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 December 2013 – February 2014

March 2014

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Version: 0	Date: 24 March 2014

Disclaimer

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ENVIRON

Ref.: OAPANDSNEM00_0_1207L.14

24 March 2014

By Fax (3656 3100 / 2407 8382) and Post

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 December 2013 to February 2014

Reference is made to the Environmental Team's submission of the draft Quarterly EM&A Report for December 2013 to February 2014 received by e-mail on 24 March 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

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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 December 2013 to 28 February 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

All 1-Hour TSP results were below the Action and Limit Level in the reporting quarter. Three (3) exceedances of Action Level and one (1) exceedance of Limit Level were recorded in 20 January 2014 for 24-hour TSP monitoring at ID2, 3, 4 and 5 respectively. Exceedances were not related to project.

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

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

Complaint, Notification of Summons and Successful Prosecution

As informed by the Contractor in January 2014, two (2) air related complaints were received in November and December 2013 respectively.

- CEDD(ICC) referred two (2) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 11 November 2013 and 2 December 2013.

  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.

  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 6 and 12 November 2013, the measured 24-hour TSP level was found to be 54.7μg/m^3 and 72.2μg/m^3 respectively. The measured 1-hour TSP levels on 6 and 12 November 2013 were found to be 76.2μg/m^3; 79.6μg/m^3; 80.5μg/m^3 and 83.8μg/m^3; 81.6μg/m^3; 85.9μg/m^3respectively. All measured 1-hour TSP and 24-hour TSP level were below the Action and Limit Level.

  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 29 November and 5 December 2013, the measured 24-hour TSP level was found to be 39.9μg/m^3 and 25.4μg/m^3 respectively. The measured 1-hour TSP levels on 29 November and 5 December 2013 were found to be 83.6μg/m^3; 84.1μg/m^3; 82.8μg/m^3 and 78.4μg/m^3; 82.1μg/m^3; 80.6μg/m^3respectively. All measured 1-hour TSP and 24-hour TSP level 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.

As informed by the Contractor on 6 March 2014, two summonses were received regarding the suspected violation case of Water Pollution Control Ordinance (Cap. 358) within site working area of the project on 4 May 2013. One of which had been reported in the previous quarterly report (EM&A Quarterly Summary Report for September-November 2013), the other summon was included in this EM&A quarterly report.

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 (December 2013 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 December 2013 to 28 February 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 All 1-Hour TSP results were below the Action and Limit Level in the reporting quarter. Three (3) exceedances of Action Level and one (1) exceedance of Limit Level were recorded in 20 January 2014 for 24-hour TSP monitoring at ID2, 3, 4 and 5 respectively. Exceedances were not related to project.

3.1.5 For the 24Hr TSP Action Level exceedances recorded at ID2, 4 and 5, results of 209.2μg/m3, 213.6μg/m3 and 237.6μg/m3 were recorded on 20 January 2014 (24-hr TSP).

According to information provided by the Contractor, concreting, installation of formwork, excavation and drainage works were the major construction activities being undertaken within works area of the Project during the monitoring period.

Dust mitigation measures have been implemented by the Contractor as listed below:-

- Main haul road were regularly watering by water trucks to maintain the surface wet;
- Continuous water spraying and tarpaulin sheet coverage was applied during excavation;
- Exposed slope surface should be either hydroseeded, shotcreted or covered up by tarpaulin;
- Vehicle washing facility was provided at vehicle exit points, and vehicle was washed to remove any dusty materials from its body and wheels before leaving.

Very close to the monitoring locations, there were contracts carrying out concrete mixing, excavation, rock breaking, pilling and drilling works at Portions A, B, C, D and Footbridge D in the works area during the course of monitoring. These works may probably contribute to the measured dust level at the Stations.

The dust exceedance was therefore considered not to be due to the Project works.

3.1.6 For the 24Hr TSP Limit Level exceedance recorded at ID3, a result of 282.6μg/m3, was recorded on 20 January 2014 (24-hr TSP).

According to information provided by the Contractor, concreting, installation of formwork, excavation and drainage works were the major construction activities being undertaken within works area of the Project during the monitoring period.

Dust mitigation measures have been implemented by the Contractor as listed below:-

- Main haul road were regularly watering by water trucks to maintain the surface wet;
- Continuous water spraying and tarpaulin sheet coverage was applied during excavation;
- Exposed slope surface should be either hydroseeded, shotcreted or covered up by tarpaulin;
- Vehicle washing facility was provided at vehicle exit points, and vehicle was washed to remove any dusty materials from its body and wheels before leaving.

Very close to the monitoring locations, there were contracts carrying out concrete mixing, excavation, rock breaking and pilling works at Portion C and Footbridge D in the works area during the course of monitoring. These works may probably contribute to the measured dust level at the Station.

The dust exceedance was therefore considered not to be due to the Project works.

