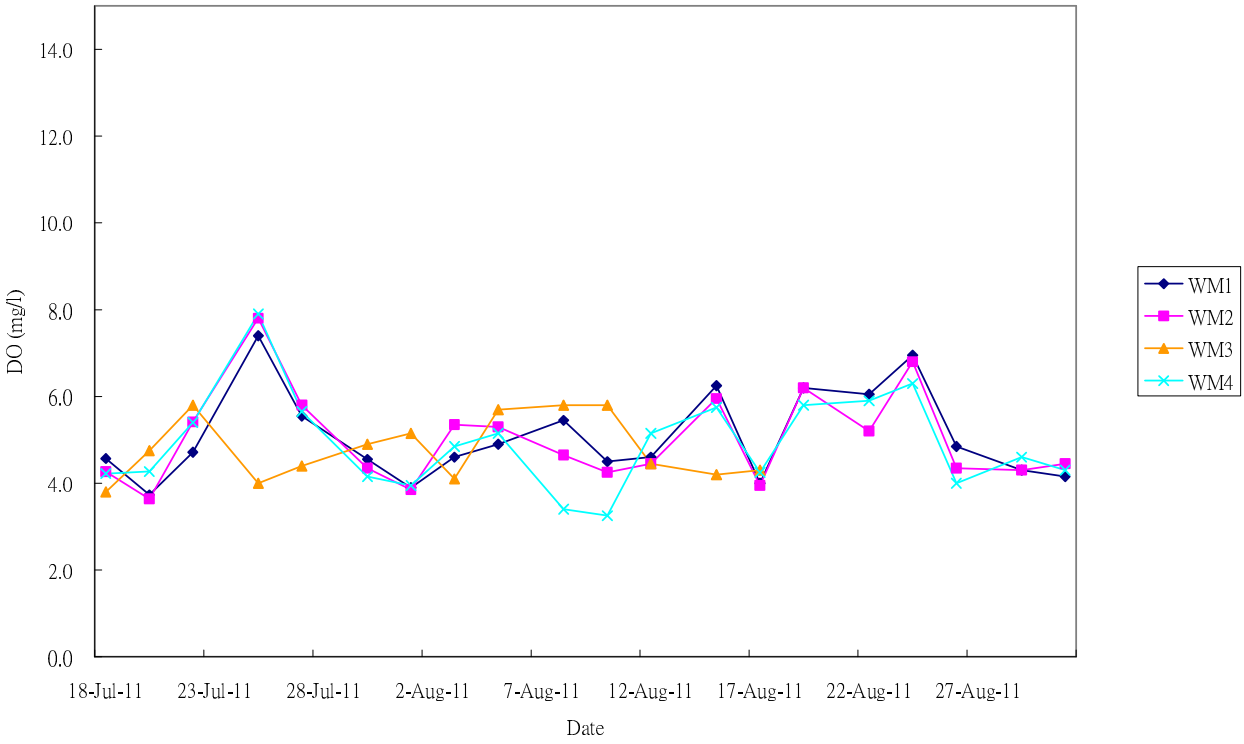


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Suspended Solids in Flood Tide - Depth Average

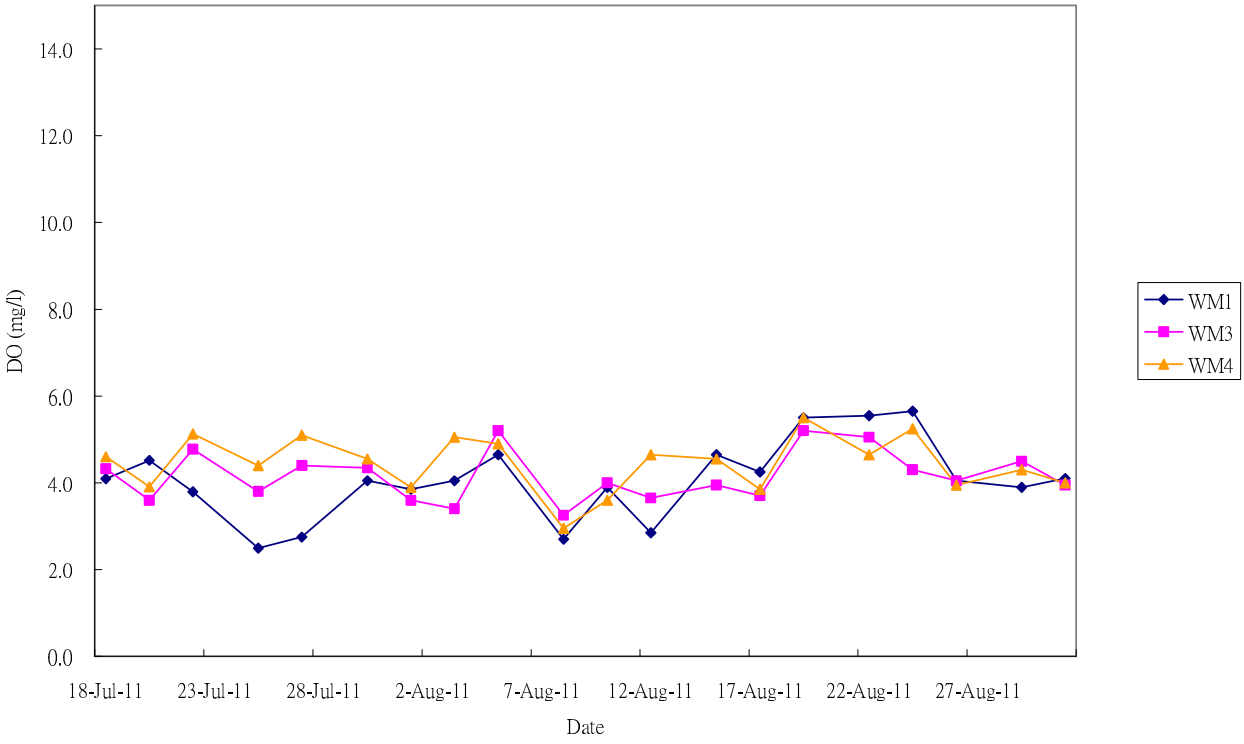


Monitoring Results for Dissolved Oxygen in Ebb Tide - Surface Level

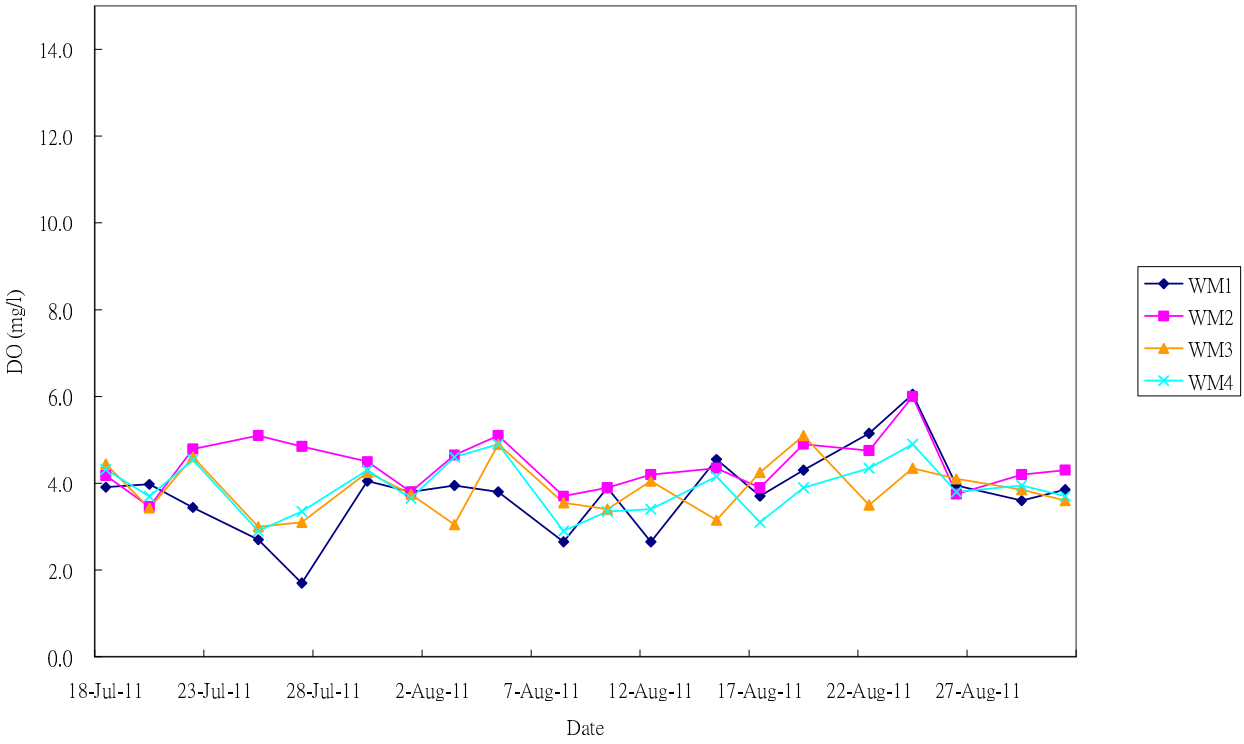


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Dissolved Oxygen in Ebb Tide - Middle Level

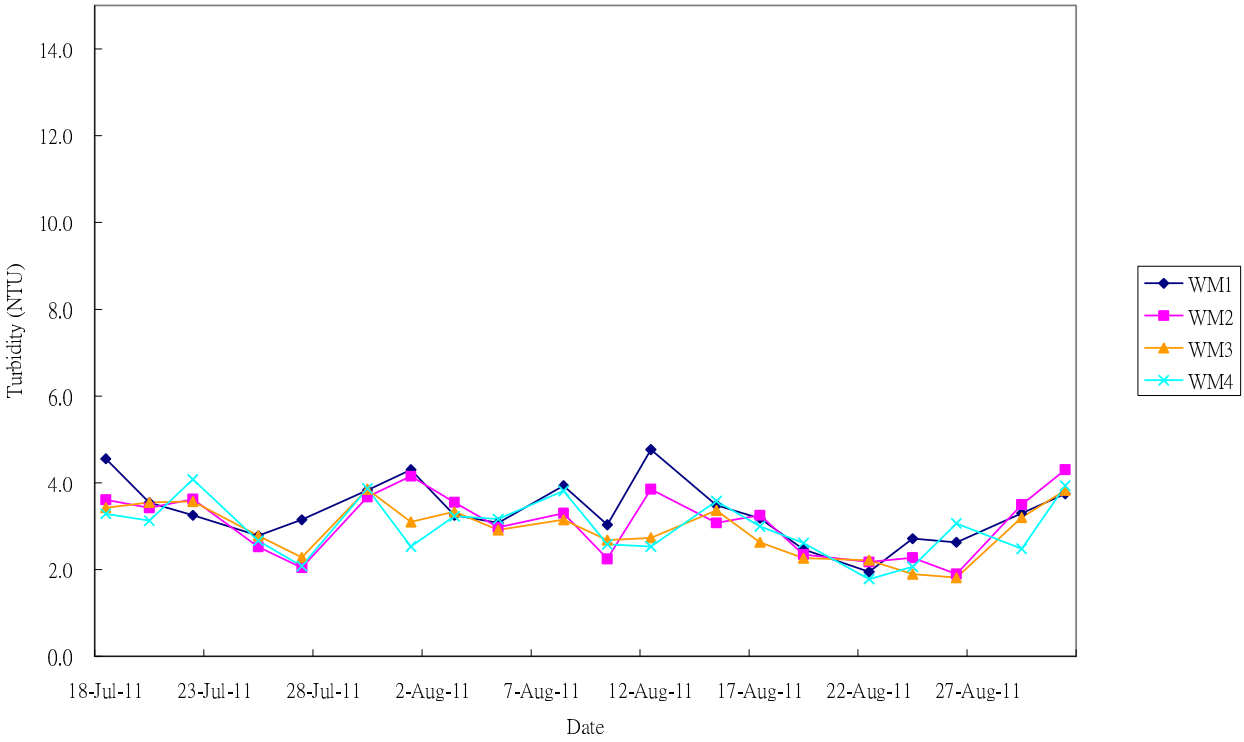


Monitoring Results for Dissolved Oxygen in Ebb Tide - Bottom Level

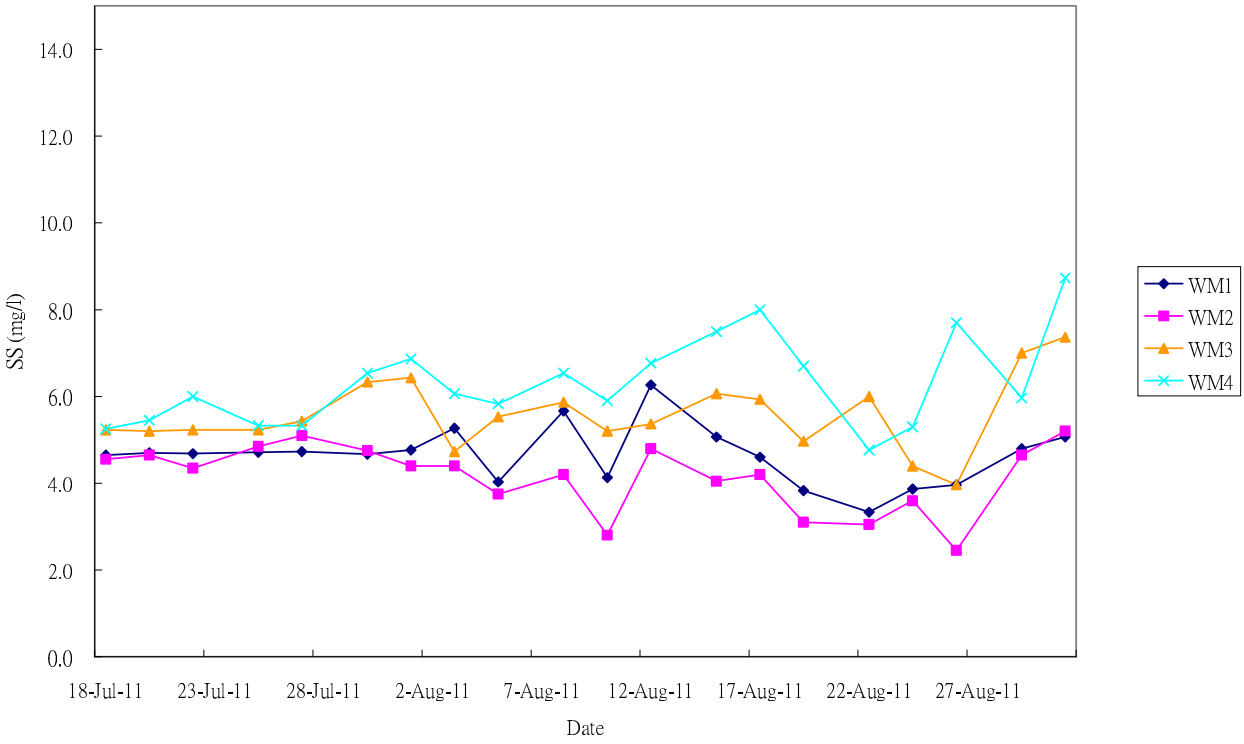


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Turbidity in Ebb Tide - Depth Average



