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**TEST REPORT**

**CONCENTRIC CONSTRUCTION LIMITED**

**OPERATION OF PUBLIC FILL  
RECEPTION FACILITIES AT TSEUNG  
KWAN O AREA 137, QUARRY BAY AND  
MUI WO**

**(CONTRACT NO.: CV/2005/12)**

**TSEUNG KWAN O AREA 137**

**QUARTERLY EM&A SUMMARY REPORT NO.1**

**(FOR APRIL - JUNE 2006)**

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Report No.: ENA60452



**BMT Asia Pacific Limited**

12 July 2006  
Our Ref: 8116/2895

By Hand

Concentric Construction Limited  
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For the attention of Mr. Stephen Choi

Dear Sir

**Contract No. CV/2005/12**  
**Fill Bank at Tseung Kwan O Area 137**  
**Quarterly EM&A Report**

Following review of the Quarterly EM&A Report No. 2 for the reporting period April - June 2006, the IEC has verified the information presented.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned.

Yours sincerely  
**BMT Asia Pacific Limited**

Ben Ridley  
IEC

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## **EXECUTIVE SUMMARY**

This is the second Quarterly Environmental Monitoring and Audit (EM&A) Summary Report prepared by ETS-Testconsult Ltd (ET) for the "Contract No. CV/2005/12 Operation of Public Fill Reception Facilities at Tseung Kwan O Area 137, Quarry Bay and Mui Wo" (The Project).

This report documents the findings of EM&A Works conducted during the operation phase of Fill Bank at Tseung Kwan O Area 137 between April and June 2006.

### **Construction Progress**

As informed by the Contractor, the construction activities in this reporting quarterly were as below:

- *Manage the incoming public fill dump trucks arriving through land access;*
- *Transport temporary stockpiled public fill from the Barge Handling Area (BHA) to Stockpile Areas or the Sorting Facility for Penny's Bay Reclamation Stage 2 (PBR2);*
- *Transport stockpile public fill from Stockpile Areas to the Sorting Facility for Penny's Bay Reclamation Stage 2 (PBR2);*
- *Direct some incoming public fill dump trucks to the Sorting Facility for Penny's Bay Reclamation Stage 2 (PBR2) for unloading;*
- *Routine site cleaning and maintenance of internal haul roads and access roads; and*
- *Routine implementation of environmental mitigation measures such as dust suppression by water spraying, cleaning of nearby public roads by using road sweeper and collection of floating debris inside a berthing basin within the site boundary; and*
- *Landscaping works in the vicinity of the main entrance of the Fill Bank at Tseung Kwan O Area 137 and in front of the Engineer's Site Office.*

Dump truck traffic and hauling activities at Barge Handling Area (BHA) were the major dust sources. Barge delivery of fill material was also undertaken in the reporting quarter. Besides the Fill Bank operation, the other dust sources near TKO Area 137 also included operation of C&DMSF at PBR2 Project and dumping activities at the SENT Landfill.

The desilting facilities were in proper operation to avoid silty discharge and the silt curtains were properly installed. There was no sediment plume observed during the monitoring events.

The major noise sources during the reporting quarter were the dump truck traffic and construction activities near the site egress. Noise impact on the sensitive receivers was insignificant in the reporting quarter according to the results of noise monitoring and site inspections.

### **Environmental Monitoring Works**

#### **Noise Monitoring**

No exceedances of Action and Limit levels for noise monitoring were recorded in the reporting quarter.

#### **Air Monitoring**

During the reporting quarter, no exceedances of Action and Limit levels were recorded for 24-hr and 1-hr TSP monitoring. The air quality during the operation hours of the Fill Bank was considered acceptable.

#### **Marine Water Quality Monitoring**

Marine water quality monitoring was conducted in accordance with the EM&A Manual.

According to the summary of marine water monitoring results, totally four exceedances were recorded in this quarter.

One exceedance of Turbidity on Limit Level at Monitoring Station C1 was recorded at 12 April 2006 (mid-ebb). Exceedance was not due to the operation of Fill Bank since the station was located at the upstream of the works area.

Besides, two exceedances of Action Level on Dissolved Oxygen at Monitoring Stations C1 and M4 were recorded on 24 May 2006 (mid-flood). According to the monitoring results, it was found that dissolved oxygen content of the impact station C1 (5.25mg/L) was found closed to that of reference station M4 (5.37mg/L). At the same time, no abnormal site activities was observed at the Fill Bank. Therefore, the exceedances might be due to natural fluctuation of dissolved oxygen content in the water body around the area and considered not due to the Fill Bank operation.

Finally, one exceedance of Action Level on dissolved oxygen at Monitoring Station C1 was recorded on 23 June 2006 (mid-ebb). Exceedance was not due to the operation of the Fill Bank as monitoring station C1 was located upstream to the works area.



**Landscape and Visual**

Erection of hoarding and chain link fencing was provided at the Fill Bank site boundary. The germination rate on the panel at Portion A, B, G, H and I was satisfactory in this reporting quarter. Water spraying was provided regularly on all the hydroseeding slopes.

**Environmental Complaints, Notification of summons and successful prosecutions**

No complaints, notification of summons and prosecutions with respect to environmental issues were received in this quarter.

The investigation report of the complaint received on 27 March 2006 had been sent to EPD, CEDD and IEC on 11 April 2006. As discussed with EPD on 29 May 2006, it is confirmed that no further actions will be taken by EPD. Therefore, the complaint is considered to be closed.



## 1.0 INTRODUCTION

Concentric Construction Ltd (CCL) appointed Environmental Team (ET) of ETS-Testconsult Limited (ETL) to undertake the Environmental Monitoring and Audit (EM&A) for the "Operation of Public Fill Reception Facilities at Tseung Kwan O Area 137, Quarry Bay and Mui Wo" (Contract No.: CV/2005/12) (The Project).

In accordance with the Amended Environmental Permit (No.: EP-134/2002/E) (the EP), an EM&A programme should be implemented in accordance with the procedures and requirements in the EM&A Manual of the approved EIA report (Registration No. AEIAR-060/2002). The EM&A programme for this study as stated in Section 2.3.1 of the EM&A Manual covers the following environmental aspects during the establishment, operation and removal phases of the Fill Bank at Tseung Kwan O Area 137:

- Fugitive Dust;
- Noise generation from onsite activities;
- Water Quality; and
- Landscape and Visual.

Baseline monitoring was completed in August and September 2002 by MaterialLab. Action and Limit Levels were established for air and water quality parameters based on the baseline monitoring results.

This is the second quarterly EM&A Report of the Project. This report summarizes the findings of EM&A Works conducted during the operation phase of Fill Bank at Tseung Kwan O Area 137 for the period from April to June 2006.



## 2.0 PROJECT INFORMATION

### 2.1 Construction Progress in this reporting quarter

As informed by the Contractor, the activities in the reporting quarter include:

- *Manage the incoming public fill dump trucks arriving through land access;*
- *Transport temporary stockpiled public fill from the Barge Handling Area (BHA) to Stockpile Areas or the Sorting Facility for Penny's Bay Reclamation Stage 2 (PBR2);*
- *Transport stockpile public fill from Stockpile Areas to the Sorting Facility for Penny's Bay Reclamation Stage 2 (PBR2);*
- *Direct some incoming public fill dump trucks to the Sorting Facility for Penny's Bay Reclamation Stage 2 (PBR2) for unloading;*
- *Routine site cleaning and maintenance of internal haul roads and access roads; and*
- *Routine implementation of environmental mitigation measures such as dust suppression by water spraying, cleaning of nearby public roads by using road sweeper and collection of floating debris inside a berthing basin within the site boundary; and*
- *Landscaping works in the vicinity of the main entrance of the Fill Bank at Tseung Kwan O Area 137 and in front of the Engineer's Site Office.*

### 2.2 Site Description

Tseung Kwan O Area 137 is located at the southern end of Wan Po Road. In the vicinity of the site are other industrial uses such as SENT landfill, TKO Industrial Estate, etc. Both Island Resort and Fullview Garden are also situated at more than 1.8km from the site. Other existing ASRs and NSRs, including resident developments and schools, are located at a further distance away from TKO Area 137.

### 2.3 Construction Programme

Details of construction programme are shown in Appendix G.

### 2.4 Project Organization and Management Structure

The organization chart and lines of communication with respect to the on-site environmental management and monitoring program are shown in Appendix A.

### 2.5 Contact Details of Key Personnel

The key personnel contact names and telephone numbers are shown in Table 2.1.

Table 2.1 Contact Details of Key Personnel

<i>Organization</i>	<i>Name of Key Staff</i>	<i>Project Role</i>	<i>Tel. No.</i>	<i>Fax No.</i>
<i>CEDD</i>	<i>Mr. H C TANG</i>	<i>Engineer</i>	<i>2762 5602</i>	<i>2714 0113</i>
<i>IEC (BMT)</i>	<i>Mr Ben Ridley</i>	<i>IEC</i>	<i>2815 2221</i>	<i>2815 3377</i>
<i>Contractor (CCL)</i>	<i>Mr. C P Lam</i>	<i>Project Manager</i>	<i>2398 8001</i> <i>9212 9417</i>	<i>2398 8301</i>
<i>ET (ETL)</i>	<i>Mr C. L. Lau</i>	<i>ET Leader</i>	<i>2946 7791</i>	<i>2695 3944</i>





### **3.0 SUMMARY OF EM&A REQUIREMENTS**

#### **3.1 EM&A Programme**

The EM&A programme required environmental monitoring for air quality, noise and marine water quality and environmental site inspections for air quality, noise, marine water quality, landscape and visual, and waste management. The EM&A requirements for each parameter described in the following sections include:

- All monitoring parameters;
- Monitoring schedules for the reporting month and forthcoming months;
- Action and Limit levels for all environmental parameters;
- Event/Action Plans;
- Environmental mitigation measures, as recommended in the Project EIA study final report; and
- Environmental requirements in contract documents.

The advice on implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of the Report.

#### **3.2 Monitoring Stations and Parameters**

The EM&A Manual designates several locations to monitor environmental impacts in terms of air quality, noise and water quality due to the Project. The description and detailed locations of monitoring stations for air quality, noise and marine water quality are shown in Figures 1, 2 and 3 and relevant sections of this Report.

#### **3.3 Monitoring Methodology and Calibration Details**

All monitoring works were conducted and monitoring equipment was calibrated in according with the EM&A Manual. Copies of calibration certificates of monitoring equipments are attached in Appendix B1, C1 and D1.

#### **3.4 Environmental Quality Performance Limits (Action/Limit Levels)**

The environmental quality performance limits, i.e. Action/Limit Levels (AL Levels) were derived from the baseline monitoring results. If the measured environmental quality parameters exceed the AL Levels, the respective action plan will be implemented. The AL Levels for each monitoring parameter are given in Appendix E. The event action plan is given in Appendix F.

#### **3.5 Environmental Mitigation Measures**

Relevant mitigation measures were recommended in the EM&A Manual for the Contractor to implement. A list of mitigation measures is given in Appendix H.



#### 4.0 MONITORING RESULTS

##### 4.1 Air Quality

In accordance with the EM&A Manual, air quality monitoring, including 1-hr and 24-hr TSP, is to be conducted once every six days. In the reporting quarter, all the 1-hr and 24-hr TSP monitoring results complied with the AL Levels. The monitoring data and trend of air quality during the reporting quarter are given in Appendix B2 and B3.

Major dust sources in the Fill Bank were dump truck traffic and hauling activities at BHA.

Table 4.1 presents the number of exceedances recorded in each month of the reporting quarter. The number of monitoring event included regular monitoring events and additional ones.

Table 4.1 Summary of Number of Exceedances for 1-hr and 24-hr TSP Monitoring

Monitoring Parameter	Level of Exceedance	April 2006	May 2006	June 2006
24-hr TSP	No of monitoring events	6	5	6
	Action Level	0	0	0
	Limit Level	0	0	0
	Total	0	0	0
1-hr TSP	No of monitoring events	18	15	18
	Action Level	0	0	0
	Limit Level	0	0	0
	Total	0	0	0

Table 4.2 presents the 1-hr and 24-hr TSP averages in the baseline period and for each month in the reporting quarter. It was found that the 1-hr and 24-hr TSP averages at both stations in the reporting quarter were higher than the baseline levels but they were within the AL Levels. As a result, the Contractor should provide more mitigation measures to avoid dust generation.

Table 4.2 Comparison of Baseline and Various Period of Averaged 1-hr and 24-hr TSP Impact monitoring Results

Period	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )		24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	
	AA1	AA2	AA1	AA2
Baseline (29/08 – 13/09)	195		123	
April 2006	327	325	180	180
May 2006	293	276	155	139
June 2006	299	279	169	156

##### 4.2 Noise

Noise monitoring was required to be conducted at least once per month. Only daytime noise was monitored in the reporting quarter. All recorded noise levels complied with the AL Levels. The registered noise levels in the past three months are tabulated and plotted in Appendix C2 and C3.

Table 4.3 presents the limited level and average impact noise monitoring results during the reporting quarter.

Table 4.3 Summary of Impact Monitoring results of Noise Daytime Monitoring

Monitoring Location	Limit Level	April 2006	May 2006	June 2006
Leq, dB(A)				
N1	75	71.6	62.8	68.5

The major noise sources in the reporting quarter were dump truck traffic and construction activities near the site egress. The noise impact was insignificant as the Fill Bank was remote from nearby sensitive receivers.

### 4.3 Marine Water Quality

In accordance with the EM&A Manual, the marine water quality monitoring was conducted at the monitoring station (M4) and the control station (C1) in the reporting quarter.

Impact marine water quality monitoring was conducted three days per week. Measurements were taken at both mid-ebb and mid-flood tides at three depths (i.e. 1m below surface, mid depth and 1m above seabed). The AL Levels are included in Appendix E.

Totally four exceedances were recorded in this reporting quarter. One exceedance of Limit Level on Turbidity, two exceedances of Action Level on Dissolved Oxygen (Surface & Middle) and one exceedance of Action Level on Dissolved Oxygen (Bottom) were recorded. Since all exceedances were not due to the operation of Fill Bank, no further actions were required.

Table 4.4 presents the total number of marine water quality exceedances in the reporting quarter. The trend of marine water quality in the past three months is depicted in Appendix D3.

Table 4.4 Total Number of Marine Water Quality Exceedances in the Quarter

Parameter	Exceedance Level	April 2006	May 2006	June 2006
Number of monitoring days		11	12	14
Dissolved Oxygen, DO (S&M)	Action	0	2	0
	Limit	0	0	0
	Total	0	2	0
Dissolved Oxygen, DO (B)	Action	0	0	1
	Limit	0	0	0
	Total	0	0	1
Turbidity	Action	0	0	0
	Limit	1	0	0
	Total	1	0	0
Suspended Solids, SS	Action	0	0	0
	Limit	0	0	0
	Total	0	0	0
Total Number of DO, Turbidity and SS Exceedances	Action	0	2	1
	Limit	1	0	0
	Total	1	2	1

A comparison between the quarterly mean/median of SS and the 1.3 times of the baseline mean was made for each tide at each station. The statistical analysis results are given in Appendix I and it shows that a generally better marine quality was recorded in the reporting quarter in respect to 130% of the baseline mean. Monitoring stations with significant difference ( $p < 0.05$ ) is summarized in Table 4.5.

Table 4.5 Summary of Statistically Significant Results of SS

Monitoring Station	Significant difference?	
	Mid-ebb	Mid-flood
C1	√	√
M4	√	√



## 5.0 INSPECTION RESULTS

### 5.1 Implementation Status of Environmental Mitigation Measures

ET conducted weekly site inspections to monitor the Contractor's implementation of environmental mitigation measures. After each site inspection, the Contractor was notified of ET's observations and recommendations. A corrective action plan detailing the environmental observations was prepared by ET and the Contractor then completed this plan to propose/report their remedial works.

Air quality was the major environmental issue in the reporting quarter. The Contractor generally implemented most of the environmental mitigation measures in the reporting quarter. Dump truck traffic was the major dust source in the Fill Bank. Generally, the Contractor implemented adequate dust mitigation measures in the reporting quarter including dampening of haul roads, water spraying on the truckloads, operation of automatic wheel washing facilities and mist spraying systems, dampening of fill material prior to handling or stockpiling, etc.

Dump truck traffic and construction activities near the site egress were the major noise sources. As the Fill Bank was remote from the nearby NSRs, the noise impact was minimal. The powered mechanical equipment were generally operated and maintained properly.

In this quarter, the silt curtain was found totally damaged during the weekly site inspections. The Contractor was reminded to repair the silt curtain immediately and maintain it properly. The amount of runoff discharge was minimal in the reporting quarter. The Contractor regularly maintained the drainage system. Approved pesticide was applied in all permanent desilting chambers if there was stagnant water. Regarding the observations about accumulation of fill materials on the concrete pavement at the BHA in the reporting quarter, the Contractor was reminded to clean up the fill materials as soon as each unloading activity completed to avoid the fill materials from being washed into the sea. Furthermore, the Contractor should also regularly inspect and maintain the oil interceptor at the car park to ensure it properly functions.

The site toilet and shower room had been in use since October 2003. They were properly operated in the reporting quarter.

Although there were a few observations regarding improper handling of oil drums and chemical containers, such as lack of drip tray and accumulated of stagnant water in the drip tray, the Contractor rectified most of these problems. Besides, the Contractor should provide tarpaulin sheets before repairing and maintenance works and also carry out proper cleaning activities immediately after such works.

The Contractor watered the slopes at Portions A, B, G, H and I two to three times daily. The germination rate on the panel at Portion A, B, G, H and I was satisfactory in this reporting quarter. The Contractor was reminded to maintain the panel properly.

## 5.2 Status of Environmental Licensing and Permitting

The status of licences and permits is summarized in Table 5.1.

Table 5.1 Summary of environmental licensing and permit status

Description	Permit No.	Valid Period		Section
		From	To	
Amended Environmental Permit	EP-134/2002/F	26/01/06	---	(Valid) <ul style="list-style-type: none"> <li>▪ Site clearance</li> <li>▪ Construction of a temporary storm water system</li> <li>▪ Stockpiling of 6 million m<sup>3</sup> of public fill</li> <li>▪ Setting up two barging points for transporting the stockpiled public fill by barges</li> <li>▪ Setting up a temporary barging point at the existing Explosive Off-loading Barging Point for the period of May 2004 to December 2004 for transporting the stockpiled public fill by barge</li> <li>▪ Construction and operation of a construction and Demolition Material Sorting Facility (C&amp;DMSF)</li> <li>▪ Setting up a Construction and Demolition Material Crushing Facility at the TKO Basin</li> <li>▪ Remove the temporary fill bank</li> </ul>
Effluent Discharge License	TE/D1152/839/1	06/06/03	30/06/08	<ul style="list-style-type: none"> <li>▪ For effluent from site toilet and shower room</li> <li>▪ For aerobic wastewater treatment plant</li> </ul>
Chemical Waste Producer	5213-839-P2800-23	04/08/05	---	<ul style="list-style-type: none"> <li>▪ Spent Lubricating Oil</li> <li>▪ Solvent &amp; Battery</li> <li>▪ Surplus Paint Bank &amp; Fuel</li> <li>▪ Contaminated Soil</li> <li>▪ Empty Chemical Containers</li> </ul>

## 5.3 Advice on Solids and Liquid Waste Management Status

The Contractor usually disposed of non-inert waste, including general refuse and materials segregated from the existing stockpiles, to SENT landfill. There was no disposal of metal scraps in the reporting quarter. Table 5.2 summarizes data on offsite waste disposal in the quarter.

Table 5.2 Estimated Offsite Waste Disposal in the Reporting Quarter

Waste Type	Examples	April 2006	May 2006	June 2006
C&D Waste (tons)	Domestic waste (site) collected in garbage bins and general refuse	2.59	2.27	3.04
Chemical Waste (L)	Waste oil	0	0	0
Recycle Material (kg)	Metal scraps	0	0	0

The site toilet and shower room and several chemical toilets were in use throughout the reporting quarter. Discharge from the site toilet and shower room was made to the additional drainage DP4 after passing through the sewage treatment system. A licensed collector also regularly collected waste from the chemical toilets.

## 6.0 NON-COMPLIANCE OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

### 6.1 Summary of Non-compliance

In this reporting quarter, one exceedance of Limit Level on Turbidity, two exceedances of Action Level on Dissolved Oxygen (Surface & Middle) and one exceedance of Action Level on Dissolved Oxygen (Bottom) were recorded. No exceedances of Action and Limit Level of 24-hr and 1-hr TSP monitoring results were recorded during the reporting quarter. No day-time noise level measured at all monitoring stations exceeded the Action and Limit Level in the reporting quarter.

### 6.2 Review of the Reasons for and the Implications of Non-compliance

Since there was no exceedance on air quality and noise monitoring parameters recorded in this monitoring month. Hence the review of the reasons for the non-compliance was not required.

In this reporting quarter, one exceedance of Turbidity on Limit Level at Monitoring Station C1 was recorded at 12 April 2006 (mid-ebb). Exceedance was not due to the operation of Fill Bank since the station was located at the upstream of the works area.

Besides, two exceedances of Action Level on Dissolved Oxygen at Monitoring Stations C1 and M4 were recorded on 24 May 2006 (mid-flood). According to the monitoring results, it was found that dissolved oxygen content of the impact station C1 (5.25mg/L) was found closed to that of reference station M4 (5.37mg/L). At the same time, no abnormal site activities was observed at the Fill Bank. Therefore, the exceedances might be due to natural fluctuation of dissolved oxygen content in the water body around the area and considered not due to the Fill Bank operation.

Finally, one exceedance of Action Level on dissolved oxygen at Monitoring Station C1 was recorded on 23 June 2006 (mid-ebb). Exceedance was not due to the operation of the Fill Bank as monitoring station C1 was located upstream to the works area.

### 6.3 Summary of Actions Taken

Since all exceedances were not due to the operation of Fill Bank, no further actions were required.

### 6.4 Summary of Environmental Complaint, Notifications of Summons and Successful Prosecutions Handling

No complaints, notifications of summons and successful prosecutions were received. A summary of environmental complaints and prosecutions was given in Table 6.1 and further details of the complaint could be found in the Complaint Log (Appendix K).

Table 6.1 Summary of Environmental Complaints and Prosecutions

Month (2006)	Complaints logged	Summon served	Successful Prosecution
April	0	0	0
May	0	0	0
June	0	0	0
Cumulative	1	0	0

The investigation report of the complaint received on 27 March 2006 had been sent to EPD, CEDD and IEC on 11 April 2006. As discussed with EPD on 29 May 2006, it is confirmed that no further actions will be taken by EPD. Therefore, the complaint is considered to be closed.

## 7.0 COMMENTS, CONCLUSIONS AND RECOMMENDATION

This report presents the second quarter of the Fill Bank operation. Major activity in the Fill Bank was the import and dumping of fill material. Air quality was the major environmental issue in the Fill Bank. Generally, the Contractor implemented most of the mitigation measures to minimize the dust impact.

There were no air quality and noise exceedances recorded in the reporting quarter.

Totally four exceedances were recorded in this reporting quarter. One exceedance of Limit Level on Turbidity, two exceedances of Action Level on Dissolved Oxygen (Surface & Middle) and one exceedance of Action Level on Dissolved Oxygen (Bottom) were recorded. Since all exceedances were not due to the operation of Fill Bank, no further actions were required.

No complaints, notification of summons and prosecutions with respect to environmental issues were received in this quarter. The investigation report of the complaint received on 27 March 2006 had been sent to EPD, CEDD and IEC on 11 April 2006. As discussed with EPD on 29 May 2006, it is confirmed that no further actions will be taken by EPD. Therefore, the complaint is considered to be closed.

According to the ET weekly site inspection and IEC site audits carried out in this quarter, it was indicated that site practices of the Contractor were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was up to standard. The Contractor generally implemented sufficient dust mitigation measures, including operation of the mist spraying systems and automatic wheel washing facilities, dampening of haul roads and stockpiling areas. Although no obvious sediment plume was observed discharged out of the TKO Basin, the silt curtain in place at the mouth of the TKO Basin was found completely damaged during the weekly site inspections in this quarter. The Contractor should repair the damaged silt curtain immediately and check the silt curtain regularly and maintain it properly.

According to the environmental site inspections performed in the reporting quarter, the following recommendations were provided:

### **Air Quality**

- Ensure the frequency of water spraying on haul roads, unloading areas and stockpiles to be sufficient to suppress the dust sources;
- Conduct road sweeping on the public road and the main haul roads outside and near the site egress by the road sweeper. Undertake water spraying on stockpiling area;
- Provide proper maintenance for the powered mechanical equipment and barges to avoid emission of dark smoke;
- Provide water spraying onto the truckloads during inspection of fill material;
- Erect adequate speed limit signs to advise the truck drivers of the speed limit;
- Operate mist spraying systems and automatic water sprinklers in the Fill Bank;
- Implement the dust mitigation measures for the construction activities; and
- Ensure all vehicles to be washed before leaving the site egress through the provision, operation and maintenance of automatic wheel washing facilities.

### **Noise**

- Conduct noisy activities at a farther location from the NSRs.

### **Water Quality**

- Maintain the drainage system, including the trapezoidal channels, permanent desilting chambers, DP3 & DP4 regularly;
- Operate and maintain the silt curtains regularly;
- Check and maintain the silt curtain regularly;
- Operate the cleaning vessel within the TKO Basin regularly;



- Remove the stagnant water or provide pesticide for the stagnant water in the permanent desilting chambers, if any.

#### **Chemical and Waste Management**

- Remove waste materials from the site to avoid accumulation regularly;
- Handle and store chemical wastes properly;
- Remove unwanted material in the existing stockpiles and avoid further dumping of such material;
- Provide and maintain sufficient drip trays for diesel drums, chemical containers, chemical waste storage drums and diesel operated generator set;
- Maintain mesh screen on top of the additional drainage, DP3 to avoid improper dumping of rubbish;
- Maintain good housekeeping at the workshop area;
- Ensure sufficient tarpaulin sheets are provided to cover drip trays; and
- Avoid soil being polluted during oil filling and equipment maintenance; hence, properly remove and store the contaminated soil, if any.

#### **Landscape and Visual**

- Provide hydroseeding on the exposed slopes, on which the final profile has been formed;
- Erect all the site hoarding / chaining fences in accordance with agreed design at proper location; and
- Maintain the hydroseeding slopes in accordance with the Landscape Plan.



