China State Construction Engineering (Hong Kong) Ltd.

Contract No. CV/2007/03

Development at Anderson Road – Site Formation and Associated Infrastructure Works

Quarterly EM&A Summary Report for March – May 2014

June 2014

	Name	Signature
Prepared & Checked:	Isabella Yeung	
Reviewed, Approved & Certified:	Yiu Wah Fung	

Version: 0	Date: 27 June 2014

Disclaimer

This report is prepared for China State Construction Engineering (Hong Kong) Ltd. and is given for its sole benefit in relation to and pursuant to Contract No. CV/2007/03 Development at Anderson Road – Site Formation and Associated Infrastructure Works and may not be disclosed to, quoted to or relied upon by any person other than China State Construction Engineering (Hong Kong) Ltd. without our prior written consent. No person (other than China State Construction Engineering (Hong Kong) Ltd.) into whose possession a copy of this report comes may rely on this report without our express written consent and China State Construction Engineering (Hong Kong) Ltd. may not rely on it for any purpose other than as described above.

AECOM Asia Co. Ltd.
15/F, Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong.
Tel: (852) 3922 9000 Fax: (852) 3922 9797 www.aecom.com

ENVIRON

Ref.: OAPANDSNEM00_0_1266L.14

25 May 2014

By Post and Fax: 2407 8382

Engineer's Representative
Ove Arup & Partners
Level 5, Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
Hong Kong

Attention: Mr. Dennis Leung

Dear Sir,

Re: Contract No. CV/2007/03 (Environmental Permit No. EP -140/2002)
Development at Anderson Road
Site Formation and Associated Infrastructure Works
Quarterly EM&A Report for March to May 2014

Reference is made to the Environmental Team's submission of the draft Quarterly EM&A Report for March to May 2014 received by e-mail on 25 June 2014.

Please be informed that we have no adverse comment on the captioned submission and thereby write to verify the captioned submission.

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,

David Yeung
Independent Environmental Checker

c.c.	AECOM	Attn.: Mr. Y.W. Fung	Fax: 3922 9797
	CSCEC	Attn.: Mr. C. S. Yeung	Fax: 2702 6553

Q:\Projects\OAPANDSNEM00\Corr\OAPANDSNEM00_0_1266L.14.doc

ENVIRON Hong Kong Limited 英環香港有限公司
Room 2403, 24/F., Jubilee Centre, 18 Fenwick Street, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.environcorp.com

Table of Content

Page

List of Tables

List of Figures

List of Appendices

EXECUTIVE SUMMARY

The Project "Development at Anderson Road – Site Formation and Associated Infrastructure Works" (hereafter called "the Project") is proposed to form platforms for housing development and associated uses in area of about 20 hectares, and to carry out necessary infrastructural upgrading or improvement works to cater for the proposed development.

China State Construction Engineering (Hong Kong) Limited (CSCE) was commissioned as the Contractor of the Project. AECOM Asia Co. Ltd. (AECOM) was employed by CSCE as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for the Project.

The impact EM&A for the Project includes air quality and noise monitoring. The EM&A programme for Sau Ming Primary School (ID 4) and Sau Mau Ping Catholic Primary School (ID 5) commenced on 1 May 2008, while for Kwun Tong Government Secondary School (ID 1A), On Yat House (ID 2) and Sau Nga House (ID 3) commenced on 1 June 2008.

The monitoring stations ID 4 & ID 5 will serve both the entire Development of Anderson Road (Schedule 3 Designated Project (DP)) project as well as the Widening of Po Lam Road (Schedule 2 DP) project.

The construction for the Widening of Po Lam Road (Schedule 2 DP) project was commenced in this reporting period, i.e. on 21 September 2011.

