



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  
June 2012 – August 2012**

September 2012

	Name	Signature
Prepared & Checked:	Isabella Yeung	
Reviewed, Approved & Certified:	Edith Ng (ETL)	

Version: 0

Date: 25 September 2012

**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.

11/F, Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong.

Tel: (852) 3105 8686 Fax: (852) 2317 7609 www.aecom.com

Ref.: OAPANDSNEM00\_0\_0936L.12

22 October 2012

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 June to August 2012**

Reference is made to the Environmental Team's submission of the draft Quarterly EM&A Report for June to August 2012 received by E-mail on 15 October 2012.

Please be informed that we have no adverse comment on 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  
CSCEC

Attn: Ms. Edith Ng  
Attn: Mr. Wilson Lau

Fax: 2891 0305  
Fax: 2702 6553

Q:\Projects\OAPANDSNEM00\Corr\OAPANDSNEM00\_0\_0936L.12.doc

## Table of Content

	Page
<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1 INTRODUCTION.....</b>	<b>4</b>
1.1 Scope of Report .....	4
1.2 Project Organization.....	4
1.3 Summary of Construction Works .....	4
<b>2 SUMMARY OF EM&amp;A PROGRAMME REQUIREMENTS .....</b>	<b>6</b>
2.1 Monitoring Parameters.....	6
2.2 Environmental Quality Performance Limits (Action/Limit Levels) .....	6
2.3 Environmental Mitigation Measures.....	6
<b>3 MONITORING RESULTS .....</b>	<b>7</b>
3.1 Air Quality.....	7
3.2 Construction Noise.....	9
3.3 Environmental Site Inspection .....	11
<b>4 ADVICE ON SOLID AND LIQUID WASTE MANAGEMENT STATUS .....</b>	<b>13</b>
4.1 Summary of Solid and Liquid Waste Management.....	13
<b>5 SUMMARY OF NON-COMPLIANCE (EXCEEDANCES) OF ENVIRONMENTAL QUALITY</b>	<b>14</b>
5.1 Summary of Exceedances and Review of the Reasons for Non-compliance .....	14
<b>6 COMPLAINT, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION .....</b>	<b>15</b>
6.1 Summary of Environmental complaints, notification of summons and successful prosecutions .....	15
<b>7 COMMENTS, RECOMMENDATIONS AND CONCLUSIONS.....</b>	<b>17</b>
7.1 Comments on Mitigation Measures .....	17
7.2 Recommendations on EM&A Programme.....	18
7.3 Conclusions.....	18

### List of Tables

Table 1.1	Contact Information of Key Personnel
Table 3.1	Summary of Number of Exceedances for 1-hr and 24-hr TSP Concentration
Table 3.2	Summary of Number of Exceedances for Construction Noise
Table 4.1	Summary of Quantity of Waste for Disposal
Table 6.1	Summary of Environmental Complaints, Summons and Prosecutions

### List of Figures

Figure 1.1	General Layout Plan
Figure 2.1	Monitoring Locations

### List of Appendices

Appendix A	Project Organization Structure
Appendix B	Implementation Schedule of Environmental Mitigation Measures (EMIS)
Appendix C	Summary of Action and Limit Levels
Appendix D	Graphical Presentation of Impact Air Quality Monitoring Results over the Past Four Months
Appendix E	Graphical Presentation of Noise Monitoring Results over the Past Four Months
Appendix F	Cumulative Statistics on Exceedances, Complaints, Notification of Summons and Successful Prosecutions

## 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 June 2012 to 31 August 2012. As informed by the Contractor, construction activities in the reporting quarter were:

