# Contract No. CV/2004/03 – Maintenance and Repairs to Franchised and Licensed Ferry Pier (2005-2008) Construction of Yung Shue Wan Helipad – Works Order No. YSW/01/03

Environmental Monitoring and Audit Monthly Report (Version 1)

December 2007

Certified By

(Environmental Team Leader)

#### REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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## ABBREVIATION AND ACRONYM

AL Levels Action and Limit Levels

CEDD Civil Engineering & Development Department

E / ER Engineer/Engineer's Representative

EIA Environmental Impact Assessment

EM&A Environmental Monitoring and Audit

EMIS Environmental Mitigation Implementation Schedule

EP Environmental Permit

EPD Environmental Protection Department

ET Environmental Team

HVS High Volume Sampler

IEC Independent Environmental Checker

RE Resident Engineer

RH Relative Humidity

TSP Total Suspended Particulates

QA/QC Quality Assurance / Quality Control

SLM Sound Level Meter

WMP Waste Management Plan

#### **EXECUTIVE SUMMARY**

#### Introduction

- 1. This is the 4<sup>th</sup> Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the "Construction of Yung Shue Wan Helipad Works order No. YSW/01/03 under Contract No. CV/2004/03" (the Project). This report documents the findings of EM&A Works conducted in December 2007.
- 2. The site activities undertaken in the reporting month included:
  - Piling Works

## **Environmental Monitoring Works**

3. Environmental monitoring for the Project was performed in accordance with the updated EM&A Manual and the monitoring results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

4. Summary of the non-compliance of the reporting month is tabulated in Table I.

Table I Summary Table for Non-compliance Recorded in the Reporting Month

Parameter	No. of Ex	cceedance	No. of Exceedance Due to the Project		Action
	Action Level	Limit Level	Action Level	Limit Level	Taken
Noise	0	0	0	0	N/A
Water	0	0	0	0	N/A

#### Construction Noise

5. All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Water Quality

6. All water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit level exceedances were recorded.

#### **Environmental Licenses and Permits**

7. Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, An Environmental Permit No. EP-242/2006 was issued on 13 March 2006 for this Project (EP) to the CEDD as Permit Holder.

#### **Key Information in the Reporting Month**

8. Summary of key information in the reporting month is tabulated in Table II.

# Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0		N/A	N/A	
Changes to the assumptions and key construction / operation activities recorded	0		N/A	N/A	
Status of submissions under EP	0		N/A.	N/A	
Notifications of any summons & prosecutions received	0		N/A	N/A	

## **Future Key Issues:**

Major site activities for the coming two months include:

• Piling Works

#### 1. INTRODUCTION

#### **Background**

- 1.1 The Project "Construction of Yung Shue Wan Helipad" (Works order No.YSWH/01/03) under Contract No. CV/2004/03 was awarded to CWE-ZHEC Joint Venture (hereinafter called the "Contractor") by the Civil Engineering and Development Department (CEDD) of the Hong Kong Special Administrative Region (HKSAR).
- 1.2 The Project has been planned and managed in-house by the Land Works Division of CEDD on behalf of the Home Affairs Department (HAD). The Project mainly comprises the construction works of a helipad used solely for emergency purpose with diameter of 25 metres and an Emergency Vehicular Access of about 25 metres long and 3.5 metres wide connecting the helipad with existing road. The general layout of the Project is shown in Figure 1.1.
- 1.3 The Project is a 'designated project' under Item B.2, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) by virtue of being: "A helipad within 300m of existing or planned residential development". An environmental impact assessment (EIA) report has been prepared in 2005 for the Project to consider the key issues of noise, air quality, water quality, construction waste, ecological and cultural impacts, and identify possible mitigation measures.
- 1.4 An Environmental Permit No. EP-242/2006 was issued on 13 March 2006 for this Project (EP) to the CEDD as the Permit Holder. An updated Environmental Monitoring and Audit Manual (the EM&A Manual) was prepared to fulfill requirements stipulated in Condition 2.4 of the EP.
- 1.5 Cinotech Consultants Limited was commissioned by the CWE-ZHEC Joint Venture (the Contractor) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. The Updated EM&A Manual was prepared by Cinotech to fulfill the requirements of the EP. This is the 4<sup>th</sup> monthly EM&A report summarizing the EM&A works for the Project in December 2007.

#### **Project Organizations**

- 1.6 Different parties with different levels of involvement in the project organization include:
  - Project Proponent –Civil Engineering and Development Department (CEDD)
  - The Engineer of the Engineer's Representative (ER) –Civil Engineering and Development Department (CEDD)
  - Environmental Team (ET) Cinotech Consultants Limited.
  - Independent Environmental Checker (IEC) Mannings (Asia) Company Limited
  - Environmental Protection Department (EPD) Environmental Regulations Enforcer
  - Contractor CWE-ZHEC Joint Venture

- 1.7 The responsibilities of respective parties are detailed in Sections 1.21 to 1.38 of the Updated EM&A Manual of the Project.
- 1.8 The key contacts of the Project are shown in Table 1.1 and the organization chart of ET is shown in Figure 2.1.

**Table 1.1 Key Project Contacts** 

Party	Role	Name	Position	Phone No.	Fax No.
CEDD	Permit Holder	Mr. K.S Cheng	Engineer	2762 5455 2714 20	
CEDD	Termit Holder	Mr. M.O Chiu	Senior Inspector of Works	2762 5552	2714 2034
		Mr. Fung Ping Lun	Engineer	2762 5068	
CEDD	Engineer	Mr. K.S Cheng	Engineer	2762 5455	27142054
		Dr. Priscilla Choy	ET Leader	2151 2089	
Cinotech	Cinotech Environmental Team		Project Coordinator & Audit Team Leader	2151 2095	3107 1388
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
Mannings (asia)  Independent Environmental Checker		Mr. Mark Cheung	Independent Environmental Checker		31682022
		Mr. Simon Ng	Assistant Independent Environmental Checker 31682028		31082022
CWE-ZHEC Joint Venture  Contractor		Mr. Alan Mong	Site Agent	2727 0128	2379 5931
		Mr. Y.F. Chao	Project Manager	2727 0128	2379 5931

## **Construction Programme**

- 1.9 The site activities undertaken in the reporting month included:
  - Piling Works

## Monthly EM&A Report – December 2007

## **Summary of EM&A Requirements**

- 1.10 The EM&A programme requires construction phase monitoring construction noise and water quality and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
  - All monitoring parameters;
  - Action and Limit levels for all environmental parameters;
  - Event Action Plans;
  - Environmental mitigation measures, as recommended in the project EIA study final report; and
  - Environmental requirements in contract documents.
- 1.11 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.
- 1.12 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely water and noise levels and audit works for the Project in December 2007.

#### 2. NOISE

## **Monitoring Requirements**

2.1 Two noise monitoring stations, namely N3 and N5 were designated in the Updated EM&A Manual for impact monitoring. Appendix A shows the established Action and Limit Levels for the environmental monitoring works.

## **Monitoring Locations**

2.2 Noise monitoring was conducted at two designated monitoring stations as listed in Table 2.1. Figure 3.1 shows the locations of these stations.

**Table 2.1 Noise Monitoring Stations** 

Monitoring Stations	Locations
N3	North Lamma Clinic
N5	No. 105 Yung Shue Wan Main Street

## **Monitoring Equipment**

2.3 Table 2.2 summarizes the noise monitoring equipment. Copies of calibration certificates are provided in Appendix B.

**Table 2.2 Noise Monitoring Equipment** 

Equipment	Model and Make	Qty.
Integrating Sound Level Meter	B&K Model 2238	3
Calibrator	B&K 4231	2

## **Monitoring Parameters, Frequency and Duration**

2.4 Table 2.3 summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in Appendix D.

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<b>Table 2.3</b>	<b>Noise Monitoring</b>	Parameters, Freq	uency and Duration

Monitoring Stations	Parameter	Period	Frequency	Measurement
N3 N5	$\begin{array}{c} L_{10}(30 \text{ min.}) \\ dB(A) \\ L_{90}(30 \text{ min.}) \\ dB(A) \\ L_{eq}(30 \text{ min.}) \\ dB(A) \end{array}$	0700-1900 hrs on normal weekdays	Once per week	Façade

## Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was set on a tripod at a height of 1.2 m above the ground.
- For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB(A).
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

frequency weighting : Atime weighting : Fast

time measurement : 30 minutes / 5 minutes

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the  $L_{eq}$ ,  $L_{90}$  and  $L_{10}$  were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused temporarily during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

#### **Maintenance and Calibration**

- 2.5 The microphone head of the sound level meter and calibrator was cleaned with soft cloth regularly.
- 2.6 The meters were sent to the supplier to check and calibrate on a yearly interval.

#### **Results and Observations**

- 2.7 Noise monitoring at the two designated locations was conducted as scheduled in the reporting month.
- 2.8 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured Leq Baseline Leq = Measured CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the allowed CNL at each designated noise monitoring station are presented at Table 3.4.
- 2.9 No Action/Limit Level exceedance was recorded.
- 2.10 Noise monitoring results and graphical presentations are shown in Appendix E. In accordance with Condition 5.2 of the EP, all environmental monitoring data was made available to the public via internet access at the website http://nteema.cedd.gov.hk/YSWHelipad/.
- 2.11 The major noise source identified at the designated noise monitoring stations was the activities around Yung Shue Wan Playground.

Table 2.4 Baseline Noise Level and Allowed Construction Noise Level for Monitoring Stations

Station	Baseline Noise Level, dB (A)	Allowed CNL, dB (A)
N3 – North Lamma Clinic	60.8 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
	59.7 (at 1900 – 2300 hrs on all days & 0700 – 1900 hrs on holidays)	
	59.4 (at 2300 – 0700 hrs of the next day)	
N4 – Yung Shue Wan Playground	63.8 (at 0700 – 1900 hrs on normal weekdays)	75 (at 0700 – 1900 hrs on normal weekdays)
	61.4 (at 1900 – 2300 hrs on all days & 0700 – 1900 hrs on holidays)	
	63.6 (at 2300 – 0700 hrs of the next day)	

#### 3. WATER QUALITY

## **Monitoring Requirements**

3.1 Dissolved oxygen (DO concentration in mg/L and DO saturation in percentage), Turbidity (Tby in NTU), Suspended Solid (SS in mg/L), pH, salinity and both water and ambient temperature monitoring were conducted to monitor the water quality. Appendix A shows the established Action/Limit Levels for the environmental monitoring works.

## **Monitoring Locations**

3.2 Locations of designated Water Quality Monitoring Stations are shown in **Figure 3.1** and described in Table 3.1. Samples shall be taken at all designated Monitoring and Control Stations.

**Table 3.1** Locations for Water Quality Monitoring

Manitanina Stations	Coordinates		
Monitoring Stations	Northing (m)	Easting (m)	
Control Station			
C1	809 608.0	829 207.7	
Impact Stations			
M1	809 544.0	829 213.0	
M2	809 559.2	829 243.0	

## **Monitoring Equipment**

3.3 Table 3.2 summarizes the equipment used in the water quality monitoring program. All the monitoring equipment complied with the specifications is stipulated in the Updated EM&A Manual. Copies of the calibration certificates of the equipment are shown in Appendix B.

**Table 3.2** Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Multi-parameter Water Quality System	YSI 6820-C-M	2
Monitoring Position Equipment	"Magellan" Handheld GPS Model GPS-320	1

#### **Monitoring Parameters, Frequency and Duration**

3.4 Table 3.3 summarizes the monitoring parameters, monitoring period and frequencies of water quality monitoring.

**Table 3.3** Frequency and Parameters of Water Quality Monitoring

Station	Parameters	Frequency
C1	DO, SS, turbidity,	1 day per week during the marine work and
M1	salinity, pH &	3 days per week during the piling work, at
M2	temperature	mid-flood and mid-ebb

#### Monitoring Methodology, Calibration Details and QA/QC Procedures

#### Instrumentation

3.5 A multi-parameter meter (Model YSI 6820 C-M) was used to measure DO, DO saturation, turbidity, salinity and temperature.

## Operating/Analytical Procedures

- 3.6 At each measurement, two consecutive measurements of DO concentration, DO saturation, salinity, turbidity and temperature were taken. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.
- 3.7 For SS measurement, duplicate water samples for SS were taken and analysed at each monitoring station at each sample depth. The sample bottles were then packed in coolboxes (without being frozen), and delivered to a HOKLAS accredited laboratory for analysis of suspended solids concentrations within 24 hours.

#### Maintenance and Calibration

- 3.8 Before each round of monitoring, a zero check in distilled water was performed with the turbidity probe of YSI 6820-C-M. The probe was then calibrated with a solution of known NTU.
- 3.9 QA/QC procedures as attached in Appendix C are available for the SS analyzed in the HOKLAS-accredited laboratory, WELLAB Ltd.

#### **Results and Observations**

- 3.10 Water quality monitoring was conducted as scheduled in the reporting month. The monitoring data and graphical presentations of the monitoring results are shown in Appendix F. Details of the Exceedance Report are shown in **Appendix G**.
- 3.11 In accordance with Condition 5.2 of the EP, all environmental monitoring data was made available to the public via internet access at the website <a href="http://nteema.cedd.gov.hk/YSWHelipad/">http://nteema.cedd.gov.hk/YSWHelipad/</a>.
- 3.12 A total of 2 Action level and 2 Limit Level exceedances were recorded in the reporting month. All exceedances were considered not due to the project as no marine working activities were undertaken during the monitoring.

- 3.13 There were no major marine construction activities, such as marine piling work has been conducted during the monitoring that the exceedances were recorded.
- 3.14 The marine construction activities commenced on 12 November 2007. There is no Action/Limit Level exceedance was recorded during the marine construction activities.

#### 4. ENVIRONMENTAL AUDIT

#### **Site Audits**

- 4.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in Appendix H.
- 4.2 Site audits were conducted on 5<sup>th</sup>, 12<sup>th</sup>, 19<sup>th</sup> & 27<sup>th</sup> December 2007. No non-compliance was observed during the site audits.

## **Review of Environmental Monitoring Procedures**

4.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

#### *Noise Monitoring*

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

#### Water Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- The monitoring team recorded the weather condition on the monitoring day.

## Status of Environmental Licensing and Permitting

4.4 All permits/licenses obtained for the Project are summarized in Table 4.1.

#### **Status of Waste Management**

4.5 The amount of wastes generated by the activities of the Project in December 2007 is shown in Appendix I.

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 Table 4.1
 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Section	Status
1 ci ilit 140.	From	To	Section	Status
Environmental Per	rmit (EP)			
EP-242/2006	13/3/200	N/A	A helipad used solely for emergency purpose with diameter of 25 metres and an Emergency Vehicular Access of about 25 metres long and 3.5 metres wide connecting the helipad with existing road.	Valid

## **Implementation Status of Environmental Mitigation Measures**

4.6 According to the *EIAO Guidance Note No. 14/2003*, the key information in the EIA Report is summarized in Table 4.2. According to the EIA Report, air quality, noise and water quality would be the key issues during the construction and operation of the Yung Shue Wan Helipad. Details of the implementation of mitigation measures are provided in the Appendix K.

Table 4.2 Key Information in the EIA Report and the Status of EMIS

	Issues	Assumptions and Assessment	Recommended Mitigation Measures
	Air	With the implementation of dust suppression mitigation measures, the level of construction dust would comply with the relevant AQO.	<ul> <li>Restricting heights from which material are dropped</li> <li>Covering the materials on truck with tarpaulin sheet</li> <li>Watering of the dusty areas, at least twice a day</li> <li>Provide wheel-washing facilities at site exit(s)</li> <li>Traveling speeds should be controlled</li> </ul>
Construction	Noise	Noise level at most of NSRs would exceed the noise criteria without mitigation measures.	Good site practice, adoption of quiet construction plant, reduction of on-time operation of plant, movable noise barrier and avoid simultaneous noisy activities.
Con	Water	Adverse impacts on the water quality	Good site practice, adoption of use holding tank that should be fitted with a tight fitting seal, excavator grab seal is tightly closed and the hoist speed is suitably low, large objects should be removed from the excavator grab and use small diameter pre-bored piling instead of dredging and reclamation for construction of helipad

	Issues	Assumptions and Assessment	Recommended Mitigation Measures
	Ecolog	Ecology concentration, if unmitigated, it would not comply with the animals & Plants Ordinance (Protection of Endangered Species) (Cap. 187)	<ul> <li>Silt curtain should be installed</li> <li>Good site practice measures:</li> <li>Particular care should be taken when demolishing the existing concrete planter and decommissioning the silt curtain</li> <li>Materials storage areas should be located well away from the seawall and covered during the works.</li> <li>Holding tank that should be fitted with a tight fitting seal</li> <li>Excavator seal is tightly closed and the hoist speed is suitably low</li> <li>Large objects should be removed from the excavator grab and use small diameter prebored piling instead of dredging and reclamation for construction of helipad</li> </ul>
	Waste	Potential for environmental impacts (Visual impacts and nuisance)	Good site practice, adoption of proper on-site handling and storage (covered containers), reuse (of inert C&D materials) and off-site disposal (via approved waste collectors to approved waste facilities and/or disposal grounds) the generation.
peration	Noise	NSRs along the alignment would be exposed to noise level exceeding the noise limit without mitigation measures.	<ul> <li>Use of quieter helicopter type EC155B1 in priority</li> <li>Reduce the angle of the helicopter flights path</li> <li>The helipad will be solely for emergency use</li> </ul>
edO Obe	Waste	Potential for environmental impacts without mitigation measures.	<ul> <li>The helipad will only be used for emergency purposes.</li> <li>No equipment will be placed on the landing pad or along the EVA</li> </ul>

4.7 During the weekly environmental site inspections in the reporting period, no non-conformance was identified. There are no observations and recommendations.

## **Implementation Status of Event Action Plans**

4.8 The Event Action Plans for noise and water quality are presented in Appendix J.

#### **Construction Noise**

4.9 No Action/Limit Level exceedance was recorded for construction noise.

## Water Quality

4.10 No Action/Limit Level exceedances were recorded for water quality.

## **Summary of Complaints and Prosecutions**

- 4.11 No environmental prosecution and complaint was received in the reporting month.
- 4.12 No environmental prosecution was received in the reporting month.
- 4.13 There were no environmental complaints and no prosecution received since the commencement of the Project. The Complaint Log is attached in Appendix M.

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#### 5. FUTURE KEY ISSUES

## **Key Issues for the Coming Month**

- 5.1 Key environmental issues in the coming month include:
  - Generation of dust from operation of equipment.
  - Noise from operation equipment and machinery on-site.
  - Storage of chemicals/fuel and chemical waste/waste oil on site.
  - Contamination of marine water.

