

**Interim Notifications of Environmental Quality Limits Exceedances**

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	11-Sep-09
Time	9:40 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	4.9 (higher than 130% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A low SS level of 2.2 is recorded at Control Station (I-1-C)
Actions taken / to be taken	The measured SS level was below baseline Action / Limit Level and was within the range of baseline SS concentration (1-10.5mg/L). Only water pumping work was undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be contributed by natural variation and no action should be required.
Remarks	Following mitigation measures were provided: (1) sandbags were used at the gap of the bridge to avoid wastewater from site activities directly running down to the channel of I-1. (2) The working site was segregated with a wall and no wastewater was observed down to the channel-I1. (3) Sand/silts removal facilities was installed at the location of I-1.

Prepared by: Terence Kong  
 Designation: Environmental Team Leader

Signature:



Date: 18-Sep-09

**Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 11-Sep-09**



Site photo



Photo taken at I-1



Photo taken at I-1-C

**Interim Notifications of Environmental Quality Limits Exceedances**

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	14-Sep-09
Time	10:47 AM
Monitoring Location	Squatters (I-3)
Parameter	Suspended Solid
Action & Limit Levels	6.13 / 7.23
Measured Level	2.8 (higher than 130% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A low SS level of 2.1 is recorded at Control Station (I-3-C)
Actions taken / to be taken	The measured SS level was below baseline Action / Limit Level and was within the range of baseline SS concentration (1- 7.5mg/L). Site cleaning and tidying, soil nailing, formation of access road and disposal of C&D materials were undertaken during measurement. No direct disturbance was observed from the site. Thus, the exceedance is considered to be contributed by natural variation and no action should be required.
Remarks	Following mitigation measures were provided: (1) Gabion wall has been constructed to avoid any water from rainstorm and from site activities directly running down to the river of I-3. (2) Sedimentation Pond and Sand/silts removal facilities was installed at the location of I-3.

Prepared by: Terence Kong

Designation: Environmental Team Leader

Signature:



Date: 21-Sep-09

Photographic record for exceedance of Suspended Solid recorded at Squatters (I-3) on 14-Sep-09



Site photo



Photo taken at I-3



Photo taken at I-3-C

**Interim Notifications of Environmental Quality Limits Exceedances**

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	16-Sep-09
Time	11:27 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	3.3 (higher than 120% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A low SS level of 2.7 is recorded at Control Station (I-1-C)
Actions taken / to be taken	The measured SS level was below baseline Action / Limit Level and was within the range of baseline SS concentration (1-10.5mg/L). Only site cleaning and tidying as well as preparation and formation of working platform were undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be contributed by natural variation and no action should be required.
Remarks	Following mitigation measures were provided: (1) sandbags were used at the gap of the working platform to avoid wastewater from site activities directly running down to the channel of I-1. (2) The working site was segregated with a wall and no wastewater was observed down to the channel - I1. (3) Sand/silts removal facilities were installed at the location of I-1.

Prepared by: Terence Kong  
 Designation: Environmental Team Leader

Signature:



Date: 24-Sep-09

**Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 16-Sep-09**



Site photo



Photo taken at I-1



Photo taken at I-1-C

**Interim Notifications of Environmental Quality Limits Exceedances**

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	7-Sep-09
Time	N/A
Monitoring Location	Roof top of Greenview Terrace facing to the construction site (NSR 9)
Parameter	Noise
Action & Limit Levels	When one documented complaint is received / 75 dB(A)
Measured Level	N/A
Possible reason for Action or Limit Level Non-compliance	Daytime Construction works (Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials )
Actions taken / to be taken	The documented complaint for noise is considered to trigger the action level and the Contractor was also reminded to enhance the on site noise mitigation measures continuously. Noise monitoring frequency would be proposed to increase twice per week by ET
Remarks	Please refer to the Complaint Investigation Report (CIR-009) attached for details.

