

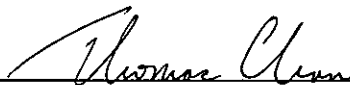
MTR Corporation Limited

South Island Line (East)

Monthly EM&A Report No. 10

May 2012

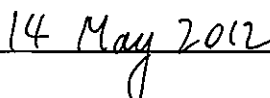
Verified by:



Thomas Chan

Independent Environmental Checker

Date:



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South Island Line (East)

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Certified by:

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Richard Kwan

Environmental Team Leader

Date: 14 MAY 2012

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 tenth Monthly EM&A Report for SIL(E) Project. The Report presents the results of EM&A works undertaken during the period of 1 April 2012 to 30 April 2012. The major construction activities in the reporting period included piling, excavation and slope stabilization works as well as blasting works at WCH depot site.

Impact monitoring for air quality, noise and water quality were conducted in the reporting period. No exceedance was found and there was no breach of Action / Limit Levels for air quality and water quality impact monitoring.

Continuous noise monitoring at station CN4 was carried out in accordance with the requirements under the Updated EM&A Manual. Exceedances to the updated noise prediction in the construction noise mitigation measures plan were recorded on 2, 3 and 12 April 2012. Investigation and necessary remedial action(s) have also been conducted following the procedures specified in the Event and Action plan under the Updated EM&A Manual.

Two noise complaints were referred by EPD in 3 and 30 April 2012. For the first complaint, investigations have been carried out in accordance with the EM&A Manual and investigation report has been sent to EPD. For second complaints, investigation will be carried out in accordance with the EM&A Manual and investigation report will be sent to EPD. No 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 tenth 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 30 April 2012.

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	<ul style="list-style-type: none">- ISL/TWL cofferdam- Utility works at Rodney Street- Infeed Substation Modification Works- ADD demolition work- Secant piles, diaphragm wall and plunge columns works- Construction of site office- Construction of SCR Room- Excavation and ELS for SEE Shaft- Covered walkway at Harcourt Road- Temporary CITIC footbridge diversion

Contract No. 902

Site	Construction Activities
Hong Kong Park Ventilation Shaft	<ul style="list-style-type: none"> - Construction for plant room - Utility diversion - Temporary traffic arrangement - Provision of temporary RCP and DG stores to LCSD - Demolition of existing RCP building
Nam Fung Portal	<ul style="list-style-type: none"> - Temporary haul road construction - Pile cap excavation and construction - Pier construction - Drilling and grouting works for soft ground tunnel - ELS works (Shaft portion) - Erection of site hoarding and noise barrier - Relocation of temporary site office - Trenches for Town Gas along Nam Fung Road
Chung Hom Shan Magazine	<ul style="list-style-type: none"> - Operation of Magazine
Telegraph Bay Barging Point	<ul style="list-style-type: none"> - Site preparation - Construction of the barging ramp footings and structural steel works - Construction of noise enclosure

Contract No. 903

Site	Construction Activities
OCP Station	<ul style="list-style-type: none"> - Bored piling - Formation / Groundwork for OCP substructure - Pile caps for OCP footbridge
WCH Station	<ul style="list-style-type: none"> - Bored piling - Construction of new nullah wall - Construction of Station Pad Footing - Nullah deck construction - Utility diversions - Columns construction
Zone B (Ex-Canadian Site to OCP Station)	<ul style="list-style-type: none"> - Pier and Cross Head construction
Zone C (OCP Station to WCH Station)	<ul style="list-style-type: none"> - Bored piling - Pile cap construction - Slope stabilisation - Construction of nullah wall
Zone D (WCH Station to WCH nullah)	<ul style="list-style-type: none"> - Gravity wall - Pile caps - Bored piling
Zone E (Aberdeen Channel)	<ul style="list-style-type: none"> - Pier stem - Bored piling

Contract No. 904

Site	Construction Activities
Ex-Harbour Mission School	<ul style="list-style-type: none"> - Pipe piling and excavation - Installation of ground anchor - Tunnel box construction - Joint bay and duct back excavation outside Sham Wan Tower
Lee Wing Street	<ul style="list-style-type: none"> - Tunnel portal excavation - Conveyor footing along Lee Nam Road - Drill and blast at Adit Tunnel
LET Station Entrance A	<ul style="list-style-type: none"> - Site clearance and formation - Drainage construction - Excavation

Site	Construction Activities
	- Piling works
LET Station Entrance B	- Site clearance and preparation - Construction of retaining wall, manhole and pipe laying - Formation of new bus bay
South Horizons	- Water mains diversion - Installation of pipe piles - Grouting works - Trial trench excavation
South Horizons Plant Building	- Site clearance and preparation - Haul road excavation - Shotcreting - Soil nailing works
Project site office at Ap Lei Chau Bridge Playground	- Operation of project site office

Contract No. 907

Site	Construction Activities
WCH Depot	- Site formation - Pipe piling - Blasting - Utility diversions
Lee Nam Road Barging Facility	- Barging facility in operation

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	- ISL/TWL cofferdam - Utility works at Rodney Street - Infeed Substation Modification Works - ADD demolition work - Secant piles, diaphragm wall and plunge columns works - Construction of site office - Construction of SCR Room - Excavation and ELS for SEE Shaft - Covered walkway at Harcourt Road - Temporary CITIC footbridge diversion

Contract No. 902

Site	Construction Activities
Hong Kong Park Ventilation Shaft	- Construction for plant room - Utility diversion - Temporary traffic arrangement - Provision of temporary RCP and DG stores to LCSD - Demolition of existing RCP building - Installation of tie-back anchors - Pipe piling for the shaft at ground level

Site	Construction Activities
Nam Fung Portal	<ul style="list-style-type: none"> - Temporary haul road construction - Pile cap excavation and construction - Pier construction - Drilling and grouting works for soft ground tunnel - ELS works (Shaft portion) - Erection of site hoarding and noise barrier - Relocation of temporary site office - Trenches for Town Gas along Nam Fung Road
Chung Hom Shan Magazine	<ul style="list-style-type: none"> - Operation of Magazine
Telegraph Bay Barging Point	<ul style="list-style-type: none"> - Construction of the barging ramp footings and structural steel works - Construction of noise enclosure

Contract No. 903

Site	Construction Activities
OCP Station	<ul style="list-style-type: none"> - Bored piling - Formation / Groundwork for OCP substructure - Pile cap for OCP footbridge construction
WCH Station	<ul style="list-style-type: none"> - Construction of station pad footings / depot bored piling - New south nullah wall excavation - Construction of Columns - Utility diversions
Zone B (Ex-Canadian Site to OCP Station)	<ul style="list-style-type: none"> - Pier construction - Segment erection - Pier and cross head construction
Zone C (OCP Station to WCH Station)	<ul style="list-style-type: none"> - Pile Cap construction - Pier / portal construction - Construction of nullah wall - Nullah deck construction - Slope stabilization - Mini piling
Zone D (WCH Station to WCH nullah)	<ul style="list-style-type: none"> - Bored piling - Pile caps - Gravity wall - Piers construction
Zone E (Aberdeen Channel)	<ul style="list-style-type: none"> - Pile cap construction - Pier construction - Bored piling - Pier Stem - Preparation for span construction

Contract No. 904

Site	Construction Activities
Ex-Harbour Mission School	<ul style="list-style-type: none"> - Pipe piling and excavation - Installation of ground anchor - Tunnel box construction - Joint bay and duct back excavation outside Sham Wan Tower - Removal of central media at Ap Lei Chau Bridge Road - Trench excavation
Lee Wing Street	<ul style="list-style-type: none"> - Tunnel portal excavation - Conveyor footing along Lee Nam Road - Drill and blast at Adit Tunnel
LET Station Entrance A	<ul style="list-style-type: none"> - Site clearance and formation

Site	Construction Activities
	<ul style="list-style-type: none"> - Drainage construction - Excavation - Piling works
LET Station Entrance B	<ul style="list-style-type: none"> - Site clearance and preparation - Construction of retaining wall, manhole and pipe laying - Trench excavation
South Horizons	<ul style="list-style-type: none"> - Water mains diversion - Installation of pipe piles - Grouting works - Trial trench excavation
South Horizons Plant Building	<ul style="list-style-type: none"> - Site clearance and preparation - Haul road excavation - Shotcreting - Soil nailing works
Project site office at Ap Lei Chau Bridge Playground	<ul style="list-style-type: none"> - Operation of project site office

Contract No. 907

Site	Construction Activities
WCH Depot	<ul style="list-style-type: none"> - Site formation - Excavation of piling cap - Pipe piling - Blasting - Utilities diversions
Lee Nam Road Barging Facility	<ul style="list-style-type: none"> - Barging facility in operation

2.4 Project Areas and Environmental Monitoring Locations

The works areas of the Project are shown in **Figures 1 and 2**. The existing barging point at Telegraph Bay for the DSD's HKWDT project will be taken over and used for the SIL(E) project. Impact dust and noise monitoring will be carried out at designated monitoring locations during operation of the Telegraph Bay barging point.

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)

ID	Monitoring Station
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.

In accordance with the Updated EM&A Manual, additional monitoring in term of continuous monitoring of LAeq, 30min noise levels should be conducted at South Horizons Phase IV Block 25 Dover Court station CN4 during normal construction working hour (0700-1900 Monday to Saturday) throughout the construction period with the residual impact predicted at the corresponding NSR (SOH8) as presented in the Construction Noise Mitigation Measures Plan submitted under the Environmental Permit.

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 States 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. The calibration records are shown 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 ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)	Compliance (Yes/No)	Weather Condition
CD1 Wong Chuk Hang San Wai					
03-Apr-12	97.0	173	260	Yes	Fine
10-Apr-12	43.3	173	260	Yes	Fine
17-Apr-12	37.7	173	260	Yes	Cloudy
24-Apr-12	32.5	173	260	Yes	Cloudy
CD2 Police College – Police Quarters					
03-Apr-12	177.8	184	260	Yes	Fine
10-Apr-12	118.7	184	260	Yes	Fine
17-Apr-12	81.3	184	260	Yes	Cloudy
24-Apr-12	100.9	184	260	Yes	Cloudy
CD3 San Wui Commercial Society of HK Chan Pak Sha School					
03-Apr-12	93.8	169	260	Yes	Fine
10-Apr-12	42.6	169	260	Yes	Fine
17-Apr-12	82.3	169	260	Yes	Cloudy
24-Apr-12	39.3	169	260	Yes	Cloudy
CD4 Shan On House					

Date	TSP ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)	Compliance (Yes/No)	Weather Condition
02-Apr-12	81.4	176	260	Yes	Fine
12-Apr-12	40.7	176	260	Yes	Fine
18-Apr-12	52.4	176	260	Yes	Cloudy
23-Apr-12	50.4	176	260	Yes	Cloudy
30-Apr-12	41.2	176	260	Yes	Cloudy
CD5 South Horizons Phase IV – Block 25					
02-Apr-12	92.3	169	260	Yes	Fine
12-Apr-12	43.5	169	260	Yes	Fine
18-Apr-12	74.4	169	260	Yes	Cloudy
23-Apr-12	56.6	169	260	Yes	Cloudy
30-Apr-12	34.2	169	260	Yes	Cloudy

Note: Please refer to Figures 3 to 6 for the location of construction air quality monitoring stations

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. The calibration records are shown 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. The monitoring was conducted during the course of construction works, please refer to S2.2 for major construction activities of the respective SIL(E) civil works contracts in the reporting month. Weather conditions throughout the monitoring period were mild with light wind of not exceeding 2-3m/s on average.

Furthermore, construction noise monitoring in term of continuous monitoring of LAeq, 30min noise levels were conducted at South Horizons Phase IV Block 25 Dover Court monitoring station CN4 during normal construction working hour (0700-1900 Monday to

Saturday) in the reporting month.

Monitoring results for CN1, CN2, CN3 and CN5 are presented in the following table. Monitoring results and graphical plot for CN4 are presented in **Appendix D**. Construction noise exceeding the predicted noise levels as stated in the construction noise mitigation measures plan were recorded on 2, 3 and 12 April 2012 at station CN4. Details of the exceedances are mentioned in S3.4. In addition, it was also noted that the noise levels recorded at San Wui Commercial Society of HK Chan Pak Sha School on 5, 12, 18, and 25 April 2012 were of 70.6dBA to 71.2dBA. Though this exceeded the construction noise criteria of 70dBA, this was in line with the updated prediction of noise levels as contained in the construction noise mitigation measures plan submitted under the Environmental Permit and thus complied with the Limit Level as defined in the Updated EM&A Manual. No further action was taken.

Date	Time	LAeq (dBA)	Limit Level (dBA)	Compliance (Yes/No)	Weather Condition
CN1 San Wui Commercial Society of HK Chan Pak Sha School					
5-Apr	10:45	70.6	70#	Yes	Cloudy, wind <5m/s
12-Apr	11:15	71.1	70#	Yes	Fine, wind <5m/s
18-Apr	16:55	70.7	70#	Yes	Cloudy, wind <5m/s
25-Apr	13:45	71.2	70#	Yes	Cloudy, wind <5m/s
CN2 Holy Spirit Seminary					
5-Apr	11:35	69.8	70#	Yes	Cloudy, wind <5m/s
11-Apr	16:45	70.2	70#	Yes	Fine, wind <5m/s
18-Apr	15:35	69.6	70#	Yes	Cloudy, wind <5m/s
25-Apr	14:30	69.8	70#	Yes	Cloudy, wind <5m/s
CN3 Shun Fung Building					
2-Apr	11:30	72.3	75#	Yes	Fine, wind <5m/s
12-Apr	16:00	70.1	75#	Yes	Fine, wind <5m/s
18-Apr	16:00	72.6	75#	Yes	Cloudy, wind <5m/s
23-Apr	10:00	71.6	75#	Yes	Cloudy, wind <5m/s
30-Apr	15:30	68.0	75#	Yes	Cloudy, wind <5m/s
CN4 South Horizons Phase IV – Block 25 Dover Court *					
CN5 TWGHs Jockey Club Rehabilitation Complex Block A					
3-Apr	15:40	70.4	75	Yes	Fine, wind <5m/s
12-Apr	10:35	69.8	75	Yes	Fine, wind <5m/s
18-Apr	14:40	70.8	75	Yes	Cloudy, wind <5m/s
24-Apr	14:30	71.2	75	Yes	Cloudy, wind <5m/s

Note: (#)Or updated prediction of noise levels as contained in construction noise mitigation measures plan
 (*)Noise monitoring results and graphical representation of the noise monitoring data at CN4 are provided in Appendix D
 Please refer to Figures 7 to 8 for the location of construction noise monitoring stations

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 (°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 than 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 water quality monitoring parameters recorded in the reporting period, therefore no action was taken.

Construction noise exceeding the predicted noise levels as stated in the construction noise mitigation measures plan were recorded on 2, 3 and 12 April 2012 at station CN4. The noise exceedances were considered to be attributed to grout hole drilling and piling works within project works area in the vicinity of monitoring station. Acoustic fabric was already applied to the grout hole drilling rig. Further action to install noise shroud surrounding the piling rig head was implemented. Purpose built noise shroud / enclosure around the drill head was fabricated and mast of the rig was covered entirely to minimize the noise to the residents in the vicinity of the works area. Details of the exceedance are mentioned in **Appendix E**.

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.

Health conditions of the two retained and pruned trees, *Ficus elastica*, located at Wong Chuk Hang San Wai have been monitored. The contractor had enhanced the tree protection zone and was reminded to properly maintain the protection zone.

Transplanted Tree

Total of 438 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 and Kellett Bay, 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 18 April 2012 at 5:45 p.m. A total of 40 ardeids, which all 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 were noted and these slope trees had been removed 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 Transplanting 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. Two *Aquilaria sinensis*, which are located outside the active works area to the north of Nam Fung Road, were also found in very poor health condition and suspected to be dead specimens.

Regular monitoring on the transplanted *H. cordata*, *Ai. Fordii* has been conducted. The transplanted *H. cordata* was in fair health condition and protection fences have been maintained around the receptor sites. Condition of three specimens of *Ai Fordii* was very poor after transplantation as no new leaves or buds have regenerated, while the seedling remained in fair condition. Monitoring of these tree specimens will be continued to evaluate their potential recovery ability in the coming wet season.

The transplantation works of the two *Aq. Sinensis* had been witnessed by the certified arborist, and AFCD conducted spot inspection before and after the transplantation works. The health condition of the two transplanted *Aq. Sinensis* was fair, and a proper tree protection area had been identified. Regular monitoring will be carried out.

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: April 2012				
Contract 901	1,793	7	5	200
Contract 902	4,824	1,158	66	0
Contract 903	6,672	0	263	400
Contract 904	14,107	0	38	0
Contract 907	22,245	0	7	0

7 RECORD OF ENVIRONMENTAL COMPLAINTS

Two environmental complaints were referred from EPD in the reporting period:-

1. EPD received a public complaint on 2 April 2012 regarding air emission from generator below Block 33A of South Horizons. EPD referred the complaint information to MTR on 3 April 2012 for complaint investigation as per the EM&A programme. Mitigation measures such as cover for enclosure to interrupt the dispersion of exhaust from stationary plants to avoid direct and point discharge to the nearby residents. Review of the site activities will be undertaken regularly to check the adequacy of air quality mitigation measures to be implemented.

The complaint investigation report had been sent to EPD.

2. EPD received a public complaint on 30 April 2012 regarding emission from diesel engine and the construction noise from the construction site near Block 33 of South Horizons. EPD referred the complaint information to MTR on 30 April 2012 for complaint investigation as per the EM&A programme. Investigation is carried out in accordance with the EM&A Manual and investigation report will be sent to EPD.

8 RECORD OF NON-COMPLIANCES

There was no non-compliance identified in the reporting period. However, exceedances to the updated noise prediction in the construction noise mitigation measures plan were recorded in the reporting month. Investigation and necessary remedial action(s) have also been conducted following the procedures specified in the Event and Action plan under the Updated EM&A Manual. Details are mentioned in S3.4 and **Appendix E**.

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 30 April 2012 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	EP Condition fulfilled dated 13 February 2012
2.9	Construction noise mitigation measures plan	EP Condition fulfilled dated 13 February 2012
2.11	Construction & demolition materials management plan for barging points	EP Condition fulfilled dated 12 December 2011
2.13 (a)	Ecological planting & landscape plan	EP Condition fulfilled dated 12 December 2011
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 8 Sep 2011
2.14 (b)	Transplantation proposal for plant species of conservation interest	H. cordata: EP Condition fulfilled dated 15 Sep 2011 Aq. sinensis: EP Condition fulfilled dated 21 Feb 2012 Ai. fordii: EP Condition fulfilled dated 18 Oct 2011
2.14 (c)	As built drawings of transplanting works for plant species of conservation interest	H. cordata: EP Condition fulfilled dated 15 Sep 2011 Aq. sinensis: Submitted on 20 Mar 2012 Ai. fordii: EP Condition fulfilled dated 22 Dec 2011
2.15	Tree protection plan	Updated version submitted on 26 Mar 2012

EP Clause No.	Description of Submission	Status
2.16(a)	Silt curtain plan	For Aberdeen Channel: EP Condition fulfilled dated 12 Aug 2011 For Telegraph Bay: EP Condition fulfilled dated 14 Dec 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
3.3	Baseline monitoring report	EP Condition fulfilled dated 21 February 2012
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 30 April 2012 is shown below:

Description	Effective Date	Expiry Date
Environmental Permit for South Island Line (East) EP-407/2010/A	14/12/2011	N/A
Contract 901		
Chemical Waste Producer Licence 5213-124-K3004-01	23/5/2011	N/A
Waste Disposal 7012859	1/6/2011	N/A
Water Discharge Licence WT00009466-2011	4/7/2011	30/7/2016
CNP for plunge column, secant piles, rock splitting and welding works GW-RS0272-12	12/3/2012	6/9/2012
CNP for modification works at admiralty station	Submitted on 27/4/2012	
CNP for CITIC footbridge erection GW-RS0386-12	14/4/2012	9/6/2012

Description		Effective Date	Expiry Date
<u>Contract 902</u>			
Chemical Waste Producer Licence	5213-175-N2206-12	24/6/2011	N/A
Chemical Waste Producer Licence	5213-124-N2345-02	28/10/2011	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
Water Discharge Licence for CHS Magazine	WT00009842-2011	11/8/2011	31/8/2016
Water Discharge Licence for Telegraph Bay Barging Point	WT00010649-2011	27/10/2011	31/10/2016
CNP for Nam Fung Path	GW-RS0434-12	02/05/2012	01/11/2012
<u>Contract 903</u>			
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	WT00010501-2011	3/10/2011	31/10/2016
Water Discharge Licence for Zone D	WT00010319-2011	3/10/2011	31/10/2016
Water Discharge Licence for Zone C	WT00010648-2011	24/10/2011	31/10/2016
CNP for Zone D	GW-RS0999-11	4/11/2011	3/5/2012
CNP for Zone E	GW-RS1016-11	11/11/2011	9/5/2012
CNP for Zone E	GW-RS1191-11	30/12/2011	30/3/2012
CNP for Zone C	GW-RS0060-12	30/1/2012	24/7/2012
CNP for Zone C	GW-RS0141-12	17/2/2012	16/8/2012
CNP for TTM	GW-RS0155-12	21/2/2012	15/5/2012
CNP for OCP station	GW-RS0168-12	22/2/2012	20/8/2012
CNP for Zone C	GW-RS0194-12	29/2/2012	29/9/2012
CNP for Segment erection	GW-RS0188-12	28/2/2012	28/4/2012
CNP for Entrance A	GW-RS0248-12	9/3/2012	5/9/2012
CNP for WCH Station	GW-RS0257-12	15/3/2012	29/8/2012
CNP for Zone E	GW-RS0344-12	30/3/2012	29/9/2012
CNP for Zone B	GW-RS0399-12	23/4/2012	31/5/2012
<u>Contract 904</u>			
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

Description		Effective Date	Expiry Date
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 Lee Nam Road near Horizon Plaza	GW-RS0139-12	15/2/2012	13/8/2012 (Cancelled)
CNP for Ap Lei Chau Bridge Road	GW-RS00289-12	21/3/2012	30/4/2012 (Expired)
CNP for Yi Nam Road near Marina Square East Centre	GW-RS0339-12	30/3/2012	27/9/2012
CNP for Lee Nam Road near Harbour Industrial Centre	GW-RS0397-12	17/4/2012	30/4/2012 (Expired)
CNP for Lee Nam Road near Horizon Plaza	GW-RS0335-12	3/4/2012	30/6/2012
<u>Contract 907</u>			
Chemical Waste Producer Licence	5113-175-C3675-01	24/6/2011	N/A
Waste Disposal	7012950	31/5/2011	N/A
Waste Disposal for barges	7013400	26/8/2011	N/A
Water Discharge Licence for barging point	WT00009896-2011	11/8/2011	31/8/2016
Water Discharge Licence for WCH Depot	WT00010365-2011	21/9/2011	30/9/2016
Water Discharge Licence for bus terminus	WT00010366-2011	21/9/2011	30/9/2016
CNP for water mains	GW-RS1159-11	21/12/2011	29/2/2012
CNP for water pumping	GW-RS1168-11	30/12/2011	29/6/2012
CNP for water mains	GW-RS0093-12	3/2/2012	31/3/2012
CNP for utilities	GW-RS0296-12	29/3/2012	19/4/2012
CNP for utilities	GW-RS0296-12	29/3/2012	19/4/2012
CNP for FD3	GW-RS0376-12	20/4/2012	25/5/2012
CNP for watermains connection	GW-RS0290-12	10/4/2012	31/5/2012

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.	On-going
2	The contractor was reminded to enhance dust control for main haul road.	On-going
3	The contractor was reminded to remove stagnant water.	On-going
4	The contractor was reminded to enhance the segregation of recycle materials.	On-going
5	The contractor was reminded to improve the site drainage system and divert all surface runoff to wastewater treatment system for proper treatment.	On-going
6	The contractor was reminded to remove general refuse off site in a timely manner.	On-going
7	The contractor was reminded to shelter the grout mixing area with the top and 3 sides.	On-going
Contract 902		
1	The contractor was reminded to provide drip tray during equipment maintenance works to prevent oil leakage.	Improved and standard to be maintained
2	The contractor was reminded to properly maintain the site drainage system and provide adequate silt removal facilities.	On-going
3	The contractor was reminded to properly maintain the tree protection zone.	Improved and standard to be maintained
4	The contractor was reminded to spray water to the haul road and during handling of dusty materials for dust suppression.	On-going
5	The contractor was reminded to cover stockpiling or remove them as soon as possible.	Improved and standard to be maintained
6	The contractor is reminded to provide adequate temporary noise mitigation measures.	On-going
Contract 903		
1	The contractor was reminded to improve housekeeping of the site.	Improved and standard to be maintained
2	The contractor was reminded to clean the nullah before the re-open of the stop log for the coming wet season. In addition, the contractor should closely monitor the effluent quality during the de-silting of the nullah.	Ongoing
3	A de-silting record had been conducted by the Contractor and submitted to EPD for reference.	No action required
4	The contractor was reminded to improve the tree protection works.	On-going
5	Water spraying system has been installed by the contractor at the WCH station area for dust suppression.	Improved and standard to be maintained
6	Acoustic fabric has been erected nearby the Holy Spirit Seminary for the noisy works. The contractor was reminded to closely monitor the effectiveness of the mitigation measures provided.	On-going
7	The Contractor was reminded to ensure all the trucks should be covered before leaving the site, and remain covered until reaching the loading point.	On-going
8	The Contractor was reminded to conduct regular monitoring and implement proper tree protection measures for the transplanted Aq. Sinensis.	On-going

Item	Description	Follow up Status
Contract 904		
1	The contractor was reminded to provide drip trays for chemicals and remove stagnant water inside.	Improved and standard to be maintained
2	The contractor was reminded to provide drip tray during equipment maintenance works to prevent oil leakage.	Improved and standard to be maintained
3	The contractor was reminded to maintain good housekeeping.	Improved and standard to be maintained
4	The contractor was reminded to provide adequate silt removal facilities, as well as properly maintain the site drainage system and discharge.	On-going
5	The contractor was reminded to improve dust suppression measures.	On-going
6	The contractor was reminded to improve wheel washing facilities.	On-going
7	The contractor was reminded to provide adequate temporary noise mitigation measures.	On-going
Contract 907		
1	The contractor was reminded to provide drip tray for chemicals.	On-going
2	The contractor was reminded to provide drip tray / tarpaulin sheet during equipment maintenance works to prevent oil leakage.	On-going
3	The contractor was reminded to provide appropriate labels for the chemical waste in the chemical waste store.	Improved and standard to be maintained
4	The contractor was reminded to maintain good housekeeping.	On-going
5	The contractor was reminded to increase the water spraying frequency within the breaking zone.	On-going
6	Special construction arrangement had been implemented during the public examination period. Rock breaking works only carried out at those areas as far as possible from the school. The Contractor was reminded to keep on the practice until the end of the public examination period.	On-going

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 16, 18, 19, 24 and 25 April 2012. Observation was made for Contract 903 regarding the cleaning / de-silting of nullah and the effluent quality control. Other minor irregularities including provision of movable noise barriers as necessary and enhancing site drainage system and dust suppression measures 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)

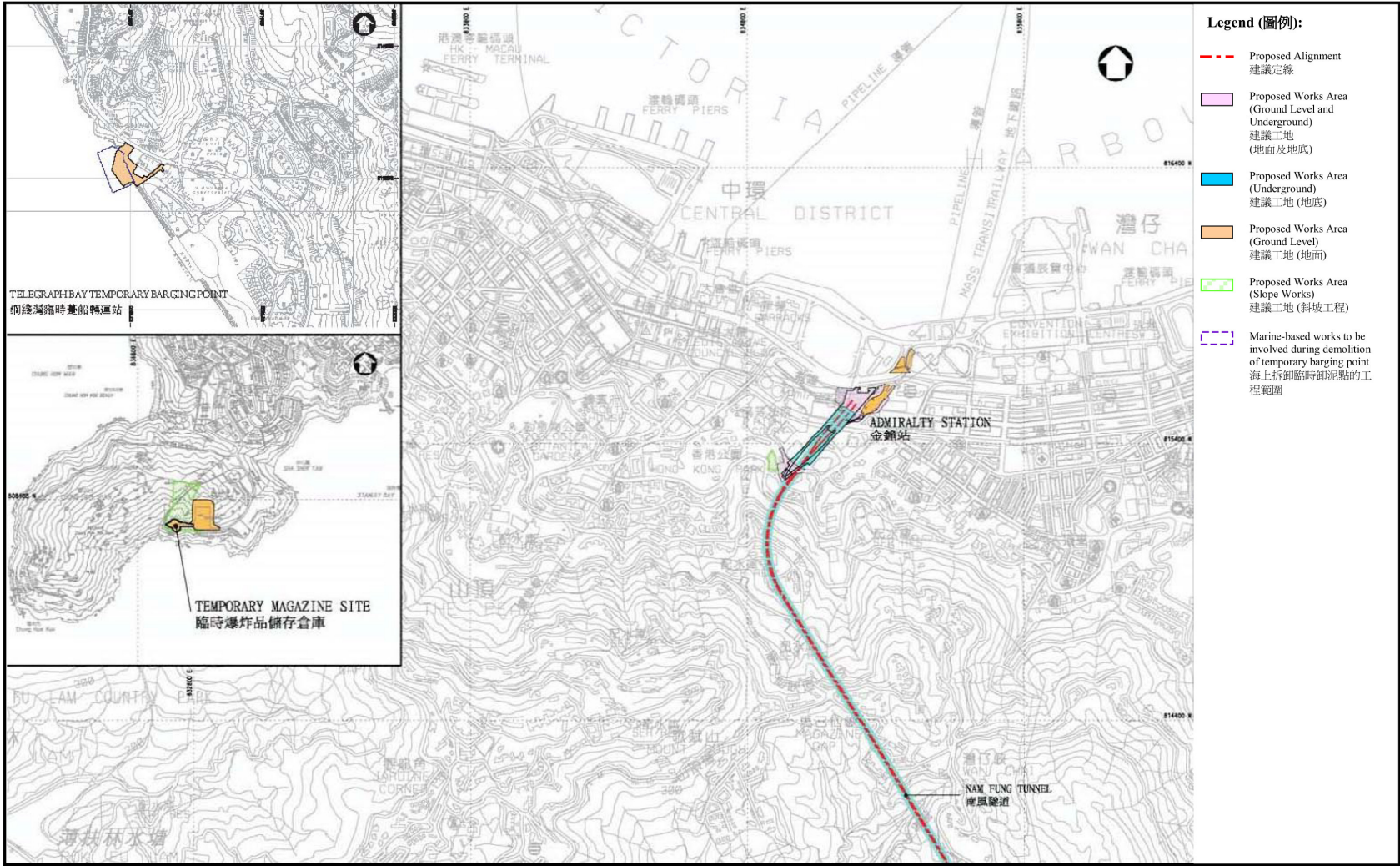


Figure 2 – Works Areas of the Project (2 of 2)

