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TEST REPORT

Wai Kee (Zens) Construction & Transportation Co., Ltd.

**RECONSTRUCTION OF JETTY
AT LUNG KWU CHAU**

(CED CONTRACT NO.: CV/2002/11)

**BASELINE MONITORING REPORT
(18 APRIL TO 16 MAY 2003)
REVISION 2**

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Tony Wong
Tony Wong
Operations Manager

Date: 18 April to 16 May 2003

Report No. ENA 30282A
Superseding Test Report ENA 30282

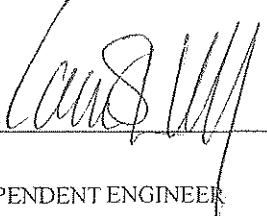
Our Ref: TCS/2003/E010/600/Cert-02

**INDEPENDENT ENGINEER
AUDIT CERTIFICATE**

**CED CONTRACT NO. CV/2002/11
CONSTRUCTION OF LUNG KWU CHAU JETTY
BASELINE MONITORING REPORT (REVISION 2)**

We certify that this report has been audited against Environmental Permit No. EP-150/2002 A using reasonable skill and care.

Signed:



A handwritten signature consisting of stylized characters, possibly 'CLIFF LAM', written over a horizontal line.

INDEPENDENT ENGINEER

Name: CLIFF LAM

Action-United
Environmental Services & Consulting

Date: 18 June 2003



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FIGURE

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EXECUTIVE SUMMARY

This baseline monitoring report has been prepared by the Environmental Team (ET) of ETS-Testconsult Ltd for baseline monitoring under the Environmental Permit No. EP-150/2002 (the EP) for "Construction of Jetty at Lung Kwu Chau (CED Contract No. : CV/2002/11)" (The Project). Under the requirements of Section 4 of the EP, EM&A programme as set out in the EM&A Manual is required to be implemented.

According to the EM&A Manual, baseline marine water monitoring was carried out at 5 designated monitoring stations from 18 April to 16 May 2003 except 05 May 2003, which was cancelled due to bad weather (Red Rainstorm and Thunderstorm warning).

Monitoring parameters including Dissolved Oxygen, Turbidity and Suspended Solids, and other relevant data (such as water depth, monitoring time, salinity, Dissolved Oxygen Saturation (%), tidal stages and weather condition) were recorded during the baseline monitoring.

The average of Dissolve Oxygen, Turbidity and Suspended Solids were in the range of 2.82-9.53 mg/L (surface and middle depth) and 2.93-9.24 mg/L (bottom depth), 3.86-87.9 NTU and 2.2-96 mg/L respectively.

The measured results of the monitoring parameters are considered representative of the pre-construction ambient conditions prior to the commencement of the works.

Statistical analysis indicates that no significant difference between all monitoring stations during ebb and flood tides is found on monitoring parameters. It is therefore considered that the use of one set of Action/Limit Levels for both ebb and flood tides is already appropriate for the EM&A programme.

The baseline monitoring results were adopted to establish the Action and Limit Levels, which are summarized below:

Parameter	Action Level	Limit Level
DO (mg/L)	<u>Surface & Middle</u> 4 mg/L <u>Bottom</u> 2.86 mg/L	<u>Surface & Middle</u> 4 mg/L <u>Bottom</u> 2 mg/L
SS (mg/L) (Depth-averaged)	44 mg/L or 120% of the upstream control station's SS at the same tide on the same day	49 mg/L or 130% of the upstream control station's SS at the same tide on the same day
Turbidity (NTU) (Depth-averaged)	37.4 NTU or 120% of the upstream control station's turbidity at the same tide on the same day	46.2 NTU or 130% of the upstream control station's turbidity at the same tide on the same day



1.0 INTRODUCTION

Wai Kee (Zens) Construction & Transportation Co., Ltd. (WKC&T) has been awarded the Contract No.: CV/2002/11, "Construction of Jetty at Lung Kwu Chau" (the Project) by the CED. ETS-Testconsult Limited (ETL) has been commissioned as Environmental Team (ET) to carry out baseline marine water quality monitoring at Lung Kwu Chau.

The purpose of this baseline report is to set out ambient levels for marine water quality as a basis for the environmental impact and compliance monitoring for the reconstruction of jetty at Lung Kwu Chau. The baseline monitoring was conducted at the designated monitoring stations from 18 April and 16 May 2003 and Action and Limit (A/L) Levels were determined in accordance with the EM&A Manual. This report presents the monitoring stations, equipment, period, methodology, results and observations for marine water quality during the baseline monitoring period.

2.0 PROJECT INFORMATION

2.1 Background

To provide essential navigational aid for aircraft operating into and out of Hong Kong International Airport, a Doppler VHF Omni-directional Range and Distance Measuring Equipment (DVOR/DME) Station is being operated on Lung Kwu Chau. The existing jetty at Lung Kwu Chau is too small and the surrounding waters are too shallow to accommodate the vessels employed by Civil Aviation Department (CAD) for transporting equipment and personnel for servicing and maintaining the DVOR/DME. At present, the transportation relies heavily on helicopters, the operation of which is prohibited during night times and adverse weather conditions. In order that emergency repair work can be undertaken during such periods, CED has proposed to construct a proper jetty for berthing of marine vessels.

2.2 Project Location and Scope

The proposed site of the Project is located on the eastern coast of Lung Kwu Chau as shown in Figure 1. Lung Kwu Chau is situated within the gazetted Sha Chau and Lung Kwu Chau Marine Park. Due to the remoteness of the site, the island is uninhabited with no infrastructure other than the existing jetty and the DVOR/DME Station. Under the preliminary design, the scope of this Project comprises the following:

- Construction of a precast concrete blockwork jetty (10 m by 20 m) with a single berth;
- Construction of a concrete catwalk (approximately 22 m long);
- Dredging of an approach channel to a level of -2.5 mCD in front of the berth;
- Installation of miscellaneous facilities on the jetty, including lighting, navigation light, fendering, handrails, bollards, tide gauge, etc;
- Demolition of the existing jetty upon completion of the proposed jetty;
- Extension of an existing footpath.

2.3 Construction Programme

The Project is scheduled to commence in April 2003 for completion in December 2003. The Construction Programme is attached in Appendix E.



3.0 BASELINE MARINE WATER QUALITY MONITORING

3.1 Monitoring Locations

The marine water quality monitoring stations during the dredging works are shown in Figure 2. The co-ordinates of the proposed monitoring stations are listed in Table 3.1.

Table 3.1 Proposed Marine Water Quality Monitoring Stations

Station	Eastling	Northing
M1	806244	827080
M2	806329	826408
M3	806235	826089
C1	806116	827618
C2	806034	825308

Control station C1 should be the upstream control station for all monitoring stations during mid-ebb and Control Station C2 should be the upstream control station for all monitoring stations during mid-flood.

3.2 Monitoring Parameters

Monitoring parameters listed in Table 3.2 shall be measured out by the ET to ensure that any deteriorating water quality could be readily detected and timely action be taken to rectify the situation. Table 3.3 shows the other relevant water quality data recorded during the baseline monitoring.

Table 3.2 Monitoring Parameters

In-situ measurement	Laboratory analysis
Dissolved Oxygen (mg/L)	Suspended solids (mg/L)
Turbidity (NTU)	

Table 3.3 Other relevant water quality parameters

Water Quality Parameters	
Tidal stages	Ambient Temperature (°C)
Water depth (m)	Marine Water Temperature (°C)
Monitoring time (hr:mm)	Dissolved Oxygen saturation (%)
Weather Condition	Salinity (ppt)

Note: pH is agreed by ET Leader, the Engineer and IE to be irrelevant to the Project.

3.3 Monitoring Frequency

The baseline monitoring frequency of marine water quality is summarized in Table 3.4.

Table 3.4 Monitoring frequency of Baseline Monitoring

Frequency	Monitoring Depth
3 days/week, 2 tides/day	Surface, middle and bottom



3.4 Monitoring Methodology and Equipment Used

Positioning of the monitoring stations

A hand-held digital Global Positioning System (GPS) was used to identify the designated monitoring stations prior to water sampling.

Water Depth measurement

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

In-situ Water Quality Monitoring Equipment

All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals or sometimes longer throughout all stages of the water quality monitoring.

Dissolved Oxygen (DO) and temperature measuring equipment

Portable, weatherproof DO-measuring meter with built-in salinity compensation (YSI model 95) was used in the baseline monitoring. It can be capable for measuring:

- a dissolved oxygen level in the range of 0-20 mg/L and 0-200 % saturation; and
- a temperature of 0-45 degree Celsius

This type of DO-measuring meter has a membrane electrode with automatic temperature compensation complete with a 50-feet cable. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring location

Turbidity Measurement Instrument

Portable and weatherproof turbidity meter (HACH model 2100P) was used during baseline monitoring. It has a photoelectric sensor capable of measuring turbidity between 0-1000 NTU. Response of the sensor was checked with certified standard Turbidity solutions before the start of measurement.

Salinity

A portable salinity meter capable of measuring salinity in the range 0-40 ppt (YSI Model 30M) was provided for measuring salinity of the water at each monitoring location. It was checked with standard 30 ppt Salinity solutions before the start of measurement.

Water Sampling and Sample Analysis

In-situ monitoring was carried out at three depths: 1 meter below water surface, at mid-depth and 1 meter above the seabed. If the water depth is less than 6 m, the mid-depth station shall be omitted and if the water depth is below 3 m, only the mid depth station shall be monitored.

A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 litres, was lowered into the water body at the predetermined depth. The opening ends of the sampler were then closed accordingly and water samples were collected.

The sample container, made by high-density polythene, was rinsed with a portion of the water sample. The water sample was then transferred to the container, labelled with a unique sample ID and sealed with a screw cap. The water samples were stored in a cool box maintained at 4°C. The water samples were then delivered to a local HOKLAS-accredited laboratory (Environmental Laboratory, ETS-Testconsult Ltd, HOKLAS Registration No. 022) on the same day for analysis.

3.5 Quality Assurance (QA) / Quality Control (QC) results and Determination Limits

At each measurement/sampling depth, two consecutive measurements of dissolved oxygen (DO), dissolved oxygen saturation (DOS), turbidity and salinity were taken. For turbidity measurement, the sample was collected by using sampler and then transferred to the cell. The reading of turbidity of the sample was directly recorded from the Turbidimeter (HACH 2100P) after inserting the cell to the Turbidimeter. For DO, DOS and Salinity, duplicate measurements were performed by dropping the calibrated probes of the corresponding monitoring equipments to the designated depths of the water column and taking readings after stabilized. The duplicate measurements were averaged if the difference was not greater than 25%.

The summary of laboratory testing method of Total Suspended Solids analysis was shown in Table 3.5.

Table 3.5 The summary of laboratory testing method of Total Suspended Solids

Laboratory Analysis	Testing Procedure	Method Detection Limit
Total suspended solids	In house method based on APHA 19 th ed 2540D	1.0 mg/L

Environmental Laboratory of ETS-Testconsult Ltd has quality assurance and quality control programs in accordance with HOKLAS requirement. For the QA/QC procedures, one QC Sample, one Duplicate Sample and one Sample Spike of every batch of 20 samples were analysed. The QA/QC results are summarized in Appendix G.

3.6 Details of site Equipment used for In-situ measurement

Table 3.6 shows the equipment used for in-situ monitoring of water quality. The calibration certificates are attached in Appendix A.

Table 3.6 Details Baseline Monitoring Equipment (In-site measurement)

Parameter	Model	Date of Calibration / Performance Check	Due Date	Equipment No.
Coordinate of Monitoring stations	MLR GPS Navigator, SP24	-----	-----	EW/005/01*
Dissolved Oxygen (Saturation), Temperature	YSI Dissolved Oxygen Meter, YSI 95	02-04-2003	01-07-2003	EW/003/001 *
		02-04-2003	01-07-2003	EW/003/002 *
Turbidity	HACH Model 2100P Turbid Meter	23-02-2003	22-05-2003	ET/0505/004 #

Parameter	Model	Date of Calibration / Performance Check	Due Date	Equipment No.
Salinity	YSI Model 30M	21-03-2003	20-06-2003	EW/004/01 [#]
Water Depth	EAGLE Strata 128 Sonar	-----	-----	EW/002/02

Remark: (*) indicates the instrument should be calibrated on use.

(#) indicates the instrument should be checked with standard solution before use.

3.7 Monitoring Duration and Period

In-situ measurement was carried out at both mid-flood and mid-ebb at each location on a sampling day. Table 3.6 shows the schedule for baseline water quality monitoring at Lung Kwu Chau.

Table 3.6 Schedule for Baseline Monitoring at Lung Kwu Chau

MONITORING DATE	1 st Tide Monitoring (Starting Time)	2 nd Tide Monitoring (Starting Time)
18/04/2003 (Fri)	08:30 Mid-Flood	14:00 Mid-Ebb
21/04/2003 (Mon)	09:30 Mid-Flood	15:45 Mid-Ebb
23/04/2003 (Wed)	09:30 Mid-Flood	16:30 Mid-Ebb
25/04/2003 (Fri)	09:45 Mid-Ebb	14:00 Mid-Flood
28/04/2003 (Mon)	10:00 Mid-Ebb	16:00 Mid-Flood
30/04/2003 (Wed)	11:30 Mid-Ebb	16:15 Mid-Flood
02/05/2003 (Fri)	08:45 Mid-Flood	13:30 Mid-Ebb
05/05/2003 * (Mon)	09:45 Mid-Flood	14:00 Mid-Ebb
07/05/2003 (Wed)	09:45 Mid-Flood	14:00 Mid-Ebb
09/05/2003 (Fri)	10:00 Mid-Flood	16:30 Mid-Ebb
12/05/2003 (Mon)	10:00 Mid-Ebb	15:00 Mid-Flood
14/05/2003 (Wed)	10:00 Mid-Ebb	15:15 Mid-Flood
16/05/2003 (Fri)	12:00 Mid-Ebb	17:30 Mid-Flood

Remark : (*) indicates the morning cancelled due to bad weather (Red Rainstorm and Thunderstorm warning).

4.0 RESULTS AND OBSERVATIONS

4.1 Results

Determination of Action and Limit Level

The field records of baseline monitoring were attached in Appendix B1. The data of marine water quality parameters carried at 5 monitoring stations (C1, M1, M2, M3 and C2) at Lung Kwu Chau between 18 April and 16 May 2003 except 05 May 2003, which was cancelled due to bad weather (Red Rainstorm and Thunderstorm warning), are tabulated in Appendix B2.



The monitoring data of SS and Turbidity at 18 April 2003 at monitoring stations C1, C2 and M1 (C1, C2 and M1 at mid-flood and C1 at mid-ebb) were abnormally high (greater than 200mg/L in SS and 140 NTU in Turbidity at bottom level). After discussion between Engineer's Representative, Independent Engineer and ET, these sets of data from these monitoring stations were excluded from the determination of Action and Limit Level.

Summary statistics for each monitoring parameter including range, mean and percentiles based on depth-averaged data are given in Table 4.1.

Table 4.1 Summary Statistics of Baseline Monitoring Parameters at Lung Kwu Chau

Parameter	Mean (Range)	95%ile (5%ile)	99%ile (1%ile)
DO (Surface and Middle) in mg/L	6.23 (2.82-9.53)	(4.13)	(3.40)
DO (Bottom) in mg/L	5.90 (2.93-9.24)	(3.72)	(3.05)
SS* in mg/L	16.7 (2.2-96)	44	49
Turbidity* in NTU	17.1 (3.86-87.9)	37.4	46.2

*Depth-averaged, which is calculated by taking the arithmetic means of reading of all three depths.

Action/Limit (A/L) Levels for Marine Water Monitoring Parameters at Lung Kwu Chau are determined according to the following Table 4.2 which is extracted from EM&A Manual.

Table 4.2 Action and Limit Level for Marine Water Quality

Parameters	Action	Limit
DO in mg/L (Surface, Middle & Bottom)	<u>Surface and Middle</u> 1 percentile of baseline data; or midway between 5 percentile of baseline data and limit level <u>Bottom</u> 1 percentile of baseline data or midway between 5 percentile of baseline data and limit level	<u>Surface and Middle</u> 4 mg/L <u>Bottom</u> 2 mg/L
SS in mg/L (depth-averaged)	95 percentile of baseline data or 120% of upstream control station's SS at the same tide of the same day	99 percentile of baseline or 130% of upstream control station's SS at the same tide of the same day
Turbidity in NTU (depth-averaged)	95 percentile of baseline data or 120% of upstream control station's Turbidity at the same tide of the same day	99 percentile of baseline or 130% of upstream control station's Turbidity at the same tide of the same day

- Notes:
1. "depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
 2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
 3. For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
 4. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.



According to the Table 4.2, Action Levels of DO at surface & middle and bottom depth may be either 1 percentile of baseline data or midway between 5 percentile of baseline data and Limit Level as calculated below:

Dissolved Oxygen (DO)	<u>1 percentile of baseline data</u>	<u>Midway between 5 percentile of baseline data and Limit Level</u>
Surface & Middle (mg/L)	3.40	3.07
Bottom (mg/L)	3.05	2.86

From the data above, both of 1 percentile of baseline data and the set of figures of midway between 5 percentile of baseline data and Limit Level are not appropriate to be the Action Level for the Surface & Middle because they are lower than the Limit Level of 4 mg/L. 4mg/L of the Limit Level is therefore used as the Action Level.

In case of Bottom level, the set of midway between 5 percentile of baseline data and Limit Level is selected for the Action Level.

In case of any exceedance of the Action or Limit Levels, appropriate actions set out in the Event and Action Plan (Refer to the EM&A Manual Table 2.3, Event and Action Plan for Water Quality) shall be taken upon ETL's notification.

Table 4.3 Action and Limit Levels for Marine Water Quality at Lung Kwu Chau

Parameter	Action Level	Limit Level
DO (mg/L)	<u>Surface & Middle</u> 4 mg/L	<u>Surface & Middle</u> 4 mg/L
	<u>Bottom</u> 2.86 mg/L	<u>Bottom</u> 2 mg/L
SS (mg/L) (Depth-averaged)	44 mg/L or 120% of the upstream control station's SS at the same tide on the same day	49 mg/L or 130% of the upstream control station's SS at the same tide on the same day
Turbidity (NTU) (Depth-averaged)	37.4 NTU or 120% of the upstream control station's turbidity at the same tide on the same day	46.2 NTU or 130% of the upstream control station's turbidity at the same tide on the same day

- Notes:
1. "depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
 2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
 3. For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
 4. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.

Determination of the difference between Control and Impact stations

The difference between control and impact stations for the monitoring parameters (DO, Turbidity and SS) has been shown in Appendix F. According to the results, it is concluded that there is no significant difference between control and impact stations for the monitoring parameters at Lung Kwu Chau.



4.2 Observations

The weather condition during the period of baseline monitoring varied to be sunny, fine, cloudy and rainy days. All the baseline marine water monitoring was conducted without construction activities.

The major influential factors for the baseline marine water quality monitoring were the traffic transportation (e.g. passing vessels) and the human activities (e.g. local tour) around the monitoring locations.

5.0 REVISION FOR INCLUSION IN THE EM&A MANUAL

The recommended Action and Limit levels for marine water quality given in Table 4.3 of this report should be included in the revised EM&A Manual.

6.0 CONCLUSIONS AND RECOMMENDATIONS

According to the EM&A Manual, baseline marine water monitoring was carried out at 5 designated monitoring stations from 18 April to 16 May 2003 except 05 May 2003, which was cancelled due to bad weather (Red Rainstorm and Thunderstorm warning).

Monitoring parameters including Dissolved Oxygen, Turbidity and Suspended Solids, and other relevant data (such as water depth, monitoring time, salinity, Dissolved Oxygen Saturation (%), tidal stages and weather condition) were recorded during the baseline monitoring.

The average of Dissolve Oxygen, Turbidity and Suspended Solids were in the range of 2.82-9.53 mg/L (surface and middle depth) and 2.93-9.24 mg/L (bottom depth), 3.86-87.9 NTU and 2.2-96 mg/L respectively.

The measured results of the monitoring parameters are considered representative of the pre-construction ambient conditions prior to the commencement of the works.

Statistical analysis indicates that no significant difference between all monitoring stations during ebb and flood tides is found on monitoring parameters. It is therefore considered that the use of one set of Action/Limit Levels for both ebb and flood tides is already appropriate for the EM&A programme.

It is recommended that the Action and Limit Levels established from the baseline monitoring results should be used as performance criteria in the EM&A of the Project.



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ETS-TESTCONSULT LIMITED

Appendix A

Calibration Certificates for Baseline Monitoring Equipments



Performance Check of Salinity Meter

Equipment Ref. No. : EW/004/01 Manufacturer : TSI

Model No. : 30M Serial No. : 97J0300AA

Date of Calibration : 21 March 03 Due Date : 20 June 03

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

J137

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30	29.6	1.33

Acceptance Criteria

Difference : <10 %

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

Checked by : Linda Lam

Approved by : DL



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	ET/103/CO ₂	Manufacturer	YSI
Model No.	95	Serial No.	9730182 AD
Date of Calibration	22 April 03	Calibration Due Date	01 July 03

Ref. No. of Reference Thermometer : ET/2403/01

Ref. No. of Potassium Dichromate : ET/0520/003/02

Temperature Verification

Thermometer reading	Temperature (°C)		
	1	2	Average
Meter reading	20.0	20.3	

Linearity Checking

Purging time, min	DO meter reading, mg/L			Winkler Titration result, mg/L		
	1	2	Average	1	2	Average
2	7.28	7.30	7.29	7.22	7.23	7.23
5	4.87	5.01	4.99	5.01	5.04	5.03
10	2.23	2.24	2.25	2.11	2.09	2.10
Linear regression coefficient	0.9970					

Zero Point Checking

DO meter reading, mg/L	0.00
------------------------	------

Salinity Checking

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result, mg/L		
	1	2	Average	1	2	Average
10	7.18	7.17	7.18	7.13	7.11	7.12
30	6.97	6.99	6.98	6.95	6.94	6.95

Acceptance Criteria

- (1) Difference between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
- (2) Linear regression coefficient : > 0.99
- (3) Zero checking: 0.0mg/L
- (4) Difference (%) of DO content from the meter reading and by winkler titration : ± 5%

The equipment complies * / does not comply * with the specified requirements and is deemed acceptable * / unacceptable * for use.

* Delete as appropriate

Calibrated by : Linda Lam

Approved by :



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	EW/1003/001	Manufacturer	YSI
Model No.	95	Serial No.	97110407 AD
Date of Calibration	02 April 2003	Calibration Due Date	01 July 2003

Ref. No. of Reference Thermometer : ET/2403/01

Ref. No. of Potassium Dichromate : ET/0521/CCB/92

Temperature Verification

Temperature (°C)	
Thermometer reading	20.0
Meter reading	20.2

Linearity Checking

Purging time, min	DO meter reading, mg/L			Winkler Titration result, mg/L		
	1	2	Average	1	2	Average
2	7.34	7.36	7.35	7.22	7.23	7.23
5	4.98	4.92	4.95	5.01	5.04	5.03
10	2.22	2.23	2.21	2.11	2.09	2.10
Linear regression coefficient	0.9981			1.00		

Zero Point Checking

DO meter reading, mg/L	0.00
------------------------	------

Salinity Checking

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result, mg/L		
	1	2	Average	1	2	Average
10	7.20	7.17	7.19	7.13	7.11	7.12
30	6.98	7.01	7.00	6.95	6.94	6.95

Acceptance Criteria

- (1) Difference between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
- (2) Linear regression coefficient : < 0.99
- (3) Zero checking: 0.0mg/L
- (4) Difference (%) of DO content from the meter reading and by winkler titration : ± 5%

The equipment complies * / does not comply * with the specified requirements and is deemed acceptable * / unacceptable * for use.

* Delete as appropriate

Calibrated by

Linda Lam

Approved by :

JL



Internal Calibration Report of Turbidimeter

Equipment Ref. No. : ET/6505/004 Manufacturer : HACH
Model No. : 2100P Serial No. : 95110 0009130
Date of Calibration : 23 February, 2003 Calibration Due : 22 May, 2003

Data

4.95	54.8	550
0 - 10 NTU Gelex Vial	10 - 100 NTU Gelex Vial	100 - 1000 NTU Gelex Vial
4.91	54.7	547

The equipment complies * / does not comply * with the specified requirements and is deemed acceptable * / unacceptable * for use.

* Delete as appropriate

Calibrated by : VCL

Approved by : Frinda Lam



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Appendix B1

Field Records of Baseline Monitoring



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 18-4-2003
Weather condition : ClearTide status : Mid - Flood
Ambient Temperature (°C) : 25

Station: C1 Duration: 09:53 to 10:03 Depth of Water (meter): 15.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.1			14.2			
TEMP. (°C)		22.9			22.6			22.4		
SALINITY (ppt)	23.3	23.7	Ave.: 23.3	26.1	26.2	Ave.: 26.2	26.8	26.7	Ave.: 26.8	
D.O. (mg/L)	5.42	5.37	Ave.: 5.40	5.63	5.57	Ave.: 5.60	5.71	5.69	Ave.: 5.70	
D.O.S. (%)	76.7	74.8	Ave.: 75.3	77.9	77.1	Ave.: 77.5	78.8	78.5	Ave.: 78.7	
TURBIDITY (NTU)	22.9	21.6	Ave.: 23.3	12.9	12.1	Ave.: 12.5	14.6	14.9	Ave.: 14.8	
S.S. (mg/L)	18	19	Ave.: 19	15.7	15.1	Ave.: 15.4	25.7	24.8	Ave.: 25.3	

Station: M1 Duration: 09:39 to 09:50 Depth of Water (meter): 14.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.2			13.4			
TEMP. (°C)		23.0			22.7			22.4		
SALINITY (ppt)	22.6	22.7	Ave.: 22.7	24.8	24.8	Ave.: 24.8	24.8	24.8	Ave.: 24.8	
D.O. (mg/L)	5.75	5.63	Ave.: 5.59	5.69	5.61	Ave.: 5.65	5.84	5.90	Ave.: 5.87	
D.O.S. (%)	77.6	78.4	Ave.: 78.0	79.0	78.3	Ave.: 78.7	80.6	81.2	Ave.: 80.9	
TURBIDITY (NTU)	20.3	21.1	Ave.: 20.7	27.1	27.0	Ave.: 27.1	33.3	33.1	Ave.: 33.2	
S.S. (mg/L)	22	21	Ave.: 22	32.4	31.6	Ave.: 32.0	44.5	43.1	Ave.: 43.8	

Station: M2 Duration: 09:23 to 09:34 Depth of Water (meter): 8.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.0			7.0			
TEMP. (°C)		27.4			23.4			23.4		
SALINITY (ppt)	21.1	21.2	Ave.: 21.2	21.5	21.4	Ave.: 21.5	21.3	21.4	Ave.: 21.4	
D.O. (mg/L)	5.67	5.69	Ave.: 5.68	5.72	5.65	Ave.: 5.69	5.66	5.64	Ave.: 5.65	
D.O.S. (%)	79.7	80.1	Ave.: 79.9	80.2	79.3	Ave.: 79.8	79.0	79.0	Ave.: 79.0	
TURBIDITY (NTU)	10.4	9.93	Ave.: 10.2	13.3	12.6	Ave.: 13.0	20.0	19.1	Ave.: 19.6	
S.S. (mg/L)	16	11	Ave.: 11	10	10	Ave.: 10	21	22	Ave.: 22	

Station: M3 Duration: 09:10 to 09:21 Depth of Water (meter): 8.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.2			7.4			
TEMP. (°C)		23.3			22.9			22.9		
SALINITY (ppt)	21.6	21.6	Ave.: 21.6	23.7	23.7	Ave.: 23.7	23.8	23.8	Ave.: 23.8	
D.O. (mg/L)	5.73	5.80	Ave.: 5.77	5.84	5.91	Ave.: 5.88	5.86	5.81	Ave.: 5.84	
D.O.S. (%)	80.4	81.1	Ave.: 80.8	81.2	81.8	Ave.: 81.5	81.5	80.6	Ave.: 81.1	
TURBIDITY (NTU)	11.7	10.1	Ave.: 10.9	28.1	29.4	Ave.: 28.8	49.1	48.3	Ave.: 48.5	48.7
S.S. (mg/L)	19	18	Ave.: 19	30	31	Ave.: 31	81	83	Ave.: 82	

Station: C2 Duration: 08:50 to 09:05 Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.2			5.4			
TEMP. (°C)		23.1			22.8			22.7		
SALINITY (ppt)	22.6	22.6	Ave.: 22.6	21.0	25.0	Ave.: 25.0	25.5	25.5	Ave.: 25.5	
D.O. (mg/L)	5.90	5.95	Ave.: 5.93	5.99	5.93	Ave.: 5.96	5.98	5.91	Ave.: 5.95	
D.O.S. (%)	82.3	82.9	Ave.: 82.6	82.3	82.7	Ave.: 83.0	82.0	82.5	Ave.: 82.8	
TURBIDITY (NTU)	15.7	14.1	Ave.: 14.9	51.3	52.7	Ave.: 52.0	156	149	Ave.: 153	
S.S. (mg/L)	20	21	Ave.: 21	72	74	Ave.: 73	230	237	Ave.: 234	

Any notable discoloration of water? Y / N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	V.C. Tiu	J.T.	18/4
Tested by:	Ronice	P.L.	19/4
Checked By	Linda Lam	Linda Lam	22-4-03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 18-4-03

Tide status : Mid-Tide

Weather condition : CLEAR

Ambient Temperature (°C) : 25

Station: C1 Duration: 14:45 to 15:08 Depth of Water (meter): 14.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	7.4	13.8	21.2	21.2	22.5	22.5	22.5	22.5	
TEMP. (°C)	21.8	21.6	Ave.: 21.7	22.2	22.4	Ave.: 22.3	23.6	22.6	Ave.: 23.6	
D.O. (mg/L)	5.15	5.07	Ave.: 5.11	5.22	5.19	Ave.: 5.21	5.16	5.16	Ave.: 5.16	
D.O.S. (%)	70.6	69.3	Ave.: 69.7	71.2	70.8	Ave.: 71.0	69.8	69.8	Ave.: 69.8	
TURBIDITY (NTU)	10.3	11.8	Ave.: 11.1	67.5	63.2	Ave.: 65.4	177	163	Ave.: 170	
S.S. (mg/L)	14	15	Ave.: 15	82	80	Ave.: 81	229	236	Ave.: 233	

Station: M1 Duration: 14:39 to 14:54 Depth of Water (meter): 15.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	7.9	14.7	23.9	23.7	23.4	23.9	23.4	23.4	
TEMP. (°C)	22.3	22.5	Ave.: 22.3	22.2	22.1	Ave.: 22.2	23.9	23.4	Ave.: 23.1	
D.O. (mg/L)	5.17	5.19	Ave.: 5.18	5.33	5.30	Ave.: 5.32	5.06	5.10	Ave.: 5.08	
D.O.S. (%)	70.3	70.7	Ave.: 70.5	72.1	71.4	Ave.: 72.0	68.9	69.4	Ave.: 69.2	
TURBIDITY (NTU)	11.6	11.2	Ave.: 11.9	14.0	13.7	Ave.: 14.1	33.1	25.6	Ave.: 34.4	
S.S. (mg/L)	9.5	9.5	Ave.: 9.5	15	14	Ave.: 15	25	26	Ave.: 26	