Prepared by: Terence Kong

Designation: Environmental Team Leader

Signature:



Date: 6-Oct-09

### Complaint Investigation Report

<b>Contractor:</b> Maeda – CREC – SELI Joint Venture	<b>ET Received Date:</b> 7 September 2009	<b>Ref:</b> CIR – 009
<b>Project:</b> Design and Construction of Tsuen Wan Drainage Tunnel		
<b>COMPLAINANT</b>		
Name: Mr. Lam, Greenview Terrace Property Management Office Tel: 2490 9680 Fax: 3426 9700	Address: No. 6 Castle Peak Road, Tsuen Wan, N.T.	
<b>COMPLAINT INVESTIGATION</b>		
<b>Description (cause of impact, type of impact and location, etc.)</b>		
<b><u>Details of the Complaint</u></b> A complaint (SOR ref: (DC/2007/12)/M45/500/02628) was received from Greenview Terrace regarding to daytime construction noise level ( $L_{eq(30min)}$ ) was sometimes exceeded 75 dB(A) at the outfall construction site. The complaint date was corresponded to 22 August 2009.		
<b><u>Findings/ Observations</u></b> Regular daytime construction noise monitoring, in accordance with EM&A Manual are performed by Environmental Team. The monitoring station concerned is NSR9 (i.e. at the roof top of Greenview Terrace facing to the construction site).  Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. The monitoring results from 6 July 2009 to 31 August 2009 at NSR 9 under EM&A requirements were summarised in the attached table. In accordance with EIAO-TM, the daytime construction noise limit is 75 dB(A) for NSR9. The measured noise levels complied with the limit level in accordance with the EIAO-TM. These cases would also be treated as an action level exceedance on noise and would be reported in next EM&A report.  The Contractor and the Environmental Team were also undertaken site investigation on the subject area in response to Greenview Terrace's complaint. The mitigation measures during the site investigation were observed as follows:  <u>Noise</u> <ul style="list-style-type: none"><li>• Several layers of sound insulation sheets were installed at several locations of the site area.</li><li>• Movable noise barriers were used to surround the breaking activities.</li><li>• Noise insulation materials were used to enclose the breaking tip tightly.</li></ul>		
<b><u>Conclusion/Proposed Action</u></b> Based on our site inspection and monitoring results, no noise levels ( $L_{eq(30min)}$ ) from the measurement taken from ET were exceeded 75dB(A). However, it was a recurrent case from Greenview Terrace. The Contractor was reminded to enhance the on-site noise mitigation measures. The enhanced mitigation measures are proposed as follows:  <ol style="list-style-type: none"><li>1. A staff from the Contractor was designated to take the reading of <math>L_{eq}</math> (5mins) at the roof of Greenview Terrace. In case of the <math>L_{eq}</math> (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level.</li><li>2. The designated staff was reminded to record all the weather condition including raining and wind speed.</li><li>3. Tools box talk for Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.</li><li>4. Several movable noise barriers had been placed on site and the movable noise barriers was modified.</li><li>5. Existing 25 ton rock breaker had been replaced by the another breaker.</li><li>6. The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap.</li><li>7. A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace.</li><li>8. Noise monitoring frequency was increased twice per week.</li></ol>		

Noise monitoring was increased by ET. The measurement was taken on 10, 12, 15, 17 and 28 August 2009. The noise levels ( $L_{eq, 30 \text{ min}}$ ) were shown in the following table. The measured noise levels were complied with the limit level in accordance with the EIAO-TM.

Date	Start Time	End Time	$L_{eq}$ , dB(A)	Limit Level, dB(A)	Noise Sources
10-Aug-09	10:27	10:57	73	75	Breaker x 2, Backhoe x 1, Traffic Noise
12-Aug-09	09:57	10:27	74.1	75	Breaker x 2, Backhoe x 2, Traffic Noise
15-Aug-09	09:48	10:18	71.5	75	Breaker x 2 & Backhoe x 2, Traffic Noise
17-Aug-09	15:41	16:11	70.9	75	Breaker x 2, Backhoe x 2, Traffic and Aircraft Noise
28-Aug-09	14:34	15:04	73.5	75	Breaker x 2, Excavator x 1, Traffic and Aircraft Noise

Remark:

The location of PME will be changed on and off and the utilization time for each PME may not be in constant.

From the additional monitoring data above and under EM&A requirements, noise level ( $L_{eq, 30 \text{ min}}$ ) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels ( $L_{eq, 30 \text{ min}}$ ) were also re-measured after the implementation of the mitigation measures and the monitoring results are shown in the following table.

