



QUARTERLY  
ENVIRONMENTAL MONITORING AND AUDIT REPORT  
FOR  
CONTRACT No. CV/2002/13  
FILL BANK AT TUEN MUN AREA 38  
JULY TO SEPTEMBER 2004  
(Revision No. 0)

Report No.: ET12301

Certified by:   
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Date: 23/11/04

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Date: 24/1/04

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## **EXECUTIVE SUMMARY.**

This is the 5<sup>th</sup> Quarterly Environmental Monitoring and Audit (EM&A) report for Contract No. CV/2002/13 – Fill Bank at Tuen Mun Area 38. The site has been in operation as a public filling area as part of the overall reclamation works. The site is 24 hours operated except during the Chinese New Year holidays to provide a stable outlet for public fill to serve the construction industry. This report covers the monitoring works conducted from July to September 2004.

### **Construction Activities for the Reported Period.**

- Public filling operation.
- Operation of tipping hall.
- Hydroseeding to slope surface. .

### **Air Quality Monitoring.**

Two stations (A1 and A2) have been identified as the locations for the monitoring of 24-hour and 1-hour Total Suspended Particulates (TSP). The Monitoring of 24-hour TSP was carried out on sixteen occasions at A1 and A2. Monitoring of 1-hour TSP was carried out on forty-eight occasions at A1 and A2. There was no exceedance to the set Action and Limit levels for both parameters at A1 and A2.

### **Water Quality Monitoring.**

Water quality in terms of turbidity, dissolved oxygen, suspended solids, temperature, and salinity, was carried out on thirty-eight occasions during flood tide and ebb tide at FM1, FM2, FC1 and FC2. There was no exceedance to the set action or limit level for all parameters at all stations.

### **Landscape Audit**

Hydroseeding was applied to most completed slope surfaces. There was no specific site observation regarding the landscape aspect during the reporting period.

### **Waste Management.**

480,700m<sup>3</sup> public fill was collected to the Fill Bank. 118.67t C&D waste and general refuse were disposed of at WENT Landfill. 1.872t chemical waste collected by licensed contractor for disposal.

### **Complaints and Notifications of Summonses and Successful Prosecutions.**

Three complaints were received in this reporting period. One was about dust generation by site vehicles at Lung Mun Road in the vicinity of the Fill bank and another was about excessive dust emission within the site. Both situations were rectified by the Contractor. One complain was about dust emission and debris leaking from dump trucks travelling along Lung Mun Road near the Government Depot. This complaint was considered to be not site-related.

**Site Inspections.**

Thirteen weekly site inspections were carried out by the Environmental Team (ET) in this reporting period. Three audits by the Independent Environmental Checker (IEC) were carried out in this reporting period. The major observations, action by the Contractor and the environmental outcomes are summarised in the Section 7 of this report.

## **1. INTRODUCTION.**

### **1.1 Background.**

Stanger Asia Ltd. has been commissioned by the Penta-Ocean Construction Co. Ltd. to provide an Environmental Team (ET) to monitor air and water quality and audit landscape works for Contract No.CV/2002/13. The team is to take a pro-active role in all issues, which may be of environmental concern during the establishment, operation and decommissioning phases of the Fill Bank at Tuen Mun Area 38.

The Independent Environmental Checker (IEC) appointed for this project is Materialab Consultants Ltd.

In this report, the air and water quality monitoring works and landscape audit conducted from July to August 2004 will be detailed and reviewed. All monitoring works were carried in accordance to “*Agreement No, PW 01/2002 Project Profile for Fill Bank at Tuen Mun Area 38, Environmental Monitoring and Audit Manual*”.

### **1.2 Report Structure.**

The purpose of this report is to detail and review the air and water quality monitoring works and landscape audit undertaken from July to September 2004.

The report follows the format given below:

Section 1	Introduction and background information to the content of this report.
Section 2	This section gives the information of the project.
Section 3	This section summarises all the environmental permits and licenses.
Section 4	Summary of the EM&A requirements is presented.
Section 5	This section details the implemented mitigation measures.
Section 6	Details monitoring results.
Section 7	The site environmental audits are summarized in this section.
Section 8	The status for solid and liquid waste management for the site is overviewed.
Section 9	Complaints, notifications of summons and successful prosecutions are summarized.
Section 10	This section gives a conclusion in relation to all monitoring activities.

## **2. PROJECT INFORMATION.**

### **2.1 Site Description.**

The works mainly comprise the construction of temporary storm water system, setting up of C&D material loading/unloading facilities, setting up/ refurbishing site facilities, stockpiling of 4.9 million m<sup>3</sup> of public fill, and decommissioning of the temporary fill bank.

The site layout plan is shown in Figure 2.1.

### **2.2 Project Organization.**

Mr. L.M. Chan is the Engineer's Representative for the Civil Engineering Department, Government of the HKSAR. (Tel: 2762 5602, Fax: 2714 0113).

The Independent Environmental Checker (IEC) for this project is headed by Mr. Joseph Poon - Manager of Materialab Consultants Ltd. (Tel: 2450 8238, Fax: 2450 6138).

Mr. Lok Wah Fung is the Site Agent for Penta-Ocean Construction Co., Ltd. (Tel: 2491 1584, Fax: 2496 0433).

The Environmental Team (ET) for the project is Stanger Asia Ltd. The team is headed by Mr Chris Shenfield – Senior Environmental Scientist. (Tel: 2682 1203, Fax: 2682 0046).

The Organization Chart with the key personnel contacts names and telephone numbers is given in Appendix I.

### **2.3 Construction Programme.**

The overall construction programme is given in Appendix VI. Details of the construction activities are listed below.

- Site clearance;
- Construction of storm water drainage system;
- Stockpiling of 4.9 million m<sup>3</sup> of public fill;
- Construction of landscape works; and
- Removal of stockpiled public fill.



### 3. ENVIRONMENTAL PERMITS AND LICENSES.

The summary of the status of all environmental permits, licenses and notification for this project as at September 2004 is summarized in the following table.

**Table 3.1 Summary of the Environmental Permits and Licenses**

Description	Licence/Permit No.	Date of Issue	Date of Expiry	Status
Environmental Permit	EP-153/2003	13-Feb-03	--	Superseded
Registration of Chemical Waste Producer	WPN5296-421-P2800-03	05-Aug-03	--	Issued
Amended Environmental Permit	EP-153/2003/A	30-Oct-03	--	Issued
Construction Noise Permit	GW-TW0143-04	15-May-04	14-Nov-04	Issued

### 4. SUMMARY OF EM&A REQUIREMENTS.

#### 4.1 Air Quality.

##### *Monitoring Location.*

The project has two designated locations (A1 & A2) for the monitoring of air quality. A1 is a fixed location in the vicinity of the site office to monitoring the TSP levels at River Trade Terminal and A2 is a movable location to the western boundary of the site that is designed to move as works progress. The air monitoring locations are shown in Figure 4.1.

**Table 4.1 Coordinates of Air Quality Monitoring Stations**

Station	HK Metric Grid – Easting	HK Metric Grid - Northing
A1	811368	825593
A2	810812*	825096*

\* - Coordinates of present location.

##### *Methodology*

Measurement of 24-hour and 1-hour TSP levels were carried out in accordance to the high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50). The high volume samplers are calibrated at bi-monthly intervals. The calibration kit (Anderson Model G2535) comprising pressure plates and a transfer standard is traceable to the internationally recognized standard.

##### *Laboratory Measurement.*

Laboratory measurements were carried out in Stanger Asia Ltd. own HOKLAS accredited laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments.

*Monitoring Parameters Frequency.*

**Table 4.2 Air Quality Monitoring Frequency**

Monitoring Locations	Parameter	Frequency
A1 & A2	24-hr TSP	Once in every six days
	1-hr TSP	Three times in every six days

*Action and Limit Levels.*

The Action levels for air quality monitoring were established from the impact monitoring data of Contract No. CV/2000/01 prior to the commencement of the fill bank utilising the criteria laid out in *section 4.7* of the EM&A Manual for the project. The Limit levels for air quality monitoring has been set in line with statutory guidelines for air quality in Hong Kong. Action and Limit levels for both 24-hour and 1-hour TSP are given in the following table.

**Table 4.3 Action and Limit Levels for Air Quality**

Parameter Monitored	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
1-hour TSP	344	500
24-hour TSP	192	260

## **4.2 Water Quality.**

*Monitoring Locations.*

The EM&A Manual produced for this project has proposed two monitoring stations (FM1 & FM2) and two control stations (FC1 & FC2) for the carrying out of water quality monitoring. Control Station FC1 will act as upstream control station for the mid-ebb tide with control station FC2 acting as upstream control stations for the mid-flood tide.

The designated monitoring stations are shown in Figure 4.2.

*Methodology.*

Measurements are taken at three water depths, namely 1m below water surface, mid-water and 1m above seabed at both mid-flood and mid-ebb tides. Replicates samples and measurements of turbidity, dissolved oxygen (mg/L), dissolved oxygen (% saturation) and temperature at each depth of each station are taken. Suspended solids shall be determined in the laboratory. For the purpose of evaluating the water quality, all values for suspended solids and turbidity shall be depth-averaged. All on-site monitoring equipment was calibrated three-monthly at Stanger Asia's HOKLAS accredited laboratory.

*Laboratory Analysis (Fill Bank Project).*

The laboratory measurements of suspended solids were carried out at Stanger Asia Limited, a HOKLAS accredited laboratory in accordance with Method No. 2540D 17<sup>th</sup> Edition of APHA.

Stanger Asia operates a comprehensive quality assurance and quality control programmes for QA/AC procedures in accordance with the requirements of HOKLAS accreditation, all filters were equilibrated and weighted repeatedly until the difference of two consecutive results is less than 0.5 mg.

*Monitoring Parameters and Frequency.*

**Table 4.4 Water Quality Monitoring Frequency**

Monitoring Locations	Monitoring Parameters	Frequency	Requirements
Designated Control Stations: FC1 & FC2.  Designated Monitoring Stations: FM1 & FM2.	Dissolved Oxygen, Salinity, Suspended Solids, Temperature and Turbidity.	Three days per week.	At three depths during mid-ebb and mid-flood tides.

*Action and Limit Levels.*

The Action and Limit levels for water quality monitoring were established from the impact monitoring data of Contract No. CV/2000/01 prior to the commencement of the fill bank utilising the criteria laid out in *section 6.8* of the EM&A Manual for the project.

**Table 4.5 Action and Limit Level for Water Quality**

Parameter	Action level	Limit level
Dissolved Oxygen in mg/L.		
Surface & Middle	<4.78mg/L	<4mg/L
Bottom.	<4.16mg/L	<2mg/L
Suspended Solids (SS) in mg/L (depth-averaged)	>120% of upstream control station's SS at the same time of the same day.	>130% of upstream control station's SS at the same tide of the same day .
Turbidity (Tby) in NTU	>120% of upstream control station's Tby at the same tide of the same day.	>130% of upstream control station's Tby at the same tide of the same day.

All the figures given in the table are used for reference only and the EPD may amend the figures whenever necessary.

**4.3 Event and Action Plans.**

The Event and Action Plans for air and water are attached in Appendix II of this report.

**5. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES.**

The contractor implemented various environmental mitigation measures as recommended in the Project Profile and Environmental Permit. The implementation status is attached in Appendix III.

## 6. MONITORING RESULTS.

### 6.1 Air Quality Monitoring.

Monitoring of 24-hour and 1-hour TSP is summarized in the following tables. The results are present graphically in Figures 6.1 and 6.2.

**Table 6.1 Results of 24-hour TSP Monitoring Data**

Location	Number of Monitoring	Number of Exceedance	
		Action Level	Limit Level
A1	16	0	0
A2	16	0	0
Action Level	192 $\mu\text{g}/\text{m}^3$		
Limit Level	260 $\mu\text{g}/\text{m}^3$		

**Table 6.2 Results of 1-hour TSP Monitoring Data**

Location	No. of Monitoring	No. of Exceedance	
		Action Level	Limit Level
A1	48	0	0
A2	48	0	0
Action Level	344 $\mu\text{g}/\text{m}^3$		
Limit Level	500 $\mu\text{g}/\text{m}^3$		

There was no non-compliances in this reporting period.

### 6.2 Water Quality Monitoring.

Water quality in terms of turbidity, dissolved oxygen and suspended solids was conducted at FM1, FM2, FC1 and FC2 at a frequency of three days per week, at mid-flood and mid-ebb tides. Results for water quality monitoring are summarised in the following table. Graphical presentations of the results are shown in Figure 6.3 – Figure 6.10.

**Table 6.3 Summary of Water Quality Monitoring Data**

Parameter	Number of Occasions Monitored	Exceedance Level		Total
		Action	Limit	
Surface & Middle Dissolved Oxygen	152	0	0	0
Bottom Dissolved Oxygen	152	0	0	0
Turbidity	152	0	0	0
Suspended Solids	152	0	0	0
Total	608	0	0	0

There was no exceedance to all parameter in this reporting period.

#### *Quarterly Assessment of Impacts from Construction Activities*

A quarterly assessment of impacts on suspended solids from construction activities at the project site, including comparison of the difference between the quarterly mean and 1.3 times of the ambient mean for each monitoring station, which is defined as 30% increase of the baseline data of the parameter is

summarized in Table 6.4. All quarterly assessment analytical results demonstrate that the quarterly means of suspended solids at all stations are significantly higher than the 1.3 on water quality times of the ambient means ( $p < 0.05$ ). The quarterly means of suspended solids at both monitoring and control stations increased to about 2 times of the ambient means. Therefore, the changes were not considered to be related to the Fill Bank Project. These were possibly due to variation of ambient condition.

**Table 6.4 Quarterly Assessment of Impacts on Suspended Solids**

Monitoring Station	Significant Difference?	SS Level Increased to more than 1.3 Times of Ambient Mean?
FM1	Y	Y
FM2	Y	Y
FC1	Y	Y
FC2	Y	Y

**7. ENVIRONMENTAL AUDIT.**

**7.1 Site Inspections.**

Thirteen site inspections were carried out by the Environmental Team (ET) in this reporting period. Three audits by the Independent Environmental Checker (IEC) were carried out in this reporting period. The major observations by the ET and IEC, actions by the Contractor and outcomes are summarised in the following tables.

*Environmental Team.*

**Table 7.1 Summary of Findings, Actions and Outcomes of Site Inspection by the ET**

Observations	Actions by Contractor	Outcome
<b>July 2004</b>		
Drainage system was blocked by deposit. (14.07.2004)	Cleaned up the deposit regularly.	Deposit in the drainage was cleaned up. (31.07.2004)
Debris was observed in the sediment tanks. (31.07.2004)	To clean up the debris in the sedimentation system regularly.	To be observed..
The engine cover of excavator was opened during operation (31.07.2004)	To ensure all cover of excavators are closed.	Situation rectified. (07.08.2004)
Haul roads were dusty. (14.07.2004)	Sprayed more water on dusty area.	Situation improved. (24.07.2004)
<b>August 2004</b>		
Splashing of fill materials into the sea. (07.08.2004)	Raised nets and sheeting to retain materials.	Sheeting and nets were raised. (13.08.2004)
Some drainage channels were blocked by deposit. (13.08.2004)	Cleaned up the deposit regularly.	Contractor carries out regular cleaning to drainage channels.
The automatic wheel washing facility was not functioning. (13, 18, 27.08.2004)	Repair the facility and increase frequency of road sweeping to keep the public highways free of mud.	Road sweeper was operated to clean up the public highways.
<b>September 2004</b>		
Drainage channels near the recycling plant were filled with deposit. (03.09.2004)	Clean up the deposit regularly.	Contractor carries out regular cleaning to drainage channels.
Access road exiting from wheel wash bay was muddy. (03.09.2004)	Clean up that area regularly.	Situation improved. (09.09.2004)
The automatic wheel washing facility was not functioning. (03, 09, 15, 28.09.2004)	Repaired the facility and increased frequency of road sweeping to keep the public highways free of mud.	The facility was operated occasionally. Road sweeper was operated to keep the public highways clean.
Sedimentation tanks were filled with deposit. (09, 21, 28.09.2004)	Clean up the sedimentation tanks.	To be observed.
Dust generation from site traffic on dry haul roads. (15, 21.09.2004)	Increased the frequency of water spraying.	Frequency of water spraying increased, situation improved. (28.09.2004)
Splashing of fill materials into the sea. (21.09.2004)	Raise nets and repair sheeting to retain materials.	To be observed.