This report documents the findings of EM&A works for ID 1A, ID 2, ID 3, ID 4 and ID 5 conducted in the period from 1 March 2014 to 31 May 2014. As informed by the Contractor, construction activities in the reporting quarter were:

- Site clearance
- Establishment of temporary access road and temporary drainage
- Slope stabilization and upgrading works
- Temporary traffic arrangement and road work at New Clear Water Bay Road, Sau Mau Ping Road, Sau Fung Street , J2 and J/O Po Lam Road
- Toe / Berm planter and platform drainage construction
- Retaining wall structural works
- Trench excavation and pipe laying
- RE wall panel installation and backfilling
- Pipe pile construction of Footbridge C
- Structural works at Footbridges A, B and C
- Pipe Jacking at Sau Mau Ping Road
- Earth work and C&D stock pile
- Breaking of rock trench at public road
- Drainage construction at public road
- Construction of the twin 1800mm dia. pipes
- Construction of the coping structure at R15b
- Installation of precast panel to Bridge A
- Installation of noise barriers
- Waterworks
- Mini-pile construction of Footbridge A tower B

Environmental Monitoring Works

EM&A Programme

A summary of monitoring and audit activities conducted in the reporting quarter is listed below:

24-hour TSP monitoring	17 sessions
1-hour TSP monitoring	51 sessions
Daytime Noise monitoring	13 sessions
Environmental Site Inspection	13 sessions

Breaches of Action and Limit Levels

No exceedance of Action and Limit Level was recorded for 1-hour TSP and 24-hour TSP monitoring in the reporting quarter.

According to the information provided by the Contractor, no Action Level exceedance was recorded since no noise related complaint was received during the reporting quarter.

No exceedance Limit Level of noise was recorded in the reporting quarter.

Complaint, Notification of Summons and Successful Prosecution

According to the information provided by the Contractor, eight (8) air related complaints were received in March 2014 and two (2) air related complaints were received in April 2014.

- CEDD(ICC) referred seven (7) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 6, 7, 11, 12, 14, 21 and 25 March 2014.

  Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J2. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

  According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 1A (roof of Kwun Tong Government Secondary School) on 8, 14, 20 and 26 March 2014, the measured 24-hour TSP levels were found to be 28.5μg/m^3, 53.1μg/m^3, 29.3μg/m^3 and 54.9μg/m^3 respectively. The measured 1-hour TSP levels on 8, 14, 20 and 26 March 2014 were found to be 80.1μg/m^3; 78.4μg/m^3; 78.9μg/m^3, 80.6μg/m^3; 78.4μg/m^3; 82.6μg/m^3, 79.5μg/m^3; 80.7μg/m^3; 82.2μg/m^3 and 76.1μg/m^3; 74.8μg/m^3; 72.9μg/m^3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

  Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility.

The situation was improved and the complaint was closed.

- CEDD(ICC) referred one (1) complaint about dust nuisance along Po Lam Road on 6 March 2014.

  Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J1. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

  According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 5 (Sau Mau Ping Catholic Primary School) on 8 and 14 March 2014, the measured 24-hour TSP levels were found to be 28.5μg/m^3 and 53.1μg/m^3 respectively. The measured 1-hour TSP levels on 8 and 14 March 2014 were found to be 80.1μg/m^3; 78.4μg/m^3; 78.9μg/m^3 and 80.6μg/m^3; 78.4μg/m^3; 82.6μg/m^3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

  Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility.

The situation was improved and the complaint was closed.

- CEDD(ICC) referred two (2) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 29 April 2014.

  Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J2. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

  According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 1A (roof of Kwun Tong Government Secondary School) on 23 and 29 April 2014, the measured 24-hour TSP levels were found to be 37.7μg/m^3 and 39.1μg/m^3 respectively. The measured 1-hour TSP levels on 23 and 29 April 2014 were found to be 76.8μg/m^3; 75.9μg/m^3; 76.2μg/m^3 and 76.1μg/m^3; 74.8μg/m^3; 72.9μg/m^3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

  Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility.

The situation was improved and the complaint was closed.