## **Monitoring Schedule for the Next Month**

5.2 The tentative environmental monitoring schedules for the next month are shown in Appendix D.

## **Construction Program for the Next Month**

5.3 The tentative construction program for the Project is provided in **Appendix L**.

#### 6. CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

6.1 Environmental monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.

## Construction Noise Monitoring

6.2 All construction noise monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

## Water Quality Monitoring

6.3 All water quality monitoring was performed as scheduled. No Action/Limit Level exceedances were recorded.

## Complaint and Prosecution

6.4 No environmental prosecution and complaint was received in the reporting month.

#### **Recommendations**

6.5 According to the environmental audit performed in the reporting month, the following recommendations were made:

#### **Dust Impact**

- To prohibit any open burning on site.
- To regularly maintain the machinery and vehicles on site.
- To follow up any exceedance caused by the construction works.
- To implement dust suppression measures on all haul roads, stockpiles, dry surfaces and excavation works.
- To provide hoarding

## Noise Impact

- To inspect the noise sources inside the site.
- To follow up any exceedance caused by the construction works.
- To space out noisy equipment and position the equipment as far away as possible from sensitive receivers.
- To provide temporary noise barriers for operations of noisy equipment near the noise sensitive receivers in an appropriate location.

#### Water Impact

- To identify any wastewater discharges from site.
- To provide silt curtain surrounding the whole of the piling site.
- To check the holding tank should be fitted with a tight fitting seal.
- To ensure the excavator grab seal is tightly closed.

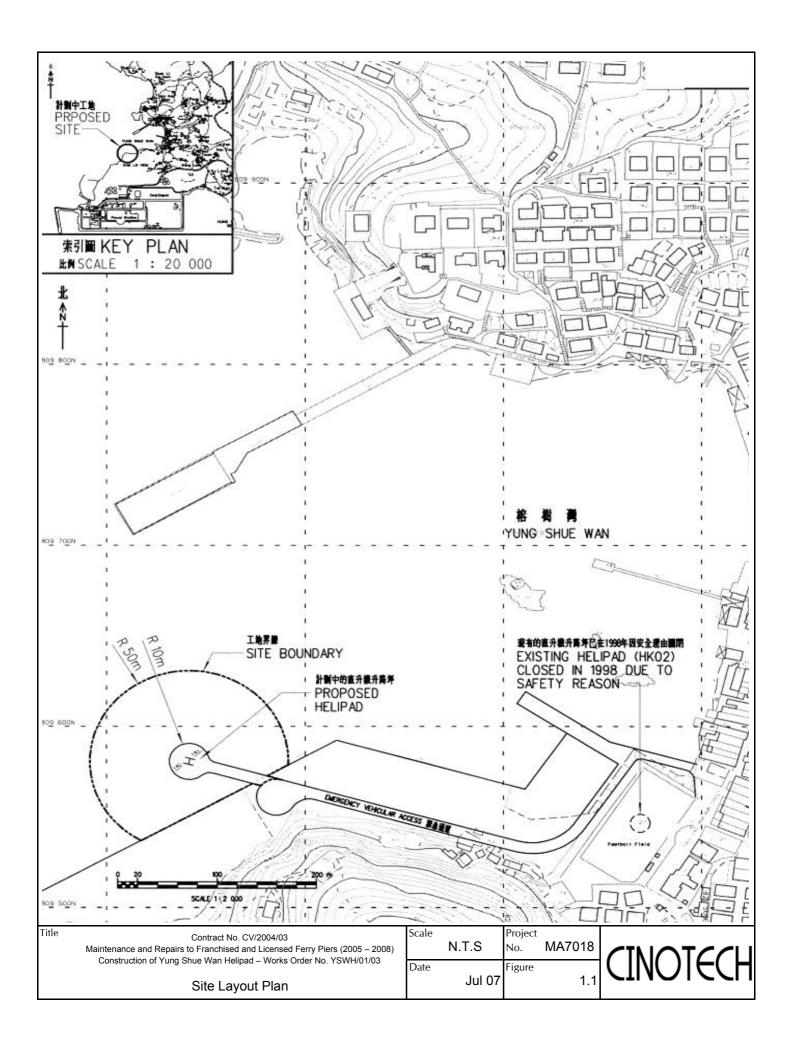
#### Waste/Chemical Management

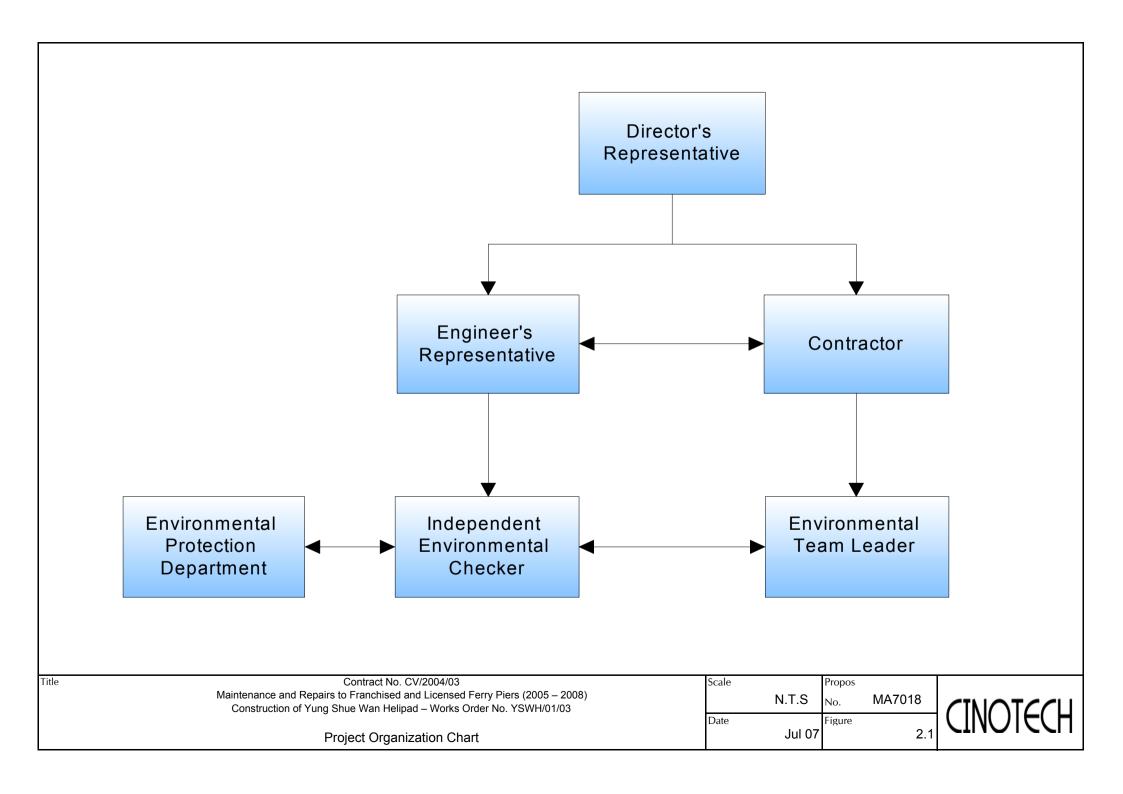
- To check for any accumulation of waste materials or rubbish on site.
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the site.
- To avoid improper handling or storage of oil drum on site.

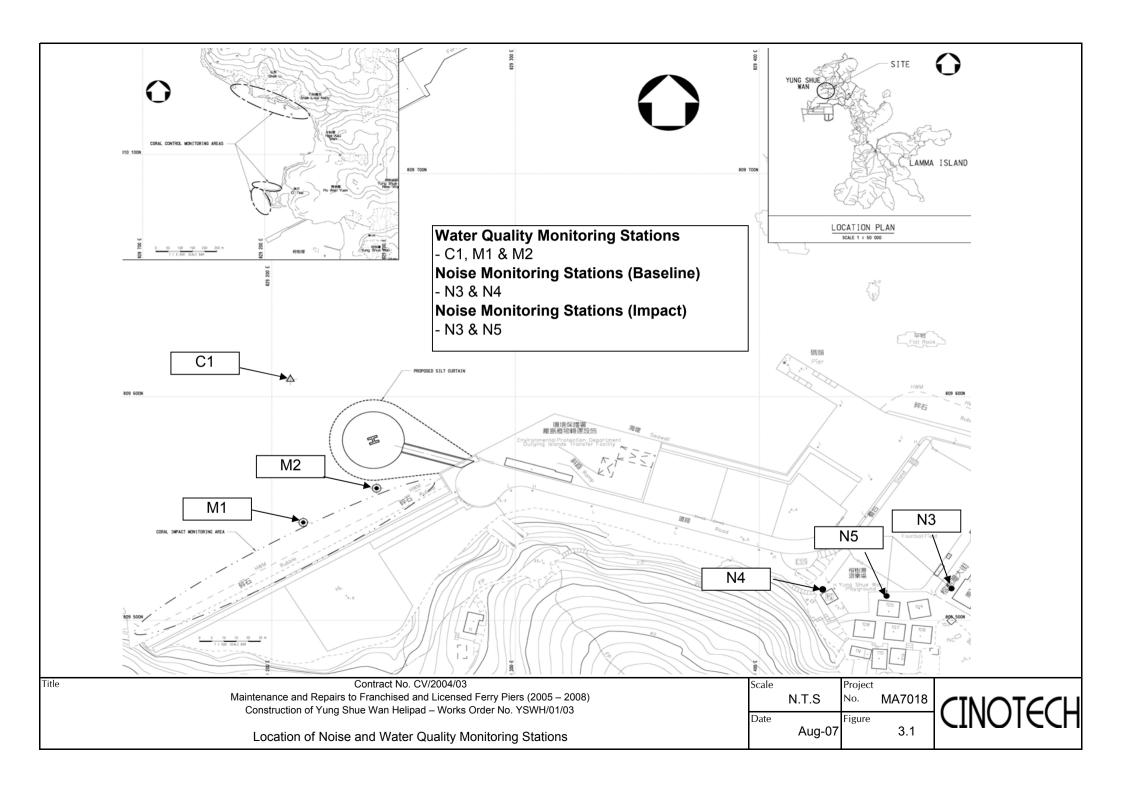
## **Ecology**

• To provide silt curtain, checked and maintenance throughout the construction period

# **FIGURES**







# APPENDIX A ACTION AND LIMIT LEVELS

#### **Action and Limit Levels**

**Table A-1** Action and Limit Level for Construction Noise

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

Table A-2 Action and Limit Level for Water Quality

Parameter (unit)	Action	Limit
Dissolved Oxygen (mg/L)	Surface and middle	Surface and middle
(surface, middle, bottom)	5%-ile of baseline for surface and	4 mg/L or 1%-ile of baseline
	middle layers	for surface and middle layers
	Bottom	Bottom
	5%-ile of baseline for bottom	2 mg/L or 1%-ile of baseline
	layer	for bottom layer
SS (mg/L)	95%-ile of baseline data or 120%	99%-ile of baseline or 130%
Depth average	of upstream control station's SS	of SS readings at the upstream
	at the same tide of the same day.	control station at the same tide
		of same day and specific
		sensitive receiver water quality
		requirements.
Turbidity (NTU)	95%-ile of baseline data or 120	99%-ile of baseline or 130%
(depth average)	% of upstream control station's	of turbidity at the upstream
	turbidity at the same tide of the	control station at the same tide
	same day.	of same day.

#### **Notes:**

- "Depth-averaged" is calculated by taking the arithmetic means of reading all three depths.
- For DO, non-compliance of the water quality limit occurs when monitoring result is lower than the limit.
- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the Engineer may amend the figures whenever it is considered as necessary

## APPENDIX B COPIES OF CALIBRATION CERTIFCATES

## WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center 13-15 Yuen Shun Circuit, Shatin, Hong Kong.

Tel: (852) 2898 7388 Fax: (852) 2898 7076

## **TEST REPORT**

APPLICANT: Cinotech Consultants Limited

1602-1610 Delta House,

3 On Yiu Street, Shatin, N.T. Test Report No.: C/N/61215/1
Date of Issue: 2006-12-15
Date Received: 2006-12-14
Date Tested: 2006-12-15
Date Completed: 2006-12-15
Next Due Date: 2007-12-14

ATTN:

Mr. Henry Leung

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## **Certificate of Calibration**

## Item for calibration:

Description

: Integrating Sound Level Meter

Manufacturer
Model No.
Serial No.
Microphone No.
Equipment No.

: 2289749 : N-01-01

: Brüel & Kjær

: B&K 2238 : 2337665

**Test conditions:** 

Room Temperatre

: 20 degree Celsius

Relative Humidity

: 60%

## **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE
Operation Manager



Unit C, 1/F., Goldlion Holdings Center, 13-15 Yuen Shun Circuit, Shatin, NT, HK. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

## TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: C/N/71213/1
Date of Issue: 2007-12-14
Date Received: 2007-12-13
Date Tested: 2007-12-14
Date Completed: 2007-12-14
Next Due Date: 2008-12-13

ATTN:

Mr. Henry Leung

Page:

1 of 1

## **Certificate of Calibration**

#### Item for calibration:

Description

: Integrating Sound Level Meter

Manufacturer Model No. Serial No. : Brüel & Kjær : B&K 2238 : 2337665

Microphone No.

: 2289749

Equipment No.

: N-01-01

#### Test conditions:

Room Temperatre

: 20 degree Celsius

Relative Humidity

: 60%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE Senior Chemist



Unit C, 1/F., Goldlion Holdings Center, 13-15 Yuen Shun Circuit, Shatin, NT, HK. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

#### TEST REPORT

APPLICANT: Cinotech Consultants Limited

1601-1610 Delta House,

3 On Yiu Street, Shatin, N.T. Test Report No.: C/N/70903-1
Date of Issue: 2007-09-03
Date Received: 2007-09-01
Date Tested: 2007-09-03
Date Completed: 2007-09-03
Next Due Date: 2008-09-02

ATTN:

Mr. Henry Leung

Page:

1 of 1

## Certificate of Calibration

#### Item for calibration:

Description : Integrating Sound Level Meter

Manufacturer : Brüel & Kjær Model No. : B&K 2238 Serial No. : 2359311 Microphone No. : 2346382 Equipment No. : N-01-03

Test conditions:

Room Temperatre : 22 degree Celsius

Relative Humidity : 62%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB	
94	94.0	
114	114.0	

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE Senior Chemist



Unit C, 1/F., Goldtion Holdings Center, 13-15 Yuen Shun Circuit, Shatin, NT, HK. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

#### TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: C/N/71015/1
Date of Issue: 2007-10-15
Date Received: 2007-10-13
Date Tested: 2007-10-13
Date Completed: 2007-10-15
Next Due Date: 2008-10-14

ATTN:

Mr. Henry Leung

Page:

1 of 1

## Certificate of Calibration

#### Item for calibration:

Description : Integrating Sound Level Meter

Manufacturer : Brüel & Kjær
Model No. : B&K 2238
Serial No. : 2394976
Microphone No. : 2407349
Equipment No. : N-01-05

Test conditions:

Room Temperatre : 21 degree Celsius

Relative Humidity : 60%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Senior Chemist



Unit C, 1/F., Goldlion Holdings Center, 13-15 Yuen Shun Circuit, Shatin, NT, HK. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

## **TEST REPORT**

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	C/N/71116/2
Date of Issue:	2007-11-16
Date Received:	2007-11-15
Date Tested:	2007-11-15
Date Completed:	2007-11-16
Next Due Date:	2008-11-15

ATTN:

Mr. Henry Leung

Page:

1 of 1

#### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: Brüel & Kjær

Model No.

: 4231

Serial No.

: 2326353

Project No. Equipment No. : C13 : N-02-01

#### **Test conditions:**

Room Temperatre

: 20 degree Celsius

Relative Humidity

: 59%

Pressure

: 1015.2 hPa

#### Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Senior Chemist

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## WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center 13-15 Yuen Shun Circuit, Shatin, Hong Kong.

Tel: (852) 2898 7388 Fax: (852) 2898 7076

# TEST REPORT

APPLICANT: Cinotech Consultants Limited

1602-1610 Delta House,

3 On Yiu Street, Shatin, N.T.

Test Report No.:	C/06/70305
Date of Issue:	2007-03-05
Date Received:	2007-03-03
Date Tested:	2007-03-03
Date Completed:	2007-03-05
Next Due Date:	2008-03-04

ATTN:

Mr. Henry Leung

Page:

1 of 1

#### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: Brüel & Kjær

Model No. Serial No. Project No.

: 2343007 : C13

: 4231

Equipment No.

: N-02-02

#### Test conditions:

Room Temperatre

: 20 degree Celsius

Relative Humidity

: 65%

Pressure

: 1020.1hPa

#### Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.2 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

Operation Manager





### TEST REPORT

APPLICANT: Cinotech Consultants Limited

1602-1610 Delta House,

3 On Yiu Street, Shatin, N.T.

Test Report No.:	C/N/70903-3
Date of Issue:	2007-09-03
Date Received:	2007-09-01
Date Tested:	2007-09-03
Date Completed:	2007-09-03
Next Due Date:	2008-09-02

ATTN:

Mr. Henry Leung

Page:

1 of 1

### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: Brüel & Kjær

Model No.

: 4231

Serial No.

: 2412367

Equipment No.

