CONTRACT NO: KL/2009/01

SITE FORMATION FOR KAI TAK CRUISE TERMINAL DEVELOPMENT

BASELINE WATER QUALITY MONITORING REPORT

- FEBRUARY TO MARCH 2010 -

CLIENT:

Penta Ocean Construction Co., Ltd.

Unit 601, K. Wah Centre,
191 Java Road,
North Point,
Hong Kong

PREPARED BY:

Lam Environmental Services Limited

11/F Centre Point
181-185 Gloucester Road,
Wanchai, H.K.

Telephone: (852) 2882-3939
Facsimile: (852) 2882-3331
E-mail: info@lamenviro.com
Website: http://www.lamenviro.com

CERTIFIED BY:

Raymond Dai
Environmental Team Leader

DATE:

26 April 2010

FUGRO (HONG KONG) LIMITED CONSULTING ENGINEERS
7/F., Guardian House,,
32 Oi Kwan Road,
Wanchai, Hong Kong
Tel : +852 2577-9023
Fax : +852 2895-2379
Email : fugro@fugro.com.hk

FAX MESSAGE

Priority ☐ normal / ☐ urgent

To	Lam Environmental Services Ltd.	Ref. No.	MCLF2688
Country		Fax No.	2882 3331
Attn.	Mr. Raymond Dai	Date	26 April 2010
From	Joseph Poon	No. of Pages	1 (Incl. this page)
C.c. To	Mr. Barry C. S. Wong (Scott Wilson Ltd.)	Fax No.	2428 9922
	Mr. K. Y. Shin (Civil Engineering and Development Department)	Fax No.	2301 1277
	Mr. Perry Yam (Penta-Ocean Construction Co., Ltd.)	Email	perry.yam@pentaocean.com.hk

Subject **Agreement No. CE 19/2009 (EP)**
Dredging Works for Proposed Cruise Terminal at Kai Tak –
Revised Water Quality Monitoring Baseline Report (February to March 2010)

We refer to the revised Water Quality Monitoring Baseline Report (February to March 2010) that we received through email on 26th April 2010 and are pleased to confirm we have no further comment on the report.

Should you require further information, please feel free to contact us.

Best regards,

pp

Joseph Poon
Independent Environmental Checker

JP/CY/by

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

EXECUTIVE SUMMARY

E1.1 This is the Baseline Water Quality Monitoring report for Environmental Permit No. EP-328/2009A –Dredging Works for Proposed Cruise Terminal at Kai Tak. This report presents the baseline water quality monitoring during the period 21 February to 19 March 2010 at the existing site at six WSD flushing water intakes along the seafront of the Victoria Harbour.

Project Background

E1.2 Development of the cruise terminal at Kai Tak would require dredging at the existing seawall at the southern tip of the former Kai Tak Airport runway for construction of a quay deck structure for two berths, and dredging the seabed fronting the new quay to provide necessary manoeuvring basin.

E1.3 The current Project involves a dredging operation exceeding 500,000m^3 for construction and operation of the proposed cruise terminal at Kai Tak and is therefore classified as a Designated Project under Item C.12, Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO). An Environmental Impact Assessment (EIA) Study for the Project has been undertaken in accordance with the EIA Study Brief (No. ESB-159/2006) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM).

Water Quality Monitoring

E1.4 Water quality monitoring in terms of turbidity, suspended solids, dissolved oxygen, salinity, temperature and pH was carried out for 12 days at 6 WSD flushing water intakes WSD9, WSD10, WSD15, WSD17, WSD19 and WSD21 at the existing site along the seafront of the Victoria Harbour. Silt screen has been installed at WSD17-Quarry Bay and WSD15-Sai Wan Ho by other project since 5/3/2010. No marine construction activity was observed during the period of baseline water quality monitoring.

Water Quality Limits

E1.5 Action and limit levels are derived based on the baseline monitoring data and summarized in the following tables for water quality monitoring upon the commencement of work.

Action and Limit Levels for Water Quality Monitoring – WSD9, WSD10, WSD15, WSD17, WSD19 & WSD21

Parameters	**Action Level**			**Limit Level**		
Turbidity in NTU		All Season			All Season	
	WSD9	5.67		WSD9	12.27	
	WSD10	6.26		WSD10	10.47	
	WSD15	8.15		WSD15	14.41	
	WSD17	11.60		WSD17	16.91	
	WSD21	9.11		WSD21	15.38	
	WSD19	13.09		WSD19	15.34	
Suspended Solids (SS) in mg/L		Dry Season	Wet Season		Dry Season	Wet Season
	WSD9	6.9	9.7	WSD9	7.8	10.9
	WSD10	7.7	9.1	WSD10	10.3	12.2
	WSD15	7.8	13.5	WSD15	8.4	14.5
	WSD17	9.5	11.2	WSD17	13.7	16.2
	WSD21	13.3	17.1	WSD21	13.9	17.8
	WSD19	16.3	15.1	WSD19	17.0	15.7

1 INTRODUCTION

1.1 SCOPE OF THE REPORT

1.1.1 Lam Environmental Services Limited has been appointed to work as the dredging work Environmental Team (ET) for Penta-Ocean Construction Company Limited to implement the Environmental Monitoring and Audit (EM&A) programme for the Environmental Permit No. EP-328/2009A –Dredging Works for Proposed Cruise Terminal at Kai Tak.

1.1.2 This report presents the environmental monitoring data and information recorded from monitoring work carried during the baseline water quality monitoring period from 21 February to 19 March 2010 at 6 WSD flushing water intakes along the seafront of the Victoria Harbour.in accordance with EM&A Manual.

1.2 STRUCTURE OF THE REPORT

Section 1 ***Introduction*** – details the scope and structure of the report.

Section 2 ***Project Background*** – summarizes background and scope of the project, site description, project organization and contact details of key personnel, construction programme and works undertaken during the impacting monitoring period.

Section 3 ***Implementation Status*** – summarizes the requirements for implementation of environmental protection and pollution control / mitigation measures for impact monitoring period.

Section 4 ***Methodology for Water Quality Monitoring*** – summarizes all the requirements for water quality monitoring including monitoring location, parameters, methodology and equipment, and monitoring frequency.

Section 5 ***Monitoring Results*** – summarizes the monitoring results obtained in the reporting period.

Section 6 ***Determination of Water Quality Limits*** – summarizes the derivation of the Trigger, Action and Target Levels for the water quality and the Event and Action Plan.

Section 7 ***Conclusion***

2 PROJECT BACKGROUND

2.1 SCOPE OF PROJECT AND SITE DESCRIPTION

2.1.1 The former Kai Tak Airport located in the south-eastern part of Kowloon Peninsula was the international airport of Hong Kong. The Kai Tak Airport had come into operations since 1920s. The operation of the Kai Tak Airport was ceased and replaced by the new airport at Chek Lap Kok in July 1998. After closure, the disused airport site has been occupied by various temporary uses, including a golf driving range on the runway area.

2.1.2 In 2002, the Chief Executive in Council approved the Kai Tak Outline Zoning Plans (No. S/K19/3 and S/K21/3) to provide the statutory framework to proceed with the South East Kowloon Development at the former Kai Tak Airport. However, following the judgment of the Court of Final Appeal in January 2004 regarding the Harbour reclamation, the originally proposed development which involved reclamation has to be reviewed. The Kai Tak Planning Review (KTPR) has resulted with a Preliminary Outline Development Plan (PODP) for Kai Tak in October 2006. Subsequently, the Administration announced in October 2006 a plan to implement a cruise terminal at Kai Tak, as part of the development.

2.1.3 Development of the cruise terminal at Kai Tak would require dredging at the existing seawall at the southern tip of the former Kai Tak Airport runway for construction of a quay deck structure for two berths, and dredging the seabed fronting the new quay to provide necessary manoeuvring basin. The general layout of the proposed cruise terminal construction is shown in ***Figure 2.1***.

2.1.4 The current Project involves a dredging operation exceeding 500,000m^3 for construction and operation of the proposed cruise terminal at Kai Tak and is therefore classified as a Designated Project under Item C.12, Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO). An Environmental Impact Assessment (EIA) Study for the Project has been undertaken in accordance with the EIA Study Brief (No. ESB-159/2006) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM).

2.2 PROJECT ORGANISATION AND CONTACT PERSONNEL

2.2.1 The project organisation and lines of communication with respect to environmental protection work are shown in ***Figure 2.2***

2.3 CONSTRUCTION PROGRAMME AND WORKS

2.3.1 Updated construction programme with milestones of environmental protection / mitigation activities is shown in ***Appendix 2.1***.

2.3.2 No marine construction work was conducted during the baseline-monitoring period.

2.3.3 It was found silt screen have been installed at WSD17 (Quarry Bay) and WSD 15 (Sai Wan Ho) by other project since 5 March and 6 March 2010 respectively. Such observation was immediately reported to EPD and it was concluded that the sampling point of these intakes will be located outside the silt screen in the coming baseline water monitoring so as to comply with the purpose and situation of baseline monitoring. The relevant correspondence of adjustment sampling points of WSD15 and WSD17 to EPD is enclosed in ***Appendix 2.2***.

3 IMPLEMENTATION STATUS

3.1 STATUS OF REGULATORY COMPLIANCE

3.1.1 A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in ***Table 3.1***.

Table 3.1 Summary of Environmental Permit

Permits and/or Licences	Reference No.	Issued Date	Expiry Date	Status
Environmental Permit	EP-328/2009/A	15-6-2009	-	Valid

3.2 IMPLEMENTATION OF POLLUTION CONTROL / MITIGATION MEASURES

3.2.1 The potential environmental impacts arising from the construction phase have been studied and presented in the EIA Report. Appropriate mitigation measures have been recommended and should be implemented to minimise the potential environmental impacts of the Project. An implementation schedule of the recommended mitigation measures for water quality control is presented in ***Appendix 3.2***.

4 METHODOLOGY FOR WATER QUALITY MONITORING

4.0.1 In accordance with the EIA report, an Environmental Monitoring and Audit (EM&A) programme for water quality should be implemented during dredging works for cruise terminal construction to provide a monitoring mechanism for the potential water quality impacts.

4.1 CONSTRUCTION PHASE MONITORING

4.1.1 The key water quality impact during the construction phase is the potential elevation of suspended solids (SS) level in the marine water close to the works sites due to the dredging works for cruise terminal construction of the Project. According to the EIA study, regular monitoring of the SS level near the works sites is recommended during both the dredging works to ensure the compliance with the water quality standards.

4.2 WATER QUALITY PARAMETERS

4.2.1 Monitoring of turbidity and suspended solids (SS) shall be carried out at 6 WSD flushing water intakes. Turbidity are measured in-situ while SS is determined in laboratory.

4.2.2 In association with the water quality parameters, some relevant data shall also be measured, such as monitoring location/position, time, water depth, water temperature, pH, salinity, dissolved oxygen (DO) saturation, weather conditions, sea conditions, tidal stage, and any special phenomena and work underway at the construction site etc.

4.3 SAMPLING PROCEDURES AND MONITORING EQUIPMENT

4.3.1 In-situ measurements and water sampling shall be conducted at mid-depth. Duplicate *in-situ* measurements and water sampling have been conducted in each sampling event. Water samples for all monitoring parameters shall be collected, stored, preserved and analysed according to the Standard Methods, APHA 17 and/or agreed by IEC and EPD.

Dissolved Oxygen and Temperature Measuring Equipment

(i) The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
- a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
- a temperature of 0-45 degree Celsius

(ii) It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).

(iii) Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

Turbidity Measurement Instrument

4.3.2 The instrument should be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment should use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and be complete with a cable (e.g. Hach model 2100P or an approved similar instrument).

Suspended Solids

4.3.3 A water sampler comprises a transparent PVC cylinder, with a capacity of not less than 2 litres, and can be effectively sealed with latex cups at both ends. The sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth (e.g. Kahlsico Water Sampler or an approved similar instrument).

4.3.4 Water samples for suspended solids measurement should be collected in high-density polythene bottles, packed in ice (cooled to 4°C without being frozen), and delivered to ALS Technichem (HK) Pty Ltd. as soon as possible after collection for analysis.

Water Depth Detector

4.3.5 A portable, battery-operated echo sounder shall be used for the determination of water depth at each designated monitoring station. This unit can either be

handheld or affixed to the bottom of the workboat, if the same vessel is to be used throughout the monitoring programme.

Salinity

4.3.6 A portable salinometer capable of measuring salinity in the range of 0-40 ppt shall be provided for measuring salinity of the water at each of monitoring location.

Locating the Monitoring Site

4.3.7 A hand-held or boat-fixed type digital Global Positioning System (GPS) with way point bearing indication or other equivalent instrument of similar accuracy shall be provided and used during monitoring to ensure the monitoring vessel is at the correct location before taking measurements.

Calibration and Accuracy of Instrument

4.3.8 All in-situ monitoring instrument shall be checked, calibrated and certified by a laboratory accredited under HOKLAS or equivalent before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes should be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.

4.3.9 For the on site calibration of field equipment by the ET, the BS 127:1993, "Guide to Field and on-site test methods for the analysis of waters" should be observed.

4.3.10 Sufficient stocks of spare parts should be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.

4.3.11 Current calibration certificates are presented in ***Appendix 4.1.2***.

4.4 LABORATORY MEASUREMENT / ANALYSIS

4.4.1 Analysis of suspended solids has been carried out in a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd. Water samples of about 1L shall be collected at the monitoring stations for carrying out the laboratory SS determination. The detection limit shall be 2.5mg/L or better. The SS determination work shall start within 24 hours after collection of the water samples. The SS determination shall follow APHA 17ed 2540D or equivalent methods subject to the approval of IEC and EPD.

4.5 MONITORING LOCATIONS

Water Monitoring Stations

4.5.1 The 6 water monitoring stations at the existing site along the seafront of the Victoria Harbour were monitored during ebb tide and flood tide. Their locations are shown in ***Figure 4.1a***.

4.5.2 The water quality monitoring stations are listed in ***Table 4.1***.

Table 4.1 Water Quality Monitoring Stations

Monitoring Station	Easting	Northing
WSD9 (Tai Wan)	837 920.96E	818 330.02N
WSD10 (Cha Kwo Ling)	841 900.86E	817 700.07N
WSD15 (Sai Wan Ho)	841 110.42E	816 450.09N
WSD17 (Quarry Bay)	839 790.33E	817 032.24N
WSD21 (Wan Chai)	836 220.80E	815 940.07N
WSD19 (Sheung Wan)	833 415.06E	816 770.97N

Note: There is a slight adjustment for sampling point of WSD15 and WSD17 due to installation of silt screen by other project after mid-flood of 5 March 2010. The adjusted sampling point of WSD15 and WSD17 are located outside the silt screen so as to comply the situation and condition of baseline water monitoring. The distance between the original coordinate of monitoring station and adjusted sampling point is approximate 3m.

4.6 BASELINE MONITORING PROGRAMME

4.6.1 The baseline monitoring was undertaken at all designated water monitoring stations, 3 days per week, at mid-flood and mid-ebb tides, for 4 weeks prior to the commencement of dredging work.

4.6.2 It was confirmed that there are no marine construction activities in the vicinity of the stations. The actual monitoring work during the reporting period will be conducted as presented in ***Appendix 4.1.5***.

5 MONITORING RESULTS

5.1 WATER QUALITY MONITORING RESULTS

5.1.1 Water quality monitoring was carried out on 12 days at all the designated monitoring stations WSD9, WSD10, WSD15, WSD17, WSD 19 and WSD21 along the seafront of Victoria Harbour.

5.1.2 Details of Quality Assurance (QA) and Quality Control (QC) results and detection limits for Suspended Solid laboratory testing are shown in ***Appendix 5.1a***.

5.1.3 Calculated water quality monitoring results in this reporting period are reviewed and summarized in ***Tables 5.1a*** and ***5.1b***. Details of measured and tested results can be referred in ***Appendix 5.1b***. Graphical trends are presented in ***Figure 5.1a-b*** and ***Figure 5.2a-b***.

Table 5.1a Water Quality Monitoring Results (mid-flood tide) – Feb-Mar 2010

Station		Turbidity (NTU)	Suspended Solids (mg/L)
WSD9	Avg.	3.77	5
	Min.	1.69	3
	Max.	14.23	8
WSD10	Avg.	3.76	5
	Min.	1.55	2
	Max.	11.72	11
WSD15	Avg.	4.81	5
	Min.	1.59	1
	Max.	16.25	9
WSD17	Avg.	6.33	7
	Min.	2.68	4
	Max.	18.43	15
WSD21	Avg.	6.97	9
	Min.	3.43	5
	Max.	17.25	14
WSD19	Avg.	6.95	9
	Min.	4.00	5
	Max.	13.45	13

Table 5.1b Water Quality Monitoring Results (mid-ebb tide) – Feb-Mar 2010

Station		Turbidity (NTU)	Suspended Solids (mg/L)
WSD9	Avg.	3.42	4
	Min.	1.77	2
	Max.	5.72	8
WSD10	Avg.	3.34	4
	Min.	1.93	2
	Max.	6.04	8
WSD15	Avg.	3.88	4
	Min.	2.69	1
	Max.	7.61	7
WSD17	Avg.	6.18	7
	Min.	3.45	4
	Max.	11.83	10
WSD19	Avg.	7.77	10
	Min.	4.75	5
	Max.	15.90	17
WSD21	Avg.	6.33	9
	Min.	3.84	4
	Max.	8.76	14

6 REVIEW OF WATER QUALITY AND IMPACT MONITORING

6.1 DETERMINATION OF ACTION AND LIMIT LEVELS

6.1.1 The criteria for determining the Action and Limit Levels of the water quality for the construction phase monitoring are shown in ***Table 6.1a***.

Table 6.1a Action Levels for Water Quality

Parameters	Action Level	Limit Level
Turbidity in NTU	95%-ile of baseline data[See Note 1] or 10mg/L	99%-ile of baseline data[See Note 1] or 10mg/L
Suspended Solids (SS)	95%-ile of baseline data [See Note 1]	99%-ile of baseline data [See Note 1]

Remarks:

1. It is recommended to conduct the monitoring behind the silt screens and at the appropriate vertical levels of the abstraction points of these intakes.
2. For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the igures whenever it is considered as necessary.

Note: More than 1 set of baseline data should be derived to take account the seasonal fluctuation of the background SS level.

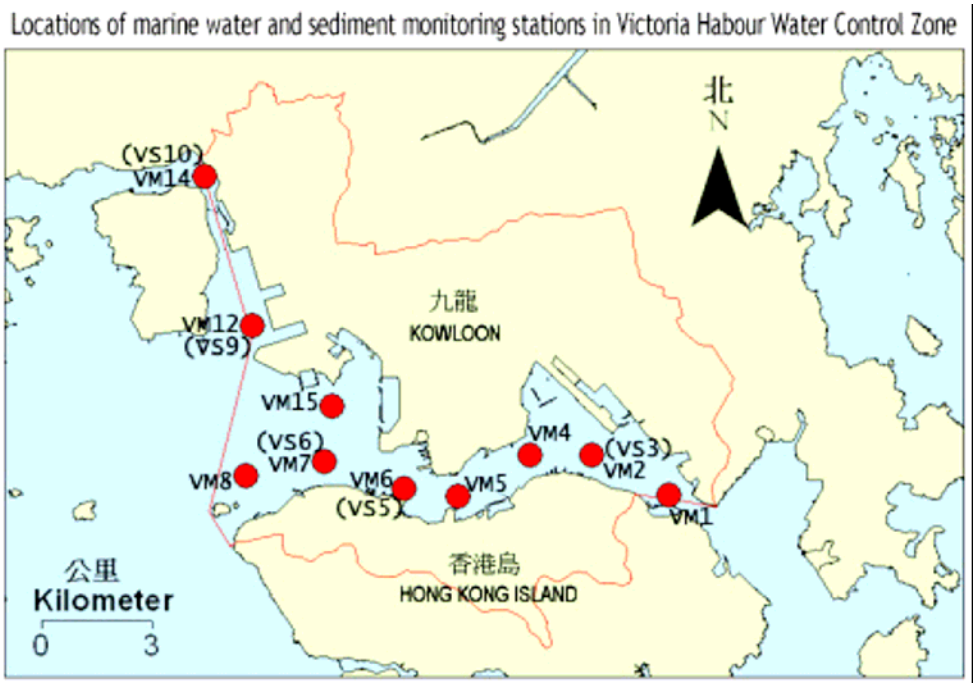
6.1.2 As per clause 4.9.3 of EM&A Manual, it is recommended that EPD routine marine water quality monitoring data at the relevant stations should be used to determine the monthly variation of the SS level in the Victoria Harbour.

6.1.3 It should be noted that according Section 5.6.82 of the EIA report, it is considered that use of EPD routine monitoring results for establishing the background water quality cannot address the above potential water quality concern. In addition, most of the sensitive receivers (i.e. the seawater intakes) are located at the waterfront and are potentially affected by the pollutants discharged from the nearby storm outfalls. On the other hand, all the EPD routine monitoring stations are located further away from the waterfront in the main harbour channel which may not be representative of the local water quality characteristics at the seawater intake points.

6.1.4 In such circumstances, it is considered that the mid-depth water quality of the would be most appropriate set of data to represent intake water quality so that the effect due to pollutants discharged from the nearby storm outfalls and the associated deposit accumulated at waterfront bottom can be minimized in reviewing the water quality at the intake positions.

6.1.5 As such, mid-depth data of EPD routine marine water quality monitoring data will be used for deriving the two sets of Action and Limit levels for dry and wet seasons respectively for each intake.

6.1.6 According to the location of the EPD routine monitoring stations in the diagram below, the closet monitoring station will be used for comparison purpose.



6.1.7 Overlaying with ***Fig. 4.1a***, the correlation of the baseline monitoring stations and the EPD monitoring stations will be:

- WSD9 co-relates with VM4
- WSD10 co-relates with VM2
- WSD15 co-relates with VM1
- WSD17 co-relates with VM2
- WSD21 co-relates with VM5
- WSD19 co-relates with VM6

6.1.8 The monthly SS pattern derived from the EPD monitoring data for 2007 and 2008 are used to compare the baseline monitoring data collected at the intake points to take account the seasonal fluctuation in the background SS level. Summary of EPD monitoring data for 2007 and 2008 can be referred in ***Appendix 6.1a*** and ***Table 6.1b*** represents the background SS conditions during the wet season (Apr-Sep) and dry season (Oct-Mar).

Table 6.1b Background SS conditions at EPD monitoring stations – 2007 & 2008

Station \ SS (mg/L)		Dry season 2007	Wet season 2007	Variation in avg. SS	Dry season 2008	Wet season 2008	Variation in avg. SS	Mean Variation %
VM1	Avg.	3.12	5.23	67.9%	3.92	6.98	78.3%	73.1%
	Min.	1.6	3.4	-	1.1	3.8	-	-
	Max.	5.8	8.5	-	6.5	12.0	-	-
VM2	Avg.	3.02	3.90	29.3%	3.78	4.03	6.6%	17.9%
	Min.	1.8	2.8	-	1.6	3.6	-	-
	Max.	4.4	5.8	-	9.2	4.8	-	-
VM4	Avg.	3.15	4.18	32.8%	4.03	5.88	45.9%	39.3%
	Min.	1.7	2.7	-	2.8	3.1	-	-
	Max.	4.8	5.9	-	7.7	11	-	-
VM5	Avg.	3.60	4.07	13.0%	3.87	5.57	44.0%	28.5%
	Min.	1.7	2.8	-	2.4	2.4	-	-
	Max.	8.0	6.2	-	6.6	10.0	-	-
VM6	Avg.	4.28	3.73	-12.8%	5.53	5.42	-2.1%	-7.5%
	Min.	2.1	2.5	-	2.0	3.5	-	-
	Max.	9.5	4.2	-	14.0	7.4	-	-

6.1.9 The observed SS variation indicates the wet season SS at all monitoring stations expected to be raised by a certain degree compared with the dry season SS except for VM6 in a negative change is resulted. So the all the nearby water intakes could follow a similar trend, i.e. WSD9, WSD10, WSD15, WSD17 and WSD21 will have an increase in the background SS while a decrease is expected for the background SS at WSD019.

6.1.10 For the baseline data taken during the dry season, the derivation of the wet season shall be adjusted with dry season SS Action and Limit Levels multiplied with mean SS variation percentage of 2007 & 2008 to account for the seasonal fluctuation.

6.1.11 Based on results in ***Tables 5.1a and 5.1b***, action and limit levels are derived and summarized in ***Tables 6.1c*** for water quality monitoring upon the commencement of work. From the ***Tables 6.1c,*** the occasional maximum SS value are higher than 10mg/L during dry and wet seasons, so the action and limit level are determined by 95%-ile and 99%-ile of baseline data.

Table 6.1c Action and Limit Levels for Water Quality Monitoring

Parameters	Action Level			Limit Level		
Turbidity in NTU		All Season			All Season	
	WSD9	5.67		WSD9	12.27	
	WSD10	6.26		WSD10	10.47	
	WSD15	8.15		WSD15	14.41	
	WSD17	11.60		WSD17	16.91	
	WSD21	9.11		WSD21	15.38	
	WSD19	13.09		WSD19	15.34	
Suspended Solids (SS) in mg/L		Dry Season	Wet Season		Dry Season	Wet Season
	WSD9	6.9	9.7	WSD9	7.8	10.9
	WSD10	7.7	9.1	WSD10	10.3	12.2
	WSD15	7.8	13.5	WSD15	8.4	14.5
	WSD17	9.5	11.2	WSD17	13.7	16.2
	WSD21	13.3	17.1	WSD21	13.9	17.8
	WSD19	16.3	15.1	WSD19	17.0	15.7

6.2 IMPACT MONITORING

6.2.1 Impact monitoring shall be conducted 3 days per week, at mid-flood and mid-ebb tides, with sampling/measurement at the appropriate monitoring stations as designated in ***Table 4.1***. The interval between 2 sets of monitoring shall not be less than 36 hours except where there are exceedances of Action and/or Limit Levels, in which case the monitoring frequency will be increased.

6.2.2 Should the monitoring results of the water quality parameters at any designated impact monitoring stations during the construction phase indicate that the water quality criteria exceed the Action or Limit Levels, the actions in accordance with the Event and Action Plan in ***Appendix 6.2a***.

6.2.3 Tentative water quality monitoring schedule should be provided to the IEC and EPD at least two weeks before the commencement of monitoring for agreement. The IEC and EPD should be notified immediately of any changes in the tentative schedule.

7 CONCLUSION

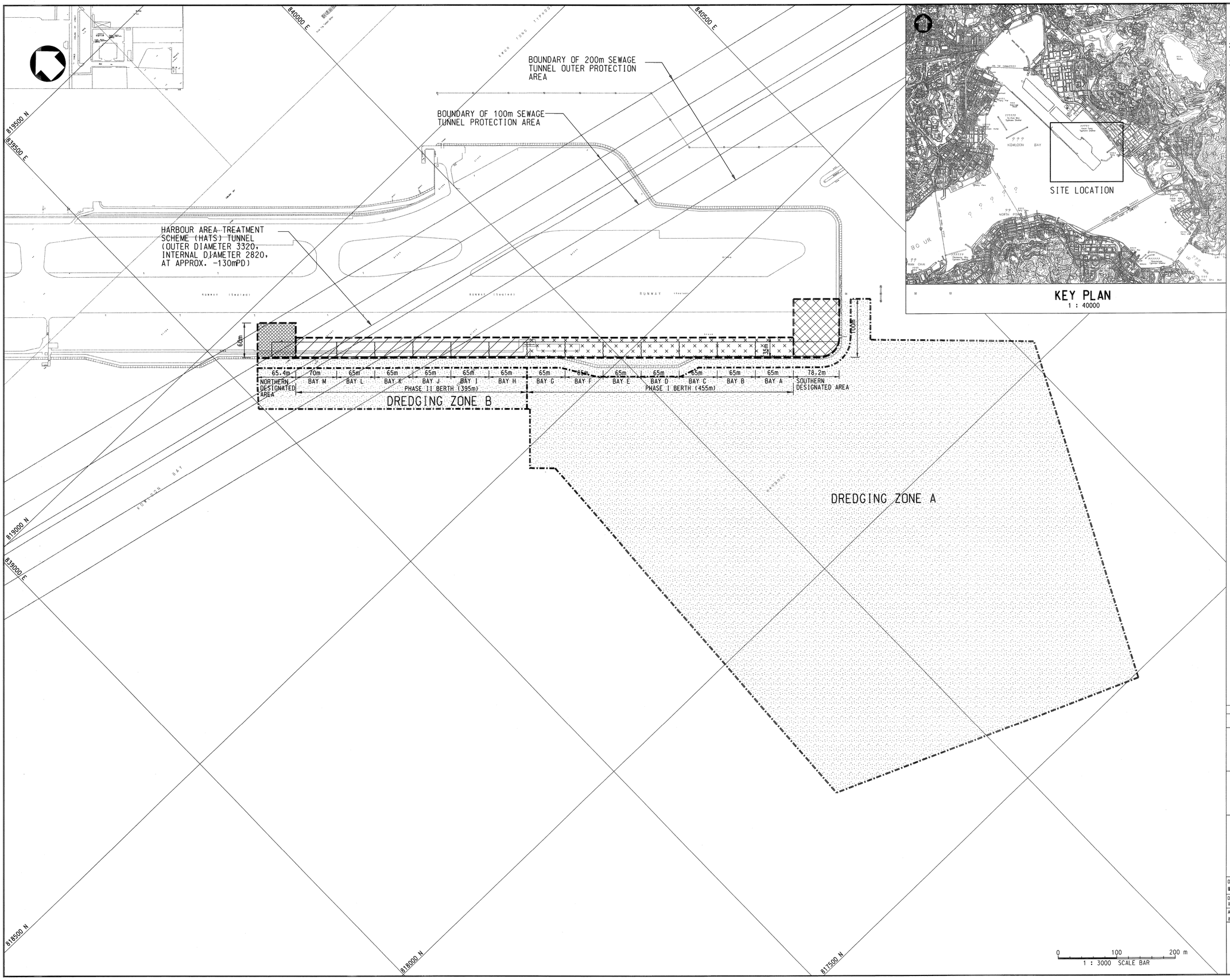
7.0.1 The baseline monitoring programme was carried out in accordance with the EM&A requirements, minor alterations to the programme were made in response to changing circumstances.

7.0.2 No marine construction activity was observed during the period of baseline water quality monitoring.

7.0.3 In summary, the water quality impact monitoring shall be proceeded in accordance with the methodology and the derived water quality limits as laid down in this report upon the commencement of dredging work for Kai Tak Cruise Terminal.

Figure 2.1

General Layout



KEY PLAN
1 : 40000

NOTES:

1. ALL COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
2. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
3. SETTING OUT REFER TO DRAWING NO.08290/1021.