No environmental complaint and no notification of summons and successful prosecution were received in the reporting quarter. The cumulative statistics on complaints has been updated in Appendix F.

Please refer to the monthly EM&A reports (March 2014 Version 0 and April 2014 Version 0) accordingly for the details of the captioned changes in summon and complaint record.

1 INTRODUCTION

1.1 Scope of Report

1.1.1 This is the quarterly Environmental Monitoring and Audit (EM&A) Report for the reporting period from 1 March 2014 to 31 May 2014 under the Project "Contract CV/2007/03 - Development at Anderson Road – Site Formation and Associated Infrastructure Works" (hereafter called "the Project"), which serving for both the entire Development of Anderson Road (Schedule 3 Designated Project (DP)) project as well as the Widening of Po Lam Road (Schedule 2 DP) project (which was commenced on 21 September 2011).

1.1.2 This report presents a summary of the EM&A works, list of activities and mitigation measures proposed by the Environmental Team (ET) for the Project during the reporting period.

1.2 Project Organization

1.2.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
ER (Ove Arup)	Chief Resident Engineer	Dennis Leung	3656 3000	3656 3100
	Senior Resident Engineer	Michael Wright	3656 3000	3656 3100
	Resident Engineer (Safety and Environmental)	Kenneth Lee	3656 3000	3656 3100
IEC (ENVIRON)	Independent Environmental Checker	David Yeung	3465 2888	3465 2899
Contractor (CSCE)	Site Agent	C S Yeung	2704 2095	2702 6553
	Environmental Manager	Leo Chung	2704 2095	2702 6553
ET (AECOM)	ET Leader	Yiu Wah Fung	3922 9366	3922 9797

1.3 Summary of Construction Works

1.3.1 The Contactor has carried out major activities in the reporting quarter. Details of the works undertaken in this reporting period are listed below:

- Site clearance
- Establishment of temporary access road and temporary drainage
- Slope stabilization and upgrading works
- Temporary traffic arrangement and road work at New Clear Water Bay Road, Sau Mau Ping Road, Sau Fung Street , J2 and J/O Po Lam Road
- Toe / Berm planter and platform drainage construction
- Retaining wall structural works
- Trench excavation and pipe laying
- RE wall panel installation and backfilling
- Pipe pile construction of Footbridge C
- Structural works at Footbridges A, B and C
- Pipe Jacking at Sau Mau Ping Road
- Earth work and C&D stock pile
- Breaking of rock trench at public road
- Drainage construction at public road
- Construction of the twin 1800mm dia. pipes
- Construction of the coping structure at R15b
- Installation of precast panel to Bridge A
- Installation of noise barriers
- Waterworks
- Mini-pile construction of Footbridge A tower B

1.3.2 The general layout plan of the Project site showing the contract area is shown in Figure 1.1.

1.3.3 The environmental mitigation measures implementation schedule (EMIS) are presented in Appendix B.

2 SUMMARY OF EM&A PROGRAMME REQUIREMENTS

2.1 Monitoring Parameters

2.1.1 The EM&A Manual designated five monitoring stations to monitor environmental impacts on air quality and noise due to the Project. The monitoring locations are depicted in Figure 2.1.

2.1.2 The monitoring stations ID 4 & ID 5 will serve both the entire Development of Anderson Road (Schedule 3 Designated Project (DP)) project as well as the Widening of Po Lam Road (Schedule 2 DP) project.

2.2 Environmental Quality Performance Limits (Action/Limit Levels)

2.2.1 The environmental quality performance limits (i.e. Action/Limit Levels) were derived from the baseline air quality and noise monitoring results of Kwun Tong Government Secondary School (ID 1A), On Yat House (ID 2), Sau Nga House (ID 3), Sau Ming Primary School (ID 4) and Sau Mau Ping Catholic Primary School (ID 5) and / or as defined in the EM&A Manual for air quality and noise impacts.