: N-02-03

#### **Test conditions:**

Room Temperatre

: 22 degree Celsius

Relative Humidity

: 62%

### Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

#### Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE Senior Chemist

APPENDIX C QUALITY CONTROL REPORTS FOR SS LABORATORY ANALYSIS





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05807

Date of Issue: 2007/12/04

Date Received: 2007/12/03

Date Tested: 2007/12/03 Date Completed: 2007/12/04

Page: 1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/03

Number of Sample: 28

Custody No.:

MA7018/71203

\*

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M2bf	15	13	14	89

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05818

Date of Issue: 2007/12/06

Date Received: 2007/12/05

Date Tested: 2007/12/05

Date Completed: 2007/12/06
Page: 1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/05

Number of Sample: 28

20

Custody No.: MA7018/71205

\*

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M2bf	27	24	14	101

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05836

Page:

Date of Issue: 2007/12/10

Date Received: 2007/12/07

Date Tested: 2007/12/07

Date Completed: 2007/12/10

1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site: Construction of Yung Shue Wan Helipad

M A 7010

Project No.:

MA7018

Sampling Date:

2007/12/07

Number of Sample: 28

28

Custody No.: MA7018/71207

\*

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
C1SE	18	18	1	99

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05846

Page:

Date of Issue: 2007/12/11

Date Received: 2007/12/10

Date Tested: 2007/12/10 Date Completed: 2007/12/11

1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/10

Number of Sample: 28

Custody No.:

MA7018/71210

\*

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M2BE	18	16	11	94

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05861

Date of Issue: 2007/12/13

Date Received: 2007/12/12

Date Tested: 2007/12/12 Date Completed: 2007/12/13

ATTN: Mr. Henry Leung Page: 1 of 1

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/12

Number of Sample: 28

28

Custody No.: MA7018/71212

\*

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M1SE	25	28	10	97

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05879

Page:

Date of Issue: 2007/12/17

Date Received: 2007/12/14

Date Tested: 2007/12/14

Date Completed: 2007/12/17

1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site: Construction of Yung Shue Wan Helipad

Project No.: MA7018

Sampling Date: 2007/12/14

Number of Sample: 28

Custody No.: MA7018/71214

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M1SE	22	25	15	97

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05894

Date of Issue: 2007/12/18

Date Received: 2007/12/17

Date Tested: 2007/12/17 Date Completed: 2007/12/18

**ATTN: Mr. Henry Leung** Page: 1 of 1

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/17

Number of Sample: 28

Custody No.:

MA7018/71217

\*

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M1SE	27	27	3	93

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05913

Date of Issue: 2007/12/20

Date Received: 2007/12/19

Date Tested: 2007/12/19

Date Completed: 2007/12/20
Page: 1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site: Construction of Yung Shue Wan Helipad

MA7018

Project No.: Sampling Date:

2007/12/19

Number of Sample: 28

28

Custody No.:

MA7018/71219

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L		
M1BE	12	11	4	96

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For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05929

Date of Issue: 2007/12/24

Date Received: 2007/12/21

Date Tested: 2007/12/21 Date Completed: 2007/12/24

Page: 1 of 1

**ATTN: Mr. Henry Leung** 

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

Sampling Site:

2007/12/21

Number of Sample: 28

28

Custody No.:

MA7018/71221

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L		
M2BF	18	21	13	92

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For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05946

Date of Issue: 2007/12/27

Date Received: 2007/12/24

Date Tested: 2007/12/24 Date Completed: 2007/12/27

Page: 1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/24

Number of Sample: 28

28

Custody No.:

MA7018/71224

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, Trial 2, Difference,			
	mg/L	mg/L	%	
M1SE	15	15	0	99

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05954

Page:

Date of Issue: 2007/12/28

Date Received: 2007/12/27

Date Tested: 2007/12/27

Date Completed: 2007/12/28

1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site: Construction of Yung Shue Wan Helipad

Project No.: MA7018

Sampling Date: 2007/12/27

Number of Sample: 28

Custody No.: MA7018/71227

Total Suspended Solids	Du	plicate Analy	QC Recovery, %	
Sampling Point	Trial 1,	Trial 2,	Difference,	
	mg/L	mg/L	%	
M2BF	9	9	7	99

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05961

Date of Issue: 2007/12/31

Date Received: 2007/12/28

Date Tested: 2007/12/28 Date Completed: 2007/12/31

Page: 1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/28

Number of Sample: 28

28

Custody No.:

MA7018/71228

Total Suspended Solids	Du	plicate Anal	QC Recovery, %	
Sampling Point	Trial 1,	Trial 2,	Difference,	
	mg/L	mg/L	%	
M2SF	9	8	8	90

PREPARED AND CHECKED BY:

atiablese

For and On Behalf of WELLAB Ltd.

PATRICK TSE





**APPLICANT: Cinotech Consultants Limited** 

RM 1710, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Laboratory No.: 05973

Page:

Date of Issue: 2008/01/02

Date Received: 2007/12/31

Date Tested: 2007/12/31

Date Completed: 2008/01/02

1 of 1

**ATTN: Mr. Henry Leung** 

Sampling Site:

Construction of Yung Shue Wan Helipad

Project No.:

MA7018

Sampling Date:

2007/12/31

Number of Sample: 28

28

Custody No.:

MA7018/71231

\*

Total Suspended Solids	Du	plicate Analy	QC Recovery, %	
Sampling Point	Trial 1,	Trial 2,	Difference,	
	mg/L	mg/L	%	
C1BF	25	24	1	91

PREPARED AND CHECKED BY:

PatrileTse

For and On Behalf of WELLAB Ltd.

PATRICK TSE

APPENDIX D ENVIRONMENTAL MONITORING SCHEDULE

# Contract No. CV/2004/03 - Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 – 2008) Construction of Yung Shue Wan Helipad – Works Order No. YSWH/01/03 Tentative Impact Noise Monitoring Schedule for December 2007

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2-Dec	3-Dec	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec
			Noise Monitoring at N3 and N5			
9-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec
			Noise Monitoring at N3 and N5			
16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec
			Noise Monitoring at N3 and N5			
23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec
				Noise Monitoring at N3 and N5		
30-Dec	31-Dec	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

# Contract No. CV/2004/03 - Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 – 2008) Construction of Yung Shue Wan Helipad – Works Order No. YSWH/01/03 Tentative Impact Water Quality Monitoring Schedule for December 2007

Sunday	Mond	ay	Tuesday	Wednesday	Thursday	Frid	ay	Saturday
2-Dec		3-Dec	4-Dec	5-De	c (	6-Dec	7-Dec	8-Dec
	Mid-Ebb Mid-Flood	8:00 14:15		Mid-Ebb 9:5 Mid-Flood 15:4		Mid-Ebb Mid-Flood	11:27 16:43	
9-Dec		10-Dec	11-Dec	12-De	c 13	3-Dec	14-Dec	15-Dec
	Mid-Flood Mid-Ebb	8:00 12:31		Mid-Flood 9:1 Mid-Ebb 14:2		Mid-Flood Mid-Ebb	10:39 15:44	
16-Dec		17-Dec	18-Dec	19-De	c 20	0-Dec	21-Dec	22-Dec
	Mid-Flood Mid-Ebb	12:36 17:00		Mid-Ebb 8:0 Mid-Flood 13:5		Mid-Ebb Mid-Flood	9:27 14:59	
23-Dec		24-Dec	25-Dec	26-De	27	7-Dec	28-Dec	29-De
	Mid-Ebb Mid-Flood	12:21 17:04				9:39 Mid-Flood 14:41 Mid-Ebb	10:20 15:31	
30-Dec		31-Dec	1-Jan	2-Ja	n	3-Jan	4-Jan	5-Jai
	Mid-Ebb Mid-Flood	12:18 17:30						

The schedule may be changed due to unforeseen circumstances (adverse weather, etc) NA indicated favourable tide occurs during non-working hours

# Contract No. CV/2004/03 - Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 – 2008) Construction of Yung Shue Wan Helipad – Works Order No. YSWH/01/03 Tentative Impact Noise Monitoring Schedule for January 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30-Dec	31-Dec	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan
			Noise Monitoring at N3 and N5			
6-Jan	7-Jan	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan
			Noise Monitoring at N3 and N5			
13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
			Noise Monitoring at N3 and N5			
20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan
			Noise Monitoring at N3 and N5			
27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb
			Noise Monitoring at N3 and N5			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

# Contract No. CV/2004/03 - Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 – 2008) Construction of Yung Shue Wan Helipad – Works Order No. YSWH/01/03 Tentative Impact Water Quality Monitoring Schedule for January 2008

Sunday	Mond		Tuesday	Wedneso	lay	Thursday	Frida	у	Saturday	
30-Dec		31-Dec	1-Jan		2-Jan	3-Jan		4-Jan		5-Jai
	Mid-Flood Mid-Ebb	12:18 17:30		Mid-Ebb Mid-Flood	8:00 13:17		Mid-Ebb Mid-Flood	9:25 14:19		
6-Jan		7-Jan	8-Jan		9-Jan	10-Jan		11-Jan		12-Jai
	Mid-Ebb Mid-Flood	11:44 16:16		Mid-Flood Mid-Ebb	8:07 13:00		Mid-Flood Mid-Ebb	9:02 14:16		
13-Jan		14-Jan	15-Jan		16-Jan	17-Jan		18-Jan		19-Jar
	Mid-Flood Mid-Ebb	10:42 16:39		Mid-Flood Mid-Ebb	12:06 18:00		Mid-Ebb Mid-Flood	8:00 13:28		
20-Jan		21-Jan	22-Jan		23-Jan	24-Jan		25-Jan		26-Ja
	Mid-Ebb Mid-Flood	11:36 16:21		Mid-Flood Mid-Ebb	8:00 13:07		Mid-Flood Mid-Ebb	8:45 14:12		
27-Jan		28-Jan	29-Jan		30-Jan	31-Jan		1-Feb		2-Fel
	Mid-Flood Mid-Ebb	10:01 15:59		Mid-Flood Mid-Ebb	11:02 18:00		Mid-Ebb Mid-Flood	8:00 13:28		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc) NA indicated favourable tide occurs during non-working hours

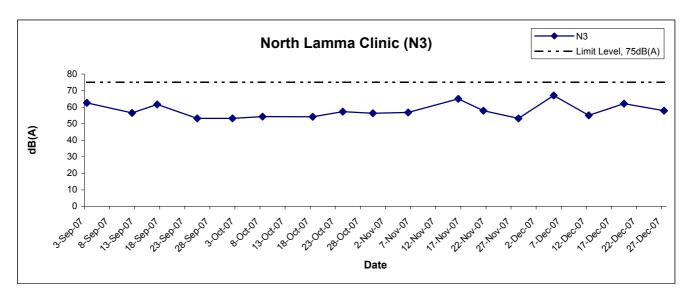
APPENDIX E NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

### Appendix E - Noise Monitoring Results

Location N3 -	North Lamm	a Clinic									
Data	Time	\A/a ath ar	dB (A) (30-min)								
Date	Time	Weather	L <sub>eq</sub>	L <sub>10</sub>	L 90						
5-Dec-07	13:00	Sunny	67.0	70.0	52.0						
12-Dec-07	13:00	Sunny	55.0	57.5	51.0						
19-Dec-07	11:20	Cloudy	62.1	65.0	58.0						
27-Dec-07	10:35	Sunny	57.8	58.5	54.0						
		Average	62.8	65.6	54.6						
		Minimum	55.0	57.5	51.0						
		Maximum	67.0	70.0	58.0						

Location N5 -	No. 105 Yun	Shue Wan Ma	in Street								
Doto	Time	Weather	dB (A) (30-min)								
Date	Time	vveatriei	L <sub>eq</sub>	L <sub>10</sub>	L 90						
5-Dec-07	13:35	Sunny	69.9	73.5	54.0						
12-Dec-07	13:35	Sunny	54.3	55.5	53.0						
19-Dec-07	10:40	Cloudy	64.8	67.0	59.5						
27-Dec-07	11:10	Sunny	57.6	58.5	54.5						
		Average	65.3	68.5	56.1						
		Minimum	54.3	55.5	53.0						
		Maximum	69.9	73.5	59.5						

### **Noise Levels**





itle	Contract No. CV/2004/03
	Maintananae and Banaira to Franchicad and Licensed Farry Dior

Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 - 2008) Construction of Yung Shue Wan Helipad - Works Order No. YSWH/01/03

Graphical Presentation of Construction Noise Monitoring Results

Scale Project
No. MA7018

Dec 07 Appendix



APPENDIX F WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATION

### Water Quality Monitoring Results at C1 - Mid-Ebb Tide

Date	Weather	Sea	Sampling	Depti	) (m)	Water Temp	perature (°C)	Ambient Ten	nperature (°C)	ŗ	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolv	ed Oxygen	(mg/L)	1	Turbidity(NTL	I)	Suspe	ended Solids	(mg/L)
Date	Condition	Condition**	Time	Бери	1 (111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	21.7 21.7	21.7	21.7 21.7	21.7	7.4 7.4	7.4	26.3 26.4	26.4	60.6 61.1	60.9	5.5 5.5	5.5		2.5 2.7	2.6		17.0 16.0	16.5	
3-Dec-07	Sunny	Moderate	08:00	Middle	3	21.1 21.1	21.1	21.7 21.7	21.7	7.2 7.2	7.2	26.6 26.6	26.6	65.2 63.5	64.4	5.9 6.1	6.0	5.8	3.7	3.8	5.3	12.0 12.0	12.0	15.7
				Bottom	5	20.3	20.3	21.7	21.7	7.3 7.3	7.3	29.3 29.4	29.4	65.4 66.4	65.9	6.7	6.7	6.7	9.3 9.6	9.5		18.0 19.0	18.5	
				Surface	1	19.9	19.9	20.5	20.5	7.2	7.2	26.0	26.1	60.4	60.7	5.4	5.4		2.3	2.4		15.0	15.0	
5 Dec 07	Cummu	Madarata	09:50		3	19.9 19.9	19.9	20.5 20.5	20.5	7.2 7.0	7.0	26.1 26.3	26.3	60.9 65.0	64.2	5.4 5.8	5.9	5.7	2.5 3.5	3.6	5.1	15.0 16.0	16.0	15.7
5-Dec-07	Sunny	Moderate	09.50	Middle	5	19.9 19.8		20.5 20.5		7.0 7.2		26.3 29.0		63.3 65.2	-	6.0 6.6		0.0	3.7 9.1		5.1	16.0 16.0		15.7
				Bottom		19.8 26.9	19.8	20.5 19.4	20.5	7.1 7.5	7.2	29.1 31.1	29.1	66.2 83.4	65.7	6.6 7.4	6.6	6.6	9.4 5.2	9.3		16.0 18.0	16.0	<del></del>
				Surface	1	26.6 26.5	26.8	19.4	19.4	7.5 7.2	7.5	31.2 31.4	31.2	82.4 91.2	82.9	7.3	7.4	7.3	5.2	5.2		18.0	18.0	l
7-Dec-07	Sunny	Moderate	11:01	Middle	3	26.5 25.2	26.5	19.4	19.4	7.3	7.3	31.5 32.1	31.5	89.5 76.5	90.4	7.5	7.1		6.3	6.1	6.2	16.0	16.0	18.7
				Bottom	5	24.6	24.9	19.4	19.4	7.4	7.4	32.3	32.2	78.8	77.7	6.3 6.4	6.4	6.4	7.5	7.4		22.0	22.0	<u> </u>
				Surface	1	21.7 21.7	21.7	20.7 20.7	20.7	7.5 7.4	7.5	25.7 25.8	25.8	59.9 60.4	60.2	5.4 5.3	5.4	5.7	2.4 2.6	2.5		16.0 16.0	16.0	
10-Dec-07	Sunny	Moderate	12:00	Middle	3	21.1 21.1	21.1	20.7 20.7	20.7	7.2 7.2	7.2	26.0 26.0	26.0	64.5 62.8	63.7	5.8 5.9	5.9		3.6 3.8	3.7	5.2	18.0 18.0	18.0	15.8
				Bottom	5	21.3 21.3	21.3	20.7 20.7	20.7	7.4 7.3	7.4	28.7 28.8	28.8	64.7 65.7	65.2	6.6 6.6	6.6	6.6	9.2 9.5	9.4		13.0 14.0	13.5	
				Surface	1	21.6 21.7	21.7	19.5 19.5	19.5	7.5 7.5	7.5	25.9 26.0	26.0	60.0 60.5	60.3	5.5 5.4	5.5	5.0	2.5 2.7	2.6		19.0 19.0	19.0	
12-Dec-07	Sunny	Moderate	14:00	Middle	3	21.1 21.1	21.1	19.5 19.5	19.5	7.2 7.2	7.2	26.2 26.2	26.2	64.6 62.9	63.8	5.9 6.0	6.0	5.8	3.7 3.9	3.8	5.3	26.0 26.0	26.0	20.8
				Bottom	5	21.3 21.2	21.3	19.5 19.5	19.5	7.4 7.4	7.4	28.9 29.0	29.0	64.8 65.8	65.3	6.7 6.7	6.7	6.7	9.3 9.6	9.5		17.0 18.0	17.5	
				Surface	1	20.1	20.1	19.5 19.5	19.5	7.4 7.4	7.4	26.1 26.2	26.2	60.4 60.9	60.7	5.6 5.6	5.6		2.5 2.7	2.6		22.0 22.0	22.0	
14-Dec-07	Sunny	Moderate	15:30	Middle	3	20.1 20.1 20.1	20.1	19.5 19.5	19.5	7.2 7.2	7.2	26.4 26.4	26.4	65.0 63.3	64.2	6.0	6.1	5.9	3.7	3.8	5.3	22.0 22.0	22.0	23.3
				Bottom	5	20.0	20.0	19.5 19.5	19.5	7.3	7.3	29.1	29.2	65.2 66.2	65.7	6.8	6.8	6.8	9.3 9.6	9.5		26.0 26.0	26.0	
				Surface	1	26.7	26.7	20.5	20.5	7.5	7.5	30.0	30.0	74.5	74.4	5.7	5.7		6.5	6.7		19.0	18.5	
17-Dec-07	Sunny	Moderate	17:02	Middle	3	26.7 26.7	26.8	20.5	20.5	7.5 7.3	7.3	29.9 30.2	30.4	74.2	72.6	5.6 6.6	6.6	6.2	7.1	7.3	7.6	18.0 23.0	23.0	23.5
				Bottom	5	26.8 26.8	26.8	20.5	20.5	7.3	7.4	30.5	30.8	71.4	70.9	6.5	6.6	6.6	7.4 8.7	8.7		23.0	29.0	
				Surface	1	26.8	23.1	20.5 19.7	19.7	7.4	7.6	30.7 32.8	32.8	71.4 96.5	96.2	6.6	6.7		3.3	3.5		29.0 13.0	13.5	
19-Dec-07	Sunny	Moderate	08:43	Middle	3	23.1 23.1	23.1	19.7 19.7	19.7	7.5 7.3	7.3	32.8 32.8	32.8	95.9 95.1	94.8	6.7 6.6	6.6	6.7	3.6	3.4	3.5	14.0 10.0	10.0	17.2
13-060-07	Guilly	Moderate	00.40		5	23.1 23.1	23.1	19.7 19.7	19.7	7.3 7.5	7.5	32.8 32.8	32.8	94.5 94.6	94.4	6.6 6.6	6.6	6.6	3.5 3.6	3.6	0.0	10.0 28.0	28.0	
				Bottom		23.1 27.0		19.7 22.3		7.4 7.5		32.8 32.0		94.1 76.4	-	6.6 6.7		0.0	3.6 5.7			28.0 14.0		<del></del>
				Surface	1	27.0 26.6	27.0	22.3 22.3	22.3	7.5	7.5	32.1 32.3	32.1	75.4 84.2	75.9	6.6	6.7	6.3	5.9	5.8		14.0	14.0	
21-Dec-07	Sunny	Moderate	09:31	Middle	3	26.6 25.3	26.6	22.3 22.3	22.3	7.3 7.4	7.3	32.3 35.0	32.3	82.5 69.5	83.4	5.8 5.6	5.9		6.5 7.9	6.6	6.8	18.0 19.0	17.5	16.8
				Bottom	5	24.7	25.0	22.3	22.3	7.4 7.4	7.4	35.1	35.1	71.8	70.7	5.8	5.7	5.7	8.2	8.1		19.0	19.0	<u> </u>

Remarks: \* DA: Depth-Averaged
 \*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 \*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at C1 - Mid-Ebb Tide

