

Kowloon-Canton Railway Corporation

KCRC East Rail Extensions Sheung Shui to Lok Ma Chau

Monthly EM&A Report –
March 2004

April 2004

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EXECUTIVE SUMMARY

INTRODUCTION

This Report (in HTML format) is the twenty-first Monthly EM&A Report for the Sheung Shui to Lok Ma Chau Spur Line and includes the Monthly EM&A Reports for construction contracts LDB201, LCC202 and LCC300. This Report and all monitoring data collected under the EM&A Programme are available on the KCRC East Rail Extensions Environmental Monitoring and Audit Website at www.env-ere.kcrc.com.

Further to the application of Variation of Environmental Permit (VEP) in December 2003, the Environmental Permit No. EP-129/2002/B was issued on 15 January 2004.

LDB201 Sheung Shui to Chau Tau Tunnels

The construction works for LDB201 commenced in late November 2002. This Report presents the EM&A findings in the period from 26 February to 25 March 2004. The main construction activities undertaken during the reporting month include:

- East Approach Area – San Wan Road & East Rail Area: 900mm diameter watermain diversion stage 2, trenching and cable laying for CLP cable diversion, construction of retaining wall of noise barrier from CH30+200 to CH30+380;
- Cut and cover cofferdam (near Sheung Shui Launching Shaft Area): Excavation and strutting in Cut & Cover Tunnel Box E Cofferdam, predrilling and driving sheetpiles for Tunnel boxes;
- TBM Works area: Tunnel boring and lining, and regular maintenance of TBM;
- East EAP (EAP 2): Tunnel boring and lining in TBM Works Area, rock excavation, installation of 4th layer and strutting, reinstatement of DSD service road;
- West EAP (EAP 5): Excavation to +6.0mPD, installation of 2nd layer of waling and strutting, fabrication of 3rd layer of waling and strutting;
- Future Kwu Tung Station Enabling Works Area: Cut & Cover box column and middle roof slab construction, utilities diversion on Ho Sheung Heung Road; and
- West Approach Area: Extraction shaft excavation.

LDB201 conducted the routine monitoring works at these monitoring locations: AM1, AM2 and AM3 for air quality, NM1, NM1A, NM2, NM3, NM4, NM5, NM6, NM7, NM8, NM9, NM10, NM11 and NM12 for noise, and URS, SR1, URB, RB1, UCTC and CTC1 for water quality, in this reporting month.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hr TSP monitoring were conducted once every six days at the monitoring locations. There were action level exceedances of 1-hour TSP and 24-hour TSP during the reporting month. These exceedances were likely due to the dry weather and the stockpile on site. Nevertheless the contractor's Environmental Team Leader (CET Leader) has reminded the ET to closely monitor the site and to water the site more frequently to reduce the impacts.

Noise monitoring of $L_{eq(30min)}$ was conducted once every six days during non-restricted hours at the identified monitoring locations. There was no exceedance recorded in the reporting month.

Water quality monitoring was conducted at the identified water quality monitoring locations. An action level exceedance of the pH value was recorded at River Sutlej monitoring locations in the reporting month. The exceedance was likely due to the cleaning up of riverbed by DSD's contractor.

The excavated spoil was mainly generated from the shaft excavation at East EAP, TBM excavation, jet grouting works at Cross Passages and excavation at both East and West Cut & Cover Tunnels. These excavated spoils were disposed of to Kai Tak Public Filling Barging Point and Tuen Mun Area 38. Some of the excavated spoils were transferred to alternative sites for reuse including the works area under the EPD's Project of Development and Management of WENT Landfill, Contract LCC300 – Lok Ma Chau Terminus and Associated Works and HY2003/06 – RPIS Minor Rural Improvement Works Package 5 Contract 5C. All the disposal and transportation of waste were recorded under the four-page trip ticket system. Delivery and arrival time of the trucks were also recorded.

No complaint, warning or prosecution was received during the reporting month.

There were weekly site inspections carried out by the CET Leader and an IEC monthly site audit on 16 March. The Contractor has proposed mitigation measures to rectify the environmental deficiencies or improve the environmental performance in response to the non-compliances and observations raised by the CET Leader during weekly site inspection and the IEC during the monthly site audit. The proposed measures include the establishment of perimeter channels' cleaning schedule and record, taking away the pump from sludge pit, providing drip trays to oil drums, cleaning up drip trays, covering stockpiles, installing wheel washing facilities, providing appropriate bunded area for chemical storage, providing rubbish bins, segregation of waste and covering the cement bags with thicker tarpaulin sheets. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

LCC202 West Section Alignment and Associated Works

The commencement date for LCC202 started on 26 March 2003. This Report presents the EM&A works during the period from 25 February to 24 March 2004. Within this reporting month, the major construction works included pre-bored H-piling at P3, pre-bore drilling at W24-37, W40-49 and W61-66, column construction at W24-49 as well as viaduct construction at W50-60.