Station: M2 Duration: 14:25 to 14:38 Depth of Water (meter): 7.3

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.1	6.3	23.7	23.7	23.4	23.6	24.8	24.8	
TEMP. (°C)	22.5	23.5	Ave.: 23.5	23.6	23.5	Ave.: 23.6	24.8	24.8	Ave.: 24.8	
SALINITY (ppt)	32.5	32.5	Ave.: 32.5	32.5	32.5	Ave.: 32.5	32.5	32.5	Ave.: 32.5	
D.O. (mg/L)	5.81	5.80	Ave.: 5.81	5.78	5.78	Ave.: 5.78	5.81	5.73	Ave.: 5.82	
D.O.S. (%)	78.8	78.6	Ave.: 78.7	78.2	78.1	Ave.: 78.2	78.4	78.7	Ave.: 78.6	
TURBIDITY (NTU)	27.7	27.0	Ave.: 28.4	26.2	27.2	Ave.: 26.7	66.4	63.8	Ave.: 66.1	
S.S. (mg/L)	27	26	Ave.: 27	29	30	Ave.: 30	95	97	Ave.: 96	

Station: M3 Duration: 14:11 to 14:23 Depth of Water (meter): 7.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.5	6.0	23.7	23.6	23.5	23.6	24.0	24.0	
TEMP. (°C)	23.7	23.7	Ave.: 23.7	23.7	23.6	Ave.: 23.6	23.6	24.0	24.0	
SALINITY (ppt)	24.1	24.1	Ave.: 24.1	24.1	24.1	Ave.: 24.1	24.6	24.8	Ave.: 24.6	
D.O. (mg/L)	6.25	6.24	Ave.: 6.25	6.21	6.21	Ave.: 6.21	6.18	6.18	Ave.: 6.19	
D.O.S. (%)	84.7	84.7	Ave.: 84.7	84.0	84.0	Ave.: 84.0	83.4	83.8	Ave.: 83.4	
TURBIDITY (NTU)	23.3	25.6	Ave.: 24.5	37.7	37.8	Ave.: 37.8	58.6	57.2	Ave.: 57.9	
S.S. (mg/L)	30	29	Ave.: 30	35	35	Ave.: 35	70	73	Ave.: 72	

Station: C2 Duration: 14:00 to 14:09 Depth of Water (meter): 4.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.5	4.8	23.3	23.6	23.8	23.6	23.8	23.8	
TEMP. (°C)	26.7	26.7	Ave.: 26.7			Ave.:	26.8	26.8	Ave.: 26.8	
SALINITY (ppt)	6.74	6.80	Ave.: 6.80			Ave.:	6.82	6.81	Ave.: 6.82	
D.O. (mg/L)	91.6	91.6	Ave.: 91.5			Ave.:	91.1	91.2	Ave.: 91.1	
D.O.S. (%)	30.5	27.6	Ave.: 29.1			Ave.:	37.6	35.5	Ave.: 36.6	
TURBIDITY (NTU)	40	41	Ave.: 41			Ave.:	48	50	Ave.: 49 (cont)	
S.S. (mg/L)										

Any notable discoloration of water? Y N If yes, elaboration is as follows:Any notable pollutant by others near monitoring site? Y N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Alvin	Alvin	18-4-03
Tested by:	Renee	Renee	19-4-03
Checked By	Linda Law	Linda Law	22-4-03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 21/4/2003

Tide status

FLOOD
MID - ~~PRED~~ ~~EST~~
27

Weather condition : SUNNY

Ambient Temperature (°C)

Station: C1

Duration: 0950 to 1003

Depth of Water (meter): 15.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.5			14.0			
TEMP. (°C)	25.8			24.8			24.1			
SALINITY (ppt)	22.1	21.8	Ave.: 21.9	25.1	24.5	Ave.: 24.8	27.8	27.9	Ave.: 27.9	
D.O. (mg/L)	6.07	6.01	Ave.: 6.04	6.12	6.16	Ave.: 6.14	6.16	6.14	Ave.: 6.15	
D.O.S. (%)	87.3	87.2	Ave.: 87.3	87.3	87.8	Ave.: 87.6	87.6	87.3	Ave.: 87.5	
TURBIDITY (NTU)	8.98	8.40	Ave.: 8.69	15.8	14.9	Ave.: 15.4	84.0	87.2	Ave.: 85.6	
S.S. (mg/L)	5.0	5.0	Ave.: 5.0	15	15	Ave.: 15	87	83	Ave.: 85	

Station: M1

Duration: 1010 to 1025

Depth of Water (meter): 14.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.4			13.8			
TEMP. (°C)	26.1			24.8			24.2			
SALINITY (ppt)	23.1	22.7	Ave.: 22.9	25.2	25.2	Ave.: 25.2	26.9	27.5	Ave.: 27.2	
D.O. (mg/L)	6.14	6.13	Ave.: 6.14	6.28	6.28	Ave.: 6.27	6.42	6.29	Ave.: 6.36	
D.O.S. (%)	87.3	87.6	Ave.: 87.5	87.4	88.0	Ave.: 87.7	89.3	87.2	Ave.: 88.3	
TURBIDITY (NTU)	15.4	16.2	Ave.: 15.8	18.4	19.5	Ave.: 19.0	61.0	69.4	Ave.: 68.2	
S.S. (mg/L)	7.8	8.3	Ave.: 8.1	16	17	Ave.: 17	71	66	Ave.: 69	

Station: M2

Duration: 1040 to 1050

Depth of Water (meter): 8.5

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.3			7.5			
TEMP. (°C)	25.7			25.1			24.9			
SALINITY (ppt)	21.2	21.3	Ave.: 21.3	22.9	22.5	Ave.: 22.7	23.5	23.3	Ave.: 23.4	
D.O. (mg/L)	6.42	6.44	Ave.: 6.43	6.48	6.46	Ave.: 6.47	6.52	6.48	Ave.: 6.50	
D.O.S. (%)	90.6	91.5	Ave.: 91.1	90.9	90.9	Ave.: 90.9	91.3	90.7	Ave.: 91.0	
TURBIDITY (NTU)	9.74	9.46	Ave.: 9.60	16.8	16.7	Ave.: 16.8	27.0	27.8	Ave.: 27.4	
S.S. (mg/L)	4.3	4.8	Ave.: 4.7	9.8	10	Ave.: 9.9	27	25	Ave.: 26	

Station: M3

Duration: 1053 to 1100

Depth of Water (meter): 7.3

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.7			6.3			
TEMP. (°C)	25.1			25.0			25.0			
SALINITY (ppt)	23.4	23.3	Ave.: 23.4	23.4	23.3	Ave.: 23.4	23.6	24.0	Ave.: 23.8	
D.O. (mg/L)	6.66	6.61	Ave.: 6.64	6.40	6.44	Ave.: 6.42	6.42	6.52	Ave.: 6.47	
D.O.S. (%)	93.7	93.0	Ave.: 93.4	89.7	90.4	Ave.: 90.1	90.2	91.5	Ave.: 90.9	
TURBIDITY (NTU)	13.8	14.4	Ave.: 14.1	20.7	16.4	Ave.: 20.1	28.1	28.1	Ave.: 28.1	
S.S. (mg/L)	12	12	Ave.: 12	20	21	Ave.: 21	27	25	Ave.: 26	

Station: C2

Duration: 1105 to 1120

Depth of Water (meter): 6.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.1			5.2			
TEMP. (°C)	25.7			25.3			24.7			
SALINITY (ppt)	22.3	22.5	Ave.: 22.4	23.3	22.9	Ave.: 23.1	26.1	26.4	Ave.: 26.3	
D.O. (mg/L)	6.59	6.56	Ave.: 6.58	6.70	6.64	Ave.: 6.67	6.91	6.90	Ave.: 6.91	
D.O.S. (%)	93.5	93.3	Ave.: 93.4	94.3	93.9	Ave.: 94.1	96.5	95.9	Ave.: 96.2	
TURBIDITY (NTU)	8.62	10.5	Ave.: 9.86	8.22	8.01	Ave.: 8.12	88.7	87.0	Ave.: 87.9	
S.S. (mg/L)	6.0	6.8	Ave.: 6.4	9.0	8.5	Ave.: 8.8	6.3	7.0	Ave.: 6.7	

Any notable discoloration of water? Y N If yes, elaboration is as follows:Any notable pollutant by others near monitoring site? Y N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Eric Young		21/4/03
Tested by	L. WAI HAN		23/4/03
Checked By	Linda Lam		24/4/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 21-4-03
Weather condition : CLEARTide status : M2D - EBB
Ambient Temperature (°C) : 25

Station: C1 Duration: 16:33 to 16:45 Depth of Water (meter): 12.5

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.3	11.5	25.1	25.6	23.6	Ave.: 23.6	24.7	24.7	
TEMP. (°C)	25.5									
SALINITY (ppt)	22.1	22.2	Ave.: 22.2	23.6	23.6	Ave.: 23.6	24.7	24.7	Ave.: 24.7	
D.O. (mg/L)	4.71	4.70	Ave.: 4.71	4.71	4.71	Ave.: 4.71	4.69	4.74	Ave.: 4.72	
D.O.S. (%)	66.6	66.4	Ave.: 66.5	67.3	66.2	Ave.: 66.9	65.6	66.2	Ave.: 65.9	
TURBIDITY (NTU)	6.56	6.68	Ave.: 6.62	9.10	9.29	Ave.: 9.20	53.2	49.7	Ave.: 51.5	
S.S. (mg/L)	5.0	5.3	Ave.: 5.2	8.0	8.5	Ave.: 8.3	5.8	5.2	Ave.: 5.5	water

Station: M1 Duration: 16:21 to 16:33 Depth of Water (meter): 12.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.3	11.6	25.1	25.8	25.3	Ave.: 23.8	25.3	25.3	
TEMP. (°C)	25.3									
SALINITY (ppt)	23.6	23.0	Ave.: 23.0	23.8	23.8	Ave.: 23.8	25.3	25.3	Ave.: 25.3	
D.O. (mg/L)	4.69	4.67	Ave.: 4.68	4.82	4.76	Ave.: 4.77	4.92	4.92	Ave.: 4.91	
D.O.S. (%)	66.1	65.9	Ave.: 65.9	67.7	67.0	Ave.: 67.4	68.8	68.4	Ave.: 68.6	
TURBIDITY (NTU)	9.38	9.26	Ave.: 9.32	8.43	8.50	Ave.: 8.47	11.5	13.2	Ave.: 12.4	
S.S. (mg/L)	11	10	Ave.: 11	7.3	8.0	Ave.: 7.7	13	12	Ave.: 13	

Station: M2 Duration: 16:05 to 16:20 Depth of Water (meter): 6.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.4	5.7	25.4	25.4	25.2	Ave.: 23.3	23.9	23.9	
TEMP. (°C)	25.4									
SALINITY (ppt)	23.0	23.1	Ave.: 23.1	23.3	23.3	Ave.: 23.3	23.9	23.9	Ave.: 23.9	
D.O. (mg/L)	4.87	4.85	Ave.: 4.86	5.03	4.99	Ave.: 5.01	4.84	4.81	Ave.: 4.83	
D.O.S. (%)	68.8	68.5	Ave.: 68.7	71.4	70.7	Ave.: 71.1	68.6	68.2	Ave.: 68.4	
TURBIDITY (NTU)	10.1	10.2	Ave.: 10.2	15.2	17.8	Ave.: 16.5	24	22.6	Ave.: 23.4	
S.S. (mg/L)	11	10	Ave.: 11	18	17	Ave.: 18	19	21	Ave.: 20	

Station: M3 Duration: 15:51 to 16:04 Depth of Water (meter): 7.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.7	6.4	25.4	25.1	25.3	Ave.: 23.8	23.2	23.2	
TEMP. (°C)	25.4									
SALINITY (ppt)	23.1	23.2	Ave.: 23.2	23.8	23.8	Ave.: 23.8	23.2	23.2	Ave.: 23.2	
D.O. (mg/L)	5.30	5.31	Ave.: 5.31	5.17	5.18	Ave.: 5.15	4.87	4.96	Ave.: 4.97	
D.O.S. (%)	74.8	75.0	Ave.: 74.9	72.1	71.8	Ave.: 72.0	70.0	70.1	Ave.: 70.1	
TURBIDITY (NTU)	9.40	9.10	Ave.: 9.27	13.8	12.7	Ave.: 13.3	9.53	9.84	Ave.: 9.69	
S.S. (mg/L)	10	11	Ave.: 11	18	16	Ave.: 17	9.3	9.0	Ave.: 9.2	

Station: C2 Duration: 15:42 to 15:49 Depth of Water (meter): 5.5

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.7	6.4	25.6	25.1	24.4	Ave.: 23.8	27.2	27.2	
TEMP. (°C)	25.6									
SALINITY (ppt)	23.3	23.4	Ave.: 23.4				Ave.: 23.8	27.2	27.2	Ave.: 27.2
D.O. (mg/L)	7.16	7.15	Ave.: 7.14				Ave.: 6.06	6.07	6.07	Ave.: 6.07
D.O.S. (%)	103.8	103.3	Ave.: 103.6				Ave.: 84.3	84.3	84.4	Ave.: 84.4
TURBIDITY (NTU)	10.5	10.6	Ave.: 10.6				Ave.: 14.2	15.3	14.8	Ave.: 14.8
S.S. (mg/L)	13	11	Ave.: 12				Ave.: 16	15	16	Ave.: 16

Any notable discolouration of water? Y/N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y/N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	ACWLN		21-4-03
Tested by	LI WAI HOM		23-4-03
Checked By	Linda Law		24-4-03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 23/4/2003
Weather condition : FINETide status : MID - FLOOD
Ambient Temperature (°C) : 24

Station: C1 Duration: 1009 to 1025 Depth of Water (meter): 14.9

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	7.5	13.9	25.0	25.0	24.7				
TEMP. (°C)	25.8									
SALINITY (ppm)	18.2	18.2	Ave.: 18.2	27.1	27.4	Ave.: 27.3	29.3	29.1	Ave.: 29.2	
D.O. (mg/L)	4.52	4.54	Ave.: 4.53	4.80	4.81	Ave.: 4.81	4.70	4.72	Ave.: 4.71	
D.O.S. (%)	66.1	66.4	Ave.: 66.3	69.2	69.4	Ave.: 69.3	67.6	67.9	Ave.: 67.8	
TURBIDITY (NTU)	7.39	7.38	Ave.: 7.39	5.97	6.18	Ave.: 6.08	7.63	7.42	Ave.: 7.53	
S.S. (mg/L)	6.5	6.5	Ave.: 6.5	9.5	9.5	Ave.: 9.4	10	11	Ave.: 11	

Station: M1 Duration: 0944 to 10006 Depth of Water (meter): 8.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.4	7.7	25.2	25.2	24.6				
TEMP. (°C)	25.7									
SALINITY (ppm)	16.1	16.1	Ave.: 16.1	24.4	24.4	Ave.: 24.4	29.5	29.2	Ave.: 29.4	
D.O. (mg/L)	4.39	4.37	Ave.: 4.38	4.35	4.38	Ave.: 4.37	4.84	4.83	Ave.: 4.54	
D.O.S. (%)	64.3	63.9	Ave.: 64.1	63.1	63.5	Ave.: 63.3	64.9	64.7	Ave.: 64.8	
TURBIDITY (NTU)	7.18	7.20	Ave.: 7.19	7.33	7.50	Ave.: 7.42	9.56	9.37	Ave.: 9.47	
S.S. (mg/L)	11	12	Ave.: 12	7.5	7.5	Ave.: 7.5	13	15	Ave.: 14	

Station: M2 Duration: 0936 to 0950 Depth of Water (meter): 7.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.8	6.6	25.6	25.4	23.4	26.8	27.1	25.0	
TEMP. (°C)	25.6									
SALINITY (ppm)	18.9	18.9	Ave.: 18.9	23.4	23.3	Ave.: 23.3	26.8	27.1	Ave.: 27.0	
D.O. (mg/L)	4.67	4.68	Ave.: 4.68	4.70	4.68	Ave.: 4.69	4.68	4.67	Ave.: 4.68	
D.O.S. (%)	68.3	68.4	Ave.: 68.4	68.8	68.5	Ave.: 68.7	67.8	67.6	Ave.: 67.7	
TURBIDITY (NTU)	7.21	7.18	Ave.: 7.20	6.32	5.92	Ave.: 6.12	9.87	8.93	Ave.: 9.90	
S.S. (mg/L)	5.3	5.3	Ave.: 5.3	5.0	5.0	Ave.: 5.0	9.8	9.8	Ave.: 9.8	

Station: M3 Duration: 0920 to 0933 Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.2	5.4	25.5	25.4	25.3				
TEMP. (°C)	25.5									
SALINITY (ppm)	20.5	20.5	Ave.: 20.5	23.2	23.4	Ave.: 23.3	25.1	24.9	Ave.: 25.0	
D.O. (mg/L)	5.32	5.32	Ave.: 5.32	5.32	5.36	Ave.: 5.34	5.29	5.31	Ave.: 5.30	
D.O.S. (%)	77.3	77.4	Ave.: 77.4	77.1	77.6	Ave.: 77.4	76.8	77.1	Ave.: 77.0	
TURBIDITY (NTU)	7.02	7.36	Ave.: 7.18	5.63	5.69	Ave.: 5.66	7.04	7.00	Ave.: 7.02	
S.S. (mg/L)	4.8	4.8	Ave.: 4.8	6.0	6.0	Ave.: 6.0	7.0	7.0	Ave.: 7.0	

Station: C2 Duration: 0906 to 0916 Depth of Water (meter): 5.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.2	4.6	25.6	25.4	25.2				
TEMP. (°C)	25.6									
SALINITY (ppm)	21.4	21.4	Ave.: 21.4			Ave.:	25.5	25.5	Ave.: 25.5	
D.O. (mg/L)	5.75	5.78	Ave.: 5.77			Ave.:	5.96	5.95	Ave.: 5.96	
D.O.S. (%)	84.0	84.7	Ave.: 84.4			Ave.:	86.4	86.2	Ave.: 86.3	
TURBIDITY (NTU)	6.46	6.93	Ave.: 6.70			Ave.:	11.4	11.4	Ave.: 11.4	
S.S. (mg/L)	6.8	6.8	Ave.: 6.8			Ave.:	12	11	Ave.: 12	

Any notable discoloration of water? Y (N) If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y (N) If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Eric Yeung	BY	23/4/03
Tested by:	Denee Lin	DL	24/4/03
Checked By	Linda Law	Linda Law	26/4/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 23/4/2003
Weather condition : SUNNYTide status : MID - EBB
Ambient Temperature (°C) : 27

Station: C1

Duration: 1808 to 1820

Depth of Water (meter): 14.6

		SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)		1.0			7.3			13.6			
TEMP. (°C)		27.1			25.1			24.4			
SALINITY (ppm)		14.9	14.8	Ave.: 14.9	27.5	27.9	Ave.: 27.7	29.0	29.1	Ave.: 29.1	
D.O. (mg/L)		6.28	6.30	Ave.: 6.29	6.25	6.19	Ave.: 6.22	6.17	6.19	Ave.: 6.18	
D.O.S. (%)		93.9	94.2	Ave.: 94.1	90.4	89.4	Ave.: 89.5	89.1	89.5	Ave.: 88.3	
TURBIDITY (NTU)		6.46	6.45	Ave.: 6.46	9.07	9.05	Ave.: 9.06	7.53	7.22	Ave.: 7.38	
S.S. (mg/L)		6.5	6.5	Ave.: 6.5	9.0	9.0	Ave.: 9.0	6.8	6.8	Ave.: 6.8	

Station: M1

Duration: 1755 to 1806

Depth of Water (meter): 8.3

		SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)		1.0			4.2			7.3			
TEMP. (°C)		26.2			25.3			25.2			
SALINITY (ppm)		19.6	19.4	Ave.: 19.5	24.1	24.0	Ave.: 24.1	22.9	23.0	Ave.: 23.0	
D.O. (mg/L)		6.46	6.48	Ave.: 6.47	6.51	6.54	Ave.: 6.53	6.53	6.56	Ave.: 6.55	
D.O.S. (%)		95.0	95.3	Ave.: 95.2	94.5	94.9	Ave.: 94.7	94.9	95.4	Ave.: 95.2	
TURBIDITY (NTU)		5.91	5.76	Ave.: 5.84	5.45	5.47	Ave.: 5.50	5.01	5.10	Ave.: 5.06	
S.S. (mg/L)		4.0	4.0	Ave.: 4.0	6.5	6.5	Ave.: 6.5	6.5	6.5	Ave.: 6.5	

Station: M2

Duration: 1744 to 1752

Depth of Water (meter): 5.6

		SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)		1.0						4.6			
TEMP. (°C)		25.7						24.7			
SALINITY (ppm)		23.0	23.0	Ave.: 23.0			Ave.: 23.0	24.2	24.4	Ave.: 24.3	
D.O. (mg/L)		6.44	6.42	Ave.: 6.43			Ave.: 6.43	6.09	6.12	Ave.: 6.11	
D.O.S. (%)		94.2	93.9	Ave.: 94.1			Ave.: 94.1	87.5	87.9	Ave.: 87.7	
TURBIDITY (NTU)		4.90	4.82	Ave.: 4.86			Ave.: 4.86	9.48	9.23	Ave.: 9.36	
S.S. (mg/L)		6.0	6.0	Ave.: 6.0			Ave.: 6.0	10	11	Ave.: 11	

Station: M3

Duration: 1731 to 1742

Depth of Water (meter): 7.4

		SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)		1.0			3.7			6.4			
TEMP. (°C)		25.4			25.0			24.5			
SALINITY (ppm)		23.0	23.0	Ave.: 23.0	25.6	25.7	Ave.: 25.7	29.3	29.5	Ave.: 29.4	
D.O. (mg/L)		6.51	6.50	Ave.: 6.51	6.40	6.36	Ave.: 6.38	6.21	6.23	Ave.: 6.22	
D.O.S. (%)		94.9	94.7	Ave.: 94.8	92.8	92.2	Ave.: 92.5	89.4	89.7	Ave.: 89.6	
TURBIDITY (NTU)		6.96	6.82	Ave.: 6.74	8.51	8.57	Ave.: 8.54	11.6	11.5	Ave.: 11.7	
S.S. (mg/L)		5.8	5.8	Ave.: 5.8	8.5	9.0	Ave.: 8.8	14	15	Ave.: 15	

Station: C2

Duration: 1720 to 1728

Depth of Water (meter): 5.5

		SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)		1.0						4.5			
TEMP. (°C)		26.0						24.9			
SALINITY (ppm)		19.7	19.8	Ave.: 19.8			Ave.: 19.8	29.3	29.6	Ave.: 29.5	
D.O. (mg/L)		5.40	5.37	Ave.: 5.39			Ave.: 5.39	5.19	5.23	Ave.: 5.24	
D.O.S. (%)		80.6	80.1	Ave.: 80.4			Ave.: 80.4	74.7	75.2	Ave.: 75.0	
TURBIDITY (NTU)		6.81	6.93	Ave.: 6.87			Ave.: 6.87	21.2	21.3	Ave.: 21.3	
S.S. (mg/L)		8.3	8.3	Ave.: 8.3			Ave.: 8.3	53	50	Ave.: 52	

Any notable discoloration of water? N If yes, elaboration is as follows: _____Any notable pollutant by others near monitoring site? N If yes, elaboration is as follows: _____

	Name	Signature	Date
Recorded by	Eric Young		23/4/03
Tested by:	Pearce Lin		24/4/03
Checked By	Linda Lam		26/4/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 25-4-03

Tide status

M2 (�)

Weather condition

Cloudy

Ambient Temperature (°C)

25

Station:

C1

Duration: 15:02 to 15:21

Depth of Water (meter):

15.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	7.8	14.6	2.8	25.5	30.5	30.5	34.6		
TEMP. (°C)	26.8				25.5			34.1		
SALINITY (ppt)	14.7	14.4	Ave.: 14.6	29.3	28.6	Ave.: 29.5	30.5	30.5	Ave.: 30.5	
D.O. (mg/L)	2.81	3.80	Ave.: 3.81	3.83	2.85	Ave.: 2.84	2.93	2.92	Ave.: 2.93	
D.O.S. (%)	56.6	56.6	Ave.: 56.6	40.3	60.5	Ave.: 40.4	41.5	41.4	Ave.: 41.5	
TURBIDITY (NTU)	7.1	6.88	Ave.: 7.04	5.87	6.70	Ave.: 6.32	57.2	32.3	Ave.: 35.3	
S.S. (mg/L)	6.0	6.5	Ave.: 6.3	8.5	8.0	Ave.: 8.3	37	35	Ave.: 36	

Station:

M1

Duration: 14:42 to 14:53

Depth of Water (meter):

14.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	7.1	13.1	2.8	25.7	29.2	34.2	34.2	34.2	
TEMP. (°C)	26.9				25.7			34.2		
SALINITY (ppt)	14.1	14.3	Ave.: 14.3	29.0	29.3	Ave.: 29.2	27.9	27.6	Ave.: 27.8	Water
D.O. (mg/L)	2.69	3.19	Ave.: 3.69	2.88	2.96	Ave.: 2.92	3.01	2.95	Ave.: 3.03	
D.O.S. (%)	54.9	55.0	Ave.: 55.0	44.5	41.2	Ave.: 41.6	41.8	43.3	Ave.: 43.1	
TURBIDITY (NTU)	5.28	5.61	Ave.: 5.48	6.48	7.16	Ave.: 6.82	7.72	7.48	Ave.: 7.60	
S.S. (mg/L)	7.5	7.0	Ave.: 7.3	6.0	6.3	Ave.: 6.2	8.8	8.0	Ave.: 8.4	

Station:

M2

Duration: 14:28 to 14:38

Depth of Water (meter):

5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.8	24.0	2.8	25.8	27.4	34.8	34.8	34.8	
TEMP. (°C)	26.3									
SALINITY (ppt)	17.1	17.8	Ave.: 17.5				Ave.: 24.1	24.6	Ave.: 24.0	
D.O. (mg/L)	4.35	6.22	Ave.: 4.28				Ave.: 3.27	3.14	Ave.: 3.36	
D.O.S. (%)	64.0	62.3	Ave.: 63.2				Ave.: 47.1	49.5	Ave.: 48.5	
TURBIDITY (NTU)	6.25	5.92	Ave.: 6.08				Ave.: 7.83	8.46	Ave.: 8.17	
S.S. (mg/L)	6.0	6.0	Ave.: 6.0				Ave.: 9.5	8.8	Ave.: 9.2	

Station:

M3

Duration: 14:06 to 14:26

Depth of Water (meter):

5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.8	24.0	2.8	25.2	27.4	34.8	34.8	34.8	
TEMP. (°C)	26.5									
SALINITY (ppt)	16.6	16.6	Ave.: 16.6				Ave.: 26.2	28.3	Ave.: 27.2	
D.O. (mg/L)	4.02	4.17	Ave.: 4.14				Ave.: 3.20	3.28	Ave.: 3.29	
D.O.S. (%)	60.8	41.7	Ave.: 61.3				Ave.: 47.0	46.8	Ave.: 46.9	
TURBIDITY (NTU)	0.15	5.12	Ave.: 5.14				Ave.: 11.0	12.5	Ave.: 11.8	
S.S. (mg/L)	3.8	4.0	Ave.: 3.9				Ave.: 11	10	Ave.: 11	

Station:

C2

Duration: 14:43 to 14:50

Depth of Water (meter):

5.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.8	24.0	2.8	25.2	27.4	34.8	34.8	34.8	
TEMP. (°C)	35.8									
SALINITY (ppt)	19.3	19.3	Ave.: 19.3				Ave.: 26.4	26.7	Ave.: 26.6	
D.O. (mg/L)	5.88	5.86	Ave.: 5.87				Ave.: 5.08	5.02	Ave.: 5.05	
D.O.S. (%)	56.2	85.9	Ave.: 86.1				Ave.: 53.5	72.1	Ave.: 73.1	
TURBIDITY (NTU)	7.27	6.12	Ave.: 7.75				Ave.: 10.6	10.1	Ave.: 9.7	
S.S. (mg/L)	6.8	6.8	Ave.: 6.8				Ave.: 37	32	Ave.: 35	

Any notable discolouration of water? Y N If yes, elaboration is as follows:Any notable pollutant by others near monitoring site? Y N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Alvin		25-04-03
Tested by	Li Wai Hon		26-04-03
Checked By	Linda Lam		28-04-03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 25-4-03
Weather condition : CLEARTide status : M21 - EBB
Ambient Temperature (°C) : 25

Station: C1 Duration: 11:52 to 12:30 Depth of Water (meter): 15.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	7.6	14.2	25.5	25.7	24.3				
TEMP. (°C)	25.5									
SALINITY (ppt)	15.1	14.7	Ave.: 14.9	27.8	26.3	Ave.: 28.1	19.5	28.1	Ave.: 29.1	
D.O. (mg/L)	2.98	3.55	Ave.: 3.07	3.84	3.12	Ave.: 3.83	5.67	3.60	Ave.: 3.65	
D.O.S. (%)	58.6	58.2	Ave.: 58.4	76.7	55.7	Ave.: 56.1	52.2	52.6	Ave.: 52.3	
TURBIDITY (NTU)	0.19	5.94	Ave.: 6.07	0.6	8.62	Ave.: 10.2	17.1	13.2	Ave.: 12.5	
S.S. (mg/L)	5.8	6.0	Ave.: 5.9	4.5	4.8	Ave.: 4.7	12	12	Ave.: 12	

Station: M1 Duration: 10:53 to 11:58 Depth of Water (meter): 13.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.7	12.4	25.5	24.3	24.3				
TEMP. (°C)	26.1									
SALINITY (ppt)	15.4	15.4	Ave.: 15.4	27.4	26.0	Ave.: 27.2	28.7	20.5	Ave.: 28.6	
D.O. (mg/L)	4.05	4.06	Ave.: 4.06	3.01	3.66	Ave.: 3.64	3.15	3.10	Ave.: 3.13	
D.O.S. (%)	60.1	60.2	Ave.: 60.2	53.3	54.0	Ave.: 53.7	44.7	44.0	Ave.: 44.4	
TURBIDITY (NTU)	5.97	5.29	Ave.: 5.61	10.0	10.3	Ave.: 10.2	8.95	8.69	Ave.: 8.67	
S.S. (mg/L)	9.5	8.8	Ave.: 9.2	5.3	6.0	Ave.: 5.7	7.8	8.3	Ave.: 8.1	

Station: M2 Duration: 10:25 to 10:45 Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.5	5.3	25.5	25.1	25.1				
TEMP. (°C)	25.4									
SALINITY (ppt)	17.0	17.7	Ave.: 17.1	19.3	19.3	Ave.: 19.3	25.8	23.7	Ave.: 23.8	
D.O. (mg/L)	3.67	3.64	Ave.: 3.68	3.10	3.15	Ave.: 3.77	3.7	3.72	Ave.: 3.72	
D.O.S. (%)	53.8	54.0	Ave.: 54.0	55.4	55.1	Ave.: 55.3	53.9	53.9	Ave.: 53.9	
TURBIDITY (NTU)	7.17	6.70	Ave.: 6.94	6.59	6.10	Ave.: 6.35	7.37	5.20	Ave.: 9.29	
S.S. (mg/L)	2.0	2.3	Ave.: 2.2	3.5	4.0	Ave.: 3.8	7.8	8.0	Ave.: 7.9	