Monitoring Results for Suspended Solids in Ebb Tide - Depth Average



SIL(E) Water Quality Monitoring Data Record Sheet

Date: 1-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Calm
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1935	10.2	*Surface*	26.7	26.8	26.8	8.2	8.2	8.2	28.8	28.7	28.8	4.3	4.2	4.3	60.2	58.8	59.5	3.4	3.3	3.4		8.4	8.6	8.5	
			Middle	26.2	26.1	26.2	8.2	8.2	8.2	29.7	29.8	29.8	4.1	4.1	4.1	57.4	57.6	57.5	3.2	3.3	3.3	3.5	8.8	8.4	8.6	7.0
			Bottom	26.0	26.1	26.1	8.2	8.2	8.2	29.9	30.2	30.1	3.9	3.9	3.9	54.6	53.8	54.2	3.7	3.8	3.8		4.0	4.0	4.0	
WM1	1910	6.6	*Surface*	27.0	26.9	27.0	8.2	8.2	8.2	29.6	29.7	29.7	4.4	4.3	4.4	61.6	60.2	60.9	3.4	3.5	3.5		3.2	3.6	3.4	
			Middle	26.3	26.2	26.3	8.2	8.2	8.2	29.8	29.7	29.8	4.2	4.1	4.2	58.8	57.4	58.1	3.4	3.4	3.4	3.5	4.4	4.4	4.4	5.2
			Bottom	26.1	26.2	26.2	8.2	8.2	8.2	30.2	30.7	30.5	3.9	3.9	3.9	54.6	53.8	54.2	3.7	3.6	3.7		8.0	7.6	7.8	
WM2	1845	5.9	*Surface*	27.0	26.9	27.0	8.2	8.2	8.2	29.8	29.7	29.8	4.2	4.1	4.2	58.8	57.4	58.1	3.4	3.3	3.4		8.6	8.2	8.4	
			Middle																			3.4				6.7
			Bottom	26.6	26.7	26.7	8.1	8.1	8.1	29.9	30.0	30.0	3.8	4.0	3.9	52.4	56.0	54.2	3.5	3.2	3.4		4.8	5.0	4.9	
WM3	1820	8.8	*Surface*	27.3	27.4	27.4	8.1	8.1	8.1	28.6	28.6	28.6	3.9	3.9	3.9	54.6	54.7	54.7	3.0	3.0	3.0		4.2	4.4	4.3	
			Middle	27.0	27.1	27.1	8.2	8.2	8.2	28.9	29.0	29.0	3.8	3.8	3.8	53.2	53.4	53.3	2.9	2.9	2.9	3.0	7.8	8.0	7.9	5.9
			Bottom	26.4	26.4	26.4	8.1	8.1	8.1	29.9	30.0	30.0	3.5	3.6	3.6	49.0	50.4	49.7	3.1	3.0	3.1		5.6	5.6	5.6	
WM4	1755	9.6	*Surface*	27.3	27.2	27.3	8.1	8.1	8.1	29.6	29.7	29.7	4.3	4.4	4.4	60.2	61.6	60.9	2.4	2.4	2.4		6.4	6.8	6.6	
			Middle	26.8	26.9	26.9	8.2	8.2	8.2	29.8	29.8	29.8	4.1	4.2	4.2	57.4	58.8	58.1	2.6	2.6	2.6	2.5	6.0	5.8	5.9	6.2
			Bottom	26.6	26.5	26.6	8.2	8.2	8.2	30.0	30.1	30.1	4.0	4.1	4.1	56.0	57.4	56.7	2.6	2.6	2.6		6.0	6.2	6.1	
CS2	1730	13.4	*Surface*	27.4	27.5	27.5	8.1	8.1	8.1	29.8	29.7	29.8	4.0	3.9	4.0	56.0	54.6	55.3	3.0	3.0	3.0		6.6	7.0	6.8	
			Middle	26.8	26.7	26.8	8.2	8.2	8.2	30.8	30.9	30.9	3.9	4.2	4.1	54.6	58.8	56.7	3.1	3.1	3.1	3.2	4.8	5.0	4.9	6.9
			Bottom	26.3	26.2	26.3	8.2	8.2	8.2	31.8	31.8	31.8	3.7	3.7	3.7	51.8	51.5	51.7	3.4	3.3	3.4		9.0	8.8	8.9	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 1-Aug-11
Tide: Mid-Ebb
Weather: Sunny
Sea Conditions: Calm
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1300	12.0	*Surface*	27.1	27.2	27.2	8.2	8.2	8.2	29.4	29.3	29.4	3.9	4.0	4.0	56.3	57.2	56.8	5.2	5.1	5.2		4.4	4.2	4.3	
			Middle	26.8	26.9	26.9	8.2	8.2	8.2	29.6	29.7	29.7	3.9	3.9	3.9	56.1	56.4	56.3	5.2	5.3	5.3	5.3	8.0	8.4	8.2	6.1
			Bottom	26.3	26.3	26.3	8.2	8.2	8.2	29.9	29.9	29.9	3.9	3.8	3.9	55.3	55.0	55.2	5.4	5.4	5.4		5.8	5.6	5.7	
WM1	1325	13.4	*Surface*	27.1	27.1	27.1	8.2	8.2	8.2	29.2	29.2	29.2	3.9	3.9	3.9	55.1	55.8	55.5	4.0	4.1	4.1		6.4	6.0	6.2	
			Middle	26.7	26.8	26.8	8.2	8.2	8.2	29.6	29.6	29.6	3.9	3.8	3.9	54.7	54.4	54.6	4.3	4.3	4.3	4.3	4.4	4.2	4.3	4.8
			Bottom	26.3	26.3	26.3	8.2	8.2	8.2	29.9	29.9	29.9	3.8	3.8	3.8	54.1	54.3	54.2	4.5	4.6	4.6		3.8	3.8	3.8	
WM2	1348	5.8	*Surface*	27.1	27.1	27.1	8.2	8.2	8.2	29.4	29.5	29.5	3.8	3.9	3.9	54.7	55.4	55.1	4.0	3.9	4.0		5.0	5.2	5.1	
			Middle																			4.2				4.4
			Bottom	26.8	26.9	26.9	8.2	8.2	8.2	29.8	29.7	29.8	3.8	3.8	3.8	54.4	54.7	54.6	4.3	4.4	4.4		3.8	3.6	3.7	
WM3	1405	9.4	*Surface*	27.1	27.1	27.1	8.2	8.2	8.2	29.5	29.6	29.6	3.8	3.8	3.8	53.4	55.0	54.2	2.9	3.0	3.0		5.4	5.6	5.5	
			Middle	26.9	26.9	26.9	8.2	8.2	8.2	29.7	29.7	29.7	3.6	3.6	3.6	51.9	51.5	51.7	3.1	3.1	3.1	3.1	6.4	6.8	6.6	6.4
			Bottom	26.3	26.3	26.3	8.2	8.2	8.2	30.1	30.2	30.2	3.8	3.7	3.8	54.0	51.9	53.0	3.2	3.3	3.3		7.4	7.0	7.2	
WM4	1430	8.6	*Surface*	27.1	27.2	27.2	8.2	8.2	8.2	29.7	29.7	29.7	3.9	4.0	4.0	56.1	57.0	56.6	2.7	2.7	2.7		6.8	7.0	6.9	
			Middle	26.8	26.8	26.8	8.2	8.2	8.2	29.8	29.9	29.9	3.9	3.9	3.9	55.4	54.9	55.2	2.4	2.5	2.5	2.5	6.2	6.2	6.2	6.9
			Bottom	26.5	26.5	26.5	8.2	8.2	8.2	30.1	30.1	30.1	3.6	3.7	3.7	51.7	52.4	52.1	2.4	2.5	2.5		7.6	7.4	7.5	
CS2	1458	10.4	*Surface*	27.2	27.2	27.2	8.2	8.2	8.2	30.0	30.1	30.1	4.1	4.1	4.1	58.6	58.9	58.8	2.6	2.6	2.6		5.4	5.2	5.3	
			Middle	26.8	26.7	26.8	8.2	8.2	8.2	30.1	30.2	30.2	4.0	4.1	4.1	56.8	57.5	57.2	2.6	2.5	2.6	2.6	4.8	4.8	4.8	5.6
			Bottom	26.4	26.3	26.4	8.2	8.2	8.2	30.6	30.7	30.7	3.8	3.9	3.9	54.4	55.1	54.8	2.6	2.7	2.7		6.6	7.0	6.8	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 3-Aug-11
Tide: Mid-Flood
Weather: Fine
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1042	12.0	*Surface*	27.2	27.3	27.3	8.3	8.3	8.3	29.3	29.4	29.4	4.7	4.9	4.8	66.5	67.2	66.9	3.3	3.1	3.2		8..8	9.2	9.2	
			Middle	27.0	27.1	27.1	8.2	8.3	8.3	29.4	29.4	29.4	3.5	3.5	3.5	65.3	65.5	65.4	3.2	3.2	3.2	3.5	7.0	6.6	6.8	6.4
			Bottom	26.8	26.9	26.9	8.2	8.3	8.3	29.5	29.6	29.6	4.3	4.4	4.4	55.4	55.8	55.6	3.9	4.0	4.0		3.4	3.2	3.3	
WM1	1002	17.4	*Surface*	27.6	27.5	27.6	8.3	8.2	8.3	29.5	29.6	29.6	3.3	3.4	3.4	52.6	53.3	53.0	3.4	3.4	3.4		2.0	2.0	2.0	
			Middle	27.2	27.2	27.2	8.3	8.2	8.3	29.5	29.5	29.5	3.8	3.7	3.8	52.4	51.6	52.0	2.9	3.1	3.0	3.1	4.6	4.2	4.4	4.6
			Bottom	26.8	26.8	26.8	8.2	8.2	8.2	29.6	29.5	29.6	3.5	3.6	3.6	53.8	54.2	54.0	3.0	3.0	3.0		7.4	7.2	7.3	
WM2	0935	5.9	*Surface*	27.5	27.5	27.5	8.3	8.3	8.3	29.5	29.6	29.6	4.8	4.9	4.9	55.8	56.5	56.2	3.1	3.2	3.2		8.0	7.8	7.9	
			Middle																			3.2				5.8
			Bottom	27.2	27.3	27.3	8.2	8.3	8.3	29.6	29.6	29.6	3.9	4.0	4.0	52.4	52.7	52.6	3.3	3.1	3.2		3.8	3.6	3.7	
WM3	0904	10.2	*Surface*	27.5	27.5	27.5	8.1	8.2	8.2	29.6	29.5	29.6	3.2	3.3	3.3	58.7	59.1	58.9	2.7	2.8	2.8		5.6	5.4	5.5	
			Middle	27.3	27.3	27.3	8.2	8.1	8.2	29.4	29.4	29.4	3.0	3.1	3.1	56.9	57.5	57.2	2.5	2.4	2.5	2.8	7.2	7.0	7.1	6.0
			Bottom	27.3	27.4	27.4	8.1	8.1	8.1	29.6	29.6	29.6	3.9	3.8	3.9	63.8	63.3	63.6	3.4	3.1	3.3		5.6	5.4	5.5	
WM4	0835	10.4	*Surface*	27.6	27.6	27.6	8.3	8.3	8.3	29.6	29.6	29.6	4.0	3.9	4.0	57.9	57.0	57.5	3.0	2.7	2.9		4.2	4.4	4.3	
			Middle	27.6	27.5	27.6	8.3	8.2	8.3	29.4	29.5	29.5	4.2	4.3	4.3	62.5	63.3	62.9	2.3	2.4	2.4	2.7	6.0	6.2	6.1	5.8
			Bottom	27.2	27.2	27.2	8.2	8.2	8.2	29.7	29.7	29.7	4.0	4.1	4.1	58.2	58.7	58.5	2.8	2.7	2.8		7.0	7.0	7.0	
CS2	0815	14.9	*Surface*	27.7	27.7	27.7	8.2	8.3	8.3	29.7	29.6	29.7	4.4	4.5	4.5	47.9	48.2	48.1	4.3	4.5	4.4		5.8	6.0	5.9	
			Middle	27.1	27.2	27.2	8.2	8.2	8.2	29.7	29.8	29.8	4.0	4.2	4.1	65.2	65.8	65.5	4.3	4.3	4.3	3.9	4.2	4.0	4.1	6.4
			Bottom	27.1	27.1	27.1	8.3	8.2	8.3	29.7	29.7	29.7	4.1	4.0	4.1	52.3	51.9	52.1	3.0	3.0	3.0		9.0	9.4	9.2	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 3-Aug-11
Tide: Mid-Ebb
Weather: Fine
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1300	11.6	*Surface*	27.9	28.0	28.0	8.2	8.2	8.2	29.0	29.0	29.0	6.9	7.0	7.0	94.8	95.1	95.0	3.3	2.9	3.1		3.0	3.0	3.0	
			Middle	27.5	27.5	27.5	8.3	8.3	8.3	29.5	29.6	29.6	5.1	5.0	5.1	80.3	79.6	80.0	3.0	3.1	3.1	2.9	6.8	7.0	6.9	5.0
			Bottom	27.3	27.4	27.4	8.2	8.3	8.3	29.7	29.6	29.7	4.9	4.9	4.9	78.7	79.3	79.0	2.4	2.7	2.6		5.0	5.4	5.2	
WM1	1330	11.4	*Surface*	27.6	27.6	27.6	8.2	8.3	8.3	29.6	29.6	29.6	4.6	4.6	4.6	69.6	69.8	69.7	3.1	3.1	3.1		6.4	6.6	6.5	
			Middle	27.5	27.6	27.6	8.2	8.3	8.3	29.7	29.6	29.7	4.0	4.1	4.1	65.6	66.5	66.1	3.4	3.8	3.6	3.3	4.4	4.2	4.3	5.3
			Bottom	27.3	27.3	27.3	8.2	8.2	8.2	29.6	29.7	29.7	3.9	4.0	4.0	64.8	65.2	65.0	3.0	3.1	3.1		5.0	5.0	5.0	
WM2	1357	5.9	*Surface*	27.5	27.6	27.6	8.3	8.2	8.3	29.6	29.7	29.7	5.3	5.4	5.4	78.9	79.1	79.0	3.5	3.6	3.6		4.2	3.8	4.0	
			Middle																			3.6				4.4
			Bottom	27.5	27.5	27.5	8.1	8.2	8.2	29.7	29.7	29.7	4.7	4.6	4.7	62.3	61.8	62.1	3.5	3.6	3.6		4.8	4.8	4.8	
WM3	1429	9.4	*Surface*	27.4	27.5	27.5	8.2	8.2	8.2	29.7	29.6	29.7	4.7	4.8	4.8	66.9	67.1	67.0	3.5	3.2	3.4		6.6	6.8	6.7	
			Middle	27.4	27.4	27.4	8.1	8.2	8.2	29.7	29.8	29.8	3.4	3.4	3.4	58.2	57.7	58.0	3.3	3.3	3.3	3.3	4.6	4.2	4.4	4.7
			Bottom	27.2	27.3	27.3	8.1	8.2	8.2	29.8	29.7	29.8	3.0	3.1	3.1	47.7	48.5	48.1	3.3	3.4	3.4		3.2	3.0	3.1	
WM4	1456	9.6	*Surface*	27.4	27.4	27.4	8.3	8.3	8.3	29.8	29.7	29.8	4.8	4.9	4.9	72.4	72.9	72.7	3.4	3.3	3.4		5.8	6.0	5.9	
			Middle	27.4	27.3	27.4	8.2	8.3	8.3	29.7	29.7	29.7	5.1	5.0	5.1	74.6	73.2	73.9	3.1	3.0	3.1	3.2	5.8	5.6	5.7	6.1
			Bottom	27.2	27.2	27.2	8.2	8.2	8.2	29.8	29.8	29.8	4.6	4.6	4.6	70.1	70.4	70.3	3.3	3.3	3.3		6.8	6.4	6.6	
CS2	1524	14.0	*Surface*	27.9	28.0	28.0	8.3	8.2	8.3	29.9	29.9	29.9	4.2	4.2	4.2	79.2	78.3	78.8	2.4	2.2	2.3		4.4	4.2	4.3	
			Middle	27.3	27.4	27.4	8.2	8.3	8.3	29.8	29.9	29.9	4.6	4.5	4.6	81.9	81.5	81.7	1.9	2.0	2.0	2.0	3.0	3.4	3.2	4.8
			Bottom	26.9	27.0	27.0	8.3	8.3	8.3	30.0	29.9	30.0	4.2	4.3	4.3	79.7	80.6	80.2	1.8	1.9	1.9		7.0	7.0	7.0	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 5-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Calm
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1102	12.5	*Surface*	28.5	28.4	28.5	8.3	8.3	8.3	28.6	28.6	28.6	6.2	6.1	6.2	94.2	93.7	94.0	2.1	2.2	2.2		5.4	5.6	5.5	
			Middle	28.1	28.0	28.1	8.3	8.3	8.3	29.1	29.1	29.1	5.5	5.5	5.5	83.7	84.1	83.9	2.9	3.0	3.0	2.8	7.8	8.0	7.9	5.8
			Bottom	27.3	27.3	27.3	8.3	8.3	8.3	29.7	29.7	29.7	4.7	4.6	4.7	69.8	69.2	69.5	3.2	3.2	3.2		3.8	4.4	4.1	
WM1	1035	14.9	*Surface*	28.2	28.2	28.2	8.3	8.3	8.3	29.6	29.6	29.6	5.5	5.4	5.5	82.4	81.9	82.2	2.9	2.9	2.9		3.6	3.6	3.6	
			Middle	28.0	28.0	28.0	8.3	8.3	8.3	29.5	29.5	29.5	5.4	5.4	5.4	81.6	81.2	81.4	2.8	2.8	2.8	2.9	3.4	3.6	3.5	4.4
			Bottom	28.3	28.2	28.3	8.3	8.3	8.3	29.4	29.5	29.5	5.4	5.3	5.4	81.4	80.7	81.1	3.0	3.1	3.1		5.8	6.2	6.0	
WM2	1015	5.8	*Surface*	28.5	28.5	28.5	8.3	8.2	8.3	29.7	29.7	29.7	5.3	5.4	5.4	80.7	81.1	80.9	3.1	3.0	3.1		7.8	7.4	7.6	
			Middle																			3.3				6.6
			Bottom	28.2	28.2	28.2	8.3	8.3	8.3	29.4	29.4	29.4	5.2	5.1	5.2	78.6	78.1	78.4	3.5	3.4	3.5		5.8	5.4	5.6	
WM3		8.9	*Surface*	28.6	28.5	28.6	8.3	8.3	8.3	29.2	29.2	29.2	5.3	5.3	5.3	80.3	80.8	80.6	2.5	2.5	2.5		3.8	3.8	3.8	
			Middle	27.9	27.9	27.9	8.3	8.3	8.3	29.4	29.4	29.4	5.5	5.4	5.5	83.2	82.6	82.9	2.9	2.9	2.9	2.8	7.4	8.2	7.8	5.9
			Bottom	28.0	27.9	28.0	8.3	8.3	8.3	30.0	30.0	30.0	4.8	4.8	4.8	72.3	72.7	72.5	3.1	3.1	3.1		6.2	5.8	6.0	
WM4	0921	8.9	*Surface*	28.6	28.6	28.6	8.2	8.2	8.2	29.2	29.2	29.2	5.7	5.6	5.7	87.1	86.5	86.8	3.4	3.3	3.4		8.8	8.4	8.6	
			Middle	28.2	28.1	28.2	8.2	8.2	8.2	29.7	29.7	29.7	5.3	5.3	5.3	79.8	79.4	79.6	2.7	2.9	2.8	3.2	6.0	6.6	6.3	7.8
			Bottom	27.9	27.8	27.9	8.2	8.1	8.2	29.7	29.7	29.7	5.2	5.1	5.2	78.3	77.8	78.1	3.6	3.5	3.6		8.4	8.8	8.6	
CS2	0900	14.9	*Surface*	28.5	28.5	28.5	8.0	7.9	8.0	29.3	29.4	29.4	6.1	6.1	6.1	93.2	92.7	93.0	3.8	3.9	3.9		8.4	8.8	8.6	
			Middle	27.5	27.5	27.5	7.8	7.8	7.8	30.0	30.1	30.1	4.9	4.8	4.9	74.6	74.1	74.4	4.0	4.0	4.0	4.1	5.8	6.2	6.0	8.2
			Bottom	27.0	27.0	27.0	8.0	8.0	8.0	30.5	30.4	30.5	4.1	4.1	4.1	61.6	61.2	61.4	4.4	4.4	4.4		9.8	10.2	10.0	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 5-Aug-11
Tide: Mid-Ebb
Weather: Fine
Sea Conditions: Calm
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1425	14.8	*Surface*	29.3	29.4	29.4	8.3	8.4	8.4	28.9	28.8	28.9	5.5	5.5	5.5	94.5	95.8	95.2	4.9	4.8	4.9		4.8	4.8	4.8	
			Middle	28.1	28.1	28.1	8.3	8.4	8.4	29.6	29.7	29.7	4.5	4.5	4.5	74.4	73.9	74.2	4.3	4.4	4.4	4.0	7.0	7.0	7.0	5.1
			Bottom	27.8	27.7	27.8	8.3	8.3	8.3	29.8	29.9	29.9	4.1	4.1	4.1	64.3	64.7	64.5	2.8	3.0	2.9		3.2	3.6	3.4	
WM1	1450	12.6	*Surface*	28.9	29.0	29.0	8.4	8.4	8.4	29.5	29.5	29.5	4.9	4.9	4.9	85.4	84.8	85.1	2.8	2.9	2.9		4.2	4.4	4.3	
			Middle	29.1	29.0	29.1	8.4	8.4	8.4	29.3	29.4	29.4	4.7	4.6	4.7	79.5	78.6	79.1	3.0	3.2	3.1	3.1	3.8	3.8	3.8	4.0