LCC202 conducted the routine monitoring works at these monitoring locations: AM4 for air quality, NM15 for noise, and USRT and STR1 for water quality, in this reporting month. As FP1 and FP2 were found dry and FP3 was already filled for reedbed construction, no water quality monitoring was conducted at these locations.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hr TSP monitoring were conducted once every six days at the monitoring location. There was no exceedance recorded in the reporting month.

Noise monitoring of $L_{eq(30min)}$ was conducted once every six days during non-restricted hours at the identified monitoring location. There was no exceedance recorded in the reporting month.

Water monitoring was undertaken at USTR and STR1 at San Tin River. An action level exceedance of turbidity was recorded at STR1 in this reporting month. As observed by

the sampling team of the CET Leader, the exceedance was likely due to other constructor's works conducted in the vicinity of the sampling locations.

There were about 2,322m³ of excavated material transported from Pond 18 within LCC202 site to LFCC007 (Pond 1) and about 1,302m³ of excavated material were delivered to the Government public fill barging point. About 14.88m³ of general refuse was collected by a licensed collector for disposal in the reporting month. All the disposal and transportation of waste were recorded under a trip ticket system.

No notification of summons or complaint was received during the reporting month.

The CET Leader carried out weekly site inspections and an IEC monthly site audit was conducted on 25 March. In response to the observations raised by the ET Leader and the IEC, the Contractor has proposed mitigation measures including cleaning up of oily water from drip trays, relocating oil drums into drip trays, cleaning up general refuse and oil spillage, disposing of general refuse at designated collection bin, providing proper tree fence, removing uncovered stockpiles and cleaning up and proper disposal of concrete residue. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

LCC300 Lok Ma Chau Station and Associated Works

The EM&A programme for LCC300 commenced in mid-December 2002. This report summarises the EM&A works conducted during the period from 26 February to 25 March 2004. During the reporting month the principal work activities included earth works for reedbed and surcharge areas, substructure at immigration hall and superstructure at the terminus area, construction of western channel outfall and Chau Tau Culvert, bored piling, tree transplanting and trench excavation for utility works along the Emergency Access Road (EVA). In accordance to the new EP conditions, acoustic panels as specified in the Construction Noise Impact Assessment report under the EP should be provided. The installation of the acoustic panels was commenced in early February 2004.

LCC300 conducted the routine monitoring works at these monitoring locations: AM4 for air quality, NM13, NM14 and NM15 for noise, and two alternative water quality monitoring locations, namely, FPBBL1 and FPBBL2 for water quality, in this reporting month. As FP3 was filled and no construction works of this contract is likely affecting the San Tin River, the alternative water quality monitoring locations which are located to the south of the terminus site were identified to replace FP3, STR1 and USTR. The proposal of the alternative water quality monitoring location was accepted by EPD.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hr TSP monitoring were conducted once every six days at the monitoring location. An Action Level exceedance of TSP was recorded during the reporting month. It was likely due to the dust generation along the access road which was shared among LCC300, LCC202 and the Contract for New Boundary Bridge Construction. Water bowser was enhanced for better dust suppression.

Noise monitoring of $L_{eq(30min)}$ was conducted once every six days during non-restricted hours at the identified monitoring locations. There was no exceedance recorded in the reporting month.

Water quality monitoring was conducted at the approved alternative monitoring locations. The action and limit levels were under review.

A small amount of general refuse and C&D materials were generated during the reporting month. They were transferred to the landfill site by a licensed collector. Recycling of used paper was undertaken. Recyclable materials, such as completely decomposed granite (CDG) from the Kai Tak public fill area, were also used on site.

No notification of summons was received during the reporting month.

The CET Leader and the Engineer conducted regular site inspections and the IEC conducted a monthly site audit on 16 March during the reporting month. In response to the observations raised by the IEC during the site audit, the Contractor has instigated an action plan to rectify the inadequacies. The remedial actions included regular cleaning of channels, covering and watering exposed tree root, meeting with adjacent contractors to facilitate the cleaning of access road and reminding sub-contractors to monitor the covering of dump truck before leaving the site. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

1 Introduction

Hyder has been commissioned by KCRC as the IEC for the East Rail Extensions, which include the Ma On Shan to Tai Wai Rail, the Hung Hom to Tsim Sha Tsui Extension and the Lok Ma Chau Spur Line. A requirement of the Contract is for the IEC to prepare a combined EM&A Report on a monthly basis for each of the above rail lines. The combined report combines the Monthly EM&A Reports for each of the construction contracts within each rail line. This Report (in HTML format) is the twenty-first IEC Monthly EM&A Report for the Sheung Shui to Lok Ma Chau Spur Line and includes the Monthly EM&A Reports for construction contracts LDB201, LCC202 and LCC300 and a summary of the reports. It also includes a brief summary of the IEC Site Audits and information supplied by KCRC on Public Consultation activities.

