Chun Wo - Fujita - Henryvicy JV

KCRC West Rail CC203 - Tin Shui Wai Station

Monthly EM&A Report
September 2003

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Hyder Consulting

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EXECUTIVE SUMMARY

CFHJV, the main Contractor for West Rail CC203 appointed Hyder as the Contractor's Environmental Team (CET) to undertake the Environmental Monitoring and Audit (EM&A) works in accordance with the contract specific EM&A Manual. This monthly EM&A report summarizes the impact monitoring and auditing data for September 2003.

Construction Activities

Major construction activities undertaken in September 2003 included underground drainage and utility; Architectural Builder's Work and Finishes (ABWF) and Electrical and Mechanical (E&M) works for the TIS station; construction of permanent road works at Ping Ha Road, Tin Fuk Road and Kiu Fat Street, construction Tin Yiu Road covered walkway, landscape works including planters, cycle track and footpath, construction of PTI-Access structure and drainage work.

No construction activity was undertaken during restricted hours in September 2003.

Air Quality Impact Monitoring

Air quality monitoring of 24 hour TSP was carried out at three locations in accordance with the contract specific EM&A Manual. No exceedance of Action / Limit Level as recorded in September 2003, which indicated that works carried out in September 2003 were in full compliance with the air quality criteria for the Project.

Noise Impact Monitoring

Noise monitoring of $L_{eq(30min)}$ was carried out at three locations in accordance with the contract specific EM&A Manual. No exceedance of Limit Level as recorded in September 2003, which indicated that works carried out in September 2003 were in full compliance with the noise criteria for the Project.

Environmental Auditing

Site inspections were carried out by the CET on 17 and 24 of September 2003. All observations have been recorded in the audit checklist and passed to the Contractor together with the CET's recommendations. Recommendations included provision of water spraying on concrete breaking were suggested.

Site audit was conducted by the IEC on 16 September 2003. No Non-compliance (NC) was issued by IEC. However, the Contractor was reminded to cover the stockpiles at the open area near LRT ramp, to provide drip tray for the generator and remove the contaminated soil with oil stain. In additional, the contractor was advised to hydroseed the open slope near LRT ramp.

Waste Management

260 m^3 of excavated materials from earthworks were disposed of at the Public Filling Barging Point at Tuen Mun Area 38 in September 2003. No chemical waste was produced in September 2003.

Complaints

There have been no complaints received during the reporting month.

Notification of Summons, Successful Prosecutions and Corrective Actions

There have been no Notification of Summons received during the reporting month.

Future Key Issues

The construction activities for the next three months will be very similar to those carried out in September 2003. Therefore it is anticipated that the results for air quality and noise monitoring for upcoming months will be similar to those measured in September 2003.

1. BACKGROUND INFORMATION

1.1 PROJECT INFORMATION

West Rail Contract CC 203 (hereafter known as the Project) comprises of the construction of Tin Shui Wai Station and the Essential Public Infrastructure Works (EPIW) such as road improvement of Tin Fuk Road and Ping Ha Road including associated footbridges, subways and passenger transportation interchanges.

Tin Shui Wai station is one of the new stations at the Western Section of the West Rail alignment, which extends from Yuen Long Station to Tuen Mun Station. Tin Shui Wai Station is located between Tin Shui Wai New Town and the Ping Shan area. The site encroaches upon sections of Tin Fuk Road and Ping Ha Road. Figures 1.1 and 1.2 show the Project location and the site boundary.

CFHJV is the main Contractor for the Project. It is a joint venture between Chun Wo Construction and Engineering Co. Ltd., Fujita Corporation and Henryvicy Construction Co. Ltd. (hereafter known as the Contractor). Hyder Consulting has been employed as the Contractor's Environmental Team (CET) to undertake the Environmental Monitoring and Audit (EM&A) programme in accordance with the contract specific EM&A Manual.

Major construction works for the Project has commenced. Impact monitoring for air quality and noise has been undertaken by the CET during the course of the works. This report summarizes the monitoring and auditing data, which form the basis for the assessment of compliance against define criteria.

1.2 CONSTRUCTION PROGRAMME

The overall construction programme from the detail design to completion of all civil works will take approximately 51 months. The construction of the Tin Shui Wai Station will included all activities such as foundation and structural works of the station, plumbing and drainage works and electrical and mechanical installations.

1.3 PROJECT ORGANISATION AND MANAGEMENT

An Environmental Team is set up for the Project construction phase. The organisation and lines of communication with respect to environmental works are shown in Figure 1.3.

In general, CET is responsible for regular on-site monitoring and audits/inspection on environmental issues and report to the Contractor of any environmental deficiencies. The Independent Environmental Checker (IEC) is responsible for carrying out the formal audit and verify the overall environmental performance. Finally, the Environmental Manager of KCRC will manage the IEC who would review the deliverables prior to the submission to EPD.

2. SUMMARY OF EM&A REQUIREMENT

2.1 AIR QUALITY

2.1.1 Air Quality Parameters

24-hour Total Suspended Particulates (TSP) level should be measured at the selected air monitoring locations in accordance with the EM&A Manual. Monitoring under typical weather conditions (with no adverse weather such as typhoon signal or rainstorm warning) was undertaken at each monitoring location once per week. Information such as date of monitoring, duration, weather condition, equipment used and monitoring results will be recorded on the field data sheet developed for the Project. Results are summarized in Section 4.1.

2.1.2 Monitoring Methodology

24-hour TSP monitoring is carried out by using High Volume Air Sampler (HVAS) and follows the standard sampling method as set out in High Volume Method for Total Suspended Particulates, Part 50 Chapter 1 Appendix B, Title 40 of the Code of Federal Regulations of the USEPA.

After sampling, the filter paper loaded with dust is kept in a clean and tightly sealed plastic bag. The filter paper is then re-conditioned in a dessicator for 24 hours before obtaining the weight under laboratory conditions.

The average concentration of the suspended particulates will be calculated based on the following information obtained from monitoring:

- Flow rate
- Weight of the filter paper before and after sampling
- Sampling period indicated by the elapsed-time meter

All samples collected once per week and they will be kept in good condition (i.e. stored in sealed plastic bags, with brief description of the monitoring dates and locations) for a period of 6 months before disposal.

2.1.3 Monitoring Equipment/Calibration

High Volume Air Sampler (HVAS) - Model GMW GS2310-105 is used for 24 hours TSP monitoring. It complies with the USEPA specifications in Appendix B Part 5 - Reference Method for the Determination of Suspended Particulate matter in the Atmosphere (High-Volume Method) of the Code of Federal Regulation dated July 1, 1991.

All HVAS were calibrated before commencement of monitoring using standard orifice 5-points calibration method with orifice calibrator to determine the actual flow rate of each HVAS. This will be used for the calculation of the TSP level. Calibration Kit Model - G2523 is used for calibration of the HVAS. Recalibration of the HVAS should be carried out least once every six months.

2.1.4 Monitoring Locations

Air sensitive receivers were identified in the West Rail EM&A Manual (see Figure 2.1) of which three have been selected for the air quality impact monitoring. They are listed in Table 2.1 and shown in Figure 2.2.