LEGEND:

- SOUTHERN DESIGNATED AREA
- NORTHERN DESIGNATED AREA
- DREDGING ZONE / SEAWALL REMOVAL
- PHASE I BERTH AREA
- PHASE II BERTH AREA

Rev. 修訂	Date 日期	Description 內容摘要	Drawn 繪圖	Checked 核核
-	06/09	TENDER	LC	WCS

土木工程拓展署
Civil Engineering and Development Department

Contract No.KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development

GENERAL LAYOUT PLAN

Drawing No. 圖則編號	08290/1011		
Designed 設計 BK	Drawn 繪圖 WHM	Checked 核核 WCS	Scale 比例 1:3000
Approved 批准		Date 日期 06/09	Status 現況 TENDER

Scott Wilson Ltd
偉信顧問集團有限公司

FILE
*ATE TIME

Figure 2.2

Project Organisation and Lines of Communication

Project Organization Chart

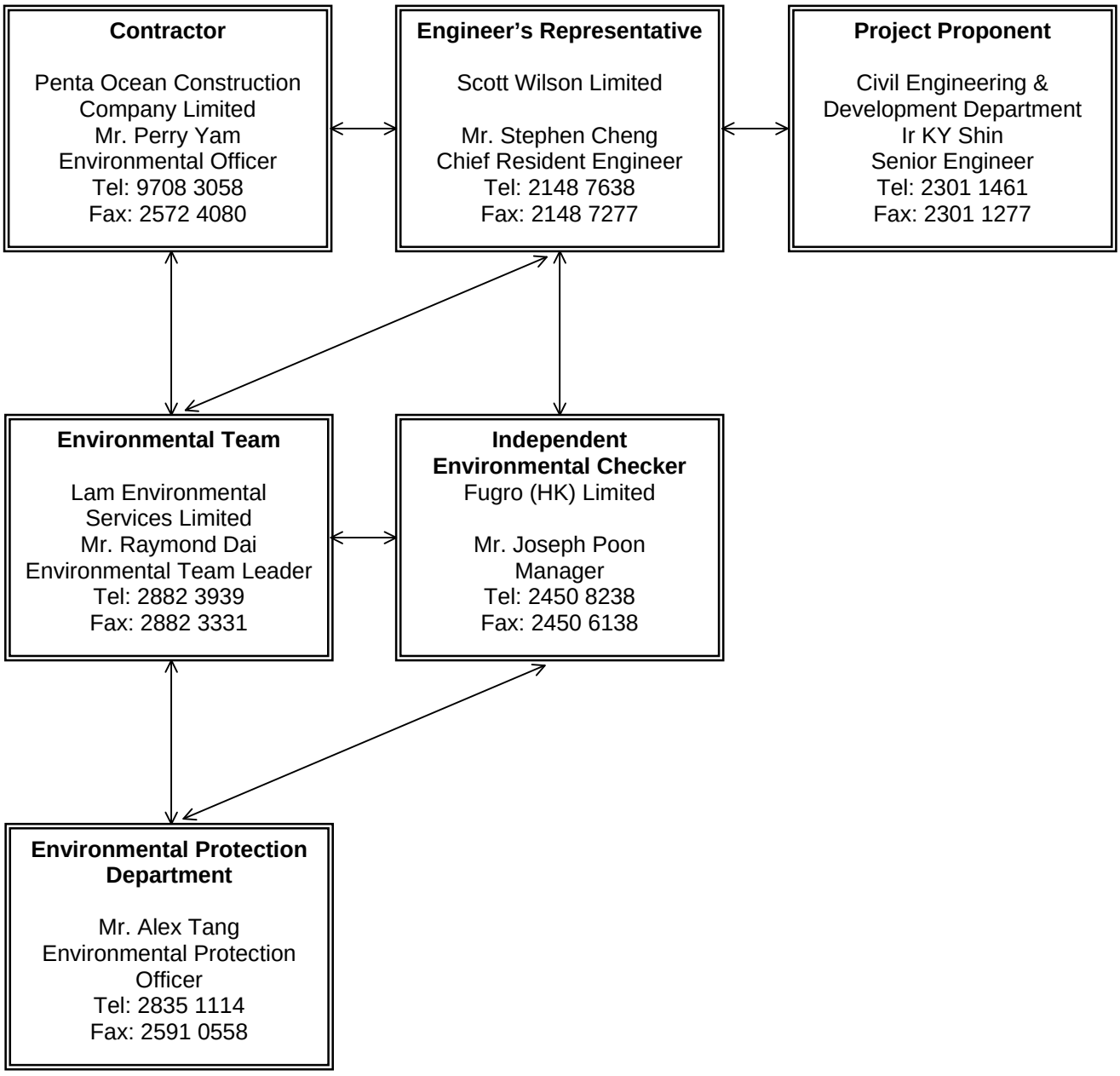
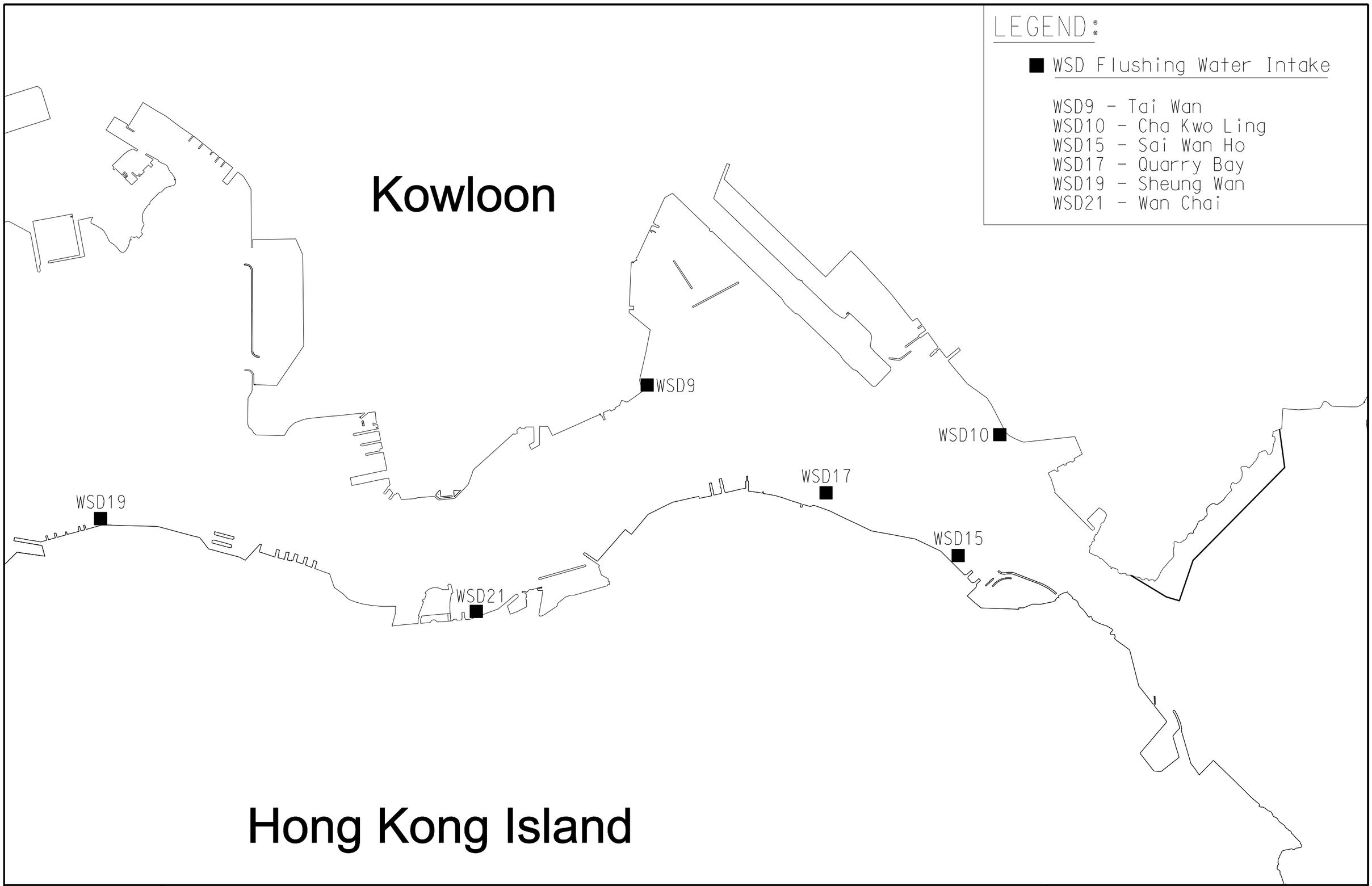


Figure 4.1a

Locations of Water Quality Monitoring Stations



MAUNSELL | AECOM
Maunsell Consultants Asia Ltd

AGREEMENT NO. CE 35/2006 (CE)
KAI TAK DEVELOPMENT ENGINEERING STUDY CUM DESIGN AND
CONSTRUCTION OF ADVANCE WORKS-INVESTIGATION, DESIGN AND CONSTRUCTION

WATER QUALITY MONITORING STATIONS

SCALE	A3 1:35000	DATE	AUG 07
CHECK	AKYC	DRAWN	WCM
JOB No.	60022503	DRAWING No.	4.1
		REV	-

P:/60022503/Reports/CT Dredging/EM&A Manual/Formal submission/Figures/Drawings/4.1.dgn

Figure 5.1a-b

Graphical Plots of Water Quality Monitoring Results (mid-flood tide)

Figure 5.1a - Graphical Plots of Water Quality Monitoring Results (mid-flood tide)

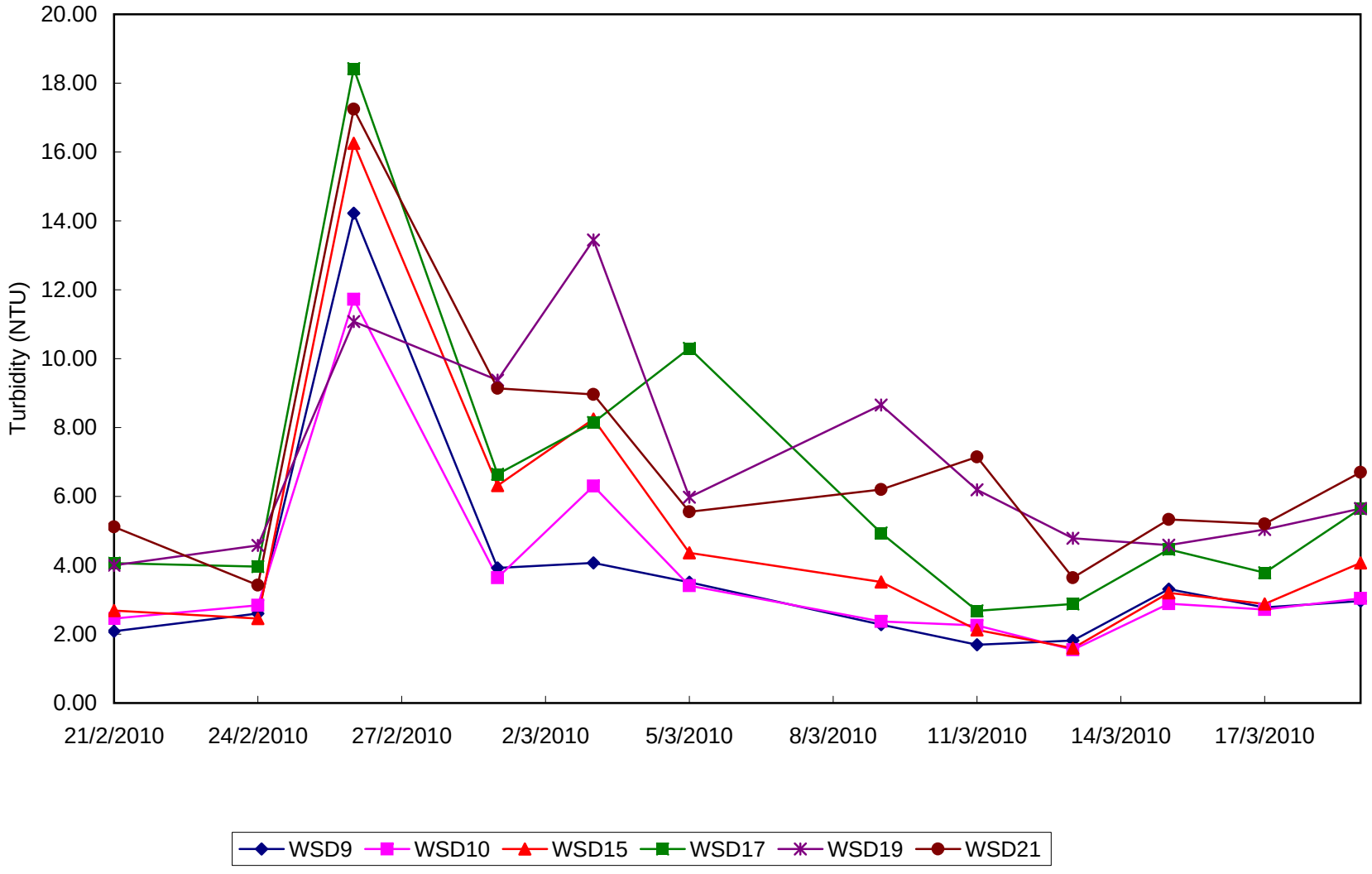


Figure 5.1b - Graphical Plots of Water Quality Monitoring Results (mid-flood tide)

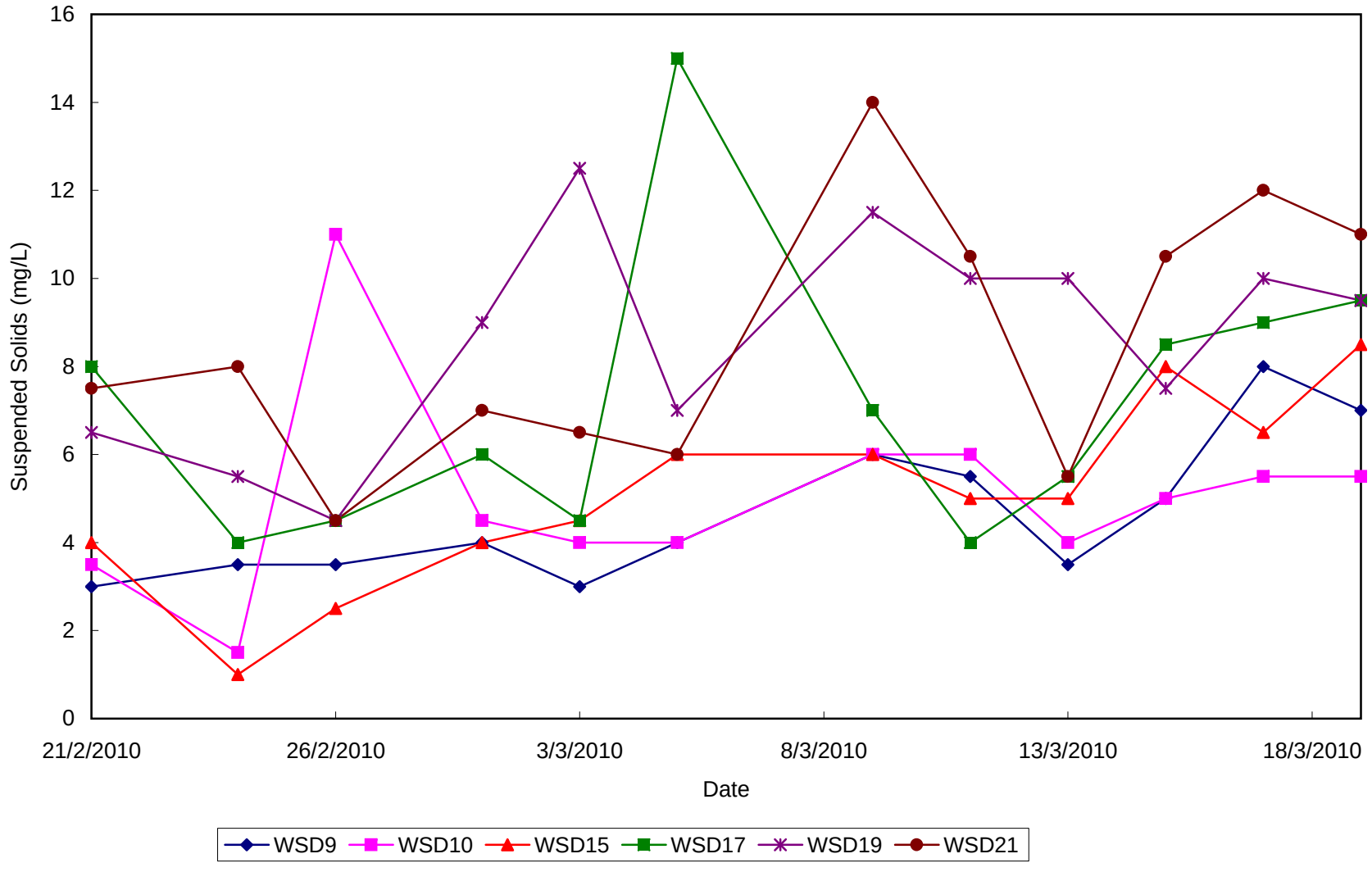


Figure 5.2a-b

Graphical Plots of Water Quality Monitoring Results (mid-ebb tide)

Figure 5.2a Graphical Plots of Water Quality Monitoring Results (mid-ebb tide)

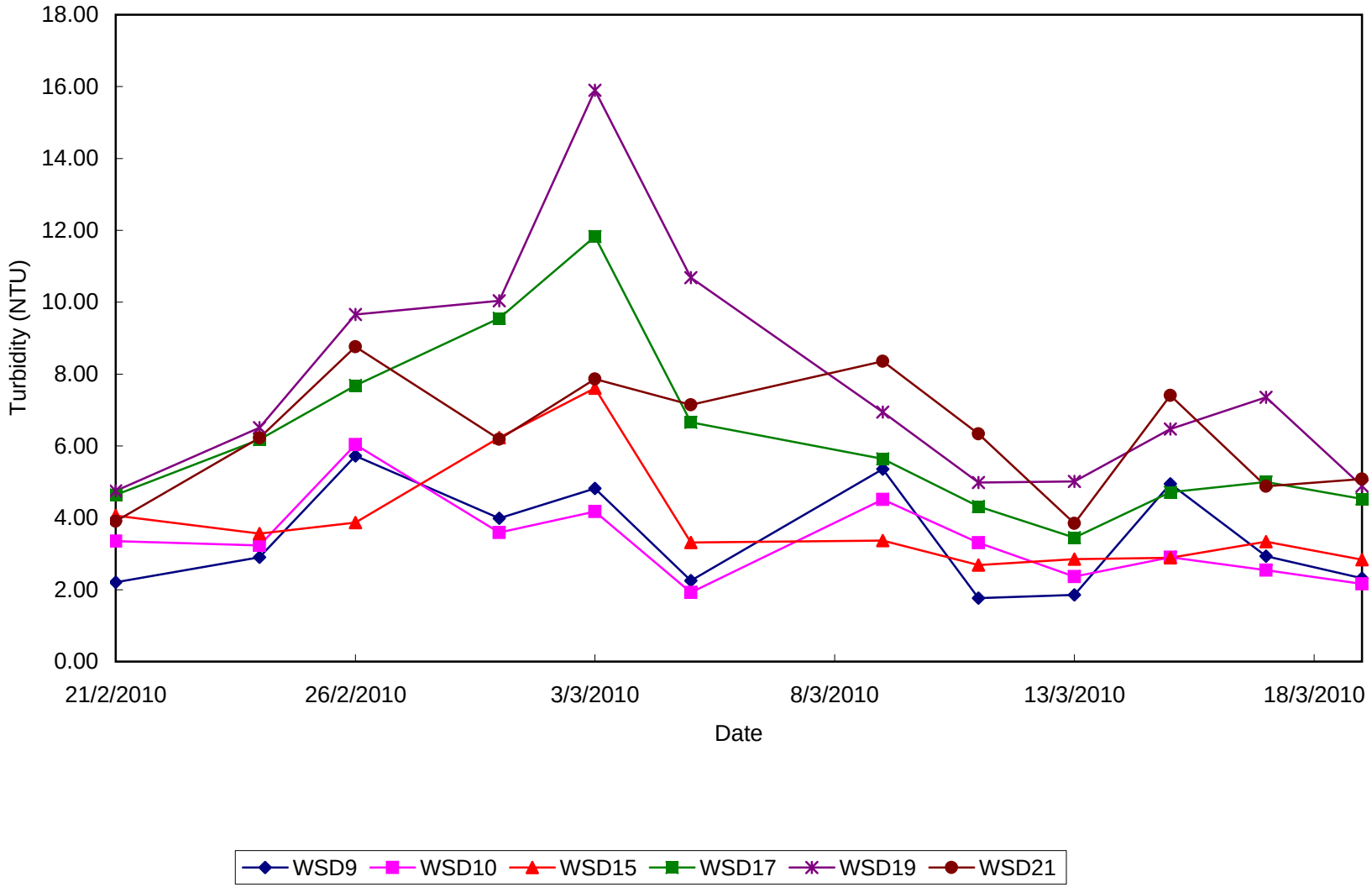
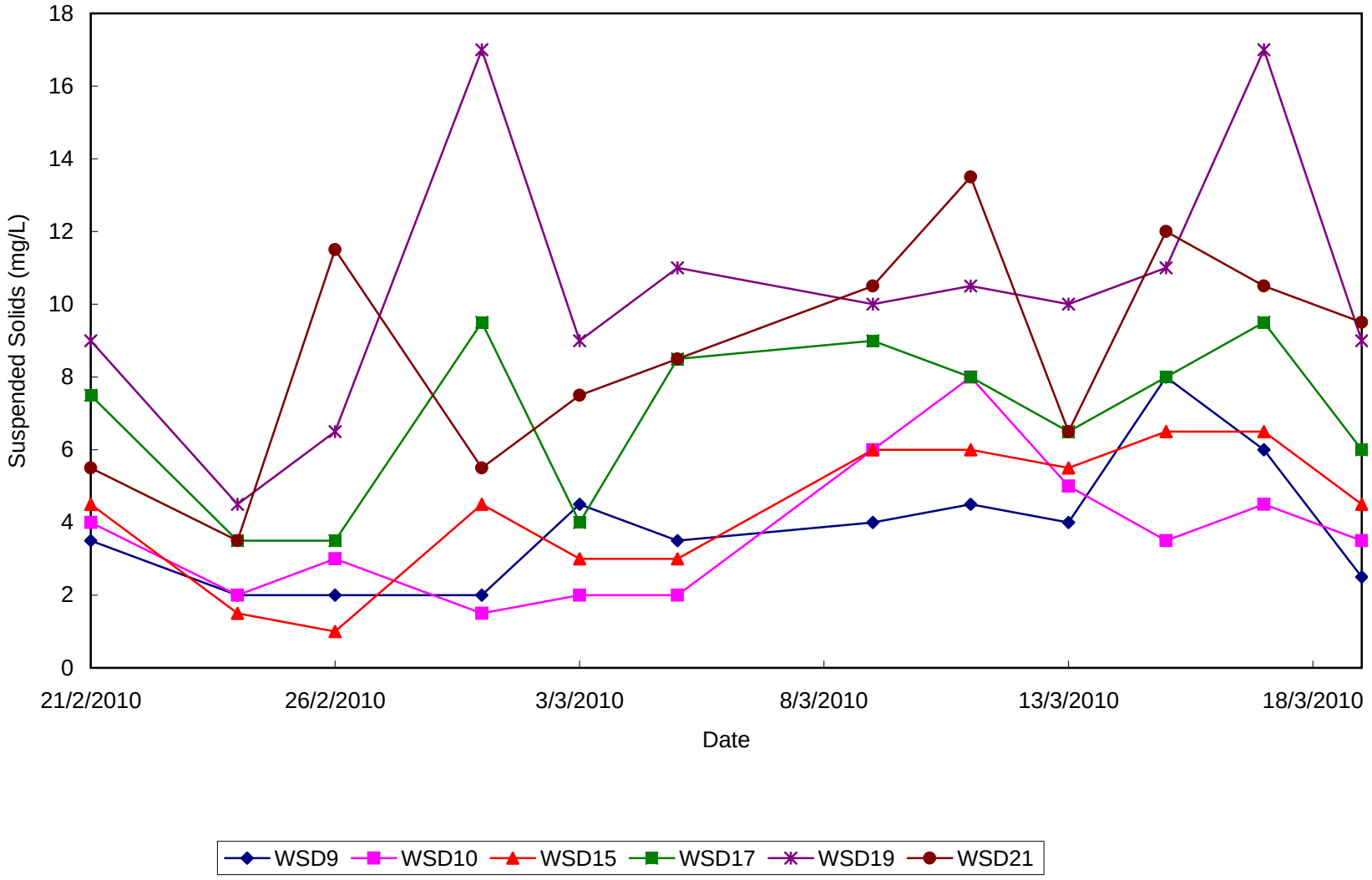


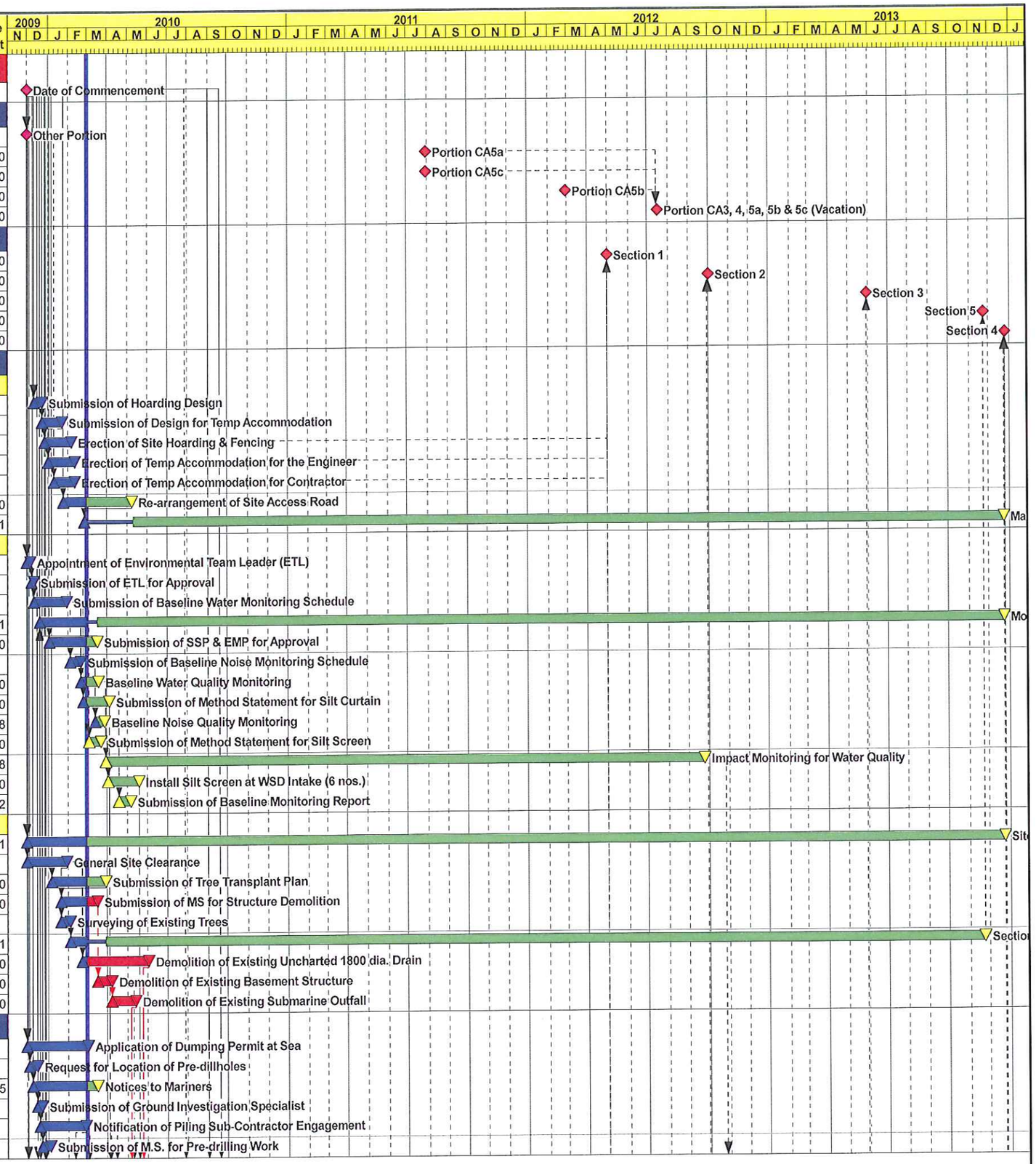
Figure 5.2b Graphical Plots of Water Quality Monitoring Results (mid-ebb tide)



Appendix 2.1

Updated Construction Programme with Milestones of Environmental Protection / Mitigation Activities

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
Site Formation for Kai Tak Cruise Terminal Deve.								
0001	Date of Commencement	0	30/11/09A	30/11/09A				
Mandatory Date								
0020	Other Portion	0	30/11/09A	30/11/09A				
0005	Portion CA5a	0	31/07/11*	31/07/11*			0	0
0015	Portion CA5c	0	31/07/11*	31/07/11*			0	0
0010	Portion CA5b	0	29/02/12*	29/02/12*			0	0
0025	Portion CA3, 4, 5a, 5b & 5c (Vacation)	0			15/07/12*	15/07/12*	0	0
Completion Date								
0030	Section 1	0			30/04/12*	30/04/12*	0	0
0035	Section 2	0			30/09/12*	30/09/12*	0	0
0040	Section 3	0			30/05/13*	30/05/13*	0	0
0050	Section 5	0			23/11/13*	23/11/13*	0	0
0045	Section 4	0			24/12/13*	24/12/13*	0	0
Preliminaries								
Temporary Accommodation								
0081	Submission of Hoarding Design	14	11/12/09A	11/12/09A	23/12/09A	23/12/09A		
0072	Submission of Design for Temp Accommodation	14	24/12/09A	24/12/09A	22/01/10A	22/01/10A		
0052	Erection of Site Hoarding & Fencing	55	28/12/09A	28/12/09A	05/02/10A	05/02/10A		
0055	Erection of Temp Accommodation for the Engineer	45	02/01/10A	02/01/10A	10/02/10A	10/02/10A		
0060	Erection of Temp Accommodation for Contractor	40	11/01/10A	11/01/10A	11/02/10A	11/02/10A		
0051	Re-arrangement of Site Access Road	90	25/01/10A	25/01/10A	08/05/10	10/05/10	1	0
0065	Maintenance of Traffic Flow	1,485	26/02/10A	26/02/10A	23/12/13	24/12/13	1	1
Environmental & Site Safety Monitoring								
0078	Appointment of Environmental Team Leader (ETL)	7	01/12/09A	01/12/09A	05/12/09A	05/12/09A		
0088	Submission of ETL for Approval	14	08/12/09A	08/12/09A	11/12/09A	11/12/09A		
0070	Submission of Baseline Water Monitoring Schedule	48	11/12/09A	11/12/09A	30/01/10A	30/01/10A		
0068	Monthly Update SSP & EMP	1,198	21/12/09A	21/12/09A	23/12/13	24/12/13	1	1
0067	Submission of SSP & EMP for Approval	60	04/01/10A	04/01/10A	17/03/10	18/03/10	1	0
0086	Submission of Baseline Noise Monitoring Schedule	60	05/02/10A	05/02/10A	19/02/10A	19/02/10A		
0071	Baseline Water Quality Monitoring	30	21/02/10A	21/02/10A	19/03/10	07/07/10	94	0
0177	Submission of Method Statement for Silt Curtain	60	24/02/10A	24/02/10A	03/04/10	19/06/10	66	0
0096	Baseline Noise Quality Monitoring	24	14/03/10A	14/03/10A	27/03/10	07/07/10	87	18
0116	Submission of Method Statement for Silt Screen	15	05/03/10	11/05/10	22/03/10	27/05/10	57	0
0075	Impact Monitoring for Water Quality	766	30/03/10	29/06/11	24/09/12	24/12/13	384	28
0090	Install Silt Screen at WSD Intake (6 nos.)	40	03/04/10	09/06/10	19/05/10	24/07/10	57	0
0101	Submission of Baseline Monitoring Report	15	19/04/10*	08/07/10	05/05/10	24/07/10	69	12
Site Clearance								
0066	Site Cleanliness and Tidiness	1,397	01/12/09A	01/12/09A	23/12/13	24/12/13	1	1
0145	General Site Clearance	60	01/12/09A	01/12/09A	30/01/10A	30/01/10A		
0062	Submission of Tree Transplant Plan	50	07/01/10A	07/01/10A	29/03/10	30/03/10	1	0
0175	Submission of MS for Structure Demolition	28	21/01/10A	21/01/10A	16/03/10	16/03/10	0	0
0061	Surveying of Existing Trees	30	22/01/10A	22/01/10A	03/02/10A	03/02/10A		
0091	Section 5 - Preserv. & Protect of Existing Trees	1,119	04/02/10A	04/02/10A	22/11/13	23/11/13	1	1
0111	Demolition of Existing Uncharted 1800 dia. Drain	80	23/02/10A	23/02/10A	01/06/10	01/06/10	0	0
0150	Demolition of Existing Basement Structure	20	17/03/10	17/03/10	08/04/10	08/04/10	0	0
0155	Demolition of Existing Submarine Outfall	30	09/04/10	09/04/10	13/05/10	13/05/10	0	0
Preparatory Works								
0180	Application of Dumping Permit at Sea	48	01/12/09A	01/12/09A	02/03/10A	02/03/10A		
0181	Request for Location of Pre-dillholes	14	05/12/09A	05/12/09A	15/12/09A	15/12/09A		
0190	Notices to Mariners	77	09/12/09A	09/12/09A	17/03/10	19/06/10	81	15
0201	Submission of Ground Investigation Specialist	7	16/12/09A	16/12/09A	23/12/09A	23/12/09A		
0170	Notification of Piling Sub-Contractor Engagement	20	21/12/09A	21/12/09A	26/02/10A	26/02/10A		
0315	Submission of M.S. for Pre-drilling Work	20	24/12/09A	24/12/09A	05/01/10A	05/01/10A		