*Independent Environmental Checker.*

**Table 7.2 Summary of Findings, Actions and Outcomes of Site Inspection by the IEC**

Observations	Actions by Contractor	Outcome
<b>14<sup>th</sup> July 2004</b>		
Splashing generated from wet soils during transfer to the barge at the tipping hall has caused splashing into the sea.	Raised nets to retain material and instructed barges to berth as close to the seawall as possible.	To be observed in next reporting period.
Pondings were observed at various locations.	Drain away the stagnant water.	Some pondings were filled. (31.07.2004)
The wheel washing bay near the main entrance was flooded.	Maintained the drainage system to avoid flooding.	Situation rectified. (24.07.2004)
Water sprinkling was weak. Dust emission from traffic on haul roads along the western side and seafront, and haul roads to the tipping hall and sorting facility on RTT side.	Sprayed more water on dusty area	Situation improved. (24.07.2004)
The western side of the fill bank was only partially hydroseeded.	To arrange hydroseeding on that portion upon slope trimming works completed.	To be observed in next reporting period.
Vegetation, as well as stagnant water, was observed in the u-channel and sand/silt traps.	Removed the debris and vegetation to drain away stagnant water regularly.	Deposit in the drainage was cleaned up. (31.07.2004)
Trucks were travelling at speed greater than 10 km/hr which enhanced dust emission.	Reminded all truck drivers to adhere to speed limit.	No speeding vehicles was noted. (24.07.2004)
<b>13<sup>th</sup> August 2004</b>		
The high-pressure water jet at the site exit was not functioning.	Repair the facility and increase frequency of road sweeping.	Road sweeper was operated to clean up the public highways.
The western side of the fill bank was only partially hydroseeded.	To arrange hydroseeding on that portion upon slope trimming works completed.	To be observed in next reporting period.
Stagnant water and pondings were observed in the u-channel and sand/silt traps.	Drain away stagnant water regularly.	Contractor drains away stagnant water on regular basis.

**Table 7.2 (cont'd) Summary of Findings, Actions and Outcomes of Site Inspection by the IEC**

Observations	Actions by Contractor	Outcome
<b>21<sup>st</sup> September 2004</b>		
Splashing generated during the transfer of wet soil to the barge at the tipping hall caused splashing into the sea.	Raise nets and repair sheeting to retain materials.	To be observed.
Heavy dust emission was observed from traffic on haul roads.	Increased the frequency of water spraying.	Frequency of water spraying increased, situation improved. (28.09.2004)
Litter was observed in the sea near the barging point and the fill bank.	Clean up the litter regularly.	Situation rectified. (28.09.2004)
The western side of the fill bank was only partially hydroseeded.	To arrange hydroseeding on that portion upon slope trimming works completed.	To be observed after slope trimming works completed.
Stagnant water and pondings were observed in various locations.	Drain away stagnant water regularly.	Contractor drains away stagnant water on regular basis.

## **7.2 Landscape and Visual.**

Three landscape audits were conducted during the reporting period. Completed slopes were being hydroseeded during this reporting period. There was no specific observation regarding landscape aspect in this reporting period.



**8. WASTE MANAGEMENT.**

480,700m<sup>3</sup> public fill was collected to the Fill Bank. 118.67t C&D waste and general refuse were disposed of at WENT Landfill. 1.872t chemical waste generated was collected by licensed contractor for disposal.

**9. COMPLAINTS, NOTIFICATIONS OF SUMMONSES AND SUCCESSFUL PROSECUTIONS.**

Three complaints were received in this reporting period. One was about dust generation by site vehicles at Lung Mun Road in the vicinity of the Fill bank and another was about excessive dust emission within the site. Both situations were rectified by the Contractor. One complain was about dust emission and debris leaking from dump trucks travelling along Lung Mun Road near the Government Depot. This complaint was considered to be not site-related.

Cumulative statistics on complaints, notifications of summonses and successful prosecutions are attached in Appendix V.

**10. CONCLUSION.**

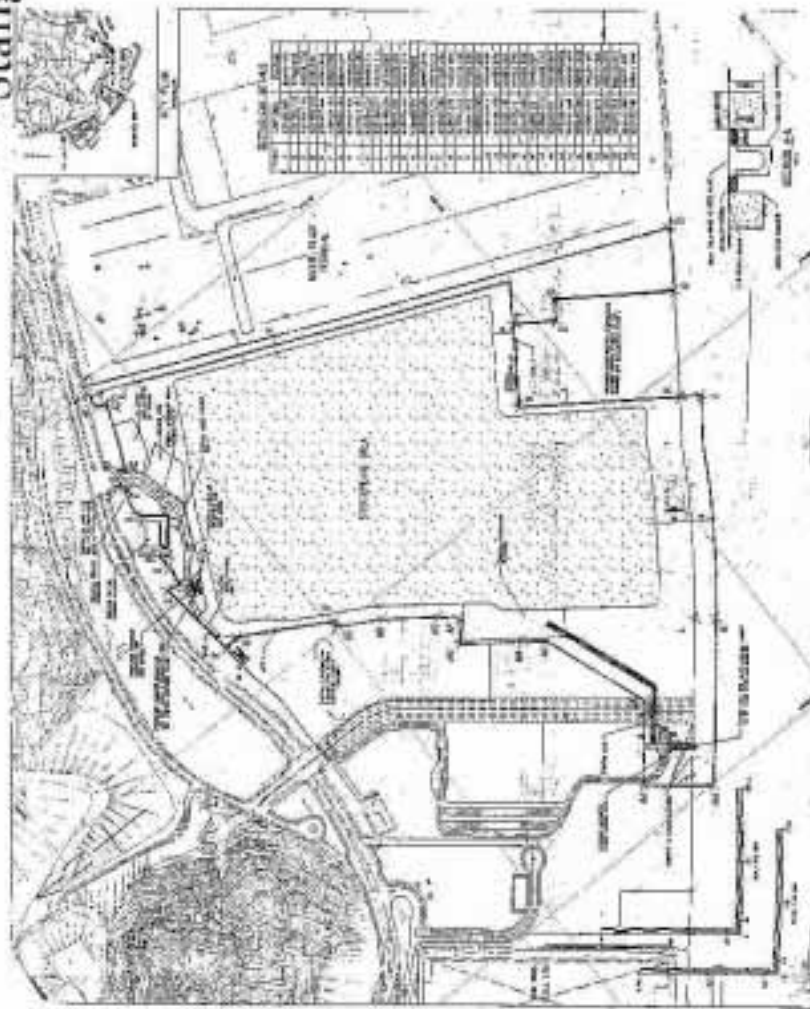
This Quarterly Environmental Monitoring and Audit Report details the monitoring works carried out during the period from July to September 2004. The monitoring works were effective to generate data to identify or confirm the absence of impact attributable to the works.

All results for the air quality monitoring conducted this quarter at monitoring station A1 and A2 were acceptable.

In relation to the monitoring of water quality, there was no exceedance to all parameters in this reporting period.

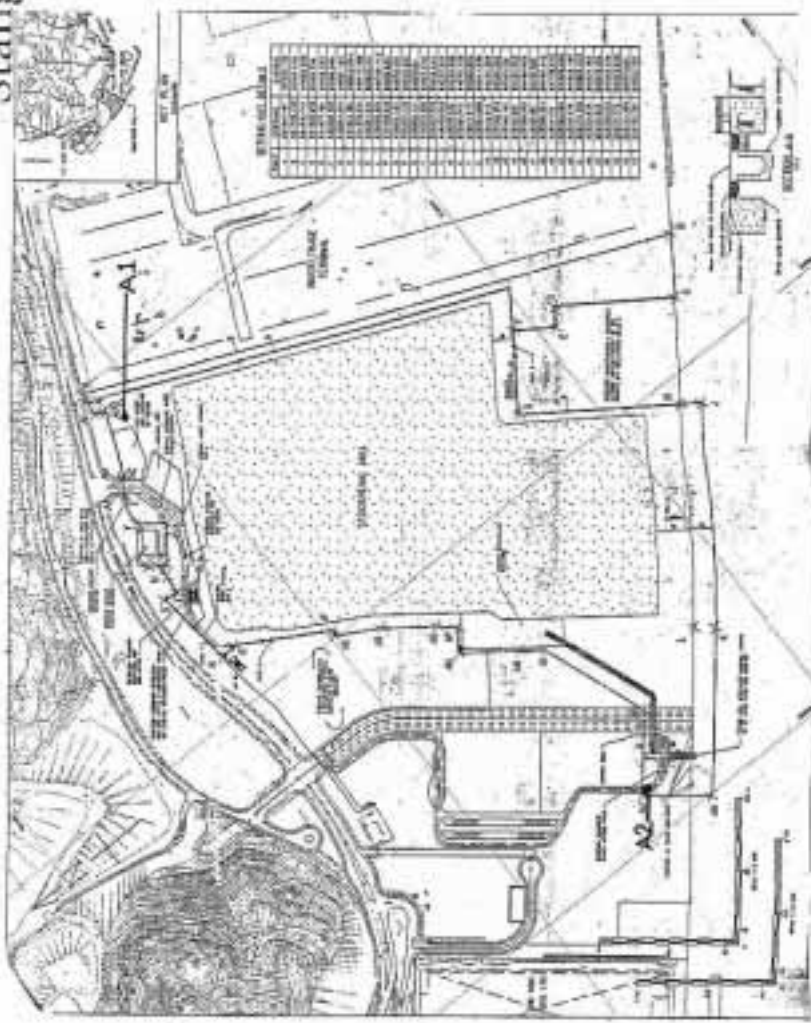
No specific observation was reported from landscape audit. Three environmental complaint or summon was received during this quarter.

## **Figures**



**Figure 2.1 - The Site Layout Plan**

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**Figure 4.1 – Air Quality Monitoring Stations**

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**Figure 4.7 – Water Quality Monitoring Stations**

The arrangement of this report is based on the report by Stanger Asia Limited. It may contain information related with the project and is not intended to be used for any other purpose.

RM1, RM2, RM3, RM4 - General Stations; RM5, RM6 - General Stations; RM7, RM8 - General Stations.