Name	Description	Location of the HVAS
Queen Elizabeth School Old Students' Assn. Primary School (14/5)	It is a standard primary school which locates at the junction of Tin Fuk Road and Tin Yiu Road.	Roof of the school, facing Tin Fuk Road and Tin Yiu Road
TWGHs Kwok Yat Wai College (14/6)	It is a standard secondary school which locates adjacent to Tin Fuk Road.	Roof of the school hall, facing Tin Fuk Road
Queen Elizabeth School Old Students' Assn. Branch Primary School (14/C2)	It is a standard primary school which locates adjacent to Ping Ha Road.	Roof of the school, facing Ping Ha Road

Table 2.1 List of Locations for Air Impact Monitoring

2.1.5 Action and Limit Level

The Action and Limit Levels for the 24-hours air quality monitoring is shown in Table 2.2. The actual Action and Limit Levels at each monitoring location is based upon the results obtained during the baseline monitoring which is presented in Section 4 of this report.

In the case of exceedance of Action and/or Limit levels for air quality occur, Event Contingency Plans (ECPs), which is developed by KCRC, will be implemented. The ECPs for Action and Limit levels exceedances are shown in Table 2.3 and 2.4 respectively. ECP for Complaints Handling is shown in Table 2.5.

Level	Total Suspended Particulates (μg m^{-3})
Action	For baseline < 108 μg m^{-3} , average of 130% of baseline and the Limit level
	For 108 < baseline < 154 μg m^{-3} , 200 μg m^{-3}
	For Baseline > 154 μg m^{-3} , 130% of baseline level
Limit	260 μg m^{-3}

Table 2.2 Action and Limit Level for 24-hour Air Quality Monitoring

Step	Day	Action	Contractor / CET	RSS	IEC
1.	1	Identify exceedance from monitoring data and initiate corrective action. Submit data to RSS with observed source(s) of pollution.	■		
2.	1	Input monitoring data and observed pollution source(s) into WREMS on same day when data is submitted from CET. WREMS will automatically generate a Notice of Exceedance (NOE) and send it to the IEC via e-mail.		■	
3.	1	On same day of receipt of the NOE, check monitoring data trend and Contractor's work method. Decide if a formal NOE will be issued. If so, forward the NOE via e-mail to KCRC and RSS. If not, close the Exceedance record in the WREMS.			■ □
4.	1	Confirm receipt of NOE to IEC.		■	
5.	1	Issue NOE to Contractors and remind their contractual obligations.		■	
6.	2	Propose remedial measures to RSS within 1 working day of receipt of NOE.	■	□	
7.	2	Review and agree the proposed remedial measures and make recommendations where necessary.		■ □	■ □
8.	2	Implement the proposed remedial measures once they have been agreed.	■		
9.	-	Arrange site visit to ensure implementation of the agreed remedial measures.		■	■
10.	-	Increase monitoring frequency to assess effectiveness of remedial measures. (Be specific about the frequency for the different parameters. E.g. once every 3 days for 24-hr dust, daily for 1-hr dust) Submit monitoring data to RSS for entering into the WREMS once they are available.	■		
11.	-	If exceedance continues, arrange meeting with Contractor and RSS to review the implemented remedial measures and identify further remedial measures. Go to step 8. If exceedance stops for 3 consecutive monitoring, resume normal monitoring frequency.	■	■ □	■
12.	-	Inform IEC the closure of exceedance.		■	
13.	-	Close the exceedance record in the WREMS.			■

Table 2.3 Event Contingency Plan for Action Level Exceedance

Step	Day	Action	Contractor/ CET	RSS	IEC
1.	1	Identify exceedance from monitoring data and initiate corrective action. Submit data to RSS with observed source(s) of pollution.	■		
2.	1	Input monitoring data and observed pollution source(s) into WREMS on same day when data is submitted from CET. WREMS will automatically generate a Notice of Exceedance (NOE) and send it to the IEC via e-mail.		■	
3.	1	On same day of receipt of the NOE, check monitoring data trend and Contractor's work method. Decide if a formal NOE will be issued. If so, forward the NOE via e-mail to KCRC and RSS. If not, close the Exceedance record in the WREMS.			■ □
4.	1	Confirm receipt of NOE to IEC on receipt of NOE.		■	
5.	1	Issue NOE to Contractors and remind their contractual obligations.		■	
6.	1	Take immediate action to avoid further exceedance.	■		
7.	2	Propose remedial measures to RSS within 1 working days of receipt of NOE.	■	□	
8.	2	Review and agree with the proposed remedial measures and make recommendations where necessary.		■ □	■ □
9.	2	Implement the proposed remedial measures once they have been agreed.	■		
10.	-	Arrange site visit to ensure implementation of agreed remedial measures.		■	■
11.	-	Increase monitoring frequency to assess effectiveness of remedial measures. (Be specific about the frequency for the different parameters. e.g. daily for all parameters) Submit monitoring data to RSS for entering into the WREMS once they are available.	■		
12.	-	If exceedance continues, arrange meeting with Contractor and RSS to review the implemented remedial measures and identify further remedial measures. Go to step 9. If exceedance stops for 3 consecutive monitoring, resume normal monitoring frequency.	■	■ □	■
13.	-	Inform IEC the closure of exceedance.		■	
14.	-	Close the exceedance record in the WREMS.			■

Table 2.4 Event Contingency Plan for Limit Level Exceedance

Step	Day	Action	Contractor/ CET	KCRC	RSS	IEC
1.	1	Party receiving complaint shall create a new complaint record in the WREMS. If the Contractor receives a complaint, the Contractor shall pass the information to the RSS for entering into the WREMS. WREMS then automatically sends a Notification of Complaint to KCRC, RSS and IEC via e-mail.	■	■	■	
2.	1	RSS forward the complaint to Contractor/CET if that is not already received by the Contractor.			■	
3.	2	Within 1 working day after the receipt of the Notification of Complaint, provide RSS relevant works site information, e.g. types and locations of construction works.	■		□	
4.	2	Investigate the complaint to determine its validity, and to assess whether the source of the problem is due to the works activities. Report the validity of the complaint to KCRC and RSS.				■ □
5.	2	If complaint is valid and due to works, RSS shall notify the Contractor. If complaint is invalid or not due to works, Go to Step 11.			■	
6.	2	Propose mitigation measures to RSS within 1 working day of the receipt of the Notification.	■		□	
7.	2	Review and agree with the proposed mitigation measures and make recommendations where necessary.			■ □	■ □
8.	2	Implement the mitigation measures once they have been agreed.	■			
9.	4	Audit the implementation of the proposed mitigation measures on site within 2 working days after the measures have been agreed.			■ □	■ □
10.	-	Undertake additional monitoring to verify the situation where necessary.	■			
11.	4	Report the investigation results and subsequent actions taken to RSS within 2 working days after the implementation of mitigation measures.	■		□	
12.	5	Respond to the complainant within 1 working day after receiving the investigation report.		■		
13.	25	If no further comments or complaints are received from the complainant within 20 working days after responding to the complainant, close the complaint record in the WREMS. If the complainant has further comments or complaints on the same issue, notify other parties on the same day and go to step 2.		■	■ □	

■ action party

□ enter comments/proposals into the appropriate exceedance record in WREMS where applicable.

CET – Contractor's Environmental Team

IEC – Independent Environmental Checker

KCRC – Designated personnel at KCRC

RSS –Resident Site Staff

WREMS - West Rail Environmental Management System

Table 2.5 Event Contingency Plan for Complaints Handling

2.2 NOISE

2.2.1 Noise Parameters

The construction noise level should be measured in terms of equivalent A-weighted sound pressure level (L_{eq}) measured in decibels (dB). Monitoring of $L_{eq(30\ min)}$ is carried at the noise monitoring locations once every week during normal construction working hours (07:00-19:00 hours Monday to Saturday). Restricted hour noise monitoring (19:00-07:00 hours or any time on general holidays including Sunday) in terms of $L_{eq(15min)}$ should be undertaken if the construction activities are being carried out in restricted hours under the conditions of valid Construction Noise Permits (CNPs).