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 1 of 9

Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
0165	Application of CNP for Precussive Piling	28	28/12/09A	28/12/09A	12/01/10A	12/01/10A		
0171	Material Submission of Steel Pipe for Approval	28	29/12/09A	29/12/09A	11/01/10A	11/01/10A		
1620	Material Submission for Steel Reinforcement	40	30/12/09A	30/12/09A	11/01/10A	11/01/10A		
0185	Application of CNP other than Precussive Piling	30	15/01/10A	15/01/10A	27/01/10A	27/01/10A		
1600	Material Submission for Design Concrete Mix	40	15/01/10A	15/01/10A	21/01/10A	21/01/10A		
0370	Submission of Proposed Pile Shoe	30	12/02/10A	12/02/10A	10/03/10A	10/03/10A		
0186	Submission of M.S. for Dredging Works	35	24/02/10A	24/02/10A	17/05/10	24/07/10	59	0
0172	Material Submission of Epoxy Paint	50	25/02/10A	25/02/10A	29/03/10	11/05/10	37	29
0196	Submission of Particulars for Pile Testings	25	26/02/10A	26/02/10A	05/05/10	26/06/10	45	45
0365	Submission of Proposed Welder for Approval	28	26/02/10A	26/02/10A	01/04/10	08/05/10	32	32
0176	Submission of M.S. for Piling Works	28	05/03/10	05/03/10	06/04/10	06/04/10	0	0
1540	Submission of M.S. for Hydrographic Survey	25	05/03/10	19/05/10	02/04/10	16/06/10	64	0
1610	Plant Trial for Design Concrete Mix	40	22/03/10	28/06/10	06/05/10	12/08/10	84	50
0360	Fabrication & Delivery of 25ton Hydraulic Hammer	120	15/04/10	26/06/10	01/09/10	12/11/10	62	0
1520	Submission of Casting Yard for Precast Units	50	06/05/10	09/06/10	02/07/10	05/08/10	29	0
1580	Submission of M.S. for Structural Works	60	18/05/10	23/10/10	26/07/10	31/12/10	136	0
1570	Sub. MS for Installation of Precast Front Panel	60	03/07/10	17/08/10	10/09/10	25/10/10	38	35
1590	Material Submission for Marine Fittings	60	27/07/10	03/01/11	04/10/10	19/03/11	136	0
1650	Submission of MS. for Suspension Soffit Platform	60	27/07/10	22/07/11	04/10/10	29/09/11	302	302
1640	Material Submission of Bituminous & Roadmarking	60	05/10/10	21/03/11	13/12/10	28/05/11	136	0
1630	Sub. M.S. for Flexible Pavement & Marking	60	14/12/10	30/05/11	01/03/11	06/08/11	136	0
1670	Submission of Loading and Unloading Facilities	40	19/01/11	04/07/11	12/03/11	18/08/11	136	0
Delivery of Steel Pipe Piles								
0191	Factory Visit of Pipe Manufacturing	12	01/02/10A	01/02/10A	05/02/10A	05/02/10A		
0192	Ordering of 1.2m dia Pile Material	0	09/02/10A	09/02/10A				
0195	Ordering of 1.1m dia Pile Material	0	09/02/10A	09/02/10A				
0200	1st. Lot (15%) Delivery	0	29/03/10*	07/04/10			9	0
0205	2nd. Lot (20%) Delivery	0	13/05/10	28/07/10			76	0
0210	3rd. Lot (15%) Delivery	0	07/07/10	21/09/10			76	0
0215	4th. Lot (15%) Delivery	0	31/08/10	15/11/10			76	0
0220	5th. Lot (15%) Delivery	0	25/10/10	19/01/11			86	0
0225	6th. Lot (20%) Delivery	0	19/12/10	22/10/11			307	124
Production of Precast Units								
Precast Planks for Deck Construction								
0230	Prepare for Fabrication of Precast Planks	21	03/07/10*	11/10/11	27/07/10	03/11/11	391	67
0235	Portion MQ1	25	20/09/10	11/10/11	18/10/10	08/11/11	324	0
0240	Portion MQ2	80	19/10/10	09/11/11	20/01/11	17/02/12	324	0
0245	Portion SDA	18	21/01/11	18/02/12	17/02/11	09/03/12	324	0
0250	Portion MQ3	25	18/02/11	10/03/12	18/03/11	07/04/12	324	0
0255	Portion MQ4	100	19/03/11	09/01/13	13/07/11	11/05/13	559	0
0260	Portion NDA	14	14/07/11	13/05/13	29/07/11	28/05/13	559	454
Front Panel along PipePile Wall								
0265	Prepare for Fabrication of Precast Front Panels	21	03/07/10	06/08/10	27/07/10	30/08/10	29	0
0270	Portion MQ1	14	28/07/10	31/08/10	12/08/10	15/09/10	29	0
0275	Portion MQ2	30	13/08/10	16/09/10	16/09/10	20/10/10	29	0
0280	Portion SDA	4	17/09/10	21/10/10	21/09/10	25/10/10	29	0
0285	Portion MQ3	15	22/09/10	18/04/11	08/10/10	04/05/11	171	0
0290	Portion MQ4	25	09/10/10	30/07/11	06/11/10	27/08/11	245	0
0295	Portion NDA	4	08/11/10	22/11/11	11/11/10	25/11/11	318	161
Concrete Seawall Blocks								
0300	Prepare for Fabrication Precast Seawall Blocks	21	03/07/10	18/01/11	27/07/10	17/02/11	169	31
0305	Portion SDA	50	02/09/10	18/02/11	29/10/10	16/04/11	138	0
0310	Portion NDA	50	30/10/10	27/02/12	27/12/10	24/04/12	401	296
Mobilization of Plants								
0319	Excavator for Trimming of Existing Ground	6	03/12/09A	03/12/09A	05/12/09A	05/12/09A		
1530	Piling Rigs for Removal of Obstruction	20	10/12/09A	10/12/09A	21/12/09A	21/12/09A		

PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 2 of 9

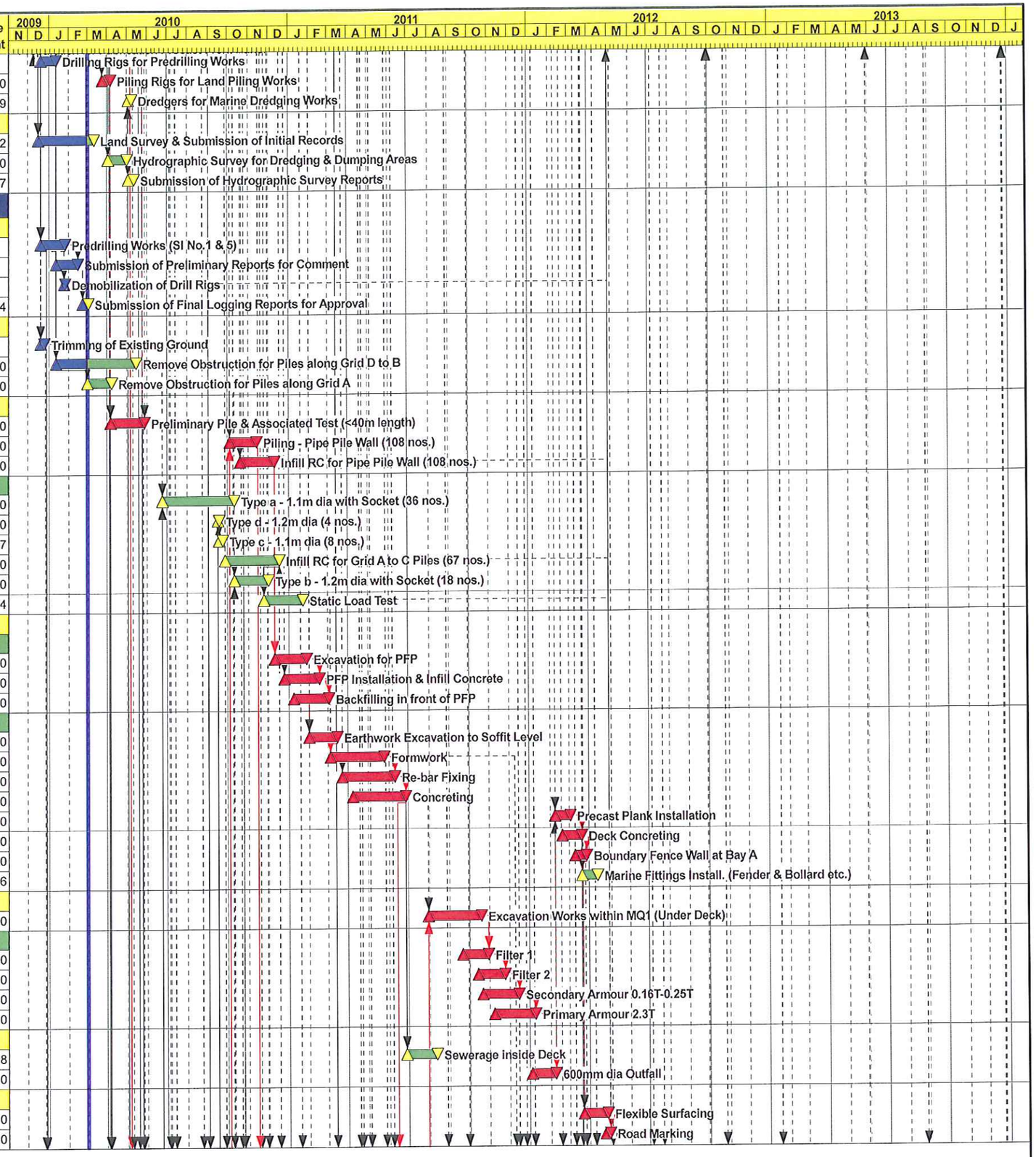
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
0320	Drilling Rigs for Predrilling Works	30	21/12/09A	21/12/09A	11/01/10A	11/01/10A		
0325	Piling Rigs for Land Piling Works	10	25/03/10	25/03/10	05/04/10	05/04/10	0	0
0330	Dredgers for Marine Dredging Works	5	04/05/10	20/07/10	08/05/10	24/07/10	66	9
Initial Survey								
0335	Land Survey & Submission of Initial Records	50	16/12/09A	16/12/09A	11/03/10	22/05/10	62	62
0340	Hydrographic Survey for Dredging & Dumping Areas	25	03/04/10	17/06/10	01/05/10	15/07/10	64	0
0341	Submission of Hydrographic Survey Reports	8	03/05/10	16/07/10	11/05/10	24/07/10	64	7
Section 1 - Portion MQ1								
Ground Investigation Work								
0345	Predrilling Works (SI No.1 & 5)	20	21/12/09A	21/12/09A	25/01/10A	25/01/10A		
0350	Submission of Preliminary Reports for Comment	20	13/01/10A	13/01/10A	15/02/10A	15/02/10A		
0361	Demobilization of Drill Rigs	3	25/01/10A	25/01/10A	26/01/10A	26/01/10A		
0351	Submission of Final Logging Reports for Approval	10	22/02/10A	22/02/10A	02/03/10	02/10/10	184	184
Temporary Work for Pilling								
0375	Trimming of Existing Ground	28	21/12/09A	21/12/09A	24/12/09A	24/12/09A		
0380	Remove Obstruction for Piles along Grid D to B	66	12/01/10A	12/01/10A	15/05/10	18/05/10	2	0
0385	Remove Obstruction for Piles along Grid A	34	01/03/10	03/03/10	08/04/10	10/04/10	2	0
Piling Work								
0395	Preliminary Pile & Associated Test (<40m length)	45	07/04/10	07/04/10	28/05/10	28/05/10	0	0
0400	Piling - Pipe Pile Wall (108 nos.)	36	04/10/10	04/10/10	13/11/10	13/11/10	0	0
0430	Infill RC for Pipe Pile Wall (108 nos.)	44	20/10/10	20/10/10	09/12/10	09/12/10	0	0
Piling - Grid A to C								
0405	Type a - 1.1m dia with Socket (36 nos.)	93	24/06/10	07/09/10	09/10/10	23/12/10	64	0
0420	Type d - 1.2m dia (4 nos.)	2	16/09/10	29/12/10	17/09/10	30/12/10	89	0
0415	Type c - 1.1m dia (8 nos.)	4	18/09/10	31/12/10	22/09/10	05/01/11	89	27
0435	Infill RC for Grid A to C Piles (67 nos.)	71	27/09/10	10/12/10	17/12/10	10/03/11	64	0
0410	Type b - 1.2m dia with Socket (18 nos.)	45	11/10/10	24/12/10	01/12/10	22/02/11	64	0
0425	Static Load Test	50	25/11/10	16/02/11	22/01/11	14/04/11	64	64
Deck Structures								
Precast Front Panel (PFP)								
0440	Excavation for PFP	40	10/12/10	10/12/10	26/01/11	26/01/11	0	0
0445	PFP Installation & Infill Concrete	40	24/12/10	24/12/10	16/02/11	16/02/11	0	0
0450	Backfilling in front of PFP	40	08/01/11	08/01/11	02/03/11	02/03/11	0	0
Beam Construction								
0454	Earthwork Excavation to Soffit Level	30	01/02/11	01/02/11	14/03/11	14/03/11	0	0
0455	Formwork	69	05/03/11	05/03/11	24/05/11	24/05/11	0	0
0460	Re-bar Fixing	69	22/03/11	22/03/11	09/06/11	09/06/11	0	0
0465	Concreting	69	07/04/11	07/04/11	25/06/11	25/06/11	0	0
0470	Precast Plank Installation	20	09/02/12	09/02/12	02/03/12	02/03/12	0	0
0475	Deck Concreting	25	20/02/12	20/02/12	19/03/12	19/03/12	0	0
1595	Boundary Fence Wall at Bay A	15	10/03/12	10/03/12	27/03/12	27/03/12	0	0
0480	Marine Fittings Install. (Fender & Bollard etc.)	20	20/03/12	07/04/12	11/04/12	30/04/12	16	16
Earthworks								
0485	Excavation Works within MQ1 (Under Deck)	69	30/07/11	30/07/11	18/10/11	18/10/11	0	0
Seawall Rockfilling								
0490	Filter 1	35	20/09/11	20/09/11	29/10/11	29/10/11	0	0
0495	Filter 2	35	13/10/11	13/10/11	22/11/11	22/11/11	0	0
0500	Secondary Armour 0.16T-0.25T	48	21/10/11	21/10/11	15/12/11	15/12/11	0	0
0505	Primary Armour 2.3T	53	08/11/11	08/11/11	09/01/12	09/01/12	0	0
Drainage Works								
0515	Sewerage inside Deck	40	27/06/11	16/12/11	11/08/11	08/02/12	148	148
0510	600mm dia Outfall	25	04/01/12	04/01/12	08/02/12	08/02/12	0	0
Road Works								
0520	Flexible Surfacing	30	23/03/12	23/03/12	26/04/12	26/04/12	0	0
0525	Road Marking	7	23/04/12	23/04/12	30/04/12	30/04/12	0	0



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 3 of 9

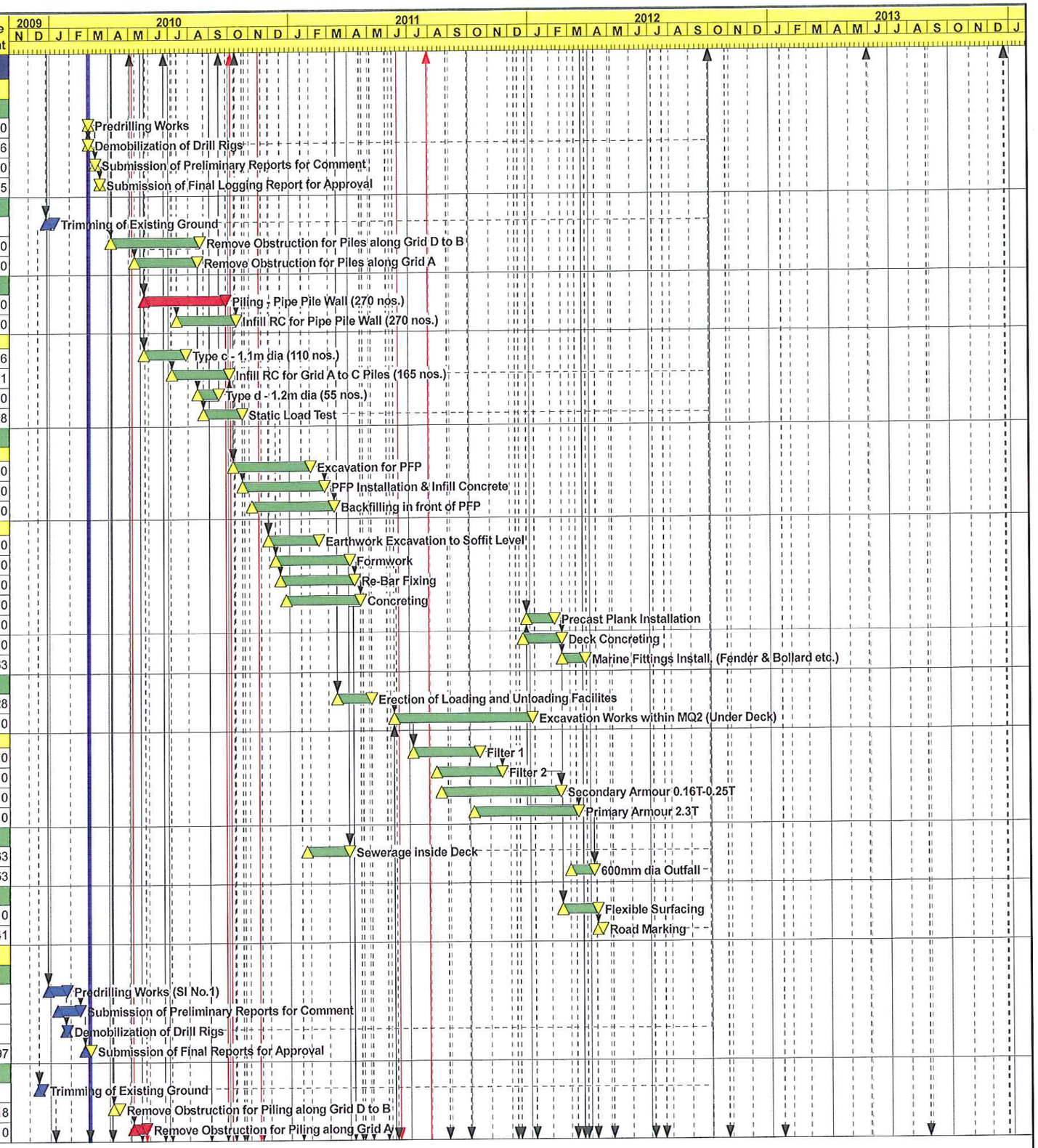
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
Section 2 - Portion MQ2, LS1, LS2, SDA & DZA								
Portion MQ2								
Ground Investigation Work								
0530	Predrilling Works	0	01/03/10	04/05/10	27/02/10	03/05/10	55	0
0541	Demobilization of Drill Rigs	0	01/03/10	01/10/12	27/02/10	29/09/12	796	796
0535	Submission of Preliminary Reports for Comment	0	12/03/10	15/05/10	11/03/10	14/05/10	55	0
0536	Submission of Final Logging Report for Approval	0	20/03/10	24/05/10	19/03/10	22/05/10	55	55
Temporary Work for Pilling								
0545	Trimming of Existing Ground	50	28/12/09A	28/12/09A	07/01/10A	07/01/10A		
0550	Remove Obstruction for Piles along Grid D to B	116	05/04/10	07/04/10	17/08/10	19/08/10	2	0
0555	Remove Obstruction for Piles along Grid A	83	10/05/10	21/08/10	13/08/10	25/11/10	89	0
Piling Work								
0560	Piling - Pipe Pile Wall (270 nos.)	108	24/05/10	24/05/10	25/09/10	25/09/10	0	0
0580	Infill RC for Pipe Pile Wall (270 nos.)	79	13/07/10	21/09/10	12/10/10	21/12/10	60	0
Piling - Grid A to C								
0565	Type c - 1.1m dia (110 nos.)	55	24/05/10	23/09/10	26/07/10	25/11/10	105	16
0585	Infill RC for Grid A to C Piles (165 nos.)	76	06/07/10	04/07/12	01/10/10	29/09/12	611	611
0570	Type d - 1.2m dia (55 nos.)	28	14/08/10	26/11/10	15/09/10	28/12/10	89	0
0575	Static Load Test	50	24/08/10	02/02/11	20/10/10	07/04/11	138	78
Deck Structures								
Precast Front Panel (PFP)								
0590	Excavation for PFP	100	08/10/10	17/12/10	02/02/11	20/04/11	60	0
0595	PFP Installation & Infill Concrete	100	22/10/10	31/12/10	23/02/11	04/05/11	60	0
0600	Backfilling in front of PFP	100	05/11/10	15/01/11	09/03/11	18/05/11	60	0
Beam Construction								
0661	Earthwork Excavation to Soffit Level	60	29/11/10	15/02/11	14/02/11	25/04/11	60	0
0605	Formwork	90	10/12/10	26/02/11	01/04/11	10/06/11	60	0
0610	Re-Bar Fixing	90	18/12/10	02/05/11	09/04/11	13/08/11	108	0
0615	Concreting	90	27/12/10	10/05/11	18/04/11	22/08/11	108	0
0620	Precast Plank Installation	30	26/12/11	08/05/12	06/02/12	11/06/12	108	0
0625	Deck Concreting	45	20/12/11	02/05/12	17/02/12	22/06/12	108	0
0630	Marine Fittings Install. (Fender & Bollard etc.)	30	18/02/12	27/08/12	23/03/12	29/09/12	163	163
Earthworks								
0634	Erection of Loading and Unloading Facilites	45	14/03/11	19/08/11	04/05/11	10/10/11	136	28
0635	Excavation Works within MQ2 (Under Deck)	180	07/06/11	11/10/11	03/01/12	15/05/12	108	0
Seawall Rockfilling								
0640	Filter 1	87	06/07/11	09/11/11	14/10/11	25/02/12	108	0
0645	Filter 2	87	10/08/11	14/12/11	18/11/11	31/03/12	108	0
0650	Secondary Armour 0.16T-0.25T	150	17/08/11	21/12/11	15/02/12	20/06/12	108	0
0655	Primary Armour 2.3T	129	06/10/11	17/02/12	12/03/12	16/07/12	108	0
Drainage Works								
0665	Sewerage inside Deck	50	26/01/11	03/08/12	31/03/11	29/09/12	463	463
0660	600mm dia Outfall	30	01/03/12	27/08/12	04/04/12	29/09/12	153	153
Road Works								
0670	Flexible Surfacing	45	18/02/12	01/08/12	10/04/12	21/09/12	141	0
0675	Road Marking	7	11/04/12	22/09/12	18/04/12	29/09/12	141	141
Portion SDA								
Ground Investigation Work								
0680	Predrilling Works (SI No.1)	20	29/12/09A	29/12/09A	25/01/10A	25/01/10A		
0685	Submission of Preliminary Reports for Comment	20	13/01/10A	13/01/10A	15/02/10A	15/02/10A		
1550	Demobilization of Drill Rigs	3	25/01/10A	25/01/10A	26/01/10A	26/01/10A		
1535	Submission of Final Reports for Approval	10	22/02/10A	22/02/10A	02/03/10	02/08/10	131	97
Temporary Work for Pilling								
0695	Trimming of Existing Ground	10	14/12/09A	14/12/09A	19/12/09A	19/12/09A		
0700	Remove Obstruction for Piling along Grid D to B	7	07/04/10	28/04/10	14/04/10	05/05/10	18	18
0705	Remove Obstruction for Piling along Grid A	17	06/05/10	06/05/10	25/05/10	25/05/10	0	0



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 4 of 9

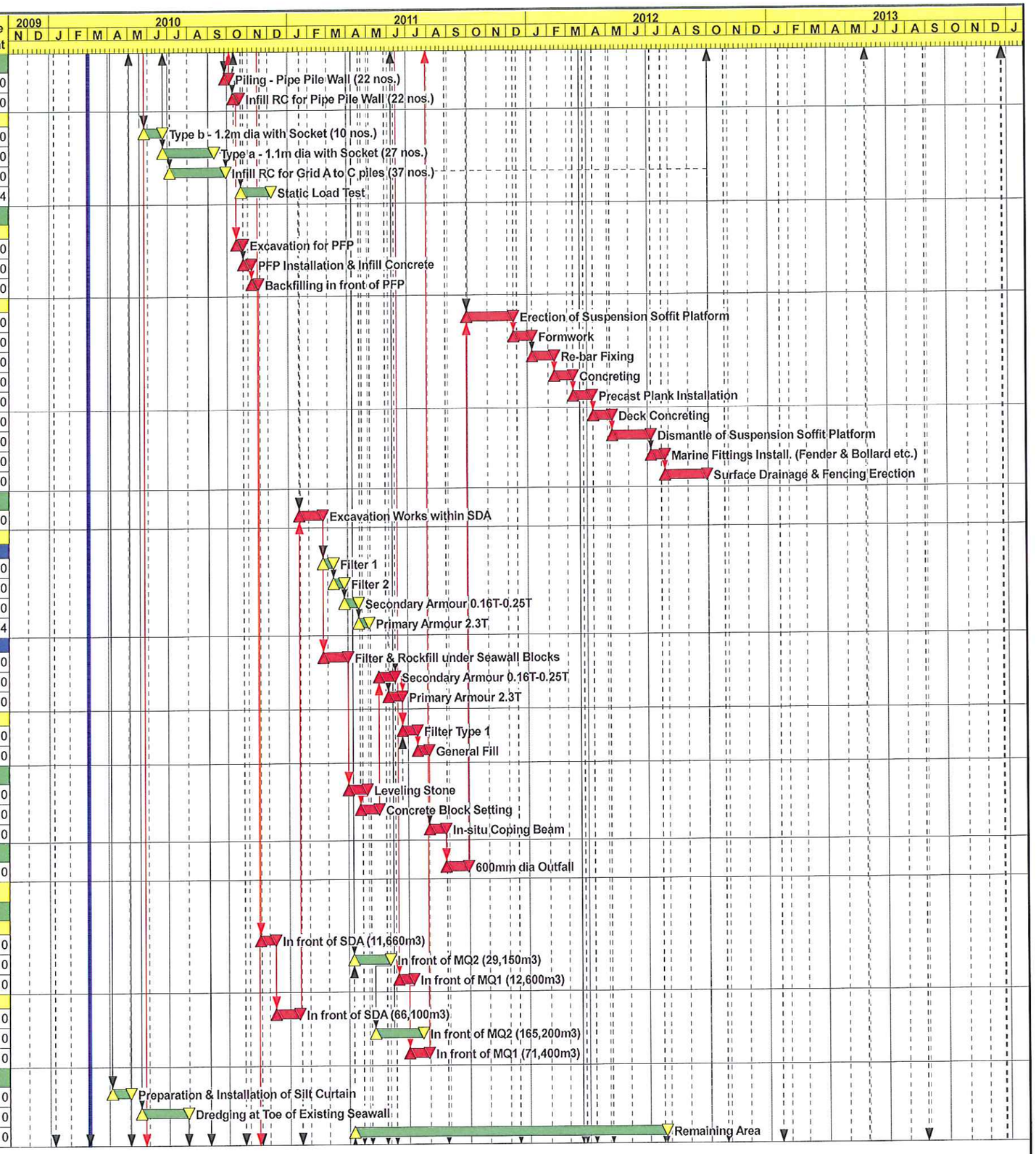
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
Piling Work								
0710	Piling - Pipe Pile Wall (22 nos.)	6	27/09/10	27/09/10	02/10/10	02/10/10	0	0
0725	Infill RC for Pipe Pile Wall (22 nos.)	8	09/10/10	09/10/10	18/10/10	18/10/10	0	0
Piling - Grid A to C								
0720	Type b - 1.2m dia with Socket (10 nos.)	25	26/05/10	05/07/10	23/06/10	02/08/10	34	0
0715	Type a - 1.1m dia with Socket (27 nos.)	68	24/06/10	03/08/10	10/09/10	20/10/10	34	0
0730	Infill RC for Grid A to C piles (37 nos.)	73	05/07/10	13/08/10	27/09/10	05/11/10	34	0
1555	Static Load Test	40	21/10/10	30/11/10	06/12/10	15/01/11	34	34
Deck Structures								
Precast Front Panel (PFP)								
0735	Excavation for PFP	10	14/10/10	14/10/10	25/10/10	25/10/10	0	0
0740	PFP Installation & Infill Concrete	10	26/10/10	26/10/10	05/11/10	05/11/10	0	0
0745	Backfilling in front of PFP	10	06/11/10	06/11/10	17/11/10	17/11/10	0	0
Beam Construction								
0746	Erection of Suspension Soffit Platform	60	30/09/11	30/09/11	08/12/11	08/12/11	0	0
0750	Formwork	24	09/12/11	09/12/11	06/01/12	06/01/12	0	0
0755	Re-bar Fixing	24	07/01/12	07/01/12	10/02/12	10/02/12	0	0
0760	Concreting	24	11/02/12	11/02/12	09/03/12	09/03/12	0	0
0765	Precast Plank Installation	25	10/03/12	10/03/12	07/04/12	07/04/12	0	0
0770	Deck Concreting	25	09/04/12	09/04/12	07/05/12	07/05/12	0	0
0990	Dismantle of Suspension Soffit Platform	50	08/05/12	08/05/12	04/07/12	04/07/12	0	0
0775	Marine Fittings Install. (Fender & Bollard etc.)	20	05/07/12	05/07/12	27/07/12	27/07/12	0	0
1585	Surface Drainage & Fencing Erection	55	28/07/12	28/07/12	29/09/12	29/09/12	0	0
Earthwork								
0780	Excavation Works within SDA	25	17/01/11	17/01/11	21/02/11	21/02/11	0	0
Seawall Rockfilling								
Pipe Pile Wall Portion								
0785	Filter 1	14	22/02/11	22/03/11	09/03/11	06/04/11	24	0
0790	Filter 2	14	10/03/11	07/04/11	25/03/11	22/04/11	24	0
0795	Secondary Armour 0.16T-0.25T	18	26/03/11	23/04/11	15/04/11	13/05/11	24	0
0800	Primary Armour 2.3T	14	16/04/11	14/05/11	02/05/11	30/05/11	24	24
Concrete Blk Seawall								
0805	Filter & Rockfill under Seawall Blocks	32	22/02/11	22/02/11	30/03/11	30/03/11	0	0
0810	Secondary Armour 0.16T-0.25T	21	17/05/11	17/05/11	09/06/11	09/06/11	0	0
0815	Primary Armour 2.3T	19	31/05/11	31/05/11	21/06/11	21/06/11	0	0
Filling Behind Concrete Blk Seawall								
0820	Filter Type 1	20	22/06/11	22/06/11	14/07/11	14/07/11	0	0
0825	General Fill	15	15/07/11	15/07/11	01/08/11	01/08/11	0	0
Concrete Blk Seawall								
0830	Leveling Stone	25	31/03/11	31/03/11	28/04/11	28/04/11	0	0
0835	Concrete Block Setting	25	18/04/11	18/04/11	16/05/11	16/05/11	0	0
0840	In-situ Coping Beam	21	02/08/11	02/08/11	25/08/11	25/08/11	0	0
Drainage								
0845	600mm dia Outfall	30	26/08/11	26/08/11	29/09/11	29/09/11	0	0
Portion DZA								
Existing Seawall Removal / Excavation								
Armour Rock Removal								
0860	In front of SDA (11,660m3)	20	18/11/10	18/11/10	10/12/10	10/12/10	0	0
0855	In front of MQ2 (29,150m3)	47	07/04/11	11/08/11	31/05/11	04/10/11	108	0
0850	In front of MQ1 (12,600m3)	19	15/06/11	15/06/11	06/07/11	06/07/11	0	0
Rockfill / Filter Mat'l & General Fill Removal								
0875	In front of SDA (66,100m3)	30	11/12/10	11/12/10	15/01/11	15/01/11	0	0
0870	In front of MQ2 (165,200m3)	64	09/05/11	12/09/11	21/07/11	24/11/11	108	0
0865	In front of MQ1 (71,400m3)	26	30/06/11	30/06/11	29/07/11	29/07/11	0	0
Dredging								
0095	Preparation & Installation of Silt Curtain	25	05/04/10	21/06/10	03/05/10	19/07/10	66	0
0880	Dredging at Toe of Existing Seawall	60	20/05/10*	26/07/10	28/07/10	02/10/10	57	0
0885	Remaining Area	400	08/04/11	14/06/11	25/07/12	29/09/12	57	0