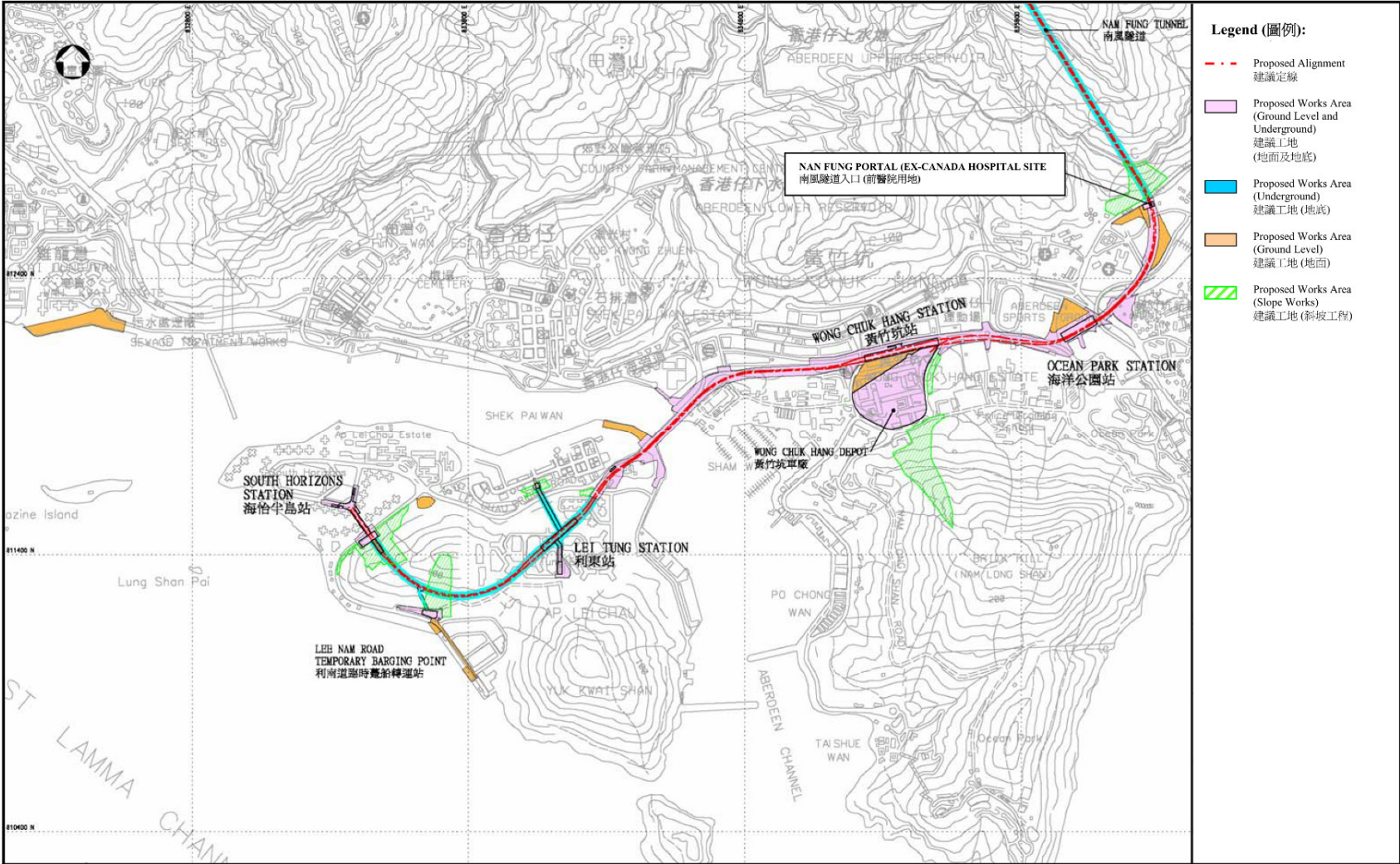


Figure 3 – Location of Construction Air Quality Monitoring Stations (1 of 4)

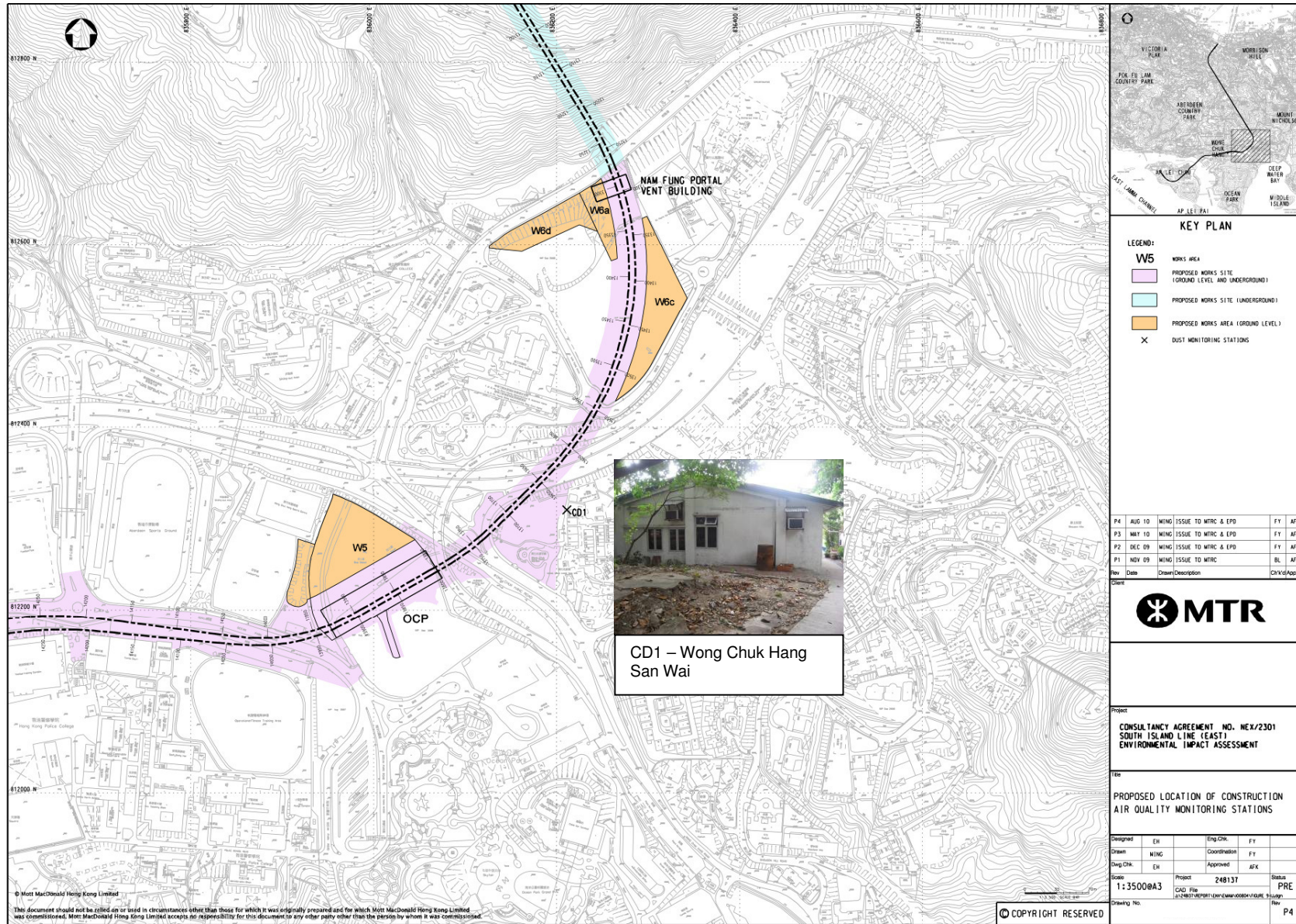


Figure 4 – Location of Construction Air Quality Monitoring Stations (2 of 4)

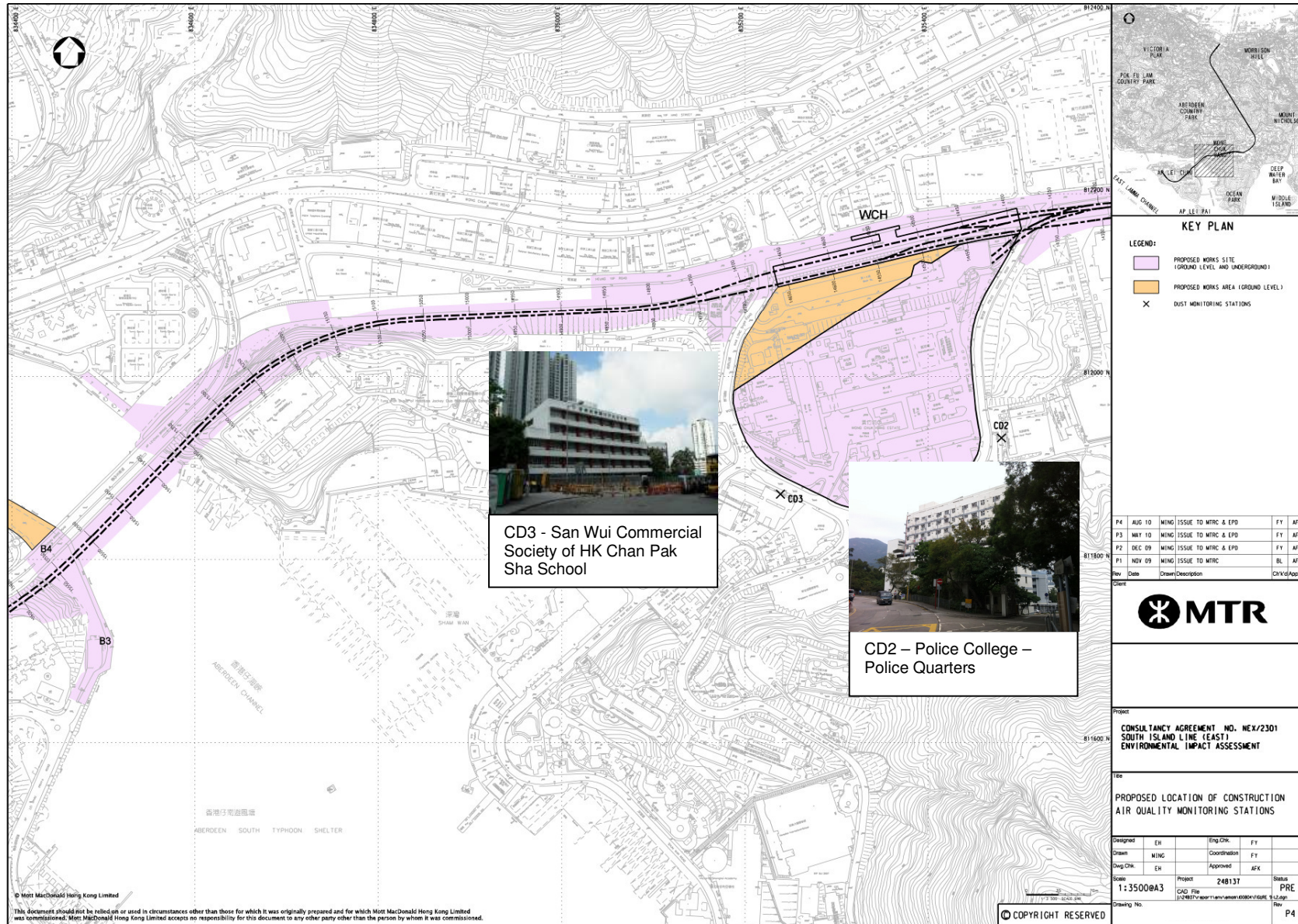


Figure 5 – Location of Construction Air Quality Monitoring Stations (3 of 4)



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



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

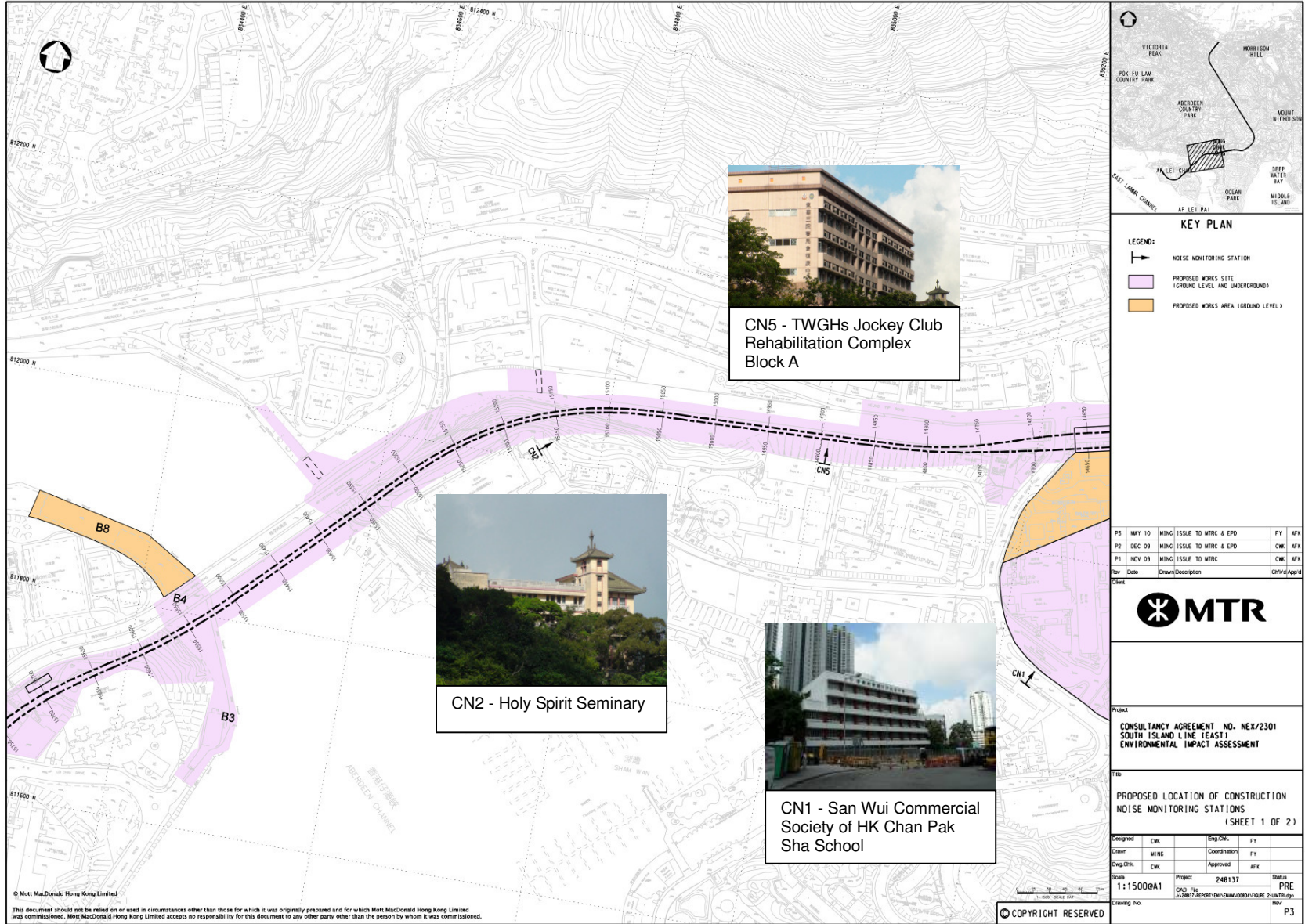


Figure 8 – Location of Construction Noise Monitoring Stations (2 of 2)

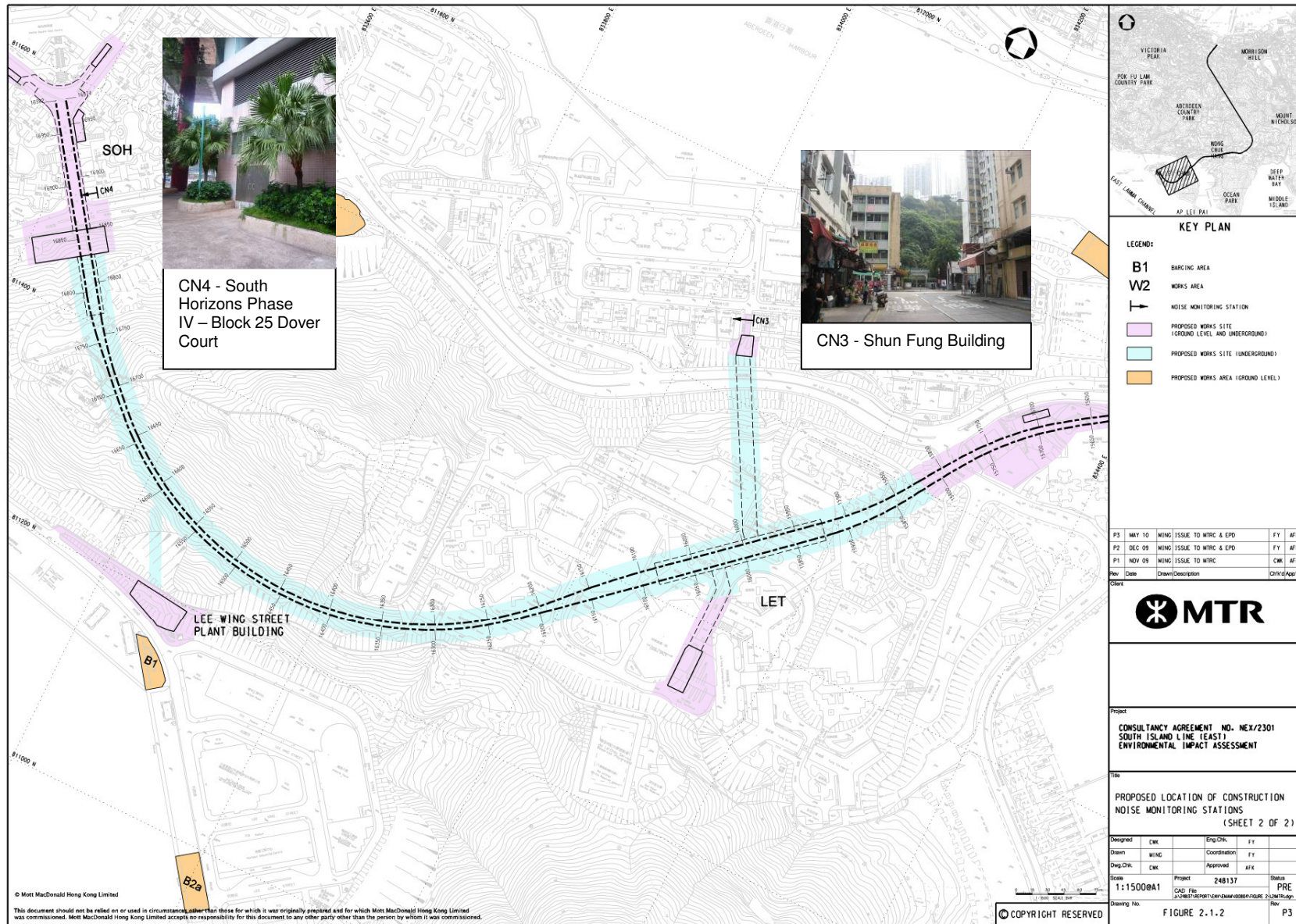
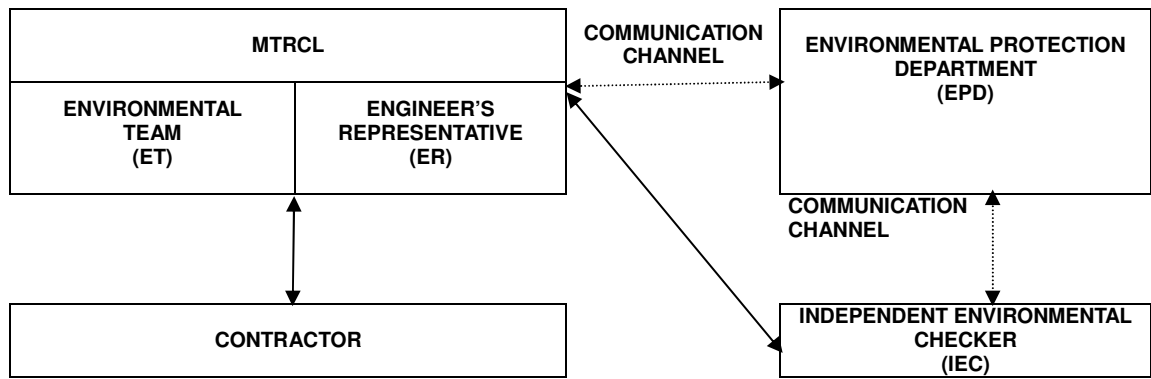


Figure 9 – Location of Water Quality Monitoring Stations



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	Mr. Richard Kwan	2688 1179
Engineer's Representative		
Project Manager – SIL Civil	Mr. Mark Cuzner	3987 8288
Construction Manager – SIL (901)	Mr. Alan Boden	2206 8688
Construction Manager – SIL (902 / 904)	Mr. Ken Wong	2285 4688
Construction Manager – SIL (903 / 907 / 908)	Mr. Kit Chan	3975 6988
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

Organization	Name	Telephone
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
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 ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
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 ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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)	120% of upstream control station of the same day		130% of upstream control station of the same day	
Turbidity in NTU (depth averaged)	120% of upstream control station of the same day		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 ^[1]	
B&K 2250	2551244	25 Jan 2011	25 Jan 2013 ^[1]	
B&K 4231 Calibrator	2725557	15 Jun 2011	15 Jun 2013 ^[1]	
B&K 4231 Calibrator	2309393	15 Jun 2011	15 Jun 2013 ^[1]	

High Volume Sampler

Model	Sampler	Calibration Date	Expiry Date	Remark
Graseby-Andersen	694-0661	17 Jan 2012	17 Jul 2012 ^[3]	
Graseby-Andersen	894-0833	17 Jan 2012	17 Jul 2012 ^[3]	
Graseby-Andersen	994-0878	17 Jan 2012	17 Jul 2012 ^[3]	
Graseby-Andersen	1294-1104	17 Jan 2012	17 Jul 2012 ^[3]	
Graseby-Andersen	1294-1111	17 Jan 2012	17 Jul 2012 ^[3]	

Water Quality Monitoring Equipment

Model	Serial Number	Calibration Date	Expiry Date	Remark
Turbidimeter				
HACH 2100P	08060C030281	13 Jan 2012	12 Apr 2012 ^[2]	
HACH 2100P	08060C030281	13 Apr 2012	12 Jul 2012	
pH Meter				
HANNA HI8314	674469	10 Mar 2012	9 Apr 2012 ^[4]	
HANNA HI8314	674469	10 Apr 2012	9 May 2012	
Multimeter for Temperature / Dissolved Oxygen / Salinity				
YSI Pro2030	10F 101978	13 Feb 2012	12 May 2012 ^[4]	

- Note: [1] Calibration certificates refer to Appendix C of EM&A report - August 2011
 [2] Calibration certificates refer to Appendix C of EM&A report - February 2012
 [3] Calibration certificates refer to Appendix C of EM&A report - March 2012
 [4] Calibration certificates refer to Appendix C of EM&A report - April 2012



Performance Check of Turbidimeter

Equipment Ref. No. : ET/0505/007 Manufacturer : HACH
Model No. : 2100P Serial No. : 08060 C 030281
Date of Calibration : 13/04/2012 Due Date : 12/07/2012

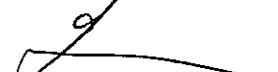
Gelex Vial Std	Theoretical Value (NTU)	Measured Value (NTU)	Difference %
0-10 NTU	5.34	5.24	1.87
10-100 NTU	52.5	53.0	0.95
100-1000 NTU	543	536	1.29

Acceptance Criteria

Difference : <5 %

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

Checked by : 

Approved by : 



Internal Calibration & Performance Check Report of pH Meter

Equipment Ref. No. : <u>ET/EW/007/003</u>	Manufacturer : <u>HANNA</u>
Model No. : <u>HI 8314</u>	Serial No. : <u>674469</u>
Date of Calibration : <u>10/04/2012</u>	Calibration Due Date : <u>09/05/2012</u>

Liquid Junction Error

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/001/9
 Temperature of Solution : 20.0 pH_½ = +0.08
 pH value of diluted buffer : 6.77 pH (S) = 6.881
 pH = pH(S) - pH of diluted buffer = 0.111 (Observed Deviation)
 Liquid Junction Error (pH_j) = pH - pH_½ = 0.031

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.93
 Shift on stirring, pH_s = pH_s - pH(S) - pH_j = 0.018

Noise

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

Verification of ATC

Ref. No. of reference thermometer used:	<u>ET/0521/001</u>
Temperature record from the reference thermometer (T _R):	<u>20.0</u> °C
Temperature record from the ATC (T _{ATC}):	<u>19.9</u> °C
Temperature Difference (T _R - T _{ATC})	<u>0.1</u> °C

Acceptance Criteria

Performance Characteristic	Acceptable Range
Liquid Junction Error pH _j	≤0.05
Shift on Stirring pH _s	≤0.02
Noise pH _n	≤0.02
Verification of ATC Temperature Difference	≤0.5°C

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

* Delete as appropriate

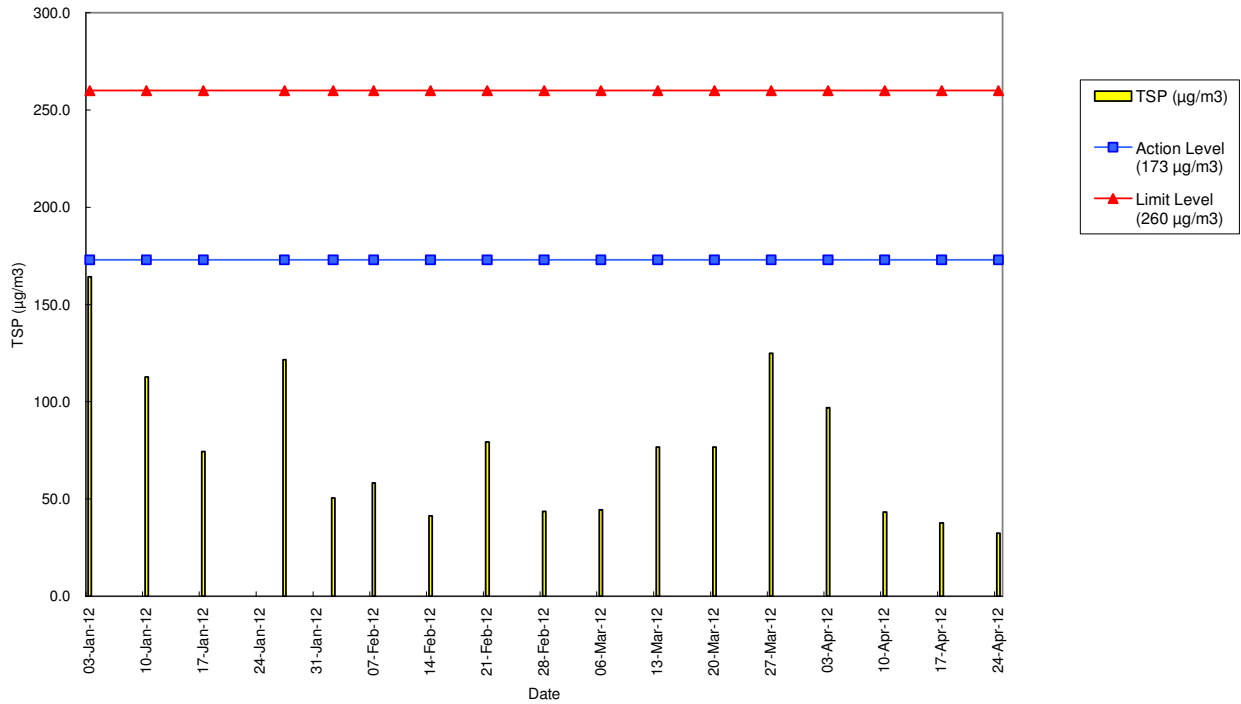
Calibrated by : Approved Signatory :

APPENDIX D

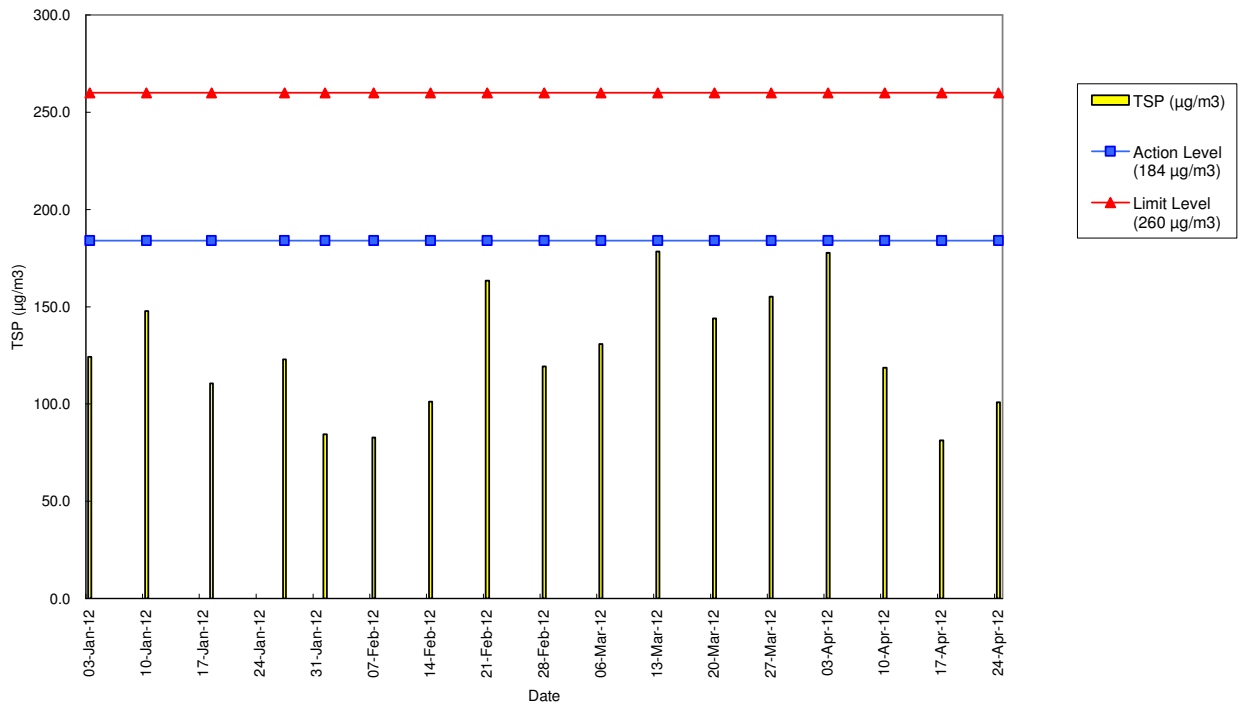
Graphical Plots of Air Quality, Noise & Water Quality Impact Monitoring
and Monitoring Results for Noise and Water Quality