## **Appendix A**

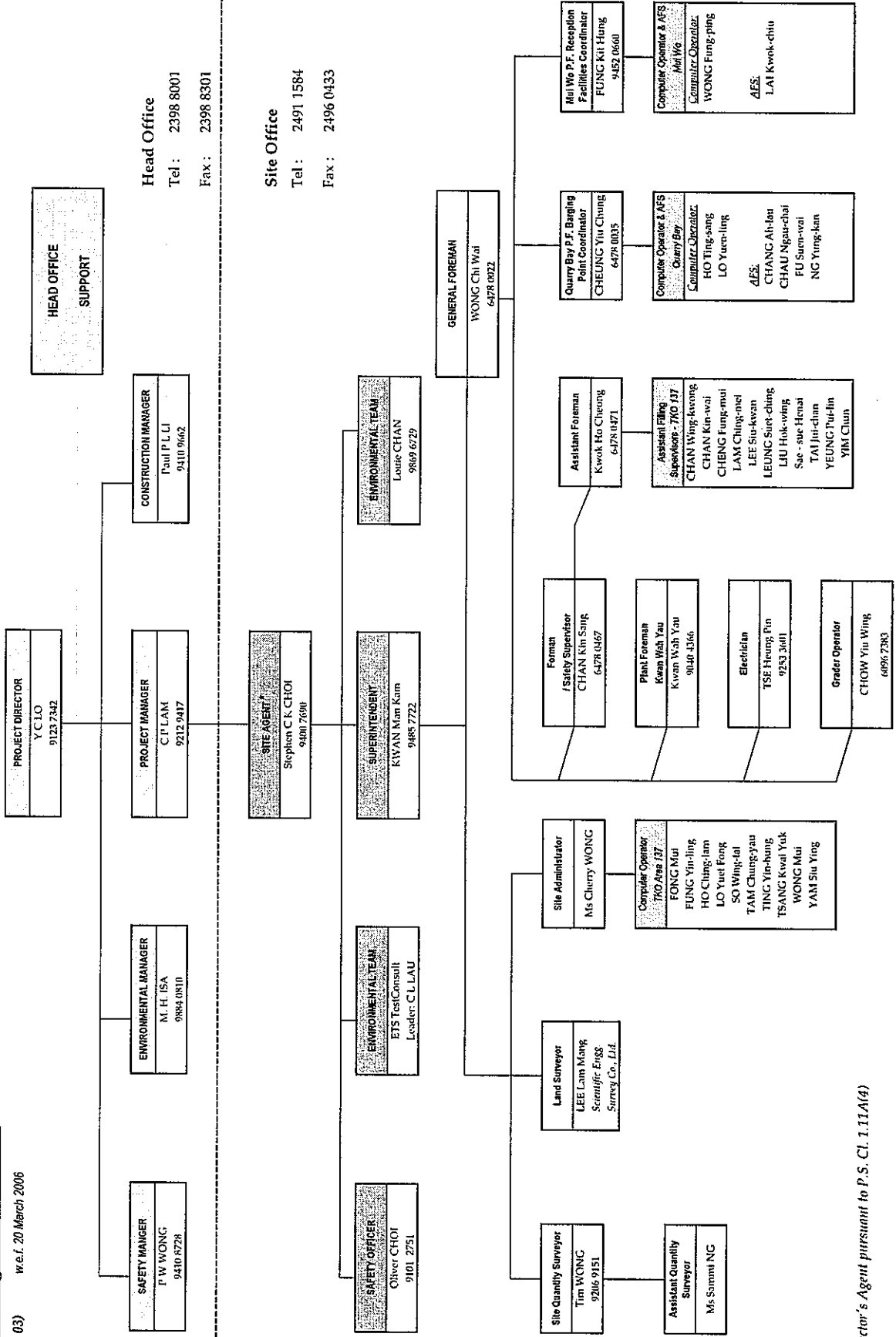
### **Organization Chart and Lines of Communication**

CEDD Contract No. CV/2005/12  
 Operation of Public Fill Reception Facilities at  
 Tseung Kwan O Area 137, Quarry Bay and Mui Wo



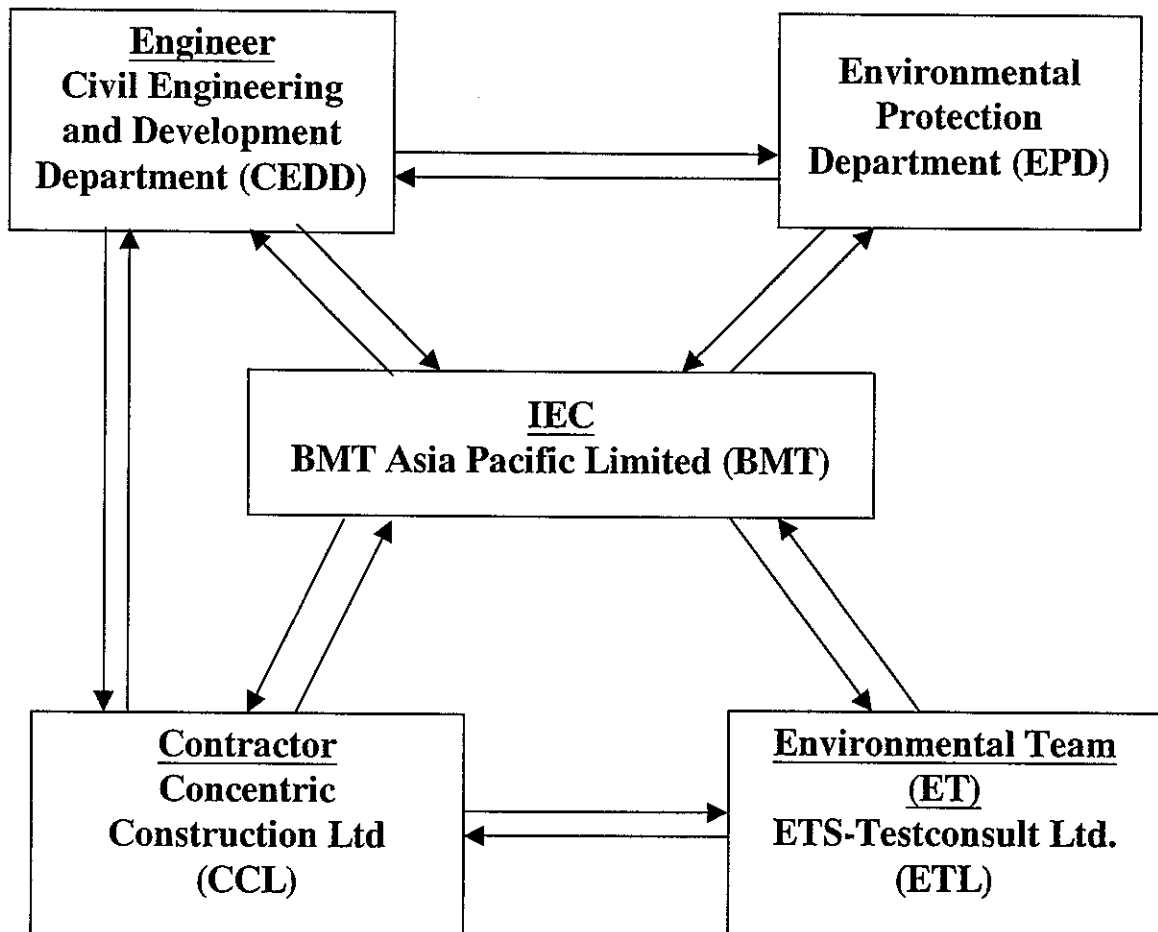
Project Organization Chart

(Rev. 03) w.e.f. 20 March 2006



\* Contractor's Agent pursuant to P.S. Cl. 1.11A(4)

# Lines of Communication



## **Appendix B1**

### **Calibration Certificates for Air Quality Monitoring Equipments**



東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong  
Tel : 2695 8318 E-mail : etl@ets-testconsult.com  
Fax : 2695 3944 Web site : www.ets-testconsult.com

**TEST REPORT**

**Calibration Report**  
of  
**High Volume Air Sampler**

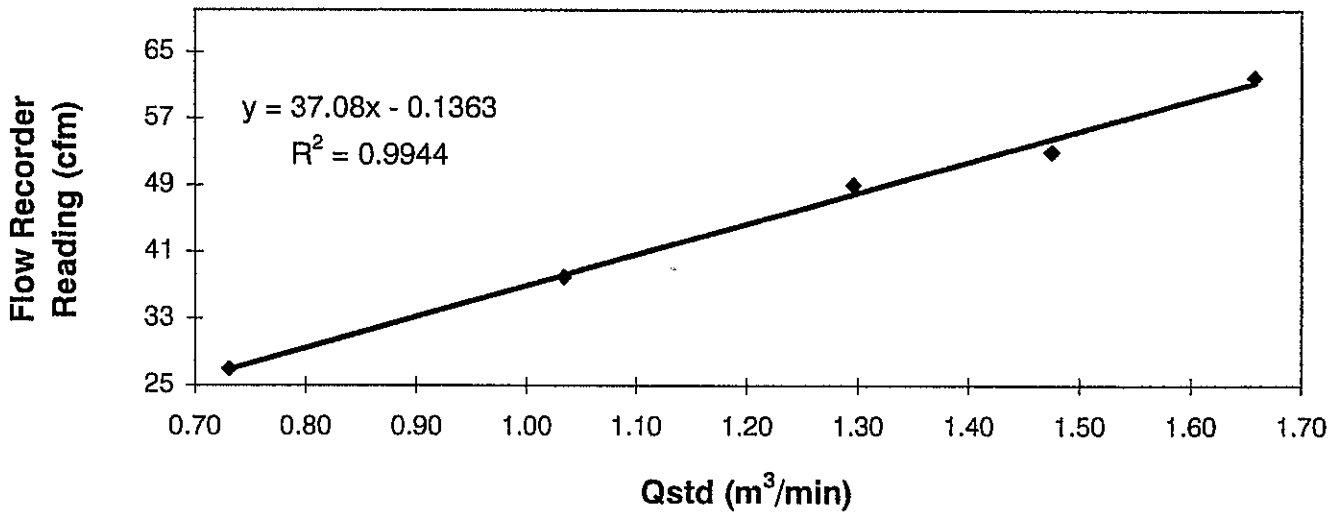
Manufacturer : Greasby GMW Date of Calibration : 22 May 2006

Serial No. : 10347 ( ET / EA / 003 / 06 ) Calibration Due Date : 21 July 2006

Method : Based on Operations Manual for in series calibration method by TISCH  
ENVIRONMENTAL Model Te-5025A calibration kit

Results	Flow recorder reading (cfm)	62	53	49	38	27
	Qstd (Actual flow rate, m <sup>3</sup> /min)	1.66	1.48	1.30	1.03	0.73
	Pressure : 758.24 mm Hg	Temp. : 299 K				

**Air Sampler 10347 Calibration Curve**  
Site:Tseung Kwan O (AA1)  
Date of Calibration: 22 May 2006



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

The high volume sampler complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \* / ~~unacceptable~~ \* for use.

Calibrated by : H. T. Chow  
H. T. Chow  
(Asst. Environmental Officer)

Approved by : Linda Law  
Linda Law  
(Environmental Officer)



東業德勤測試顧問有限公司

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Tel : 2695 8318

E-mail : etl@ets-testconsult.com

Fax : 2695 3944

Web site : www.ets-testconsult.com

## TEST REPORT

### Calibration Report of High Volume Air Sampler

Manufacturer : Greasby GMW Date of Calibration : 20 March 2006

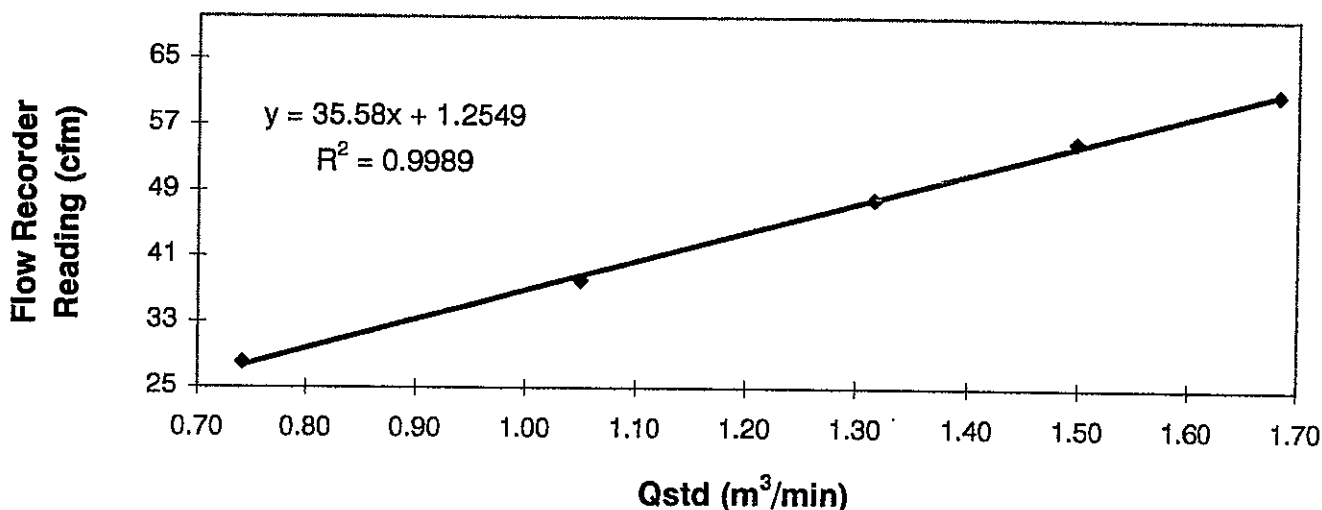
Serial No. : 10347 ( ET / EA / 003 / 06 ) Calibration Due Date : 19 May 2006

Method : Based on Operations Manual for in series calibration method by TISCH  
ENVIROMENTAL Model Te-5025A calibration kit

Results :


Flow recorder reading (cfm)	61	55	48	38	28
Qstd (Actual flow rate, m <sup>3</sup> /min)	1.68	1.50	1.32	1.05	0.74
Pressure :	761.46 mm Hg		Temp. : 291.3 K		


### Air Sampler 10347 Calibration Curve Site:Tseung Kwan O (AA1) Date of Calibration: 20 March 2006



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

The high volume sampler complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
H. T. Chow  
(Asst. Environmental Officer)

Approved by :   
Linda Law  
(Environmental Officer)



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**TEST REPORT**

**Calibration Report**  
of  
**High Volume Air Sampler**

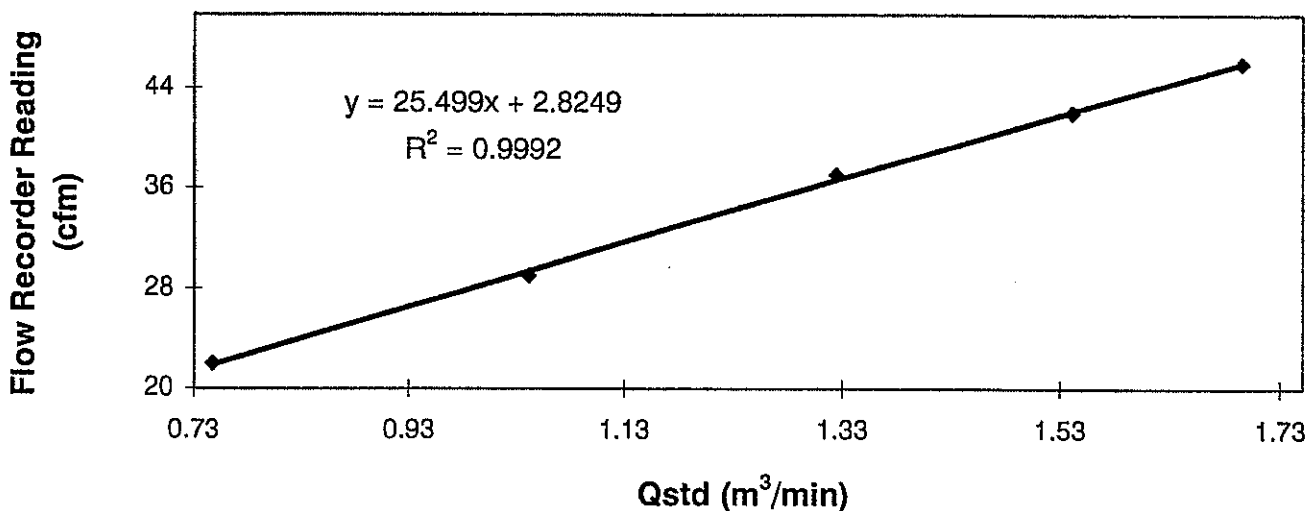
Manufacturer : Greasby GMW Date of Calibration : 22 May 2006

Serial No. : 1176 ( ET / EA / 003 / 05 ) Calibration Due Date : 21 July 2006

Method : Based on Operations Manual for in series calibration method by TISCH  
ENVIROMENTAL Model Te-5025A calibration kit

Results	Flow recorder reading (cfm)	46	42	37	29	22
	Qstd (Actual flow rate, m <sup>3</sup> /min)	1.72	1.56	1.34	1.06	0.76
	Pressure : 758.24 mm Hg	Temp. : 299 K				

**Air Sampler 1176 Calibration Curve**  
Site: Tseung Kwan O (AA2)  
Date of Calibration: 22 May 2006



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

The high volume sampler complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \*/ ~~unacceptable~~ \* for use.

Calibrated by : H. T. Chow  
H. T. Chow  
(Asst. Environmental Officer)

Approved by : Linda Law  
Linda Law  
(Environmental Officer)



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Fax : 2695 3944 Web site : www.ets-testconsult.com

**TEST REPORT**

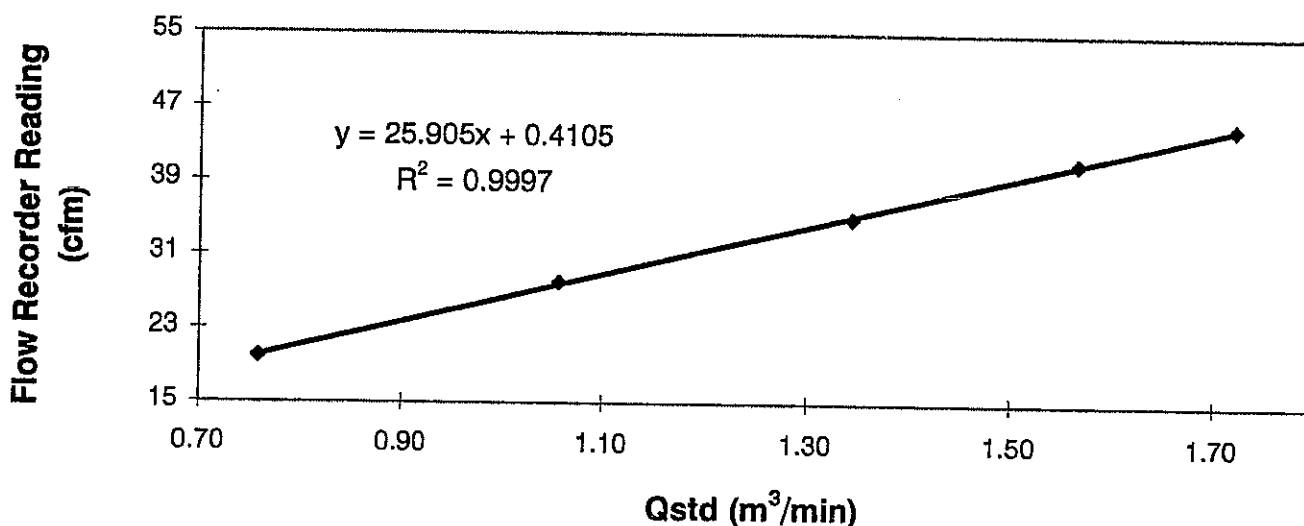
**Calibration Report  
of  
High Volume Air Sampler**

**Manufacturer** : Greasby GMW Date of Calibration : 20 March 2006  
**Serial No.** : 1176 ( ET / EA / 003 / 05 ) Calibration Due Date : 19 May 2006  
**Method** : Based on Operations Manual for in series calibration method by TISCH  
ENVIROMENTAL Model Te-5025A calibration kit

**Results** :

Flow recorder reading (cfm)	45	41	35	28	20
Qstd (Actual flow rate, m <sup>3</sup> /min)	1.72	1.56	1.34	1.06	0.76
Pressure :	761.46 mm Hg		Temp. : 291.3 K		

**Air Sampler 1176 Calibration Curve  
Site: Tseung Kwan O (AA2)  
Date of Calibration: 20 March 2006**



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5 point calibration

The high volume sampler complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \* / unacceptable \* for use.

Calibrated by : H. T. Chow  
H. T. Chow  
(Asst. Environmental Officer)

Approved by : Linda Law  
Linda Law  
(Environmental Officer)





TISCH ENVIRONMENTAL, INC.  
 145 SOUTH MIAMI AVE.  
 VILLAGE OF CLEVELAND, OH 45002  
 513.467.9000  
 877.263.7610 TOLL FREE  
 513.467.9009 FAX  
 WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Jun 24, 2005 Rootmeter S/N 9833620 Ta (K) - 292  
 Operator Tisch Orifice I.D. - 0873 Pa (mm) - 761.24

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4090	3.1	2.00
2	NA	NA	1.00	0.9980	6.2	4.00
3	NA	NA	1.00	0.8930	7.8	5.00
4	NA	NA	1.00	0.8510	8.6	5.50
5	NA	NA	1.00	0.7020	12.5	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0180	0.7225	1.4298	0.9959	0.7068	0.8759
1.0139	1.0159	2.0221	0.9919	0.9938	1.2387
1.0118	1.1330	2.2608	0.9898	1.1084	1.3849
1.0106	1.1876	2.3711	0.9887	1.1618	1.4525
1.0054	1.4322	2.8597	0.9835	1.4010	1.7518
Qstd slope (m) = 2.01640			Qa slope (m) = 1.26264		
intercept (b) = -0.02588			intercept (b) = -0.01585		
coefficient (r) = 0.99998			coefficient (r) = 0.99998		
y axis = SQRT[H2O(Pa/760)(298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)  
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]  
 Qa = Va/Time

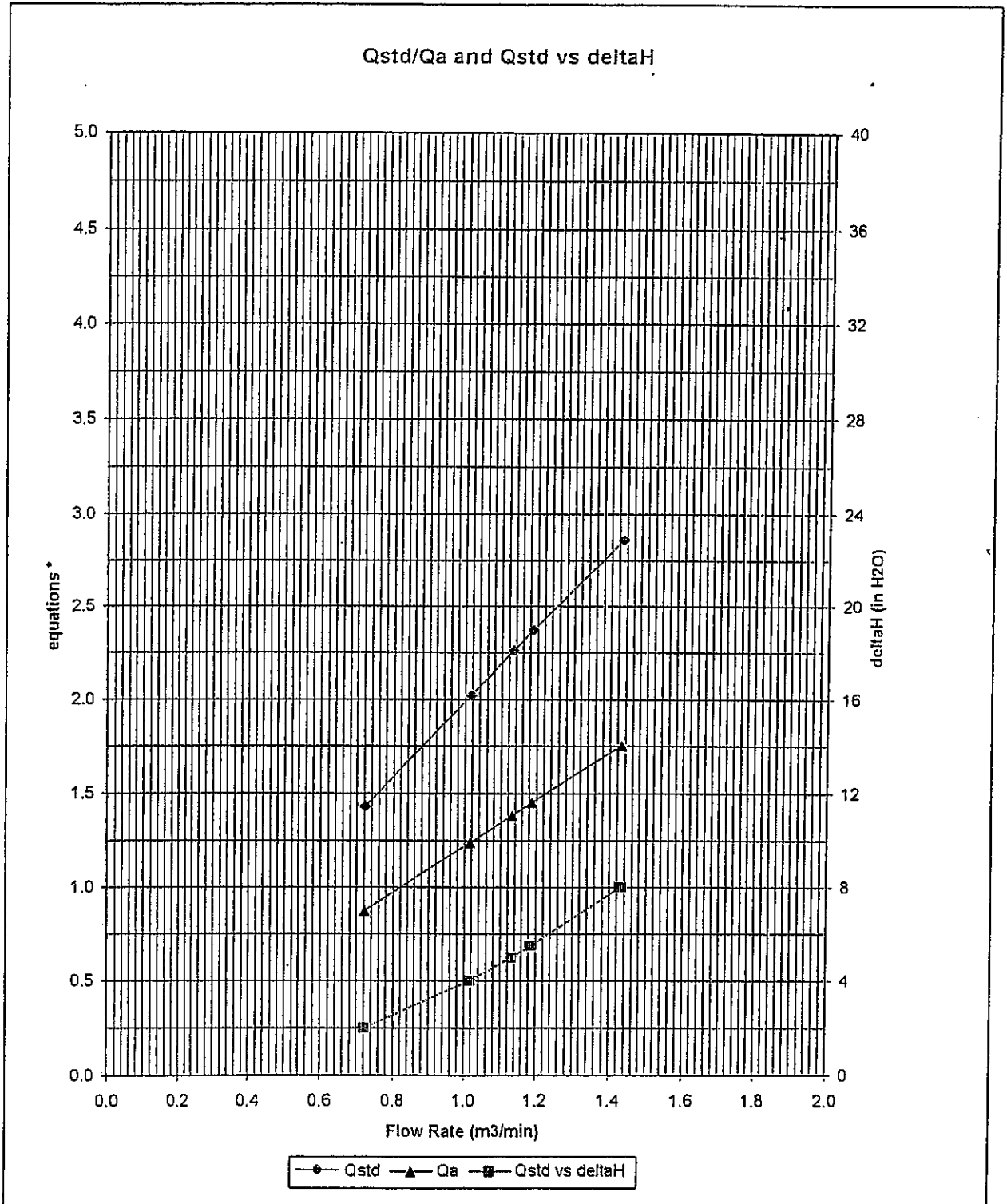
For subsequent flow rate calculations:

Qstd = 1/m{ [SQRT(H2O(Pa/760)(298/Ta))] - b}  
 Qa = 1/m{ [SQRT H2O(Ta/Pa)] - b}



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 WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT



\* y-axis equations:

Qstd series: 
$$\sqrt{\Delta H \left( \frac{P_a}{P_{std}} \right) \left( \frac{T_{std}}{T_a} \right)}$$

Qa series: 
$$\sqrt{(\Delta H (T_a / P_a))}$$

#0873



## **Appendix B2**

### **Air Quality Monitoring Results**

## Summary of 24-hr TSP Monitoring Results

Monitoring Station : AA1  
Location : Outside CEDD Site Office

Date	Start Time	Finish Time	Date	Time	Elapse Time		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min.)		Average (m <sup>3</sup> /min.)	Filter Weight (g)		Conc. (µg/m <sup>3</sup> )
					Initial	Final		Initial	Final		Initial	Final	
04/04/06	14:15	05/04/06	14:21	8622.42	8646.52	24.10	1.09	1.09	1.09	1.09	2.8429	3.1392	188
10/04/06	15:30	11/04/06	16:07	8649.52	8674.13	24.61	1.06	1.06	1.06	1.06	2.8492	3.1059	164
13/04/06	14:15	14/04/06	14:32	8677.13	8701.42	24.29	1.06	1.06	1.06	1.06	2.8616	3.0980	153
19/04/06	14:10	20/04/06	14:28	8704.42	8728.72	24.30	1.03	1.03	1.03	1.03	2.8457	3.1490	202
25/04/06	13:15	26/04/06	13:52	8731.72	8756.33	24.61	0.92	0.92	0.92	0.92	2.8411	3.1060	195
29/04/06	14:15	30/04/06	14:17	8759.33	8783.37	24.01	0.95	0.95	0.95	0.95	2.8734	3.1201	180
04/05/06	13:15	05/05/06	13:28	8786.37	8810.58	24.21	1.26	1.26	1.26	1.26	2.8332	3.1517	174
10/05/06	14:30	11/05/06	15:22	8813.58	8838.45	24.87	1.03	1.03	1.03	1.03	2.8205	3.0695	162
16/05/06	15:45	17/05/06	15:58	8841.45	8865.66	24.21	0.86	0.86	0.86	0.86	2.8575	3.0536	157
22/05/06	14:15	23/05/06	14:15	8868.66	8892.66	24.00	1.03	1.03	1.03	1.03	2.8282	3.0492	149
27/05/06	15:00	28/05/06	15:01	8896.66	8919.68	24.02	1.06	1.06	1.06	1.06	2.8279	3.0341	135
02/06/06	12:05	03/06/06	12:07	8922.68	8946.71	24.03	0.97	0.97	0.97	0.97	2.8461	3.0489	145
08/06/06	14:30	09/06/06	14:30	8949.71	8973.71	24.00	0.95	0.95	0.95	0.95	2.8700	3.0930	163
14/06/06	16:00	15/06/06	16:04	8976.71	9000.78	24.07	0.92	0.92	0.92	0.92	2.8414	3.0726	174
20/06/06	14:15	21/06/06	14:51	9003.78	9028.38	24.60	0.81	0.81	0.81	0.81	2.8493	3.0502	168
26/06/06	13:00	27/06/06	13:10	9031.38	9055.55	24.17	0.84	0.84	0.84	0.84	2.8710	3.0866	177
30/06/06	13:00	01/07/06	13:14	9058.55	9082.78	24.23	0.92	0.92	0.92	0.92	2.8656	3.1117	184

Monitoring Station : AA2  
Location : Site Egress

Date	Start Time	Finish Time	Date	Time	Elapse Time		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min.)		Average (m <sup>3</sup> /min.)	Filter Weight (g)		Conc. (µg/m <sup>3</sup> )
					Initial	Final		Initial	Final		Initial	Final	
04/04/06	14:15	05/04/06	14:53	11911.84	11936.48	24.64	1.45	1.45	1.45	1.45	2.8298	3.2392	191
10/04/06	15:30	11/04/06	15:37	11939.48	11963.59	24.11	1.45	1.45	1.45	1.45	2.8671	3.2468	181
13/04/06	14:15	14/04/06	14:30	11966.59	11990.84	24.25	1.49	1.49	1.49	1.49	2.8338	3.1915	165
19/04/06	14:10	20/04/06	14:33	11993.84	12018.23	24.39	1.45	1.45	1.45	1.45	2.8656	3.2688	190
25/04/06	13:15	26/04/06	13:53	12020.23	12044.87	24.64	1.41	1.41	1.41	1.41	2.8525	3.2360	184
29/04/06	14:15	30/04/06	14:56	12047.87	12072.55	24.68	1.45	1.45	1.45	1.45	2.8539	3.2125	167
04/05/06	13:15	05/05/06	13:59	12076.55	12101.28	24.73	1.30	1.30	1.30	1.30	2.8533	3.1465	152
10/05/06	14:30	11/05/06	15:12	12104.28	12128.98	24.70	1.64	1.64	1.64	1.64	2.8344	3.1990	150
16/05/06	15:45	17/05/06	16:36	12131.98	12156.83	24.85	1.53	1.53	1.53	1.53	2.8432	3.1717	144
22/05/06	14:15	23/05/06	15:03	12159.83	12184.63	24.80	1.46	1.46	1.46	1.46	2.8330	3.1089	127
27/05/06	15:00	28/05/06	15:34	12187.63	12212.20	24.57	1.22	1.22	1.22	1.22	2.8414	3.0590	121
02/06/06	12:15	03/06/06	12:18	12215.20	12239.25	24.05	1.22	1.22	1.22	1.22	2.8382	3.0671	130
08/06/06	14:30	09/06/06	14:50	12242.25	12266.59	24.34	1.26	1.26	1.26	1.26	2.8595	3.1392	152
14/06/06	16:00	15/06/06	16:04	12269.59	12293.65	24.06	1.30	1.30	1.30	1.30	2.8519	3.1503	159
20/06/06	14:15	21/06/06	14:20	12296.65	12320.74	24.09	1.30	1.30	1.30	1.30	2.8686	3.1711	161
26/06/06	13:00	27/06/06	13:10	12323.74	12347.90	24.16	1.26	1.26	1.26	1.26	2.8444	3.1458	165
30/06/06	13:00	01/07/06	13:05	12350.90	12374.98	24.08	1.30	1.30	1.30	1.30	2.8637	3.1830	170