			Bottom	28.6	28.4	28.5	8.3	8.3	8.3	29.4	29.4	29.4	3.8	3.8	3.8	61.3	59.0	60.2	3.2	3.4	3.3		3.8	4.2	4.0	
WM2	1518	5.4	*Surface*	28.3	28.2	28.3	8.4	8.4	8.4	29.3	29.3	29.3	5.3	5.3	5.3	81.2	82.0	81.6	3.1	3.0	3.1		4.0	3.6	3.8	
			Middle																			3.0				3.8
			Bottom	28.1	28.2	28.2	8.4	8.4	8.4	29.2	29.2	29.2	5.1	5.1	5.1	79.1	79.5	79.3	3.0	2.8	2.9		3.6	3.8	3.7	
WM3	1535	6.8	*Surface*	29.1	29.2	29.2	8.4	8.4	8.4	29.1	29.0	29.1	5.8	5.8	5.8	87.9	88.0	88.0	2.8	2.9	2.9		5.2	5.6	5.4	
			Middle	29.2	29.2	29.2	8.5	8.5	8.5	29.4	29.3	29.4	5.2	5.2	5.2	82.6	82.8	82.7	2.7	2.8	2.8	2.9	5.0	5.8	5.4	5.5
			Bottom	29.0	29.1	29.1	8.4	8.4	8.4	29.5	29.6	29.6	4.9	4.9	4.9	74.1	74.6	74.4	3.1	3.2	3.2		5.6	6.0	5.8	
WM4	1559	9.2	*Surface*	29.0	28.9	29.0	8.5	8.5	8.5	29.3	29.3	29.3	5.1	5.2	5.2	80.8	81.6	81.2	3.4	3.3	3.4		6.0	5.8	5.9	
			Middle	28.4	28.3	28.4	8.4	8.4	8.4	29.4	29.3	29.4	4.9	4.9	4.9	77.6	78.2	77.9	3.2	3.1	3.2	3.2	5.8	5.8	5.8	5.8
			Bottom	28.3	28.2	28.3	8.4	8.4	8.4	29.5	29.5	29.5	4.9	4.9	4.9	75.7	78.0	76.9	3.0	3.0	3.0		6.0	5.6	5.8	
CS2	1629	14.6	*Surface*	29.7	29.8	29.8	8.7	8.7	8.7	28.7	28.8	28.8	6.0	6.1	6.1	90.4	91.2	90.8	4.0	4.0	4.0		6.8	6.4	6.6	
			Middle	28.1	28.2	28.2	8.4	8.3	8.4	29.0	29.1	29.1	5.0	4.9	5.0	76.2	75.4	75.8	4.1	4.2	4.2	4.1	6.4	6.8	6.6	6.5
			Bottom	27.5	27.4	27.5	8.1	8.0	8.1	30.2	30.3	30.3	4.3	4.3	4.3	62.6	62.1	62.4	4.0	4.0	4.0		6.4	6.2	6.3	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 8-Aug-11
Tide: Mid-Flood
Weather: Cloudy
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1527	13.8	*Surface*	29.2	29.3	29.3	8.2	8.2	8.2	28.1	28.2	28.2	8.4	8.1	8.3	127.7	122.2	125.0	5.1	5.3	5.2		8.6	8.6	8.6	
			Middle	27.3	27.4	27.4	8.3	8.2	8.3	29.8	29.8	29.8	5.0	5.2	5.1	75.4	76.9	76.2	3.4	3.7	3.6	4.3	7.6	7.8	7.7	7.0
			Bottom	26.0	26.1	26.1	8.5	8.4	8.5	30.9	30.7	30.8	3.4	3.5	3.5	49.4	50.7	50.1	4.0	4.1	4.1		4.6	5.0	4.8	
WM1	1447	12.5	*Surface*	28.9	29.0	29.0	8.1	8.2	8.2	29.0	28.9	29.0	6.9	6.8	6.9	105.1	103.6	104.4	4.8	5.0	4.9		5.8	6.0	5.9	
			Middle	28.4	28.4	28.4	8.3	8.2	8.3	29.2	29.3	29.3	5.3	5.1	5.2	78.7	76.8	77.8	4.3	4.4	4.4	5.2	5.8	6.0	5.9	7.1
			Bottom	27.7	27.7	27.7	8.3	8.3	8.3	29.7	29.6	29.7	4.0	3.9	4.0	60.7	58.2	59.5	6.1	6.3	6.2		9.2	10.0	9.6	
WM2	1420	5.8	*Surface*	28.7	28.8	28.8	8.2	8.2	8.2	28.7	28.7	28.7	7.0	6.9	7.0	106.4	104.2	105.3	5.6	5.6	5.6		9.4	9.4	9.4	
			Middle																			5.0				7.4
			Bottom	28.7	28.7	28.7	8.4	8.4	8.4	28.8	28.7	28.8	5.2	5.0	5.1	80.0	77.4	78.7	4.5	4.3	4.4		5.6	5.2	5.4	
WM3	1352	9.1	*Surface*	28.8	28.9	28.9	8.2	8.1	8.2	28.8	28.8	28.8	6.2	6.0	6.1	95.9	93.1	94.5	4.2	4.4	4.3		6.6	7.0	6.8	
			Middle	28.9	28.8	28.9	8.3	8.2	8.3	28.9	28.9	28.9	5.4	5.2	5.3	83.7	80.9	82.3	3.4	3.6	3.5	4.8	6.4	6.6	6.5	7.9
			Bottom	28.7	28.8	28.8	8.3	8.2	8.3	28.9	28.9	28.9	5.6	5.8	5.7	84.8	86.3	85.6	6.7	6.4	6.6		10.2	10.4	10.3	
WM4	1323	9.7	*Surface*	29.2	29.3	29.3	8.2	8.3	8.3	28.6	28.7	28.7	5.8	5.2	5.5	90.2	79.9	85.1	4.0	4.3	4.2		8.0	8.0	8.0	
			Middle	29.4	29.4	29.4	8.4	8.3	8.4	26.9	27.0	27.0	5.9	5.8	5.9	90.4	88.5	89.5	3.4	3.5	3.5	4.4	5.2	6.0	5.6	7.9
			Bottom	27.6	27.7	27.7	8.3	8.4	8.4	30.1	30.0	30.1	4.9	4.1	4.5	65.3	58.4	61.9	5.7	5.4	5.6		10.6	9.8	10.2	
CS2	1300	14.9	*Surface*	29.7	29.6	29.7	8.4	8.4	8.4	28.7	28.7	28.7	9.4	9.4	9.4	122.5	118.4	120.5	6.6	6.5	6.6		12.4	12.0	12.2	
			Middle	27.5	27.6	27.6	8.6	8.5	8.6	30.2	30.2	30.2	4.8	4.7	4.8	75.2	73.7	74.5	5.3	5.4	5.4	5.9	9.5	9.6	9.6	10.9
			Bottom	26.2	26.1	26.2	8.5	8.4	8.5	31.1	31.2	31.2	3.0	3.2	3.1	45.4	47.5	46.5	5.9	5.7	5.8		11.0	10.6	10.8	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 8-Aug-11
Tide: Mid-Ebb
Weather: Sunny
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	0800	15.8	*Surface*	29.7	29.7	29.7	8.4	8.4	8.4	27.6	27.7	27.7	5.4	5.3	5.4	74.4	73.8	74.1	2.3	2.8	2.6		3.6	4.2	3.9	
			Middle	28.9	28.8	28.9	8.3	8.4	8.4	28.9	28.8	28.9	4.8	4.8	4.8	69.1	68.8	69.0	4.9	5.0	5.0	4.1	8.0	8.4	8.2	6.3
			Bottom	27.5	27.6	27.6	8.3	8.3	8.3	29.9	29.9	29.9	2.7	2.7	2.7	55.8	56.3	56.1	4.9	4.9	4.9		6.6	6.8	6.7	
WM1	0830	12.1	*Surface*	29.5	29.4	29.5	8.3	8.4	8.4	28.1	28.1	28.1	5.4	5.5	5.5	80.1	80.5	80.3	3.5	3.5	3.5		6.2	5.6	5.9	
			Middle	28.7	28.7	28.7	8.3	8.3	8.3	29.1	29.1	29.1	2.7	2.7	2.7	58.6	57.3	58.0	4.0	4.0	4.0	3.9	6.0	5.4	5.7	5.7
			Bottom	28.4	28.3	28.4	8.3	8.3	8.3	29.3	29.3	29.3	2.6	2.7	2.7	40.9	41.2	41.1	4.2	4.4	4.3		5.2	5.6	5.4	
WM2	0858	5.5	*Surface*	29.4	29.4	29.4	8.5	8.5	8.5	28.3	28.3	28.3	4.7	4.6	4.7	55.3	54.8	55.1	2.6	2.8	2.7		3.2	3.8	3.5	
			Middle																			3.3				4.2
			Bottom	29.2	29.2	29.2	8.5	8.4	8.5	28.3	28.4	28.4	3.7	3.7	3.7	57.9	58.3	58.1	3.9	3.9	3.9		5.0	4.8	4.9	
WM3	0928	8.2	*Surface*	29.8	29.7	29.8	8.6	8.6	8.6	28.4	28.4	28.4	4.0	4.0	4.0	51.5	51.9	51.7	2.6	2.7	2.7		6.2	5.6	5.9	
			Middle	29.4	29.4	29.4	8.5	8.5	8.5	28.6	28.6	28.6	3.3	3.2	3.3	59.5	58.5	59.0	3.4	3.6	3.5	3.2	5.4	5.8	5.6	5.9
			Bottom	29.1	29.2	29.2	8.5	8.6	8.6	28.9	28.9	28.9	3.5	3.6	3.6	54.5	55.7	55.1	3.3	3.3	3.3		6.0	6.2	6.1	
WM4	0955	8.8	*Surface*	29.4	29.5	29.5	8.6	8.6	8.6	28.4	28.4	28.4	3.4	3.4	3.4	53.2	54.1	53.7	3.3	4.2	3.8		6.2	6.6	6.4	
			Middle	29.3	29.3	29.3	8.6	8.6	8.6	28.7	28.8	28.8	2.9	3.0	3.0	46.6	47.4	47.0	4.2	3.4	3.8	3.8	6.6	5.8	6.2	6.5
			Bottom	29.5	29.5	29.5	8.5	8.5	8.5	28.9	28.8	28.9	2.9	2.9	2.9	41.3	42.6	42.0	3.8	4.0	3.9		7.2	6.8	7.0	
CS2	1026	14.2	*Surface*	30.2	30.1	30.2	8.5	8.6	8.6	28.7	28.8	28.8	5.3	5.3	5.3	85.9	86.4	86.2	2.5	2.4	2.5		4.8	4.6	4.7	
			Middle	29.3	29.4	29.4	8.6	8.6	8.6	29.2	29.2	29.2	3.8	3.9	3.9	49.8	50.7	50.3	1.8	2.2	2.0	3.7	3.4	4.0	3.7	6.2
			Bottom	25.8	25.9	25.9	8.3	8.4	8.4	31.6	31.7	31.7	1.6	1.7	1.7	25.8	26.3	26.1	6.6	6.7	6.7		10.0	10.6	10.3	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 10-Aug-11
Tide: Mid-Flood
Weather: Cloudy
Sea Conditions: Great Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1738	12.0	*Surface*	28.7	28.7	28.7	8.2	8.1	8.2	26.6	26.7	26.7	6.0	5.9	6.0	94.3	93.3	93.8	3.7	3.9	3.8		7.6	7.4	7.5	
			Middle	26.9	26.9	26.9	8.2	8.2	8.2	29.7	29.6	29.7	3.7	3.8	3.8	53.9	54.5	54.2	3.6	3.6	3.6	4.3	9.0	8.8	8.9	8.3
			Bottom	26.6	26.6	26.6	8.2	8.2	8.2	30.0	30.0	30.0	3.5	3.4	3.5	45.5	44.0	44.8	5.4	5.7	5.6		8.2	8.8	8.5	
WM1	1656	13.6	*Surface*	28.3	28.3	28.3	8.2	8.2	8.2	25.4	25.3	25.4	3.3	3.2	3.3	47.2	45.2	46.2	3.9	3.8	3.9		4.8	4.6	4.7	
			Middle	27.9	27.9	27.9	8.2	8.2	8.2	28.5	28.5	28.5	3.0	3.0	3.0	44.4	44.0	44.2	3.8	3.7	3.8	3.7	4.6	4.8	4.7	5.3
			Bottom	27.7	27.6	27.7	8.1	8.2	8.2	28.7	28.8	28.8	3.4	3.5	3.5	48.6	49.3	49.0	3.6	3.6	3.6		6.8	6.4	6.6	
WM2	1625	6.0	*Surface*	28.4	28.4	28.4	8.2	8.1	8.2	25.4	25.5	25.5	3.8	3.9	3.9	55.8	57.4	56.6	3.9	4.0	4.0		7.4	7.0	7.2	
			Middle																			3.9				6.3
			Bottom	28.3	28.3	28.3	8.2	8.2	8.2	27.9	27.9	27.9	4.0	3.7	3.9	61.8	55.1	58.5	3.8	3.7	3.8		5.2	5.6	5.4	
WM3	1600	9.0	*Surface*	28.2	28.2	28.2	8.3	8.3	8.3	27.3	27.3	27.3	4.2	4.3	4.3	66.2	65.1	65.7	3.0	2.9	3.0		3.6	3.8	3.7	
			Middle	28.3	28.3	28.3	8.2	8.3	8.3	27.7	27.6	27.7	3.5	3.6	3.6	48.4	49.5	49.0	2.7	2.8	2.8	2.9	6.2	6.0	6.1	5.1
			Bottom	27.8	27.8	27.8	8.2	8.3	8.3	28.8	28.8	28.8	3.3	3.5	3.4	46.6	49.1	47.9	2.9	2.9	2.9		5.6	5.6	5.6	
WM4	1532	8.2	*Surface*	28.3	28.3	28.3	8.3	8.2	8.3	27.4	27.3	27.4	4.8	4.7	4.8	69.5	68.2	68.9	2.8	2.7	2.8		6.0	5.8	5.9	
			Middle	28.2	28.2	28.2	8.3	8.3	8.3	27.4	27.4	27.4	4.0	3.9	4.0	54.9	56.0	55.5	2.6	2.6	2.6	2.7	5.6	5.2	5.4	5.9
			Bottom	28.1	28.1	28.1	8.2	8.3	8.3	28.4	28.4	28.4	2.9	3.0	3.0	40.1	41.6	40.9	2.8	2.8	2.8		6.2	6.4	6.3	
CS2	1505	14.0	*Surface*	28.4	28.4	28.4	8.3	8.3	8.3	27.1	27.2	27.2	6.3	6.2	6.3	89.1	86.9	88.0	4.0	3.9	4.0		7.6	7.4	7.5	
			Middle	27.9	27.9	27.9	8.3	8.3	8.3	28.6	28.6	28.6	4.6	4.8	4.7	49.8	51.1	50.5	3.6	3.7	3.7	3.8	6.0	6.2	6.1	7.5
			Bottom	26.5	26.4	26.5	8.2	8.3	8.3	30.5	30.5	30.5	3.3	3.4	3.4	46.5	47.3	46.9	3.7	3.7	3.7		9.0	9.0	9.0	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 10-Aug-11
Tide: Mid-Ebb
Weather: Rainy
Sea Conditions: Great Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	0830	14.4	*Surface*	28.7	28.6	28.7	8.1	8.1	8.1	27.6	27.5	27.6	6.1	5.4	5.8	93.8	77.7	85.8	4.0	4.1	4.1		6.4	6.4	6.4	
			Middle	27.4	27.5	27.5	8.1	8.2	8.2	29.4	29.4	29.4	5.1	5.1	5.1	73.7	74.3	74.0	3.2	3.4	3.3	4.0	6.0	5.8	5.9	6.4
			Bottom	26.7	26.7	26.7	8.1	8.2	8.2	30.0	30.0	30.0	4.1	3.7	3.9	59.3	53.9	56.6	4.3	4.7	4.5		6.8	7.2	7.0	
WM1	0900	8.2	*Surface*	28.6	28.5	28.6	8.1	8.1	8.1	27.5	27.4	27.5	4.6	4.4	4.5	67.9	56.2	62.1	3.6	3.5	3.6		4.8	4.8	4.8	
			Middle	28.4	28.5	28.5	8.1	8.0	8.1	27.9	27.8	27.9	3.9	3.9	3.9	61.2	58.9	60.1	3.0	3.2	3.1	3.0	4.4	4.6	4.5	4.1
			Bottom	28.5	28.5	28.5	8.0	8.0	8.0	28.2	28.2	28.2	3.9	3.9	3.9	58.0	59.2	58.6	2.4	2.5	2.5		3.0	3.2	3.1	
WM2	0927	6.0	*Surface*	28.4	28.4	28.4	8.1	8.0	8.1	28.0	27.9	28.0	4.4	4.1	4.3	58.3	57.6	58.0	2.3	2.6	2.5		2.8	3.2	3.0	
			Middle																			2.3				2.8
			Bottom	28.5	28.5	28.5	8.1	8.1	8.1	28.2	28.2	28.2	4.0	3.8	3.9	45.6	44.3	45.0	2.0	2.1	2.1		2.4	2.8	2.6	
WM3	0954	8.0	*Surface*	28.4	28.5	28.5	8.1	8.0	8.1	28.2	28.3	28.3	4.5	4.3	4.4	53.4	52.1	52.8	2.4	2.6	2.5		4.6	4.8	4.7	
			Middle	28.5	28.5	28.5	8.0	8.0	8.0	28.4	28.3	28.4	4.1	3.9	4.0	50.2	49.7	50.0	2.3	2.3	2.3	2.7	4.8	5.0	4.9	5.2
			Bottom	27.8	27.9	27.9	7.9	8.0	8.0	28.9	28.9	28.9	3.5	3.3	3.4	38.7	36.4	37.6	3.4	3.1	3.3		6.2	5.8	6.0	
WM4	1022	9.2	*Surface*	28.6	28.6	28.6	8.0	8.0	8.0	28.3	28.3	28.3	3.3	3.2	3.3	48.6	46.5	47.6	2.3	2.3	2.3		5.2	5.0	5.1	
			Middle	28.5	28.5	28.5	8.0	8.1	8.1	28.4	28.3	28.4	3.6	3.6	3.6	53.7	54.1	53.9	3.0	2.8	2.9	2.6	6.4	6.0	6.2	5.9
			Bottom	27.8	27.8	27.8	8.1	8.1	8.1	29.0	29.0	29.0	3.4	3.3	3.4	49.9	49.1	49.5	2.5	2.6	2.6		6.4	6.4	6.4	
CS2	1052	14.6	*Surface*	29.0	28.9	29.0	8.1	8.1	8.1	27.8	27.9	27.9	4.4	4.6	4.5	64.7	68.1	66.4	3.0	3.2	3.1		6.0	6.6	6.3	
			Middle	27.0	27.1	27.1	8.1	8.1	8.1	30.3	30.4	30.4	3.5	3.1	3.3	51.8	45.6	48.7	3.7	3.9	3.8	3.7	7.0	7.2	7.1	6.8
			Bottom	25.3	25.4	25.4	8.0	8.1	8.1	31.9	31.9	31.9	2.3	2.5	2.4	33.7	37.3	35.5	4.3	4.0	4.2		6.8	7.0	6.9	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 12-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1842	10.3	*Surface*	28.9	29.0	29.0	8.5	8.4	8.5	27.1	27.1	27.1	6.7	6.6	6.7	82.7	81.5	82.1	2.8	2.7	2.8		7.2	7.0	7.1	
			Middle	28.2	28.3	28.3	8.5	8.5	8.5	27.7	27.6	27.7	5.6	5.5	5.6	66.5	65.4	66.0	3.2	3.4	3.3	3.5	8.0	8.2	8.1	6.7
			Bottom	27.0	27.0	27.0	8.4	8.5	8.5	29.1	29.2	29.2	3.1	3.1	3.1	48.1	49.7	48.9	4.3	4.5	4.4		4.8	5.2	5.0	
WM1	1800	12.3	*Surface*	28.8	28.7	28.8	8.5	8.5	8.5	27.3	27.2	27.3	4.6	4.7	4.7	72.5	73.3	72.9	2.7	2.8	2.8		3.4	3.6	3.5	
			Middle	28.2	28.2	28.2	8.5	8.4	8.5	27.9	27.9	27.9	4.3	4.4	4.4	63.8	64.7	64.3	3.3	3.2	3.3	3.2	4.0	4.0	4.0	4.8
			Bottom	27.8	27.9	27.9	8.4	8.3	8.4	28.3	28.2	28.3	3.9	3.8	3.9	63.6	62.8	63.2	3.4	3.6	3.5		7.2	6.8	7.0	
WM2	1729	5.9	*Surface*	29.0	29.1	29.1	8.5	8.5	8.5	27.0	27.0	27.0	5.0	4.9	5.0	79.0	78.2	78.6	3.0	2.6	2.8		7.0	6.6	6.8	
			Middle																			3.5				6.1
			Bottom	28.9	28.9	28.9	8.4	8.5	8.5	27.2	27.1	27.2	5.3	5.3	5.3	79.1	79.7	79.4	4.2	4.3	4.3		5.2	5.4	5.3	
WM3	1656	8.8	*Surface*	29.2	29.2	29.2	8.5	8.4	8.5	27.3	27.2	27.3	4.8	4.8	4.8	75.8	76.3	76.1	2.3	2.6	2.5		2.8	3.2	3.0	
			Middle	28.9	28.9	28.9	8.5	8.4	8.5	27.3	27.3	27.3	4.4	4.4	4.4	69.8	70.2	70.0	2.3	2.2	2.3	2.6	6.2	5.8	6.0	4.4
			Bottom	27.9	27.8	27.9	8.4	8.4	8.4	28.8	28.9	28.9	3.3	3.4	3.4	52.5	53.1	52.8	2.7	3.4	3.1		4.0	4.4	4.2	
WM4	1625	10.5	*Surface*	29.5	29.5	29.5	8.4	8.4	8.4	27.2	27.2	27.2	5.1	5.0	5.1	82.0	81.5	81.8	2.8	2.9	2.9		5.4	5.2	5.3	
			Middle	28.5	28.4	28.5	8.4	8.4	8.4	27.9	27.9	27.9	4.9	5.0	5.0	69.1	70.5	69.8	2.6	2.6	2.6	3.0	5.6	5.6	5.6	5.8