The two statistical sound levels L_{10} and L_{90}; the level exceeded for 10 and 90 percent of the time respectively, is also recorded during monitoring. Major noise sources observed, both on-site and off-site, will be recorded on the field data sheet. All measurements are recorded to the nearest 0.1 dB. All measured data are provided in electronic format and results are summarized in Section 4.2.

2.2.2 Monitoring Methodology

Sound level meters, which comply with the International Electrotechnical Commission Publication 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications as referred to the Technical Memorandum (TM) issued under the Noise Control Ordinance, were used. Noise levels for the A-weighted levels L_{eq}, L_{10} and L_{90} were measured throughout the impact monitoring. Average, by sound power, of six consecutive 5 minutes readings is used to provide $L_{eq(30\ min)}$ for non-restricted hours (07:00-19:00 hours Monday to Saturday). A facade correction of 3dB(A) will be applied to measurements which are carried out under free field conditions.

During the impact monitoring, parameters such as dates, weather conditions, equipment used, measurement results and major noise sources are recorded on the field data record sheet. In relation to the monitored noise levels, other noise sources such as road traffic may make a significant contribution to the overall noise environment. Therefore, the results of noise monitoring activities will take into account such influencing factors which were not present during the baseline monitoring period. All measurements are recorded to the nearest 0.1dB(A).

2.2.3 Monitoring Equipment

Bruel & Kjaer (B&K) Precision Integrating Sound Level Meters of Type 2238 in compliance with the International Electrotechnical Commission Publication 651: 1979 (Type 1) and 804: 1985 (Type 1) Specifications, stated in the Technical Memorandum (TM) issued under the NCO, were used for baseline monitoring.

Prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator (B&K Type 4231) generating a known sound pressure level at a known frequency. Measurements are considered as valid only if the calibration level from before and after the noise measurement agree to within 1 dB.

2.2.4 Monitoring Locations

Noise sensitive receivers were identified in the West Rail EM&A (see Figure 2.1) of which three have been selected for the noise impact monitoring. They are listed in Table 2.6 and shown in Figure 2.2.

Name	Description	Location of Sound Level Meter
Queen Elizabeth School Old Students' Assn. Primary School (14/5)	It is a standard primary school which locates at the junction of Tin Fuk Road and Tin Yiu Road.	On ground level at the school playground, facing Tin Fuk Road and Tin Yiu Road
TWGH's Kwok Yat Wai College (14/6)	It is a standard secondary school which locates adjacent to Tin Fuk Road.	On the roof of the school facing Tin Fuk Road
Queen Elizabeth School Old Students' Assn. Branch Primary School (14/C2)	It is a standard primary school which locates adjacent to Ping Ha Road.	On the roof of the school facing Ping Ha Road

Table 2.6 List of Locations for Noise Impact Monitoring

2.2.5 Action and Limit Level

The Action and Limit levels for construction noise is shown in Table 2.7. The construction site is located in the Tin Shui Wai area which is within the designated area EPD/NP/NT-04 and the Area Sensitivity Rate (ASR) for the monitoring locations are classified as "B".

In cases where exceedance of Action level occur, since Action level is based on receiving of documented complaints, ECP for Complaints Handling (Table 2.5) should be implemented. If exceedance of the Limit level occur, ECP for Limit Level Exceedance (Table 2.4) should be implemented.

Time Period	Action	Limit
non-restricted hours (0700-1900 on normal weekdays)	When one or more documented complaints are received	75dB(A)*
restricted hours (19:00-07:00 hours or any time on general public holidays including Sundays)	When one or more documented complaints are received	refer to relevant Construction Noise Permit (CNP) listed in section 3.2

Note: The ASR for the site is classified as "B", which low density residential areas consist of low-rise or isolated high-rise developments are indirectly affected.

** Between 0700-1900 on normal weekdays, construction noise limit for schools without noise insulation is 70dB(A) during normal term time and 65dB(A) during examination period. For schools with noise insulation, the noise limit level is 80dB(A) during normal term time and 75dB(A) during examination period.*

Table 2.7 Action and Limit Levels for Construction Noise dB(A)

3. SUMMARY OF CONSTRUCTION ACTIVITIES

3.1 CONSTRUCTION ACTIVITIES

In September 2003, major site construction activities undertaken for the Project during non-restricted hours are listed as follow:

- Underground drainage and Utility;
- ABWF and E&M works for the TIS station;
- Construction of permanent road works at Ping Ha Road, Tin Fuk Road, Tin Yiu Road & Kiu Fat Street;
- Construction of Tin Yiu Road covered walkway;
- Landscape works including planters, cycle track and footpath; and
- PTI-Access structure and drainage work.

No construction activity was undertaken during restricted hours in September 2003.

3.2 VALID EPD PERMITS/LICENCES

All EPD permits or licences which are valid, expired, under the process of application or refused to grant during the reporting month are shown in Appendix H.

3.3 ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

The schedule for implementation of the construction phase mitigation measures (EMIS) can be referred to Appendix C.

4. MONITORING RESULTS

4.1 AIR QUALITY

The 24-hour TSP impact monitoring results and the corresponding Action and Limit levels are summarized in Table 4.1. More detailed results, weather conditions, and graphical presentations are presented in Appendix A.

Location	Action level ($\mu g/m^3$)	Limit level ($\mu g/m^3$)	Date	TSP (24hr) ($\mu g/m^3$)
Queen Elizabeth School Old Student Assn. Primary School (14/5)	192	260	3-Sep-03	104.30
			10-Sep-03	94.12
			17-Sep-03	107.64
			24-Sep-03	130.73
TWGHs Kwok Yat Wai College (14/6)	195	260	3-Sep-03	113.55
			10-Sep-03	111.80
			17-Sep-03	93.02
			24-Sep-03	118.32
Queen Elizabeth School Old Student Assn. Branch Primary School (14/C2)	200	260	3-Sep-03	-
			10-Sep-03	-
			17-Sep-03	70.36
			24-Sep-03	90.39

Notes: The air quality monitoring at 14/C2 has been resumed since 17 Sep 03.

Table 4.1 Results of Air Quality Impact Monitoring

No exceedance of Action / Limit Level as recorded in September 2003, which indicated that works carried out in September 2003 were in full compliance with the air quality criteria for the Project.

4.2 NOISE

The impact monitoring results are summarized in Table 4.2. Detailed results, including the weather conditions, and the graphical presentations are presented in Appendix B. Facade correction of 3dB(A) has been added to the measured L_{eq}, L_{10} and L_{90} for measurements carried out under free field conditions.

Location	Date	Limit Level, dB(A)	Average Impact noise measurement (30 min.), dB(A)		
			Leq	L_{10}	L_{90}
Queen Elizabeth School Old Student Assn. Primary School (14/5)	4-Sep-03	80	-	-	-
	11-Sep-03		-	-	-
	18-Sep-03		65.8	67.8	60.0
	25-Sep-03		66.1	68.2	61.3
TWGHs Kwok Yat Wai College (14/6)*	4-Sep-03	80	66.3	68.9	62.0
	11-Sep-03		64.5	66.4	60.8
	18-Sep-03		65.0	67.5	61.7
	25-Sep-03		65.7	68.0	61.7
Queen Elizabeth School Old Student Assn. Branch Primary School (14/C2)	4-Sep-03	80	-	-	-
	11-Sep-03		-	-	-
	18-Sep-03		62.9	66.0	58.4
	25-Sep-03		62.6	65.5	58.0

Notes: Limit level for 14/5, 14/6 & 14/C2, with noise insulation, is 80dB(A) during normal term time and 75dB(A) during examination period

Cell shaded with a thicker border represents a Limit Level exceedance.