## Summary of 1-hr TSP Monitoring Results

Monitoring Station : AA1  
Location : Outside CEDD Site Office

Date	Time		Elapse Time		Sampling Time		Flow Rate (m <sup>3</sup> /min.)		Average (m <sup>3</sup> /min.)	Filter Weight (g)		Conc. (ng/m <sup>3</sup> )
	Start	Finish	Initial	Final	(hrs)		Initial	Final		Initial	Final	
04/04/06	09:30	10:30	8619.42	8620.42	1.00	1.00	1.09	1.09	1.09	2.8392	2.8593	323
	11:00	12:00	8620.42	8621.42	1.00	1.00	1.09	1.09	1.09	2.8956	2.9195	365
	13:00	14:00	8621.42	8622.42	1.00	1.00	1.09	1.09	1.09	2.8872	2.9097	344
10/04/06	11:00	12:00	8646.52	8647.52	1.00	1.00	1.06	1.06	1.06	2.8422	2.8647	354
	13:00	14:00	8647.52	8648.52	1.00	1.00	1.06	1.06	1.06	2.8396	2.8605	329
	14:15	15:15	8648.52	8649.52	1.00	1.00	1.06	1.06	1.06	2.8577	2.8778	316
13/04/06	09:30	10:30	8674.13	8675.13	1.00	1.00	1.06	1.06	1.06	2.8692	2.8882	299
	11:00	12:00	8675.13	8676.13	1.00	1.00	1.06	1.06	1.06	2.8717	2.8935	343
	13:00	14:00	8676.13	8677.13	1.00	1.00	1.06	1.06	1.06	2.8495	2.8698	319
19/04/06	08:30	09:30	8701.42	8702.42	1.00	1.00	1.03	1.03	1.03	2.8432	2.8617	299
	11:00	12:00	8702.42	8703.42	1.00	1.00	1.03	1.03	1.03	2.8314	2.8541	367
	13:00	14:00	8703.42	8704.42	1.00	1.00	1.03	1.03	1.03	2.8511	2.8724	345
25/04/06	08:30	09:30	8728.72	8729.72	1.00	1.00	0.92	0.92	0.92	2.8532	2.8678	264
	09:45	10:45	8729.72	8730.72	1.00	1.00	0.92	0.92	0.92	2.8917	2.9071	297
	11:00	12:00	8730.72	8731.72	1.00	1.00	0.92	0.92	0.92	2.8644	2.8838	351
29/04/06	09:30	10:30	8756.33	8757.33	1.00	1.00	0.95	0.95	0.95	2.8623	2.8808	325
	11:00	12:00	8757.33	8758.33	1.00	1.00	0.95	0.95	0.95	2.8712	2.8918	361
	13:00	14:00	8758.33	8759.33	1.00	1.00	0.95	0.95	0.95	2.8449	2.8607	277
04/05/06	08:30	09:30	8783.37	8784.37	1.00	1.00	1.26	1.26	1.26	2.8618	2.8804	246
	09:45	10:45	8784.37	8785.37	1.00	1.00	1.26	1.26	1.26	2.8907	2.9137	304
	11:00	12:00	8785.37	8786.37	1.00	1.00	1.26	1.26	1.26	2.8854	2.9125	358
10/05/06	09:45	10:45	8810.58	8811.58	1.00	1.00	1.03	1.03	1.03	2.8416	2.8598	294
	11:00	12:00	8811.58	8812.58	1.00	1.00	1.03	1.03	1.03	2.8335	2.8543	337
	13:15	14:15	8812.58	8813.58	1.00	1.00	1.03	1.03	1.03	2.8628	2.8821	312
16/05/06	09:30	10:30	8838.45	8839.45	1.00	1.00	0.86	0.86	0.86	2.8272	2.8409	266
	11:00	12:00	8839.45	8840.45	1.00	1.00	0.86	0.86	0.86	2.8345	2.8512	324
	13:00	14:00	8840.45	8841.45	1.00	1.00	0.86	0.86	0.86	2.8197	2.8345	287
22/05/06	09:30	10:30	8865.66	8866.66	1.00	1.00	1.03	1.03	1.03	2.8618	2.8791	280
	11:00	12:00	8866.66	8867.66	1.00	1.00	1.03	1.03	1.03	2.8594	2.8786	311
	13:00	14:00	8867.66	8868.66	1.00	1.00	1.03	1.03	1.03	2.8677	2.8834	254
27/05/06	09:00	10:00	8892.66	8893.66	1.00	1.00	1.06	1.06	1.06	2.8613	2.8767	242
	11:00	12:00	8893.66	8894.66	1.00	1.00	1.06	1.06	1.06	2.8541	2.8734	303
	13:30	14:30	8894.66	8895.66	1.00	1.00	1.06	1.06	1.06	2.8484	2.8659	275
02/06/06	08:30	09:30	8919.68	8920.68	1.00	1.00	0.97	0.97	0.97	2.8495	2.8597	175
	09:45	10:45	8920.68	8921.68	1.00	1.00	0.97	0.97	0.97	2.8611	2.8752	242
	11:00	12:00	8921.68	8922.68	1.00	1.00	0.97	0.97	0.97	2.8329	2.8506	304
08/06/06	08:30	09:30	8946.71	8947.71	1.00	1.00	0.95	0.95	0.95	2.8518	2.8635	205
	11:00	12:00	8947.71	8948.71	1.00	1.00	0.95	0.95	0.95	2.8697	2.8889	337
	13:15	14:15	8948.71	8949.71	1.00	1.00	0.95	0.95	0.95	2.8432	2.8590	277
14/06/06	08:30	09:30	8973.71	8974.71	1.00	1.00	0.92	0.92	0.92	2.8629	2.8764	245
	11:00	12:00	8974.71	8975.71	1.00	1.00	0.92	0.92	0.92	2.8534	2.8731	357
	13:30	14:30	8975.71	8976.71	1.00	1.00	0.92	0.92	0.92	2.8490	2.8660	308
20/06/06	08:30	09:30	9000.78	9001.78	1.00	1.00	0.81	0.81	0.81	2.8642	2.8782	288
	11:00	12:00	9001.78	9002.78	1.00	1.00	0.81	0.81	0.81	2.8573	2.8750	364
	13:00	14:00	9002.78	9003.78	1.00	1.00	0.81	0.81	0.81	2.8819	2.8976	323
26/06/06	08:30	09:30	9028.38	9029.38	1.00	1.00	0.84	0.84	0.84	2.8441	2.8602	319
	09:45	10:45	9029.38	9030.38	1.00	1.00	0.84	0.84	0.84	2.8593	2.8763	337
	11:00	12:00	9030.38	9031.38	1.00	1.00	0.84	0.84	0.84	2.8687	2.8873	369
30/06/06	08:30	09:30	9055.55	9056.55	1.00	1.00	0.92	0.92	0.92	2.8427	2.8580	277
	09:45	10:45	9056.55	9057.55	1.00	1.00	0.92	0.92	0.92	2.8514	2.8682	304
	11:00	12:00	9057.55	9058.55	1.00	1.00	0.92	0.92	0.92	2.8616	2.8814	359

## Summary of 1-hr TSP Monitoring Results

Monitoring Station : AA2  
 Location : Site Egress

Date	Time			Elapse Time		Sampling Time		Flow Rate (m <sup>3</sup> /min.)		Average (m <sup>3</sup> /min.)	Filter Weight (g)		Conc. (ng/m <sup>3</sup> )
	Start	Finish		Initial	Final	(hrs)	Initial	Final	Initial		Final		
04/04/06	09:30	10:30		11908.84	11909.84	1.00	1.45	1.45	2.8793	2.9088	339		
	11:00	12:00		11909.84	11910.84	1.00	1.45	1.45	2.8658	2.8980	370		
	13:00	14:00		11910.84	11911.84	1.00	1.45	1.45	2.8877	2.9184	353		
10/04/06	11:00	12:00		11936.46	11937.46	1.00	1.45	1.45	2.8534	2.8850	363		
	13:00	14:00		11937.46	11938.46	1.00	1.45	1.45	2.8393	2.8660	307		
	14:15	15:15		11938.46	11939.46	1.00	1.45	1.45	2.8585	2.8881	340		
13/04/06	09:30	10:30		11963.59	11964.59	1.00	1.49	1.49	2.8552	2.8843	326		
	11:00	12:00		11964.59	11965.59	1.00	1.49	1.49	2.8714	2.9027	350		
	13:00	14:00		11965.59	11966.59	1.00	1.49	1.49	2.8777	2.9040	294		
19/04/06	08:30	09:30		11980.84	11981.84	1.00	1.45	1.45	2.8607	2.8865	297		
	11:00	12:00		11981.84	11982.84	1.00	1.45	1.45	2.8464	2.8795	357		
	13:00	14:00		11982.84	11983.84	1.00	1.45	1.45	2.8362	2.8644	324		
25/04/06	08:30	09:30		12018.23	12019.23	1.00	1.41	1.41	2.8775	2.9005	272		
	09:45	10:45		12019.23	12020.23	1.00	1.41	1.41	2.8686	2.8925	283		
	11:00	12:00		12020.23	12021.23	1.00	1.41	1.41	2.8305	2.8593	340		
29/04/06	09:30	10:30		12045.87	12046.87	1.00	1.45	1.45	2.8373	2.8643	310		
	11:00	12:00		12046.87	12047.87	1.00	1.45	1.45	2.8514	2.8821	353		
	13:00	14:00		12047.87	12048.87	1.00	1.45	1.45	2.8682	2.8893	266		
04/05/06	08:30	09:30		12073.55	12074.55	1.00	1.30	1.30	2.8822	2.9001	229		
	09:45	10:45		12074.55	12075.55	1.00	1.30	1.30	2.8795	2.9020	288		
	11:00	12:00		12075.55	12076.55	1.00	1.30	1.30	2.8543	2.8804	335		
10/05/06	09:45	10:45		12101.28	12102.28	1.00	1.64	1.64	2.8197	2.8460	267		
	11:00	12:00		12102.28	12103.28	1.00	1.64	1.64	2.8383	2.8707	329		
	13:15	14:15		12103.28	12104.28	1.00	1.64	1.64	2.8222	2.8515	298		
16/05/06	09:30	10:30		12129.98	12129.98	1.00	1.53	1.53	2.8628	2.8845	236		
	11:00	12:00		12129.98	12130.98	1.00	1.53	1.53	2.8509	2.8796	313		
	13:00	14:00		12130.98	12131.98	1.00	1.53	1.53	2.8361	2.8613	275		
22/05/06	09:30	10:30		12156.83	12157.83	1.00	1.46	1.46	2.8493	2.8730	271		
	11:00	12:00		12157.83	12158.83	1.00	1.46	1.46	2.8555	2.8820	303		
	13:00	14:00		12158.83	12159.83	1.00	1.46	1.46	2.8398	2.8598	228		
27/05/06	09:00	10:00		12184.63	12185.63	1.00	1.22	1.22	2.8271	2.8427	213		
	11:00	12:00		12185.63	12186.63	1.00	1.22	1.22	2.8551	2.8768	296		
	13:30	14:30		12186.63	12187.63	1.00	1.22	1.22	2.8323	2.8516	264		
02/06/06	08:30	09:30		12212.20	12213.20	1.00	1.22	1.22	2.8147	2.8260	154		
	09:45	10:45		12213.20	12214.20	1.00	1.22	1.22	2.8282	2.8427	198		
	11:00	12:00		12214.20	12215.20	1.00	1.22	1.22	2.8506	2.8723	296		
08/06/06	08:30	09:30		12239.25	12240.25	1.00	1.26	1.26	2.8688	2.8794	233		
	11:00	12:00		12240.25	12241.25	1.00	1.26	1.26	2.8510	2.8744	310		
	13:15	14:15		12241.25	12242.25	1.00	1.26	1.26	2.8393	2.8574	239		
14/06/06	08:30	09:30		12266.59	12267.59	1.00	1.30	1.30	2.8308	2.8512	262		
	11:00	12:00		12267.59	12268.59	1.00	1.30	1.30	2.8612	2.8869	329		
	13:30	14:30		12268.59	12269.59	1.00	1.30	1.30	2.8445	2.8670	288		
20/06/06	08:30	09:30		12293.65	12294.65	1.00	1.30	1.30	2.8552	2.8767	276		
	11:00	12:00		12294.65	12295.65	1.00	1.30	1.30	2.8418	2.8664	315		
	13:00	14:00		12295.65	12296.65	1.00	1.30	1.30	2.8677	2.8914	304		
26/06/06	08:30	09:30		12320.74	12321.74	1.00	1.26	1.26	2.8329	2.8553	296		
	09:45	10:45		12321.74	12322.74	1.00	1.26	1.26	2.8543	2.8789	325		
	11:00	12:00		12322.74	12323.74	1.00	1.26	1.26	2.8318	2.8577	343		
30/06/06	08:30	09:30		12347.90	12348.90	1.00	1.30	1.30	2.8547	2.8740	247		
	09:45	10:45		12348.90	12349.90	1.00	1.30	1.30	2.8339	2.8564	288		
	11:00	12:00		12349.90	12350.90	1.00	1.30	1.30	2.8422	2.8676	326		

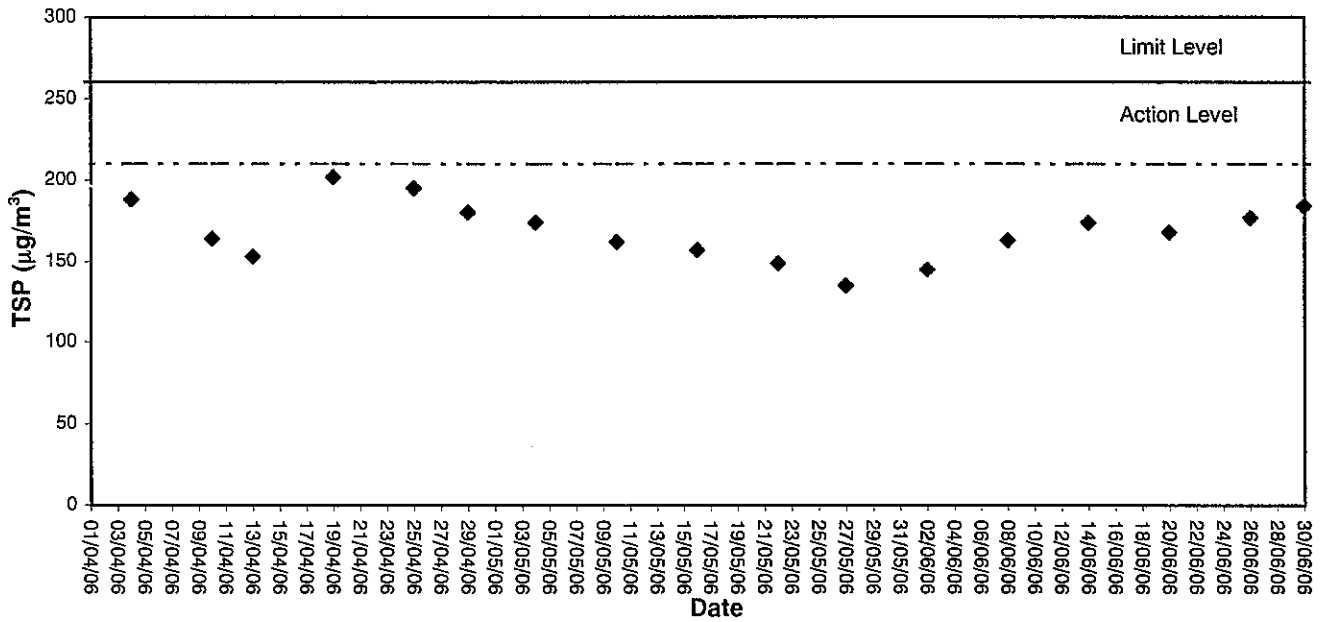


## **Appendix B3**

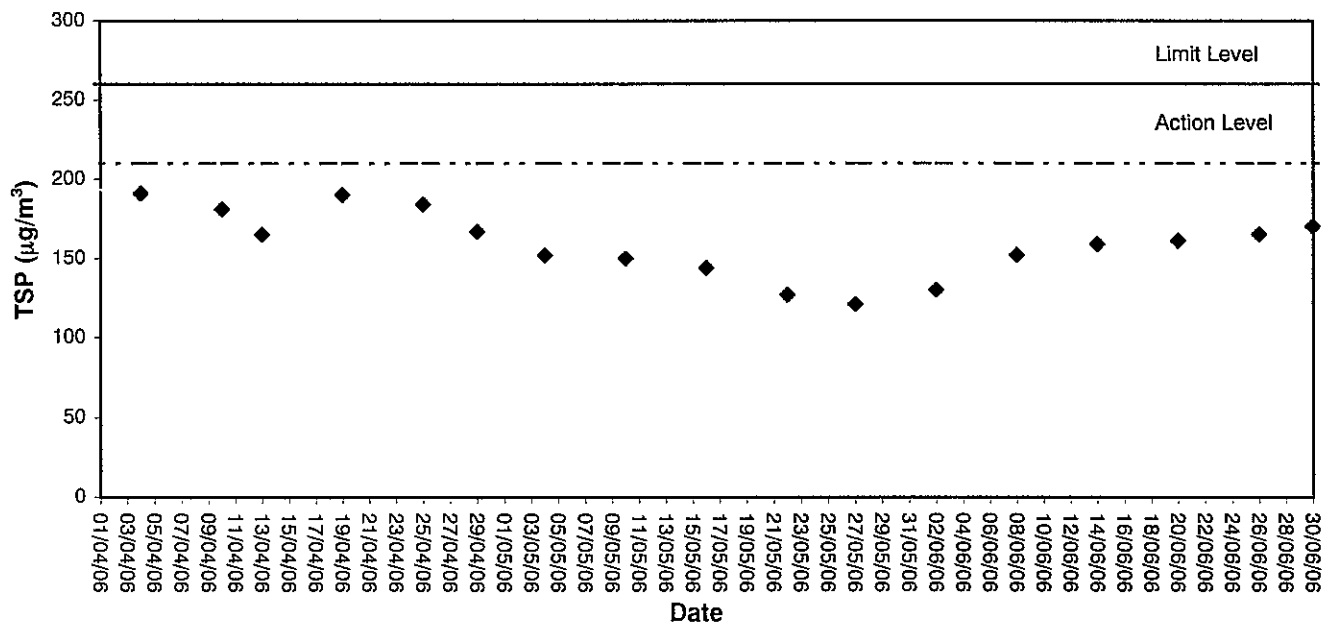
### **Graphical Plots of Air Quality Monitoring Data**



### 24-hour TSP level at AA1 (Outside CEDD Site Office)



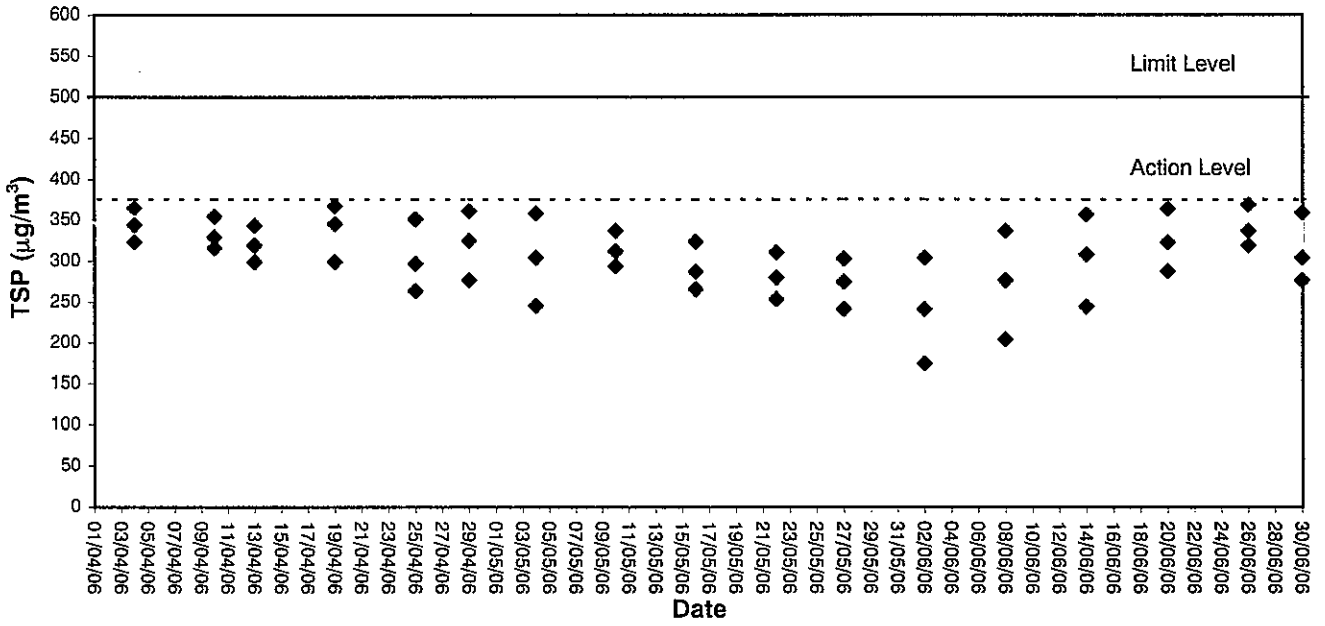
### 24-hour TSP level at AA2 (Site Egress)



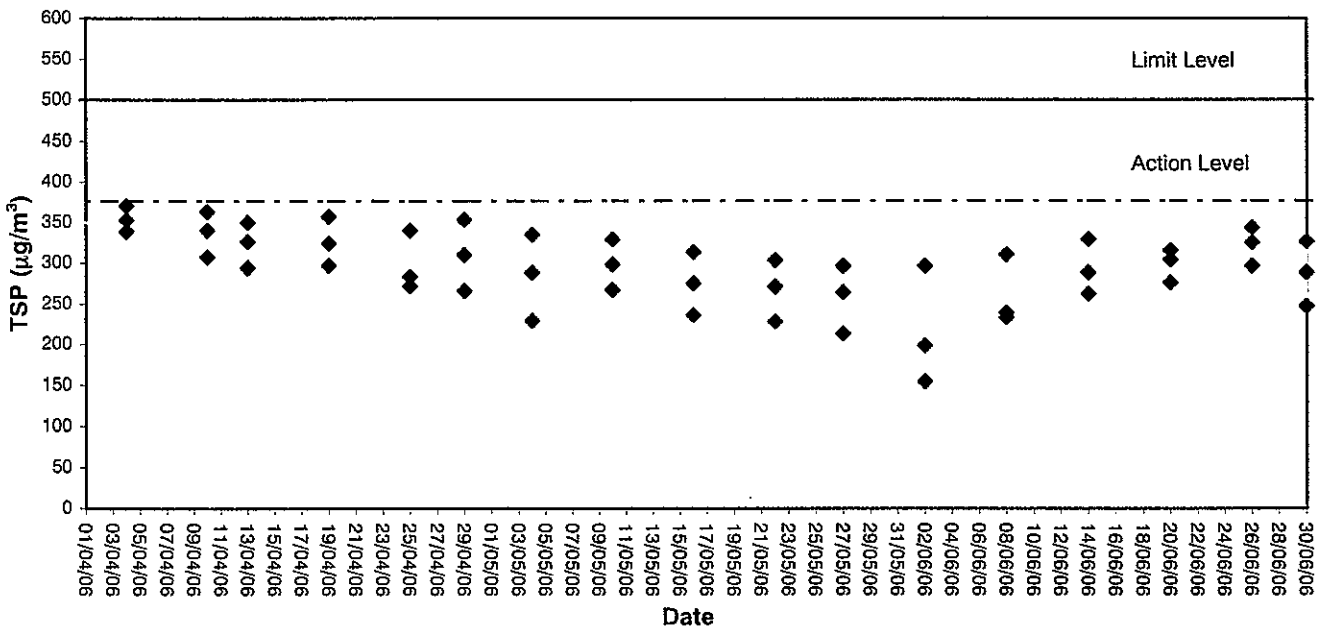




### 1-hour TSP level at AA1 (Outside CEDD Site Office)



### 1-hour TSP level at AA2 (Site Egress)





## **Appendix C1**

### **Calibration Certificates for Noise Monitoring Equipments**



# Calibration Certificate

Certificate No. **61398**

Page 1 of 3 Pages

**Customer :** ETS-Testconsult Limited

**Address :** 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

**Order No. :** Q60555

**Date of receipt :** 29-Mar-06

## Item Tested

**Description :** Precision Integrating Sound Level Meter

**Manufacturer :** Rion

**Model :** NL-31

**Serial No. :** 00110024

## Test Conditions

**Date of Test :** 4-Apr-06

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Calibration procedure : Z01.

## Test Results

All results were within the IEC 651 Type 1 and IEC 804 Type 1 specification.

The results are shown in the attached page(s).

Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S017	Function Generator	C051022	21-Mar-07	HKGSCCL
S024	Calibrator	S41431	22-May-06	PRC-NIM

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

**Calibrated by :**   
P.F. Wong

**Approved by :**   
Dorothy Cheuk

**Date:** 4-Apr-06



# Calibration Certificate

Certificate No. **61398**

Page 2 of 3 Pages

Results :

## 1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L <sub>A</sub>	Fast	94.0	93.8
		Slow		93.8
	L <sub>C</sub>	Fast		93.8
		L <sub>p</sub>		Fast
30 – 120	L <sub>A</sub>	Fast	94.0	93.8
		Slow		93.7
	L <sub>C</sub>	Fast		93.8
		L <sub>p</sub>		Fast
30 – 120	L <sub>A</sub>	Fast	113.9	113.8
		Slow		113.7
	L <sub>C</sub>	Fast		113.8
		L <sub>p</sub>		Fast

IEC 651 Type 1 Spec. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.2$  dB

## 2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. :  $\pm 0.3$  dB

Uncertainty :  $\pm 0.01$  dB



# Calibration Certificate

Certificate No. 61398

Page 3 of 3 Pages

### 3. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	- 39.5	- 39.4 dB, $\pm 1.5$ dB
63 Hz	- 26.2	- 26.2 dB, $\pm 1.5$ dB
125 Hz	- 16.2	- 16.1 dB, $\pm 1$ dB
250 Hz	- 8.8	- 8.6 dB, $\pm 1$ dB
500 Hz	- 3.3	- 3.2 dB, $\pm 1$ dB
1 kHz	0.0 (Ref.)	0 dB, $\pm 1$ dB
2 kHz	+ 1.2	+ 1.2 dB, $\pm 1$ dB
4 kHz	+ 1.1	+ 1.0 dB, $\pm 1$ dB
8 kHz	- 1.2	- 1.1 dB, + 1.5 dB $\sim$ - 3 dB
16 kHz	- 6.7	- 6.6 dB, + 3 dB $\sim$ $\infty$

Uncertainty :  $\pm 0.1$  dB

### 4. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.8	$\pm 0.5$ dB
1/10 <sup>2</sup>	40.0	40.0	
1/10 <sup>3</sup>	40.0	40.0	$\pm 1.0$ dB
1/10 <sup>4</sup>	40.0	40.0	

Uncertainty :  $\pm 0.1$  dB

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 000 hPa.

----- END -----



# Calibration Certificate

Certificate No. **61399**

Page 1 of 2 Pages

**Customer :** ETS-Testconsult Limited

**Address :** 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

**Order No. :** Q60555

**Date of receipt :** 29-Mar-06

## Item Tested

**Description :** Sound Level Calibrator

**Manufacturer :** Rion

**Model :** NC-73

**Serial No. :** 10644871

## Test Conditions

**Date of Test :** 4-Apr-06

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Calibration procedure : F21, Z02.

## Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	53024	7-Jul-06	PRC-NIM
S024	Calibrator	S41431	22-May-06	PRC-NIM
S041	Universal Counter	53972	26-Aug-06	HKGSC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

**Calibrated by :** 

P.F. Wong

**Approved by :** 

Dorothy Cheuk

**Date:** 4-Apr-06

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

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# Calibration Certificate

Certificate No. 61399

Page 2 of 2 Pages

Results :

## 1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value		Mfr's Spec.
	Before Adjust.	After Adjust.	
94 dB	94.7	94.2	$\pm 1$ dB

Uncertainty :  $\pm 0.2$  dB

## 2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.984 kHz	$\pm 2$ %

Uncertainty :  $\pm 0.1$  %

## 3. Level Stability : 0.0 dB

Uncertainty :  $\pm 0.01$  dB

## 4. Total Harmonic Distortion : $< 0.3$ %

Mfr's Spec. :  $< 3$  %

Uncertainty :  $\pm 2.3$  % of reading

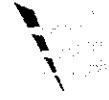
Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. The above measured values are the mean of 3 measurement.