Figure 6.1 - Graphical Plot for 24-hr TSP

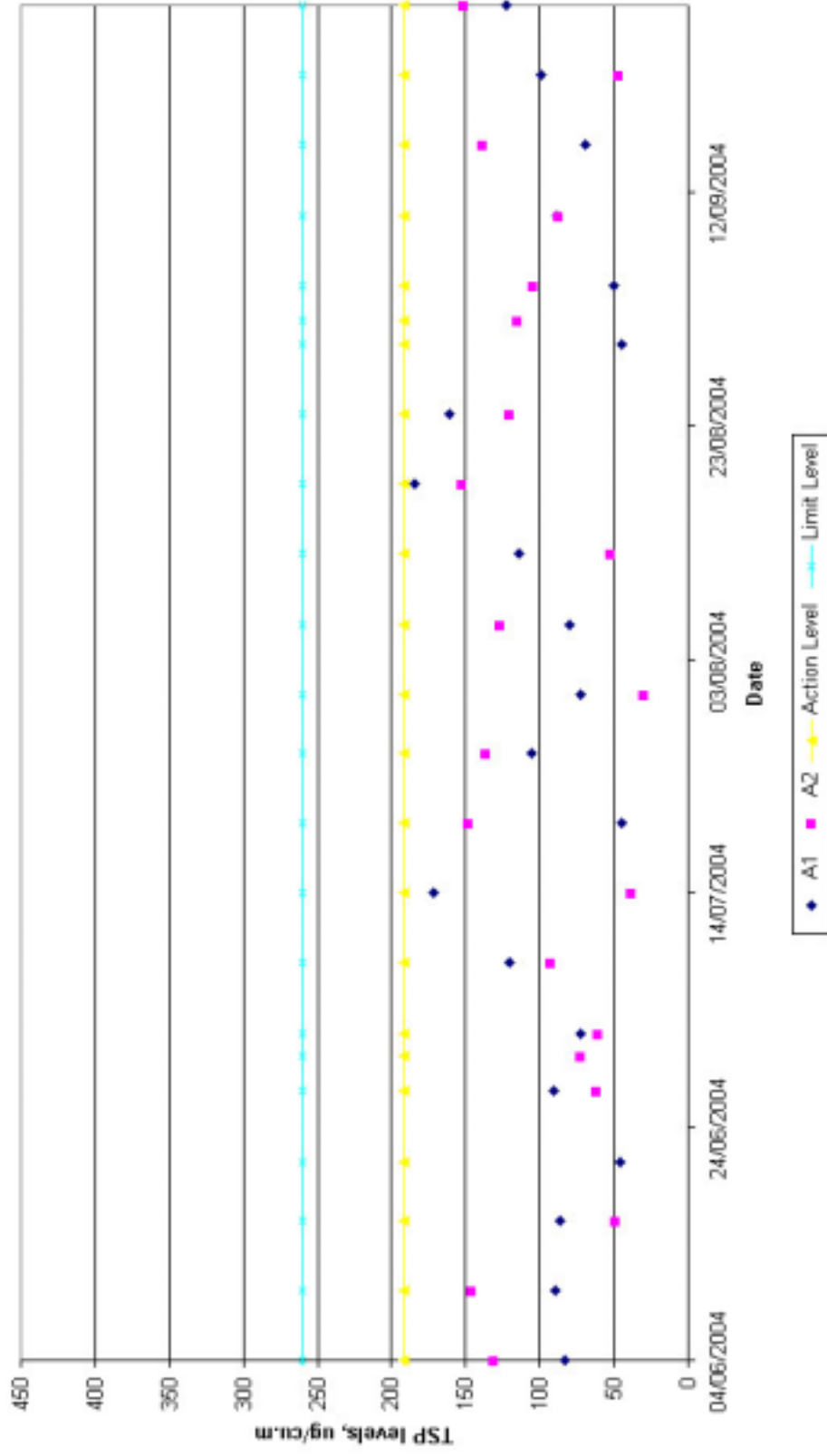


Figure 6.2 - Graphical Plot for 1-hr TSP

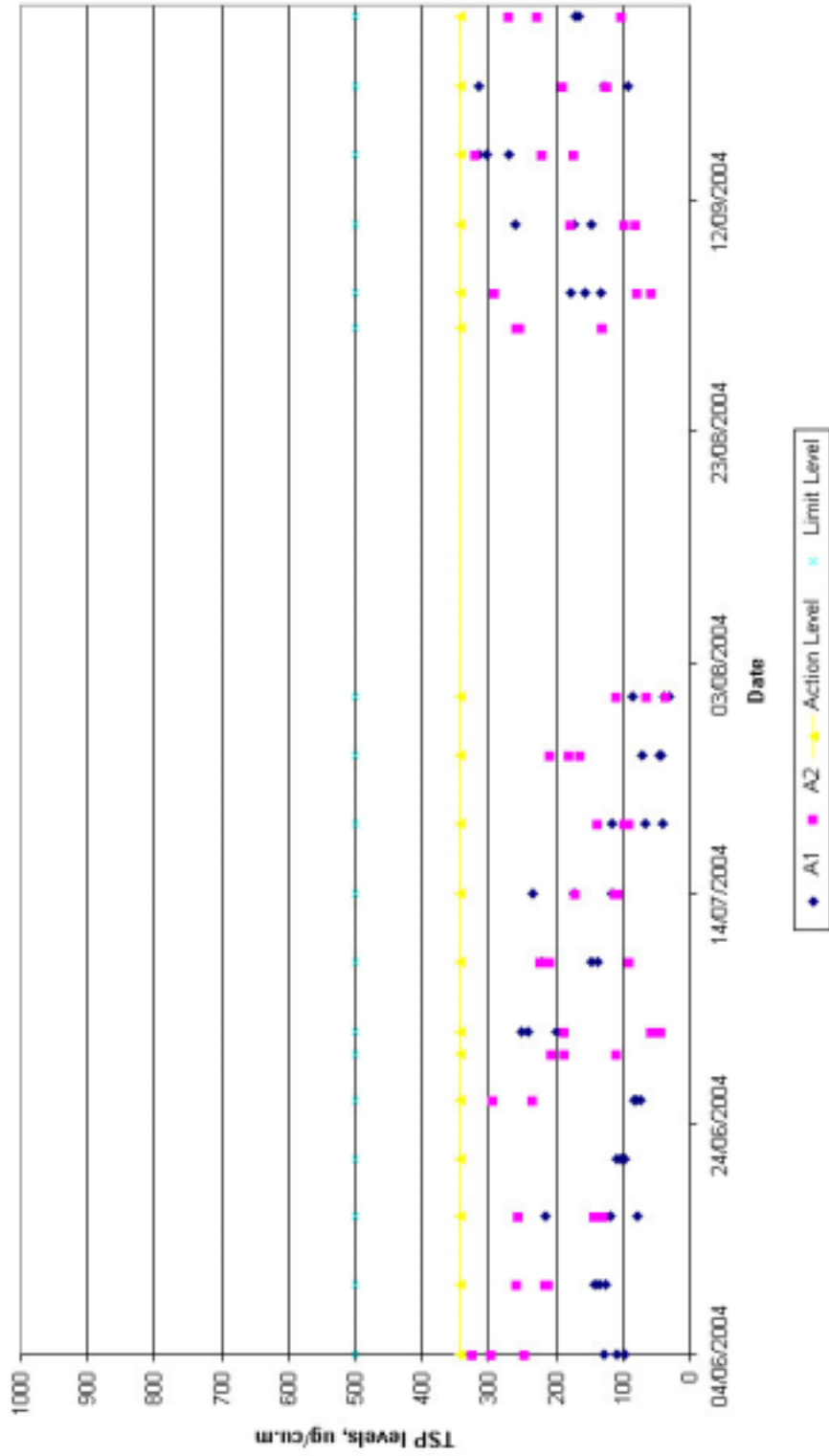


Figure 6.3 - Surface and Middle Averaged Dissolved Oxygen - Mid-Flood

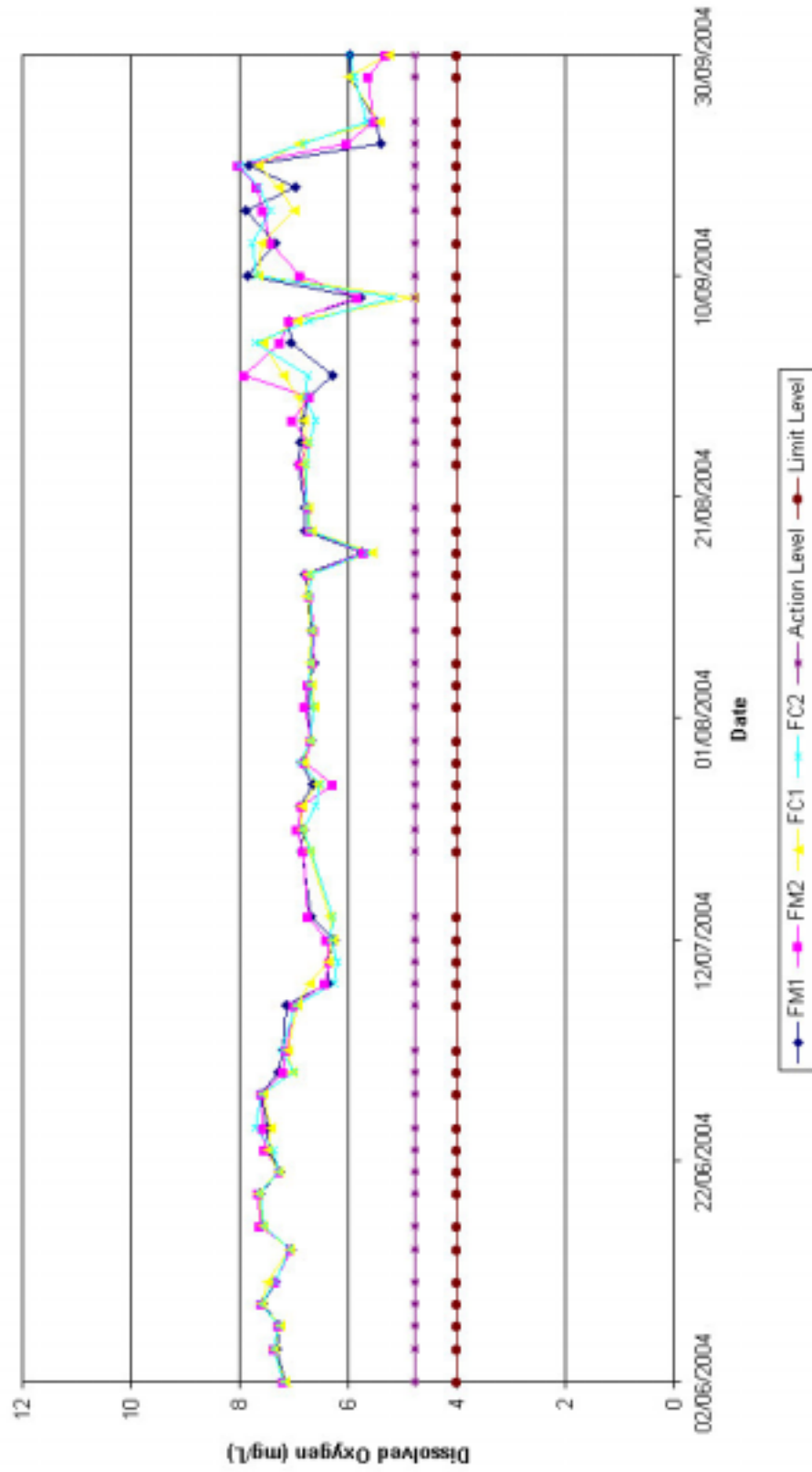




Figure 6.4 - Surface and Middle Averaged Dissolved Oxygen - Mid-Ebb

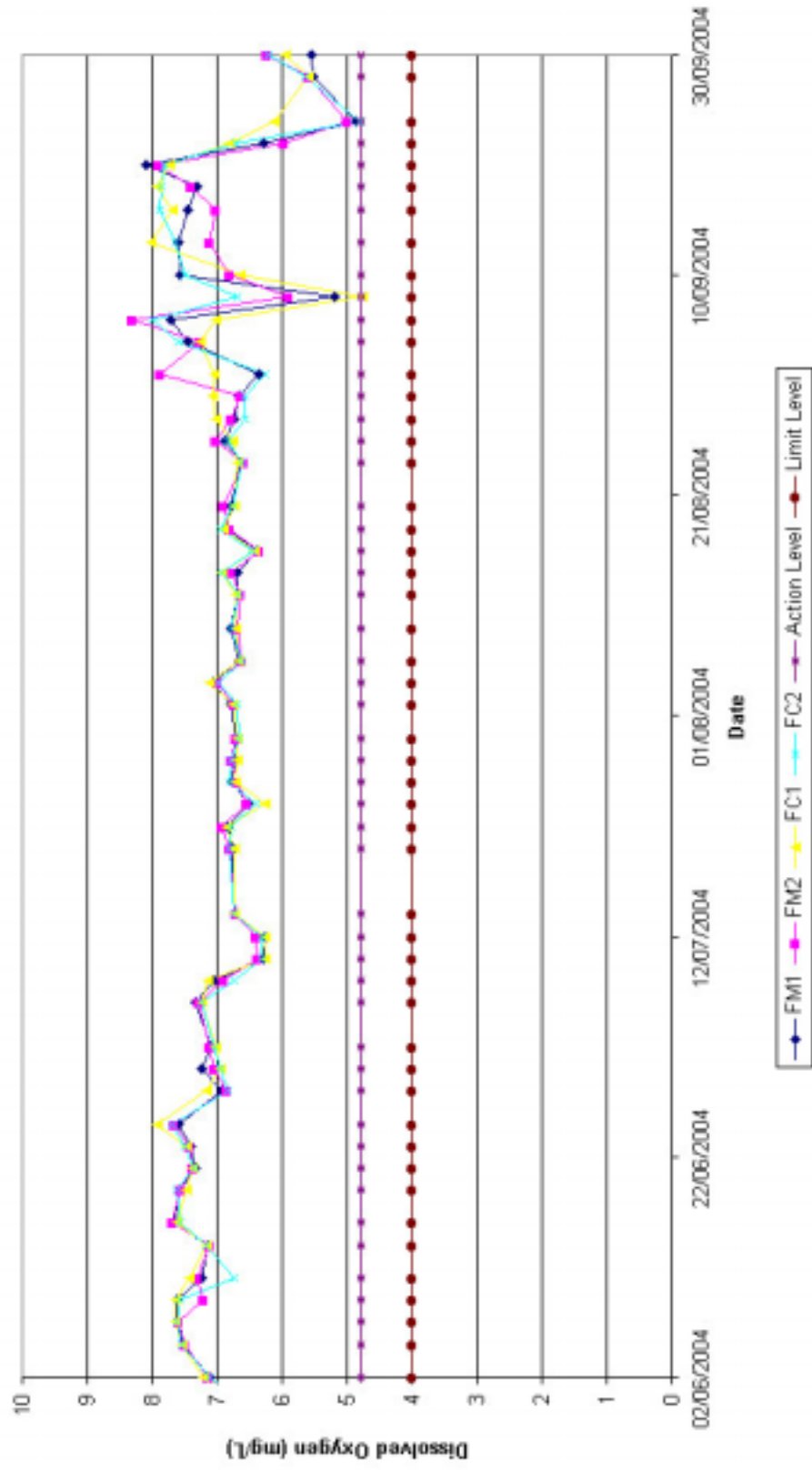


Figure 6.5 - Bottom Averaged Dissolved Oxygen - Mid-Flood