2.2.2 The baseline condition of air quality (for ID 1A, ID 2 & ID 3) in the Project site was reviewed in August 2008 upon agreed by ER and IEC. Reviewed Action Levels for air quality at ID 1A, ID 2 and ID 3 were established in September 2008. The latest Action and Limit Levels (established in September 2008) for all monitoring parameters are summarized in Appendix C.

2.3 Environmental Mitigation Measures

2.3.1 Relevant environmental mitigation measures were stipulated in the Particular Specification and EP (No.: EP-140/2002) for the Contractor to adopt. A list of environmental mitigation measures and their implementation statuses are given in Appendix B.

3 MONITORING RESULTS

3.1 Air Quality

3.1.1 Air quality monitoring, including 1-hr and 24-hr TSP, was conducted for at least three times every 6 days and for at least once every 6 days respectively at the 5 monitoring stations (ID 1A, ID 2, ID 3, ID 4 and ID 5), in accordance with the EM&A Manual.

3.1.2 Fifty-one (51) sessions of 1-hr TSP monitoring and seventeen (17) sessions of 24-hr TSP monitoring were conducted for the 5 monitoring stations (ID 1A, ID 2, ID 3, ID4 & ID5) in the reporting quarter.

3.1.3 The weather was mostly cloudy and sunny, with occasionally rainy days in the reporting quarter. The trend of impact air quality monitoring results for the reporting quarter is given in Appendix D. Major dust source included construction activities of the Project, concurrent construction activities of another project carried out in the vicinity and nearby traffic emissions.

3.1.4 No exceedance of Action and Limit Level was recorded for 1-hour TSP and 24-hour TSP monitoring in the reporting quarter.

3.1.5 Table 3.1 presents the number of exceedances recorded in each month of the reporting quarter. The number of monitoring events included regular impact monitoring events and additional ones, if any.

Table 3.1 Summary of Number of Exceedances for 1-hr and 24-hr TSP Concentration

Monitoring Parameter	Location	Level of Exceedance	Month		
			Mar 14	**Apr 14**	**May 14**
1-hr TSP	ID 1A	No. of monitoring events	15	18	18
		Action	0	0	0
		Limit	0	0	0
	ID 2	No. of monitoring events	15	18	18
		Action	0	0	0
		Limit	0	0	0
	ID 3	No. of monitoring events	15	18	18
		Action	0	0	0
		Limit	0	0	0
	ID 4	No. of monitoring events	15	18	18
		Action	0	0	0
		Limit	0	0	0
	ID 5	No. of monitoring events	15	18	18
		Action	0	0	0
		Limit	0	0	0
	Total		**0**	**0**	**0**
24-hr TSP	ID 1A	No. of monitoring events	5	6	6
		Action	0	0	0
		Limit	0	0	0
	ID 2	No. of monitoring events	5	6	6
		Action	0	0	0
		Limit	0	0	0
	ID 3	No. of monitoring events	5	6	6
		Action	0	0	0
		Limit	0	0	0
	ID 4	No. of monitoring events	5	6	6
		Action	0	0	0
		Limit	0	0	0
	ID 5	No. of monitoring events	5	6	6
		Action	0	0	0
		Limit	0	0	0
	Total		**0**	**0**	**0**

3.2 Construction Noise

3.2.1 Noise was conducted at the 5 monitoring stations (ID 1A, ID 2, ID 3, ID 4 and ID 5) for at least once per week during the construction phase (0700 – 1900) of the Project.

3.2.2 Thirteen (13) noise monitoring events were carried out for all monitoring stations in the reporting quarter.

3.2.3 According to the information provided by the Contractor, no noise complaint was received in the reporting quarter; hence, no Action Level exceedance was received in the reporting quarter.