Station: M3 Duration: 10:24 to 10:20 Depth of Water (meter): 6.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.1	5.2	25.5	25.8	25.8				
TEMP. (°C)	26.0									
SALINITY (ppt)	18.8	18.6	Ave.: 18.7	19.1	19.5	Ave.: 19.9	21.8	21.0	Ave.: 21.4	
D.O. (mg/L)	3.92	3.89	Ave.: 3.91	4.06	4.03	Ave.: 4.08	4.10	4.12	Ave.: 4.13	
D.O.S. (%)	57.5	57.0	Ave.: 57.3	54.4	59.4	Ave.: 59.7	60.6	60.3	Ave.: 60.5	
TURBIDITY (NTU)	5.13	5.14	Ave.: 5.69	5.73	5.12	Ave.: 5.43	7.04	5.95	Ave.: 6.50	
S.S. (mg/L)	4.0	4.5	Ave.: 4.3	3.0	3.3	Ave.: 3.2	3.5	3.8	Ave.: 3.7	

Station: C2 Duration: 01:47 to 01:02 Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.1	4.7	25.5	25.1	25.1				
TEMP. (°C)	25.7									
SALINITY (ppt)	15.2	15.3	Ave.: 15.3			Ave.: 17.4	22.1	22.1	Ave.: 22.4	
D.O. (mg/L)	5.6	5.56	Ave.: 5.59			Ave.: 4.64	4.68	4.68	Ave.: 4.69	
D.O.S. (%)	82.1	81.3	Ave.: 81.7			Ave.: 60.0	63.7	63.7	Ave.: 66.0	
TURBIDITY (NTU)	7.01	6.18	Ave.: 7.49			Ave.: 5.76	4.56	4.56	Ave.: 4.81	
S.S. (mg/L)	2.8	3.0	Ave.: 2.9			Ave.: 3.0	3.5	3.8	Ave.: 3.3	

Any notable discoloration of water? Y / N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	ALVIN		26-4-03
Tested by	LI WAI HONG		26-4-03
Checked By	Linda Lam	Linda Lam	28-4-03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 28-4-2003

Tide status : mid-T/lood

Weather condition : clear

Ambient Temperature (°C) : 30

Station: C1

Duration: 16:48 to 16:59

Depth of Water (meter): 15.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.7			14.4			
TEMP. (°C)	27.0			26.5			26.3			
SALINITY (ppt)	18.0	18.0	Ave.: 18.0	20.1	20.1	Ave.: 20.1	21.8	21.8	Ave.: 21.8	
D.O. (mg/L)	7.03	6.96	Ave.: 7.00	7.41	7.34	Ave.: 7.38	7.22	7.14	Ave.: 7.18	
D.O.S. (%)	98.2	97.4	Ave.: 97.8	103.6	102.8	Ave.: 103.2	101.1	100.4	Ave.: 100.8	
TURBIDITY (NTU)	13.2	14.1	Ave.: 13.7	15.0	15.8	Ave.: 15.4	13.0	12.3	Ave.: 12.7	
S.S. (mg/L)	12	12	Ave.: 12	14	14	Ave.: 14	11	10	Ave.: 11	

Station: M1

Duration: 16:34 to 16:45

Depth of Water (meter): 16.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			8.0			15.0			
TEMP. (°C)	26.6			26.6			26.5			
SALINITY (ppt)	17.4	17.4	Ave.: 17.4	19.6	19.6	Ave.: 19.6	21.7	21.7	Ave.: 21.7	
D.O. (mg/L)	5.86	5.93	Ave.: 5.89	6.73	6.65	Ave.: 6.69	6.54	6.47	Ave.: 6.51	
D.O.S. (%)	80.4	81.2	Ave.: 80.8	94.6	93.8	Ave.: 94.2	92.6	92.0	Ave.: 92.3	
TURBIDITY (NTU)	12.4	11.3	Ave.: 11.9	13.1	14.2	Ave.: 13.7	15.4	14.7	Ave.: 15.1	
S.S. (mg/L)	10	10	Ave.: 10	12	13	Ave.: 13	15	14	Ave.: 15	

Station: M2

Duration: 16:19 to 16:30

Depth of Water (meter): 9.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.5			8.0			
TEMP. (°C)	26.6			26.9			26.8			
SALINITY (ppt)	17.3	17.3	Ave.: 17.3	19.2	19.2	Ave.: 19.2	21.5	21.5	Ave.: 21.5	
D.O. (mg/L)	5.60	5.71	Ave.: 5.66	6.50	6.42	Ave.: 6.46	6.37	6.30	Ave.: 6.34	
D.O.S. (%)	77.9	78.8	Ave.: 78.4	91.2	90.4	Ave.: 90.8	89.3	88.5	Ave.: 88.9	
TURBIDITY (NTU)	12.0	12.9	Ave.: 12.5	11.7	10.8	Ave.: 11.3	14.4	13.6	Ave.: 14.0	
S.S. (mg/L)	11	11	Ave.: 11	10	11	Ave.: 11	13	13	Ave.: 13	

Station: M3

Duration: 16:05 to 16:17

Depth of Water (meter): 5.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.5			8.0			
TEMP. (°C)	26.5			26.4			26.4			
SALINITY (ppt)	19.1	19.2	Ave.: 19.2			Ave.: 19.2	21.6	21.6	Ave.: 21.6	
D.O. (mg/L)	7.17	7.09	Ave.: 7.13			Ave.: 7.55	7.47	7.51	Ave.: 7.51	
D.O.S. (%)	99.7	98.8	Ave.: 99.3			Ave.: 105.2	104.4	104.8	Ave.: 104.8	
TURBIDITY (NTU)	12.2	13.1	Ave.: 12.7			Ave.: 11.8	12.2	12.0	Ave.: 12.0	
S.S. (mg/L)	12	12	Ave.: 12			Ave.: 11	12	12	Ave.: 12	

Station: C2

Duration: 15:51 to 16:00

Depth of Water (meter): 5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.8			26.7			
TEMP. (°C)	27.5									
SALINITY (ppt)	21.9	21.9	Ave.: 21.9			Ave.: 22.1	22.1	21.1	Ave.: 21.1	
D.O. (mg/L)	9.56	9.50	Ave.: 9.53			Ave.: 9.28	9.20	9.24	Ave.: 9.24	
D.O.S. (%)	136.1	135.3	Ave.: 135.7			Ave.: 129.9	129.0	129.5	Ave.: 129.5	
TURBIDITY (NTU)	28.2	27.5	Ave.: 27.9			Ave.: 16.1	15.4	15.8	Ave.: 15.8	
S.S. (mg/L)	28	29	Ave.: 29			Ave.: 14	15	15	Ave.: 15	

Any notable discolouration of water? Y / N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Y.K.T/14	Jew	28/4
Tested by:	Panee	D.L.	29/4
Checked By	Linda Law	Linda Law	31/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 28-4-2003

Tide status

: Mid-Ebb

Weather condition : clear

Ambient Temperature (°C) : 30

Station: C1

Duration: 11:30 to 11:41

Depth of Water (meter): 16.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			8.0			15.0			
TEMP. (°C)	26.7	Jin 24.9-28			25.9			25.4		
SALINITY (ppt)	18.0	18.0	Ave.: 18.0	24.8	24.8	Ave.: 24.8	26.0	26.0	Ave.: 26.0	
D.O. (mg/L)	6.67	6.75	Ave.: 6.71	5.90	5.96	Ave.: 5.93	5.86	5.80	Ave.: 5.83	
D.O.S. (%)	91.9	92.8	Ave.: 92.4	83.6	84.2	Ave.: 83.9	83.7	83.0	Ave.: 83.4	
TURBIDITY (NTU)	12.1	13.1	Ave.: 12.6	17.4	18.2	Ave.: 17.8	19.2	18.4	Ave.: 18.8	
S.S. (mg/L)	11	12	Ave.: 12	16	17	Ave.: 17	17	17	Ave.: 17	

Station: M1

Duration: 11:14 to 11:25

Depth of Water (meter): 17.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			8.0			16.2			
TEMP. (°C)	26.9			26.1			25.7			
SALINITY (ppt)	20.5	20.5	Ave.: 20.5	25.6	25.6	Ave.: 25.6	26.1	26.1	Ave.: 26.1	
D.O. (mg/L)	7.76	7.70	Ave.: 7.73	5.99	5.90	Ave.: 5.95	5.81	5.74	Ave.: 5.78	
D.O.S. (%)	108.6	107.4	Ave.: 108.0	85.2	84.3	Ave.: 84.8	82.5	81.7	Ave.: 82.1	
TURBIDITY (NTU)	11.7	12.0	Ave.: 11.9	20.1	21.0	Ave.: 20.6	17.4	18.3	Ave.: 17.9	
S.S. (mg/L)	16	11	Ave.: 11	21	21	Ave.: 21	17	16	Ave.: 17	

Station: M2

Duration: 11:00 to 11:11

Depth of Water (meter): 11.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.6			10.2			
TEMP. (°C)	26.6			25.8			25.4			
SALINITY (ppt)	21.0	21.0	Ave.: 21.0	27.6	27.7	Ave.: 27.7	27.7	27.7	Ave.: 27.7	
D.O. (mg/L)	6.55	6.49	Ave.: 6.52	5.38	5.45	Ave.: 5.42	5.47	5.53	Ave.: 5.50	
D.O.S. (%)	92.2	91.5	Ave.: 91.9	77.5	78.2	Ave.: 77.9	77.9	78.6	Ave.: 78.3	
TURBIDITY (NTU)	11.1	12.0	Ave.: 11.6	17.7	18.3	Ave.: 18.0	20.6	21.3	Ave.: 21.0	
S.S. (mg/L)	10	11	Ave.: 11	18	19	Ave.: 19	22	21	Ave.: 22	

Station: M3

Duration: 10:49 to 10:58

Depth of Water (meter): 5.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						4.6			
TEMP. (°C)	27.0						26.4			
SALINITY (ppt)	18.0	18.0	Ave.: 18.0			Ave.:	20.9	21.0	Ave.: 21.0	
D.O. (mg/L)	7.54	7.46	Ave.: 7.50			Ave.:	6.87	6.80	Ave.: 6.84	
D.O.S. (%)	104.3	103.5	Ave.: 103.9			Ave.:	95.4	94.6	Ave.: 95.0	
TURBIDITY (NTU)	11.3	12.0	Ave.: 11.7			Ave.:	12.5	13.1	Ave.: 12.8	
S.S. (mg/L)	10	10	Ave.: 10			Ave.:	12	11	Ave.: 12	

Station: C2

Duration: 10:34 to 10:45

Depth of Water (meter): 6.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.3			5.6			
TEMP. (°C)	27.2			26.5			26.5			
SALINITY (ppt)	18.8	18.7	Ave.: 18.8	22.0	22.0	Ave.: 22.0	23.1	23.1	Ave.: 23.1	
D.O. (mg/L)	8.38	8.34	Ave.: 8.36	7.62	7.55	Ave.: 7.59	7.32	7.24	Ave.: 7.28	
D.O.S. (%)	117.2	116.9	Ave.: 117.1	105.4	104.7	Ave.: 105.1	104.0	103.1	Ave.: 103.6	
TURBIDITY (NTU)	9.72	9.67	Ave.: 9.70	11.9	12.1	Ave.: 12.0	14.8	15.6	Ave.: 15.2	
S.S. (mg/L)	9.0	9.2	Ave.: 9.1	11	11	Ave.: 11	14	14	Ave.: 14	

Any notable discoloration of water? Y/N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y/N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	YKZIN	Jin	28/4
Tested by:	Pence	Jin	29/4
Checked By	Linda Law	(Linda Law)	3/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 30-4-03 Tide status : Mid - Flood
 Weather condition : Cloudy Ambient Temperature (°C) : 23

Station: C1 Duration: 17:30 to 17:53 Depth of Water (meter): 15.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	
TEMP. (°C)	25.8	25.8	25.8	25.5	25.5	25.5	25.4	25.4	25.4	
SALINITY (ppt)	22.6	22.3	Ave.: 22.5	22.4	22.2	Ave.: 20.3	23.6	23.2	Ave.: 21.4	
D.O. (mg/L)	5.16	5.20	Ave.: 5.18	4.72	4.70	Ave.: 4.71	4.81	4.76	Ave.: 4.79	
D.O.S. (%)	71.5	71.0	Ave.: 71.3	66.5	66.2	Ave.: 66.4	67.3	66.8	Ave.: 67.1	
TURBIDITY (NTU)	20.4	20.0	Ave.: 20.2	17.3	16.2	Ave.: 10.8	23.5	21.8	Ave.: 22.7	
S.S. (mg/L)	16	14	Ave.: 15	18	19	Ave.: 19	22	24	Ave.: 23	

Station: M1 Duration: 17:07 to 17:27 Depth of Water (meter): 60.3

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	
TEMP. (°C)	26.6	26.6	26.6	26.0	26.0	26.0	25.7	25.7	25.7	
SALINITY (ppt)	18.9	18.4	Ave.: 18.7	21.3	20.6	Ave.: 21.0	21.5	21.7	Ave.: 21.6	
D.O. (mg/L)	5.70	5.65	Ave.: 5.68	5.27	5.32	Ave.: 5.30	4.69	4.68	Ave.: 4.69	
D.O.S. (%)	84.4	84.1	Ave.: 84.3	72.0	72.8	Ave.: 72.4	66.3	66.1	Ave.: 66.2	
TURBIDITY (NTU)	13.6	14.5	Ave.: 14.1	19.6	13.9	Ave.: 19.8	25.0	36.6	Ave.: 25.8	
S.S. (mg/L)	11	11	Ave.: 11	15	16	Ave.: 16	27	30	Ave.: 29	

Station: M2 Duration: 16:38 to 16:59 Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	
TEMP. (°C)	26.1	26.1	26.1	25.7	25.7	25.7	25.5	25.5	25.5	
SALINITY (ppt)	19.9	20.2	Ave.: 20.1	22.8	22.9	Ave.: 22.9	24.2	23.7	Ave.: 23.9	
D.O. (mg/L)	6.25	6.22	Ave.: 6.24	5.97	5.91	Ave.: 5.94	5.78	5.81	Ave.: 5.80	
D.O.S. (%)	91.2	91.8	Ave.: 92.0	87.2	86.4	Ave.: 86.8	84.9	85.2	Ave.: 85.1	
TURBIDITY (NTU)	18.2	18.0	Ave.: 18.1	25.4	25.9	Ave.: 25.7	31.2	30.4	Ave.: 30.8	
S.S. (mg/L)	15	13	Ave.: 14	20	22	Ave.: 21	25	24	Ave.: 25	

Station: M3 Duration: 16:21 to 16:53 Depth of Water (meter): 5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	
TEMP. (°C)	26.1	26.1	26.1	25.7	25.7	25.7	25.5	25.5	25.5	
SALINITY (ppt)	19.3	19.2	Ave.: 19.3			Ave.:	23.3	24.8	Ave.: 23.1	
D.O. (mg/L)	7.25	7.25	Ave.: 7.25			Ave.:	6.20	6.13	Ave.: 6.17	
D.O.S. (%)	107.3	107.2	Ave.: 107.3			Ave.:	91.6	90.7	Ave.: 91.2	
TURBIDITY (NTU)	14.6	15.2	Ave.: 14.9			Ave.:	28.9	27.7	Ave.: 28.1	
S.S. (mg/L)	17	15	Ave.: 16			Ave.:	21	22	Ave.: 22	

Station: C2 Duration: 16:20 to 16:14 Depth of Water (meter): 4.5

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	
TEMP. (°C)	25.4	25.4	25.4	25.3	25.3	25.3	25.3	25.3	25.3	
SALINITY (ppt)	20.3	20.8	Ave.: 20.6			Ave.:	24.1	22.6	Ave.: 23.4	
D.O. (mg/L)	7.54	7.44	Ave.: 7.49			Ave.:	6.58	6.54	Ave.: 6.56	
D.O.S. (%)	111.0	129.7	Ave.: 109.9			Ave.:	96.7	96.7	Ave.: 96.0	
TURBIDITY (NTU)	17.1	17.4	Ave.: 17.3			Ave.:	27.8	24.6	Ave.: 23.7	
S.S. (mg/L)	15	14	Ave.: 15			Ave.:	23	24	Ave.: 24	

Any notable discoloration of water? Y / N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows:

Recorded by	Name	Signature	Date
Tested by:	Lai Hoi Hong		02-5-03
Checked By	Linda Lam	Linda Lam	3/5/03

Construction of Lung Kwu Chau Jetty

Contract No. : CV/2002/11

Contractor : Wai Kee (Zens) Construction & Transportation Co., Ltd.

Contractor's Environmental Team : ETS-Testconsult Ltd.

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 20-4-03
Weather condition : CLEARTide status : M21-EBB
Ambient Temperature (°C) : 26

Station: C2. SK Duration: 11:00 to 11:25 Depth of Water (meter): 5.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						4.4			
TEMP. (°C)	26.7						25.4			
SALINITY (ppt)	21.0	21.4	Ave.: 21.2				21.8	21.1	Ave.: 22.0	
D.O. (mg/L)	8.95	8.92	Ave.: 8.94				7.64	7.45	Ave.: 7.50	
D.O.S. (%)	131.9	131.4	Ave.: 131.7				119.3	108.1	Ave.: 109.1	
TURBIDITY (NTU)	15.5	16.4	Ave.: 16.0				18.3	18.3	Ave.: 18.3	
S.S. (mg/L)	15	16	Ave.: 16				13	13	Ave.: 13	

Station: M1 M1 Duration: 11:30 to 11:47 Depth of Water (meter): 5.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						4.1			
TEMP. (°C)	25.9						25.6			
SALINITY (ppt)	22.1	21.1	Ave.: 21.6				25.0	25.0	Ave.: 25.0	
D.O. (mg/L)	6.33	6.24	Ave.: 6.29				5.63	5.62	Ave.: 5.63	
D.O.S. (%)	92.6	91.5	Ave.: 92.1				81.9	81.8	Ave.: 81.9	
TURBIDITY (NTU)	16.5	18.8	Ave.: 17.6				26.5	27.1	Ave.: 26.8	
S.S. (mg/L)	13	15	Ave.: 14				20	22	Ave.: 21	

Station: M2 Duration: 11:54 to 12:15 Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						4.7			
TEMP. (°C)	25.9						25.3			
SALINITY (ppt)	21.8	21.8	Ave.: 21.8				25.9	25.5	Ave.: 25.7	
D.O. (mg/L)	5.58	5.50	Ave.: 5.54				5.13	5.15	Ave.: 5.14	
D.O.S. (%)	81.8	80.8	Ave.: 81.3				74.3	74.7	Ave.: 74.5	
TURBIDITY (NTU)	20.5	20.2	Ave.: 20.4				33.5	31.6	Ave.: 32.6	
S.S. (mg/L)	16	14	Ave.: 15				26	28	Ave.: 27	

Station: M1 M1 Duration: 12:22 to 12:48 Depth of Water (meter): 11.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						10.8			
TEMP. (°C)	26.2			5.8			25.6			
SALINITY (ppt)	19.6	19.4	Ave.: 19.5	19.8	19.4	Ave.: 19.6	21.3	21.4	Ave.: 21.3	
D.O. (mg/L)	5.47	5.48	Ave.: 5.48	5.45	5.47	Ave.: 5.43	5.38	5.36	Ave.: 5.37	
D.O.S. (%)	81.0	81.0	Ave.: 81.0	80.3	80.7	Ave.: 80.0	74.4	78	Ave.: 79.3	
TURBIDITY (NTU)	18.6	16.1	Ave.: 17.4	13.4	13.0	Ave.: 13.3	22.1	24.8	Ave.: 23.5	
S.S. (mg/L)	16	11	Ave.: 11	10	11	Ave.: 11	24	26	Ave.: 25	

Station: C1 SK Duration: 12:52 to 13:13 Depth of Water (meter): 13.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						12.8			
TEMP. (°C)	26.5			6.6			25.8			
SALINITY (ppt)	17.5	17.9	Ave.: 17.6	20.6	21.1	Ave.: 20.8	20.3	20.2	Ave.: 20.3	
D.O. (mg/L)	5.29	5.23	Ave.: 5.26	4.96	4.96	Ave.: 4.96	4.88	4.70	Ave.: 4.79	
D.O.S. (%)	78.4	77.5	Ave.: 78.0	73.0	73.0	Ave.: 73.0	71.9	68.8	Ave.: 70.4	
TURBIDITY (NTU)	13.1	13.6	Ave.: 13.4	15.4	14.8	Ave.: 15.1	14.1	14.9	Ave.: 13.5	
S.S. (mg/L)	14	13	Ave.: 13	10	10	Ave.: 10	9.8	10	Ave.: 9.9	

Any notable discolouration of water? Y / N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	ALVIN		30-4-03
Tested by:	LI WAI HONH		02-5-03
Checked By	LINDA LAM		31-5-03

Construction of Lung Kwu Chau Jetty

Contract No. : CV/2002/11

Contractor : Wai Kee (Zens) Construction & Transportation Co., Ltd.

Contractor's Environmental Team : ETS-Testconsult Ltd.

東業德勘測試驗有限公司
ETS-TESTCONSULT LIMITED

Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 2/5/03

Tide status

Weather condition : cloudy

Ambient Temperature (°C) : 24

0949

1005

Station: C1

Duration: 0937 to 1047

Depth of Water (meter): 13.3

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.7			12.3			
TEMP. (°C)	24.7				24.8			24.9		
SALINITY (ppm)	26.1	26.0	Ave.: 26.1	27.2	27.5	Ave.: 27.4	28.1	27.9	Ave.: 28.5	
D.O. (mg/L)	5.19	5.17	Ave.: 5.18	5.61	5.60	Ave.: 5.61	5.62	5.61	Ave.: 5.62	
D.O.S. (%)	80.0	79.7	Ave.: 79.9	80.3	80.2	Ave.: 80.3	80.1	80.0	Ave.: 80.1	
TURBIDITY (NTU)	16.5	16.8	Ave.: 16.7	27.6	28.3	Ave.: 28.0	40.2	40.5	Ave.: 40.5	
S.S. (mg/L)	14	14	Ave.: 14	25	26	Ave.: 26	38	38	Ave.: 38	

Station: M1

Duration: 0937 to 1047

Depth of Water (meter): 12.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.3			11.6			
TEMP. (°C)	24.9				24.7			24.8		
SALINITY (ppm)	25.4	25.4	Ave.: 25.4	26.4	26.6	Ave.: 26.5	27.8	27.7	Ave.: 27.8	
D.O. (mg/L)	5.62	5.59	Ave.: 5.61	5.54	5.57	Ave.: 5.56	5.48	5.46	Ave.: 5.47	
D.O.S. (%)	80.5	80.0	Ave.: 80.3	79.0	79.4	Ave.: 79.2	77.6	77.3	Ave.: 77.5	
TURBIDITY (NTU)	12.6	12.7	Ave.: 12.7	16.6	16.8	Ave.: 15.8	17.4	17.7	Ave.: 17.6	
S.S. (mg/L)	11	11	Ave.: 11	14	15	Ave.: 15	16	16	Ave.: 16	

Station: M2

Duration: 0937 to 1047

Depth of Water (meter): 11.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			4.1			7.1			
TEMP. (°C)	24.6				24.8			24.9		
SALINITY (ppm)	24.0	24.2	Ave.: 24.1	24.5	24.3	Ave.: 24.4	25.6	25.8	Ave.: 25.7	
D.O. (mg/L)	5.86	5.84	Ave.: 5.85	5.77	5.74	Ave.: 5.76	5.73	5.70	Ave.: 5.72	
D.O.S. (%)	83.8	83.4	Ave.: 83.6	82.9	82.4	Ave.: 82.7	82.1	82.0	Ave.: 82.1	
TURBIDITY (NTU)	10.9	10.8	Ave.: 10.9	10.4	10.1	Ave.: 10.3	15.5	15.0	Ave.: 15.3	
S.S. (mg/L)	9.8	10	Ave.: 9.9	9.6	9.4	Ave.: 9.5	13	14	Ave.: 14	

Station: M3

Duration: 0907 to 1047

Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0				4.1			7.1		
TEMP. (°C)	24.8					24.9				
SALINITY (ppm)	25.2	25.0	Ave.: 25.1				25.7	25.7	Ave.: 25.7	
D.O. (mg/L)	6.03	6.00	Ave.: 6.02				5.90	5.94	Ave.: 5.92	
D.O.S. (%)	86.1	87.7	Ave.: 85.9				84.4	85.0	Ave.: 84.7	
TURBIDITY (NTU)	10.6	10.7	Ave.: 10.7				9.78	9.42	Ave.: 9.60	
S.S. (mg/L)	9.8	9.4	Ave.: 9.6				8.8	9.0	Ave.: 8.9	

Station: C2

Duration: 0852 to 0905

Depth of Water (meter): 6.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0				3.4			5.7		
TEMP. (°C)	24.7					24.7			24.7	
SALINITY (ppm)	25.6	25.7	Ave.: 25.7	26.1	26.0	Ave.: 26.1	28.0	27.9	Ave.: 28.0	
D.O. (mg/L)	5.67	5.66	Ave.: 5.67	5.69	5.68	Ave.: 5.59	5.76	5.73	Ave.: 5.55	
D.O.S. (%)	81.9	81.8	Ave.: 81.9	80.2	79.9	Ave.: 80.1	79.4	78.8	Ave.: 79.1	
TURBIDITY (NTU)	8.34	8.05	Ave.: 8.20	9.76	9.84	Ave.: 9.80	11.0	11.2	Ave.: 11.1	
S.S. (mg/L)	7.6	7.8	Ave.: 7.7	8.2	8.2	Ave.: 8.2	14	14	Ave.: 14	

Any notable discolouration of water? Y N If yes, elaboration is as follows: _____Any notable pollutant by others near monitoring site? Y N If yes, elaboration is as follows: _____

	Name	Signature	Date
Recorded by	ERIC YEUNG		2/5/2003
Tested by:	Perree Lim		3/5/2003
Checked By	Linda Law		5/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 21/5/03
Weather condition : SUNNYTide status : MID-EBB
Ambient Temperature (°C) : 27

Station: C1 Duration: 1425 to 1440 Depth of Water (meter): 13.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.6			12.2			
TEMP. (°C)	25.7			28.7			25.6			
SALINITY (ppt)	23.4	23.4	Ave.: 23.4	24.6	24.7	Ave.: 24.7	24.8	24.8	Ave.: 24.8	
D.O. (mg/L)	6.70	6.67	Ave.: 6.69	7.19	7.22	Ave.: 7.21	7.14	7.18	Ave.: 7.19	
D.O.S. (%)	98.0	97.5	Ave.: 97.8	105.0	105.5	Ave.: 105.3	105.0	104.8	Ave.: 104.9	
TURBIDITY (NTU)	11.2	11.4	Ave.: 11.3	11.1	10.8	Ave.: 11.0	9.76	9.30	Ave.: 9.53	
S.S. (mg/L)	10	10	Ave.: 10	10	11	Ave.: 11	9.0	9.2	Ave.: 9.1	

Station: M1 Duration: 1407 to 1422 Depth of Water (meter): 11.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			5.6			10.1			
TEMP. (°C)	25.7			25.7			25.6			
SALINITY (ppt)	24.6	24.4	Ave.: 24.5	24.4	24.3	Ave.: 24.4	25.9	25.3	Ave.: 25.4	
D.O. (mg/L)	6.67	6.70	Ave.: 6.69	6.69	6.70	Ave.: 6.70	6.94	6.97	Ave.: 6.96	
D.O.S. (%)	97.6	98.2	Ave.: 97.9	97.8	98.0	Ave.: 97.9	101.4	101.9	Ave.: 101.7	
TURBIDITY (NTU)	11.9	11.8	Ave.: 11.8	10.7	11.0	Ave.: 10.9	13.0	13.2	Ave.: 13.1	
S.S. (mg/L)	10	10	Ave.: 10	9.6	9.4	Ave.: 9.5	11	12	Ave.: 12	

Station: M2 Duration: 1352 to 1404 Depth of Water (meter): 6.9

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.5			5.9			
TEMP. (°C)	25.8			25.8			25.7			
SALINITY (ppt)	25.1	25.1	Ave.: 25.1	25.6	25.6	Ave.: 25.6	25.9	25.9	Ave.: 25.9	
D.O. (mg/L)	6.98	6.95	Ave.: 6.97	6.94	6.93	Ave.: 6.94	6.88	6.90	Ave.: 6.89	
D.O.S. (%)	102.1	101.6	Ave.: 101.9	101.4	101.3	Ave.: 101.4	100.6	100.9	Ave.: 100.8	
TURBIDITY (NTU)	18.7	18.6	Ave.: 18.7	24.0	24.3	Ave.: 24.2	20.4	21.1	Ave.: 20.8	
S.S. (mg/L)	17	16	Ave.: 17	22	23	Ave.: 23	18	19	Ave.: 19	

Station: M3 Duration: 1342 to 1351 Depth of Water (meter): 5.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.5			4.1			
TEMP. (°C)	25.8			25.8			25.6			
SALINITY (ppt)	25.5	25.4	Ave.: 25.5			Ave.:	26.0	25.9	Ave.: 26.0	
D.O. (mg/L)	6.95	6.93	Ave.: 6.94			Ave.:	6.87	6.85	Ave.: 6.86	
D.O.S. (%)	101.5	101.2	Ave.: 101.4			Ave.:	100.6	100.2	Ave.: 100.4	
TURBIDITY (NTU)	18.0	17.7	Ave.: 17.9			Ave.:	21.2	20.8	Ave.: 21.0	
S.S. (mg/L)	16	16	Ave.: 16			Ave.:	19	20	Ave.: 20	

Station: C2 Duration: 1330 to 1340 Depth of Water (meter): 5.3

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.5			4.3			
TEMP. (°C)	27.7						26.6			
SALINITY (ppt)	26.8	26.8	Ave.: 26.8			Ave.:	27.9	27.7	Ave.: 27.8	
D.O. (mg/L)	6.94	6.92	Ave.: 6.93			Ave.:	6.97	6.99	Ave.: 6.98	
D.O.S. (%)	104.7	104.3	Ave.: 104.5			Ave.:	103.3	103.6	Ave.: 103.5	
TURBIDITY (NTU)	28.4	29.3	Ave.: 28.9			Ave.:	15.6	14.8	Ave.: 15.2	
S.S. (mg/L)	30	31	Ave.: 31			Ave.:	13	14	Ave.: 14	

Any notable discoloration of water? If yes, elaboration is as follows:Any notable pollutant by others near monitoring site? If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	ERIC YOUNG	Eric	21/5/03
Tested by:	Derek Lim	Derek	31/5/03
Checked By	Linda Law	Linda Law	31/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 7/5/2003

Tide status : MID-FLOOD

Weather condition : Cloudy

Ambient Temperature (°C) : 28

Station: C1

Duration: 1055 to 1110

Depth of Water (meter): 12.9

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.5	11.9	26.7	26.5	26.3				
TEMP. (°C)	26.7									
SALINITY (ppm)	19.5	19.6	Ave.: 19.6	20.7	20.6	Ave.: 20.7	25.7	25.9	Ave.: 25.8	
D.O. (mg/L)	7.84	7.56	Ave.: 7.85	7.70	7.67	Ave.: 7.69	7.50	7.52	Ave.: 7.51	
D.O.S. (%)	116.6	116.9	Ave.: 116.8	114.0	113.5	Ave.: 113.8	110.5	110.8	Ave.: 110.7	
TURBIDITY (NTU)	10.4	10.7	Ave.: 10.6	10.7	11.0	Ave.: 10.9	11.4	11.8	Ave.: 11.6	
S.S. (mg/L)	11	10	Ave.: 11	9.8	9.3	Ave.: 9.4	10	9.8	Ave.: 9.9	

