

Territory Development Department
NT EAST Development Office

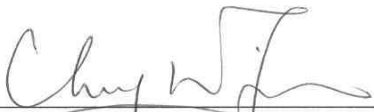
Sha Tin New Town, Stage II

**Route 9 between Cheung Sha Wan and
Sha Tin – Entrusted Portion**

**Environmental Monitoring and Audit
Quarterly Report (Version 1)**

February 2003 to April 2003

Certified By


(Environmental Team Leader)

REMARKS:

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

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EXECUTIVE SUMMARY

1. This is the second Environmental Monitoring and Audit (EM&A) Quarterly Summary Report prepared by Cinotech Consultants Limited for the “Sha Tin New Town, Stage II Route 9 between Cheung Sha Wan and Sha Tin – Entrusted Portion” (the Project). This summary report presents EM&A works performed in the period between 1st February 2003 and 30th April 2003.
2. The construction activities undertaken in the reporting quarter were:
 - Site clearance works
 - Ground investigation works
 - Tree felling works
 - Excavation works
 - Bund wall construction
 - Demolition of Asbestos
 - Installation of soil nail
 - Formation of hoarding and fencing

Environmental Monitoring Works

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

Air Quality

1-hour TSP Monitoring

4. All 1-hour TSP monitoring was conducted as scheduled except for the monitoring at Station A3 on 4th March 2003. The monitoring was suspended due to bad weather and rescheduled on 5th March 2003. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

5. All 24-hour TSP monitoring was conducted as scheduled. No Action/Limit Level exceedance was recorded in the reporting period.

Construction Noise

6. All construction noise monitoring was conducted as scheduled except for the monitoring at Station N6 on 4th March 2003. The monitoring was suspended due to bad weather and rescheduled on 5th March 2003. An additional monitoring at Station N5 (Garden Villa) was conducted on 18th April 2003 for the construction works on public holidays. One Action Level exceedance (complaint) was raised by a resident living at Garden Villa on 22nd April 2003. No Limit Level exceedance was recorded in the reporting period.

Environmental Complaint and Prosecution

7. No environmental prosecution was received during the reporting quarter.
8. One complaint related to the Project works was reported on 22nd April 2003. The complaint, which was transferred by Environmental Protection Department (EPD) to Environmental Team (ET) on 22nd April 2003, was raised by a resident living at Garden Villa on 22nd April 2003 concerning construction activity during general holidays (18th to 21st April 2003) at Portion 2C, the concerned works area near Garden Villa at Tai Po Road.
9. Complaint investigation was carried by ET, who submitted by a complaint investigation report to EPD and ER on 28th April 2003.

Environmental Licensing and Permitting

10. License/Permits granted to the Project include the Environmental Permit (EP), Construction Noise Permits (CNP) and Waste Disposal (Chemical Waste) License.

Future Key Issues

11. Excavation works, site clearance works, site formation works, demolition of asbestos containing materials will be the major construction activities for the coming quarter. The anticipated environmental impact will be mainly on dust and noise due to earthworks.