3.2.4 No Limit Level exceedance of noise was recorded in the reporting quarter.

3.2.5 The graphical plots of trends of the noise monitoring results in the reporting quarter are provided in Appendix E. Major noise source included construction activities of the Project, concurrent construction activities of another project carried out in the vicinity, nearby traffic emissions and noise from school activities and community noise.

3.2.6 Table 3.2 presents the number of exceedances recorded in each month of the reporting quarter. The number of monitoring events included regular monitoring events and additional ones, if any.

Table 3.2 Summary of Number of Exceedances for Construction Noise

Monitoring Parameter	Location	Level of Exceedance	Month		
			Dec 13	**Jan 14**	**Feb 14**
Construction Noise	ID 1A	No. of monitoring events	4	5	4
		Limit	0	0	0
	ID 2	No. of monitoring events	4	5	4
		Limit	0	0	0
	ID 3	No. of monitoring events	4	5	4
		Limit	0	0	0
	ID 4	No. of monitoring events	4	5	4
		Limit	0	0	0
	ID 5	No. of monitoring events	4	5	4
		Limit	0	0	0
	Total Action Level*		**0**	**0**	**0**
	Total Limit Level		**0**	**0**	**0**

Remarks: * Number of Action Level exceedance for construction noise is the number of documented noise related complaint received in the reporting period from any one of the sensitive receivers.

3.3 Environmental Site Inspection

3.3.1 There were 13 site inspections conducted in the reporting quarter to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. The major concerns for the Project are air quality, noise, water quality and chemical and waste management. Particular observations and non-compliance and their statuses are described below.

3.3.2 The Contractor has rectified most of the observations as identified during environmental site inspection in the reporting period within agreed time frame. Rectifications of remaining identified items are undergoing by the Contractor. Follow-up inspections on the status on provision of mitigation measures will be conducted to ensure all identified items are mitigated properly.

3.3.3 Air Quality Impact

- Stockpile of dusty material was observed not being covered by tarpaulin sheet at Portion C. The Contractor should cover the stockpile with tarpaulin sheet.
- No wheel washing mechanism was provided at the entrance of Portion R15. Mud trail was observed bringing beyond the site entrance by vehicles and was extensively led to Po Lam Road. The Contractor should provide sufficient wheel washing facilities at Portion R15 to minimize the dust impact and clear the mud trail as soon as possible.
- Dark smoke was observed generating from an air compressor at Road L3. The Contractor should maintain all plants/equipment on-site in a good condition as to prevent dark smoke generation.
- Ineffective wheel washing mechanism was observed on R15B. The Contractor should make sure all vehicles should have their wheels washed before leaving the site.
- An exposed stockpile was observed at Portion A2. The Contractor should spray the stockpile with water or cover it entirely by impervious sheeting.
- Exposed slopes were observed at Gate 6. The Contractor should cover the slopes entirely by tarpaulin sheets.

3.3.4 Construction Noise Impact

- No dust suppression and noise abating measures were provided for the breaking works which were undertaken at Portion J2. The Contractor was should provide spraying of water for any dust generating works to minimize dust emission and acoustic insulation material wrapping for breaking tip of the breaker.

3.3.5 Water Quality Impact

- Direct discharge of muddy waste water without de-silting treatment into the drainage at R25A and the box culvert at Portion F was observed. Moreover, overflow of silty water from the main construction area to gullies at Road L6 and all the way to the works area at Portion J1 as observed during the site inspection. No surface runoff control measures were provided at Portion J1 and the silty water was discharged eventually into the existing storm drain. The Contractor was urged to provide de-silting treatment and intercept surface run-off such as placing of sandbags along the existing storm drain to prevent surface runoff from being discharged into the existing storm drain.

3.3.6 Chemical and Waste Management

- Chemical containers at Footbridge C were observed placed on bare ground without provision of drip tray. The Contractor should provide chemical containers with drip tray.

- Oil drums and chemical containers were observed placing on bare ground without the provision of drip tray at Gate 5. The Contractor should provide drip tray or equivalent measures to retain leakage, if any.