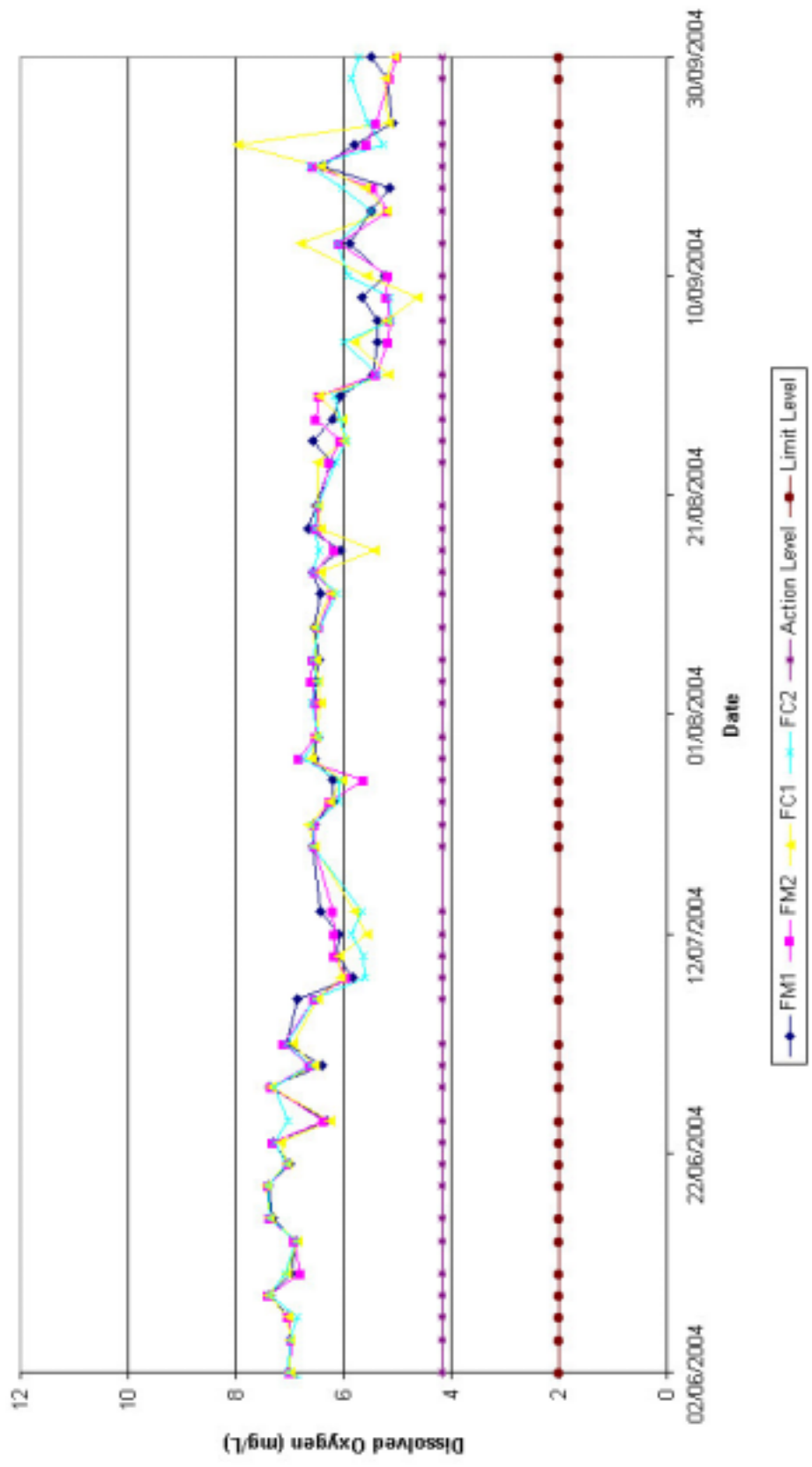


Figure 6.6 - Bottom Averaged Dissolved Oxygen - Mid-Ebb

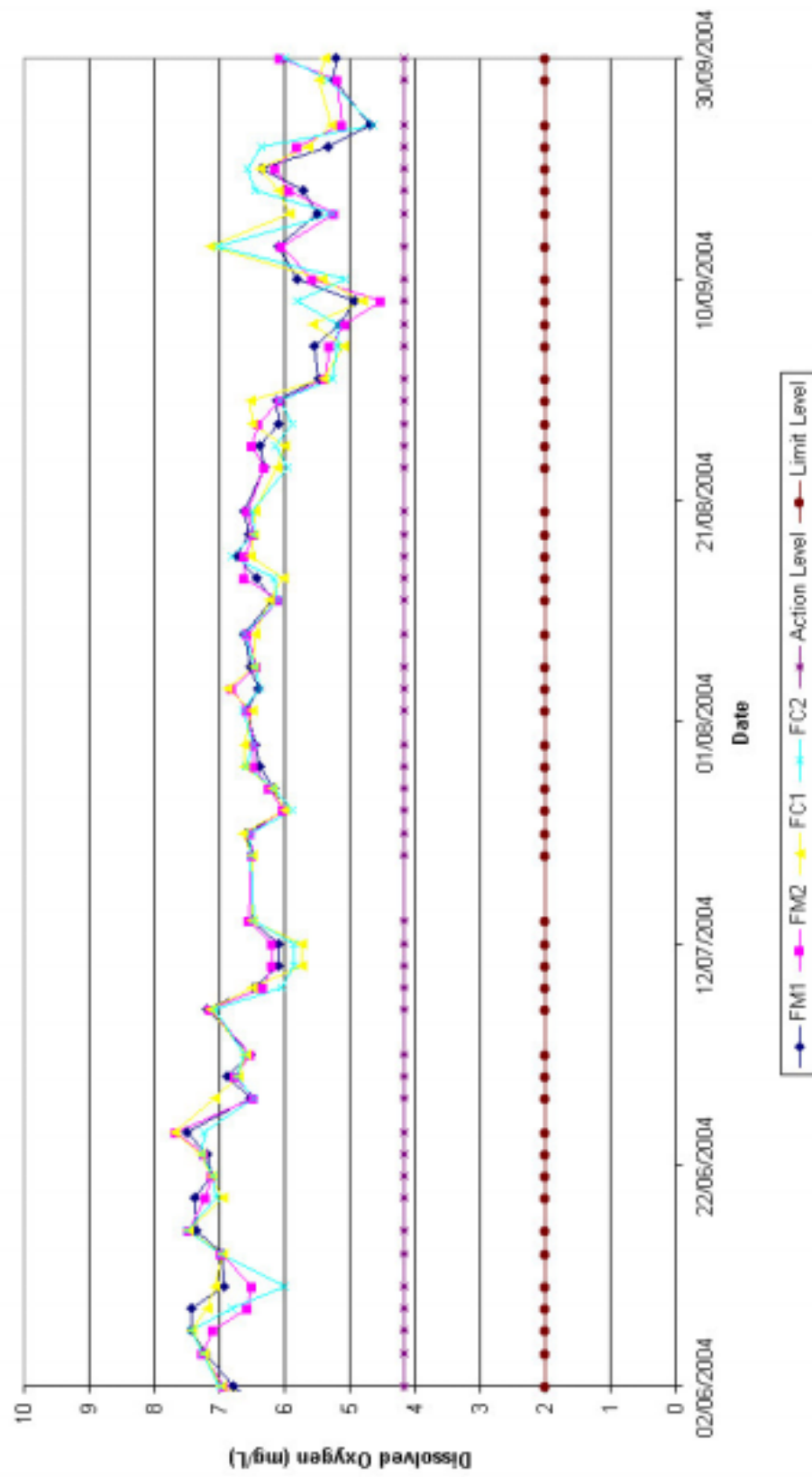


Figure 6.7 - Depth Averaged Turbidity - Mid-Flood

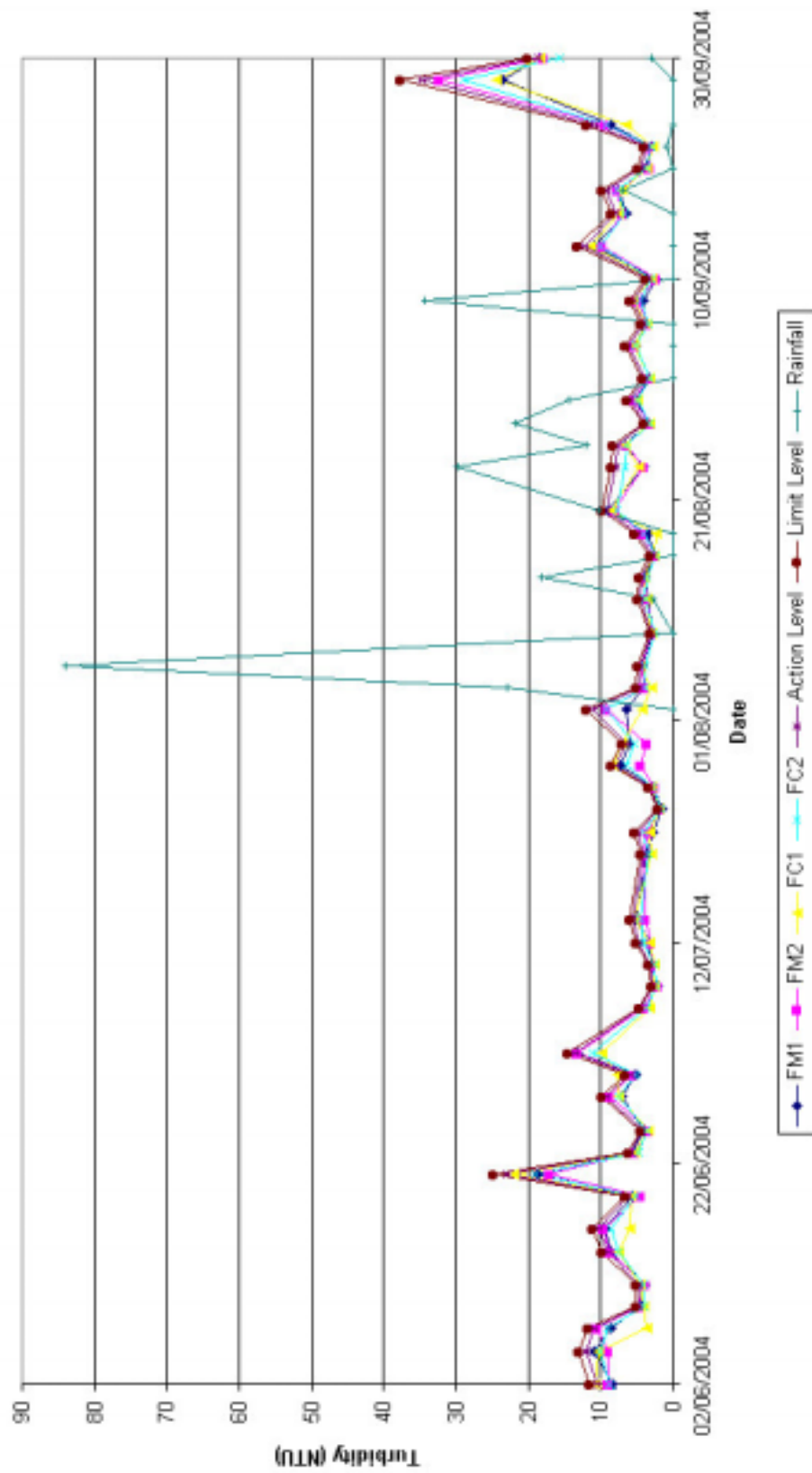


Figure 6.8 - Depth Averaged Turbidity - Mid-Ebb

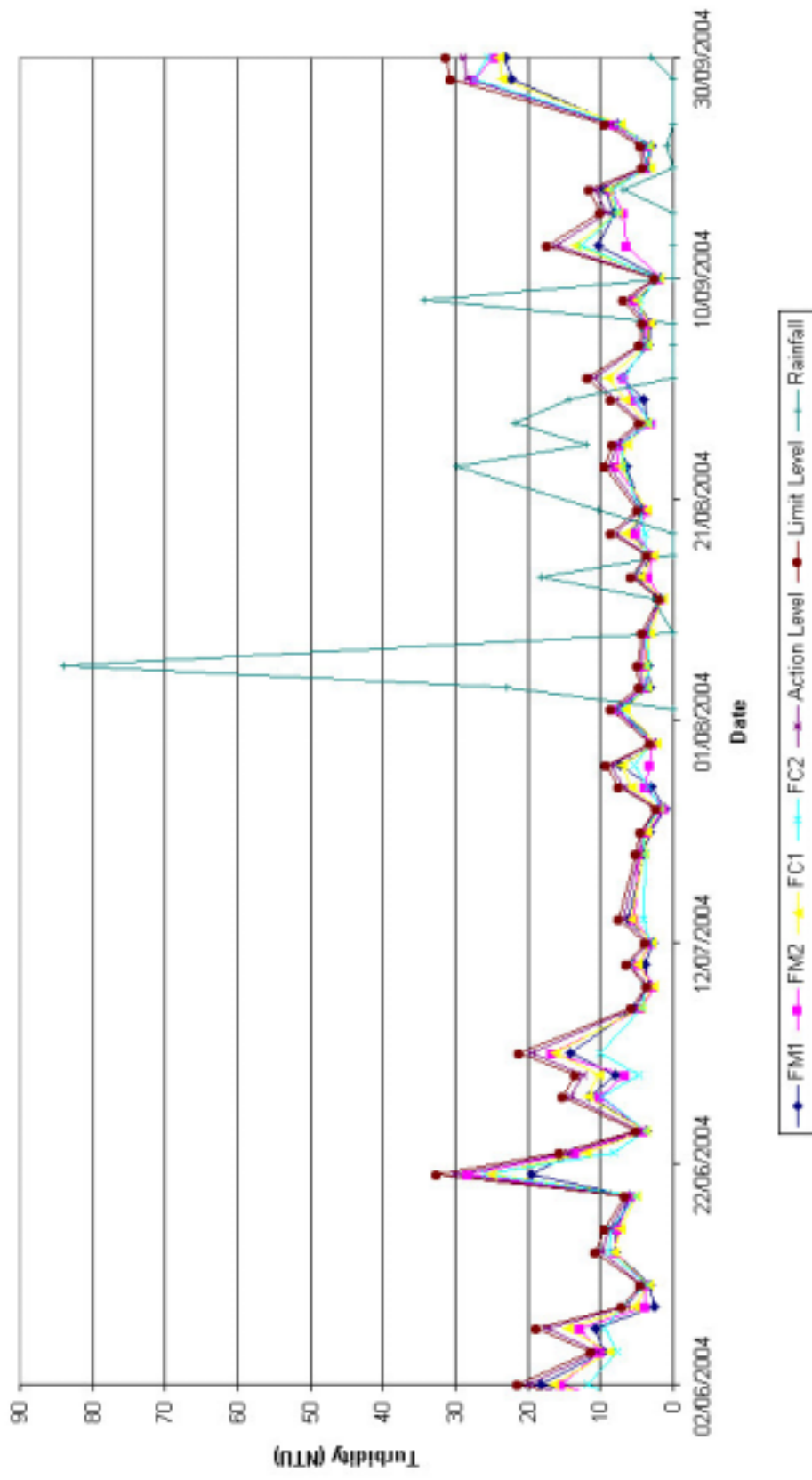


Figure 6.9 - Depth Averaged Suspended Solids - Mid-Flood

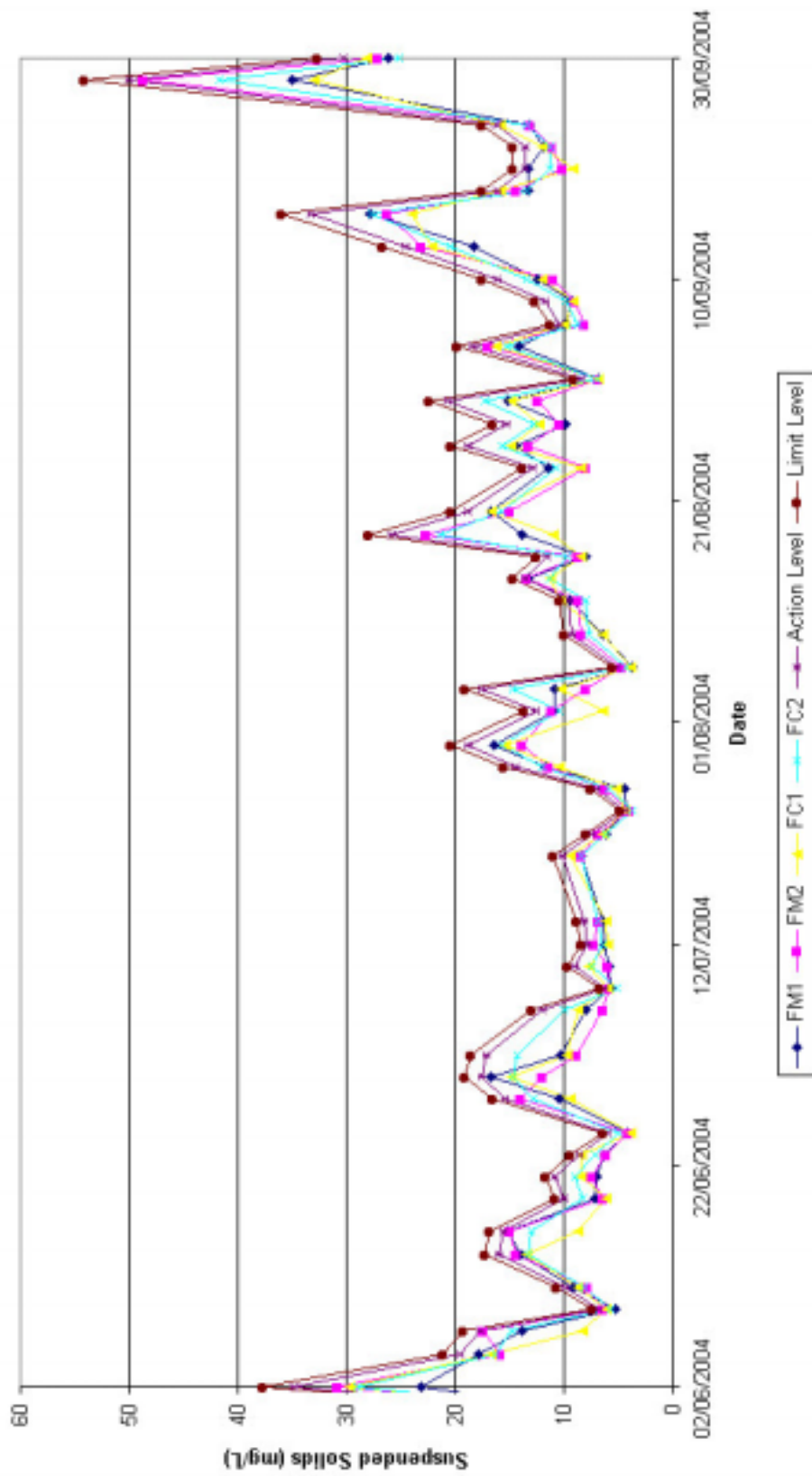
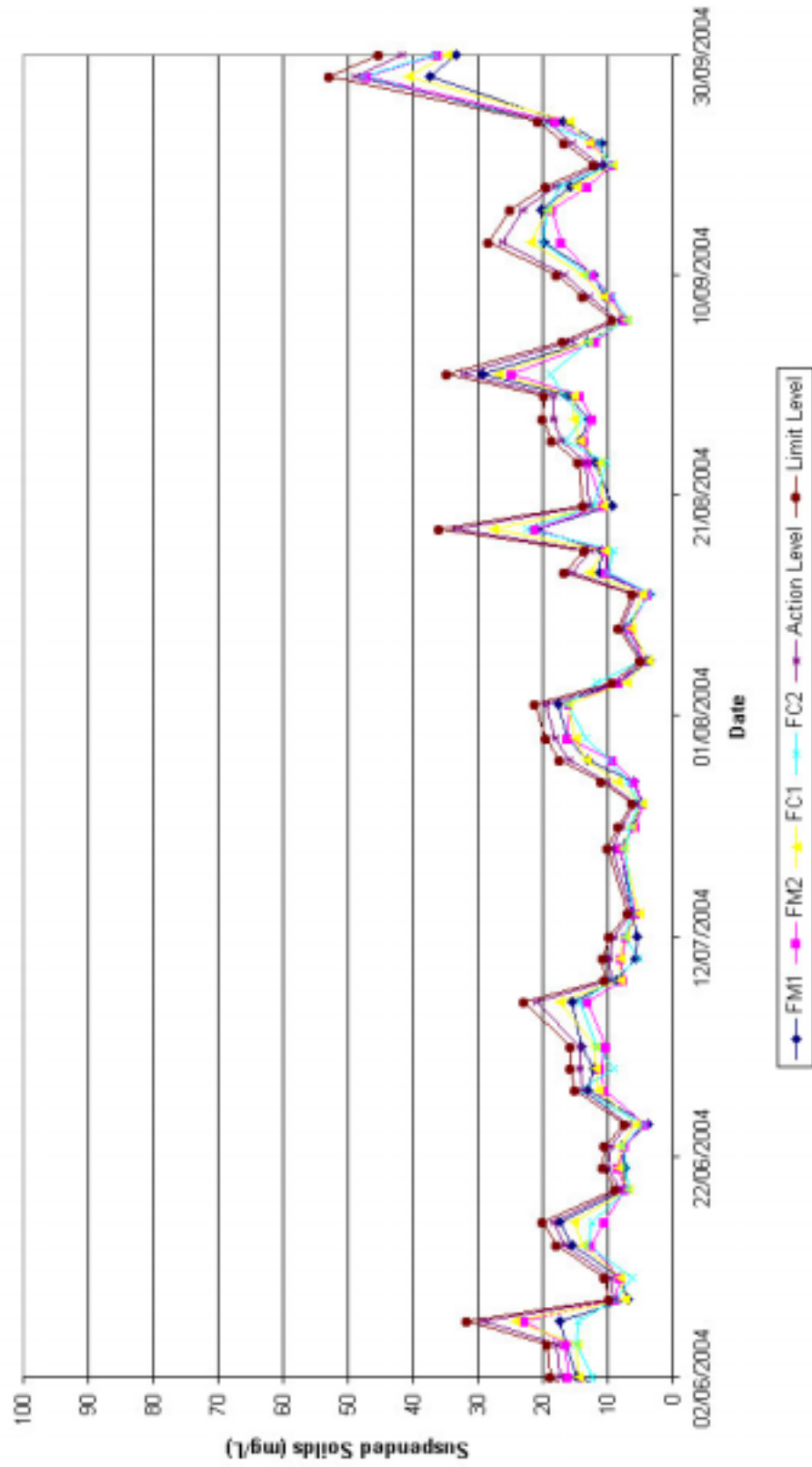