1. INTRODUCTION

- 1.1 Route 9 (Sha Tin Section) (R9S) (hereinafter called the “Project”) forms part of the Route 9 between Cheung Sha Wan and Sha Tin project, which will be a new expressway connecting west Kowloon and Sha Tin. The Project, the entrusted portion of the Route 9 project, is being managed and implemented by Territory Development Department (TDD) (hereinafter called the "Project Proponent").
- 1.2 The Project works mainly comprise the site formation for a toll plaza at the valley of Sha Tin Heights, the construction of 1 km long dual three-lane tunnels under Sha Tin Heights, a 0.6 km long dual two-lane tunnel approach road in Tai Wai, two slip road viaducts with approximately total length of 1 km connecting to Che Kung Miu Road, associated noise barriers and noise enclosures, drainage, slope works and landscape works. The remainder of the Route 9 (Main Portion, R9K) project forms the Kowloon Section and is being managed and implemented separately by Highways Department.
- 1.3 The Project is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 449, EIAO). An environmental impact assessment (EIA) report has been prepared in 1998 for the Route 9 project to consider the key issues of noise, air quality, water quality, ecological, construction waste, landscape and visual, land use and culture impacts, and identify possible mitigation measures. An updated Final EIA report was subsequently completed in August 1999 to cater for some changes in the main portion. The 1998 and 1999 Route 9 EIA (R9 EIA Reports) reports were included in the EIA register under the EIAO as report number EIA-135/BC and AEIAR-022/1999 respectively. EM&A Manuals for each of the R9 EIA reports were also included as part of the EIA reports in the register.
- 1.4 Subsequent to the endorsement of the R9 EIA reports by EPD in November 1999, the R9 project was deferred to start in 2002/2003 for completion by 2006/07. The implementation of the Route 9 project was then separated into the R9S and R9K portions. Meanwhile further design amendments had also been proposed for the R9S during the detailed design stage to resolve various engineering constraints. In view of these changes, an Environmental Review on the R9S was undertaken to update the findings of the R9 EIA reports. The Environmental Review report for R9S was completed in September 2001 and an Environmental Permit No. EP-104/2001 was issued on 4th October 2001 for the Project.
- 1.5 The works of the R9S is constructed under TDD’s construction Contract No. ST 89/02 “Route 9 – Sha Tin Heights Tunnel and Approaches”. The site layout of the Project is shown in Figure 1.
- 1.6 Cinotech Consultants Limited (Cinotech) was commissioned by TDD to undertake the Environmental Team (ET) Services for the Project. This is the second Quarterly EM&A report summarizes the EM&A works for the Project between February 2003 and April 2003.

2. PROJECT CHARACTERISTICS

Project Organization and Contacts of Key Management

- 2.1 An organization structure and the line of communication were set up for the Project between the Project Proponent, Engineer Representative (ER), Independent Environmental Checker (IEC), the Contractor and Environmental Team (ET). The organization chart and contact details are shown in Appendix A and Figure 3.

Construction Programme and Synopsis of Work

- 2.2 The construction programme is presented in Appendix B. The site activities during the reporting period are summarized in Table 2.1.

Table 2.1 Summary of Works Undertaken in the Reporting Months

Item	Work Activity	Month		
		Feb 03	Mar 02	Apr 03
1.	Site clearance works	✓	✓	✓
2.	Tree felling works	✓	✓	✓
3.	Excavation works	✓	✓	✓
4.	Ground investigation works	✓	✓	✓
5.	Bund wall construction	-	-	✓
6.	Demolition of Asbestos	-	-	✓
7.	Installation of soil nail	-	-	✓
8.	Formation of hoarding and fencing	-	-	✓

3. ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

Monitoring Parameters and Monitoring Locations

- 3.1 The EM&A Manuals designate locations for the ET to monitor environmental impacts in terms of air quality and noise due to the Project. The Project area and monitoring locations are depicted in Figures 2a and 2b. Appendix C gives details of monitoring requirements.

Monitoring Methodology and Calibration Details

- 3.2 Monitoring works/equipment were conducted/calibrated regularly in accordance with the EM&A Manuals. Copies of calibration certificates are attached in the appendices of the Monthly Reports.

Environmental Quality Performance Limits (Action and Limit Levels)

- 3.3 The environmental quality performance limits, i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in Appendix D.

Environmental Mitigation Measures

- 3.4 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the EM&A Manuals for the Contractor to implement. A list of mitigation measures is given in Appendix G.

4. MONITORING RESULTS

Weather Conditions

- 4.1 The weather during monitoring sessions was mainly sunny or cloudy. The weather conditions for each individual monitoring session were presented in the field record sheets.

Air Quality

- 4.2 Dust monitoring was conducted as scheduled in the reporting period. The monitoring data of 1-hour and 24-hour TSP Levels are attached in the appendices of the Monthly Reports. The graphical presentations of the monitoring results are shown in Appendix E.

1-hour TSP

- 4.1 All measured 1-hour TSP levels during daytime were below the Action/Limit Levels in the reporting period.

24-hour TSP

- 4.2 All 24-hour TSP monitoring results in the reporting quarter were all below the Action/Limit Levels.

Noise

- 4.3 Noise monitoring was performed at four designated locations during the daytime period (0700 to 1900) as scheduled. The noise monitoring data are attached in the appendices of the Monthly Reports. The graphical plot of the noise monitoring results in this reporting quarter are shown in Appendix F.
- 4.4 One Action Level exceedance (complaint) was raised by a resident living at Garden Villa on 22nd April 2003. No Limit Level exceedance was recorded in the reporting period.