3.1.7 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		
			Dec 13	**Jan 14**	**Feb 14**
1-hr TSP	ID 1A	No. of monitoring events	18	18	15
		Action	0	0	0
		Limit	0	0	0
	ID 2	No. of monitoring events	18	18	15
		Action	0	0	0
		Limit	0	0	0
	ID 3	No. of monitoring events	18	18	15
		Action	0	0	0
		Limit	0	0	0
	ID 4	No. of monitoring events	18	18	15
		Action	0	0	0
		Limit	0	0	0
	ID 5	No. of monitoring events	15	18	15
		Action	0	0	0
		Limit	0	0	0
	Total		**0**	**0**	**0**
24-hr TSP	ID 1A	No. of monitoring events	6	6	5
		Action	0	0	0
		Limit	0	0	0
	ID 2	No. of monitoring events	6	6	5
		Action	0	1	0
		Limit	0	0	0
	ID 3	No. of monitoring events	6	6	5
		Action	0	0	0
		Limit	0	1	0
	ID 4	No. of monitoring events	6	6	5
		Action	0	1	0
		Limit	0	0	0
	ID 5	No. of monitoring events	6	6	5
		Action	0	1	0
		Limit	0	0	0
	Total		**0**	**4**	**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

- No water spraying provided for rock breaking process at Footbridge A was observed. The Contractor should provide spraying of water to the concerned works as dust suppression measure.
- Mud trail was observed at the entrance of the works area at Footbridge A. The Contractor should provide wheel washing facilities and ensure all vehicles should be washed before leaving the works area.
- Dusty materials were observed on the haul road at Bridge A. The Contractor was reminded to provide water spraying for the haul road on a regular basis to prevent dust emission.
- Dark smoke was observed emitting from the breaker at Portion C2. The Contractor should provide proper maintenance to the breaker to prevent the arising of dark smoke.
- Dry condition was observed on haul roads and in works area all over the site. The Contractor should provide regular and frequent spraying of water as dust suppression measures.
- Dusty materials were observed accumulated between the damaged hoardings and footpath at Portion J2. The Contractor was reminded to clear the materials and repair the damaged hoardings so as to prevent the dusty materials from entering the channel underneath.
- Mud trail at the site entrance of R15 was observed. The Contractor should clear the mud trail and ensure that all vehicles would have their wheels washed before leaving the site.
- Ineffective wheel washing mechanism was observed at Gate 6 and Gate 5. The Contractor should to make sure all vehicles should have their wheel washed before leaving the site.
- Dark smoke was observed emitting from the excavator adjacent to the RE Site Office. The Contractor should provide proper maintenance to the excavator to prevent the arising of dark smoke.
- Fugitive dust was observed arisen from the drilling activity near the RE Site Office. The Contractor should provide spraying of water to the concerned works as dust suppression measure.

3.3.4 Construction Noise Impact

- Breaking and drilling activities were observed at Portion C2. With the consideration of topography and safety concerns, the Contractor was reminded to provide noise abatement measure to lessen noise impact to the NSRs.
- Insufficient noise abatement measure for pilling work was observed at works area in Footbridge A. The Contractor should enhance the mitigation measures to lessen noise nuisance to NSR.

3.3.5 Water Quality Impact

- Accumulation of silt and mud were observed on the channel bed at Portion R22. The Contractor should remove the silt and mud regularly.

3.3.6 Chemical and Waste Management

- General refuse was observed floating on water surface in the box culvert located below Portion F. The Contractor was reminded to remove the refuse in timely manner.
- Chemical containers found on bare ground without the provision of drip tray at Branch M were observed. The Contractor should provide drip trays or equivalent measures to retain leakage, if any.
- Generator and chemical containers were observed to be stored in Footbridge A, Portion A and C without the provision of drip tray. The Contractor should provide drip tray or equivalent measures to retain leakage, if any.
- Oil stain was found on bare ground near the generator placing in Portion A. The Contractor should clear the contaminated soil and disposed of as chemical waste.
- General refuse was observed accumulated at Footbridge B and C respectively. The Contractor should clear the refuse as soon as possible and avoid the accumulation of refuse
- Oil leakage from generator was observed at Footbridge A. The Contractor should clear the oil stain and disposed of as chemical waste, and maintain the generator in a good condition in order to prevent oil leakage.
- Chemical containers and oil drum were placed on bare ground without provision of drip trays in Branch N, Footbridge B, Portion C, L1 and L2. The Contractor was reminded to provide drip trays as soon as possible to prevent oil leakage.
- Oil leaking generator was observed at Road L1. The Contractor should clear the oil stain and disposed of as chemical waste, and maintain the generator in a good condition in order to prevent oil leakage.

3.3.7 Landscape and Visual Impact

- Nil

4 ADVICE ON SOLID AND LIQUID WASTE MANAGEMENT STATUS

4.1 Summary of Solid and Liquid Waste Management

4.1.1 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.

