

China State – Zen Pacific Joint Venture

**KCRC CONTRACT CC-403 :
TUNNEL WORKS - MEI FOO TO NAM CHEONG**

**MONTHLY ENVIRONMENTAL MONITORING
AND AUDIT REPORT
(APRIL 2003)**

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Executive Summary

This report is prepared to document the impact environmental monitoring works conducted for contract CC-403 Tunnel Works: Mei Foo to Nam Cheong. Impact noise and air quality monitoring were carried out between 1 and 30 April 2003. In reference to the collected data and by routine field observation, the environmental condition during the construction was satisfactory. There was no exceedance of Action and Limit Levels recorded in air quality and noise quality. There was no notification of summons and prosecution received this month.

No complaint was received during the month of April 2003. No non-compliance was found during site inspection in last month's site visit.

There were some remarks made during this month's site audit on 11 April 2003 by the Independent Environmental Checker (IEC). In the portion of China State, the major work on site was the landscaping work and reinstatement work while part of the U-channel is still in progress. Next, uncovered soil for the landscaping work was observed. The Contractor indicated that the soil would be used immediately for the landscaping work. It was recommended that the soil should be covered when in use. Further, the Contractor was reminded the soil and mud should be cleaned up nearby the U-channel.

Weekly ET site inspections were carried out on 2, 9, 16, 23 and 30 April 2003. There were some observations recorded during the weekly site inspection. Following the audit of last month, a stockpile was allocated in Lai Wan interchange, the Contractor was recommended to cover it to avoid any environmental impact.

The IEC had made two comments on the March 2003 Monthly EM&A Report. The location of ceased monitoring location was 4/1, 4/4 and 8/3 of dust monitoring location and 4/1, MF104 and 8/3 of noise monitoring location. Next, the environmental permit EP-004/1998/F has been updated in Appendix E.

1. INTRODUCTION

1.1 Purpose

This report presents the February 2003 environmental monitoring and audit results for West Rail's Contract CC-403, Tunnel Works – Mei Foo to Nam Cheong.

2. PROJECT INFORMATION

2.1 Background

The Kowloon Canton Railway Corporation (KCRC) is responsible for managing and undertaking the construction of the West Rail Project. The West Rail provides train services for passengers between West Kowloon and Tuen Mun.

2.2 Project Program

Please refer to the Contract CC-403, Tunnel Works – Mei Foo To Nam Cheong Environmental Monitoring and Auditing Manual (EM&A Manual) for details.

2.3 Project Organization

Please refer to the EM&A Manual for details. The organizations and lines of communication with respect to environmental works are shown in Figure 2.5.

2.4 Construction Program

Please refer to the EM&A Manual for details.

2.5 Permit/License Status

Due to the versatility of this project, the Contractor has applied several permit/license. The details are listed in Appendix E.

3. ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

3.1 Monitoring Parameters

3.1.1 Air Quality Monitoring

24-hr total suspended particulate (TSP) levels in $\mu\text{g}/\text{m}^3$ were measured.

3.1.2 Noise Monitoring

30 minutes of L_{eq} , (Equivalent continuous sound pressure level), L_{10} (10 percentile sound pressure level) and L_{90} (90 percentile sound pressure level) in A-Weighting were measured at 5 minute logging intervals.

3.2 Site Inspection and Audit

The ET and the Contractor will carry out weekly site inspection. The location of Areas A to E on Site Inspection Checklist is shown in Figure 2.8. Monthly site inspection was conducted by the Independent Environmental Checker (IEC) to verify the Contractor's overall environmental protection performance.

3.3 Environmental Quality Performance Limits

With reference to the Baseline Monitoring Report of CC-402 and CC-403 the Action and Limit (A/L) Levels for air and noise quality are listed in Tables 3.1 and 3.2 respectively. The Technical Memorandum for Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters are used as the Limit Levels for water quality.

Table 3.1 – Action and Limit levels for 24-hr TSP

Monitoring Station	Parameter	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASD Site in Lai Chi Kok Park (4/1)	24-hr TSP	147	260
Mei Foo Blk. 8 (4/4)	24-hr TSP	154	260
Annex of Haking Wong TC (8/3)	24-hr TSP	163	260
Nam Cheong Estate (24/2)	24-hr TSP	161	260
Chung Yew House (17/2)	24-hr TSP	167	260

Table 3.2 – Action and Limit Levels for Noise

Monitoring Station	Time period	Action Level dB(A)	Limit Level dB(A)
Mei Foo Block 8 (4/4)	0700-1900 hrs on normal weekdays	When one documented complaint is received	75.0
	0700-2300 hrs on holidays; 1900-2300 hrs on all other days		65.7
	2300-0700 of next day		59.7
Annex of Haking Wong TC (8/3)	0700-1900 hrs on normal weekdays	When one documented complaint is received	70.0 (65.0 during exam)
	0700-2300 hrs on holidays; 1900-2300 hrs on all other days		66.5
	2300-0700 of next day		64.1
Chung Yew House (17/2)	0700-1900 hrs on normal weekdays	When one documented complaint is received	75.0
	0700-2300 hrs on holidays; 1900-2300 hrs on all other days		70.0
	2300-0700 of next day		55.0
Block 104 Phase 8 MFSC (MF104)	0700-1900 hrs on normal weekdays	When one documented complaint is received	75.0
	0700-2300 hrs on holidays; 1900-2300 hrs on all other days		70.0
	2300-0700 of next day		55.0

3.4 Action Plans

Please refer to the EM&A Manual for details of the actions plans, contingency plan for limit level exceedance of air, water and noise, for contingency plan for environmental complaints, and for non-compliance.

3.5 Recommended Environmental Mitigation Measures

Please refer to the EM&A Manual for details.

4. IMPACT ENVIRONMENTAL MONITORING

4.1 Monitoring Program

As described in the West Rail EM&A Manual, the following environmental monitoring program has been implemented:

Table 4.1 – Environmental Monitoring Program

Type of Monitoring	Parameters	Location	Frequency
Air Quality Monitoring	1 set of 24-hour TSP	Lai Chi Kok Park to the East of MFSC (4/1) Mei Foo Block 8 (4/4) Annex of Haking Wang TC (8/3) Nam Cheong Estate (24/2) Chung Yew House (17/2)	Once every 6 days
Noise Monitoring	6 sets of 5 mins L_{eq} , L_{10} and L_{90}	Mei Foo Block 8 (4/4) Annex of Haking Wong TC (8/3) Chung Yew House (17/2) Block 104 Phase 8 MFSC (MF104)	Once every 6 days

The landscaping works in Lai Chi Kok Park has been substantially completed. Therefore no further environmental monitoring is required in this area.

Table 4.2 – Schedule for Air and Noise Monitoring from May 2003 to July 2003

Type of Monitoring	May 2003	June 2003	July 2003
Air Monitoring	3, 9, 15, 21, 27	2, 8, 14, 20, 26	2, 8, 14, 20, 26
Noise Monitoring	3, 9, 15, 21, 27	2, 8, 14, 20, 26	2, 8, 14, 20, 26

4.2 Air Quality Monitoring

4.2.1 Monitoring Methodology

24-hr TSP level is measured using the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations (40CFR), Chapter 1 (Part 50). Air is drawn through a high volume sampler (HVS) fitted with a conditioned and pre-weighted filter paper at a controlled rate. After sampling for 24 hours, the filter paper with retained particles is returned to laboratory for weighing. The 24-hr TSP levels are calculated from the mass of particulates retained on the filter paper to the total volume of air sampled.

4.2.2 Monitoring Equipment and Calibration Details

ANDERSEN GMWS-2310 High Volume Air Sampler was used for 24-hour TSP monitoring. The HVS was calibrated before the commencement of air quality monitoring, after motor maintenance and every two months. Five-point calibration was used to calibrate the HVS. Five sets of orifice calibrator represent different flow rates (QStd in m³/min) are used to establish a relationship with the recorder reading in cfm (cubic feet per minute). The calibration curves for the HVSS are attached in Appendix A.

4.2.3 Parameters Monitored

24-hr total suspended particulates (TSP) levels reported in µg/m³ were measured.

4.2.4 Monitoring Frequency, Duration and Period

Details of air quality monitoring performed in April 2003 are listed in Appendix B.

4.2.5 Monitoring Results

A summary of the monitoring results is tabulated below. Details of the air quality monitoring results are attached in Appendix B. All monitoring results were satisfactory.

Table 4.3 – Summary of Air Quality Monitoring Results for April 2003

Location	Mean TSP (µg/m ³)	Range of TSP (µg/m ³)
24/2	83	48~105
17/2	88	70~101

4.3 Noise Monitoring

4.3.1 Monitoring Methodology

30 minutes of L_{eq}, L₁₀ and L₉₀ in A-weighting measurement were conducted at a logging interval of 5 minutes.

4.3.2 Monitoring Equipment and Calibration Details

The sound level meters (SLMs) used for the impact noise monitoring are in compliance with the International Electrical Commission (IEC) Publication 651 1979 (Type 1) and 804: 1995 (Type 1) specifications. In addition, the SLMs are supplied and used with the manufacturer's recommended windshield.