4. Atmospheric Pressure : 1 000 hPa

----- END -----



## **Appendix C2**

### **Noise Monitoring Results**





## Day-time Noise Monitoring

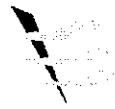
**Monitoring Location: N1 (Site Egress)**

Date	Start Sampling Time (hh:mm)	Noise Level dB (A)			Wind Speed (m/s)	Weather Condition
		L <sub>eq(30min)</sub>	L <sub>10</sub>	L <sub>90</sub>		
04/04/06	10:50	71.6	76.8	70.2	0.8	Sunny
04/05/06	13:25	62.8	67.0	59.6	1.2	Cloudy
02/06/06	09:50	68.5	72.6	58.9	0.9	Drizzle

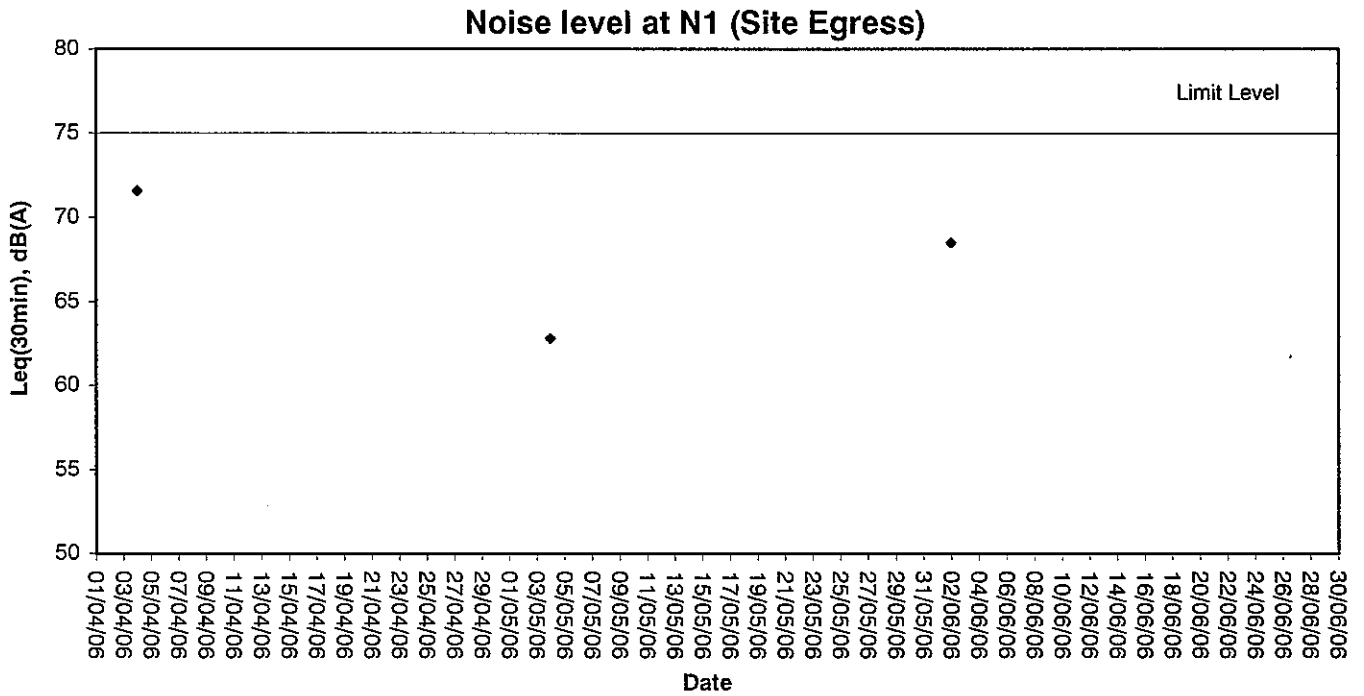


## **Appendix C3**

### **Graphical Plots of Noise Monitoring Data**



## Noise Monitoring (Day-time)





## **Appendix D1**

### **Calibration Certificates for Marine Water Quality Monitoring Equipments**



## Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : <u>ET/EW/003/001</u>	Manufacturer : <u>YSL</u>
Model No. : <u>95</u>	Serial No. : <u>97H 04071 AD</u>
Date of Calibration : <u>01/03/06</u>	Calibration Due Date : <u>31/05/06</u>

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

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

### Temperature Verification

Thermometer reading	Temperature (°C)
Meter reading	20.0
	20.0

### Linearity Checking

Purging time, min	DO meter reading, mg/L			Winkler Titration result, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.46	7.44	7.45	7.31	7.29	7.30	2.03
5	5.66	5.64	5.65	5.66	5.64	5.65	0.00
10	4.01	3.99	4.00	3.82	3.80	3.81	4.87
Linear regression coefficient				0.9968			

### Zero Point Checking

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

### Salinity Checking

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.16	7.14	7.15	7.01	7.01	7.01	1.98
30	6.56	6.54	6.55	6.32	6.30	6.31	3.73

### 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 : within ± 5%

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

\* Delete as appropriate

Calibrated by : (Signature)

Approved by : (Signature)



**Internal Calibration Report of Dissolved Oxygen Meter**

Equipment Ref. No. : <u>ET/EW/003/001</u>	Manufacturer : <u>YSI</u>
Model No. : <u>95</u>	Serial No. : <u>9714 04071AD</u>
Date of Calibration : <u>30/5/16</u>	Calibration Due Date : <u>29/8/16</u>

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

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

**Temperature Verification**

	Temperature (°C)
Thermometer reading	20.0
Meter reading	20.0

**Linearity Checking**

Purging time, min	DO meter reading, mg/L			Winkler Titration result, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.45	7.43	7.44	7.50	7.52	7.51	0.94
5	5.51	5.49	5.50	5.63	5.61	5.62	2.16
10	3.68	3.66	3.67	3.56	3.54	3.55	3.32
Linear regression coefficient						0.9981	

**Zero Point Checking**

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

**Salinity Checking**

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.11	7.09	7.10	7.20	7.18	7.19	1.26
30	6.53	6.51	6.52	6.66	6.64	6.65	1.97

**Acceptance Criteria**

- (1) Differenc 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 : within ± 5%

The equipment complies \* / does not comply \* with the specified requirements and is deemed acceptable \*  
 / unacceptable \* for use:  
 \* Delete as appropriate

Calibrated by : Gordon Lam                      Approved by : [Signature]



## Performance Check of Salinity Meter

Equipment Ref. No. : ET / 0527 / 001 Manufacturer : YSI

Model No. : Model 30 Serial No. : 9961183

Date of Calibration : 28 / 4 / 06 Due Date : 28 / 7 / 06

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

J 196A

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30	29.3	2.4%

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 : RA

Approved by : Gordon Law



## Internal Calibration Report of Turbidimeter

Equipment Ref. No. : ET/0505/002

Manufacturer : HACH

Model No. : 2100P

Serial No. : 930900003728

Date of Calibration : 28/4/06

Calibration Due : 28/7/06

### Data

(4.95) 0 - 10 NTU Gelex Vial	(49.0) 10 - 100 NTU Gelex Vial	(409) 100 - 1000 NTU Gelex Vial
4.91	48.3	406

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

\* Delete as appropriate

Calibrated by : PK

Approved by : [Signature]





## **Appendix D2**

### **Impact Marine Water Quality Monitoring Results**

**Mid-Flood Tide**



東業 獲 動 測 試 顧 問 有 限 公 司  
ETS-TESTCONSULT LIMITED

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)			DO (S&M)		
			Surface	Bottom		Value	Average	Value	Average	Depth-average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Action Level	Limit Level		
03/04/06	09:12 - 09:28	24/Sunny	Surface	1.0	20.9	32.2	6.22	6.20	84.1	83.8	3.41	3.47	3.5	3.7	5.10	5.45	3.5	3.5	3.5	5.10		
					20.2	32.6	5.84	5.82	83.5	83.8	3.52	3.5	3.8									
			Middle	10.3	20.2	32.5	5.80	5.82	79.0	78.8	3.29	3.33	3.5	3.5								
					20.0	32.7	5.23	5.21	78.5	78.8	3.36	3.33	3.5	3.5								
			Bottom	19.6	20.0	32.7	5.18	5.21	70.7	70.5	3.04	3.06	3.2	3.2							3.2	3.2
					20.7	32.1	6.98	6.94	70.2	70.5	3.08	3.06	3.2	3.2							2.5	2.5
06/04/06	07:00 - 07:16	20/Cloudy	Surface	1.0	20.7	32.1	6.90	6.94	95.4	94.9	2.11	2.06	2.5	2.5	5.10	5.45	2.4	2.3	2.3	5.10		
					20.8	32.4	6.51	6.46	94.4	94.9	2.01	2.06	2.5	2.5								
			Middle	11.0	20.8	32.4	6.41	6.46	89.6	89.3	1.92	1.87	2.3	2.3							2.3	2.3
					20.5	32.5	6.31	6.26	89.0	89.3	1.82	1.87	2.2	2.3							2.3	2.3
			Bottom	21.0	20.5	32.5	6.21	6.26	85.3	85.8	1.99	2.04	2.3	2.3							2.3	2.3
					21.4	31.6	6.72	6.71	85.3	85.8	2.09	2.04	4.0	3.9							4.0	3.9
08/04/06	08:15 - 08:28	23/Cloudy	Surface	1.0	21.4	31.6	6.69	6.71	91.3	91.1	3.76	3.77	3.5	3.5	5.10	5.45	3.6	3.5	3.3	5.10		
					21.1	32.8	6.47	6.45	90.9	91.1	3.77	3.77	3.5	3.5							3.0	3.1
			Middle	10.1	21.1	32.8	6.43	6.45	87.9	87.7	3.52	3.52	3.2	3.1							3.2	3.1
					20.8	33.0	6.30	6.32	87.4	87.7	3.52	3.52	3.2	3.1							3.0	3.0
			Bottom	19.2	20.8	33.0	6.33	6.32	85.6	85.8	3.10	3.11	3.2	3.3							3.2	3.3
					23.7	32.1	6.36	6.39	86.0	85.8	3.12	3.11	3.0	3.1							3.0	3.1
10/04/06	16:30 - 16:44	27/Fine	Surface	1.0	23.7	32.2	6.36	6.39	86.5	86.2	2.81	2.81	3.2	3.1	5.10	5.45	3.1	3.1	3.0	5.10		
					22.5	32.4	5.98	5.94	85.9	86.2	2.80	2.81	3.2	3.1							3.2	3.1
			Middle	10.4	22.5	32.3	5.90	5.94	80.7	80.2	2.98	2.98	3.2	3.1							3.2	3.1
					21.9	32.6	5.76	5.74	79.6	80.2	2.98	2.98	3.0	3.0							3.0	3.0
			Bottom	19.8	21.9	32.6	5.71	5.74	77.8	77.5	2.90	2.90	3.0	3.0							3.0	3.0
					22.0	32.4	6.73	6.68	77.1	77.5	2.90	2.90	4.5	4.4							4.5	4.4
12/04/06	18:24 - 18:36	28/Cloudy	Surface	1.0	22.0	32.4	6.63	6.68	95.1	94.6	4.11	4.06	4.3	4.4	5.10	5.45	4.3	4.0	4.5	5.10		
					22.2	33.1	6.86	6.83	94.1	94.6	4.01	4.06	4.0	4.0							4.0	4.0
			Middle	11.0	22.2	33.1	6.80	6.83	96.0	95.5	3.88	3.93	4.0	4.0							4.0	4.0
					22.4	33.0	6.44	6.49	95.0	95.5	3.98	3.93	4.0	4.0							4.0	4.0
			Bottom	21.0	22.4	33.0	6.54	6.49	92.2	92.7	4.47	4.44	4.5	4.5							4.5	4.5
					22.6	32.9	6.56	6.55	93.2	92.7	4.40	4.44	4.5	4.5							4.5	4.5
18/04/06	07:00 - 07:15	28/Cloudy	Surface	1.0	23.1	31.9	6.53	6.55	87.2	87.0	3.67	3.66	4.0	3.9	5.10	5.45	3.7	4.0	4.5	5.10		
					22.8	32.5	6.27	6.26	86.8	87.0	3.65	3.66	3.8	3.9							4.0	4.0
			Middle	10.1	22.8	32.5	6.24	6.26	82.7	82.5	3.72	3.72	4.0	4.0							4.0	4.0
					22.6	32.8	5.94	5.93	82.3	82.5	3.71	3.72	4.0	4.0							4.0	4.0
			Bottom	19.2	22.6	32.9	5.91	5.93	78.4	78.2	3.14	3.14	3.2	3.2							3.2	3.2
					22.7	32.4	6.60	6.56	78.0	78.2	3.13	3.14	3.2	3.2							3.2	3.2
20/04/06	08:44 - 08:58	28/Cloudy	Surface	1.0	22.7	32.4	6.52	6.56	90.9	90.5	2.00	1.95	2.5	2.4	5.10	5.45	2.4	2.2	2.5	5.10		
					21.6	32.5	6.33	6.28	90.0	90.5	1.90	1.95	2.2	2.2							2.2	2.2
			Middle	11.0	21.6	32.5	6.23	6.28	87.2	86.7	1.87	1.84	2.2	2.2							2.2	2.2
					21.2	32.5	6.19	6.24	86.2	86.7	1.80	1.84	2.2	2.2							2.2	2.2
			Bottom	21.0	21.2	32.5	6.19	6.24	85.2	85.7	2.46	2.43	2.5	2.5							2.5	2.5
					23.7	31.6	6.74	6.73	85.2	85.7	2.40	2.43	2.5	2.5							2.5	2.5
22/04/06	08:00 - 08:15	28/Cloudy	Surface	1.0	23.7	31.6	6.71	6.73	92.3	92.1	3.94	3.93	4.5	4.4	5.10	5.45	4.2	4.5	3.8	5.10		
					23.4	32.2	6.52	6.51	91.9	92.1	3.92	3.93	4.5	4.5							4.5	4.5
			Middle	10.2	23.4	32.2	6.49	6.51	88.6	88.4	3.79	3.79	4.5	4.5							4.5	4.5
					23.2	32.5	6.30	6.32	88.2	88.4	3.78	3.79	4.5	4.5							4.5	4.5
			Bottom	19.4	23.2	32.5	6.30	6.32	85.6	85.8	3.52	3.52	3.8	3.8							3.8	3.8
					23.2	32.5	6.33	6.32	86.0	85.8	3.51	3.52	3.8	3.8							3.8	3.8

**Mid-Flood Tide**



東業 檢驗 測試 顧問 有限公司  
ETS-TESTCONSULT LIMITED

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)			DO (S&M)			
			Surface	Middle		Bottom	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Action Level	Limit Level	
24/04/06	16:14 - 16:30	23/Cloudy	Surface		20.3	32.4	32.4	6.63	6.62	6.49	91.1	90.9	2.14	2.16	2.5	2.4							
			Middle		19.5	32.6	32.6	6.39	6.36	6.49	87.8	87.6	1.95	1.97	2.0	2.0							
			Bottom		19.2	32.7	32.7	6.40	6.38	6.38	87.3	87.1	2.40	2.43	2.7	2.7							5.10
26/04/06	17:46 - 18:04	26/Cloudy	Surface		21.9	32.0	32.0	6.85	6.80		94.4	93.9	3.15	3.20	3.5	3.5							
			Middle		21.6	32.4	32.4	6.61	6.57	6.69	91.1	90.7	3.31	3.27	4.0	4.0							5.10
			Bottom		21.0	32.2	32.2	6.33	6.28	6.28	87.2	86.8	3.00	2.95	3.3	3.3							
28/04/06	11:45 - 11:58	25/Rainy	Surface		23.9	31.5	31.5	6.16	6.17	6.14	86.8	87.3	2.64	2.64	3.0	3.0							
			Middle		23.5	32.4	32.4	6.08	6.11		86.1	86.4	3.02	3.02	3.2	3.2							5.10
			Bottom		23.4	33.0	33.0	6.43	6.41	6.41	91.1	90.9	2.98	2.98	3.5	3.5							
02/05/06	07:30 - 07:43	27/Cloudy	Surface		23.8	32.3	32.3	6.76	6.75	6.64	95.3	95.1	3.43	3.43	3.5	3.7							
			Middle		23.5	32.8	32.8	6.54	6.53		92.2	92.0	3.14	3.13	3.2	3.2							5.10
			Bottom		23.4	33.0	33.0	6.12	6.14	6.14	85.6	85.8	2.89	2.89	3.0	3.0							
04/05/06	07:50 - 08:05	26/Cloudy	Surface		28.0	30.7	30.7	6.91	6.87		94.9	94.5	2.71	2.66	3.0	3.0							
			Middle		27.6	31.1	31.1	6.44	6.39	6.63	88.9	88.5	2.44	2.49	2.5	2.5							5.10
			Bottom		27.0	31.6	31.6	6.20	6.16	6.16	85.1	84.6	2.17	2.14	2.3	2.3							
06/05/06	07:00 - 07:16	29/Sunny	Surface		23.9	32.1	32.1	6.54	6.53		92.6	92.4	2.69	2.72	3.0	3.0							
			Middle		23.5	32.6	32.6	6.12	6.10	6.31	86.7	86.5	2.53	2.56	2.7	2.7							5.10
			Bottom		23.2	32.9	32.9	5.89	5.86	5.86	83.3	83.0	2.14	2.16	2.2	2.2							
08/05/06	14:00 - 14:13	30/Cloudy	Surface		27.8	32.2	32.2	6.90	6.92	6.79	97.8	98.1	3.17	3.17	3.5	3.5							
			Middle		27.4	33.1	33.1	6.68	6.67		94.8	94.6	3.06	3.07	3.2	3.2							5.10
			Bottom		26.9	33.2	33.2	6.82	6.81	6.81	96.1	95.9	2.93	2.92	3.0	3.0							
10/05/06	16:00 - 16:13	31/Sunny	Surface		28.3	32.8	32.8	6.73	6.72	6.57	95.5	95.3	3.26	3.27	3.5	3.5							
			Middle		27.8	33.2	33.2	6.44	6.43		91.4	91.2	2.97	2.96	3.2	3.3							5.10
			Bottom		27.4	33.2	33.2	6.05	6.07	6.07	85.3	85.5	3.02	3.02	3.0	3.0							

**Mid-Flood Tide**

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)	Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)			DO (S&M)	
					Value	Average	Value	Average	Depth-average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Action Level	Limit Level	
12/05/06	17:46 - 18:08	30/Cloudy	Surface	25.5	32.0	32.0	6.97	6.94	6.74	95.1	94.6	2.60	2.55	3.0	2.9	5.10	5.10			
					32.0	6.90	2.50													
			Middle	25.1	32.2	6.50	2.66	2.71	3.0	3.0										
					32.2	6.60	2.75													
			Bottom	24.7	32.4	6.30	2.96	2.93	2.8	2.8										
					32.4	6.39	2.90													
15/05/06	07:00 - 07:13	30/Sunny	Surface	27.8	32.4	32.4	6.60	6.62	6.51	93.7	93.9	3.70	3.71	4.0	4.0	5.10	5.10			
					32.4	6.63	3.72													
			Middle	27.4	32.7	6.42	3.42	3.42	3.5	3.5										
					32.7	6.39	3.41													
			Bottom	26.8	32.9	6.12	3.68	3.68	3.8	3.8										
					32.9	6.15	3.67													
19/05/06	08:45 - 08:58	28/Sunny	Surface	26.7	32.3	32.3	6.34	6.36	6.34	94.9	95.1	3.49	3.50	4.0	3.9	5.10	5.10			
					32.3	6.37	3.50													
			Middle	25.4	33.1	6.35	3.83	3.84	4.3	4.3										
					33.1	6.31	3.84													
			Bottom	25.0	33.3	6.42	3.96	3.97	4.5	4.5										
					33.3	6.39	3.97													
22/05/06	14:00 - 14:13	26/Cloudy	Surface	25.6	32.4	32.4	6.26	6.22	6.26	93.2	92.6	3.55	3.58	3.5	3.5	5.10	5.10			
					32.4	6.18	3.60													
			Middle	25.2	33.1	6.33	3.70	3.75	4.0	4.0										
					33.1	6.28	3.80													
			Bottom	24.6	33.4	6.24	3.82	3.84	3.5	3.5										
					33.4	6.30	3.86													
24/05/06	15:30 - 15:43	28/Cloudy	Surface	25.7	32.0	32.0	5.62	5.64	5.24	82.6	82.8	3.96	3.97	4.0	4.2	5.10	5.10			
					31.9	5.65	3.97													
			Middle	25.2	32.7	4.86	3.98	3.98	4.0	4.0										
					32.6	4.83	3.97													
			Bottom	25.3	33.1	5.21	4.12	4.13	4.5	4.5										
					33.1	5.23	4.14													
26/05/06	18:18 - 18:34	26/Sunny	Surface	27.0	33.0	33.0	6.38	6.34	6.24	93.1	92.6	2.71	2.66	3.0	2.9	5.10	5.10			
					33.0	6.30	2.61													
			Middle	26.6	33.2	6.17	3.81	3.76	4.0	4.0										
					33.2	6.10	3.71													
			Bottom	24.9	33.4	5.86	3.62	3.57	4.3	4.3										
					33.4	5.80	3.52													
29/05/06	07:00 - 07:13	26/Rainy	Surface	25.2	30.4	30.4	6.24	6.23	5.97	87.9	87.7	3.92	3.93	4.0	4.1	5.10	5.10			
					30.4	6.21	3.93													
			Middle	24.7	31.3	5.72	3.80	3.80	4.0	4.0										
					31.3	5.69	4.02													
			Bottom	24.5	31.5	5.19	4.02	4.02	4.3	4.3										
					31.5	5.22	4.01													
01/06/06	08:32 - 08:43	27/Rainy	Surface	25.8	31.9	32.0	6.42	6.45	6.30	91.2	91.6	2.83	2.83	3.0	3.1	5.10	5.10			
					32.0	6.48	2.82													
			Middle	25.2	32.7	6.19	2.76	2.76	3.0	3.0										
					32.7	6.11	2.76													
			Bottom	24.7	33.4	5.94	2.55	2.56	2.8	2.8										
					33.4	5.98	2.56													

**Mid-Flood Tide**

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)	Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)			DO (S&M)	
					Value	Average	Value	Average	Depth-average	Value	Average	Value	Average	Depth-average	Value	Average	Value	Depth-average	Action Level	Limit Level
03/06/06	08:30 - 08:42	26/Drizzle	Surface	25.3	32.8	32.8	6.25	6.23	6.13	90.7	90.5	2.65	2.67	3.0	3.0	5.45	5.10			
			Middle	25.2	32.9	6.04	6.02	6.13	89.6	89.4	2.88	2.90	3.2	3.2						
			Bottom	25.0	32.9	5.57	5.55	5.55	89.1	89.4	2.92	2.92	3.2	3.2						
05/06/06	12:30 - 12:45	26/Cloudy	Surface	26.2	32.1	32.1	6.59	6.55	6.34	97.0	96.5	3.66	3.63	4.0	4.0	5.45	5.10			
			Middle	25.4	32.2	6.17	6.14	6.34	95.0	90.6	3.60	3.94	4.0	4.3						
			Bottom	25.0	32.2	6.10	6.25	6.25	91.1	91.9	3.97	3.95	4.3	4.3						
07/06/06	15:00 - 15:13	30/Cloudy	Surface	26.8	31.7	31.7	6.65	6.63	6.18	97.2	97.0	2.07	2.07	2.5	2.5	5.45	5.10			
			Middle	26.3	33.3	5.74	5.73	6.18	96.8	83.7	2.06	3.97	4.3	4.3						
			Bottom	26.2	33.6	4.80	4.83	4.83	83.5	71.9	3.97	4.04	4.3	4.3						
09/06/06	16:30 - 16:43	28/Rainy	Surface	26.7	24.0	24.0	5.98	5.97	5.84	86.1	85.9	3.10	3.09	3.5	3.5	5.45	5.10			
			Middle	26.4	32.2	5.72	5.71	5.84	82.3	82.1	2.79	2.79	3.0	3.0						
			Bottom	25.9	32.4	5.69	5.23	5.23	81.9	75.2	2.78	3.63	4.0	4.0						
12/06/06	17:30 - 17:43	28/Cloudy	Surface	26.7	25.0	25.0	6.06	6.06	5.87	86.0	85.8	3.37	3.37	3.5	3.5	5.45	5.10			
			Middle	26.4	32.6	6.05	5.69	5.87	85.6	80.8	3.36	2.93	3.5	3.0						
			Bottom	25.9	32.7	5.68	5.12	5.12	80.9	72.1	2.92	2.87	3.0	2.5						
14/06/06	08:16-08:31	28/Cloudy	Surface	26.1	31.1	31.1	6.99	6.95	6.66	103.5	103.0	2.11	2.06	2.4	2.4	5.45	5.10			
			Middle	25.4	31.7	6.33	6.38	6.66	102.5	93.0	2.01	3.37	3.5	3.5						
			Bottom	25.1	31.9	6.43	6.55	6.55	93.5	96.5	3.32	4.24	4.7	4.8						
16/06/06	08:15-08:28	29/Cloudy	Surface	27.0	32.0	32.0	6.83	6.80	6.65	97.0	96.6	3.08	3.08	2.9	2.9	5.45	5.10			
			Middle	26.6	32.8	6.52	6.49	6.65	96.1	92.2	3.07	3.01	2.8	2.5						
			Bottom	26.3	33.0	6.46	6.63	6.63	95.0	94.2	2.86	2.86	3.0	3.0						
19/06/06	11:15 - 11:30	29/Cloudy	Surface	27.2	33.1	33.1	7.17	7.22	6.89	103.1	103.6	2.12	2.17	2.5	2.5	5.45	5.10			
			Middle	27.0	33.4	6.61	6.56	6.89	104.1	93.7	2.22	2.35	2.8	2.8						
			Bottom	26.0	33.6	6.31	6.26	6.26	93.2	90.9	2.30	3.86	4.3	4.2						

# Mid-Flood Tide



廣業檢測測試顧問有限公司  
ETS-TESTCONSULT LIMITED

## Monitoring Station : C1

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)			DO (S&M)	
			Surface	Middle		Bottom	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Action Level
21/06/06	14:15 - 14:30	31/Sunny	Surface	1.0	27.7	30.9	30.9	6.55	6.52	93.7	93.3	3.38	3.38	3.5	3.5	3.3	3.5	5.10	5.45	5.10	
						30.9	6.49	92.8	3.38	3.5											
						31.3	6.21	88.8	3.03	3.3											
			Middle	9.9	27.5	31.4	6.13	87.7	3.03	3.2	3.09	3.2									
						31.9	6.03	86.2	2.86	3.0											
						31.9	6.09	87.1	2.86	3.0											
Bottom	18.8	27.0	26.7	6.43	95.1	3.29	4.0	4.0	3.29	4.0											
			26.7	6.40	94.7	3.28	4.0	4.0													
			32.9	5.72	84.6	4.02	4.3	4.3													
23/06/06	16:30 - 16:43	31/Sunny	Surface	1.0	29.0	32.8	32.9	5.76	5.74	85.2	84.9	4.03	4.03	4.3	4.3	4.1	4.0	5.10	5.45	5.10	
						32.8	5.76	85.2	4.03	4.3											
						33.3	5.13	75.9	4.18	4.0											
			Middle	9.9	27.8	33.4	5.16	76.3	4.19	4.0	4.19	4.0									
						32.0	6.62	94.7	3.18	3.4											
						32.1	6.58	94.1	3.18	3.4											
Bottom	18.8	26.4	32.7	6.17	88.2	3.04	2.8	2.8	3.04	2.8											
			32.7	6.11	87.4	3.05	2.8	2.8													
			33.1	5.94	84.9	2.87	2.5	2.5													
26/06/06	17:30 - 17:44	31/Sunny	Surface	1.0	27.3	33.1	32.1	5.98	6.14	85.5	85.2	2.88	2.88	2.5	2.5	2.9	4.5	5.10	5.45	5.10	
						33.1	6.30	90.0	3.78	4.5											
						27.9	6.33	90.5	3.76	4.5											
			Middle	10.0	27.1	27.9	5.96	87.8	3.05	2.8	2.8	3.05	2.8								
						27.9	6.32	84.9	2.87	2.5	2.5										
						31.8	5.96	84.6	4.06	4.0	4.0										
Bottom	19.0	26.7	31.8	5.97	84.9	4.07	4.0	4.07	4.07	4.0											
			31.8	5.98	84.9	3.99	3.5														
			32.0	5.17	73.4	3.99	3.5														
28/06/06	14:30 - 14:43	29/Rainy	Surface	1.0	27.6	32.0	32.0	5.19	5.19	73.6	73.6	3.99	3.99	3.5	3.5	4.0	4.5	5.10	5.45	5.10	
						32.0	5.20	73.8	3.98	3.5											
						32.0	5.19	73.8	3.98	3.5											
			Middle	10.1	26.9	32.0	5.19	73.6	3.99	3.5	3.99	3.99	3.5								
						32.0	5.19	73.6	3.99	3.5											
						32.0	5.19	73.6	3.99	3.5											
Bottom	19.2	26.8	32.0	5.19	73.6	3.99	3.5	3.99	3.99	3.5											
			32.0	5.19	73.6	3.99	3.5														
			32.0	5.19	73.6	3.99	3.5														