Graphical Plots of Air Quality Monitoring Results

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

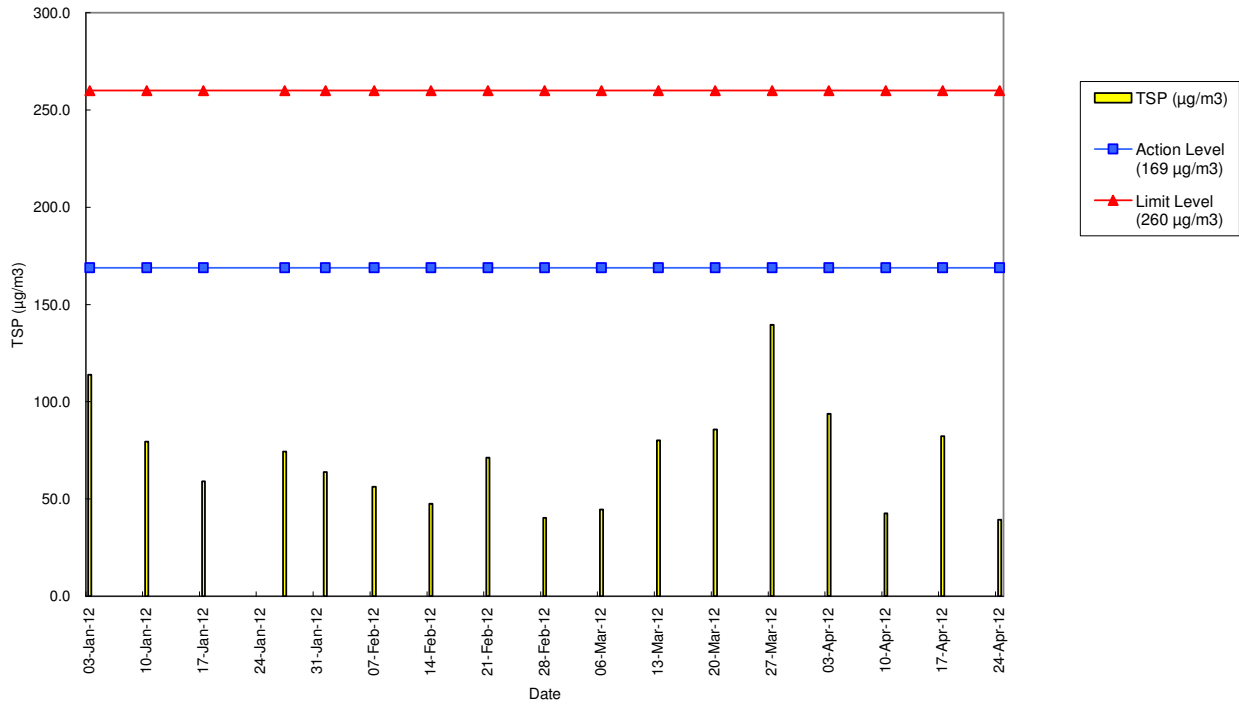


24-hr TSP Level at CD2 Police College - Police Quarters

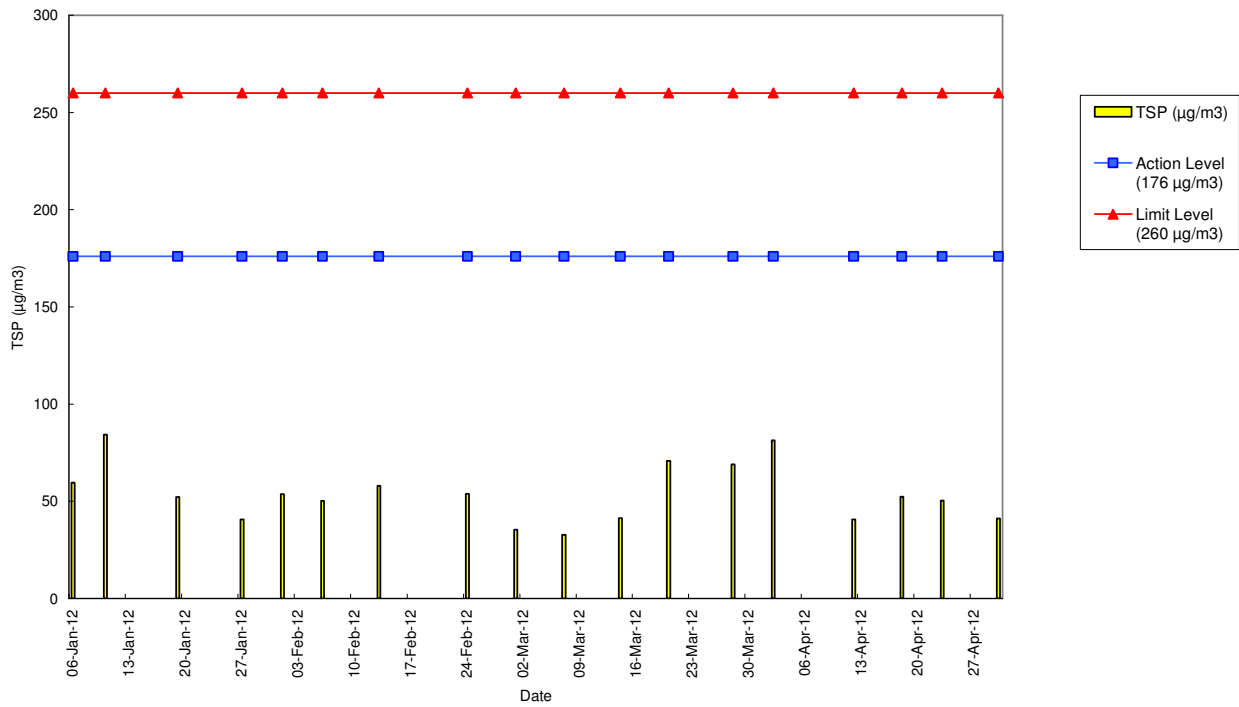


Graphical Plots of Air Quality Monitoring Results

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

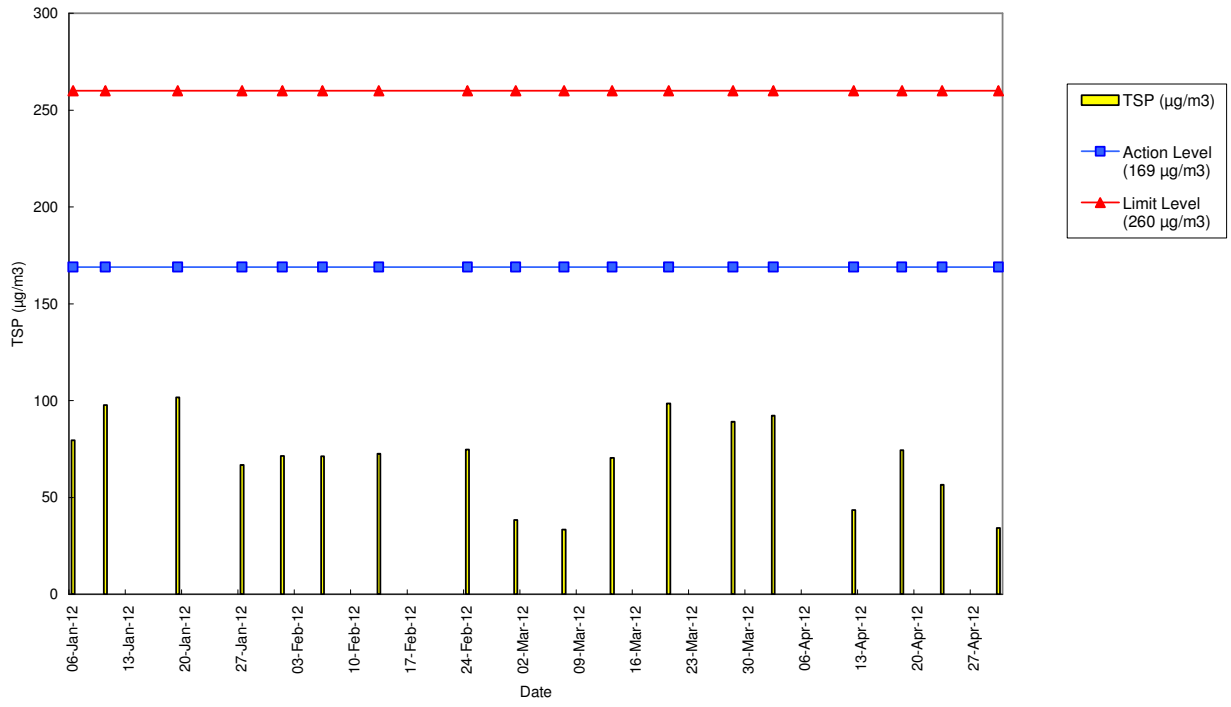


24-hr TSP Level at CD4 Shan On House



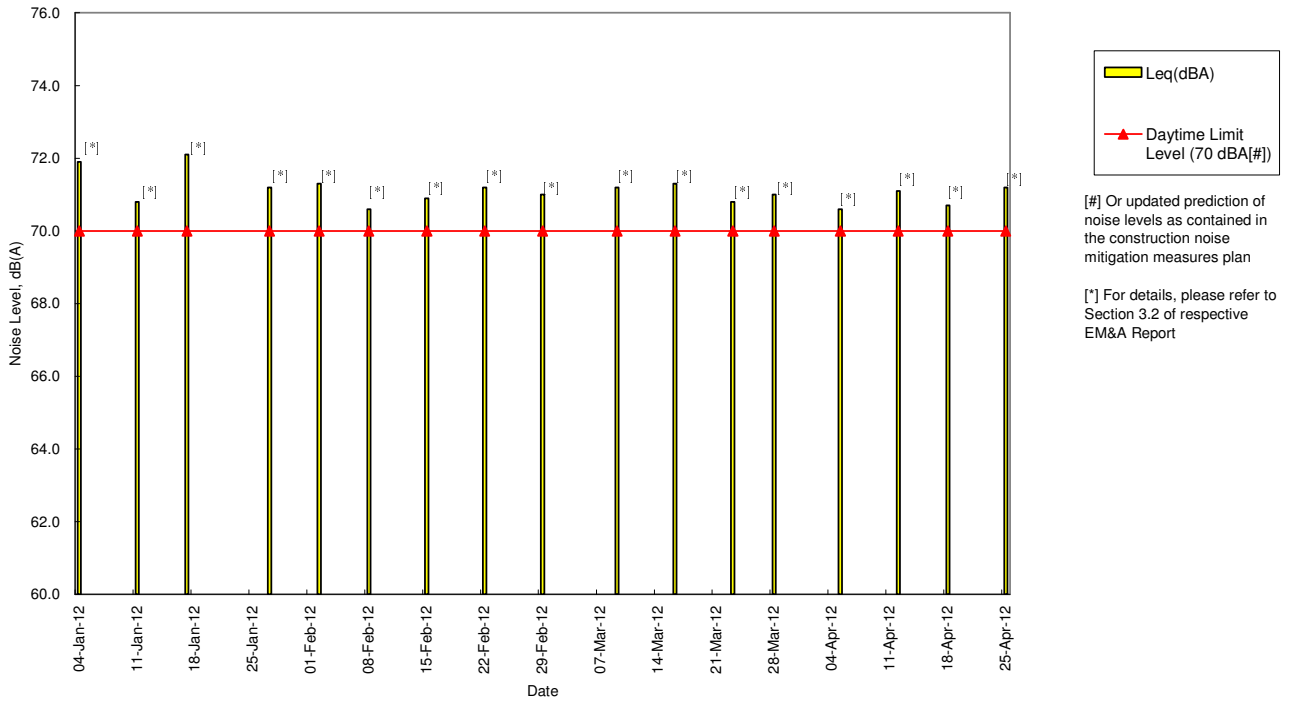
Graphical Plots of Air Quality Monitoring Results

24-hr TSP Level at CD5 South Horizons Phase IV – Block 25

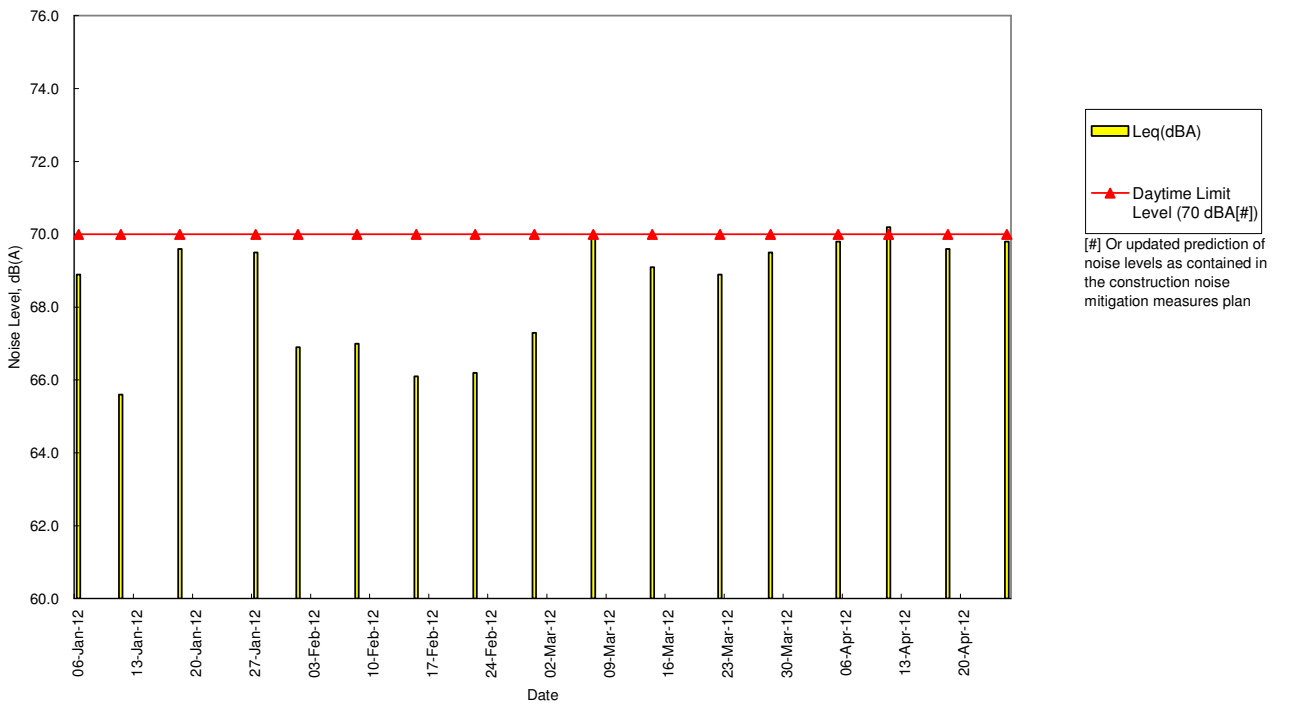


Graphical Plots of Noise Monitoring Results

Noise Level at CN1 San Wui Commercial Society of HK Chan Pak Sha School (Educational Institution)

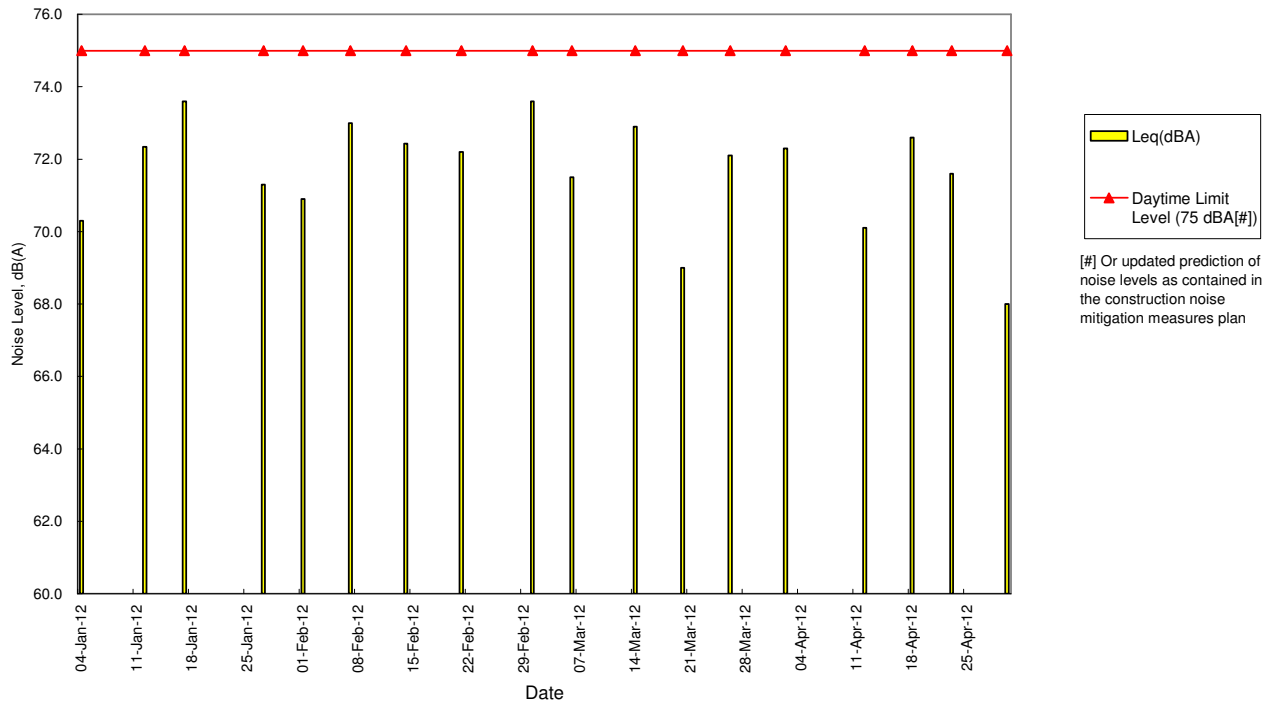


Noise Level at CN2 Holy Spirit Seminary (Educational Institution)

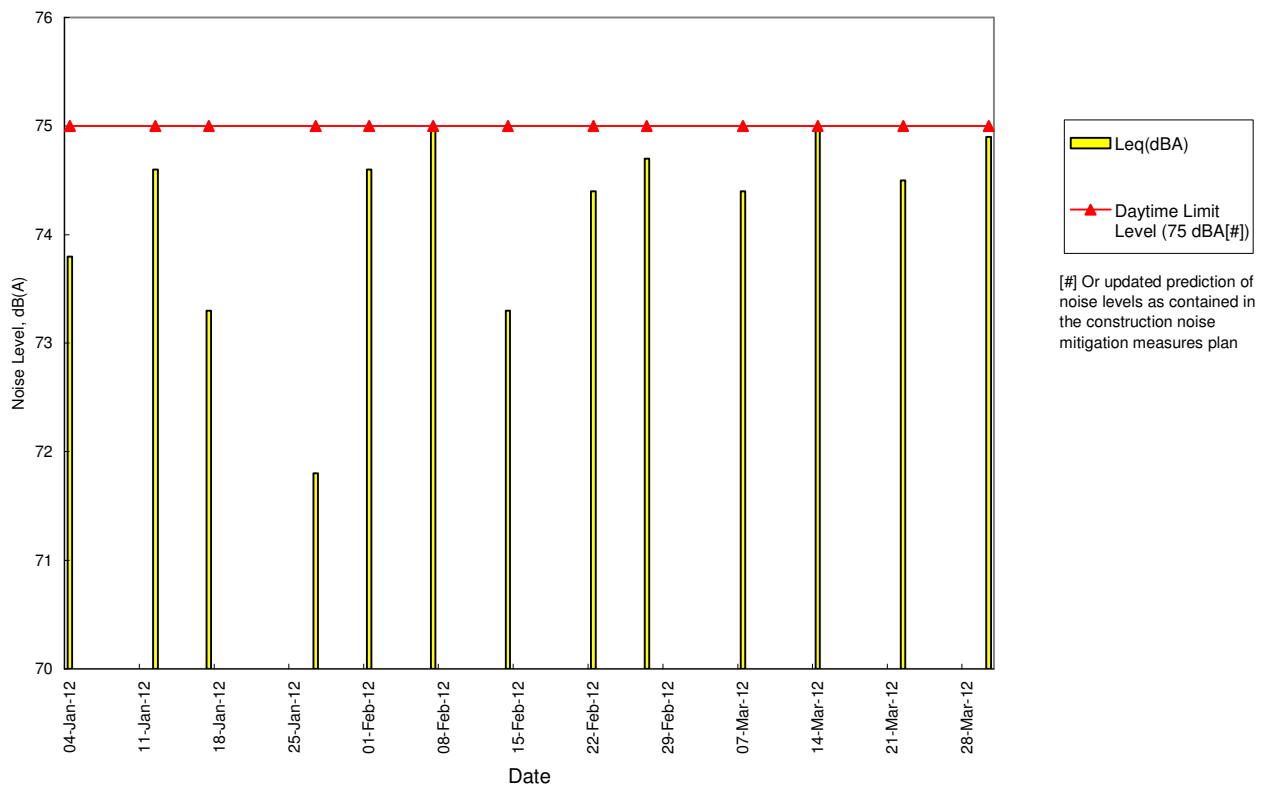


Graphical Plots of Noise Monitoring Results

Noise Level at CN3 Shun Fung Building (Residential)

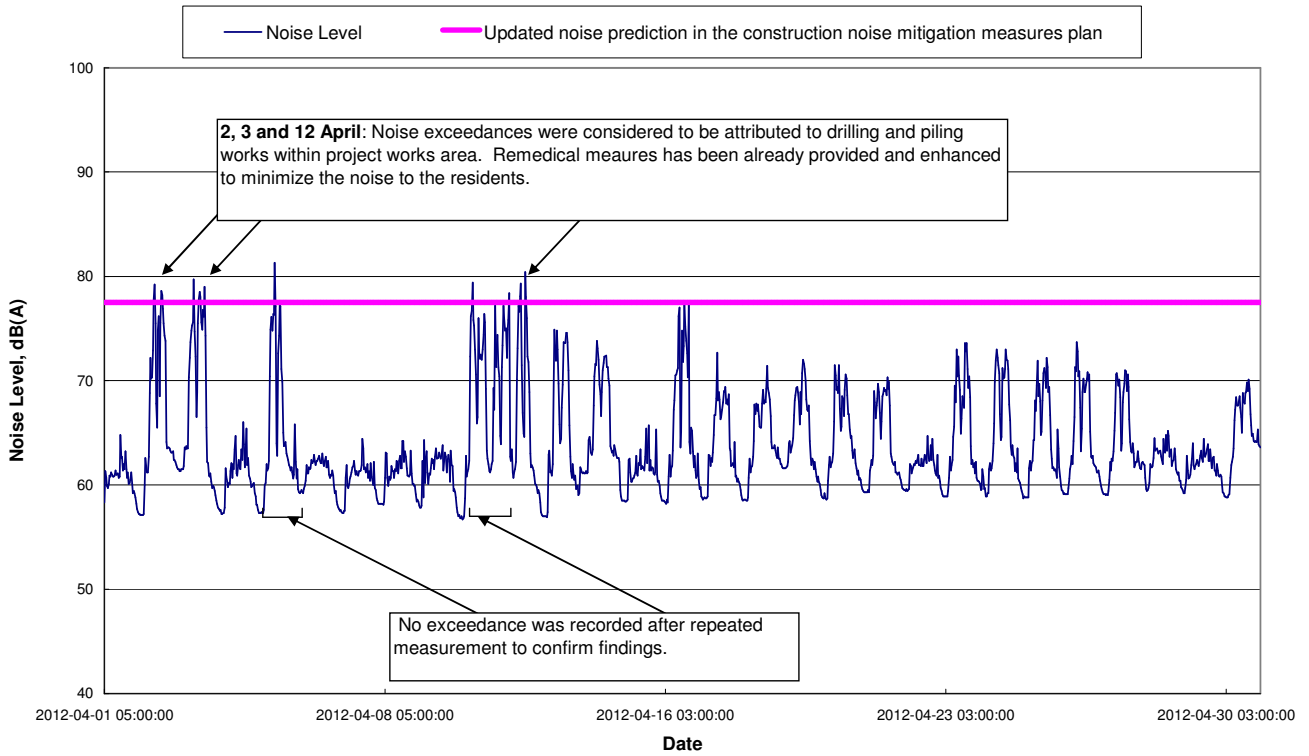


Noise Level at CN4 South Horizons Phase IV – Block 25 Dover Court (Residential)

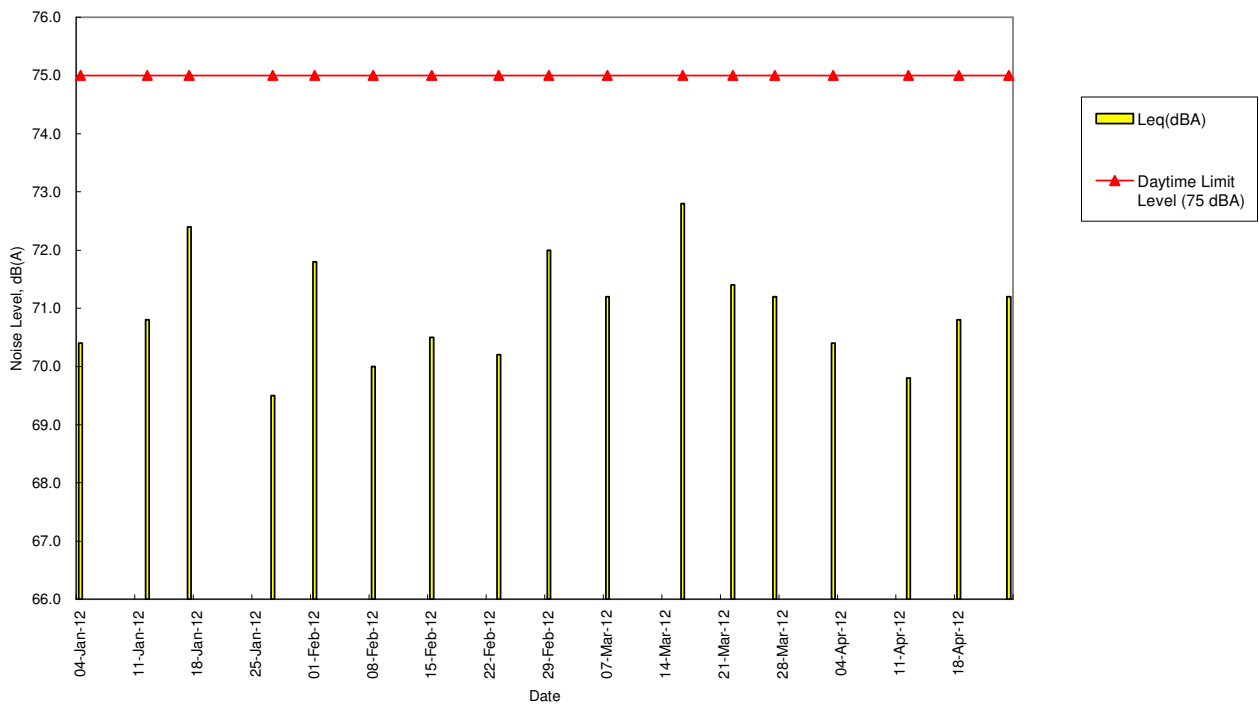


Graphical Plots of Noise Monitoring Results

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

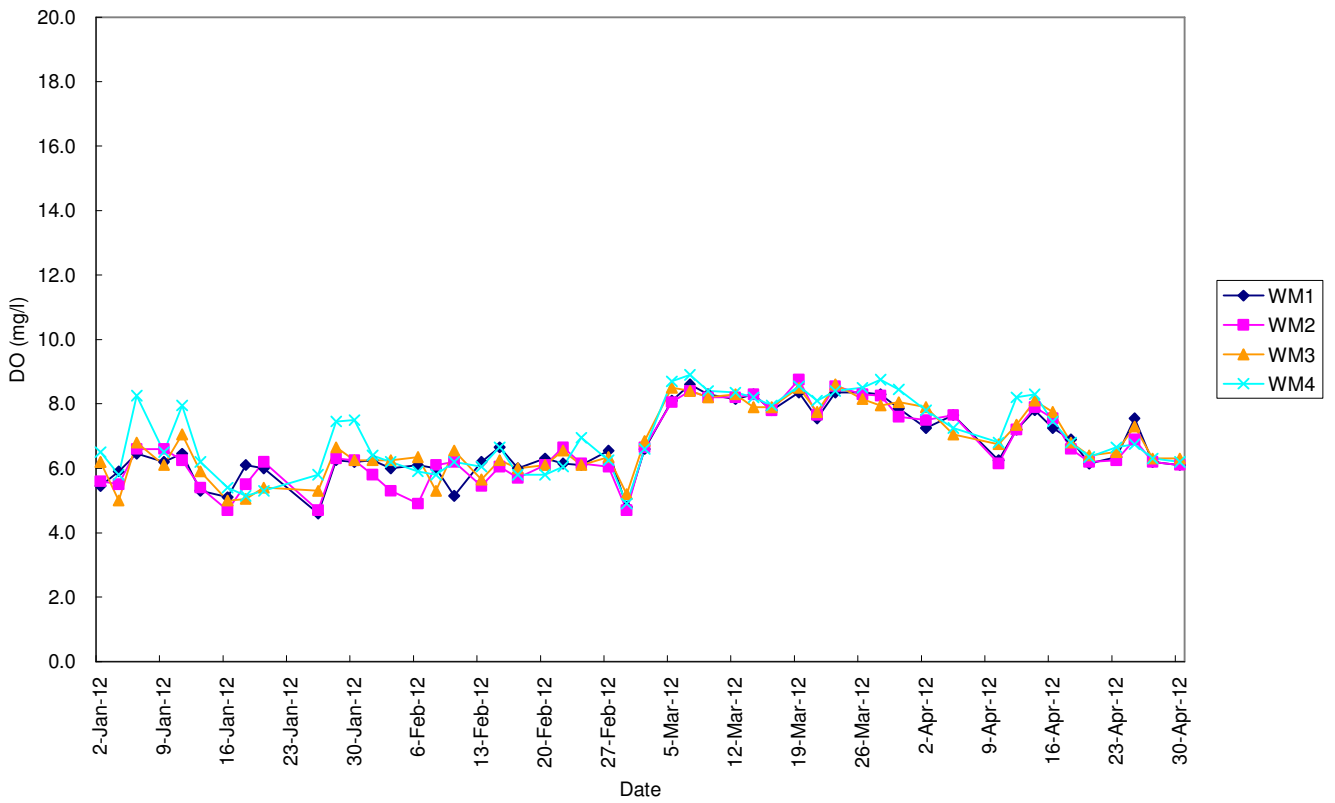


Noise Level at CN5 TWGHs Jockey Club Rehabilitation Complex Block A (Convalescent Home)

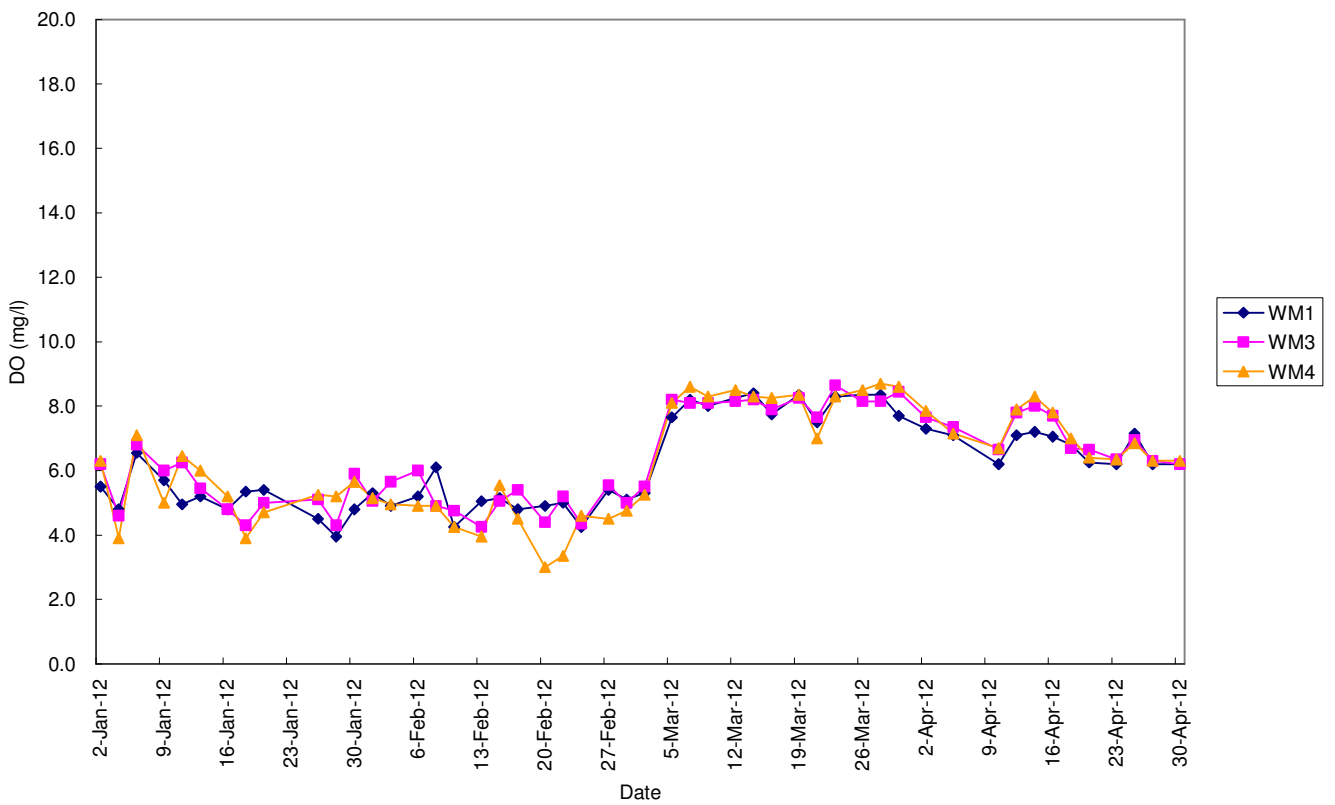


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Dissolved Oxygen in Flood Tide - Surface Level