Wind speed measurements were taken using a portable wind speed meter to ensure that no measurement should be taken with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. Details of the monitoring equipment used are summarized in Table 4.4:

Table 4.4 – Noise Monitoring Equipment

Equipment Function	Equipment
Noise Level Measurement	Rion NL-14 Precision Integrating Sound Level Meter
Calibration of Sound Level Meter	Rion NC-73 Sound Level Calibrator
Wind Speed Measurement	TSI Model 8340 Air Velocity Meter

The SLM is checked before and after each measurement with the acoustic calibrator and the readings are valid if they agree within 1.0 dB. Calibrations of the SLM and acoustic calibrator are carried out every year. The calibration certificates of the SLMs and calibrator are shown in Appendix A.

4.3.3 Parameters Monitored

Six consecutive 5-min L_{eq} , L_{10} and L_{90} were measured.

4.3.4 Monitoring Frequency, Duration and Period

Details of noise quality monitoring performed in March 2003 are attached in Appendix C.

4.3.5 Monitoring Results

Having compared the results with the A/L Levels, no exceedance was found.

Table 4.6 – Summary of Noise Monitoring Results

Location	Mean noise levels [dB(A)] obtained in March 2003	Range of noise levels [dB(A)] obtained in April 2003
17/2	63.4	58.5~65.6

4.4 Weekly Site Inspection

Weekly ET site inspections were carried out on 2, 9, 16, 23 and 30 April 2003. There were some observations recorded during the weekly site inspection. Following the audit of last month, a stockpile was allocated in Lai Wan interchange, the Contractor was recommended to cover it to avoid any environmental impact.

4.5 Waste Management

4.5.1 Excavated Materials

The project involves a lot of excavation and the excavated materials would be used for backfilled after tunnel box construction. Currently, those materials are being stockpiled on site.

4.5.2 Chemical Wastes

The storage areas for chemical wastes were clearly labeled and used solely for the storage of chemical waste. And chemical wastes are only produced in a small amount, which is difficult to be recorded. No open flame, smoking or any type of localized heat was observed near the chemical storage areas. To avoid land contamination, enough drip trays were provided.

5. RESULTS

The environmental condition during construction in April 2003 was satisfactory. All air quality monitoring results complied with the A/L Levels. Sources of air pollution produced during the construction activities were landscaping works, backfilling tunnel, road works, construction of drainage channel, and transportation of excavated materials in this month. Also, dump trucks traveling to and from the construction site produced a lot of fugitive dust.

Noise monitoring results in April 2003 were also satisfactory. All of the monitoring results were within the A/L Levels. The main sources of noise pollution produced during the construction activities were landscaping works, backfilling tunnel, excavation, construction of drainage channel, and dump trucks' passing by. Another source was the traffic noise from highway. During routine site inspection, the Contractor turned off the idle equipment and operated noisy equipment when necessary.

6. IEC SITE AUDIT

In the portion of China State, the major work on site was the landscaping work and reinstatement work while part of the U-channel is still in progress. Next, uncovered soil for the landscaping work was observed. The Contractor indicated that the soil would be used immediately for the landscaping work. It was recommended that the soil should be covered when in use. Further, the Contractor was reminded the soil and mud should be cleaned up nearby the U-channel.

7. RECORD OF COMPLAINTS/PROSECUTIONS

No complaint was received in April 2003. A complaint log is tabulated below for reference.

Table 6.1 CC-403 Complaint Log

Month	Date	Location	Details	Prosecution
July – December 1999	---	---	---	---
January 2000	6 January 2000	Nam Cheong Estate, Sham Shui Po	Daytime construction noise from West Rail construction site affecting residents of Nam Cheong Estate	---
February – October 2000	---	---	---	---
November 2000	1 November 2000	High floor flat of Block 16 Boy MFSC Stage One	Severe dark dust found in flat suspected caused by CC403 works in the park	---
	Complaints about the noise level were received from 1 to 31 November.	Mei Foo Sun Tsuen	Construction activities generated noise on early and night time works	---
December 2000	Complaints about the noise level were received from 2 to 18 December.	Mei Foo Sun Tsuen	Construction activities generated noise on early and night time works	---
January 2001	6 January 2001	Recreation Ground near Po Lun Street & Lai Po Road	Dirty & Mud water Influent from WR construction site	---
	8 & 11 January 2001	Stage I Block 8A mid floor	Noise generated after normal construction hour	---
	16 January 2001	Block 112, MFSC	Dust generated from the construction site affected the residents of MFSC	---
	18 January 2001	Mei Foo state 8	Construction activities generated noise on early and night time works	---
	27 March 2000	Container Port Road	Dust emission on the road near the site access	Sustained in the trial held on 18 Jan. 2001
February 2001	6 February 2001	Mei Foo Stage 8	1) Noise generated after 11:00 pm, but the exact days could not specified 2) Excavated material was left uncovered.	---
	13 February 2001	Block 8B MFSC Stage 1	Excavated material was left uncovered and no water sprayed in that few days.	---
	19 February 2001	MFSC Resident	Suspected the Contractor don't have environmental permit for the Sunday works.	---
	20 February 2001	MF CCLG Member	Mud & dirt found off the Block 6 & 8 of MFSC Stage 1. The Contractor had been watering more frequently and had covered that heaps of material	---

Month	Date	Location	Details	Prosecution
March 2001	5 March 2001	Block2, 4, 6 & 8 MFSC, Stage 1	The leaps of dust piled up within CC403 work site	
	8 March 2001	Block 10C MFSC stage 8	1) Construction noise generated at as late as 1am or 2am 2) Suspected the construction works in progress overnight 3) Heard abrupt noise during between 7 pm and 9pm at several nights	---
April 2001	18 April 2001	MFSC Resident	Dust suspected to be caused by WR construction works nearby. CC403 Contractor has been watered the site area more frequency.	---
May 2001	29 May 2001	Mei Foo Stage 4 10C	Excavation materials were found uncovered at WR work site near Mei Foo Stage 8, causing dust nuisance to nearby residents. CC403 Contractor has been asked to cover the stockpiling material properly.	---
June 2001	28 June 2001	Mei Foo Stage 1, Block 8, lower floor	One side of the noise barrier covering the “ventilation machine” for the tunnel box was removed during past few days. The result in noise nuisance to nearby residents.	CC403 Contractor had been asked to repair the damaged noise barrier.
July 2001	---	---	---	---
August 2001	9 August 2001	Mei Foo	An illegal opening at the hoarding just opposite to Mei Foo Stage 1, Block 8 was reported. It is very dangerous to passers-by especially children, as they could enter into the construction site without any hindrance.	CC403 Contractor has been asked to repair the damaged hoarding.
	14 August 2001	Mei Foo	Uneven road surface on the junction to Cheung Sha Wan/Lai Chi Kok area from Route 3 Expressway (Kowloon bound). The conditions should be improved as soon as possible.	CC403 Contractor will construct a section of new temporarily carriageway.
September 2001	14 September 2001	Mei Foo	Mei Foo State 1 I. O. C Chairman complained that many workers climbed over the hoardings opposite to Mei Foo Stage 1, Block 6 and 8 to enter the construction site especially in the morning. As that is not a proper site entrance this caused inconvenience and disturbance to the residents nearby.	CC403 Contractor has been advised to instruct their workers to use proper access, and report to police for other trespassers.
	27 September 2001	Mei Foo	A resident complained that a construction vehicle access, inside WR CC403 construction site, opposite to Block 8 MFSC Stage 1 was very dusty. He urged WR to increase the number of water spraying to dusty road surface.	CC403 Contractor has agreed to spray water more frequently (2 times in the morning and 3 times in the afternoon) to CC403 work areas.
	28 September 2001	Mei Foo/Nam Cheong	A complaint was received by Highways Department on 21/09/01. There was deposition of debris on public road in the vicinity of a construction site at Lai Po Road. It was found that vehicles from CC403 site at Lai Wan Interchange deposited the debris. He urged the WR Contractor to clear the debris as soon as possible and take necessary actions to prevent this to happen again.	CC403 Contractor had been asked to clear the debris as soon as possible.

Month	Date	Location	Details	Prosecution
October 2001	5 October 2001	Mei Foo	A resident complaint that wind brought mud and dirt generated from the WR site into a MFSC Stage 1 resident unit.	CC403 Contractor has been asked to spray water more frequently.
	8 October 2001	Mei Foo/Nam Cheong	The Transport Complaint Unit has received a public complaint about mud and dirt spreading out along Lai Po Road. The complainant suspects the mud and dirt came from the WR site and requested ER to investigate the matter.	CC403 Contractor has been asked to tidy up the road.
	26 October 2001	Mei Foo/Nam Cheong	A hotline complainant called about mud and dust at the site entrance. The location described by the complainant is Kowloon bound Route 3 Expressway to Lai Chi Kok area.	CC 403 Contractor has arranged labor to clean up the debris along Lai Po Road and they would arrange workers to clean the road every Sunday and whenever necessary.
	29 October 2001	Mei Foo	A resident of Blk 108, Stage 8, MFSC complained noise generated by WR night works on: 22-24 Oct: Road surface work near Stage 8 till 11 p.m. 25 Oct (Sunday): Road surface works near Stage 8 till 12:30 a.m. 28 Oct (Sunday): Road drilling near Stage 8 till 12:30 a.m. Has informed the complainant that the Contractor has already obtained Night Work Permit. But he queried if the permit allows such noisy works at midnight and when these nights will be completed.	The Contractor has been told to reduce noise generated during night work periods.
November 2001	13 November 2001	Resident of Mei Foo Stage 1	A resident was complained that dust keep blowing into their flats from WR site during these windy days. She urged WR to cover the sand and spray water more frequently inside the site.	CC-403 Contractor has been asked to cover any temporary stockpile and spray water more frequently.
	13 November 2001	Resident of Mei Foo Stage 1	A resident of Block 24, Stage1, MFSC (facing Lai Chi Kok Park) was complained that dust keep blowing into their flats from WR site near Block 8 recently. She urged WR to cover the sand and spray water more frequently inside the site. She also wanted to know plantation would start there.	CC-403 Contractor has been asked to cover any temporary stockpile and spray water more frequently in their work site area.
December 2001	---	---	---	---
January 2002	---	---	---	---
February 2002	---	---	---	---
March 2002	---	---	---	---
April 2002	---	---	---	---
May 2002	---	---	---	---

Month	Date	Location	Details	Prosecution
June 2002	---	---	---	---
July 2002	---	---	---	---
August 2002	---	---	---	---
September 2002	---	---	---	---
October 2002	---	---	---	---
November 2002	---	---	---	---
December 2002	---	---	---	---
January 2003	---	---	---	---
February 2003	---	---	---	---
March 2003	---	---	---	---
April 2003	---	---	---	---

8. CONCLUSION

All the monitoring parameters were satisfactory in April 2003. There was no exceedance of A/L levels recorded in air and noise quality monitoring. There was no notification of summons and prosecution received in this month. Improvement in environmental pollution prevention by the Contractor was observed such as watering haul roads more frequently and covering all stockpiles properly.