			Bottom	26.9	27.0	27.0	8.4	8.3	8.4	30.0	30.0	30.0	3.1	3.1	3.1	48.1	49.2	48.7	3.6	3.4	3.5		6.8	6.2	6.5	
CS2	1600	13.7	*Surface*	30.7	30.7	30.7	8.3	8.2	8.3	26.7	26.7	26.7	8.1	8.1	8.1	119.2	119.8	119.5	1.8	1.8	1.8		4.2	4.6	4.4	
			Middle	28.8	28.9	28.9	8.3	8.3	8.3	28.0	28.0	28.0	5.4	5.3	5.4	88.4	87.9	88.2	2.1	1.8	2.0	3.3	4.8	4.6	4.7	6.5
			Bottom	26.0	25.9	26.0	8.2	8.2	8.2	30.6	30.7	30.7	3.3	3.3	3.3	41.9	42.4	42.2	5.9	6.5	6.2		10.4	10.6	10.5	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 12-Aug-11
Tide: Mid-Ebb
Weather: Sunny
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	0930	15.2	*Surface*	29.2	29.2	29.2	8.4	8.5	8.5	27.7	27.8	27.8	5.0	5.1	5.1	74.6	75.9	75.3	4.6	4.1	4.4		5.6	5.0	5.3	
			Middle	28.5	28.5	28.5	8.4	8.4	8.4	27.6	27.6	27.6	5.1	5.0	5.1	75.3	74.7	75.0	4.6	4.4	4.5	5.5	7.8	7.4	7.6	8.1
			Bottom	25.6	25.6	25.6	8.3	8.4	8.4	30.4	30.4	30.4	2.7	2.8	2.8	33.5	33.7	33.6	7.5	7.6	7.6		11.2	11.4	11.3	
WM1	1005	16.7	*Surface*	28.5	28.6	28.6	8.4	8.3	8.4	27.9	27.9	27.9	4.6	4.6	4.6	66.1	66.7	66.4	4.2	4.0	4.1		5.6	5.2	5.4	
			Middle	27.3	27.2	27.3	8.3	8.3	8.3	29.6	29.7	29.7	2.9	2.8	2.9	45.2	44.8	45.0	4.3	5.0	4.7	4.8	5.2	6.0	5.6	6.3
			Bottom	26.4	26.5	26.5	8.4	8.4	8.4	30.2	30.2	30.2	2.6	2.7	2.7	37.8	38.2	38.0	5.5	5.6	5.6		8.0	7.6	7.8	
WM2	1037	5.6	*Surface*	28.6	28.6	28.6	8.4	8.4	8.4	28.0	28.0	28.0	4.5	4.4	4.5	73.5	72.6	73.1	4.9	5.0	5.0		6.0	6.0	6.0	
			Middle																			3.9				4.8
			Bottom	28.4	28.5	28.5	8.4	8.3	8.4	28.1	28.1	28.1	4.2	4.2	4.2	67.4	66.6	67.0	2.7	2.8	2.8		3.4	3.8	3.6	
WM3	1110	7.8	*Surface*	28.7	28.7	28.7	8.4	8.3	8.4	27.9	27.9	27.9	4.9	4.9	4.9	64.9	65.6	65.3	2.9	2.8	2.9		4.6	4.6	4.6	
			Middle	28.6	28.7	28.7	8.4	8.4	8.4	27.9	27.8	27.9	3.6	3.7	3.7	63.8	64.7	64.3	2.3	2.4	2.4	2.7	5.0	4.6	4.8	5.4
			Bottom	28.1	28.1	28.1	8.3	8.4	8.4	28.3	28.4	28.4	4.1	4.0	4.1	58.0	57.3	57.7	2.9	3.1	3.0		6.4	7.0	6.7	
WM4	1141	9.2	*Surface*	29.0	29.0	29.0	8.4	8.5	8.5	27.5	27.6	27.6	5.1	5.2	5.2	77.2	77.8	77.5	2.2	2.1	2.2		6.4	5.8	6.1	
			Middle	28.6	28.5	28.6	8.5	8.4	8.5	27.8	27.8	27.8	4.7	4.6	4.7	75.5	74.9	75.2	2.4	2.4	2.4	2.5	6.4	6.2	6.3	6.8
			Bottom	27.6	27.6	27.6	8.4	8.5	8.5	28.8	28.9	28.9	3.4	3.4	3.4	51.7	52.2	52.0	3.2	2.9	3.1		8.0	7.8	7.9	
CS2	1215	14.9	*Surface*	29.6	29.5	29.6	8.5	8.5	8.5	27.0	27.0	27.0	6.7	6.5	6.6	74.1	72.8	73.5	2.0	1.8	1.9		4.2	4.4	4.3	
			Middle	27.0	27.0	27.0	8.4	8.5	8.5	30.0	30.0	30.0	3.2	3.2	3.2	54.7	53.6	54.2	2.0	1.9	2.0	2.5	4.2	4.4	4.3	5.8
			Bottom	25.0	25.6	25.3	8.3	8.4	8.4	31.2	31.1	31.2	2.4	2.4	2.4	37.6	38.2	37.9	3.8	3.4	3.6		8.8	8.6	8.7	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 15-Aug-11
Tide: Mid-Flood
Weather: Fine
Sea Conditions: Calm
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1945	10.4	*Surface*	28.3	28.3	28.3	8.0	8.1	8.1	28.1	28.0	28.1	5.4	5.5	5.5	80.3	81.4	80.9	2.6	2.7	2.7		5.6	6.0	5.8	
			Middle	28.0	28.0	28.0	8.1	8.1	8.1	28.2	28.3	28.3	3.8	4.0	3.9	58.4	59.3	58.9	3.0	3.0	3.0	3.0	7.6	7.6	7.6	6.2
			Bottom	27.8	27.7	27.8	8.1	8.1	8.1	28.5	28.6	28.6	4.2	4.0	4.1	62.3	59.6	61.0	3.3	3.3	3.3		5.0	5.2	5.1	
WM1	1908	7.8	*Surface*	28.8	28.8	28.8	8.1	8.1	8.1	27.8	27.8	27.8	6.0	6.0	6.0	90.9	91.3	91.1	3.1	3.1	3.1		3.8	4.0	3.9	
			Middle	28.6	28.6	28.6	8.1	8.1	8.1	28.1	28.1	28.1	4.5	4.6	4.6	67.3	68.1	67.7	2.9	3.0	3.0	3.1	4.6	4.2	4.4	5.0
			Bottom	28.6	28.6	28.6	8.1	8.1	8.1	28.1	28.2	28.2	4.4	4.5	4.5	60.5	61.1	60.8	3.2	3.1	3.2		6.8	6.6	6.7	
WM2	1845	5.9	*Surface*	28.7	28.6	28.7	8.1	8.1	8.1	27.9	28.0	28.0	6.0	5.9	6.0	91.5	90.8	91.2	3.3	3.2	3.3		7.4	7.2	7.3	
			Middle																			3.2				6.3
			Bottom	28.6	28.6	28.6	8.1	8.0	8.1	28.0	28.0	28.0	5.1	4.9	5.0	78.2	76.6	77.4	3.1	3.2	3.2		5.0	5.4	5.2	
WM3	1820	8.6	*Surface*	28.6	28.6	28.6	8.0	8.1	8.1	28.0	28.0	28.0	6.3	6.4	6.4	94.2	95.6	94.9	2.5	2.6	2.6		3.8	4.4	4.1	
			Middle	28.8	28.8	28.8	8.1	8.1	8.1	28.0	28.0	28.0	4.6	4.8	4.7	60.8	62.3	61.6	2.8	2.8	2.8	2.7	7.4	6.8	7.1	5.7
			Bottom	28.4	28.4	28.4	8.1	8.1	8.1	28.7	28.7	28.7	4.1	4.2	4.2	58.9	59.8	59.4	2.7	2.9	2.8		6.0	5.8	5.9	
WM4	1752	9.4	*Surface*	28.7	28.7	28.7	8.1	8.1	8.1	28.2	28.2	28.2	6.7	6.6	6.7	101.7	100.8	101.3	2.5	2.4	2.5		6.4	6.0	6.2	
			Middle	28.5	28.5	28.5	8.1	8.1	8.1	28.3	28.3	28.3	5.4	5.5	5.5	77.2	78.5	77.9	2.5	2.3	2.4	2.6	5.8	5.4	5.6	6.3
			Bottom	28.4	28.4	28.4	8.1	8.0	8.1	28.4	28.4	28.4	4.0	4.0	4.0	58.5	59.0	58.8	2.9	3.0	3.0		7.2	7.2	7.2	
CS2	1720	13.2	*Surface*	29.8	29.7	29.8	8.0	8.1	8.1	28.0	28.0	28.0	6.9	7.0	7.0	109.3	111.2	110.3	2.4	2.3	2.4		5.2	5.2	5.2	
			Middle	29.0	29.0	29.0	8.0	8.0	8.0	28.8	28.7	28.8	4.8	4.7	4.8	72.9	71.2	72.1	2.7	2.6	2.7	2.8	6.0	5.8	5.9	6.5
			Bottom	28.1	28.1	28.1	8.1	8.1	8.1	29.0	29.1	29.1	5.2	5.3	5.3	80.5	81.2	80.9	3.2	3.3	3.3		8.6	8.4	8.5	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 15-Aug-11
Tide: Mid-Ebb
Weather: Fine
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1235	11.2	*Surface*	28.7	28.7	28.7	8.0	8.1	8.1	27.6	27.6	27.6	7.7	7.5	7.6	115.5	114.7	115.1	3.2	3.4	3.3		4.6	4.8	4.7	
			Middle	28.8	28.8	28.8	8.0	8.0	8.0	27.9	27.9	27.9	6.0	5.9	6.0	89.5	88.2	88.9	2.8	2.6	2.7	3.4	5.2	5.0	5.1	5.4
			Bottom	27.6	27.5	27.6	8.0	8.0	8.0	28.8	28.8	28.8	4.4	4.5	4.5	64.6	65.4	65.0	4.2	4.3	4.3		6.4	6.4	6.4	
WM1	1303	12.0	*Surface*	28.5	28.5	28.5	8.0	8.0	8.0	28.0	28.0	28.0	6.3	6.2	6.3	97.1	96.4	96.8	3.0	3.1	3.1		5.2	5.0	5.1	
			Middle	28.2	28.2	28.2	8.0	8.1	8.1	28.3	28.3	28.3	4.7	4.6	4.7	71.4	70.1	70.8	3.6	3.6	3.6	3.5	5.4	5.4	5.4	5.1
			Bottom	28.3	28.4	28.4	8.0	8.0	8.0	28.1	28.1	28.1	4.6	4.5	4.6	69.8	68.3	69.1	3.8	3.8	3.8		4.6	4.8	4.7	
WM2	1330	5.8	*Surface*	28.2	28.2	28.2	8.1	8.0	8.1	28.2	28.2	28.2	5.9	6.0	6.0	84.6	85.3	85.0	3.2	3.4	3.3		4.0	4.4	4.2	
			Middle																			3.1				4.1
			Bottom	28.3	28.2	28.3	8.0	8.1	8.1	28.1	28.1	28.1	4.4	4.3	4.4	67.9	67.2	67.6	2.8	2.9	2.9		4.0	3.8	3.9	
WM3	1350	9.6	*Surface*	28.1	28.1	28.1	8.1	8.1	8.1	28.4	28.4	28.4	5.2	5.1	5.2	77.2	76.8	77.0	3.1	3.1	3.1		4.8	4.8	4.8	
			Middle	28.2	28.2	28.2	8.0	8.1	8.1	28.6	28.6	28.6	4.0	3.9	4.0	58.2	57.0	57.6	3.3	3.2	3.3	3.4	5.4	5.4	5.4	6.1
			Bottom	28.0	27.9	28.0	8.1	8.1	8.1	28.7	28.7	28.7	3.1	3.2	3.2	44.9	46.7	45.8	3.8	3.7	3.8		8.0	8.0	8.0	
WM4	1430	9.8	*Surface*	28.5	28.5	28.5	8.0	8.0	8.0	28.6	28.6	28.6	5.7	5.8	5.8	87.6	88.3	88.0	3.3	3.4	3.4		7.4	7.8	7.6	
			Middle	28.3	28.3	28.3	8.1	8.0	8.1	28.7	28.8	28.8	4.5	4.6	4.6	70.4	71.6	71.0	3.4	3.5	3.5	3.6	8.8	8.8	8.8	7.5
			Bottom	28.1	28.1	28.1	8.1	8.0	8.1	28.7	28.6	28.7	4.1	4.2	4.2	60.2	61.4	60.8	3.9	4.0	4.0		6.0	6.2	6.1	
CS2	1505	14.2	*Surface*	29.4	29.4	29.4	8.0	8.0	8.0	28.2	28.2	28.2	6.9	6.9	6.9	108.3	110.1	109.2	2.3	2.1	2.2		3.6	3.8	3.7	
			Middle	28.9	28.8	28.9	8.0	8.0	8.0	28.6	28.7	28.7	4.5	4.6	4.6	68.5	69.3	68.9	2.3	2.5	2.4	2.5	5.4	5.4	5.4	5.6
			Bottom	28.1	28.2	28.2	8.0	8.1	8.1	28.9	28.9	28.9	5.3	4.9	5.1	80.7	75.4	78.1	3.0	3.0	3.0		7.6	7.6	7.6	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 17-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1024	11.4	*Surface*	28.3	28.4	28.4	8.3	8.3	8.3	28.4	28.4	28.4	4.5	4.4	4.5	67.2	66.7	67.0	2.7	3.0	2.9		6.8	6.8	6.8	
			Middle	27.2	27.2	27.2	8.3	8.2	8.3	29.6	29.6	29.6	3.7	3.7	3.7	58.3	59.6	59.0	2.9	3.1	3.0	3.2	7.8	8.0	7.9	6.8
			Bottom	26.7	26.8	26.8	8.2	8.3	8.3	29.9	30.0	30.0	3.1	3.1	3.1	45.3	45.8	45.6	3.9	3.6	3.8		6.0	5.4	5.7	
WM1	0941	10.9	*Surface*	28.7	28.7	28.7	8.4	8.3	8.4	28.7	28.8	28.8	4.9	4.8	4.9	70.6	69.8	70.2	2.9	2.9	2.9		3.6	4.0	3.8	
			Middle	28.5	28.5	28.5	8.3	8.3	8.3	28.7	28.8	28.8	4.3	4.3	4.3	64.6	65.0	64.8	3.2	2.8	3.0	3.0	4.0	4.0	4.0	4.8
			Bottom	28.3	28.4	28.4	8.3	8.3	8.3	28.8	28.7	28.8	3.8	3.9	3.9	63.3	64.2	63.8	3.0	3.1	3.1		6.6	6.4	6.5	
WM2	0910	5.8	*Surface*	28.7	28.8	28.8	8.2	8.2	8.2	28.6	28.6	28.6	2.9	2.9	2.9	46.2	47.1	46.7	2.2	2.6	2.4		5.8	6.4	6.1	
			Middle																			2.7				5.3
			Bottom	28.4	28.4	28.4	8.3	8.2	8.3	28.8	28.8	28.8	2.4	2.5	2.5	36.2	37.5	36.9	2.7	3.1	2.9		4.0	4.8	4.4	
WM3	0838	9.9	*Surface*	28.5	28.6	28.6	8.3	8.3	8.3	28.7	28.6	28.7	4.1	4.1	4.1	50.6	51.8	51.2	1.7	2.1	1.9		2.4	2.6	2.5	
			Middle	28.2	28.1	28.2	8.3	8.3	8.3	28.7	28.8	28.8	2.3	2.2	2.3	47.3	46.8	47.1	2.2	2.5	2.4	2.1	5.6	6.4	6.0	4.4
			Bottom	27.9	27.8	27.9	8.3	8.2	8.3	29.2	29.2	29.2	2.7	2.7	2.7	43.5	44.4	44.0	2.2	2.1	2.2		4.6	4.6	4.6	
WM4	0805	10.5	*Surface*	28.8	28.7	28.8	8.2	8.3	8.3	28.5	28.5	28.5	4.3	4.4	4.4	49.4	50.3	49.9	2.2	1.9	2.1		5.6	4.8	5.2	
			Middle	28.8	28.8	28.8	8.3	8.2	8.3	28.7	28.8	28.8	2.7	2.7	2.7	46.8	45.9	46.4	1.6	1.6	1.6	2.0	4.2	4.0	4.1	5.0
			Bottom	27.1	27.2	27.2	8.2	8.2	8.2	30.2	30.1	30.2	1.9	1.9	1.9	29.6	29.1	29.4	2.3	2.6	2.5		5.4	6.2	5.8	
CS2	0745	14.9	*Surface*	29.2	29.2	29.2	8.2	8.3	8.3	26.2	26.2	26.2	4.3	4.3	4.3	66.0	66.8	66.4	3.0	2.5	2.8		6.0	5.6	5.8	
			Middle	28.1	28.1	28.1	8.2	8.2	8.2	29.2	29.1	29.2	2.4	2.3	2.4	45.6	44.4	45.0	1.7	2.1	1.9	2.3	4.4	4.4	4.4	5.7
			Bottom	26.8	26.9	26.9	8.1	8.2	8.2	30.4	30.4	30.4	2.6	2.7	2.7	27.5	28.2	27.9	2.1	2.2	2.2		7.0	6.6	6.8	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 17-Aug-11
Tide: Mid-Ebb
Weather: Cloudy
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1230	11.3	*Surface*	28.2	28.3	28.3	8.2	8.2	8.2	28.1	28.1	28.1	7.2	7.3	7.3	95.6	96.3	96.0	3.4	3.4	3.4		3.8	4.2	4.0	
			Middle	27.3	27.3	27.3	8.2	8.3	8.3	29.3	29.3	29.3	4.6	4.5	4.6	67.7	67.2	67.5	2.8	3.0	2.9	3.1	4.4	4.6	4.5	4.1
			Bottom	26.6	26.6	26.6	8.1	8.2	8.2	29.9	30.0	30.0	3.5	3.5	3.5	49.1	50.3	49.7	2.8	3.0	2.9		3.4	4.0	3.7	
WM1	1305	9.6	*Surface*	28.2	28.2	28.2	8.2	8.3	8.3	28.7	28.6	28.7	4.0	4.0	4.0	62.7	63.1	62.9	3.5	2.9	3.2		5.6	4.6	5.1	
			Middle	28.1	28.2	28.2	8.3	8.3	8.3	28.7	28.8	28.8	4.2	4.3	4.3	60.9	61.6	61.3	3.3	2.8	3.1	3.2	4.4	4.0	4.2	4.6
			Bottom	27.4	27.4	27.4	8.3	8.2	8.3	29.3	29.3	29.3	3.7	3.7	3.7	54.3	55.0	54.7	3.6	3.0	3.3		4.4	4.6	4.5	
WM2	1337	5.4	*Surface*	28.0	28.1	28.1	8.3	8.2	8.3	28.8	28.8	28.8	3.9	4.0	4.0	57.5	58.7	58.1	3.0	3.4	3.2		3.8	4.4	4.1	
			Middle																			3.3				4.2
			Bottom	27.8	27.8	27.8	8.2	8.2	8.2	29.1	29.0	29.1	3.9	3.9	3.9	56.0	56.8	56.4	3.4	3.2	3.3		4.4	4.2	4.3	
WM3	1409	9.6	*Surface*	28.0	28.0	28.0	8.3	8.3	8.3	28.7	28.7	28.7	4.1	4.1	4.1	61.6	62.5	62.1	2.3	2.4	2.4		4.6	4.6	4.6	
			Middle	28.0	27.9	28.0	8.3	8.2	8.3	28.7	28.8	28.8	3.7	3.7	3.7	57.4	56.9	57.2	2.7	2.7	2.7	2.6	5.8	6.0	5.9	5.9
			Bottom	27.7	27.8	27.8	8.2	8.2	8.2	29.1	29.0	29.1	4.2	4.3	4.3	53.5	53.9	53.7	2.8	2.9	2.9		7.2	7.4	7.3	
WM4	1442	9.8	*Surface*	28.4	28.5	28.5	8.3	8.3	8.3	28.5	28.5	28.5	4.2	4.3	4.3	69.2	70.4	69.8	3.6	3.3	3.5		9.0	8.2	8.6	
			Middle	28.3	28.3	28.3	8.2	8.3	8.3	28.7	28.6	28.7	3.8	3.9	3.9	63.9	64.4	64.2	2.9	2.5	2.7	3.0	7.0	6.6	6.8	8.0
			Bottom	27.3	27.2	27.3	8.2	8.2	8.2	29.7	29.7	29.7	3.1	3.1	3.1	47.7	48.6	48.2	2.8	2.9	2.9		8.8	8.4	8.6	
CS2	1514	14.4	*Surface*	29.1	29.1	29.1	8.6	8.5	8.6	28.4	28.4	28.4	5.7	5.7	5.7	96.6	95.2	95.9	3.7	2.9	3.3		7.8	6.8	7.3	
			Middle	28.6	28.5	28.6	8.5	8.5	8.5	28.7	28.6	28.7	4.5	4.6	4.6	75.6	75.9	75.8	2.7	2.8	2.8	3.3	5.0	5.6	5.3	7.5
			Bottom	25.5	25.6	25.6	8.1	8.2	8.2	31.3	31.4	31.4	2.4	2.4	2.4	32.1	33.3	32.7	4.0	3.9	4.0		10.0	9.8	9.9	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 19-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1113	11.5	*Surface*	29.4	29.3	29.4	8.6	8.5	8.6	27.6	27.6	27.6	6.8	6.8	6.8	102.5	103.0	102.8	2.5	2.5	2.5		6.2	6.4	6.3	
			Middle	28.6	28.6	28.6	8.5	8.6	8.6	28.1	28.1	28.1	5.6	5.7	5.7	88.4	88.9	88.7	2.1	2.5	2.3	2.4	5.6	6.4	6.0	5.2
			Bottom	28.2	28.3	28.3	8.5	8.5	8.5	28.3	28.4	28.4	5.7	5.7	5.7	87.8	87.2	87.5	2.5	2.4	2.5		3.2	3.2	3.2	