Measurements were under free field condition therefore facade corrections of 3dB(A) were applied.

The noise monitoring at 14/5 & 14/C2 has been resumed since 18 Sep 03.

Table 4.2 Results of Noise Impact Monitoring During Non-Restricted Hours

No exceedance of Limit Level as recorded in September 2003, which indicated that works carried out in September 2003 were in full compliance with the noise criteria for the Project.

4.3 SUMMARY OF EXCEEDANCES

Table 4.3 below summarised the total number of exceedance for the air quality and noise during the reporting month.

Exceedance	Total No. of Measurements	Action Level Exceedance	% of Action Level Exceedance	Limit Level Exceedance	% of Limit Level Exceedance
Air Quality	10	0	0%	0	0%
Noise Non-restricted hour	8	0	N/A	0	0%

Note: 'N/A' – Action Level for noise relates to the number of documented complaint received

Table 4.3 Summary of Exceedances

No Notice of Exceedances (NoEs) was received in September 2003.

5. NON-COMPLIANCE AND DEFICIENCY

5.1 CET SITE INSPECTION/AUDIT

Site inspections were carried out by CET once a week as below:

- Tin Shui Wai Station – 17 and 24 of September 2003.

All observations have been recorded in the audit checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary. Significant deficiencies observed during site inspection/audits and recommendation, which have been made by the CET, are summarised in Table 5.1 below:

Significant Deficiencies Observed	CET Recommendation
Air Quality • No watering was provided for the concrete breaking at the site near Tin Tau Court.	• Watering should be provided for the concrete breaking to avoid dust generation.

Table 5.1 Summary of CET Findings during Site Inspection/Audit

5.2 IEC SITE AUDIT

Site audit was undertaken by IEC on 16 September 2003. Three observations were issued by the IEC. Appendix J presents the site inspection checklist. The observations are summarised as below.

Observation

- The open area near LRT ramp contain soil stockpile. Contractor was reminded to cover the stockpiles while not in use.
- The open slope near LRT ramp was covered with tarpaulin sheet. However, the tarpaulin sheet will be blown up by wind from the time. Contractor was advised to hydroseed the slope as soon as possible.
- Diesel spillage was observed near the generator. Contractor was reminded to provide drip tray for generator and remove the contaminated soil.

6. WASTE MANAGEMENT

The materials being disposed off site during the reporting period are listed in Table 6.1 below.

Source	Material Description	Quantity (m^3)	Disposal Location
Earthwork (Luen Hing)	Excavated unsuitable materials (Tin Fuk Road, Ping Ha Road, Tin Yiu Road, GL8, 9, 15,16,18, FB1 and FB3)	260	Tuen Mun Area 38

Note: Unsuitable materials – Materials not suitable for filling within CC-203 site.

Table 6.1 Summary of Surplus Material Disposed Off Site

No chemical waste was generated in September 2003.

7. COMPLAINT

No complaint was received during the reporting month.

Appendix D presents a Complaints Log summarising all complaints received since the commencement of the Project.

8. SUMMARY OF NOTIFICATION OF SUMMONS, SUCCESSFUL PROSECUTIONS AND CORRECTIVE ACTIONS

No Notification of Summons as received during the reporting month.

Appendix K presents a list of Notification of Summons received since the commencement of the project.

9. FUTURE KEY ISSUES

In accordance with the construction programme provided by the Contractor, construction activities to be carried out for the upcoming three months will include the following:

- Underground drainage and utility;
- Construction of permanent road works at Ping Ha Road;
- Construction of permanent road works at Tin Yiu Road;
- Construction of covered walkway at Tin Yiu Road;
- Construction of permanent roadwork at Tin Fuk Road and Kiu Fat Street;
- Construction of Track 01;
- Landscape works including planters, cycle track and footpath; and
- PTI-Access structure.

The construction activities for the next three months will be very similar to those carried out in September 2003. Therefore it is anticipated that the results for air quality and noise monitoring for upcoming months will be also similar to those measured in September 2003.

A weekly monitoring schedule for the next month is presented in Appendix E of this report. The monitoring events will be the same as this month and the methodology for air quality and noise monitoring is referred to in sections 2.1.2 and 2.2.2 of this report respectively.

10. CONCLUSION

Air quality and noise impact monitoring have been undertaken in September 2003 in accordance with the contract specific EM&A Manual. No exceedance for both air quality and noise monitoring was recorded in September 2003.

Site audits / inspections were carried out by CET and IEC during the reporting month. No Non-compliance was issued by IEC. However, three deficiencies were observed.

260 m^3 of excavated materials from earthworks were disposed of to public filling barging point at Tuen Mun Area 38 in September 2003.

There have been no complaint and Notification of Summons received during the reporting month.

The Contractor should continue to review construction methods and environmental impacts and implement suitable mitigation measures as necessary.

APPENDIX C ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
Noise Impacts					
Use of quiet plant and silenced equipment would be considered for restricted hours work if any is required and if equipment is available. (Details of equipment are provided in the EMP)	For all work sites	Throughout construction phase	West Rail Environmental Impact Assessment (West Rail EIA)	Construction Manager (External Work) (CMEW) monitored by Project Technical Manager (TM)	Currently being implemented on site
The Contractor shall ensure the noisy construction equipment such as hand-held breaker and air compressor fitted with a noise emission label issued by EPD. All equipment is regularly maintained. All equipment engines and motors are equipped with proper mufflers.	For all work sites	Throughout construction phase	Noise Control (Hand Held Percussive Breakers) & (air Compressors) Regulations	CMEW monitored by Project TM	Currently being implemented on site
When an exceedance of noise criteria is anticipated from some construction activities which are monitored by the impact monitoring, JV will consider the use of portable noise barriers with a skid footing, a small cantilevered upper portion and a density no less than 20kg per m^2 to reduce the noise to contract specific noise criteria.	Specific Location exceed the noise criteria	The period for using portable noise barrier are not yet decided, details will be provided in the regular EM &A reports once available	West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
Reduce number of plant operating simultaneously close to NSRs	For all work sites	During construction of foundation box and station box	West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
Good site practices include: a) Operation of only well maintained plant on-site; b) Regular servicing of plant during construction; c) Restriction of rock drilling to the shortest period possible; d) Use of and maintenance of silencers or mufflers on construction equipment during construction; e) Siting of mobile plant as far away from NSRs as possible; f) Shut down of machines and plant that may be intermittently used between work periods or failing that, equipment shall be throttled down to a minimum; and	For all work sites	Throughout construction phase	West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
g) Orientation of plant known to emit noise strongly in one direction such that the noise is directed away from nearby SRs.					
Air Quality Impacts					
i) Site boundary and entrance (a) Hoarding will be provided along the site boundary (b) Wheel washing facilities are provided to prevent dusty material from being carried off-site on vehicles and deposited on public roads. Wash-water shall have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of wheel wash operations. Area at which vehicle washing takes place and the section of road between the washing facilities and the exit point is paved with concrete, bituminous or hardcore material.	All entrances / exits at all construction sites It will be installed prior to the start of any dusty activities	Throughout work phase	Part III item 13 of the Air Pollution Control (Construction Dust) Regulation West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
ii) Cement Storage and Handling (a) Every stock of more than 20 bags of cement shall be covered entirely by impervious sheeting of placed in an area sheltered on the top and the 3 sides. (b) Cement delivered in bulk shall be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line such that, in the event of the silo approaching an overfilling stops with one minute. (c) Silos used for the storage of cement shall not be overfilled. (d) any cement during and after de-bagging process, shall be carried out in a totally enclosed system or facility, and vent or exhaust shall be fitted with an effective fabric filter or equivalent air pollution control system or equipment.	Cement storage area	Throughout the work phase	Part III item 15 of the Air Pollution Control (Construction Dust) Regulation	CMEW monitored by Project TM	N/A
ii) Access haul roads All haul roads of vehicles shall be paved with concrete, bitumous hardcore materials or metal plates, and kept clear of dusty materials. The Contractor shall spray all roads within the construction sites and roads leading to the sites using water bowsers with spray bars, hose pipes etc. to control dust.	At all haul roads prior to construction At roads (as stipulated)	At all times throughout the construction phase.	Part III item 14 of the Air Pollution Control (Construction Dust) Regulation	CMEW monitored by Project TM	Currently being implemented on site