9. FUTURE KEY ISSUES

The major construction works planned and their major impact between May 2003 and July 2003 are presented in the table below.

Table 8.1 – Works Program and Impact Predication from May 2003 - July 2003

Month	Works Planned	Impact Predications	Mitigation Measures
May 2003	Landscaping works, E&M testing inside tunnel.	- Silt water produced from wheel washing facilities	- Settled out sand and silt from wastewater and clean up at least on a weekly basis to ensure the continued efficiency of the process.
June 2003	Landscaping works, E&M testing inside tunnel.	- Silt water produced from wheel washing facilities	- Settled out sand and silt from wastewater and clean up at least on a weekly basis to ensure the continued efficiency of the process.
July 2003	Landscaping works, E&M testing inside tunnel.	- Silt water produced from wheel washing facilities	- Settled out sand and silt from wastewater and clean up at least on a weekly basis to ensure the continued efficiency of the process.

Appendix A

Calibration and Certificates of Monitoring Equipment

Appendix B

24-hr TSP Monitoring Results

Monitoring Location: 24/2 (Nam Cheong Estate)

Date	Sampling start time	Elapsed time reading (hr.)		Flow Rate (m ³ /min)			Weight of filter paper (g)			Sampling time (hr.)	Weather condition	Total suspended particulate (µg/m ³)	Contributing factors
		Start	Finish	Start	Finish	Average	Initial	Final	Diff.				
4/04/03	13:32	11070.64	11094.30	1.35	1.35	1.35	2.843	2.994	0.151	23.66	Cloudy	79	No construction activities observed
10/04/03	16:32	11094.30	11119.30	1.35	1.35	1.35	2.839	2.936	0.097	25.00	Drizzle	48	No construction activities observed
16/04/03	14:45	11119.30	11142.99	1.38	1.38	1.38	2.817	2.999	0.182	23.69	Fine	93	Passing vehicles; Excavation
22/04/03	13:51	11142.99	11166.56	1.38	1.38	1.38	2.817	3.022	0.205	23.57	Clear	105	Passing vehicles
28/04/03	14:30	11166.56	11190.81	1.42	1.42	1.42	2.817	3.007	0.190	24.25	Clear	92	No construction activities observed

Monitoring Location: 17/2 (Chung Yew House)

Date	Sampling start time	Elapsed time reading (hr.)		Flow Rate (m ³ /min)			Weight of filter paper (g)			Sampling time (hr.)	Weather condition	Total suspended particulate (µg/m ³)	Contributing factors
		Start	Finish	Start	Finish	Average	Initial	Final	Diff.				
4/04/03	13:25	10420.80	10445.58	1.47	1.47	1.47	2.869	3.077	0.208	24.78	Cloudy	95	No construction activities observed
10/04/03	16:15	10445.58	10469.24	1.44	1.44	1.44	2.868	3.011	0.143	23.66	Drizzle	70	No construction activities observed
16/04/03	13:50	10469.24	10493.00	1.41	1.41	1.41	2.825	3.028	0.203	23.76	Fine	101	Passing vehicles
22/04/03	13:20	10493.00	10516.87	1.41	1.41	1.41	2.825	3.009	0.184	23.87	Clear	91	Passing vehicles
28/04/03	14:22	10516.87	10540.64	1.41	1.41	1.41	2.825	2.996	0.171	23.77	Clear	85	No construction activities observed

Appendix C

Noise Monitoring Results

Monitoring Location: 17/2 (Chung Yew House)

Date	Sampling Time (hh:mm)		Noise Level dB(A)			Weather condition	Wind speed (m/s)	Contributing Factors
	Start	Finish	L _{eq}	L ₁₀	L ₉₀			
4/04/03	13:02	13:32	63.0	66.1	61.3	Cloudy	1.50	Passing vehicles
10/04/03	16:05	16:35	58.5	61.6	54.9	Drizzle	1.90	Passing vehicles
16/04/03	14:00	14:30	64.9	67.0	62.2	Fine	0.30	Passing vehicles
22/04/03	13:02	13:32	65.6	67.3	63.1	Clear	0.24	Passing vehicles
28/04/03	13:45	14:15	61.6	65.2	58.8	Clear	1.06	No construction activities observed

Appendix D

Site Inspection Check List

Appendix E

Permitting and Licensing Status

Summary of Environmental Permit

Type of License	License No.	Date of Expiry or Duration	Time of Implementation	Status	Remarks
Environmental	EP-004/1998/F	----	----	In Use	Construction of West Rail
Environmental	EP-004/1998/E	----	----	Expired	Construction of West Rail
Environmental Permit	EP-004/1998/D	----	----	Expired	Construction of West Rail
Environmental	EP-004/1998/C	----	----	Expired	Construction of West Rail
Environmental Permit	EP-004/1998/B	----	----	Expired	Construction of West Rail
Discharge	EP482/264/0479/1	30-9-2004	----	In Use	6 no. of discharge pts. (A-F) Suspended solids Test (Bimonthly)
Discharge	EP482/264/0477/1	31-12-2004	----	In Use	Discharge from junction of Sham Mong Road & Hing Wah Street West (Bi-monthly)
Discharge	EP482/269A/0003/1	31-01-2005	----	In Use	Nam Cheong Park (Quarterly)
Noise	GW-UE0252-00	27-12-2000	----	Expired	----
Noise	GW-UE0129-00	31-10-2000	----	Expired	----
Noise	PP-UE0048-00	19-6-2000 – 18-12-2000	----	Expired	----
Noise	GW-UE0195-00	16-01-2001	----	Expired	----
Noise	GW-UE0197-00	12-12-2000	----	Expired	----
Noise	GW-UE0196-00	1-12-2000	----	Expired	Batching Plant
Noise	GW-UE0363-00 (former UE0129)	27-9-2000 – 23-3-2001	----	Expired	----
Noise	GW-UE0349-00 (former UE0195)	6-12-2000	----	Cancelled	Po Lun Street to Mei Foo Roundabout Works from 1900 to 2100
Noise	GW-UE0369-00 (former UE0252)	9-10-2000 – 8-4-2001	----	Expired	----
Noise	GW-UE0403-00	31-1-2001	----	Expired	----
Noise	GW-UE0469-00		----	Cancelled	Replaced by GW-UE530-00
Noise	GW-UE530-00 (Former GW-UE0469-00)	6-12-2000- 5-6-2001	0700-2300 hours (in general holiday) 1900-2300 hours (excluding general holiday)	Expired	Po Lun Street to Mei Foo Roundabout Works

Summary of Environmental Permit

Type of License	License No.	Date of Expiry or Duration	Time of Implementation	Status	Remarks
Noise	GW-UE0470-00	2-12-2000-1-6-2001	0700-2300 hours (in general holiday) 1900-2300 hours (excluding general holiday)	Expired	Batching Plant
Noise	GE-UE0480-00	9-12-2000-12-5-2001	2300-0700 hours (in general holiday) 2300-0700 hours (excluding general holiday)	Expired	Po Lun Street to Mei Foo Roundabout (Water Pumps)
Noise	PP-UE0106-00	19-12-2000-1-5-2001	0700-1900Hours(excluding general holiday)	Expired	Drop Hammer/Diesel Hammer for percussive piling works and H-Piling
Noise	GW-UE0083-01 (former GW-UE0363-00)	24-03-2001-23-09-2001	0700-2300 hours (in general holiday) 1900-2300 hours (excluding general holiday)	Expired	Works Site A7 to Po Lun Street (Tunnel Works)
Noise	GW-UE0031-01 (former GW-UE0369-00)	22-02-2001-21-08-2001	0700-2100 hours (in general holiday) 1900-2300 hours (excluding general holiday)	Expired	Construction works at NAC
Further Environmental Permit	FEP-01/034/1999	----	----	In Use	Construction of Road P1 Southbound at Nam Cheong Park
Further Environmental Permit	FEP-06/004/1999	----	----	In Use	Construction of the cut-and cover tunnels and associated works
Environmental Permit	EP-033/1999	----	----	In Use	Construction & Widening of Road P1
Waste Disposal	WPN5213-264-C3045-03	----	----	In Use	To supersede permit no. WPN9593-264-A2104-04
Waste Disposal	WPN5211-269-Z3108-01	----	----	In Use	----
Noise	GE-UE0191-01 (Former GE-UE0480-00)	12-5-2001-11-12-01	2300-0700 hours (in general holiday) 2300-0700 hours (excluding general holiday)	Expired	Po Lun Street to Mei Foo Roundabout (Water Pumps)