Date	Weather	Sea	Sampling	Depth	) (m)	Water Temp	perature (°C)	Ambient Ten	nperature (°C)	1	ρH	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)	1	Turbidity(NTL	J)	Suspended Solids (mg/L)		
Date	Condition	Condition**	Time	Вери	· (···/)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	18.9 18.9	18.9	19.5 19.5	19.5	7.4 7.4	7.4	25.6 25.6	25.6	60.8 62.4	61.6	5.6 5.6	5.6	5.9	2.7 3.0	2.9		17.0 18.0	17.5	
24-Dec-07	Fine	Moderate	12:20	Middle	3	18.9 19.0	19.0	19.5 19.5	19.5	7.1 7.2	7.2	25.8 26.2	26.0	61.9 63.2	62.6	6.0 6.2	6.1	5.8	5.0 5.2	5.1	5.7	16.0 16.0	16.0	16.3
				Bottom	5	19.0 19.0	19.0	19.5 19.5	19.5	7.3 7.3	7.3	26.5 26.4	26.5	63.3 64.0	63.7	6.2 6.2	6.2	6.2	9.0 9.2	9.1		15.0 16.0	15.5	
				Surface	1	19.7 19.7	19.7	21.2 21.2	21.2	7.4 7.4	7.4	30.9 30.9	30.9	71.6 71.5	71.6	5.9 5.9	5.9	5.9	3.2 3.2	3.2		6.0 7.0	6.5	
27-Dec-07	Fine	Moderate	14:19	Middle	3	20.2 20.2	20.2	21.2 21.2	21.2	7.2 7.3	7.3	30.9 30.9	30.9	71.0 71.1	71.1	5.9 5.9	5.9	5.8	3.8 4.0	3.9	3.9	12.0 12.0	12.0	9.5
				Bottom	5	19.7 19.6	19.7	21.2 21.2	21.2	7.4 7.4	7.4	30.8 30.8	30.8	76.9 77.0	77.0	5.9 5.9	5.9	5.9	4.6 4.7	4.7		10.0 10.0	10.0	
				Surface	1	19.7 19.7	19.7	21.8 21.8	21.8	7.4 7.4	7.4	31.5 31.6	31.6	74.2 74.2	74.2	5.3 5.3	5.3	5.3	3.2 3.1	3.2		9.0 9.0	9.0	
28-Dec-07	Sunny	Moderate	15:17	Middle	3	20.4 20.3	20.4	21.8 21.8	21.8	7.1 7.1	7.1	31.7 31.7	31.7	74.1 74.2	74.2	5.3 5.3	5.3	0.0	3.8 3.9	3.9	4.0	7.0 8.0	7.5	7.3
				Bottom	5	19.8 19.8	19.8	21.8 21.8	21.8	7.3 7.3	7.3	31.9 31.9	31.9	75.0 75.4	75.2	5.4 5.4	5.4	5.4	4.7 4.9	4.8		5.0 6.0	5.5	
				Surface	1	19.0 19.0	19.0	18.5 18.5	18.5	7.3 7.3	7.3	26.1 26.2	26.2	60.3 60.8	60.6	5.5 5.5	5.5	5.8	2.5 2.7	2.6		8.0 8.0	8.0	
31-Dec-07	Sunny	Moderate	17:00	Middle	3	19.0 19.0	19.0	18.5 18.5	18.5	7.1 7.1	7.1	26.4 26.4	26.4	64.9 63.2	64.1	5.9 6.1	6.0	5.0	3.7 3.9	3.8	5.3	12.0 12.0	12.0	9.3
				Bottom	5	18.9 18.8	18.9	18.5 18.5	18.5	7.2 7.2	7.2	29.1 29.2	29.2	65.1 66.1	65.6	6.7 6.7	6.7	6.7	9.3 9.6	9.5		8.0 8.0	8.0	

Remarks: \* DA: Depth-Averaged
 \*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 \*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at C1 - Mid-Flood Tide

Date	Weather	Sea	Sampling	Dept	h (m)	Water Temp	erature (°C)	Ambient Tem	perature (°C)	p	Н	Salin	ity ppt	DO Satu	uration (%)	Dissol	ved Oxygen	(mg/L)	-	Turbidity(NTL	J)	Suspe	nded Solids	s (mg/L)
Date	Condition	Condition**	Time	Бері	11 (111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	20.2 20.2	20.2	22.6 22.6	22.6	7.3 7.3	7.3	25.7 25.7	25.7	60.9 62.5	61.7	5.4 5.4	5.4	E 7	2.6 2.9	2.8		9.0 10.0	9.5	
3-Dec-07	Sunny	Moderate	14:00	Middle	3	20.2 20.3	20.3	22.6 22.6	22.6	7.4 7.4	7.4	25.9 26.3	26.1	62.0 63.3	62.7	5.8 6.0	5.9	5.7	4.9 5.1	5.0	5.6	25.0 25.0	25.0	15.8
				Bottom	5	20.3 20.3	20.3	22.6 22.6	22.6	7.3 7.3	7.3	26.6 26.4	26.5	63.4 64.1	63.8	6.0	6.0	6.0	8.9 9.1	9.0		13.0 13.0	13.0	1
				Surface	1	19.7	19.7	21.4	21.4	7.0	7.0	25.4	25.4	60.7	61.5	5.3	5.3		2.4	2.6		19.0	19.0	
5-Dec-07	Sunny	Moderate	15:00	Middle	3	19.7 19.7	19.8	21.4 21.4	21.4	7.0 7.2	7.2	25.4 25.6	25.8	62.3 61.8	62.5	5.3 5.7	5.8	5.6	4.7	4.8	5.4	19.0 18.0	18.5	19.2
	,			Bottom	5	19.8 19.8	19.8	21.4 21.4	21.4	7.2 7.1	7.1	26.0 26.3	26.2	63.1 63.2	63.6	5.9 5.9	5.9	5.9	4.9 8.7	8.8		19.0 20.0	20.0	1
				Surface	1	19.8 26.0	26.0	21.4 18.5	18.5	7.0 7.3	7.3	26.1 30.6	30.6	63.9 81.1	80.5	5.9 5.2	5.2	0.0	8.9 5.2	5.4		20.0	20.0	
7.0 07	0	Madagata	40:00			26.0 26.0		18.5 18.5		7.3 7.4		30.6 30.8		79.8 85.8	-	5.2 6.0		5.8	5.5 6.9		7.0	20.0 17.0		40.0
7-Dec-07	Sunny	Moderate	16:32	Middle	3	26.1 26.1	26.1	18.5 18.5	18.5	7.5 7.3	7.5	31.1 31.5	31.0	84.3 84.8	85.1	6.5 6.1	6.3	0.4	7.2 8.5	7.1	7.0	17.0 17.0	17.0	18.0
			l	Bottom	5	26.1 21.2	26.1	18.5 21.6	18.5	7.3 7.3	7.3	31.3 25.1	31.4	83.3 60.2	84.1	6.1 5.3	6.1	6.1	8.4 2.5	8.5		17.0 15.0	17.0	1
				Surface	1	21.2	21.2	21.6 21.6	21.6	7.3 7.4	7.3	25.1 25.3	25.1	61.8 61.3	61.0	5.3 5.7	5.3	5.6	2.8	2.7		15.0 18.0	15.0	-
10-Dec-07	Sunny	Moderate	08:00	Middle	3	21.3	21.3	21.6	21.6	7.4	7.4	25.7	25.5	62.6	62.0	5.9	5.8		5.0	4.9	5.5	18.0	18.0	15.8
				Bottom	5	21.3 21.3	21.3	21.6 21.6	21.6	7.3 7.3	7.3	26.0 25.8	25.9	62.7 63.4	63.1	5.9 5.9	5.9	5.9	8.8 9.0	8.9		26.0 26.0	26.0	
				Surface	1	21.1 21.1	21.1	20.4 20.4	20.4	7.3 7.3	7.3	25.3 25.3	25.3	60.3 61.9	61.1	5.4 5.4	5.4	5.7	2.6 2.9	2.8		24.0 24.0	24.0	
12-Dec-07	Sunny	Moderate	09:00	Middle	3	21.2 21.3	21.3	20.4 20.4	20.4	7.4 7.4	7.4	25.5 25.9	25.7	61.4 62.7	62.1	5.8 6.0	5.9		4.9 5.1	5.0	5.6	28.0 28.0	28.0	24.0
				Bottom	5	21.3 21.3	21.3	20.4 20.4	20.4	7.3 7.3	7.3	26.2 26.0	26.1	62.8 63.5	63.2	6.0 6.0	6.0	6.0	8.9 9.1	9.0		20.0 20.0	20.0	
				Surface	1	19.9 19.9	19.9	20.4 20.4	20.4	7.2 7.2	7.2	25.5 25.5	25.5	60.7 62.3	61.5	5.5 5.5	5.5	F 0	2.6 2.9	2.8		25.0 24.0	24.5	
14-Dec-07	Sunny	Moderate	10:20	Middle	3	19.9 20.0	20.0	20.4 20.4	20.4	7.4 7.4	7.4	25.7 26.1	25.9	61.8 63.1	62.5	5.9 6.1	6.0	5.8	4.9 5.1	5.0	5.6	30.0 30.0	30.0	28.5
				Bottom	5	20.0 20.0	20.0	20.4 20.4	20.4	7.3 7.2	7.3	26.4 26.3	26.4	63.2 63.9	63.6	6.1 6.1	6.1	6.1	8.9 9.1	9.0		31.0 31.0	31.0	
				Surface	1	27.6 27.6	27.6	24.2 24.2	24.2	7.3	7.4	30.5 30.6	30.6	80.1 81.1	80.6	7.1 7.1	7.1		6.5 6.5	6.5		28.0 28.0	28.0	
17-Dec-07	Sunny	Moderate	12:31	Middle	3	27.2 27.2	27.2	24.2 24.2	24.2	7.5 7.5	7.5	30.8 30.8	30.8	89.9 88.2	89.1	6.4 6.3	6.4	6.8	6.1 6.5	6.3	6.8	27.0 28.0	27.5	28.2
				Bottom	5	25.4 25.3	25.4	24.2	24.2	7.4 7.4	7.4	33.5 33.6	33.6	75.3 77.5	76.4	6.0 6.2	6.1	6.1	7.4 7.7	7.6		29.0 29.0	29.0	1
				Surface	1	23.0	23.0	20.4	20.4	7.4	7.4	32.8	32.8	97.8	97.7	6.8	6.8		4.2	4.2		28.0	27.0	
19-Dec-07	Sunny	Moderate	14:27	Middle	3	22.9 22.9	22.9	20.4	20.4	7.4 7.5	7.5	32.8 32.7	32.7	97.5 96.0	95.9	6.8	6.7	6.8	2.8	3.0	3.7	26.0 15.0	15.0	20.8
	,			Bottom	5	22.8 22.8	22.8	20.4	20.4	7.5 7.4	7.4	32.7 32.7	32.7	95.8 94.5	94.6	6.7 6.6	6.6	6.6	3.1	4.0		15.0 20.0	20.5	1
				Surface	1	22.8 26.1	26.1	20.4 24.8	24.8	7.4 7.3	7.3	32.7 31.4	31.5	94.6 68.8	68.7	6.6 5.2	5.2		4.0 5.5	5.6		21.0 10.0	10.0	<del>                                     </del>
21-Dec-07	Sunny	Moderate	15:02	Middle	3	26.1 26.1	26.2	24.8 24.8	24.8	7.3 7.5	7.5	31.5 31.6	31.8	68.5 68.5	68.6	5.2 5.2	5.2	5.2	5.7 6.9	6.9	7.2	10.0 17.0	17.5	13.8
21-060-07	Sunny	iviouerate	15.02	Bottom	5	26.2 26.2	26.2	24.8 24.8	24.8	7.5 7.4		32.0 32.3	32.2	68.7 65.5	-	5.2 6.2	6.2	6.0	6.9 9.2	9.2	1.2	18.0 14.0		13.0
				Bottom	5	26.2	20.2	24.8	24.8	7.3	7.4	32.1	32.2	65.7	65.6	6.2	0.∠	6.2	9.1	9.2		14.0	14.0	

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at C1 - Mid-Flood Tide

Date	Weather	Sea	Sampling	Depth	h (m)	Water Tem	perature (°C)	Ambient Ter	nperature (°C)		рН	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)		Turbidity(NTL	J)	Suspe	nded Solids	(mg/L)
Date	Condition	Condition**	Time	Вери	(111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	19.1 19.1	19.1	20.4 20.4	20.4	7.2 7.2	7.2	26.2 26.3	26.3	60.5 61.0	60.8	5.7 5.7	5.7	6.0	2.6 2.8	2.7		4.0 5.0	4.5	
24-Dec-07	Fine	Moderate	17:00	Middle	3	19.1 19.1	19.1	20.4 20.4	20.4	7.3 7.3	7.3	26.5 26.5	26.5	65.1 63.4	64.3	6.1 6.3	6.2	0.0	3.8 4.0	3.9	5.4	17.0 16.0	16.5	11.3
				Bottom	5	19.0 19.0	19.0	20.4 20.4	20.4	7.2 7.2	7.2	29.2 29.3	29.3	65.3 66.3	65.8	6.9 6.9	6.9	6.9	9.4 9.7	9.6		13.0 13.0	13.0	
				Surface	1	21.6 21.6	21.6	19.1 19.1	19.1	7.3 7.3	7.3	30.7 30.8	30.8	84.3 84.1	84.2	5.5 5.5	5.5	5.5	3.7 3.7	3.7		6.0 7.0	6.5	
27-Dec-07	Fine	Moderate	09:12	Middle	3	21.1 21.0	21.1	19.1 19.1	19.1	7.4 7.4	7.4	31.0 31.0	31.0	83.6 83.2	83.4	5.4 5.4	5.4	5.5	4.7 4.7	4.7	4.5	7.0 7.0	7.0	7.2
				Bottom	5	20.6 20.5	20.6	19.1 19.1	19.1	7.3 7.3	7.3	31.0 31.0	31.0	83.2 83.0	83.1	5.4 5.4	5.4	5.4	4.9 5.0	5.0		8.0 8.0	8.0	
				Surface	1	20.9 20.8	20.9	19.7 19.7	19.7	7.2 7.2	7.2	31.3 31.3	31.3	72.2 72.2	72.2	5.1 5.1	5.1	5.1	4.1 4.0	4.1		7.0 7.0	7.0	
28-Dec-07	Sunny	Moderate	10:38	Middle	3	20.3 20.3	20.3	19.7 19.7	19.7	7.3 7.3	7.3	31.9 32.0	32.0	72.1 72.2	72.2	5.1 5.1	5.1	0.1	5.1 5.2	5.2	5.0	11.0 11.0	11.0	8.5
				Bottom	5	19.7 19.7	19.7	19.7 19.7	19.7	7.2 7.2	7.2	32.1 32.1	32.1	73.0 73.4	73.2	5.2 5.2	5.2	5.2	5.6 5.5	5.6		7.0 8.0	7.5	
				Surface	1	18.8 18.8	18.8	18.9 18.9	18.9	7.1 7.1	7.1	25.5 25.5	25.5	60.6 62.2	61.4	5.4 5.4	5.4	5.7	2.6 2.9	2.8		23.0 23.0	23.0	
31-Dec-07	Sunny	Moderate	12:22	Middle	3	18.8 18.9	18.9	18.9 18.9	18.9	7.3 7.3	7.3	25.7 26.1	25.9	61.7 63.0	62.4	5.8 6.0	5.9	5.1	4.9 5.1	5.0	5.6	23.0 23.0	23.0	23.7
				Bottom	5	18.9 18.9	18.9	18.9 18.9	18.9	7.2 7.1	7.2	26.4 26.2	26.3	63.1 63.8	63.5	6.0 6.0	6.0	6.0	8.9 9.1	9.0		25.0 25.0	25.0	

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M1 - Mid-Ebb Tide

Date	Weather	Sea	Sampling	Depth	(m)	Water Temp	perature (°C)	Ambient Ten	nperature (°C)	ŗ	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolv	ed Oxygen	(mg/L)		Turbidity(NTL	J)	Suspe	ended Solids	(mg/L)
Date	Condition	Condition**	Time	Бери	(111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	20.1 20.4	20.3	21.7 21.7	21.7	7.3 7.3	7.3	26.2 26.3	26.3	61.7 65.0	63.4	5.7 5.8	5.8		3.1 3.3	3.2		21.0 21.0	21.0	
3-Dec-07	Sunny	Moderate	08:11	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	-	3.6	-	-	18.8
				Bottom	3	20.2	20.2	21.7	21.7	7.4	7.4	26.6	26.6	61.9	60.7	5.8	5.9	5.9	3.9	4.0		17.0	16.5	
						20.2 19.6		21.7	1	7.4 7.0		26.6 25.9		59.4 61.5	1	6.0 5.6			4.1 2.9	<u> </u>		16.0 15.0		<b></b>
				Surface	1	19.9	19.8	20.5	20.5	7.0	7.0	26.0	26.0	64.8	63.2	5.7	5.7	5.7	3.1	3.0		14.0	14.5	1
5-Dec-07	Sunny	Moderate	10:00	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	3.4	-	-	13.3
				Bottom	3	19.7 19.7	19.7	20.5 20.5	20.5	7.2 7.2	7.2	26.3 26.3	26.3	61.7 59.2	60.5	5.7 5.9	5.8	5.8	3.7 3.9	3.8		12.0 12.0	12.0	
				Surface	1	26.5 26.7	26.6	19.4 19.4	19.4	7.4 7.4	7.4	31.1 31.2	31.2	87.7 91.4	89.6	6.5 6.6	6.6		5.2 5.4	5.3		13.0 13.0	13.0	
7-Dec-07	Sunny	Moderate	11:11	Middle	-	-	-	-	-	-	-	-	-	-	-		-	6.6	-	-	5.9	-	-	14.5
				Bottom	3	26.6 26.6	26.6	19.4 19.4	19.4	7.5 7.5	7.5	31.5 31.5	31.5	87.9 85.4	86.7	6.4 6.2	6.3	6.3	6.2 6.5	6.4		16.0 16.0	16.0	1
				Surface	1	21.1	21.3	20.7	20.7	7.3	7.3	25.6	25.7	61.0	62.7	5.5	5.6		3.0	3.1		17.0	16.5	
10-Dec-07	Sunny	Moderate	12:11	Middle	_	21.4	-	20.7	_	7.3	-	25.7	-	64.3	_	5.7	_	5.6	3.2	_	3.5	16.0	_	17.3
	,			Bottom	3	21.2	21.2	20.7	20.7	7.4	7.4	26.0	26.0	61.2	60.0	5.7	5.8	5.8	3.8	3.9		18.0	18.0	1
				Surface	1	21.2 21.1	21.3	20.7 19.5	19.5	7.4 7.3	7.3	26.0 25.8	25.9	58.7 61.1	62.8	5.9 5.6	5.7	0.0	4.0 3.1	3.2		18.0 25.0	24.5	<del>                                     </del>
12-Dec-07	Cummu	Madarata	14:11	Middle	'	21.4	21.3	19.5 -	19.5	7.3	7.5	25.9	25.9	64.4	02.0	5.8	5.7	5.7	3.3		3.6	24.0		24.8
12-Dec-07	Sunny	Moderate	14.11	ivildale		-	-	-	-	-	-		-		-	-	-		-	-	3.0		-	24.0
				Bottom	3	21.2 21.2	21.2	19.5 19.5	19.5	7.4 7.4	7.4	26.2 26.2	26.2	61.3 58.8	60.1	5.8 6.0	5.9	5.9	3.9 4.1	4.0		25.0 25.0	25.0	<u>L</u>
				Surface	1	19.8 20.1	20.0	19.5 19.5	19.5	7.3 7.3	7.3	26.0 26.1	26.1	61.5 64.8	63.2	5.8 5.9	5.9	5.9	3.1 3.3	3.2		22.0 22.0	22.0	
14-Dec-07	Sunny	Moderate	15:40	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	-	3.6	-	-	21.8
				Bottom	3	19.9 19.9	19.9	19.5 19.5	19.5	7.4 7.4	7.4	26.4 26.4	26.4	61.7 59.2	60.5	5.9 6.1	6.0	6.0	3.9 4.1	4.0		21.0 22.0	21.5	1
				Surface	1	26.7 26.8	26.8	20.5 20.5	20.5	7.4 7.4	7.4	30.1 30.2	30.2	74.3 74.4	74.4	6.9	6.9		7.5 7.8	7.7		27.0 27.0	27.0	
17-Dec-07	Sunny	Moderate	17:11	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	-	-	7.7	-	-	25.0
				Bottom	3	26.8 26.8	26.8	20.5	20.5	7.5 7.5	7.5	30.3 30.3	30.3	74.5 73.5	74.0	6.7	6.8	6.8	7.7 7.5	7.6		22.0 24.0	23.0	
				Surface	1	22.9	22.9	19.7	19.7	7.4	7.4	32.7	32.7	91.0	91.0	6.7	6.7		3.8	3.9		21.0	21.0	
19-Dec-07	Sunny	Moderate	08:36	Middle	_	22.9	_	19.7	_	7.4	_	32.7	_	91.0	_	6.7	_	6.7	3.9	_	3.9	21.0	_	16.8
	,			Bottom	3	22.8	22.8	19.7	19.7	7.5	7.5	32.8	32.8	91.0	91.0	6.7	6.7	6.7	3.9	3.8		12.0	12.5	
					1	22.8 26.6	26.8	19.7 22.3	22.3	7.5 7.4	7.4	32.8 31.9	32.0	90.9 80.7	82.6	6.7 5.8	5.9	0.7	3.6 5.9	5.8		13.0 19.0		
04 D 67	0	Madazz	00:44	Surface	- 1	26.9	20.0	22.3	22.3	7.4		32.0		84.4		5.9	5.9	5.9	5.7		0.0	19.0	19.0	45.0
21-Dec-07	Sunny	Moderate	09:41	Middle	-	26.7	-	22.3	-	7.5	-	32.3	-	80.9		5.7	-		6.5	-	6.2	11.0	-	15.3
				Bottom	3	26.7	26.7	22.3	22.3	7.5	7.5	32.3	32.3	78.4	79.7	5.6	5.7	5.7	6.5	6.5		12.0	11.5	<u> </u>