Station: M1

Duration: 1041 to 1053

Depth of Water (meter): 13.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.9	12.8	26.7	26.5	26.5				
TEMP. (°C)	26.7									
SALINITY (ppm)	19.9	20.0	Ave.: 20.0	21.5	21.7	Ave.: 21.6	20.5	20.4	Ave.: 20.5	
D.O. (mg/L)	7.74	7.76	Ave.: 7.75	7.59	7.62	Ave.: 7.61	7.80	7.83	Ave.: 7.82	
D.O.S. (%)	114.8	115.2	Ave.: 114.8	112.4	112.9	Ave.: 112.7	115.3	116.0	Ave.: 115.7	
TURBIDITY (NTU)	11.2	11.5	Ave.: 11.4	10.2	10.6	Ave.: 10.4	15.3	15.7	Ave.: 15.5	
S.S. (mg/L)	10	10	Ave.: 10	13	12	Ave.: 13	18	16	Ave.: 17	

Station: M2

Duration: 1025 to 1039

Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.2	5.4	26.7	26.5	26.6				
TEMP. (°C)	26.8									
SALINITY (ppm)	19.8	19.7	Ave.: 19.8	19.9	19.9	Ave.: 19.9	20.7	20.7	Ave.: 20.7	
D.O. (mg/L)	8.00	8.03	Ave.: 8.02	7.84	7.87	Ave.: 7.86	7.79	7.76	Ave.: 7.78	
D.O.S. (%)	118.9	119.4	Ave.: 118.9	116.5	117.0	Ave.: 116.8	115.3	114.7	Ave.: 115.0	
TURBIDITY (NTU)	15.6	15.8	Ave.: 15.7	14.0	18.1	Ave.: 18.1	23.7	23.3	Ave.: 23.5	
S.S. (mg/L)	12	12	Ave.: 12	15	16	Ave.: 16	21	23	Ave.: 22	

Station: M3

Duration: 1014 to 1024

Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.2	4.7	26.7	26.5	26.6				
TEMP. (°C)	26.8									
SALINITY (ppm)	19.7	19.8	Ave.: 19.8			Ave.: 21.0	20.9	20.9	Ave.: 21.0	
D.O. (mg/L)	8.02	8.06	Ave.: 8.04			Ave.: 7.82	7.80	7.81	Ave.: 7.81	
D.O.S. (%)	119.4	120.1	Ave.: 119.8			Ave.: 116.0	115.6	115.8	Ave.: 115.8	
TURBIDITY (NTU)	11.4	11.1	Ave.: 11.3			Ave.: 21.7	22.1	21.9	Ave.: 21.9	
S.S. (mg/L)	13	12	Ave.: 13			Ave.: 18	19	19	Ave.: 19	

Station: C2

Duration: 1000 to 1012

Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.2	4.7	27.3	27.0	27.0				
TEMP. (°C)	27.3									
SALINITY (ppm)	19.7	19.6	Ave.: 19.7			Ave.: 20.6	20.4	20.4	Ave.: 20.5	
D.O. (mg/L)	8.21	8.14	Ave.: 8.18			Ave.: 7.90	7.85	7.88	Ave.: 7.88	
D.O.S. (%)	123.3	121.7	Ave.: 122.5			Ave.: 118.0	117.1	117.6	Ave.: 117.6	
TURBIDITY (NTU)	6.76	6.87	Ave.: 6.82			Ave.: 6.64	6.41	6.53	Ave.: 6.53	
S.S. (mg/L)	6.0	6.0	Ave.: 6.0			Ave.: 6.0	6.8	6.7	Ave.: 6.7	

Any notable discoloration of water? Y N If yes, elaboration is as follows:Any notable pollutant by others near monitoring site? Y N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Eric Young	Eric	7/5/03
Tested by	Li Wai Haw	Li	9/5/03
Checked By	Linda Law	Linda Law	10/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 9-5-2003
Weather condition : CloudyTide status : Mid-Flood
Ambient Temperature (°C) : 29

Station: C1 Duration: 11:28 to 11:39 Depth of Water (meter): 15.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			2.5			14.0			
TEMP. (°C)		27.2			27.0			26.8		
SALINITY (ppm)	25.8	25.8	Ave.: 25.8	26.2	26.2	Ave.: 26.2	27.0	27.0	Ave.: 27.0	
D.O. (mg/L)	7.31	7.24	Ave.: 7.28	6.96	6.90	Ave.: 6.93	6.57	6.51	Ave.: 5.54	
D.O.S. (%)	102.7	102.0	Ave.: 102.4	97.8	97.0	Ave.: 97.4	92.3	91.5	Ave.: 91.9	
TURBIDITY (NTU)	6.42	6.36	Ave.: 6.39	6.77	6.70	Ave.: 6.74	7.46	7.58	Ave.: 7.52	
S.S. (mg/L)	5.4	5.6	Ave.: 5.5	6.0	6.0	Ave.: 6.0	6.2	6.0	Ave.: 6.1	

Station: M1 Duration: 11:15 to 11:26 Depth of Water (meter): 14.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			2.1			13.2			
TEMP. (°C)		27.3			27.1			26.9		
SALINITY (ppm)	26.1	26.1	Ave.: 26.1	26.7	26.7	Ave.: 26.7	27.2	27.2	Ave.: 27.2	
D.O. (mg/L)	7.43	7.36	Ave.: 7.40	7.10	7.02	Ave.: 7.06	6.82	6.74	Ave.: 6.78	
D.O.S. (%)	104.4	103.6	Ave.: 104.0	99.5	98.6	Ave.: 99.1	95.8	95.1	Ave.: 95.5	
TURBIDITY (NTU)	5.84	5.76	Ave.: 5.80	7.77	7.70	Ave.: 7.74	6.92	6.83	Ave.: 6.88	
S.S. (mg/L)	4.8	5.0	Ave.: 4.9	6.6	6.4	Ave.: 6.5	5.8	5.8	Ave.: 5.8	

Station: M2 Duration: 11:00 to 11:12 Depth of Water (meter): 7.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.5			6.0			
TEMP. (°C)		27.1			27.0			26.9		
SALINITY (ppm)	26.4	26.4	Ave.: 26.4	26.8	26.8	Ave.: 26.8	27.0	27.0	Ave.: 27.0	
D.O. (mg/L)	7.11	7.03	Ave.: 7.07	6.92	6.89	Ave.: 6.91	6.73	6.26	Ave.: 6.30	
D.O.S. (%)	99.9	99.1	Ave.: 99.5	99.0	98.8	Ave.: 98.9	95.4	94.5	Ave.: 95.0	
TURBIDITY (NTU)	5.82	5.76	Ave.: 5.78	5.96	5.87	Ave.: 5.92	4.54	4.46	Ave.: 4.50	
S.S. (mg/L)	4.8	5.0	Ave.: 4.9	5.2	5.4	Ave.: 5.3	4.0	4.0	Ave.: 4.0	

Station: M3 Duration: 10:46 to 10:58 Depth of Water (meter): 6.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.4			5.8			
TEMP. (°C)		27.2			27.1			26.9		
SALINITY (ppm)	26.4	26.4	Ave.: 26.4	26.6	26.6	Ave.: 26.6	27.1	27.1	Ave.: 27.1	
D.O. (mg/L)	6.81	6.73	Ave.: 6.77	6.61	6.54	Ave.: 6.58	6.10	6.10	Ave.: 6.18	
D.O.S. (%)	97.6	96.8	Ave.: 97.2	96.7	96.0	Ave.: 96.4	93.2	92.3	Ave.: 92.8	
TURBIDITY (NTU)	5.41	5.37	Ave.: 5.39	4.84	4.76	Ave.: 4.80	3.90	3.81	Ave.: 3.85	
S.S. (mg/L)	4.6	4.8	Ave.: 4.7	4.2	4.4	Ave.: 4.3	3.2	3.0	Ave.: 3.1	

Station: C2 Duration: 10:30 to 10:44 Depth of Water (meter): 5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0						4.8			
TEMP. (°C)		27.0						26.7		
SALINITY (ppm)	26.7	26.7	Ave.: 26.7			Ave.: 27.0	27.0	27.0	Ave.: 27.0	
D.O. (mg/L)	6.54	6.46	Ave.: 6.50			Ave.: 6.29	6.21	6.14	Ave.: 6.25	
D.O.S. (%)	95.2	94.4	Ave.: 94.8			Ave.: 92.0	91.2	91.2	Ave.: 91.6	
TURBIDITY (NTU)	4.90	4.82	Ave.: 4.86			Ave.: 6.40	6.33	6.33	Ave.: 6.37	
S.S. (mg/L)	5.4	7.6	Ave.: 6.5			Ave.: 6.0	6.4	6.4	Ave.: 6.3	

Any notable discoloration of water? Y/N If yes, elaboration is as follows: *1/12*Any notable pollutant by others near monitoring site? Y/N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Y.K.TIN	Tin	9/5
Tested by:	Renee Lin	TL	10/5
Checked By	Linda Lam	Linda Lam	12/5/03

Construction of Lung Kwu Chau Jetty

Contract No. : CV/2002/J1

Contractor : Wai Kee (Zens) Construction & Transportation Co., Ltd.

Contractor's Environmental Team : ETS-Testconsult Ltd.

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 7/5/2003

Tide status : MID-EBB

Weather condition : Cloudy

Ambient Temperature (°C) : 29

Station: C1

Duration: 1459 to 1515

Depth of Water (meter): 12.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.2			11.4			
TEMP. (°C)	27.5			27.2			27.0			
SALINITY (ppt)	22.1	22.3	Ave.: 22.2	25.9	26.0	Ave.: 26.0	27.1	26.9	Ave.: 27.0	
D.O. (mg/L)	7.22	7.25	Ave.: 7.24	6.96	6.97	Ave.: 6.97	6.87	6.81	Ave.: 6.85	
D.O.S. (%)	103.0	103.6	Ave.: 103.3	99.4	99.7	Ave.: 99.6	97.6	96.4	Ave.: 97.0	
TURBIDITY (NTU)	10.9	11.0	Ave.: 11.0	9.81	9.75	Ave.: 9.78	12.6	12.3	Ave.: 12.3	
S.S. (mg/L)	11	11	Ave.: 11	9.0	8.8	Ave.: 8.9	10	11	Ave.: 11	

Station: M1

Duration: 1441 to 1457

Depth of Water (meter): 13.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.6			12.2			
TEMP. (°C)	27.6			27.2			27.1			
SALINITY (ppt)	21.8	22.0	Ave.: 21.9	24.5	24.6	Ave.: 24.6	26.1	26.4	Ave.: 26.3	
D.O. (mg/L)	7.19	7.21	Ave.: 7.20	6.94	6.92	Ave.: 6.93	6.73	6.76	Ave.: 6.75	
D.O.S. (%)	102.5	102.7	Ave.: 102.5	98.6	98.3	Ave.: 98.5	96.1	96.6	Ave.: 96.4	
TURBIDITY (NTU)	13.4	13.2	Ave.: 13.3	15.4	15.5	Ave.: 15.5	16.1	15.9	Ave.: 16.0	
S.S. (mg/L)	11	10	Ave.: 11	18	17	Ave.: 18	11	13	Ave.: 12	

Station: M2

Duration: 1426 to 1439

Depth of Water (meter): 6.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.1			5.1			
TEMP. (°C)	27.5			27.5			27.4			
SALINITY (ppt)	20.9	21.0	Ave.: 21.0	23.5	23.3	Ave.: 23.4	24.9	25.0	Ave.: 25.0	
D.O. (mg/L)	7.31	7.28	Ave.: 7.26	7.26	7.24	Ave.: 7.25	6.87	6.91	Ave.: 6.89	
D.O.S. (%)	104.5	104.0	Ave.: 104.3	101.8	101.5	Ave.: 101.7	97.5	98.2	Ave.: 97.9	
TURBIDITY (NTU)	15.1	15.4	Ave.: 15.3	19.6	19.3	Ave.: 19.5	27.6	27.5	Ave.: 27.6	
S.S. (mg/L)	12	12	Ave.: 12	16	17	Ave.: 17	25	27	Ave.: 26	

Station: M3

Duration: 1411 to 1425

Depth of Water (meter): 6.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.1			5.2			
TEMP. (°C)	27.9			27.7			27.5			
SALINITY (ppt)	21.4	21.6	Ave.: 21.5	24.0	24.0	Ave.: 24.0	25.7	25.5	Ave.: 25.6	
D.O. (mg/L)	7.44	7.45	Ave.: 7.47	7.36	7.37	Ave.: 7.37	7.07	7.05	Ave.: 7.06	
D.O.S. (%)	107.3	108.7	Ave.: 107.0	104.1	104.2	Ave.: 104.2	98.3	98.0	Ave.: 98.2	
TURBIDITY (NTU)	12.7	13.1	Ave.: 12.9	16.7	16.9	Ave.: 16.8	19.2	19.0	Ave.: 19.0	
S.S. (mg/L)	10	10	Ave.: 10	12	14	Ave.: 13	20	18	Ave.: 19	

Station: C2

Duration: 1400 to 1409

Depth of Water (meter): 5.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.1			4.6			
TEMP. (°C)	28.1			27.7			27.5			
SALINITY (ppt)	20.9	20.7	Ave.: 20.8			Ave.: 23.1	23.2		Ave.: 23.2	
D.O. (mg/L)	7.35	7.39	Ave.: 7.37			Ave.: 7.17	7.15		Ave.: 7.16	
D.O.S. (%)	105.3	106.2	Ave.: 105.8			Ave.: 99.1	98.7		Ave.: 98.9	
TURBIDITY (NTU)	10.2	10.4	Ave.: 10.3			Ave.: 15.3	15.6		Ave.: 15.5	
S.S. (mg/L)	9.0	9.8	Ave.: 9.8			Ave.: 12	13		Ave.: 13	

Any notable discoloration of water? Y/N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y/N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Eric Yung	EY	7/5/03
Tested by	L. WAI HOK	HW	9/5/03
Checked By	Kin L. Lam	LL	10/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 9-5-2003 Tide status : Mid-Tide
 Weather condition : cloudy Ambient Temperature (°C) : 29

Station: C1 Duration: 15:48 to 16:57 Depth of Water (meter): 14.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.1			13.2			
TEMP. (°C)	26.8			26.6			26.4			
SALINITY (ppm)	25.9	25.9	Ave.: 25.9	26.1	26.1	Ave.: 26.1	27.0	27.0	Ave.: 27.1	
D.O. (mg/L)	7.53	7.48	Ave.: 7.51	7.23	7.16	Ave.: 7.20	6.98	6.90	Ave.: 6.94	
D.O.S. (%)	109.7	108.8	Ave.: 109.3	105.3	104.5	Ave.: 104.9	100.4	99.6	Ave.: 100.0	
TURBIDITY (NTU)	7.15	7.06	Ave.: 7.11	7.42	7.36	Ave.: 7.39	9.81	9.75	Ave.: 9.78	
S.S. (mg/L)	6.6	6.8	Ave.: 6.7	6.2	6.2	Ave.: 6.2	8.4	8.6	Ave.: 8.5	

Station: M1 Duration: 16:00 to 16:09 Depth of Water (meter): 13.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.7			12.4			
TEMP. (°C)	26.7			26.5			26.3			
SALINITY (ppm)	25.7	25.7	Ave.: 25.7	26.0	26.0	Ave.: 26.0	26.2	26.3	Ave.: 26.3	
D.O. (mg/L)	7.19	7.11	Ave.: 7.15	7.02	6.93	Ave.: 6.98	6.86	6.80	Ave.: 6.83	
D.O.S. (%)	104.7	103.8	Ave.: 104.3	102.4	101.7	Ave.: 102.1	99.9	99.1	Ave.: 99.3	
TURBIDITY (NTU)	6.76	6.67	Ave.: 6.72	8.40	8.31	Ave.: 8.36	9.41	9.33	Ave.: 9.37	
S.S. (mg/L)	5.4	5.6	Ave.: 5.5	7.6	7.8	Ave.: 7.7	8.8	9.0	Ave.: 8.9	

Station: M2 Duration: 16:12 to 16:21 Depth of Water (meter): 6.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.4			5.8			
TEMP. (°C)	26.8			26.7			26.5			
SALINITY (ppm)	26.3	26.3	Ave.: 26.3	26.8	26.9	Ave.: 26.9	27.3	27.3	Ave.: 27.3	
D.O. (mg/L)	7.79	7.71	Ave.: 7.75	7.47	7.40	Ave.: 7.44	7.08	7.00	Ave.: 7.04	
D.O.S. (%)	113.5	112.7	Ave.: 113.1	108.8	108.0	Ave.: 108.4	103.5	102.7	Ave.: 103.1	
TURBIDITY (NTU)	8.17	8.24	Ave.: 8.21	11.2	12.1	Ave.: 11.7	14.2	13.3	Ave.: 13.8	
S.S. (mg/L)	7.8	7.6	Ave.: 7.7	11	11	Ave.: 11	12	13	Ave.: 13	

Station: M3 Duration: 16:23 to 16:33 Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.2			5.4			
TEMP. (°C)	26.7			26.6			26.5			
SALINITY (ppm)	25.9	25.9	Ave.: 25.9	26.4	26.4	Ave.: 26.4	27.0	27.0	Ave.: 27.0	
D.O. (mg/L)	7.50	7.42	Ave.: 7.46	7.14	7.06	Ave.: 7.10	6.72	6.63	Ave.: 6.68	
D.O.S. (%)	109.3	108.5	Ave.: 108.9	105.1	103.4	Ave.: 103.8	97.9	97.0	Ave.: 97.5	
TURBIDITY (NTU)	11.9	12.4	Ave.: 12.2	15.7	14.8	Ave.: 15.3	16.9	17.3	Ave.: 17.1	
S.S. (mg/L)	10	11	Ave.: 11	13	13	Ave.: 13	15	16	Ave.: 16	

Station: C2 Duration: 16:35 to 16:43 Depth of Water (meter): 5.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.2			4.4			
TEMP. (°C)	26.7			26.6			26.4			
SALINITY (ppm)	25.9	25.9	Ave.: 25.9			Ave.: 27.1	27.1	27.1	Ave.: 27.1	
D.O. (mg/L)	7.09	7.02	Ave.: 7.05			Ave.: 6.75	6.64	6.64	Ave.: 6.70	
D.O.S. (%)	103.3	102.4	Ave.: 102.9			Ave.: 98.4	97.6	97.6	Ave.: 98.0	
TURBIDITY (NTU)	15.8	15.0	Ave.: 15.4			Ave.: 13.7	12.6	12.6	Ave.: 13.2	
S.S. (mg/L)	14	14	Ave.: 14			Ave.: 11	12	12	Ave.: 12	

Any notable discoloration of water? Y If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Y.K. Tse	Tse	9/5
Tested by:	Dorree Lin	Lin	10/5
Checked By	Linda Lam	Lam	12/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 12-5-03

Tide status : MID - FLOOD

Weather condition : SUNNY

Ambient Temperature (°C) : 31

Station: C1

Duration: 1556 to 1612

Depth of Water (meter): 14.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			7.1			13.2			
TEMP. (°C)	29.1			28.4			25.4	25.4	Ave.: 25.4	
SALINITY (ppm)	18.6	18.5	Ave.: 18.6	24.7	24.8	Ave.: 24.8	25.4	25.4	Ave.: 25.4	
D.O. (mg/L)	7.93	7.91	Ave.: 7.92	7.33	7.36	Ave.: 7.35	6.26	6.29	Ave.: 6.28	
D.O.S. (%)	118.7	118.4	Ave.: 118.6	109.5	111.0	Ave.: 109.8	91.8	92.3	Ave.: 92.1	
TURBIDITY (NTU)	8.62	8.71	Ave.: 8.67	9.46	9.55	Ave.: 9.51	7.61	7.72	Ave.: 9.67	
S.S. (mg/L)	8.5	8.5	Ave.: 8.5	9.8	9.5	Ave.: 9.7	8.8	9.0	Ave.: 8.9	

Station: M1

Duration: 1540 to 1554

Depth of Water (meter): 11.9

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.0			10.9			
TEMP. (°C)	29.2			28.2			27.9			
SALINITY (ppm)	19.0	18.9	Ave.: 19.0	23.4	23.2	Ave.: 23.3	25.4	25.6	Ave.: 25.5	
D.O. (mg/L)	8.12	8.14	Ave.: 8.13	7.49	7.47	Ave.: 7.48	6.58	6.56	Ave.: 6.57	
D.O.S. (%)	121.6	122.0	Ave.: 121.8	111.7	111.3	Ave.: 111.5	96.8	96.2	Ave.: 96.4	
TURBIDITY (NTU)	9.78	10.0	Ave.: 9.89	12.3	12.1	Ave.: 12.2	8.47	8.95	Ave.: 8.91	
S.S. (mg/L)	9.3	9.3	Ave.: 9.3	13	12	Ave.: 13	8.0	8.3	Ave.: 8.2	

Station: M2

Duration: 1523 to 1537

Depth of Water (meter): 7.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.7			6.4			
TEMP. (°C)	29.1			28.3			25.1			
SALINITY (ppm)	19.3	19.4	Ave.: 19.4	20.6	20.4	Ave.: 20.5	23.3	23.1	Ave.: 23.2	
D.O. (mg/L)	8.05	8.02	Ave.: 8.04	7.67	7.63	Ave.: 7.65	6.32	6.34	Ave.: 6.33	
D.O.S. (%)	120.3	119.8	Ave.: 120.1	114.6	114.4	Ave.: 114.7	93.0	93.3	Ave.: 93.2	
TURBIDITY (NTU)	12.8	13.0	Ave.: 12.9	11.4	11.5	Ave.: 11.5	14.9	15.4	Ave.: 15.2	
S.S. (mg/L)	10	10	Ave.: 10	14	13	Ave.: 14	10	11	Ave.: 11	

Station: M3

Duration: 1512 to 1522

Depth of Water (meter): 5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.7			4.8			
TEMP. (°C)	28.8			28.3			27.9			
SALINITY (ppm)	18.1	18.1	Ave.: 18.1			Ave.:	21.5	21.5	Ave.: 21.5	
D.O. (mg/L)	7.84	7.82	Ave.: 7.83			Ave.:	6.41	6.43	Ave.: 6.42	
D.O.S. (%)	117.5	117.4	Ave.: 117.6			Ave.:	94.6	94.7	Ave.: 94.6	
TURBIDITY (NTU)	11.4	11.1	Ave.: 11.3			Ave.:	14.2	14.7	Ave.: 14.5	
S.S. (mg/L)	9.5	9.8	Ave.: 9.7			Ave.:	12	10	Ave.: 11	

Station: C2

Duration: 1500 to 1510

Depth of Water (meter): 5.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.7			4.8			
TEMP. (°C)	29.0						27.9			
SALINITY (ppm)	18.5	18.6	Ave.: 18.6			Ave.:	22.1	22.3	Ave.: 22.2	
D.O. (mg/L)	7.90	7.88	Ave.: 7.89			Ave.:	6.04	6.09	Ave.: 6.07	
D.O.S. (%)	118.6	118.2	Ave.: 118.4			Ave.:	89.1	89.6	Ave.: 89.4	
TURBIDITY (NTU)	8.28	8.04	Ave.: 8.21			Ave.:	1.94	1.57	Ave.: 8.76	
S.S. (mg/L)	8.3	8.3	Ave.: 8.3			Ave.:	12	9.8	Ave.: 9.7	Indicates

Any notable discoloration of water? Y / N If yes, elaboration is as follows:

8.3 8.3 8.3

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	ERIC Young	Eric	12-5-03
Tested by	Li Wah Ho	L	13-5-03
Checked By	Linda Law	Linda Law	14-5-03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 12-5-03

Tide status : MID-TIDE

Weather condition : SUNNY

Ambient Temperature (°C) : 30

Station: C1

Duration: 1057 to 1112

Depth of Water (meter): 13.5

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.8	12.5	27.9	27.2	Ave.: 25.1	Ave.: 25.0	Ave.: 25.1	Ave.: 25.0	
TEMP. (°C)	28.7									
SALINITY (ppt)	17.0	16.8	Ave.: 16.9	20.3	20.2	Ave.: 20.3	25.1	25.0	Ave.: 25.1	
D.O. (mg/L)	6.83	6.85	Ave.: 6.84	6.35	6.38	Ave.: 6.31	5.74	5.65	Ave.: 5.70	
D.O.S. (%)	102.3	102.6	Ave.: 102.5	93.3	93.8	Ave.: 93.6	83.8	82.4	Ave.: 83.1	
TURBIDITY (NTU)	10.1	10.1	Ave.: 10.1	8.75	8.58	Ave.: 8.67	8.24	8.39	Ave.: 8.32	
S.S. (mg/L)	12	13	Ave.: 13	8.0	8.0	Ave.: 8.0	7.8	7.5	Ave.: 7.7	

Station: M1

Duration: 1040 to 1055

Depth of Water (meter): 11.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	5.5	10.0	27.6	27.2	Ave.: 24.0	Ave.: 23.9	Ave.: 24.0	Ave.: 24.0	
TEMP. (°C)	28.4									
SALINITY (ppt)	18.1	18.1	Ave.: 18.1	22.5	22.4	Ave.: 22.5	24.0	23.9	Ave.: 24.0	
D.O. (mg/L)	6.83	6.81	Ave.: 6.82	5.99	6.03	Ave.: 6.01	5.69	5.66	Ave.: 5.68	
D.O.S. (%)	101.6	101.2	Ave.: 101.4	87.7	88.2	Ave.: 88.0	83.1	82.6	Ave.: 82.9	
TURBIDITY (NTU)	6.76	6.50	Ave.: 6.63	9.51	9.39	Ave.: 9.45	10.5	10.6	Ave.: 10.6	
S.S. (mg/L)	6.5	6.8	Ave.: 6.7	9.5	9.5	Ave.: 9.5	12	12	Ave.: 12	

Station: M2

Duration: 1025 to 1038

Depth of Water (meter): 6.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.4	5.5	27.4	27.5	Ave.: 21.3	Ave.: 21.4	Ave.: 21.4	Ave.: 21.4	
TEMP. (°C)	28.2									
SALINITY (ppt)	17.9	18.1	Ave.: 18.0	17.9	17.9	Ave.: 17.9	21.5	21.3	Ave.: 21.4	
D.O. (mg/L)	6.80	6.82	Ave.: 6.81	6.78	6.81	Ave.: 6.80	6.01	6.03	Ave.: 6.02	
D.O.S. (%)	100.4	100.9	Ave.: 100.7	99.8	100.3	Ave.: 100.1	87.9	88.2	Ave.: 88.1	
TURBIDITY (NTU)	7.33	7.0	Ave.: 7.22	6.90	6.94	Ave.: 6.96	8.44	9.14	Ave.: 8.99	
S.S. (mg/L)	6.5	6.3	Ave.: 6.4	6.0	6.0	Ave.: 6.0	9.3	9.6	Ave.: 9.2	

Station: M3

Duration: 1013 to 1024

Depth of Water (meter): 5.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.4	5.5	27.4	27.5	Ave.: 20.7	Ave.: 20.7	Ave.: 20.7	Ave.: 20.7	
TEMP. (°C)	28.1									
SALINITY (ppt)	17.4	17.5	Ave.: 17.5			Ave.: 20.8	20.6	20.6	Ave.: 20.7	
D.O. (mg/L)	6.50	6.52	Ave.: 6.51			Ave.: 6.26	6.25	6.25	Ave.: 6.26	
D.O.S. (%)	96.2	96.5	Ave.: 96.4			Ave.: 91.6	91.4	91.4	Ave.: 91.5	
TURBIDITY (NTU)	8.11	8.34	Ave.: 8.23			Ave.: 7.48	7.42	7.42	Ave.: 7.65	
S.S. (mg/L)	8.5	8.8	Ave.: 8.7			Ave.: 7.5	7.5	7.5	Ave.: 7.5	

Station: C2

Duration: 1000 to 1011

Depth of Water (meter): 5.2

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.4	5.5	27.4	27.5	Ave.: 23.7	Ave.: 23.6	Ave.: 23.7	Ave.: 23.7	
TEMP. (°C)	28.4									
SALINITY (ppt)	19.2	19.3	Ave.: 19.3			Ave.: 23.7	23.6	23.6	Ave.: 23.7	
D.O. (mg/L)	6.65	6.63	Ave.: 6.64			Ave.: 5.97	6.00	5.99	Ave.: 5.99	
D.O.S. (%)	99.0	99.6	Ave.: 99.8			Ave.: 87.3	87.7	87.7	Ave.: 87.5	
TURBIDITY (NTU)	6.39	6.57	Ave.: 6.48			Ave.: 10.5	10.2	10.2	Ave.: 10.4	
S.S. (mg/L)	6.0	6.3	Ave.: 6.2			Ave.: 9.0	9.0	9.0	Ave.: 9.0	

Any notable discoloration of water? Y N If yes, elaboration is as follows:Any notable pollutant by others near monitoring site? Y N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Eric Young		12-5-03
Tested by	Li Way Hom		12-5-03
Checked By	Linda Lam		14-5-03

Construction of Lung Kwu Chau Jetty

Contract No. : CV/2002/11

Contractor : Wai Kee (Zens) Construction & Transportation Co., Ltd.

Contractor's Environmental Team : ETS-Testconsult Ltd.