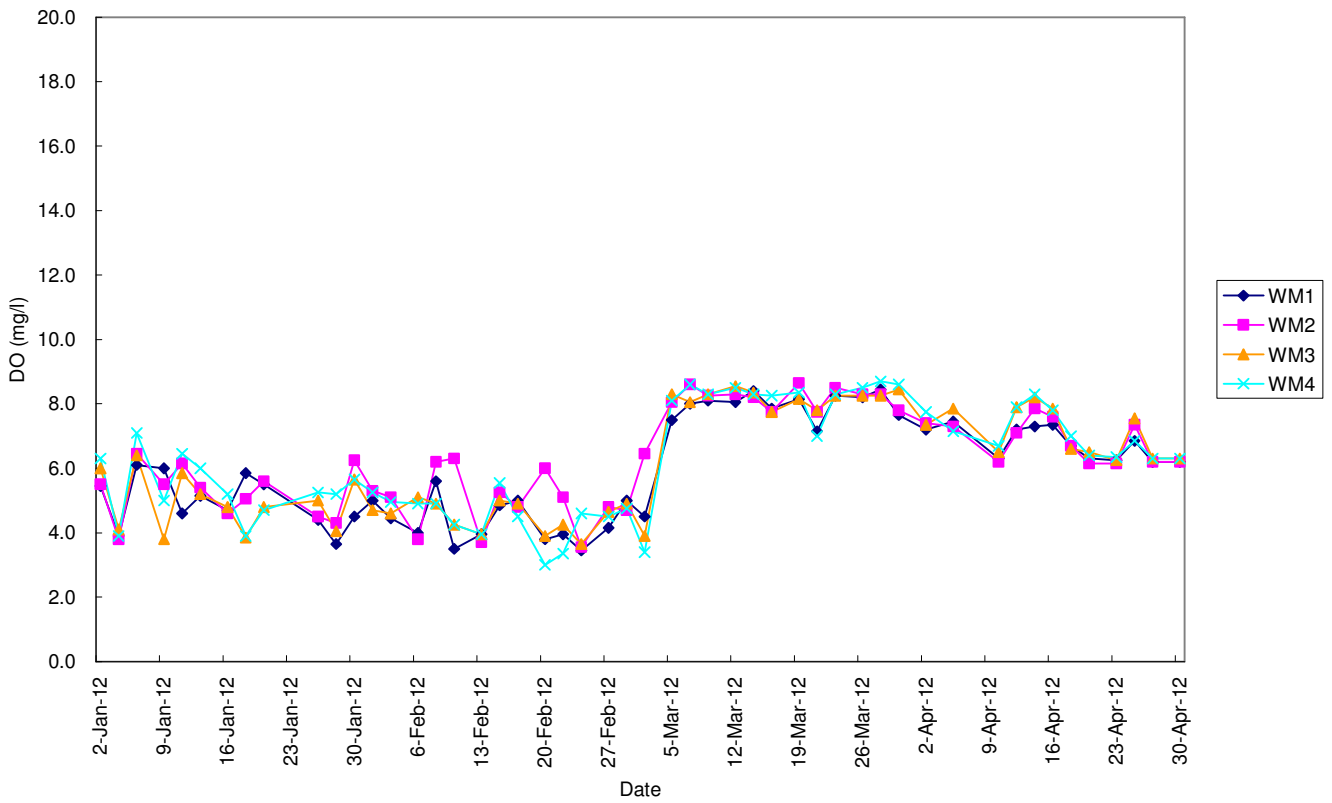


Monitoring Results for Dissolved Oxygen in Flood Tide - Middle Level

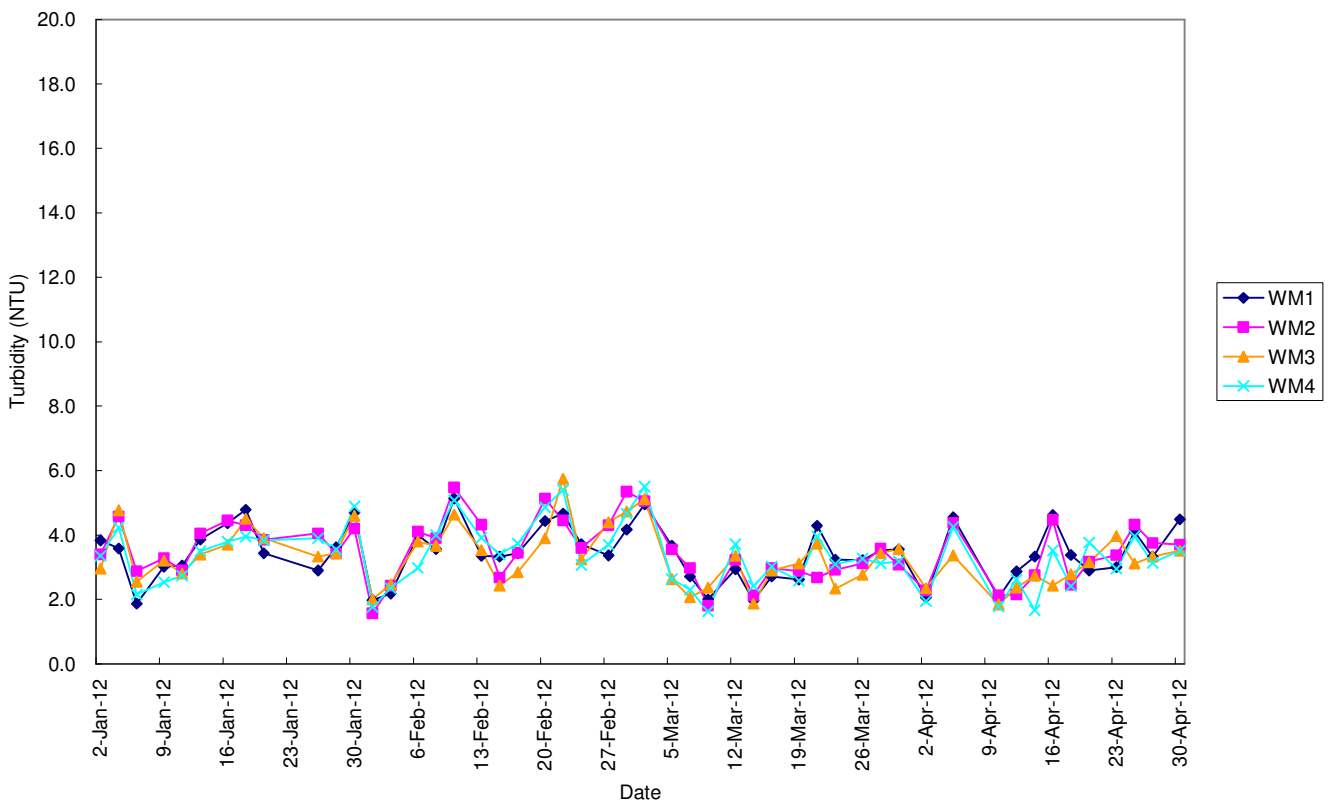


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Dissolved Oxygen in Flood Tide - Bottom Level

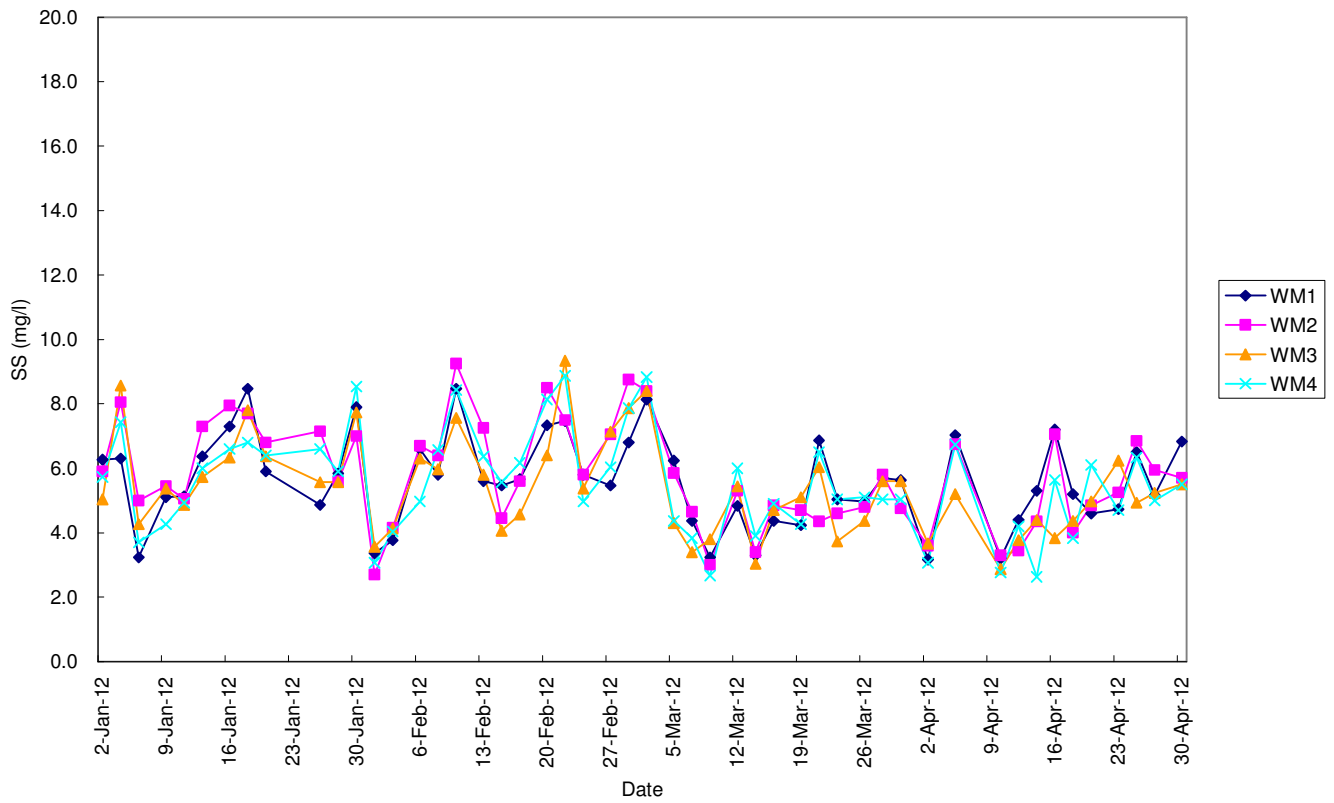


Monitoring Results for Turbidity in Flood Tide - Depth Average

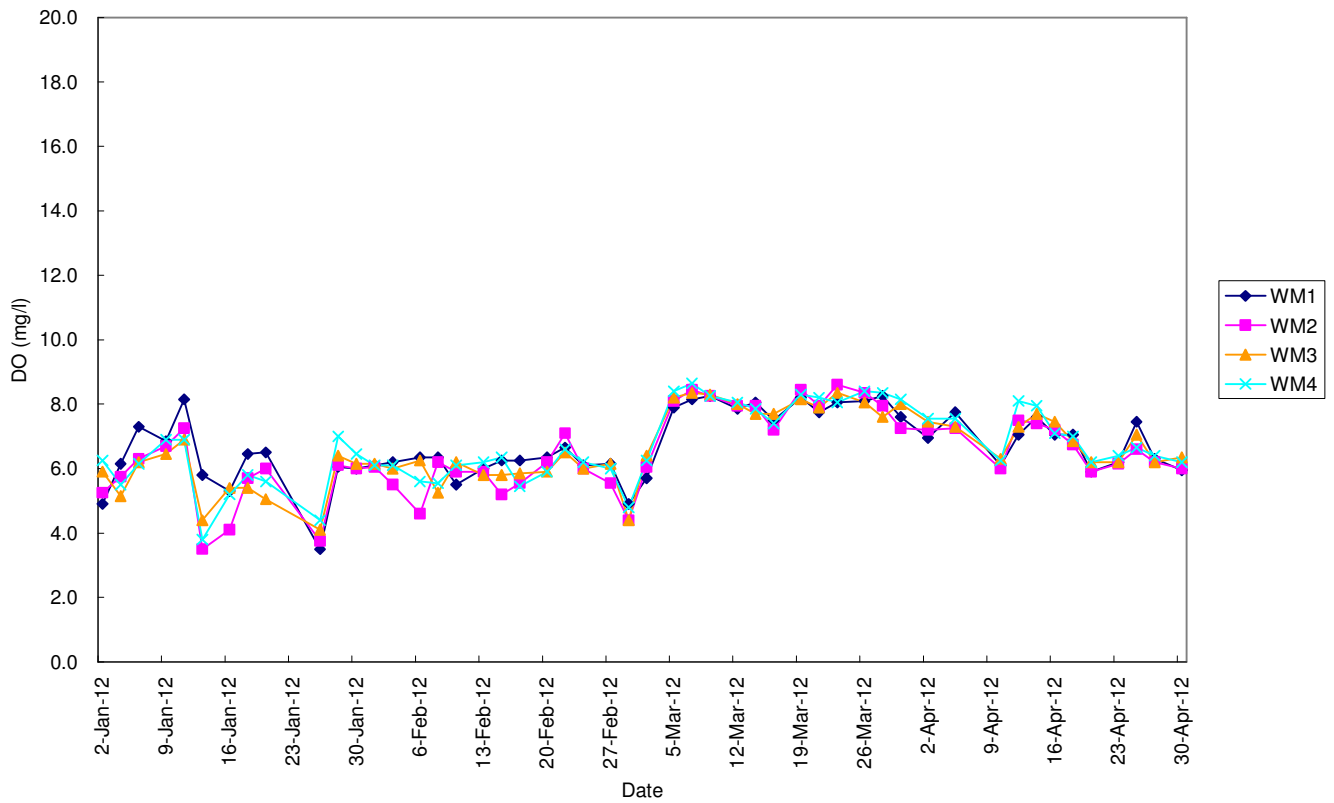


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Suspended Solids in Flood Tide - Depth Average

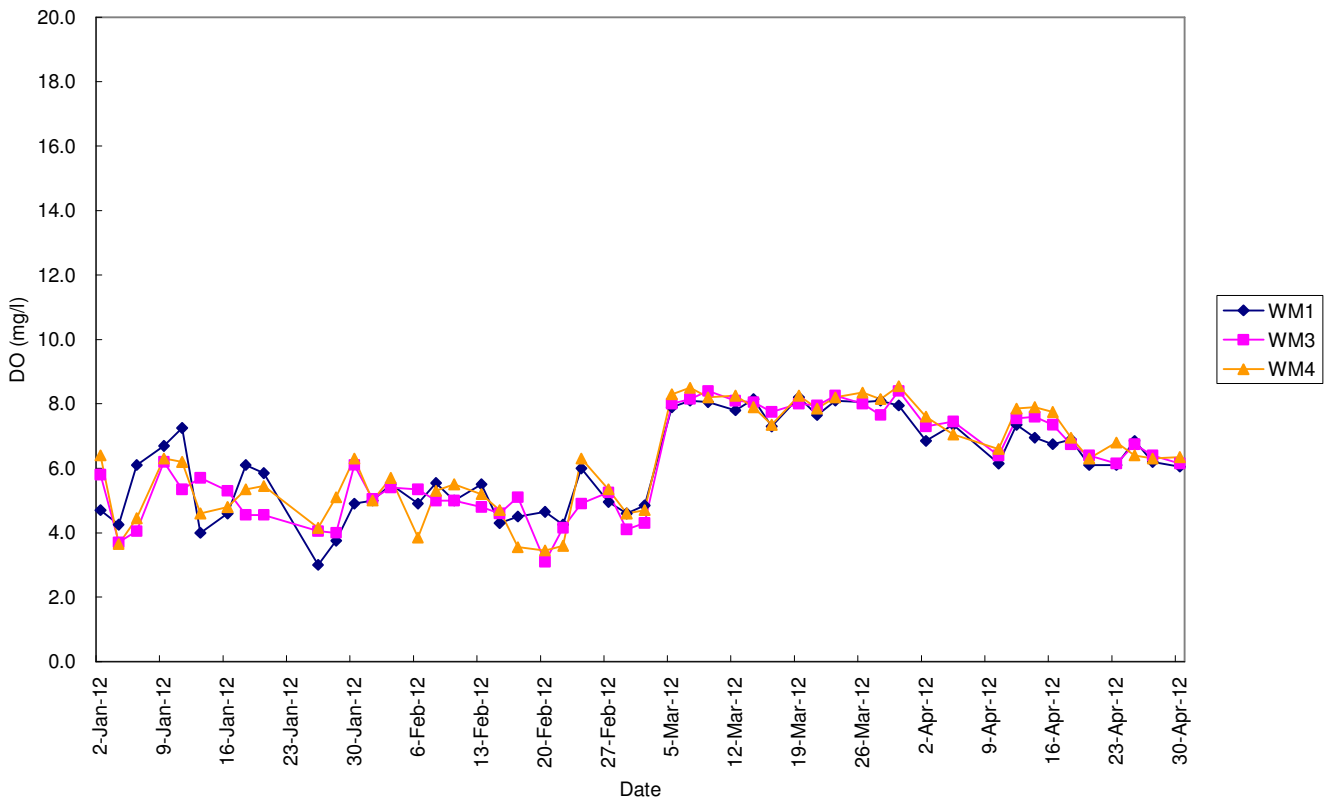


Monitoring Results for Dissolved Oxygen in Ebb Tide - Surface Level

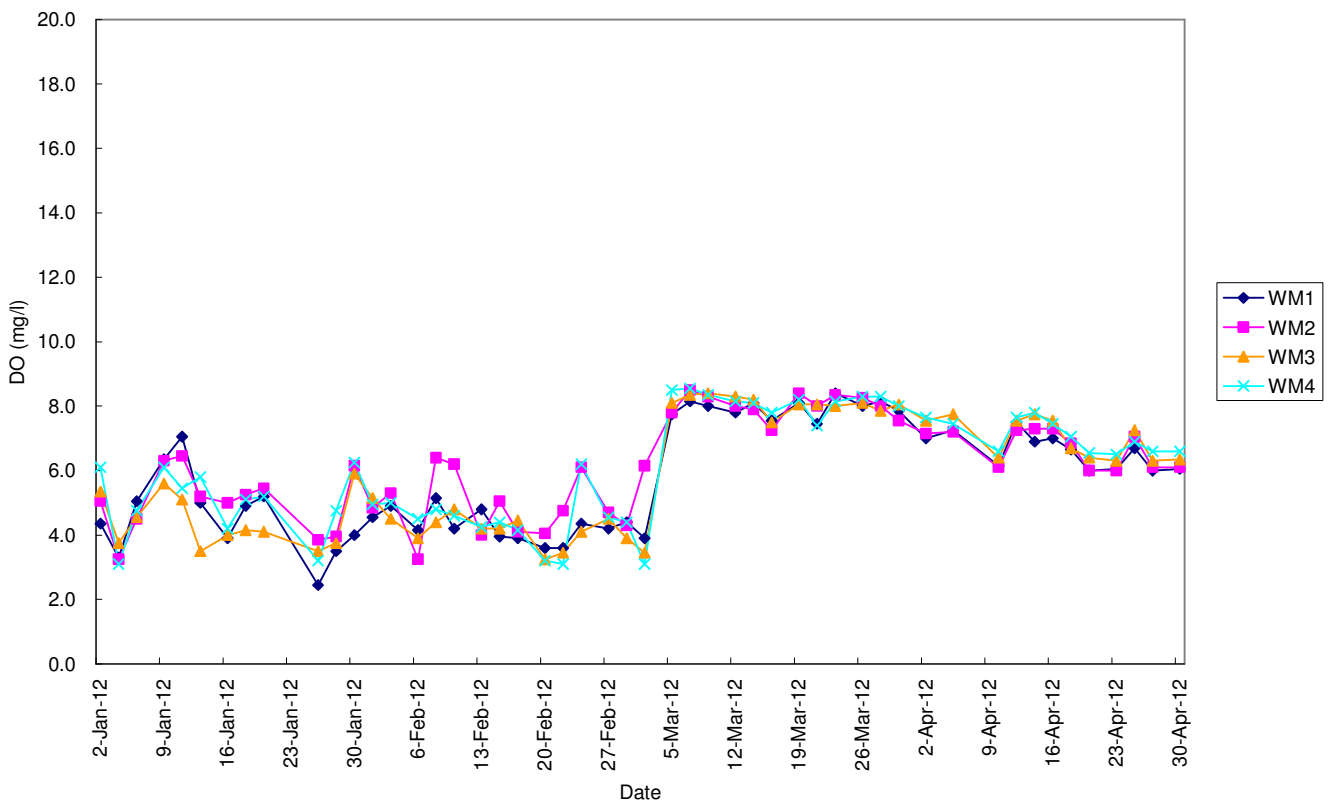


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Dissolved Oxygen in Ebb Tide - Middle Level

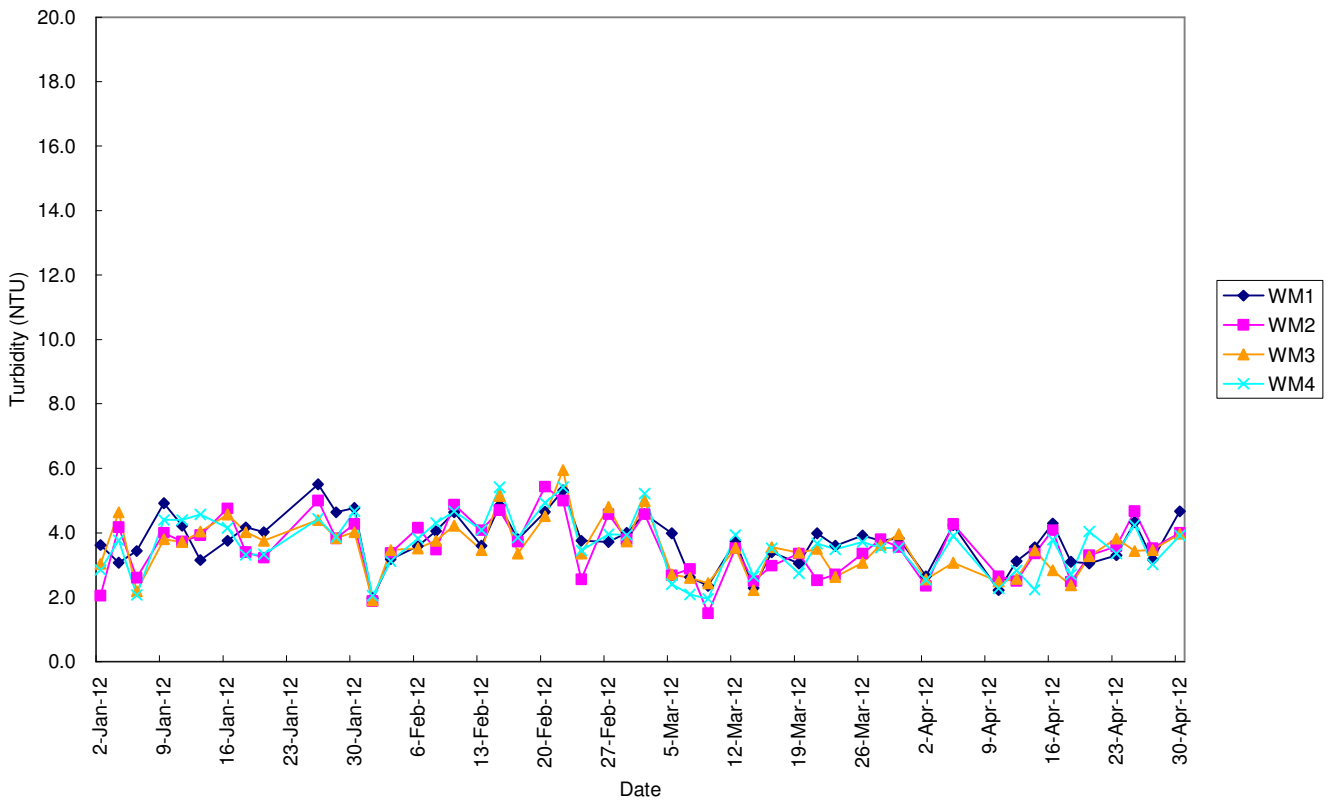


Monitoring Results for Dissolved Oxygen in Ebb Tide - Bottom Level

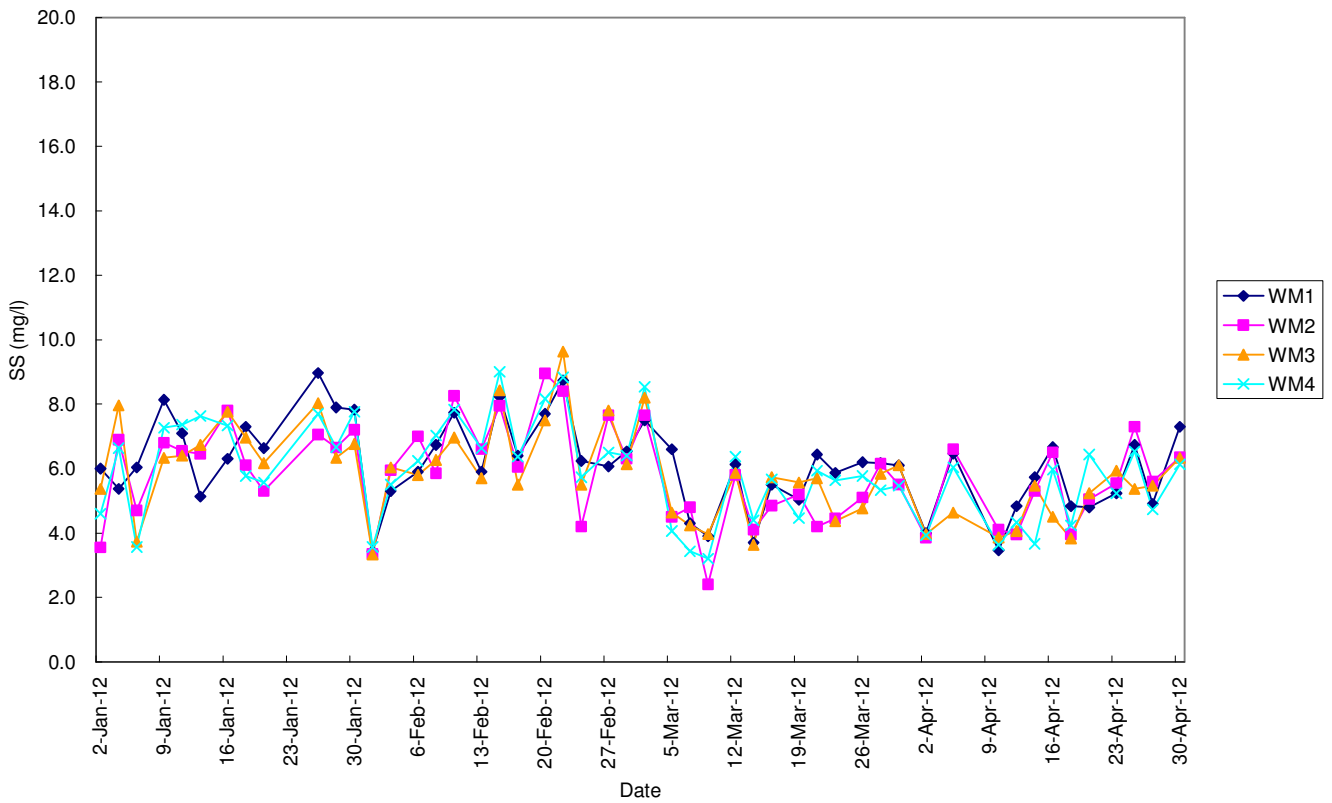


Graphical Plots of Water Quality Monitoring Results

Monitoring Results for Turbidity in Ebb Tide - Depth Average



Monitoring Results for Suspended Solids in Ebb Tide - Depth Average



Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 30-Apr-12

Weather Conditions: Cloudy

Parameter	Date	Time	Unit	Value
Leq(30min)	30-Apr-12	7:00	LAeq	62.7
Leq(30min)	30-Apr-12	7:30	LAeq	63.5
Leq(30min)	30-Apr-12	8:00	LAeq	66.2
Leq(30min)	30-Apr-12	8:30	LAeq	67.2
Leq(30min)	30-Apr-12	9:00	LAeq	68.4
Leq(30min)	30-Apr-12	9:30	LAeq	67.6
Leq(30min)	30-Apr-12	10:00	LAeq	67.6
Leq(30min)	30-Apr-12	10:30	LAeq	67.9
Leq(30min)	30-Apr-12	11:00	LAeq	68.5
Leq(30min)	30-Apr-12	11:30	LAeq	67.4
Leq(30min)	30-Apr-12	12:00	LAeq	66.5
Leq(30min)	30-Apr-12	12:30	LAeq	65.0
Leq(30min)	30-Apr-12	13:00	LAeq	68.8
Leq(30min)	30-Apr-12	13:30	LAeq	67.9
Leq(30min)	30-Apr-12	14:00	LAeq	67.8
Leq(30min)	30-Apr-12	14:30	LAeq	68.8
Leq(30min)	30-Apr-12	15:00	LAeq	68.9
Leq(30min)	30-Apr-12	15:30	LAeq	69.8
Leq(30min)	30-Apr-12	16:00	LAeq	69.0
Leq(30min)	30-Apr-12	16:30	LAeq	70.1
Leq(30min)	30-Apr-12	17:00	LAeq	69.2
Leq(30min)	30-Apr-12	17:30	LAeq	66.8
Leq(30min)	30-Apr-12	18:00	LAeq	65.7
Leq(30min)	30-Apr-12	18:30	LAeq	64.7

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 27-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	27-Apr-12	7:00	LAeq	62.3
Leq(30min)	27-Apr-12	7:30	LAeq	63.2
Leq(30min)	27-Apr-12	8:00	LAeq	65.2
Leq(30min)	27-Apr-12	8:30	LAeq	66.9
Leq(30min)	27-Apr-12	9:00	LAeq	70.6
Leq(30min)	27-Apr-12	9:30	LAeq	70.7
Leq(30min)	27-Apr-12	10:00	LAeq	70.1
Leq(30min)	27-Apr-12	10:30	LAeq	69.5
Leq(30min)	27-Apr-12	11:00	LAeq	70.1
Leq(30min)	27-Apr-12	11:30	LAeq	68.4
Leq(30min)	27-Apr-12	12:00	LAeq	63.3
Leq(30min)	27-Apr-12	12:30	LAeq	64.0
Leq(30min)	27-Apr-12	13:00	LAeq	67.9
Leq(30min)	27-Apr-12	13:30	LAeq	68.9
Leq(30min)	27-Apr-12	14:00	LAeq	69.7
Leq(30min)	27-Apr-12	14:30	LAeq	71.0
Leq(30min)	27-Apr-12	15:00	LAeq	70.9
Leq(30min)	27-Apr-12	15:30	LAeq	69.0
Leq(30min)	27-Apr-12	16:00	LAeq	70.6
Leq(30min)	27-Apr-12	16:30	LAeq	69.4
Leq(30min)	27-Apr-12	17:00	LAeq	66.3
Leq(30min)	27-Apr-12	17:30	LAeq	64.1
Leq(30min)	27-Apr-12	18:00	LAeq	63.2
Leq(30min)	27-Apr-12	18:30	LAeq	63.1

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 26-Apr-12

Weather Conditions: Cloudy

Parameter	Date	Time	Unit	Value
Leq(30min)	26-Apr-12	7:00	LAeq	62.0
Leq(30min)	26-Apr-12	7:30	LAeq	64.2
Leq(30min)	26-Apr-12	8:00	LAeq	66.5
Leq(30min)	26-Apr-12	8:30	LAeq	71.3
Leq(30min)	26-Apr-12	9:00	LAeq	70.9
Leq(30min)	26-Apr-12	9:30	LAeq	73.7
Leq(30min)	26-Apr-12	10:00	LAeq	72.8
Leq(30min)	26-Apr-12	10:30	LAeq	70.4
Leq(30min)	26-Apr-12	11:00	LAeq	70.9
Leq(30min)	26-Apr-12	11:30	LAeq	67.4
Leq(30min)	26-Apr-12	12:00	LAeq	63.2
Leq(30min)	26-Apr-12	12:30	LAeq	65.4
Leq(30min)	26-Apr-12	13:00	LAeq	68.9
Leq(30min)	26-Apr-12	13:30	LAeq	70.2
Leq(30min)	26-Apr-12	14:00	LAeq	68.9
Leq(30min)	26-Apr-12	14:30	LAeq	68.9
Leq(30min)	26-Apr-12	15:00	LAeq	69.6
Leq(30min)	26-Apr-12	15:30	LAeq	70.2
Leq(30min)	26-Apr-12	16:00	LAeq	70.8
Leq(30min)	26-Apr-12	16:30	LAeq	70.0
Leq(30min)	26-Apr-12	17:00	LAeq	70.6
Leq(30min)	26-Apr-12	17:30	LAeq	65.1
Leq(30min)	26-Apr-12	18:00	LAeq	62.7
Leq(30min)	26-Apr-12	18:30	LAeq	62.6