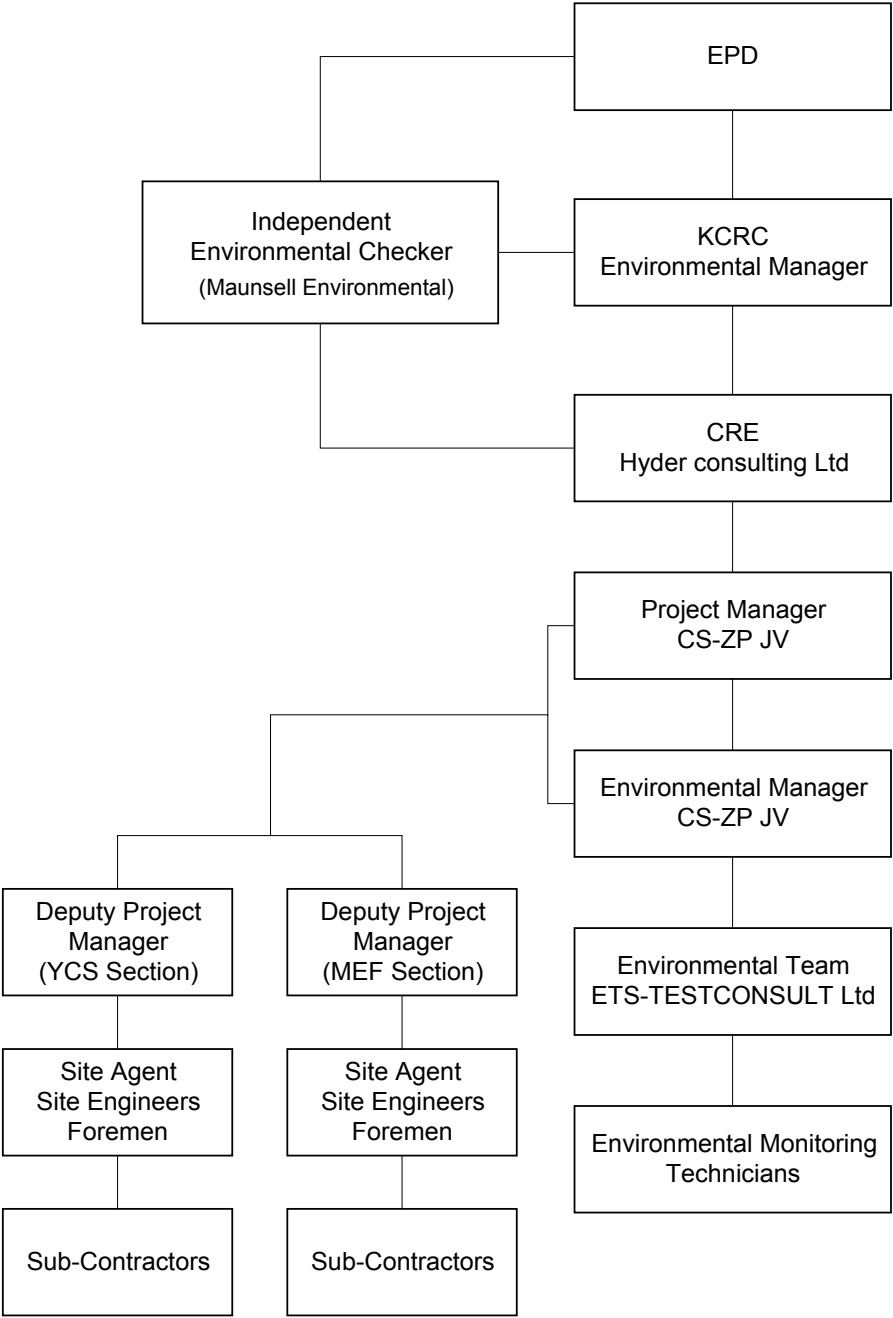
Summary of Environmental Permit

Type of License	License No.	Date of Expiry or Duration	Time of Implementation	Status	Remarks
Noise	GW-UE0192-01 (Former GW-UE530-00)	6-6-2001- 5-12-2001	0700-2300 hours (in general holiday) 1900-2300 hours (excluding general holiday)	Expired	Po Lun Street to Mei Foo Roundabout Works
Noise	GW-UE0190-1 (Former GW-UE0470-00)	2-6-2001- 1-12-2001	0700-2300 hours (in general holiday) 1900-2300 hours (excluding general holiday)	Cancelled	Batching Plant
Noise	PP-UE0106-00 (Former GE-UE0480-00)	2-6-2001- 12-11-2001	2300-0700 hours (in general holiday) 2300-0700 hours (excluding general holiday)	Expired	Po Lun Street to Mei Foo Roundabout (Water Pumps)
Noise	GW-UE0451-01	28 November 2001 ~ 28February 2002	0700-1900Hours(excluding general holiday)	In Use	West Kowloon Highway near Mei Foo Roundabout, along Lai Chi Kok Park.
Noise	GW-UE0487-01	20 December 2001 ~ 19 June 2002	0700-1900Hours(excluding general holiday)	In Use	Mei Foo to Nam Cheong, along Lai Chi Kok Park.
Noise	GW-UE0488-01	20 December 2001 ~ 19 June 2002	2300-0700 hours (in general holiday) 2300-0700 hours (excluding general holiday)	In Use	Mei Foo to Nam Cheong, along Lai Chi Kok Park. (Water pumps, submersible)

Appendix F

IEC's Comments on Site Inspection

Figure 2.5 Contract CC-403 Environmental Management Structure



Appendix G

Contractor's Response to Comment-response Table of the Last Month's EM&A Report

**KOWLOON-CANTON RAILWAY CORPORATION
WEST RAIL
DESIGN REVIEW RECORD**

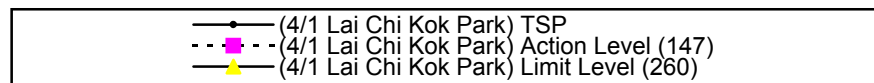
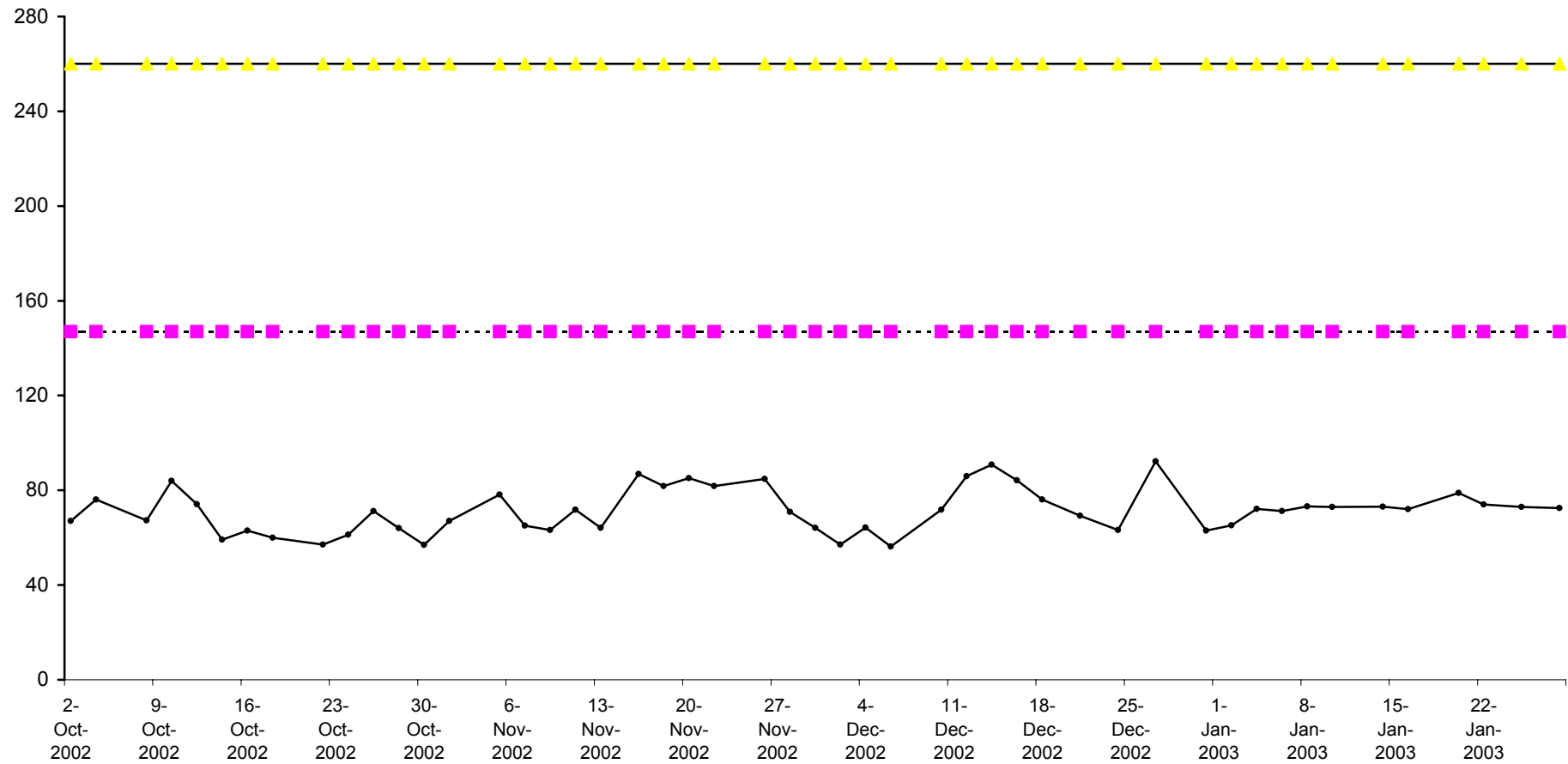
Comments on CC-403 Monthly Environmental Monitoring and Audit Report – March 2003 (Dated April 2003)