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 5 of 9

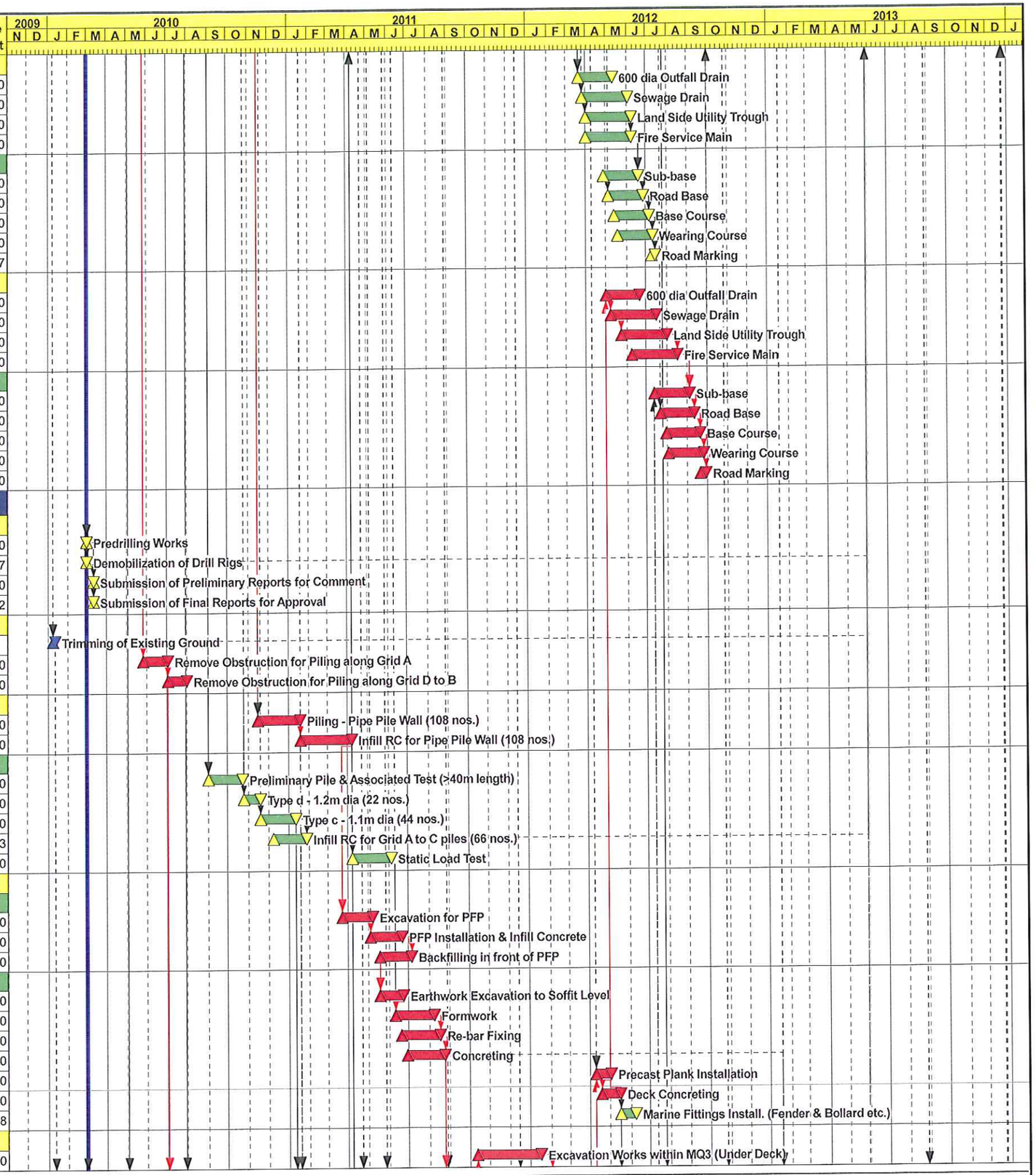
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
Portion LS1								
0890	600 dia Outfall Drain	45	20/03/12	06/06/12	10/05/12	27/07/12	67	0
0895	Sewage Drain	60	26/03/12	12/06/12	02/06/12	20/08/12	67	0
0905	Land Side Utility Trough	60	31/03/12	18/06/12	08/06/12	25/08/12	67	0
0900	Fire Service Main	60	31/03/12	18/06/12	08/06/12	25/08/12	67	0
Roadworks								
0910	Sub-base	45	27/04/12	14/07/12	18/06/12	04/09/12	67	0
0915	Road Base	45	05/05/12	23/07/12	26/06/12	12/09/12	67	0
0920	Base Course	45	14/05/12	31/07/12	04/07/12	20/09/12	67	0
0925	Wearing Course	45	19/05/12	06/08/12	10/07/12	26/09/12	67	0
0930	Road Marking	5	09/07/12	25/09/12	13/07/12	29/09/12	67	67
Portion LS2								
0935	600 dia Outfall Drain	45	30/04/12	30/04/12	20/06/12	20/06/12	0	0
0940	Sewage Drain	60	08/05/12	08/05/12	16/07/12	16/07/12	0	0
0950	Land Side Utility Trough	60	24/05/12	24/05/12	01/08/12	01/08/12	0	0
0945	Fire Service Main	60	09/06/12	09/06/12	17/08/12	17/08/12	0	0
Roadworks								
0955	Sub-base	45	13/07/12	13/07/12	03/09/12	03/09/12	0	0
0960	Road Base	45	21/07/12	21/07/12	11/09/12	11/09/12	0	0
0965	Base Course	45	30/07/12	30/07/12	19/09/12	19/09/12	0	0
0970	Wearing Course	45	04/08/12	04/08/12	25/09/12	25/09/12	0	0
0975	Road Marking	8	21/09/12	21/09/12	29/09/12	29/09/12	0	0
Section 3 - Portion MQ3								
Ground Investigation Work								
0980	Predrilling Works	0	01/03/10	03/11/10	27/02/10	02/11/10	212	0
0991	Demobilization of Drill Rigs	0	01/03/10	31/05/13	27/02/10	30/05/13	997	997
0985	Submission of Preliminary Reports for Comment	0	12/03/10	15/11/10	11/03/10	13/11/10	212	0
1525	Submission of Final Reports for Approval	0	12/03/10	15/11/10	11/03/10	13/11/10	212	212
Temporary Work for Pilling								
0995	Trimming of Existing Ground	20	08/01/10A	08/01/10A	11/01/10A	11/01/10A		
1005	Remove Obstruction for Piling along Grid A	33	26/05/10	26/05/10	02/07/10	02/07/10	0	0
1000	Remove Obstruction for Piling along Grid D to B	25	03/07/10	03/07/10	31/07/10	31/07/10	0	0
Piling Work								
1010	Piling - Pipe Pile Wall (108 nos.)	54	15/11/10	15/11/10	17/01/11	17/01/11	0	0
1030	Infill RC for Pipe Pile Wall (108 nos.)	63	18/01/11	18/01/11	07/04/11	07/04/11	0	0
Piling - Grid A to C								
1575	Preliminary Pile & Associated Test (>40m length)	45	02/09/10	13/11/10	23/10/10	05/01/11	62	0
1020	Type d - 1.2m dia (22 nos.)	22	25/10/10	06/01/11	18/11/10	31/01/11	62	0
1015	Type c - 1.1m dia (44 nos.)	44	19/11/10	01/02/11	10/01/11	30/03/11	62	0
1035	Infill RC for Grid A to C piles (66 nos.)	42	08/12/10	12/04/13	26/01/11	30/05/13	713	713
1025	Static Load Test	50	08/04/11	25/05/11	04/06/11	21/07/11	40	40
Deck Structures								
Precast Front Panel (PFP)								
1040	Excavation for PFP	40	22/03/11	22/03/11	06/05/11	06/05/11	0	0
1045	PFP Installation & Infill Concrete	40	05/05/11	05/05/11	20/06/11	20/06/11	0	0
1050	Backfilling in front of PFP	40	19/05/11	19/05/11	04/07/11	04/07/11	0	0
Beam Construction								
1051	Earthwork Excavation to Soffit Level	30	19/05/11	19/05/11	22/06/11	22/06/11	0	0
1055	Formwork	50	11/06/11	11/06/11	08/08/11	08/08/11	0	0
1060	Re-bar Fixing	50	20/06/11	20/06/11	16/08/11	16/08/11	0	0
1065	Concreting	50	28/06/11	28/06/11	24/08/11	24/08/11	0	0
1070	Precast Plank Installation	20	09/04/12	09/04/12	01/05/12	01/05/12	0	0
1075	Deck Concreting	25	18/04/12	18/04/12	16/05/12	16/05/12	0	0
1080	Marine Fittings Install. (Fender & Bollard etc.)	20	17/05/12	08/05/13	08/06/12	30/05/13	298	298
Earthworks								
1085	Excavation Works within MQ3 (Under Deck)	82	12/10/11	12/10/11	16/01/12	16/01/12	0	0



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 6 of 9

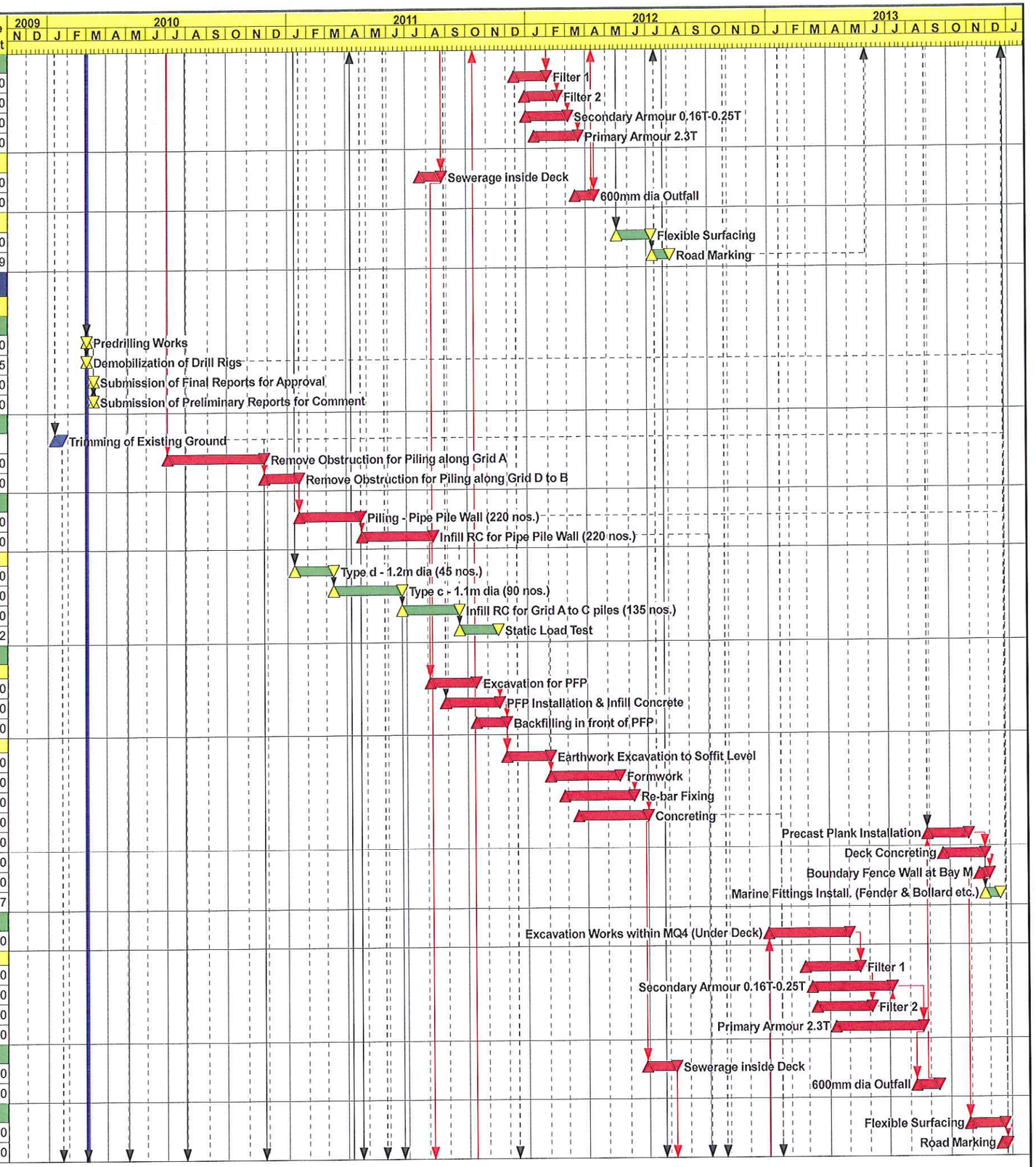
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
Seawall Rockfilling								
1090	Filter 1	35	14/12/11	14/12/11	31/01/12	31/01/12	0	0
1095	Filter 2	35	30/12/11	30/12/11	16/02/12	16/02/12	0	0
1100	Secondary Armour 0.16T-0.25T	48	31/12/11	31/12/11	03/03/12	03/03/12	0	0
1105	Primary Armour 2.3T	53	12/01/12	12/01/12	20/03/12	20/03/12	0	0
Drainage Works								
1115	Sewerage inside Deck	30	21/07/11	21/07/11	24/08/11	24/08/11	0	0
1110	600mm dia Outfall	25	15/03/12	15/03/12	12/04/12	12/04/12	0	0
Road Works								
1120	Flexible Surfacing	45	17/05/12	12/03/13	07/07/12	02/05/13	249	0
1125	Road Marking	24	09/07/12	03/05/13	04/08/12	30/05/13	249	249
Section 4 - Portion MQ4, LS3, NDA & DZB								
Portion MQ4								
Ground Investigation Work								
1130	Predrilling Works	0	01/03/10	19/03/11	27/02/10	18/03/11	322	0
1141	Demobilization of Drill Rigs	0	01/03/10	25/12/13	27/02/10	24/12/13	1,175	1,175
1135	Submission of Final Reports for Approval	0	12/03/10	31/03/11	11/03/10	30/03/11	322	260
1560	Submission of Preliminary Reports for Comment	0	12/03/10	31/03/11	11/03/10	30/03/11	322	0
Temporary Work for Piling								
1145	Trimming of Existing Ground	40	12/01/10A	12/01/10A	22/01/10A	22/01/10A		
1155	Remove Obstruction for Piling along Grid A	125	03/07/10	03/07/10	25/11/10	25/11/10	0	0
1150	Remove Obstruction for Piling along Grid D to B	45	26/11/10	26/11/10	18/01/11	18/01/11	0	0
Piling Work								
1160	Piling - Pipe Pile Wall (220 nos.)	74	19/01/11	19/01/11	21/04/11	21/04/11	0	0
1180	Infill RC for Pipe Pile Wall (220 nos.)	93	23/04/11	23/04/11	09/08/11	09/08/11	0	0
Piling - Grid A to C								
1170	Type d - 1.2m dia (45 nos.)	45	11/01/11	31/03/11	10/03/11	21/05/11	62	0
1165	Type c - 1.1m dia (90 nos.)	90	11/03/11	23/05/11	23/06/11	03/09/11	62	0
1185	Infill RC for Grid A to C piles (135 nos.)	74	24/06/11	05/09/11	17/09/11	29/11/11	62	0
1175	Static Load Test	50	19/09/11	30/11/11	15/11/11	03/02/12	62	62
Deck Structures								
Precast Front Panel (PFP)								
1190	Excavation for PFP	60	05/08/11	05/08/11	13/10/11	13/10/11	0	0
1195	PFP Installation & Infill Concrete	70	29/08/11	29/08/11	17/11/11	17/11/11	0	0
1200	Backfilling in front of PFP	40	14/10/11	14/10/11	29/11/11	29/11/11	0	0
Beam Construction								
1201	Earthwork Excavation to Soffit Level	50	30/11/11	30/11/11	03/02/12	03/02/12	0	0
1205	Formwork	90	04/02/12	04/02/12	18/05/12	18/05/12	0	0
1210	Re-bar Fixing	90	25/02/12	25/02/12	08/06/12	08/06/12	0	0
1215	Concreting	90	17/03/12	17/03/12	29/06/12	29/06/12	0	0
1220	Precast Plank Installation	55	27/08/13	27/08/13	29/10/13	29/10/13	0	0
1225	Deck Concreting	55	20/09/13	20/09/13	22/11/13	22/11/13	0	0
1605	Boundary Fence Wall at Bay M	15	14/11/13	14/11/13	30/11/13	30/11/13	0	0
1230	Marine Fittings Install. (Fender & Bollard etc.)	20	23/11/13	02/12/13	16/12/13	24/12/13	7	7
Earthworks								
1235	Excavation Works within MQ4 (Under Deck)	98	29/12/12	29/12/12	30/04/13	30/04/13	0	0
Seawall Rockfilling								
1240	Filter 1	72	23/02/13	23/02/13	17/05/13	17/05/13	0	0
1250	Secondary Armour 0.16T-0.25T	105	05/03/13	05/03/13	04/07/13	04/07/13	0	0
1245	Filter 2	72	13/03/13	13/03/13	04/06/13	04/06/13	0	0
1255	Primary Armour 2.3T	113	11/04/13	11/04/13	20/08/13	20/08/13	0	0
Drainage Works								
1265	Sewerage inside Deck	40	26/06/12	26/06/12	10/08/12	10/08/12	0	0
1260	600mm dia Outfall	30	09/08/13	09/08/13	12/09/13	12/09/13	0	0
Road Works								
1270	Flexible Surfacing	45	30/10/13	30/10/13	20/12/13	20/12/13	0	0
1275	Road Marking	7	17/12/13	17/12/13	24/12/13	24/12/13	0	0



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 7 of 9

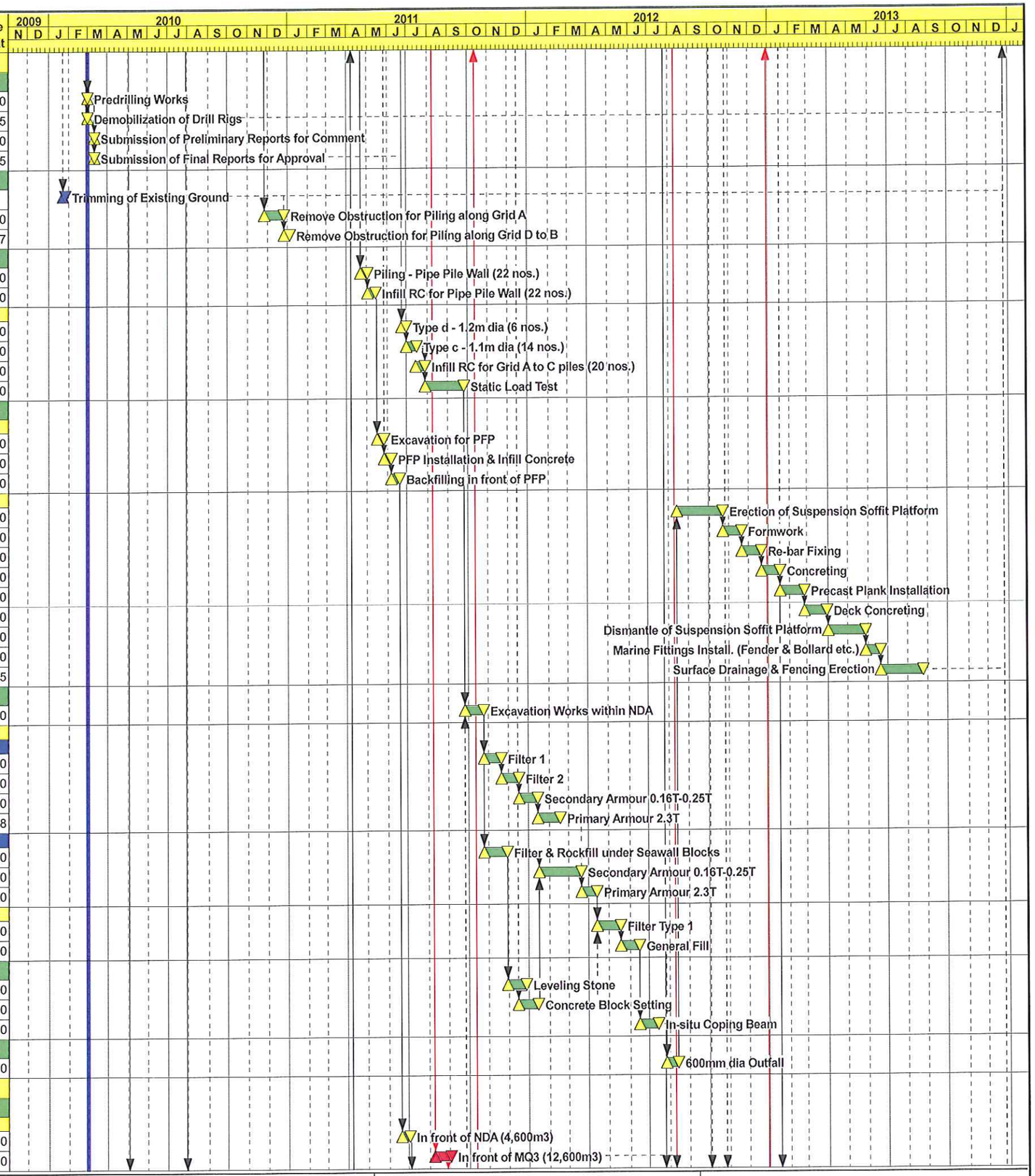
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
Portion NDA								
Ground Investigation Work								
1280	Predrilling Works	0	01/03/10	13/10/11	27/02/10	12/10/11	500	0
1545	Demobilization of Drill Rigs	0	01/03/10	25/12/13	27/02/10	24/12/13	1,175	1,175
1285	Submission of Preliminary Reports for Comment	0	12/03/10	25/10/11	11/03/10	24/10/11	500	0
1290	Submission of Final Reports for Approval	0	12/03/10	25/10/11	11/03/10	24/10/11	500	395
Temporary Work for Piling								
1295	Trimming of Existing Ground	10	23/01/10A	23/01/10A	26/01/10A	26/01/10A		
1305	Remove Obstruction for Piling along Grid A	26	26/11/10	15/09/11	25/12/10	14/10/11	244	0
1300	Remove Obstruction for Piling along Grid D to B	6	27/12/10	15/10/11	03/01/11	21/10/11	244	87
Piling Work								
1310	Piling - Pipe Pile Wall (22 nos.)	9	22/04/11	22/10/11	02/05/11	01/11/11	157	0
1325	Infill RC for Pipe Pile Wall (22 nos.)	11	03/05/11	02/11/11	14/05/11	14/11/11	157	0
Piling - Grid A to C								
1320	Type d - 1.2m dia (6 nos.)	6	24/06/11	25/10/11	30/06/11	31/10/11	105	0
1315	Type c - 1.1m dia (14 nos.)	14	01/07/11	01/11/11	16/07/11	16/11/11	105	0
1330	Infill RC for Grid A to C piles (20 nos.)	12	15/07/11	15/11/11	28/07/11	28/11/11	105	0
1565	Static Load Test	50	29/07/11	29/11/11	24/09/11	02/02/12	105	0
Deck Structures								
Precast Front Panel (PFP)								
1335	Excavation for PFP	10	16/05/11	15/11/11	26/05/11	25/11/11	157	0
1340	PFP Installation & Infill Concrete	10	27/05/11	26/11/11	07/06/11	07/12/11	157	0
1345	Backfilling in front of PFP	10	08/06/11	08/12/11	18/06/11	19/12/11	157	0
Beam Construction								
1349	Erection of Suspension Soffit Platform	60	14/08/12	14/12/12	22/10/12	01/03/13	105	0
1350	Formwork	25	23/10/12	02/03/13	20/11/12	30/03/13	105	0
1355	Re-bar Fixing	25	21/11/12	01/04/13	19/12/12	29/04/13	105	0
1360	Concreting	25	20/12/12	30/04/13	18/01/13	28/05/13	105	0
1365	Precast Plank Installation	25	19/01/13	29/05/13	23/02/13	26/06/13	105	0
1370	Deck Concreting	30	25/02/13	27/06/13	30/03/13	31/07/13	105	0
1660	Dismantle of Suspension Soffit Platform	50	01/04/13	01/08/13	28/05/13	27/09/13	105	0
1375	Marine Fittings Install. (Fender & Bollard etc.)	20	29/05/13	28/09/13	20/06/13	21/10/13	105	0
1615	Surface Drainage & Fencing Erection	55	21/06/13	22/10/13	23/08/13	24/12/13	105	105
Earthwork								
1380	Excavation Works within NDA	25	26/09/11	03/02/12	24/10/11	02/03/12	105	0
Seawall Rockfilling								
Pipe Pile Wall Portion								
1385	Filter 1	23	25/10/11	05/04/12	19/11/11	01/05/12	133	0
1390	Filter 2	23	21/11/11	02/05/12	16/12/11	28/05/12	133	0
1395	Secondary Armour 0.16T-0.25T	23	17/12/11	29/05/12	13/01/12	23/06/12	133	0
1400	Primary Armour 2.3T	23	14/01/12	25/06/12	16/02/12	20/07/12	133	28
Concrete Blk Seawall Portion								
1405	Filter & Rockfill under Seawall Blocks	30	25/10/11	03/03/12	28/11/11	06/04/12	105	0
1410	Secondary Armour 0.16T-0.25T	50	16/01/12	24/05/12	20/03/12	20/07/12	105	0
1415	Primary Armour 2.3T	20	21/03/12	21/07/12	12/04/12	13/08/12	105	0
Filling Behind Concrete Blk Seawall								
1420	Filter Type 1	30	13/04/12	14/08/12	17/05/12	17/09/12	105	0
1425	General Fill	25	18/05/12	18/09/12	15/06/12	16/10/12	105	0
Concrete Blk Seawall								
1430	Leveling Stone	25	29/11/11	07/04/12	27/12/11	05/05/12	105	0
1435	Concrete Block Setting	25	16/12/11	25/04/12	14/01/12	23/05/12	105	0
1440	In-situ Coping Beam	25	16/06/12	17/10/12	14/07/12	14/11/12	105	0
Drainage Works								
1445	600mm dia Outfall	15	27/07/12	27/11/12	13/08/12	13/12/12	105	0
Portion DZB								
Existing Seawall Removal / Excavation								
Armour Rock Removal								
1460	In front of NDA (4,600m3)	12	20/06/11	20/12/11	02/07/11	03/01/12	157	0
1450	In front of MQ3 (12,600m3)	23	08/08/11	08/08/11	02/09/11	02/09/11	0	0



PENTA-OCEAN CONSTRUCTION CO., LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Sheet 8 of 9

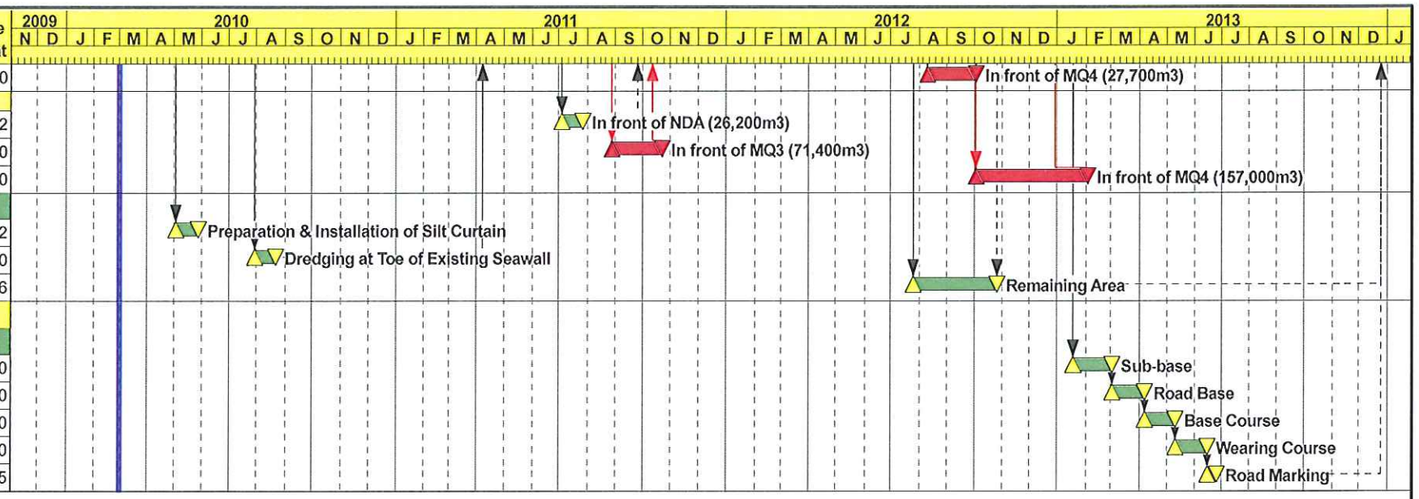
Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Activity ID	Activity Description	Orig Dur	Early Start	Late Start	Early Finish	Late Finish	Total Float	Free Float
1455	In front of MQ4 (27,700m3)	45	11/08/12	11/08/12	02/10/12	02/10/12	0	0
Rockfill / Filter Mat'l & General Fill Removal								
1475	In front of NDA (26,200m3)	20	04/07/11	04/01/12	26/07/11	02/02/12	157	52
1465	In front of MQ3 (71,400m3)	48	29/08/11	29/08/11	22/10/11	22/10/11	0	0
1470	In front of MQ4 (157,000m3)	105	03/10/12	03/10/12	02/02/13	02/02/13	0	0
Dredging								
1479	Preparation & Installation of Silt Curtain	22	04/05/10	08/09/10	28/05/10	02/10/10	109	52
1480	Dredging at Toe of Existing Seawall	20	29/07/10	04/10/10	20/08/10	26/10/10	57	0
1485	Remaining Area	80	26/07/12	23/09/13	26/10/12	24/12/13	356	356
Portion LS3								
Roadworks								
1495	Sub-base	30	19/01/13	26/07/13	01/03/13	29/08/13	155	0
1500	Road Base	30	02/03/13	30/08/13	05/04/13	03/10/13	155	0
1505	Base Course	30	06/04/13	04/10/13	10/05/13	07/11/13	155	0
1510	Wearing Course	30	11/05/13	08/11/13	14/06/13	12/12/13	155	0
1515	Road Marking	10	15/06/13	13/12/13	26/06/13	24/12/13	155	155



PENTA-OCEAN CONSTRUCTION CO.,LTD. 五洋建設

?Primavera Systems, Inc.

Early Bar
Progress Bar
Critical Activity

KTCT

Penta-Ocean Construction Co., Ltd.

CEDD Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development
Clause 16 - Master Works Programme

Start Date	30/11/09
Finish Date	24/12/13
Data Date	01/03/10
Run Date	08/03/10 10:54

Date	Revision	Checked	Approved
06/01/10	A	JO	DK
26/02/10	B	DK	DK

Appendix 2.2

The Relevant Correspondence of Adjustment Sampling Points of WSD15 and WSD17 to EPD

Attn: The Engineer's Representatives Scott Wilson Ltd.	**KL/2009/01** **Site Formation for Kai Tak Cruise Terminal Development**	PENTA-OCEAN CONSTRUCTION CO, LTD. 五洋建設

CONTRACTOR'S SUBMISSION FORM

Title of Submission :	**Water Quality Monitoring (Baseline) – Detail Arrangement**	**Date of Submission: 09 March 2010**

Ref. No. : KTCT/907/CSF/0056C

Specification Reference: PS Section 25.32
Drawing Reference:
Letter Reference:
Description of Contents:

Sampling location at Sai Wan Ho and Quarry Bay intakes proposed by ET Leader and verified by IEC.

Remarks:	For RSS Only
1 (this page) + 6 pages KKY/SH/PY/rl	

Purpose of Submission:
For Review ☐ For Information ☑ For Record Purposes ☐

From : Contractor's Representative
Name: KK Yuen Position: Site Agent
Signature:
Date: 09 March 2010

Penta-Ocean Construction Co., LTD

Lam Environmental Services

Our ref.: LES/J2009-09/CS/L015

Date : 8 March 2010

Penta Ocean Construction Co., Ltd.
Unit 601, K. Wah Centre,
191 Java Road,
North Point,
Hong Kong

Attn: Mr. KK Yuen

Environmental Permit No. EP/328/2009/A
Contract No. KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development
Baseline Noise Monitoring Sampling Point at WSD15 and WSD17

Dear Mr. Yuen,

As the silt screen has been installed at Intake WSD15-Sai Wan Ho and WSD17-Quarry Bay by other project since 5 March 2010, the sampling point of these intakes will be located outside the silt screen in the coming baseline water monitoring so as to comply with the purpose and situation of baseline monitoring. IEC has no comment on the captioned proposal. The verification letter is enclosed for your retention.

Should you have any enquiry, please feel free to contact our Assistant Environmental Engineer, Ms Cherry Mak at 2839 5604 or undersigned at 2839 5666.

Yours truly,

Raymond Dai
Senior Environmental Consultant

Encl.

c.c. IEC, Fugro – Mr. Joseph Poon

Lam Environmental Services Ltd
11/F Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong
Tel: 2882 3939 Fax: 2882 3331

FUGRO (HONG KONG) LIMITED CONSULTING ENGINEERS
7/F., Guardian House,,
32 Oi Kwan Road,
Wanchai, Hong Kong
Tel : +852 2577-9023
Fax : +852 2895-2379
Email : fugro@fugro.com.hk

FAX MESSAGE

Priority ☐ normal / ☐ urgent

To	Lam Environmental Services Ltd.	Ref. No.	MCLF2670
Country		Fax No.	2882 3331
Attn.	Mr. Raymond Dai	Date	08 March 2010
From	Joseph Poon	No. of Pages	1 (Incl. this page)
C.c. To	Mr. Barry C. S. Wong (Scott Wilson Ltd.)	Fax No.	2428 9922
	Mr. K. Y. Shin (Civil Engineering and Development Department)	Fax No.	2301 1277
	Mr. Perry Yam (Penta-Ocean Construction Co., Ltd.)	Email	perry.yam@pentaocean.com.hk
Subject	**Agreement No. CE 19/2009 (EP) Dredging Works for Proposed Cruise Terminal at Kai Tak – Sampling point at Intake WSD17 Quarry Bay and Sampling point at Intake WSD15 Sai Wan Ho**		

We refer to the proposal for sampling point at Intake WSD17 Quarry Bay (Ref. LES/J2009-09/CS/F008) and sampling point at Intake WSD15 Sai Wan Ho (Ref. LES/J2009-09/CS/F009) that we received through facsimile on 6th March 2010 and 8th March 2010 respectively, and are pleased to confirm we have no further comment on the captioned proposal.

Should you require further information, please feel free to contact us.