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 25-Apr-12

Weather Conditions: Cloudy

Parameter	Date	Time	Unit	Value
Leq(30min)	25-Apr-12	7:00	LAeq	62.3
Leq(30min)	25-Apr-12	7:30	LAeq	64.3
Leq(30min)	25-Apr-12	8:00	LAeq	64.3
Leq(30min)	25-Apr-12	8:30	LAeq	68.1
Leq(30min)	25-Apr-12	9:00	LAeq	67.1
Leq(30min)	25-Apr-12	9:30	LAeq	69.5
Leq(30min)	25-Apr-12	10:00	LAeq	71.9
Leq(30min)	25-Apr-12	10:30	LAeq	68.5
Leq(30min)	25-Apr-12	11:00	LAeq	69.7
Leq(30min)	25-Apr-12	11:30	LAeq	68.0
Leq(30min)	25-Apr-12	12:00	LAeq	64.8
Leq(30min)	25-Apr-12	12:30	LAeq	65.1
Leq(30min)	25-Apr-12	13:00	LAeq	68.1
Leq(30min)	25-Apr-12	13:30	LAeq	70.7
Leq(30min)	25-Apr-12	14:00	LAeq	71.2
Leq(30min)	25-Apr-12	14:30	LAeq	70.8
Leq(30min)	25-Apr-12	15:00	LAeq	69.3
Leq(30min)	25-Apr-12	15:30	LAeq	72.2
Leq(30min)	25-Apr-12	16:00	LAeq	71.3
Leq(30min)	25-Apr-12	16:30	LAeq	68.9
Leq(30min)	25-Apr-12	17:00	LAeq	69.4
Leq(30min)	25-Apr-12	17:30	LAeq	66.7
Leq(30min)	25-Apr-12	18:00	LAeq	63.4
Leq(30min)	25-Apr-12	18:30	LAeq	62.5

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 24-Apr-12

Weather Conditions: Cloudy

Parameter	Date	Time	Unit	Value
Leq(30min)	24-Apr-12	7:00	LAeq	62.3
Leq(30min)	24-Apr-12	7:30	LAeq	64.0
Leq(30min)	24-Apr-12	8:00	LAeq	65.9
Leq(30min)	24-Apr-12	8:30	LAeq	69.9
Leq(30min)	24-Apr-12	9:00	LAeq	71.9
Leq(30min)	24-Apr-12	9:30	LAeq	73.0
Leq(30min)	24-Apr-12	10:00	LAeq	72.2
Leq(30min)	24-Apr-12	10:30	LAeq	71.5
Leq(30min)	24-Apr-12	11:00	LAeq	70.7
Leq(30min)	24-Apr-12	11:30	LAeq	66.8
Leq(30min)	24-Apr-12	12:00	LAeq	64.3
Leq(30min)	24-Apr-12	12:30	LAeq	64.6
Leq(30min)	24-Apr-12	13:00	LAeq	71.2
Leq(30min)	24-Apr-12	13:30	LAeq	70.2
Leq(30min)	24-Apr-12	14:00	LAeq	70.3
Leq(30min)	24-Apr-12	14:30	LAeq	71.1
Leq(30min)	24-Apr-12	15:00	LAeq	73.0
Leq(30min)	24-Apr-12	15:30	LAeq	72.0
Leq(30min)	24-Apr-12	16:00	LAeq	71.9
Leq(30min)	24-Apr-12	16:30	LAeq	71.1
Leq(30min)	24-Apr-12	17:00	LAeq	67.7
Leq(30min)	24-Apr-12	17:30	LAeq	66.2
Leq(30min)	24-Apr-12	18:00	LAeq	63.7
Leq(30min)	24-Apr-12	18:30	LAeq	62.9

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 23-Apr-12

Weather Conditions: Cloudy

Parameter	Date	Time	Unit	Value
Leq(30min)	23-Apr-12	7:00	LAeq	62.4
Leq(30min)	23-Apr-12	7:30	LAeq	64.6
Leq(30min)	23-Apr-12	8:00	LAeq	65.6
Leq(30min)	23-Apr-12	8:30	LAeq	69.5
Leq(30min)	23-Apr-12	9:00	LAeq	67.9
Leq(30min)	23-Apr-12	9:30	LAeq	73.0
Leq(30min)	23-Apr-12	10:00	LAeq	70.4
Leq(30min)	23-Apr-12	10:30	LAeq	72.3
Leq(30min)	23-Apr-12	11:00	LAeq	70.5
Leq(30min)	23-Apr-12	11:30	LAeq	69.1
Leq(30min)	23-Apr-12	12:00	LAeq	64.9
Leq(30min)	23-Apr-12	12:30	LAeq	66.4
Leq(30min)	23-Apr-12	13:00	LAeq	68.5
Leq(30min)	23-Apr-12	13:30	LAeq	68.1
Leq(30min)	23-Apr-12	14:00	LAeq	67.4
Leq(30min)	23-Apr-12	14:30	LAeq	73.6
Leq(30min)	23-Apr-12	15:00	LAeq	72.8
Leq(30min)	23-Apr-12	15:30	LAeq	73.6
Leq(30min)	23-Apr-12	16:00	LAeq	71.1
Leq(30min)	23-Apr-12	16:30	LAeq	69.3
Leq(30min)	23-Apr-12	17:00	LAeq	70.4
Leq(30min)	23-Apr-12	17:30	LAeq	68.4
Leq(30min)	23-Apr-12	18:00	LAeq	63.7
Leq(30min)	23-Apr-12	18:30	LAeq	62.0

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 21-Apr-12

Weather Conditions: Cloudy

Parameter	Date	Time	Unit	Value
Leq(30min)	21-Apr-12	7:00	LAeq	61.9
Leq(30min)	21-Apr-12	7:30	LAeq	62.8
Leq(30min)	21-Apr-12	8:00	LAeq	69.0
Leq(30min)	21-Apr-12	8:30	LAeq	67.9
Leq(30min)	21-Apr-12	9:00	LAeq	66.4
Leq(30min)	21-Apr-12	9:30	LAeq	67.6
Leq(30min)	21-Apr-12	10:00	LAeq	68.3
Leq(30min)	21-Apr-12	10:30	LAeq	69.7
Leq(30min)	21-Apr-12	11:00	LAeq	68.9
Leq(30min)	21-Apr-12	11:30	LAeq	66.9
Leq(30min)	21-Apr-12	12:00	LAeq	64.4
Leq(30min)	21-Apr-12	12:30	LAeq	66.1
Leq(30min)	21-Apr-12	13:00	LAeq	68.5
Leq(30min)	21-Apr-12	13:30	LAeq	68.7
Leq(30min)	21-Apr-12	14:00	LAeq	69.3
Leq(30min)	21-Apr-12	14:30	LAeq	69.0
Leq(30min)	21-Apr-12	15:00	LAeq	69.1
Leq(30min)	21-Apr-12	15:30	LAeq	68.6
Leq(30min)	21-Apr-12	16:00	LAeq	70.3
Leq(30min)	21-Apr-12	16:30	LAeq	69.2
Leq(30min)	21-Apr-12	17:00	LAeq	69.9
Leq(30min)	21-Apr-12	17:30	LAeq	67.6
Leq(30min)	21-Apr-12	18:00	LAeq	63.0
Leq(30min)	21-Apr-12	18:30	LAeq	62.7

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 20-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	20-Apr-12	7:00	LAeq	62.2
Leq(30min)	20-Apr-12	7:30	LAeq	63.0
Leq(30min)	20-Apr-12	8:00	LAeq	66.1
Leq(30min)	20-Apr-12	8:30	LAeq	71.5
Leq(30min)	20-Apr-12	9:00	LAeq	70.5
Leq(30min)	20-Apr-12	9:30	LAeq	69.1
Leq(30min)	20-Apr-12	10:00	LAeq	69.4
Leq(30min)	20-Apr-12	10:30	LAeq	68.8
Leq(30min)	20-Apr-12	11:00	LAeq	71.5
Leq(30min)	20-Apr-12	11:30	LAeq	67.3
Leq(30min)	20-Apr-12	12:00	LAeq	65.2
Leq(30min)	20-Apr-12	12:30	LAeq	65.6
Leq(30min)	20-Apr-12	13:00	LAeq	68.5
Leq(30min)	20-Apr-12	13:30	LAeq	68.3
Leq(30min)	20-Apr-12	14:00	LAeq	66.6
Leq(30min)	20-Apr-12	14:30	LAeq	69.1
Leq(30min)	20-Apr-12	15:00	LAeq	70.6
Leq(30min)	20-Apr-12	15:30	LAeq	70.2
Leq(30min)	20-Apr-12	16:00	LAeq	68.6
Leq(30min)	20-Apr-12	16:30	LAeq	66.8
Leq(30min)	20-Apr-12	17:00	LAeq	66.8
Leq(30min)	20-Apr-12	17:30	LAeq	65.3
Leq(30min)	20-Apr-12	18:00	LAeq	64.5
Leq(30min)	20-Apr-12	18:30	LAeq	64.7

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 19-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	19-Apr-12	7:00	LAeq	63.8
Leq(30min)	19-Apr-12	7:30	LAeq	64.5
Leq(30min)	19-Apr-12	8:00	LAeq	66.7
Leq(30min)	19-Apr-12	8:30	LAeq	68.1
Leq(30min)	19-Apr-12	9:00	LAeq	68.6
Leq(30min)	19-Apr-12	9:30	LAeq	69.3
Leq(30min)	19-Apr-12	10:00	LAeq	69.4
Leq(30min)	19-Apr-12	10:30	LAeq	68.9
Leq(30min)	19-Apr-12	11:00	LAeq	68.0
Leq(30min)	19-Apr-12	11:30	LAeq	65.8
Leq(30min)	19-Apr-12	12:00	LAeq	68.9
Leq(30min)	19-Apr-12	12:30	LAeq	66.8
Leq(30min)	19-Apr-12	13:00	LAeq	70.7
Leq(30min)	19-Apr-12	13:30	LAeq	72.0
Leq(30min)	19-Apr-12	14:00	LAeq	71.6
Leq(30min)	19-Apr-12	14:30	LAeq	71.1
Leq(30min)	19-Apr-12	15:00	LAeq	70.0
Leq(30min)	19-Apr-12	15:30	LAeq	68.2
Leq(30min)	19-Apr-12	16:00	LAeq	67.2
Leq(30min)	19-Apr-12	16:30	LAeq	67.1
Leq(30min)	19-Apr-12	17:00	LAeq	67.6
Leq(30min)	19-Apr-12	17:30	LAeq	64.2
Leq(30min)	19-Apr-12	18:00	LAeq	62.6
Leq(30min)	19-Apr-12	18:30	LAeq	61.9

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 18-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	18-Apr-12	7:00	LAeq	61.8
Leq(30min)	18-Apr-12	7:30	LAeq	62.7
Leq(30min)	18-Apr-12	8:00	LAeq	64.2
Leq(30min)	18-Apr-12	8:30	LAeq	67.7
Leq(30min)	18-Apr-12	9:00	LAeq	66.8
Leq(30min)	18-Apr-12	9:30	LAeq	67.8
Leq(30min)	18-Apr-12	10:00	LAeq	67.1
Leq(30min)	18-Apr-12	10:30	LAeq	67.7
Leq(30min)	18-Apr-12	11:00	LAeq	66.6
Leq(30min)	18-Apr-12	11:30	LAeq	65.6
Leq(30min)	18-Apr-12	12:00	LAeq	65.5
Leq(30min)	18-Apr-12	12:30	LAeq	65.5
Leq(30min)	18-Apr-12	13:00	LAeq	67.8
Leq(30min)	18-Apr-12	13:30	LAeq	69.1
Leq(30min)	18-Apr-12	14:00	LAeq	67.8
Leq(30min)	18-Apr-12	14:30	LAeq	68.1
Leq(30min)	18-Apr-12	15:00	LAeq	67.9
Leq(30min)	18-Apr-12	15:30	LAeq	69.2
Leq(30min)	18-Apr-12	16:00	LAeq	71.4
Leq(30min)	18-Apr-12	16:30	LAeq	69.3
Leq(30min)	18-Apr-12	17:00	LAeq	68.8
Leq(30min)	18-Apr-12	17:30	LAeq	68.2
Leq(30min)	18-Apr-12	18:00	LAeq	66.6
Leq(30min)	18-Apr-12	18:30	LAeq	64.1

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 17-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	17-Apr-12	7:00	LAeq	62.2
Leq(30min)	17-Apr-12	7:30	LAeq	63.1
Leq(30min)	17-Apr-12	8:00	LAeq	64.8
Leq(30min)	17-Apr-12	8:30	LAeq	66.7
Leq(30min)	17-Apr-12	9:00	LAeq	66.7
Leq(30min)	17-Apr-12	9:30	LAeq	68.3
Leq(30min)	17-Apr-12	10:00	LAeq	72.7
Leq(30min)	17-Apr-12	10:30	LAeq	68.1
Leq(30min)	17-Apr-12	11:00	LAeq	68.9
Leq(30min)	17-Apr-12	11:30	LAeq	68.2
Leq(30min)	17-Apr-12	12:00	LAeq	66.3
Leq(30min)	17-Apr-12	12:30	LAeq	66.5
Leq(30min)	17-Apr-12	13:00	LAeq	67.2
Leq(30min)	17-Apr-12	13:30	LAeq	67.9
Leq(30min)	17-Apr-12	14:00	LAeq	69.0
Leq(30min)	17-Apr-12	14:30	LAeq	68.9
Leq(30min)	17-Apr-12	15:00	LAeq	69.4
Leq(30min)	17-Apr-12	15:30	LAeq	67.8
Leq(30min)	17-Apr-12	16:00	LAeq	68.2
Leq(30min)	17-Apr-12	16:30	LAeq	67.7
Leq(30min)	17-Apr-12	17:00	LAeq	68.7
Leq(30min)	17-Apr-12	17:30	LAeq	63.5
Leq(30min)	17-Apr-12	18:00	LAeq	63.3
Leq(30min)	17-Apr-12	18:30	LAeq	61.8

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 16-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	16-Apr-12	7:00	LAeq	61.8
Leq(30min)	16-Apr-12	7:30	LAeq	63.3
Leq(30min)	16-Apr-12	8:00	LAeq	67.2
Leq(30min)	16-Apr-12	8:30	LAeq	68.1
Leq(30min)	16-Apr-12	9:00	LAeq	70.5
Leq(30min)	16-Apr-12	9:30	LAeq	70.6
Leq(30min)	16-Apr-12	10:00	LAeq	71.0
Leq(30min)	16-Apr-12	10:30	LAeq	71.2
Leq(30min)	16-Apr-12	11:00	LAeq	76.2
Leq(30min)	16-Apr-12	11:30	LAeq	77.0
Leq(30min)	16-Apr-12	12:00	LAeq	63.6
Leq(30min)	16-Apr-12	12:30	LAeq	65.1
Leq(30min)	16-Apr-12	13:00	LAeq	74.8
Leq(30min)	16-Apr-12	13:30	LAeq	71.8
Leq(30min)	16-Apr-12	14:00	LAeq	73.3
Leq(30min)	16-Apr-12	14:30	LAeq	77.7
Leq(30min)	16-Apr-12	15:00	LAeq	75.2
Leq(30min)	16-Apr-12	15:30	LAeq	73.8
Leq(30min)	16-Apr-12	16:00	LAeq	72.6
Leq(30min)	16-Apr-12	16:30	LAeq	70.3
Leq(30min)	16-Apr-12	17:00	LAeq	77.6
Leq(30min)	16-Apr-12	17:30	LAeq	64.1
Leq(30min)	16-Apr-12	18:00	LAeq	63.0
Leq(30min)	16-Apr-12	18:30	LAeq	65.5

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 14-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	14-Apr-12	7:00	LAeq	62.9
Leq(30min)	14-Apr-12	7:30	LAeq	63.4
Leq(30min)	14-Apr-12	8:00	LAeq	67.6
Leq(30min)	14-Apr-12	8:30	LAeq	70.4
Leq(30min)	14-Apr-12	9:00	LAeq	71.6
Leq(30min)	14-Apr-12	9:30	LAeq	71.5
Leq(30min)	14-Apr-12	10:00	LAeq	73.8
Leq(30min)	14-Apr-12	10:30	LAeq	73.1
Leq(30min)	14-Apr-12	11:00	LAeq	72.0
Leq(30min)	14-Apr-12	11:30	LAeq	69.6
Leq(30min)	14-Apr-12	12:00	LAeq	68.7
Leq(30min)	14-Apr-12	12:30	LAeq	66.6
Leq(30min)	14-Apr-12	13:00	LAeq	68.9
Leq(30min)	14-Apr-12	13:30	LAeq	71.0
Leq(30min)	14-Apr-12	14:00	LAeq	71.7
Leq(30min)	14-Apr-12	14:30	LAeq	72.3
Leq(30min)	14-Apr-12	15:00	LAeq	72.3
Leq(30min)	14-Apr-12	15:30	LAeq	72.4
Leq(30min)	14-Apr-12	16:00	LAeq	71.3
Leq(30min)	14-Apr-12	16:30	LAeq	71.3
Leq(30min)	14-Apr-12	17:00	LAeq	70.2
Leq(30min)	14-Apr-12	17:30	LAeq	69.5
Leq(30min)	14-Apr-12	18:00	LAeq	63.7
Leq(30min)	14-Apr-12	18:30	LAeq	63.5

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 13-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	13-Apr-12	7:00	LAeq	60.9
Leq(30min)	13-Apr-12	7:30	LAeq	62.0
Leq(30min)	13-Apr-12	8:00	LAeq	70.0
Leq(30min)	13-Apr-12	8:30	LAeq	74.9
Leq(30min)	13-Apr-12	9:00	LAeq	73.4
Leq(30min)	13-Apr-12	9:30	LAeq	71.9
Leq(30min)	13-Apr-12	10:00	LAeq	74.8
Leq(30min)	13-Apr-12	10:30	LAeq	73.0
Leq(30min)	13-Apr-12	11:00	LAeq	69.7
Leq(30min)	13-Apr-12	11:30	LAeq	65.8
Leq(30min)	13-Apr-12	12:00	LAeq	64.0
Leq(30min)	13-Apr-12	12:30	LAeq	64.4
Leq(30min)	13-Apr-12	13:00	LAeq	67.4
Leq(30min)	13-Apr-12	13:30	LAeq	69.6
Leq(30min)	13-Apr-12	14:00	LAeq	73.7
Leq(30min)	13-Apr-12	14:30	LAeq	73.6
Leq(30min)	13-Apr-12	15:00	LAeq	73.6
Leq(30min)	13-Apr-12	15:30	LAeq	74.6
Leq(30min)	13-Apr-12	16:00	LAeq	74.6
Leq(30min)	13-Apr-12	16:30	LAeq	73.7
Leq(30min)	13-Apr-12	17:00	LAeq	71.0
Leq(30min)	13-Apr-12	17:30	LAeq	65.7
Leq(30min)	13-Apr-12	18:00	LAeq	62.7
Leq(30min)	13-Apr-12	18:30	LAeq	61.3

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 12-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	12-Apr-12	7:00	LAeq	61.5
Leq(30min)	12-Apr-12	7:30	LAeq	62.2
Leq(30min)	12-Apr-12	8:00	LAeq	70.1
Leq(30min)	12-Apr-12	8:30	LAeq	73.1
Leq(30min)	12-Apr-12	9:00	LAeq	77.5
Leq(30min)	12-Apr-12	9:30	LAeq	76.6
Leq(30min)	12-Apr-12	10:00	LAeq	78.4
Leq(30min)	12-Apr-12	10:30	LAeq	79.5
Leq(30min)	12-Apr-12	11:00	LAeq	71.5
Leq(30min)	12-Apr-12	11:30	LAeq	66.9
Leq(30min)	12-Apr-12	12:00	LAeq	64.9
Leq(30min)	12-Apr-12	12:30	LAeq	64.6
Leq(30min)	12-Apr-12	13:00	LAeq	80.6
Leq(30min)	12-Apr-12	13:30	LAeq	78.3
Leq(30min)	12-Apr-12	14:00	LAeq	76.0
Leq(30min)	12-Apr-12	14:30	LAeq	72.3
Leq(30min)	12-Apr-12	15:00	LAeq	P.F.
Leq(30min)	12-Apr-12	15:30	LAeq	P.F.
Leq(30min)	12-Apr-12	16:00	LAeq	P.F.
Leq(30min)	12-Apr-12	16:30	LAeq	P.F.
Leq(30min)	12-Apr-12	17:00	LAeq	71.8
Leq(30min)	12-Apr-12	17:30	LAeq	68.9
Leq(30min)	12-Apr-12	18:00	LAeq	63.0
Leq(30min)	12-Apr-12	18:30	LAeq	61.7

Remark: Power failure was occurred in between 15:00 to 17:00 and resumption was made after 17:00.

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 11-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	11-Apr-12	7:00	LAeq	62.0
Leq(30min)	11-Apr-12	7:30	LAeq	62.3
Leq(30min)	11-Apr-12	8:00	LAeq	69.3
Leq(30min)	11-Apr-12	8:30	LAeq	67.2
Leq(30min)	11-Apr-12	9:00	LAeq	77.2
Leq(30min)	11-Apr-12	9:30	LAeq	71.3
Leq(30min)	11-Apr-12	10:00	LAeq	73.2
Leq(30min)	11-Apr-12	10:30	LAeq	74.4
Leq(30min)	11-Apr-12	11:00	LAeq	71.3
Leq(30min)	11-Apr-12	11:30	LAeq	70.4
Leq(30min)	11-Apr-12	12:00	LAeq	64.7
Leq(30min)	11-Apr-12	12:30	LAeq	63.9
Leq(30min)	11-Apr-12	13:00	LAeq	71.3
Leq(30min)	11-Apr-12	13:30	LAeq	73.4
Leq(30min)	11-Apr-12	14:00	LAeq	77.5
Leq(30min)	11-Apr-12	14:30	LAeq	76.0
Leq(30min)	11-Apr-12	15:00	LAeq	74.8
Leq(30min)	11-Apr-12	15:30	LAeq	75.0
Leq(30min)	11-Apr-12	16:00	LAeq	72.2
Leq(30min)	11-Apr-12	16:30	LAeq	74.9
Leq(30min)	11-Apr-12	17:00	LAeq	75.8
Leq(30min)	11-Apr-12	17:30	LAeq	78.6
Leq(30min)	11-Apr-12	18:00	LAeq	62.7
Leq(30min)	11-Apr-12	18:30	LAeq	62.3

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 10-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	10-Apr-12	7:00	LAeq	61.5
Leq(30min)	10-Apr-12	7:30	LAeq	62.3
Leq(30min)	10-Apr-12	8:00	LAeq	72.3
Leq(30min)	10-Apr-12	8:30	LAeq	76.2
Leq(30min)	10-Apr-12	9:00	LAeq	76.7
Leq(30min)	10-Apr-12	9:30	LAeq	79.6
Leq(30min)	10-Apr-12	10:00	LAeq	75.8
Leq(30min)	10-Apr-12	10:30	LAeq	75.3
Leq(30min)	10-Apr-12	11:00	LAeq	73.0
Leq(30min)	10-Apr-12	11:30	LAeq	70.6
Leq(30min)	10-Apr-12	12:00	LAeq	65.9
Leq(30min)	10-Apr-12	12:30	LAeq	66.5
Leq(30min)	10-Apr-12	13:00	LAeq	76.0
Leq(30min)	10-Apr-12	13:30	LAeq	72.7
Leq(30min)	10-Apr-12	14:00	LAeq	72.1
Leq(30min)	10-Apr-12	14:30	LAeq	72.5
Leq(30min)	10-Apr-12	15:00	LAeq	72.0
Leq(30min)	10-Apr-12	15:30	LAeq	73.0
Leq(30min)	10-Apr-12	16:00	LAeq	74.4
Leq(30min)	10-Apr-12	16:30	LAeq	76.4
Leq(30min)	10-Apr-12	17:00	LAeq	75.6
Leq(30min)	10-Apr-12	17:30	LAeq	69.2
Leq(30min)	10-Apr-12	18:00	LAeq	63.3
Leq(30min)	10-Apr-12	18:30	LAeq	62.5

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 5-Apr-12

Weather Conditions: Rainy

Parameter	Date	Time	Unit	Value
Leq(30min)	5-Apr-12	7:00	LAeq	61.6
Leq(30min)	5-Apr-12	7:30	LAeq	62.3
Leq(30min)	5-Apr-12	8:00	LAeq	70.4
Leq(30min)	5-Apr-12	8:30	LAeq	74.9
Leq(30min)	5-Apr-12	9:00	LAeq	76.1
Leq(30min)	5-Apr-12	9:30	LAeq	74.8
Leq(30min)	5-Apr-12	10:00	LAeq	76.4
Leq(30min)	5-Apr-12	10:30	LAeq	76.3
Leq(30min)	5-Apr-12	11:00	LAeq	81.4
Leq(30min)	5-Apr-12	11:30	LAeq	77.1
Leq(30min)	5-Apr-12	12:00	LAeq	64.0
Leq(30min)	5-Apr-12	12:30	LAeq	62.8
Leq(30min)	5-Apr-12	13:00	LAeq	72.6
Leq(30min)	5-Apr-12	13:30	LAeq	74.3
Leq(30min)	5-Apr-12	14:00	LAeq	77.4
Leq(30min)	5-Apr-12	14:30	LAeq	77.1
Leq(30min)	5-Apr-12	15:00	LAeq	71.1
Leq(30min)	5-Apr-12	15:30	LAeq	69.9
Leq(30min)	5-Apr-12	16:00	LAeq	65.0
Leq(30min)	5-Apr-12	16:30	LAeq	63.7
Leq(30min)	5-Apr-12	17:00	LAeq	64.0
Leq(30min)	5-Apr-12	17:30	LAeq	64.1
Leq(30min)	5-Apr-12	18:00	LAeq	63.0
Leq(30min)	5-Apr-12	18:30	LAeq	62.8

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 3-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	3-Apr-12	7:00	LAeq	63.5
Leq(30min)	3-Apr-12	7:30	LAeq	70.3
Leq(30min)	3-Apr-12	8:00	LAeq	72.2
Leq(30min)	3-Apr-12	8:30	LAeq	73.7
Leq(30min)	3-Apr-12	9:00	LAeq	74.8
Leq(30min)	3-Apr-12	9:30	LAeq	75.3
Leq(30min)	3-Apr-12	10:00	LAeq	75.6
Leq(30min)	3-Apr-12	10:30	LAeq	79.7
Leq(30min)	3-Apr-12	11:00	LAeq	74.7
Leq(30min)	3-Apr-12	11:30	LAeq	72.3
Leq(30min)	3-Apr-12	12:00	LAeq	66.5
Leq(30min)	3-Apr-12	12:30	LAeq	68.9
Leq(30min)	3-Apr-12	13:00	LAeq	75.5
Leq(30min)	3-Apr-12	13:30	LAeq	77.8
Leq(30min)	3-Apr-12	14:00	LAeq	78.5
Leq(30min)	3-Apr-12	14:30	LAeq	78.0
Leq(30min)	3-Apr-12	15:00	LAeq	75.6
Leq(30min)	3-Apr-12	15:30	LAeq	74.9
Leq(30min)	3-Apr-12	16:00	LAeq	76.8
Leq(30min)	3-Apr-12	16:30	LAeq	76.1
Leq(30min)	3-Apr-12	17:00	LAeq	79.0
Leq(30min)	3-Apr-12	17:30	LAeq	74.3
Leq(30min)	3-Apr-12	18:00	LAeq	65.5
Leq(30min)	3-Apr-12	18:30	LAeq	62.2

Monitoring Location: CN4 - South Horizons Phrase IV - Block 25

Date of Monitoring: 2-Apr-12

Weather Conditions: Fine

Parameter	Date	Time	Unit	Value
Leq(30min)	2-Apr-12	7:00	LAeq	61.2
Leq(30min)	2-Apr-12	7:30	LAeq	62.7
Leq(30min)	2-Apr-12	8:00	LAeq	68.8
Leq(30min)	2-Apr-12	8:30	LAeq	72.2
Leq(30min)	2-Apr-12	9:00	LAeq	70.2
Leq(30min)	2-Apr-12	9:30	LAeq	70.3
Leq(30min)	2-Apr-12	10:00	LAeq	72.9
Leq(30min)	2-Apr-12	10:30	LAeq	77.7
Leq(30min)	2-Apr-12	11:00	LAeq	79.2
Leq(30min)	2-Apr-12	11:30	LAeq	75.5
Leq(30min)	2-Apr-12	12:00	LAeq	67.8
Leq(30min)	2-Apr-12	12:30	LAeq	65.5
Leq(30min)	2-Apr-12	13:00	LAeq	74.8
Leq(30min)	2-Apr-12	13:30	LAeq	76.2
Leq(30min)	2-Apr-12	14:00	LAeq	68.5
Leq(30min)	2-Apr-12	14:30	LAeq	75.6
Leq(30min)	2-Apr-12	15:00	LAeq	78.6
Leq(30min)	2-Apr-12	15:30	LAeq	78.2
Leq(30min)	2-Apr-12	16:00	LAeq	76.9
Leq(30min)	2-Apr-12	16:30	LAeq	75.5
Leq(30min)	2-Apr-12	17:00	LAeq	74.3
Leq(30min)	2-Apr-12	17:30	LAeq	73.8
Leq(30min)	2-Apr-12	18:00	LAeq	64.1
Leq(30min)	2-Apr-12	18:30	LAeq	63.5