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
iii) Exposed earth To minimise dust emissions, the amount of spoil exposed and the dust generation potential shall be kept as low as possible, this can be accomplished by surface compaction, temporary fabric covers, minimising the extent of exposed soil and the prompt re-vegetation or hydroseeding of completed earthworks.	Across the Site	At all times throughout the construction phase	Part III item 16 of the	CMEW monitored by Project TM	Currently being implemented on site
iv) Stockpiles Cover entirely by impervious sheeting, placed in an area sheltered on the top and the three sides; or The entire surface is kept wet by applying water spraying or dust suppression chemical.	At all stockpiles	At all times throughout the construction phase	Part IV item 18 of the Air Control (Construction Dust) Regulation	CMEW monitored by Project TM	Currently being implemented on site
v) Loading, unloading or transfer of dusty materials All dusty materials are sprayed with water immediately before their handling.	Prior to loading, unloading or transfer of materials that are likely to generate dust	During the construction phase	West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
vi) Conveyor belt system Conveyor belts shall be fitted with wind-boards, and conveyor transfer points and hopper discharge areas shall be enclosed to minimise dust emission. All conveyors carrying materials that have the potential to create dust shall be totally enclosed and fitted with belt cleaners. Where dusty materials are being discharged to vehicles from a conveying system at a fixed transfer point, a three-sided roofed enclosure with a flexible curtain across the entry shall be provided. Exhaust fans shall be provided for this enclosure and vented to a suitable fabric filter system.	Prior to operation of the Conveyor system At a fixed transfer point	At all times throughout the construction phase	Part III item 20 of Air Pollution Control (Construction Dust) Regulation	CMEW monitored by Project TM	N/A
vii) Debris handling Materials 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 in good condition. The tarpaulin shall be properly secured and shall extend at least 300 mm over the edges of the side and tailboards. The debris shall be kept wet by water spray prior to dumping into a chute.	During loading of materials	At all times throughout the construction phase	West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
viii) Site clearance During breaking/crushing or demolition works, watering shall be implemented to control dust. All demolished items shall be covered or placed in area with	Across entire Site	During any Site clearance works		CMEW monitored by Project TM	Currently being implemented on site

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
shelter within a day of demolition.					
The Contractor shall also ensure the following site practices are implemented: a) Open burning of debris, construction wastes, vegetation or other materials on the site is prohibited. b) Dust nuisance is prevented at all times. c) All vehicles have their engines turned off while parked on the site.	At all site areas	Throughout construction phase	Air Pollution Control (Open Burning) Regulation	CMEW monitored by Project TM	Currently being implemented on site
Water Quality Impacts					
Minimise exposed soil areas to reduce the potential for increased siltation, contamination of runoff and erosion. Slopes and open stockpiles of construction material will be covered with tarpaulin or similar fabric to minimise siltation impacts arising. Construction runoff impacts associated with above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include: (i) The use of sediment traps; and (ii) Adequate maintenance of drainage systems to prevent flooding and overflow.	All exposed soil areas which exist or may arise	During the entire construction period	Item 7 of the ProPECC Note PN 1/94 on Construction Drainage West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
The boundaries of critical areas of earthworks will be marked and surrounded by dykes or embankments for flood protection. Temporary ditches will be provided to facilitate runoff discharge into appropriate watercourses, via a silt retention pond. Permanent drainage channels will incorporate sediment basins or traps and baffles to enhance deposition rates.	At all critical areas of earthworks	Immediately on the commencement of construction works	West Rail EIA	CMEW monitored by Project TM	N/A
All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge would be adequately designed for the controlled release of storm flows. Details of site drainage system and locations of the final discharge points are given in the EMP. All sediment traps will be regularly cleaned and maintained. The temporarily diverted drainage will be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.	Design prior to construction and install immediately on start of construction programme	Throughout construction phase	West Rail EIA	Project TM CMEW monitored by Project TM	N/A
Sand and silt in wash water from wheel washing facilities will be settled out and removed before discharge into storm drains. A section of the road between the wheel washing bay and public road will be re-ad with backfill to prevent mud, water or other	At all wheel washing facilities which must be located at all entrances / exits at the Site	Throughout entire construction phase	Item 15 of the ProPECC PN 1/94 Part III item 13 of the	CMEW monitored by Project TM	N/A

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
road will be paved with backfill to prevent wash water or other site runoff from entering public road drains. Details of the wastewater treatment facilities at all discharge points including the type and size of equipment used are included in the EMP. The wastewater treatment facilities will be cleaned on a weekly basis and more frequently during the wet season.	exits at the Site		Air Pollution Control (Construction Dust) Regulation West Rail EIA		
Oil interceptors will be provided in the drainage system and regularly emptied to prevent the release of oils and grease into the storm water drainage system after accidental spillage. The interceptor shall have a bypass to prevent flushing during periods of heavy rain.	Located downstream of any significant oil and grease sources	Throughout entire construction phase		CMEW monitored by Project TM	N/A
Collection, handling and disposal of debris and rubbish to avoid water quality impacts.	At all times and within the entire site	Throughout the construction phase	Chapter 358 Part III of item 8 of the Water Pollution Control Ordinance (WPCO) West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
Prevention of fuel from tanks and storage areas entering water bodies.	All fuel tanks / storage areas to be bunded (to 110% capacity of maximum storage area) in sealed areas and locked at all times	Throughout construction phase	Chapter 358 Part III of item 9 of WPCO Chapter 354 Part III item 9 of the Waste Disposal Ordinance (WDO) Item 23 of the ProPECC 1/94 West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
Effluents generated are required to meet the TM standards prior to discharge. Sewage shall be directed to the public foul sewer system.	For all effluent sources (e.g. offices, canteen, toilets, etc.)	Throughout construction period	WPCO	CMEW monitored by Project TM	Currently being implemented on site
Provision of portable chemical toilets by a licensed contractor as necessary.	Suitably located across the Site	Throughout the construction period	WPCO and WDO	CMEW monitored by Project TM	Currently being implemented on site
Visual / Landscape Impacts					
Control of night-time lighting	Wherever spot lights are installed	Throughout construction phase	West Rail EIA	CMEW monitored by Project TM	N/A
Erection of decorative screen hoarding as necessary	Around Site boundary	Wherever practicable early in construction phase	West Rail EIA	CMEW monitored by Project TM	N/A
Advance planting for screening	Around Site boundary	Wherever practicable	West Rail EIA	CMEW monitored by	N/A