ITEM NO.	REVIEW BY	DOCUMENT REFERENCE	COMMENT	CONTRACTOR'S RESPONSE
1	IEC	Section 4.1	Although the landscape works in Lai Chi Kok Park has been substantially completed, please state clearly that when the monitoring was ceased and at which locations in the monthly report.	4/1, 4/4 and 8/3 of dust monitoring station and MF104, 4/4, 8/3 was ceased since the beginning of February.
2	IEC	Executive Summary & Appendix E	Although the executive summary indicated that environmental permit EP-004/1998/F was updated in Appendix E, in fact no amendment was observed in the table. Please amend the table.	The Appendix E have been amended

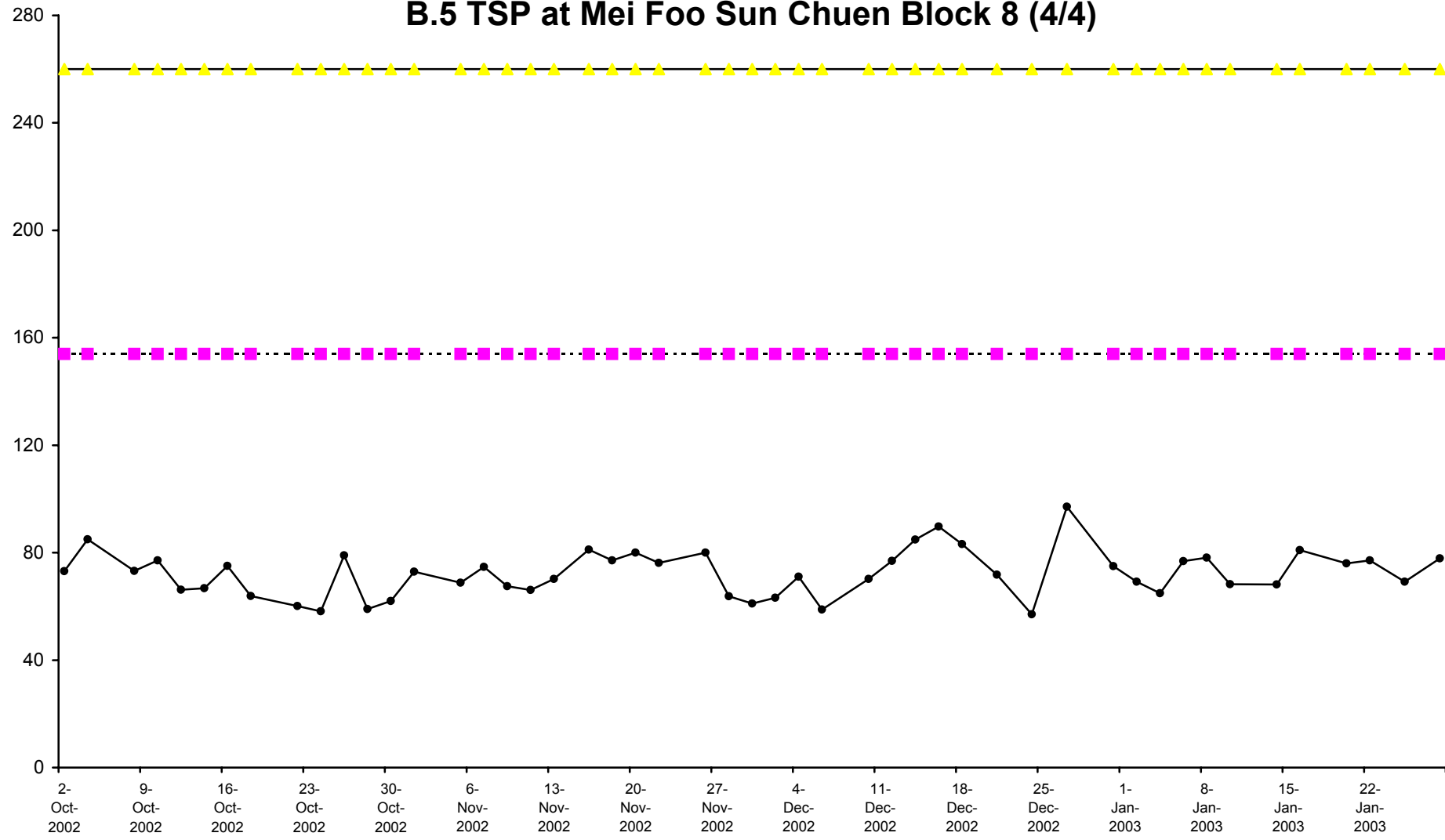
FIGURES

GRAPHICAL PLOT

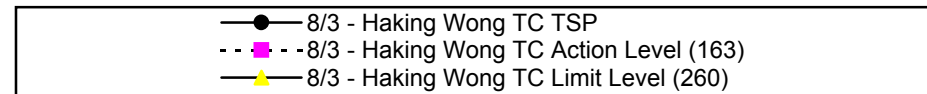
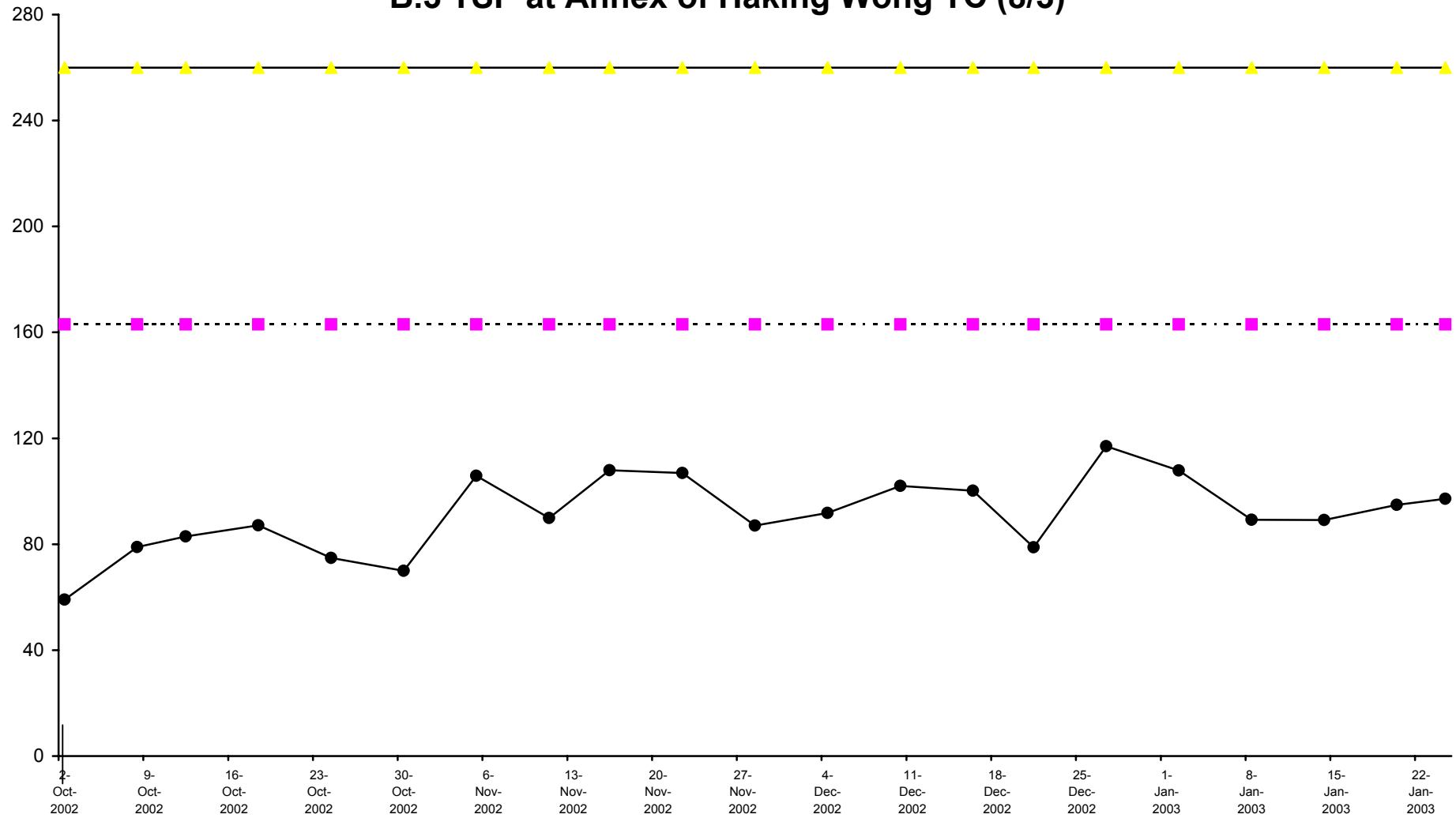
B.4 TSP at Lai Chi Kok Park (4/1)