# Mid-Flood Tide

## Monitoring Station : M4



東業德勘測試驗有限公司  
ETS-TESTCONSULT LIMITED

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
03/04/06	09:50 - 10:03	24/Sunny	Surface	1.0	21.1	32.1	32.2	6.45	6.43	87.3	87.1	2.76	2.79	3.0	3.0	3.1			
			Middle	4.9		32.5	32.5	5.91	5.88	79.9	79.6	3.20	3.22	3.2	3.2				
			Bottom	8.8		32.7	32.7	5.54	5.52	74.9	74.7	3.24	2.97	3.2	3.2				
06/04/06	07:47 - 08:07	20/Cloudy	Surface	1.0	20.8	32.4	32.4	7.07	7.04	96.4	95.9	2.58	2.54	2.8	2.8	2.5			
			Middle	3.9		32.5	32.5	6.66	6.63	91.1	90.6	2.19	2.15	2.2	2.3				
			Bottom	6.8		32.5	32.5	6.60	6.27	85.1	85.6	2.00	1.95	2.3	2.3				
08/04/06	08:58 - 09:11	23/Cloudy	Surface	1.0	21.5	31.7	31.7	6.84	6.82	93.0	92.7	2.98	2.98	3.2	3.2	3.2			
			Middle	4.8		32.8	32.9	6.53	6.52	88.4	88.6	3.02	3.03	3.5	3.5				
			Bottom	8.6		33.0	33.1	6.65	6.64	90.0	90.2	2.88	2.88	3.0	3.0				
10/04/06	17:00 - 17:14	27/Fine	Surface	1.0	23.2	32.4	32.4	6.32	6.30	85.3	85.1	2.84	2.84	3.0	3.0	2.9			
			Middle	5.1		32.4	32.4	6.03	5.99	81.4	80.9	2.75	2.75	2.7	2.7				
			Bottom	9.2		32.8	32.8	5.71	5.68	77.1	76.6	2.88	2.89	3.2	3.1				
12/04/06	17:45 - 17:58	28/Cloudy	Surface	1.0	22.0	32.6	32.6	6.98	6.94	99.9	99.5	3.21	3.16	3.3	3.3	3.8			
			Middle	4.3		32.7	32.7	6.76	6.73	95.2	95.7	3.92	3.87	4.0	4.0				
			Bottom	7.6		32.4	32.4	6.68	6.64	94.4	93.9	4.00	3.98	4.2	4.3				
18/04/06	07:45 - 08:00	28/Cloudy	Surface	1.0	23.2	32.0	32.0	6.63	6.63	88.1	88.0	3.53	3.54	4.0	4.0	3.6			
			Middle	4.8		32.5	32.5	6.31	6.33	83.9	84.2	3.29	3.33	3.5	3.5				
			Bottom	8.6		32.4	32.4	6.35	6.10	80.2	80.4	3.04	3.04	3.2	3.2				
20/04/06	08:00 - 08:16	28/Cloudy	Surface	1.0	22.4	31.9	31.9	6.51	6.47	89.7	89.4	2.27	2.32	2.5	2.5	2.7			
			Middle	4.0		32.1	32.1	6.20	6.16	85.4	84.9	2.95	2.50	2.7	2.8				
			Bottom	7.0		32.4	32.4	6.31	6.36	86.9	87.4	2.86	2.63	2.7	2.8				
22/04/06	08:45 - 09:00	28/Cloudy	Surface	1.0	23.8	31.6	31.6	6.85	6.83	93.8	93.5	3.63	3.64	4.0	4.0	3.5			
			Middle	4.8		32.2	32.3	6.43	6.42	88.0	87.8	3.07	3.07	3.2	3.2				
			Bottom	8.6		32.5	32.5	6.54	6.53	88.9	88.7	3.14	3.15	3.2	3.4				

# Mid-Flood Tide

## Monitoring Station : M4



榮業德勘測試驗有限公司  
ETS-TESTCONSULT LIMITED

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average
24/04/06	15:30 - 15:46	23/Cloudy	Surface	1.0	20.1	32.3	32.3	6.54	6.52	6.36	89.1	89.9	2.83	2.86	3.0	3.0	2.8	2.5	3.0
						32.3	32.3	6.50	6.20	89.6	85.3	2.89	2.68	3.0	2.7				
						32.3	32.4	6.23	6.17	85.0	85.0	2.64	2.72	2.8	2.8				
26/04/06	16:50 - 17:06	26/Cloudy	Surface	1.0	21.7	32.6	32.6	6.52	6.50	6.50	89.0	88.8	2.16	2.20	3.0	3.0	3.1	3.0	3.0
						32.6	32.1	6.48	6.89	88.6	95.3	2.23	2.84	3.0	3.2				
						32.1	32.1	6.94	6.84	95.0	92.7	2.80	2.64	3.0	3.0				
28/04/06	12:28 - 12:42	25/Rainy	Surface	1.0	23.4	32.1	32.1	6.70	6.74	6.81	93.0	92.7	2.67	2.64	3.0	3.0	3.2	3.0	3.0
						32.1	32.4	6.77	6.47	6.47	89.6	89.3	2.60	2.84	3.0	3.0			
						32.4	32.4	6.50	6.44	6.47	89.0	89.0	2.79	2.89	3.0	3.0			
02/05/06	08:13 - 08:26	27/Cloudy	Surface	1.0	24.0	32.3	32.2	6.31	6.29	6.33	89.4	89.2	2.95	2.96	3.0	3.0	3.2	3.0	3.0
						32.4	32.1	6.27	6.36	6.36	90.1	90.2	2.96	2.35	3.0	2.5			
						32.8	32.9	6.47	6.43	6.38	90.7	90.5	2.33	2.36	3.0	4.0			
04/05/06	07:05 - 07:20	26/Cloudy	Surface	1.0	27.5	32.7	32.8	6.39	6.38	6.38	90.3	87.7	3.64	3.04	3.0	3.0	2.6	3.0	3.0
						32.7	33.0	6.29	6.22	6.22	87.4	87.9	3.03	2.07	3.0	2.3			
						33.0	31.7	6.24	6.13	6.13	86.7	84.5	3.04	2.00	3.0	3.0			
06/05/06	07:45 - 07:58	29/Sunny	Surface	1.0	24.0	31.1	31.1	6.68	6.64	6.44	91.8	91.4	2.60	2.56	3.0	2.5	2.9	2.5	3.0
						31.1	31.4	6.60	6.24	6.30	90.9	88.0	2.52	2.04	3.0	2.2			
						31.4	31.4	6.19	6.24	6.22	85.7	85.1	2.07	2.87	3.0	2.8			
08/05/06	14:43 - 14:56	30/Cloudy	Surface	1.0	27.7	31.7	31.7	6.08	6.03	6.03	85.0	85.1	3.06	2.66	3.0	2.5	2.7	2.5	2.5
						31.7	32.3	6.18	6.39	6.75	85.0	98.7	3.00	2.69	3.0	2.5			
						32.3	32.3	6.42	6.21	6.62	90.9	98.9	2.91	2.84	3.0	2.7			
10/05/06	16:43 - 16:56	31/Sunny	Surface	1.0	28.2	32.4	32.8	6.36	6.82	6.74	88.1	96.7	2.84	2.99	3.0	3.3	3.1	3.0	2.9
						32.4	32.8	6.22	6.66	6.66	88.1	96.9	2.84	2.79	3.0	3.2			
						32.5	33.2	6.20	6.64	6.66	87.9	94.7	2.90	2.78	3.0	3.0			



# Mid-Flood Tide

## Monitoring Station : M4



東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average
12/05/06	17:00 - 17:16	30/Cloudy	1.0	3.9	25.1	32.3	32.3	6.77	6.74	6.56	93.2	92.7	2.55	2.50	2.5	2.5	2.5	2.5	2.5
						32.3	32.4	6.70	6.38	6.56	92.2	86.7	2.45	2.57	2.5	2.5	2.5	2.5	
						32.4	32.5	6.33	6.24	6.47	86.2	86.5	2.62	2.76	2.5	2.7	2.5	2.7	
15/05/06	07:43 - 07:56	30/Sunny	1.0	4.8	27.7	32.5	32.4	6.20	6.56	6.47	86.9	93.0	2.81	3.29	3.5	3.5	3.5	3.5	3.5
						32.4	32.8	6.57	6.39	6.22	86.0	90.8	2.71	2.88	3.2	3.0	3.0	3.0	
						32.3	32.8	6.54	6.43	6.22	92.8	87.7	3.28	2.74	3.5	3.2	3.5	3.2	
19/05/06	09:28 - 09:41	28/Sunny	1.0	4.9	27.0	32.8	33.0	6.41	6.55	6.49	91.0	98.3	2.87	3.90	4.0	4.0	4.0	4.0	4.0
						32.8	33.1	6.44	6.32	6.39	90.5	94.8	2.88	3.96	4.0	4.0	4.0	4.0	
						32.9	33.1	6.20	6.39	6.39	87.4	93.8	2.74	3.80	4.0	4.0	4.0	4.0	
22/05/06	14:46 - 14:58	26/Cloudy	1.0	8.2	25.4	32.6	32.6	6.37	6.32	6.31	87.9	94.6	2.73	3.78	3.7	3.7	3.7	3.7	3.7
						32.6	32.8	6.36	6.30	6.28	95.0	94.2	3.76	3.87	3.8	3.8	3.8	3.8	
						32.8	33.0	6.28	6.28	6.28	93.9	93.8	3.84	3.63	3.8	3.5	3.5	3.5	
24/05/06	16:13 - 16:26	28/Cloudy	1.0	4.5	25.5	33.0	33.0	6.40	5.56	5.37	94.6	81.7	3.66	3.71	4.0	4.0	4.0	4.0	4.0
						33.1	32.2	6.37	5.18	5.31	93.5	75.8	3.70	3.53	4.0	3.5	3.5	3.5	
						32.3	32.6	5.54	5.18	5.31	81.5	77.6	3.71	4.02	4.0	4.4	4.0	4.4	
26/05/06	17:30 - 17:46	26/Sunny	1.0	8.0	25.1	32.6	32.7	5.31	6.47	6.26	77.4	94.5	4.01	3.65	3.8	3.8	3.8	3.8	3.8
						32.6	33.1	5.30	6.05	6.09	94.0	87.6	3.70	2.86	3.8	3.2	3.8	3.2	
						33.1	33.2	6.44	6.14	6.14	95.0	89.7	3.60	2.74	3.8	3.0	3.0	3.0	
29/05/06	07:43 - 07:56	26/Rainy	1.0	4.8	25.2	33.2	33.4	6.09	6.32	6.09	90.2	89.0	2.77	3.66	3.8	3.8	3.8	3.8	3.8
						33.2	31.3	6.18	5.86	6.09	89.2	82.6	2.70	3.23	3.8	3.5	3.5	3.5	
						33.4	31.5	6.10	5.45	5.45	88.8	76.2	3.24	3.51	3.5	4.0	4.0	4.0	
01/06/06	07:50 - 08:03	27/Rainy	1.0	8.4	24.6	33.4	33.1	6.10	6.35	6.21	88.2	90.2	3.50	3.21	3.2	3.2	3.2	3.2	3.2
						33.4	32.0	5.46	6.07	6.21	89.7	86.1	3.51	2.99	3.2	3.0	3.0	3.0	
						33.1	32.8	5.94	5.91	5.91	90.6	83.9	3.20	2.75	3.0	2.5	2.5	2.5	

# Mid-Flood Tide

## Monitoring Station : M4



東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
03/06/06	09:13 - 09:26	26/Drizzle	Surface	1.0	25.3	32.7	32.7	6.44	6.43	93.6	93.4	3.14	3.16	3.0	3.0	3.0			
			Middle	4.6	25.2	32.8	32.8	6.18	6.15	91.3	91.0	2.72	2.76	3.0	3.0				
			Bottom	8.2	25.2	33.0	33.0	5.75	5.74	87.4	87.2	2.60	2.63	2.8	2.9				
05/06/06	11:45 - 12:00	26/Cloudy	Surface	1.0	25.6	31.9	31.9	6.67	6.64	98.0	97.5	3.55	3.50	3.8	3.8	3.8			
			Middle	4.3	25.5	32.1	32.1	6.29	6.34	91.1	91.6	3.39	3.35	3.5	3.5				
			Bottom	7.6	25.4	32.2	32.2	6.15	6.10	90.6	90.3	3.82	3.77	4.0	4.0				
07/06/06	15:43 - 15:56	30/Cloudy	Surface	1.0	27.5	25.8	25.9	6.91	6.92	100.7	101.0	2.60	2.62	2.8	2.8	2.8			
			Middle	4.5	27.0	27.7	27.7	6.31	6.30	92.1	92.0	2.32	2.32	2.5	2.5				
			Bottom	8.0	26.4	32.8	32.8	5.18	5.20	77.2	77.4	4.14	4.15	4.5	4.5				
09/06/06	17:13 - 17:26	28/Rainy	Surface	1.0	26.6	23.7	23.7	6.07	6.06	87.4	87.2	2.96	2.96	3.2	3.2	3.2			
			Middle	4.9	26.2	32.0	32.0	5.83	5.84	83.3	83.5	3.05	3.05	3.5	3.5				
			Bottom	8.8	25.9	32.4	32.4	5.37	5.35	76.7	76.5	3.43	3.43	3.5	3.5				
12/06/06	18:13 - 18:26	28/Cloudy	Surface	1.0	26.6	24.9	24.9	6.10	6.12	86.6	86.9	2.89	2.89	3.0	3.0	3.0			
			Middle	4.8	26.3	29.8	29.8	5.81	5.80	82.5	82.7	2.64	2.64	2.5	2.5				
			Bottom	8.6	26.1	32.1	32.1	5.29	5.27	75.1	74.8	2.77	2.77	2.5	2.5				
14/06/06	07:30-07:46	28/Cloudy	Surface	1.0	25.9	31.1	31.1	6.72	6.67	99.5	99.0	2.51	2.46	3.0	3.0	3.0			
			Middle	4.3	25.2	31.6	31.6	6.44	6.39	94.1	93.6	2.97	2.89	2.5	2.5				
			Bottom	7.6	25.3	31.6	31.6	6.19	6.24	91.4	91.9	2.81	2.86	2.8	2.9				
16/06/06	08:59-09:13	29/Cloudy	Surface	1.0	27.1	32.1	32.1	6.91	6.87	98.1	97.5	2.93	2.93	3.0	3.0	3.0			
			Middle	4.6	26.9	32.7	32.7	6.47	6.44	91.9	91.5	2.64	2.64	3.0	3.0				
			Bottom	8.2	26.6	33.2	33.2	6.32	6.29	89.7	89.4	2.51	2.51	2.7	2.8				
19/06/06	12:03 - 12:13	29/Cloudy	Surface	1.0	27.1	32.7	32.7	7.51	7.46	107.0	106.5	1.91	1.86	2.2	2.2	2.2			
			Middle	4.1	26.6	32.6	32.6	6.32	6.27	89.6	89.3	2.37	2.38	2.5	2.5				
			Bottom	7.2	25.8	33.2	33.2	6.50	6.45	99.2	98.7	3.59	3.55	4.0	4.0				

# Mid-Flood Tide



榮業德動測試驗有限公司  
ETS-TESTCONSULT LIMITED

## Monitoring Station : M4

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Middle		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
21/06/06	15:01 - 15:15	31/Sunny	Surface	1.0	27.6	31.0	31.1	6.42	6.45	91.8	92.3	3.31	3.31	3.5	3.5	3.3			
						31.1	31.1	6.48	6.30	92.7	3.31	3.5							
						31.2	31.3	6.11	6.15	87.4	3.16	3.5							
23/06/06	17:13 - 17:26	31/Sunny	Middle	4.2	27.4	31.3	31.3	6.19	6.15	88.5	88.0	3.16	3.16	3.5	3.5	2.9			
						31.3	32.1	5.92	5.95	84.7	3.03	3.0							
						32.0	32.1	5.98	5.95	85.5	3.03	3.0							
23/06/06	17:13 - 17:26	31/Sunny	Bottom	7.4	27.3	25.8	25.8	6.62	6.61	98.6	98.4	2.49	2.50	3.0	3.0	2.9			
						25.8	28.1	6.59	6.31	98.1	2.50	2.5							
						28.0	28.1	6.29	6.31	93.7	1.97	2.5							
23/06/06	17:13 - 17:26	31/Sunny	Surface	1.0	29.2	33.0	33.1	5.57	5.55	82.4	82.1	2.63	2.63	3.3	3.3	2.9			
						33.1	33.1	5.53	5.55	81.8	2.62	3.2							
						32.1	32.1	6.53	6.57	93.4	3.10	3.0							
26/06/06	18:13 - 18:27	28/Sunny	Middle	4.6	27.0	32.6	32.6	6.04	6.07	86.4	86.8	2.98	2.98	2.8	2.8	2.8			
						32.6	32.6	6.10	6.07	87.2	2.98	2.8							
						33.2	33.2	5.86	5.89	83.8	2.91	2.5							
26/06/06	18:13 - 18:27	28/Sunny	Bottom	8.2	26.9	33.2	33.2	5.92	5.89	84.7	84.3	2.91	2.91	2.5	2.5	2.8			
						33.2	32.1	6.61	6.57	94.5	3.10	3.0							
						32.1	32.1	6.61	6.57	94.5	3.10	3.0							
28/06/06	15:13 - 15:26	29/Rainy	Surface	1.0	27.8	28.4	28.4	6.45	6.47	92.6	92.4	3.60	3.61	3.8	3.8	3.4			
						28.3	28.4	6.45	6.47	92.2	3.62	3.8							
						31.9	31.9	6.07	6.05	86.8	3.27	3.5							
28/06/06	15:13 - 15:26	29/Rainy	Middle	4.9	27.0	31.9	31.9	6.03	6.05	86.2	86.5	3.26	3.27	3.5	3.5	3.4			
						31.9	32.1	5.34	5.32	75.8	3.34	3.0							
						32.1	32.1	5.34	5.32	75.2	3.35	3.0							

# Mid-Ebb Tide



英業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

## Monitoring Station : C1

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Disolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)				
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
03/04/06	15:03 - 15:17	26/Sunny	Surface	1.0	22.2	32.0	32.0	6.07	6.06	82.1	81.9	3.17	3.20	3.5	3.5	3.2					
			Middle	9.9	20.3	32.4	32.4	5.72	5.70	77.3	77.1	2.64	2.67	3.0	3.0						
			Bottom	18.8	20.0	32.6	32.6	5.02	4.99	67.9	67.7	3.02	3.04	3.2	3.2						
06/04/06	18:16 - 18:31	22/Cloudy	Surface	1.0	20.8	32.2	32.2	7.21	7.16	98.6	98.3	1.88	1.84	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.5
			Middle	10.6	20.6	32.5	32.5	6.80	6.75	93.0	92.5	2.17	2.22	2.5	2.5						
			Bottom	20.2	20.4	32.7	32.7	6.51	6.46	88.9	88.5	2.30	2.25	2.7	2.8						
08/04/06	18:30 - 18:43	23/Cloudy	Surface	1.0	21.2	31.6	31.6	6.85	6.83	93.1	92.9	3.14	3.15	3.0	3.1	3.0	3.0	3.0	3.0	3.0	3.0
			Middle	9.8	20.7	32.8	32.8	6.69	6.67	90.9	90.7	2.82	2.83	3.0	3.0						
			Bottom	18.6	20.4	32.9	33.0	6.17	6.19	83.2	83.4	2.56	2.55	2.5	2.5						
10/04/06	11:00 - 11:15	27/Fine	Surface	1.0	23.1	32.1	32.1	6.34	6.31	84.8	85.2	3.28	3.28	3.5	3.5	3.3	3.3	3.3	3.3	3.3	3.3
			Middle	10.2	22.6	32.2	32.2	5.95	5.93	80.3	80.1	3.19	3.19	3.2	3.2						
			Bottom	19.4	22.5	32.6	32.6	5.42	5.40	73.1	72.9	3.07	3.07	3.2	3.2						
12/04/06	12:28 - 12:45	28/Cloudy	Surface	1.0	22.3	32.0	32.0	6.64	6.67	93.2	93.6	4.39	4.35	4.5	4.5	5.4	5.4	5.4	5.4	5.4	5.4
			Middle	10.7	22.4	32.9	32.9	6.78	6.74	95.8	95.4	4.93	4.88	5.2	5.3						
			Bottom	20.4	22.7	32.1	32.1	6.53	6.57	95.0	93.8	6.18	6.14	6.5	6.5						
18/04/06	13:45 - 13:58	28/Cloudy	Surface	1.0	23.7	32.1	32.1	6.71	6.73	89.6	89.4	3.27	3.26	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4
			Middle	9.9	23.4	32.5	32.5	6.43	6.42	85.5	85.3	2.94	2.93	3.3	3.3						
			Bottom	18.8	22.8	32.9	32.9	6.10	6.12	80.5	80.7	3.05	3.05	3.5	3.5						
20/04/06	16:50 - 17:06	28/Cloudy	Surface	1.0	22.1	32.1	32.1	6.61	6.66	92.1	91.6	2.21	2.16	2.2	2.2	2.6	2.6	2.6	2.6	2.6	2.6
			Middle	11.5	21.4	32.4	32.4	6.44	6.39	88.8	88.4	2.40	2.35	2.5	2.5						
			Bottom	22.0	21.0	32.6	32.6	6.21	6.21	85.2	84.7	2.81	2.77	3.0	3.0						
22/04/06	17:30 - 17:45	28/Cloudy	Surface	1.0	24.4	31.7	31.7	6.89	6.87	94.3	94.1	3.43	3.44	3.5	3.5	3.3	3.3	3.3	3.3	3.3	3.3
			Middle	9.9	24.1	32.5	32.5	6.63	6.62	90.8	90.6	2.94	2.94	3.0	3.0						
			Bottom	18.8	23.7	32.6	32.6	6.20	6.22	84.3	84.5	3.06	3.07	3.5	3.5						

**Mid-Ebb Tide**

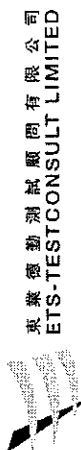


東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average
24/04/06	11:10 - 11:25	23/Cloudy	Surface	1.0	20.2	32.3	32.3	6.72	6.70	6.58	92.3	92.1	2.64	2.66	3.0	3.0	3.0		
			Middle	11.3	19.4	32.6	32.6	6.45	6.47	89.1	88.9	2.68	2.80	3.2	3.2				
			Bottom	21.6	19.0	32.8	32.8	6.48	6.28	88.6	85.0	2.85	2.52	3.2	2.7				
26/04/06	11:14 - 11:28	26/Cloudy	Surface	1.0	22.1	31.7	31.7	7.07	7.11	6.94	96.5	97.0	2.92	2.88	3.5	3.4	3.1		
			Middle	10.5	21.6	32.0	32.0	6.80	6.76	92.8	92.4	2.17	2.14	2.5	2.5				
			Bottom	20.0	21.1	32.4	32.4	6.51	6.48	88.9	88.5	2.10	2.95	3.5	3.5				
28/04/06	17:30 - 17:43	25/Rainy	Surface	1.0	23.6	32.0	32.0	6.52	6.51	6.36	91.9	91.7	3.07	3.07	3.3	3.3	3.1		
			Middle	10.1	23.4	32.5	32.6	6.49	6.22	87.3	87.1	3.06	2.90	2.7	2.8				
			Bottom	19.2	23.2	32.9	33.0	6.20	6.13	86.9	86.4	2.89	3.13	3.2	3.2				
02/05/06	14:30 - 14:43	27/Cloudy	Surface	1.0	24.4	32.3	32.3	6.56	6.55	6.43	92.4	92.2	2.92	2.93	3.2	3.3	3.2		
			Middle	9.7	23.7	32.8	32.9	6.30	6.32	88.8	89.0	2.76	2.77	3.0	3.0				
			Bottom	18.4	23.4	33.0	33.0	6.33	6.06	89.2	85.4	2.77	2.95	3.3	3.3				
04/05/06	17:05 - 17:21	26/Cloudy	Surface	1.0	27.4	31.0	31.0	7.00	6.95	6.61	95.5	95.0	2.37	2.34	2.5	2.5	2.7		
			Middle	11.5	27.8	31.2	31.2	6.90	6.26	86.1	85.6	2.30	2.66	2.5	2.7				
			Bottom	22.0	27.0	31.7	31.7	6.21	6.05	85.1	82.6	2.60	2.60	2.7	2.7				
06/05/06	16:30 - 16:44	29/Sunny	Surface	1.0	24.2	32.2	32.2	6.64	6.62	6.51	94.0	93.8	3.25	3.27	3.5	3.5	3.0		
			Middle	9.6	23.7	32.8	32.8	6.42	6.40	90.9	90.7	2.68	2.72	3.0	3.0				
			Bottom	18.2	23.4	33.0	33.0	6.37	6.02	90.4	84.6	2.76	2.43	2.5	2.5				
08/05/06	09:00 - 09:13	30/Cloudy	Surface	1.0	27.2	32.0	32.0	6.62	6.61	6.46	94.0	93.8	3.42	3.43	3.5	3.5	3.3		
			Middle	9.8	26.8	33.0	33.0	6.30	6.32	89.4	89.6	2.97	2.98	3.0	3.0				
			Bottom	18.6	26.7	33.1	33.1	5.98	5.97	89.8	84.1	2.98	3.07	3.5	3.5				
10/05/06	10:00 - 10:13	31/Sunny	Surface	1.0	27.9	32.8	32.8	6.62	6.64	6.48	94.0	94.2	3.45	3.46	4.0	3.9	3.5		
			Middle	9.9	27.5	33.1	33.1	6.30	6.32	88.8	89.0	3.17	3.16	3.2	3.2				
			Bottom	18.8	27.4	33.2	33.2	6.12	6.14	86.2	86.5	3.06	3.07	3.5	3.5				

**Mid-Ebb Tide**



東業德動測試顧問有限公司  
ETS-TESTCONSULT LIMITED

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
12/05/06	11:58 - 12:13	30/Sunny	Surface	1.0	26.7	31.7	31.7	6.81	6.76	92.9	92.5	2.81	2.76	3.0	3.0	2.8			
			Middle	11.0	26.3	32.1	32.1	6.42	6.37	88.0	87.5	2.44	2.42	2.5	2.5				
			Bottom	21.0	25.8	32.2	32.2	6.21	6.16	85.7	85.4	2.77	2.74	2.8	2.8				
15/05/06	12:00 - 12:13	30/Sunny	Surface	1.0	28.4	32.5	32.5	6.40	6.42	90.8	91.1	3.20	3.21	3.5	3.5	3.3			
			Middle	9.8	28.0	32.8	32.8	6.17	6.19	87.6	87.8	3.01	3.02	3.3	3.3				
			Bottom	18.6	27.0	32.9	32.9	5.89	5.87	83.0	82.7	2.89	2.88	3.0	3.0				
19/05/06	16:40 - 16:53	28/Sunny	Surface	1.0	27.1	32.3	32.3	6.42	6.44	94.3	94.6	3.76	3.75	4.0	4.0	3.8			
			Middle	9.9	25.9	33.2	33.2	6.34	6.36	93.6	93.4	3.49	3.49	3.8	3.8				
			Bottom	18.8	25.4	33.3	33.3	6.28	6.28	91.8	91.6	3.70	3.71	3.5	3.5				
22/05/06	08:30 - 08:44	25/Cloudy	Surface	1.0	24.2	32.4	32.4	6.25	6.31	93.5	94.3	3.52	3.49	3.8	3.8	3.5			
			Middle	9.7	23.6	33.0	33.0	6.22	6.19	92.2	92.6	3.28	3.32	3.5	3.5				
			Bottom	18.4	23.2	33.3	33.3	6.24	6.30	93.4	94.2	3.40	3.34	3.2	3.2				
24/05/06	09:30 - 09:43	28/Cloudy	Surface	1.0	25.4	31.7	31.7	5.71	5.73	83.4	83.6	3.30	3.30	3.5	3.5	3.9			
			Middle	9.9	25.2	32.4	32.4	5.75	5.77	84.0	83.9	4.13	4.13	4.2	4.3				
			Bottom	18.8	25.2	32.5	32.5	5.75	5.73	83.2	83.4	3.93	3.93	4.0	4.0				
26/05/06	11:15 - 11:31	26/Sunny	Surface	1.0	25.5	32.8	32.8	6.17	6.14	90.1	89.6	2.52	2.47	2.7	2.7	3.8			
			Middle	9.7	25.4	33.1	33.1	5.96	5.93	88.0	88.5	4.20	4.24	4.5	4.5				
			Bottom	18.4	25.4	33.1	33.1	5.73	5.68	84.9	84.5	3.97	3.94	4.3	4.3				
29/05/06	12:30 - 12:43	26/Rainy	Surface	1.0	25.4	30.3	30.3	6.68	6.66	94.1	93.9	3.43	3.43	3.5	3.5	3.5			
			Middle	9.8	25.1	31.2	31.2	6.20	6.22	87.4	87.7	3.57	3.57	3.8	3.8				
			Bottom	18.6	24.8	31.5	31.5	5.94	5.93	83.7	83.5	3.12	3.12	3.2	3.2				
01/06/06	16:14 - 16:28	27/Rainy	Surface	1.0	26.1	31.7	31.7	6.53	6.50	92.7	92.3	2.76	2.76	3.0	3.0	2.8			
			Middle	10.9	25.4	32.6	32.6	6.17	6.13	86.5	87.1	2.52	2.52	2.7	2.8				
			Bottom	20.8	24.9	33.1	33.1	5.99	5.96	85.1	84.7	2.44	2.45	2.7	2.8				