Best regards,

Joseph Poon
Independent Environmental Checker

JP/CY/by

Lam Environmental Services

Photo Taken at Intake WSD17 Quarry Bay on 5/3/2010

Lam Environmental Services Ltd
11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong
Tel: 2882 3939 Fax: 2882 3331 Web Site: http://www.lamenviro.com

Lam Environmental Services

Photo Taken at Intake WSD15 Sai Wan Ho on 6/3/2010

Lam Environmental Services Ltd
11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong
Tel: 2882 3939 Fax: 2882 3331 Web Site: http://www.lamenviro.com

Appendix 3.2

Implementation Schedule of Mitigation Measures

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S3.6	Requirements of the Air Pollution Control (Construction Dust) Regulation shall be adhered to during the construction period.	Work site / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	Air Pollution Control (Construction Dust) Regulation
S3.6	In order to minimize the potential odour emissions, if any, the dredged sediment placed on barge should be properly covered as far as practicable to minimise the exposed area and hence the potential odour emissions during the transportation of the dredged sediment.	Work site / During dredging in construction stage	Contractor for capital dredging	Dredging works scheduled in May 2010	EIAO-TM
S4.8	Good Site Practices: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. • Mobile plant, if any, should be sited as far away from NSRs as possible. • Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. • Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.	Work site / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	NCO EIAO-TM

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S4.9	If there is any planned NSRs within 300m from the work area occupied during the dredging period, an EM&A programme is recommended to be established according to the predicted occurrence of noisy activities. All the recommended mitigation measures for daytime normal working activities should be incorporated into the EM&A programme for implementation during dredging.	Representative NSRs at the former Kai Tak Airport runway / Upon formal occupation	N/A	Baseline noise monitoring will be proposed	NCO EIAO-TM
S5.9	• Dredging will be carried out by closed grab dredger to minimize release of sediment and other contaminants during both capital and maintenance dredging. • The maximum production rate for dredging from the seabed to provide necessary manoeuvring area would not be more than 4,000m^3 per day (and no more than 2 closed grab dredgers) during capital dredging and 2,000m^3 per day (and no more than 1 closed grab dredger) during maintenance dredging. • The maximum production rate for dredging at or near the seawall area would not be more than 4,000m^3 per day for berth construction. No more than two closed grab dredger would be operated at the same time at or near the seawall for berth construction.	Work site / During dredging in construction stage	Contractor for capital dredging	Dredging works scheduled in May 2010	EIAO-TM WPCO
S5.9	Silt curtains should be deployed around the closed grab dredgers used for dredging at and near the existing seawall of the former Kai Tak Airport runway for construction of the cruise berth structures.	Work site / During dredging in construction stage	Contractor for capital dredging	Method statement to be certified and verified for formal submission	EIAO-TM, WPCO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S5.9	Silt screens should be installed at the WSD flushing water intakes at Cha Kwo Ling, Sai Wan Ho, Quarry Bay, Sheung Wan, Wan Chai and Tai Wan for dredging in the manoeuvring basin of the first berth during the capital dredging.	Seawater intakes in Victoria Harbour/ During the construction of cruise terminal	Contractor for capital dredging	Method statement to be certified and verified for formal submission	EIAO-TM, WPCO
S5.9	Silt screens should be installed at the WSD flushing water intakes at Cha Kwo Ling, Quarry Bay and Tai Wan for dredging in the manoeuvring basin of the second berth during the capital dredging.	Seawater intakes in Victoria Harbour / During the construction of cruise terminal	Contractor for capital dredging	Method statement to be certified and verified for formal submission	EIAO-TM, WPCO
S5.9	If the opening has been introduced at the northern runway, silt screens should also be installed at the WSD flushing water intake at Sai Wan Ho, Sheung Wan and Wan Chai for dredging in the manoeuvring basin of the second berth during the capital dredging.	Seawater intake at Sai Wan Ho, Sheung Wan and Wan Chai / During the construction of cruise terminal	To be confirmed at later stage	To be confirmed at later stage	EIAO-TM, WPCO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S5.9	Other good site practices that should be undertaken during dredging include: • all vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; • all barges / dredgers should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; • construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; • barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation.	Work site and adjacent waters / During dredging in construction stage	Contractor for capital dredging	Dredging works scheduled in May 2010	EIAO, EIAO-TM, WPCO, WDO
S5.9	Appropriate numbers of portable chemical toilets shall be provided by a licensed contractor to serve the construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices.	Work site and adjacent waters / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	EIAO-TM, WPCO, WDO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S5.9	Collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish during the dredging works.	Work site and adjacent waters / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	EIAO-TM, WPCO, WDO
S5.9	An environmental monitoring and audit programme should be implemented to verify whether or not impact predictions are representative, and to ensure that all the recommended mitigation measures are implemented properly. If the water quality monitoring data indicate that the proposed dredging works result in unacceptable water quality impacts in the receiving water, appropriate actions should be taken to review the dredging operation and additional measures such as use of frame-type silt curtain, deployment of double silt curtains, slowing down, or rescheduling of works should be implemented as necessary.	6 selected WSD flushing water intakes in Victoria Harbour/ During dredging in construction stage	Environmental Team and verified by Independent Environmental Checker	Implemented; baseline monitoring schedule was proposed	EIAO-TM, WPCO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S5.9	Silt screens are recommended to be deployed at 6 selected WSD flushing water intakes during the capital dredging. The contractor for capital dredging shall demonstrate and ensure that the design of the silt screen will not affect the normal operation of flushing water intake. The contractor shall obtain consensus from all relevant parties, including WSD and Marine Department on the design of the silt screen at each of the six selected flushing water intake points before installation of the silt screen and commencement of the proposed dredging works. As a mitigation measure to avoid the pollutant and refuse entrapment problems and to ensure that the impact monitoring results are representative, regular maintenance of the silt screens and refuse collection should be performed at the monitoring stations at regular intervals on a daily basis. The Contractor should be responsible for keeping the water behind the silt screen free from floating rubbish and debris during the impact monitoring period.	6 selected WSD flushing water intakes in Victoria Harbour/ During dredging in construction stage	Contractor for capital dredging	Method statement to be certified and verified for formal submission	EIAO-TM, WPCO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S6.7	Good Site Practices It is not anticipated that adverse waste management related impacts would arise, provided that good site practices are adhered to. Recommendations for good site practices during the dredging activities include: • Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site. • Training of site personnel in proper waste management and chemical waste handling procedures. • Provision of sufficient waste disposal points and regular collection for disposal. • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. • A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites). • Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	Work site / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	EIAO-TM

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S6.7 (cont.)	• Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the workforce. • Any unused chemicals or those with remaining functional capacity shall be recycled.	Work site / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	EIAO-TM
S6.7	Marine Sediments The dredged marine sediments would be loaded onto barges and transported to the designated disposal sites allocated by the MFC depending on their level of contamination. Sediment classified as Category L would be suitable for Type 1 – Open Sea Disposal. Contaminated sediment would require either Type 1 – Open Sea Disposal (Dedicated Sites) or Type 2 - Confined Marine Disposal and must be dredged and transported with great care in accordance with ETWB TCW No. 34/2002. Subject to the final allocation of the disposal sites by MFC, the dredged contaminated sediment must be effectively isolated from the environment upon final disposal and shall be disposed of at the East Sha Chau Contaminated Mud Pits that are designated for the disposal of contaminated mud in Hong Kong.	Work site / During dredging in construction stage	Contractor for capital dredging	Dredging works scheduled in May 2010	ETWB TCW No. 34/2002

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S6.7	It will be the responsibility of the Contractor to satisfy the appropriate authorities that the contamination levels of the marine sediment to be dredged have been analysed and recorded. According to the ETWB TCW No. 34/2002, this will involve the submission of a formal Sediment Quality Report to the DEP, prior to the dredging contract being tendered. The contractor for the dredging works shall apply for the allocation of marine sediment disposal sites from all relevant authorities.	Work site / During dredging in construction stage	Contractor for capital dredging	Dumping Permit application submitted	ETWB TCW No. 34/2002
S6.7	During transportation and disposal of the dredged marine sediments requiring Type 1 and Type 2 disposal, the following measures shall be taken to minimise potential impacts on water quality: • Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved. • Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP. • Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.	Work site / During dredging in construction stage	Contractor for capital dredging	Method statement to be certified and verified for formal submission	WDO; WPCO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S6.7	Chemical Wastes After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) should be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals should be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work site / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	Waste Disposal (Chemical Waste) (General) Regulation; Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
S6.7	General Refuse General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material.	Work site / During dredging in construction stage	Contractor for capital dredging	Implemented for site preparation work	WDO, WPCO

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S6.7	Construction and Demolition Material It is recommended that the extent of dredging of the existing seawall should be kept to a minimum in the detailed design of the new cruise terminal to minimize generation of C&D material. Mitigation measures and good site practices should be incorporated in the contract document to control potential environmental impact from handling and transportation of C&D material. The mitigation measures include: • Where it is unavoidable to have transient stockpiles of C&D material within the Project work site pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible. • Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric. • Skip hoist for material transport should be totally enclosed by impervious sheeting. • Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site. • The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	Work site / During the construction period	Contractor for capital dredging	Implemented for site preparation work	ETWB TCW No. 33/2002, 31/2004, 19/2005

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S6.7 (cont.)	• The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle. • All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet. • The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.	Work site / During the construction period	Contractor for capital dredging	Implemented for site preparation work	ETWB TCW No. 33/2002, 31/2004, 19/2005
S6.7	When delivering inert C&D material to public fill reception facilities, the material shall consist entirely of inert construction waste and of size less than 250mm or other sizes as agreed with the Secretary of the Public Fill Committee. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements and implemented by the Contractor under the Waste Management Plan certified by the Environmental Team and verified by the Independent Environmental Checker who should be responsible for auditing the results of the system.	Work site / During the construction period	Contractor, Environmental Team and Independent Environmental Checker	No waste disposed off site	ETWB TCW No. 31/2004

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S7.8	The dredging activities of the proposed cruise terminal should ensure that disturbance to the existing seawall masonry outside the Project boundary should be avoided as far as practicable.	Work site/ During construction of cruise terminal	Contractor as per CEDD's advice	Dredging works scheduled in May 2010	Antiquities and Monuments Ordinance EIAO, EIAO-TM Guidance Notes on Assessment of Impact on Sites of Cultural Heritage in Environmental Impact Assessment Studies (GN-CH) Hong Kong Planning Standards and Guidelines (HKPSG)
S7.10, App. 7.1	It is recommended that the dredged spoil should be monitored for the presence of archaeological material. Guidelines for the monitoring brief have been prepared in consultation with the AMO. A qualified marine archaeologist needs to be on standby to provide specialist advice, if required, but the monitoring can be carried out by a member of staff on the dredging barge.	Work site / during dredging in construction stage	Contractor for capital dredging	Dredging works scheduled in May 2010	Antiquities and Monuments Ordinance EIAO, EIAO-TM GN-CH HKPSG Marine Archaeological Investigation Guidelines

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
8.7	Translocate those existing coral colonies attached on boulders that are manually movable by a diver underwater (possibly longest dimension of less than 50cm) located within the hard substrata sea area within the dredging site as far as practicable prior to the commencement of the capital dredging activities. The entire translocation exercise include the preparation of a detailed translocation plan, the pre-translocation coral survey, the coral translocation, and the quarterly post-translocation monitoring for one year. Pre-translocation survey would be focused on identifying and mapping of coral colonies that would be directly impacted by the proposed dredging and investigating the translocation feasibility of these coral colonies. A detailed translocation plan (including pre-translocation coral survey, translocation methodology and monitoring of transplanted corals) should be prepared during the detailed design stage of the Project which, together with the ecologist involved in coral translocation, should be approved by AFCD prior to commencement of the translocation exercises. The proposed relocation of the coral colonies should not affect any private/public marine rights at the recipient site.	Along the section of the former Kai Tak Airport runway that will be directed affected by the cruise terminal construction / During detailed design stage	Other ET specifically employed for coral translocation works	Final Detailed Coral Translocation Plan was approved by EPD in letter ref. (18) in EP2/K19/C/19 Pt.5 dated 5 June 2009. Form 5 was submitted under CEDD's memo ref. (6) in KD 2/31/4 Pt.3 dated 10 June 2009 regarding minor alteration of the position of the coral recipient site. Coral Translocation Report was submitted in Scott Wilson letter ref. 08290/325723 dated 2 July 2009. Post-translocation report shall be referred to the submissions by another ET specifically employed for coral translocation works.	EIAO-TM

EIA Ref #	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Status	Relevant Legislation and Guidelines
S8.7	New seawalls at the berth structure of the cruise terminal shall be constructed in order to provide large area of hard substrata for settlement and recruitment of intertidal and subtidal assemblages similar to those previously recorded from existing habitats.	The section of the former Kai Tak Airport runway that will be directed affected by the cruise terminal construction / During detailed design stage	To be confirmed at later stage	To be confirmed at later stage	EIAO-TM
9.6	No fisheries-specific mitigation measures would be required.	-	Not applicable	Not applicable	-

Appendix 4.1.2

Calibration Certificates for Monitoring Equipment

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

ALS TECHNICHEM (HK) Pty Ltd
Environmental Division

CERTIFICATE OF ANALYSIS

CONTACT:	MR RAYMOND DAI	**Batch:**	HK0927580
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT,	**DATE RECEIVED:**	24/12/2009
	181-185 GLOUCESTER ROAD,	**DATE OF ISSUE:**	07/01/2010
	WANCHAI, HONG KONG.	**SAMPLE TYPE:**	EQUIPMENT
ORDER No.:		**No. of SAMPLES:**	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

11/F
Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
Fax: 852-2610 2021
Email: hongkong@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA		*AMERICAS*
Brisbane	*Hong Kong*	*Vancouver*
Melbourne	*Singapore*	*Santiago*
Sydney	*Kuala Lumpur*	*Amtofagasta*
Newcastle	*Bogor*	*Lima*

Abbreviations: *% SPK REC denotes percentage spiko rocovory*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Batch: HK0927580
Date of Issue: 24/12/2009
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Turbidity System

Item : HACH Turbidimeter

Model No. : 2100P

Serial No. : 931000003861

Equipment No. : --

Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 2130B

Date of Calibration : 30 December, 2009

Testing Results :

Expected Reading	Recording Reading
4.00 NTU	4.06 NTU
16.0 NTU	16.0 NTU
80.0 NTU	73.1 NTU
160 NTU	152 NTU
Allowing Deviation	±10%

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

ALS TECHNICHEM (HK) Pty Ltd
Environmental Division

CERTIFICATE OF ANALYSIS

CONTACT:	MR RAYMOND DAI	**Batch:**	HK0927582
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT,	**DATE RECEIVED:**	24/12/2009
	181-185 GLOUCESTER ROAD,	**DATE OF ISSUE:**	07/01/2010
	WANCHAI, HONG KONG.	**SAMPLE TYPE:**	EQUIPMENT
ORDER No.:		**No. of SAMPLES:**	1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

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

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

11/F
Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
Fax: 852-2610 2021
Email: hongkong@alsenviro.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA		*AMERICAS*
Brisbane	*Hong Kong*	*Vancouver*
Melbourne	*Singapore*	*Santiago*
Sydney	*Kuala Lumpur*	*Amtofagasta*
Newcastle	*Bogor*	*Lima*

Abbreviations: *% SPK REC denotes percentage spike recovery*
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

CERTIFICATE OF ANALYSIS

Batch: HK0927582
Date of Issue: 07/01/2010
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Salinity System

Item : SONDE Environmental Monitoring System

Model No. : 600 XL

Serial No. : 05C1607

Equipment No. : --

Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 2520 A and B

Date of Calibration : 30 December, 2009

Testing Results :

Expected Reading	Recording Reading
10.0 g/L	10.0 g/L
20.0 g/L	21.1 g/L
30.0 g/L	31.3 g/L
Allowing Deviation	±10%

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

CERTIFICATE OF ANALYSIS

Batch: HK0927582
Date of Issue: 07/01/2010
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of Thermometer

Item : YSI SONDE Environmental Monitoring System

Model No. : 600 XL

Serial No. : 05C1607

Equipment No. : --

Calibration Method : In-house Method

Date of Calibration : 30 December, 2009

Testing Results :

Reference Temperature (^{0}C)	Recorded Temperature (^{0}C)
22.0 ^{0}C 38.0 ^{0}C	21.5 ^{0}C 39.7 ^{0}C
Allowing Deviation	±2.0^{0}C

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

CERTIFICATE OF ANALYSIS

Batch: HK0927582
Date of Issue: 07/01/2010
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of DO System

Item : YSI SONDE Environmental Monitoring System

Model No. : 600 XL

Serial No. : 05C1607

Equipment No. : --

Calibration Method : This meter was calibrated in accordance with standard method APHA (18th Ed.) 4500-O C & G

Date of Calibration : 30 December, 2009

Testing Results :

Expected Reading	Recording Reading
3.98 mg/L	4.07 mg/L
5.97 mg/L	5.99 mg/L
8.84 mg/L	8.79 mg/L
Allowing Deviation	±0.2 mg/L

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

CERTIFICATE OF ANALYSIS

Batch: HK0927582
Date of Issue: 07/01/2010
Client: LAM GEOTECHNICS LIMITED
Client Reference:

Calibration of pH System

Item : YSI SONDE Environmental Monitoring System

Model No. : 600 XL

Serial No. : 05C1607

Equipment No. : --

Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 4500-H^+B

Date of Calibration : 30 December, 2009

Testing Results :

Expected Reading	Recording Reading
4.00	3.99
7.00	6.97
10.0	10.1
Allowing Deviation	± 0.2

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

Appendix 4.1.5

Monitoring Programme

Contract No. KL/2009/01
Site Formation for Kai Tak Cruise Terminal Development

Water Quality Monitoring Scheudule (Baseline)

Feb - Mar 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
21-Feb WQM (baseline) Mid-flood: 09:49 Mid-ebb: 16:58	22-Feb	23-Feb	24-Feb WQM (baseline) Mid-flood: 08:45 Mid-ebb: 21:14	25-Feb	26-Feb WQM (baseline) Mid-flood: 05:38 Mid-ebb: 23:00	27-Feb
28-Feb	1-Mar WQM (baseline) Mid-flood: 07:02 Mid-ebb: 12:50	2-Mar	3-Mar WQM (baseline) Mid-flood: 08:04 Mid-ebb: 14:09	4-Mar	5-Mar WQM (baseline) Mid-flood: 09:07 Mid-ebb: 15:33	6-Mar
7-Mar	8-Mar	9-Mar WQM (baseline) Mid-flood: 08:17 Mid-ebb: 20:34	10-Mar	11-Mar WQM (baseline) Mid-flood: 14:54 Mid-ebb: 22:14	12-Mar	13-Mar WQM (baseline) Mid-flood: 16:47 Mid-ebb: 23:30
14-Mar	15-Mar WQM (baseline) Mid-flood: 06:37 Mid-ebb: 12:25	16-Mar	17-Mar WQM (baseline) Mid-flood: 07:12 Mid-ebb: 13:19	18-Mar	19-Mar WQM (baseline) Mid-flood: 07:56 Mid-ebb: 14:22	20-Mar

Notes:

1. Water Quality Monitoring for 6 water quality monitoring stations: WSD9, WSD10, WSD15, WSD17, WSD21, WSD19

2. Actual monitoring will be subjected to change due to any safety concern or adverse weather condition.

For enquiry on day-to-day monitoring matters, please contact Ms Cherry Mak at 9237 6460.

Appendix 5.1a

Details of Quality Assurance (QA) and Quality Control (QC) results and Detection Limits for Suspended Solid Laboratory Testing

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1003256		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 22-FEB-2010		
Order number	: ----			Date of issue	: 01-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1003256 supersedes any previous reports with this reference. The completion date of analysis is 25-FEB-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1003256 :

Project Name: Contract No. KL/2009/01 Kai Tak Cruise Terminal Development.
Sample(s) were received in a chilled condition.
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[21-FEB-2010]	HK1003256-003		**3**				
WSD9_TW M ME DUP	[21-FEB-2010]	HK1003256-004		**4**				
WSD10_CKL M ME	[21-FEB-2010]	HK1003256-009		**4**				
WSD10_CKL M ME DUP	[21-FEB-2010]	HK1003256-010		**4**				
WSD15_SWH M ME	[21-FEB-2010]	HK1003256-015		**5**				
WSD15_SWH S ME DUP	[21-FEB-2010]	HK1003256-016		**4**				
WSD17_QB M ME	[21-FEB-2010]	HK1003256-021		**7**				
WSD17_QB M ME DUP	[21-FEB-2010]	HK1003256-022		**8**				
WSD19_SW M ME	[21-FEB-2010]	HK1003256-027		**8**				
WSD19_SW M ME DUP	[21-FEB-2010]	HK1003256-028		**10**				
WSD21_WC M ME	[21-FEB-2010]	HK1003256-033		**6**				
WSD21_WC M ME DUP	[21-FEB-2010]	HK1003256-034		**5**				
WSD9_TW M MF	[21-FEB-2010]	HK1003256-039		**3**				
WSD9_TW M MF DUP	[21-FEB-2010]	HK1003256-040		**3**				
WSD10_CKL M MF	[21-FEB-2010]	HK1003256-045		**4**				
WSD10_CKL M MF DUP	[21-FEB-2010]	HK1003256-046		**3**				
WSD15_SWH M MF	[21-FEB-2010]	HK1003256-051		**4**				
WSD15_SWH M MF DUP	[21-FEB-2010]	HK1003256-052		**4**				
WSD17_QB M MF	[21-FEB-2010]	HK1003256-057		**7**				
WSD17_QB M MF DUP	[21-FEB-2010]	HK1003256-058		**9**				
WSD19_SW M MF	[21-FEB-2010]	HK1003256-063		**6**				
WSD19_SW M MF DUP	[21-FEB-2010]	HK1003256-064		**7**				
WSD21_WC M MF	[21-FEB-2010]	HK1003256-069		**7**				
WSD21_WC M MF DUP	[21-FEB-2010]	HK1003256-070		**8**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1260975)								
HK1003256-003	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK1003256-033	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1260976)								
HK1003256-063	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	8	14.3

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1260975)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	88.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1260976)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	114	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1003268		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 25-FEB-2010		
Order number	: ----			Date of issue	: 02-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1003268 supersedes any previous reports with this reference. The completion date of analysis is 26-FEB-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1003268 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound: EA025: Suspended Solids (SS)				
			LOR Unit: 1 mg/L				
			EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[24-FEB-2010]	HK1003268-003	**2**				
WSD9_TW M ME DUP	[24-FEB-2010]	HK1003268-004	**2**				
WSD10_CKL M ME	[24-FEB-2010]	HK1003268-009	**2**				
WSD10_CKL M ME DUP	[24-FEB-2010]	HK1003268-010	**2**				
WSD15_SWH M ME	[24-FEB-2010]	HK1003268-015	**1**				
WSD15_SWH M ME DUP	[24-FEB-2010]	HK1003268-016	**2**				
WSD17_QB M ME	[24-FEB-2010]	HK1003268-021	**3**				
WSD17_QB M ME DUP	[24-FEB-2010]	HK1003268-022	**4**				
WSD19_SW M ME	[24-FEB-2010]	HK1003268-027	**4**				
WSD19_SW M ME DUP	[24-FEB-2010]	HK1003268-028	**5**				
WSD21_WC M ME	[24-FEB-2010]	HK1003268-033	**4**				
WSD21_WC M ME DUP	[24-FEB-2010]	HK1003268-034	**3**				
WSD9_TW M MF	[24-FEB-2010]	HK1003268-039	**3**				
WSD9_TW M MF DUP	[24-FEB-2010]	HK1003268-040	**4**				
WSD10_CKL M MF	[24-FEB-2010]	HK1003268-045	**2**				
WSD10_CKL M MF DUP	[24-FEB-2010]	HK1003268-046	**1**				
WSD15_SWH M MF	[24-FEB-2010]	HK1003268-051	<1				
WSD15_SWH M MF DUP	[24-FEB-2010]	HK1003268-052	**1**				
WSD17_QB M MF	[24-FEB-2010]	HK1003268-057	**5**				
WSD17_QB M MF DUP	[24-FEB-2010]	HK1003268-058	**3**				
WSD19_SW M MF	[24-FEB-2010]	HK1003268-063	**6**				
WSD19_SW M MF DUP	[24-FEB-2010]	HK1003268-064	**5**				
WSD21_WC M MF	[24-FEB-2010]	HK1003268-069	**9**				
WSD21_WC M MF DUP	[24-FEB-2010]	HK1003268-070	**7**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1262120)								
HK1003268-003	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	2	2	0.0
HK1003268-033	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1262121)								
HK1003268-063	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	15.5

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1262120)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1262121)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1003272		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 27-FEB-2010		
Order number	: ----			Date of issue	: 03-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1003272 supersedes any previous reports with this reference. The completion date of analysis is 02-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1003272 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[26-FEB-2010]	HK1003272-003		**2**				
WSD9_TW M ME DUP	[26-FEB-2010]	HK1003272-004		**2**				
WSD10_CKL M ME	[26-FEB-2010]	HK1003272-009		**3**				
WSD10_CKL M ME DUP	[26-FEB-2010]	HK1003272-010		**3**				
WSD15_SWH M ME	[26-FEB-2010]	HK1003272-015		**1**				
WSD15_SWH M ME DUP	[26-FEB-2010]	HK1003272-016		**1**				
WSD17_QB M ME	[26-FEB-2010]	HK1003272-021		**4**				
WSD17_QB M ME DUP	[26-FEB-2010]	HK1003272-022		**3**				
WSD19_SW M ME	[26-FEB-2010]	HK1003272-027		**6**				
WSD19_SW M ME DUP	[26-FEB-2010]	HK1003272-028		**7**				
WSD21_WC M ME	[26-FEB-2010]	HK1003272-033		**13**				
WSD21_WC M ME DUP	[26-FEB-2010]	HK1003272-034		**10**				
WSD9_TW M MF	[26-FEB-2010]	HK1003272-039		**3**				
WSD9_TW M MF DUP	[26-FEB-2010]	HK1003272-040		**4**				
WSD10_CKL M MF	[26-FEB-2010]	HK1003272-045		**19**				
WSD10_CKL M MF DUP	[26-FEB-2010]	HK1003272-046		**3**				
WSD15_SWH M MF	[26-FEB-2010]	HK1003272-051		**2**				
WSD15_SWH M MF DUP	[26-FEB-2010]	HK1003272-052		**3**				
WSD17_QB M MF	[26-FEB-2010]	HK1003272-057		**5**				
WSD17_QB M MF DUP	[26-FEB-2010]	HK1003272-058		**4**				
WSD19_SW M MF	[26-FEB-2010]	HK1003272-063		**5**				
WSD19_SW M MF DUP	[26-FEB-2010]	HK1003272-064		**4**				
WSD21_WC M MF	[26-FEB-2010]	HK1003272-069		**5**				
WSD21_WC M MF DUP	[26-FEB-2010]	HK1003272-070		**4**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1265222)								
HK1003272-003	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	2	3	0.0
HK1003272-033	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	13	13	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1265223)								
HK1003272-063	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1265222)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1265223)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: **LAM ENVIRONMENTAL SERVICES LTD**	*Laboratory*	: **ALS Technichem HK Pty Ltd**	*Page*	: **1 of 3**		
Contact	: **MS CHERRY MAK**	*Contact*	: **Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1004096**		
Address	: **11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG**	*Address*	: **11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**				
E-mail	: **cherrymak@lamenviro.com**	*E-mail*	: **Godfrey.Chan@alsenviro.com**				
Telephone	: **+852 2919 0288**	*Telephone*	: **+852 2610 1044**				
Facsimile	: **+852 2882 3331**	*Facsimile*	: **+852 2610 2021**				
Project	: **MARINE WATER QUALITY MONITORING AT WSD INTAKES**	*Quote number*	: **----**	*Date received*	: **01-MAR-2010**		
Order number	: **----**			*Date of issue*	: **06-MAR-2010**		
C-O-C number	: **----**			*No. of samples*	- *Received* :	**24**	
Site	: **----**				- *Analysed* :	**24**	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004096 supersedes any previous reports with this reference. The completion date of analysis is 04-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004096 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[01-MAR-2010]	HK1004096-001		**2**				
WSD9_TW M ME DUP	[01-MAR-2010]	HK1004096-002		**2**				
WSD10_CKL M ME	[01-MAR-2010]	HK1004096-003		**2**				
WSD10_CKL M ME DUP	[01-MAR-2010]	HK1004096-004		**1**				
WSD15_SWH M ME	[01-MAR-2010]	HK1004096-005		**5**				
WSD15_SWH M ME DUP	[01-MAR-2010]	HK1004096-006		**4**				
WSD17_QB M ME	[01-MAR-2010]	HK1004096-007		**9**				
WSD17_QB M ME DUP	[01-MAR-2010]	HK1004096-008		**10**				
WSD19_SW M ME	[01-MAR-2010]	HK1004096-009		**18**				
WSD19_SW M ME DUP	[01-MAR-2010]	HK1004096-010		**16**				
WSD21_WC M ME	[01-MAR-2010]	HK1004096-011		**6**				
WSD21_WC M ME DUP	[01-MAR-2010]	HK1004096-012		**5**				
WSD9_TW M MF	[01-MAR-2010]	HK1004096-013		**3**				
WSD9_TW M MF DUP	[01-MAR-2010]	HK1004096-014		**5**				
WSD10_CKL M MF	[01-MAR-2010]	HK1004096-015		**5**				
WSD10_CKL M MF DUP	[01-MAR-2010]	HK1004096-016		**4**				
WSD15_SWH M MF	[01-MAR-2010]	HK1004096-017		**4**				
WSD15_SWH M MF DUP	[01-MAR-2010]	HK1004096-018		**4**				
WSD17_QB M MF	[01-MAR-2010]	HK1004096-019		**7**				
WSD17_QB M MF DUP	[01-MAR-2010]	HK1004096-020		**5**				
WSD19_SW M MF	[01-MAR-2010]	HK1004096-021		**10**				
WSD19_SW M MF DUP	[01-MAR-2010]	HK1004096-022		**8**				
WSD21_WC M MF	[01-MAR-2010]	HK1004096-023		**7**				
WSD21_WC M MF DUP	[01-MAR-2010]	HK1004096-024		**7**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1265360)								
HK1004096-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	2	2	0.0
HK1004096-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	14.5
EA/ED: Physical and Aggregate Properties (QC Lot: 1265361)								
HK1004096-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	12	10.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1265360)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1265361)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1004114		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 03-MAR-2010		
Order number	: ----			Date of issue	: 09-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004114 supersedes any previous reports with this reference. The completion date of analysis is 09-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004114 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: MARINE WATER		Compound	EA025: Suspended Solids (SS)				
		LOR Unit	1 mg/L				
Client sample ID	Client sampling date / time	Laboratory sample ID	EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[03-MAR-2010]	HK1004114-001	**5**				
WSD9_TW M ME DUP	[03-MAR-2010]	HK1004114-002	**4**				
WSD10_CKL M ME	[03-MAR-2010]	HK1004114-003	**2**				
WSD10_CKL M ME DUP	[03-MAR-2010]	HK1004114-004	**2**				
WSD15_SWH M ME	[03-MAR-2010]	HK1004114-005	**3**				
WSD15_SWH M ME DUP	[03-MAR-2010]	HK1004114-006	**3**				
WSD17_QB M ME	[03-MAR-2010]	HK1004114-007	**4**				
WSD17_QB M ME DUP	[03-MAR-2010]	HK1004114-008	**4**				
WSD19_SW M ME	[03-MAR-2010]	HK1004114-009	**8**				
WSD19_SW M ME DUP	[03-MAR-2010]	HK1004114-010	**10**				
WSD21_WC M ME	[03-MAR-2010]	HK1004114-011	**8**				
WSD21_WC M ME DUP	[03-MAR-2010]	HK1004114-012	**7**				
WSD9_TW M MF	[03-MAR-2010]	HK1004114-013	**3**				
WSD9_TW M MF DUP	[03-MAR-2010]	HK1004114-014	**3**				
WSD10_CKL M MF	[03-MAR-2010]	HK1004114-015	**4**				
WSD10_CKL M MF DUP	[03-MAR-2010]	HK1004114-016	**4**				
WSD15_SWH M MF	[03-MAR-2010]	HK1004114-017	**4**				
WSD15_SWH M MF DUP	[03-MAR-2010]	HK1004114-018	**5**				
WSD17_QB M MF	[03-MAR-2010]	HK1004114-019	**5**				
WSD17_QB M MF DUP	[03-MAR-2010]	HK1004114-020	**4**				
WSD19_SW M MF	[03-MAR-2010]	HK1004114-021	**12**				
WSD19_SW M MF DUP	[03-MAR-2010]	HK1004114-022	**13**				
WSD21_WC M MF	[03-MAR-2010]	HK1004114-023	**6**				
WSD21_WC M MF DUP	[03-MAR-2010]	HK1004114-024	**7**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1272552)								
HK1004114-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	4	0.0
HK1004114-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	13.8
EA/ED: Physical and Aggregate Properties (QC Lot: 1272553)								
HK1004114-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	13	9.1