- Blasting;
- Drainage works;
- Slope upgrading works;
- Excavation work at Portions A, B, C, D, E, H, J4, S1a, S2a, S2b;
- Temporary traffic arrangement at J/O Po Lam Road & Sau Mau Ping Road, Portion J2, J3 and J4;
- Site clearance;
- Erection of hoardings and chain link fence;
- Establishment of temporary access and temporary drainage;
- Slope stabilization;
- Tree transplanting and protection;
- Maintenance works;
- Bridge structural works;
- Retaining structures structural works;
- RE wall panel installation;
- Slope drainage and maintenance access;
- Erection and maintenance of blasting cages and fencing;
- Pre-stressing works of bridge;
- Toe / Beam planter construction;
- Permanent backfilling at RW22;
- Bored pile(column method), capping beam & panel wall construction at R15;
- Lowering down of bored pile at R15;
- Construction of Bridge A, B and D;
- U-channel and box-culvert works at Portion D and E; and
- Preparation works for area J1a and J1b (R15b)

## **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	16 sessions
1-hour TSP monitoring	48 sessions
Daytime Noise monitoring	14 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, two (2) Action Level exceedance were recorded since two (2) noise related complaints were received in the reporting quarter.

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

### **Complaint, Notification of Summons and Successful Prosecution**

Based on the information provided by the Contractor, two (2) noise complaints and no notification of summons and successful prosecution were received in the reporting quarter.

- A complaint was referred by CEDD (ICC) regarding the construction noise impact from retaining wall construction alongside Po Lam Road on 17 July 2012.

According to the noise monitoring data recorded on 12 and 18 July 2012 at the nearest monitoring station ID5 (Sau Mau Ping Catholic Primary School), the measured noise levels in Leq (30-min) were 62.2 dB(A) and 65.9 dB(A) respectively, which were below the Limit Level. The averaged noise level is Leq (30-min) 64.0 dB(A).

Noise mitigation measures have been provided at works area R15b to mitigate the noise impacts which included erection of noise barriers and provide acoustic wrappings to the breaking tips of hydraulic breakers worked at the works area for the sides facing the noise sensitive receivers.

In parallel, noise concern has been conveyed to the contractor responsible for the construction at nearby public housing site (in Platform D and E previously formed under DAR) and reminded them to review their noise mitigation measures as well.

Construction noise was potentially contributed by rock breaking activities at retaining wall at R15b of the Project.

The Contractor was recommended and agreed to strictly implement the noise mitigation measures and ensure the effectiveness of noise mitigation measures deployed within works area should be reviewed onsite regularly in order to provide sufficient noise screening effect properly for the NSRs.

The measured noise level was below the Limit Level.

No further complaint was received and the complaint was closed.

- A complaint was referred by CEDD (ICC) regarding the construction noise impact from retaining wall construction alongside Po Lam Road on 31 July 2012.

According to the noise monitoring data recorded on 30 July 2012 at the nearest monitoring station ID5 (Sau Mau Ping Catholic Primary School), the measured noise level in Leq (30-min) was 63.3dB(A), which was below the Limit Level.

Noise mitigation measures have been provided at works area R15b to mitigate the noise impacts which included erection of noise barriers and provide acoustic wrappings to the breaking tips of hydraulic breakers worked at the works area for the sides facing the noise sensitive receivers.

Construction noise was potentially contributed by rock breaking activities at retaining wall at R15b of the Project.

The Contractor was recommended to stop rock breaking work at 6pm, maintain the noise mitigation measures and ensure the effectiveness of noise mitigation measures deployed within works area should be reviewed onsite regularly in order to provide sufficient noise screening effect properly for the noise sensitive receivers.

No further complaint was received and the complaint was closed.

Please refer to the monthly EM&A report (July 2012 Version 0 and August 2012 Version 0) accordingly for the details of the captioned complaint.

## 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 June 2012 to 31 August 2012 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	3743 0717	3548 6988
Contractor (CSCE)	Site Agent	Wilson Lau	2704 2095	2702 6553
	Environmental Manager	Leo Chung	2704 2095	2702 6553
ET (AECOM)	ET Leader	Edith Ng	3922 9407	2317 7609

### 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:

- Blasting;
- Drainage works;
- Slope upgrading works;
- Excavation work at Portions A, B, C, D, E, H, J4, S1a, S2a, S2b;
- Temporary traffic arrangement at J/O Po Lam Road & Sau Mau Ping Road, Portion J2, J3 and J4;
- Site clearance;
- Erection of hoardings and chain link fence;
- Establishment of temporary access and temporary drainage;
- Slope stabilization;
- Tree transplanting and protection;
- Maintenance works;
- Bridge structural works;
- Retaining structures structural works;
- RE wall panel installation;