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M1 - Mid-Ebb Tide

Date	Weather	Sea	Sampling	Depti	h (m)	Water Temp	perature (°C)	Ambient Terr	nperature (°C)	ŗ	Н	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)	1	Turbidity(NTL	J)	Suspe	nded Solids	(mg/L)
Date	Condition	Condition**	Time	Бери	. ()	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	19.0 19.0	19.0	19.5 19.5	19.5	7.2 7.3	7.3	25.8 25.9	25.9	64.0 61.4	62.7	5.8 5.8	5.8	5.8	5.2 5.4	5.3		15.0 15.0	15.0	
24-Dec-07	Fine	Moderate	12:30	Middle	ı	-	-	-	-	-	-	1 1	-	-	-	-	-	5.0		-	5.5	-	-	17.5
				Bottom	3	19.0 19.1	19.1	19.5 19.5	19.5	7.4 7.4	7.4	26.0 26.0	26.0	61.2 60.5	60.9	5.9 5.9	5.9	5.9	5.5 5.7	5.6		20.0 20.0	20.0	
				Surface	1	19.6 19.6	19.6	21.2 21.2	21.2	7.3 7.3	7.3	30.9 30.9	30.9	77.2 76.4	76.8	5.9 5.9	5.9	5.9	3.9 3.8	3.9		9.0 8.0	8.5	
27-Dec-07	Fine	Moderate	14:24	Middle	1	-	-	-	-	-	-	-	-	-	-	-	-	5.8	-	-	4.5	-	-	8.3
				Bottom	3	20.7 20.7	20.7	21.2 21.2	21.2	7.5 7.5	7.5	30.9 30.9	30.9	76.4 76.6	76.5	5.8 5.8	5.8	5.8	5.0 5.0	5.0		8.0 8.0	8.0	
				Surface	1	19.8 19.8	19.8	21.8 21.8	21.8	7.2 7.2	7.2	31.6 31.6	31.6	82.9 81.4	82.2	6.0 5.9	6.0	6.0	3.8 3.9	3.9		8.0 8.0	8.0	
28-Dec-07	Sunny	Moderate	15:22	Middle	ı	-	-	-	-	-	-	1 1	-	-	-	-	-	0.0	-	-	4.5	-	-	8.0
				Bottom	3	20.7 20.7	20.7	21.8 21.8	21.8	7.4 7.4	7.4	31.6 31.6	31.6	78.9 78.1	78.5	5.7 5.6	5.7	5.7	5.0 5.1	5.1		8.0 8.0	8.0	
				Surface	1	18.7 19.0	18.9	18.5 18.5	18.5	7.2 7.2	7.2	26.0 26.1	26.1	61.4 64.7	63.1	5.7 5.8	5.8	5.8	3.1 3.3	3.2	•	6.0 6.0	6.0	
31-Dec-07	Sunny	Moderate	17:10	Middle	,	-	-	-	-	-	-	1 1	-	-	-	-	-	5.0	-	-	3.6	-	-	8.5
				Bottom	3	18.8 18.8	18.8	18.5 18.5	18.5	7.3 7.3	7.3	26.4 26.4	26.4	61.6 59.1	60.4	5.8 6.0	5.9	5.9	3.9 4.1	4.0		11.0 11.0	11.0	

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M1 - Mid-Flood Tide

Date	Weather	Sea	Sampling	Dept	h (m)	Water Temp	perature (°C)	Ambient Ten	nperature (°C)	p	Н	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)	1	Turbidity(NTL	J)	Suspe	ended Solids	(mg/L)
Date	Condition	Condition**	Time	Бері	11 (111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	20.3 20.3	20.3	22.6 22.6	22.6	7.3 7.4	7.4	25.9 26.0	26.0	64.1 61.5	62.8	5.6 5.6	5.6		5.1 5.2	5.2		15.0 16.0	15.5	
3-Dec-07	Sunny	Moderate	14:11	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-	-	5.4	-	-	16.3
				Bottom	4	20.3 20.3	20.3	22.6 22.6	22.6	7.4 7.4	7.4	26.0 26.1	26.1	61.3 60.6	61.0	5.7 5.7	5.7	5.7	5.4 5.6	5.5		17.0 17.0	17.0	
				Surface	1	19.8 19.8	19.8	21.4 21.4	21.4	7.2 7.2	7.2	25.6 25.7	25.7	63.9 61.3	62.6	5.5 5.5	5.5		4.9 5.1	5.0		16.0 16.0	16.0	
5-Dec-07	Sunny	Moderate	15:10	Middle	-	-	-		-	-	-	-	-	-	-	-	-	5.5	-	-	5.2	-	-	13.0
				Bottom	4	19.8 19.8	19.8	21.4	21.4	7.1 7.1	7.1	25.7 25.8	25.8	61.1 60.4	60.8	5.6 5.6	5.6	5.6	5.2 5.4	5.3		10.0 10.0	10.0	•
				Surface	1	26.0	26.0	18.5	18.5	7.4	7.4	30.8	30.8	80.8	81.0	6.3	6.4		7.3	7.5		16.0	16.0	
7-Dec-07	Sunny	Moderate	16:41	Middle	-	26.0	-	18.5	-	7.4	-	30.7	-	81.2	-	6.4	-	6.4	7.6	-	7.5	16.0	-	12.8
	,			Bottom	4	26.1	26.1	18.5	18.5	7.4	7.4	30.9	30.9	81.1	80.6	6.1	6.2	6.2	7.5	7.4		9.0	9.5	
				Surface	1	26.1	21.3	18.5 21.6	21.6	7.4	7.4	30.9 25.3	25.4	63.4	62.1	6.3 5.5	5.5		7.3 5.0	5.1		10.0	15.0	
10-Dec-07	Sunny	Moderate	08:11	Middle	-	21.3	-	21.6	-	7.4	-	25.4	-	60.8	-	5.5	-	5.5	5.1	-	5.3	15.0	-	17.3
				Bottom	4	21.3	21.3	21.6	21.6	7.4	7.4	25.4	25.5	60.6	60.3	5.5	5.6	5.6	5.3	5.4		10.0	10.0	
				Surface	1	21.3 21.2	21.2	21.6 20.4	20.4	7.4 7.4	7.4	25.5 25.5	25.6	59.9 63.5	62.2	5.6 5.6	5.6		5.5 5.1	5.2		10.0 18.0	18.0	<del>                                     </del>
12-Dec-07	Sunny	Moderate	09:11	Middle	_	21.2		20.4		7.4	-	25.6		60.9	-	5.6 -	-	5.6	5.2	-	5.4	18.0	-	16.8
	,			Bottom	4	21.2	21.3	20.4	20.4	7.4	7.4	25.6	25.7	60.7	60.4	5.6	5.7	5.7	5.4	5.5		15.0	15.5	1
				Surface	1	21.3	20.0	20.4	20.4	7.4	7.4	25.7 25.7	25.8	63.9	62.6	5.7 5.7	5.7		5.6 5.1	5.2		16.0 12.0	12.5	<u> </u>
14-Dec-07	Sunny	Moderate	10:30	Middle	-	20.0	-	20.4	-	7.4	-	25.8	-	61.3	-	5.7	-	5.7	5.3	-	5.4	13.0	-	18.3
	,			Bottom	4	20.0	20.1	20.4	20.4	7.3	7.3	25.9	25.9	61.1	60.8	5.8	5.8	5.8	5.4	5.5		24.0	24.0	1
				Surface	1	20.1 27.2	27.4	20.4 24.2	24.2	7.3 7.4	7.5	25.9 30.4	30.5	60.4 86.4	88.1	5.8 6.3	6.3		5.6 6.5	6.6		24.0 23.0	23.5	
17-Dec-07	Sunny	Moderate	12:41	Middle	_	27.5	-	24.2	_	7.5	_	30.6	_	89.7	-	6.3	-	6.3	6.7	_	6.6	24.0	-	25.3
	,			Bottom	4	27.3	27.3	24.2	24.2	7.5	7.5	30.8	30.8	86.6	85.4	6.1	6.1	6.1	6.4	6.6		27.0	27.0	
				Surface	1	27.3	23.0	24.2	20.4	7.5 7.5	7.5	30.8	32.8	90.6	90.6	6.0	6.7		3.6	3.6		27.0	22.0	
19-Dec-07	Sunny	Moderate	14:38	Middle	-	22.9	-	20.4	-	7.5	-	32.8	-	90.6	-	6.7	-	6.7	3.6	-	4.1	22.0	-	18.3
	,			Bottom	3	23.1	23.1	20.4	20.4	7.5	7.5	32.8	32.8	91.1	91.1	6.7	6.7	6.7	4.1	4.5		15.0	14.5	1
				Surface	1	23.1	26.1	20.4	24.8	7.5 7.4	7.4	32.8 31.6	31.6	91.0 68.5	68.6	6.7 6.4	6.5		8.2	8.0		14.0 15.0	15.5	
21-Dec-07	Sunny	Moderate	15:11	Middle	-	26.1		24.8		7.4	-	31.6	-	68.7	-	6.5	-	6.5	7.7	-	8.1	16.0	-	14.5
				Bottom	4	26.2	26.2	24.8	24.8	7.5	7.5	31.7	31.8	68.8	68.3	6.2	6.3	6.3	8.2	8.2		13.0	13.5	1
				Dollo.II	<u> </u>	26.2	_0	24.8		7.5		31.8	00	67.8	00.0	6.4	0.0	0.0	8.1	J.2		14.0		<u> </u>

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M1 - Mid-Flood Tide

Date	Weather	Sea	Sampling	Depth	h (m)	Water Temp	perature (°C)	Ambient Ten	nperature (°C)		Н	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)	7	Turbidity(NTL	J)	Susper	nded Solids	(mg/L)
Dute	Condition	Condition**	Time	Вери	()	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	18.8 19.1	19.0	20.4 20.4	20.4	7.3 7.3	7.3	26.1 26.2	26.2	61.6 64.9	63.3	5.9 6.0	6.0	6.0	3.2 3.4	3.3		10.0 10.0	10.0	
24-Dec-07	Fine	Moderate	17:10	Middle		-	-		-	-	-		-	-	-	-	-	0.0	-	-	3.7	-	1	11.0
				Bottom	4	18.9 18.9	18.9	20.4 20.4	20.4	7.3 7.3	7.3	26.5 26.5	26.5	61.8 59.3	60.6	6.0 6.2	6.1	6.1	4.0 4.2	4.1		12.0 12.0	12.0	
				Surface	1	21.2 21.2	21.2	19.1 19.1	19.1	7.4 7.4	7.4	30.8 30.8	30.8	76.2 75.9	76.1	5.4 5.4	5.4	5.4	4.0 4.0	4.0		7.0 6.0	6.5	
27-Dec-07	Fine	Moderate	09:18	Middle	i	-	-	1 1	-	-	-	1 1	-	-	-	-	-	5.	-	-	5.3	-	i	6.3
				Bottom	4	19.8 19.8	19.8	19.1 19.1	19.1	7.5 7.4	7.5	30.9 30.9	30.9	75.5 75.5	75.5	5.3 5.3	5.3	5.3	6.3 6.7	6.5		6.0 6.0	6.0	
				Surface	1	20.9 20.9	20.9	19.7 19.7	19.7	7.3 7.3	7.3	31.3 31.2	31.3	80.9 79.4	80.2	5.8 5.7	5.8	5.8	3.9 4.0	4.0		10.0 10.0	10.0	
28-Dec-07	Sunny	Moderate	10:43	Middle	i	-	-	1 1	-	-	-	1 1	-	-	-	-	-	0.0	-	-	5.3	-	-	10.0
				Bottom	4	20.3 20.3	20.3	19.7 19.7	19.7	7.4 7.3	7.4	32.0 32.0	32.0	76.9 76.1	76.5	5.5 5.4	5.5	5.5	6.5 6.6	6.6		10.0 10.0	10.0	
				Surface	1	18.8 18.9	18.9	18.9 18.9	18.9	7.3 7.3	7.3	25.7 25.8	25.8	63.8 61.2	62.5	5.6 5.6	5.6	5.6	5.1 5.3	5.2		4.0 6.0	5.0	
31-Dec-07	Sunny	Moderate	12:32	Middle	ı	-	-		-	-	-	1 1	-	-	_	-	-	5.0	-	-	5.4	-	-	8.8
				Bottom	3	18.9 19.0	19.0	18.9 18.9	18.9	7.3 7.2	7.3	25.8 25.9	25.9	61.0 60.3	60.7	5.7 5.7	5.7	5.7	5.4 5.6	5.5		13.0 12.0	12.5	

Remarks: \* DA: Depth-Averaged
 \*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
 \*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M2 - Mid-Ebb Tide

Date	Weather	Sea	Sampling	Depth	(m)	Water Temp	erature (°C)	Ambient Ten	nperature (°C)	ŗ	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolv	ed Oxygen	(mg/L)		Turbidity(NTL	J)	Suspe	ended Solids	(mg/L)
Date	Condition	Condition**	Time	Бери	(111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	20.5 20.4	20.5	21.7 21.7	21.7	7.4 7.4	7.4	26.3 26.3	26.3	64.1 65.1	64.6	5.3 5.4	5.4		2.1 2.1	2.1		19.0 18.0	18.5	
3-Dec-07	Sunny	Moderate	08:19	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	-	-	3.6	-	-	15.3
				Bottom	3	19.9	19.7	21.7	21.7	7.4	7.4	27.1	27.3	63.7	63.3	5.7	5.7	5.7	4.9	5.1		12.0	12.0	1
						19.4 20.0		21.7		7.4 7.1		27.5 26.0		62.8 63.9		5.7 5.2			5.2 1.9			12.0 15.0	igspace	<u> </u>
				Surface	1	19.9	20.0	20.5	20.5	7.1	7.2	26.0	26.0	64.9	64.4	5.3	5.3	5.3	1.9	1.9		15.0	15.0	
5-Dec-07	Sunny	Moderate	10:10	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	3.4	-	-	18.0
				Bottom	3	19.4 18.9	19.2	20.5 20.5	20.5	7.1 7.1	7.1	26.8 27.2	27.0	63.5 62.6	63.1	5.6 5.6	5.6	5.6	4.7 4.9	4.8		21.0 21.0	21.0	
				Surface	1	26.9 26.4	26.7	19.4 19.4	19.4	7.4 7.4	7.4	31.1 31.4	31.3	90.1 91.1	90.6	6.5 6.6	6.6		4.7 5.1	4.9		18.0 18.0	18.0	
7-Dec-07	Sunny	Moderate	11:22	Middle	-	-	-	-	-	-	-	-	-	-	-		-	6.6	-	-	6.4	-	-	18.3
				Bottom	3	26.3 26.0	26.2	19.4 19.4	19.4	7.4 7.4	7.4	32.0 32.4	32.2	89.7 91.8	90.8	6.6 6.8	6.7	6.7	7.6 8.1	7.9		19.0 18.0	18.5	
				Surface	1	21.5	21.5	20.7	20.7	7.4	7.4	25.7	25.7	63.4	63.9	5.1	5.2		2.0	2.0		13.0	13.0	
10-Dec-07	Sunny	Moderate	12:22	Middle		21.4	_	20.7	_	7.4	-	25.7	-	64.4	_	5.2	-	5.2	2.0	_	3.5	13.0	-	15.5
	,			Bottom	3	20.9	20.7	20.7	20.7	7.4	7.4	26.5	26.7	63.0	62.6	5.6	5.6	5.6	4.8	5.0		18.0	18.0	
				Surface	1	20.4 21.5	21.5	20.7 19.5	19.5	7.3 7.4	7.4	26.9 25.9	25.9	62.1 63.5	64.0	5.6 5.2	5.3		5.1 2.1	2.1		18.0 18.0	18.0	
12-Dec-07	Sunny	Moderate	14:22	Middle	'	21.4	21.5	19.5	19.5	7.4		25.9	25.5	64.5	-	5.3	5.5	5.3	2.1		3.6	18.0	-	15.3
12-Dec-07	Sullily	Woderate	14.22	ivildule		-	-	-	-	-		-	-	-		-	-		-	_	3.0	-	<u> </u>	10.5
				Bottom	3	20.8 20.4	20.6	19.5 19.5	19.5	7.4 7.4	7.4	26.7 27.1	26.9	63.1 62.2	62.7	5.7 5.7	5.7	5.7	4.9 5.2	5.1		12.0 13.0	12.5	
				Surface	1	20.2 20.1	20.2	19.5 19.5	19.5	7.4 7.4	7.4	26.1 26.1	26.1	63.9 64.9	64.4	5.4 5.5	5.5	5.5	2.1 2.1	2.1		18.0 18.0	18.0	
14-Dec-07	Sunny	Moderate	15:50	Middle	-	-	-	-	-		-	-	-	-	-		-	5.5	-	-	3.6	-	-	17.8
				Bottom	3	19.6 19.1	19.4	19.5 19.5	19.5	7.3 7.3	7.3	26.9 27.3	27.1	63.5 62.6	63.1	5.8 5.8	5.8	5.8	4.9 5.1	5.0		17.0 18.0	17.5	
				Surface	1	26.8 26.8	26.8	20.5 20.5	20.5	7.5 7.5	7.5	29.9 29.9	29.9	73.1 73.3	73.2	6.8 6.8	6.8		6.5 6.4	6.5		26.0 26.0	26.0	
17-Dec-07	Sunny	Moderate	17:22	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	7.0	-	-	25.0
				Bottom	3	26.6 26.6	26.6	20.5 20.5	20.5	7.5 7.4	7.5	30.3 30.4	30.4	71.8 70.8	71.3	6.6	6.6	6.6	7.3 7.7	7.5		24.0 24.0	24.0	1
				Surface	1	23.1	23.1	19.7	19.7	7.5	7.5	32.8	32.8	91.0	91.0	6.7	6.7		3.8	3.7		14.0	14.0	
19-Dec-07	Sunny	Moderate	08:51	Middle		23.1	_	19.7	_	7.5	-	32.8	-	90.9	-	6.7	-	6.7	3.5	_	3.8	14.0	-	19.5
				Bottom	3	22.8	22.8	19.7	19.7	7.5	7.5	32.8	32.8	90.6	90.8	6.7	6.7	6.7	3.9	3.9		25.0	25.0	1
				Surface	1	22.8 27.0	26.8	19.7 22.3	22.3	7.5 7.5	7.5	32.8 32.0	32.1	91.0 83.1	83.6	6.7 5.9	5.9		3.9 5.4	5.5		25.0 13.0	13.0	<del></del>
21 Dog 07	Suppy	Moderate	00:52			26.5	20.0	22.3	22.3	7.5		32.2		84.1		5.9	۵.8	5.9	5.5		7.1	13.0		10.0
21-Dec-07	Sunny	Moderate	09:52	Middle	-	26.4	-	22.3	-	7.4	-	32.9	-	- 82.7	-	5.9	-		8.5	-	7.1	8.0	-	10.8
				Bottom	3	26.1	26.3	22.3	22.3	7.4	7.4	33.2	33.1	74.8	78.8	6.2	6.1	6.1	8.7	8.6		9.0	8.5	