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
		early in construction phase		Project TM	
Use of stripped excavated material / earth mounding for screening	Wherever noisy plants are operating for excavating materials	Throughout construction phase	WDO	CMEW monitored by Project TM	N/A
Minimising height of temporary structures	Wherever practicable.	At the beginning of the construction phase	West Rail EIA	CMEW monitored by Project TM	N/A
Careful positioning of construction plant	Particularly in conspicuous areas and near large or well used areas by the Site	During all construction phase	West Rail EIA	CMEW monitored by Project TM	N/A
Waste Management Impacts					
All waste management related activities would be undertaken in accordance with the Waste Management Plan for this contract.	For all work sites	Throughout the contract	As noted in the WMP West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
Completion and submission of FMC questionnaire on *Surplus and Fill Requirements* to encourage re-use of excess excavated material by other land formation / reclamation projects.		Prior to commencement of construction works		CMEW monitored by Project TM	N/A
Construction waste materials shall be separated into inert, non inert and chemical waste categories: i) Inert waste will be reuse as for as possible, and the surplus suitable for reclamation / land formation shall be disposed at a public dumping site; ii) Unsuitable inert material and non-inert material shall be disposed of at landfill; and iii) Chemical waste under Schedule 1 of the Regulation shall be stored according to the Regulation, and shall be disposed of at the Tsing Yi CWTF or another location determined by Government. iv) Contaminated excavated material (please refer to Contamination Action Plan)	At all locations	During the construction period	Chapter 354 Part IV item 16 of WDO Section 4.6 and 4.6 of the Code of Practice on the Packaging, Labelling and storage of Chemical Waste under Chapter 354 section 35 of the WDO	CMEW monitored by Project TM	Currently being implemented on site
Wastes shall be stored and handled in dedicated areas with bunded sides such a way as to avoid loss or leakage and subsequent pollution. Waste storage sites shall be approved by the Engineer and shall be located away from sensitive areas such as: residential, surface/groundwater or coastal areas. Designated waste storage areas shall be well maintained and	For all areas	Throughout construction phase	Part III items 9, 10 and 11 of the WDO	CMEW monitored by Project TM	Currently being implemented on site

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
cleaned regularly.					
The environmental monitoring shall include trip ticket usage to ensure proper disposal and avoidance of fly tipping.		For all waste disposal off-site	Chapter 354 Part IV item 16 of the WDO	CMEW monitored by Project TM	Currently being implemented on site
Permitted waste hauliers will be used to collect and transport wastes to the appropriate disposal points. The following measures to minimise adverse impacts will be instigated: i. Use waste hauliers authorised or licensed to collect the specific category of waste; ii. Remove wastes twice day; iii. Maintain and clean waste storage areas daily; iv. Minimise windblown litter and dust during transportation by either covering tucks or transporting wastes in enclosed containers; v. Obtain the necessary waste disposal permits form the appropriate authorities, in accordance with the; vi. Dispose of waste at licensed sites; vii. Develop procedures such as a ticketing system to facilitate tracking of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes dose not occur; and viii. Maintain records of the quantities of wastes generated, recycled and disposed.	As required	Throughout construction phase	Chapter 354 Part III of the WDO West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
During the excavation process should any material be found or suspected to be contaminated the following will be followed: • Inspection of material and visually confirmation of potential contamination. • Sampling and analysis specialist material for disposal options. Excavation works will be supervised at all times by an environmental / contamination specialist.	As required	Throughout construction phase	Item 9, 10 and 11 of the ProPECC Noted PN 3/94 Contaminated Land Assessment and Remediation	Project TM	N/A
Careful planning and good site management to minimise over-ordering and waste of materials such as concrete, mortars and cement grouts. The design of formwork should maximise the use of standard wooden panels so that high reuse level can be achieved. Alternatives such as steel formwork or plastic fencing should be considered to increase the potential for reuse.	All Site areas	During construction period	Item 5 of the Works Branch Technical Circular No. 32/92	Project TM	Currently being implemented on site

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
Recycle as much as possible of the construction waste on-site. Proper segregation of wastes on site will increase the feasibility of recycling certain components of the waste stream. Concrete and masonry can be used as general fill and steel reinforcement bar can be used by scrap steel mills. Different areas shall be designated for such segregation and storage wherever site conditions permit.	All Site areas	During construction period	West Rail EIA	CMEW monitored by Project TM	Currently being implemented on site
Spent bentonite slurries or other grouts used in diaphragm wall construction shall be collected, and reconditioned and reused wherever practicable.	At diaphragm wall locations	During construction period	West Rail EIA	Construction Manager (Sub-Station) (CMss) monitored by Project TM	Currently being implemented on site
Chemical waste that is produced, as defined by Schedule 1 of the Regulation, shall be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	Wherever chemical waste is produced	During construction	Sections 4.2 and 4.6 of the Code of Practice Packaging, Labelling and storage of Chemical Wastes under Chapter 354 of the WDO West Rail EIA.	CMss monitored by Project TM	Currently being implemented on site
General refuse generated on-site will be stored in enclosed bins or compaction units separate from construction and chemical wastes. A reputable waste collector will be employed by the JV to remove general refuse from the site, separately from construction and chemical wastes, on a daily or every second day basis to minimise odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law and will not be undertaken.	To be implemented	Throughout works duration and across Site Requires designation of a specific waste storage area	Part III items 9, 10 and 11 of the WDO	CMEW monitored by Project TM	Currently being implemented on site
Office wastes can be reduced through recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme will be considered if one is available.	To be implemented	Throughout works duration and across Site	West Rail EIA	Admin. Manager monitored by Project TM	N/A
Nuisance Impacts					
The Contractor shall be responsible for ensuring that no earth, rock or debris is deposited on public or private rights of way as a result of his operations, including any deposits arising from the movement of Construction Plant or vehicles.	At public and private rights of way	Throughout construction phase	Chapter 28 of the Crown Land Ordinance	CMEW monitored by Project TM	Currently being implemented on site
The Contractor shall at all times ensure that all existing stream courses and drains within, and adjacent to, the Site are kept safe and free from any debris and any excavated materials arising from the Works	All existing stream courses / drains within, and adjacent to the Site	Throughout construction phase	EIA Ordinance Chapter 358 of Part III item 9 of the WPCO	CMEW monitored by Project TM	Currently being implemented on site

Environment Protection Measure	Location	Duration	Relevant Legislation / Guidelines	Responsible Personnel	Status
from the Works.			Crown Land Ordinance		
Site hoarding shall be constructed of re-usable materials source without detrimental impact on the environment.		Throughout construction phase	EIA Ordinance	CMEW monitored by Project TM	Currently being implemented on site
Use of tropical hardwoods on-site is prohibited. EM is responsible to ensure no tropical hardwoods will be used by JV. The construction manager will ensure that the sub-contract or will not use the hardwood. This measure is in accordance with the Works Bureau Technical Circular No. (WBTC) No. 32/92 entitled "The use of Tropical Hardwood on Construction Sites."		Throughout construction phase	EIA Ordinance Item 4 & 5 of the WBTC No 32/92	Project TM	Currently being implemented on site
The Contractor shall where ever possible avoid transportation of materials and equipment during peak hours 07:00 to 09:00 and 17:00 to 19:00 to avoid aggravating conditions on local roads.	Throughout the site	Throughout construction phase	EIA Ordinance	CMEW monitored by Project TM	Currently being implemented on site