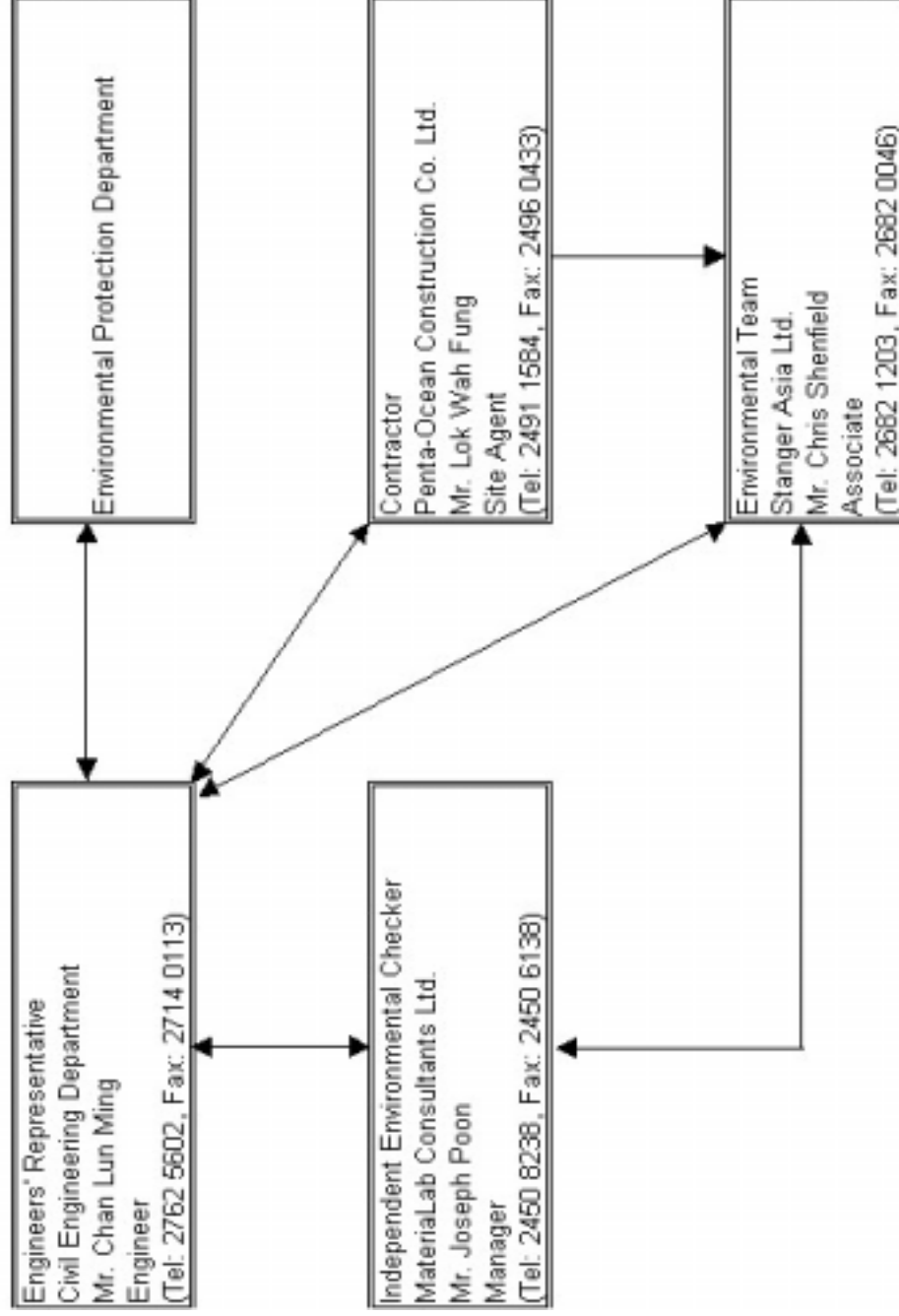
Figure 6.10 - Depth Averaged Suspended Solids - Mid-Ebb



**Appendix I**  
**Organization Chart**



**Project Organization (Environmental)**  
**Fill Bank at Tuen Mun Area 38**  
**Contract No. CV/2002/13**



## **Appendix II**

### **Event and Actions Plans**

**Event and Action Plan for Air Quality**

<b>EVENT</b>	<b>ACTION</b>				<b>CONTRACTOR</b>
	<b>ET Leader</b>	<b>IC (E)</b>	<b>ER</b>		
Action Level 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, IEC and Contractor.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET.</li> <li>2. Check Contractor's working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify unacceptable practice.</li> <li>2. Amend working methods if appropriate.</li> </ol>	
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 IEC and Contractor.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Discuss with IEC and Contractor on remedial actions.</li> <li>6. If exceedance continues, arrange meeting with IEC 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 ET.</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 Contractor.</li> <li>3. Ensure remedial actions are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to ER within 3 working days of notification.</li> <li>2. Implement the agreed proposals.</li> <li>3. Amend proposals if appropriate.</li> </ol>	

**Event and Action Plan for Air Quality (cont'd)**

<b>EVENT</b>	<b>ACTION</b>			<b>CONTRACTOR</b>
	<b>ET Leader</b>	<b>IC (E)</b>	<b>ER</b>	
Limit Level 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 findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET.</li> <li>2. Check Contractor's working method.</li> <li>4. Discuss with ET and Contractor on possible remedial measures.</li> <li>5. Advise the ER on the effectiveness of the proposed remedial measures.</li> <li>6. Supervisor 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. Ensure remedial actions properly implemented.</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 IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Amend proposal if appropriate.</li> </ol>
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 IEC, ER and Contractor and EPD.</li> <li>3. Repeat measurements to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation measure(s) to be implemented.</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken.</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, 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 IEC, agree with the Contractor on the remedial measures to be implemented.</li> <li>4. Ensure remedial measures properly implemented.</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</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 IEC 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 portion of works as determined by the ER until the exceedance is abated.</li> </ol>

**Event and Action Plan for Water Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level				
Action level being exceeded by one sampling day.	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurements to confirm findings;</li> <li>2. Identify source(s) of impacts;</li> <li>3. Inform IEC and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC and Contractor;</li> <li>6. Repeat measurements on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by Contractor and advise ER accordingly;</li> <li>3. Assess the effectiveness of implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC on the proposed mitigation measures;</li> <li>2. Make agreement on the mitigation measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</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. Discuss with ET and IEC and propose mitigation measures to IEC and ER;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
Action level being exceeded by more than one consecutive sampling day.	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurements to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform contractor and IEC;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Prepare to increase the monitoring frequency to daily;</li> <li>8. Repeat measurements on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the proposed mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by Contractor advise ER accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC on the proposed mitigation measures;</li> <li>2. Make agreement on the mitigation measures to be implemented;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the Engineer and confirm notification of the non-compliance in writing;</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. Discuss with the ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>

**Event and Action Plan for Water Quality (Cont'd)**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit level				
Limit level being exceeded by one sampling day.	<ol style="list-style-type: none"> <li>Repeat in-situ measurements to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform contractor and IEC;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with ER and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Prepare to increase the monitoring frequency to daily until no exceedance of Limit level.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly;</li> <li>Assess the effectiveness of implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>Request Contractor to critically review the working methods;</li> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with the ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by more than one sampling day.	<ol style="list-style-type: none"> <li>Repeat in-situ measurements to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform contractor and IEC;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with ER and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>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>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by the Contractor and advise ER accordingly;</li> <li>Assess the effectiveness of implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Request Contractor to critically review the working methods;</li> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> <li>Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of works identified as the cause of exceedance until no exceedance of Limit level.</li> </ol>	<ol style="list-style-type: none"> <li>Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with the ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>Implement the agreed mitigation measures;</li> <li>As directed by the Engineer, slow down or stop all or part of the works identified as the cause of exceedance or construction activities.</li> </ol>

## **Appendix III**

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

## IMPLEMENTATION STATUS OF MITIGATION MEASURES

Area	Mitigation Measures	Implementation Period	Implementation Status
1. General	Maximum stockpiling height to be limited to a maximum of +35mPD.	Throughout the operation period	Implemented
2. Air Quality	Working areas where excavation or earthmoving operations are taking place shall be sprayed with water or a dusty suppression chemical.	Throughout the operation period	Occasionally implemented
	Any stockpiling of excavated material shall be covered by impervious sheeting or sprayed with water or a dust suppression chemical.	Throughout the operation period	Occasionally implemented
	All roads within the site to be covered with concrete, bituminous materials, hardcore or metal plates.	Throughout the operation period	Implemented
	Erect a hoarding of at least 2.4m high along the northern and eastern boundaries of the site except at the site entrance/exit. Before occupation of the Recovery Park Phase I and II, site hoarding of at least 2.4m high should also be erected along the western boundary of the fill bank.	Throughout the operation period	Implemented
	Install/refurnish vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points.	Throughout the operation period	Implemented
	At the barging point, the drop height between the barge and dump trucks shall be minimized.	Throughout the operation period	Implemented
	Tipping halls provided for transfer of public fill from trucks to barges shall be top and 3-sides enclosed.	Throughout the operation period	Implemented
	Water lorries and/or road sweepers shall be provided and used in dust suppression.	Throughout the operation period	Implemented
	The designated main haul roads shall be watered at approximately every 2 hours to ensure that the roads are kept sufficiently dampened.	Throughout the operation period	Implemented



Area	Mitigation Measures	Implementation Period	Implementation Status
2. Air Quality	Truck speed to be controlled to within 10 km/hr.	Throughout the operation period	Implemented
	All dusty fill material shall be sprayed with water or a dust suppression chemical prior to loading, unloading or transfer.	Throughout the operation period	Implemented
	Frequent watering (at least three times per day) of the worksites with active dusty operations is recommended. The frequency shall be increased when the weather is dry.	Throughout the operation period	Implemented
	Loading of public fill delivered to the site shall be sprayed with water at the material landing point to minimize dust emission except when the materials are sufficiently dampened when landing.	Throughout the operation period	Implemented
	Vehicle washing facilities including high pressure water jet at the existing exits shall be maintained and operated by designated staff to ensure that these dust control measures are being used.	Throughout the operation period	Occasionally Implemented
	Before leaving the fill bank site, every vehicle shall be washed to remove any dusty materials from its body and wheels.	Throughout the operation period	Implemented
	Trucks carrying dusty loads entered to the site shall be sprayed with water once the impervious sheeting covering the load is removed.	Throughout the operation period	Implemented
	A minimum buffer distance of 20m shall always be maintained between the edge of public fill stockpiling area and the nearest air sensitive receivers at the River Trade Terminal.	Throughout the operation period	Implemented
	An area of 100m x 100m in the north-eastern corner of the stockpiling area shall be managed by the Contractor as a "truckload control zone". Number of trucks traveling to the control zone shall be limited to a maximum of 64 vehicles per hour, and a daily maximum of 633 vehicles per day.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
2. Air Quality	A minimum buffer zone of 20m shall be maintained between the edge of the public fill stockpiling area and the nearest air sensitive land use at Recovery Park Phase I and Phase II along the western boundary of the site.	Throughout the operation period	Implemented
	Temporary slope surfaces shall be covered with tarpaulin sheets or other impermeable sheets, or sprayed with water or a dust suppression chemical, or protected by other methods approved by CED.	Throughout the operation period	Partially implemented
	Final slope surfaces shall be treated by compaction, followed by hydroseeding, vegetation planting or other suitable surface stabiliser approved by CED to prevent the washing away of stockpiled material.	Throughout the operation period	Implemented
	Any belt conveyor systems used for transfer of dusty materials shall be enclosed on top and 2 sides.	Throughout the operation period	N/A
	Every transfer point between two conveyors shall be totally enclosed.	Throughout the operation period	N/A
	An effective belt scraper or equivalent device shall be installed at the head pulley of every belt conveyor to dislodge fine particles that may adhere to the belt surface.	Throughout the operation period	N/A
	The belt conveyor shall be equipped with bottom plates or other similar means to prevent falling of material from the return belt.	Throughout the operation period	N/A
	Every stockpiling belt conveyor shall be provided with a mechanism to adjust its level such that the vertical distance between the belt conveyor and the material landing point is maintained at no more than 1m.	Throughout the operation period	N/A
	Dusty materials loaded from a belt conveyor outlet to stockpiles, storage bins, trucks, barges and other open areas shall be sprayed with water or a dust suppression chemical.	Throughout the operation period	N/A

Area	Mitigation Measures	Implementation Period	Implementation Status
2. Air Quality	Frequent mist spraying should be applied on dusty areas. The frequency of spraying required will depend upon local meteorological conditions such as rainfall, temperature, wind speed and humidity. The amount of mist spraying should be just enough to dampen the material without over-watering.	Throughout the operation period	Implemented
3. Noise	No project activities associated with land-based intake of public fill shall be carried out between 20:00 and 08:00 hrs daily.	Throughout the operation period	Implemented
	All construction works should be carried out during the non-restricted hours (i.e. 7:00 a.m. to 7:00 p.m. on weekdays other than General Holidays).	Throughout the operation period	N/A
	Before the commencement of any works that may generate a significant noise impact, the Contractor should submit to the Engineer for approval the method of working, equipment and sound-reducing measures (e.g. use of silenced type equipment).	Throughout the operation period	N/A
	The fill bank should not be in operation from 8:00 p.m. to 8:00 a.m. the next day.	Throughout the operation period	N/A
4. Water Quality	Trapezoidal surface channels should be constructed to intercept polluted surface runoff. These channels shall be equipped with sand/de-silting traps such that the effluent discharged from site during the establishment, operation and decommissioning phases will meet the required discharge limits.	Throughout the operation period	Implemented
	Tipping halls at the waterfront provided for transfer of public fill from trucks to barges shall be enclosed design with the top 3-sides enclosed to prevent spillage of material into the marine water.	Throughout the operation period	Implemented
	Before the completion of the surface drainage channels at the commencement of the project, earth bunds and sand bag barriers shall be use at required locations to effectively divert storm water to available drainage channels constructed under the reclamation works.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	Temporary drainage facilities provided shall allow polluted stormwater to be diverted to existing intercepting channels before stockpiling of public fill should begin.	Throughout the operation period	Implemented
	Intercepting channels shall be equipped with sand/silt removal facilities to allow the stormwater to be treated before discharge at the designated outfalls.	Throughout the operation period	Implemented
	Effluent discharged shall meet the relevant discharge limits.	Throughout the operation period	N/A
	A minimum buffer distance of 50m will be provided between the edge of the stockpiling area of the fill bank and seafront.	Throughout the operation period	Implemented
	Open channels and/or other effective drainage system shall be constructed at the perimeter of the site for intercepting and directing runoff to sand/silt removal facilities prior to discharge.	Throughout the operation period	Implemented
	The unpaved area on the seaward side of the channels shall be covered with gravel and formed with slope so that polluted stormwater will be intercepted by the channels.	Throughout the operation period	Implemented
	Any excavated material generated near the seafront (e.g. from the construction of the barging point) not required to be backfilled immediately should be transported away from the seafront to avoid potential water quality impact especially during the rainy season.	Throughout the operation period	Implemented
	Public fill transported to the stockpiling area for storage should not contain unsuitable material such as peat, vegetation, timber, organic, soluble or perishable material, dangerous or toxic material, floatable materials (such as bottle, plastic bags, foam box), and materials susceptible to combustion.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	<p>Temporary slope surfaces shall be covered as far as practicable and as soon as possible with tarpaulin or other impermeable sheets, or protected by other methods approved by CED when rainstorms are likely, especially when a rainstorm is imminent or forecast.</p>	Throughout the operation period	Implemented
	<p>Final slope surfaces shall be treated by compaction, followed by hydroseeding, vegetation planting or other suitable stabilizer approved by CED to prevent the washing away of stockpiled material.</p>	Throughout the operation period	Implemented
	<p>Adequately designed and constructed catchpits, sand and silt removal facilities and intercepting channels should be maintained, and the deposited silt and grit should be removed weekly and on a as need basis especially during the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.</p>	Throughout the operation period	Implemented
	<p>A wheel washing bay should be provided at the site exit and washwater should have sand and silt settled out or removed before the water is being reused or discharged into storm drains.</p>	Throughout the operation period	Implemented
	<p>All vehicles and plant bodies should be cleaned before they leave the fill bank site to ensure that no earth, mud or debris is deposited by them on roads.</p>	Throughout the operation period	Implemented
	<p>The section of construction road between the wheel washing bay and the public road should be paved with concrete, bituminous materials or hardcore to reduce vehicle tracking of soil and to prevent site run-off from entering public roads drains.</p>	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	<p>Sewage from toilets and similar facilities should be discharged into a foul sewer, or chemical toilets should be provided. Should chemical toilets be employed these must be provided by a licensed contractor, who will be responsible for appropriate disposal and maintenance of these facilities.</p> <p>Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewers via grease traps.</p> <p>Drainage systems provided at car parking areas shall be provided with oil interceptors in addition to sand/silt removal facilities.</p> <p>All barges used in the transportation of fill material during the operation/decommissioning stages should be properly licensed under the Shipping and Port Control Ordinance, and of appropriate size such that adequate clearance is maintained between the vessels and the sea bed at all states of the tide.</p>	<p>Throughout the operation period</p> <p>Throughout the operation period</p> <p>Throughout the operation period</p> <p>Throughout the operation period</p>	<p>Implemented</p> <p>N/A</p> <p>N/A</p> <p>Implemented</p>
	<p>All vessels used for transportation of fill material should have tight fitting seals to their bottom openings.</p> <p>When backhoe fixed on an appropriately designed flat-top pontoon is in use, the reach of the backhoe shall be controlled to within the flat-top pontoon of sufficient length to avoid accidental dropping of public fill into the sea.</p> <p>When hopper barges with mobile crane is in use, guardrails or equivalent shall be fixed alongside the berthing faces to guide the movement of the crane to avoid accidental dropping of fill material.</p>	<p>Throughout the operation period</p> <p>Throughout the operation period</p> <p>Throughout the operation period</p>	<p>Implemented</p> <p>N/A</p> <p>N/A</p>
	<p>When derrick barges with built-in crane are in use, the reach of the jig shall be controlled to within the length of the barge to avoid accidental dropping of public fill into the sea.</p>	<p>Throughout the operation period</p>	<p>Implemented</p>