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M2 - Mid-Ebb Tide

Date	Weather	Sea	Sampling	Depti	h (m)	Water Temp	perature (°C)	Ambient Terr	nperature (°C)	ŗ	Н	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)	1	Turbidity(NTL	J)	Suspe	nded Solids	(mg/L)
Date	Condition	Condition**	Time	Бери	. ()	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	19.0 19.0	19.0	19.5 19.5	19.5	7.3 7.3	7.3	25.6 25.6	25.6	57.8 56.8	57.3	5.5 5.6	5.6	5.6	2.4 2.8	2.6		6.0 6.0	6.0	
24-Dec-07	Fine	Moderate	12:40	Middle	,	-	-	-	-	-	-	1 1	-		-	-	-	5.0		-	4.0	-	-	10.0
				Bottom	3	19.0 19.0	19.0	19.5 19.5	19.5	7.3 7.3	7.3	26.0 26.1	26.1	60.0 60.3	60.2	5.8 5.8	5.8	5.8	5.2 5.4	5.3		14.0 14.0	14.0	
				Surface	1	20.3 20.2	20.3	21.2 21.2	21.2	7.4 7.4	7.4	30.8 30.9	30.9	75.9 76.0	76.0	5.8 6.0	5.9	5.9	3.5 3.5	3.5		7.0 7.0	7.0	
27-Dec-07	Fine	Moderate	14:31	Middle	ı	-	-	-	-	-	-	1 1	-		-	-	-	5.5	-	-	4.6	-	-	10.5
				Bottom	3	19.4 19.4	19.4	21.2 21.2	21.2	7.4 7.4	7.4	30.9 30.9	30.9	76.0 75.8	75.9	6.0 6.0	6.0	6.0	5.6 5.6	5.6		14.0 14.0	14.0	
				Surface	1	20.0 20.0	20.0	21.8 21.8	21.8	7.3 7.3	7.3	31.7 31.8	31.8	77.9 77.7	77.8	5.6 5.6	5.6	5.6	3.6 3.3	3.5		6.0 7.0	6.5	
28-Dec-07	Sunny	Moderate	15:29	Middle	ı	-	-	-	-	-	-	1 1	-	1 1	-	-	-	5.0	-	-	4.7	-	-	8.3
				Bottom	3	19.5 19.6	19.6	21.8 21.8	21.8	7.3 7.3	7.3	31.5 31.5	31.5	83.9 83.6	83.8	6.0 6.0	6.0	6.0	5.8 5.9	5.9		10.0 10.0	10.0	
				Surface	1	19.1 19.0	19.1	18.5 18.5	18.5	7.3 7.3	7.3	26.1 26.1	26.1	63.8 64.8	64.3	5.3 5.4	5.4	5.4	2.1 2.1	2.1	•	10.0 10.0	10.0	
31-Dec-07	Sunny	Moderate	17:20	Middle	,	-	-	-	-	-	-	1 1	-		-	-	-	5.4	-	-	3.6	-	-	11.0
				Bottom	3	18.5 18.0	18.3	18.5 18.5	18.5	7.2 7.2	7.2	26.9 27.3	27.1	63.4 62.5	63.0	5.7 5.7	5.7	5.7	4.9 5.1	5.0		12.0 12.0	12.0	

Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

### Water Quality Monitoring Results at M2 - Mid-Flood Tide

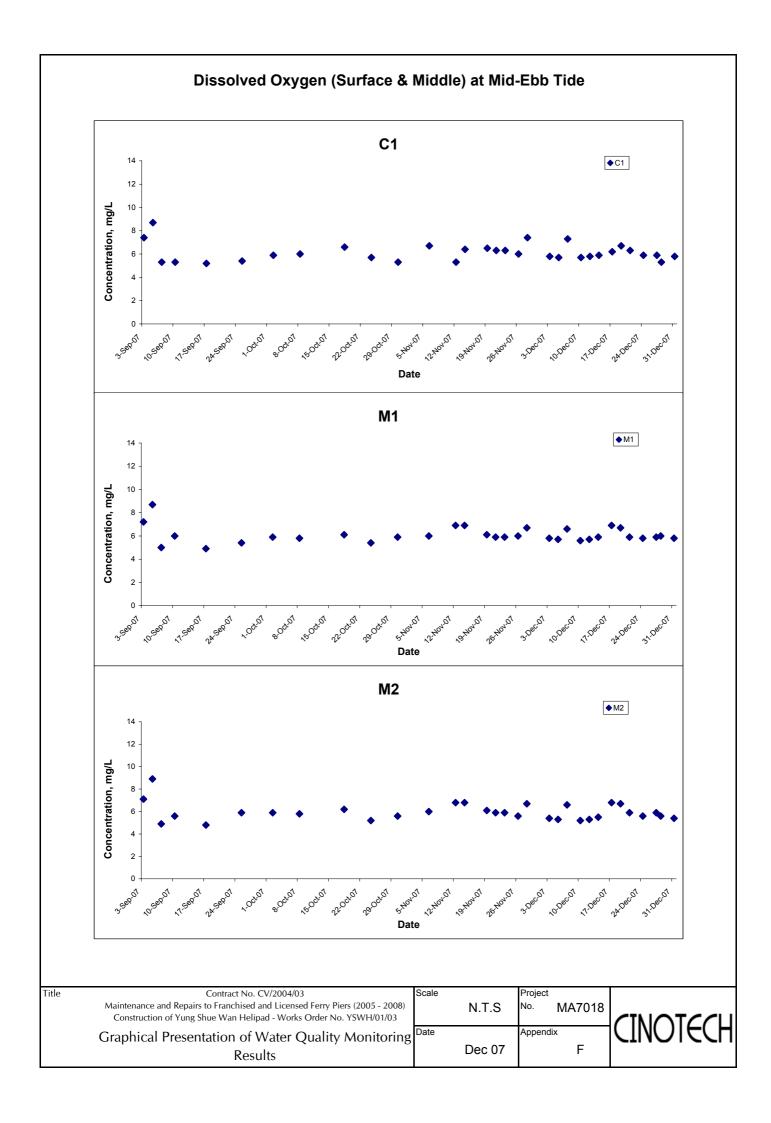
Date	Weather	Sea	Sampling	Dept	h (m)	Water Temp	erature (°C)	Ambient Tem	perature (°C)	р	Н	Salin	ity ppt	DO Satu	ration (%)	Dissol	ved Oxygen	(mg/L)	-	Turbidity(NTL	J)	Suspe	ended Solids	s (mg/L)
Date	Condition	Condition**	Time	Бері	11 (111)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	20.3 20.3	20.3	22.6 22.6	22.6	7.3 7.3	7.3	25.7 25.7	25.7	57.9 56.9	57.4	5.3 5.4	5.4	E 4	2.3 2.7	2.5		16.0 16.0	16.0	
3-Dec-07	Sunny	Moderate	14:22	Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	-	-	3.9	-	-	15.5
				Bottom	3	20.3 20.3	20.3	22.6 22.6	22.6	7.6 7.5	7.6	26.1 26.1	26.1	60.1 60.4	60.3	5.6 5.6	5.6	5.6	5.1 5.2	5.2		15.0 15.0	15.0	
				Surface	1	19.8 19.8	19.8	21.4 21.4	21.4	7.2 7.2	7.2	25.4 25.4	25.4	57.7 56.7	57.2	5.2 5.3	5.3		2.1 2.5	2.3		13.0 13.0	13.0	
5-Dec-07	Sunny	Moderate	15:20	Middle	-	-	-	-	-	-	-	- 25.4	-	- 50.7	-	-	-	5.3	-	-	3.7	-	-	19.8
				Bottom	3	19.8 19.8	19.8	21.4	21.4	7.3 7.3	7.3	25.8 25.8	25.8	59.9 60.2	60.1	5.5 5.5	5.5	5.5	4.9 5.1	5.0		27.0 26.0	26.5	•
				Surface	1	26.1	26.1	18.5	18.5	7.4	7.4	30.7	30.7	79.7	79.8	6.3	6.3		5.2	5.2		10.0	10.0	
7-Dec-07	Sunny	Moderate	16:52	Middle	-	26.1	-	18.5	-	7.4	-	30.6	-	79.8	-	6.3	-	6.3	5.1	-	6.3	10.0	-	16.0
				Bottom	4	25.9	25.8	18.5	18.5	7.6 7.6	7.6	30.9	31.0	79.1	79.3	6.0	6.1	6.1	7.1 7.5	7.3		22.0	22.0	•
				Surface	1	25.7	21.3	18.5 21.6	21.6	7.4	7.4	31.0 25.1	25.1	79.4 57.2	56.7	5.2	5.3		2.2	2.4		22.0	27.0	
10-Dec-07	Sunny	Moderate	08:19	Middle	-	21.3	-	21.6	-	7.4	-	25.1	-	56.2	-	5.3	-	5.3	2.6	-	3.8	27.0	-	15.5
				Bottom	3	21.3	21.3	21.6	21.6	7.4	7.5	25.5	25.5	59.4	59.6	5.5	5.5	5.5	5.0	5.1		10.0	10.0	
				Surface	1	21.3	21.3	21.6	20.4	7.5	7.4	25.5 25.3	25.3	59.7 57.3	56.8	5.5	5.4		2.3	2.5		10.0 28.0	28.0	
12-Dec-07	Sunny	Moderate	09:19	Middle	-	21.2	-	20.4	-	7.4	_	25.3	-	56.3	-	5.4	_	5.4	2.7	_	3.9	28.0	-	28.0
	,			Bottom	3	21.3	21.3	20.4	20.4	7.6	7.6	25.7	25.7	59.5	59.7	5.6	5.6	5.6	5.1	5.2		28.0	28.0	
				Surface	1	21.3	20.0	20.4	20.4	7.6	7.4	25.7 25.5	25.5	59.8 57.7	57.2	5.6 5.4	5.5		5.2 2.3	2.5		28.0	28.0	
14-Dec-07	Sunny	Moderate	10:40	Middle	-	20.0	-	20.4	-	7.4	-	25.5	-	56.7	-	5.5	-	5.5	2.7	-	3.9	28.0	-	25.5
				Bottom	3	20.0	20.0	20.4	20.4	7.5	7.5	25.9	26.0	59.9	60.1	5.7	5.7	5.7	5.1	5.2		23.0	23.0	•
				Surface	1	20.0 27.6	27.6	20.4	24.2	7.5 7.4	7.4	26.0 30.5	30.6	88.8 88.8	89.3	5.7 6.3	6.4		5.3 6.0	6.2		23.0 25.0	25.0	
17-Dec-07	Sunny	Moderate	12:52	Middle	-	27.5	-	24.2	-	7.4	-	30.7	-	89.8	-	6.4	-	6.4	6.4	-	7.2	25.0	-	26.0
				Bottom	4	27.0 26.7	26.9	24.2 24.2	24.2	7.6 7.6	7.6	31.3 31.7	31.5	88.4 80.5	84.5	6.3 6.6	6.5	6.5	7.8 8.3	8.1		27.0 27.0	27.0	
				Surface	1	22.8 22.8	22.8	20.4	20.4	7.4 7.5	7.5	32.8 32.8	32.8	90.9	90.9	6.8	6.8		4.0	3.9		19.0	19.0	
19-Dec-07	Sunny	Moderate	14:52	Middle	-	-	-	20.4	-	-	-	-	-	90.9	-	6.8	-	6.8	3.7	-	4.0	19.0	-	21.0
				Bottom	3	22.9 22.8	22.9	20.4	20.4	7.7 7.6	7.7	32.8 32.8	32.8	90.8	90.8	6.8 6.8	6.8	6.8	3.7 4.3	4.0		23.0	23.0	
				Surface	1	26.2	26.2	24.8	24.8	7.4	7.4	31.4	31.4	67.4	67.5	6.4	6.4		5.9	5.9		13.0	13.0	
21-Dec-07	Sunny	Moderate	15:22	Middle	-	26.2	-	24.8	-	7.4	-	31.4	-	67.5	-	6.4	-	6.4	5.8	-	6.7	13.0	-	15.5
				Bottom	4	26.0	25.9	24.8	24.8	7.6	7.6	31.8	31.8	66.1	65.6	6.1	6.1	6.1	7.5	7.5		18.0	18.0	
		<u> </u>				25.8		24.8		7.6		31.8		65.1		6.1			7.5			18.0	<u> </u>	<u> </u>

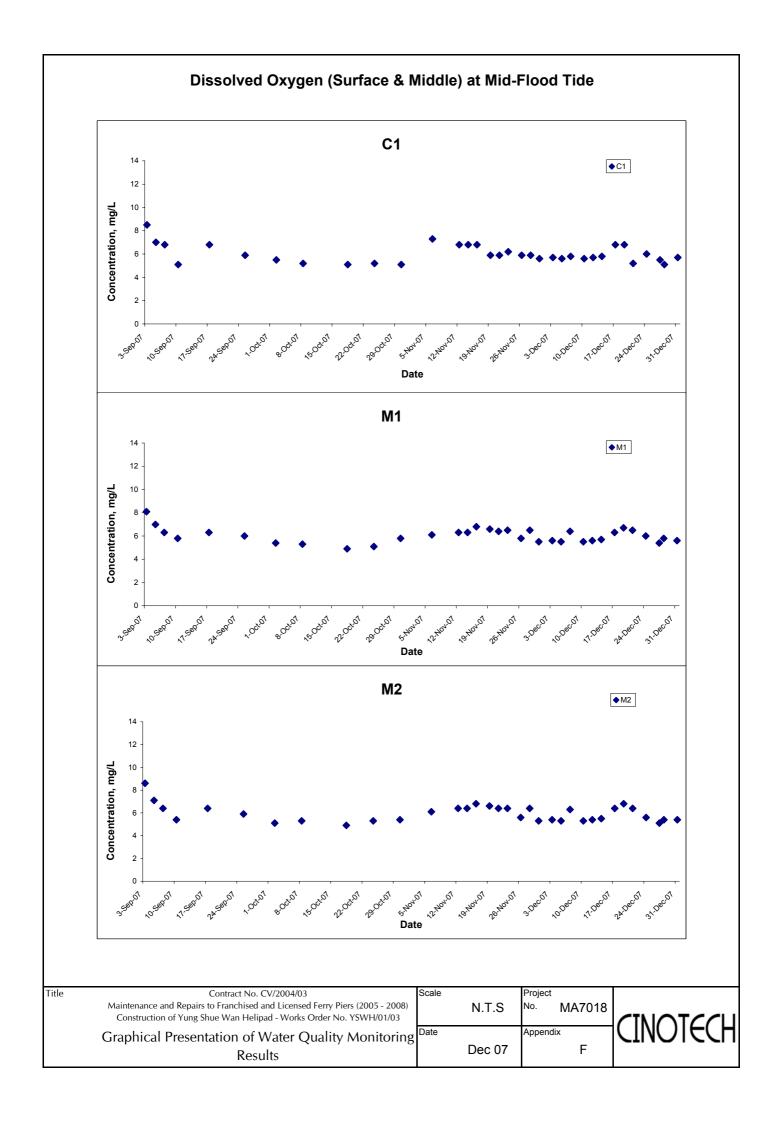
Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