- Slope drainage and maintenance access;
- Erection and maintenance of blasting cages and fencing;
- Pre-stressing works of bridge;
- Toe / Beam planter construction;
- Permanent backfilling at RW22;
- Bored pile(column method), capping beam & panel wall construction at R15;
- Lowering down of bored pile at R15;
- Construction of Bridge A, B and D;
- U-channel and box-culvert works at Portion D and E; and
- Preparation works for area J1a and J1b (R15b)

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 Forty-eighth (48) sessions of 1-hr TSP monitoring and sixteen (16) 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 sunny, with occasionally cloudy period 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			
			Jun 12	Jul 12	Aug 12	
1-hr TSP	ID 1A	No. of monitoring events	18	15	15	
		Action	0	0	0	
		Limit	0	0	0	
	ID 2	No. of monitoring events	18	15	15	
		Action	0	0	0	
		Limit	0	0	0	
	ID 3	No. of monitoring events	18	15	15	
		Action	0	0	0	
		Limit	0	0	0	
	ID 4	No. of monitoring events	18	15	15	
		Action	0	0	0	
		Limit	0	0	0	
	ID 5	No. of monitoring events	18	15	15	
		Action	0	0	0	
		Limit	0	0	0	
	<b>Total</b>			<b>0</b>	<b>0</b>	<b>0</b>
	24-hr TSP	ID 1A	No. of monitoring events	6	5	5
			Action	0	0	0
Limit			0	0	0	
ID 2		No. of monitoring events	6	5	5	
		Action	0	0	0	
		Limit	0	0	0	
ID 3		No. of monitoring events	6	5	5	
		Action	0	0	0	
		Limit	0	0	0	
ID 4		No. of monitoring events	6	5	5	
		Action	0	0	0	
		Limit	0	0	0	
ID 5		No. of monitoring events	6	5	5	
		Action	0	0	0	
		Limit	0	0	0	
<b>Total</b>			<b>0</b>	<b>0</b>	<b>0</b>	

### **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 Fourteen (14) 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, two (2) noise complaints were received in the reporting quarter; hence, two (2) Action Level exceedance were 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			
			Jun 12	Jul 12	Aug 12	
Construction Noise	ID 1A	No. of monitoring events	5	5	4	
		Limit	0	0	0	
	ID 2	No. of monitoring events	5	5	4	
		Limit	0	0	0	
	ID 3	No. of monitoring events	5	5	4	
		Limit	0	0	0	
	ID 4	No. of monitoring events	5	5	4	
		Limit	0	0	0	
	ID 5	No. of monitoring events	5	5	4	
		Limit	0	0	0	
	<b>Total Action Level*</b>			<b>0</b>	<b>1</b>	<b>1</b>
	<b>Total Limit Level</b>			<b>0</b>	<b>0</b>	<b>0</b>

**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**

- Over 20 bags of cement were observed stored at open area at S103 works area. The Contractor should cover entirely by tarpaulin sheet or placed in an area sheltered on the top and the 3 sides.
- Dark smoke emission was observed from excavators and breakers worked in Portion C2 and S2a. The Contractor should repair the excavators and breakers, conduct regular inspection of the working machineries worked in work areas to avoid any dark smoke emission.
- Fugitive dust emission was observed at rock breaking and drilling works area in Portion C2. The Contractor should provide dust suppressive measure (like provision of regular water spraying or sprinklers) at the works area to minimize the dust impact.
- Exposed area was observed at Slope R22 (Portion S2a). The Contractor should cover up the exposed slopes completely by tarpaulin sheet or shotcrete the exposed slopes to minimize the dust impact. For the rock breaking works area in Portion S2a, the Contractor should provide dust suppressive measures (like provision of regular water spraying or sprinklers) at the breaking works areas to minimize the dust impacts.