東華德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 14-5-2003
Weather condition : clearTide status : Mid-Tide
Ambient Temperature (°C) : 28

Station: C1 Duration: 16:22 to 16:33 Depth of Water (meter): 13.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.8	12.6	26.8	26.8	26.7	26.7	26.7	26.7	
TEMP. (°C)	27.4									
SALINITY (ppt)	14.3	14.3	Ave.: 14.3	19.4	19.4	Ave.: 19.5	19.3	19.3	Ave.: 19.3	
D.O. (mg/L)	6.00	6.92	Ave.: 5.96	6.12	6.04	Ave.: 6.08	6.07	6.16	Ave.: 6.12	
D.O.S. (%)	86.1	85.3	Ave.: 85.7	87.4	86.6	Ave.: 87.0	86.3	88.0	Ave.: 87.2	
TURBIDITY (NTU)	20.1	19.4	Ave.: 19.7	15.6	14.7	Ave.: 15.2	39.6	38.8	Ave.: 39.2	
S.S. (mg/L)	18	17	Ave.: 18	13	13	Ave.: 13	36	37	Ave.: 27	

Station: M1 Duration: 16:09 to 16:20 Depth of Water (meter): 12.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.0	11.0	27.0	27.0	27.3	27.3	27.3	27.3	
TEMP. (°C)	27.8									
SALINITY (ppt)	14.3	14.3	Ave.: 14.3	18.4	18.4	Ave.: 18.4	15.1	15.1	Ave.: 15.1	
D.O. (mg/L)	6.16	6.10	Ave.: 6.13	6.83	6.15	Ave.: 6.19	6.08	6.01	Ave.: 6.05	
D.O.S. (%)	89.0	88.2	Ave.: 88.6	89.3	88.8	Ave.: 89.2	87.8	87.0	Ave.: 87.4	
TURBIDITY (NTU)	18.2	17.5	Ave.: 17.9	18.5	17.6	Ave.: 18.1	16.9	16.1	Ave.: 16.5	
S.S. (mg/L)	16	17	Ave.: 17	16	16	Ave.: 16	15	14	Ave.: 15	

Station: M2 Duration: 15:57 to 16:07 Depth of Water (meter): 8.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.0	7.0	26.4	26.4	26.7	26.7	26.7	26.7	
TEMP. (°C)	27.1									
SALINITY (ppt)	16.6	16.6	Ave.: 16.6	22.6	22.6	Ave.: 22.6	20.4	20.8	Ave.: 20.5	
D.O. (mg/L)	6.45	6.37	Ave.: 6.41	6.25	6.16	Ave.: 6.21	6.13	6.05	Ave.: 6.09	
D.O.S. (%)	92.2	91.3	Ave.: 91.8	89.0	88.2	Ave.: 88.6	87.6	86.8	Ave.: 87.2	
TURBIDITY (NTU)	19.1	18.4	Ave.: 18.8	26.5	25.7	Ave.: 26.1	24.3	23.6	Ave.: 24.0	
S.S. (mg/L)	17	17	Ave.: 17	23	24	Ave.: 24	21	22	Ave.: 22	

Station: M3 Duration: 15:44 to 15:55 Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.2	5.4	27.3	27.3	26.9	26.9	26.9	26.9	
TEMP. (°C)	27.5									
SALINITY (ppt)	17.7	17.7	Ave.: 17.7	18.8	18.0	Ave.: 18.4	20.3	20.3	Ave.: 20.3	
D.O. (mg/L)	6.59	6.51	Ave.: 6.55	6.55	6.47	Ave.: 6.51	6.43	6.34	Ave.: 6.39	
D.O.S. (%)	95.0	94.1	Ave.: 94.6	94.2	93.7	Ave.: 94.0	93.0	92.1	Ave.: 92.6	
TURBIDITY (NTU)	21.0	20.7	Ave.: 20.9	28.1	29.0	Ave.: 28.6	30.5	29.6	Ave.: 30.1	
S.S. (mg/L)	20	20	Ave.: 20	27	26	Ave.: 27	28	28	Ave.: 28	

Station: C2 Duration: 15:35 to 15:42 Depth of Water (meter): 5.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.4	5.4	27.7	27.7	26.6	26.6	26.6	26.6	
TEMP. (°C)	27.7									
SALINITY (ppt)	18.2	18.2	Ave.: 18.2			Ave.: 28.1	28.1	28.1	Ave.: 28.1	
D.O. (mg/L)	6.82	6.74	Ave.: 6.78			Ave.: 6.65	6.58	6.62	Ave.: 6.62	
D.O.S. (%)	100.9	100.0	Ave.: 100.5			Ave.: 94.9	95.1	94.5	Ave.: 94.5	
TURBIDITY (NTU)	25.1	24.4	Ave.: 24.8			Ave.: 28.7	27.9	28.3	Ave.: 28.3	
S.S. (mg/L)	23	23	Ave.: 23			Ave.: 26	27	27	Ave.: 27	

Any notable discoloration of water? Y / N If yes, elaboration is as follows: _____

Any notable pollutant by others near monitoring site? Y / N If yes, elaboration is as follows: _____

	Name	Signature	Date
Recorded by	Y. C. TIN	Jin	14/15
Tested by:	Rosie Lin	PL	15/15
Checked By	Linda Lam	Linda Lam	17/15/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : (4-5-2003)

Tide status : Mid - Ebb

Weather condition : Clear

Ambient Temperature (°C) : 28

Station:

C1

Duration: 11:15 to 11:25

Depth of Water (meter): 13.0

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.5	12.0	27.8	27.8	27.8	27.8	27.8	27.8	
TEMP. (°C)	28.3									
SALINITY (ppm)	17.7	17.7	Ave.: 17.7	23.8	23.5	Ave.: 23.5	24.9	24.9	Ave.: 24.9	
D.O. (mg/L)	6.79	6.70	Ave.: 6.75	6.40	6.42	Ave.: 6.46	6.28	6.21	Ave.: 6.25	
D.O.S. (%)	96.5	95.7	Ave.: 96.1	91.2	90.4	Ave.: 90.8	88.6	87.8	Ave.: 88.2	
TURBIDITY (NTU)	15.0	14.2	Ave.: 14.6	20.8	20.1	Ave.: 20.5	24.7	27.9	Ave.: 24.3	
S.S. (mg/L)	13	13	Ave.: 13	18	19	Ave.: 19	21	22	Ave.: 22	

Station:

M1

Duration: 11:04 to 11:13

Depth of Water (meter): 12.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	6.5	12.0	27.8	27.8	27.8	27.8	27.8	27.8	
TEMP. (°C)	28.1									
SALINITY (ppm)	16.8	16.8	Ave.: 16.8	20.1	20.1	Ave.: 20.1	23.2	23.2	Ave.: 23.2	
D.O. (mg/L)	6.79	6.84	Ave.: 6.82	6.68	6.60	Ave.: 6.64	6.38	6.30	Ave.: 6.34	
D.O.S. (%)	92.6	92.5	Ave.: 92.1	92.2	94.3	Ave.: 94.8	89.6	88.7	Ave.: 89.2	
TURBIDITY (NTU)	30.7	31.3	Ave.: 31.0	17.6	17.1	Ave.: 17.4	24.2	27.4	Ave.: 23.8	
S.S. (mg/L)	28	28	Ave.: 28	16	15	Ave.: 16	22	23	Ave.: 23	

Station:

M2

Duration: 10:49 to 10:59

Depth of Water (meter): 8.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.3	7.6	28.1	28.1	27.7	27.7	27.7	27.7	
TEMP. (°C)	28.5									
SALINITY (ppm)	19.6	19.6	Ave.: 19.6	22.4	22.4	Ave.: 22.4	24.2	24.2	Ave.: 24.2	
D.O. (mg/L)	6.58	6.50	Ave.: 6.53	6.44	6.36	Ave.: 6.40	6.14	6.07	Ave.: 6.11	
D.O.S. (%)	93.7	91.0	Ave.: 93.4	90.9	90.1	Ave.: 90.5	86.8	86.0	Ave.: 86.4	
TURBIDITY (NTU)	17.8	17.1	Ave.: 17.5	27.2	26.4	Ave.: 26.8	30.7	29.8	Ave.: 30.3	
S.S. (mg/L)	16	15	Ave.: 16	25	25	Ave.: 25	27	28	Ave.: 28	

Station:

M3

Duration: 10:37 to 10:47

Depth of Water (meter): 6.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	3.4	5.8	28.0	28.0	28.3	28.3	28.3	28.3	
TEMP. (°C)	28.4									
SALINITY (ppm)	21.0	Ave.: 21.0	23.1	23.1	Ave.: 23.1	20.1	20.1	Ave.: 20.1	Ave.: 20.1	
D.O. (mg/L)	6.44	Ave.: 6.48	6.21	6.13	Ave.: 6.17	6.54	6.48	Ave.: 6.51	Ave.: 6.51	
D.O.S. (%)	92.7	92.0	Ave.: 92.4	88.2	87.4	Ave.: 87.8	92.8	92.1	Ave.: 92.5	
TURBIDITY (NTU)	27.9	23.1	Ave.: 23.5	28.5	27.6	Ave.: 28.1	19.3	18.5	Ave.: 18.9	
S.S. (mg/L)	22	21	Ave.: 22	26	26	Ave.: 26	17	18	Ave.: 18	

Station:

C2

Duration: 10:25 to 10:35

Depth of Water (meter): 5.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0	4.6	26.8	28.6	28.6	28.6	28.6	28.6	28.6	
TEMP. (°C)	28.6									
SALINITY (ppm)	17.2	17.2	Ave.: 17.2			Ave.:	20.9	20.9	Ave.: 20.9	
D.O. (mg/L)	6.52	6.44	Ave.: 6.48	6.21	6.13	Ave.: 6.17	6.54	6.48	Ave.: 6.51	
D.O.S. (%)	92.7	92.0	Ave.: 92.4	88.2	87.4	Ave.: 87.8	92.8	92.1	Ave.: 92.5	
TURBIDITY (NTU)	19.2	18.7	Ave.: 19.0			Ave.:	20.0	20.7	Ave.: 20.4	
S.S. (mg/L)	13	13	Ave.: 13	16	16	Ave.:	18.19	19	Ave.: 19	

Any notable discoloration of water? Y If yes, elaboration is as follows: _____

Tide

Any notable pollutant by others near monitoring site? Y If yes, elaboration is as follows: _____

	Name	Signature	Date
Recorded by	Y.K.TIN	Jin	14/5
Tested by:	Dence Lin	PL	15/5
Checked By	Linda Lam	Linda Lam	17/5/03



Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 16-5-03 Tide status : M2 - H.S.D.
Weather condition : Cloudy Ambient Temperature (°C) : 28

Station: C1 Duration: 17:04 to 17:26 Depth of Water (meter): 13.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			6.9			12.8			
TEMP. (°C)	27.0			26.5			26.1			
SALINITY (ppm)	16.5	16.5	Ave.: 16.5	25.2	25.0	Ave.: 25.2	26.8	26.9	Ave.: 26.9	
D.O. (mg/L)	4.95	4.96	Ave.: 4.96	4.60	4.43	Ave.: 4.57	4.45	4.41	Ave.: 4.43	
D.O.S. (%)	76.9	77.1	Ave.: 77.0	72.5	71.6	Ave.: 72.1	70.6	70.2	Ave.: 70.4	
TURBIDITY (NTU)	31.4	33.1	Ave.: 32.6	47.2	42.6	Ave.: 44.9	83.9	81.5	Ave.: 82.2	
S.S. (mg/L)	28	27	Ave.: 28	35	34	Ave.: 35	87	83	Ave.: 85	

Station: M1 Duration: 17:29 to 17:48 Depth of Water (meter): 10.8

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			5.5			9.8			
TEMP. (°C)	27.0			26.7			26.1			
SALINITY (ppm)	16.3	15.8	Ave.: 16.1	23.5	23.5	Ave.: 23.3	27.2	28.4	Ave.: 27.8	
D.O. (mg/L)	5.27	5.35	Ave.: 5.31	4.72	4.68	Ave.: 4.70	4.31	4.29	Ave.: 4.30	
D.O.S. (%)	80.9	81.9	Ave.: 81.4	74.1	73.8	Ave.: 73.9	69.0	68.7	Ave.: 68.9	
TURBIDITY (NTU)	30.2	27.2	Ave.: 28.7	49.2	43.5	Ave.: 46.4	62.7	69.3	Ave.: 65.5	
S.S. (mg/L)	31	29	Ave.: 30	42	45	Ave.: 44	63	67	Ave.: 65	

Station: M2 Duration: 17:54 to 18:17 Depth of Water (meter): 7.1

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.8			5.1			
TEMP. (°C)	27.2			26.9			26.3			
SALINITY (ppm)	15.0	15.0	Ave.: 15.0	15.2	15.1	Ave.: 15.2	17.3	17.6	Ave.: 17.5	
D.O. (mg/L)	5.64	5.69	Ave.: 5.67	5.17	5.14	Ave.: 5.16	4.82	4.87	Ave.: 4.8	
D.O.S. (%)	85.7	86.4	Ave.: 86.1	79.8	79.3	Ave.: 79.6	75.5	75.8	Ave.: 75.7	
TURBIDITY (NTU)	40.6	41.7	Ave.: 41.2	35.4	32.8	Ave.: 34.1	50.9	51.6	Ave.: 51.3	
S.S. (mg/L)	25	33	Ave.: 34	38	39	Ave.: 39	55	52	Ave.: 54	

Station: M3 Duration: 18:20 to 18:37 Depth of Water (meter): 5.9

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.8			5.1			
TEMP. (°C)	27.3			26.9			26.6			
SALINITY (ppm)	17.1	17.4	Ave.: 18.0			Ave.:	25.4	24.2	Ave.: 24.8	
D.O. (mg/L)	5.24	5.53	Ave.: 5.36			Ave.:	5.51	5.46	Ave.: 5.49	
D.O.S. (%)	85.0	84.3	Ave.: 84.7			Ave.:	84.1	83.4	Ave.: 83.8	
TURBIDITY (NTU)	36.8	34.5	Ave.: 35.7			Ave.:	45.6	46.4	Ave.: 46.0	
S.S. (mg/L)	30	32	Ave.: 31			Ave.:	40	41	Ave.: 41	

Station: C2 Duration: 18:39 to 19:50 Depth of Water (meter): 5.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
	1.0			3.8			5.1			
TEMP. (°C)	27.2			26.9			26.4			
SALINITY (ppm)	19.4	19.5	Ave.: 19.5			Ave.:	24.6	24.8	Ave.: 24.7	
D.O. (mg/L)	5.88	5.87	Ave.: 5.88			Ave.:	5.22	5.36	Ave.: 5.34	
D.O.S. (%)	87.8	87.6	Ave.: 88.7			Ave.:	87.5	87.1	Ave.: 87.8	
TURBIDITY (NTU)	35.3	21.7	Ave.: 33.5			Ave.:	38.9	39.0	Ave.: 39.0	
S.S. (mg/L)	30	30	Ave.: 30			Ave.:	37	38	Ave.: 38	

Any notable discolouration of water? Y/N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y/N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	A. Yuen		16-5-03
Tested by	L. Wai Ho Ng		17-5-03
Checked By	Linda Lam	Linda Lam	19-5-03

Construction of Lung Kwu Chau Jetty

Contract No. : CV/2002/11

Contractor : Wai Kee (Zens) Construction & Transportation Co., Ltd.

Contractor's Environmental Team : ETS-Testconsult Ltd.

東業德勘測試驗有限公司
ETS-TESTCONSULT LIMITED

Water Quality Monitoring (Lung Kwu Chau) - Data Record Sheet

Sampling Date : 16-5-03
Weather condition : CSEAPTide status : MID - ESB
Ambient Temperature (°C) : 28

Station: C1 Duration: 13:59 to 14:18 Depth of Water (meter): 14.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)	1.0			7.4			13.7			
TEMP. (°C)	27.6			27.1			26.3			
SALINITY (ppt)	21.6	21.3	Ave.: 21.5	19.4	19.6	Ave.: 19.5	25.2	24.7	Ave.: 25.0	
D.O. (mg/L)	4.92	4.47	Ave.: 4.95	4.50	4.42	Ave.: 4.46	21.37	21.35	Ave.: 4.36	
D.O.S. (%)	77.1	77.7	Ave.: 77.4	71.9	70.8	Ave.: 76.4	70.4	70.1	Ave.: 70.3	
TURBIDITY (NTU)	16.4	14.3	Ave.: 16.7	33.9	34.4	Ave.: 34.2	48.5	48.1	Ave.: 48.3	
S.S. (mg/L)	18	17	Ave.: 18	29	31	Ave.: 30	52	50	Ave.: 51	

Station: M1 Duration: 13:41 to 13:51 Depth of Water (meter): 14.6

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)	1.0			5.8			10.6			
TEMP. (°C)	27.5	27.8	Ave.: 27.5	26.8			25.9			
SALINITY (ppt)	21.4	18.1	Ave.: 20.2	23.5	22.4	Ave.: 23.0	26.4	26.3	Ave.: 26.4	
D.O. (mg/L)	5.71	5.73	Ave.: 5.74	5.23	5.20	Ave.: 5.22	4.69	4.70	Ave.: 4.70	
D.O.S. (%)	86.7	86.8	Ave.: 86.8	80.8	80.4	Ave.: 80.6	74.4	74.6	Ave.: 74.5	
TURBIDITY (NTU)	15.4	17.6	Ave.: 16.8	38.3	26.5	Ave.: 27.4	64.9	61.7	Ave.: 63.3	
S.S. (mg/L)	13	13	Ave.: 13	31	30	Ave.: 31	54	50	Ave.: 52	

Station: M2 Duration: 13:18 to 13:35 Depth of Water (meter): 6.4

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)	1.0			3.7			5.4			
TEMP. (°C)	27.5			26.9			26.4			
SALINITY (ppt)	21.2	21.5	Ave.: 21.9	24.8	24.9	Ave.: 24.9	25.3	26.6	Ave.: 26.3	
D.O. (mg/L)	5.38	5.38	Ave.: 5.38	5.02	4.94	Ave.: 4.98	4.71	4.65	Ave.: 4.68	
D.O.S. (%)	82.6	82.6	Ave.: 82.6	78.2	76.4	Ave.: 77.8	74.5	73.7	Ave.: 74.1	
TURBIDITY (NTU)	18.6	10.5	Ave.: 19.6	37.1	32.1	Ave.: 38.1	20.4	23.0	Ave.: 21.7	
S.S. (mg/L)	13	15	Ave.: 14	32	34	Ave.: 33	22	21	Ave.: 22	

Station: M3 Duration: 12:53 to 13:14 Depth of Water (meter): 6.5

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)	1.0			3.3			5.5			
TEMP. (°C)	27.8			27.0			26.4			
SALINITY (ppt)	25.7	25.7	Ave.: 25.7	24.3	24.1	Ave.: 24.2	28.1	28.8	Ave.: 28.1	
D.O. (mg/L)	5.74	5.73	Ave.: 5.74	5.31	5.30	Ave.: 5.31	5.06	4.98	Ave.: 5.02	
D.O.S. (%)	87.7	86.9	Ave.: 87.3	87.8	87.6	Ave.: 81.7	78.5	77.9	Ave.: 78.2	
TURBIDITY (NTU)	11.2	11.3	Ave.: 11.3	16.8	15.8	Ave.: 16.3	18.9	20.6	Ave.: 19.8	
S.S. (mg/L)	10	10	Ave.: 10	14	15	Ave.: 15	15	16	Ave.: 16	

Station: C2 Duration: 12:28 to 12:52 Depth of Water (meter): 5.7

DEPTH (meter)	SURFACE			MIDDLE			BOTTOM			REMARKS
DEPTH (meter)	1.0			1.1			4.7			
TEMP. (°C)	27.6						26.8			
SALINITY (ppt)	20.0	19.5	Ave.: 19.8				26.7	26.2	Ave.: 26.5	
D.O. (mg/L)	6.18	6.14	Ave.: 6.16				13.10	12.63	Ave.: 12.62	
D.O.S. (%)	82.9	91.4	Ave.: 91.8				11.77	10.53	Ave.: 88.3	
TURBIDITY (NTU)	15.4	16.9	Ave.: 16.2				27.6	30.5	Ave.: 29.1	
S.S. (mg/L)	18	17	Ave.: 18				20	22	Ave.: 21	

Any notable discoloration of water? Y/N If yes, elaboration is as follows:

Any notable pollutant by others near monitoring site? Y/N If yes, elaboration is as follows:

	Name	Signature	Date
Recorded by	Alvin	/	16-5-03
Tested by:	Li Wai Hin	/	17-05-03
Checked By	Linda Law	Linda Law	19-5-03



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Appendix B2

Baseline Monitoring Results



Environmental Marine Water Monitoring Data at Lung Kwu Chau

1. Monitoring Time and Water Depth

Date	Monitoring Time and Water Depth	Monitoring Location									
		C1		M1		M2		M3		C2	
		Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb
18/04/03	Monitoring Time	09:53-10:03	14:55-15:08	09:39-09:50	14:39-14:54	09:23-09:34	14:25-14:38	09:10-09:21	14:11-14:23	08:50-09:05	14:00-14:09
	Water Depth (m)	15.2	14.8	14.4	15.7	8.0	7.3	8.4	7.0	6.4	4.8
21/04/03	Monitoring Time	09:50-10:03	16:33-16:45	10:10-10:25	16:21-16:33	10:40-10:50	16:05-16:20	10:53-11:00	15:51-16:04	11:05-11:20	15:42-15:49
	Water Depth (m)	15.0	12.5	14.8	12.6	8.5	6.7	7.3	7.4	6.2	5.5
23/04/03	Monitoring Time	10:09-10:25	18:08-18:20	09:54-10:06	17:55-18:06	09:36-09:50	17:44-17:52	09:20-09:33	17:31-17:42	09:06-09:16	17:20-17:28
	Water Depth (m)	14.9	14.6	8.7	8.3	7.6	5.6	6.4	7.4	5.6	5.5
25/04/03	Monitoring Time	15:02-15:21	11:52-12:30	14:42-14:59	10:55-11:38	14:29-14:39	10:25-10:49	14:06-14:26	10:04-10:20	13:48-14:00	09:47-10:02
	Water Depth (m)	15.6	15.2	14.1	13.4	5.8	6.9	5.8	6.2	5.4	5.7
28/04/03	Monitoring Time	16:48-16:59	11:30-11:41	16:34-16:45	11:14-11:25	16:19-16:30	11:00-11:11	16:05-16:17	10:49-10:58	15:51-16:00	10:34-10:45
	Water Depth (m)	15.4	16.0	16.0	17.2	9.0	11.2	5.6	5.6	5.8	6.6
30/04/03	Monitoring Time	17:30-17:53	12:52-13:13	17:07-17:27	12:22-12:48	16:38-16:59	11:54-12:15	16:21-16:33	11:30-11:47	16:00-16:14	11:00-11:25
	Water Depth (m)	13.2	13.2	10.3	11.8	6.4	5.7	5.8	5.1	4.5	5.4
02/05/03	Monitoring Time	09:49-10:05	14:25-14:40	09:33-09:47	14:07-14:22	09:17-09:31	13:52-14:04	09:07-09:16	13:42-13:51	08:52-09:05	13:30-13:40
	Water Depth (m)	13.3	13.2	12.6	11.1	8.1	6.9	5.7	5.1	6.7	5.3
07/05/03	Monitoring Time	10:55-11:10	14:59-15:15	10:41-10:53	14:14-14:57	10:25-10:39	14:26-14:39	10:14-10:24	14:11-14:25	10:00-10:12	14:00-14:09
	Water Depth (m)	12.9	12.4	13.8	13.2	6.4	6.1	5.7	6.2	5.8	5.6
09/05/03	Monitoring Time	11:28-11:39	15:48-15:57	11:15-11:26	16:00-16:09	11:00-11:12	16:12-16:21	10:46-10:58	16:23-16:33	10:30-10:44	16:35-16:43
	Water Depth (m)	15.0	14.2	14.2	13.4	7.0	6.8	6.8	6.4	5.8	5.4
12/05/03	Monitoring Time	15:56-16:12	10:57-11:12	15:40-15:54	10:40-10:55	15:23-15:37	10:25-10:38	15:12-15:22	10:13-10:24	15:00-15:10	10:00-10:11
	Water Depth (m)	14.2	13.5	11.9	11.0	7.4	6.8	5.8	5.1	5.8	5.2
14/05/03	Monitoring Time	16:33-16:33	11:15-11:25	16:09-16:20	11:04-11:13	15:57-16:07	10:49-10:59	15:44-15:55	10:37-10:47	15:35-15:42	- 10:25-10:35
	Water Depth (m)	13.6	13.0	12.0	12.6	8.0	8.6	6.4	6.8	5.4	5.6
16/05/03	Monitoring Time	17:04-17:26	13:59-14:18	17:29-17:48	13:41-13:57	17:54-18:17	13:18-13:35	18:20-18:37	12:53-13:14	18:39-18:50	12:28-12:52
	Water Depth (m)	13.8	14.7	10.9	11.6	7.1	6.4	5.9	6.5	5.4	5.7



Environmental Marine Water Monitoring Data at Lung Kwu Chau

2. Temperature (°C)

Date	Temperature (°C)																													
	C1						M1						M2						M3						C2					
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
18/04/03	22.9	22.6	22.4	24.2	24.2	23.5	23.0	22.7	22.4	23.9	23.7	23.4	23.4	23.4	23.7	23.7	23.4	23.3	22.9	22.9	23.7	23.6	23.5	23.1	22.8	22.7	23.3	---	22.9	
21/04/03	25.8	24.8	24.1	25.5	25.1	24.8	26.1	24.8	24.2	25.3	25.1	24.7	25.7	25.1	24.9	25.4	25.2	25.1	25.0	25.0	25.4	25.1	25.3	25.7	25.3	24.7	26.6	---	24.4	
23/04/03	25.8	25.0	24.7	27.1	25.1	24.4	25.7	25.2	24.6	26.2	25.3	25.2	25.6	25.4	25.0	25.7	--	24.7	25.5	25.4	25.3	25.4	25.0	24.5	25.6	--	25.2	26.8	---	24.9
25/04/03	26.8	25.5	24.1	25.9	25.1	24.3	26.9	25.7	24.2	26.1	25.3	24.9	26.3	--	24.8	25.9	25.5	25.1	26.5	--	25.2	26.0	25.9	25.8	25.8	--	25.1	25.7	---	25.3
28/04/03	27.0	26.5	26.3	26.7	25.9	25.4	26.5	26.5	26.5	26.9	26.1	25.7	26.6	26.9	26.8	26.6	25.8	25.4	26.5	--	26.4	27.0	--	26.4	27.5	--	26.7	27.2	26.5	26.5
30/04/03	25.9	25.5	25.4	26.5	26.2	25.9	26.6	26.0	25.7	26.2	25.8	25.6	26.1	25.7	25.5	25.9	--	25.3	26.2	--	25.8	25.9	--	25.6	25.4	--	25.3	26.2	---	25.4
02/05/03	24.7	24.8	24.9	25.7	25.7	25.6	24.9	24.7	24.8	25.7	25.7	25.6	24.6	24.8	24.9	25.8	25.8	25.7	24.8	--	24.9	25.8	--	25.6	24.7	24.7	27.7	---	26.6	
07/05/03	26.7	26.5	26.3	27.5	27.2	27.0	26.7	26.5	27.6	27.2	27.1	26.8	26.7	26.6	27.8	27.5	27.4	26.8	--	26.6	27.9	27.7	27.5	27.3	--	27.0	28.1	---	27.5	
09/05/03	27.2	27.0	26.8	26.8	26.6	26.4	27.3	27.1	26.9	26.7	26.5	26.3	27.1	27.0	26.9	26.8	26.7	26.5	27.2	27.1	26.9	26.7	26.6	26.5	27.0	--	26.7	26.7	---	26.4
12/05/03	29.1	28.4	28.1	28.7	27.9	27.2	29.3	28.2	27.9	28.4	27.6	27.2	29.1	28.3	28.1	28.2	27.8	27.5	28.8	--	27.9	28.1	--	27.5	29.0	--	27.9	28.4	---	27.5
14/05/03	27.4	26.8	26.7	28.3	27.8	27.8	27.0	27.3	29.1	28.5	27.8	27.1	26.4	26.7	28.5	28.1	27.7	27.5	27.3	26.9	28.4	28.0	28.3	27.7	--	26.5	28.6	---	26.8	
16/05/03	27.0	26.5	26.1	27.6	27.1	26.3	27.0	26.7	26.1	27.5	26.8	25.9	27.2	26.9	26.3	27.5	26.9	26.4	27.3	--	26.6	27.8	27.0	26.4	27.2	--	26.4	27.6	---	26.8

3. Dissolved Oxygen (DO, mg/L)

Date	Dissolved Oxygen (DO, mg/L)																													
	C1						M1						M2						M3						C2					
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
18/04/03	5.40	5.60	5.70	5.11	5.21	5.16	5.59	5.65	5.87	5.18	5.32	5.08	5.68	5.69	5.65	5.81	5.78	5.82	5.77	5.88	5.84	6.25	6.21	6.19	5.93	5.96	5.95	6.80	---	6.82
21/04/03	6.04	6.14	6.15	4.71	4.75	4.72	6.14	6.27	6.36	4.68	4.79	4.91	6.43	6.47	6.50	4.86	5.01	4.83	6.64	6.42	6.47	5.31	5.15	4.97	6.58	6.67	6.91	7.14	---	6.07
23/04/03	4.53	4.81	4.71	6.29	6.22	6.18	4.38	4.37	4.54	6.47	6.53	6.55	4.68	4.69	4.68	6.43	--	6.11	5.32	5.34	5.30	6.51	6.38	6.22	5.77	--	5.96	5.39	---	5.21
25/04/03	3.81	2.84	2.93	3.97	3.83	3.65	3.69	2.92	3.03	4.06	3.64	3.13	4.28	--	3.36	3.68	3.77	3.72	4.14	--	3.29	3.91	4.08	4.13	5.87	--	5.05	5.59	---	4.69
28/04/03	7.00	7.38	7.18	6.71	5.93	5.83	5.90	6.69	6.51	7.73	5.95	5.78	5.66	6.46	6.34	6.52	5.42	5.50	7.13	--	7.51	7.50	--	6.84	9.53	--	9.24	8.36	7.59	7.28
30/04/03	5.18	4.71	4.79	5.26	4.96	4.79	5.68	5.30	4.69	5.48	5.43	5.37	6.24	5.94	5.80	5.54	--	5.14	7.25	--	6.17	6.29	--	5.63	7.49	--	6.56	8.94	---	7.50
02/05/03	5.58	5.61	5.62	6.69	7.21	7.19	5.61	5.56	5.47	6.69	6.70	6.96	5.85	5.76	5.72	6.97	6.94	6.89	6.02	--	5.92	6.94	--	6.86	5.67	5.59	5.55	6.93	---	6.98
07/05/03	7.85	7.69	7.51	7.24	6.97	6.85	7.75	7.61	7.82	7.20	6.93	6.75	8.02	7.86	7.78	7.30	7.25	6.89	8.04	--	7.81	7.47	7.37	7.06	8.18	--	7.88	7.37	---	7.16
09/05/03	7.28	6.93	5.54	7.51	7.20	6.94	7.40	7.06	6.78	7.15	6.98	6.83	7.07	6.91	6.30	7.75	7.44	7.04	6.77	6.58	6.13	7.46	7.10	6.68	6.50	---	6.25	7.05	---	6.70
12/05/03	7.92	7.35	6.28	6.84	6.37	5.70	8.13	7.48	6.57	6.82	6.01	5.68	8.04	7.65	6.33	6.81	6.80	6.02	7.83	--	6.42	6.51	--	6.26	7.89	--	6.07	6.64	---	5.99
14/05/03	5.96	6.08	6.12	6.75	6.46	6.25	6.13	6.19	6.05	6.82	6.64	6.34	6.41	6.21	6.09	6.53	6.40	6.11	6.55	6.51	6.39	6.48	6.17	6.51	6.78	--	6.62	6.89	---	6.64
16/05/03	4.96	4.57	4.43	4.95	4.46	4.36	5.31	4.70	4.30	5.74	5.22	4.70	5.67	5.16	4.85	5.38	4.98	4.68	5.56	--	5.49	5.76	5.31	5.02	5.88	--	5.34	6.16	---	5.62