2 IEC monthly site audits

IEC monthly site audits were conducted for LDB201 and LCC300 on 16 March, and for LCC202 on 25 March. Non-compliances and observations issued by the IEC are based on the requirements of KCRC's Environmental Management System.

2.1 Contract LDB201

The IEC site audit for LDB201 was undertaken on 16 March. The main construction activities undertaken in the reporting month include:

- East Approach Area – San Wan Road & East Rail Area: 900mm diameter watermain diversion stage 2, trenching and cable laying for CLP cable diversion, construction of retaining wall of noise barrier from CH30+200 to CH30+380;
- Cut and cover cofferdam (near Sheung Shui Launching Shaft Area): Excavation and strutting in Cut & Cover Tunnel Box E Cofferdam, predrilling and driving sheetpiles for Tunnel boxes;
- TBM Works area: Tunnel boring and lining, and regular maintenance of TBM;
- East EAP (EAP 2): Tunnel boring and lining in TBM Works Area, rock excavation, installation of 4th layer and strutting, reinstatement of DSD service road;
- West EAP (EAP 5): Excavation to +6.0mPD, installation of 2nd layer of waling and strutting, fabrication of 3rd layer of waling and strutting;

- Future Kwu Tung Station Enabling Works Area: Cut & Cover box column and middle roof slab construction, utilities diversion on Ho Sheung Heung Road; and
- West Approach Area: Extraction shaft excavation.

Eleven observations were raised during the site audit:

Observations

All sites – perimeter channels

1. Improvement was observed. However some areas still need to be closely monitored and frequent maintenance, such as Chau Tau and TBM Temporary Spoil Basin.

Chau Tau, TBM site and Kwu Tung

2. Oil drums were not well contained in drip trays.

Chau Tau – maintenance area

3. Rubbish in a drip tray was observed.

CP9

4. A proper chemical store for the chemicals should be provided.
5. Chemical drums and general refuse were put together. Waste segregation should be performed.
6. There was only tarpaulin sheet covering the cement bags. A proper enclosure should be installed for the cement mixing process.

CP8 & CP9

7. No water hose was observed at the site exit of CP9 and the wheel washing was inadequate at CP8.

EAP5

8. Stockpile was not covered. Although some works was going on, the area which is not involved, should be covered.

Kwu Tung

9. Discharge of wastewater from the sludge pit of AquaSed was observed. Although the wastewater was clean, untreated water should not be directly discharged without prior inspection.

TBM Temporary Spoil Basin

10. Water inside the AquaSed was brownish. Proper dosage of coagulant should be added and the water quality should be checked before discharge.

Cut and Cover site

11. The door of a generator was opened.

As a result of the observations raised by the IEC the contractor has proposed mitigation measures which include the establishment of perimeter

channels' cleaning schedule and record, taking away the pump from sludge pit, providing drip trays to oil drums, cleaning up drip trays, covering stockpiles, installing wheel washing facilities, providing appropriate bunded area for chemical storage, providing rubbish bins, segregation of waste and covering the cement bags with thicker tarpaulin sheets. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

2.2 Contract LCC202

The IEC site audit for LCC202 was undertaken on 25 March 2004. The major construction works include pre-bored H-piling at P3, pre-bore drilling at W24-37, W40-49 and W61-66, column construction at W24-49 as well as viaduct construction at W50-60. Three observations were raised during the site audit:

Observations

Pier W39 – Pond 18

1. Stockpiles were not covered or removed promptly.

Pier W35

2. Rubbish was observed in a fish pond next to Pier W35.

General site

3. Concrete residue was found in various locations of the site. Proper clean up and dispose of are necessary.

As a result of the observations raised by the IEC, the contractor has proposed mitigation measures including removing uncovered stockpiles, removing rubbish in the fish pond and cleaning up and proper disposal of concrete residue. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

2.3 Contract LCC300

The IEC site audit was conducted on 16 March 2004. The major construction works include earth works for reedbed and surcharge areas, substructure at immigration hall and superstructure at the terminus area, construction of western channel outfall and Chau Tau Culvert, bored piling, tree transplanting and trench excavation for utility works along the Emergency Access Road (EVA). Four observations were raised during the site audit:

Observations

Lok Ma Chau Road

1. The surface channel near pipe pile wall contained some construction materials and debris. Cleaning up is necessary.

Outside On Kee Store

2. Tree root was exposed without watering. Backfilling of soil and adequate watering are required.

Border Road near NBB site

3. Muddy road was observed.

Terminus site

4. The truck with full load of soil was not covered.

In response to the observations raised by the IEC, the Contractor has proposed some improvement measures including regular cleaning of channels, covering and watering exposed tree root, meeting with adjacent contractors to facilitate the cleaning of access road and reminding sub-contractors to monitor the covering of dump truck before leaving the site. The implementation and effectiveness of these measures will be assessed and verified during the next site audit.

3 Public Consultation

No public consultation was conducted in the reporting month.