APPENDIX D COMPLAINTS LOG

Date Received	Complainant	Details of the Complaint	Action	Completion Date	Remark
6th, 23rd and 27th of March 2000	Principal of QESB (14/C2)	The Contractor coordinated with the school to commence sheet pilling during lunch hour and after school as requested by the school. However, the school complain that sheet pilling work affected their activities during lunch hours and after school.	Re-arrangement of the sheet pilling hours has been carried out by the Contractor in order to satisfy the school's requirement and minimize the noise impact to the school activities. A meeting has been held on 7th April between all parties to discuss this issue. The Contractor agreed to coordinated with the school to carry out sheet piling after school hours and details are as follow: • 16:00-19:00 hours from Mondays to Fridays; and • 13:00-19:00 hours on Saturdays.	-	Closed. No reference log number was found.
(No complaint received in April 2000)					
(No complaint received in May 2000)					
(No complaint received in June 2000)					
(No complaint received in July 2000)					
(No complaint received in August 2000)					
(No complaint received in September 2000)					
(No complaint received in October 2000)					
(No complaint received in November 2000)					
28th December 2000	Local resident through Oriental Press and Mr. Chan Wai Yip of Yuen Long District Board	Two complaints were received by the JV from EPD regarding noise generated from the LRT power cable re-allocation works carried out by the CC230JV in November. EPD had subsequently carried out several visits but could not identified any noisy activities. EPD has since responded to the complainants. The works are now completed.	EPD had made several inspections but nothing related to the complaint was found. EPD have warned the Contractor to follow the regulations, but no legal action was taken against the contractor	-	Closed. Ref. No. WR1CRN 2000-0273245
(No complaint received in January 2001)					
(No complaint received in February 2001)					
(No complaint received in March 2001)					

Date Received	Complainant	Details of the Complaint	Action	Completion Date	Remark
19th April 2001	Residents of Tin Tsz Estate	A complaint was received by the EPD regarding the noise generated from a pump truck, locating at the junction of Tin Fuk Road and Long Tin Road. The pump truck was used for cleaning the existing box culvert B during day time.	The Contractor had taken immediate action to control the noise generation from the truck on the same day. A temporary noise barrier was erected using concrete blocks with noise screening materials shielding the engine of the pump truck, as a mitigation measure. A site inspection of the above set up was carried out by the environmental team of KCRC, IEC and RSS on 26 April 2001. No adverse comment was received formally so far. Representatives from the Concern Group of Tin Tsz Estate (Mr. Ting), Chan Wai Yip's Office, Yuen Long District Office, Housing Department, EPD and KCRC (RSS/Contractor/Public Affairs/Environmental Team) have attended the site inspection on 4 June 2001. Noise measurements at Tsz Sum House have also been taken. The noise monitoring has confirmed that there was no adverse noise impact from the pumping activity. The complainant, Mr. Ting, was satisfied with the noise monitoring results and accepted the new arrangement on the pump work.	-	Closed. No reference log number was found.
No complaint received in May 2001					
18 June 2001		A complaint was received by EPD regarding the extraction of sheet piles, locating at Manhole No. FM38.10.	The extracting work has been completed and movable noise barriers will be proposed and erected when the contractor carry out this sort of work in next time.		
28 June 2001	Resident of Tin Tsz Estate	A complaint was received by the EPD regarding the noise generated, locating at grid 19, under the station. Concrete breaking work has been carring out during daytime.	Movable noise barriers were erected surrounding the working portion, in order to minimize the noise impact.	-	Closed. No reference log number was found.
No complaint received in July 2001					
No complaint received in August 2001					
No complaint received in September 2001					
No complaint received in October 2001					
No complaint received in November 2001					
No complaint received in December 2001					

Date Received	Complainant	Details of the Complaint	Action	Completion Date	Remark
16 Jan 2002	Principal of QESB (14/C2)	The school complain that noise from construction work affected their activities.	Additional noise monitoring was carried out to determine the validity of the complaint and to assess whether the source of the problem is due to the works activities. Two set of Leq(30min) {construction noise without sheet-piling (#1) & with sheet-piling (#2)} were measured on the same day. The results shown the noise level for both set of measurement did not exceed the Limit Level and therefore no corrective action should be implemented.	-	Closed. No reference log number was found.
No complaint received in February 2002					
No complaint received in March 2002					
No complaint received in April 2002					
No complaint received in May 2002					
No complaint received in June 2002					
No complaint received in July 2002					
No complaint received in August 2002					
No complaint received in September 2002					
No complaint received in October 2002					
No complaint received in November 2002					
No complaint received in December 2002					
No complaint received in January 2003					
No complaint received in February 2003					
No complaint received in March 2003					
No complaint received in April 2003					
No complaint received in May 2003					
No complaint received in June 2003					
No complaint received in July 2003					
No complaint received in August 2003					
No complaint received in September 2003					

APPENDIX E MONITORING SCHEDULE FOR THE NEXT MONTH

	Monday	Tuesday	Wednesday	Thursday	Friday
14/6 TWGHS Kwok Yat Wai College			■	■□	
14/5 Queen Elizabeth Old Student's Assn. Primary Sch			■	■□	
14/C2 Queen Elizabeth Old Student's Branch Assn. Primary Sch.			■	■□	

■ Air Quality Monitoring
□ Noise Monitoring

APPENDIX F COMMENTS AND RESPONSES

The comment from KCRC/IEC for August 2003 EM&A report was received with no objection.

APPENDIX H - SUMMARY OF EPD PERMITS/LICENCES FOR THE PROJECT

Table H1 Summary of Permits/Licences

EPD ref. no.	EPD's notification of application dated	Permit no.	Permit time constraint	Permit valid from / to	Description
Environmental Permits					
N/A	20-Feb-2003	EP-004/1998/F	N/A	Valid	EP for West Rail Phase I
N/A	27-Sep-2002	EP-004/1998/E	N/A	Superseded by EP-004/1998/F	EP for West Rail Phase I
N/A	8-July-2002	EP-004/1998/D	N/A	Superseded by EP-004/1998/E	EP for West Rail Phase I
N/A	4-Apr-2002	EP-004/1998/C	N/A	Superseded by EP-004/1998/D	EP for West Rail Phase I
N/A	27-Jun-2001	EP-004/1998/B	N/A	Superseded by EP-004/1998/C	EP for West Rail Phase I
N/A	18-Aug-2000	VEP-020/2000/A/EP-004	N/A	Superseded by EP	VEP for West Rail Phase I
N/A	16-Sep-1998	EP-004/1998	N/A	Superseded by VEP	EP for West Rail Phase I
N/A	1-Sept-2001	VEP-023/2000/A/EP-033	N/A	Notify EPD four weeks prior to commencement	VEP for the Essential Public Infrastructure Works (EPIW) Associated with West Rail Station in Yuen Long, Tin Shui Wai and Tuen Mun
N/A	23-Aug-1999	EP-033/1999	N/A	Superseded by VEP	EP for the Essential Public Infrastructure Works (EPIW) Associated with West Rail

EPD ref. no.	EPD's notification of application dated	Permit no.	Permit time constraint	Permit valid from / to	Description
					Station in Yuen Long, Tin Shui Wai and Tuen Mun
N/A	22-Sep-1999	FEP-12/004/1999	N/A	Notify EPD one week prior to commencement	FEP for Contract 203 Tin Shui Wai Station
N/A	20-Oct-1999	FEP-01/33/1999	N/A	Notify EPD one week prior to commencement	FEP for EPIW Contract 203 Tin Shui Wai Station
Water Discharge Licence					
N/A	16-Feb-2000	1T241/1		31st January 2005	
Registration as a Chemical Waste Producer					
N/A	22-Dec-1999	5117-510-C3104-01		N/A	
Air Pollution (Construction Dust) Notification					
N/A	28- Sep- 1999	Not required	N/A	N/A	N/A

APPENDIX I CUMULATIVE LOG OF NOTICE OF EXCEEDANCES (NOES)