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	<p>The design of the specific transfer methods shall be as such that the pathway of material delivery from barge to the waterfront will not be directly on top of the marine water.</p> <p>Barges should not be filled to a level which may cause overflow of material during loading or transportation.</p> <p>Barge effluents (e.g. muddy water) should be properly collected and treated prior to disposal.</p> <p>Work activities should 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 point.</p> <p>A waste collection vessel shall be deployed to remove floating refuse on the sea near the fill bank for proper disposal.</p>	<p>Throughout the operation period</p> <p>Throughout the operation period</p> <p>Throughout the operation period</p> <p>Throughout the operation period</p>	<p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Occasionally Implemented</p>
5. Landfill Gas	<p>Main site offices of the fill bank shall be constructed within the site area lying outside the 250m consultation zone of the restored Siu Lang Shui Landfill.</p> <p>The container office(s) to be set up at the site entrance/exit which is situated within the construction zone of the landfill shall be constructed on a raised hollow platform, or equivalent.</p> <p>No underground structures such as drainage and sewage systems, underground pipelines and chambers shall be constructed at the site area lying within the consultation zone.</p> <p>In the unlikely event that any sign of leachate-contaminated groundwater be encountered during the establishment, operation or decommissioning phases of the fill bank, the landfill operator should be informed so that this can be collected for proper treatment and disposal.</p>	<p>Throughout the operation period</p> <p>Throughout the operation period</p> <p>Throughout the operation period</p>	<p>Occasionally Implemented</p> <p>Implemented</p> <p>Implemented</p>

Area	Mitigation Measures	Implementation Period	Implementation Status
6. Landscape and Visual	Hydroseeding or coloured geo-textile matting (dark green/brown) shall be provided on the slopes of the fill bank along the eastern, northern and western sides of the fill bank as the slopes of each layer of platform are formed.	Throughout the operation period	Implemented
	A buffer tree planting strip should be provided along the northern perimeter of the site where space permits. A row of approximately 3m high native evergreen tree species with a tall habit when fully grown (e.g. Casuarina equisetifolia) shall be planted at the early establishment/ operational phase of the project.	Throughout the operation period	Implemented
	The design, colour and finish of structures at the fill bank should be such that they are visually recessive. Reflectivity should be reduced through selection of material or surface treatment.	Throughout the operation period	Implemented
	The surface colour selected should be of an earthy tone with strong natural qualities (e.g. green/grey/brown). The use of bold colour schemes should be avoided.	Throughout the operation period	Implemented
	The existing 2.4m high site hoarding located along Lung Mun Road should be maintained to help screening of the fill bank.	Throughout the operation period	Implemented



**Appendix IV**  
**Complaint Log**

**CONTRACT No. CV/2002/13 – FILL BANK AT TUEN MUN AREA 38 - ENVIRONMENTAL COMPLAINTS LOG.**

Complaint Log No.	Date of Receipt	Received From and Received By	Nature of Complaint	Date Investigated	Outcome	Date of Reply and to Whom
001	07.02.2004	From: Public By: Home Affairs Department	Cleanliness of public roads.	N/A	The situation was rectified.	N/A
002	29.06.2004	From: Public By: EPD	Dust generation in Fill Bank.	N/A	The situation was rectified.	N/A
003	31.07.2004	From: Public By: EPD	Dust generation at Lung Mun Road near Fill Bank.	07.08.2004	The situation was rectified.	N/A
004	13.08.2004	From: Public By: EPD	Dust emission within the site.	18.08.2004	The situation was rectified.	N/A
005	26.08.2004	From: Public By: EPD	Dust emission and debris leakage from dump trucks near Government Depot.	07.09.2004	Not site related.	N/A
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

**Appendix V**

**Cumulative Statistics on Complaints, Notifications of Summonses and Successful Prosecutions**

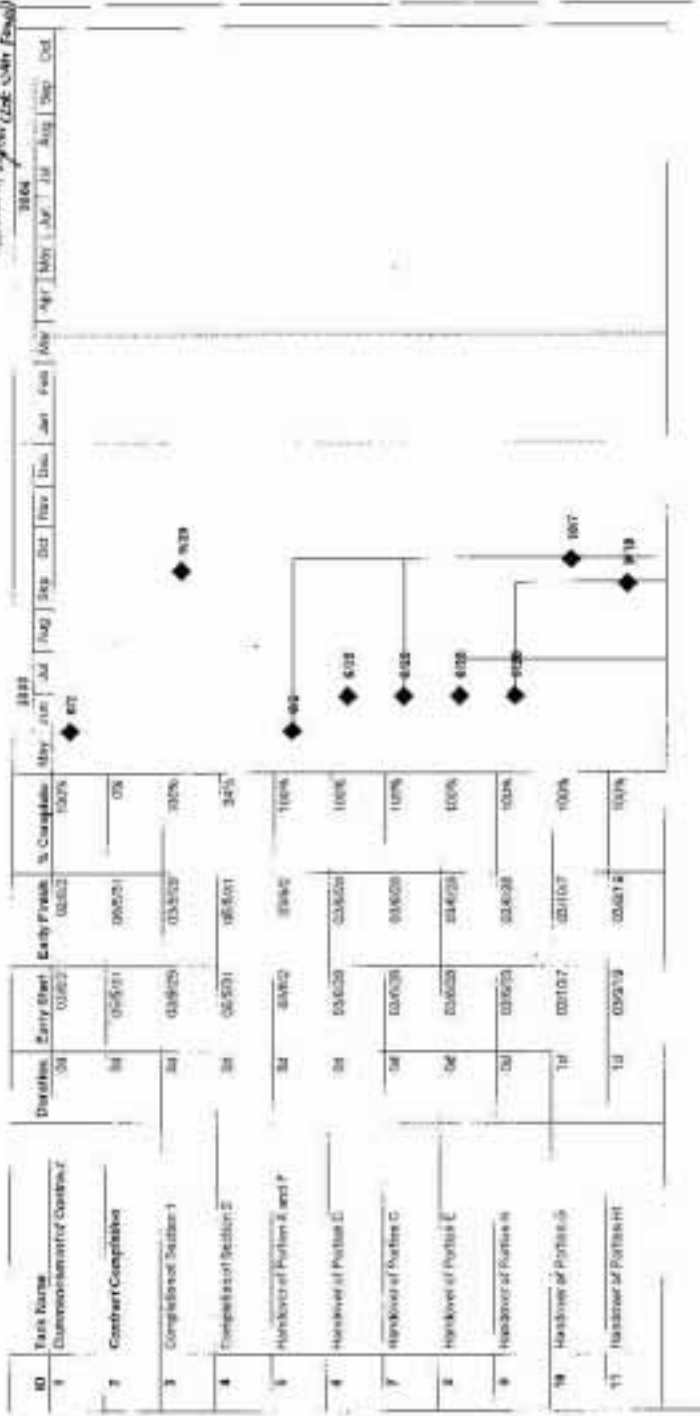
<b>CONTRACT No. CV/2002/13 – FILL BANK AT TUEN MUN AREA 38</b>			
<b>Cumulative Statistics on Complaints</b>			
<b>Environmental Parameters</b>	<b>Cumulative No. Brought Forward</b>	<b>No. of Complaints This Quarter</b>	<b>Cumulative Number to Date</b>
Air	1	3	4
Noise	0	---	0
Water	0	---	0
Waste	1	---	1
Landscape & Visual	0	---	0
Total	0	---	5

**Appendix VI**

**Master Construction Programme**

Three month rolling programme (Mar 2004 - May 2004)

Prepared by: [Signature]  
 Reviewed by: [Signature]  
 Approved by: [Signature] (Date: 04/05/2004)



Contract No. CH/2003/17  
 PFI Bank at Tuon Man Area 30  
 Issue: 1 March 2004

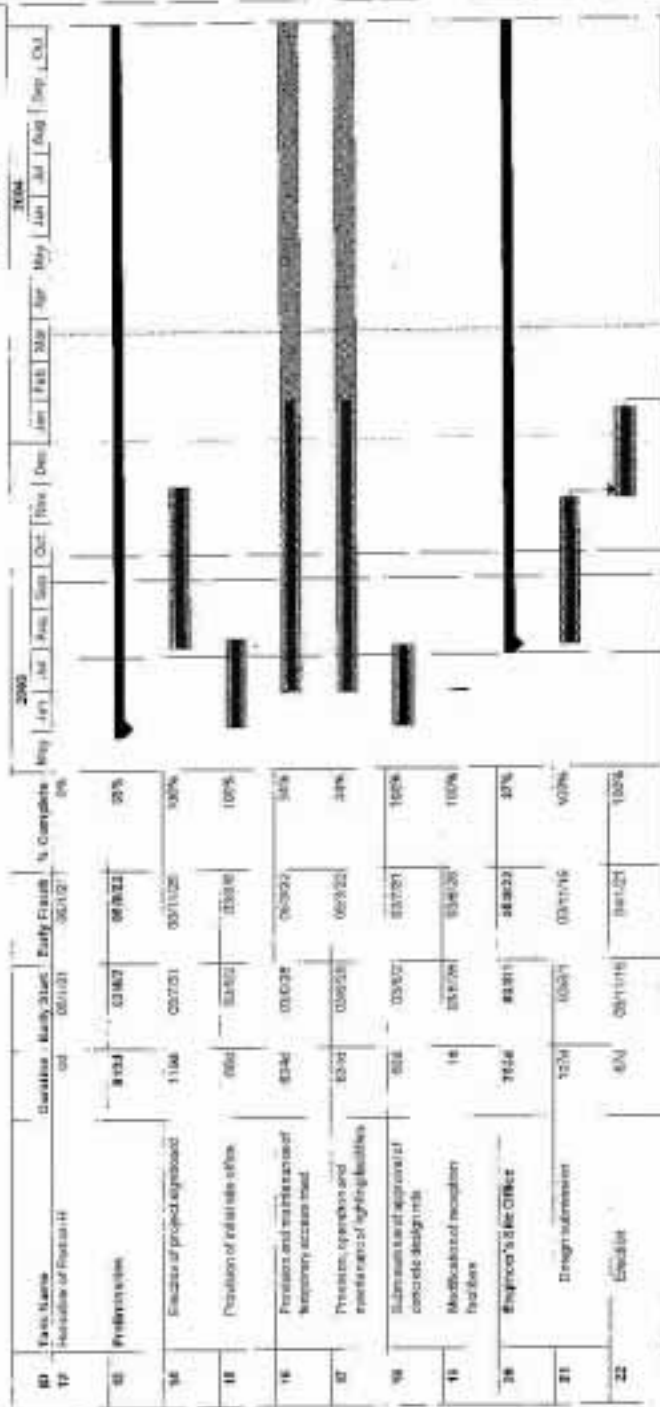
Task: [ ] Summary  
 Program: [ ] Rolled Up Task  
 Milestone: [ ] Rolled Up Milestone

Rolled Up Progress: [ ]  
 Critical Path: [ ]  
 Subcritical Path for Each Section: [ ]

Page 1

Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved by:



Control No. CU000013  
 PD 2004 of Tuen Mui Area 2B  
 Date: 1 March 2004

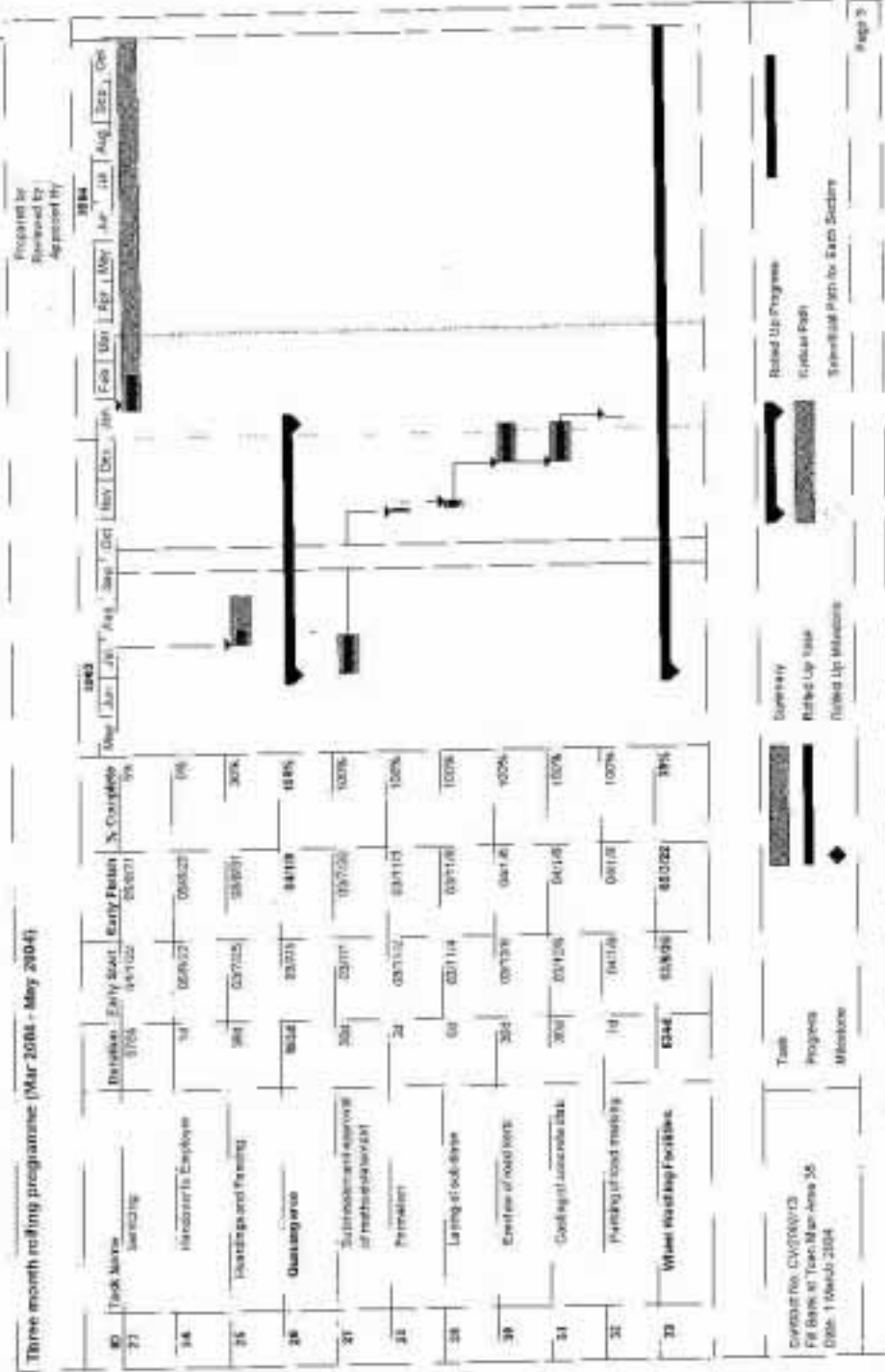
Task: Programme Milestones

Legend:  
 [Hatched] Review  
 [Solid Black] Roll Up Progress  
 [Dotted] Roll Up Month  
 [Diagonal Lines] Roll Up Milestone