Environmental Marine Water Monitoring Data at Lung Kwu Chau

4. Dissolved Oxygen Saturation (DOS, %)

Date	Dissolved Oxygen Saturation (DOS, %)																													
	C1						M1						M2						M3						C2					
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
18/04/03	75.3	77.5	78.7	70.0	71.0	69.8	78.0	78.7	80.9	70.5	72.0	69.2	79.9	79.8	79.0	78.7	78.2	78.6	80.8	81.5	81.1	84.7	84.0	83.4	82.6	83.0	82.8	91.5	---	91.1
21/04/03	88.3	88.6	87.5	66.5	66.9	65.9	87.5	87.7	88.3	66.0	67.4	68.6	91.1	90.9	91.0	68.7	71.1	68.4	93.4	90.1	90.9	74.9	72.0	70.1	93.4	94.1	96.2	103.6	---	84.4
23/04/03	66.3	69.3	67.8	94.1	89.9	88.3	64.1	63.3	64.8	95.2	94.7	95.2	68.4	68.7	67.7	94.1	---	87.7	77.4	77.4	77.0	94.8	92.5	89.6	84.4	---	86.3	80.4	---	75.0
25/04/03	56.6	40.4	41.5	58.4	56.1	52.3	55.0	41.6	43.1	60.2	53.7	44.4	63.2	---	48.5	54.0	55.3	53.9	61.3	---	46.9	57.3	59.7	60.5	86.1	---	73.1	81.7	---	68.0
28/04/03	97.8	103.2	100.8	92.4	83.9	83.4	80.8	94.2	92.3	108.0	84.8	82.1	78.4	90.8	88.9	91.9	77.9	78.3	99.3	---	104.8	103.9	---	95.0	135.7	---	129.5	117.1	105.1	103.6
30/04/03	71.3	66.4	67.1	78.0	73.0	70.4	84.3	72.4	66.2	81.0	80.0	79.3	92.0	86.8	85.1	81.3	---	74.5	107.3	---	91.2	92.1	---	81.9	109.9	---	96.0	131.7	---	109.7
02/05/03	79.9	80.3	80.1	97.8	105.3	104.9	80.3	79.2	77.5	97.9	97.9	101.7	83.6	82.7	82.1	101.9	101.4	100.8	85.9	---	84.7	101.4	---	100.4	81.9	80.1	79.1	104.5	---	103.5
07/05/03	116.8	113.8	110.7	103.3	99.6	97.0	115.0	112.7	115.7	102.6	98.5	96.4	119.2	116.8	115.0	104.3	101.7	97.9	119.8	---	115.8	109.0	104.2	98.2	122.5	---	117.6	105.8	---	98.9
09/05/03	102.4	97.4	91.9	109.3	104.9	100.0	104.0	99.1	95.5	104.3	102.1	99.5	99.5	98.9	95.0	113.1	108.4	103.1	97.2	96.4	92.8	108.9	103.8	97.5	94.8	---	91.6	102.9	---	98.0
12/05/03	118.6	109.8	92.1	102.5	93.6	83.1	121.8	111.5	96.4	101.4	88.0	82.9	120.1	114.7	93.2	100.7	100.1	88.1	117.6	---	94.6	96.4	---	91.5	118.4	---	89.4	98.8	---	87.5
14/05/03	85.7	87.0	87.2	96.1	90.8	88.2	88.6	89.2	87.4	98.1	94.8	89.2	91.8	88.6	87.2	93.4	90.5	86.4	94.6	94.0	92.6	92.4	87.8	92.5	100.5	---	94.5	99.3	---	94.8
16/05/03	77.0	72.1	70.4	77.4	71.4	70.3	81.4	73.9	68.9	86.8	80.6	74.5	86.1	79.6	75.7	82.6	77.8	74.1	84.7	---	83.8	87.3	81.7	78.2	88.7	---	81.8	91.8	---	85.3

5. Turbidity

Date	Turbidity (NTU)																																							
	C1						M1						M2						M3						C2															
	Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb			Flood			Ebb												
	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B									
18/04/03	23.3	125	148	—	11.1	65.4	170	—	20.7	271	332	—	12.9	14.1	34.4	20.5	10.2	13.0	19.6	14.3	28.4	26.7	66.1	40.4	10.9	28.8	48.7	29.5	24.5	37.8	57.9	40.1	14.9	52.0	153	—	29.1	—	36.6	32.9
21/04/03	8.69	15.4	85.6	36.5	6.62	9.20	51.5	22.4	15.8	19.0	68.2	34.3	9.32	8.47	12.4	10.1	9.60	16.8	27.4	17.9	10.2	16.5	23.4	16.7	14.1	20.1	28.1	20.8	9.27	13.3	9.69	10.8	9.56	8.12	27.9	35.2	10.6	—	14.8	12.7
23/04/03	7.39	6.08	7.53	7.00	6.46	9.05	7.38	7.63	7.19	7.42	9.47	8.03	5.84	5.50	5.06	5.47	7.20	6.12	9.90	7.74	4.86	—	9.36	7.11	7.18	5.66	7.02	6.62	6.74	8.54	11.7	8.99	6.70	—	11.4	9.05	6.87	—	21.3	14.1
25/04/03	7.04	8.32	35.3	16.9	6.07	10.2	12.5	9.59	5.98	6.82	7.60	6.80	5.61	10.2	8.57	8.16	6.08	—	8.17	7.13	6.94	6.35	9.29	7.53	5.64	—	11.6	8.72	5.69	5.43	6.50	5.87	7.75	—	19.7	13.7	7.49	—	4.81	6.15
28/04/03	13.7	15.4	12.7	13.9	12.6	17.8	18.8	16.4	11.9	13.7	15.1	13.6	11.9	20.6	17.9	16.8	12.5	11.3	14.0	12.6	11.6	18.0	21.0	16.9	12.7	—	12.0	12.4	11.7	—	12.8	12.3	27.9	—	15.8	21.9	9.70	12.0	15.2	12.3
30/04/03	20.2	10.8	22.7	17.9	13.4	15.1	13.5	14.0	14.1	19.8	25.8	19.9	17.4	13.3	23.5	18.1	18.1	25.7	30.8	24.9	20.4	—	32.6	26.5	14.9	—	28.1	21.5	17.6	—	26.8	22.2	17.3	—	23.7	20.5	16.0	—	18.3	17.2
02/05/03	16.7	28.0	40.5	28.4	11.3	11.0	9.53	10.6	12.7	15.8	17.6	15.4	11.9	10.9	13.1	12.0	10.9	10.3	15.3	12.2	18.7	24.2	20.6	21.2	10.7	—	9.60	10.2	17.9	—	21.0	19.5	8.20	15.1	11.0	28.9	—	15.2	22.1	
07/05/03	10.6	10.9	11.6	11.0	11.0	9.78	12.3	11.0	11.4	10.4	15.5	12.4	13.3	15.5	16.0	14.9	15.7	18.1	23.5	19.1	15.3	19.5	27.6	20.8	11.3	—	21.9	16.6	12.9	16.8	19.0	16.2	5.82	—	6.53	6.68	10.3	—	15.5	12.9
09/05/03	6.39	6.74	7.52	6.88	7.11	7.39	9.78	8.09	5.80	7.74	6.88	6.81	6.72	8.36	9.37	8.15	5.79	5.92	4.50	5.40	8.21	11.7	13.8	11.2	5.39	4.80	3.86	4.68	12.2	15.3	17.1	14.9	4.86	—	6.37	5.62	15.4	—	13.2	14.3
12/05/03	8.67	9.51	9.67	9.28	10.1	8.67	8.32	9.03	9.89	12.2	8.91	10.3	6.63	9.45	10.6	8.89	12.9	11.5	15.2	13.2	7.22	6.96	8.99	7.72	11.3	—	14.5	12.9	8.23	—	7.65	7.94	8.21	—	8.76	8.49	6.48	—	10.4	8.44
14/05/03	19.7	15.2	39.2	24.7	14.6	20.5	24.3	19.8	17.9	18.1	16.5	17.5	31.0	17.4	23.8	24.1	18.8	26.1	24.0	23.0	17.5	26.8	30.3	24.9	20.9	28.6	30.1	26.5	23.5	28.1	18.9	23.5	24.8	—	28.3	26.6	19.0	—	20.4	19.7
16/05/03	32.6	44.9	82.2	53.2	16.7	34.2	48.3	33.1	28.7	46.4	65.5	46.9	16.8	27.4	63.3	35.8	41.2	34.1	51.3	42.2	19.6	38.1	21.7	26.5	35.7	—	46.0	40.9	11.3	16.3	19.8	15.8	33.5	—	39.0	36.3	16.2	—	29.1	22.7

Remark: the bolded data were excluded from the determination and Action and Limit Level because they were abnormally high.

Environmental Marine Water Monitoring Data at Lung Kwu Chau

6. Suspended Solids

Date	Suspended Solids (mg/L)																																							
	C1								M1								M2								M3								C2							
	Flood				Ebb				Flood				Ebb				Flood				Ebb				Flood				Ebb											
	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave	S	M	B	Ave								
18/04/03	19	150	250	—	15	81	230	—	22	320	440	—	9.5	15	26	17	11	10	22	14	27	30	96	51	19	31	82	44	30	35	72	46	21	73	230	—	41	—	49	45
21/04/03	5.0	15	85	35	5.2	8.3	55	23	8.1	17	69	31	11	7.7	13	11	4.7	9.9	26	14	11	18	20	16	12	21	26	20	11	17	9.2	12	6.4	8.8	67	27	12	—	15	14
23/04/03	6.5	9.5	11	9.0	6.5	9.0	6.8	7.4	12	7.5	14	11	4.0	6.5	6.5	5.7	5.3	5.0	9.8	6.7	6.0	—	11	8.5	4.8	6.0	7.0	5.9	5.8	8.8	15	9.9	6.8	—	12	9.4	8.3	—	52	30
25/04/03	6.3	8.3	36	17	5.9	4.7	12	7.5	7.3	6.2	8.4	7.3	9.2	5.7	8.1	7.7	6.0	—	9.2	7.6	2.2	3.8	7.9	4.6	3.9	—	11	7.5	4.3	3.2	3.7	3.7	8.6	—	35	22	2.9	—	3.3	3.1
28/04/03	12	14	11	12	12	17	17	15	10	13	15	13	11	21	17	16	11	11	13	12	11	19	22	17	12	—	12	12	10	—	12	11	29	—	15	22	9.1	11	14	11
30/04/03	15	19	23	19	13	10	9.9	11	11	16	29	19	11	11	25	16	14	21	25	20	15	—	27	21	—	22	19	14	—	21	18	15	—	24	20	16	—	13	15	
02/05/03	14	26	38	26	10	11	9.1	10	11	15	16	14	10	9.5	12	11	9.9	9.5	14	11	17	23	19	20	9.6	—	8.9	9.3	16	—	20	18	7.7	8.2	14	10.0	31	—	14	23
07/05/03	11	9.4	9.9	10	11	8.9	11	10.3	10	13	17	13	11	18	12	14	12	16	22	17	12	17	26	18	13	—	19	16	10	13	19	14	6.0	—	6.7	6.4	9.2	—	13	11
09/05/03	5.5	6.0	6.1	5.9	6.7	6.2	8.5	7.1	4.9	6.5	5.8	5.7	5.5	7.7	8.9	7.4	4.9	5.3	4.0	4.7	7.7	11	13	11	4.7	4.3	3.1	4.0	11	13	16	13	3.7	—	6.3	5	14	—	12	13
12/05/03	8.5	9.7	8.9	9.0	13	8.0	7.7	9.6	9.3	13	8.2	10	6.7	9.5	12	9.4	10	14	11	12	6.4	6.0	9.2	7.2	9.7	—	11	10	8.7	—	7.5	8.1	8.3	—	8.3	8.3	6.2	—	9.0	7.6
14/05/03	18	13	37	23	13	19	22	18	17	16	15	16	28	16	23	22	17	24	22	21	16	25	28	23	20	27	28	25	22	26	28	25	23	—	27	25	17	—	19	18
16/05/03	28	35	85	49	18	30	51	33	30	44	65	46	13	31	52	32	34	39	54	42	14	33	22	23	31	—	41	36	10	15	16	14	30	—	38	34	18	—	21	20

Remark: the bolded data were excluded from the determination and Action and Limit Level because they were abnormally high.

7. Salinity

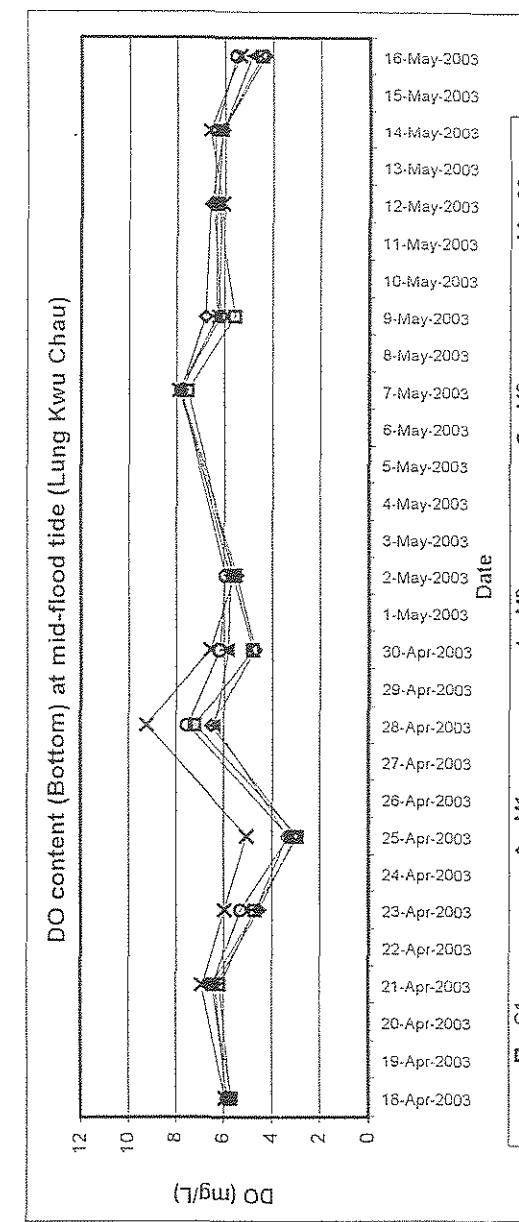
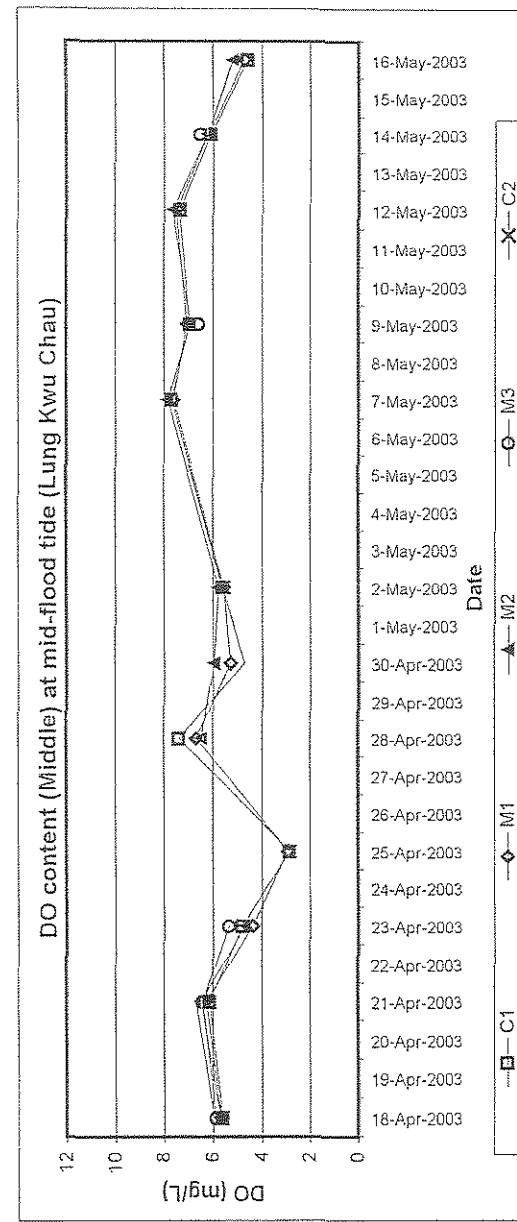
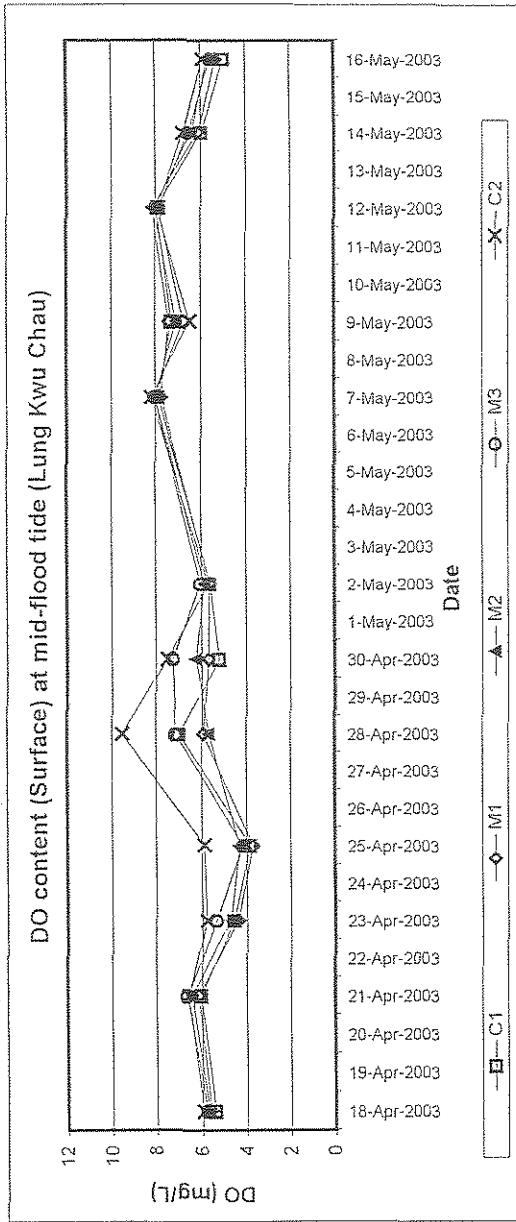
Date	Salinity (ppt)																																							
	C1								M1								M2								M3								C2							
	Flood				Ebb				Flood				Ebb				Flood				Ebb				Flood				Ebb											
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B							
18/04/03	23.3	26.2	26.8	21.7	22.3	23.6	22.7	24.8	24.8	22.3	22.2	23.9	21.2	21.5	21.4	23.5	23.6	24.8	21.6	23.7	23.8	24.1	24.1	24.6	22.6	25.0	25.5	26.7	—	26.8										
21/04/03	22.0	24.8	27.9	22.2	23.6	24.7	22.9	25.2	27.2	23.0	23.8	25.3	27.3	22.7	23.4	23.1	23.3	23.9	23.4	23.8	23.2	23.8	23.2	22.4	23.1	26.3	23.4	—	27.2											
23/04/03	18.2	27.3	29.2	14.9	27.7	29.1	16.1	24.4	29.4	19.5	24.1	23.0	18.9	23.4	27.0	23.0	—	28.3	20.5	23.3	25.0	23.0	25.7	29.4	21.4	—	25.5	19.8	—	29.5										
25/04/03	14.6	29.5	30.5	14.9	28.1	29.1	14.3	29.2	29.8	15.4	27.2	28.6	17.5	—	24.0	17.1	19.3	23.8	16.6	—	27.2	18.7	19.9	21.4	19.3	—	26.6	15.3	—	22.4										
28/04/03	18.0	20.1	21.8	18.0	24.8	26.0	17.4	19.6	21.7	20.5	25.6	26.1	17.3	19.2	21.5	21.0	27.7	27.7	19.2	—	21.6	18.0	—	21.0	21.9	—	21.1	18.8	22.0	23.1										
30/04/03	22.5	20.3	23.4	17.6	20.9	20.3	18.7	21.0	21.6	19.5	19.6	21.3	20.1	22.9	23.9	21.8	—	25.7	19.3	—	23.1	21.6	—	25.0	20.6	—	23.4	21.2	—	22.0										
02/05/03	26.1	27.4	28.5	23.4	24.7	24.8	25.4	26.5	27.8	24.5	24.4	25.4	24.1	24.4	25.7	25.1	25.6	25.9	25.1	—	25.7	25.5	—	26.0	25.7	26.1	28.0	26.8	—	27.8										
07/05/03	19.6	20.7	25.8	22.2	26.0	27.0	20.0	21.6	20.5	21.9	24.6	26.3	19.8	19.9	20.7	21.0	23.4	25.0	19.8	—	21.0	21.5	24.0	25.6	19.7	—	20.5	20.8	—	23.2										
09/05/03	25.8	26.2	27.0	25.9	26.1	27.1	26.1	26.7	27.2	25.7	26.0	26.3	26.4	26.8	27.0	26.3	26.9	27.3	26.4	26.6	27.1	25.9	26.4	27.0	26.7	—	27.0	25.9	—	27.1										
12/05/03	18.6	24.8	25.4	16.9	20.3	25.1	19.0	23.3	25.5	18.1	22.5	24.0	19.4	20.5	23.2	18.0	17.9	21.4	18.1	—	21.5	17.5	—	20.7	18.6	—	22.2	19.3	—	23.7										
14/05/03	14.3	19.5	19.3	17.7	23.5	24.9	14.3	18.4	15.1	16.8	20.1	23.2	16.6	22.6	20.5	19.6	22.4	24.2	17.7	18.4	20.3	21.0	23.1	20.1	18.2	—	28.1	17.2	—	20.9										
16/05/03	16.5	25.2	26.9	21.5	19.5	25.0	16.1	23.3	27.8	17.8	23.0	26.4	15.0	15.2	17.5	21.9	24.9	26.3	18.0	—	24.8	25.7	24.2	28.1	19.5	—	24.7	19.8	—	26.5										

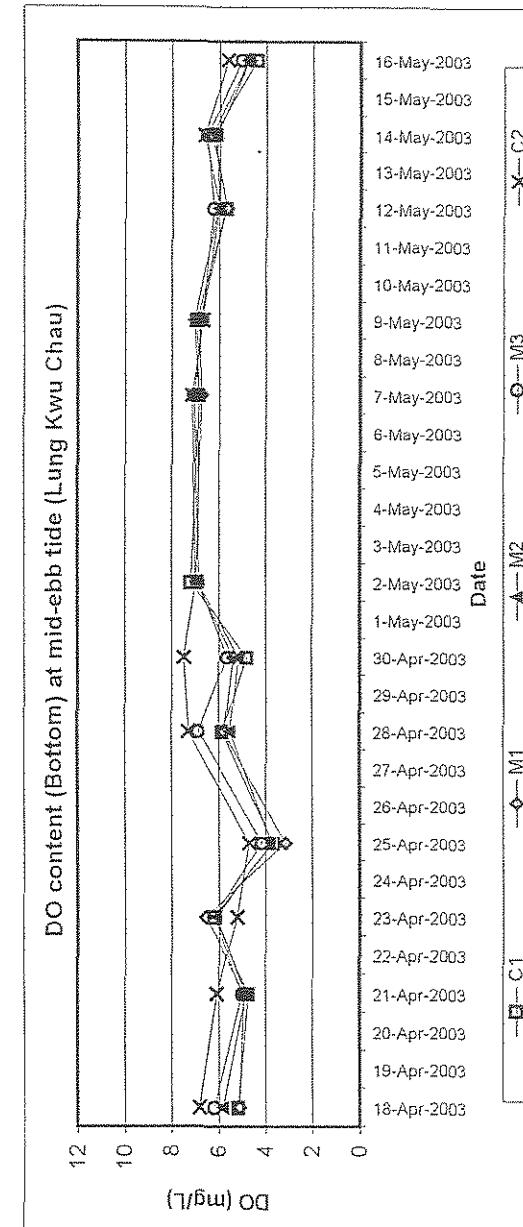
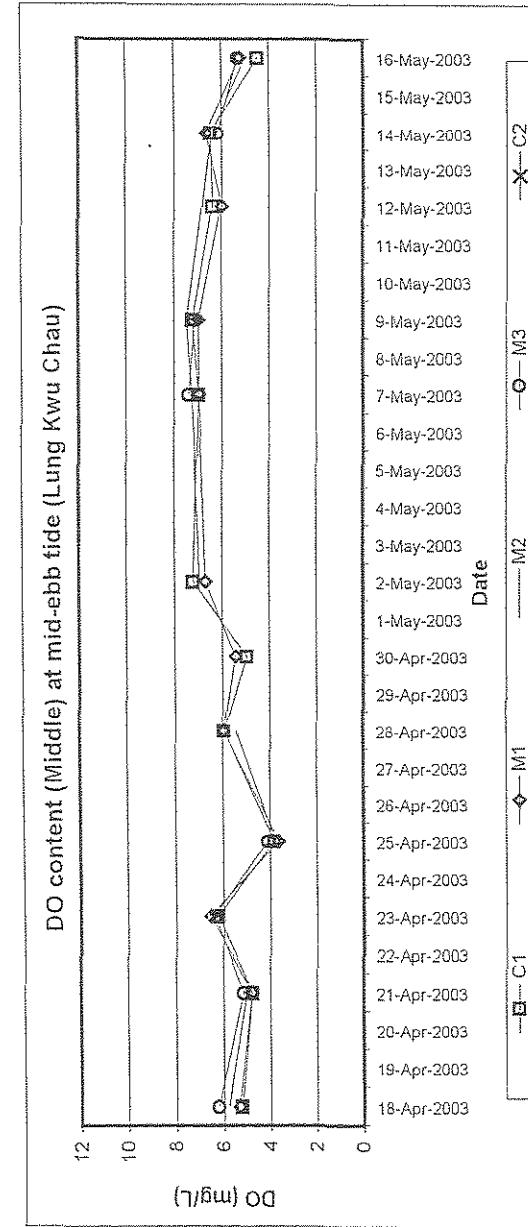
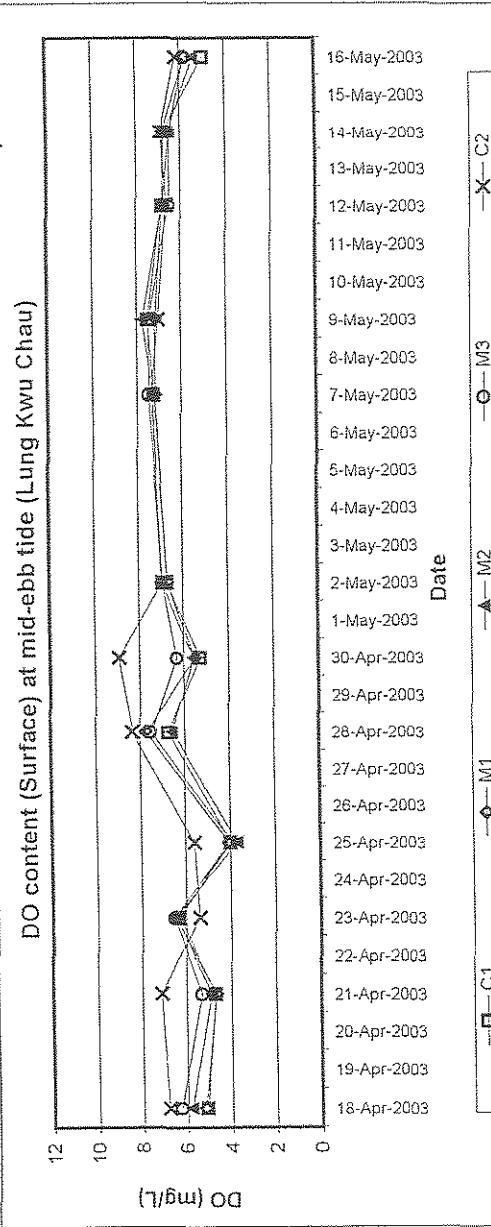


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Appendix C

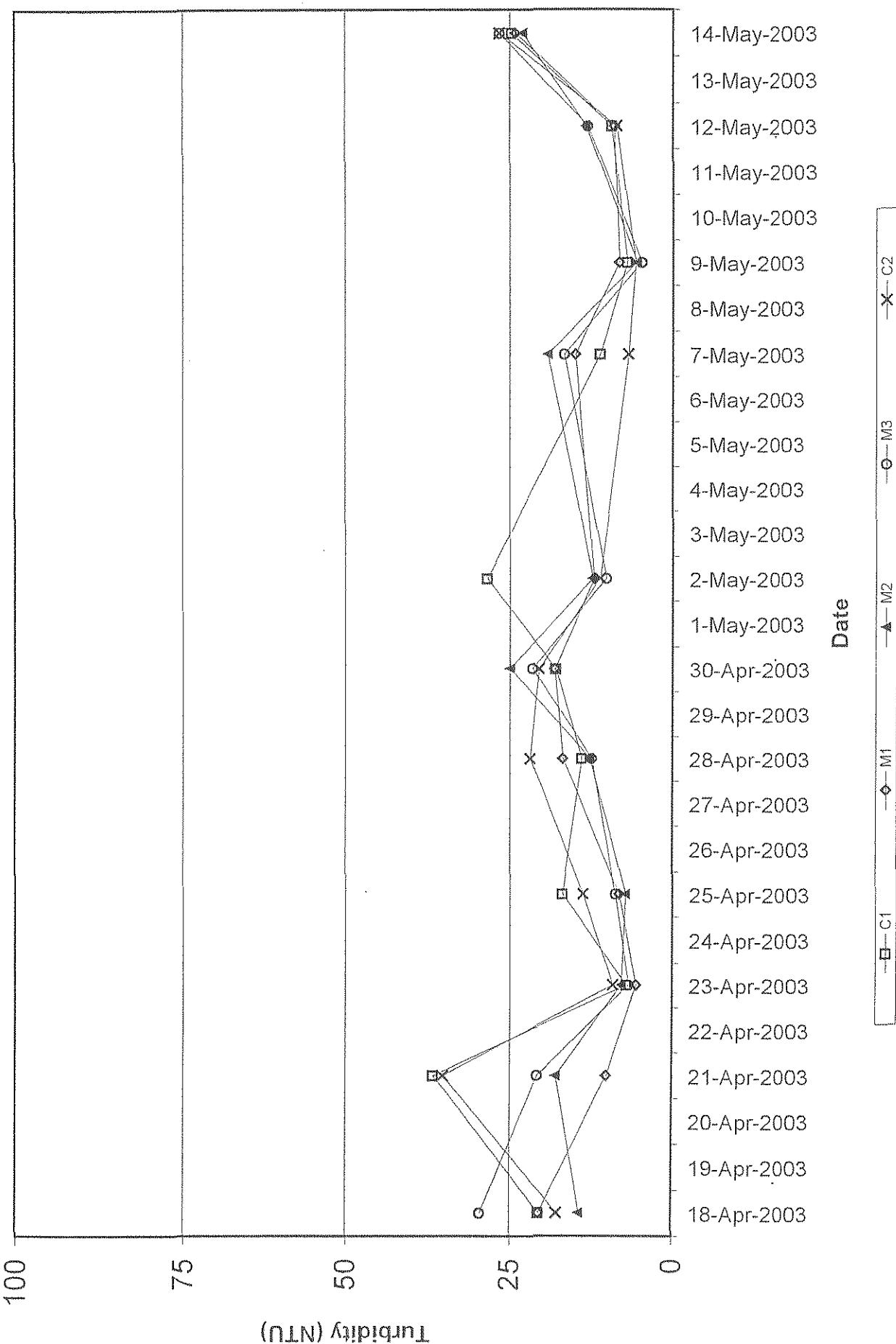
Graphical Plots of Baseline Monitoring Data