- The air compressor at Road L3 was observed placed on bare ground without provision of drip tray. The Contractor should provide drip tray to retain oil leakage, if any.

- General refuse was observed accumulated underneath Bridge B. The Contractor should dispose of the refuse in timely manner.

- Chemical containers were observed on bare ground without the provision of drip tray on Bridge C and under Bridge B. The Contractor should provide drip trays to retain oil leakage, if any. In addition, stagnant water was observed in the drip tray of the air compressor. The Contractor should clear the stagnant water inside the drip tray.

- Construction waste was observed on Road L1. The Contractor was reminded to clear the waste to maintain site tidiness

- Stagnant water was observed near the excavator in Portion C2 and in the trench along Road L1. The Contractor should clear the water using a water pump to prevent mosquito breeding.

3.3.7 Landscape and Visual Impact

- Nil

ADVICE ON SOLID AND LIQUID WASTE MANAGEMENT STATUS

3.4 Summary of Solid and Liquid Waste Management

3.4.1 The Contractor is registered as a chemical waste producer for this Project. C&D materials and wastes sorting were carried out on site. Receptacles were available for C&D wastes and general refuse collection.

3.4.2 As advised by the Contractor, quantity of waste for disposal in the reporting quarter is summarized in the Table 4.1.

Table 4.1 Summary of Quantity of Waste for Disposal*

Type of waste	Month		
	Mar 14	**Apr 14**	**May 14**
Total C&D material (m^3)	10,780m^3	9,938m^3	6,859m^3
Hard Rock and Large Broken Concrete	3,452m^3	4,496m^3	6,086m^3
Reuse in the Project	0m^3	0m^3	0m^3
Reuse in other Projects	0m^3	0m^3	0m^3
Disposed to TKO 137	7,328m^3	8,442m^3	773m^3
Metals	24,880kg	0kg	0kg
Paper cardboard packing	10kg	10kg	0kg
Plastics	0kg	0kg	0kg
Chemical waste	0L	0L	0L
General refuse	671.33 tonnes	63.85 tonnes	54.89 tonnes

***Remarks: The quantity of waste for March, April and May 2014 were updated by the Contractor in June 2014.**

3.4.3 The Contractor is advised to properly maintain on site C&D materials and wastes collection, sorting and recording system and maximize reuse / recycle of C&D materials and wastes. The Contractor is reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

3.4.4 The Contractor is reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practise on the Packaging, Labelling and Storage of Chemical Wastes.

4 SUMMARY OF NON-COMPLIANCE (EXCEEDANCES) OF ENVIRONMENTAL QUALITY

4.1 Summary of Exceedances and Review of the Reasons for Non-compliance

4.1.1 No exceedance of Action and Limit Level was recorded for 1-hour TSP and 24-hour TSP monitoring in the reporting quarter.

4.1.2 According to the information provided by the Contractor, no noise complaint was received in the reporting quarter. Hence, no Action Level exceedance was received in the reporting quarter.

4.1.3 No Limit Level exceedance for noise was recorded at all monitoring stations in the reporting quarter.

5 COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

5.1 Summary of Environmental complaints, notification of summons and successful prosecutions

According to the information provided by the Contractor, eight (8) air related complaints were received in March 2014 and two (2) air related complaints were received in April 2014.

- CEDD(ICC) referred seven (7) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 6, 7, 11, 12, 14, 21 and 25 March 2014.

Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J2. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 1A (roof of Kwun Tong Government Secondary School) on 8, 14, 20 and 26 March 2014, the measured 24-hour TSP levels were found to be 28.5μg/m^3, 53.1μg/m^3, 29.3μg/m^3 and 54.9μg/m^3 respectively. The measured 1-hour TSP levels on 8, 14, 20 and 26 March 2014 were found to be 80.1μg/m^3; 78.4μg/m^3; 78.9μg/m^3, 80.6μg/m^3; 78.4μg/m^3; 82.6μg/m^3, 79.5μg/m^3; 80.7μg/m^3; 82.2μg/m^3 and 76.1μg/m^3; 74.8μg/m^3; 72.9μg/m^3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility. The situation was improved and the complaint was closed.