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 2-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1551	11.3	Surface	19.2	19.2	19.2	8.1	8.1	8.1	27.5	27.5	27.5	8.6	8.6	8.6	109.0	109.7	109.4	2.0	2.0	2.0					3.0	3.0	3.0		
			Middle	19.0	19.1	19.1	8.1	8.1	8.1	27.5	27.5	27.5	8.5	8.5	8.5	108.4	107.2	107.8	2.5	2.7	2.6	2.5					4.0	4.4	4.2	3.9
			Bottom	19.1	19.1	19.1	8.1	8.2	8.2	27.7	27.6	27.7	8.5	8.4	8.5	108.8	107.4	108.1	2.8	2.7	2.8					4.6	4.6	4.6		
WM1	1520	14.6	Surface	19.3	19.3	19.3	8.2	8.2	8.2	27.7	27.7	27.7	7.3	7.2	7.3	92.5	91.6	92.1	1.6	1.7	1.7					2.4	2.6	2.5		
			Middle	19.2	19.2	19.2	8.2	8.2	8.2	27.8	27.8	27.8	7.3	7.3	7.3	92.1	92.9	92.5	2.1	2.0	2.1	2.1					3.2	3.2	3.2	3.2
			Bottom	19.2	19.1	19.2	8.2	8.2	8.2	27.7	27.8	27.8	7.2	7.2	7.2	91.3	91.9	91.6	2.5	2.5	2.5					3.8	3.8	3.8		
WM2	1453	5.0	Surface	19.2	19.2	19.2	8.2	8.2	8.2	27.7	27.7	27.7	7.5	7.5	7.5	95.2	94.2	94.7	2.2	2.3	2.3					3.4	3.6	3.5		
			Middle																		2.3							3.6		
			Bottom	19.3	19.2	19.3	8.2	8.1	8.2	27.6	27.7	27.7	7.4	7.4	7.4	94.0	94.8	94.4	2.3	2.3	2.3					3.8	3.6	3.7		
WM3	1426	10.2	Surface	19.2	19.3	19.3	8.1	8.1	8.1	27.9	27.8	27.9	7.9	7.9	7.9	100.8	99.3	100.1	2.1	2.1	2.1					3.2	3.4	3.3		
			Middle	19.3	19.2	19.3	8.2	8.1	8.2	27.8	27.8	27.8	7.6	7.7	7.7	97.1	98.4	97.8	2.4	2.4	2.4	2.4					3.6	4.0	3.8	3.7
			Bottom	19.1	19.1	19.1	8.1	8.1	8.1	27.9	27.9	27.9	7.4	7.3	7.4	95.3	94.5	94.9	2.6	2.5	2.6					4.0	3.8	3.9		
WM4	1359	10.1	Surface	19.2	19.3	19.3	8.2	8.1	8.2	27.8	27.9	27.9	7.8	7.8	7.8	99.7	99.0	99.4	1.9	1.9	1.9					3.0	3.0	3.0		
			Middle	19.2	19.2	19.2	8.1	8.2	8.2	27.9	27.9	27.9	7.9	7.8	7.9	100.5	99.6	100.1	1.8	1.8	1.8	2.0					2.8	3.0	2.9	3.1
			Bottom	19.1	19.1	19.1	8.1	8.1	8.1	27.9	27.9	27.9	7.7	7.8	7.8	98.1	99.2	98.7	2.1	2.2	2.2					3.2	3.4	3.3		
CS2	1330	11.9	Surface	19.3	19.3	19.3	8.1	8.2	8.2	27.9	27.9	27.9	8.1	8.2	8.2	102.5	103.9	103.2	2.1	2.1	2.1					3.2	3.2	3.2		
			Middle	19.2	19.3	19.3	8.2	8.2	8.2	27.9	27.8	27.9	8.1	8.1	8.1	102.1	102.7	102.4	2.4	2.3	2.4	2.4					3.8	3.6	3.7	3.7
			Bottom	19.2	19.2	19.2	8.2	8.2	8.2	27.9	27.9	27.9	8.1	8.1	8.1	102.8	101.4	102.1	2.7	2.6	2.7					4.2	4.0	4.1		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 2-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	0900	10.8	Surface	18.9	19.0	19.0	8.1	8.2	8.2	27.4	27.5	27.5	8.1	8.2	8.2	103.3	104.5	103.9	2.5	2.8	2.7					3.8	4.2	4.0		
			Middle	19.0	19.0	19.0	8.2	8.2	8.2	27.5	27.6	27.6	8.2	8.3	8.3	104.4	106.0	105.2	2.9	3.1	3.0	3.0					4.6	4.8	4.7	4.6
			Bottom	19.1	19.0	19.1	8.1	8.2	8.2	27.6	27.7	27.7	8.0	8.1	8.1	102.4	103.5	103.0	3.4	3.2	3.3					5.2	5.0	5.1		
WM1	0932	14.2	Surface	19.1	19.2	19.2	8.1	8.1	8.1	27.6	27.7	27.7	6.9	7.0	7.0	88.5	89.3	88.9	2.2	2.5	2.4					3.4	3.4	3.4		
			Middle	19.1	19.1	19.1	8.1	8.2	8.2	27.7	27.8	27.8	6.8	6.9	6.9	87.2	88.0	87.6	2.6	2.8	2.7	2.7					4.0	4.2	4.1	4.0
			Bottom	19.1	19.2	19.2	8.1	8.2	8.2	27.8	27.8	27.8	7.0	7.0	7.0	89.5	90.0	89.8	3.0	2.8	2.9					4.6	4.4	4.5		
WM2	0949	4.6	Surface	19.2	19.2	19.2	8.2	8.2	8.2	27.7	27.6	27.7	7.2	7.2	7.2	91.8	92.5	92.2	2.5	2.7	2.6					4.0	4.2	4.1		
			Middle																		2.4							3.9		
			Bottom	19.2	19.2	19.2	8.1	8.2	8.2	27.7	27.7	27.7	7.1	7.2	7.2	90.9	92.2	91.6	2.0	2.2	2.1					3.6	3.6	3.6		
WM3	1015	1000.0	Surface	19.2	19.2	19.2	8.1	8.2	8.2	27.8	27.9	27.9	7.4	7.5	7.5	94.5	95.7	95.1	2.6	2.4	2.5					4.0	3.8	3.9		
			Middle	19.2	19.1	19.2	8.2	8.2	8.2	27.9	27.9	27.9	7.3	7.3	7.3	93.1	93.7	93.4	2.3	2.1	2.2	2.6					3.6	3.2	3.4	4.0
			Bottom	19.2	19.2	19.2	8.2	8.1	8.2	27.8	27.9	27.9	7.5	7.6	7.6	95.6	96.5	96.1	3.0	2.9	3.0					4.6	4.6	4.6		
WM4	1040	9.8	Surface	19.2	19.2	19.2	8.1	8.2	8.2	27.8	27.8	27.8	7.5	7.6	7.6	96.0	97.1	96.6	2.9	3.1	3.0					4.4	4.8	4.6		
			Middle	19.2	19.2	19.2	8.2	8.2	8.2	27.8	27.9	27.9	7.6	7.6	7.6	96.6	97.4	97.0	2.0	2.2	2.1	2.5					3.2	3.4	3.3	3.9
			Bottom	19.2	19.1	19.2	8.1	8.2	8.2	27.9	27.9	27.9	7.6	7.7	7.7	97.1	98.4	97.8	2.6	2.4	2.5					4.0	3.8	3.9		
CS2	1112	11.4	Surface	19.2	19.3	19.3	8.2	8.2	8.2	27.8	27.9	27.9	7.8	7.9	7.9	99.6	100.7	100.2	2.6	2.8	2.7					4.0	4.2	4.1		
			Middle	19.2	19.2	19.2	8.2	8.2	8.2	27.9	27.9	27.9	7.9	8.0	8.0	100.3	101.8	101.1	2.3	2.1	2.2	2.6					3.6	3.4	3.5	4.0
			Bottom	19.2	19.2	19.2	8.2	8.2	8.2	27.9	27.9	27.9	7.8	7.9	7.9	99.0	101.1	100.1	2.9	3.1	3.0					4.4	4.6	4.5		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 5-Apr-12
 Tide: Mid-Flood
 Weather: Rainy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1709	11.6	Surface	19.7	19.8	19.8	8.1	8.1	8.1	27.7	27.8	27.8	7.4	7.5	7.5	95.2	96.6	95.9	3.5	3.7	3.6					5.2	5.6	5.4		
			Middle	19.7	19.6	19.7	8.1	8.2	8.2	27.5	27.5	27.5	7.9	7.8	7.9	101.5	100.3	100.9	4.4	4.5	4.5	4.5					6.8	7.0	6.9	6.9
			Bottom	19.6	19.7	19.7	8.1	8.1	8.1	27.5	27.6	27.6	8.1	8.1	8.1	104.2	104.8	104.5	5.3	5.4	5.4					8.2	8.4	8.3		
WM1	1633	14.3	Surface	19.7	19.8	19.8	8.2	8.1	8.2	27.8	27.7	27.8	7.7	7.6	7.7	99.1	97.8	98.5	4.5	4.7	4.6					7.0	7.0	7.0		
			Middle	19.8	19.7	19.8	8.1	8.1	8.1	27.8	27.7	27.8	7.2	7.0	7.1	92.7	90.1	91.4	4.1	4.0	4.1	4.6					6.4	6.2	6.3	7.0
			Bottom	19.7	19.7	19.7	8.2	8.1	8.2	27.7	27.6	27.7	7.5	7.4	7.5	96.5	95.3	95.9	4.9	5.1	5.0					7.6	8.0	7.8		
WM2	1603	5.8	Surface	19.8	19.8	19.8	8.2	8.1	8.2	27.7	27.7	27.7	7.8	7.5	7.7	100.3	96.4	98.4	4.2	4.1	4.2					6.4	6.2	6.3		
			Middle																			4.4								6.8
			Bottom	19.7	19.8	19.8	8.1	8.1	8.1	27.6	27.7	27.7	7.2	7.4	7.3	92.7	95.3	94.0	4.5	4.7	4.6					7.0	7.4	7.2		
WM3	1532	10.5	Surface	19.7	19.8	19.8	8.1	8.2	8.2	27.6	27.7	27.7	7.0	7.1	7.1	90.2	91.5	90.9	2.7	2.9	2.8					4.0	4.4	4.2		
			Middle	19.7	19.7	19.7	8.2	8.2	8.2	27.8	27.7	27.8	7.3	7.4	7.4	94.0	95.3	94.7	3.4	3.3	3.4	3.4					5.4	5.2	5.3	5.2
			Bottom	19.7	19.8	19.8	8.1	8.1	8.1	27.8	27.7	27.8	7.8	7.9	7.9	100.4	101.7	101.1	4.0	3.9	4.0					6.2	6.0	6.1		
WM4	1500	11.7	Surface	19.8	19.7	19.8	8.2	8.1	8.2	27.6	27.7	27.7	7.2	7.3	7.3	92.7	94.0	93.4	4.5	4.6	4.6					7.0	7.4	7.2		
			Middle	19.8	19.8	19.8	8.2	8.2	8.2	27.7	27.7	27.7	7.7	7.4	7.6	99.1	95.3	97.2	4.0	3.9	4.0	4.3					6.2	6.2	6.2	6.7
			Bottom	19.8	19.7	19.8	8.2	8.1	8.2	27.8	27.7	27.8	7.1	7.2	7.2	91.4	92.7	92.1	4.2	4.3	4.3					6.6	7.0	6.8		
CS2	1430	14.3	Surface	19.8	19.8	19.8	8.2	8.2	8.2	27.8	27.8	27.8	7.7	7.6	7.7	99.3	98.0	98.7	3.9	4.1	4.0					6.0	6.4	6.2		
			Middle	19.8	19.7	19.8	8.1	8.2	8.2	27.8	27.9	27.9	7.1	7.3	7.2	91.5	94.1	92.8	4.4	4.5	4.5	4.6					6.8	7.0	6.9	7.2
			Bottom	19.8	19.8	19.8	8.2	8.1	8.2	27.9	27.8	27.9	7.8	8.0	7.9	100.5	103.1	101.8	5.3	5.5	5.4					8.2	8.6	8.4		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 5-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	10.8	Surface	19.7	19.7	19.7	8.2	8.2	8.2	26.7	26.8	26.8	8.4	8.4	8.4	107.7	107.2	107.5	3.8	3.7	3.8		6.0	6.0	6.0	
			Middle	19.6	19.6	19.6	8.1	8.2	8.2	27.4	27.4	27.4	8.2	8.0	8.1	105.7	103.2	104.5	4.5	4.6	4.6	4.5	7.2	7.4	7.3	7.1
			Bottom	19.6	19.6	19.6	8.1	8.1	8.1	27.5	27.5	27.5	8.4	8.2	8.3	108.2	105.6	106.9	5.1	5.0	5.1		8.0	7.8	7.9	
WM1	1033	13.7	Surface	19.7	19.8	19.8	8.2	8.1	8.2	27.6	27.7	27.7	7.9	7.6	7.8	101.8	98.4	100.1	4.0	4.2	4.1		6.0	6.4	6.2	
			Middle	19.7	19.7	19.7	8.1	8.1	8.1	27.6	27.7	27.7	7.4	7.3	7.4	94.7	93.6	94.2	3.8	3.9	3.9	4.2	5.8	6.0	5.9	6.5
			Bottom	19.7	19.7	19.7	8.2	8.1	8.2	27.6	27.6	27.6	7.2	7.3	7.3	93.0	94.2	93.6	4.8	4.7	4.8		7.4	7.2	7.3	
WM2	1102	5.2	Surface	19.7	19.8	19.8	8.1	8.1	8.1	27.6	27.7	27.7	7.3	7.2	7.3	93.5	92.8	93.2	3.8	4.0	3.9		5.8	6.2	6.0	
			Middle																		4.3				6.6	
			Bottom	19.8	19.8	19.8	8.1	8.2	8.2	27.7	27.7	27.7	7.3	7.1	7.2	93.6	90.9	92.3	4.6	4.7	4.7		7.2	7.2	7.2	
WM3	1129	9.8	Surface	19.7	19.7	19.7	8.2	8.2	8.2	27.7	27.7	27.7	7.4	7.2	7.3	95.3	92.3	93.8	2.4	2.5	2.5		3.6	3.8	3.7	
			Middle	19.7	19.8	19.8	8.1	8.2	8.2	27.8	27.7	27.8	7.5	7.4	7.5	96.0	95.1	95.6	2.9	3.1	3.0	3.1	4.4	4.4	4.4	4.6
			Bottom	19.7	19.8	19.8	8.2	8.1	8.2	27.7	27.7	27.7	7.8	7.7	7.8	99.9	98.6	99.3	3.7	3.8	3.8		5.6	6.0	5.8	
WM4	1159	10.3	Surface	19.7	19.8	19.8	8.2	8.2	8.2	27.7	27.7	27.7	7.6	7.5	7.6	97.6	96.8	97.2	4.1	4.2	4.2		6.2	6.4	6.3	
			Middle	19.7	19.7	19.7	8.1	8.2	8.2	27.7	27.8	27.8	7.0	7.1	7.1	89.8	91.2	90.5	3.6	3.5	3.6	3.9	5.8	5.6	5.7	6.0
			Bottom	19.7	19.7	19.7	8.2	8.1	8.2	27.7	27.8	27.8	7.4	7.5	7.5	95.7	96.2	96.0	3.9	4.1	4.0		6.0	6.2	6.1	
CS2	1234	13.8	Surface	19.8	19.7	19.8	8.2	8.2	8.2	27.8	27.7	27.8	8.0	7.9	8.0	103.2	102.1	102.7	4.2	4.1	4.2		6.8	6.6	6.7	
			Middle	19.8	19.8	19.8	8.1	8.2	8.2	27.8	27.8	27.8	7.4	7.3	7.4	95.2	93.9	94.6	3.6	3.7	3.7	4.2	5.4	5.8	5.6	6.6
			Bottom	19.7	19.8	19.8	8.2	8.1	8.2	27.8	27.8	27.8	8.1	7.9	8.0	104.6	101.9	103.3	4.8	5.0	4.9		7.4	7.6	7.5	

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 10-Apr-12
 Tide: Mid-Flood
 Weather: Fine
 Sea Conditions: Calm
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1017	13.0	Surface	20.3	20.3	20.3	8.2	8.2	8.2	27.6	27.7	27.7	6.8	6.7	6.8	88.8	87.6	88.2	2.5	2.7	2.6		4.0	4.0	4.0	
			Middle	20.3	20.3	20.3	8.2	8.3	8.3	27.7	27.7	27.7	6.7	6.7	6.7	87.5	87.2	87.4	2.8	3.0	2.9	2.9	4.4	4.6	4.5	4.5
			Bottom	20.3	20.2	20.3	8.3	8.2	8.3	27.7	27.8	27.8	6.7	6.6	6.7	87.0	86.7	86.9	3.3	3.1	3.2		5.2	5.0	5.1	
WM1	0945	12.2	Surface	20.2	20.2	20.2	8.2	8.2	8.2	27.5	27.6	27.6	6.2	6.3	6.3	81.4	82.2	81.8	1.9	2.1	2.0		2.8	3.2	3.0	
			Middle	20.2	20.3	20.3	8.2	8.2	8.2	27.6	27.6	27.6	6.2	6.2	6.2	80.7	81.4	81.1	1.7	1.8	1.8	2.1	2.6	3.0	2.8	3.2
			Bottom	20.3	20.3	20.3	8.2	8.2	8.2	27.6	27.7	27.7	6.3	6.3	6.3	82.0	82.5	82.3	2.5	2.4	2.5		4.0	3.6	3.8	
WM2	0918	4.2	Surface	20.2	20.1	20.2	8.1	8.2	8.2	27.3	27.3	27.3	6.1	6.2	6.2	80.2	81.1	80.7	2.1	2.2	2.2		3.2	3.4	3.3	
			Middle																		2.1				3.3	
			Bottom	20.2	20.2	20.2	8.2	8.2	8.2	27.2	27.3	27.3	6.2	6.2	6.2	80.7	81.5	81.1	2.0	2.2	2.1		3.2	3.4	3.3	
WM3	0852	10.6	Surface	20.2	20.1	20.2	8.1	8.1	8.1	27.7	27.6	27.7	6.7	6.8	6.8	87.8	88.4	88.1	2.0	1.9	2.0		3.0	3.0	3.0	
			Middle	20.2	20.2	20.2	8.1	8.2	8.2	27.7	27.7	27.7	6.7	6.6	6.7	87.2	86.6	86.9	1.7	1.6	1.7	1.9	2.8	2.6	2.7	2.9
			Bottom	20.2	20.3	20.3	8.2	8.2	8.2	27.7	27.8	27.8	6.5	6.5	6.5	85.0	85.7	85.4	1.8	2.1	2.0		2.8	3.0	2.9	
WM4	0825	9.8	Surface	20.2	20.2	20.2	8.0	8.1	8.1	27.6	27.5	27.6	6.8	6.8	6.8	88.5	89.1	88.8	1.7	1.5	1.6		2.6	2.4	2.5	
			Middle	20.2	20.2	20.2	8.1	8.1	8.1	27.7	27.6	27.7	6.8	6.9	6.9	89.2	90.1	89.7	1.7	1.8	1.8	1.8	2.6	2.8	2.7	2.8
			Bottom	20.2	20.1	20.2	8.1	8.2	8.2	27.6	27.6	27.6	6.7	6.7	6.7	87.4	87.0	87.2	2.0	2.0	2.0		3.0	3.2	3.1	
CS2	0800	15.0	Surface	20.2	20.2	20.2	8.1	8.1	8.1	27.2	27.3	27.3	6.8	6.9	6.9	88.4	89.7	89.1	1.8	2.0	1.9		3.0	3.2	3.1	
			Middle	20.1	20.1	20.1	8.1	8.2	8.2	27.3	27.4	27.4	6.9	7.0	7.0	89.7	91.1	90.4	1.5	1.6	1.6	1.9	2.4	2.6	2.5	3.1
			Bottom	20.1	20.2	20.2	8.2	8.2	8.2	27.4	27.5	27.5	7.0	7.0	7.0	91.3	91.6	91.5	2.3	2.1	2.2		3.8	3.6	3.7	

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 10-Apr-12
 Tide: Mid-Ebb
 Weather: Fine
 Sea Conditions: Calm
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	12.4	Surface	20.3	20.4	20.4	8.1	8.1	8.1	27.6	27.7	27.7	6.6	6.7	6.7	85.9	86.8	86.4	2.8	2.9	2.9					4.4	4.6	4.5		
			Middle	20.3	20.4	20.4	8.1	8.2	8.2	27.7	27.7	27.7	6.7	6.6	6.7	86.9	86.3	86.6	2.9	3.1	3.0	3.1					4.6	5.0	4.8	4.9
			Bottom	20.3	20.3	20.3	8.1	8.2	8.2	27.7	27.7	27.7	6.6	6.6	6.6	85.9	86.1	86.0	3.3	3.4	3.4					5.4	5.6	5.5		
WM1	1332	11.8	Surface	20.3	20.3	20.3	8.2	8.1	8.2	27.7	27.7	27.7	6.1	6.1	6.1	79.6	79.8	79.7	2.1	2.2	2.2					3.2	3.0	3.1		
			Middle	20.3	20.2	20.3	8.2	8.2	8.2	27.8	27.7	27.8	6.1	6.2	6.2	79.8	80.5	80.2	1.9	2.0	2.0	2.2					3.0	3.2	3.1	3.5
			Bottom	20.2	20.2	20.2	8.2	8.2	8.2	27.8	27.8	27.8	6.1	6.2	6.2	79.5	80.1	79.8	2.6	2.5	2.6					4.2	4.2	4.2		
WM2	1401	4.0	Surface	20.3	20.2	20.3	8.2	8.3	8.3	27.7	27.6	27.7	6.0	6.0	6.0	77.9	78.3	78.1	2.4	2.5	2.5					3.6	3.8	3.7		
			Middle																			2.7							4.1	
			Bottom	20.2	20.2	20.2	8.2	8.3	8.3	27.7	27.8	27.8	6.1	6.1	6.1	79.2	79.8	79.5	2.8	2.9	2.9					4.4	4.6	4.5		
WM3	1417	10.2	Surface	20.3	20.4	20.4	8.2	8.2	8.2	27.6	27.7	27.7	6.3	6.3	6.3	81.8	82.2	82.0	2.5	2.4	2.5					4.0	3.6	3.8		
			Middle	20.4	20.3	20.4	8.2	8.1	8.2	27.6	27.7	27.7	6.4	6.4	6.4	83.5	83.1	83.3	2.6	2.7	2.7	2.5					4.0	4.2	4.1	3.9
			Bottom	20.3	20.3	20.3	8.2	8.1	8.2	27.7	27.8	27.8	6.4	6.4	6.4	83.4	83.0	83.2	2.3	2.4	2.4					3.6	3.8	3.7		
WM4	1444	9.4	Surface	20.4	20.4	20.4	8.2	8.2	8.2	27.7	27.8	27.8	6.3	6.2	6.3	81.7	81.1	81.4	2.2	2.1	2.2					3.4	3.4	3.4		
			Middle	20.3	20.4	20.4	8.2	8.3	8.3	27.7	27.8	27.8	6.6	6.6	6.6	86.3	86.0	86.2	2.4	2.3	2.4	2.3					3.8	3.8	3.8	3.6
			Bottom	20.3	20.3	20.3	8.2	8.3	8.3	27.8	27.8	27.8	6.6	6.6	6.6	85.7	86.1	85.9	2.3	2.3	2.3					3.6	3.8	3.7		
CS2	1510	14.8	Surface	20.4	20.3	20.4	8.2	8.2	8.2	27.7	27.8	27.8	6.7	6.6	6.7	87.0	86.4	86.7	2.3	2.3	2.3					3.6	3.6	3.6		
			Middle	20.3	20.3	20.3	8.2	8.2	8.2	27.8	27.8	27.8	6.8	6.8	6.8	88.3	88.7	88.5	2.2	2.1	2.2	2.3					3.4	3.6	3.5	3.7
			Bottom	20.3	20.2	20.3	8.2	8.3	8.3	27.8	27.8	27.8	6.7	6.7	6.7	87.6	86.9	87.3	2.4	2.6	2.5					4.0	4.2	4.1		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

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

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1145	11.0	Surface	21.2	21.2	21.2	8.2	8.2	8.2	27.3	27.3	27.3	7.9	7.9	7.9	105.7	105.3	105.5	5.2	5.2	5.2	8.0	8.2	8.1		
			Middle	20.9	20.9	20.9	8.2	8.2	8.2	27.5	27.5	27.5	7.8	7.8	7.8	103.9	104.4	104.2	4.9	4.9	4.9	5.5	7.6	8.0	7.8	8.6
			Bottom	20.7	20.7	20.7	8.2	8.2	8.2	27.9	27.9	27.9	7.9	7.9	7.9	105.2	105.5	105.4	6.3	6.3	6.3		9.8	10.2	10.0	
WM1	1112	14.8	Surface	21.2	21.2	21.2	8.2	8.2	8.2	27.6	27.6	27.6	7.2	7.2	7.2	95.9	96.3	96.1	2.1	2.1	2.1	3.2	3.2	3.2		
			Middle	21.1	21.1	21.1	8.2	8.2	8.2	27.6	27.6	27.6	7.1	7.1	7.1	94.0	94.4	94.2	4.3	4.3	4.3	2.9	6.4	6.6	6.5	4.4
			Bottom	21.1	21.1	21.1	8.2	8.2	8.2	27.7	27.7	27.7	7.2	7.2	7.2	95.4	95.0	95.2	2.2	2.2	2.2		3.4	3.6	3.5	
WM2	1048	5.8	Surface	21.2	21.2	21.2	8.2	8.2	8.2	27.5	27.5	27.5	7.2	7.2	7.2	95.0	95.4	95.2	1.9	1.9	1.9					
			Middle																							
			Bottom	21.1	21.1	21.1	8.2	8.2	8.2	27.5	27.5	27.5	7.1	7.1	7.1	93.9	93.5	93.7	2.4	2.4	2.4		3.8	4.0	3.9	
WM3	1022	10.1	Surface	21.2	21.1	21.2	8.2	8.2	8.2	27.7	27.7	27.7	7.3	7.4	7.4	97.0	97.6	97.3	1.6	1.6	1.6		2.6	2.6	2.6	
			Middle	20.9	20.9	20.9	8.2	8.2	8.2	27.9	27.9	27.9	7.8	7.8	7.8	104.3	104.6	104.5	2.6	2.6	2.6	2.4	4.0	4.2	4.1	3.8
			Bottom	20.9	20.9	20.9	8.2	8.2	8.2	27.9	27.9	27.9	7.9	7.9	7.9	105.1	105.5	105.3	2.9	2.9	2.9		4.6	4.6	4.6	
WM4	0957	10.9	Surface	21.1	21.1	21.1	8.1	8.1	8.1	27.8	27.8	27.8	8.2	8.2	8.2	108.9	108.4	108.7	2.4	2.4	2.4		3.6	3.8	3.7	
			Middle	21.1	21.1	21.1	8.1	8.1	8.1	27.9	27.9	27.9	8.0	8.0	8.0	107.0	106.7	106.9	2.4	2.4	2.4	2.6	4.0	4.0	4.0	4.2
			Bottom	20.9	20.9	20.9	8.1	8.1	8.1	28.0	28.0	28.0	7.9	7.9	7.9	104.8	105.2	105.0	3.1	3.0	3.1		5.0	4.8	4.9	
CS2	0930	15.1	Surface	21.3	21.2	21.3	8.1	8.1	8.1	27.3	27.3	27.3	8.1	8.0	8.1	106.9	106.4	106.7	4.5	4.5	4.5		7.0	7.2	7.1	
			Middle	20.9	20.9	20.9	8.1	8.1	8.1	27.8	27.8	27.8	8.1	8.1	8.1	107.0	107.5	107.3	5.6	5.6	5.6	5.3	8.6	8.8	8.7	8.4
			Bottom	20.7	20.7	20.7	8.1	8.1	8.1	28.0	28.0	28.0	8.1	8.1	8.1	107.2	106.8	107.0	5.9	5.9	5.9		9.4	9.4	9.4	

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 12-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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.*	D.A.**	1	2	Ave.*	D.A.**				
CS1	1400	10.4	Surface	21.7	21.7	21.7	8.2	8.1	8.2	27.2	27.3	27.3	7.6	7.6	7.6	100.9	101.3	101.1	5.8	5.7	5.8	9.0	8.6	8.8			
			Middle	21.2	21.3	21.3	8.2	8.2	8.2	27.6	27.6	27.6	7.4	7.5	7.5	98.9	100.1	99.5	5.2	5.2	5.2	5.8	8.2	8.4	8.3	9.1	
			Bottom	21.0	21.0	21.0	8.2	8.1	8.2	27.9	27.9	27.9	7.5	7.5	7.5	99.6	100.2	99.9	6.4	6.5	6.5		10.0	10.2	10.1		
WM1	1434	14.0	Surface	21.7	21.8	21.8	8.2	8.2	8.2	27.6	27.7	27.7	7.0	7.1	7.1	98.5	99.4	99.0	2.4	2.4	2.4	3.6	3.8	3.7			
			Middle	21.6	21.6	21.6	8.1	8.2	8.2	27.6	27.6	27.6	7.3	7.4	7.4	96.3	97.5	96.9	4.4	4.6	4.5	3.1	6.8	7.0	6.9	4.8	
			Bottom	21.4	21.5	21.5	8.2	8.2	8.2	27.7	27.7	27.7	7.5	7.5	7.5	98.6	99.0	98.8	2.4	2.5	2.5		3.8	4.0	3.9		
WM2	1501	5.6	Surface	21.8	21.8	21.8	8.2	8.1	8.2	27.4	27.5	27.5	7.5	7.5	7.5	98.7	99.2	99.0	2.2	2.1	2.2	3.4	3.4	3.4			
			Middle																		2.5			4.0			
			Bottom	21.6	21.5	21.6	8.2	8.2	8.2	27.5	27.5	27.5	7.3	7.2	7.3	96.3	95.0	95.7	2.9	2.8	2.9		4.4	4.6	4.5		
WM3	1524	9.6	Surface	21.9	21.8	21.9	8.2	8.2	8.2	27.8	27.8	27.8	7.3	7.3	7.3	96.8	97.2	97.0	1.8	1.8	1.8	2.8	3.0	2.9			
			Middle	21.6	21.6	21.6	8.1	8.2	8.2	27.9	27.8	27.9	7.6	7.5	7.6	101.3	99.5	100.4	2.9	2.9	2.9	2.6	4.6	4.6	4.6	4.1	
			Bottom	21.5	21.4	21.5	8.2	8.2	8.2	27.9	27.9	27.9	7.5	7.6	7.6	100.4	101.4	100.9	3.0	3.0	3.0		4.6	4.8	4.7		
WM4	1549	10.6	Surface	21.8	21.7	21.8	8.1	8.2	8.2	27.7	27.8	27.8	8.1	8.1	8.1	107.9	107.1	107.5	2.5	2.6	2.6	3.8	4.0	3.9			
			Middle	21.4	21.3	21.4	8.1	8.1	8.1	27.8	27.8	27.8	7.9	7.8	7.9	105.6	104.2	104.9	2.6	2.7	2.7	2.8	4.0	4.2	4.1	4.3	
			Bottom	21.0	21.0	21.0	8.2	8.2	8.2	27.8	27.9	27.9	7.7	7.6	7.7	102.6	101.4	102.0	3.4	3.2	3.3		5.0	5.0	5.0		
CS2	1614	14.8	Surface	21.7	21.6	21.7	8.2	8.2	8.2	27.4	27.4	27.4	7.6	7.6	7.6	100.8	100.3	100.6	4.9	4.9	4.9	7.6	7.4	7.5			
			Middle	21.2	21.2	21.2	8.2	8.2	8.2	27.8	27.8	27.8	7.5	7.4	7.5	100.1	98.6	99.4	5.9	6.1	6.0	5.7	9.2	9.6	9.4	8.8	
			Bottom	21.0	21.1	21.1	8.2	8.2	8.2	27.8	27.9	27.9	7.5	7.9	7.7	100.3	99.6	100.0	6.2	6.2	6.2		9.6	9.6	9.6		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 14-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1348	10.5	Surface	22.1	22.1	22.1	8.2	8.2	8.2	27.2	27.2	27.2	8.8	8.8	8.8	119.6	119.4	119.5	4.4	4.4	4.4		6.8	7.0	6.9	
			Middle	21.8	21.8	21.8	8.2	8.2	8.2	27.4	27.4	27.4	8.8	8.8	8.8	118.6	118.9	118.8	5.0	5.0	5.0	4.5	7.8	8.2	8.0	7.2
			Bottom	21.4	21.4	21.4	8.2	8.2	8.2	28.0	28.0	28.0	8.3	8.3	8.3	111.1	110.7	110.9	4.2	4.2	4.2		6.6	6.8	6.7	
WM1	1315	14.1	Surface	22.0	22.0	22.0	8.2	8.2	8.2	27.4	27.4	27.4	7.8	7.8	7.8	105.2	104.8	105.0	2.6	2.6	2.6		4.0	4.2	4.1	
			Middle	21.7	21.7	21.7	8.2	8.2	8.2	27.6	27.6	27.6	7.2	7.2	7.2	96.2	96.6	96.4	3.4	3.4	3.4	3.3	5.6	5.4	5.5	5.3
			Bottom	21.6	21.6	21.6	8.2	8.2	8.2	27.6	27.6	27.6	7.3	7.3	7.3	97.5	97.1	97.3	4.0	4.0	4.0		6.4	6.2	6.3	
WM2	1250	5.8	Surface	22.0	22.0	22.0	8.2	8.2	8.2	27.3	27.3	27.3	7.9	7.9	7.9	106.7	106.2	106.5	2.3	2.3	2.3		3.6	3.6	3.6	
			Middle																		2.8				4.4	
			Bottom	21.8	21.8	21.8	8.2	8.2	8.2	27.5	27.5	27.5	7.9	7.8	7.9	106.2	105.7	106.0	3.2	3.2	3.2		5.2	5.0	5.1	
WM3	1224	9.8	Surface	22.1	22.1	22.1	8.2	8.2	8.2	27.4	27.4	27.4	8.1	8.1	8.1	109.5	109.7	109.6	1.7	1.7	1.7		2.6	2.8	2.7	
			Middle	22.0	22.0	22.0	8.2	8.2	8.2	27.4	27.4	27.4	8.0	8.0	8.0	108.2	107.6	107.9	2.3	2.3	2.3	2.7	3.8	3.8	3.8	4.4
			Bottom	21.4	21.4	21.4	8.2	8.2	8.2	27.8	27.8	27.8	8.2	8.2	8.2	110.4	110.8	110.6	4.2	4.2	4.2		6.6	6.8	6.7	
WM4	1158	11.1	Surface	22.2	22.2	22.2	8.1	8.1	8.1	27.4	27.4	27.4	8.3	8.3	8.3	111.8	111.5	111.7	1.5	1.5	1.5		2.4	2.6	2.5	
			Middle	22.2	22.2	22.2	8.1	8.1	8.1	27.4	27.4	27.4	8.3	8.3	8.3	112.2	111.8	112.0	1.3	1.3	1.3	1.7	2.0	2.0	2.0	2.6
			Bottom	21.3	21.3	21.3	8.1	8.1	8.1	28.1	28.1	28.1	8.3	8.3	8.3	111.3	111.6	111.5	2.2	2.2	2.2		3.4	3.4	3.4	
CS2	1130	15.4	Surface	22.3	22.3	22.3	8.1	8.1	8.1	27.4	27.4	27.4	9.2	9.2	9.2	122.4	122.1	122.3	3.6	3.6	3.6		5.6	5.6	5.6	
			Middle	21.5	21.5	21.5	8.1	8.1	8.1	27.8	27.8	27.8	9.1	9.1	9.1	121.2	120.7	121.0	4.2	4.2	4.2	3.9	6.6	6.8	6.7	6.2
			Bottom	21.3	21.3	21.3	8.1	8.1	8.1	28.1	28.1	28.1	8.8	8.8	8.8	117.9	117.5	117.7	3.9	4.0	4.0		6.2	6.4	6.3	