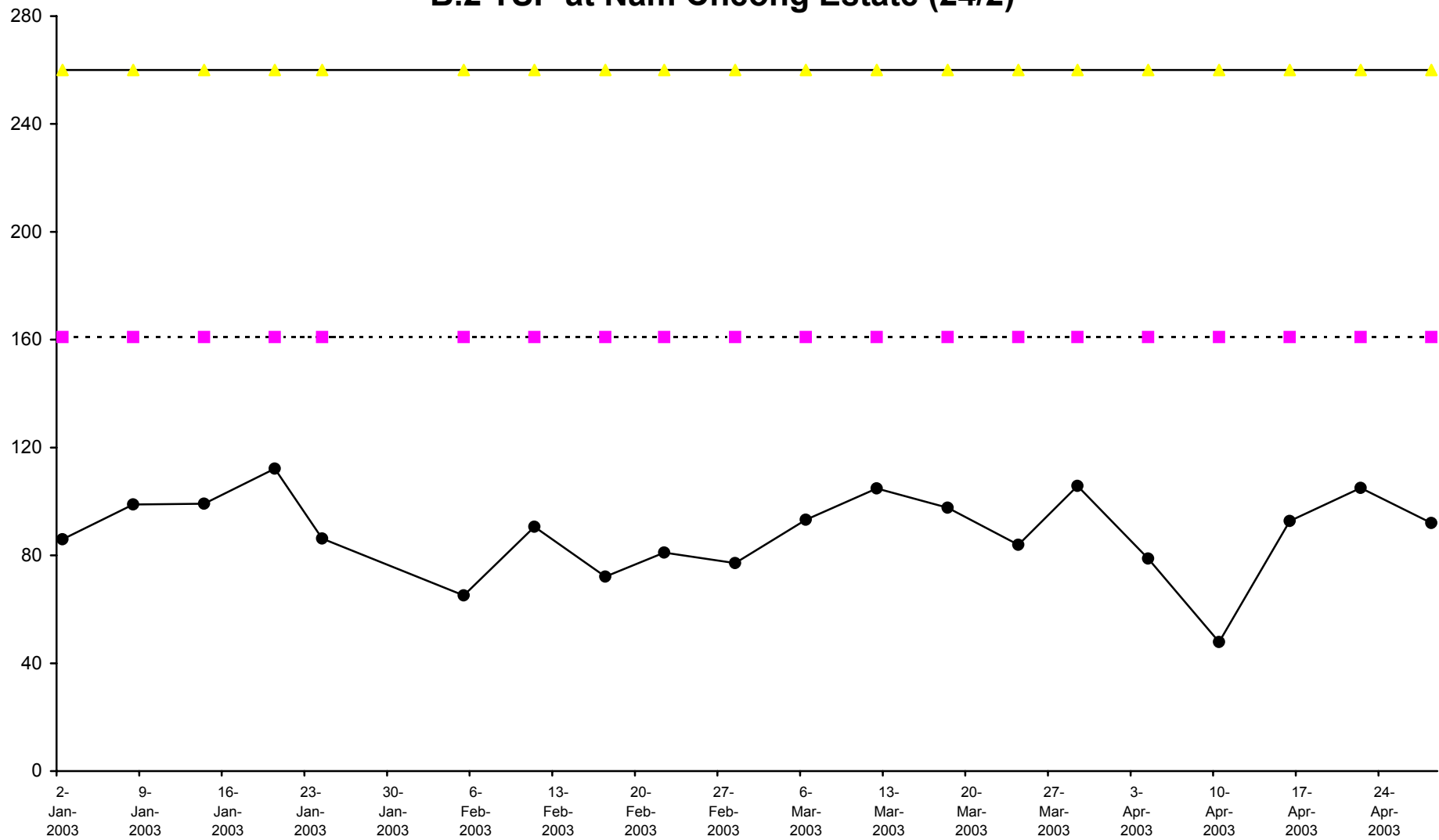
B.5 TSP at Mei Foo Sun Chuen Block 8 (4/4)



B.3 TSP at Annex of Haking Wong TC (8/3)

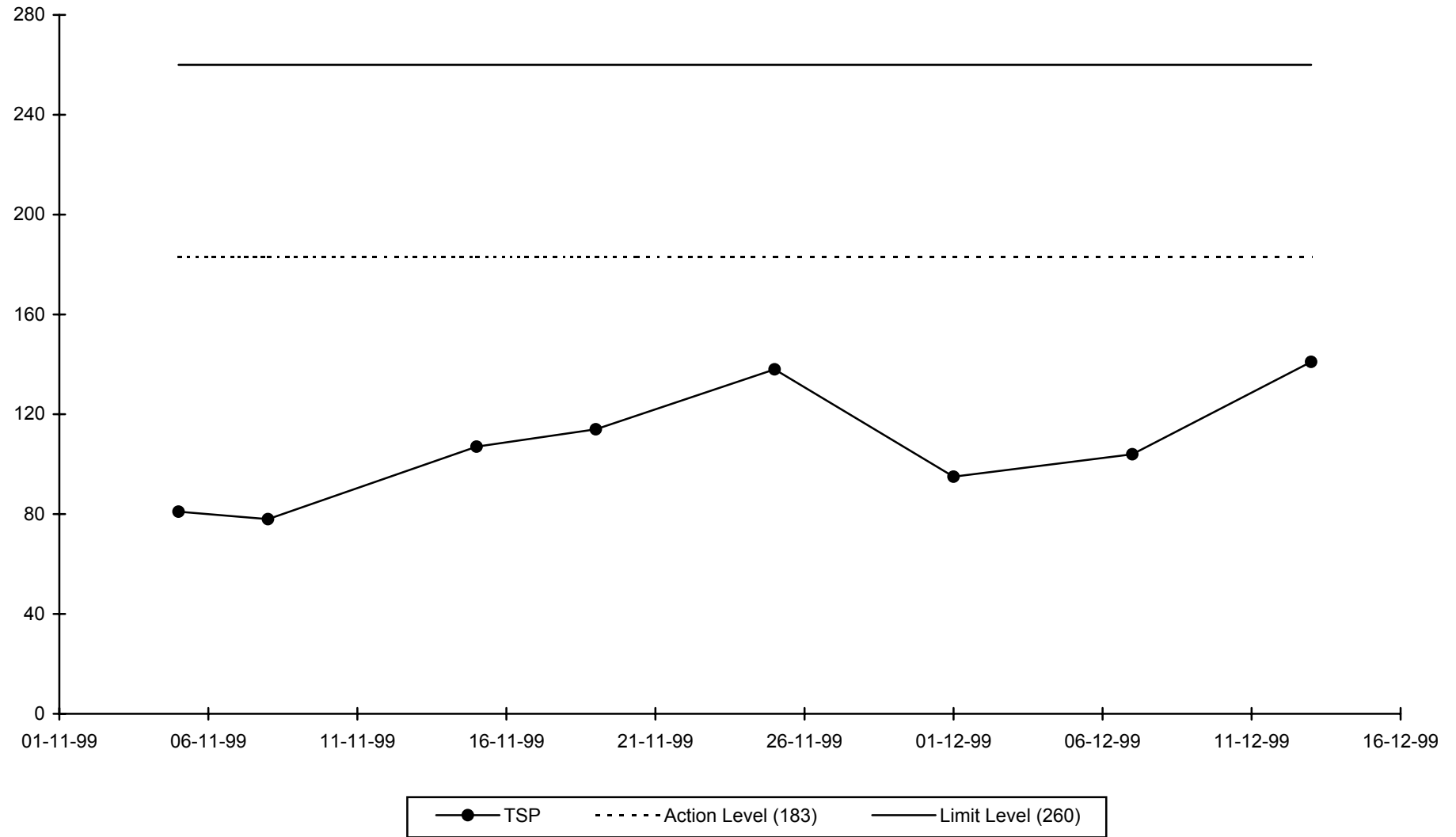


B.2 TSP at Nam Cheong Estate (24/2)