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1272552)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1272553)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: **LAM ENVIRONMENTAL SERVICES LTD**	*Laboratory*	: **ALS Technichem HK Pty Ltd**	*Page*	: **1 of 3**		
Contact	: **MS CHERRY MAK**	*Contact*	: **Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1004115**		
Address	: **11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG**	*Address*	: **11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**	*Amendment No.*	: **1**		
E-mail	: **cherrymak@lamenviro.com**	*E-mail*	: **Godfrey.Chan@alsenviro.com**				
Telephone	: **+852 2919 0288**	*Telephone*	: **+852 2610 1044**				
Facsimile	: **+852 2882 3331**	*Facsimile*	: **+852 2610 2021**				
Project	: **MARINE WATER QUALITY MONITORING AT WSD INTAKES**	*Quote number*	: **----**	*Date received*	: **05-MAR-2010**		
Order number	: **----**			*Date of issue*	: **16-MAR-2010**		
C-O-C number	: **----**			*No. of samples*	- *Received* :	**26**	
Site	: **----**				- *Analysed* :	**24**	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004115_1.00 supersedes any previous reports with this reference. The completion date of analysis is 07-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004115 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[05-MAR-2010]	HK1004115-001		**3**				
WSD9_TW M ME DUP	[05-MAR-2010]	HK1004115-002		**4**				
WSD10_CKL M ME	[05-MAR-2010]	HK1004115-003		**2**				
WSD10_CKL M ME DUP	[05-MAR-2010]	HK1004115-004		**2**				
WSD15_SWH M ME	[05-MAR-2010]	HK1004115-005		**3**				
WSD15_SWH M ME DUP	[05-MAR-2010]	HK1004115-006		**3**				
WSD19_SW M ME	[05-MAR-2010]	HK1004115-009		**12**				
WSD19_SW M ME DUP	[05-MAR-2010]	HK1004115-010		**10**				
WSD21_WC M ME	[05-MAR-2010]	HK1004115-011		**8**				
WSD21_WC M ME DUP	[05-MAR-2010]	HK1004115-012		**9**				
WSD9_TW M MF	[05-MAR-2010]	HK1004115-013		**5**				
WSD9_TW M MF DUP	[05-MAR-2010]	HK1004115-014		**3**				
WSD10_CKL M MF	[05-MAR-2010]	HK1004115-015		**4**				
WSD10_CKL M MF DUP	[05-MAR-2010]	HK1004115-016		**4**				
WSD15_SWH M MF	[05-MAR-2010]	HK1004115-017		**6**				
WSD15_SWH M MF DUP	[05-MAR-2010]	HK1004115-018		**6**				
WSD17_QB M MF	[05-MAR-2010]	HK1004115-019		**14**				
WSD17_QB M MF DUP	[05-MAR-2010]	HK1004115-020		**16**				
WSD19_SW M MF	[05-MAR-2010]	HK1004115-021		**6**				
WSD19_SW M MF DUP	[05-MAR-2010]	HK1004115-022		**8**				
WSD21_WC M MF	[05-MAR-2010]	HK1004115-023		**5**				
WSD21_WC M MF DUP	[05-MAR-2010]	HK1004115-024		**7**				
WSD17_QB M ME	[05-MAR-2010]	HK1004115-025		**8**				
WSD17_QB M ME DUP	[05-MAR-2010]	HK1004115-026		**9**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1270806)								
HK1004115-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK1004115-012	WSD21_WC M ME DUP	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	14.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1270807)								
HK1004115-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1270806)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1270807)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	89.5	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1004766		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 10-MAR-2010		
Order number	: ----			Date of issue	: 15-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004766 supersedes any previous reports with this reference. The completion date of analysis is 12-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004766 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[09-MAR-2010]	HK1004766-001		**3**				
WSD9_TW M ME DUP	[09-MAR-2010]	HK1004766-002		**5**				
WSD10_CKL M ME	[09-MAR-2010]	HK1004766-003		**5**				
WSD10_CKL M ME DUP	[09-MAR-2010]	HK1004766-004		**7**				
WSD15_SWH M ME	[09-MAR-2010]	HK1004766-005		**6**				
WSD15_SWH M ME DUP	[09-MAR-2010]	HK1004766-006		**6**				
WSD17_QB M ME	[09-MAR-2010]	HK1004766-007		**8**				
WSD17_QB M ME DUP	[09-MAR-2010]	HK1004766-008		**10**				
WSD19_SW M ME	[09-MAR-2010]	HK1004766-009		**10**				
WSD19_SW M ME DUP	[09-MAR-2010]	HK1004766-010		**10**				
WSD21_WC M ME	[09-MAR-2010]	HK1004766-011		**11**				
WSD21_WC M ME DUP	[09-MAR-2010]	HK1004766-012		**10**				
WSD9_TW M MF	[09-MAR-2010]	HK1004766-013		**7**				
WSD9_TW M MF DUP	[09-MAR-2010]	HK1004766-014		**5**				
WSD10_CKL M MF	[09-MAR-2010]	HK1004766-015		**6**				
WSD10_CKL M MF DUP	[09-MAR-2010]	HK1004766-016		**6**				
WSD15_SWH M MF	[09-MAR-2010]	HK1004766-017		**7**				
WSD15_SWH M MF DUP	[09-MAR-2010]	HK1004766-018		**5**				
WSD17_QB M MF	[09-MAR-2010]	HK1004766-019		**7**				
WSD17_QB M MF DUP	[09-MAR-2010]	HK1004766-020		**7**				
WSD19_SW M MF	[09-MAR-2010]	HK1004766-021		**12**				
WSD19_SW M MF DUP	[09-MAR-2010]	HK1004766-022		**11**				
WSD21_WC M MF	[09-MAR-2010]	HK1004766-023		**13**				
WSD21_WC M MF DUP	[09-MAR-2010]	HK1004766-024		**15**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1277332)								
HK1004766-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0
HK1004766-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	12	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1277333)								
HK1004766-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	11	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1277332)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1277333)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1004767		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 12-MAR-2010		
Order number	: ----			Date of issue	: 16-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004767 supersedes any previous reports with this reference. The completion date of analysis is 15-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004767 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[11-MAR-2010]	HK1004767-001		**5**				
WSD9_TW M ME DUP	[11-MAR-2010]	HK1004767-002		**4**				
WSD10_CKL M ME	[11-MAR-2010]	HK1004767-003		**8**				
WSD10_CKL M ME DUP	[11-MAR-2010]	HK1004767-004		**8**				
WSD15_SWH M ME	[11-MAR-2010]	HK1004767-005		**6**				
WSD15_SWH M ME DUP	[11-MAR-2010]	HK1004767-006		**6**				
WSD17_QB M ME	[11-MAR-2010]	HK1004767-007		**8**				
WSD17_QB M ME DUP	[11-MAR-2010]	HK1004767-008		**8**				
WSD19_SW M ME	[11-MAR-2010]	HK1004767-009		**11**				
WSD19_SW M ME DUP	[11-MAR-2010]	HK1004767-010		**10**				
WSD21_WC M ME	[11-MAR-2010]	HK1004767-011		**13**				
WSD21_WC M ME DUP	[11-MAR-2010]	HK1004767-012		**14**				
WSD9_TW M MF	[11-MAR-2010]	HK1004767-013		**5**				
WSD9_TW M MF DUP	[11-MAR-2010]	HK1004767-014		**6**				
WSD10_CKL M MF	[11-MAR-2010]	HK1004767-015		**6**				
WSD10_CKL M MF DUP	[11-MAR-2010]	HK1004767-016		**6**				
WSD15_SWH M MF	[11-MAR-2010]	HK1004767-017		**5**				
WSD15_SWH M MF DUP	[11-MAR-2010]	HK1004767-018		**5**				
WSD17_QB M MF	[11-MAR-2010]	HK1004767-019		**4**				
WSD17_QB M MF DUP	[11-MAR-2010]	HK1004767-020		**4**				
WSD19_SW M MF	[11-MAR-2010]	HK1004767-021		**10**				
WSD19_SW M MF DUP	[11-MAR-2010]	HK1004767-022		**10**				
WSD21_WC M MF	[11-MAR-2010]	HK1004767-023		**11**				
WSD21_WC M MF DUP	[11-MAR-2010]	HK1004767-024		**10**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1278336)								
HK1004767-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK1004767-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	13	12	13.5
EA/ED: Physical and Aggregate Properties (QC Lot: 1278337)								
HK1004767-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1278336)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	113	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1278337)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	114	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1004769		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 14-MAR-2010		
Order number	: ----			Date of issue	: 19-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004769 supersedes any previous reports with this reference. The completion date of analysis is 17-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004769 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[13-MAR-2010]	HK1004769-001		**5**				
WSD9_TW M ME DUP	[13-MAR-2010]	HK1004769-002		**3**				
WSD10_CKL M ME	[13-MAR-2010]	HK1004769-003		**5**				
WSD10_CKL M ME DUP	[13-MAR-2010]	HK1004769-004		**5**				
WSD15_SWH M ME	[13-MAR-2010]	HK1004769-005		**5**				
WSD15_SWH M ME DUP	[13-MAR-2010]	HK1004769-006		**6**				
WSD17_QB M ME	[13-MAR-2010]	HK1004769-007		**6**				
WSD17_QB M ME DUP	[13-MAR-2010]	HK1004769-008		**7**				
WSD19_SW M ME	[13-MAR-2010]	HK1004769-009		**10**				
WSD19_SW M ME DUP	[13-MAR-2010]	HK1004769-010		**10**				
WSD21_WC M ME	[13-MAR-2010]	HK1004769-011		**6**				
WSD21_WC M ME DUP	[13-MAR-2010]	HK1004769-012		**7**				
WSD9_TW M MF	[13-MAR-2010]	HK1004769-013		**4**				
WSD9_TW M MF DUP	[13-MAR-2010]	HK1004769-014		**3**				
WSD10_CKL M MF	[13-MAR-2010]	HK1004769-015		**4**				
WSD10_CKL M MF DUP	[13-MAR-2010]	HK1004769-016		**4**				
WSD15_SWH M MF	[13-MAR-2010]	HK1004769-017		**6**				
WSD15_SWH M MF DUP	[13-MAR-2010]	HK1004769-018		**4**				
WSD17_QB M MF	[13-MAR-2010]	HK1004769-019		**6**				
WSD17_QB M MF DUP	[13-MAR-2010]	HK1004769-020		**5**				
WSD19_SW M MF	[13-MAR-2010]	HK1004769-021		**11**				
WSD19_SW M MF DUP	[13-MAR-2010]	HK1004769-022		**9**				
WSD21_WC M MF	[13-MAR-2010]	HK1004769-023		**6**				
WSD21_WC M MF DUP	[13-MAR-2010]	HK1004769-024		**5**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1280538)								
HK1004769-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK1004769-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1280539)								
HK1004769-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	12.3

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1280538)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1280539)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	88.0	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1004770		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 15-MAR-2010		
Order number	: ----			Date of issue	: 19-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004770 supersedes any previous reports with this reference. The completion date of analysis is 17-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004770 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[15-MAR-2010]	HK1004770-001		**7**				
WSD9_TW M ME DUP	[15-MAR-2010]	HK1004770-002		**5**				
WSD10_CKL M ME	[15-MAR-2010]	HK1004770-003		**2**				
WSD10_CKL M ME DUP	[15-MAR-2010]	HK1004770-004		**5**				
WSD15_SWH M ME	[15-MAR-2010]	HK1004770-005		**7**				
WSD15_SWH M ME DUP	[15-MAR-2010]	HK1004770-006		**6**				
WSD17_QB M ME	[15-MAR-2010]	HK1004770-007		**8**				
WSD17_QB M ME DUP	[15-MAR-2010]	HK1004770-008		**8**				
WSD19_SW M ME	[15-MAR-2010]	HK1004770-009		**12**				
WSD19_SW M ME DUP	[15-MAR-2010]	HK1004770-010		**10**				
WSD21_WC M ME	[15-MAR-2010]	HK1004770-011		**13**				
WSD21_WC M ME DUP	[15-MAR-2010]	HK1004770-012		**11**				
WSD9_TW M MF	[15-MAR-2010]	HK1004770-013		**5**				
WSD9_TW M MF DUP	[15-MAR-2010]	HK1004770-014		**5**				
WSD10_CKLM MF	[15-MAR-2010]	HK1004770-015		**6**				
WSD10_CKLM MF DUP	[15-MAR-2010]	HK1004770-016		**4**				
WSD15_SWH M MF	[15-MAR-2010]	HK1004770-017		**7**				
WSD15_SWH M MF DUP	[15-MAR-2010]	HK1004770-018		**9**				
WSD17_QB M MF	[15-MAR-2010]	HK1004770-019		**9**				
WSD17_QB M MF DUP	[15-MAR-2010]	HK1004770-020		**8**				
WSD19_SW M MF	[15-MAR-2010]	HK1004770-021		**8**				
WSD19_SW M MF DUP	[15-MAR-2010]	HK1004770-022		**7**				
WSD21_WC M MF	[15-MAR-2010]	HK1004770-023		**11**				
WSD21_WC M MF DUP	[15-MAR-2010]	HK1004770-024		**10**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1282089)								
HK1004770-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
HK1004770-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	13	14	11.4
EA/ED: Physical and Aggregate Properties (QC Lot: 1282090)								
HK1004770-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	12.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1282089)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1282090)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1004771		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 17-MAR-2010		
Order number	: ----			Date of issue	: 22-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	24	
Site	: ----				- Analysed :	24	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004771 supersedes any previous reports with this reference. The completion date of analysis is 19-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004771 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[17-MAR-2010]	HK1004771-001		**7**				
WSD9_TW M ME DUP	[17-MAR-2010]	HK1004771-002		**5**				
WSD10_CKL M ME	[17-MAR-2010]	HK1004771-003		**5**				
WSD10_CKL M ME DUP	[17-MAR-2010]	HK1004771-004		**4**				
WSD15_SWH M ME	[17-MAR-2010]	HK1004771-005		**6**				
WSD15_SWH M ME DUP	[17-MAR-2010]	HK1004771-006		**7**				
WSD17_QB M ME	[17-MAR-2010]	HK1004771-007		**9**				
WSD17_QB M ME DUP	[17-MAR-2010]	HK1004771-008		**10**				
WSD19_SW M ME	[17-MAR-2010]	HK1004771-009		**18**				
WSD19_SW M ME DUP	[17-MAR-2010]	HK1004771-010		**16**				
WSD21_WC M ME	[17-MAR-2010]	HK1004771-011		**10**				
WSD21_WC M ME DUP	[17-MAR-2010]	HK1004771-012		**11**				
WSD9_TW M MF	[17-MAR-2010]	HK1004771-013		**7**				
WSD9_TW M MF DUP	[17-MAR-2010]	HK1004771-014		**9**				
WSD10_CKL M MF	[17-MAR-2010]	HK1004771-015		**6**				
WSD10_CKL M MF DUP	[17-MAR-2010]	HK1004771-016		**5**				
WSD15_SWH M MF	[17-MAR-2010]	HK1004771-017		**6**				
WSD15_SWH M MF DUP	[17-MAR-2010]	HK1004771-018		**7**				
WSD17_QB M MF	[17-MAR-2010]	HK1004771-019		**8**				
WSD17_QB M MF DUP	[17-MAR-2010]	HK1004771-020		**10**				
WSD19_SW M MF	[17-MAR-2010]	HK1004771-021		**9**				
WSD19_SW M MF DUP	[17-MAR-2010]	HK1004771-022		**11**				
WSD21_WC M MF	[17-MAR-2010]	HK1004771-023		**13**				
WSD21_WC M MF DUP	[17-MAR-2010]	HK1004771-024		**11**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1285339)								
HK1004771-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	15.4
HK1004771-011	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 1285341)								
HK1004771-021	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1285339)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 1285341)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

CERTIFICATE OF ANALYSIS

Client	: **LAM ENVIRONMENTAL SERVICES LTD**	*Laboratory*	: **ALS Technichem HK Pty Ltd**	*Page*	: **1 of 3**		
Contact	: **MS CHERRY MAK**	*Contact*	: **Chan Kwok Fai, Godfrey**	*Work Order*	: **HK1004773**		
Address	: **11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG**	*Address*	: **11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**				
E-mail	: **cherrymak@lamenviro.com**	*E-mail*	: **Godfrey.Chan@alsenviro.com**				
Telephone	: **+852 2919 0288**	*Telephone*	: **+852 2610 1044**				
Facsimile	: **+852 2882 3331**	*Facsimile*	: **+852 2610 2021**				
Project	: **MARINE WATER QUALITY MONITORING AT WSD INTAKES**	*Quote number*	: **----**	*Date received*	: **19-MAR-2010**		
Order number	: **----**			*Date of issue*	: **26-MAR-2010**		
C-O-C number	: **----**			*No. of samples*	- *Received* : **8**		
Site	: **----**				- *Analysed* : **8**		

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1004773 supersedes any previous reports with this reference. The completion date of analysis is 26-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1004773 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD9_TW M ME	[19-MAR-2010]	HK1004773-001		**3**				
WSD9_TW M ME DUP	[19-MAR-2010]	HK1004773-002		**2**				
WSD10_CKL M ME	[19-MAR-2010]	HK1004773-003		**4**				
WSD10_CKL M ME DUP	[19-MAR-2010]	HK1004773-004		**3**				
WSD9_TW M MF	[19-MAR-2010]	HK1004773-005		**8**				
WSD9_TW M MF DUP	[19-MAR-2010]	HK1004773-006		**6**				
WSD10_CKL M MF	[19-MAR-2010]	HK1004773-007		**5**				
WSD10_CKL M MF DUP	[19-MAR-2010]	HK1004773-008		**6**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1288703)								
HK1004773-001	WSD9_TW M ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1288703)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3		
Contact	: MS CHERRY MAK	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1005917		
Address	: 11/F CENTRE POINT, 181-185 GLOUCESTER ROAD, WANCHAI, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong				
E-mail	: cherrymak@lamenviro.com	E-mail	: Godfrey.Chan@alsenviro.com				
Telephone	: +852 2919 0288	Telephone	: +852 2610 1044				
Facsimile	: +852 2882 3331	Facsimile	: +852 2610 2021				
Project	: MARINE WATER QUALITY MONITORING AT WSD INTAKES	Quote number	: ----	Date received	: 19-MAR-2010		
Order number	: ----			Date of issue	: 26-MAR-2010		
C-O-C number	: ----			No. of samples	- Received :	16	
Site	: ----				- Analysed :	16	

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1005917 supersedes any previous reports with this reference. The completion date of analysis is 26-MAR-2010. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1005917 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

Signatory	Position	Authorised results for:-
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **MARINE WATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	1 mg/L				
				EA/ED: Physical and Aggregate Properties				
WSD15_SWH M ME	[19-MAR-2010]	HK1005917-001		**5**				
WSD15_SWH M ME DUP	[19-MAR-2010]	HK1005917-002		**4**				
WSD17_QB M ME	[19-MAR-2010]	HK1005917-003		**7**				
WSD17_QB M ME DUP	[19-MAR-2010]	HK1005917-004		**5**				
WSD19_SW M ME	[19-MAR-2010]	HK1005917-005		**10**				
WSD19_SW M ME DUP	[19-MAR-2010]	HK1005917-006		**8**				
WSD21_WC M ME	[19-MAR-2010]	HK1005917-007		**10**				
WSD21_WC M ME DUP	[19-MAR-2010]	HK1005917-008		**9**				
WSD15_SWH M MF	[19-MAR-2010]	HK1005917-009		**8**				
WSD15_SWH M MF DUP	[19-MAR-2010]	HK1005917-010		**9**				
WSD17_QB M MF	[19-MAR-2010]	HK1005917-011		**9**				
WSD17_QB M MF DUP	[19-MAR-2010]	HK1005917-012		**10**				
WSD19_SW M MF	[19-MAR-2010]	HK1005917-013		**9**				
WSD19_SW M MF DUP	[19-MAR-2010]	HK1005917-014		**10**				
WSD21_WC M MF	[19-MAR-2010]	HK1005917-015		**12**				
WSD21_WC M MF DUP	[19-MAR-2010]	HK1005917-016		**10**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1288688)								
HK1005917-007	WSD21_WC M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK1005917-013	WSD19_SW M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 1288688)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	110	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

Appendix 5.1b

Water Quality Monitoring Results – Feb-Mar 2010

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 21/2/2010 Weather Condition: Cloudy Ambient Temperature, °C: 14.2 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	10:32	7.0	3.5	16.18	16.20	16.11	7.46	7.46	7.39	34.64	34.61	34.64	80.8	80.8	80.9	7.94	7.93	7.96	1.95	2.05	2.09	3	3.0
Tai Wan	WDS9_TW M MF DUP	10:40	7.0	3.5	16.01	16.03		7.31	7.33		34.63	34.66		80.9	81.0		7.98	7.98		2.18	2.17		3	
WSD10	WSD10_CKL M MF	11:33	6.0	3.0	16.44	16.45	16.36	7.64	7.64	7.61	34.63	34.65	34.63	69.5	69.3	69.1	6.80	6.78	6.77	2.52	2.36	2.46	4	3.5
Cha Kwo Ling	WSD10_CKL M MF DUP	11:33	6.0	3.0	16.27	16.28		7.57	7.58		34.63	34.60		68.8	68.9		6.75	6.74		2.42	2.52		3	
WSD15	WSD15_SWH M MF	11:20	7.0	3.5	16.34	16.36	16.36	7.66	7.67	7.66	34.52	34.50	34.53	72.8	72.7	72.9	7.11	7.07	7.14	2.84	2.97	2.69	4	4.0
Sai Wan Ho	WSD15_SWH M MF DUP	11:20	7.0	3.5	16.36	16.37		7.66	7.65		34.51	34.57		73.2	73.0		7.20	7.18		2.42	2.52		4	
WSD17	WSD17_QB M MF	10:56	9.0	4.5	16.25	16.26	16.24	7.48	7.49	7.48	34.64	34.61	34.66	76.8	76.5	74.3	7.54	7.53	7.30	4.92	4.31	4.06	7	8.0
Quarry Bay	WSD17_QB M MF DUP	10:56	9.0	4.5	16.21	16.22		7.47	7.48		34.68	34.71		72.4	71.6		7.09	7.05		3.46	3.55		9	
WSD21	WSD21_WC M MF	10:02	6.0	3.0	16.47	16.42	16.45	7.19	7.18	7.31	34.66	34.62	34.66	84.5	84.4	84.3	8.26	8.26	8.24	4.93	4.92	5.12	7	7.5
Wan Chai	WSD21_WC M MF DUP	10:11	6.0	3.0	16.43	16.46		7.43	7.43		34.67	34.70		84.5	83.8		8.27	8.17		5.58	5.03		8	
WSD19	WSD19_SW M MF	9:23	10.0	5.0	16.73	16.73	16.64	7.10	7.12	7.08	33.32	33.36	33.38	95.9	95.7	98.1	9.40	9.55	9.64	4.13	4.32	4.00	6	6.5
Sheung Wan	WSD19_SW M MF DUP	9:30	10.0	5.0	16.53	16.57		7.04	7.05		33.39	33.43		100.5	100.3		9.82	9.80		3.85	3.71		7	

Date of Sampling: 21/2/2010 Weather Condition: Cloudy Ambient Temperature, °C: 14.2 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	15:50	6.0	3.0	17.22	17.21	17.14	7.16	7.17	7.18	34.44	34.49	34.44	42.6	42.1	43.2	4.08	4.06	4.16	2.25	2.21	2.21	3	3.5
Tai Wan	WDS9_TW M ME DUP	15:50	6.0	3.0	17.01	17.11		7.20	7.19		34.44	34.40		44.2	44.0		4.26	4.25		2.01	2.37		4	
WSD10	WSD10_CKL M ME	14:55	6.0	3.0	18.47	18.45	18.06	7.24	7.23	7.19	34.53	34.50	34.53	44.6	44.3	47.5	4.18	4.16	4.50	3.03	3.74	3.35	4	4.0
Cha Kwo Ling	WSD10_CKL M ME DUP	14:55	6.0	3.0	17.81	17.51		7.14	7.15		34.53	34.55		50.5	50.5		4.83	4.82		3.32	3.31		4	
WSD15	WSD15_SWH M ME	15:15	7.0	3.5	17.56	17.52	17.53	7.10	7.08	6.85	34.53	34.51	34.53	49.4	49.5	49.2	4.73	4.74	4.70	4.60	4.70	4.06	5	4.5
Sai Wan Ho	WSD15_SWH M ME DUP	15:15	7.0	3.5	17.53	17.52		6.67	6.56		34.52	34.54		48.9	48.8		4.67	4.66		3.59	3.35		4	
WSD17	WSD17_QB M ME	15:28	9.0	4.5	17.24	17.23	17.09	6.08	6.07	6.40	34.47	34.49	34.47	46.6	46.4	46.0	4.48	4.45	4.45	5.07	4.67	4.64	7	7.5
Quarry Bay	WSD17_QB M ME DUP	15:28	9.0	4.5	16.93	16.95		6.72	6.71		34.46	34.44		45.8	45.0		4.46	4.39		4.39	4.41		8	
WSD21	WSD21_WC M ME	16:15	6.0	3.0	17.73	17.45	17.40	7.19	7.28	7.26	34.40	34.42	33.89	47.1	43.1	45.2	4.49	4.14	4.33	3.76	3.99	3.90	6	5.5
Wan Chai	WSD21_WC M ME DUP	16:15	6.0	3.0	17.20	17.21		7.28	7.27		33.38	33.37		45.5	45.0		4.37	4.32		3.77	4.09		5	
WSD19	WSD19_SW M ME	16:55	7.0	3.5	17.52	17.48	17.45	7.33	7.31	7.32	33.32	33.35	33.39	45.2	46.2	45.8	4.35	4.43	4.40	5.65	5.29	4.75	8	9.0
Sheung Wan	WSD19_SW M ME DUP	16:55	7.0	3.5	17.52	17.26		7.31	7.31		33.44	33.46		47.1	44.7		4.52	4.29		3.97	4.09		10	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 24/2/2010 Weather Condition: Cloudy Ambient Temperature, °C: 18.7 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	9:15	7.0	3.5	18.81	18.04	18.82	7.80	7.85	7.82	40.40	32.75	34.97	44.1	40.9	39.4	3.15	3.26	3.06	2.30	2.58	2.60	3	3.5
Tai Wan	WDS9_TW M MF DUP	9:18	7.0	3.5	19.27	19.14		7.82	7.80		33.35	33.38		36.1	36.6		3.06	2.78		2.58	2.95		4	
WSD10	WSD10_CKL M MF	9:20	7.0	3.5	18.01	18.17	18.54	7.76	7.82	7.83	33.73	33.65	33.73	55.6	51.5	52.5	3.63	4.04	3.82	3.08	2.56	2.84	2	1.5
Cha Kwo Ling	WSD10_CKL M MF DUP	9:26	7.0	3.5	18.90	19.06		7.86	7.86		33.76	33.78		53.6	49.2		4.07	3.55		3.00	2.70		1	
WSD15	WSD15_SWH M MF	9:50	7.0	3.5	18.33	18.19	18.76	7.85	7.83	7.83	33.87	33.79	33.74	41.6	35.9	37.2	3.28	2.58	2.79	2.95	2.19	2.46	<1	1.0
Sai Wan Ho	WSD15_SWH M MF DUP	9:56	7.0	3.5	19.10	19.40		7.83	7.82		33.76	33.55		34.5	36.7		2.46	2.83		2.28	2.41		1	
WSD17	WSD17_QB M MF	10:15	10.0	5.0	18.42	19.35	19.41	7.82	7.81	7.80	33.94	33.81	30.58	35.8	29.8	31.7	2.36	2.34	2.41	3.72	3.44	3.96	5	4.0
Quarry Bay	WSD17_QB M MF DUP	10:18	10.0	5.0	19.75	20.11		7.79	7.79		21.54	33.01		31.3	30.0		2.57	2.35		4.40	4.29		3	
WSD21	WSD21_WC M MF	10:50	6.0	3.0	20.35	20.68	19.81	7.63	7.58	7.57	33.32	33.27	33.36	31.6	21.9	31.2	2.84	2.61	2.45	3.53	3.60	3.43	9	8.0
Wan Chai	WSD21_WC M MF DUP	10:56	6.0	3.0	19.03	19.18		7.56	7.51		33.47	33.36		30.6	40.7		1.95	2.39		3.60	2.97		7	
WSD19	WSD19_SW M MF	11:30	7.0	3.5	20.79	20.96	20.52	7.50	7.44	7.50	33.34	33.36	33.39	34.9	46.6	37.4	2.13	2.89	2.79	4.60	4.05	4.58	6	5.5
Sheung Wan	WSD19_SW M MF DUP	11:36	7.0	3.5	20.12	20.19		7.54	7.52		33.42	33.43		28.4	39.7		2.96	3.17		5.30	4.35		5	

Date of Sampling: 24/2/2010 Weather Condition: Cloudy Ambient Temperature, °C: 18.7 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	19:45	7.0	3.5	19.21	19.23	18.85	7.67	7.68	7.68	35.90	35.90	34.56	52.2	51.4	48.9	4.34	4.43	3.98	2.67	3.36	2.90	2	2.0
Tai Wan	WDS9_TW M ME DUP	19:50	7.0	3.5	18.50	18.47		7.69	7.66		33.22	33.21		46.0	46.1		3.54	3.62		2.87	2.70		2	
WSD10	WSD10_CKL M ME	20:15	5.0	2.5	18.15	18.16	18.18	7.67	7.63	7.67	33.60	33.59	33.55	42.6	43.0	39.7	3.27	3.30	3.09	3.36	3.21	3.24	2	2.0
Cha Kwo Ling	WSD10_CKL M ME DUP	20:20	5.0	2.5	18.19	18.20		7.69	7.68		33.50	33.49		35.2	38.0		2.86	2.91		3.27	3.10		2	
WSD15	WSD15_SWH M ME	20:34	7.0	3.5	18.26	18.28	18.26	7.66	7.66	7.65	33.35	33.43	33.44	33.7	33.6	32.8	2.68	2.65	2.56	3.10	3.30	3.56	1	1.5
Sai Wan Ho	WSD15_SWH M ME DUP	20:45	7.0	3.5	18.21	18.30		7.64	7.64		33.49	33.47		31.8	32.0		2.41	2.48		3.19	4.65		2	
WSD17	WSD17_QB M ME	21:00	7.0	3.5	17.83	17.87	17.94	7.61	7.61	7.61	33.40	33.36	32.63	29.2	28.6	29.0	2.30	2.25	2.27	5.95	5.55	6.18	3	3.5
Quarry Bay	WSD17_QB M ME DUP	21:06	7.0	3.5	18.01	18.03		7.60	7.60		33.42	30.35		29.1	28.9		2.24	2.27		6.61	6.60		4	
WSD21	WSD21_WC M ME	21:33	5.0	2.5	17.93	17.94	17.99	7.54	7.53	7.52	33.36	33.35	33.34	30.7	29.2	30.6	2.33	2.31	2.35	6.60	7.55	6.23	4	3.5
Wan Chai	WSD21_WC M ME DUP	21:39	5.0	2.5	18.03	18.05		7.50	7.51		33.36	33.30		30.7	31.8		2.35	2.40		5.33	5.43		3	
WSD19	WSD19_SW M ME	22:02	9.0	4.5	18.69	18.70	18.69	7.61	7.60	7.59	33.57	33.56	33.51	29.3	28.6	28.8	2.27	2.29	2.23	6.64	6.32	6.51	4	4.5
Sheung Wan	WSD19_SW M ME DUP	22:20	9.0	4.5	18.68	18.69		7.58	7.58		33.46	33.45		29.4	27.7		2.15	2.20		6.40	6.66		5	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 26/2/2010 Weather Condition: Misty Ambient Temperature, °C: 25.1 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Averge	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	6:30	9.0	4.5	18.85	18.67	18.65	7.09	7.07	7.07	32.21	33.19	32.64	66.4	61.9	59.2	5.03	4.74	4.52	17.80	16.00	14.23	3	3.5
Tai Wan	WDS9_TW M MF DUP	6:36	9.0	4.5	18.40	18.69		7.08	7.04		31.86	33.28		55.2	53.1		4.26	4.06		12.90	10.20		4	
WSD10	WSD10_CKL M MF	7:09	6.0	3.0	19.03	19.07	19.06	7.07	7.03	7.04	33.40	33.39	33.44	32.7	31.6	32.0	2.48	2.40	2.43	12.90	9.18	11.72	19	11.0
Cha Kwo Ling	WSD10_CKL M MF DUP	7:16	6.0	3.0	18.90	19.22		7.03	7.02		33.50	33.45		31.8	31.8		2.41	2.41		11.70	13.10		3	
WSD15	WSD15_SWH M MF	7:26	7.0	3.5	18.94	18.78	19.04	7.09	7.06	7.06	33.69	33.72	33.70	29.5	29.5	29.8	2.23	2.25	2.27	16.90	16.50	16.25	2	2.5
Sai Wan Ho	WSD15_SWH M MF DUP	7:31	7.0	3.5	18.98	19.47		7.04	7.05		33.63	33.75		29.5	30.8		2.26	2.32		22.20	9.41		3	
WSD17	WSD17_QB M MF	7:42	8.0	4.0	18.71	18.50	18.60	7.05	7.03	7.03	33.78	33.80	33.75	30.6	30.6	30.6	2.33	2.34	2.34	21.50	15.30	18.43	5	4.5
Quarry Bay	WSD17_QB M MF DUP	7:49	8.0	4.0	18.52	18.67		7.01	7.04		33.60	33.80		30.4	30.9		2.33	2.37		21.50	15.40		4	
WSD21	WSD21_WC M MF	8:09	6.0	3.0	18.92	19.03	19.14	7.12	7.04	7.04	33.43	33.40	33.42	30.9	31.8	31.7	2.35	2.41	2.40	21.50	16.20	17.25	5	4.5
Wan Chai	WSD21_WC M MF DUP	8:17	6.0	3.0	18.91	19.69		7.00	6.98		33.42	33.43		31.3	32.8		2.39	2.46		20.40	10.90		4	
WSD19	WSD19_SW M MF	8:46	8.0	4.0	19.78	20.18	20.38	6.99	7.00	7.00	33.33	33.50	33.91	31.6	35.2	34.8	2.36	2.58	2.57	12.60	11.10	11.08	5	4.5
Sheung Wan	WSD19_SW M MF DUP	8:50	8.0	4.0	20.75	20.80		7.00	7.00		33.40	35.39		37.4	35.1		2.75	2.58		9.01	11.60		4	