#### **3.3.4 Construction Noise Impact**

- Acoustic insulation material which adhered to the noise barriers deployed at R15b was found deteriorated after typhoon. The Contractor was reminded to inspect the status of the noise barrier regularly and maintain the noise-screening effect.
- Noise screening measures provided in rock breaking works area at Portion C2, Slope R22 (Portion S2a) and the junction of Po Lam Road and Sau Mau Ping Road was found insufficient. With consideration of topography and safety concerns, acoustic material screening measures (like provision of acoustic material wrapping to the breaking tips of the breakers, erection of temporary noise barriers and acoustic material coverage on scaffolding/platform) should be provided at the rock breaking works area to minimize the impacts to sensitive receivers nearby.

#### **3.3.5 Water Quality Impact**

- Nil

### 3.3.6 Chemical and Waste Management

- Oil stains were found on sandbags and on ground near the generator at Portion M (Kai Tak Barging Point). The Contractor should replace the stained sandbags, clear the oil stains on ground and disposed of as chemical waste. The Contractor should review on oil filling procedure regularly to avoid any leaked oil from flowing outside the works area.
- Chemical containers placed at Bridge A, R15b and R16 were stored improperly without provision of drip trays. The Contractor should properly store the chemical containers within the works area with provision of drip trays in order to retain any leakage if there is such case.

### 3.3.7 Landscape and Visual Impact

- Tree protection nets for the retained trees at Bridge A were found loosely installed and C&D materials were found placed near retained trees. The Contractor should reinstate the tree protective measures to the retained trees and remove the C&D materials placed near the retained trees.



## 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		
	Jun 12	Jul 12	Aug 12
Total C&D material (m <sup>3</sup> )	88,190m <sup>3</sup>	70,022.72m <sup>3</sup>	68,600.25m <sup>3</sup>
Hard Rock and Large Broken Concrete	58,660m <sup>3</sup>	56,098.74m <sup>3</sup>	56,096.79m <sup>3</sup>
Reuse in the Project	10,484m <sup>3</sup>	0m <sup>3</sup>	0m <sup>3</sup>
Reuse in other Projects	0m <sup>3</sup>	0m <sup>3</sup>	0m <sup>3</sup>
Disposed to barging point	19,046m <sup>3</sup>	13,923.98m <sup>3</sup>	12,503.46m <sup>3</sup>
Metals	79,250kg	19,690kg	56,470kg
Paper cardboard packing	10kg	10kg	10kg
Plastics	0kg	10kg	0kg
Chemical waste	0L	600L	0L
General refuse	60.20tonnes	62.76tonnes	93.25tonnes

\*Remarks: The quantity of waste for June, July and August 2012 were updated by the Contractor in September 2012.

- 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 There was no Action and Limit Level exceedance recorded for 1-hr TSP and 24-hr TSP in the reporting quarter.
- 4.1.2 According to the information provided by the Contractor, two (2) noise complaints were received in the reporting quarter. Hence, two (2) Action Level exceedances were 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**

5.1.1 Based on the information provided by the Contractor, two (2) noise complaints and no notification of summons and successful prosecution were received in the reporting quarter.

- A complaint was referred by CEDD (ICC) regarding the construction noise impact from retaining wall construction alongside Po Lam Road on 17 July 2012.

According to the noise monitoring data recorded on 12 and 18 July 2012 at the nearest monitoring station ID5 (Sau Mau Ping Catholic Primary School), the measured noise levels in Leq (30-min) were 62.2 dB(A) and 65.9 dB(A) respectively, which were below the Limit Level. The averaged noise level is Leq (30-min) 64.0 dB(A).

Noise mitigation measures have been provided at works area R15b to mitigate the noise impacts which included erection of noise barriers and provide acoustic wrappings to the breaking tips of hydraulic breakers worked at the works area for the sides facing the noise sensitive receivers.

In parallel, noise concern has been conveyed to the contractor responsible for the construction at nearby public housing site (in Platform D and E previously formed under DAR) and reminded them to review their noise mitigation measures as well.

Construction noise was potentially contributed by rock breaking activities at retaining wall at R15b of the Project.