Date	Start Time	End Time	$L_{eq}$ , dB(A)	Limit Level, dB(A)	Noise Sources
4-Sep-09	10:20	10:50	72.8	75	Breaker x 1, Excavator x 1, Traffic Noise
10-Sep-09	15:30	16:00	69.9	75	Excavator x 1, Traffic Noise
11-Sep-09	09:50	10:20	71.9	75	Breaker x 1, Excavator x 1, Traffic Noise
16-Sep-09	15:30	16:00	71.2	75	Breaker x 1, Drilling Work, Traffic Noise
18-Sep-09	09:40	10:10	71.9	75	Breaker x 1, Drilling Work, Excavator x1, Traffic Noise
22-Sep-09	14:38	15:08	73.2	75	Excavator x 1, Breaker x 1, Traffic Noise
25-Sep-09	15:40	16:10	<b>74.8</b>	75	Breaker x 1, Excavator x 1, Decoration at 14/F, Traffic Noise
28-Sep-09	09:30	10:00	72.4	75	Breaker x 1, Excavator x 1
2-Oct-09	09:40	10:10	<b>73.7</b>	75	Breaker x 1, Excavator x 1, Decoration at 14/F, Traffic & Aircraft Noise

Remark:

The location of PME will be changed on and off and the utilization time for each PME may not be in constant.

Noise level ( $L_{eq, 30 \text{ min}}$ ) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. The measured noise levels were complied with the limit level in accordance with the EIAO-TM. From the noise level on 25 September 2009 and 2 October 2009, the trend of noise level seemed to be increased since the decoration work at 14/F Greenview Terrace was the domain noise source during the monitoring. The noise level during that time would be considered for reference only but not count in the above range. In our investigation, there was no exceedance of the measured noise level at Greenview Terrace.

#### FOLLOW UP ACTION (S)

ET will continuously review the condition of the site during the routine site inspections and provide reminder to the Contractor. The noise monitoring frequency would be maintained in twice per week. This case would be reported an action level exceedance on noise and also would be recorded in complaint log in the monthly EM&A report (September 2009).

#### Prepared & Confirmed by:

Name: Terence Kong (ET Leader)

Signature:



Date: 12 October 2009

**ATTACHMENTS:** Noise Monitoring Data from 6 July to 31 August 2009.

### Noise Monitoring Data from 6 July 2009 to 31 August 2009

Monitoring Locations	Date	Weather Conditions	Temperature (°C)	Wind Speed (m/s)	Wind Direction	Start Time	End Time	Limit Level dB(A)	L <sub>eq(30min)</sub> dB(A)	Observation / Site Condition	Remark
NSR 9 Greenview Terrace	06-Jul-09	Sunny	31	0.5	S	15:05	15:35	75	72.4	Soil Nailing,Excavation by backhoe	Traffic noise
	16-Jul-09	Sunny	32	0.3	E	10:05	10:35	75	71.4	Soil Nailing,Excavation by backhoe	Traffic noise
	22-Jul-09	Sunny	31	0.6	E	14:05	14:35	75	72.7	Soil Nailing,Excavation & Breaking by backhoe	Traffic noise
	28-Jul-09	Fine	30	0.5	E	15:18	15:48	75	71.4	Soil Nailing,Breaking by backhoe	Traffic noise, aircraft noise
	03-Aug-09	Sunny	27	0.9	E	15:13	15:43	75	72.3	Breaking by backhoe,excavation work	Traffic noise
	14-Aug-09	Cloudy	28	0.2	E	14:35	15:05	75	72.6	Drilling,Breaking by backhoe	Traffic noise, aircraft noise
	19-Aug-09	Cloudy	31	1.3	E	13:15	13:45	75	72.1	Drilling,Breaking by backhoe	Traffic noise, aircraft noise
	25-Aug-09	Sunny	32	0.8	E	10:25	10:55	75	73.0	Breaking by backhoe,excavation work	Traffic noise
	31-Aug-09	Sunny	33	0.5	E	10:10	10:40	75	73.5	Breaking by backhoe,excavation work	Traffic noise