NOE No.	Date of Monitoring	Sampling Location	Description	Date of record input
NE-00434-CC-203-ASR-14/6-00	03-Mar-00	ASR-14/6	Action level exceedance of 24 hr TSPconc.	14-Mar-00
NE-00723-CC-203-NSR-14/C2-00	28-Apr-00	NSR-14/C2	Limit level exceedance of Leq Average	29-Apr-00
NE-00931-CC-203-NSR-14/6-00	09-Jun-00	NSR-14/6	Limit level exceedance of Leq Average	09-Jun-00
NE-00978-CC-203-NSR-14/C2-00	16-Jun-00	NSR-14/C2	Limit level exceedance of Leq Average	19-Jun-00
NE-01015-CC-203-NSR-14/C2-00	23-Jun-00	NSR-14/C2	Limit level exceedance of Leq Average	24-Jun-00
NE-01376-CC-203-NSR-14/6-00	25-Aug-00	NSR-14/6	Limit level exceedance of Leq Average	29-Aug-00
NE-01426-CC-203-NSR-14/C2-00	1-Sep-00	NSR-14/C2	Limit level exceedance of noise	5-Sep-00
NE-01497-CC-203-NSR-14/C2-00	8-Sep-00	NSR-14/C2	Limit level exceedance of noise	8-Sep-00
NE-01572-CC-203-NSR-14/C2-00	15-Sep-00	NSR-14/C2	Limit level exceedance of noise	19-Sep-00
NE-01575-CC-203-NSR-14/5-00	14-Sep-00	NSR-14/5	Action level exceedance of 24 hr TSP conc.	19-Sep-00
NE-01622-CC-203-NSR-14/C2-00	22-Sep-00	NSR-14/C2	Limit level exceedance of noise	23-Sep-00
NE-02082-CC-203-ASR-14/6-00	30-Nov-00	ASR-14/6	Action level exceedance of 24 hr TSP conc.	05-Dec-00
NE-02593-CC-203-NSR-14/C2-00	9-Mar-10	NSR-14/C2	Limit level exceedance of noise	12-Mar-01
NE-03081-CC203-NSR14/C2-00	3-Aug-01	NSR14/C2	Limit level exceedance of noise	7-Aug-01
NE-03098-CC203-NSR14/C2-00	17-Aug-01	NSR14/C2	Limit level exceedance of noise	17-Aug-01
NE-03236-CC203-ASR14/5-00	27-Sept-01	ASR14/5	Action level exceedance of 24 hr TSP conc.	5-Oct-01
NE-03237-CC203-ASR14/6-00	27-Sept-01	ASR14/6	Action level exceedance of 24 hr TSP conc.	5-Oct-01
NE-03390-CC203-ASR14/5-00	18-Oct-01	ASR14/5	Action level exceedance of 24 hr TSP conc.	13-Nov-01
NE-03389-CC203-ASR14/6-00	18-Oct-01	ASR14/6	Action level exceedance of 24 hr TSP conc.	13-Nov-01
NE-03398-CC203-NSR14/6-00	9-Nov-01	NSR14/6	Limit level exceedance of noise	14-Nov-01

APPENDIX K NOTIFICATION FROM EPD OF BREACHES OF REGULATIONS

Contract No.	EPD Reference No.	Date of Offence/Breach	Ordinance Breach	Case Mp. - FLS Defendant Company	Construction Activity During Breach/Prosecute	Date of Receive of test results and actual results	Date of Hearing	Outcome
CC203	EP94VP1/0013-99(1)-CITW2	19 Dec 99	Noise Pollution Control Ordinance	5860/00-Chun Wo Found 5861/00-Chun Wo C&E 5862/00-Fujita 5863/00-Henryvicy	Air lifting of bored piling		26 Sep 00	Guilty Guilty Guilty Guilty
CC203	-	28 Jan 00	Water Pollution Control Ordinance Cap 358	Chun Wo Found	Site Formation			Guilty
CC203	18/5000/1532-1-CITW1	31 Jul 00	Air Pollution Control Dust Regulation 4 (1)	89892/00-Chun Wo C&E 89893/00-Fujita 89893/00-Hanryvicy	Bored-Piling		14 Nov00	Guilty Guilty Guilty
CC203	FLS11652/2000	24 May 00	Water Pollution Control Ordinance Cap 358		Air lifting of bored piling	6 Dec 00	10 April 2001	N/A
CC203	EP-TW/W00048A-ETW42	24 May 00	Water Pollution Control Ordinance Cap 358	11652/00-Chun Wo C&E 11653/00-Fujita 11653/00-Henryvicy	Site Formation		19 Dec00 2 Jan 01 15 Mar 01	NotGuilty then Guilty NotGuilty then Guilty NotGuilty then Guilty
CC203	18/5000/1532-01 A1-CITW1	9 Nov 00	Air Pollution Control Dust Regulation 4 (1)	1630/01-Chun Wo C&E 1631/01-Fujita 1632/01-Henryvicy	Site Formation		27 Mar 01	Guilty Guilty Guilty
CC203	EP94/P1/0013-99(5)-CITW2	4 Dec 00	Air Pollution Control Dust Regulation 4 (1)	1633/01-Chun Wo C&E 1634/01-Fujita 1635/01-Henryvicy	Bored Piling Works		27 Mar 01	Guilty Guilty Guilty
No Notification From EPD of Breaches of Regulations was received in January 2001								
No Notification From EPD of Breaches of Regulations was received in February 2001								
No Notification From EPD of Breaches of Regulations was received in March 2001								

Contract No.	EPD Reference No.	Date of Offence/Breach	Ordinance Breach	Case Mp. - FLS Defendant Company	Construction Activity During Breach/Prosecute	Date of Receive of test results and actual results	Date of Hearing	Outcome
CC203	EP941/P1/0013-9911-CI(TW)4 EP941/P1/0013-9908-CI(TW)4	22 April 2001	Noise Control Ordinance (Cap 400)	CWFHJV	Excavation	6 November 01	4 Dec 01	Guilty
No Notification From EPD of Breaches of Regulations was received in May 2001								
No Notification From EPD of Breaches of Regulations was received in June 2001								
No Notification From EPD of Breaches of Regulations was received in July 2001								
No Notification From EPD of Breaches of Regulations was received in August 2001								
No Notification From EPD of Breaches of Regulations was received in September 2001								
No Notification From EPD of Breaches of Regulations was received in October 2001								
No Notification From EPD of Breaches of Regulations was received in November 2001								
No Notification From EPD of Breaches of Regulations was received in December 2001								
No Notification From EPD of Breaches of Regulations was received in January 2002								
No Notification From EPD of Breaches of Regulations was received in February 2002								
No Notification From EPD of Breaches of Regulations was received in March 2002								
No Notification From EPD of Breaches of Regulations was received in April 2002								
No Notification From EPD of Breaches of Regulations was received in May 2002								
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No Notification From EPD of Breaches of Regulations was received in March 2003								
No Notification From EPD of Breaches of Regulations was received in April 2003								

Contract No.	EPD Reference No.	Date of Offence/Breach	Ordinance Breach	Case Mp. - FLS Defendant Company	Construction Activity During Breach/Prosecute	Date of Receive of test results and actual results	Date of Hearing	Outcome
No Notification From EPD of Breaches of Regulations was received in May 2003								
No Notification From EPD of Breaches of Regulations was received in June 2003								
No Notification From EPD of Breaches of Regulations was received in July 2003								
No Notification From EPD of Breaches of Regulations was received in August 2003								
No Notification From EPD of Breaches of Regulations was received in September 2003								