Date of Sampling: 26/2/2010 Weather Condition: Cloudy Ambient Temperature, °C: 23.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	19:55	6.0	3.0	19.49	19.51	19.47	6.84	6.83	6.86	33.26	33.42	33.58	91.6	91.0	91.3	6.91	6.82	6.87	6.05	5.22	5.72	2	2.0
Tai Wan	WDS9_TW M ME DUP	20:15	6.0	3.0	19.08	19.80		6.86	6.90		33.74	33.89		91.1	91.4		6.91	6.83		7.83	3.79		2	
WSD10	WSD10_CKL M ME	20:34	7.0	3.5	19.08	19.60	19.48	6.99	6.95	6.99	34.08	33.75	33.92	95.6	90.8	92.7	7.23	6.80	6.95	7.22	5.95	6.04	3	3.0
Cha Kwo Ling	WSD10_CKL M ME DUP	20:42	7.0	3.5	19.43	19.80		7.01	7.00		33.91	33.92		92.2	92.0		6.91	6.87		5.93	5.06		3	
WSD15	WSD15_SWH M ME	21:04	6.0	3.0	19.44	19.61	19.67	7.16	7.01	7.06	23.97	33.82	31.43	96.1	88.6	91.5	7.67	6.63	6.95	4.19	3.85	3.87	1	1.0
Sai Wan Ho	WSD15_SWH M ME DUP	21:10	6.0	3.0	19.59	20.05		7.04	7.02		33.94	33.98		90.3	90.8		6.76	6.75		4.02	3.42		1	
WSD17	WSD17_QB M ME	21:35	9.0	4.5	19.30	19.39	19.68	7.04	7.01	7.01	33.92	33.97	33.21	89.3	89.0	88.5	7.02	7.01	6.82	7.91	7.23	7.68	4	3.5
Quarry Bay	WSD17_QB M ME DUP	21:41	9.0	4.5	19.64	20.39		6.99	7.00		33.80	31.15		85.4	90.1		6.38	6.88		7.80	7.79		3	
WSD21	WSD21_WC M ME	22:05	6.0	3.0	19.26	19.87	19.69	7.00	6.94	6.97	33.60	33.63	33.65	79.7	89.3	85.9	6.29	6.52	6.51	7.79	9.37	8.76	13	11.5
Wan Chai	WSD21_WC M ME DUP	22:10	6.0	3.0	19.64	20.00		6.99	6.96		33.75	33.61		89.5	85.2		6.98	6.25		8.97	8.90		10	
WSD19	WSD19_SW M ME	22:40	7.0	3.5	19.72	20.74	20.09	7.04	6.98	7.00	33.77	33.63	33.67	92.9	90.9	92.6	6.89	6.67	6.86	8.03	10.30	9.66	6	6.5
Sheung Wan	WSD19_SW M ME DUP	22:45	7.0	3.5	20.10	19.81		7.00	6.99		33.67	33.61		93.3	93.4		6.91	6.96		10.20	10.10		7	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 1/3/2010 Weather Condition: Foggy Ambient Temperature, °C: 21.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	7:13	7.0	3.5	19.10	19.05	19.02	6.52	6.56	6.57	33.04	33.23	33.26	97.0	98.0	99.0	7.28	7.44	7.46	3.82	3.68	3.92	3	4.0
Tai Wan	WDS9_TW M MF DUP	7:20	7.0	3.5	18.87	19.07		6.59	6.60		33.34	33.42		98.2	102.9		7.43	7.69		4.42	3.76		5	
WSD10	WSD10_CKL M MF	7:45	6.0	3.0	18.72	18.71	18.77	6.80	6.80	6.80	34.00	33.89	33.89	99.6	102.4	101.8	7.59	7.78	7.74	4.42	3.65	3.64	5	4.5
Cha Kwo Ling	WSD10_CKL M MF DUP	7:51	6.0	3.0	18.83	18.81		6.80	6.79		33.83	33.85		103.0	102.0		7.84	7.74		3.00	3.48		4	
WSD15	WSD15_SWH M MF	8:03	6.0	3.0	18.60	18.75	18.80	6.90	6.88	6.89	34.25	34.20	34.32	105.4	107.5	106.4	7.99	8.12	8.04	5.75	5.01	6.32	4	4.0
Sai Wan Ho	WSD15_SWH M MF DUP	8:06	6.0	3.0	19.03	18.81		6.90	6.89		34.13	34.70		106.2	106.5		8.02	8.04		6.05	8.45		4	
WSD17	WSD17_QB M MF	8:13	9.0	4.5	18.72	18.79	18.74	6.91	6.90	6.91	34.12	34.13	34.15	101.0	102.6	102.7	7.68	7.79	7.80	7.37	7.80	6.65	7	6.0
Quarry Bay	WSD17_QB M MF DUP	8:16	9.0	4.5	18.69	18.76		6.90	6.91		34.19	34.17		103.7	103.3		7.89	7.84		4.32	7.09		5	
WSD21	WSD21_WC M MF	8:40	6.0	3.0	19.21	19.01	19.04	6.87	6.86	6.86	33.51	33.38	33.42	100.3	97.4	99.0	7.56	7.41	7.50	7.44	6.10	9.14	7	7.0
Wan Chai	WSD21_WC M MF DUP	8:45	6.0	3.0	19.00	18.95		6.85	6.85		33.39	33.41		97.5	100.9		7.39	7.64		12.00	11.00		7	
WSD19	WSD19_SW M MF	9:10	8.0	4.0	19.71	19.83	19.74	7.08	7.00	7.01	33.40	33.23	33.20	107.6	99.6	100.6	7.97	7.45	7.53	10.50	9.75	9.38	10	9.0
Sheung Wan	WSD19_SW M MF DUP	9:15	8.0	4.0	19.56	19.84		6.98	6.97		33.07	33.10		99.2	96.1		7.45	7.26		10.10	7.17		8	

Date of Sampling: 1/3/2010 Weather Condition: Foggy Ambient Temperature, °C: 24.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	12:22	6.0	3.0	18.87	19.10	19.15	6.99	6.98	6.98	34.50	34.34	34.40	86.7	88.6	87.6	6.52	6.59	6.52	5.84	3.99	3.99	2	2.0
Tai Wan	WDS9_TW M ME DUP	12:27	6.0	3.0	19.21	19.42		6.97	6.96		34.38	34.36		89.7	85.2		6.62	6.35		2.80	3.31		2	
WSD10	WSD10_CKL M ME	11:56	6.0	3.0	19.01	18.97	19.09	6.92	6.93	6.93	33.45	34.33	34.10	86.0	86.6	88.1	6.48	6.52	6.64	3.77	3.56	3.59	2	1.5
Cha Kwo Ling	WSD10_CKL M ME DUP	11:59	6.0	3.0	19.13	19.24		6.92	6.93		34.28	34.34		87.5	92.1		6.67	6.89		4.06	2.96		1	
WSD15	WSD15_SWH M ME	11:45	6.0	3.0	18.81	18.85	18.88	6.96	6.95	6.95	34.71	34.70	34.70	89.9	91.8	92.7	6.81	6.95	6.94	8.49	5.18	6.23	5	4.5
Sai Wan Ho	WSD15_SWH M ME DUP	11:51	6.0	3.0	18.90	18.96		6.94	6.94		34.68	34.71		96.8	92.4		7.06	6.94		5.24	6.01		4	
WSD17	WSD17_QB M ME	11:30	8.0	4.0	19.27	19.35	19.22	6.72	6.95	6.88	33.99	34.59	34.43	103.0	93.8	95.2	7.76	7.02	7.16	9.71	10.60	9.55	9	9.5
Quarry Bay	WSD17_QB M ME DUP	11:35	8.0	4.0	19.10	19.17		6.93	6.93		34.59	34.54		92.7	91.1		6.99	6.85		9.40	8.49		10	
WSD21	WSD21_WC M ME	11:05	6.0	3.0	19.25	19.29	19.33	6.75	6.75	6.75	33.94	33.81	33.75	92.9	92.6	94.1	6.98	6.91	7.05	7.02	5.83	6.19	6	5.5
Wan Chai	WSD21_WC M ME DUP	11:08	6.0	3.0	19.30	19.47		6.76	6.75		33.33	33.92		96.1	94.8		7.25	7.07		6.10	5.79		5	
WSD19	WSD19_SW M ME	10:35	8.0	4.0	19.98	20.23	19.89	5.90	6.63	6.46	33.57	33.79	33.80	107.2	102.7	104.8	7.86	7.64	7.77	11.50	10.50	10.04	18	17.0
Sheung Wan	WSD19_SW M ME DUP	10:42	8.0	4.0	19.81	19.54		6.65	6.66		33.92	33.92		109.5	99.8		8.10	7.46		9.16	9.00		16	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 3/3/2010 Weather Condition: misty Ambient Temperature, °C: 24.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	8:20	6.0	3.0	18.93	20.18	19.49	6.86	6.86	6.88	33.83	33.43	33.71	72.1	84.6	79.5	5.30	6.29	5.93	4.67	3.54	4.07	3	3.0
Tai Wan	WDS9_TW M MF DUP	8:25	6.0	3.0	18.89	19.96		6.87	6.92		33.86	33.72		75.1	86.2		5.71	6.42		3.79	4.28		3	
WSD10	WSD10_CKL M MF	8:55	6.0	3.0	18.66	19.44	19.00	6.99	7.00	7.00	34.45	34.39	34.42	76.8	87.5	78.8	5.84	6.56	5.95	7.34	8.90	6.30	4	4.0
Cha Kwo Ling	WSD10_CKL M MF DUP	9:00	6.0	3.0	18.65	19.25		6.99	7.00		34.45	34.39		72.0	78.7		5.47	5.92		4.58	4.37		4	
WSD15	WSD15_SWH M MF	9:05	6.0	3.0	18.60	19.04	18.81	7.03	7.03	7.03	34.58	34.65	34.59	72.1	87.5	79.6	5.49	6.60	6.03	6.75	7.07	8.25	4	4.5
Sai Wan Ho	WSD15_SWH M MF DUP	9:10	6.0	3.0	18.60	19.01		7.03	7.02		34.59	34.53		74.5	84.2		5.67	6.36		7.66	11.50		5	
WSD17	WSD17_QB M MF	9:25	9.0	4.5	18.63	19.03	18.82	7.09	7.06	7.07	34.59	34.56	34.59	72.0	84.4	78.1	5.48	6.37	5.92	10.60	11.30	8.15	5	4.5
Quarry Bay	WSD17_QB M MF DUP	9:30	9.0	4.5	18.62	19.01		7.08	7.05		34.60	34.61		72.5	83.6		5.51	6.30		5.38	5.32		4	
WSD21	WSD21_WC M MF	9:50	6.0	3.0	18.90	19.50	19.24	6.91	6.95	6.94	33.84	33.76	33.80	58.6	70.6	64.3	4.45	5.32	4.86	8.86	9.47	8.97	6	6.5
Wan Chai	WSD21_WC M MF DUP	9:55	6.0	3.0	18.91	19.65		6.93	6.95		33.88	33.73		58.4	69.7		4.44	5.22		8.42	9.11		7	
WSD19	WSD19_SW M MF	10:15	8.0	4.0	18.97	19.42	19.24	6.96	6.97	6.97	33.55	33.45	33.54	56.7	69.2	63.5	4.31	5.22	4.80	14.60	14.20	13.45	12	12.5
Sheung Wan	WSD19_SW M MF DUP	10:20	8.0	4.0	18.95	19.62		6.97	6.97		33.54	33.62		57.5	70.4		4.38	5.29		12.50	12.50		13	

Date of Sampling: 3/3/2010 Weather Condition: misty Ambient Temperature, °C: 26.9 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	14:05	6.0	3.0	19.02	19.46	19.37	7.19	7.12	7.15	34.28	34.26	34.20	77.1	92.0	83.7	5.84	6.90	6.28	5.07	7.07	4.82	5	4.5
Tai Wan	WDS9_TW M ME DUP	14:10	6.0	3.0	18.98	20.01		7.18	7.11		34.29	33.96		77.7	87.8		5.88	6.51		3.22	3.91		4	
WSD10	WSD10_CKL M ME	14:30	6.0	3.0	18.99	19.95	19.38	7.16	7.13	7.14	34.47	34.07	34.34	57.7	75.9	66.2	4.36	5.64	4.96	2.93	3.53	4.18	2	2.0
Cha Kwo Ling	WSD10_CKL M ME DUP	14:35	6.0	3.0	18.98	19.58		7.15	7.13		34.43	34.37		58.4	72.8		4.41	5.44		4.83	5.41		2	
WSD15	WSD15_SWH M ME	14:45	6.0	3.0	18.97	19.77	19.39	7.11	7.10	7.11	34.35	34.16	34.27	50.4	67.5	58.1	3.81	5.04	4.36	5.66	7.40	7.61	3	3.0
Sai Wan Ho	WSD15_SWH M ME DUP	14:50	6.0	3.0	18.98	19.83		7.11	7.11		34.33	34.23		50.9	63.7		3.85	4.74		7.89	9.48		3	
WSD17	WSD17_QB M ME	14:55	8.0	4.0	18.86	19.51	19.16	7.10	7.09	7.10	34.34	34.15	34.25	46.4	60.6	52.9	3.52	4.55	3.99	12.10	14.20	11.83	4	4.0
Quarry Bay	WSD17_QB M ME DUP	15:00	8.0	4.0	18.85	19.42		7.09	7.10		34.35	34.16		45.9	58.8		3.48	4.42		9.50	11.50		4	
WSD21	WSD21_WC M ME	15:25	6.0	3.0	19.35	20.54	19.85	7.04	7.07	7.06	33.75	33.74	33.79	60.6	69.8	64.7	4.77	5.12	4.92	7.80	9.79	7.86	8	7.5
Wan Chai	WSD21_WC M ME DUP	15:30	6.0	3.0	19.28	20.23		7.04	7.08		33.88	33.80		59.2	69.0		4.70	5.10		6.77	7.09		7	
WSD19	WSD19_SW M ME	15:50	6.0	3.0	19.59	20.20	19.89	7.16	7.13	7.14	33.30	33.23	33.28	52.7	63.2	57.8	3.97	4.70	4.33	18.00	22.60	15.90	8	9.0
Sheung Wan	WSD19_SW M ME DUP	15:55	6.0	3.0	19.56	20.20		7.15	7.13		33.33	33.27		53.2	62.2		4.01	4.62		10.10	12.90		10	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 5/3/2010 Weather Condition: cloudy Ambient Temperature, °C: 24.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	8:15	6.0	3.0	21.29	21.57	21.59	6.92	7.19	7.20	33.47	33.97	33.69	102.7	95.1	96.8	7.39	7.67	7.50	3.58	3.43	3.51	5	4.0
Tai Wan	WDS9_TW M MF DUP	8:20	6.0	3.0	21.52	21.96		7.17	7.51		33.34	33.99		93.2	96.0		8.09	6.85		3.25	3.76		3	
WSD10	WSD10_CKL M MF	8:55	6.0	3.0	20.27	20.71	20.51	7.19	7.20	7.19	31.05	33.42	33.15	87.6	89.5	89.4	6.45	6.56	6.58	4.44	3.36	3.41	4	4.0
Cha Kwo Ling	WSD10_CKL M MF DUP	9:00	6.0	3.0	20.40	20.66		7.20	7.18		34.09	34.04		88.2	92.2		6.49	6.82		3.04	2.80		4	
WSD15	WSD15_SWH M MF	9:10	7.0	3.5	20.33	20.33	20.55	7.20	7.20	7.20	34.24	34.10	34.27	85.3	85.7	89.1	6.24	6.28	6.50	3.85	4.27	4.37	6	6.0
Sai Wan Ho	WSD15_SWH M MF DUP	9:15	7.0	3.5	20.66	20.89		7.19	7.19		34.36	34.36		92.1	93.3		6.72	6.74		4.49	4.85		6	
WSD17	WSD17_QB M MF	9:20	9.0	4.5	20.12	20.25	20.25	7.20	7.19	7.19	34.39	34.37	34.43	81.4	80.2	81.7	6.03	5.91	6.04	9.37	9.65	10.30	14	15.0
Quarry Bay	WSD17_QB M MF DUP	9:25	9.0	4.5	20.14	20.48		7.20	7.16		34.59	34.36		83.6	81.7		6.18	6.03		9.29	12.90		16	
WSD21	WSD21_WC M MF	9:45	6.0	3.0	20.48	20.61	20.53	7.13	7.13	7.12	33.55	33.42	33.48	62.8	71.0	70.6	4.64	5.18	5.52	6.12	5.40	5.55	5	6.0
Wan Chai	WSD21_WC M MF DUP	9;50	6.0	3.0	20.39	20.62		7.12	7.10		33.47	33.49		73.8	74.6		6.12	6.15		5.50	5.19		7	
WSD19	WSD19_SW M MF	10:00	7.0	3.5	21.14	21.97	21.68	7.12	7.13	7.13	21.47	26.12	28.67	71.0	72.5	71.0	5.71	5.41	5.34	8.46	5.33	5.98	6	7.0
Sheung Wan	WSD19_SW M MF DUP	10:05	7.0	3.5	21.58	22.03		7.12	7.13		33.59	33.51		70.2	70.2		5.09	5.14		5.73	4.39		8	

Date of Sampling: 5/3/2010 Weather Condition: cloudy Ambient Temperature, °C: 27.5 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	13:20	6.0	3.0	21.00	21.94	21.33	7.19	7.26	7.24	34.20	34.51	35.06	30.1	27.1	27.0	2.45	1.94	2.08	2.45	1.92	2.26	3	3.5
Tai Wan	WDS9_TW M ME DUP	13:24	6.0	3.0	20.88	21.51		7.27	7.24		34.47	37.05		25.6	25.2		1.86	2.05		2.31	2.34		4	
WSD10	WSD10_CKL M ME	13:43	7.0	3.5	20.66	21.16	22.06	7.21	7.19	7.18	38.19	34.20	35.12	22.4	21.4	21.9	1.77	1.55	1.62	2.11	2.05	1.93	2	2.0
Cha Kwo Ling	WSD10_CKL M ME DUP	13:46	7.0	3.5	24.43	21.99		7.17	7.16		34.11	33.99		21.1	22.5		1.55	1.59		1.84	1.70		2	
WSD15	WSD15_SWH M ME	13:56	7.0	3.5	20.95	21.40	21.34	7.15	7.11	7.12	34.34	34.24	34.31	18.8	20.0	19.8	1.44	1.45	1.47	3.62	3.60	3.32	3	3.0
Sai Wan Ho	WSD15_SWH M ME DUP	13:58	7.0	3.5	21.43	21.57		7.11	7.10		34.28	34.37		19.6	20.6		1.46	1.54		3.00	3.04		3	
WSD17	WSD17_QB M ME	14:55	8.0	4.0	22.27	22.65	22.46	7.25	7.24	7.23	34.37	32.46	32.92	16.9	17.9	17.2	1.23	1.29	1.28	8.09	6.64	6.66	8	8.5
Quarry Bay	WSD17_QB M ME DUP	14:58	8.0	4.0	21.99	22.93		7.21	7.20		34.44	30.40		16.6	17.5		1.21	1.37		5.77	6.13		9	
WSD21	WSD21_WC M ME	15:16	6.0	3.0	20.47	20.93	20.80	7.10	7.01	7.01	34.00	33.67	33.77	11.3	12.8	12.6	0.91	0.90	0.94	6.13	7.86	7.15	8	8.5
Wan Chai	WSD21_WC M ME DUP	15:18	6.0	3.0	20.52	21.27		6.98	6.94		33.80	33.61		11.9	14.4		0.87	1.08		7.91	6.69		9	
WSD19	WSD19_SW M ME	15:40	7.0	3.5	20.88	21.10	21.19	7.16	7.14	7.16	33.58	33.45	33.44	16.1	12.3	13.0	1.04	0.85	0.91	15.50	13.10	10.68	12	11.0
Sheung Wan	WSD19_SW M ME DUP	15:45	7.0	3.5	21.19	21.58		7.16	7.16		33.36	33.35		12.2	11.5		0.87	0.88		7.08	7.05		10	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 9/3/2010 Weather Condition: Rainly Ambient Temperature, °C: 13 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	8:15	6.0	3.0	16.97	16.73	16.77	7.61	7.77	7.75	34.51	34.89	34.83	65.6	47.1	47.2	5.07	3.54	3.69	2.56	2.34	2.28	7	6.0
Tai Wan	WDS9_TW M MF DUP	8:18	6.0	3.0	16.90	16.47		7.80	7.81		35.02	34.90		38.6	37.3		3.05	3.11		2.08	2.12		5	
WSD10	WSD10_CKL M MF	8:43	6.0	3.0	17.12	17.03	17.14	7.83	7.83	7.84	35.10	35.00	35.07	61.8	59.6	56.8	4.85	4.64	4.46	2.13	2.45	2.37	6	6.0
Cha Kwo Ling	WSD10_CKL M MF DUP	8:46	6.0	3.0	17.55	16.85		7.85	7.85		35.01	35.15		55.2	50.7		4.31	4.02		2.39	2.51		6	
WSD15	WSD15_SWH M MF	8:58	7.0	3.5	17.22	17.13	17.11	7.97	7.95	7.96	35.31	35.22	35.33	56.7	59.1	58.9	4.42	4.62	4.58	3.35	3.59	3.51	7	6.0
Sai Wan Ho	WSD15_SWH M MF DUP	9:00	7.0	3.5	17.23	16.86		7.95	7.95		35.50	35.30		59.0	60.6		4.59	4.69		3.60	3.51		5	
WSD17	WSD17_QB M MF	9:13	9.0	4.5	17.15	17.20	16.95	7.90	7.96	7.94	34.89	34.53	34.97	59.6	60.9	61.0	5.03	4.39	4.54	4.59	4.74	4.94	7	7.0
Quarry Bay	WSD17_QB M MF DUP	9:16	9.0	4.5	17.02	16.42		7.96	7.95		35.32	35.13		61.8	61.8		4.34	4.39		5.53	4.89		7	
WSD21	WSD21_WC M MF	9:35	6.0	3.0	17.43	16.98	17.35	7.91	7.92	7.92	34.76	30.08	33.57	59.5	60.0	61.5	4.66	4.80	4.63	6.46	6.01	6.20	13	14.0
Wan Chai	WSD21_WC M MF DUP	9:37	6.0	3.0	17.41	17.59		7.93	7.92		35.11	34.33		68.6	58.0		4.53	4.54		6.18	6.16		15	
WSD19	WSD19_SW M MF	9:57	7.0	3.5	16.73	16.29	16.53	7.85	7.83	7.85	34.93	34.96	34.99	65.9	65.1	59.7	5.40	4.38	4.57	8.82	8.69	8.66	12	11.5
Sheung Wan	WSD19_SW M MF DUP	10:00	7.0	3.5	16.81	16.29		7.85	7.85		35.17	34.88		53.6	54.2		4.22	4.27		9.06	8.06		11	

Date of Sampling: 9/3/2010 Weather Condition: Cloudy Ambient Temperature, °C: 9 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	18:07	6.0	3.0	16.99	17.37	17.33	6.61	7.67	7.48	34.40	35.06	34.99	105.1	102.8	102.5	8.29	7.99	7.98	6.68	7.15	5.36	3	4.0
Tai Wan	WDS9_TW M ME DUP	18:10	6.0	3.0	17.57	17.40		7.80	7.82		35.19	35.31		101.1	101.0		7.80	7.83		4.01	3.59		5	
WSD10	WSD10_CKL M ME	18:45	5.0	2.5	17.24	17.46	17.22	7.93	7.93	7.93	35.07	35.23	35.15	101.3	101.1	100.8	7.89	7.81	7.84	4.66	4.36	4.51	5	6.0
Cha Kwo Ling	WSD10_CKL M ME DUP	18:50	5.0	2.5	17.25	16.93		7.92	7.95		35.27	35.03		98.2	102.4		7.63	8.01		4.61	4.40		7	
WSD15	WSD15_SWH M ME	19:00	7.0	3.5	17.41	17.55	17.41	7.98	7.99	8.00	34.87	34.98	35.04	115.7	106.3	109.1	8.67	8.23	8.39	3.64	3.52	3.37	6	6.0
Sai Wan Ho	WSD15_SWH M ME DUP	19:05	7.0	3.5	17.76	16.92		8.01	8.00		35.10	35.22		106.1	108.1		8.20	8.46		3.17	3.15		6	
WSD17	WSD17_QB M ME	19:19	9.0	4.5	17.01	16.81	16.96	8.09	8.13	8.13	35.20	35.22	35.30	108.9	116.9	116.3	8.16	9.32	9.06	6.13	5.58	5.64	8	9.0
Quarry Bay	WSD17_QB M ME DUP	19:24	9.0	4.5	16.84	17.16		8.14	8.15		35.29	35.48		119.8	119.4		9.42	9.35		5.48	5.37		10	
WSD21	WSD21_WC M ME	19:47	6.0	3.0	16.60	17.15	17.11	8.11	8.13	8.12	34.98	34.82	34.90	118.0	112.9	112.8	9.28	8.88	8.86	8.47	7.95	8.36	11	10.5
Wan Chai	WSD21_WC M ME DUP	19:52	6.0	3.0	17.44	17.23		8.13	8.12		34.89	34.91		111.9	108.4		8.65	8.61		8.56	8.46		10	
WSD19	WSD19_SW M ME	20:08	7.0	3.5	16.57	16.67	16.93	8.16	8.14	8.14	34.41	34.74	34.75	116.6	117.0	115.2	9.22	9.23	9.05	6.84	7.46	6.95	10	10.0
Sheung Wan	WSD19_SW M ME DUP	20:13	7.0	3.5	17.43	17.03		8.13	8.11		34.89	34.95		115.6	111.7		8.99	8.74		6.60	6.88		10	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 11/3/2010 Weather Condition: Sunny Ambient Temperature, °C: 13.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	14:21	6.0	3.0	18.23	17.99	17.97	7.43	7.59	7.58	34.68	35.04	34.55	115.3	114.1	113.0	8.99	8.78	8.77	1.61	1.53	1.69	5	5.5
Tai Wan	WDS9_TW M MF DUP	14:24	6.0	3.0	18.04	17.62		7.65	7.66		33.39	35.10		110.5	111.9		8.64	8.66		1.74	1.89		6	
WSD10	WSD10_CKL M MF	14:54	7.0	3.5	18.11	18.35	18.20	7.79	7.83	7.82	34.96	35.18	34.67	111.0	111.7	111.3	8.52	8.55	8.53	2.45	2.27	2.25	6	6.0
Cha Kwo Ling	WSD10_CKL M MF DUP	14:59	7.0	3.5	18.19	18.15		7.82	7.83		35.44	33.10		110.8	111.8		8.53	8.53		2.33	1.96		6	
WSD15	WSD15_SWH M MF	15:05	7.0	3.5	17.96	18.06	18.11	7.83	7.92	7.87	35.15	35.19	35.19	110.1	113.5	111.5	8.48	8.53	8.49	2.13	2.29	2.12	5	5.0
Sai Wan Ho	WSD15_SWH M MF DUP	15:09	7.0	3.5	18.19	18.22		7.86	7.85		35.14	35.28		111.6	110.8		8.47	8.49		1.97	2.09		5	
WSD17	WSD17_QB M MF	15:15	9.0	4.5	17.97	18.17	18.21	7.82	7.85	7.78	35.52	35.18	35.54	110.4	113.0	111.1	8.48	9.76	8.74	3.35	2.58	2.68	4	4.0
Quarry Bay	WSD17_QB M MF DUP	15:19	9.0	4.5	18.32	18.38		7.58	7.85		36.22	35.24		111.1	109.8		8.45	8.28		2.44	2.34		4	
WSD21	WSD21_WC M MF	15:54	6.0	3.0	18.69	18.68	18.61	7.74	7.75	7.77	34.90	34.52	34.77	105.5	95.8	98.0	7.92	7.24	7.43	8.33	7.59	7.15	11	10.5
Wan Chai	WSD21_WC M MF DUP	15:59	6.0	3.0	18.56	18.50		7.78	7.79		34.75	34.91		95.7	94.9		7.32	7.22		6.57	6.10		10	
WSD19	WSD19_SW M MF	16:03	7.0	3.5	18.39	18.32	18.09	7.81	7.82	7.86	35.03	34.62	34.95	99.7	100.2	101.4	7.59	7.78	8.02	6.10	5.87	6.19	10	10.0
Sheung Wan	WSD19_SW M MF DUP	16:06	7.0	3.5	17.94	17.71		7.84	7.96		35.07	35.08		102.1	103.5		8.74	7.95		5.92	6.88		10	

Date of Sampling: 11/3/2010 Weather Condition: Cloudy Ambient Temperature, °C: 19.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	21:38	6.0	3.0	17.79	17.85	17.83	8.02	8.03	8.03	35.27	35.23	35.24	100.9	102.4	101.4	7.77	7.82	7.79	1.80	1.66	1.77	5	4.5
Tai Wan	WDS9_TW M ME DUP	21:43	6.0	3.0	17.86	17.80		8.03	8.03		35.25	35.22		100.7	101.6		7.74	7.82		1.75	1.85		4	
WSD10	WSD10_CKL M ME	20:46	7.0	3.5	17.78	17.74	17.72	8.03	8.02	8.03	35.14	35.20	35.23	102.5	103.9	105.1	8.06	8.02	8.15	3.24	2.98	3.31	8	8.0
Cha Kwo Ling	WSD10_CKL M ME DUP	20:50	7.0	3.5	17.72	17.64		8.02	8.03		35.29	35.27		104.7	109.3		8.07	8.45		3.85	3.17		8	
WSD15	WSD15_SWH M ME	20:34	7.0	3.5	17.60	17.54	17.68	8.01	8.00	8.02	35.24	35.31	34.90	102.8	106.5	106.6	7.93	8.43	8.30	3.08	2.77	2.69	6	6.0
Sai Wan Ho	WSD15_SWH M ME DUP	20:38	7.0	3.5	17.77	17.81		8.03	8.02		35.31	33.73		109.4	107.6		8.41	8.42		2.40	2.49		6	
WSD17	WSD17_QB M ME	20:21	9.0	4.5	17.67	17.81	17.64	7.98	7.99	7.99	35.00	35.23	35.35	99.7	102.0	102.5	7.70	7.83	7.87	4.89	3.99	4.32	8	8.0
Quarry Bay	WSD17_QB M ME DUP	20:25	9.0	4.5	17.68	17.40		7.99	7.99		35.23	35.92		103.4	105.0		7.96	7.99		4.59	3.81		8	
WSD21	WSD21_WC M ME	19:56	6.0	3.0	17.82	17.70	17.67	7.85	7.85	7.86	32.35	34.95	34.31	97.9	95.0	97.0	7.57	8.33	7.76	6.38	5.83	6.34	13	13.5
Wan Chai	WSD21_WC M ME DUP	20:00	6.0	3.0	17.62	17.53		7.87	7.88		34.96	34.97		96.2	98.9		7.47	7.67		6.66	6.47		14	
WSD19	WSD19_SW M ME	19:37	7.0	3.5	18.24	18.11	17.93	7.65	7.76	7.75	34.89	34.94	34.91	111.9	97.5	101.5	8.37	7.51	7.81	5.01	4.92	4.99	11	10.5
Sheung Wan	WSD19_SW M ME DUP	19:40	7.0	3.5	17.86	17.49		7.78	7.80		34.81	34.99		97.7	98.7		7.67	7.67		4.37	5.64		10	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 13/3/2010 Weather Condition: Foggy Ambient Temperature, °C: 17.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	16:01	6.0	3.0	18.66	18.70	18.67	7.71	7.84	7.81	34.71	34.23	34.39	84.8	81.1	83.3	6.39	6.18	6.35	2.03	1.91	1.82	4.0	3.5
Tai Wan	WDS9_TW M MF DUP	16:04	6.0	3.0	18.66	18.65		7.84	7.85		33.79	34.81		83.0	84.2		6.48	6.35		1.73	1.59		3.0	
WSD10	WSD10_CKL M MF	16:28	6.0	3.0	18.48	18.53	18.50	7.95	7.95	7.97	34.98	34.94	34.30	86.1	85.7	86.5	6.51	6.51	6.59	1.44	1.65	1.55	4.0	4.0
Cha Kwo Ling	WSD10_CKL M MF DUP	16:35	6.0	3.0	18.46	18.54		7.96	8.01		34.84	32.45		86.6	87.7		6.58	6.74		1.67	1.44		4.0	
WSD15	WSD15_SWH M MF	16:44	7.0	3.5	18.47	18.48	18.46	7.95	7.96	7.96	35.03	34.98	34.97	86.4	85.1	85.6	6.56	6.47	6.51	1.58	1.45	1.59	6.0	5.0
Sai Wan Ho	WSD15_SWH M MF DUP	16:49	7.0	3.5	18.44	18.45		7.96	7.96		34.95	34.91		85.6	85.3		6.51	6.49		1.63	1.71		4.0	
WSD17	WSD17_QB M MF	16:58	9.0	4.5	18.45	18.46	18.43	7.97	7.97	7.98	35.01	34.87	34.98	86.0	85.6	85.6	6.56	6.51	6.52	2.87	2.89	2.88	6.0	5.5
Quarry Bay	WSD17_QB M MF DUP	17:03	9.0	4.5	18.40	18.42		7.98	7.98		35.04	34.98		85.3	85.3		6.52	6.48		2.88	2.86		5.0	
WSD21	WSD21_WC M MF	17:20	6.0	3.0	18.75	18.77	18.75	7.90	7.90	7.91	34.85	34.81	34.70	81.1	77.4	78.6	6.14	6.85	6.19	3.99	3.39	3.64	6.0	5.5
Wan Chai	WSD21_WC M MF DUP	17:23	6.0	3.0	18.73	18.74		7.91	7.91		34.26	34.86		77.7	78.1		5.88	5.88		3.41	3.75		5.0	
WSD19	WSD19_SW M MF	17:40	7.0	3.5	18.79	18.79	18.77	7.92	7.93	7.93	35.01	34.97	34.94	85.1	83.6	83.4	6.37	6.29	6.29	4.95	4.60	4.79	11.0	10.0
Sheung Wan	WSD19_SW M MF DUP	17:43	7.0	3.5	18.74	18.74		7.93	7.94		34.86	34.92		83.0	81.9		6.30	6.20		4.60	5.00		9.0	