- CEDD(ICC) referred one (1) complaint about dust nuisance along Po Lam Road on 6 March 2014.

Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J1. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 5 (Sau Mau Ping Catholic Primary School) on 8 and 14 March 2014, the measured 24-hour TSP levels were found to be 28.5μg/m3 and 53.1μg/m3 respectively. The measured 1-hour TSP levels on 8 and 14 March 2014 were found to be 80.1μg/m3; 78.4μg/m3; 78.9μg/m3 and 80.6μg/m3; 78.4μg/m3; 82.6μg/m3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility. The situation was improved and the complaint was closed.

• CEDD(ICC) referred two (2) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 29 April 2014.

Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J2. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 1A (roof of Kwun Tong Government Secondary School) on 23 and 29 April 2014, the measured 24-hour TSP levels were found to be 37.7μg/m3 and 39.1μg/m3 respectively. The measured 1-hour TSP levels on 23 and 29 April 2014 were found to be 76.8μg/m3; 75.9μg/m3; 76.2μg/m3 and 76.1μg/m3; 74.8μg/m3; 72.9μg/m3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility.

The situation was improved and the complaint was closed.

No environmental complaint and no notification of summons and successful prosecution were received in the reporting quarter. The cumulative statistics on complaints has been updated in Appendix F.

Please refer to the monthly EM&A reports (March 2014 Version 0 and April 2014 Version 0) accordingly for the details of the captioned changes in summon and complaint record.

5.1.1 Table 6.1 summarized the complaint, summons and successful prosecution received in the reporting period.

Table 6.1 Summary of Environmental Complaints, Summons and Prosecutions

	Mar 14	Apr 14	May 14	Total
Complaint Logged	8	2	0	**10**
Summons Served	0	0	0	**0**
Successful Prosecution	0	0	0	**0**

5.1.2 Cumulative Statistics on Exceedances, Complaints, Notification of Summons and Successful Prosecutions recorded since the commencement of the Project are given in Appendix F.

6 COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

6.1 Comments on Mitigation Measures

6.1.1 According to the environmental site inspections performed in the reporting quarter, the following comments are provided:

6.1.2 Air Quality Impact

- Control the dust generation by screens or by water-spraying
- Regular inspection of the working machineries worked in site areas to avoid any dark smoke emission.
- Review the effectiveness of wheel washing facilities to ensure no dusty materials were carried out to public haul road by vehicles.

6.1.3 Construction Noise Impact

- Proper and effective noise mitigation measures (e.g. provision of noise barriers, absorptive material coverage on scaffolding and absorptive material wrappings to the breaking tips of the breakers) should be implemented at the breaking and drilling works areas to minimize the noise impacts to sensitive receivers nearby. The Contractor should conduct regular review on and maintain the noise screening measures provided within works area.

6.1.4 Water Quality Impact

- Temporary drainage channels/systems provided in the Project site should be reviewed regularly. Surface run-off from works area should be properly treated with desilting facilities prior to discharge.

6.1.5 Chemical and Waste Management

- Sufficient drip tray should be provided to the equipment and chemical containers in order to retain any oil or chemical leakage. Moreover, regular inspection should be conducted to maintain the status of the equipment to prevent any oil leakage and to ensure that maintenance works are carried out in roofed, paved and confined works area only.
- On-site waste sorting should be provided properly and dispose containers and cleared oil stain as chemical waste accordingly

6.1.6 Landscape and Visual Impact

- No specific observation was identified in the reporting quarter.