WM1	1030	10.9	*Surface*	29.0	28.9	29.0	8.4	8.4	8.4	27.9	27.9	27.9	6.4	6.3	6.4	90.8	89.1	90.0	1.4	1.3	1.4		2.2	2.0	2.1	
			Middle	28.9	28.9	28.9	8.5	8.4	8.5	28.1	28.1	28.1	5.5	5.5	5.5	83.9	84.5	84.2	2.4	2.4	2.4	2.0	3.2	3.4	3.3	3.4
			Bottom	29.0	29.1	29.1	8.5	8.6	8.6	28.1	28.1	28.1	5.2	5.2	5.2	82.2	82.5	82.4	2.0	2.6	2.3		4.4	5.0	4.7	
WM2	0959	5.9	*Surface*	29.6	29.7	29.7	8.6	8.6	8.6	27.6	27.7	27.7	6.4	6.4	6.4	91.7	92.3	92.0	2.3	2.3	2.3		5.8	5.8	5.8	
			Middle																			2.5				5.4
			Bottom	29.1	29.1	29.1	8.5	8.6	8.6	27.9	27.9	27.9	5.1	5.2	5.2	85.2	86.8	86.0	2.5	2.7	2.6		4.8	5.0	4.9	
WM3	0927	9.9	*Surface*	29.5	29.5	29.5	8.6	8.5	8.6	27.7	27.8	27.8	5.8	5.9	5.9	83.1	83.9	83.5	2.3	2.6	2.5		5.0	5.6	5.3	
			Middle	29.2	29.2	29.2	8.5	8.6	8.6	27.8	27.7	27.8	6.1	6.1	6.1	86.6	85.3	86.0	2.0	2.1	2.1	2.1	5.2	5.4	5.3	5.2
			Bottom	29.2	29.3	29.3	8.6	8.6	8.6	27.7	27.7	27.7	5.7	5.7	5.7	81.8	81.0	81.4	2.1	1.7	1.9		5.4	4.6	5.0	
WM4	0854	9.4	*Surface*	29.3	29.4	29.4	8.6	8.5	8.6	27.5	27.6	27.6	6.2	6.1	6.2	93.4	92.6	93.0	3.0	3.1	3.1		7.6	7.6	7.6	
			Middle	29.2	29.1	29.2	8.5	8.5	8.5	27.8	27.8	27.8	5.7	5.6	5.7	80.8	79.8	80.3	2.0	2.5	2.3	2.5	5.0	5.6	5.3	6.0
			Bottom	29.0	29.1	29.1	8.5	8.5	8.5	28.0	28.1	28.1	4.4	4.4	4.4	79.5	78.8	79.2	2.0	2.2	2.1		4.8	5.4	5.1	
CS2	0830	14.6	*Surface*	29.7	29.6	29.7	8.4	8.4	8.4	27.1	27.2	27.2	8.3	8.4	8.4	100.2	100.5	100.4	3.7	3.5	3.6		7.6	7.2	7.4	
			Middle	29.2	29.3	29.3	8.4	8.5	8.5	27.6	27.6	27.6	5.8	5.9	5.9	91.0	92.1	91.6	2.9	2.9	2.9	3.2	6.2	6.2	6.2	7.2
			Bottom	26.5	26.5	26.5	8.2	8.3	8.3	30.5	30.6	30.6	3.0	3.0	3.0	38.2	37.8	38.0	3.1	3.3	3.2		7.8	8.2	8.0	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 19-Aug-11
Tide: Mid-Ebb
Weather: Fine
Sea Conditions: Great Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1300	14.0	*Surface*	30.0	30.0	30.0	8.7	8.6	8.7	27.8	27.9	27.9	7.8	7.8	7.8	118.3	119.2	118.8	3.5	3.0	3.3		4.2	3.6	3.9	
			Middle	29.6	29.6	29.6	8.7	8.7	8.7	27.7	27.7	27.7	8.7	8.7	8.7	134.0	131.0	132.5	2.6	2.8	2.7	2.8	4.2	4.6	4.4	3.9
			Bottom	28.2	28.2	28.2	8.6	8.6	8.6	28.5	28.5	28.5	6.0	6.0	6.0	88.3	88.7	88.5	2.6	2.5	2.6		3.2	3.4	3.3	
WM1	1335	9.2	*Surface*	29.0	29.1	29.1	8.6	8.6	8.6	28.0	28.0	28.0	6.2	6.2	6.2	93.8	94.0	93.9	2.6	2.6	2.6		4.0	4.4	4.2	
			Middle	28.9	28.8	28.9	8.6	8.7	8.7	28.1	28.1	28.1	5.5	5.5	5.5	86.9	86.2	86.6	2.0	2.0	2.0	2.5	2.8	2.6	2.7	3.8
			Bottom	27.9	27.8	27.9	8.5	8.5	8.5	28.9	28.9	28.9	4.3	4.3	4.3	64.4	64.8	64.6	2.8	2.8	2.8		4.4	4.8	4.6	
WM2	1408	5.6	*Surface*	29.0	29.1	29.1	8.6	8.6	8.6	28.0	28.0	28.0	6.2	6.2	6.2	94.1	94.3	94.2	2.5	2.3	2.4		3.2	3.2	3.2	
			Middle																			2.4				3.1
			Bottom	28.7	28.8	28.8	8.5	8.6	8.6	25.3	25.3	25.3	4.9	4.9	4.9	73.4	74.0	73.7	2.3	2.3	2.3		3.0	3.0	3.0	
WM3	1439	9.6	*Surface*	29.0	29.0	29.0	8.6	8.6	8.6	28.1	28.0	28.1	5.7	5.7	5.7	90.0	89.9	90.0	2.5	2.3	2.4		5.0	5.4	5.2	
			Middle	28.9	28.9	28.9	8.6	8.6	8.6	28.2	28.1	28.2	5.2	5.2	5.2	80.4	81.3	80.9	2.0	2.1	2.1	2.3	4.2	4.6	4.4	5.0
			Bottom	27.8	27.7	27.8	8.4	8.4	8.4	27.6	27.7	27.7	5.1	5.1	5.1	73.2	73.6	73.4	2.3	2.4	2.4		5.2	5.4	5.3	
WM4	1511	9.8	*Surface*	29.3	29.3	29.3	8.7	8.7	8.7	28.1	28.0	28.1	5.8	5.8	5.8	90.4	90.8	90.6	3.1	2.8	3.0		6.6	6.4	6.5	
			Middle	28.6	28.6	28.6	8.5	8.5	8.5	28.3	28.2	28.3	5.5	5.5	5.5	83.7	83.5	83.6	2.4	2.1	2.3	2.6	6.6	6.4	6.5	6.7
			Bottom	27.9	27.9	27.9	8.3	8.3	8.3	29.8	29.9	29.9	3.9	3.9	3.9	48.9	49.0	49.0	2.5	2.8	2.7		7.0	7.2	7.1	
CS2	1541	14.6	*Surface*	30.2	30.1	30.2	8.8	8.8	8.8	27.8	27.8	27.8	8.3	8.3	8.3	108.1	107.9	108.0	2.5	2.9	2.7		5.6	6.0	5.8	
			Middle	28.4	28.4	28.4	8.6	8.6	8.6	28.8	28.8	28.8	5.3	5.3	5.3	82.6	82.7	82.7	2.1	1.8	2.0	2.5	4.4	4.2	4.3	5.8
			Bottom	25.6	25.6	25.6	8.2	8.2	8.2	31.6	31.5	31.6	2.8	2.8	2.8	41.7	42.6	42.2	2.9	2.8	2.9		7.4	7.0	7.2	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 22-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Calm
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1308	13.4	*Surface*	30.3	30.4	30.4	8.4	8.5	8.5	27.8	27.7	27.8	6.5	6.4	6.5	83.6	82.7	83.2	2.3	2.1	2.2		6.0	5.4	5.7	
			Middle	30.3	30.3	30.3	8.5	8.5	8.5	28.0	28.0	28.0	5.7	5.8	5.8	78.1	78.9	78.5	2.2	2.3	2.3	2.5	6.0	6.0	6.0	5.4
			Bottom	28.3	28.4	28.4	8.4	8.5	8.5	29.3	29.4	29.4	4.4	4.5	4.5	60.3	62.1	61.2	2.9	2.9	2.9		4.6	4.6	4.6	
WM1	1230	13.0	*Surface*	30.4	30.5	30.5	8.4	8.4	8.4	27.9	27.9	27.9	5.9	5.9	5.9	75.3	76.2	75.8	2.4	2.8	2.6		3.4	3.6	3.5	
			Middle	30.3	30.3	30.3	8.4	8.4	8.4	27.6	27.5	27.6	5.0	4.9	5.0	67.3	66.5	66.9	2.3	2.2	2.3	2.3	3.6	3.8	3.7	4.6
			Bottom	28.5	28.5	28.5	8.4	8.4	8.4	29.2	29.2	29.2	3.3	3.4	3.4	47.5	48.3	47.9	2.0	2.1	2.1		6.6	6.8	6.7	
WM2	1205	5.9	*Surface*	30.4	30.3	30.4	8.3	8.4	8.4	26.3	26.4	26.4	6.0	6.0	6.0	76.6	75.7	76.2	2.3	2.5	2.4		6.2	6.6	6.4	
			Middle																			2.7				5.6
			Bottom	29.2	29.1	29.2	8.3	8.3	8.3	28.0	27.9	28.0	3.5	3.6	3.6	49.3	50.8	50.1	3.0	3.1	3.1		4.8	4.8	4.8	
WM3	1135	9.6	*Surface*	30.3	30.3	30.3	8.1	8.1	8.1	27.8	27.8	27.8	6.0	6.0	6.0	75.7	76.3	76.0	1.8	1.9	1.9		2.8	3.0	2.9	
			Middle	30.3	30.3	30.3	8.1	8.1	8.1	27.7	27.7	27.7	5.1	4.8	5.0	69.3	59.8	64.6	1.8	1.8	1.8	2.0	4.6	5.0	4.8	4.1
			Bottom	29.8	29.8	29.8	8.0	8.1	8.1	28.7	28.8	28.8	3.1	3.2	3.2	47.8	48.4	48.1	2.3	2.4	2.4		4.4	5.0	4.7	
WM4	1107	9.4	*Surface*	30.1	30.1	30.1	8.0	7.9	8.0	27.9	28.0	28.0	6.1	6.0	6.1	78.1	76.8	77.5	1.7	1.8	1.8		4.8	5.2	5.0	
			Middle	30.1	30.0	30.1	8.1	8.2	8.2	27.9	27.9	27.9	4.3	4.5	4.4	47.8	56.4	52.1	1.7	1.7	1.7	1.6	4.2	4.4	4.3	4.3
			Bottom	28.8	28.8	28.8	8.2	8.2	8.2	28.8	28.9	28.9	3.0	3.1	3.1	46.2	47.3	46.8	1.4	1.5	1.5		3.6	3.6	3.6	
CS2	1035	14.0	*Surface*	30.2	30.2	30.2	8.0	8.0	8.0	28.4	28.5	28.5	6.9	6.9	6.9	87.7	87.0	87.4	4.4	4.2	4.3		9.2	9.4	9.3	
			Middle	28.0	28.0	28.0	8.0	7.9	8.0	29.3	29.4	29.4	4.0	3.9	4.0	52.6	51.7	52.2	2.8	2.9	2.9	3.2	4.6	4.8	4.7	6.8
			Bottom	27.2	27.2	27.2	8.0	8.0	8.0	30.0	30.0	30.0	3.6	3.5	3.6	50.6	49.7	50.2	2.4	2.5	2.5		6.2	6.4	6.3	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 22-Aug-11
Tide: Mid-Ebb
Weather: Sunny
Sea Conditions: Calm
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1500	13.0	*Surface*	31.6	31.5	31.6	8.5	8.5	8.5	28.0	28.0	28.0	6.0	5.9	6.0	81.6	80.8	81.2	3.9	4.2	4.1		4.8	5.4	5.1	
			Middle	29.2	29.2	29.2	8.7	8.6	8.7	28.5	28.5	28.5	6.1	5.8	6.0	90.3	80.1	85.2	3.9	3.7	3.8	3.3	6.2	6.0	6.1	4.8
			Bottom	27.9	27.9	27.9	8.5	8.6	8.6	29.5	29.5	29.5	5.1	5.0	5.1	67.5	66.8	67.2	2.0	2.2	2.1		3.2	3.2	3.2	
WM1	1537	12.6	*Surface*	31.3	31.2	31.3	8.1	8.2	8.2	27.9	27.9	27.9	6.1	6.0	6.1	82.8	81.8	82.3	2.1	2.3	2.2		4.0	4.2	4.1	
			Middle	30.5	30.5	30.5	8.1	8.1	8.1	27.8	27.7	27.8	5.6	5.5	5.6	75.0	73.7	74.4	1.6	1.8	1.7	2.0	2.6	3.0	2.8	3.3
			Bottom	30.2	30.2	30.2	8.1	8.2	8.2	28.0	28.1	28.1	5.3	5.0	5.2	72.4	70.8	71.6	1.9	2.0	2.0		3.0	3.2	3.1	
WM2	1605	5.8	*Surface*	30.7	30.7	30.7	8.2	8.2	8.2	27.3	27.5	27.4	5.4	5.0	5.2	79.0	71.4	75.2	2.5	2.7	2.6		3.2	3.6	3.4	
			Middle																			2.2				3.1
			Bottom	30.4	30.4	30.4	8.2	8.2	8.2	28.0	28.0	28.0	4.7	4.8	4.8	63.6	64.3	64.0	1.7	1.8	1.8		2.6	2.8	2.7	
WM3	1626	9.4	*Surface*	31.3	31.2	31.3	8.4	8.4	8.4	27.9	27.9	27.9	5.8	5.8	5.8	75.0	74.4	74.7	2.5	2.8	2.7		5.4	6.0	5.7	
			Middle	30.2	30.2	30.2	8.5	8.4	8.5	28.1	28.1	28.1	5.1	5.0	5.1	68.8	67.9	68.4	1.7	1.9	1.8	2.2	5.8	6.0	5.9	6.0
			Bottom	28.5	28.5	28.5	8.4	8.4	8.4	29.8	29.8	29.8	3.5	3.5	3.5	51.9	51.1	51.5	2.1	2.3	2.2		6.2	6.6	6.4	
WM4	1655	8.8	*Surface*	30.8	30.9	30.9	8.3	8.3	8.3	27.9	27.9	27.9	5.9	5.9	5.9	75.3	76.2	75.8	1.8	2.0	1.9		4.6	5.0	4.8	
			Middle	30.0	30.0	30.0	8.3	8.4	8.4	28.0	28.1	28.1	4.6	4.7	4.7	70.3	71.1	70.7	1.6	1.7	1.7	1.8	3.6	4.0	3.8	4.8
			Bottom	29.1	29.1	29.1	8.4	8.4	8.4	28.5	28.6	28.6	4.3	4.4	4.4	58.6	59.9	59.3	1.8	1.8	1.8		5.6	5.8	5.7	
CS2	1724	13.8	*Surface*	31.6	31.6	31.6	8.5	8.4	8.5	27.9	28.0	28.0	6.6	6.5	6.6	98.3	97.4	97.9	3.0	3.0	3.0		6.4	6.6	6.5	
			Middle	29.2	29.2	29.2	8.5	8.5	8.5	28.7	28.7	28.7	6.0	5.7	5.9	88.9	84.9	86.9	1.9	2.0	2.0	2.4	3.0	3.4	3.2	5.5
			Bottom	27.8	27.8	27.8	8.5	8.5	8.5	29.9	29.9	29.9	3.6	3.7	3.7	53.6	54.3	54.0	2.1	2.1	2.1		7.0	6.6	6.8	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 24-Aug-11
Tide: Mid-Flood
Weather: Fine
Sea Conditions: Great Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	2059	13.8	*Surface*	29.8	29.8	29.8	8.6	8.6	8.6	27.9	27.9	27.9	8.3	8.3	8.3	117.8	121.2	119.5	2.9	2.9	2.9		6.8	7.4	7.1	
			Middle	29.5	29.5	29.5	8.6	8.6	8.6	28.4	28.5	28.5	6.0	5.8	5.9	87.6	84.7	86.2	3.5	3.5	3.5	3.1	8.8	8.8	8.8	6.8
			Bottom	29.4	29.3	29.4	8.7	8.7	8.7	28.2	28.3	28.3	4.9	4.2	4.6	74.5	63.8	69.2	2.9	2.9	2.9		4.4	4.6	4.5	
WM1	2022	15.2	*Surface*	29.7	29.7	29.7	8.6	8.6	8.6	28.0	28.0	28.0	6.8	6.6	6.7	102.7	99.7	101.2	2.9	2.9	2.9		3.6	3.6	3.6	
			Middle	29.2	29.4	29.3	8.6	8.6	8.6	28.2	28.2	28.2	5.8	5.6	5.7	87.6	85.1	86.4	2.5	2.5	2.5	2.8	3.6	3.6	3.6	4.9
			Bottom	29.1	29.2	29.2	8.5	8.5	8.5	28.3	28.3	28.3	6.2	6.2	6.2	94.2	94.8	94.5	2.8	3.0	2.9		7.2	7.6	7.4	
WM2	1956	6.4	*Surface*	29.9	29.9	29.9	8.6	8.6	8.6	27.9	27.9	27.9	6.6	6.4	6.5	100.3	97.9	99.1	2.6	2.6	2.6		3.2	2.8	3.0	
			Middle																			2.6				3.5
			Bottom	29.4	29.4	29.4	8.7	8.7	8.7	28.0	28.0	28.0	6.0	5.8	5.9	91.2	82.4	86.8	2.5	2.7	2.6		4.0	4.0	4.0	
WM3	1931	8.2	*Surface*	30.0	30.0	30.0	8.7	8.7	8.7	28.4	28.6	28.5	6.2	6.0	6.1	93.0	90.0	91.5	2.0	1.8	1.9		3.0	2.8	2.9	
			Middle	29.6	29.6	29.6	8.5	8.5	8.5	28.6	28.6	28.6	4.8	4.6	4.7	72.0	69.0	70.5	2.6	2.8	2.7	2.5	5.6	6.0	5.8	5.2
			Bottom	29.8	29.8	29.8	8.6	8.6	8.6	28.9	28.9	28.9	4.9	5.1	5.0	73.5	76.5	75.0	3.0	2.8	2.9		6.6	7.2	6.9	
WM4	1900	9.4	*Surface*	30.0	30.2	30.1	8.6	8.6	8.6	28.0	28.0	28.0	6.0	6.0	6.0	93.6	90.6	92.1	2.1	2.1	2.1		4.4	4.8	4.6	
			Middle	29.4	29.6	29.5	8.7	8.7	8.7	28.4	28.6	28.5	5.4	5.6	5.5	81.0	84.0	82.5	2.4	2.6	2.5	2.5	6.0	6.6	6.3	6.1
			Bottom	29.4	29.4	29.4	8.6	8.6	8.6	29.0	28.8	28.9	4.9	4.7	4.8	68.6	69.0	68.8	2.9	2.9	2.9		7.4	7.4	7.4	
CS2	1830	14.6	*Surface*	30.2	30.2	30.2	8.6	8.6	8.6	28.6	28.6	28.6	6.8	6.6	6.7	102.0	92.4	97.2	2.6	2.8	2.7		5.6	6.2	5.9	
			Middle	29.8	29.8	29.8	8.7	8.7	8.7	28.9	28.9	28.9	5.8	5.6	5.7	87.0	85.1	86.1	2.4	2.4	2.4	2.7	4.0	4.0	4.0	5.8
			Bottom	28.4	28.4	28.4	8.7	8.7	8.7	28.4	28.6	28.5	4.9	4.7	4.8	74.5	70.5	72.5	2.8	3.0	2.9		7.2	7.6	7.4	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 24-Aug-11
Tide: Mid-Ebb
Weather: Cloudy
Sea Conditions: Great Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	0830	12.6	*Surface*	30.1	30.1	30.1	8.6	8.6	8.6	27.5	27.5	27.5	8.5	8.1	8.3	127.2	122.6	124.9	2.5	2.6	2.6		4.0	4.2	4.1	
			Middle	29.7	29.6	29.7	8.6	8.7	8.7	28.2	28.3	28.3	5.6	5.4	5.5	87.1	80.8	84.0	4.7	4.8	4.8	4.0	7.4	7.4	7.4	6.2
			Bottom	29.6	29.7	29.7	8.6	8.7	8.7	27.7	27.6	27.7	3.8	3.9	3.9	57.6	58.3	58.0	5.1	4.0	4.6		7.8	6.6	7.2	
WM1	0905	14.0	*Surface*	30.0	30.0	30.0	8.5	8.5	8.5	27.7	27.8	27.8	7.0	6.9	7.0	107.8	106.8	107.3	2.7	2.8	2.8		4.4	4.4	4.4	
			Middle	29.6	29.6	29.6	8.6	8.5	8.6	28.0	28.0	28.0	5.6	5.7	5.7	88.0	90.1	89.1	2.4	2.5	2.5	2.7	3.0	3.2	3.1	3.9
			Bottom	29.8	29.7	29.8	8.6	8.7	8.7	27.8	27.8	27.8	6.3	5.8	6.1	97.4	86.8	92.1	3.0	2.9	3.0		3.8	4.4	4.1	
WM2	0937	5.4	*Surface*	29.8	29.8	29.8	8.6	8.7	8.7	27.8	27.8	27.8	7.0	6.6	6.8	106.8	102.3	104.6	2.1	2.3	2.2		3.2	3.6	3.4	
			Middle																			2.3				3.6
			Bottom	29.6	29.6	29.6	8.6	8.7	8.7	27.8	27.9	27.9	6.1	5.9	6.0	95.3	92.1	93.7	2.3	2.4	2.4		3.8	3.8	3.8	
WM3	1010	7.4	*Surface*	29.8	29.8	29.8	8.7	8.6	8.7	28.0	28.1	28.1	5.8	5.8	5.8	91.0	90.0	90.5	1.4	1.6	1.5		3.2	3.4	3.3	
			Middle	29.7	29.7	29.7	8.5	8.6	8.6	28.1	28.2	28.2	4.2	4.4	4.3	65.4	66.7	66.1	2.0	2.2	2.1	1.9	4.6	4.6	4.6	4.4