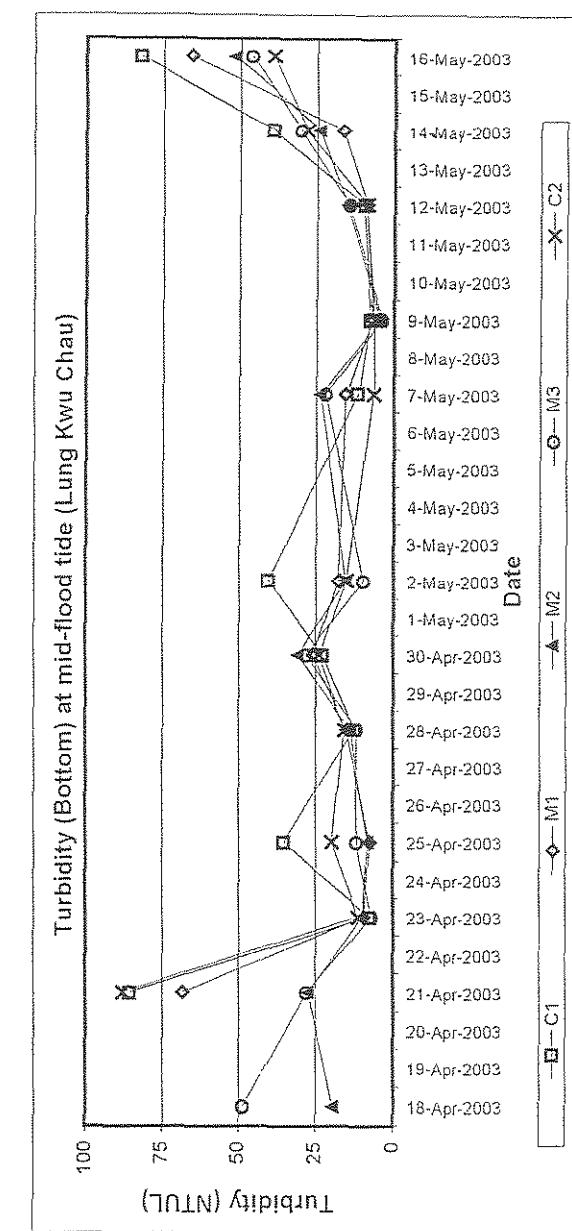
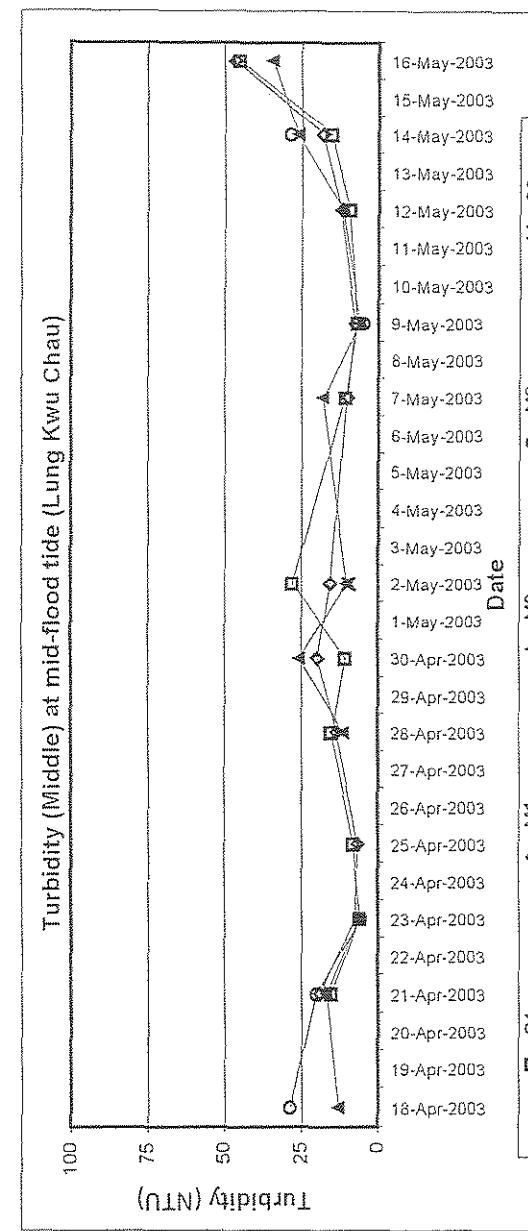
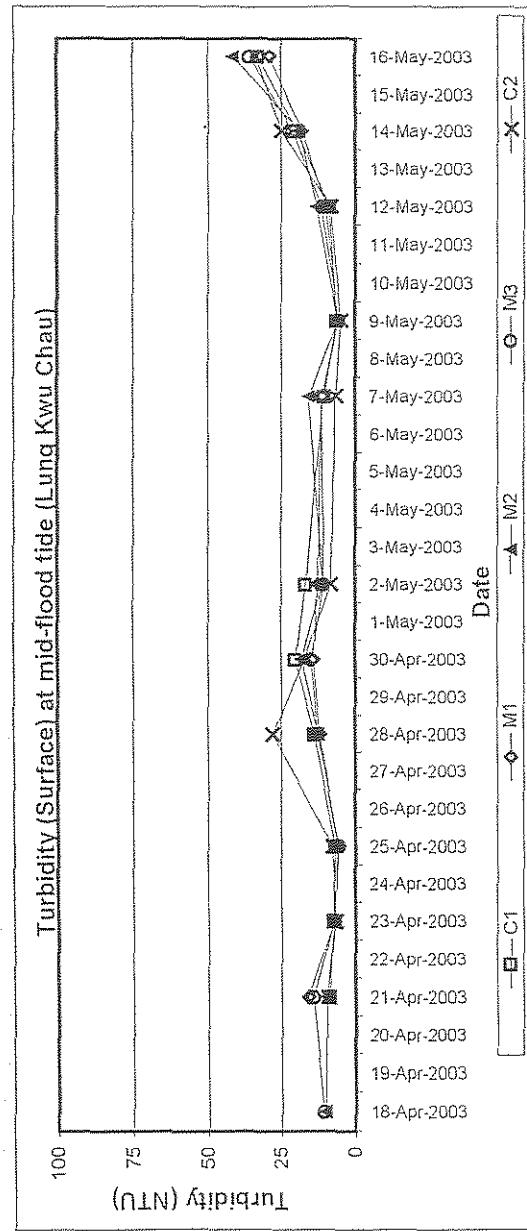






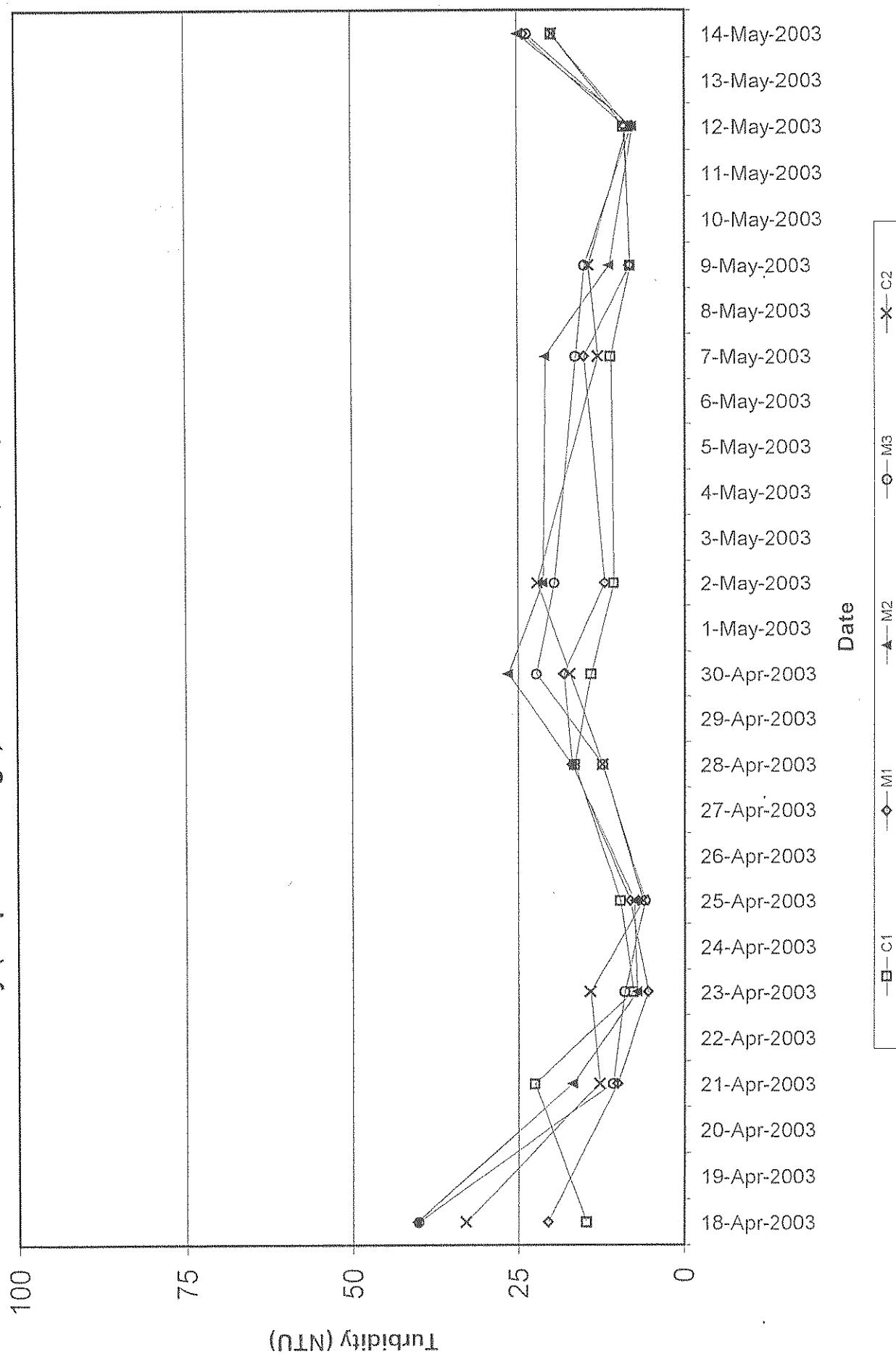
Turbidity (Depth-average) at mid-flood tide (Lung Kwu Chau)

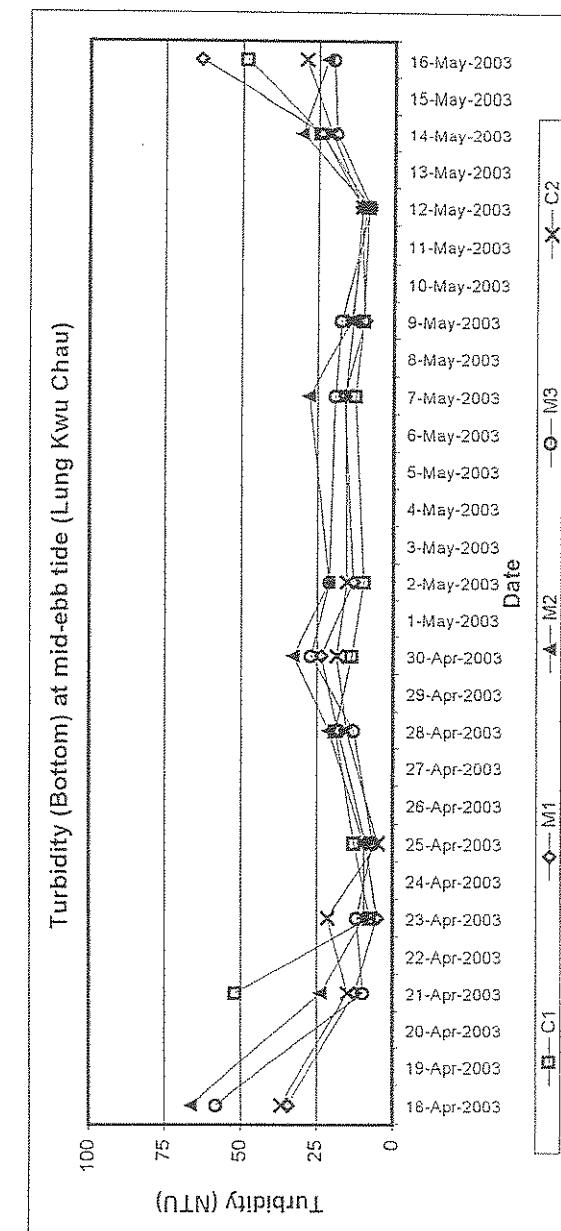
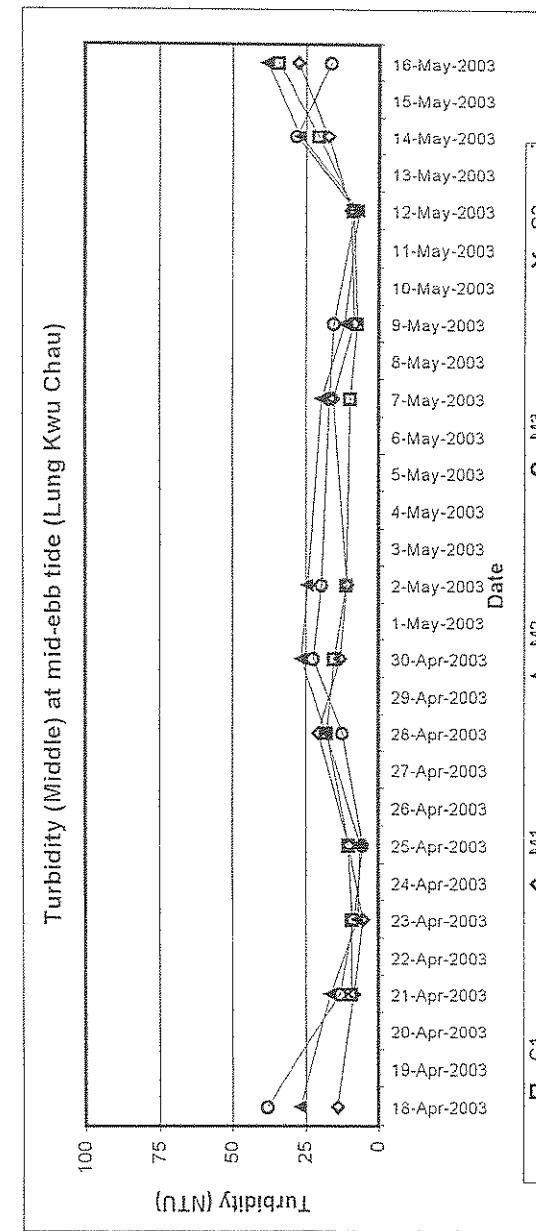
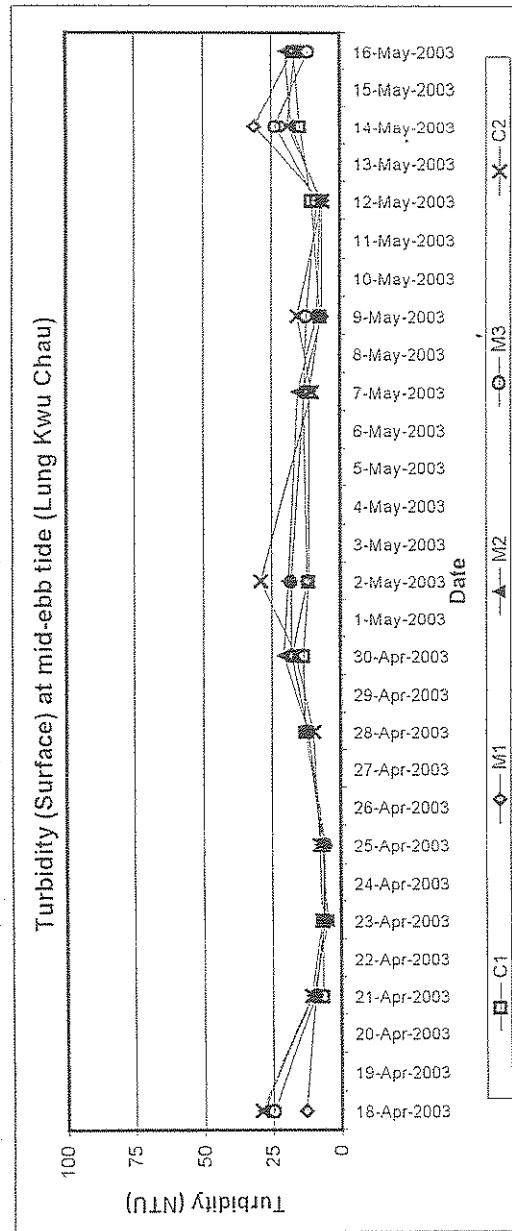






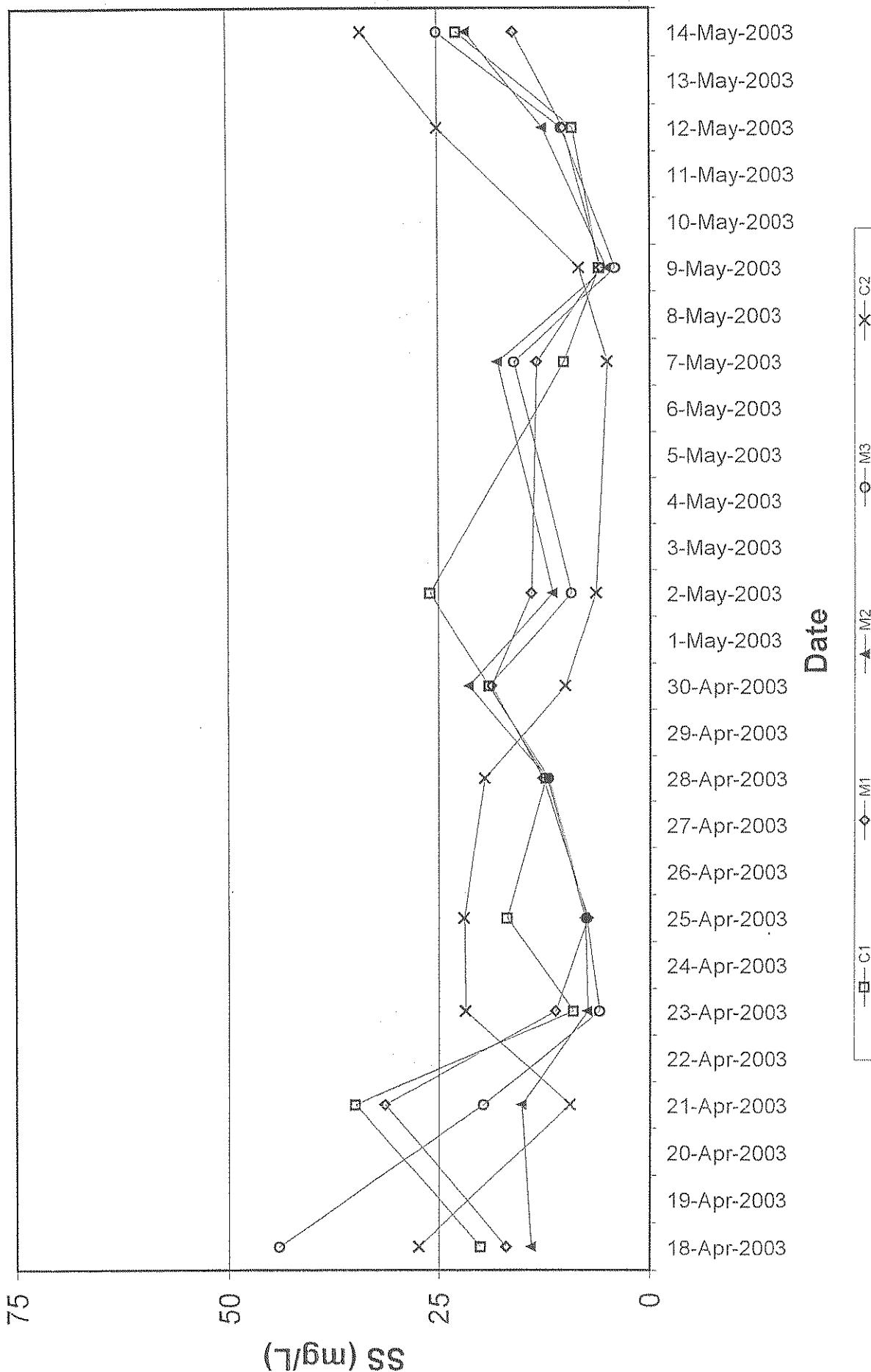
Turbidity (Depth-average) at mid-ebb tide (Lung Kwu Chau)

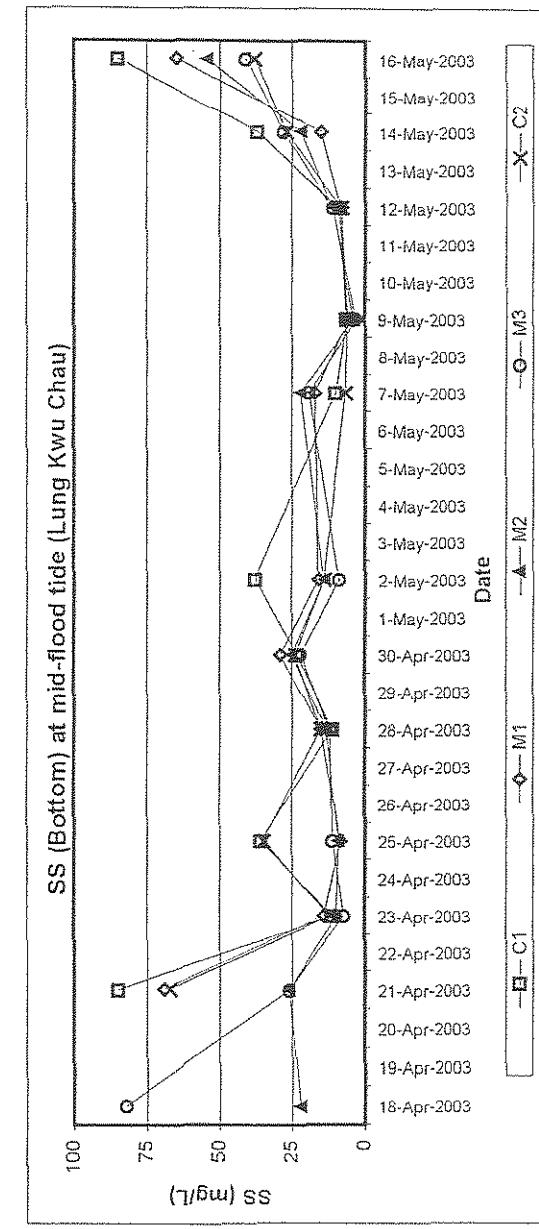
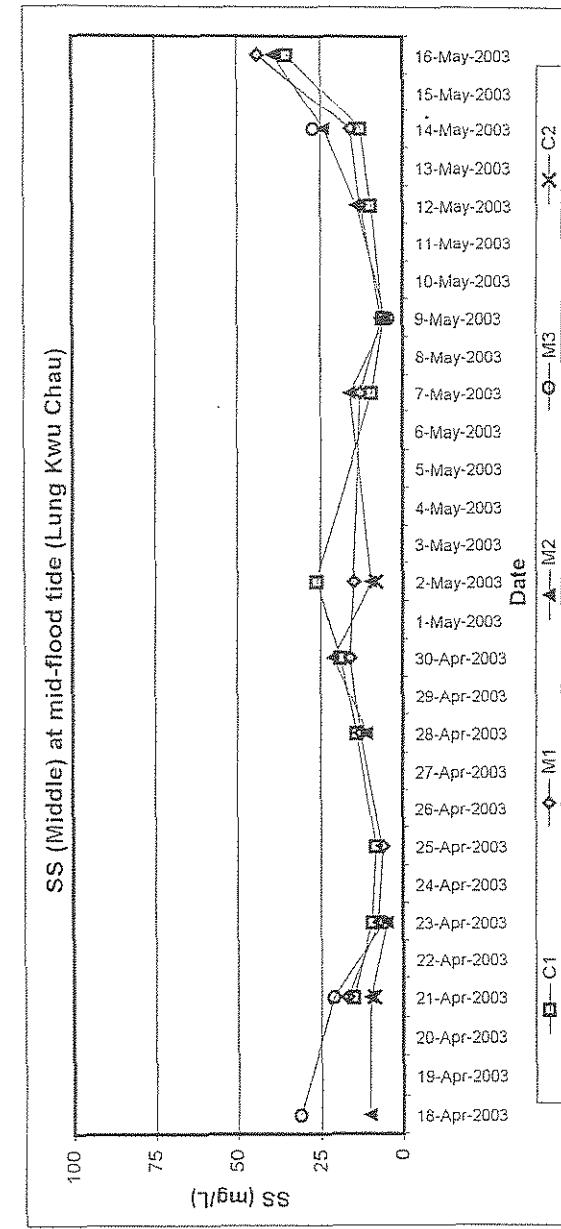
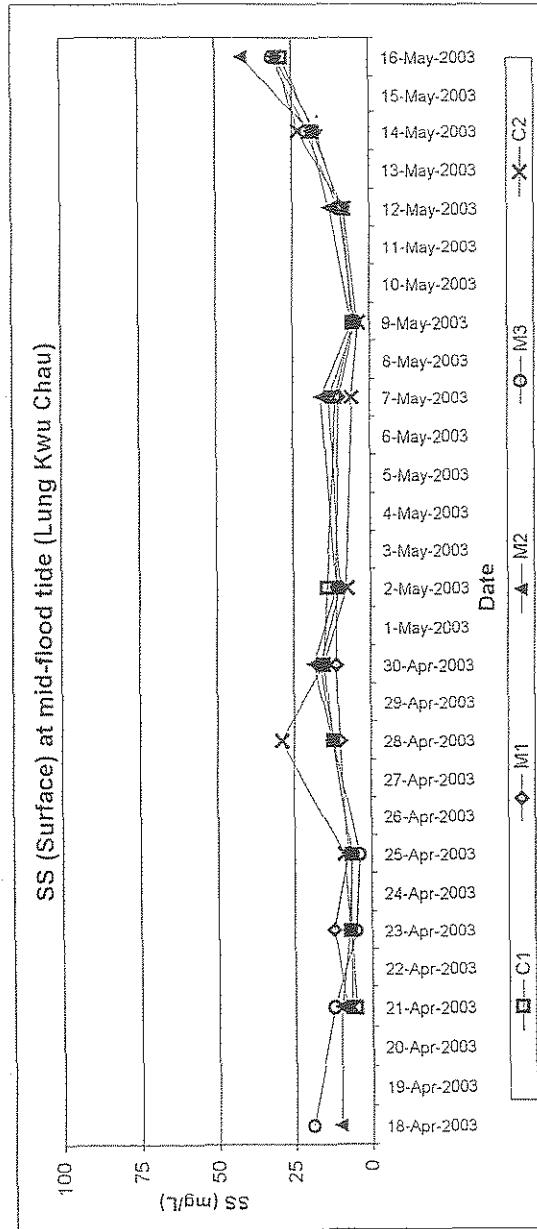






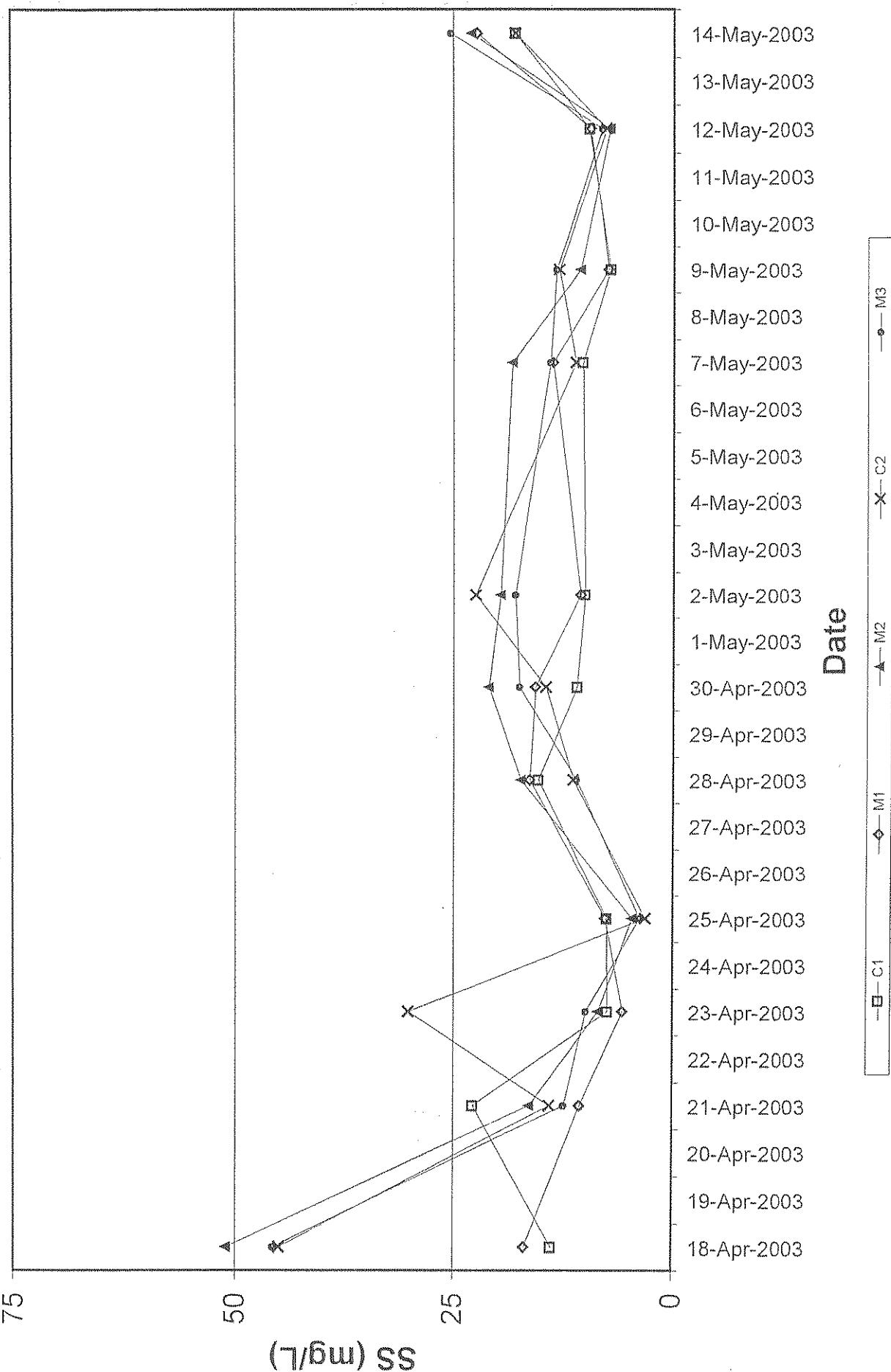
SS (Depth-average) at mid-flood tide (Lung Kwu Chau)