6.2 Recommendations on EM&A Programme

6.2.1 The impact air quality and noise monitoring programme ensured that any environmental impact to the receivers would be readily detected and timely actions could be taken to rectify any non-compliance. Assessment and analysis of monitoring results collected demonstrated the environmental acceptability of the Project. The weekly site inspection ensured that all the environmental mitigation measures recommended in the EIA report were effectively implemented.

6.2.2 The EM&A programme effectively monitored the environmental impacts from the construction activities and no particular recommendation was advised for the improvement of the programme.

6.3 Conclusions

6.3.1 Air quality and noise monitoring and weekly site inspection were carried out from March to May 2014, in accordance with the EM&A Manual.

6.3.2 No exceedance of Action and Limit Level was recorded for 1-hour TSP and 24-hour TSP monitoring in the reporting quarter.

6.3.3 As per Contractor's information, no noise complaint was received in the reporting quarter. Hence, no Action Level exceedance was noted in the reporting period and no Limit Level exceedance of noise were recorded in the reporting quarter.

6.3.4 No notification of summons and successful prosecution were received in the reporting quarter.

6.3.5 According to the information provided by the Contractor, eight (8) air related complaints were received in March 2014 and two (2) air related complaints were received in April 2014.

- CEDD(ICC) referred seven (7) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 6, 7, 11, 12, 14, 21 and 25 March 2014.

Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J2. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 1A (roof of Kwun Tong Government Secondary School) on 8, 14, 20 and 26 March 2014, the measured 24-hour TSP levels were found to be 28.5μg/m^3, 53.1μg/m^3, 29.3μg/m^3 and 54.9μg/m^3 respectively. The measured 1-hour TSP levels on 8, 14, 20 and 26 March 2014 were found to be 80.1μg/m^3; 78.4μg/m^3; 78.9μg/m^3, 80.6μg/m^3; 78.4μg/m^3; 82.6μg/m^3, 79.5μg/m^3; 80.7μg/m^3; 82.2μg/m^3 and 76.1μg/m^3; 74.8μg/m^3; 72.9μg/m^3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility. The situation was improved and the complaint was closed.

- CEDD(ICC) referred one (1) complaint about dust nuisance along Po Lam Road on 6 March 2014.

Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J1. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 5 (Sau Mau Ping Catholic Primary School) on 8 and 14 March 2014, the measured 24-hour TSP levels were found to be 28.5μg/m3 and 53.1μg/m3 respectively. The measured 1-hour TSP levels on 8 and 14 March 2014 were found to be 80.1μg/m3; 78.4μg/m3; 78.9μg/m3 and 80.6μg/m3; 78.4μg/m3; 82.6μg/m3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility. The situation was improved and the complaint was closed.

• CEDD(ICC) referred two (2) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 29 April 2014.

Fugitive dust emission was potentially generated from the vehicles passing the haul roads at Portion J2. Water spraying has been carried out by water truck twice daily to minimize fugitive emission generated and road cleaning has been organised.

According to the routine 1-hour TSP and 24-hour TSP monitoring data recorded at the nearest monitoring station ID 1A (roof of Kwun Tong Government Secondary School) on 23 and 29 April 2014, the measured 24-hour TSP levels were found to be 37.7μg/m3 and 39.1μg/m3 respectively. The measured 1-hour TSP levels on 23 and 29 April 2014 were found to be 76.8μg/m3; 75.9μg/m3; 76.2μg/m3 and 76.1μg/m3; 74.8μg/m3; 72.9μg/m3 respectively. All measured 1-hour TSP and 24-hour TSP levels were below the Action and Limit Level.

Despite that the 1-hour and 24-hour TSP levels were below the Action and Limit level. The Contractor was recommended to ensure the wheel washing facility was operated at the construction site entrance and closely monitor the effectiveness of the wheel washing facility.

The situation was improved and the complaint was closed.

6.3.6 Environmental site inspections were carried out 13 times in the reporting period. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audit.