Date of Sampling: 13/3/2010 Weather Condition: Foggy Ambient Temperature, °C: 17.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	23:25	7.0	3.5	18.33	18.35	18.33	8.06	8.06	8.05	35.20	35.11	35.12	60.3	61.0	60.7	5.22	4.65	4.93	1.86	1.77	1.86	5.0	4.0
Tai Wan	WDS9_TW M ME DUP	23:31	7.0	3.5	18.30	18.33		8.05	8.04		35.03	35.14		60.9	60.4		4.64	5.19		1.97	1.83		3.0	
WSD10	WSD10_CKL M ME	22:53	6.0	3.0	18.36	18.36	18.37	8.05	8.05	8.05	36.09	35.07	35.59	66.1	68.0	65.5	5.04	5.18	4.97	2.39	2.40	2.36	5.0	5.0
Cha Kwo Ling	WSD10_CKL M ME DUP	22:58	6.0	3.0	18.37	18.39		8.04	8.05		36.11	35.08		64.0	63.8		4.86	4.81		2.37	2.29		5.0	
WSD15	WSD15_SWH M ME	22:27	7.0	3.5	18.38	18.44	18.40	8.05	8.05	8.05	36.17	34.70	35.30	71.5	71.2	71.5	5.45	6.12	5.80	2.89	2.65	2.85	5.0	5.5
Sai Wan Ho	WSD15_SWH M ME DUP	22:32	7.0	3.5	18.36	18.43		8.06	8.05		35.15	35.17		72.0	71.4		6.17	5.44		3.22	2.64		6.0	
WSD17	WSD17_QB M ME	22:06	9.0	4.5	18.37	18.35	18.32	8.04	8.03	8.04	35.09	35.03	35.11	73.2	76.0	74.1	6.58	6.78	6.58	3.71	3.48	3.45	6.0	6.5
Quarry Bay	WSD17_QB M ME DUP	22:11	9.0	4.5	18.26	18.29		8.04	8.05		35.16	35.15		74.0	73.2		6.34	6.61		3.59	3.02		7.0	
WSD21	WSD21_WC M ME	21:26	6.0	3.0	18.69	18.66	18.65	7.91	7.91	7.91	34.56	34.25	34.57	73.8	74.5	72.0	6.32	5.67	5.65	4.43	3.67	3.84	6.0	6.5
Wan Chai	WSD21_WC M ME DUP	21:30	6.0	3.0	18.60	18.66		7.91	7.92		34.76	34.71		68.8	71.0		5.21	5.38		3.71	3.56		7.0	
WSD19	WSD19_SW M ME	21:06	8.0	4.0	18.77	18.83	18.75	7.82	7.84	7.84	34.65	34.75	34.73	86.5	81.7	81.6	6.40	6.22	6.15	6.02	5.33	5.01	10.0	10.0
Sheung Wan	WSD19_SW M ME DUP	21:11	8.0	4.0	18.68	18.70		7.85	7.86		34.85	34.68		79.3	78.7		6.00	5.97		4.58	4.12		10.0	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 15/3/2010 Weather Condition: Foggy Ambient Temperature, °C: 21.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	7:09	6.0	3.0	19.43	19.18	19.23	7.57	7.77	7.73	33.99	34.12	34.10	70.0	65.1	63.8	5.24	4.88	4.90	4.19	2.97	3.31	5.0	5.0
Tai Wan	WDS9_TW M MF DUP	7:13	6.0	3.0	19.22	19.10		7.78	7.81		34.01	34.28		61.8	58.2		4.64	4.82		3.33	2.75		5.0	
WSD10	WSD10_CKL M MF	7:46	7.0	3.5	19.15	18.96	19.05	7.98	7.99	7.99	34.88	34.88	34.71	47.4	45.3	45.1	3.58	3.42	3.41	2.87	3.24	2.88	6.0	5.0
Cha Kwo Ling	WSD10_CKL M MF DUP	7:51	7.0	3.5	18.99	19.09		7.99	7.99		34.93	34.13		44.2	43.6		3.33	3.30		3.08	2.34		4.0	
WSD15	WSD15_SWH M MF	8:01	7.0	3.5	18.76	18.79	18.81	8.03	8.04	8.03	35.19	35.01	35.03	43.0	43.0	43.3	3.24	3.25	3.27	3.85	3.26	3.20	7.0	8.0
Sai Wan Ho	WSD15_SWH M MF DUP	8:05	7.0	3.5	18.81	18.88		8.03	8.02		35.01	34.89		43.8	43.3		3.31	3.27		2.71	2.99		9.0	
WSD17	WSD17_QB M MF	8:15	8.0	4.0	18.81	18.82	18.87	8.03	8.04	8.04	33.72	35.05	34.70	42.4	42.3	42.4	3.22	3.19	3.20	4.57	4.09	4.46	9.0	8.5
Quarry Bay	WSD17_QB M MF DUP	8:19	8.0	4.0	18.94	18.89		8.04	8.04		35.01	35.03		42.7	42.3		3.21	3.19		4.97	4.21		8.0	
WSD21	WSD21_WC M MF	8:44	5.0	2.5	19.18	19.26	19.28	7.95	7.94	7.95	34.91	34.80	34.81	39.7	37.5	37.8	2.97	2.81	2.83	5.52	5.47	5.33	11.0	10.5
Wan Chai	WSD21_WC M MF DUP	8:48	5.0	2.5	19.26	19.40		7.94	7.95		34.76	34.77		37.0	37.1		2.77	2.78		5.32	5.00		10.0	
WSD19	WSD19_SW M MF	9:03	6.0	3.0	19.43	19.53	19.54	7.97	7.97	7.97	34.85	34.81	34.74	39.4	38.8	38.7	2.93	2.90	2.89	4.69	5.28	4.58	8.0	7.5
Sheung Wan	WSD19_SW M MF DUP	9:06	6.0	3.0	19.45	19.73		7.97	7.96		34.88	34.43		38.1	38.3		2.85	2.86		4.08	4.28		7.0	

Date of Sampling: 15/3/2010 Weather Condition: Cloudy Ambient Temperature, °C: 26.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	13:20	6.0	3.0	19.86	19.87	19.85	7.82	7.85	7.84	34.85	34.81	34.83	85.9	82.0	83.0	6.35	6.86	6.40	7.27	3.20	4.95	7.0	6.0
Tai Wan	WDS9_TW M ME DUP	13:25	6.0	3.0	19.75	19.90		7.85	7.84		34.86	34.78		80.5	83.5		6.15	6.25		6.18	3.14		5.0	
WSD10	WSD10_CKL M ME	12:55	6.0	3.0	19.62	19.96	19.72	7.86	7.87	7.86	35.06	34.76	34.91	85.1	87.4	86.0	6.39	6.48	6.41	2.15	3.16	2.91	2.0	3.5
Cha Kwo Ling	WSD10_CKL M ME DUP	13:00	6.0	3.0	19.43	19.85		7.87	7.84		34.93	34.87		85.5	86.1		6.37	6.38		3.45	2.86		5.0	
WSD15	WSD15_SWH M ME	12:45	6.0	3.0	19.90	19.95	19.94	7.85	7.85	7.84	35.02	34.70	34.90	86.7	84.7	84.8	6.34	6.30	6.47	3.15	2.80	2.89	7.0	6.5
Sai Wan Ho	WSD15_SWH M ME DUP	12:50	6.0	3.0	19.87	20.02		7.84	7.83		34.89	34.99		84.5	83.2		7.09	6.16		2.77	2.82		6.0	
WSD17	WSD17_QB M ME	12:35	8.0	4.0	19.87	19.91	20.43	7.81	7.85	7.83	34.53	34.87	34.65	88.0	81.7	83.2	7.31	6.06	6.32	5.31	4.69	4.72	8.0	8.0
Quarry Bay	WSD17_QB M ME DUP	12:41	8.0	4.0	20.50	21.42		7.82	7.82		34.47	34.73		81.4	81.6		6.00	5.89		4.50	4.36		8.0	
WSD21	WSD21_WC M ME	12:05	6.0	3.0	20.25	20.20	20.28	7.72	7.73	7.73	34.16	34.80	34.61	82.6	81.6	82.3	6.13	5.96	6.05	7.35	8.07	7.41	13.0	12.0
Wan Chai	WSD21_WC M ME DUP	12:10	6.0	3.0	20.14	20.52		7.74	7.73		34.71	34.75		83.0	81.9		6.13	5.99		8.18	6.02		11.0	
WSD19	WSD19_SW M ME	11:45	6.0	3.0	20.40	20.60	20.77	7.78	7.77	7.77	34.84	34.81	34.83	109.0	107.7	108.6	8.01	8.01	7.97	8.36	6.77	6.47	12.0	11.0
Sheung Wan	WSD19_SW M ME DUP	11:50	6.0	3.0	21.05	21.02		7.78	7.76		34.84	34.81		109.1	108.5		7.92	7.92		5.58	5.17		10.0	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 17/3/2010 Weather Condition: Cloudy Ambient Temperature, °C: 17.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	7:10	6.0	3.0	17.18	16.96	17.35	7.56	7.57	7.58	34.25	34.72	34.60	66.3	63.3	59.4	5.11	4.92	4.53	2.89	2.71	2.78	7.0	8.0
Tai Wan	WDS9_TW M MF DUP	7:15	6.0	3.0	17.56	17.70		7.59	7.60		34.72	34.71		56.4	51.6		4.27	3.81		2.64	2.87		9.0	
WSD10	WSD10_CKL M MF	7:40	6.0	3.0	18.12	18.25	18.23	7.68	7.78	7.75	34.95	34.98	34.98	66.8	63.5	62.9	5.09	4.82	5.01	2.94	2.95	2.71	6.0	5.5
Cha Kwo Ling	WSD10_CKL M MF DUP	7:45	6.0	3.0	18.23	18.32		7.76	7.76		34.98	35.00		63.2	58.2		5.34	4.79		2.45	2.51		5.0	
WSD15	WSD15_SWH M MF	7:55	7.0	3.5	18.39	18.43	18.42	7.78	7.79	7.79	34.91	35.06	35.03	47.3	46.7	45.3	4.02	3.53	3.64	2.89	2.92	2.88	6.0	6.5
Sai Wan Ho	WSD15_SWH M MF DUP	8:00	7.0	3.5	18.40	18.46		7.78	7.79		35.08	35.06		44.3	42.7		3.76	3.26		2.98	2.73		7.0	
WSD17	WSD17_QB M MF	8:04	8.0	4.0	18.47	18.40	18.42	7.80	7.80	7.80	35.03	35.03	35.08	48.0	46.0	44.9	3.65	3.52	3.50	3.88	3.92	3.79	8.0	9.0
Quarry Bay	WSD17_QB M MF DUP	8:09	8.0	4.0	18.42	18.39		7.80	7.80		35.12	35.14		43.3	42.1		3.29	3.55		3.64	3.70		10.0	
WSD21	WSD21_WC M MF	8:25	6.0	3.0	18.58	18.50	18.50	7.70	7.71	7.71	34.68	34.81	34.02	41.7	39.3	38.5	3.56	3.33	3.18	5.61	5.52	5.20	13.0	12.0
Wan Chai	WSD21_WC M MF DUP	8:30	6.0	3.0	18.43	18.48		7.71	7.71		34.77	31.83		36.6	36.4		2.78	3.06		5.10	4.58		11.0	
WSD19	WSD19_SW M MF	8:45	8.0	4.0	18.46	18.16	18.06	7.75	7.74	7.74	34.76	34.76	34.89	45.0	41.0	42.5	3.43	3.45	3.33	5.32	4.74	5.04	9.0	10.0
Sheung Wan	WSD19_SW M MF DUP	8:50	8.0	4.0	17.84	17.76		7.74	7.74		35.06	34.96		43.3	40.5		3.32	3.12		5.82	4.27		11.0	

Date of Sampling: 17/3/2010 Weather Condition: Cloudy Ambient Temperature, °C: 20.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	12:35	6.0	3.0	19.03	18.98	18.95	7.61	7.63	7.59	34.67	34.91	34.73	125.4	120.8	118.0	10.45	9.04	9.13	3.29	2.98	2.94	7.0	6.0
Tai Wan	WDS9_TW M ME DUP	12:37	6.0	3.0	18.89	18.90		7.49	7.63		34.59	34.74		115.0	110.8		8.67	8.36		2.84	2.63		5.0	
WSD10	WSD10_CKL M ME	12:58	7.0	3.5	18.93	18.97	18.99	7.73	7.72	7.72	33.38	34.92	34.46	91.2	91.2	91.5	6.91	6.87	6.90	2.82	2.49	2.54	5.0	4.5
Cha Kwo Ling	WSD10_CKL M ME DUP	13:00	7.0	3.5	19.00	19.07		7.72	7.71		34.54	34.99		92.8	90.8		6.99	6.83		2.46	2.39		4.0	
WSD15	WSD15_SWH M ME	13:08	7.0	3.5	18.90	18.96	19.03	7.71	7.71	7.71	35.08	33.19	34.82	88.2	88.5	87.7	6.66	6.66	6.60	3.74	3.54	3.34	6.0	6.5
Sai Wan Ho	WSD15_SWH M ME DUP	13:10	7.0	3.5	19.03	19.23		7.71	7.70		35.98	35.02		87.8	86.2		6.61	6.46		3.10	2.98		7.0	
WSD17	WSD17_QB M ME	13:19	8.0	4.0	19.10	19.10	19.14	7.65	7.65	7.65	34.99	34.01	34.61	85.4	84.3	84.8	6.43	6.33	6.38	4.91	4.84	5.00	9.0	9.5
Quarry Bay	WSD17_QB M ME DUP	13:23	8.0	4.0	19.12	19.25		7.65	7.64		34.46	34.99		84.8	84.6		6.40	6.34		4.99	5.26		10.0	
WSD21	WSD21_WC M ME	13:46	6.0	3.0	19.32	19.34	19.40	7.63	7.63	7.63	34.21	34.74	34.61	99.9	94.7	94.1	7.45	7.63	7.15	5.68	4.73	4.88	10.0	10.5
Wan Chai	WSD21_WC M ME DUP	13:49	6.0	3.0	19.42	19.53		7.63	7.62		34.74	34.73		92.5	89.2		6.89	6.63		4.75	4.34		11.0	
WSD19	WSD19_SW M ME	14:06	7.0	3.5	19.37	19.18	19.26	7.65	7.64	7.65	34.69	34.85	34.77	76.8	76.3	76.5	5.74	5.73	5.73	7.74	8.53	7.36	18.0	17.0
Sheung Wan	WSD19_SW M ME DUP	14:06	7.0	3.5	19.18	19.32		7.64	7.66		34.79	34.76		76.5	76.3		5.75	5.71		7.06	6.09		16.0	

Contract: KL/2009/01 - Site Formation for Kai Tak Cruise Terminal Development Client: Penta Ocean Construction Co. Ltd. Job No.: CS2909

Date of Sampling: 19/3/2010 Weather Condition: Sunny Ambient Temperature, °C: 19.0 Tidal State: Mid-Flood

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M MF	8:15	6.0	3.0	19.46	19.43	19.42	7.60	7.62	7.61	33.77	33.84	33.89	55.6	50.7	53.0	4.09	3.81	3.96	3.13	3.01	2.96	8	7.0
Tai Wan	WDS9_TW M MF DUP	8:19	6.0	3.0	19.39	19.41		7.61	7.60		33.97	33.98		53.7	52.1		4.01	3.91		2.64	3.07		6	
WSD10	WSD10_CKL M MF	8:49	6.0	3.0	19.27	19.27	19.22	7.63	7.64	7.65	34.18	34.88	34.74	75.8	73.6	73.2	5.68	5.52	5.51	3.15	2.95	3.04	5	5.5
Cha Kwo Ling	WSD10_CKL M MF DUP	8:53	6.0	3.0	19.16	19.17		7.66	7.67		34.95	34.94		72.4	71.0		5.44	5.38		3.01	3.04		6	
WSD15	WSD15_SWH M MF	9:01	6.0	3.0	19.28	19.33	19.30	7.69	7.69	7.69	35.02	35.03	34.38	70.0	69.8	69.1	5.22	5.22	5.19	4.52	4.37	4.07	8	8.5
Sai Wan Ho	WSD15_SWH M MF DUP	9:04	6.0	3.0	19.28	19.30		7.69	7.70		35.03	32.43		68.8	67.8		5.14	5.16		3.64	3.75		9	
WSD17	WSD17_QB M MF	9:18	9.0	4.5	19.26	19.26	19.26	7.68	7.67	7.70	37.71	343.43	112.77	65.2	64.8	64.6	4.94	4.90	4.87	5.96	5.24	5.64	9	9.5
Quarry Bay	WSD17_QB M MF DUP	9:22	9.0	4.5	19.23	19.29		7.76	7.69		35.06	34.86		64.8	63.6		4.88	4.76		5.87	5.50		10	
WSD21	WSD21_WC M MF	10:31	6.0	3.0	19.60	19.66	19.74	7.63	7.61	7.59	34.70	34.69	34.65	60.0	59.8	59.7	4.48	4.44	4.46	7.79	8.03	6.70	12	11.0
Wan Chai	WSD21_WC M MF DUP	10:36	6.0	3.0	19.88	19.82		7.56	7.57		34.67	34.53		60.0	58.8		4.48	4.45		5.25	5.73		10	
WSD19	WSD19_SW M MF	10:54	7.0	3.5	19.88	19.82	19.90	7.56	7.55	7.56	34.58	34.56	34.50	58.6	57.2	56.6	4.24	4.14	4.12	6.54	5.88	5.65	9	9.5
Sheung Wan	WSD19_SW M MF DUP	10:55	7.0	3.5	19.94	19.95		7.56	7.56		34.47	34.40		55.5	55.2		4.05	4.04		5.07	5.10		10	

Date of Sampling: 19/3/2010 Weather Condition: Sunny Ambient Temperature, °C: 25.0 Tidal State: Mid-Ebb

Station Reference	Sample ID	Time	Overall Depth, m	Sampling Depth, m	Temperature °C			pH -			Salinity ppt			DO Saturation %			DO mg/L			Turbidity NTU			Suspended Solids mg/L	
					Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value		Average	Value	Average
WSD9	WDS9_TW M ME	13:30	6.0	3.0	19.82	19.76	19.83	7.79	7.70	7.71	34.59	34.57	34.63	65.4	53.7	57.6	4.78	4.01	4.22	2.67	2.44	2.32	3	2.5
Tai Wan	WDS9_TW M ME DUP	13:35	6.0	3.0	19.86	19.87		7.67	7.68		34.72	34.62		56.6	54.5		4.14	3.96		2.28	1.89		2	
WSD10	WSD10_CKL M ME	13:55	6.0	3.0	20.42	20.42	20.35	7.77	7.75	7.75	34.73	34.73	35.49	106.8	106.0	104.8	7.85	7.78	7.71	2.02	1.86	2.16	4	3.5
Cha Kwo Ling	WSD10_CKL M ME DUP	14:00	6.0	3.0	20.25	20.31		7.74	7.72		37.75	34.73		104.8	101.4		7.72	7.48		1.95	2.82		3	
WSD15	WSD15_SWH M ME	14:12	7.0	3.5	20.21	20.12	20.12	7.70	7.71	7.68	34.89	34.84	34.87	97.8	95.2	94.3	7.24	7.03	6.96	2.90	2.66	2.83	5	4.5
Sai Wan Ho	WSD15_SWH M ME DUP	14:16	7.0	3.5	20.05	20.11		7.64	7.65		34.89	34.85		93.6	90.5		6.89	6.68		3.03	2.74		4	
WSD17	WSD17_QB M ME	14:25	8.0	4.0	19.94	19.90	19.95	7.33	7.34	7.29	34.75	34.76	34.72	87.7	83.6	84.3	6.51	6.19	6.28	4.77	4.13	4.53	7	6.0
Quarry Bay	WSD17_QB M ME DUP	14:30	8.0	4.0	19.91	20.06		7.26	7.23		34.72	34.63		81.8	83.9		6.07	6.36		4.62	4.58		5	
WSD21	WSD21_WC M ME	14:55	5.0	2.5	20.49	20.85	20.68	7.21	7.19	7.10	34.44	34.06	34.18	101.5	94.7	93.6	7.46	6.91	6.88	5.55	4.79	5.08	10	9.5
Wan Chai	WSD21_WC M ME DUP	15:00	5.0	2.5	20.69	20.67		7.00	6.98		34.17	34.04		91.4	86.9		6.76	6.38		5.11	4.87		9	
WSD19	WSD19_SW M ME	15:20	7.0	3.5	20.72	20.81	20.63	7.06	6.90	6.94	34.56	34.41	34.54	91.5	83.0	84.0	6.61	6.07	6.14	5.15	4.30	4.88	10	9.0
Sheung Wan	WSD19_SW M ME DUP	15:25	7.0	3.5	20.50	20.48		6.90	6.88		34.64	34.56		82.1	79.5		6.01	5.86		4.86	5.22		8	

Appendix 6.1a

Summary of EPD monitoring data for 2007 and 2008

Water Control Zone	Station	Dates	Sample No	Depth	Suspended Solids (mg/L)
Victoria Harbour	VM1	15/1/2007	1	Middle Water	3.3
Victoria Harbour	VM1	1/2/2007	1	Middle Water	2
Victoria Harbour	VM1	7/3/2007	1	Middle Water	2
Victoria Harbour	VM1	12/4/2007	1	Middle Water	3.4
Victoria Harbour	VM1	3/5/2007	1	Middle Water	4.1
Victoria Harbour	VM1	22/6/2007	1	Middle Water	5.6
Victoria Harbour	VM1	23/7/2007	1	Middle Water	4.4
Victoria Harbour	VM1	23/8/2007	1	Middle Water	5.4
Victoria Harbour	VM1	17/9/2007	1	Middle Water	8.5
Victoria Harbour	VM1	10/10/2007	1	Middle Water	4
Victoria Harbour	VM1	8/11/2007	1	Middle Water	5.8
Victoria Harbour	VM1	4/12/2007	1	Middle Water	1.6
Victoria Harbour	VM1	3/1/2008	1	Middle Water	1.6
Victoria Harbour	VM1	1/2/2008	1	Middle Water	1.1
Victoria Harbour	VM1	28/3/2008	1	Middle Water	5.7
Victoria Harbour	VM1	23/4/2008	1	Middle Water	12
Victoria Harbour	VM1	19/5/2008	1	Middle Water	6.6
Victoria Harbour	VM1	11/6/2008	1	Middle Water	4.9
Victoria Harbour	VM1	2/7/2008	1	Middle Water	3.8
Victoria Harbour	VM1	4/8/2008	1	Middle Water	5.4
Victoria Harbour	VM1	19/9/2008	1	Middle Water	9.2
Victoria Harbour	VM1	8/10/2008	1	Middle Water	6.5
Victoria Harbour	VM1	5/11/2008	1	Middle Water	5
Victoria Harbour	VM1	10/12/2008	1	Middle Water	3.6
Victoria Harbour	VM2	15/1/2007	1	Middle Water	2.6
Victoria Harbour	VM2	1/2/2007	1	Middle Water	2
Victoria Harbour	VM2	7/3/2007	1	Middle Water	3.3
Victoria Harbour	VM2	12/4/2007	1	Middle Water	2.8
Victoria Harbour	VM2	3/5/2007	1	Middle Water	3.7
Victoria Harbour	VM2	22/6/2007	1	Middle Water	3
Victoria Harbour	VM2	23/7/2007	1	Middle Water	5.2
Victoria Harbour	VM2	23/8/2007	1	Middle Water	2.9
Victoria Harbour	VM2	17/9/2007	1	Middle Water	5.8
Victoria Harbour	VM2	10/10/2007	1	Middle Water	4
Victoria Harbour	VM2	8/11/2007	1	Middle Water	4.4
Victoria Harbour	VM2	4/12/2007	1	Middle Water	1.8
Victoria Harbour	VM2	3/1/2008	1	Middle Water	1.6
Victoria Harbour	VM2	1/2/2008	1	Middle Water	1.6
Victoria Harbour	VM2	28/3/2008	1	Middle Water	2.9
Victoria Harbour	VM2	23/4/2008	1	Middle Water	4.8
Victoria Harbour	VM2	19/5/2008	1	Middle Water	3.8
Victoria Harbour	VM2	11/6/2008	1	Middle Water	3.8
Victoria Harbour	VM2	2/7/2008	1	Middle Water	3.6
Victoria Harbour	VM2	4/8/2008	1	Middle Water	4.2
Victoria Harbour	VM2	19/9/2008	1	Middle Water	4
Victoria Harbour	VM2	8/10/2008	1	Middle Water	4.8
Victoria Harbour	VM2	5/11/2008	1	Middle Water	9.2
Victoria Harbour	VM2	10/12/2008	1	Middle Water	2.6
Victoria Harbour	VM4	15/1/2007	1	Middle Water	2.8
Victoria Harbour	VM4	1/2/2007	1	Middle Water	2.3
Victoria Harbour	VM4	7/3/2007	1	Middle Water	3.5
Victoria Harbour	VM4	12/4/2007	1	Middle Water	2.8
Victoria Harbour	VM4	3/5/2007	1	Middle Water	4.6
Victoria Harbour	VM4	22/6/2007	1	Middle Water	3.5
Victoria Harbour	VM4	23/7/2007	1	Middle Water	5.6
Victoria Harbour	VM4	23/8/2007	1	Middle Water	2.7
Victoria Harbour	VM4	17/9/2007	1	Middle Water	5.9
Victoria Harbour	VM4	10/10/2007	1	Middle Water	4.8
Victoria Harbour	VM4	8/11/2007	1	Middle Water	3.8
Victoria Harbour	VM4	4/12/2007	1	Middle Water	1.7
Victoria Harbour	VM4	3/1/2008	1	Middle Water	2.8
Victoria Harbour	VM4	1/2/2008	1	Middle Water	2.7

Water Control Zone	Station	Dates	Sample No	Depth	Suspended Solids (mg/L)
Victoria Harbour	VM4	28/3/2008	1	Middle Water	3.4
Victoria Harbour	VM4	23/4/2008	1	Middle Water	7.8
Victoria Harbour	VM4	19/5/2008	1	Middle Water	11
Victoria Harbour	VM4	11/6/2008	1	Middle Water	3.1
Victoria Harbour	VM4	2/7/2008	1	Middle Water	3.5
Victoria Harbour	VM4	4/8/2008	1	Middle Water	4.6
Victoria Harbour	VM4	19/9/2008	1	Middle Water	5.3
Victoria Harbour	VM4	8/10/2008	1	Middle Water	4.7
Victoria Harbour	VM4	5/11/2008	1	Middle Water	7.7
Victoria Harbour	VM4	10/12/2008	1	Middle Water	2.9
Victoria Harbour	VM5	15/1/2007	1	Middle Water	1.7
Victoria Harbour	VM5	1/2/2007	1	Middle Water	3.2
Victoria Harbour	VM5	7/3/2007	1	Middle Water	2.8
Victoria Harbour	VM5	12/4/2007	1	Middle Water	3.1
Victoria Harbour	VM5	3/5/2007	1	Middle Water	5.3
Victoria Harbour	VM5	22/6/2007	1	Middle Water	3.9
Victoria Harbour	VM5	23/7/2007	1	Middle Water	6.2
Victoria Harbour	VM5	23/8/2007	1	Middle Water	2.8
Victoria Harbour	VM5	17/9/2007	1	Middle Water	3.1
Victoria Harbour	VM5	10/10/2007	1	Middle Water	8
Victoria Harbour	VM5	8/11/2007	1	Middle Water	4.2
Victoria Harbour	VM5	4/12/2007	1	Middle Water	1.7
Victoria Harbour	VM5	3/1/2008	1	Middle Water	2.8
Victoria Harbour	VM5	1/2/2008	1	Middle Water	2.4
Victoria Harbour	VM5	28/3/2008	1	Middle Water	2.7
Victoria Harbour	VM5	23/4/2008	1	Middle Water	5
Victoria Harbour	VM5	19/5/2008	1	Middle Water	5.8
Victoria Harbour	VM5	11/6/2008	1	Middle Water	4.9
Victoria Harbour	VM5	2/7/2008	1	Middle Water	2.4
Victoria Harbour	VM5	4/8/2008	1	Middle Water	5.3
Victoria Harbour	VM5	19/9/2008	1	Middle Water	10
Victoria Harbour	VM5	8/10/2008	1	Middle Water	4.7
Victoria Harbour	VM5	5/11/2008	1	Middle Water	6.6
Victoria Harbour	VM5	10/12/2008	1	Middle Water	4
Victoria Harbour	VM6	15/1/2007	1	Middle Water	2.1
Victoria Harbour	VM6	1/2/2007	1	Middle Water	4.4
Victoria Harbour	VM6	7/3/2007	1	Middle Water	2.4
Victoria Harbour	VM6	12/4/2007	1	Middle Water	3.8
Victoria Harbour	VM6	3/5/2007	1	Middle Water	4.2
Victoria Harbour	VM6	22/6/2007	1	Middle Water	2.5
Victoria Harbour	VM6	23/7/2007	1	Middle Water	3.9
Victoria Harbour	VM6	23/8/2007	1	Middle Water	4
Victoria Harbour	VM6	17/9/2007	1	Middle Water	4
Victoria Harbour	VM6	10/10/2007	1	Middle Water	9.5
Victoria Harbour	VM6	8/11/2007	1	Middle Water	4.8
Victoria Harbour	VM6	4/12/2007	1	Middle Water	2.5
Victoria Harbour	VM6	3/1/2008	1	Middle Water	2
Victoria Harbour	VM6	1/2/2008	1	Middle Water	3.1
Victoria Harbour	VM6	28/3/2008	1	Middle Water	2.4
Victoria Harbour	VM6	23/4/2008	1	Middle Water	7
Victoria Harbour	VM6	19/5/2008	1	Middle Water	6
Victoria Harbour	VM6	11/6/2008	1	Middle Water	3.5
Victoria Harbour	VM6	2/7/2008	1	Middle Water	4.4
Victoria Harbour	VM6	4/8/2008	1	Middle Water	4.2
Victoria Harbour	VM6	19/9/2008	1	Middle Water	7.4
Victoria Harbour	VM6	8/10/2008	1	Middle Water	14
Victoria Harbour	VM6	5/11/2008	1	Middle Water	6.4
Victoria Harbour	VM6	10/12/2008	1	Middle Water	5.3

Appendix 6.2a

Event and Action Plan

Event and Action Plan for Marine Water Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. (The above actions should be taken within 1 working day after the exceedance is identified) 7. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented. 3. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Review the working methods and consider additional measures such as use of frame-type silt curtain, deployment of double silt curtains, slowing down, or rescheduling of works; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER; 6. Implement the agreed mitigation measures. 7. (The above actions should be taken within 1 working day after the exceedance is identified)
Action level being exceeded by more than one consecutive sampling days	1. Identify source(s) of impact; 2. Inform IEC and Contractor; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss mitigation measures with IEC and Contractor;	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	5. Ensure mitigation measures are implemented; 6. Prepare to increase the monitoring frequency to daily; 7. (The above actions should be taken within 1 working day after the exceedance is identified) 8. Repeat measurement on next working day of exceedance.	accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	equipment; 4. Review the working methods and consider additional measures such as use of frame-type silt curtain, deployment of double silt curtains, slowing down, or rescheduling of works; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures. 7. (The above actions should be taken within 1 working day after the exceedance is identified)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	5. Ensure mitigation measures are implemented; 6. Prepare to increase the monitoring frequency to daily; 7. (The above actions should be taken within 1 working day after the exceedance is identified) 8. Repeat measurement on next working day of exceedance.	accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	equipment; 4. Review the working methods and consider additional measures such as use of frame-type silt curtain, deployment of double silt curtains, slowing down, or rescheduling of works; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures. 7. (The above actions should be taken within 1 working day after the exceedance is identified)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level. 8. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures. 5. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Review the working methods and consider additional measures such as use of frame-type silt curtain, deployment of double silt curtains, slowing down, or rescheduling of works; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures. 7. (The above actions should be taken within 1 working day after the exceedance is identified)

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit level being exceeded by more than one consecutive sampling days	1. Identify source(s) of impact; 2. Inform IEC, Contractor and EPD; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss mitigation measures with IEC, ER and Contractor; 5. Ensure mitigation measures are implemented; 6. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. 7. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 4. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. 6. (The above actions should be taken within 1 working day after the exceedance is identified)	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Review the working methods and consider additional measures such as use of frame-type silt curtain, deployment of double silt curtains, slowing down, or rescheduling of works; 5. Discuss with ET , IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities. 8. (The above actions should be taken within 1 working day after the exceedance is identified)