**Mid-Ebb Tide**



**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
03/06/06	16:00 - 16:14	26/Drizzle	Surface	1.0	25.4	32.6	32.6	6.03	6.01	87.5	87.3	2.95	2.98	3.5	3.4	3.0			
			Middle	9.8	25.2	32.7	32.7	5.98	5.86	87.0	85.2	3.01	2.47	3.3	2.5				
			Bottom	18.6	25.0	32.8	32.8	5.83	5.42	84.8	78.6	2.49	2.74	2.5	3.0				
05/06/06	18:17 - 18:31	26/Cloudy	Surface	1.0	25.8	32.4	32.4	6.80	6.65	97.6	98.1	3.41	3.46	3.5	3.5	3.6			
			Middle	10.5	25.8	32.5	32.5	6.09	6.14	98.6	90.5	3.51	3.74	3.5	4.0				
			Bottom	20.0	25.5	32.5	32.5	6.19	5.95	91.0	88.5	3.77	3.16	4.0	3.3				
07/06/06	08:30 - 08:43	30/Cloudy	Surface	1.0	27.2	32.5	25.5	6.03	6.62	88.9	95.9	3.11	2.27	2.5	2.5	3.6			
			Middle	9.9	26.4	32.6	32.6	5.90	5.67	88.0	82.7	3.21	3.97	2.5	4.3				
			Bottom	18.8	26.3	33.1	33.1	5.65	5.36	79.8	79.7	3.86	3.87	4.0	4.0				
09/06/06	10:00 - 10:13	28/Rainy	Surface	1.0	26.5	32.4	24.2	6.14	6.16	96.1	88.1	3.79	3.78	4.0	4.0	4.1			
			Middle	10.0	26.2	32.4	32.4	6.18	5.77	87.8	81.9	3.77	3.63	4.0	4.0				
			Bottom	19.0	25.8	32.8	32.8	5.79	5.20	82.2	73.8	3.62	3.89	4.0	4.3				
12/06/06	11:30 - 11:43	28/Cloudy	Surface	1.0	26.5	32.7	24.7	6.10	6.12	79.5	86.9	3.89	3.68	3.5	3.5	3.7			
			Middle	9.9	26.2	32.4	32.4	6.14	5.93	87.1	83.5	3.69	3.59	3.5	3.5				
			Bottom	18.8	25.7	32.7	32.7	5.91	5.19	83.3	73.1	3.58	4.11	4.0	4.0				
14/06/06	13:40-13:55	28/Cloudy	Surface	1.0	26.3	31.9	31.9	6.79	6.75	100.0	99.5	4.12	2.52	3.0	2.9	2.8			
			Middle	10.0	26.0	32.1	32.1	6.70	6.24	99.0	92.2	2.57	2.29	2.8	2.5				
			Bottom	19.0	25.5	32.4	32.4	6.29	6.34	92.7	92.7	2.20	2.94	2.5	3.0				
16/06/06	15:00-15:14	29/Cloudy	Surface	1.0	27.4	32.0	32.0	6.30	6.72	93.2	95.4	2.99	3.07	3.0	3.5	3.3			
			Middle	9.9	27.2	32.8	32.8	6.74	6.40	95.7	90.9	3.06	2.98	3.5	3.2				
			Bottom	18.8	26.8	33.0	33.1	6.43	6.55	91.3	93.0	2.97	2.90	3.2	3.3				
19/06/06	17:48 - 18:08	30/Cloudy	Surface	1.0	27.7	32.6	32.6	6.51	6.94	92.4	100.8	2.91	3.56	4.0	4.0	3.7			
			Middle	10.0	27.0	33.1	33.1	6.88	6.43	101.3	92.4	3.61	3.13	4.0	3.3				
			Bottom	19.0	25.2	33.6	33.6	6.46	6.12	92.8	87.0	3.16	3.54	3.2	3.8				

**Mid-Ebb Tide**

**Monitoring Station : C1**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
			Surface	Middle		Value	Average	Value	Average	Value	Average	Value	Depth-average	Value	Average
21/06/06	08:30 - 08:44	30/Sunny	Surface	1.0	27.5	30.7	30.7	6.41	6.44	91.0	91.5	3.17	3.17	3.5	3.5
			Middle	9.7	27.3	31.2	31.2	6.18	6.14	88.4	87.8	2.84	2.84	3.2	3.2
			Bottom	18.4	27.0	32.1	32.1	5.92	5.95	84.7	85.1	2.61	2.61	3.0	3.0
23/06/06	09:45 - 09:58	30/Sunny	Surface	1.0	28.4	26.5	26.5	6.66	6.68	96.1	96.3	2.35	2.35	2.7	2.7
			Middle	9.5	26.3	32.8	32.8	6.69	4.33	96.5	63.5	2.25	3.27	3.5	3.5
			Bottom	18.0	25.2	33.4	33.4	4.29	4.31	63.7	63.2	3.26	4.22	4.0	4.0
26/06/06	12:00 - 12:13	30/Sunny	Surface	1.0	27.1	31.9	31.9	6.71	6.68	96.0	95.6	3.36	3.36	3.0	3.0
			Middle	9.7	26.9	32.5	32.5	6.28	6.24	89.8	89.3	3.03	3.03	3.5	3.5
			Bottom	18.4	26.6	33.0	33.0	6.20	6.00	88.7	85.8	3.02	2.94	3.0	3.0
28/06/06	08:00 - 08:13	29/Rainy	Surface	1.0	27.8	28.0	28.0	5.97	6.45	85.4	92.2	2.95	3.20	3.5	3.5
			Middle	9.8	27.0	31.9	31.9	6.43	5.94	91.9	84.8	3.22	3.76	4.3	4.3
			Bottom	18.6	26.9	32.1	32.1	5.95	5.35	85.0	75.9	3.77	4.30	4.5	4.5



**Mid-Ebb Tide**

**Monitoring Station : M4**



東榮 德勤 测试 顾问 有限公司  
ETS-TESTCONSULT LIMITED

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)	Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
					Value	Average	Value	Average	Depth-average	Value	Average	Value	Average	Depth-average	Value	Average	Value	Average
03/04/06	15:42 - 15:58	26/Sunny	Surface	22.0	31.9	31.9	6.19	6.16	83.7	83.4	3.59	3.61	3.2	3.1	2.9			
			Middle	20.3	32.3	32.3	5.80	5.78	83.0	78.2	2.63	2.30	3.0	3.0				
			Bottom	20.1	32.5	32.5	5.75	5.64	77.9	76.3	2.33	3.01	3.0	2.7				
06/04/06	17:20 - 17:45	22/Cloudy	Surface	20.7	32.1	32.1	5.66	6.77	76.1	93.4	2.98	2.32	2.2	2.1	2.2			
			Middle	2.7	33.0	33.0	5.62	6.45	93.0	87.4	2.07	2.04	2.0	2.2				
			Bottom	20.6	33.1	33.1	6.82	6.27	87.8	90.3	1.99	2.47	2.0	2.3				
08/04/06	19:13 - 19:28	23/Cloudy	Surface	21.0	31.5	31.5	6.32	7.03	90.7	95.5	2.51	2.64	2.8	2.8	2.5			
			Middle	20.7	32.8	32.8	7.04	6.73	95.7	90.8	2.63	2.28	2.7	2.3				
			Bottom	20.5	33.0	33.0	7.01	6.64	95.3	89.5	2.27	2.12	2.3	2.5				
10/04/06	11:46 - 11:59	27/Fine	Surface	23.4	32.2	32.2	6.65	6.44	89.7	87.0	2.11	2.84	3.0	3.0	3.2			
			Middle	22.8	32.4	32.4	6.40	6.09	86.4	82.2	2.84	2.71	3.0	3.1				
			Bottom	22.6	32.6	32.6	6.75	5.73	82.6	77.4	2.71	2.82	3.2	3.5				
12/04/06	11:45 - 12:00	28/Cloudy	Surface	23.1	31.0	31.0	5.76	7.13	77.0	101.8	2.81	2.74	3.2	3.1	3.5			
			Middle	23.2	32.1	32.1	5.70	6.95	102.3	100.0	2.78	3.24	3.0	3.5				
			Bottom	22.7	32.7	32.7	6.06	6.47	100.5	93.4	3.20	3.89	3.5	4.0				
18/04/06	14:28 - 14:42	28/Cloudy	Surface	23.8	32.0	32.0	6.43	6.83	93.8	90.8	3.94	2.97	4.0	3.0	2.9			
			Middle	23.2	32.5	32.5	6.81	6.56	91.1	86.5	2.96	2.88	3.0	2.9				
			Bottom	22.9	32.9	32.9	6.57	6.17	86.7	81.4	2.87	2.66	3.0	2.8				
20/04/06	16:00 - 16:16	28/Cloudy	Surface	22.4	32.1	32.1	6.54	6.55	81.7	89.8	3.84	3.03	2.8	2.9	2.6			
			Middle	21.5	32.1	32.1	6.19	6.34	90.3	86.8	2.66	2.67	2.5	2.5				
			Bottom	21.2	32.2	32.2	6.15	6.14	84.5	84.0	2.52	2.48	2.5	2.5				
22/04/06	18:15 - 18:30	28/Cloudy	Surface	24.3	31.7	31.7	6.10	6.96	83.5	95.3	2.44	2.98	3.0	3.0	3.1			
			Middle	24.0	32.5	32.5	6.94	6.55	95.0	89.7	2.97	2.89	3.0	3.3				
			Bottom	23.9	32.6	32.6	6.57	6.41	89.3	87.7	2.88	2.91	3.3	2.9				

**Mid-Ebb Tide**



英業 實動 測 試 顧 問 有 限 公 司  
ETS-TESTCONSULT LIMITED

**Monitoring Station : M4**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)				
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
24/04/06	10:32 - 10:48	23/Cloudy	1.0	Surface	20.0	32.4	32.4	6.61	6.58	90.4	90.2	3.16	3.19	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Middle		32.4		6.55		87.4		3.22		3.0							
				Bottom		32.5		6.41		86.9		2.88		3.0							
26/04/06	12:00 - 12:15	26/Cloudy	4.0	Surface	21.6	32.5	32.5	6.37	6.39	91.1	90.6	2.92	2.90	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
				Middle		32.6		6.22		84.7		2.57		3.2							
				Bottom		32.6		6.18		84.3		2.66		3.0							
28/04/06	18:13 - 18:28	25/Rainy	4.7	Surface	23.4	32.0	32.0	7.22	7.17	98.6	98.3	3.07	3.04	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Middle		32.4		6.67		91.1		3.27		3.0							
				Bottom		32.4		6.60		90.1		3.20		3.0							
02/05/06	15:13 - 15:26	27/Cloudy	8.4	Surface	23.3	32.6	32.6	6.39	6.35	87.3	86.8	3.19	3.15	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
				Middle		32.2		6.67		94.0		2.76		2.8							
				Bottom		32.2		6.64		93.6		2.78		2.8							
04/05/06	16:30 - 16:46	26/Cloudy	1.0	Surface	24.5	32.8	32.8	6.40	6.42	90.2	90.4	2.53	2.53	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
				Middle		32.8		6.43		90.6		2.52		2.5							
				Bottom		32.7		6.29		88.6		2.69		2.5							
06/05/06	17:12 - 17:28	29/Sunny	1.0	Surface	23.8	33.0	33.0	6.25	6.27	88.1	88.4	2.67	2.68	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
				Middle		32.3		6.65		93.7		2.82		2.8							
				Bottom		32.2		6.65		93.7		2.82		2.8							
08/05/06	10:43 - 10:56	31/Sunny	4.4	Surface	27.3	32.9	32.9	6.27	6.25	88.4	88.1	2.52	2.52	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
				Middle		32.9		6.23		87.8		2.51		2.5							
				Bottom		33.0		6.12		85.6		2.63		2.5							
10/05/06	16:30 - 16:46	26/Cloudy	4.8	Surface	27.4	33.1	33.1	6.15	6.14	86.2	85.9	2.61	2.62	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
				Middle		31.6		6.79		92.6		2.29		2.8							
				Bottom		31.6		6.70		92.0		2.20		2.8							
02/05/06	15:13 - 15:26	27/Cloudy	8.4	Surface	23.3	31.2	31.2	6.44	6.39	87.6	87.1	2.70	2.74	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
				Middle		31.4		6.51		88.1		2.91		2.5							
				Bottom		31.4		6.41		87.1		2.81		2.5							
04/05/06	16:30 - 16:46	26/Cloudy	1.0	Surface	27.3	32.0	32.0	6.70	6.68	94.8	94.5	3.04	3.05	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Middle		32.6		6.34		89.8		2.73		3.0							
				Bottom		32.6		6.30		89.2		2.80		3.0							
06/05/06	17:12 - 17:28	29/Sunny	4.4	Surface	23.8	32.6	32.6	6.30	6.32	89.2	89.5	2.80	2.77	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Middle		32.9		6.13		86.8		2.42		3.0							
				Bottom		32.9		6.07		86.1		2.48		3.0							
08/05/06	09:43 - 09:56	30/Cloudy	7.8	Surface	23.7	32.2	32.2	6.57	6.56	93.2	93.0	2.95	2.94	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
				Middle		32.2		6.54		92.8		2.93		2.5							
				Bottom		32.1		6.21		87.5		2.74		2.5							
10/05/06	10:43 - 10:56	31/Sunny	4.4	Surface	26.9	33.0	33.0	6.18	6.20	87.1	87.3	2.76	2.75	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
				Middle		33.0		6.06		85.4		2.42		2.5							
				Bottom		33.0		6.10		86.0		2.47		2.5							
06/05/06	17:12 - 17:28	29/Sunny	1.0	Surface	24.2	32.8	32.8	6.74	6.68	95.7	95.5	3.29	3.30	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Middle		32.8		6.71		95.2		3.30		3.0							
				Bottom		32.7		6.71		95.2		3.30		3.0							
08/05/06	09:43 - 09:56	30/Cloudy	7.8	Surface	26.9	33.1	33.1	6.29	6.27	88.3	89.0	3.08	3.08	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
				Middle		33.1		6.25		88.7		3.07		3.5							
				Bottom		33.1		6.25		88.7		3.07		3.5							
10/05/06	10:43 - 10:56	31/Sunny	4.5	Surface	27.6	33.2	33.2	6.37	6.36	89.8	89.6	2.77	2.77	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Middle		33.2		6.34		89.3		2.76		3.0							
				Bottom		33.2		6.34		89.3		2.76		3.0							

**Mid-Ebb Tide**



東業德動測試顧問有限公司  
ETS-TESTCONSULT LIMITED

**Monitoring Station : M4**

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Middle		Bottom	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average	Value
12/05/06	12:44 - 13:00	30/Sunny	Surface	1.0	25.9	32.0	32.0	6.69	6.65	6.45	91.3	90.8	2.44	2.39	2.8	2.7	2.6		
			Middle	4.4	25.6	32.2	32.2	6.30	6.26	6.45	90.3	85.5	2.34	2.43	2.5	2.5			
			Bottom	7.8	25.4	32.4	32.4	6.22	6.06	6.06	85.0	83.6	2.40	2.65	2.5	2.5			
15/05/06	12:43 - 12:56	30/Sunny	Surface	1.0	28.5	32.5	32.5	6.51	6.49	6.34	92.4	92.1	2.94	2.94	3.2	3.1	3.0		
			Middle	4.4	28.0	32.8	32.7	6.47	6.19	6.34	91.8	87.9	2.93	2.77	3.0	3.0			
			Bottom	7.8	27.4	32.9	32.9	6.20	5.96	5.96	88.0	84.5	2.77	2.63	3.0	2.8			
19/05/06	17:23 - 17:36	28/Sunny	Surface	1.0	27.2	32.5	32.5	5.94	6.62	6.52	84.3	97.2	2.62	3.52	3.8	3.7	3.6		
			Middle	4.4	25.8	33.1	33.1	5.97	6.42	6.52	84.7	94.3	2.63	3.63	4.0	3.9			
			Bottom	7.8	25.6	33.2	33.2	6.18	6.37	6.37	97.0	93.5	3.51	3.17	3.2	3.2			
22/05/06	09:15 - 09:28	25/Cloudy	Surface	1.0	24.3	32.6	32.6	6.35	6.48	6.38	93.3	96.9	3.16	3.28	3.2	3.1	3.1		
			Middle	4.4	24.2	32.7	32.7	6.45	6.29	6.38	96.6	93.9	3.30	3.18	3.2	3.0			
			Bottom	7.8	24.0	33.0	33.0	6.32	6.21	6.21	97.2	93.3	3.16	3.22	3.0	3.0			
24/05/06	09:13 - 09:26	28/Cloudy	Surface	1.0	25.6	32.2	32.2	6.26	5.62	5.78	92.5	82.5	3.24	2.51	2.5	2.5	3.2		
			Middle	4.5	25.5	32.2	32.2	6.18	5.95	5.78	92.5	87.2	3.20	3.22	2.5	3.5			
			Bottom	8.0	25.2	32.8	32.8	5.93	6.19	6.19	87.0	90.5	3.21	3.20	3.5	3.5			
26/05/06	10:30 - 10:45	26/Sunny	Surface	1.0	25.7	33.3	33.3	6.36	6.33	6.20	90.2	92.5	3.19	3.15	3.5	3.5	3.3		
			Middle	4.3	25.6	33.4	33.4	6.30	6.07	6.20	93.0	90.2	3.10	2.74	3.5	3.0			
			Bottom	7.6	25.9	33.4	33.4	6.03	5.86	5.86	89.8	88.5	2.77	2.47	3.0	3.5			
29/05/06	13:13 - 13:26	26/Rainy	Surface	1.0	25.4	30.3	30.3	5.81	6.75	6.46	88.0	95.1	2.42	3.13	3.2	3.4	3.2		
			Middle	4.4	25.0	31.3	31.3	6.73	6.17	6.46	94.8	87.0	3.14	2.97	3.5	3.1			
			Bottom	7.8	24.9	31.5	31.5	6.15	5.87	5.87	86.7	82.1	2.97	3.09	3.2	3.2			
01/06/06	15:30 - 15:44	27/Rainy	Surface	1.0	25.6	31.9	31.9	5.85	6.41	6.28	81.8	91.0	3.09	2.98	3.0	3.0	2.8		
			Middle	4.9	25.0	32.6	32.6	6.44	6.14	6.28	91.4	87.1	2.98	2.76	3.0	2.5			
			Bottom	8.8	24.7	33.0	33.0	6.18	5.90	5.90	86.6	83.8	2.75	2.61	2.5	2.8			

**Mid-Ebb Tide**

**Monitoring Station : M4**



東業德勤測試顧問有限公司  
ETS-TESTCONSULT LIMITED

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Depth-average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	Value	Average	Depth-average
03/06/06	16:42 - 16:55	26/Drizzle	Surface	1.0	25.6	32.4	32.4	6.12	6.11	6.02	88.8	88.7	3.23	3.26	3.0	3.0	3.0		
			Middle	4.4	25.3	32.5	5.91	5.93	6.02	86.2	86.0	3.29	3.01	3.0	3.2				
			Bottom	7.8	25.2	32.7	5.51	5.49	5.49	80.0	79.8	2.69	2.73	2.8	2.9				
05/06/06	17:30 - 17:46	26/Cloudy	Surface	1.0	25.8	32.1	6.44	6.49	6.29	95.2	95.7	2.98	3.03	3.0	3.4	3.5			
			Middle	4.0	25.7	32.4	6.13	6.08	6.29	90.7	90.4	3.29	3.25	3.5	3.5				
			Bottom	7.0	25.6	32.4	6.22	6.17	6.17	92.1	91.6	3.56	3.61	3.5	3.5				
07/06/06	09:13 - 09:26	30/Cloudy	Surface	1.0	27.4	25.8	6.79	6.78	6.29	99.1	98.9	2.59	2.59	2.8	2.8	2.8			
			Middle	4.6	26.8	32.5	5.82	5.81	6.29	86.1	85.9	3.60	3.61	3.8	3.8				
			Bottom	8.2	26.6	33.1	5.57	5.56	5.56	82.4	82.2	3.79	3.80	4.0	4.0				
09/06/06	10:43 - 10:56	28/Rainy	Surface	1.0	26.6	25.0	6.20	6.19	5.99	88.6	88.4	3.17	3.17	3.0	3.1	3.1			
			Middle	4.7	26.4	32.4	5.82	5.80	5.99	83.2	82.9	2.96	2.95	3.5	3.4				
			Bottom	8.4	26.0	32.5	5.48	5.47	5.47	77.8	77.7	3.02	3.02	3.5	3.5				
12/06/06	12:13 - 12:26	28/Cloudy	Surface	1.0	26.6	25.0	6.18	6.17	6.01	87.7	87.5	3.27	3.27	3.0	3.4	3.0			
			Middle	4.6	26.4	29.8	5.86	5.85	6.01	83.2	83.0	2.96	2.95	3.5	2.5				
			Bottom	8.2	26.0	32.0	5.45	5.43	5.43	76.8	76.5	3.18	3.18	3.0	3.0				
14/06/06	13:00-13:12	28/Cloudy	Surface	1.0	25.6	32.1	6.58	6.63	6.47	97.2	97.7	2.79	2.75	2.5	2.5	2.5			
			Middle	4.1	25.4	32.4	6.26	6.31	6.47	92.7	93.2	2.88	2.84	2.7	2.7				
			Bottom	7.2	25.3	32.6	6.26	6.23	6.23	91.2	90.7	2.96	2.93	3.0	3.0				
16/06/06	15:44-15:57	29/Cloudy	Surface	1.0	27.5	32.1	6.84	6.82	6.58	97.1	96.9	2.84	2.84	3.0	3.0	3.0			
			Middle	4.5	27.1	32.7	6.37	6.34	6.58	90.5	90.1	2.56	2.56	3.0	3.0				
			Bottom	8.0	26.9	33.0	6.22	6.25	6.25	88.3	88.8	2.47	2.48	2.7	2.7				
19/06/06	17:00 - 17:16	30/Cloudy	Surface	1.0	27.2	33.2	6.82	6.77	6.47	98.7	98.4	3.17	3.14	3.0	3.1	3.1			
			Middle	4.3	26.6	33.0	6.22	6.17	6.47	89.2	88.7	3.91	3.86	4.0	4.2				
			Bottom	7.6	26.1	33.7	6.33	6.28	6.28	89.2	89.7	3.51	3.46	3.2	3.2				



**Mid-Ebb Tide**

**Monitoring Station : M4**

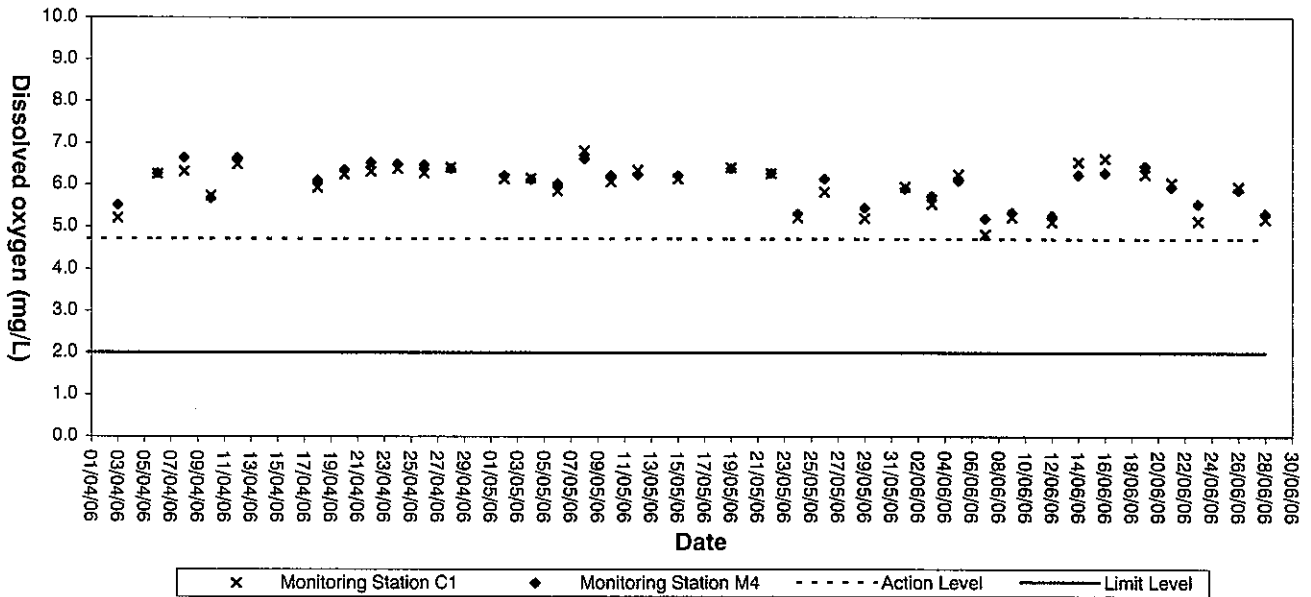
Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)			Dissolved Oxygen Saturation (%)			Turbidity (NTU)			Suspended Solids (mg/L)		
			Surface	Bottom		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
21/06/06	09:14 - 09:27	30/Sunny	Surface	1.0	27.4	30.8	30.9	6.58	6.54	94.1	93.5	3.25	3.25	3.5	3.5	3.2			
						30.9	6.50	92.9	3.25	3.5									
						31.0	6.03	86.2	3.08	3.2									
23/06/06	10:30 - 10:43	30/Sunny	Middle	4.1	27.3	31.0	31.0	6.09	6.06	87.1	86.7	3.08	3.08	3.2	3.2	3.0			
						31.0	6.09	87.1	3.08	3.2									
						32.1	5.83	83.4	2.77	3.0									
26/06/06	12:42 - 12:56	30/Sunny	Bottom	7.2	27.1	32.1	32.1	5.91	5.87	84.5	84.0	2.77	2.77	4.0	4.0	2.6			
						32.1	5.91	84.5	2.77	4.0									
						25.4	6.81	102.3	1.76	2.2									
28/06/06	08:43 - 08:56	29/Rainy	Surface	1.0	29.1	25.5	25.5	6.85	6.83	102.8	102.6	1.78	1.77	2.5	2.4	3.0			
						27.4	6.71	99.8	2.07	2.5									
						27.5	6.68	99.5	2.06	2.5									
28/06/06	08:43 - 08:56	29/Rainy	Middle	4.7	27.8	32.8	32.8	5.18	5.17	76.5	76.3	3.46	3.48	4.0	4.0	3.0			
						32.7	5.15	76.1	3.49	4.0									
						32.0	6.62	94.7	3.18	2.7									
28/06/06	12:42 - 12:56	30/Sunny	Bottom	8.4	26.6	32.0	32.1	6.54	6.58	93.5	94.1	3.18	3.18	2.9	2.9	2.6			
						32.1	6.54	93.5	3.18	2.9									
						32.8	6.09	87.1	2.91	2.5									
28/06/06	12:42 - 12:56	30/Sunny	Surface	1.0	27.2	32.8	32.8	6.16	6.13	88.1	87.6	2.90	2.91	2.5	2.5	2.6			
						32.8	6.16	88.1	2.90	2.5									
						33.0	5.94	84.9	2.62	2.5									
28/06/06	12:42 - 12:56	30/Sunny	Middle	4.3	27.1	33.1	33.1	5.90	5.92	84.4	84.7	2.62	2.62	2.5	2.5	2.6			
						33.1	5.90	84.4	2.62	2.5									
						28.2	6.69	95.6	2.97	3.3									
28/06/06	12:42 - 12:56	30/Sunny	Bottom	7.6	27.0	28.2	28.2	6.63	6.66	95.0	95.3	2.95	2.96	3.3	3.3	2.6			
						28.2	6.63	95.0	2.95	3.3									
						32.0	6.10	87.2	3.03	3.5									
28/06/06	12:42 - 12:56	30/Sunny	Surface	1.0	27.9	31.9	32.0	6.14	6.12	87.8	87.5	3.04	3.04	3.5	3.5	3.4			
						31.9	6.14	87.8	3.04	3.5									
						32.2	5.43	77.6	2.88	3.2									
28/06/06	12:42 - 12:56	30/Sunny	Middle	4.5	27.2	32.2	32.2	5.46	5.45	78.0	77.8	2.89	2.89	3.4	3.4	3.4			
						32.2	5.46	78.0	2.89	3.4									
						32.1	5.45	78.0	2.89	3.4									