			Bottom	29.9	29.9	29.9	8.7	8.6	8.7	28.1	28.1	28.1	4.8	3.9	4.4	73.1	61.0	67.1	2.0	2.2	2.1		5.0	5.6	5.3	
WM4	1042	8.7	*Surface*	29.8	29.8	29.8	8.5	8.6	8.6	27.9	27.9	27.9	6.2	6.4	6.3	96.2	99.5	97.9	1.7	1.8	1.8		4.0	4.2	4.1	
			Middle	29.7	29.8	29.8	8.5	8.5	8.5	28.3	28.2	28.3	5.5	5.0	5.3	84.5	77.5	81.0	2.4	2.4	2.4	2.1	5.6	6.0	5.8	5.3
			Bottom	29.5	29.5	29.5	8.6	8.5	8.6	28.1	28.1	28.1	5.1	4.7	4.9	77.7	72.1	74.9	1.9	2.2	2.1		5.6	6.4	6.0	
CS2	1114	14.3	*Surface*	30.4	30.3	30.4	8.5	8.7	8.6	28.2	28.2	28.2	7.3	7.2	7.3	113.7	112.6	113.2	2.0	2.2	2.1		4.2	4.2	4.2	
			Middle	29.5	29.4	29.5	8.6	8.6	8.6	28.6	28.6	28.6	4.7	5.3	5.0	72.8	81.9	77.4	1.0	1.1	1.1	1.5	2.6	2.8	2.7	3.4
			Bottom	29.7	29.6	29.7	8.7	8.6	8.7	28.3	28.2	28.3	5.2	5.1	5.2	81.9	77.1	79.5	1.2	1.2	1.2		3.2	3.2	3.2	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 26-Aug-11
Tide: Mid-Flood
Weather: Fine
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1729	13.6	*Surface*	29.2	29.1	29.2	8.0	7.9	8.0	29.0	28.9	29.0	4.9	5.0	5.0	71.5	73.5	72.5	3.0	3.2	3.1		7.8	8.2	8.0	
			Middle	28.9	28.9	28.9	8.0	8.0	8.0	28.7	28.6	28.7	4.1	3.9	4.0	59.9	58.1	59.0	2.1	2.3	2.2	2.9	5.6	6.0	5.8	6.3
			Bottom	27.9	28.0	28.0	8.0	8.0	8.0	29.8	29.9	29.9	2.8	3.0	2.9	40.9	44.1	42.5	3.2	3.4	3.3		5.0	5.2	5.1	
WM1	1650	13.4	*Surface*	29.2	29.2	29.2	7.9	7.9	7.9	28.8	28.8	28.8	4.1	4.2	4.2	58.4	59.3	58.9	2.3	2.3	2.3		2.8	3.0	2.9	
			Middle	28.9	28.9	28.9	7.9	8.0	8.0	29.0	29.0	29.0	3.6	3.6	3.6	52.5	52.0	52.3	2.7	2.6	2.7	2.8	3.8	3.6	3.7	4.8
			Bottom	27.1	27.2	27.2	8.0	8.0	8.0	30.4	30.3	30.4	3.2	3.3	3.3	46.5	48.2	47.4	3.4	3.5	3.5		7.6	7.8	7.7	
WM2	1625	5.9	*Surface*	29.2	29.1	29.2	8.0	8.0	8.0	28.7	28.7	28.7	4.0	4.0	4.0	57.2	57.8	57.5	2.4	2.6	2.5		5.8	6.4	6.1	
			Middle																			2.8				5.6
			Bottom	28.8	28.9	28.9	8.0	8.0	8.0	28.9	29.0	29.0	3.4	3.4	3.4	48.8	49.3	49.1	3.1	3.2	3.2		4.8	5.2	5.0	
WM3	1556	8.8	*Surface*	29.7	29.7	29.7	8.0	7.9	8.0	28.8	28.8	28.8	4.1	4.2	4.2	59.8	61.3	60.6	1.9	2.0	2.0		2.6	2.8	2.7	
			Middle	29.6	29.6	29.6	8.0	8.0	8.0	27.4	27.5	27.5	3.1	3.2	3.2	45.1	46.7	45.9	2.2	2.0	2.1	2.3	5.6	5.2	5.4	4.6
			Bottom	29.4	29.3	29.4	7.9	8.0	8.0	28.9	29.0	29.0	3.0	2.9	3.0	42.9	41.4	42.2	2.8	3.0	2.9		5.4	6.0	5.7	
WM4	1527	10.0	*Surface*	29.7	29.8	29.8	8.0	8.0	8.0	28.8	28.7	28.8	4.0	4.0	4.0	58.9	57.5	58.2	1.8	1.7	1.8		4.6	4.2	4.4	
			Middle	29.5	29.4	29.5	8.0	7.9	8.0	29.0	29.0	29.0	3.3	3.4	3.4	47.5	49.3	48.4	1.9	2.0	2.0	2.1	4.4	4.4	4.4	5.0
			Bottom	27.3	27.3	27.3	8.0	8.0	8.0	30.0	30.1	30.1	3.0	2.9	3.0	43.2	41.8	42.5	2.4	2.5	2.5		6.2	6.2	6.2	
CS2	1500	14.2	*Surface*	30.8	30.8	30.8	8.0	8.0	8.0	28.7	28.6	28.7	6.4	6.4	6.4	99.8	99.3	99.6	2.3	2.4	2.4		5.2	5.4	5.3	
			Middle	28.6	28.5	28.6	8.0	7.9	8.0	28.4	28.4	28.4	4.3	4.4	4.4	62.8	63.1	63.0	2.0	2.1	2.1	2.3	4.6	5.0	4.8	5.7
			Bottom	27.1	27.1	27.1	8.0	8.0	8.0	30.7	30.8	30.8	4.2	4.1	4.2	62.4	62.0	62.2	2.6	2.6	2.6		7.0	7.2	7.1	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 26-Aug-11
Tide: Mid-Ebb
Weather: Cloudy
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	0930	13.2	*Surface*	29.4	29.5	29.5	8.0	8.1	8.1	28.2	28.2	28.2	5.5	5.6	5.6	81.1	81.6	81.4	4.4	4.2	4.3		6.2	5.8	6.0	
			Middle	29.3	29.3	29.3	8.0	8.1	8.1	28.3	28.4	28.4	4.4	4.4	4.4	60.2	59.6	59.9	3.2	3.0	3.1	3.7	5.4	5.0	5.2	5.6
			Bottom	27.9	27.9	27.9	8.1	8.1	8.1	29.7	29.8	29.8	3.4	3.5	3.5	51.8	52.2	52.0	3.7	3.5	3.6		5.6	5.6	5.6	
WM1	1005	16.1	*Surface*	29.4	29.4	29.4	8.1	8.1	8.1	28.4	28.4	28.4	5.0	4.7	4.9	72.5	69.9	71.2	2.3	2.2	2.3		4.4	4.2	4.3	
			Middle	28.7	28.6	28.7	8.0	8.1	8.1	29.2	29.1	29.2	4.0	4.1	4.1	58.1	58.7	58.4	3.1	3.1	3.1	2.6	4.2	4.4	4.3	4.0
			Bottom	29.3	29.4	29.4	7.8	7.9	7.9	28.5	28.5	28.5	4.0	3.9	4.0	59.9	58.6	59.3	2.7	2.4	2.6		3.4	3.2	3.3	
WM2	1037	5.6	*Surface*	29.2	29.3	29.3	7.8	7.9	7.9	28.6	28.5	28.6	4.3	4.4	4.4	68.9	69.6	69.3	1.7	2.2	2.0		2.2	2.8	2.5	
			Middle																			1.9				2.5
			Bottom	29.4	29.3	29.4	7.9	7.9	7.9	28.4	28.4	28.4	3.8	3.7	3.8	60.2	59.8	60.0	1.9	1.8	1.9		2.4	2.4	2.4	
WM3	1110	8.3	*Surface*	29.6	29.6	29.6	7.8	7.7	7.8	28.4	28.5	28.5	4.5	4.4	4.5	64.5	64.3	64.4	1.7	1.5	1.6		3.2	2.8	3.0	
			Middle	29.5	29.5	29.5	7.8	7.8	7.8	28.6	28.7	28.7	4.0	4.1	4.1	54.2	55.9	55.1	1.9	2.0	2.0	1.8	4.4	4.4	4.4	4.0
			Bottom	29.4	29.5	29.5	7.7	7.8	7.8	28.5	28.5	28.5	4.1	4.1	4.1	59.8	59.5	59.7	1.9	1.9	1.9		4.4	4.6	4.5	
WM4	1143	8.9	*Surface*	29.5	29.6	29.6	7.8	7.9	7.9	28.4	28.4	28.4	4.0	4.0	4.0	59.4	58.7	59.1	2.0	2.0	2.0		5.2	5.0	5.1	
			Middle	29.5	29.4	29.5	7.8	7.8	7.8	28.6	28.5	28.6	4.0	3.9	4.0	57.9	57.5	57.7	3.2	3.6	3.4	3.1	8.0	9.0	8.5	7.7
			Bottom	29.1	29.1	29.1	7.9	7.9	7.9	28.8	28.7	28.8	3.8	3.8	3.8	53.1	53.9	53.5	3.6	4.0	3.8		9.0	10.0	9.5	
CS2	1215	14.7	*Surface*	30.3	30.3	30.3	8.0	8.1	8.1	28.7	28.6	28.7	6.0	5.9	6.0	91.2	90.7	91.0	2.3	2.3	2.3		5.0	5.0	5.0	
			Middle	30.0	30.1	30.1	8.1	8.0	8.1	29.2	29.2	29.2	4.2	4.2	4.2	59.1	59.6	59.4	2.6	2.5	2.6	2.4	5.6	5.4	5.5	5.5
			Bottom	28.5	28.6	28.6	8.1	8.0	8.1	29.9	29.9	29.9	3.3	3.4	3.4	50.4	51.3	50.9	2.3	2.4	2.4		6.2	6.0	6.1	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 29-Aug-11
Tide: Mid-Flood
Weather: Sunny
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1849	9.3	*Surface*	27.1	27.1	27.1	8.3	8.3	8.3	30.6	30.6	30.6	4.0	4.1	4.1	62.8	63.5	63.2	3.0	3.2	3.1		6.6	7.2	6.9	
			Middle	27.2	27.2	27.2	8.4	8.3	8.4	30.6	30.5	30.6	4.5	4.5	4.5	68.1	67.5	67.8	3.2	3.2	3.2	3.3	8.4	8.6	8.5	6.7
			Bottom	27.0	27.1	27.1	8.3	8.3	8.3	30.7	30.7	30.7	4.5	4.5	4.5	68.3	67.6	68.0	3.5	3.5	3.5		4.8	4.8	4.8	
WM1	1808	13.6	*Surface*	27.5	27.5	27.5	8.3	8.4	8.4	30.6	30.5	30.6	4.2	4.3	4.3	69.7	70.8	70.3	3.3	3.0	3.2		4.4	4.0	4.2	
			Middle	27.3	27.3	27.3	8.4	8.3	8.4	30.6	30.6	30.6	3.9	3.9	3.9	63.1	62.9	63.0	3.5	3.7	3.6	3.5	4.8	5.0	4.9	5.4
			Bottom	27.1	27.1	27.1	8.3	8.3	8.3	30.7	30.7	30.7	4.6	4.6	4.6	66.5	67.4	67.0	3.7	3.7	3.7		7.0	7.4	7.2	
WM2	1740	5.8	*Surface*	28.1	28.0	28.1	8.3	8.2	8.3	29.6	29.5	29.6	4.1	4.1	4.1	59.8	59.1	59.5	3.1	2.9	3.0		7.0	6.6	6.8	
			Middle																			3.5				6.4
			Bottom	27.5	27.5	27.5	8.2	8.3	8.3	30.4	30.4	30.4	4.1	4.0	4.1	58.1	57.4	57.8	3.9	3.9	3.9		6.0	6.0	6.0	
WM3	1710	8.7	*Surface*	27.7	27.7	27.7	8.3	8.2	8.3	30.5	30.5	30.5	4.0	4.0	4.0	54.5	55.2	54.9	2.0	2.3	2.2		3.0	3.6	3.3	
			Middle	27.6	27.7	27.7	8.3	8.3	8.3	30.5	30.6	30.6	3.3	3.4	3.4	51.6	52.3	52.0	2.3	2.3	2.3	2.5	5.8	5.8	5.8	4.7
			Bottom	27.2	27.2	27.2	8.3	8.2	8.3	30.7	30.7	30.7	3.0	3.0	3.0	47.3	47.7	47.5	3.1	3.0	3.1		4.8	5.0	4.9	
WM4	1640	9.7	*Surface*	28.0	28.0	28.0	8.3	8.3	8.3	30.6	30.5	30.6	4.7	4.7	4.7	63.4	62.3	62.9	2.4	2.6	2.5		6.0	6.6	6.3	
			Middle	27.4	27.5	27.5	8.4	8.3	8.4	30.7	30.7	30.7	4.0	3.9	4.0	61.0	60.3	60.7	2.5	2.5	2.5	2.6	6.2	6.2	6.2	6.4
			Bottom	27.5	27.5	27.5	8.3	8.4	8.4	30.7	30.7	30.7	4.3	4.4	4.4	60.8	61.9	61.4	2.6	2.8	2.7		6.6	7.0	6.8	
CS2	1615	13.3	*Surface*	28.8	28.9	28.9	8.0	8.0	8.0	30.2	30.3	30.3	6.4	6.4	6.4	82.7	82.2	82.5	3.4	3.6	3.5		6.8	6.8	6.8	
			Middle	27.6	27.6	27.6	8.2	8.1	8.2	30.7	30.7	30.7	4.7	4.8	4.8	69.9	70.5	70.2	4.0	3.9	4.0	3.6	6.4	6.2	6.3	7.2
			Bottom	27.2	27.2	27.2	8.3	8.3	8.3	30.8	30.9	30.9	4.1	4.1	4.1	61.4	61.9	61.7	3.4	3.4	3.4		8.6	8.6	8.6	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 29-Aug-11
Tide: Mid-Ebb
Weather: Sunny
Sea Conditions: Calm
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1000	11.4	*Surface*	27.8	27.9	27.9	7.9	7.9	7.9	30.7	30.7	30.7	4.8	4.8	4.8	73.8	73.2	73.5	3.4	3.5	3.5		4.2	4.4	4.3	
			Middle	27.4	27.4	27.4	8.2	8.2	8.2	30.7	30.7	30.7	4.6	4.5	4.6	69.2	68.6	68.9	3.8	3.9	3.9	3.8	5.8	6.0	5.9	5.1
			Bottom	25.4	25.4	25.4	8.2	8.2	8.2	31.9	31.9	31.9	3.8	3.7	3.8	54.6	54.1	54.4	4.0	3.9	4.0		5.0	5.0	5.0	
WM1	1020	15.3	*Surface*	28.0	28.0	28.0	8.2	8.2	8.2	30.4	30.4	30.4	4.3	4.3	4.3	65.9	65.5	65.7	3.3	3.2	3.3		5.4	4.8	5.1	
			Middle	27.6	27.6	27.6	8.2	8.2	8.2	30.6	30.6	30.6	3.9	3.9	3.9	59.0	59.4	59.2	3.2	3.2	3.2	3.3	4.0	4.0	4.0	4.8
			Bottom	26.6	26.6	26.6	8.2	8.2	8.2	30.9	30.9	30.9	3.6	3.6	3.6	53.8	54.4	54.1	3.5	3.4	3.5		5.4	5.2	5.3	
WM2	1047	5.2	*Surface*	27.7	27.7	27.7	8.2	8.2	8.2	27.9	27.9	27.9	4.3	4.3	4.3	65.2	65.5	65.4	4.0	3.9	4.0		5.4	5.2	5.3	
			Middle																			3.5				4.7
			Bottom	27.6	27.7	27.7	8.2	8.2	8.2	30.5	30.5	30.5	4.2	4.2	4.2	63.3	63.7	63.5	3.0	3.1	3.1		3.8	4.2	4.0	
WM3	1115	10.8	*Surface*	27.9	27.9	27.9	8.2	8.2	8.2	30.5	30.5	30.5	4.2	4.2	4.2	63.8	64.3	64.1	2.9	2.9	2.9		6.2	6.2	6.2	
			Middle	27.7	27.7	27.7	8.2	8.2	8.2	30.6	30.5	30.6	4.5	4.5	4.5	68.0	68.4	68.2	3.2	3.2	3.2	3.2	7.0	7.2	7.1	7.0
			Bottom	27.0	27.0	27.0	8.2	8.2	8.2	31.3	31.3	31.3	3.8	3.9	3.9	56.4	57.1	56.8	3.5	3.5	3.5		7.8	7.6	7.7	
WM4	1150	9.9	*Surface*	27.9	27.9	27.9	8.2	8.2	8.2	30.5	30.5	30.5	4.6	4.6	4.6	69.4	69.8	69.6	2.4	2.3	2.4		5.6	5.2	5.4	
			Middle	27.7	27.7	27.7	8.3	8.3	8.3	30.6	30.6	30.6	4.3	4.3	4.3	64.4	64.8	64.6	2.2	2.3	2.3	2.5	5.0	5.4	5.2	6.0
			Bottom	26.9	26.9	26.9	8.3	8.2	8.3	31.2	31.1	31.2	4.0	3.9	4.0	60.4	59.8	60.1	2.8	2.9	2.9		7.2	7.4	7.3	
CS2	1230	10.2	*Surface*	28.3	28.3	28.3	8.3	8.3	8.3	30.6	30.6	30.6	5.2	5.2	5.2	79.6	79.1	79.4	2.5	2.5	2.5		5.4	5.4	5.4	
			Middle	27.0	27.0	27.0	8.3	8.3	8.3	31.2	31.2	31.2	4.3	4.4	4.4	65.0	65.6	65.3	2.2	2.2	2.2	2.7	3.4	3.6	3.5	5.4
			Bottom	25.3	25.4	25.4	8.3	8.3	8.3	32.0	32.0	32.0	4.0	4.1	4.1	59.1	59.7	59.4	3.3	3.3	3.3		7.2	7.4	7.3	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 31-Aug-11
Tide: Mid-Flood
Weather: Cloudy
Sea Conditions: Small Wave
Upstream Control Station CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1955	15.2	*Surface*	26.9	26.9	26.9	7.9	8.0	8.0	31.1	31.2	31.2	6.0	6.0	6.0	90.4	91.1	90.8	3.3	3.4	3.4		7.6	7.8	7.7	
			Middle	26.7	26.7	26.7	8.0	8.0	8.0	31.4	31.5	31.5	5.7	5.8	5.8	86.6	87.5	87.1	3.6	3.6	3.6	3.6	9.0	8.8	8.9	7.1
			Bottom	26.5	26.4	26.5	7.9	8.0	8.0	31.8	31.7	31.8	4.9	5.0	5.0	73.8	74.4	74.1	4.0	3.9	4.0		4.8	4.8	4.8	
WM1	1918	14.8	*Surface*	26.7	26.6	26.7	7.8	7.8	7.8	31.2	31.2	31.2	4.7	4.7	4.7	69.1	69.7	69.4	3.1	3.1	3.1		4.0	4.2	4.1	
			Middle	26.8	26.7	26.8	7.9	7.8	7.9	31.3	31.5	31.4	4.4	4.5	4.5	66.7	67.3	67.0	3.5	3.4	3.5	3.4	5.4	5.0	5.2	5.5
			Bottom	26.4	26.3	26.4	7.9	7.9	7.9	31.6	31.7	31.7	4.0	4.0	4.0	59.3	59.9	59.6	3.7	3.8	3.8		7.0	7.4	7.2	
WM2	1842	5.9	*Surface*	26.6	26.7	26.7	7.8	7.8	7.8	31.1	31.1	31.1	4.6	4.5	4.6	68.4	67.7	68.1	2.9	3.0	3.0		7.0	6.8	6.9	
			Middle																			3.2				6.0
			Bottom	26.9	26.9	26.9	7.8	7.9	7.9	31.2	31.3	31.3	4.4	4.3	4.4	66.6	65.7	66.2	3.4	3.5	3.5		5.0	5.2	5.1	
WM3	1815	9.4	*Surface*	26.7	26.7	26.7	7.9	7.9	7.9	31.1	31.2	31.2	4.2	4.3	4.3	63.4	64.2	63.8	3.2	3.2	3.2		4.4	4.4	4.4	
			Middle	26.9	26.9	26.9	7.9	8.0	8.0	31.3	31.4	31.4	4.0	4.1	4.1	60.6	61.5	61.1	3.0	2.8	2.9	3.2	7.4	6.8	7.1	6.2
			Bottom	26.5	26.6	26.6	8.0	8.0	8.0	31.6	31.7	31.7	3.8	3.8	3.8	57.2	58.1	57.7	3.3	3.4	3.4		7.0	7.2	7.1	
WM4	1746	10.4	*Surface*	26.7	26.7	26.7	7.8	7.8	7.8	31.2	31.2	31.2	4.9	4.8	4.9	73.9	72.7	73.3	3.2	3.0	3.1		6.8	6.8	6.8	
			Middle	26.9	27.0	27.0	7.9	7.9	7.9	31.2	31.3	31.3	4.5	4.6	4.6	67.8	69.3	68.6	3.0	2.9	3.0	3.2	6.4	6.6	6.5	7.1
			Bottom	26.5	26.5	26.5	7.9	8.0	8.0	31.6	31.6	31.6	3.9	3.9	3.9	58.6	59.1	58.9	3.5	3.4	3.5		8.0	7.8	7.9	
CS2	1715	14.8	*Surface*	26.6	26.7	26.7	8.0	8.0	8.0	31.3	31.2	31.3	5.8	5.9	5.9	86.5	88.3	87.4	2.9	2.8	2.9		6.4	6.0	6.2	
			Middle	26.9	26.9	26.9	7.9	8.0	8.0	31.7	31.7	31.7	5.2	5.3	5.3	78.1	79.7	78.9	3.0	3.1	3.1	3.3	6.4	6.4	6.4	7.2
			Bottom	26.4	26.5	26.5	8.0	8.0	8.0	31.9	31.9	31.9	4.9	4.9	4.9	74.2	73.6	73.9	3.8	3.9	3.9		9.0	9.2	9.1	