4.1.2 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		
	Dec 13	**Jan 14**	**Feb 14**
Total C&D material (m^3)	16,051m^3	12,363m^3	13,021m^3
Hard Rock and Large Broken Concrete	6,023m^3	7,720m^3	4,084m^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	10,028m^3	4,643m^3	8,937m^3
Metals	68,340kg	0kg	23,050kg
Paper cardboard packing	0kg	10kg	10kg
Plastics	10kg	0kg	0kg
Chemical waste	0L	0L	0L
General refuse	161.71 tonnes	154.96 tonnes	719.71 tonnes

***Remarks: The quantity of waste for December 2013, January and February 2014 were updated by the Contractor in March 2014.**

4.1.3 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.

4.1.4 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.

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

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

5.1.1 All 1-Hour TSP results were below the Action and Limit Level in the reporting quarter. Three (3) exceedances of Action Level and one (1) exceedance of Limit Level were recorded in 20 January 2014 for 24-hour TSP monitoring at ID2, 3, 4 and 5 respectively. Exceedances were not related to project.

5.1.2 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.

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

6 COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

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

6.1.1 As informed by the Contractor in January 2014, two (2) air related complaints were received in November and December 2013 respectively.

CEDD(ICC) referred two (2) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 11 November 2013 and 2 December 2013.

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.

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 6 and 12 November 2013, the measured 24-hour TSP level was found to be 54.7μg/m^3 and 72.2μg/m^3 respectively. The measured 1-hour TSP levels on 6 and 12 November 2013 were found to be 76.2μg/m^3; 79.6μg/m^3; 80.5μg/m^3 and 83.8μg/m^3; 81.6μg/m^3; 85.9μg/m^3respectively. All measured 1-hour TSP and 24-hour TSP level were below the Action and Limit Level.

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 29 November and 5 December 2013, the measured 24-hour TSP level was found to be 39.9μg/m^3 and 25.4μg/m^3 respectively. The measured 1-hour TSP levels on 29 November and 5 December 2013 were found to be 83.6μg/m^3; 84.1μg/m^3; 82.8μg/m^3 and 78.4μg/m^3; 82.1μg/m^3; 80.6μg/m^3respectively. All measured 1-hour TSP and 24-hour TSP level 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.

As informed by the Contractor on 6 March 2014, two summonses were received regarding the suspected violation case of Water Pollution Control Ordinance (Cap. 358) within site working area of the project on 4 May 2013. One of which had been reported in the previous quarterly report (EM&A Quarterly Summary Report for September-November 2013), the other summon was included in this EM&A quarterly report.

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 (December 2013 Version 0) accordingly for the details of the captioned changes in summon and complaint record.

6.1.2 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

	Dec 13	Jan 14	Feb 14	Total
Complaint Logged	2	0	0	**2**
Summons Served	0	0	0	**0**
Successful Prosecution	0	0	0	**0**

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

COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

6.2 Comments on Mitigation Measures

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

6.2.2 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.

6.2.3 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.

6.2.4 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.

6.2.5 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

6.2.6 Landscape and Visual Impact

- No specific observation was identified in the reporting quarter.

6.3 Recommendations on EM&A Programme

6.3.1 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.

6.3.2 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.

6.4 Conclusions

6.4.1 Air quality and noise monitoring and weekly site inspection were carried out from December 2013 to February 2014, in accordance with the EM&A Manual.

6.4.2 All 1-Hour TSP results were below the Action and Limit Level in the reporting quarter. Three (3) exceedances of Action Level and one (1) exceedance of Limit Level were recorded in 20 January 2014 for 24-hour TSP monitoring at ID2, 3, 4 and 5 respectively. Exceedances were not related to project.

6.4.3 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.

6.4.4 As informed by the Contractor on 6 March 2014, two summonses were received regarding the suspected violation case of Water Pollution Control Ordinance (Cap. 358) within site working area of the project on 4 May 2013. One of which had been reported in the previous quarterly report (EM&A Quarterly Summary Report for September-November 2013), the other summon was included in this EM&A quarterly report.

6.4.5 No environmental complaint and no notification of summons and successful prosecution were received in the reporting quarter.

6.4.6 As informed by the Contractor in January 2014, two (2) air related complaints were received in November and December 2013 respectively.

- CEDD(ICC) referred two (2) complaints about dust nuisance along the road at Clear Water Bay Road near Anderson Road crossing on 11 November 2013 and 2 December 2013.

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.

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 6 and 12 November 2013, the measured 24-hour TSP level was found to be 54.7μg/m^3 and 72.2μg/m^3 respectively. The measured 1-hour TSP levels on 6 and 12 November 2013 were found to be 76.2μg/m^3; 79.6μg/m^3; 80.5μg/m^3 and 83.8μg/m^3; 81.6μg/m^3; 85.9μg/m^3respectively. All measured 1-hour TSP and 24-hour TSP level were below the Action and Limit Level.

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 29 November and 5 December 2013, the measured 24-hour TSP level was found to be 39.9μg/m^3 and 25.4μg/m^3 respectively. The measured 1-hour TSP levels on 29 November and 5 December 2013 were found to be 83.6μg/m^3; 84.1μg/m^3; 82.8μg/m^3 and 78.4μg/m^3; 82.1μg/m^3; 80.6μg/m^3respectively. All measured 1-hour TSP and 24-hour TSP level 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.

6.4.7 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.