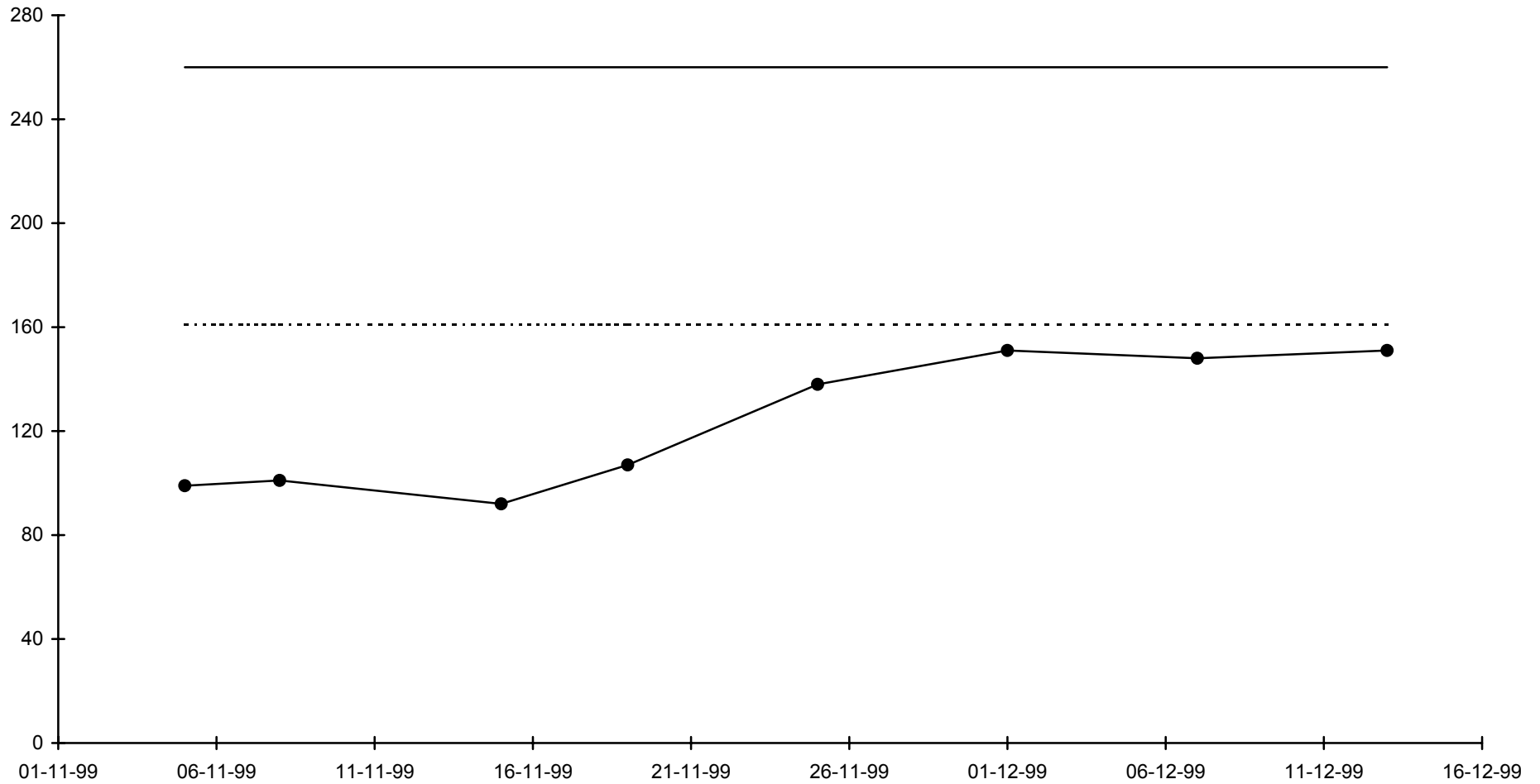


—●— 24/2 - Nam Cheong Estate TSP
- - ■ - - 24/2 - Nam Cheong Estate Action Level (161)
—▲— 24/2 - Nam Cheong Estate Limit Level (260)

Fat Tseung Street (C3/3)

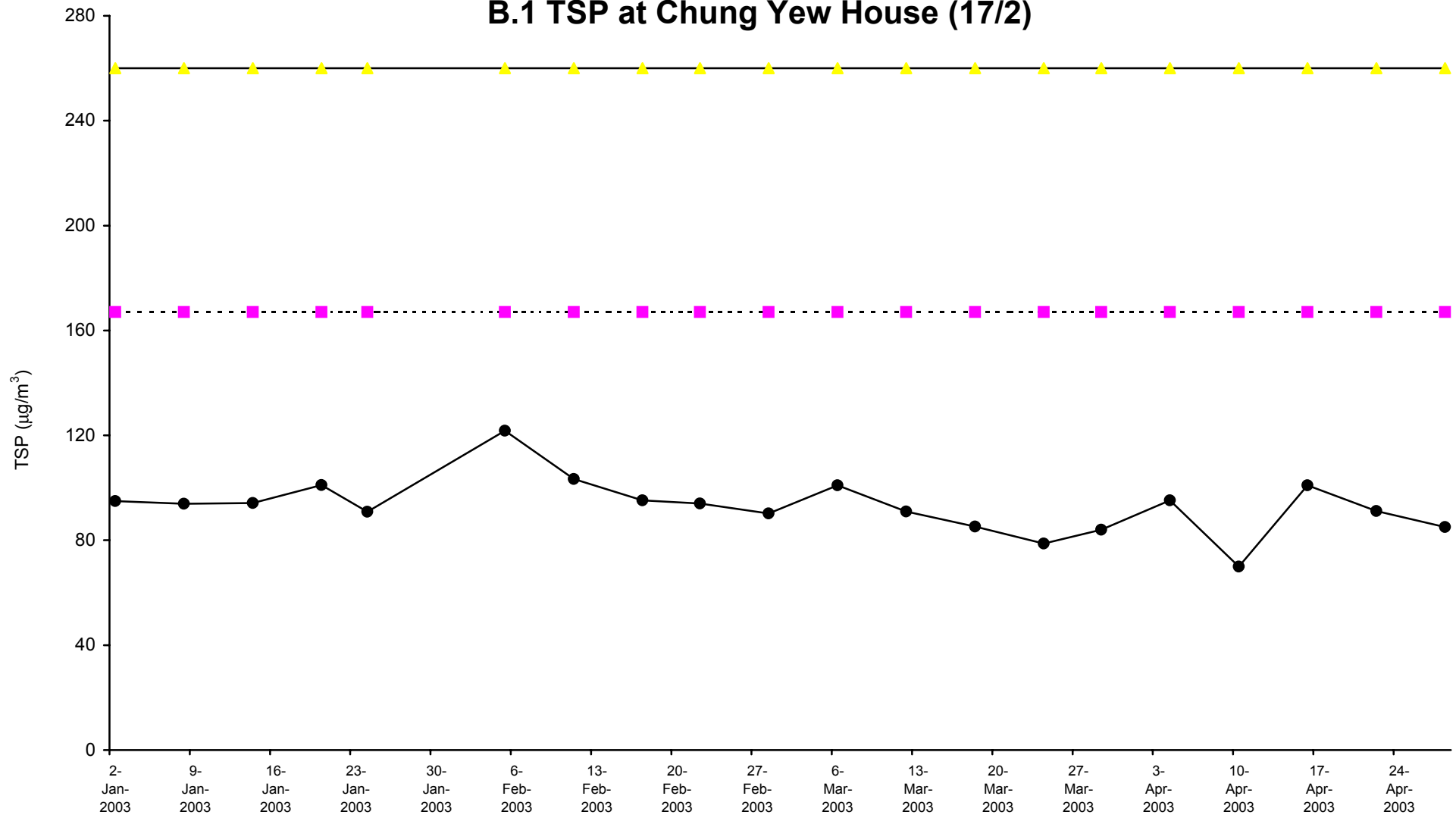


Wholesales Market (11/3)



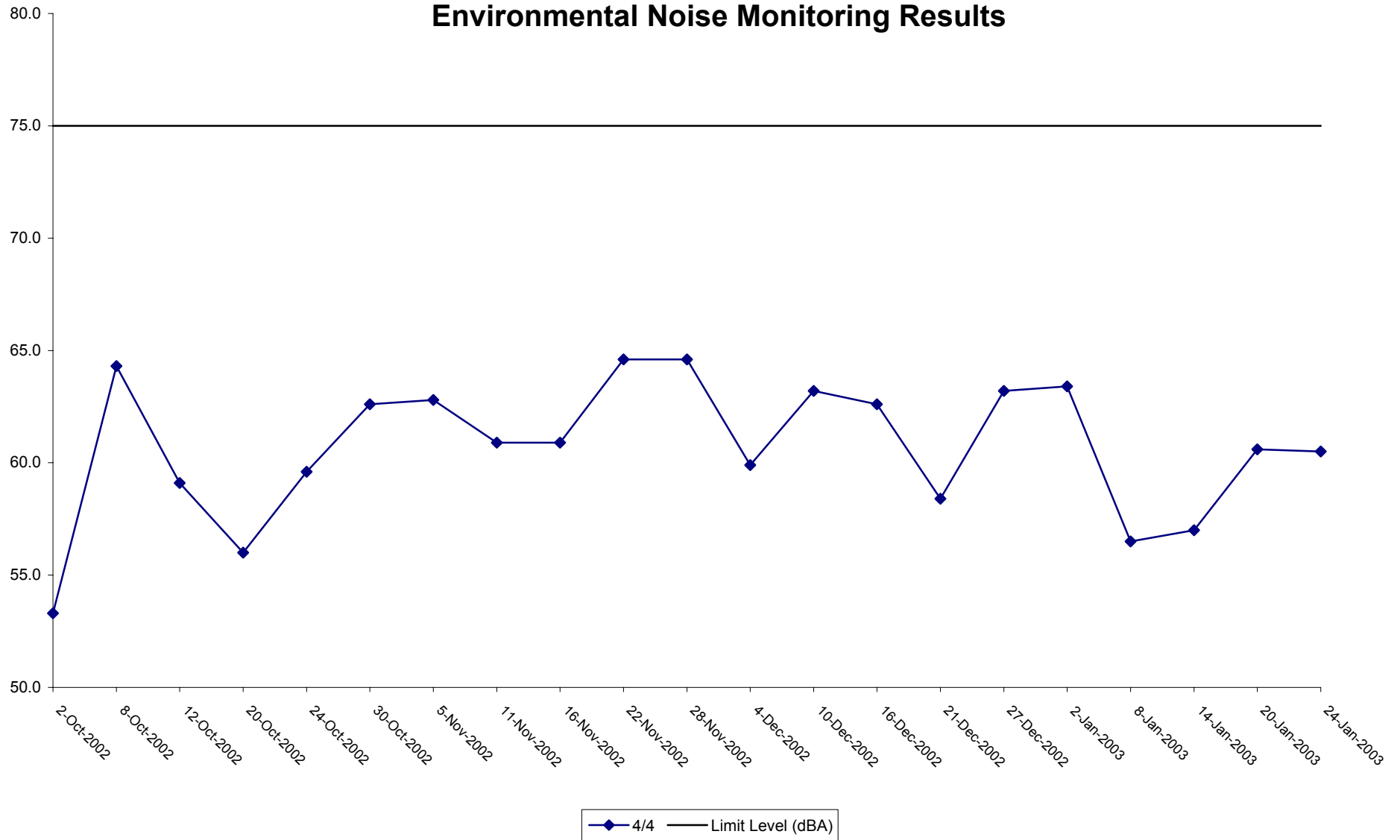
—●— TSP - - - - - Action Level (161) ——— Limit Level (260)