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 14-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1615	10.0	Surface	22.3	22.4	22.4	8.2	8.2	8.2	27.3	27.2	27.3	8.6	8.6	8.6	116.1	116.5	116.3	4.6	4.7	4.7					7.0	7.4	7.2		
			Middle	22.3	22.3	22.3	8.2	8.3	8.3	27.4	27.3	27.4	8.7	8.6	8.7	117.5	116.6	117.1	5.2	5.1	5.2	4.8					8.4	8.2	8.3	7.5
			Bottom	22.2	22.3	22.3	8.3	8.2	8.3	27.8	27.9	27.9	8.2	8.2	8.2	110.8	110.3	110.6	4.5	4.5	4.5					7.2	7.0	7.1		
WM1	1648	13.8	Surface	22.5	22.6	22.6	8.2	8.2	8.2	27.4	27.5	27.5	7.6	7.6	7.6	102.7	102.9	102.8	3.0	3.1	3.1					4.8	4.8	4.8		
			Middle	22.5	22.6	22.6	8.2	8.2	8.2	27.5	27.5	27.5	6.9	7.0	7.0	93.7	94.3	94.0	3.5	3.6	3.6	3.6					5.6	5.8	5.7	5.7
			Bottom	22.4	22.4	22.4	8.2	8.3	8.3	27.5	27.6	27.6	6.9	6.9	6.9	90.2	89.7	90.0	4.0	4.1	4.1					6.6	6.8	6.7		
WM2	1715	5.4	Surface	22.4	22.3	22.4	8.2	8.3	8.3	27.4	27.3	27.4	7.4	7.4	7.4	100.3	99.8	100.1	3.1	3.0	3.1					4.8	5.0	4.9		
			Middle																			3.4							5.3	
			Bottom	22.3	22.2	22.3	8.2	8.2	8.2	27.5	27.5	27.5	7.3	7.3	7.3	98.5	99.1	98.8	3.6	3.7	3.7					5.6	5.8	5.7		
WM3	1736	9.4	Surface	22.2	22.2	22.2	8.2	8.2	8.2	27.4	27.4	27.4	7.7	7.7	7.7	104.4	103.9	104.2	2.2	2.3	2.3					3.4	3.6	3.5		
			Middle	22.2	22.2	22.2	8.3	8.2	8.3	27.5	27.4	27.5	7.6	7.6	7.6	102.4	102.8	102.6	3.5	3.6	3.6	3.5					5.8	5.8	5.8	5.5
			Bottom	22.1	22.1	22.1	8.2	8.2	8.2	27.7	27.7	27.7	7.7	7.8	7.8	104.4	105.0	104.7	4.6	4.5	4.6					7.2	7.0	7.1		
WM4	1800	10.8	Surface	22.2	22.3	22.3	8.2	8.3	8.3	27.5	27.6	27.6	8.0	7.9	8.0	107.7	107.2	107.5	2.2	2.1	2.2					3.4	3.4	3.4		
			Middle	22.2	22.1	22.2	8.2	8.2	8.2	27.6	27.6	27.6	7.9	7.9	7.9	106.6	107.1	106.9	1.9	1.9	1.9	2.2					3.0	3.2	3.1	3.7
			Bottom	22.1	22.1	22.1	8.3	8.2	8.3	27.8	27.7	27.8	7.8	7.8	7.8	105.1	105.5	105.3	2.6	2.7	2.7					4.4	4.6	4.5		
CS2	1826	15.0	Surface	22.1	22.2	22.2	8.2	8.3	8.3	27.4	27.5	27.5	8.8	8.8	8.8	118.6	118.9	118.8	3.8	3.8	3.8					6.0	6.2	6.1		
			Middle	22.1	22.1	22.1	8.2	8.3	8.3	27.6	27.7	27.7	8.6	8.6	8.6	115.9	116.5	116.2	4.5	4.4	4.5	4.2					7.4	7.2	7.3	6.9
			Bottom	22.0	22.1	22.1	8.2	8.3	8.3	27.8	27.9	27.9	8.4	8.4	8.4	113.2	113.9	113.6	4.3	4.3	4.3					7.2	7.2	7.2		

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 16-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1559	11.2	Surface	22.9	22.8	22.9	8.1	8.2	8.2	26.6	26.7	26.7	8.5	8.5	8.5	115.6	115.0	115.3	4.3	4.5	4.4	6.6	7.0	6.8			
			Middle	22.7	22.6	22.7	8.2	8.2	8.2	27.0	27.0	27.0	8.4	8.3	8.4	114.1	112.6	113.4	5.0	4.9	5.0	5.0	7.8	8.0	7.9	7.9	
			Bottom	22.2	22.2	22.2	8.1	8.2	8.2	27.5	27.6	27.6	8.3	8.3	8.3	112.7	113.1	112.9	5.5	5.6	5.6		9.0	9.0	9.0		
WM1	1523	14.8	Surface	22.9	22.9	22.9	8.1	8.2	8.2	27.2	27.2	27.2	7.2	7.3	7.3	97.4	98.8	98.1	3.7	3.6	3.7	5.6	5.4	5.5			
			Middle	22.7	22.8	22.8	8.2	8.1	8.2	27.2	27.1	27.2	7.1	7.0	7.1	96.0	94.5	95.3	4.6	4.7	4.7	4.6	7.4	7.4	7.4	7.2	
			Bottom	22.5	22.5	22.5	8.2	8.2	8.2	27.4	27.4	27.4	7.3	7.4	7.4	98.8	99.9	99.4	5.6	5.5	5.6		8.8	8.6	8.7		
WM2	1457	5.4	Surface	22.9	22.9	22.9	8.2	8.2	8.2	27.1	27.0	27.1	7.5	7.6	7.6	101.6	103.2	102.4	4.0	4.2	4.1	6.2	6.6	6.4			
			Middle																								
			Bottom	22.9	22.9	22.9	8.1	8.2	8.2	27.1	27.1	27.1	7.6	7.6	7.6	103.0	103.8	103.4	4.9	4.8	4.9		7.8	7.6	7.7		
WM3	1430	12.6	Surface	23.0	23.1	23.1	8.2	8.2	8.2	27.0	27.0	27.0	7.7	7.8	7.8	104.5	105.7	105.1	1.8	2.0	1.9	2.8	3.0	2.9			
			Middle	22.9	22.9	22.9	8.1	8.2	8.2	27.4	27.3	27.4	7.7	7.7	7.7	104.2	104.7	104.5	2.4	2.3	2.4	2.4	3.6	3.6	3.6	3.8	
			Bottom	22.6	22.5	22.6	8.2	8.2	8.2	27.8	27.8	27.8	7.8	7.9	7.9	105.6	107.0	106.3	3.0	3.1	3.1		5.0	5.0	5.0		
WM4	1357	12.0	Surface	23.0	23.0	23.0	8.1	8.1	8.1	27.3	27.3	27.3	7.4	7.5	7.5	100.7	101.8	101.3	2.9	3.0	3.0	4.8	4.8	4.8			
			Middle	22.7	22.7	22.7	8.1	8.2	8.2	27.5	27.6	27.6	8.0	8.1	8.1	108.6	109.8	109.2	3.5	3.6	3.6	3.5	5.4	5.8	5.6	5.6	
			Bottom	22.1	22.2	22.2	8.2	8.1	8.2	28.0	28.0	28.0	7.8	7.8	7.8	112.8	113.4	113.1	4.1	4.0	4.1		6.6	6.4	6.5		
CS2	1330	14.3	Surface	23.1	23.2	23.2	8.1	8.1	8.1	27.6	27.6	27.6	10.0	10.0	10.0	135.7	136.4	136.1	3.6	3.7	3.7	5.6	5.8	5.7			
			Middle	22.7	22.7	22.7	8.2	8.1	8.2	27.6	27.7	27.7	9.2	9.3	9.3	124.9	126.2	125.6	4.2	4.4	4.3	4.3	6.6	7.0	6.8	6.9	
			Bottom	22.0	22.1	22.1	8.2	8.1	8.2	28.0	28.0	28.0	8.6	8.5	8.6	116.9	115.7	116.3	5.0	5.1	5.1		8.0	8.2	8.1		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 16-Apr-12
 Tide: Mid-Ebb
 Weather: Fine
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	0900	10.6	Surface	22.8	22.8	22.8	8.1	8.2	8.2	26.6	26.6	26.6	8.2	8.1	8.2	111.3	109.9	110.6	3.9	4.1	4.0		6.0	6.0	6.0	
			Middle	22.6	22.6	22.6	8.1	8.1	8.1	26.9	26.9	26.9	8.0	8.1	8.1	108.7	109.5	109.1	4.6	4.7	4.7	4.6	7.4	7.6	7.5	7.3
			Bottom	22.3	22.2	22.3	8.1	8.1	8.1	27.5	27.5	27.5	8.2	8.1	8.2	110.4	109.2	109.8	5.2	5.3	5.3		8.2	8.4	8.3	
WM1	0934	14.2	Surface	22.9	22.9	22.9	8.2	8.1	8.2	27.1	27.1	27.1	7.1	7.0	7.1	96.1	95.4	95.8	3.3	3.4	3.4		5.2	5.2	5.2	
			Middle	22.8	22.8	22.8	8.2	8.1	8.2	27.1	27.1	27.1	6.7	6.8	6.8	91.2	93.0	92.1	4.1	4.2	4.2	4.3	6.4	6.6	6.5	6.7
			Bottom	22.4	22.5	22.5	8.1	8.2	8.2	27.5	27.4	27.5	7.1	6.9	7.0	95.7	93.5	94.6	5.3	5.4	5.4		8.2	8.4	8.3	
WM2	1003	5.2	Surface	22.8	22.8	22.8	8.1	8.2	8.2	27.1	27.1	27.1	7.3	7.1	7.2	99.0	96.3	97.7	3.5	3.6	3.6		5.6	5.8	5.7	
			Middle																		4.1				6.5	
			Bottom	22.8	22.8	22.8	8.2	8.2	8.2	27.1	27.1	27.1	7.4	7.2	7.3	100.2	97.8	99.0	4.5	4.7	4.6		7.0	7.6	7.3	
WM3	1030	12.1	Surface	22.9	22.9	22.9	8.1	8.2	8.2	27.1	27.1	27.1	7.4	7.5	7.5	100.9	102.3	101.6	2.2	2.4	2.3		3.4	3.6	3.5	
			Middle	22.7	22.7	22.7	8.2	8.1	8.2	27.3	27.3	27.3	7.4	7.3	7.4	100.3	99.3	99.8	2.7	2.8	2.8	2.8	4.2	4.6	4.4	4.5
			Bottom	22.3	22.3	22.3	8.1	8.1	8.1	27.8	27.8	27.8	7.6	7.5	7.6	102.6	101.4	102.0	3.4	3.5	3.5		5.6	5.6	5.6	
WM4	1100	11.6	Surface	22.8	22.8	22.8	8.1	8.1	8.1	27.2	27.2	27.2	7.2	7.0	7.1	97.9	95.6	96.8	3.1	3.0	3.1		4.8	4.6	4.7	
			Middle	22.6	22.6	22.6	8.2	8.1	8.2	27.5	27.5	27.5	7.8	7.7	7.8	105.9	104.4	105.2	3.7	3.8	3.8	3.8	6.2	6.0	6.1	6.0
			Bottom	22.1	22.1	22.1	8.1	8.2	8.2	28.1	28.0	28.1	7.5	7.4	7.5	100.3	99.8	100.1	4.6	4.5	4.6		7.0	7.2	7.1	
CS2	1140	13.8	Surface	23.0	23.0	23.0	8.1	8.1	8.1	27.4	27.5	27.5	9.9	9.8	9.9	134.7	133.5	134.1	3.9	4.1	4.0		6.2	6.4	6.3	
			Middle	22.6	22.6	22.6	8.2	8.1	8.2	27.6	27.6	27.6	9.0	9.1	9.1	122.5	123.5	123.0	4.8	4.9	4.9	4.8	7.8	8.2	8.0	7.7
			Bottom	22.0	22.0	22.0	8.2	8.2	8.2	28.1	28.1	28.1	8.3	8.1	8.2	112.9	110.1	111.5	5.5	5.6	5.6		8.8	8.6	8.7	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 18-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1730	11.4	Surface	22.2	22.2	22.2	8.2	8.2	8.2	27.3	27.4	27.4	7.8	7.8	7.8	102.5	102.6	102.6	3.2	3.3	3.3		4.8	5.2	5.0	
			Middle	22.1	22.1	22.1	8.1	8.2	8.2	27.4	27.5	27.5	7.7	7.8	7.8	101.0	102.2	101.6	3.5	3.6	3.6	3.6	5.6	5.8	5.7	5.6
			Bottom	22.0	22.1	22.1	8.0	8.1	8.1	27.6	27.6	27.6	7.5	7.6	7.6	98.3	99.4	98.9	3.8	3.9	3.9		6.2	6.2	6.2	
WM1	1655	14.6	Surface	22.2	22.1	22.2	8.3	8.3	8.3	27.4	27.5	27.5	6.9	6.9	6.9	90.0	90.1	90.1	3.1	3.2	3.2		4.8	4.8	4.8	
			Middle	22.1	22.1	22.1	8.2	8.2	8.2	27.6	27.7	27.7	6.8	6.8	6.8	88.6	88.6	88.6	3.5	3.4	3.5	3.4	5.4	5.2	5.3	5.2
			Bottom	22.0	22.1	22.1	8.2	8.1	8.2	27.7	27.6	27.7	6.7	6.7	6.7	87.6	87.8	87.7	3.6	3.5	3.6		5.6	5.4	5.5	
WM2	1628	4.8	Surface	22.2	22.2	22.2	8.2	8.1	8.2	27.6	27.6	27.6	6.6	6.6	6.6	86.7	86.8	86.8	2.1	2.2	2.2		3.4	3.6	3.5	
			Middle																		2.5				4.0	
			Bottom	22.1	22.2	22.2	8.2	8.2	8.2	27.4	27.5	27.5	6.7	6.7	6.7	87.6	87.8	87.7	2.8	2.7	2.8		4.6	4.4	4.5	
WM3	1559	10.0	Surface	22.2	22.1	22.2	8.2	8.1	8.2	27.6	27.7	27.7	6.8	6.8	6.8	89.5	89.4	89.5	2.7	2.6	2.7		4.2	4.0	4.1	
			Middle	22.2	22.1	22.2	8.1	8.1	8.1	27.8	27.8	27.8	6.7	6.7	6.7	88.4	88.6	88.5	2.9	3.0	3.0	2.8	4.6	4.8	4.7	4.4
			Bottom	22.1	22.0	22.1	8.2	8.1	8.2	27.8	27.8	27.8	6.6	6.6	6.6	86.5	86.7	86.6	2.8	2.7	2.8		4.4	4.2	4.3	
WM4	1531	10.6	Surface	22.2	22.1	22.2	8.2	8.2	8.2	27.7	27.6	27.7	6.8	6.8	6.8	89.6	89.7	89.7	2.4	2.5	2.5		3.8	4.0	3.9	
			Middle	22.1	22.1	22.1	8.1	8.1	8.1	27.8	27.8	27.8	6.8	6.9	6.9	89.4	90.8	90.1	2.1	2.0	2.1	2.4	3.4	3.2	3.3	3.8
			Bottom	22.0	22.1	22.1	8.1	8.1	8.1	27.7	27.8	27.8	7.0	7.0	7.0	91.6	91.8	91.7	2.8	2.7	2.8		4.4	4.2	4.3	
CS2	1500	15.0	Surface	22.1	22.1	22.1	8.1	8.1	8.1	28.1	28.2	28.2	7.4	7.4	7.4	96.9	96.7	96.8	3.1	3.2	3.2		4.8	5.0	4.9	
			Middle	22.1	22.0	22.1	8.1	8.1	8.1	28.3	28.3	28.3	7.3	7.4	7.4	95.6	96.9	96.3	3.4	3.5	3.5	3.2	5.4	5.6	5.5	5.1
			Bottom	22.1	22.0	22.1	8.0	8.1	8.1	28.4	28.4	28.4	7.2	7.3	7.3	94.3	95.6	95.0	3.0	3.1	3.1		4.8	5.0	4.9	

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 18-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1030	11.0	Surface	22.0	22.1	22.1	8.1	8.1	8.1	27.4	27.3	27.4	7.9	7.9	7.9	103.5	103.9	103.7	3.5	3.8	3.7					5.4	5.8	5.6		
			Middle	22.0	22.0	22.0	8.1	8.2	8.2	27.5	27.5	27.5	7.8	7.8	7.8	102.1	102.6	102.4	3.6	3.7	3.7	3.8					5.6	6.0	5.8	5.9
			Bottom	22.0	21.9	22.0	8.1	8.1	8.1	27.6	27.7	27.7	7.6	7.7	7.7	99.3	100.4	99.9	4.0	3.9	4.0					6.4	6.2	6.3		
WM1	1105	14.2	Surface	22.1	22.1	22.1	8.2	8.2	8.2	27.5	27.4	27.5	7.0	7.1	7.1	91.8	92.6	92.2	2.8	3.0	2.9					4.2	4.6	4.4		
			Middle	22.1	22.0	22.1	8.2	8.2	8.2	27.6	27.6	27.6	6.9	6.9	6.9	89.9	90.5	90.2	3.3	3.4	3.4	3.1					5.2	5.2	5.2	4.8
			Bottom	22.0	22.0	22.0	8.1	8.2	8.2	27.7	27.7	27.7	6.6	6.7	6.7	86.8	87.5	87.2	3.1	3.0	3.1					5.0	4.8	4.9		
WM2	1130	4.6	Surface	22.1	22.1	22.1	8.2	8.2	8.2	27.5	27.6	27.6	6.7	6.8	6.8	87.8	88.7	88.3	2.5	2.7	2.6					3.8	4.2	4.0		
			Middle																			2.5							4.0	
			Bottom	22.1	22.1	22.1	8.2	8.2	8.2	27.5	27.5	27.5	6.9	6.8	6.9	90.1	89.4	89.8	2.3	2.4	2.4					3.8	4.0	3.9		
WM3	1154	9.6	Surface	22.1	22.2	22.2	8.1	8.1	8.1	27.7	27.8	27.8	6.9	6.8	6.9	90.4	89.6	90.0	2.4	2.2	2.3					3.8	3.6	3.7		
			Middle	22.1	22.1	22.1	8.1	8.1	8.1	27.8	27.8	27.8	6.8	6.7	6.8	89.1	88.3	88.7	2.4	2.5	2.5	2.4					4.0	4.0	4.0	3.8
			Bottom	22.0	22.0	22.0	8.1	8.2	8.2	27.7	27.8	27.8	6.7	6.7	6.7	87.3	88.0	87.7	2.3	2.4	2.4					3.6	4.0	3.8		
WM4	1220	10.2	Surface	22.1	22.1	22.1	8.2	8.2	8.2	27.7	27.7	27.7	7.0	7.0	7.0	91.4	92.2	91.8	2.7	2.9	2.8					4.2	4.6	4.4		
			Middle	22.1	22.2	22.2	8.1	8.2	8.2	27.7	27.8	27.8	6.9	7.0	7.0	90.7	91.7	91.2	2.3	2.4	2.4	2.7					3.6	4.0	3.8	4.2
			Bottom	22.1	22.1	22.1	8.1	8.2	8.2	27.7	27.7	27.7	7.1	7.0	7.1	92.8	91.7	92.3	2.9	3.0	3.0					4.4	4.6	4.5		
CS2	1250	14.6	Surface	22.0	22.0	22.0	8.1	8.1	8.1	28.2	28.1	28.2	7.3	7.3	7.3	95.2	95.9	95.6	2.0	1.9	2.0					3.2	3.0	3.1		
			Middle	22.0	22.1	22.1	8.1	8.0	8.1	28.2	28.3	28.3	7.2	7.3	7.3	94.5	95.6	95.1	1.7	1.8	1.8	2.0					2.8	3.0	2.9	3.2
			Bottom	22.0	22.0	22.0	8.1	8.1	8.1	28.4	28.3	28.4	7.2	7.1	7.2	94.1	93.2	93.7	2.1	2.3	2.2					3.4	3.6	3.5		

Remark or Observation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 20-Apr-12
 Tide: Mid-Flood
 Weather: Rainy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1815	11.8	Surface	22.0	21.9	22.0	8.1	8.1	8.1	26.4	26.5	26.5	6.8	6.8	6.8	91.6	91.8	91.7	3.2	3.3	3.3	5.0	5.4	5.2		
			Middle	21.8	21.8	21.8	8.1	8.2	8.2	26.5	26.5	26.5	6.7	6.7	6.7	90.2	90.4	90.3	3.5	3.4	3.5	3.5	5.4	5.2	5.3	5.4
			Bottom	21.8	21.7	21.8	8.2	8.2	8.2	26.5	26.5	26.5	6.6	6.7	6.7	89.6	90.2	89.9	3.8	3.6	3.7		6.0	5.6	5.8	
WM1	1740	13.6	Surface	21.9	21.9	21.9	8.1	8.2	8.2	26.3	26.3	26.3	6.2	6.1	6.2	83.5	82.9	83.2	2.5	2.7	2.6	4.0	4.4	4.2		
			Middle	21.9	21.8	21.9	8.1	8.2	8.2	26.4	26.5	26.5	6.2	6.3	6.3	83.6	84.5	84.1	2.8	2.9	2.9	2.9	4.4	4.6	4.5	4.6
			Bottom	21.8	21.8	21.8	8.2	8.2	8.2	26.6	26.7	26.7	6.3	6.3	6.3	84.8	84.6	84.7	3.2	3.3	3.3		5.2	5.0	5.1	
WM2	1715	5.2	Surface	22.0	21.9	22.0	8.1	8.1	8.1	26.3	26.4	26.4	6.2	6.2	6.2	83.1	83.3	83.2	3.0	3.1	3.1		4.6	4.8	4.7	
			Middle																			3.2				4.9
			Bottom	21.9	21.9	21.9	8.1	8.1	8.1	26.5	26.5	26.5	6.1	6.2	6.2	82.3	83.3	82.8	3.3	3.3	3.3		5.0	5.0	5.0	
WM3	1646	9.8	Surface	22.0	22.0	22.0	8.2	8.2	8.2	26.3	26.2	26.3	6.4	6.4	6.4	85.5	85.9	85.7	3.2	3.4	3.3	5.0	5.4	5.2		
			Middle	22.0	21.9	22.0	8.2	8.1	8.2	26.4	26.4	26.4	6.6	6.7	6.7	88.8	90.3	89.6	3.4	3.4	3.4	3.2	5.4	5.4	5.4	5.0
			Bottom	21.8	21.8	21.8	8.2	8.2	8.2	26.5	26.4	26.5	6.5	6.5	6.5	86.9	87.5	87.2	2.8	2.7	2.8		4.4	4.2	4.3	
WM4	1617	10.6	Surface	22.0	22.0	22.0	8.1	8.2	8.2	26.5	26.6	26.6	6.3	6.4	6.4	84.0	85.6	84.8	3.4	3.4	3.4	5.4	5.4	5.4		
			Middle	21.9	21.9	21.9	8.2	8.2	8.2	26.6	26.6	26.6	6.5	6.5	6.5	87.6	87.8	87.7	3.8	3.9	3.9	3.8	6.2	6.4	6.3	6.1
			Bottom	21.8	21.9	21.9	8.2	8.1	8.2	26.7	26.6	26.7	6.4	6.4	6.4	86.1	86.5	86.3	4.0	4.1	4.1		6.4	6.8	6.6	
CS2	1545	15.0	Surface	22.0	22.1	22.1	8.1	8.1	8.1	26.6	26.5	26.6	6.3	6.3	6.3	84.9	85.1	85.0	4.0	4.0	4.0	6.0	6.2	6.1		
			Middle	21.9	21.8	21.9	8.1	8.2	8.2	26.5	26.5	26.5	6.6	6.6	6.6	88.7	89.0	88.9	4.2	4.3	4.3	4.3	6.6	6.8	6.7	6.6
			Bottom	21.8	21.7	21.8	8.2	8.1	8.2	26.5	26.6	26.6	6.4	6.3	6.4	86.1	84.9	85.5	4.6	4.5	4.6		7.2	6.8	7.0	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 20-Apr-12
 Tide: Mid-Ebb
 Weather: Rainy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1115	12.0	Surface	22.1	22.1	22.1	8.1	8.1	8.1	26.5	26.5	26.5	6.5	6.5	6.5	87.4	87.6	87.5	3.0	3.1	3.1	4.8	5.0	4.9		
			Middle	22.1	22.1	22.1	8.2	8.1	8.2	26.7	26.6	26.7	6.5	6.5	6.5	87.1	87.2	87.2	3.7	3.6	3.7	3.5	6.2	6.0	6.1	5.8
			Bottom	22.1	22.0	22.1	8.1	8.1	8.1	26.7	26.7	26.7	6.4	6.4	6.4	86.5	86.7	86.6	3.9	3.8	3.9		6.4	6.2	6.3	
WM1	1150	14.0	Surface	22.1	22.2	22.2	8.2	8.1	8.2	26.3	26.3	26.3	5.9	5.9	5.9	79.1	79.3	79.2	2.8	2.9	2.9	4.4	4.4	4.4		
			Middle	22.1	22.1	22.1	8.1	8.1	8.1	26.6	26.6	26.6	6.1	6.1	6.1	81.7	81.6	81.7	2.6	2.7	2.7	3.1	4.0	4.4	4.2	4.8
			Bottom	22.1	22.1	22.1	8.1	8.2	8.2	26.7	26.7	26.7	6.0	6.0	6.0	80.4	80.2	80.3	3.7	3.6	3.7		5.8	5.8	5.8	
WM2	1220	5.4	Surface	22.1	22.1	22.1	8.1	8.1	8.1	26.4	26.4	26.4	5.9	5.9	5.9	79.1	79.0	79.1	3.2	3.0	3.1		4.8	4.6	4.7	
			Middle																		3.3				5.1	
			Bottom	22.1	22.0	22.1	8.1	8.1	8.1	26.6	26.6	26.6	6.0	6.0	6.0	80.4	80.6	80.5	3.4	3.6	3.5		5.2	5.6	5.4	
WM3	1245	9.4	Surface	22.1	22.1	22.1	8.1	8.1	8.1	26.2	26.3	26.3	6.2	6.2	6.2	83.1	83.3	83.2	3.5	3.5	3.5		5.4	5.6	5.5	
			Middle	22.1	22.1	22.1	8.1	8.1	8.1	26.5	26.5	26.5	6.4	6.4	6.4	85.8	85.9	85.9	3.4	3.3	3.4	3.3	5.4	5.4	5.4	5.2
			Bottom	22.0	22.1	22.1	8.2	8.1	8.2	26.6	26.6	26.6	6.4	6.4	6.4	85.8	85.7	85.8	3.0	2.9	3.0		5.0	4.6	4.8	
WM4	1315	10.2	Surface	22.1	22.0	22.1	8.2	8.1	8.2	26.7	26.6	26.7	6.2	6.2	6.2	83.1	83.3	83.2	3.8	3.9	3.9		6.0	6.2	6.1	
			Middle	22.1	22.1	22.1	8.2	8.2	8.2	26.8	26.8	26.8	6.3	6.3	6.3	84.6	84.7	84.7	4.0	4.1	4.1	4.0	6.2	6.6	6.4	6.4
			Bottom	22.0	22.1	22.1	8.1	8.1	8.1	26.8	26.8	26.8	6.6	6.5	6.6	88.4	88.0	88.2	4.1	4.3	4.2		6.6	7.0	6.8	
CS2	1348	14.8	Surface	22.1	22.1	22.1	8.1	8.1	8.1	26.7	26.6	26.7	6.1	6.1	6.1	81.7	81.9	81.8	4.1	4.3	4.2		6.0	6.2	6.1	
			Middle	22.0	22.1	22.1	8.2	8.1	8.2	26.6	26.6	26.6	6.3	6.3	6.3	84.4	84.6	84.5	4.6	4.7	4.7	4.4	7.0	7.2	7.1	6.6
			Bottom	22.1	22.0	22.1	8.1	8.1	8.1	26.7	26.6	26.7	6.2	6.1	6.2	83.1	81.7	82.4	4.5	4.4	4.5		6.8	6.6	6.7	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 23-Apr-12
 Tide: Mid-Flood
 Weather: Drizzle
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1957	13.0	Surface	22.5	22.5	22.5	8.1	8.2	8.2	25.9	26.0	26.0	6.5	6.5	6.5	86.7	86.3	86.5	3.5	3.4	3.5					5.4	5.2	5.3		
			Middle	22.5	22.4	22.5	8.2	8.1	8.2	26.2	26.2	26.2	6.4	6.4	6.4	85.3	85.0	85.2	3.9	4.0	4.0	3.9					6.2	6.4	6.3	6.0
			Bottom	22.4	22.3	22.4	8.2	8.1	8.2	26.3	26.4	26.4	6.2	6.3	6.3	83.1	83.7	83.4	4.1	4.3	4.2					6.4	6.6	6.5		
WM1	1921	13.8	Surface	22.5	22.6	22.6	8.2	8.2	8.2	25.9	26.0	26.0	6.4	6.3	6.4	85.3	83.8	84.6	2.7	2.5	2.6					4.2	3.8	4.0		
			Middle	22.5	22.5	22.5	8.2	8.2	8.2	26.2	26.1	26.2	6.2	6.2	6.2	83.2	82.7	83.0	3.0	2.9	3.0	3.0					4.8	4.6	4.7	4.7
			Bottom	22.4	22.4	22.4	8.2	8.1	8.2	26.2	26.2	26.2	6.3	6.2	6.3	83.9	83.2	83.6	3.5	3.4	3.5					5.6	5.4	5.5		
WM2	1900	5.6	Surface	22.5	22.6	22.6	8.2	8.2	8.2	25.9	25.9	25.9	6.2	6.3	6.3	83.1	83.8	83.5	3.2	3.2	3.2					5.0	5.0	5.0		
			Middle																			3.4							5.3	
			Bottom	22.5	22.6	22.6	8.2	8.2	8.2	25.9	26.0	26.0	6.2	6.1	6.2	83.1	81.4	82.3	3.5	3.6	3.6					5.4	5.6	5.5		
WM3	1832	9.8	Surface	22.5	22.6	22.6	8.2	8.2	8.2	25.4	25.5	25.5	6.5	6.5	6.5	86.5	86.7	86.6	3.5	3.5	3.5					5.4	5.4	5.4		
			Middle	22.5	22.5	22.5	8.2	8.1	8.2	26.0	26.1	26.1	6.4	6.3	6.4	85.3	84.0	84.7	3.9	4.0	4.0	4.0					6.2	6.4	6.3	6.2
			Bottom	22.4	22.4	22.4	8.2	8.1	8.2	26.2	26.2	26.2	6.3	6.2	6.3	83.8	82.9	83.4	4.4	4.5	4.5					6.8	7.2	7.0		
WM4	1804	10.4	Surface	22.6	22.6	22.6	8.2	8.1	8.2	25.7	25.7	25.7	6.7	6.6	6.7	88.8	87.8	88.3	2.5	2.7	2.6					4.0	4.4	4.2		
			Middle	22.5	22.6	22.6	8.2	8.2	8.2	26.2	26.2	26.2	6.5	6.5	6.5	86.4	86.6	86.5	3.0	2.8	2.9	3.0					4.8	4.4	4.6	4.7
			Bottom	22.4	22.4	22.4	8.2	8.2	8.2	26.2	26.3	26.3	6.3	6.4	6.4	83.9	85.3	84.6	3.3	3.4	3.4					5.2	5.4	5.3		
CS2	1730	13.2	Surface	22.6	22.5	22.6	8.2	8.1	8.2	25.8	25.9	25.9	6.5	6.4	6.5	86.4	85.3	85.9	4.1	4.3	4.2					6.8	7.2	7.0		
			Middle	22.5	22.5	22.5	8.1	8.2	8.2	26.2	26.3	26.3	6.4	6.4	6.4	85.3	85.5	85.4	4.0	4.0	4.0	4.2					6.6	6.8	6.7	7.1
			Bottom	22.5	22.4	22.5	8.2	8.2	8.2	26.3	26.3	26.3	6.3	6.3	6.3	83.9	84.0	84.0	4.6	4.4	4.5					7.4	7.6	7.5		