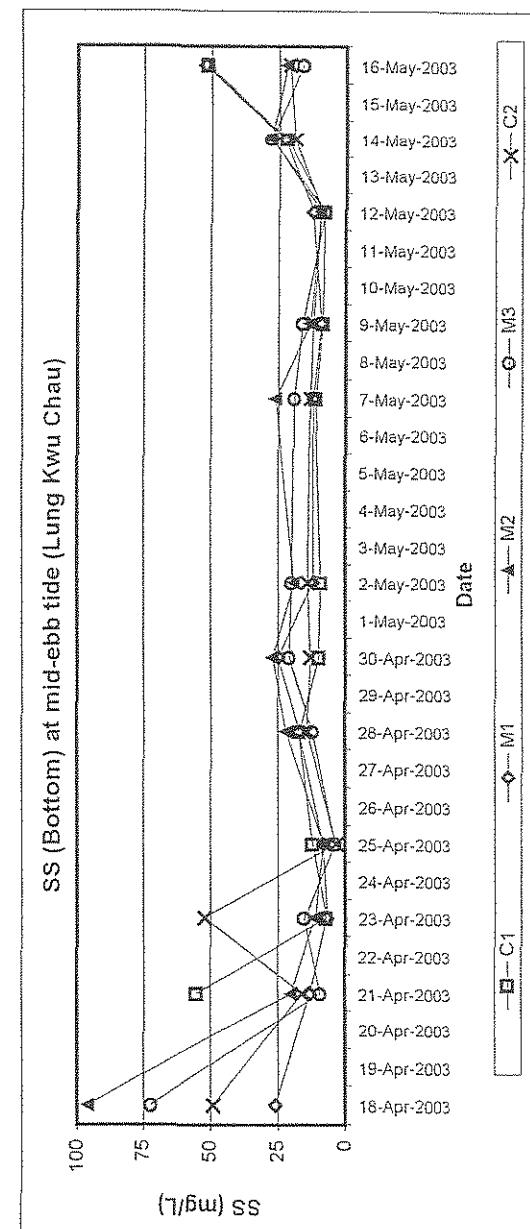
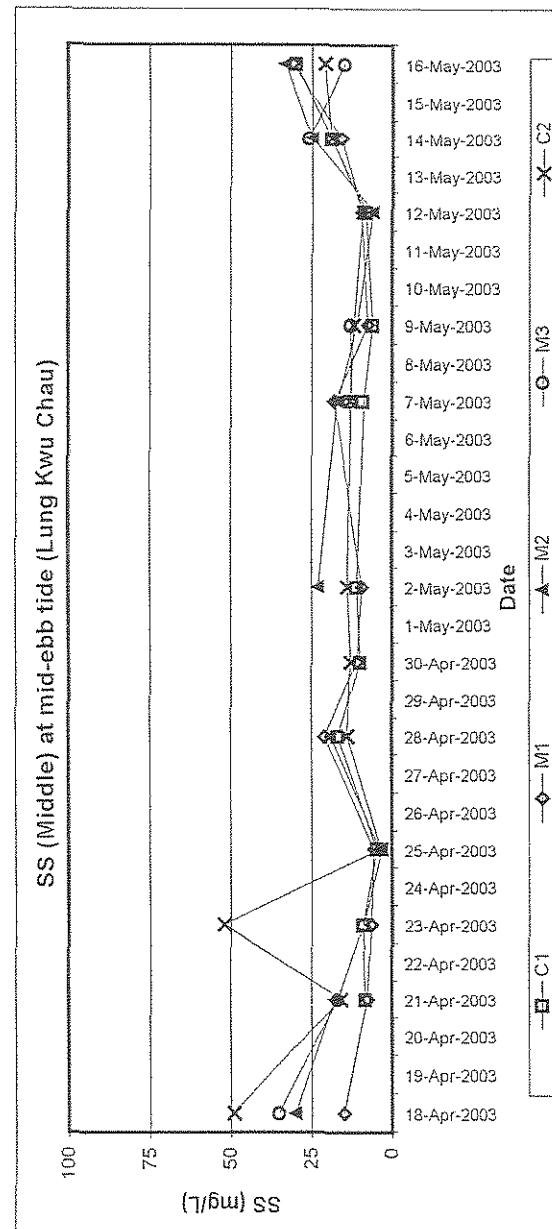
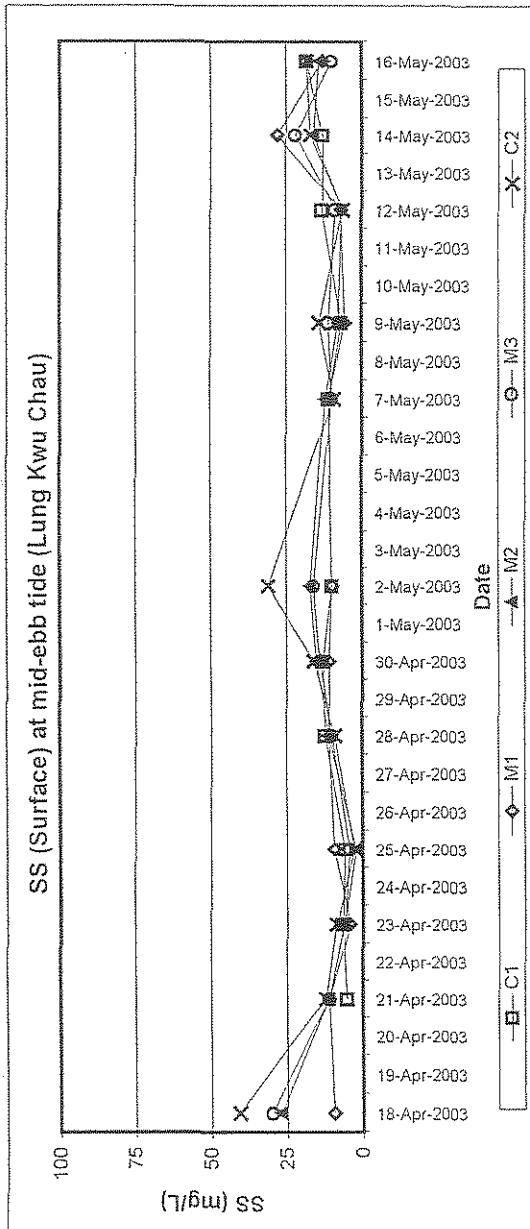






SS (Depth-average) at mid-ebb tide (Lung Kwu Chau)







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Appendix D

Weather Condition during Baseline Monitoring



Weather Condition

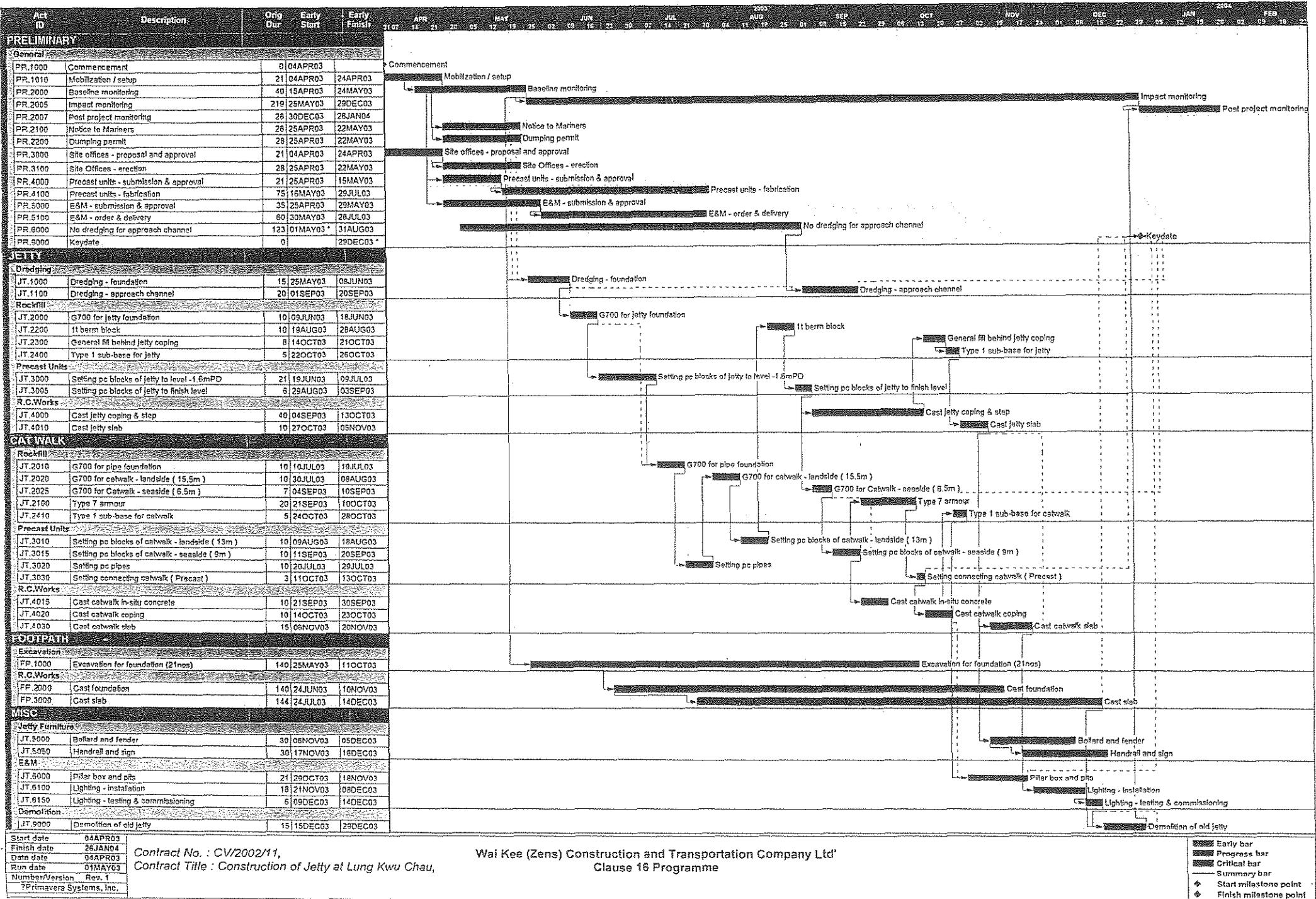
Date	Rainfall (mm)	Max. Temp. (°C)	Min. Temp. (°C)	Relative Humidity (%)	Weather Condition
18/04/03	Trace	27.5	23.3	89	Clear
19/04/03	-	27.8	24.0	86	Sunny
20/04/03	-	27.5	24.0	84	Sunny
21/04/03	Trace	27.5	23.8	85	Clear
22/04/03	-	28.2	22.6	77	Fine
23/04/03	-	29.5	23.6	77	Fine
24/04/03	-	29.8	24.3	77	Fine
25/04/03	-	29.2	25.3	75	Clear
26/04/03	-	28.8	25.1	79	Fine
27/04/03	-	26.7	23.9	82	Clear
28/04/03	Trace	27.4	23.9	80	Clear
29/04/03	Trace	28.8	24.4	83	Fine
30/04/03	0.1	27.8	23.9	71	Cloudy
01/05/03	1.4	24.9	21.3	75	Cloudy
02/05/03	-	25.2	23.1	82	Cloudy
03/05/03	19.8	25.9	23.9	92	Rainy
04/05/03	33.4	28.8	23.5	89	Rainy
05/05/03	141.1	27.2	23.3	93	Rainy
06/05/03	Trace	29.1	26.5	84	Cloudy
07/05/03	0.4	29.6	27.6	83	Cloudy
08/05/03	Trace	30.9	27.4	80	Cloudy
09/05/03	Trace	27.5	24.4	83	Cloudy
10/05/03	Trace	27.4	24.3	80	Cloudy
11/05/03	Trace	28.3	24.5	80	Cloudy
12/05/03	Trace	28.1	25.4	86	Sunny
13/05/03	Trace	29.9	25.8	85	Clear
14/05/03	2.3	32.1	26.1	80	Clear
15/05/03	Trace	31.5	26.2	80	Cloudy
16/05/03	Trace	31.2	27.8	77	Cloudy



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Appendix E

Construction Programme of the Project





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Appendix F

Statistical Analysis of difference between Control and Impact Stations



Statistical Analysis of Baseline Data from CED Contract No.: CV/2001/11 (The Construction of Lung Kwu Chau Jetty)

Methodology: Analysis of Variance (ANOVA)

Source: Web Statistics (<http://student.thu.edu.tw/~g894727/eng/stat/anova>)

1. DO (Surface and Middle)

Monitoring Parameter		Monitoring Station at Mid-flood					Monitoring Station at Mid-ebb				
		Control		Impact			Control		Impact		
		C2	C1	M1	M2	M3	C1	M1	M2	M3	C2
DO (mg/L) (Surface and Middle)	Max	7.81	7.92	8.13	8.04	8.04	7.51	7.73	7.75	7.50	8.94
	Min	3.29	2.84	2.92	4.28	4.14	3.83	3.64	3.68	3.91	5.39
	Average	\bar{X}_j	6.06	5.88	5.90	6.21	6.34	5.90	6.01	6.06	6.21
		\bar{X}_{Total}					6.23				
	Sample Size	12	12	12	12	12	12	12	12	12	12
	Total Sample size						120				
	Standard Deviation (S.D.)	1.21	1.36	1.32	1.10	1.11	1.13	1.03	1.10	1.01	0.96
	Sum of Square (Within-sample), SSW						143.15				
	Sum of Square (Between-group), SSB						1.30				
	F value						1.20				
	$F_{0.95}(9,110)$						1.97				

Note: (a) Sum of Square (Within-sample) = $\sum_{j=1}^{n_1} (X_{1j} - \bar{X}_1)^2 + \sum_{j=1}^{n_2} (X_{2j} - \bar{X}_2)^2 + \dots + \sum_{j=1}^{n_k} (X_{kj} - \bar{X}_k)^2$

(b) Sum of Square (Between-group) = $(\bar{X}_1 - \bar{X}_{Total})^2 + (\bar{X}_2 - \bar{X}_{Total})^2 + \dots + (\bar{X}_k - \bar{X}_{Total})^2$

(c) F value = $[SSB/(k-1)]/[SSW/k(n-1)]$

Conclusion: According to the results above, it is found that F value is smaller than $F_{0.95}(9,110)$ and the standard deviations of the baseline monitoring data from all monitoring locations are closed to each other. Therefore, no significant difference between all monitoring stations during ebb and flood tides is found. Account for the above, it is considered that the use of one set of Action/Limit Levels of DO (Surface and Middle) for both ebb and flood tides is already appropriate for the EM&A programme.



Statistical Analysis of Baseline Data from CED Contract No.: CV/2001/11 (The Construction of Lung Kwu Chau Jetty)

Methodology: Analysis of Variance (ANOVA)

Source: Web Statistics (<http://student.thu.edu.tw/~g894727/eng/stat/anova>)

2. DO (Bottom)

Monitoring Parameter		Monitoring Station at Mid-flood					Monitoring Station at Mid-ebb				
		Control		Impact			Control		Impact		
		C2	C1	M1	M2	M3	C1	M1	M2	M3	C2
DO (mg/L) (Bottom)	Max	9.24	7.51	7.82	8.04	7.81	7.19	6.96	7.04	7.06	7.50
	Min	5.05	2.93	3.03	4.28	3.29	3.65	3.13	3.72	4.13	4.69
	Average	\bar{X}_j	6.45	5.58	5.67	5.78	6.06	5.64	5.67	5.73	6.03
		\bar{X}_{Total}					5.90				
	Sample Size	12	12	12	12	12	12	12	12	12	12
	Total Sample size						120				
	Standard Deviation (S.D.)	1.16	1.25	1.32	1.11	1.14	1.11	1.12	1.01	0.91	0.88
	Sum of Square (Within-sample), SSW						136.48				
	Sum of Square (Between-group), SSB						0.90				
	F value						0.88				
	$F_{0.95}(9,110)$						1.97				

Note: (a) Sum of Square (Within-sample) = $\sum_{j=1}^{n_1} (X_{1j} - \bar{X}_1)^2 + \sum_{j=1}^{n_2} (X_{2j} - \bar{X}_2)^2 + \dots + \sum_{j=1}^{n_k} (X_{kj} - \bar{X}_k)^2$

(b) Sum of Square (Between-group) = $(\bar{X}_1 - \bar{X}_{Total})^2 + (\bar{X}_2 - \bar{X}_{Total})^2 + \dots + (\bar{X}_k - \bar{X}_{Total})^2$

(c) F value = $[SSB/(k-1)]/[SSW/k(n-1)]$

Conclusion: According to the results above, it is found that F value is smaller than $F_{0.95}(9,110)$ and the standard deviations of the baseline monitoring data from all monitoring locations are during ebb and flood tides are closed to each other. Therefore, no significant difference between all monitoring stations during ebb and flood tides is found. Account for the above, it is considered that the use of one set of Action/Limit Levels of DO (Bottom) for both ebb and flood tides is already appropriate for the EM&A programme.



Statistical Analysis of Baseline Data from CED Contract No.: CV/2001/11 (The Construction of Lung Kwu Chau Jetty)

Methodology: Analysis of Variance (ANOVA)

Source: Web Statistics (<http://student.thu.edu.tw/~g894727/eng/stat/anova>)

3. Turbidity

Monitoring Parameter		Monitoring Station at Mid-flood					Monitoring Station at Mid-ebb					
		Control		Impact			Control		Impact			
		C2	C1	M1	M2	M3	C1	M1	M2	M3	C2	
Turbidity (NTU)	Max	36.3	53.2	46.9	42.2	40.9	33.1	35.8	40.4	40.1	32.9	
	Min	5.62	6.88	6.80	5.40	4.68	7.63	5.47	7.11	5.87	6.15	
	Average	\bar{X}_j	17.7	20.5	17.4	16.6	117.6	14.7	15.2	19.0	16.5	
		\bar{X}_{Total}	17.1					116				
	Sample Size	11	11	11	12	12	11	12	12	12	12	
	Total Sample size	116										
	Standard Deviation (S.D.)	11.14	14.34	12.52	10.08	10.70	7.80	8.60	9.92	9.26	7.22	
	Sum of Square (Within-sample), SSW	11262										
	Sum of Square (Between-group), SSB	26.40										
	F value	0.30										
	$F_{0.95}(9,106)$	1.97										

Note: (a) Sum of Square (Within-sample) = $\sum_{j=1}^{n_1} (X_{1j} - \bar{X}_1)^2 + \sum_{j=1}^{n_2} (X_{2j} - \bar{X}_2)^2 + \dots + \sum_{j=1}^{n_k} (X_{kj} - \bar{X}_k)^2$

(b) Sum of Square (Between-group) = $(\bar{X}_1 - \bar{X}_{Total})^2 + (\bar{X}_2 - \bar{X}_{Total})^2 + \dots + (\bar{X}_k - \bar{X}_{Total})^2$

(c) F value = $[SSB/(k-1)]/[SSW/k(n-1)]$

Conclusion: According to the results above, it is found that F value is smaller than $F_{0.95}(9,106)$ and the standard deviations of the baseline monitoring data from all monitoring locations are during ebb and flood tides are closed to each other. Therefore, no significant difference between all monitoring stations during ebb and flood tides is found. Account for the above, it is considered that the use of one set of Action/Limit Levels of Turbidity for both ebb and flood tides is already appropriate for the EM&A programme.



Statistical Analysis of Baseline Data from CED Contract No.: CV/2001/11 (The Construction of Lung Kwu Chau Jetty)

Methodology: Analysis of Variance (ANOVA)

Source: Web Statistics (<http://student.thu.edu.tw/~g894727/eng/stat/anova>)

4. Suspended Solids

Monitoring Parameter		Monitoring Station at Mid-flood					Monitoring Station at Mid-ebb				
		Control		Impact			Control		Impact		
		C2	C1	M1	M2	M3	C1	M1	M2	M3	C2
Suspended Solids (mg/L)	Max	34	49	46	42	44	33	32	51	46	45
	Min	5.0	5.9	5.7	4.7	4.0	7.1	5.7	4.6	3.7	3.1
	Average	\bar{X}_j	17	20	17	16	17	14	14	18	16
		\bar{X}_{Total}					17				
	Sample Size	11	11	11	12	12	11	12	12	12	12
	Total Sample size						116				
	Standard Deviation (S.D.)	9.78	13.17	11.89	10.47	12.34	8.04	7.44	12.03	10.78	11.16
	Sum of Square (Within-sample), SSW						12483				
	Sum of Square (Between-group), SSB						28.94				
	F value						0.30				
	$F_{0.95}(9,106)$						1.97				

Note: (a) Sum of Square (Within-sample) = $\sum_{j=1}^{n_1} (X_{1j} - \bar{X}_1)^2 + \sum_{j=1}^{n_2} (X_{2j} - \bar{X}_2)^2 + \dots + \sum_{j=1}^{n_k} (X_{kj} - \bar{X}_k)^2$

(b) Sum of Square (Between-group) = $(\bar{X}_1 - \bar{X}_{Total})^2 + (\bar{X}_2 - \bar{X}_{Total})^2 + \dots + (\bar{X}_k - \bar{X}_{Total})^2$

(c) F value = $[SSB/(k-1)]/[SSW/k(n-1)]$

Conclusion: According to the results above, it is found that F value is smaller than $F_{0.95}(9,106)$ and the standard deviations of the baseline monitoring data from all monitoring locations are during ebb and flood tides are closed to each other. Therefore, no significant difference between all monitoring stations during ebb and flood tides is found. Account for the above, it is considered that the use of one set of Action/Limit Levels of Suspended Solids for both ebb and flood tides is already appropriate for the EM&A programme.



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Appendix G

QA/QC Results of Laboratory Analysis

QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample Analysis	Sample Duplicate		Sample Spike	
		% Recovery *	Sample ID	% Error #	Sample ID
18/04/2003	95.8	FM1S	-4.7	FC1S	102.0
	101.2	FC1M	3.9	EM2S	91.3
	97.6	EM2B	-2.1	EC2B	95.8
21/04/2003	93.5	FM1S	-6.2	FC1S	95.7
	107.4	FC1M	0.0	EM2S	101.8
	88.2	EM2B	-10.0	EC2B	104.9
23/04/2003	98.1	FM1S	0.0	FC1S	97.9
	98.6	FC1M	0.0	EM2S	104.0
	99.8	EM2B	0.0	EC2B	97.9
25/04/2003	102.3	FM1S	6.9	FC1S	96.3
	92.3	FC1M	6.1	EM2S	94.6
	94.3	EM2B	-2.5	EC2B	97.9
28/04/2003	99.2	FM1S	0.0	FC1S	94.3
	95.0	FC1M	0.0	EM2S	88.0
	95.0	EM2B	4.7	EC2B	103.8
30/04/2003	103.1	FM1S	0.0	FC1S	108.0
	102.1	FC1M	-5.4	EM2S	107.9
	91.8	EM2B	-7.4	EC2B	102.0
02/05/2003	92.8	FM1S	0.0	FC1S	94.1
	101.3	FC1M	-3.9	EM2S	88.5
	103.1	EM2B	-5.4	EC2B	98.0
07/05/2003	105.6	FM1S	0.0	FC1S	100.0
	105.7	FC1M	2.1	EM2S	96.2
	100.6	EM2B	-7.7	EC2B	104.2
09/05/2003	103.1	FM1S	-4.1	FC1S	109.6
	93.1	FC1M	0.0	EM2S	106.1
	92.6	EM2B	-8.0	EC2B	93.9
12/05/2003	97.2	FM1S	0.0	FC1S	103.9
	97.1	FC1M	3.1	EM2S	107.7
	104.3	EM2B	3.3	EC2B	94.3
14/05/2003	94.1	FM1S	-6.1	FC1S	107.7
	102.8	FC1M	0.0	EM2S	102.0
	94.6	EM2B	-3.6	EC2B	102.0
16/05/2003	103.1	FM1S	6.7	FC1S	100.0
	92.8	FC1M	2.9	EM2S	92.3
	100.4	EM2B	4.7	EC2B	106.4

Note: (*) % Recovery of QC Sample should be between 80% to 120%.

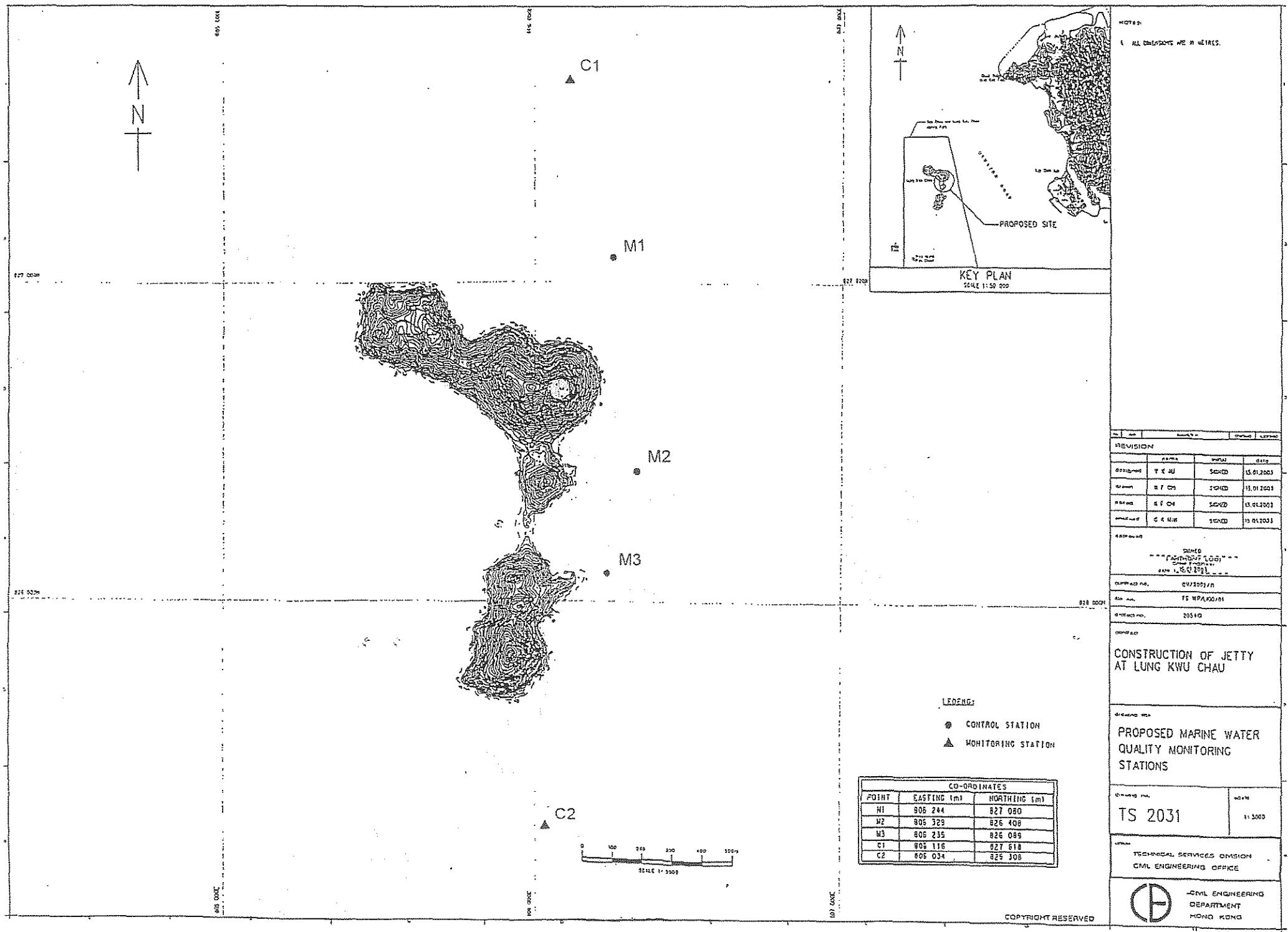
(#) % Error of Sample Duplicate should be between -10% to 10%.

(@) % Recovery of Sample Spike should be between 80% to 120%.

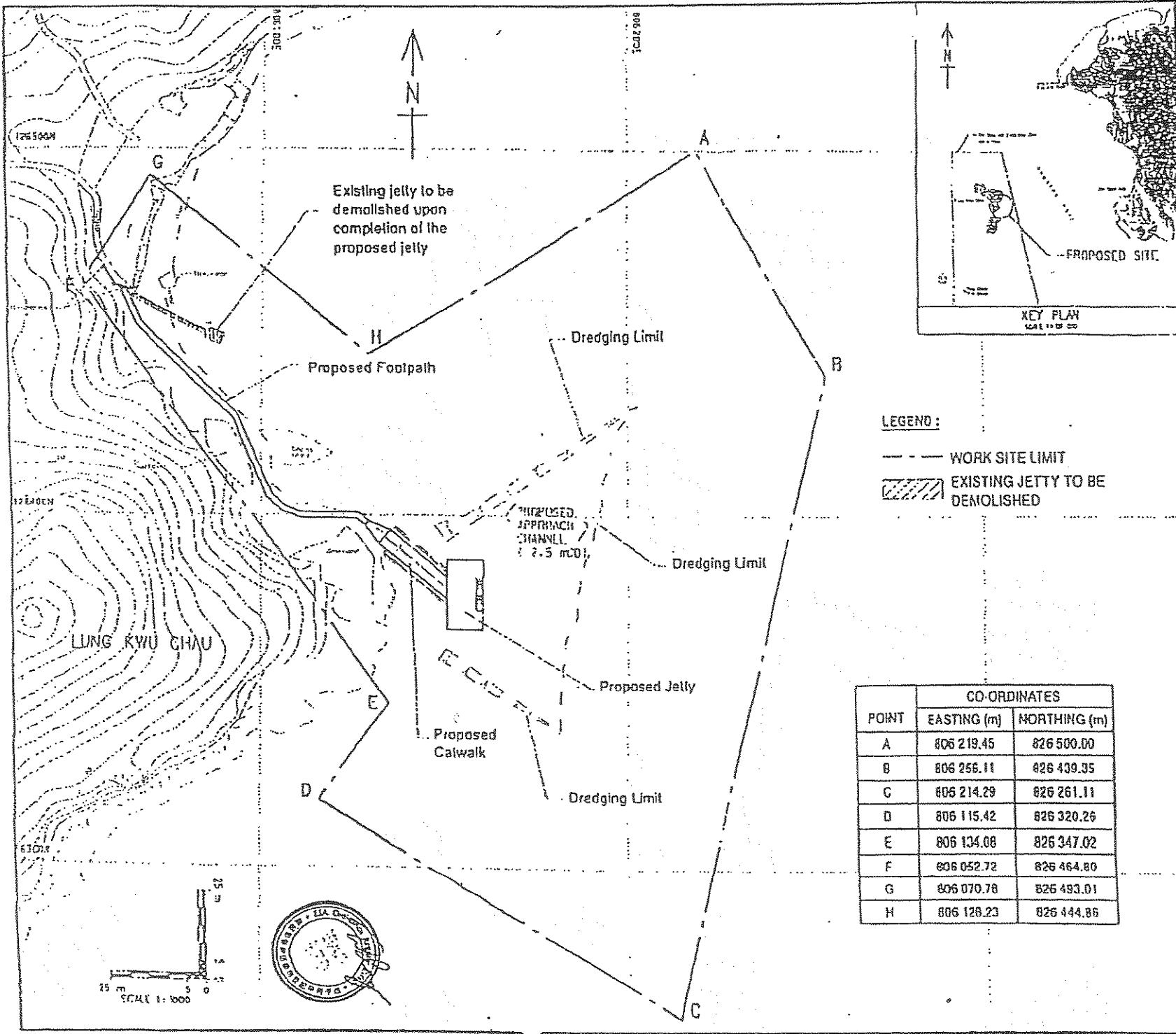


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Figures



Construction of Lung Kwu Chau Jetty



NOTES

1. All dimensions are in metres.
2. All co-ordinates refer to Hong Kong geodetic datum 1980 and are in metres.
3. All levels refer to chart datum (C.D.) and are in meters.

Environmental Permit No.:

EP-150/2002

Figure 1

EP