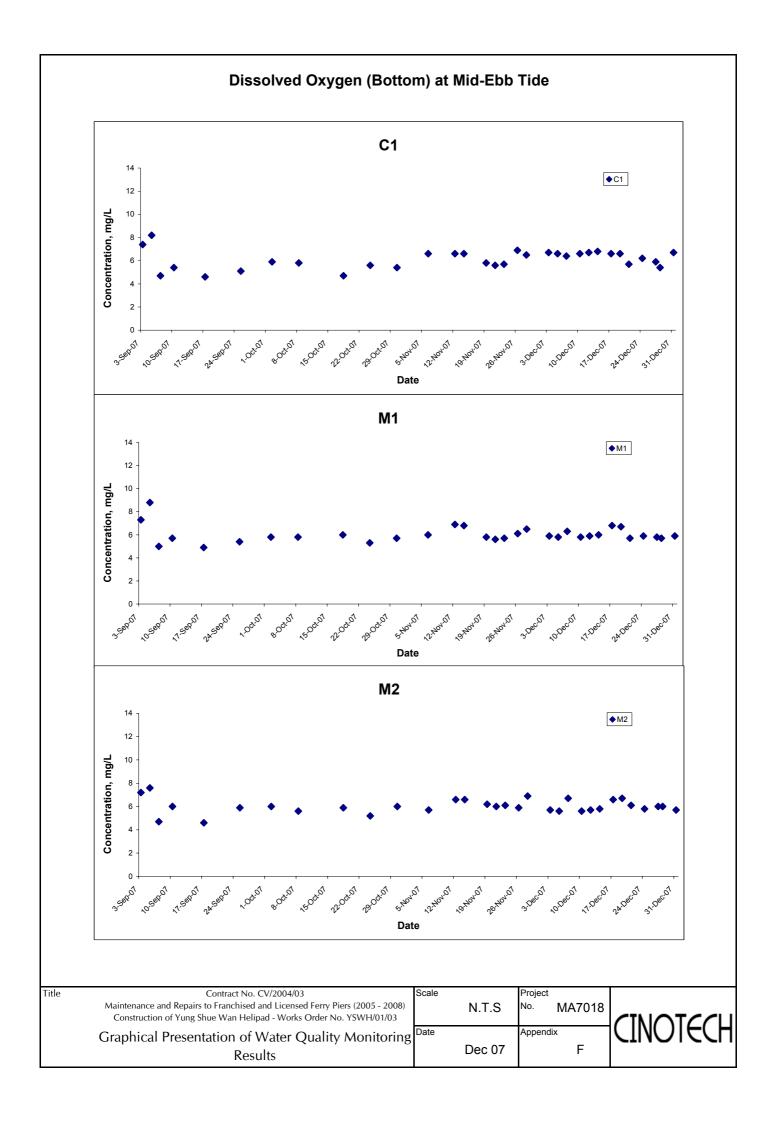
### Water Quality Monitoring Results at M2 - Mid-Flood Tide

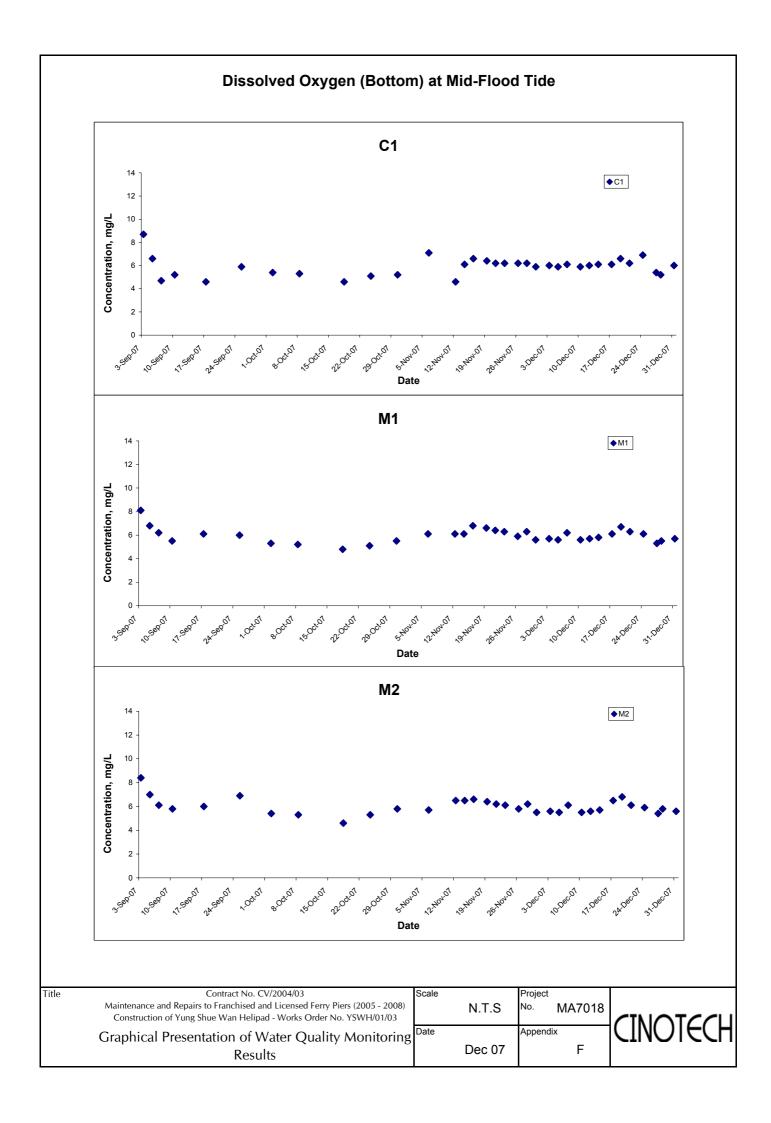
Date	Weather	Sea	Sampling	Depti	h (m)	Water Temp	perature (°C)	Ambient Ten	nperature (°C)	p	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolv	ed Oxygen	(mg/L)		Turbidity(NTL	J)	Suspe	nded Solids	(mg/L)
Date	Condition	Condition**	Time	Вери	()	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
				Surface	1	19.2 19.1	19.2	20.4 20.4	20.4	7.3 7.3	7.3	26.2 26.2	26.2	64.0 65.0	64.5	5.5 5.6	5.6	5.6	2.2 2.2	2.2		5.0 5.0	5.0	
24-Dec-07	Fine	Moderate	17:20	Middle	-		-	-	-	1 1	-		-	-	-		-	5.0	1 1	-	3.7	-	-	8.5
				Bottom	3	18.6 18.1	18.4	20.4 20.4	20.4	7.5 7.5	7.5	27.0 27.4	27.2	63.6 62.7	63.2	5.9 5.9	5.9	5.9	5.0 5.2	5.1		12.0 12.0	12.0	
				Surface	1	21.2 21.1	21.2	19.1 19.1	19.1	7.4 7.4	7.4	31.0 31.0	31.0	75.5 75.6	75.6	5.1 5.1	5.1	5.1	3.6 3.5	3.6		8.0 8.0	8.0	
27-Dec-07	Fine	Moderate	09:23	Middle	-	-	-	-	-	1 1	-		-	-	-		1	5.1	1 1	-	4.8	-	-	8.5
				Bottom	4	20.1 20.1	20.1	19.1 19.1	19.1	7.4 7.3	7.4	30.8 30.8	30.8	72.9 72.6	72.8	5.4 5.4	5.4	5.4	6.0 5.9	6.0		9.0 9.0	9.0	
				Surface	1	20.8 20.8	20.8	19.7 19.7	19.7	7.3 7.3	7.3	31.7 31.7	31.7	75.9 75.7	75.8	5.4 5.4	5.4	5.4	3.8 3.9	3.9		9.0 9.0	9.0	
28-Dec-07	Sunny	Moderate	10:25	Middle	-	-	i	-	-	1 1	-	1 1	-	-	-	1 1	-	5.4	1 1	-	5.0	-	-	10.0
				Bottom	4	20.1 20.1	20.1	19.7 19.7	19.7	7.5 7.5	7.5	32.0 32.0	32.0	81.9 81.6	81.8	5.8 5.8	5.8	5.8	5.9 6.0	6.0		11.0 11.0	11.0	
				Surface	1	18.9 18.9	18.9	18.9 18.9	18.9	7.3 7.3	7.3	25.5 25.5	25.5	57.6 56.6	57.1	5.3 5.4	5.4	5.4	2.3 2.7	2.5		10.0 10.0	10.0	
31-Dec-07	Sunny	Moderate	12:40	Middle	-	-	-	-	-	i i	-	1 1	-	-	-		-	5.4	1 1	-	3.9	-	-	10.5
				Bottom	3	18.9 18.9	18.9	18.9 18.9	18.9	7.4 7.4	7.4	25.9 25.9	25.9	59.8 60.1	60.0	5.6 5.6	5.6	5.6	5.1 5.3	5.2		11.0 11.0	11.0	

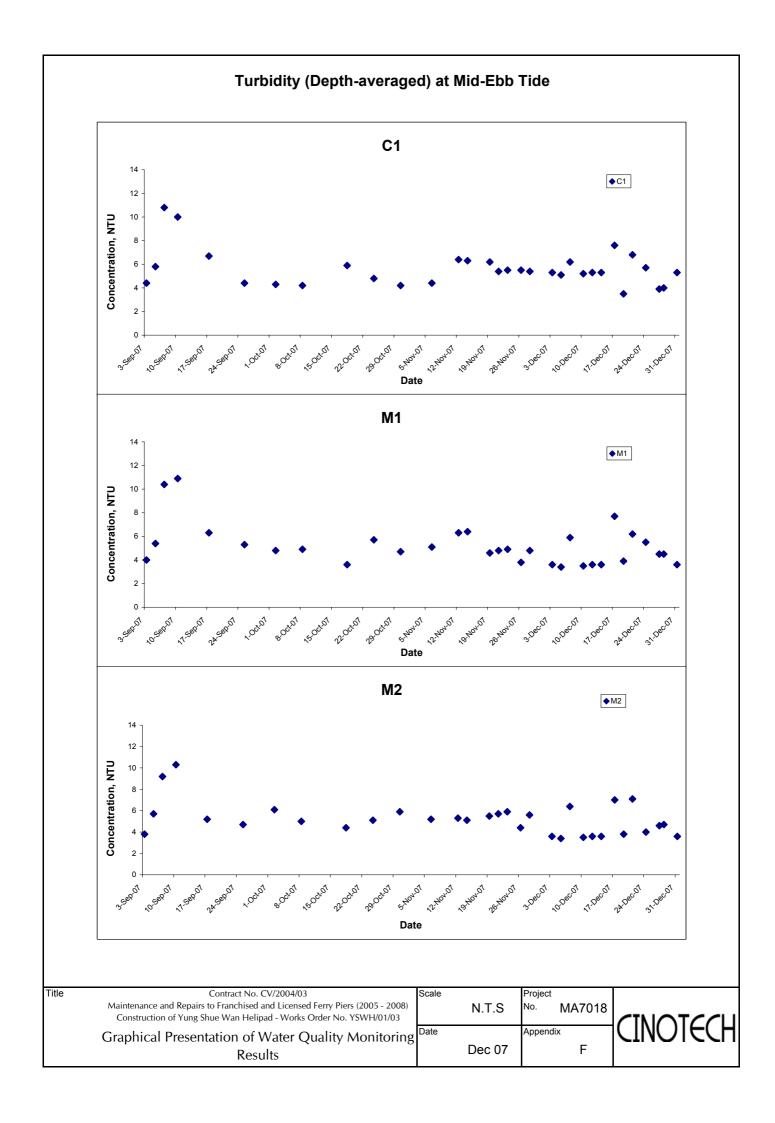
Remarks: \* DA: Depth-Averaged
\*\* Calm: Small or no wave; Moderate: Between calm and rough; Rough: White capped or rougher
\*\*\* Cancelled due to Thunderstorm Warning

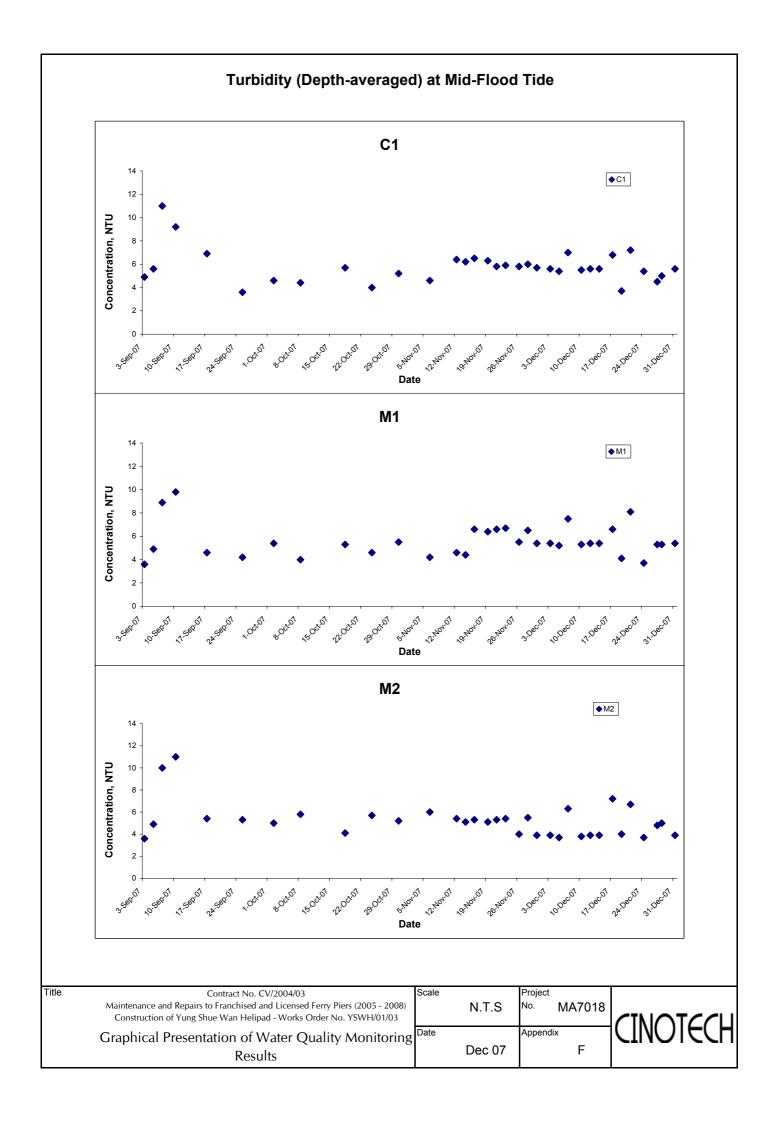


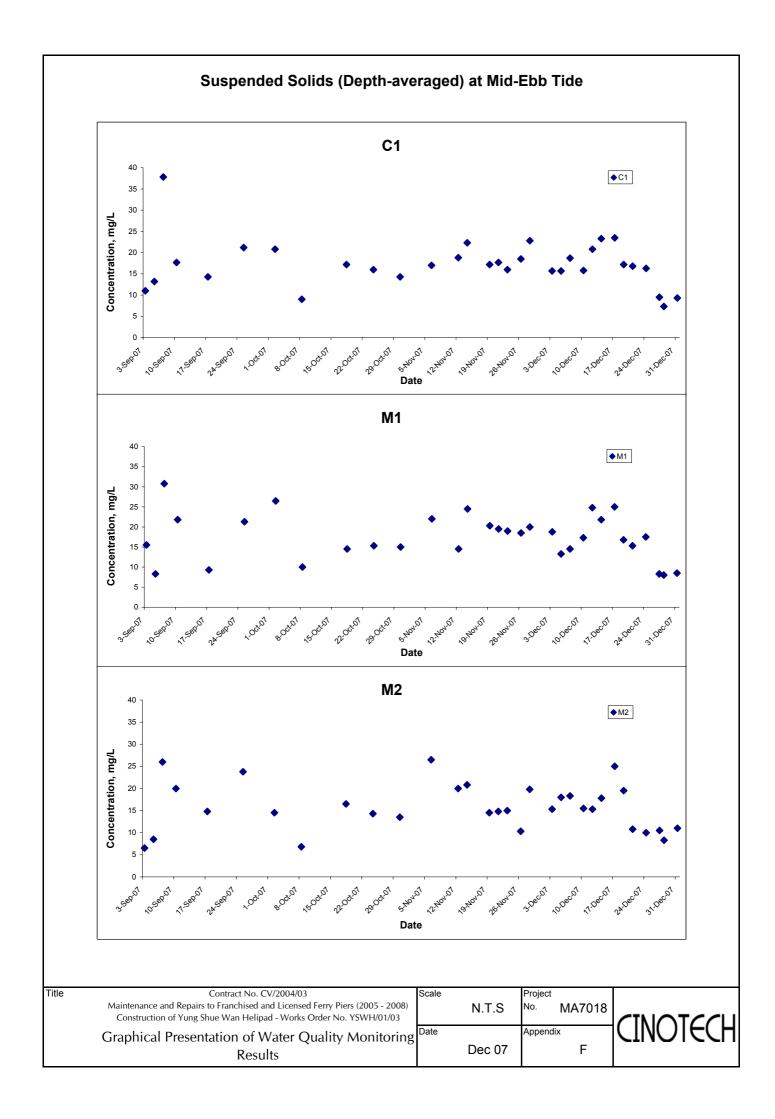


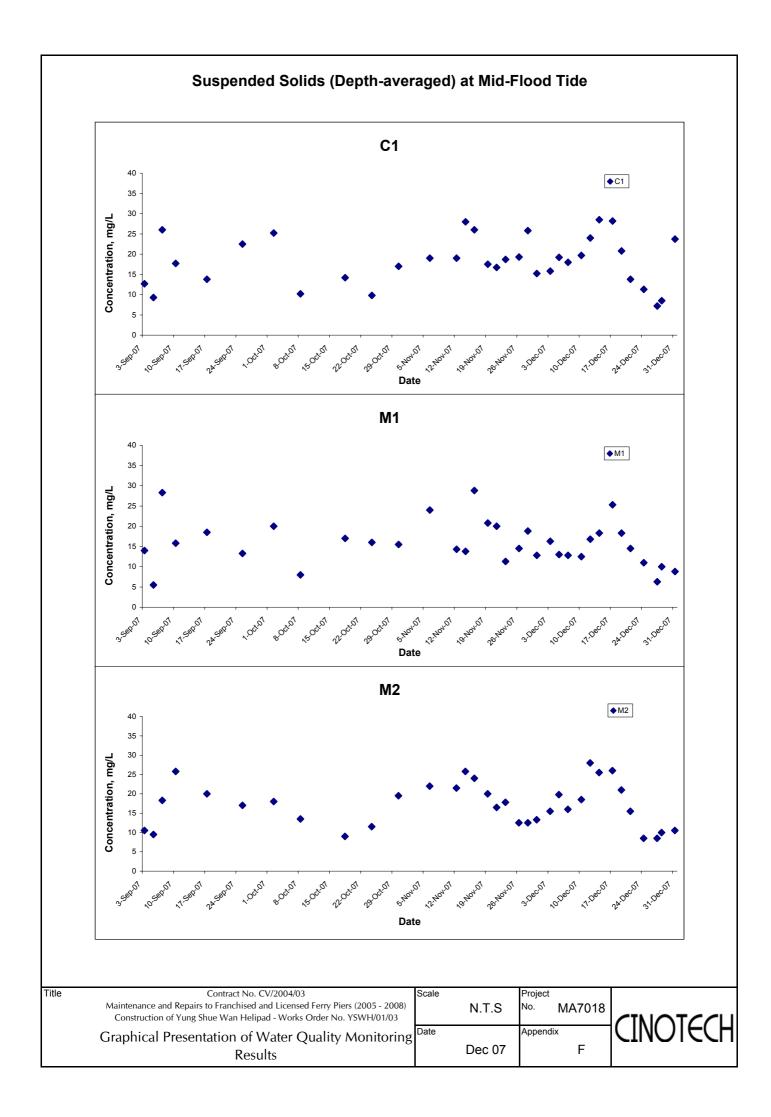












#### APPENDIX G SUMMARY OF EXCEEDANCE

Contract No. CV/2004/03 – Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005-2008)

Construction of Yung Shue Wan Helipad – Works Order No. YSWH/01/03

#### **Exceedance Report**

- (A) Exceedance Report for Construction Noise (NIL in the reporting month)
- (B) Exceedance Report for water quality monitoring (NIL in the reporting month)