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 23-Apr-12
 Tide: Mid-Ebb
 Weather: Drizzle
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	12.8	Surface	22.6	22.5	22.6	8.2	8.2	8.2	25.9	25.9	25.9	6.3	6.3	6.3	83.8	83.6	83.7	3.8	3.7	3.8		6.0	5.8	5.9	
			Middle	22.5	22.5	22.5	8.2	8.1	8.2	26.2	26.2	26.2	6.0	6.1	6.1	79.8	81.1	80.5	4.3	4.5	4.4	4.3	6.8	7.2	7.0	6.8
			Bottom	22.5	22.4	22.5	8.1	8.1	8.1	26.3	26.2	26.3	6.1	6.1	6.1	81.4	81.2	81.3	4.7	4.6	4.7		7.6	7.4	7.5	
WM1	1335	13.4	Surface	22.6	22.6	22.6	8.1	8.2	8.2	26.0	26.0	26.0	6.2	6.2	6.2	82.5	82.7	82.6	2.9	2.8	2.9		4.6	4.4	4.5	
			Middle	22.6	22.5	22.6	8.2	8.2	8.2	26.1	26.1	26.1	6.1	6.1	6.1	81.1	81.3	81.2	3.2	3.4	3.3	3.3	5.0	5.2	5.1	5.2
			Bottom	22.5	22.5	22.5	8.2	8.1	8.2	26.2	26.1	26.2	6.1	6.0	6.1	81.5	79.9	80.7	3.9	3.6	3.8		6.2	6.0	6.1	
WM2	1405	5.4	Surface	22.5	22.6	22.6	8.1	8.1	8.1	25.8	25.9	25.9	6.1	6.2	6.2	81.2	82.4	81.8	3.5	3.4	3.5		5.4	5.2	5.3	
			Middle																		3.6				5.6	
			Bottom	22.4	22.5	22.5	8.1	8.1	8.1	26.1	26.0	26.1	6.0	6.0	6.0	79.8	79.9	79.9	3.8	3.6	3.7		6.0	5.6	5.8	
WM3	1430	9.6	Surface	22.6	22.6	22.6	8.1	8.1	8.1	25.3	25.3	25.3	6.2	6.2	6.2	82.5	82.7	82.6	3.0	3.2	3.1		4.6	5.0	4.8	
			Middle	22.5	22.6	22.6	8.2	8.1	8.2	26.1	26.1	26.1	6.1	6.2	6.2	81.2	82.4	81.8	4.2	4.4	4.3	3.8	6.6	6.8	6.7	5.9
			Bottom	22.4	22.5	22.5	8.2	8.2	8.2	26.2	26.2	26.2	6.3	6.3	6.3	83.8	83.6	83.7	4.0	4.1	4.1		6.2	6.4	6.3	
WM4	1500	10.2	Surface	22.5	22.6	22.6	8.1	8.2	8.2	25.6	25.7	25.7	6.4	6.4	6.4	85.1	85.0	85.1	3.1	2.9	3.0		4.8	4.6	4.7	
			Middle	22.5	22.6	22.6	8.2	8.2	8.2	26.2	26.2	26.2	6.8	6.8	6.8	90.3	90.5	90.4	3.5	3.7	3.6	3.4	5.4	5.8	5.6	5.2
			Bottom	22.4	22.4	22.4	8.1	8.1	8.1	26.2	26.2	26.2	6.5	6.5	6.5	86.5	86.7	86.6	3.4	3.5	3.5		5.4	5.4	5.4	
CS2	1535	14.8	Surface	22.6	22.6	22.6	8.2	8.2	8.2	25.9	25.9	25.9	6.2	6.2	6.2	82.5	82.3	82.4	4.4	4.6	4.5		6.8	7.0	6.9	
			Middle	22.6	22.5	22.6	8.1	8.2	8.2	26.1	26.2	26.2	6.4	6.4	6.4	85.1	85.3	85.2	4.2	4.5	4.4	4.6	6.6	6.8	6.7	6.9
			Bottom	22.5	22.5	22.5	8.1	8.1	8.1	26.2	26.1	26.2	6.1	6.1	6.1	81.4	81.6	81.5	4.8	4.9	4.9		7.4	7.0	7.2	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 25-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	0949	11.8	Surface	23.5	23.4	23.5	8.1	8.2	8.2	24.2	24.3	24.3	8.3	8.1	8.2	111.8	108.9	110.4	4.0	3.9	4.0		6.0	6.2	6.1	
			Middle	23.1	23.1	23.1	8.2	8.1	8.2	25.7	25.7	25.7	7.8	7.9	7.9	104.8	106.1	105.5	4.6	4.7	4.7	4.6	7.4	7.4	7.4	7.1
			Bottom	22.9	22.9	22.9	8.2	8.2	8.2	25.9	25.8	25.9	8.0	7.9	8.0	107.3	105.9	106.6	5.1	5.0	5.1		8.0	7.8	7.9	
WM1	0910	14.1	Surface	23.3	23.4	23.4	8.1	8.1	8.1	24.2	24.1	24.2	7.6	7.5	7.6	102.3	101.1	101.7	3.2	3.4	3.3		5.0	5.4	5.2	
			Middle	23.1	23.0	23.1	8.2	8.1	8.2	25.6	25.7	25.7	7.1	7.2	7.2	95.4	96.8	96.1	4.3	4.2	4.3	4.1	6.8	6.8	6.8	6.5
			Bottom	22.9	23.0	23.0	8.2	8.1	8.2	25.7	25.7	25.7	6.9	6.8	6.9	92.5	91.2	91.9	4.7	4.8	4.8		7.4	7.6	7.5	
WM2	0841	5.9	Surface	23.4	23.4	23.4	8.1	8.1	8.1	24.4	24.3	24.4	6.9	6.9	6.9	92.5	92.8	92.7	4.1	3.9	4.0		6.4	6.2	6.3	
			Middle																		4.3				6.9	
			Bottom	23.2	23.1	23.2	8.2	8.1	8.2	25.3	25.4	25.4	7.3	7.4	7.4	97.9	99.3	98.6	4.6	4.7	4.7		7.4	7.4	7.4	
WM3	0811	10.8	Surface	23.4	23.4	23.4	8.2	8.2	8.2	24.3	24.3	24.3	7.2	7.4	7.3	96.9	99.7	98.3	2.9	3.1	3.0		4.6	4.8	4.7	
			Middle	23.1	23.1	23.1	8.1	8.1	8.1	25.6	25.7	25.7	6.9	7.0	7.0	92.7	94.1	93.4	2.7	2.8	2.8	3.1	4.2	4.4	4.3	4.9
			Bottom	22.9	23.0	23.0	8.2	8.2	8.2	25.8	25.8	25.8	7.5	7.6	7.6	100.5	101.9	101.2	3.5	3.7	3.6		5.6	6.0	5.8	
WM4	0742	12.1	Surface	23.4	23.5	23.5	8.1	8.2	8.2	24.3	24.2	24.3	6.7	6.8	6.8	90.3	91.6	91.0	3.3	3.5	3.4		5.2	5.6	5.4	
			Middle	23.1	23.2	23.2	8.1	8.1	8.1	25.5	25.6	25.6	6.3	6.5	6.4	84.7	87.4	86.1	4.0	3.9	4.0	4.0	6.4	6.2	6.3	6.3
			Bottom	22.9	22.8	22.9	8.2	8.1	8.2	25.7	25.8	25.8	6.8	6.9	6.9	91.1	92.5	91.8	4.5	4.6	4.6		7.2	7.4	7.3	
CS2	0715	14.2	Surface	23.5	23.5	23.5	8.2	8.1	8.2	24.3	24.4	24.4	7.9	8.0	8.0	106.5	107.8	107.2	4.2	4.3	4.3		6.6	6.8	6.7	
			Middle	23.1	23.2	23.2	8.1	8.1	8.1	25.7	25.8	25.8	7.7	7.6	7.7	103.5	102.1	102.8	4.6	4.8	4.7	4.8	7.4	7.6	7.5	7.7
			Bottom	22.9	22.9	22.9	8.1	8.2	8.2	26.0	26.0	26.0	8.1	8.2	8.2	108.6	109.9	109.3	5.4	5.5	5.5		8.6	9.0	8.8	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 25-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1145	11.2	Surface	23.5	23.5	23.5	8.2	8.2	8.2	24.4	24.3	24.4	8.0	8.0	8.0	107.0	107.7	107.4	4.2	4.1	4.2		6.4	6.6	6.5	
			Middle	23.2	23.1	23.2	8.2	8.2	8.2	25.6	25.7	25.7	7.7	7.8	7.8	103.4	104.7	104.1	4.9	5.0	5.0	4.8	7.8	8.0	7.9	7.6
			Bottom	22.9	22.9	22.9	8.2	8.1	8.2	26.0	26.0	26.0	7.6	7.7	7.7	102.9	103.8	103.4	5.3	5.3	5.3		8.4	8.4	8.4	
WM1	1219	13.8	Surface	23.4	23.4	23.4	8.1	8.2	8.2	24.2	24.2	24.2	7.4	7.5	7.5	99.8	100.6	100.2	3.6	3.5	3.6		5.6	5.6	5.6	
			Middle	23.1	23.2	23.2	8.2	8.2	8.2	25.7	25.8	25.8	6.8	6.9	6.9	91.4	92.6	92.0	4.5	4.5	4.5	4.3	7.0	6.8	6.9	6.7
			Bottom	23.0	23.0	23.0	8.2	8.1	8.2	25.8	25.8	25.8	6.7	6.7	6.7	89.9	89.2	89.6	4.9	5.0	5.0		7.6	7.8	7.7	
WM2	1250	5.6	Surface	23.4	23.3	23.4	8.2	8.1	8.2	24.5	24.5	24.5	6.6	6.6	6.6	87.8	88.5	88.2	4.4	4.3	4.4		6.8	6.8	6.8	
			Middle																			4.7				7.3
			Bottom	23.1	23.1	23.1	8.1	8.1	8.1	25.3	25.3	25.3	7.1	7.0	7.1	94.5	93.3	93.9	5.0	5.0	5.0		7.8	7.8	7.8	
WM3	1312	10.5	Surface	23.4	23.4	23.4	8.1	8.2	8.2	24.4	24.4	24.4	7.0	7.1	7.1	94.3	95.6	95.0	3.4	3.3	3.4		5.2	5.0	5.1	
			Middle	23.0	23.1	23.1	8.1	8.1	8.1	25.8	25.7	25.8	6.7	6.8	6.8	89.9	91.1	90.5	3.0	3.0	3.0	3.4	4.8	4.6	4.7	5.4
			Bottom	22.9	22.9	22.9	8.1	8.1	8.1	25.8	25.8	25.8	7.2	7.3	7.3	96.9	98.3	97.6	3.9	4.0	4.0		6.2	6.4	6.3	
WM4	1340	11.7	Surface	23.5	23.5	23.5	8.2	8.2	8.2	24.2	24.1	24.2	6.7	6.6	6.7	90.0	88.9	89.5	3.7	3.5	3.6		5.6	5.4	5.5	
			Middle	23.1	23.1	23.1	8.2	8.1	8.2	25.6	25.7	25.7	6.4	6.4	6.4	85.8	86.3	86.1	4.2	4.4	4.3	4.2	6.6	7.0	6.8	6.5
			Bottom	22.8	22.8	22.8	8.1	8.2	8.2	25.7	25.7	25.7	6.9	6.9	6.9	91.9	92.4	92.2	4.9	4.7	4.8		7.4	7.2	7.3	
CS2	1410	13.8	Surface	22.5	23.4	23.0	8.2	8.2	8.2	24.2	24.3	24.3	7.8	7.9	7.9	104.7	106.4	105.6	4.4	4.6	4.5		7.4	7.8	7.6	
			Middle	23.0	23.0	23.0	8.1	8.2	8.2	25.8	25.8	25.8	7.4	7.5	7.5	99.4	100.6	100.0	5.0	5.1	5.1	5.1	8.0	8.0	8.0	8.1
			Bottom	22.8	22.9	22.9	8.2	8.2	8.2	26.1	26.1	26.1	8.0	8.0	8.0	107.3	107.7	107.5	5.7	5.6	5.7		8.8	8.6	8.7	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 27-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Calm
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1011	14.2	Surface	23.2	23.2	23.2	8.2	8.2	8.2	25.5	25.5	25.5	6.5	6.5	6.5	89.0	89.4	89.2	4.2	4.2	4.2		6.4	6.6	6.5	
			Middle	23.2	23.2	23.2	8.2	8.2	8.2	25.6	25.6	25.6	6.5	6.5	6.5	88.5	88.9	88.7	5.0	5.0	5.0	4.8	7.8	7.8	7.8	7.5
			Bottom	23.2	23.2	23.2	8.2	8.2	8.2	25.6	25.6	25.6	6.4	6.4	6.4	88.0	88.2	88.1	5.3	5.3	5.3		8.4	8.2	8.3	
WM1	0943	14.4	Surface	23.3	23.3	23.3	8.2	8.2	8.2	25.3	25.3	25.3	6.2	6.2	6.2	85.1	84.8	85.0	2.9	2.9	2.9		4.4	4.6	4.5	
			Middle	23.3	23.3	23.3	8.2	8.2	8.2	25.5	25.5	25.5	6.2	6.2	6.2	84.6	84.8	84.7	3.6	3.6	3.6	3.3	5.6	5.6	5.6	5.2
			Bottom	23.3	23.3	23.3	8.2	8.2	8.2	25.5	25.5	25.5	6.2	6.2	6.2	84.7	85.0	84.9	3.5	3.5	3.5		5.4	5.4	5.4	
WM2	0918	5.8	Surface	23.4	23.4	23.4	8.2	8.2	8.2	25.0	25.0	25.0	6.2	6.2	6.2	84.9	84.5	84.7	3.6	3.6	3.6		5.6	5.6	5.6	
			Middle																		3.8				6.0	
			Bottom	23.4	23.4	23.4	8.2	8.2	8.2	25.2	25.2	25.2	6.2	6.2	6.2	84.6	84.9	84.8	3.9	3.9	3.9		6.2	6.4	6.3	
WM3	0853	9.2	Surface	23.5	23.5	23.5	8.1	8.1	8.1	24.9	24.9	24.9	6.3	6.3	6.3	85.7	85.9	85.8	3.0	3.0	3.0		4.6	4.6	4.6	
			Middle	23.3	23.3	23.3	8.2	8.2	8.2	25.6	25.6	25.6	6.3	6.3	6.3	86.1	86.3	86.2	3.2	3.2	3.2	3.3	5.0	5.2	5.1	5.2
			Bottom	23.2	23.2	23.2	8.2	8.2	8.2	25.6	25.6	25.6	6.3	6.3	6.3	85.8	85.5	85.7	3.8	3.8	3.8		6.0	6.0	6.0	
WM4	0828	9.8	Surface	23.4	23.4	23.4	8.1	8.1	8.1	25.1	25.1	25.1	6.3	6.3	6.3	86.1	85.9	86.0	2.9	2.9	2.9		4.6	4.6	4.6	
			Middle	23.3	23.3	23.3	8.1	8.1	8.1	25.5	25.5	25.5	6.3	6.3	6.3	85.8	86.2	86.0	3.4	3.4	3.4	3.1	5.6	5.4	5.5	5.0
			Bottom	23.1	23.1	23.1	8.1	8.1	8.1	26.0	26.0	26.0	6.3	6.3	6.3	85.6	85.3	85.5	3.1	3.1	3.1		4.8	5.0	4.9	
CS2	0800	15.4	Surface	23.2	23.2	23.2	8.1	8.1	8.1	25.2	25.2	25.2	6.7	6.7	6.7	91.0	90.7	90.9	3.8	3.8	3.8		6.0	6.0	6.0	
			Middle	23.1	23.1	23.1	8.1	8.1	8.1	25.7	25.7	25.7	6.7	6.7	6.7	91.6	91.2	91.4	4.7	4.7	4.7	4.5	7.4	7.6	7.5	7.1
			Bottom	23.1	23.1	23.1	8.1	8.1	8.1	25.9	25.9	25.9	6.7	6.7	6.7	91.3	91.0	91.2	4.9	4.9	4.9		7.8	7.8	7.8	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 27-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Calm
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	13.8	Surface	23.3	23.3	23.3	8.3	8.2	8.3	25.7	25.6	25.7	6.6	6.6	6.6	90.4	90.6	90.5	4.3	4.4	4.4	6.6	7.0	6.8		
			Middle	23.2	23.2	23.2	8.1	8.2	8.2	25.6	25.6	25.6	6.5	6.6	6.6	89.7	90.2	90.0	4.8	4.7	4.8	4.8	7.6	7.4	7.5	7.5
			Bottom	23.1	23.2	23.2	8.1	8.1	8.1	25.6	25.5	25.6	6.4	6.4	6.4	88.5	88.6	88.6	5.1	5.4	5.3		8.2	8.4	8.3	
WM1	1335	14.0	Surface	23.4	23.3	23.4	8.2	8.2	8.2	25.1	25.2	25.2	6.3	6.3	6.3	86.3	86.5	86.4	3.0	3.1	3.1	4.6	4.8	4.7		
			Middle	23.3	23.2	23.3	8.3	8.2	8.3	25.2	25.2	25.2	6.2	6.2	6.2	84.9	85.0	85.0	3.4	3.2	3.3	3.2	5.4	4.8	5.1	4.9
			Bottom	23.2	23.2	23.2	8.2	8.2	8.2	25.4	25.4	25.4	6.0	6.0	6.0	82.2	82.4	82.3	3.1	3.2	3.2		4.8	5.0	4.9	
WM2	1405	5.6	Surface	23.3	23.3	23.3	8.1	8.2	8.2	25.1	25.2	25.2	6.2	6.2	6.2	85.1	85.7	85.4	3.6	3.7	3.7					
			Middle																		3.5				5.6	
			Bottom	23.2	23.2	23.2	8.2	8.2	8.2	25.2	25.2	25.2	6.1	6.1	6.1	83.6	83.5	83.6	3.5	3.3	3.4		5.6	5.4	5.5	
WM3	1435	8.8	Surface	23.6	23.6	23.6	8.2	8.2	8.2	24.8	24.7	24.8	6.2	6.2	6.2	84.9	84.7	84.8	2.8	2.9	2.9	4.4	4.6	4.5		
			Middle	23.4	23.4	23.4	8.1	8.2	8.2	25.5	25.5	25.5	6.4	6.4	6.4	87.7	87.9	87.8	3.7	3.5	3.6	3.5	5.8	5.4	5.6	5.5
			Bottom	23.3	23.2	23.3	8.2	8.2	8.2	25.6	25.6	25.6	6.3	6.3	6.3	85.9	85.8	85.9	3.9	4.0	4.0		6.2	6.4	6.3	
WM4	1504	9.6	Surface	23.4	23.5	23.5	8.1	8.2	8.2	25.0	25.0	25.0	6.4	6.4	6.4	87.1	87.5	87.3	2.4	2.6	2.5	3.8	4.2	4.0		
			Middle	23.4	23.3	23.4	8.1	8.1	8.1	25.1	25.1	25.1	6.3	6.3	6.3	85.1	85.5	85.3	3.4	3.5	3.5	3.0	5.2	5.4	5.3	4.7
			Bottom	23.3	23.3	23.3	8.1	8.2	8.2	25.4	25.4	25.4	6.6	6.6	6.6	90.4	90.2	90.3	3.2	3.0	3.1		5.0	4.8	4.9	
CS2	1534	15.0	Surface	23.2	23.1	23.2	8.1	8.2	8.2	25.3	25.3	25.3	6.4	6.4	6.4	87.5	87.6	87.6	3.7	3.9	3.8	5.8	6.2	6.0		
			Middle	23.1	23.2	23.2	8.1	8.1	8.1	25.5	25.5	25.5	6.7	6.7	6.7	91.8	91.9	91.9	4.1	4.3	4.2	4.3	6.4	6.6	6.5	6.7
			Bottom	23.1	23.1	23.1	8.1	8.1	8.1	25.7	25.7	25.7	6.5	6.5	6.5	88.0	88.2	88.1	4.8	4.9	4.9		7.4	7.6	7.5	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 30-Apr-12
 Tide: Mid-Flood
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS2

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1359	13.2	Surface	23.8	23.8	23.8	8.1	8.1	8.1	25.4	25.4	25.4	6.4	6.4	6.4	88.3	88.5	88.4	4.9	4.7	4.8		7.6	7.4	7.5	
			Middle	23.6	23.6	23.6	8.0	8.1	8.1	25.3	25.3	25.3	6.2	6.2	6.2	85.6	85.4	85.5	4.5	4.6	4.6	4.8	7.0	7.2	7.1	7.5
			Bottom	23.7	23.6	23.7	8.1	8.1	8.1	25.2	25.3	25.3	6.0	6.0	6.0	82.8	82.4	82.6	4.9	5.1	5.0		7.6	8.0	7.8	
WM1	1324	13.0	Surface	23.7	23.6	23.7	8.1	8.1	8.1	25.2	25.3	25.3	6.1	6.1	6.1	84.0	84.2	84.1	4.5	4.7	4.6		6.8	7.2	7.0	
			Middle	23.7	23.6	23.7	8.1	8.1	8.1	25.3	25.3	25.3	6.2	6.2	6.2	85.6	85.8	85.7	4.2	4.0	4.1	4.5	6.4	6.2	6.3	6.8
			Bottom	23.6	23.6	23.6	8.1	8.1	8.1	25.2	25.3	25.3	6.2	6.2	6.2	85.2	85.3	85.3	4.8	4.7	4.8		7.2	7.2	7.2	
WM2	1259	5.8	Surface	23.8	23.8	23.8	8.1	8.1	8.1	24.6	24.7	24.7	6.1	6.1	6.1	84.5	84.3	84.4	4.0	3.8	3.9		6.2	6.0	6.1	
			Middle																			3.7				5.7
			Bottom	23.8	23.7	23.8	8.1	8.2	8.2	24.9	24.9	24.9	6.2	6.2	6.2	85.2	85.6	85.4	3.4	3.6	3.5		5.2	5.4	5.3	
WM3	1230	9.4	Surface	23.7	23.7	23.7	8.1	8.1	8.1	25.0	25.1	25.1	6.3	6.3	6.3	88.7	88.9	88.8	3.9	4.1	4.0		6.0	6.4	6.2	
			Middle	23.6	23.6	23.6	8.1	8.1	8.1	25.4	25.4	25.4	6.2	6.2	6.2	86.8	86.6	86.7	3.5	3.4	3.5	3.5	5.4	5.6	5.5	5.5
			Bottom	23.3	23.3	23.3	8.1	8.1	8.1	26.1	26.1	26.1	6.3	6.3	6.3	88.4	88.6	88.5	3.0	3.2	3.1		4.8	4.8	4.8	
WM4	1159	10.2	Surface	23.8	23.8	23.8	8.1	8.2	8.2	25.2	25.2	25.2	6.2	6.2	6.2	86.2	86.4	86.3	3.1	3.3	3.2		4.8	5.0	4.9	
			Middle	23.7	23.7	23.7	8.1	8.1	8.1	25.4	25.3	25.4	6.4	6.4	6.4	88.9	88.7	88.8	3.8	3.6	3.7	3.5	6.0	5.6	5.8	5.5
			Bottom	23.4	23.4	23.4	8.2	8.2	8.2	26.2	26.2	26.2	6.3	6.3	6.3	87.6	87.4	87.5	3.6	3.7	3.7		5.8	5.8	5.8	
CS2	1130	15.0	Surface	24.1	24.0	24.1	8.2	8.2	8.2	25.4	25.3	25.4	6.4	6.4	6.4	89.6	89.8	89.7	4.0	3.8	3.9		6.4	6.0	6.2	
			Middle	23.3	23.3	23.3	8.1	8.2	8.2	26.0	26.0	26.0	6.5	6.5	6.5	89.2	89.4	89.3	4.5	4.4	4.5	4.2	7.2	7.2	7.2	6.7
			Bottom	23.2	23.1	23.2	8.1	8.1	8.1	26.3	26.2	26.3	6.3	6.3	6.3	86.7	86.9	86.8	4.2	4.1	4.2		6.8	6.6	6.7	

Remark or Obsevation:

Note: * Average

** Depth Average

SIL(E) Water Quality Monitoring Data Record Sheet

Date: 30-Apr-12
 Tide: Mid-Ebb
 Weather: Cloudy
 Sea Conditions: Small Wave
 Upstream Control Station:CS1

Location	Sampling Time	Water Depth (m)	Monitoring Depth	Temperature (°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	1615	12.8	Surface	23.8	23.7	23.8	8.1	8.2	8.2	25.2	25.1	25.2	6.3	6.3	6.3	86.8	86.9	86.9	4.9	5.0	5.0					7.6	7.8	7.7		
			Middle	23.7	23.8	23.8	8.2	8.2	8.2	25.2	25.3	25.3	6.2	6.3	6.3	85.5	86.8	86.2	4.8	4.9	4.9	4.9					7.6	7.6	7.6	7.6
			Bottom	23.7	23.7	23.7	8.2	8.2	8.2	25.3	25.3	25.3	6.0	6.1	6.1	82.9	84.2	83.6	4.7	4.9	4.8					7.2	7.6	7.4		
WM1	1648	12.6	Surface	23.8	23.8	23.8	8.2	8.2	8.2	25.2	25.2	25.2	6.0	5.9	6.0	82.8	81.9	82.4	4.7	4.6	4.7					7.2	7.4	7.3		
			Middle	23.7	23.8	23.8	8.2	8.2	8.2	25.3	25.2	25.3	6.0	6.1	6.1	82.8	84.1	83.5	4.5	4.3	4.4	4.7					7.0	6.8	6.9	7.3
			Bottom	23.7	23.7	23.7	8.2	8.1	8.2	25.3	25.4	25.4	6.0	6.1	6.1	82.9	84.2	83.6	4.9	5.0	5.0					7.6	7.8	7.7		
WM2	1716	5.6	Surface	23.8	23.7	23.8	8.2	8.1	8.2	24.8	24.9	24.9	6.0	6.0	6.0	82.8	82.9	82.9	4.1	4.0	4.1					6.4	6.4	6.4		
			Middle																			4.0							6.4	
			Bottom	23.8	23.7	23.8	8.2	8.1	8.2	24.9	24.9	24.9	6.1	6.1	6.1	84.2	84.1	84.2	3.9	4.0	4.0					6.2	6.4	6.3		
WM3	1741	9.0	Surface	23.7	23.8	23.8	8.2	8.1	8.2	25.1	25.1	25.1	6.3	6.4	6.4	87.6	88.9	88.3	4.3	4.5	4.4					6.8	7.0	6.9		
			Middle	23.7	23.7	23.7	8.2	8.2	8.2	25.3	25.4	25.4	6.2	6.1	6.2	86.2	84.8	85.5	4.0	3.9	4.0	4.0					6.4	6.4	6.4	6.3
			Bottom	23.5	23.6	23.6	8.2	8.1	8.2	25.9	26.0	26.0	6.3	6.4	6.4	87.5	88.9	88.2	3.6	3.5	3.6					5.6	5.8	5.7		
WM4	1811	9.8	Surface	23.8	23.7	23.8	8.2	8.2	8.2	25.2	25.3	25.3	6.2	6.2	6.2	86.1	86.2	86.2	3.5	3.7	3.6					5.6	5.8	5.7		
			Middle	23.7	23.8	23.8	8.1	8.2	8.2	25.4	25.4	25.4	6.3	6.4	6.4	87.5	89.0	88.3	4.1	3.9	4.0	3.9					6.4	6.0	6.2	6.1
			Bottom	23.7	23.6	23.7	8.1	8.1	8.1	26.1	26.2	26.2	6.6	6.6	6.6	91.7	91.8	91.8	4.2	4.1	4.2					6.6	6.4	6.5		
CS2	1840	14.6	Surface	23.7	23.7	23.7	8.2	8.2	8.2	25.5	25.5	25.5	6.3	6.2	6.3	87.6	86.2	86.9	4.1	4.2	4.2					6.4	6.6	6.5		
			Middle	23.6	23.6	23.6	8.2	8.2	8.2	25.9	26.0	26.0	6.4	6.4	6.4	89.0	88.9	89.0	4.4	4.6	4.5	4.4					7.0	7.2	7.1	6.8
			Bottom	23.5	23.6	23.6	8.1	8.2	8.2	26.3	26.3	26.3	6.2	6.2	6.2	86.1	86.2	86.2	4.5	4.3	4.4					7.0	6.8	6.9		

Remark or Obsevation:

Note: * Average

** Depth Average

APPENDIX E

Review of Exceedance in Environmental Monitoring

Incident Report of Environmental Quality Limit Exceedances

Ref. No.: N120402

Project	SIL(E)
Date	02-Apr-12
Time	10:30 and 11:00; 15:00 and 15:30
Monitoring Location	Block 25, South Horizons CN4
Parameter	Noise, Leq(30mins)
Action & Limit Levels	Limit level 77dB(A) (according to the updated construction noise mitigation measures plan CNMMP)
Measured Level	Maximum level 79.2 dB(A) (Details please refer attached file)
Possible reason for Action or Limit Level Non-compliance	Piling works / grout hole drilling works from MTR construction site outside Block 25
Actions taken / to be taken	The grout hole drilling rig has been stopped on 3 April 2012 for further checking. To further reduce the noise from this operation, purpose built noise shrouds / enclosures around the drill head were fabricated and most of the rigs were covered entirely to minimize the noise to the residents in the vicinity of the works area after 16 April 2012.
Remarks	

Prepared by: Cyrus LeungDesignation: Environmental Engineer IIDate: 27/04/2012

Incident Report of Environmental Quality Limit Exceedances

Ref. No.: N120403

Project	SIL(E)
Date	03-Apr-12
Time	13:30, 14:00 and 14:30
Monitoring Location	Block 25, South Horizons CN4
Parameter	Noise, Leq(30mins)
Action & Limit Levels	Limit level 77dB(A) (according to the updated construction noise mitigation measures plan CNMMP)
Measured Level	Maximum level 78.5 dB(A) (Details please refer attached file)
Possible reason for Action or Limit Level Non-compliance	Piling works / grout hole drilling works from MTR construction site outside Block 25
Actions taken / to be taken	The grout hole drilling rig has been stopped on 3 April 2012 for further checking. To further reduce the noise from this operation, purpose built noise shrouds / enclosures around the drill head were fabricated and most of the rigs were covered entirely to minimize the noise to the residents in the vicinity of the works area after 16 April 2012.
Remarks	

Prepared by: Cyrus Leung

Designation: Environmental Engineer II

Date: 27/04/2012

Incident Report of Environmental Quality Limit Exceedances

Ref. No.: N120412

Project	SIL(E)
Date	12-Apr-12
Time	10:00, 10:30, 13:00, 13:30
Monitoring Location	Block 25, South Horizons CN4
Parameter	Noise, Leq(30mins)
Action & Limit Levels	Limit level 77dB(A) (according to the updated construction noise mitigation measures plan CNMMP)
Measured Level	Maximum level 80. dB(A) (Details please refer attached file)
Possible reason for Action or Limit Level Non-compliance	Grout hole drilling works from MTR construction site outside Block 25. One number of grout hole drilling rig was operated. As informed by Contractor, trial tests on the actual performance of the cover for the grout hole drilling rig were conducted during the period.
Actions taken / to be taken	Acoustic fabric was already applied to the grout hole drilling rig. Further action to install noise shroud surrounding the rig head was implemented. Purpose built noise shrouds / enclosures around the drill head were fabricated and most of the rigs were covered entirely to minimize the noise to the residents in the vicinity of the works area after 16 April 2012.
Remarks	

Prepared by: Cyrus LeungDesignation: Environmental Engineer IIDate: 27/04/2012