Remark or Obsevation:

Note: * Average
** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 31-Aug-11
Tide: Mid-Ebb
Weather: Cloudy
Sea Conditions: Small Wave
Upstream Control Station CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperrature (°C)			pH			Salinity (ppt)			DO (mg/l)			DO Saturation (%)			Turbidity (NTU)				Suspended Solids (mg/l)			
				1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	1	2	Ave.*	D.A.**	1	2	Ave.*	D.A.**
CS1	1300	14.8	*Surface*	27.0	27.1	27.1	7.9	8.0	8.0	31.0	31.1	31.1	6.9	6.9	6.9	103.4	102.6	103.0	4.0	4.2	4.1		5.2	5.4	5.3	
			Middle	26.9	26.9	26.9	7.9	7.9	7.9	31.3	31.4	31.4	5.8	5.8	5.8	87.2	87.8	87.5	4.1	4.3	4.2	4.3	5.6	6.0	5.8	5.7
			Bottom	26.6	26.5	26.6	8.0	7.9	8.0	31.5	31.7	31.6	4.9	4.8	4.9	73.4	72.1	72.8	4.6	4.7	4.7		5.8	6.0	5.9	
WM1	1330	14.4	*Surface*	27.2	27.1	27.2	7.6	7.7	7.7	31.3	31.2	31.3	4.1	4.2	4.2	60.3	61.1	60.7	3.5	3.4	3.5		5.4	5.0	5.2	
			Middle	26.8	26.8	26.8	7.8	7.7	7.8	31.3	31.4	31.4	4.2	4.0	4.1	61.3	59.4	60.4	3.7	3.7	3.7	3.8	4.6	4.8	4.7	5.1
			Bottom	26.5	26.5	26.5	7.8	7.8	7.8	31.6	31.6	31.6	3.9	3.8	3.9	58.7	57.9	58.3	4.0	4.2	4.1		5.2	5.4	5.3	
WM2	1400	5.6	*Surface*	26.8	26.9	26.9	7.7	7.7	7.7	31.1	31.2	31.2	4.5	4.4	4.5	67.1	66.4	66.8	3.9	4.0	4.0		4.4	4.8	4.6	
			Middle																			4.3				5.2
			Bottom	27.0	27.0	27.0	7.6	7.7	7.7	31.2	31.2	31.2	4.2	4.4	4.3	64.3	66.1	65.2	4.7	4.6	4.7		5.8	5.8	5.8	
WM3	1425	8.8	*Surface*	26.9	26.9	26.9	7.9	8.0	8.0	31.2	31.3	31.3	4.2	4.4	4.3	61.9	66.2	64.1	3.7	3.8	3.8		6.2	6.4	6.3	
			Middle	26.9	26.8	26.9	7.9	7.9	7.9	31.3	31.3	31.3	3.9	4.0	4.0	57.9	60.3	59.1	3.6	3.5	3.6	3.8	6.8	6.4	6.6	7.4
			Bottom	26.6	26.6	26.6	7.9	8.0	8.0	31.5	31.6	31.6	3.6	3.6	3.6	55.8	55.1	55.5	4.3	4.1	4.2		9.2	9.2	9.2	
WM4	1455	10.2	*Surface*	27.0	27.0	27.0	7.7	7.8	7.8	31.1	31.0	31.1	4.3	4.3	4.3	65.8	65.3	65.6	3.8	3.8	3.8		7.8	8.0	7.9	
			Middle	27.0	27.0	27.0	7.9	7.8	7.9	31.2	31.2	31.2	4.0	4.0	4.0	60.1	59.6	59.9	3.5	3.6	3.6	3.9	7.8	8.2	8.0	8.7
			Bottom	26.5	26.6	26.6	7.9	7.9	7.9	31.5	31.5	31.5	3.7	3.7	3.7	56.1	56.7	56.4	4.4	4.5	4.5		10.4	10.2	10.3	
CS2	1538	14.0	*Surface*	27.1	27.2	27.2	7.9	8.0	8.0	31.4	31.4	31.4	6.7	6.6	6.7	101.3	99.6	100.5	2.4	2.6	2.5		5.4	6.0	5.7	
			Middle	26.9	26.9	26.9	8.0	8.0	8.0	31.7	31.6	31.7	5.6	5.7	5.7	84.2	85.7	85.0	3.3	3.1	3.2	3.3	7.0	6.6	6.8	7.2
			Bottom	26.5	26.5	26.5	8.0	7.9	8.0	31.8	31.9	31.9	4.9	5.0	5.0	73.7	75.3	74.5	4.0	4.2	4.1		9.0	9.0	9.0	