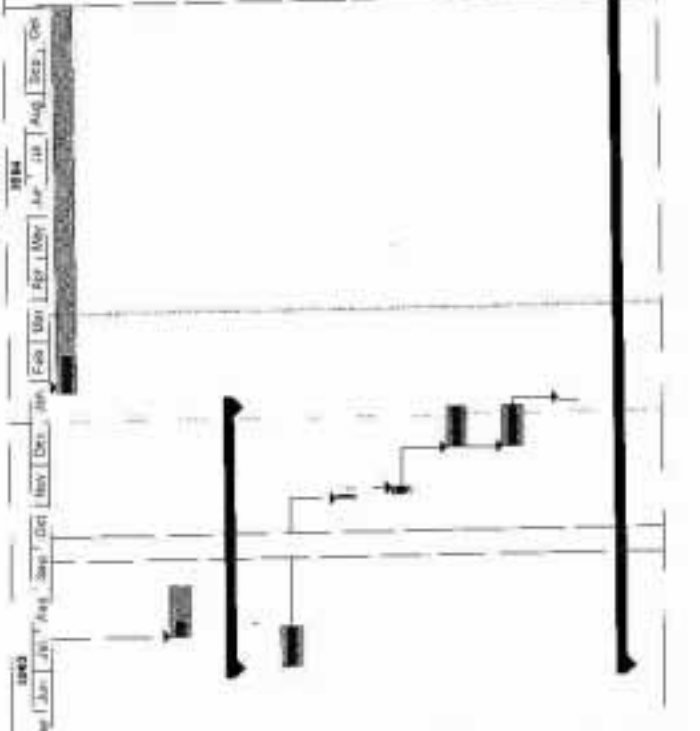
Roll Up Milestone  
 Roll Up Month  
 Roll Up Progress  
 Roll Up Day

Page 2

Three month rolling programme (Mar 2004 - May 2004)



Prepared by  
Reviewed by  
Approved by



Contract No. CV020013  
 FE Bank at Tean Mar Area 35  
 Date: 1 March 2004

Task  
 Progress  
 Milestone

Summary  
 Rolled Up task  
 Rolled Up Milestone

Roll Up Progress  
 Roll Up Path  
 Roll Up Path for Each Section



Three month rolling programme (Mar 2004 - May 2004)

Task Name	Duration	Early Start	Early Finish	% Complete
34	Take over	04/03/04	05/03/04	100%
35	Installation of aerial reading facilities	05/03/04	05/03/04	100%
36	Operation and maintenance	05/03/04	05/03/04	50%
37	Survey and system	04/03/04	05/03/04	95%
38	Provision	04/03/04	04/03/04	0%
39	Operation and maintenance	04/03/04	05/03/04	0%
40	Flipping Mill	04/03/04	04/11/04	99%
41	Modification	04/03/04	04/03/04	100%
42	Operation	04/03/04	04/11/04	0%
43	Environmental Monitoring Works	04/03/04	04/04/04	33%
44	Water Quality Database Project	04/03/04	03/03/04	100%

Prepared by  
Discussed by  
Approved By



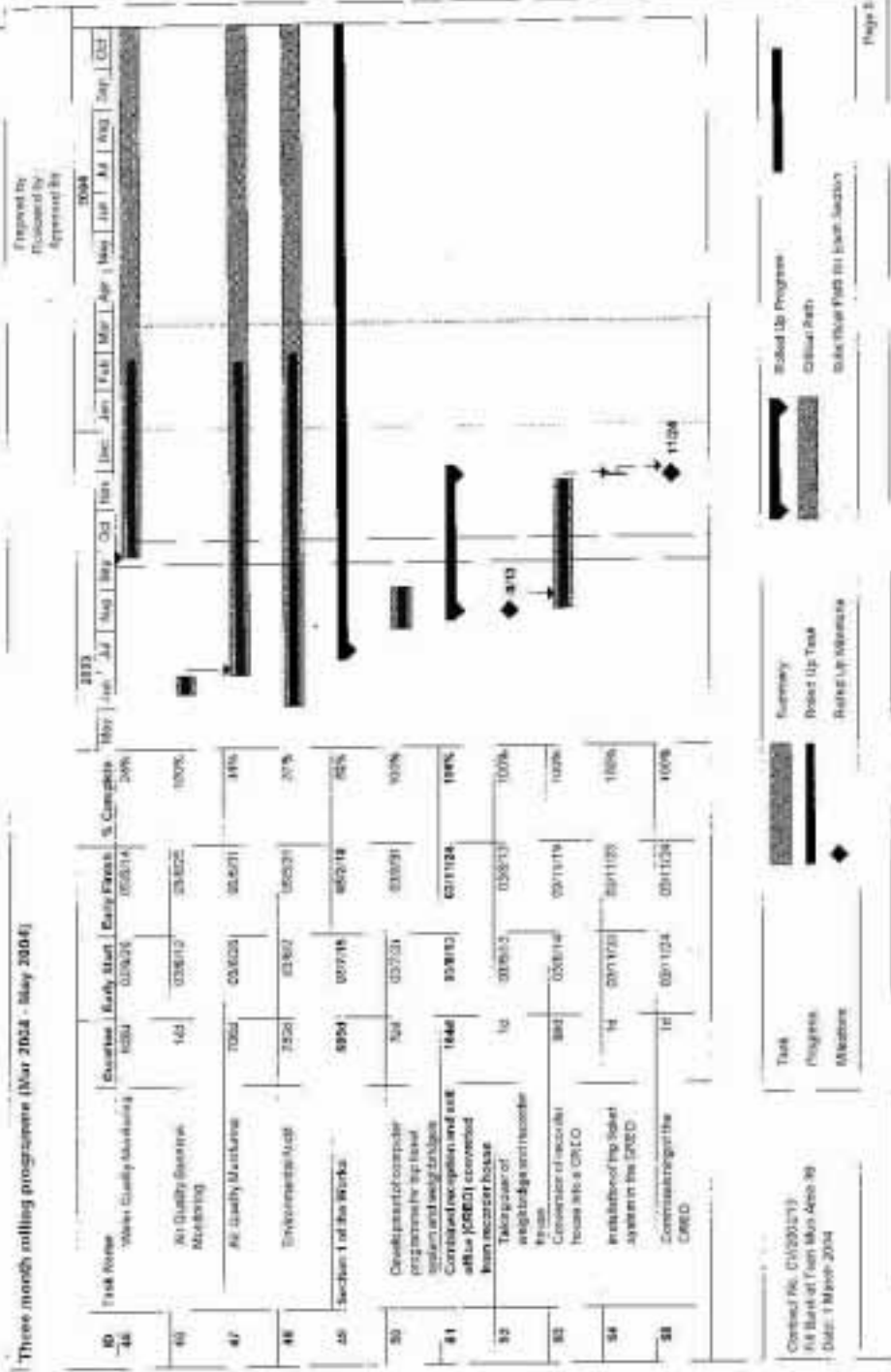
Contract No: CH0000019  
 PFI Service at Tynes Mill Area 3A  
 Date: 1 May 2004

Task: Ingress Maintenance

Summary: Rolled Up Task

Legend: Rolled Up Progress, Detail Path, Ingress Maintenance

Three month rolling programme (Mar 2004 - May 2004)



Approved by: [Signature]  
 Reviewed by: [Signature]  
 Approved by: [Signature]

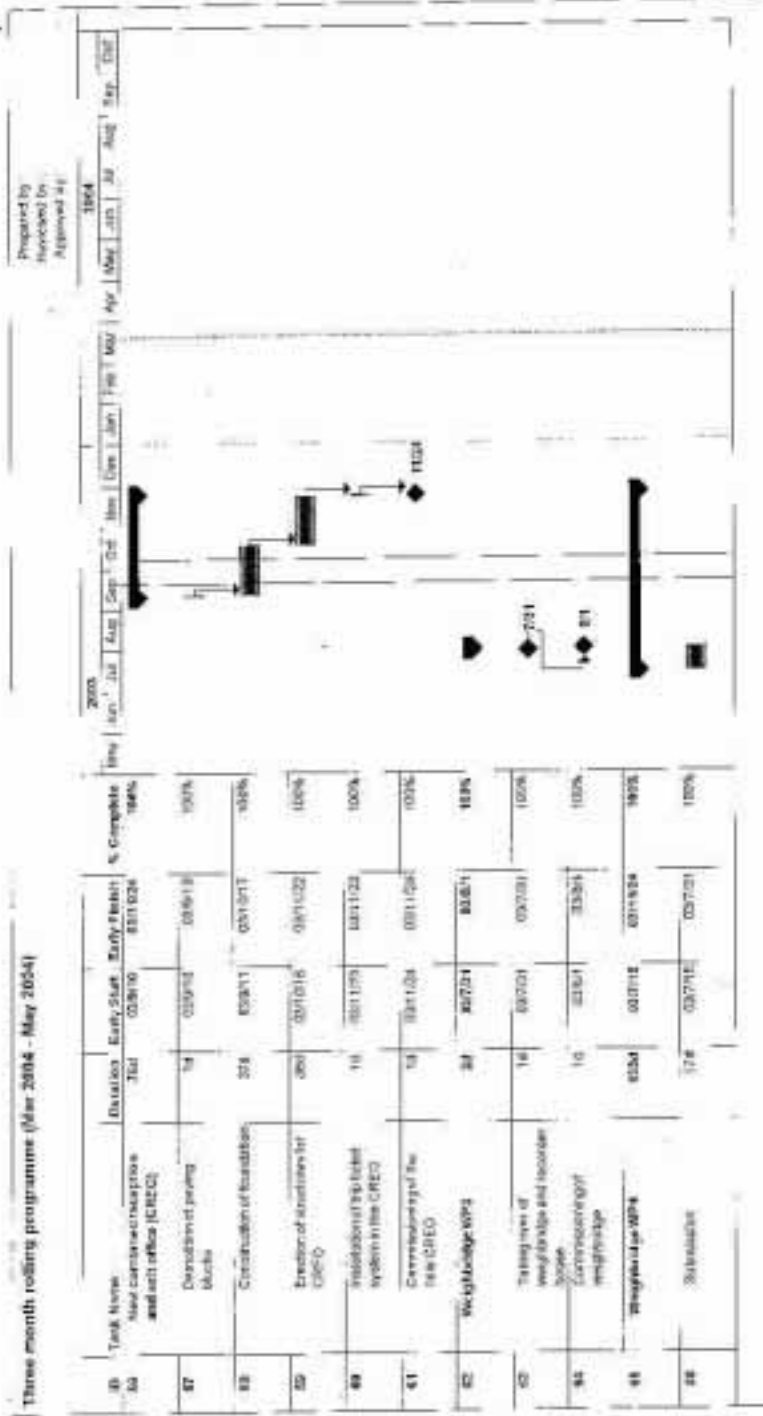
Contract No. 01/030219  
 At Bank of Town Mus A200-03  
 Date: 1 March 2004

Task Progress Milestone

Summary Roles Up Task Roles Up Milestone

Roles Up Progress Critical Path Roles Up Milestone

Three month rolling programme (Mar 2004 - May 2004)



Prepared by: [Name]  
 Approved by: [Name]

2003: May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, 2004

Task: [Progress Bar] [Milestone Diamond]

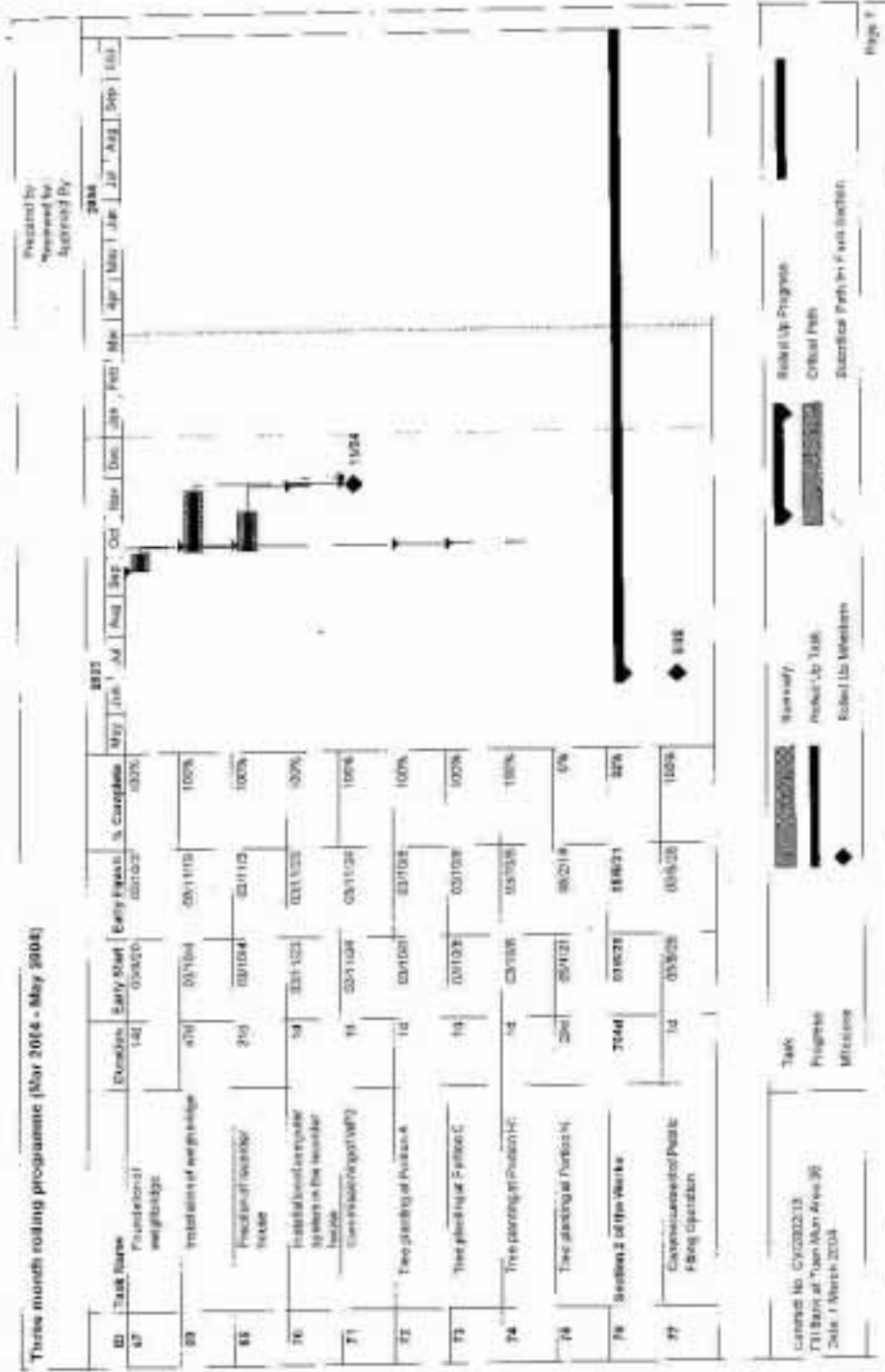
Summary: [Progress Bar] [Milestone Diamond]

Roll Up: Progress [Progress Bar] Critical Path [Milestone Diamond] Subsequent Path by Task Section [Progress Bar]

Embed No: 010200312  
 File Name: TBM Main-Steps 20  
 Date: 1 March 2004

Page 8

Three month rolling program (Mar 2004 - May 2004)



Control No. CY030213  
 T1 Basin at "Jen Man Area B"  
 Date: 1 March 2004

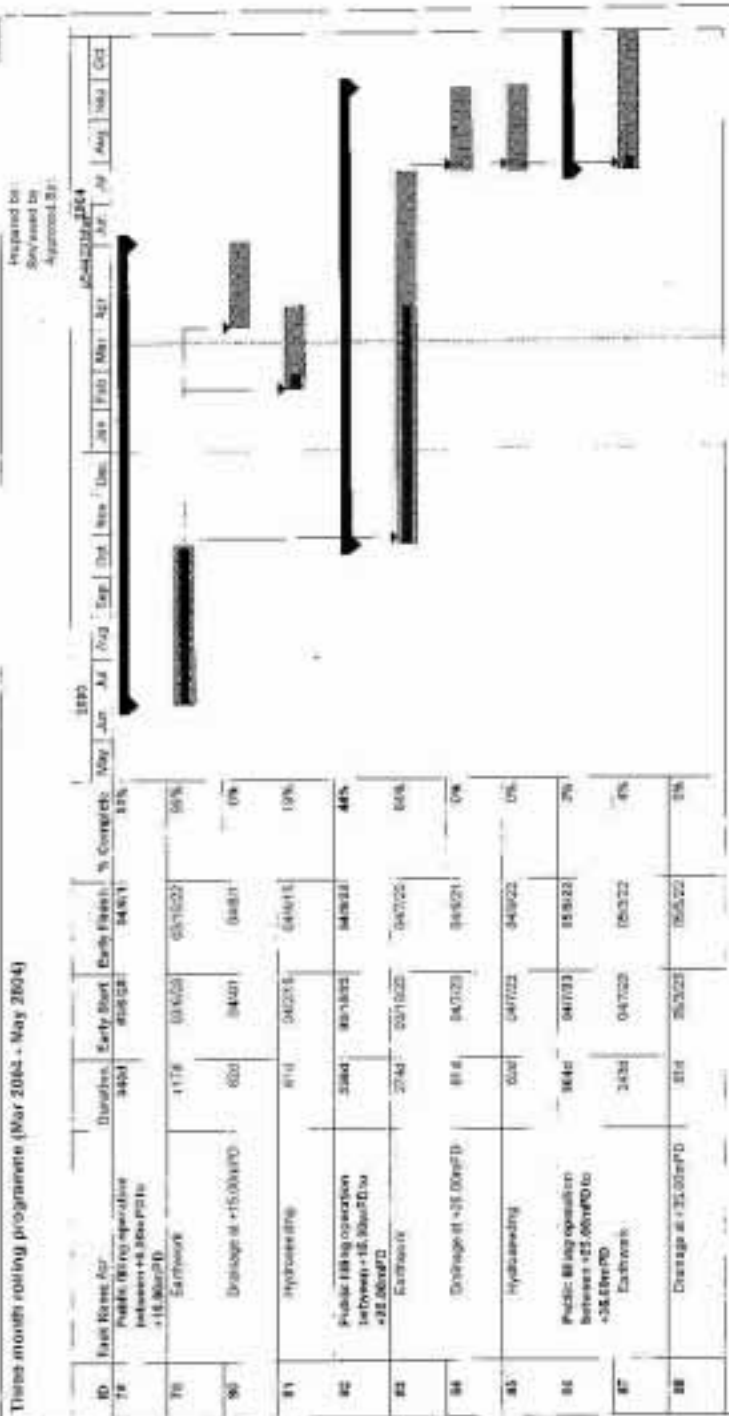
Task: Review: Action Up Task: Milestone:

Roll Up Progress: Roll Up Task: Roll Up Milestone:

Critical Path: Success Path in Fish Section:

Page 8

Three month rolling programs (Mar 2004 - May 2004)



Prepared by:  
Reviewed by:  
Approved by:

04/02/04 2004

Control No. 02/000213  
 File Name: 01 Tech Mstr - April 06  
 Date: 1 March 2004

Task: **Progress** (indicated by a shaded bar)

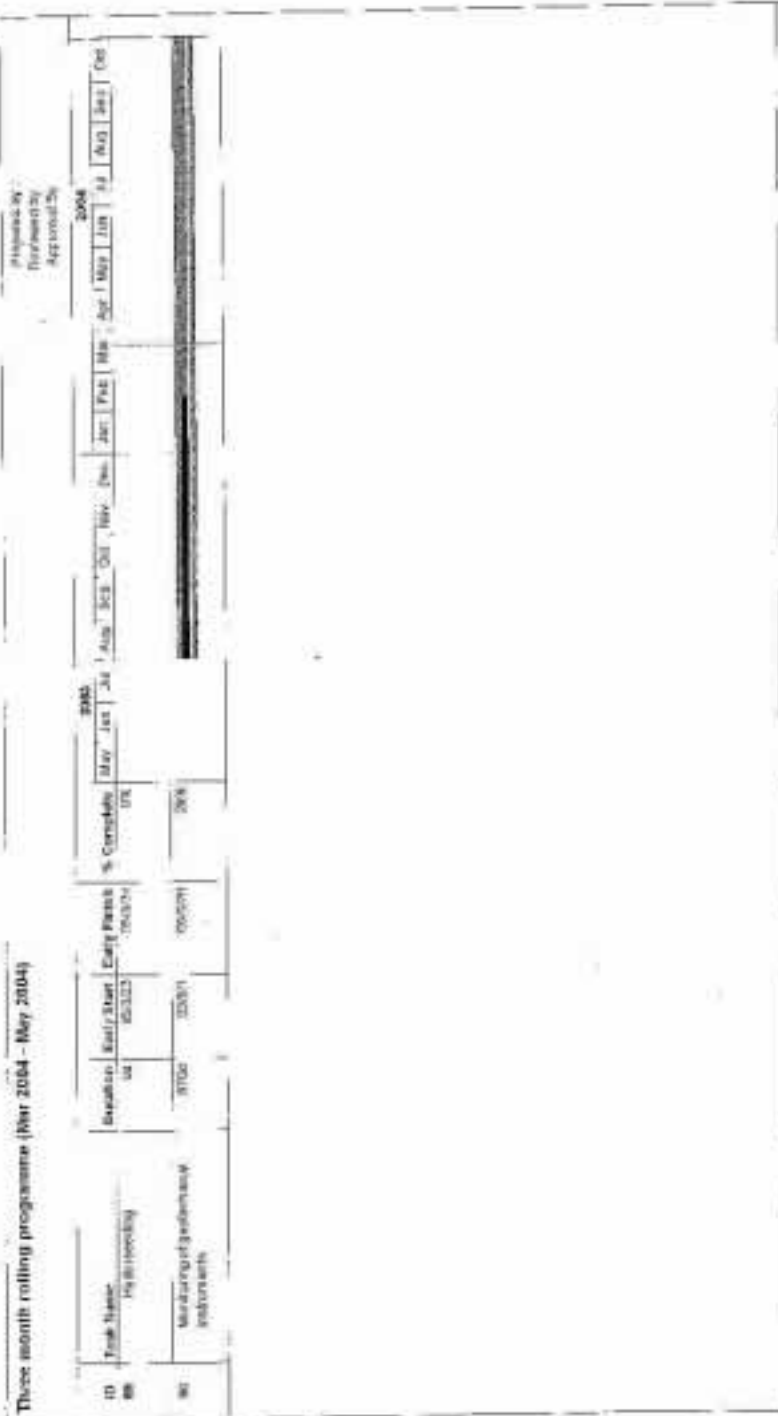
Summary: **Roller Up Progress** (indicated by a shaded bar)

Milestone: **Roller Up Task** (indicated by a diamond symbol)

Subtotal: **Roller Up Milestone** (indicated by a diamond symbol)

Roller Up Progress  
 Critical Path  
 Subtotal Path to Each Section

Three month rolling programme (Mar 2004 - May 2004)



Contract No. C/02000513  
 PR 8/04 at Tiver-Ash, Area 30  
 Date: 1 March 2004

Task  
 Progress  
 Milestone

Summary  
 Pick Up Task  
 Roll Up Milestone

Make Up Program  
 Critical Path  
 Subcritical Path in Each Section

Three month rolling programme (Mar 2004 - May 2004)



Document No: C0000013  
 1-8 Haskel Turn Mar Apr 20  
 Date: 1 March 2004

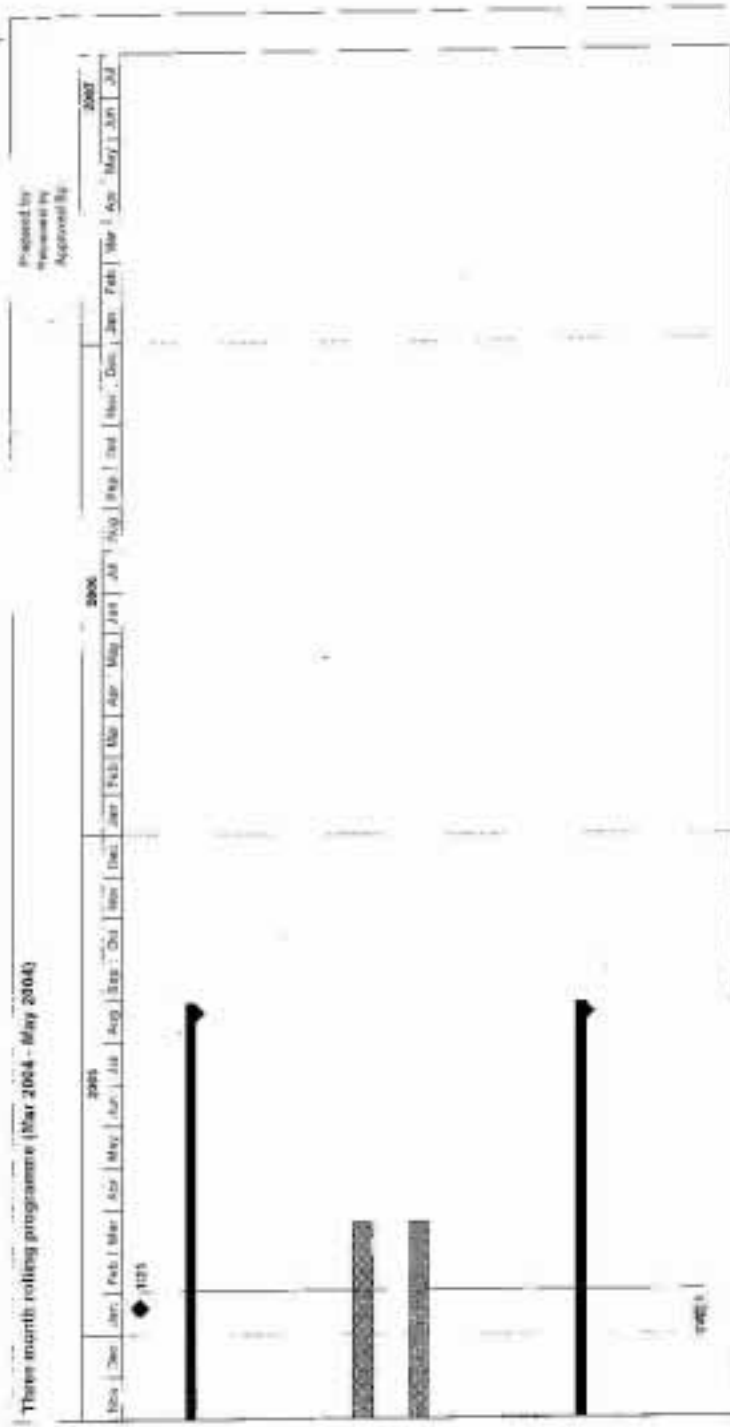
Task Progress Milestone

Summary  
 Rollover Task  
 Rollover Milestone

Rollover Progress  
 Critical Path  
 Resource Path for Task Section

Page 10

Three month rolling programme (Mar 2004 - May 2004)



Prepared by  
Reviewed by  
Approved By

2003 2004

Dec Jan Feb Mar Apr May Jun

Document: 01/000013  
P11 Date of Test: Mar 2004  
Date: 1 March 2004

Task  
Progress  
Milestone

Task

Progress

Milestone

Task

Progress

Milestone

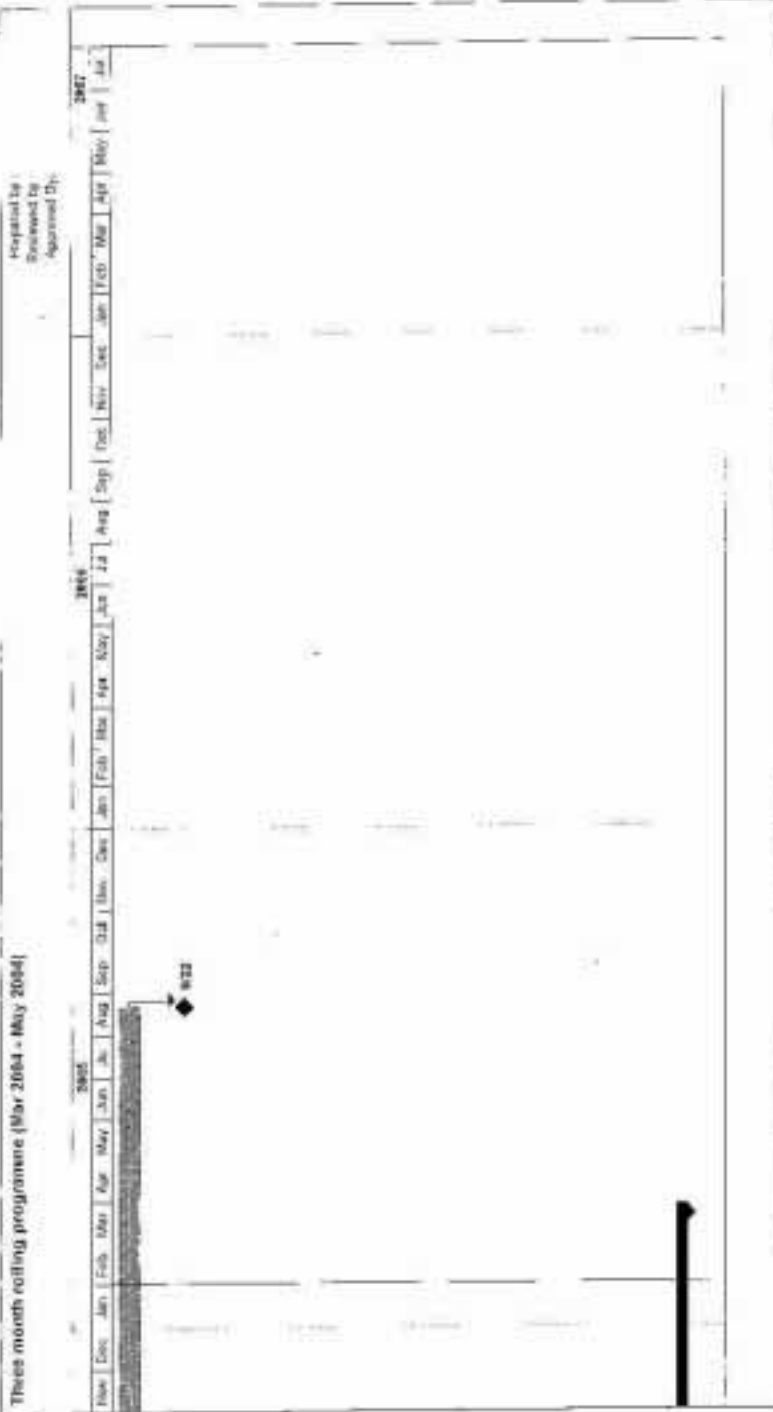
Task

Progress

Milestone



Three month rolling programme (Mar 2004 - May 2004)



Prepared by:  
Reviewed by:  
Approved by:

Contract No. CV100213  
PII Form of Ten Year K100.01  
Date: 1/05/04

Task  
Progress  
Milestones

Summary  
Roll-up Task  
Roll-up Milestone

Roll-up Progress  
Roll-up Task  
Subcontract Finish/In Event Section

Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved by:



Contract No: 010002010  
# of Work at Train/Mile/Year 36  
Date: 1 March 2004

Task  
Program  
Milestone

Summary  
Roller Up Task  
Roller Up Milestone

Roller Up Program  
Roller Up Path  
Subcontract Path to Local Section

Three month rolling programme (Mar 2004 - May 2004)



Prepared by:  
Reviewed by:  
Approved by:

Contract No. C/2002/13  
FY 2004 of Yuan Xun Area 06  
Issue 1 March 2004

Task  
Program  
Milestone

Summary  
Rolls Up Task  
Rolls Up Milestone

Rolls Up Progress  
Critical Path  
Subcritical Path, In Earth Profile

Three month rolling programmes (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved by:

	2002					2003					2004								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Task																			
Program																			
Milestone																			

Central No. C:\1000\13  
 PR Bands at Times Mar, Apr, May, Jun, Jul  
 Table 1 (March 2004)

**Task**           **Program**           **Milestone**

**Turnkey**           **Rollout Up-Task**           **Rollout Up Milestone**

**Rollout Up Program**           **Critical Path**           **Subcontract Path for Each Activity**

Three month rolling programme (Mar 2004 - May 2004)



Prepared by:  
Reviewed by:  
Approved by:

2004 2007  
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul

Control No: C0200015  
 Prepared at: Harrogate Area 08  
 Date: 1 March 2004

Task  
 Progress  
 Milestone

Summary  
 Roll/Up Task  
 Subject's Milestone

Roll/Up Progress  
 Critical Path  
 Subcritical Path to East Section

Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved by:

2003: Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2004: Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 2004



Contract No. D30001273  
PFI Bank of Town Mtn Area 2B  
Start: 1 March 2004

Title  
Programme  
Revision

Summary  
Roll Up Task  
Roll Up Milestone

Roll Up Package  
Critical Path  
Subcontract Path for Each Section

Three month rolling programme (Mar 2004 - May 2004)



Prepared by:  
Richard Ho  
Approved by:

2004

2005

2003

Contract No. CV0000173  
E8 Bank at Two Min Area 36  
Date: 1 March 2004

Task  
Progress  
Milestone

Summary  
Roll Up Task  
Roll Up Milestone

Roll Up Progress  
Roll Up Task  
Roll Up Milestone

Roll Up Task  
Roll Up Milestone