B.1 TSP at Chung Yew House (17/2)

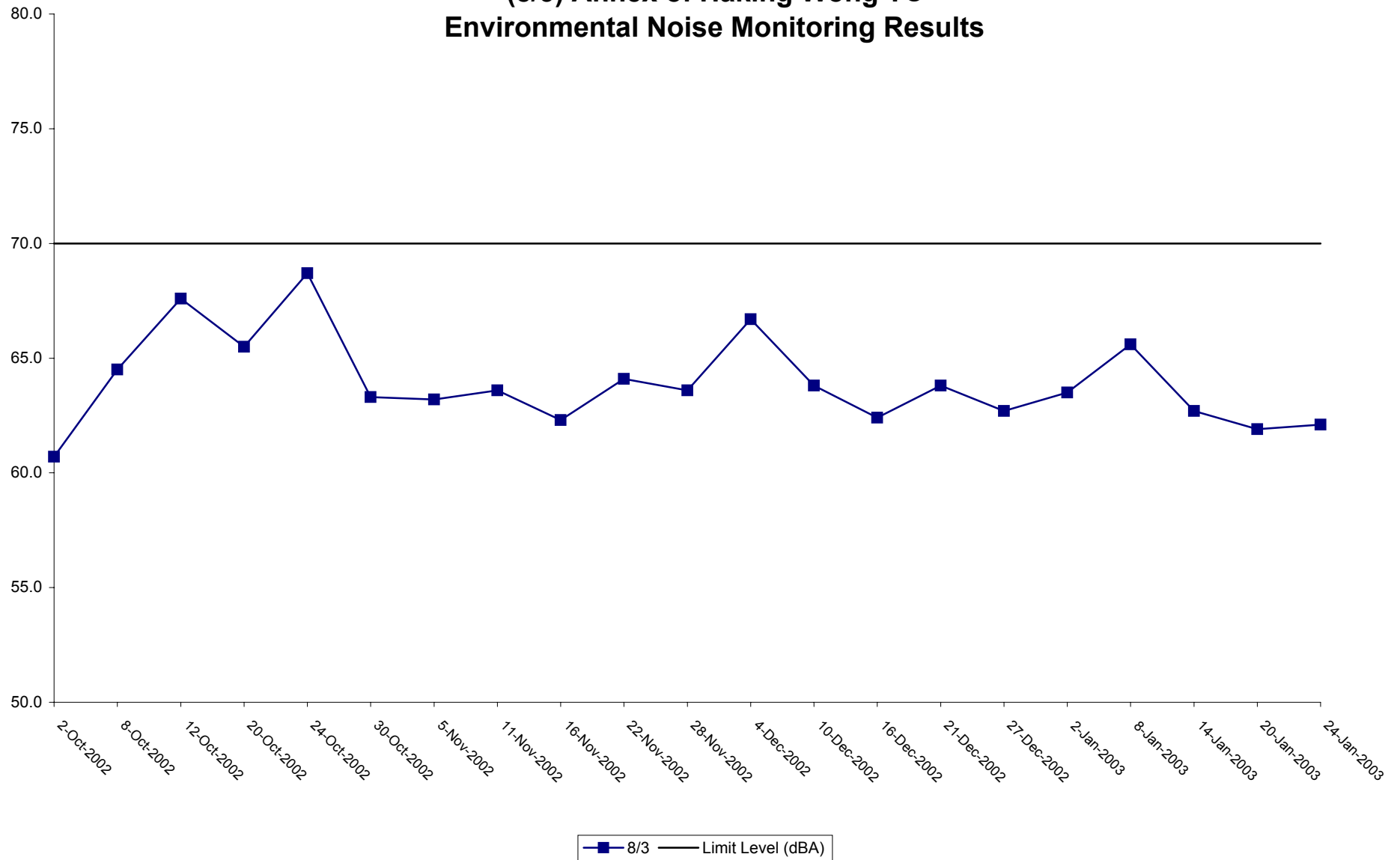


—●— 17/2 - Chung Yew House TSP
- - ■ - - 17/2 - Chung Yew House Action Level (167)

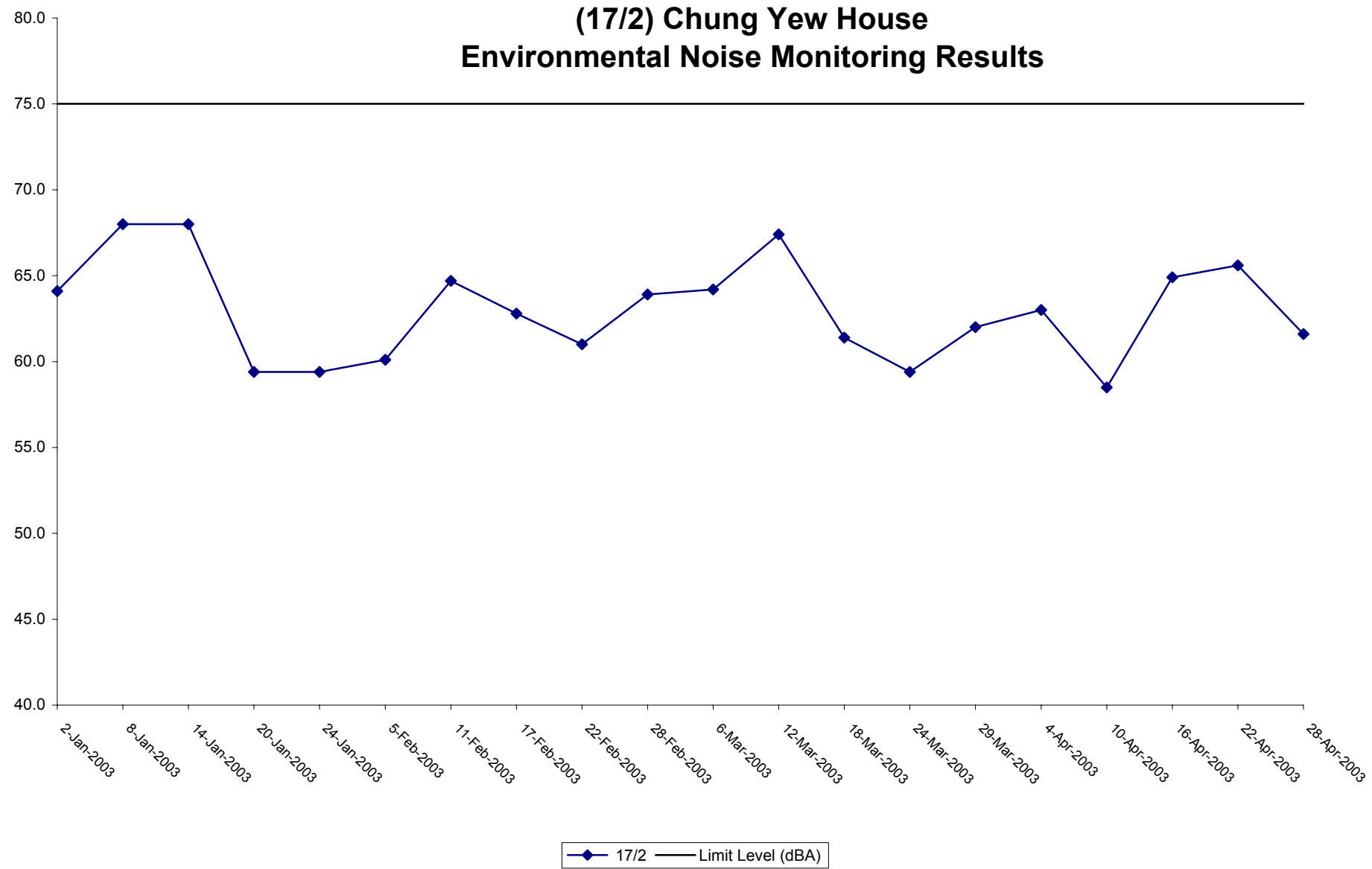
C.3
(4/4) Mei Foo Sun Chuen Block 8
Environmental Noise Monitoring Results



C. 2
(8/3) Annex of Haking Wong TC
Environmental Noise Monitoring Results



C.1
(17/2) Chung Yew House
Environmental Noise Monitoring Results



C.4
(MF104) Block 104 Phase 8 MFSC
Environmental Noise Monitoring Results