Remark or Obsevation:

Note: * Average
** Depth Average

APPENDIX E

Review of Exceedance in Water Quality Monitoring

Sampling Date	Tidal Mode	Parameter			Remarks
		DO	Turbidity	SS	
1 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
3 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
5 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.

Sampling Date	Tidal Mode	Parameter			Remarks
		DO	Turbidity	SS	
8 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom), except surface level at WM1, WM2, WM3 for mid-flood. The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
10 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
12 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.

Sampling Date	Tidal Mode	Parameter			Remarks
		DO	Turbidity	SS	
15 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom), except surface level at WM1, WM3, WM4 for mid-flood & surface level at WM1, WM2 for mid-ebb. The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
17 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
19 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom), except surface level at WM1, WM2, WM4 for mid-flood & surface level at WM1, WM2 for mid-ebb. The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
22 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom), except surface level

Sampling Date	Tidal Mode	Parameter			Remarks
		DO	Turbidity	SS	
					at WM1, WM2, ,WM3, WM4 for mid-flood & surface level at WM1 for mid-ebb. The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
24 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at WM1 (Middle level), WM2 (Botton level), WM3 (Middle & Bottom levels), WM4 (Middle & Bottom levels) for mid-flood and at WM1 (Middle level), WM3 (Surface, Middle and Bottom levels), WM4 (Middle & Bottom levels) for mid-ebb. The exceedances have been investigated and were considered not related to the project works as the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
26 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
29 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom).

Sampling Date	Tidal Mode	Parameter			Remarks
		DO	Turbidity	SS	
					The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.
31 Aug 2011	Mid-Ebb & Mid-Flood	AL, LL	-	-	Exceedances of Action/ Limit Levels were recorded at all monitoring stations (WM1, WM2, WM3, WM4) & water depth (Surface, Middle and Bottom). The exceedances have been investigated and were considered not related to the project works as the DO levels were low among all monitoring stations, including the control stations, and the silt curtain has been inspected and was functioned properly. As such, the natural fluctuation of the marine water quality has been considered attributed to the low DO levels.

Note: AL – Action Level ; LL – Limit Level