## **Appendix D3**

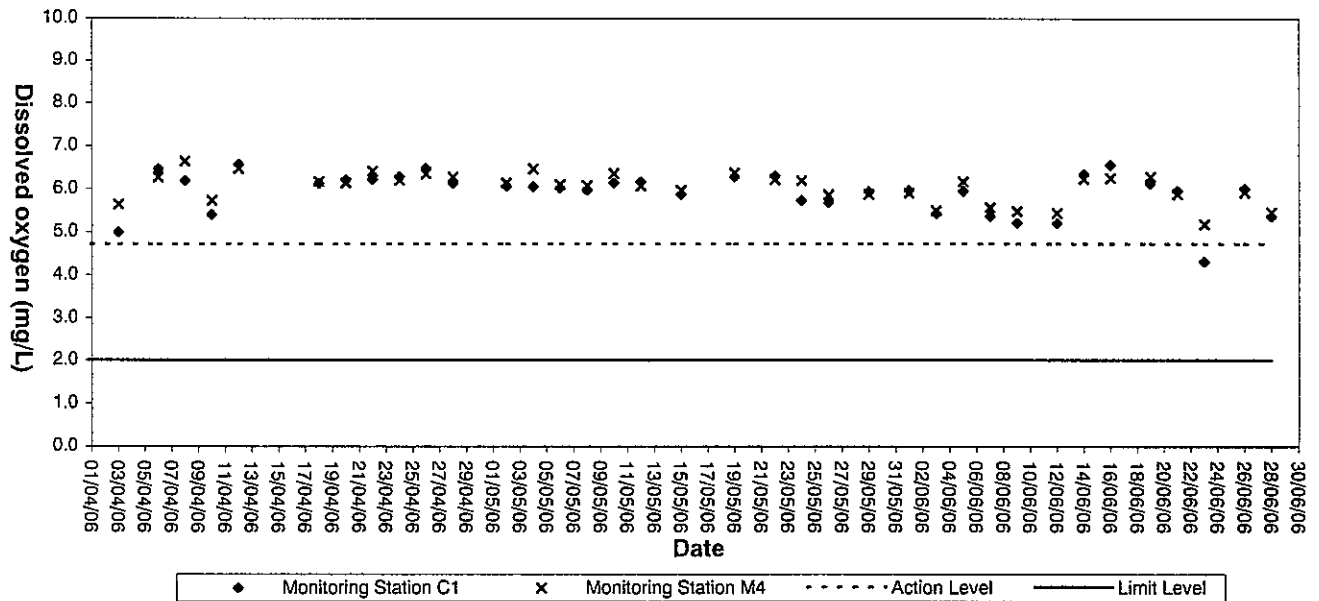
### **Graphical Plots of Impact Marine Water Quality Monitoring Data**

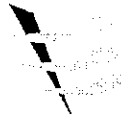


### Dissolved Oxygen (Bottom) at Mid-Flood Tide

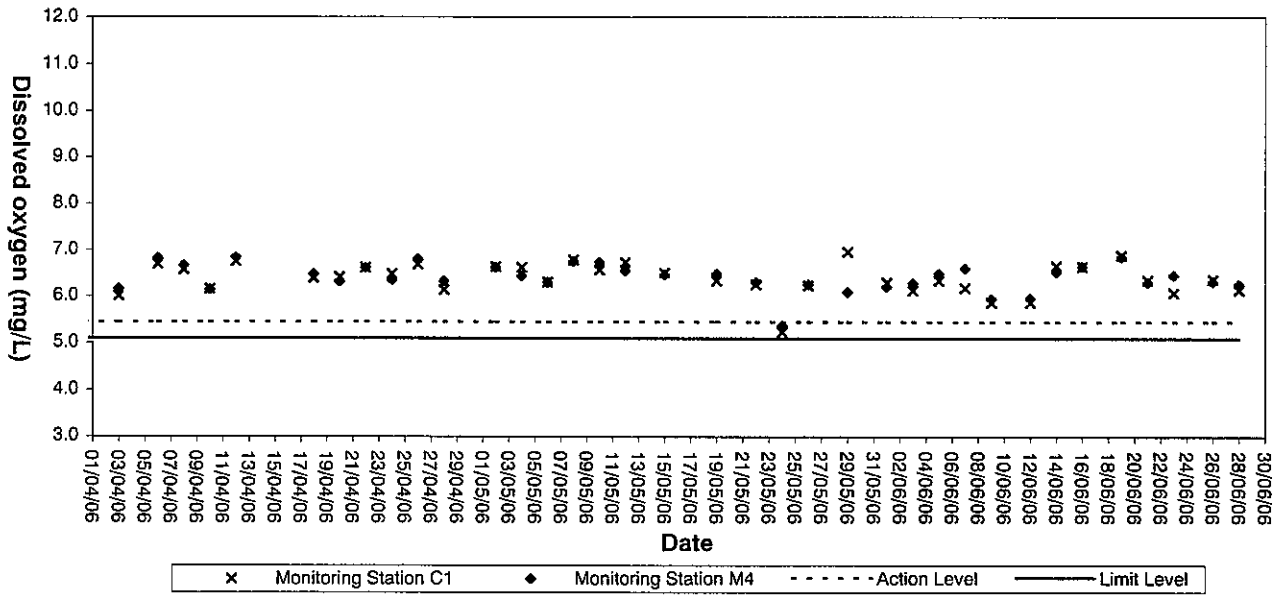


### Dissolved Oxygen (Bottom) at Mid-Ebb Tide

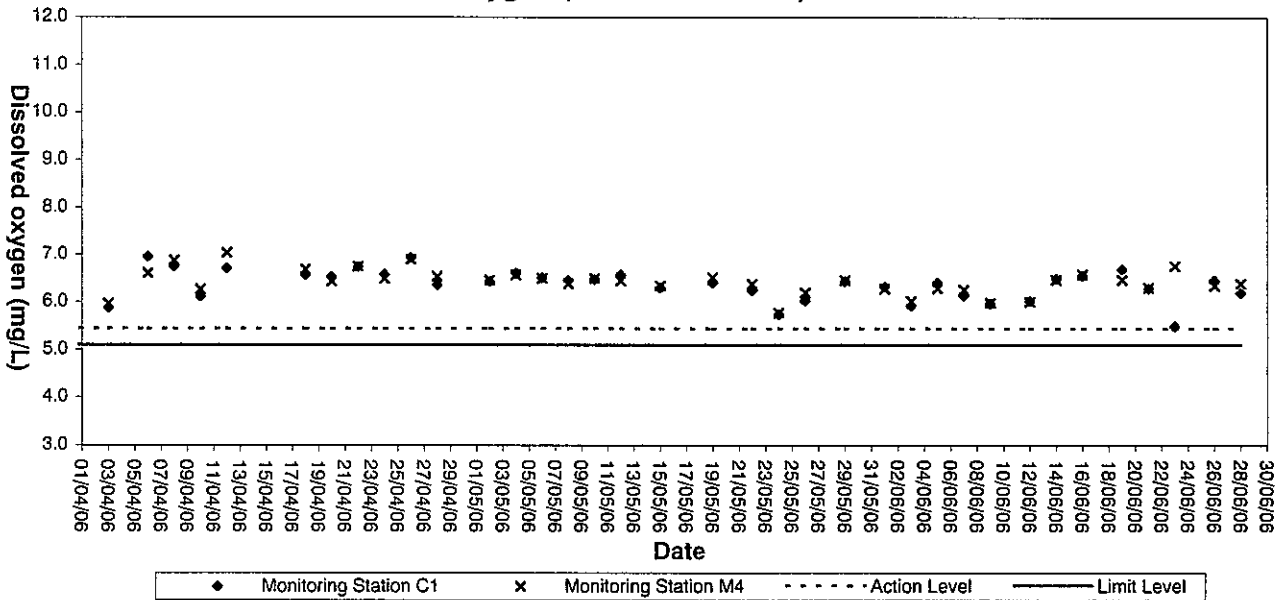




### Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



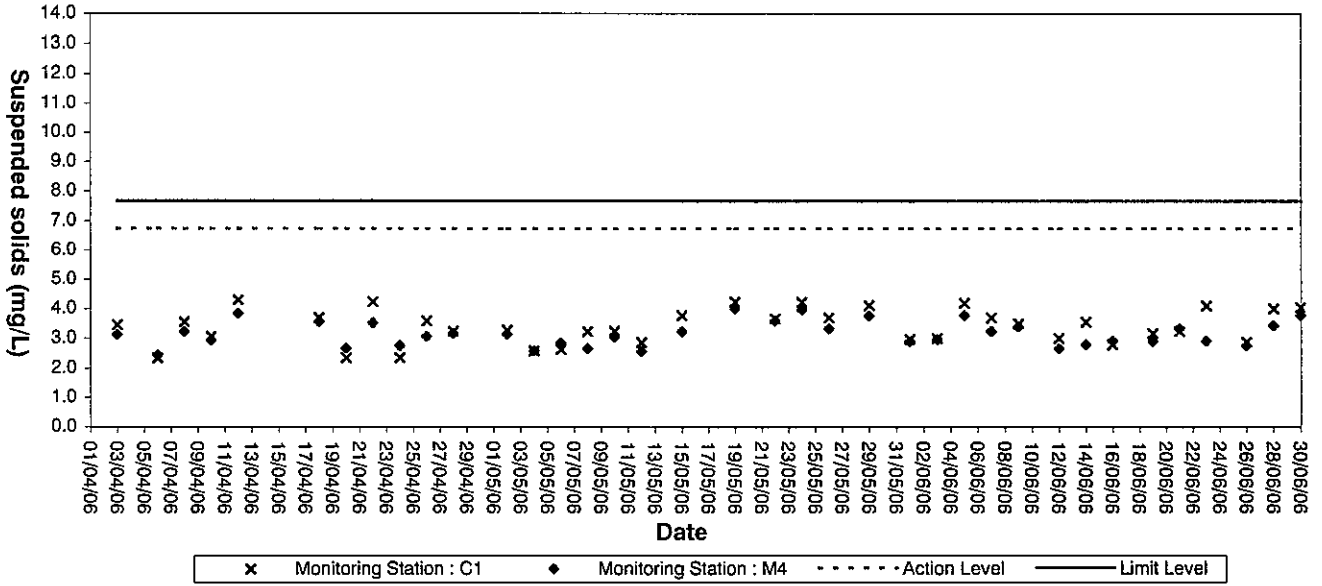
### Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



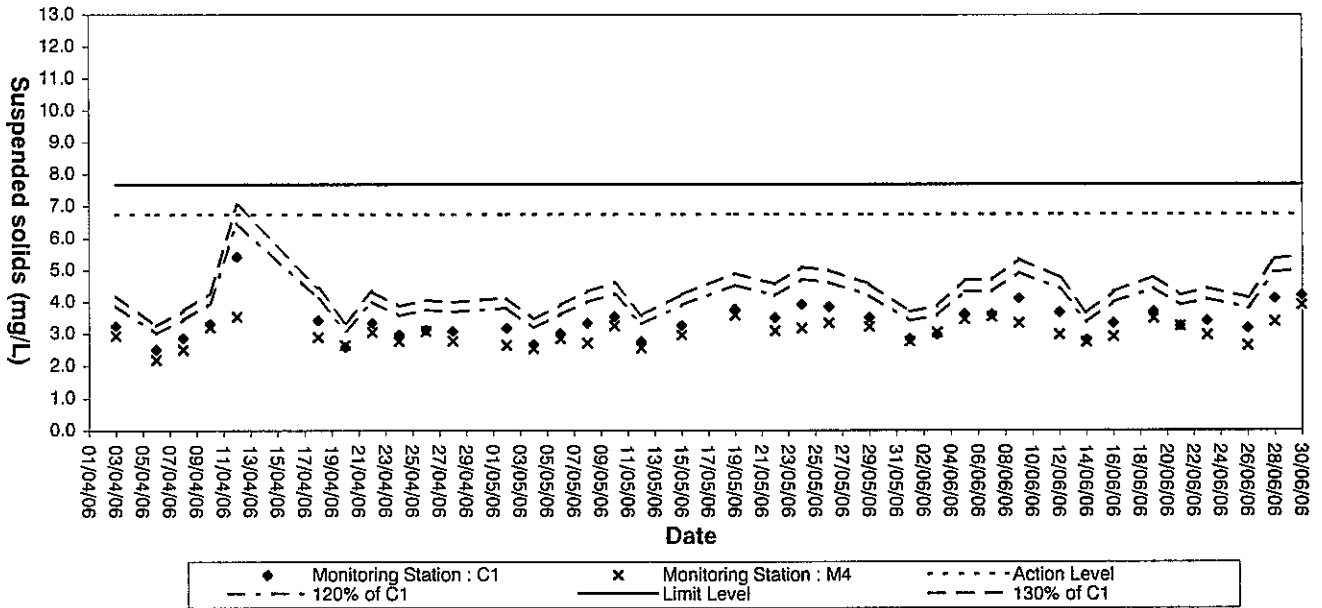




### Suspended solids (Depth-average) at Mid-Flood Tide

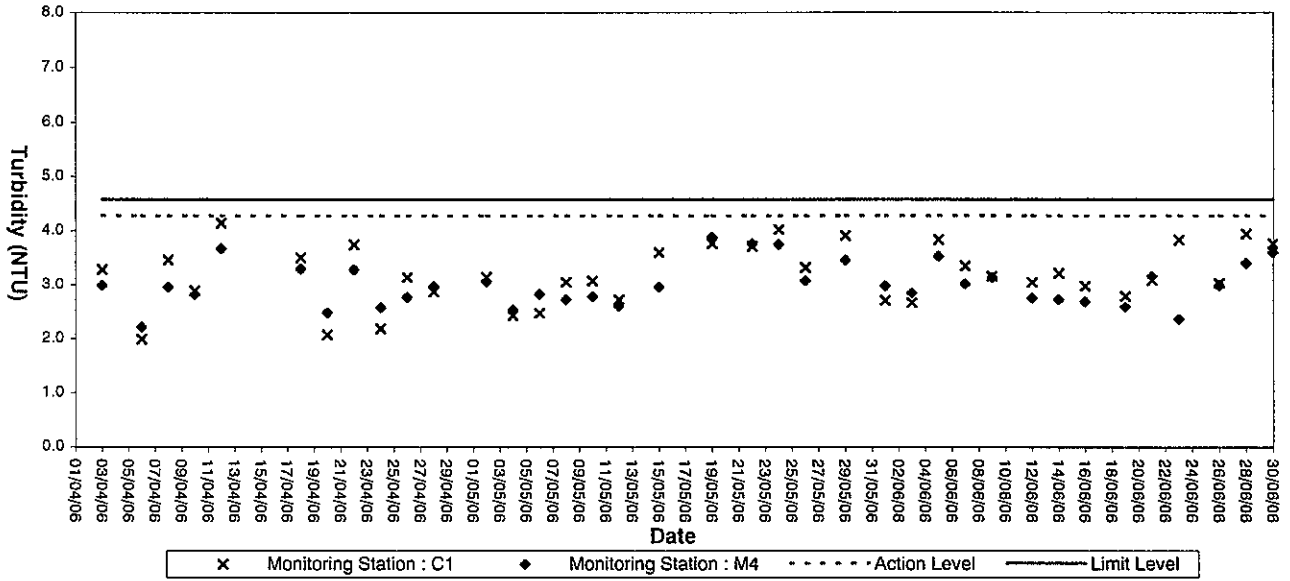


### Suspended Solids (Depth-average) at Mid-Ebb Tide

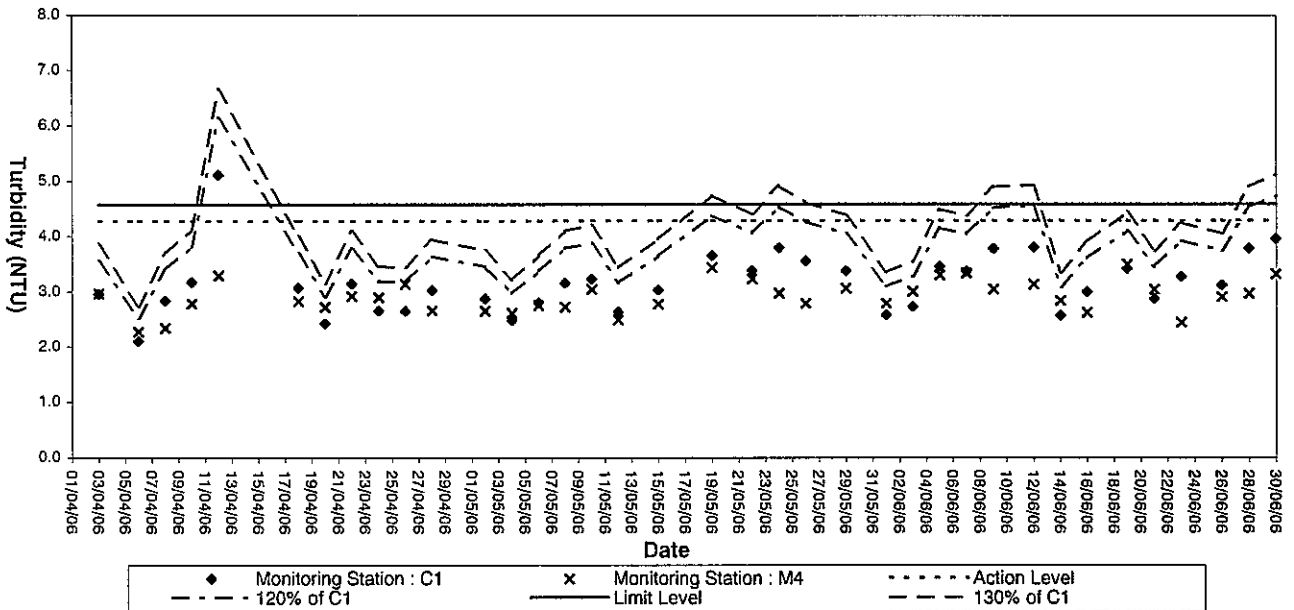




### Turbidity (Depth-average) at Mid-Flood Tide



### Turbidity (Depth-average) at Mid-Ebb Tide



## **Appendix E**

### **Environmental Quality Performance (Action / Limit Levels)**

**Action and Limit Levels for Air Quality**

**Action and Limit Levels for 1-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AA1	376	500
AA2		

**Action and Limit Levels for 24-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AA1	210	260
AA2		

**Action and Limit Levels for Noise**

Time Period	Action	Limit
0900-2100 hrs on all days	When one documented complaint is received	75*dB(A)

**Action and Limit Levels for Water Quality**

Parameters	Action	Limit
Dissolved oxygen, DO mg/L (Surface, Middle & Bottom)	<u>Surface &amp; Middle</u> DO < 5.45 (5%-ile of baseline data) <u>Bottom</u> DO < 4.72 (5%-ile of baseline data)	<u>Surface &amp; Middle</u> DO < 5.10 (1%-ile of baseline data) <u>Bottom</u> 2 mg/L
Suspended solids, SS mg/L (Depth-averaged)	SS > 6.74 (95%-ile of baseline data or SS > 120% of upstream control stations SS at the same tide of the same day)	SS > 7.67 (99%-ile of baseline data or SS > 130% of upstream control stations SS at the same tide of the same day)
Turbidity, Tby NTU (Depth-averaged)	Tby > 4.28 (95%-ile of baseline data or Tby > 120% of upstream control stations Tby at the same tide of the same day)	Tby > 4.58 (99%-ile of baseline data or Tby > 130% of upstream control stations Tby at the same tide of the same day)



## **Appendix F**

### **Event-Action Plans**

## EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE

	ACTION			
EVENT	ET Leader	IC(E)	ER	Contractor
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Inform ER, IC(E) and Contractor</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET</li> <li>2. Check contractor's working method</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practise</li> <li>2. Amend working methods if appropriate</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Inform IC(E) and Contractor</li> <li>3. Repeat measurements to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Discuss with IC(E) and Contractor on remedial actions</li> <li>6. If exceedance continues, arrange meeting with IC(E) and ER.</li> <li>7. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET Leader</li> <li>2. Check the Contractor's working method</li> <li>3. Discuss with ET and Contractor on possible remedial measures</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures</li> <li>5. Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify the Contractor</li> <li>3. Ensure remedial measures properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to IC(E) within 3 working days of notification</li> <li>2. Implement the agreed proposals</li> <li>3. Amend proposal if appropriate</li> </ol>
<b>LIMIT LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Inform ER, Contractor and EPD</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Assess the effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET Leader</li> <li>2. Check Contractor's working method</li> <li>3. Discuss with ET and Contractor on possible remedial measures</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures</li> <li>5. Supervise implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify the Contractor</li> <li>3. Ensure remedial measures properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Amend proposal if appropriate.</li> </ol>

## EVENT/ACTION PLAN FOR AIR QUALITY EXCEEDANCE

EVENT	ACTION			Contractor
	ET Leader	IC(E)	ER	
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Notify IC(E), ER, EPD and Contractor</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Carry out analysis of contractor's working procedures to determine possible mitigation to be implemented</li> <li>6. Arrange meeting with IC(E) and ER to discuss the remedial actions to be taken</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</li> <li>8. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET and Contractor on the potential remedial actions</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly</li> <li>3. Supervise the implementation of remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. In consultation with the IC(E), agree with the Contractor on the remedial measures to be implemented</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. If exceedances continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedances</li> <li>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification</li> <li>3. Implement the agreed proposals</li> <li>4. Resubmit proposals if problem still not under control</li> <li>5. Stop the relevant activity of works as determined by the ER until the exceedance is abated</li> </ol>

## EVENT/ACTION PLAN FOR NOISE EXCEEDANCE

EVENT	ACTION			
	ET Leader	IC(E)	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify the IC(E) and the Contractor. Carry out investigation.</li> <li>3. Report the results of investigation to the IC(E) and the Contractor.</li> <li>4. Discuss with the Contractor and formulate remedial measures.</li> <li>5. Increase monitoring frequency to check mitigation effectiveness</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET.</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IC(E).</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Notify the IC(E), the ER, the EPD and the Contractor.</li> <li>2. Identify source.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Inform the IC(E), the ER and the EPD the causes &amp; actions taken for the exceedances.</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep the IC(E), the EPD and the ER informed of the results</li> <li>8. If exceedance due to the construction works stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst the ER, the ET Leader and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>5. If exceedances continue, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedances is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to IC(E) within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant activity of works as determined by the ER until the exceedances is abated.</li> </ol>



## EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE

Event	ACTION			
	ET Leader	Contractor	ER	IEC
<p>Action level being exceeded by one sampling day</p>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Repeat in-situ measurement to confirm findings;</li> <li>3. Notify Contractor in writing within 24 hours of identification of the exceedance</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with Contractor if exceedance is due to the construction works within 4 working days</li> <li>8. Repeat measurement on next day of exceedance if exceedance is due to the construction works</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify the ER and IEC in writing within 24 hours of identification of exceedance</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Submit investigation report to IEC and ER within 3 working days of the identification of an exceedance</li> <li>5. Consider changes of working method if exceedance is due to the construction works</li> <li>6. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER if exceedance is due to the construction works within 4 working days of identification of an exceedance</li> <li>7. Implement the agreed mitigation measures within reasonable time scale</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of the identification of the exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Require contractor to propose remedial measures for the analysed problem if related to the construction works</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. Assess the effectiveness of the mitigation measure</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ET, ER and Contractor on the mitigation measures</li> <li>4. Review contractor's mitigation measures whenever necessary to ensure their effectiveness and advise the ER accordingly</li> <li>5. Supervise the implementation of mitigation measures</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY

### ACTION

Event	ET Leader	Contractor	ER	IEC
<p>Action level being exceeded by more than one consecutive sampling days</p>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Repeat in-situ measurement to confirm findings</li> <li>3. Notify Contractor in writing within 24 hours of identification</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with IEC and Contractor within 4 working of identification of an exceedance</li> <li>8. Ensure mitigation measures are implemented;</li> <li>9. Prepare to increase the monitoring frequency to daily;</li> <li>10. Repeat measurement on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify IEC and ER in writing within 24 hours of identification of exceedance</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Submit the results of the investigation to IEC and ER within 3 working days of the identification of an exceedance</li> <li>6. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 4 working days of identification of an exceedance</li> <li>7. Implement the agreed mitigation measures within reasonable time scale</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of the identification of the exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Require contractor to propose remedial measures for the analysed problem if related to the construction works</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. Assess the effectiveness of the mitigation measure</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ET, ER and Contractor on the mitigation measures.</li> <li>4. Review contractor's mitigation measures whenever necessary to ensure their effectiveness and advise the ER accordingly</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE

Event	ACTION		
	ET Leader	Contractor	ER
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Notify Contractor in writing within 24 hours of identification of the exceedance</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with IEC, ER and Contractor within 4 working of identification of an exceedance</li> <li>8. Ensure mitigation measures are implemented;</li> <li>9. Increase the monitoring frequency to daily until no exceedance of Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify IEC and ER in writing; within 24 hours of the identification of the exceedance</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Submit the results of the investigation to IEC and ER within 3 working days of the identification of an exceedance</li> <li>6. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 4 working days of the identification of an exceedance</li> <li>7. Implement the agreed mitigation measures within reasonable time scale</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of identification of exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Request Contractor to critically review the working methods;</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>
			IEC
			<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ET, ER and Contractor on the mitigation proposals.</li> <li>4. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly.</li> <li>5. Assess the effectiveness of the implemented mitigation measures</li> </ol>

## EVENT AND ACTION PLAN FOR WATER QUALITY EXCEEDANCE

Event	ACTION			IEC
	ET Leader	Contractor	ER	
Limit Level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Notify Contractor in writing within 24 hours of identification of the exceedance</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Carry out investigation</li> <li>6. Report the results of investigation to the Contractor within 3 working days of identification of exceedance and advise contractor if exceedance is due to contractor's construction works</li> <li>7. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>8. Ensure mitigation measures are implemented;</li> <li>9. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify ER and IEC in writing within 24 hours of the identification of the exceedance and</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>8. Submit the results of the investigation to IEC and ER within 3 working days of the identification of an exceedance</li> <li>5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 4 working days;</li> <li>6. Implement the agreed mitigation measures within reasonable time scale</li> <li>7. As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify EPD and other relevant governmental agencies in writing within 24 hours of identification of exceedance</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>3. Request Contractor to critically review the working methods;</li> <li>6. Ensure remedial measures are properly implemented</li> <li>4. Assess the effectiveness of the implemented mitigation measures;</li> <li>5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Confirm ET assessment if exceedance is due / not due to the works</li> <li>3. Discuss with ER, ET and Contractor on the mitigation measures.</li> <li>4. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly.</li> <li>5. Assess the effectiveness of the implemented mitigation measures.</li> </ol>



## **Appendix G**

### **Construction Programme**

**GCC Clause 16 Programme**

**KEYDATES & SUMMARY**

Act ID	Description	Days	Early Start	Early Finish	%
KD-001	Contract Commencement	0	30DEC05 A		100
KD-002	Commencement of the Works	0	31DEC05 A		100
<b>PRELIMINARIES</b>					
1-0100	Take over Principal Site Office for the Engineer	0	31DEC05 A		100
1-0200	Provision of Transport for the Engineer	7	30DEC05 A	05JAN06 A	100
1-1100	Contractor's Submissions	28	30DEC05 A	26JAN06 A	100
1-1200	Setup of Environmental Team for EM&A Monitoring	7	30DEC05 A	05JAN06 A	100
1-1300	Temporary Accommodation for Contractor	21	31DEC05 A	20JAN06 A	100
<b>OPERATION OF PUBLIC FILL RECEPTION FACILITIES</b>					
B1-0000	Take over the Site and Facilities at Portion B	0	31DEC05 A		100
B1-0100	SECTION B1	121	01JAN06 A	30APR06 A	100
B2-0100	SECTION B2	31	01MAY06 A	31MAY06	48
B3-0100	SECTION B3	30	01JUN06 *	30JUN06 *	0
B4-0100	SECTION B4 [Subject to Excision]	31	01JUL06	31JUL06	0
B5-0100	SECTION B5 [Subject to Excision]	31	01AUG06	31AUG06	0
C1-0000	Take over the Site and Facilities at Portion C	0	31DEC05 A		100
C1-0100	SECTION C1	121	01JAN06 A	30APR06 A	100
C2-0100	SECTION C2	31	01MAY06 A	31MAY06	48
C3-0100	SECTION C3	30	01JUN06 *	30JUN06 *	0
C4-0100	SECTION C4 [Subject to Excision]	31	01JUL06	31JUL06	0
C5-0100	SECTION C5 [Subject to Excision]	31	01AUG06	31AUG06	0
D1-0000	Take over the Site and Facilities at Portion D	0	31DEC05 A		100
D1-0100	SECTION D1	121	01JAN06 A	30APR06 A	100
D2-0100	SECTION D2	31	01MAY06 A	31MAY06	48
D3-0100	SECTION D3	30	01JUN06 *	30JUN06 *	0
D4-0100	SECTION D4 [Subject to Excision]	31	01JUL06	31JUL06	0
D5-0100	SECTION D5 [Subject to Excision]	31	01AUG06	31AUG06	0

**Contract Commencement**

Contract Commencement

Take over Principal Site Office for the Engineer

Provision of Transport for the Engineer

Contractor's Submissions

Setup of Environmental Team for EM&A Monitoring

Temporary Accommodation for Contractor

Take over the Site and Facilities at Portion B

Take over the Site and Facilities at Portion C

Take over the Site and Facilities at Portion D

**Check**

SECTION B1

SECTION B2

SECTION B3

SECTION B4 [Subject to Excision]

SECTION B5 [Subject to Excision]

SECTION C1

SECTION C2

SECTION C3

SECTION C4 [Subject to Excision]

SECTION C5 [Subject to Excision]

SECTION D1

SECTION D2

SECTION D3

SECTION D4 [Subject to Excision]

SECTION D5 [Subject to Excision]

**Approved**

SC CPL

SC CPL

SC CPL

**Revision**

Rev. 0

Rev. 1

Rev. 2

**Date**

11JAN06

31MAR06

15MAY06

**Legend**

Early bar

Progress bar

Critical bar

Summary bar

Start milestone point

Finish milestone point

CEDD Contract No. CV/2005/12  
 Operation of Public Fill Reception Facilities at  
 Tseung Kwan O Area 137, Quarry Bay and Mui Wo

Main Contractor: Concentric Construction Ltd.