#### APPENDIX H SITE AUDIT SUMMARY

#### Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 - 2008)

#### Contract No. CV/2004/03 Construction of Yung Shue Wan Helipad

#### Weekly Site Inspection Record Summary

Inspection Information			
Checklist Reference Number	71205		
Date	5 December 2007		
Time	13:00		

	Ref. No.	Non-Compliance	Related Item No.
	-	None	-
•			

Ref. No.	Remarks/Observations	Related Item No.
	Water Quality	
	No environmental deficiency was identified during site inspection.	
	Air Quality	
	No environmental deficiency was identified during site inspection.	
	Noise	
	No environmental deficiency was identified during site inspection.	
	Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	Permit / Licenses	
	No environmental deficiency was identified during site inspection.	
	Others	
	• Follow-up on previous site audit session (Ref. No. 71128), there are no	,
	environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Cheung Tsz Fun	Cly	5 December 2007
Checked by	Dr. Priscilla Choy	WI	5 December 2007

# Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 - 2008)

#### Contract No. CV/2004/03 Construction of Yung Shue Wan Helipad

### Weekly Site Inspection Record Summary

Inspection Information	
Checklist Reference Number	71212
Date	12 December 2007
Time	13:00

Ref. No.	Non-Compliance	Related Item No.
	None	-

Ref. No.	Remarks/Observations	Related Item No.
	Water Quality	
	No environmental deficiency was identified during site inspection.	
	Air Quality	
	<ul> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	Noise	
	<ul> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	Permit / Licenses	
	<ul> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	Others	'
	• Follow-up on previous site audit session (Ref. No. 71205), there are no	o
	environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Cheung Tsz Fun		12 December 2007
Checked by	Dr. Priscilla Choy	W.T.	12 December 2007

### Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 – 2008)

#### Contract No. CV/2004/03 Construction of Yung Shue Wan Helipad

#### Weekly Site Inspection Record Summary

Inspection Information		
Checklist Reference Number	71219	
Date	19 December 2007	
Time	10:15	

	Ret. No.	Non-Compliance	 Related Item No.
	-	None	-
•			

Ref. No.	Remarks/Observations	Related Item No.
	Water Quality	
	No environmental deficiency was identified during site inspection.	
	Air Quality	
	No environmental deficiency was identified during site inspection.	
	Noise	
	No environmental deficiency was identified during site inspection.	
	Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	Permit / Licenses	
	No environmental deficiency was identified during site inspection.	
	Others	
	• Follow-up on previous site audit session (Ref. No. 71212), there are no	
	environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Yeung Wing Kun	Gun	19 December 2007
Checked by	Dr. Priscilla Choy	NF	19 December 2007

#### Maintenance and Repairs to Franchised and Licensed Ferry Piers (2005 - 2008)

#### Contract No. CV/2004/03 Construction of Yung Shue Wan Helipad

### Weekly Site Inspection Record Summary

Inspection Information		
Checklist Reference Number	71227	
Date	27 December 2007	
Time	9:30	

Ref. No.	Non-Compliance	Related Item No.
-	None	-

Ref. No.	Remarks/Observations	Related Item No.
	Water Quality	
	No environmental deficiency was identified during site inspection.	
	Air Quality	
	No environmental deficiency was identified during site inspection.	
	Noise	
	No environmental deficiency was identified during site inspection.	
	Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	Permit / Licenses	
	No environmental deficiency was identified during site inspection.	
	Others	
	• Follow-up on previous site audit session (Ref. No. 71219), there are no	
	environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Tsang Tsz Keung	Kerx	27 December 2007
Checked by	Dr. Priscilla Choy	NEL	27 December 2007

APPENDIX I SUMMARY OF AMOUNT OF WASTE GENERATED

## Appendix I

Name of Department: CWE-ZHEC Joint Venture

Contract No.: CV/2004/03

# **Monthly Summary Waste Flow Table For <u>Dec 2007</u> (year)**

	Actua	l Quantities of Ir	nert C&D Materi	als Generated Mo	onthly	А	ctual Quantities	of C&D Waste (	Generated Month	ıly
Month	Total Quantity Generated	Broken Concrete (see Note 2)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 1)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Sept	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	11.000	0.000	0.000	0.000	0.000	0.000
Jan										
Feb										
Sub-total	0.000	0.000	0.000	0.000	11.000	0.000	0.000	0.000	0.000	0.000
Mar										
Apr										
May										
June										
July										
Aug										
Total	0.000	0.000	0.000	0.000	11.000	0.000	0.000	0.000	0.000	0.000

Notes: (1) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

(2) Broken concrete for recycling into aggregates.

#### APPENDIX J EVENT ACTION PLANS

#### APPENDIX J - Event / Action Plan

#### **Table J-1 Event / Action Plan Construction Noise**

Event	ACTION					
	ET Leader		IC (E)		ER	Contractor
Action	1. Notify IC(E) and Contractor	1.	Review the analysed results	1.	Confirm receipt of notification	1. Submit noise mitigation
Level	2. Carry out investigation		submitted by the ET		of failure in writing	proposal to IC(E)
	3. Report the results of	2.	Review the proposed	2.	Notify Contractor	2. Implement noise mitigation
	investigation to the IC(E) and		remedial measures by the	3.	Require Contractor to propose	proposals
	Contractor		Contractor and advise the		remedial measures for the	
	4. Discuss with the Contractor and		ER accordingly		analysed noise problem	
	formulate remedial measures	3.	Supervise the	4.	Ensure remedial measures are	
	5. Increase monitoring frequency to		implementation of remedial		properly implemented	
	check mitigation effectiveness		measures			

Limit	1. Notify IC(E), ER, EPD and	1. Discuss amongst ER, ET,	1. Confirm receipt of notification	1. Take immediate action to
Level	Contractor	and Contractor on the	of failure in writing	avoid further exceedance
Level	2. Identify source	potential remedial actions	2. Notify Contractor	2. Submit proposal for remedial
	3. Repeat measurement to confirm	2. Review Contractor's	3. Require Contractor to propose	actions to IC(E) within 3
	findings	remedial actions whenever	remedial measures for the	working days of notification
	4. Increase monitoring frequency	necessary to assure their the	analysed noise problem	3. Implement the agreed
	5. Carry out analysis of	ER accordingly	4. Ensure remedial measures are	proposals
	Contractor's working procedures	3. Supervise the	properly implemented	4. Resubmit proposals if
	to determine possible mitigation	implementation of remedial	5. If exceedance continues,	problem still not under
	to be implemented	measures	consider what portion of the	control
	6. Inform IE(E), ER and EPD the		work is responsible and	5. Stop the relevant portion of
	causes & actions taken for the		instruct the Contractor to stop	works as determined by the
	exceedances		that portion of work until the	ER until the exceedance is
	7. Assess effectiveness of		exceedance is abated	abated
	Contractor's remedial actions			
	and keep IC(E), EPD and ER			
	informed of the results			
	8. If exceedance stops, cease			
	additional monitoring			

Table J-2 Event / Action Plan for Water Quality Monitoring

EVENT		ACTION		
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1.Exceedance for one sample	<ol> <li>Identify source</li> <li>Inform ER &amp; IEC</li> <li>Repeat measurement to confirm finding</li> <li>Increase monitoring frequency to daily</li> </ol>	Check monitoring data submitted by ET	1.Notify Contractor     2.Check monitoring data and Contractor's working methods	1.Rectify any unacceptable practice     2.Amend working methods if appropriate
2.Exceedance for two or more consecutiv e samples	<ol> <li>Identify source</li> <li>Inform ER &amp; IEC</li> <li>Repeat measurements to confirm findings</li> <li>Increase monitoring frequency to daily</li> <li>Discuss with ER &amp; IEC for remedial actions required</li> <li>If exceedance continues, arrange meeting with ER &amp; IEC</li> <li>If exceedance stops, cease additional monitoring</li> </ol>	1.Checking monitoring data submitted by ET      2.Advise the ER & ET on the effectiveness of the proposed remedial measures      3.Supervise the implementation of the remedial measures	1.Confirm receipt of notification of failure in writing 2.Notify Contractor 3.Check Contractor's working methods 4.Discuss with ET, IEC and Contractor on proposed remedial actions 5.Ensure remedial actions properly implemented	1.Submit proposals for remedial actions to ER within 3 working days of notification 2.Implement the agreed proposals 3.Amend proposal if appropriate
LIMIT LEVEL				
1.Exceedance for one sample	Identify source     Inform ER & IEC and EPD     Repeat measurement to confirm finding     Increase monitoring frequency to daily     Assess effectiveness of Contractor's remedial actions and keep EPD and ER & IEC informed of the results	1.Check monitoring data submitted by ET     2.Advise the ER & ET on the effectiveness of the proposed remedial measures     3.Supervise the implementation of the remedial measures	1.Confirm receipt of notification of failure in writing     2.Notify Contractor     3.Check monitoring data and Contractor's working methods     4.Discuss with ET, IEC and Contractor on proposed remedial actions     5.Ensure remedial actions properly implemented	1.Take immediate action to avoid further exceedance 2.Submit proposals for remedial actions to ER within 3 working days of notification 3.Implement the agreed proposals 4.Amend proposal if appropriate
2.Exceedance	1. Identify source	1.Check monitoring data submitted by	1.Confirm receipt of notification of	1. Take immediate action to

EVENT		ACTION		
EVENT	ET	IEC	ER	CONTRACTOR
for two or more consecutiv e samples	2. Inform ER, IEC and EPD the causes & actions taken for the exceedances 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Investigate the causes of exceedance 6. Arrange meeting with & IEC and ER to discuss the remedial actions to be taken 7. Assess effectiveness of Contractor's remedial actions and keep ER, IEC and EPD informed of the results 8. If exceedance stops, cease additional monitoring	ET  2.Review Contractor's remedial actions to assure their effectiveness and advise the ER accordingly  3.Supervise the implementation of the remedial measures	failure in writing  2.Notify Contractor  3.Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented  4.Discuss amongst ET, IEC and the Contractor on proposed remedial actions  5.Ensure remedial measure are properly implemented  6.If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated	avoid further exceedance  2. Submit proposals for remedial actions to ER within 3 working days of notification  3. Implement the agreed proposals  4. Resubmit proposals if problem still not under control  5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

APPENDIX K ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

### Appendix K - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
	<ul> <li>Restricting heights from which materials are dropped, as far as practicable to minimise the fugitive dust arising from unloading/loading.</li> </ul>	^
	<ul> <li>All stockpiles of excavated materials or spoil of more than 50m<sup>3</sup> should be enclosed, covered or dampened during dry or windy conditions.</li> </ul>	^
	• Effective water sprays should be used to control potential dust emission sources such as unpaved haul roads and active construction areas.	۸
	All spraying of materials and surfaces should avoid excessive water usage.	٨
Construction Dust	<ul> <li>Vehicles that have the potential to create dust while transporting materials should be covered, with the cover properly secured and extended over the edges of the side and tail boards.</li> </ul>	۸
	Materials should be dampened, if necessary, before transportation.	۸
	<ul> <li>Travelling speeds should be controlled to reduce traffic induced dust dispersion and re-suspension from the operating haul trucks.</li> </ul>	۸
	Vehicle washing facilities will be provided to minimize the quantity of material deposited on public roads.	۸
	Erection of hoarding not less than 2.4m high from ground level along the site boundary.	۸
Construction	Construction Phase	
Noise	Use of silenced plant, or plant equipped with mufflers or dampers in substitute or ordinary plant.	۸
	Movable noise barriers positioned as close as possible to PMEs such that none of the PMEs will be visible when viewed from any noise sensitive facades.	۸
	Noisy equipment and noisy activities should be located as far away from the NSRs as is practical.	۸
	Unused equipment should be turned off.	۸
	<ul> <li>Number of powered mechanical equipment</li> <li>(PME) should be kept to minimum and the parallel use of noisy equipment/machinery should be avoided.</li> </ul>	۸

Types of Impacts	Mitigation Measures	Status
•	Regular maintenance of all plant and equipment.	٨
	Observe and comply with the statutory requirements and guidelines.	۸
	Operation Phase	
	Use of quieter helicopter type EC 155 B1 in priority.	-
	• Reduce the angle of the helicopter flight path from the standard 150 degrees to 80 degrees for the 'EC 155 B1' and to 70 degrees for 'Super Puma AS332 L2' helicopter	-
	The helipad will be solely for emergency use.	-
	Silt curtain to be installed surrounding the whole of the piling site.	۸
	Good site practice	
	<ul> <li>Particular care should be taken when demolishing the existing concrete planter to ensure no waste enters the water column.</li> </ul>	N/A
	<ul> <li>Particular care should be taken when decommissioning the silt curtain to avoid sudden dispersion of muddy water which may cause adverse impact to the nearby marine life;</li> </ul>	N/A
Faalage	<ul> <li>Materials storage areas should be located well away from the seawall, and any such areas should be covered during the works.</li> </ul>	^
Ecology	<ul> <li>The holding tank for sediment excavated from within the pile casing should be fitted with a tight fitting seal to prevent leakage.</li> </ul>	N/A
	Ensure that excavator seal is tightly closed and the hoist speed is suitably low.	N/A
	<ul> <li>The holding tank should not be filled to a level that will cause overflow of sediment during loading and transportation.</li> </ul>	N/A
	Large objects should be removed from the excavator grab to avoid sediment spills.	N/A
	The helipad shall be constructed by using small diameter pre-bored piling instead of dredging and reclamation.	-
<b>11</b> 7 4 <b>2</b> 11:	Construction Phase	
Water Quality	Silt curtain to be installed surrounding the whole of the piling site.	٨
	Good site practice	

Types of Impacts	Mitigation Measures	Status
•	The holding tank should be fitted with a tight fitting seal to prevent sediment leakage.	N/A
	Ensure that excavator grab seal is tightly closed and the hoist speed is suitably low.	N/A
	• The holding tank should not be filled to a level which will cause overflow of sediment during loading and transportation.	N/A
	Large objects should be removed from the excavator grab to avoid sediment spills.	N/A
	The helipad shall be constructed by using small diameter pre-bored piling instead of dredging and reclamation.	-
Waste / Chemical	• Ensure that proper handling, storage, transportation and disposal of materials is implemented at the outset and throughout the construction phase of the helipad.	^
	• In line with Government's position on waster minimization, the practice of avoiding and minimizing waster generation and waste recycling should be adopted as far as practicable.	٨
	• An on-site environmental co-ordinator should be identified at the outset of the works. The co-ordinaror shall prepare a Waste Management Plan.	^
	• Spoil generated from the piling activities will need to be properly handled to minimize contamination to the marine water and any exposed ground areas due to leakage or improper storage (i.e. onto bare ground instead of into tanks).	٨
	The reuse/recycling of all materials on site shall be investigated prior to treatment/disposal off site	٨
	Good site practices shall be adopted from the commencement of works to avoid the generation of waste and to promote waste minimization practices.	۸
	• All waste material shall be sorted on site into inert and non-inert C&D materials, and where the materials will be recycling or reused, these shall be further segregated. The Contractor shall be responsible for identifying which materials can be recycled/reused, whether on site or off site. In the event of the latter, the Contractor shall make arrangements for the collection of the recyclable materials. Any remaining non-inert waste shall be collected and disposed of to the refuse transfer station whilst any non-inert C&D material shall be re-used on site as far as possible. If no use of the material can be found on site, the inert C&D material can be delivered to a public filling area, public barging point or public stockpile area after obtaining the appropriate licence.	۸
	<ul> <li>A trip ticket system should be established at the outset of the construction of the helipad to monitor the disposal of C&amp;D and solid wastes from the site to public filling facilities and landfills.</li> </ul>	^

Types of Impacts	Mitigation Measures					
	The Contractor shall register with EPD as a Chemical Waste Producer if there is any use of chemicals on site including lubricants, paints, diesel fuel, etc. Only licensed chemical waste collectors shall be employed to collect any chemical waster generated at site. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the relevant guidelines as published by Government.					
	• A sufficient number of covered bins shall be provided on site for the containment of general refuse to prevent visual impacts and nuisance to sensitive receivers. These bins shall be cleared daily and the collected waste disposal of to the refuse transfer station. Further to the issue of Environment, Transport and Works Bureau Technical Circular (Works) No. 6/2002A, Enhanced Specification for Site Cleanliness and Tidiness, the Contractor is required to maintain a clean and hygienic site throughout the Project works.					
	<ul> <li>All Chemical toilets shall be regularly cleaned and the nightsoil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal.</li> </ul>					
	<ul> <li>Tool box talks shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.</li> </ul>					
	Contractor shall comply with all relevant statutory requirements and guidelines and their updated versions.					
	The helipad shall be constructed by using small diameter pre-bored piling instead of dredging and reclamation.					
	Operation Phase					
	• The helipad will only be used for emergency purposes. No equipment will be placed on the landing pad or along the EVA. Helicopters will not be parked at the landing pad and all repair and maintenance works (on the helicopters) will be conducted off site. As such the only source of waste generation during the operation of the helipad is anticipated to be from the long-term maintenance of the pad.					
Remarks:	^ Compliance of mitigation measure; X Non-compliance of mitigation measure;  N/A Not Applicable; •Non-compliance but rectified by the contractor;					
	N/A Not Applicable; •Non-compliance but rectified by the contractor;  * Recommendation was made during site audit but improved/rectified by the contractor.					

# APPENDIX L CONSTRUCTION PROGRAMME

Contract No: CV200403 Works Order No. YSWH/01/03 Maintenance and Repairs to Franchised Three Month Rolling Programme of Yung Shue Wan Helipad Dec to Jan 2008 and Licensed Ferry Pier (2005-2008) Task Name Start Finish Duration Construction of Yubq Shue Wan Helipad 208 days '07 Aug 2 '08 Feb 25 '08 Feb 25 2 Piling Works 208 days '07 Aug 2 '07 Oct 14 3 Fabrication of Steel Casing '07 Aug 4 72 days Erection of Silt Curtain 14 days '07 Aug 2 '07 Aug 15 4 Ground Investigation (Pre-Drilling) '07 Sep 12 5 28 days '07 Aug 16 6 Pre-bored H-Pile Works (22nos.) 120 days '07 Oct 15 '08 Feb 11 Piling Test 14 days '08 Feb 12 '08 Feb 25 Erection of Bracing Beam to Piles '07 Oct 29 '07 Dec 27 8 60 days 9 10 Superstructure Works 90 days '07 Oct 15 '08 Jan 12 11 Fabrication of Pre-cast Concrete Unit 90 days '07 Oct 15 '08 Jan 12 Milestone Progress External Tasks Task Commence of the Commence of th Project: Yueng Shue Wan Helipad - RI Date: '08 Jan 2 Split Summary External MileTask . 111111111111111111111 Progress Project Summary 💴 Split Page 1

#### APPENDIX M COMPLAINT LOG

#### APPENDIX M - COMPLAINT LOG

**Reporting Month**: December 2007

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
N/A	N/A	N/A	N/A	N/A	N/A

Remarks: No environmental complaint was received in the reporting month.