5. AUDIT RESULTS

Implementation Status of Environmental Mitigation Measures

- 5.1 The implementation status of environmental mitigation measures (EMIS) is given in Appendix G.

Site Audit Summary

Water Quality

- 5.2 During the inspections in February and April 2003, accumulation of stand water was observed during site audit sessions. The Contractor was recommended to clean up the stand water to avoid mosquito breeding.

Air Quality

- 5.3 During the regularly site inspection was undertaken on 27th February 2003, vehicles speed within the construction site was suspected exceeded 8 km/hr.
- 5.4 One vehicle without wheel washing was observed before leave the construction site.

Chemical and Waste Management

- 5.5 It was observed that oil tanks were placed on bare ground and fuel was leaking from machines. The Contractor was recommended to provide drip trays or other alternatives for storage of oil buckets. The situation has been improved by the end of the reporting quarter.
- 5.6 The Contractor was recommended to clean up the garbage accumulated in the works area more frequently.

Permit / Licenses

- 5.7 The obtained permit and licenses were found not posting at the site office entrance on 6th March 2003. The situation has been rectified in the follow-up audit session.

Status of Environmental Licensing and Permitting

- 5.8 Environmental licenses and permits including Environmental Permit for the Project and Construction Noise Permit (CNP) were in place and valid during the reporting quarter. A summary status of licenses and permits is given in Appendix H.

Advice on Solid Waste Management Status

- 5.9 The solid waste generated from the Project site office was mainly general refuse that was collected by a licensed collector on an as need basis.

6. NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

Summary of Exceedances

- 6.1 All measured 1-hour and 24-hour TSP levels were below the Action/Limit Levels in the reporting period.
- 6.2 One complaint related to the Project works was reported on 22nd April 2003. The complaint, which was transferred by Environmental Protection Department (EPD) to Environmental Team (ET) on 22nd April 2003, was concerning construction noise from the site near Garden Villa (Portion 2C) during general public holidays (18th to 21st April 2003). (Refer to Section 7 for details).

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

- 6.3 There was no non-compliance from the site audits in the reporting quarter. The observations and recommendations made in each individual site audit session were attached in the Monthly Reports.

Summary of Actions Taken

- 6.4 In this reporting quarter, the following mitigation measures were implemented:
- drip trays for oil storage of oil buckets have been provided;
 - excavated/dusty materials have been covered by tarpaulin or water sprayed;
 - wheel washing facilities were provided;
 - groundwater pumped out was recycled via sediment tanks;
 - hoarding has been set up for the site near Che Kung Miu Road.

7. ENVIRONMENTAL COMPLAINTS

Complaints Log

- 7.1 Appendix I summaries the complaints received since the Project commencement.
- 7.2 One complaint related to the Project works was reported on 22nd April 2003. The complaint, which was transferred by Environmental Protection Department (EPD) to Environmental Team (ET) on 22nd April 2003, was raised by a resident living at Garden Villa on 22nd April 2003 concerning construction activity during general holidays (18th to 21st April 2003) at Portion 2C, the concerned works area near Garden Villa at Tai Po Road.
- 7.3 Complaint investigation was carried by ET. No limit level exceedance (noise level > 65 dB(A)) was recorded for the monitoring on 18th April 2003 at Garden Villa (Station N5). Moreover, it has been confirmed that a relevant CNP (ref. GW-TN0504-2002) was granted by the Contractor for carrying out construction works at the concerned area during restricted hours (i.e. general holidays including Sundays between 07:00 and 23:00 hours and any day not being a general holiday including Sundays between 19:00 and 23:00 hours). The powered mechanical equipments used during the concerned periods were in accordance with the requirements stipulated in the CNP.
- 7.4 A complaint investigation report was submitted to EPD and ER by ET on 28th April 2003. A copy of the complain investigation report was attached in the EM&A Monthly Report for April 2003.

8. NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 8.1 All complaints have been handled in accordance with the EM&A Manuals. The implementation status of the complaint handling procedure is summarized in Appendix I Complaint Log.

9. COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

- 9.1 Excavation works, site clearance works, site formation works, demolition of asbestos containing materials will be the major construction activities for the coming quarter. The anticipated environmental impact will be mainly on dust and noise due to earthworks as well as potential surface runoff in rainy season.