## **Appendix H**

### **Implementation Schedule of Environmental Mitigation Measures (EMIS)**

## Environmental Mitigation Implementation Schedule

	Location	Implementation Status		
		April 2006	May 2006	June 2006
<b>Environmental Protection Measures</b>				
<b>Air Quality</b>				
<ul style="list-style-type: none"> <li>▪ Dust control / mitigation measures shall be provided to prevent dust nuisance.</li> <li>▪ A buffer zone of at least 100m shall be maintained between the edge of the stockpiling area and the nearest ASRs at the TKO Industrial Estate. Within the buffer zone, no dusty material shall be stockpiled and no loading / unloading and similar activities should be allowed.</li> <li>▪ Water sprays shall be provided and used to dampen materials.</li> <li>▪ Regular cleaning and watering the site shall be provided to minimize the fugitive dust emissions.</li> <li>▪ All vehicles shall be restrict to a maximum speed of 10 km per hour.</li> <li>▪ Any vehicle with open load carrying area used for moving materials which has the potential to create dust shall have properly fitting side and tail boards. Material having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin.</li> <li>▪ The designated site main haul rout shall be paved or regular watering.</li> <li>▪ Frequent watering of work site shall be at least three times per day.</li> <li>▪ Wheel washing facilities including high pressure water jet shall be provided at the entrance of work site.</li> <li>▪ Every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the fill bank.</li> <li>▪ The temporary slope surfaces, especially those facing to the north of the site shall be covered with impermeable sheet or sprayed with water or protected by other method approved by CEDD.</li> <li>▪ Final slope surfaces, especially those facing to the north of the site shall be treated by compaction, followed by hydroseeding, vegetation planting or sealing with shotcrete, latex, vinyl, bitumen, or other suitable surface stabilizer approved by CEDD.</li> <li>▪ When fill material is transfer by belt conveyor systems, the conveyors shall be enclosed on top and 2 sides.</li> <li>▪ The belt scraper shall be equipped with bottom plates or other similar means to prevent falling of material from the return belt.</li> <li>▪ The level of stockpiling belt conveyor shall be adjustable such that the vertical distance between the belt conveyor and the material landing point is maintained at no more than 1m.</li> </ul>				
<b>Noise Impact</b>				
<ul style="list-style-type: none"> <li>▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.</li> <li>▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.</li> <li>▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.</li> <li>▪ Air compressors and hand held breakers should have noise labels.</li> <li>▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li> <li>▪ Noisy equipment and mobile plant shall always be site away from NSRs.</li> </ul>				

Remark: √ = Implemented, ∇ = Partially Implemented, X = Not Implemented, N/A = Not Applicable



	Location	Implementation Status		
		April 2006	May 2006	June 2006
<b>Water Quality</b>				
▪ The existing / realigned intercepting channels and the sand / silt removal facilities shall be used and maintained regularly.	All areas	√	√	√
▪ A buffer distance of at least 100m shall be maintained between the boundary of the public fill stockpiling area and the sea front.	Along the seafront	√	√	√
▪ A buffer distance of at least 20m shall be maintained between the boundary of the C&DMSF and the seafront.	C&DMSF	N/A	N/A	N/A
▪ The stormwater intercepting system shall be effective to collect of runoff and remove suspended solids before discharge.	All areas	√	√	√
▪ The material shall be properly covered to prevent washed away especially before rainstorm.	All areas	√	√	√
▪ The temporary slope surfaces, especially those facing to the north of the site shall be covered with impermeable sheet or sprayed with water or protected by other method approved by CEDD.	Temporary Slopes	√	√	√
▪ A wheel washing bay shall be provided at the site exit and wash-water shall have sand and silt settled out or removed before being discharged into storm drains.	Wheel Washing facility	√	√	√
▪ Obtain Discharge License	Site Office	√	√	√
▪ Adequate environmental control measures shall be provided to prevent / avoid dropping of fill material into the sea during the transfer.	Barge Handling Area (BHA)	√	√	√
▪ The work activities shall not cause any visible foam, oil, grease, scum, litter or other objectionable matters to be present on the water in the vicinity of the barging facilities.	Barge Handling Area (BHA)	√	√	√
▪ A waste collection vessel shall be deployed to remove floating debris.	Barge Handling Area (BHA)	√	√	√
<b>Landscaping and Visual</b>				
• Construction of lighting to avoid spillage and glare	All areas	√	√	√
• Hydroseeding	Completed slopes	√	√	√
• Hoarding erection	Site boundary	√	√	√
• Damage to surrounding area avoided	All areas	√	√	√
<b>Other Environmental Factors</b>				
• C&D waste sorted from mixed C&D material shall be transfer to SENT landfill for disposal.	All areas	√	√	√
• Plan and stock construction materials carefully to minimise generation of waste.	All areas	√	√	√
• Any unused materials or those with remaining functional capacity should be recycled.	All areas	√	√	√
• All generators, fuel and oil storage are within bunded areas.	All areas	√	√	√
• Oil leakage from machinery, vehicle and plant is prevented.	All areas	√	√	√
• Bund chemical storage area to 110% capacity.	All areas	√	√	√
• Prevent disposal of hazardous materials to air, soil and water body	All areas	√	√	√
• Provide rubbish skips at all work areas	All areas	√	√	√



## **Appendix I**

### **Statistical Analysis of the Trend of Suspended Solids in the Quarter**

## Statistical Analysis of the Trend of Suspended Solids For Mid-Flood Tide

### Station: M4

#### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.969	1.069	0.3223
Quarterly Mean	37	0	3.159	0.423	0.0705

#### Result:

Probability that two variances are equal (f-test) = 0

Difference between means = 0.81 (Std Dev = 1.102 and SE = 0.3163)  
(95% CI : 0.19 < Diff < 1.43)

t-value of difference = 2.561 (45 degrees of freedom)  
P = <0.001

#### Conclusion:

There is a statistically significant difference between the groups.

### Station: C1

#### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.969	0.950	0.2864
Quarterly Mean	37	0	3.402	0.580	0.0967

#### Result:

Probability that two variances are equal (f-test) = 0.01256

Difference between means = 3.567 (Std Dev = 1.077 and SE = 0.2903)  
(95% CI : 2.9979 < Diff < 4.1361)

t-value of difference = 12.285 (45 degrees of freedom)  
P = <0.001

#### Conclusion:

There is a statistically significant difference between the groups.

## Statistical Analysis of the Trend of Suspended Solids

### For Mid-Ebb Tide

#### Station: M4

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.897	1.449	0.4369
Quarterly Mean	37	0	3.016	0.369	0.0615

##### Result:

Probability that two variances are equal (f-test) = 0

Difference between means = 3.881 (Std Dev = 1.4312 and SE = 0.4227)  
(95% CI : 3.2285 < Diff < 4.8855)

t-value of difference = 9.182 (45 degrees of freedom)  
P = <0.001

##### Conclusion:

There is a statistically significant difference between the groups.

#### Station: C1

##### t-test

Group Name	N	Missing	Mean	Std Dev	SE
130% Baseline Mean	12	0	6.933	1.045	0.3151
Quarterly Mean	37	0	3.361	0.550	0.0917

##### Result:

Probability that two variances are equal (f-test) = 0.0017

Difference between means = 3.572 (Std Dev = 1.1369 and SE = 0.3149)  
(95% CI : 2.9547 < Diff < 4.1893)

t-value of difference = 11.342 (45 degrees of freedom)  
P = <0.001

##### Conclusion:

There is a statistically significant difference between the groups.

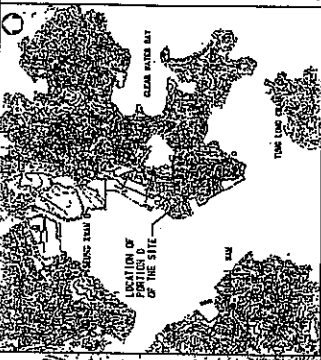


**Appendix J**  
**Site General Layout plan**

NOTES:  
 1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
 2. ALL LEVELS REFER TO MEAN SEA LEVEL UNLESS OTHERWISE SPECIFIED.  
 3. ALL LEVELS REFER TO MEAN SEA LEVEL UNLESS OTHERWISE SPECIFIED.

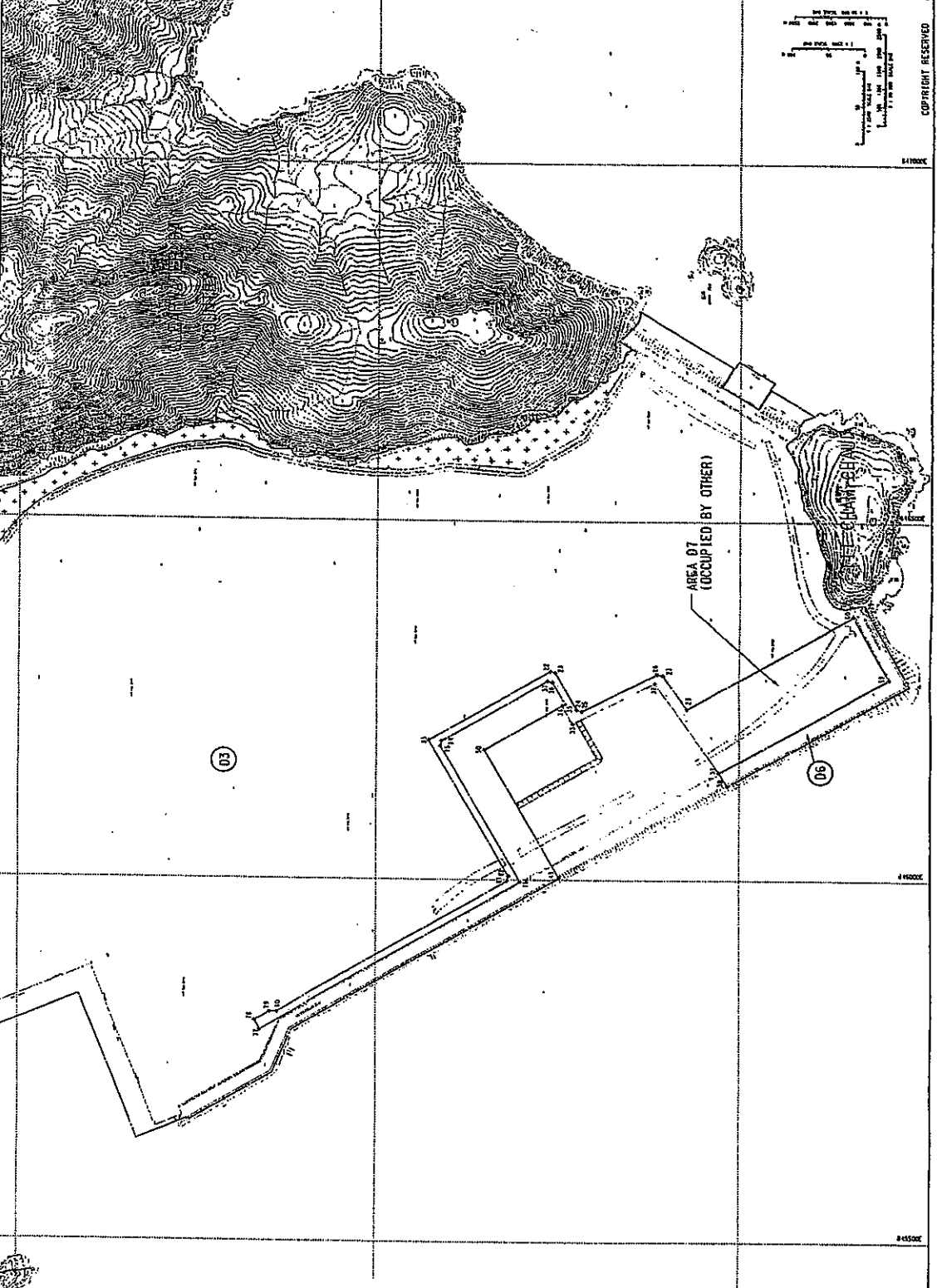
LEGEND:

- SITE BOUNDARY
- 01 PORTION 1 OF THE PORTION D
- 02 WATER BAY



KEY PLAN  
 SCALE 1:50,000

NO.	DATE	DESCRIPTION	BY	CHECKED
1	15-11-2006	ISSUED FOR TENDER	[Signature]	[Signature]
2	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
3	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
4	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
5	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
6	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
7	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
8	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
9	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]
10	15-11-2006	REVISED TO REFLECT COMMENTS	[Signature]	[Signature]



SETTING OUT DETAILS

POINT NO.	COORDINATES (Easting, Northing)
01	482100.00, 100000.00
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## **Appendix K**

### **Complaint Log**



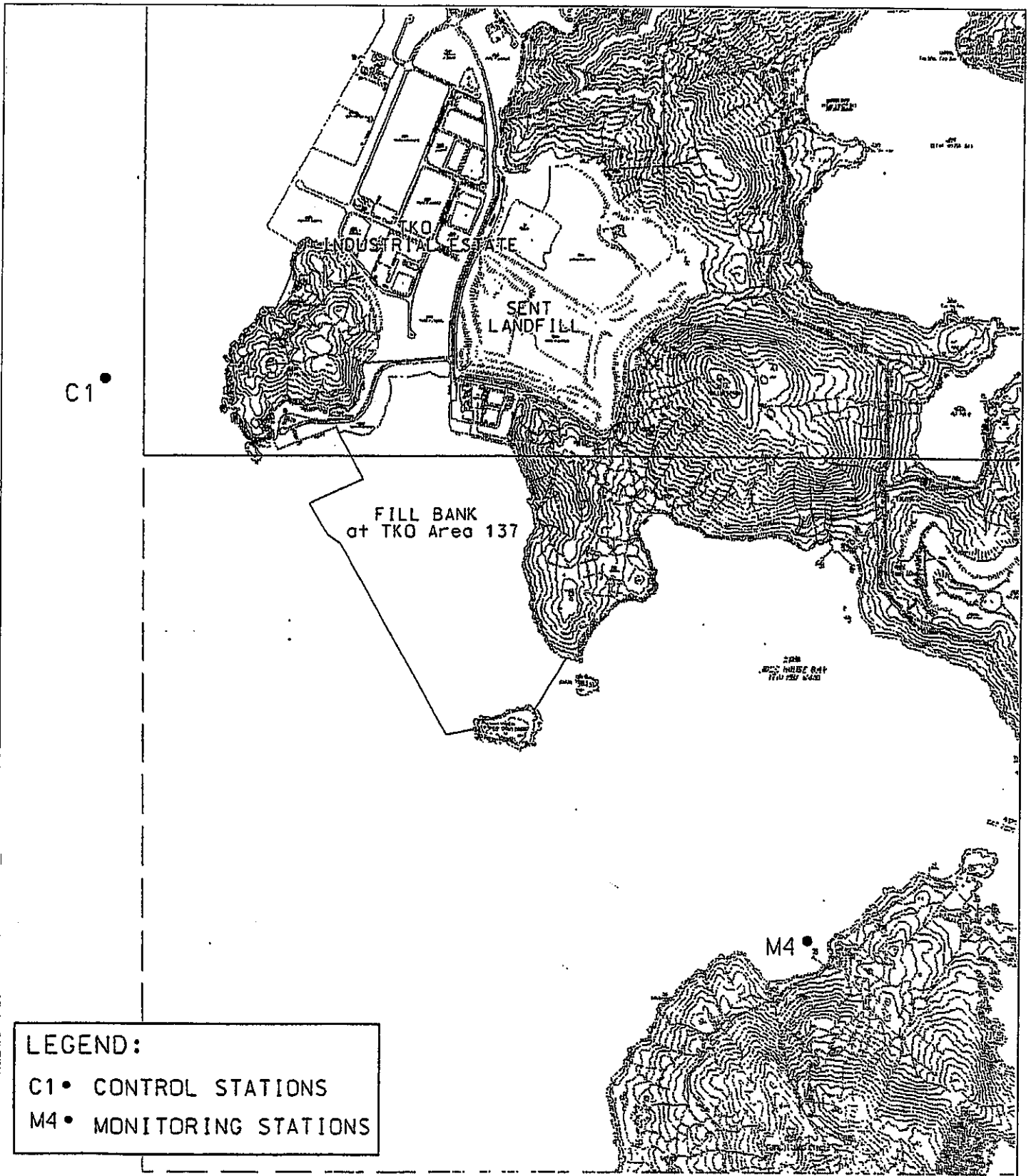
## Complaint Logs

Log Ref.	Location	Received Date	Details of Complaint	Investigation / Mitigation Action	Status
001	Wan Po Road near TVB City	27 March 2006	A complaint was received by EPD on 27 March 2006, concerning the dust and debris on Wan Po Road near TVB City Caused by dump trucks from CEDD site.	<p>In response to the complaint, EPD, RE and Contractor had taken a joint site investigation on 27 March 2006. During this joint site investigation, the performance of the wheel washing facilities was found satisfactory in cleaning the wheels of outgoing dump trucks. Besides, the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point was paved with concrete. It is no evidence to show the complaint was not related to the Fill Bank and it is believed that traffic other than Fill Bank (such as dump trucks from the Construction Waste Sorting Facility) deposited the mud and debris to road surface as they travel through Wan Po Road.</p> <p>Although the complaint was not related to the operation of Fill Bank, some mitigation measures has been taken by the Contractor to maintain the haul road and Public road:</p> <ul style="list-style-type: none"> <li>• The Contractor arranged water lorries to carry out ad-hoc additional washings on the section of Wan Po Road as well as the access road concerned during and after the joint site visit;</li> <li>• The Contractor arranged road sweeper to carry out routine cleaning the haul road and the public roads outside the Fill Bank including the section of Wan Po Road nearby TVB City;</li> <li>• All dump trucks and other vehicle were washed and removed all dusty materials from its body and wheels through wheel washing facilities before leaving the Fill Bank; and</li> <li>• Main haul road was sprayed with water by using mist-spraying system to maintain the road surface wet.</li> </ul> <p>From ET's weekly site inspection on 30 March 2006, it was noted that no dust and debris were observed on the Wan Po Road. The haul road and public road near the exit point were found wet and clean (Appendix C). Wheel washing facilities were operated properly and all dump trucks and other outgoing vehicles were washed by passing through the wheel washing facilities before leaving the Fill Bank. No violation relating depositing of debris and mud on road surface was observed during the site inspection. Hence, it was believed that the complaint was not related to the operation of Fill Bank and no further action was required to be implemented.</p>	Closed





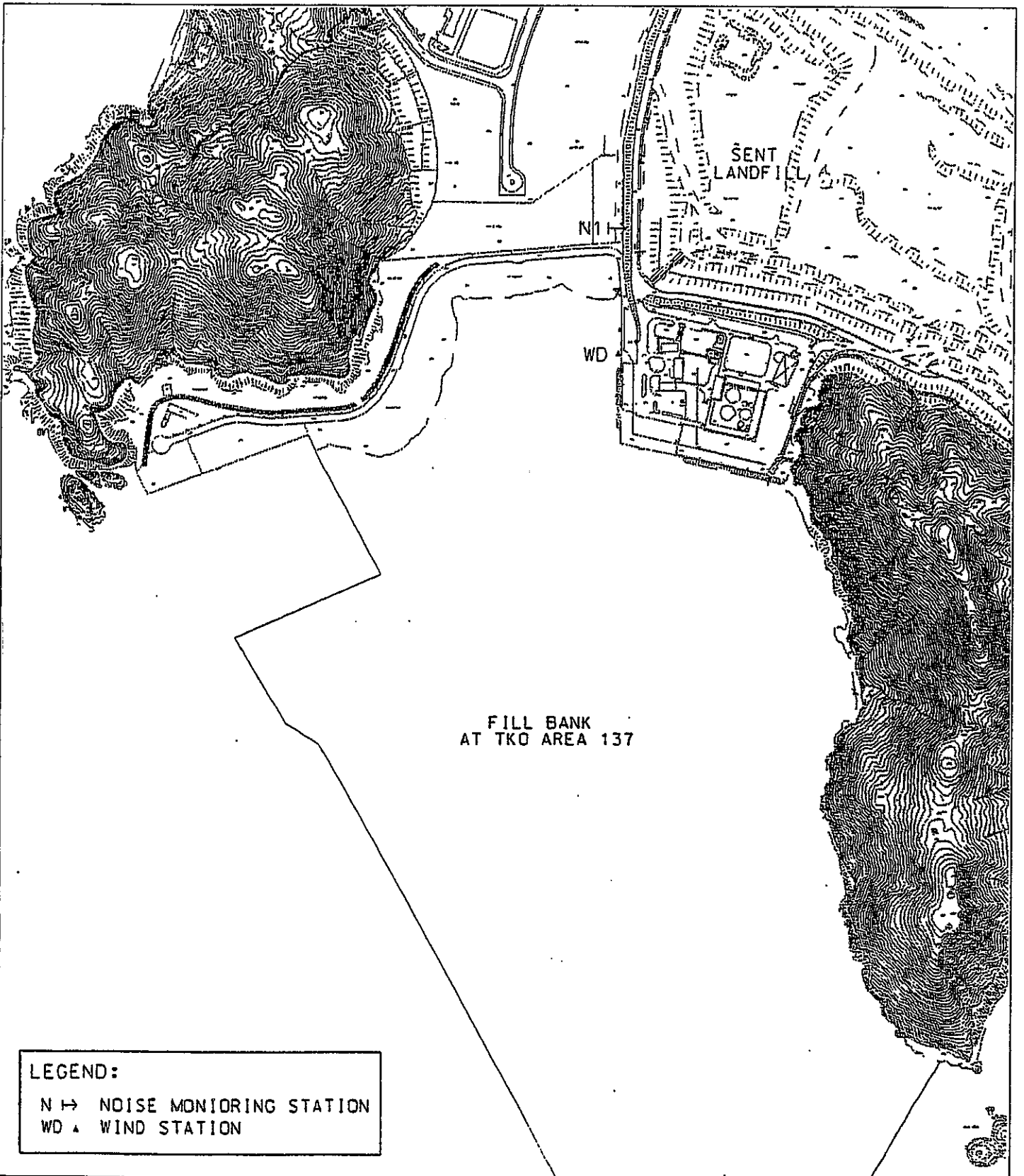
## Figures



**LEGEND:**  
 C1 • CONTROL STATIONS  
 M4 • MONITORING STATIONS

Contract No. CV/2005/12  
 Operation of Public Fill Reception Facilities at Tseung Kwan O Area 137, Quarry Bay and Mui Wo

Figure 1  
 Locations of Water Quality Monitoring Stations –  
 Fill Bank at Tseung Kwan O Area 137



**LEGEND:**

- N ↪ NOISE MONITORING STATION
- WD ▲ WIND STATION

Contract No. CV/2005/12

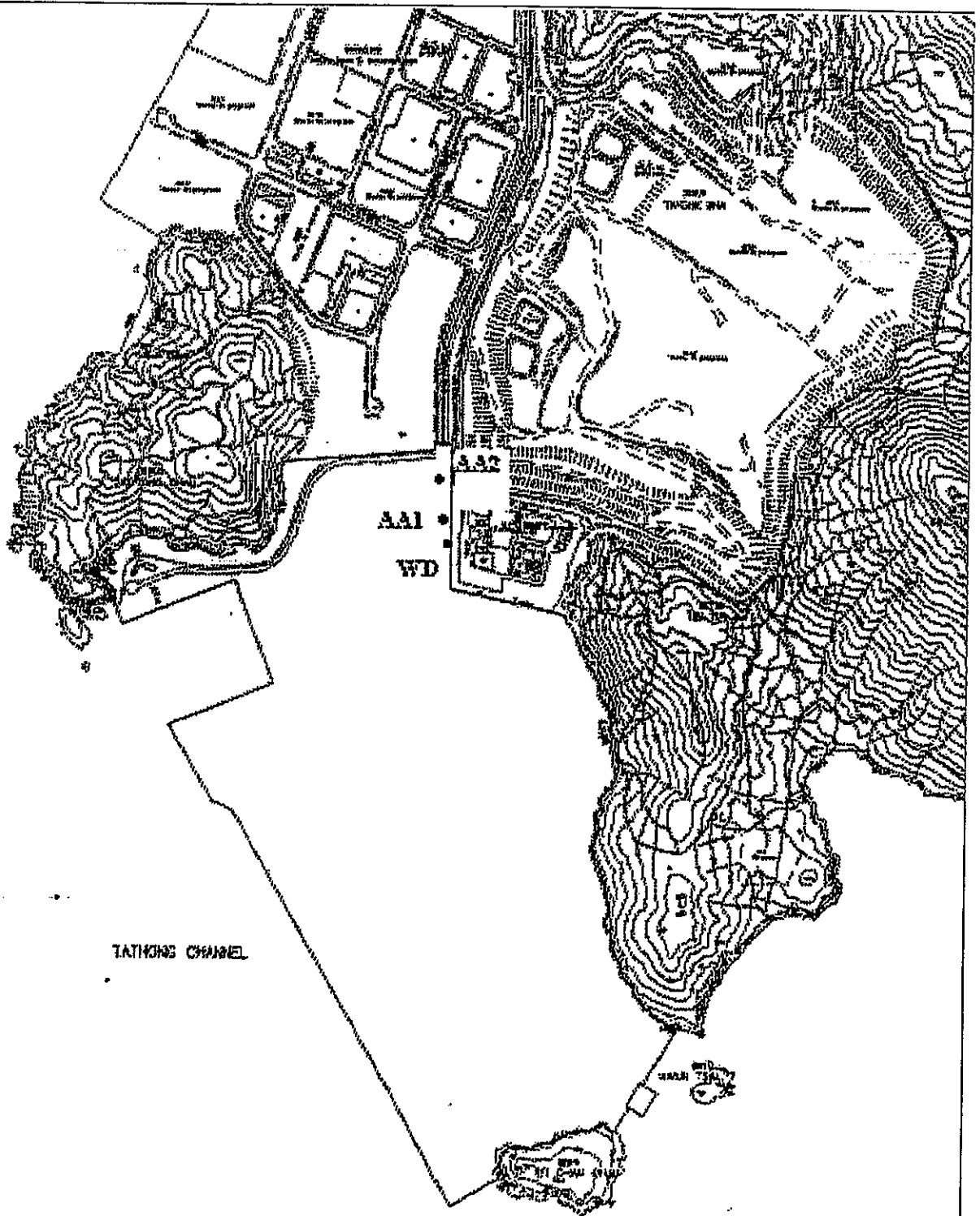
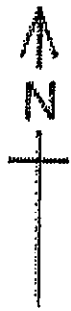
Operation of Public Fill Reception Facilities at Tseung Kwan O Area 137, Quarry Bay and Mui Wo

Figure 2

Locations of Noise Monitoring Station –  
Fill Bank at Tseung Kwan O Area 137



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ETS-TESTCONSULT LIMITED



**Legend:**

**AA ● Air Monitoring Stations**

**WD ■ Wind Station**

Contract No. CV/2005/12

Operation of Public Fill Reception Facilities at Tseung Kwan O Area 137, Quarry Bay and Mui Wo

Figure 3

Locations of Air Quality Monitoring Stations –  
Fill Bank at Tseung Kwan O Area 137



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