The Contractor was recommended and agreed to strictly implement the noise mitigation measures and ensure the effectiveness of noise mitigation measures deployed within works area should be reviewed onsite regularly in order to provide sufficient noise screening effect properly for the NSRs.

The measured noise level was below the Limit Level.

No further complaint was received and the complaint was closed.

Please refer to the monthly EM&A report (July 2012 Version 0) accordingly for the details of the captioned complaint.

- A complaint was referred by CEDD (ICC) regarding the construction noise impact from retaining wall construction alongside Po Lam Road on 31 July 2012.

According to the noise monitoring data recorded on 30 July 2012 at the nearest monitoring station ID5 (Sau Mau Ping Catholic Primary School), the measured noise level in Leq (30-min) was 63.3dB(A), which was below the Limit Level.

Noise mitigation measures have been provided at works area R15b to mitigate the noise impacts which included erection of noise barriers and provide acoustic wrappings to the breaking tips of hydraulic breakers worked at the works area for the sides facing the noise sensitive receivers.

Construction noise was potentially contributed by rock breaking activities at retaining wall at R15b of the Project.

The Contractor was recommended to stop rock breaking work at 6pm, maintain the noise mitigation measures and ensure the effectiveness of noise mitigation measures deployed within works area should be reviewed onsite regularly in order to provide sufficient noise screening effect properly for the noise sensitive receivers.

No further complaint was received and the complaint was closed.

Please refer to the monthly EM&A report (August 2012 Version 0) accordingly for the details of the captioned complaint.

- 5.1.2 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**

	<b>Jun 12</b>	<b>Jul 12</b>	<b>Aug 12</b>	<b>Total</b>
Complaint Logged	0	1	1	<b>2</b>
Summons Served	0	0	0	<b>0</b>
Successful Prosecution	0	0	0	<b>0</b>

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

## 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

- Conduct regular inspection of the working machineries within works area to avoid any dark smoke emission.
- Regular water spraying or equivalent measure should be provided to the access roads, exposed surfaces/slopes and dusty construction works areas to minimize the dust impacts to sensitive receivers nearby.
- Temporary exposed slopes/surfaces should be completely covered up with tarpaulin sheet or shotcreted or hydroseeded if no works is going to carry out on them.
- Proper shelter, in form of covering on the top and at the 3 sides of the cement mixing works station, should be provided prior to any cement mixing work was carrying out on-site.

#### 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

- No specific observation was identified in the reporting quarter. However, the Contractor should provide effective temporary drainage systems/channels and wastewater treatment systems and operate properly in works area to cater the surface run-off generated from works area and wheel washing facility. Surface run-off should be properly treated prior to discharge. Any untreated run-off should be avoided from overflowing to public drains. Temporary drainage systems/channels and wastewater treatment systems should be maintained and reviewed regularly and deposited silt and debris inside the temporary drainage channels/systems should be cleared regularly.

#### 6.1.5 Chemical and Waste Management

- Any oil stains and oil mixture found within the works area should be cleared and disposed of them as chemical waste. Proper measures (e.g. provision of drip trays or temporarily with tarpaulin sheets) should be provided if works with potential oil leakage was carrying out. Regular inspection should be conducted at works area to avoid accumulation of chemical waste in works area
- All chemical containers and oil drums placed within the works area should be stored with provision of drip trays in order to retain any oil and chemical leakage.

#### 6.1.6 Landscape and Visual Impact

- Proper tree protection measures (e.g. provision of netting to demarcate the protection zone) should be provided to existing trees to avoid accidental damage to them.

## **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 June 2012 to August 2012, in accordance with the EM&A Manual.
- 6.3.2 All 1-hour and 24-hour TSP monitoring results complied with the Action and Limit level at all monitoring locations in the reporting quarter.
- 6.3.3 As per Contractor's information, two (2) noise complaints were received in the reporting quarter. Hence, two (2) Action Level exceedances were noted in the reporting period and no Limit Level exceedance of noise were recorded in the reporting quarter.
- 6.3.4 Referring to the Contractor's information, two (2) noise complaints and no notification of summons and successful prosecution were received in the reporting quarter.
- 6.3.5 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.