

Interim Notifications of Environmental Quality Limits Exceedances

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	06-Jan-10
Time	10:30 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Turbidity
Action & Limit Levels	9.75 / 12.47
Measured Level	19.47
Possible reason for Action or Limit Level Non-compliance	A high turbidity level of 19.67 is recorded at Control Station (I-1-C). Other construction activities were carried out at control station during the measurement. (Refer to the photos below).
Actions taken / to be taken	The measured turbidity level was above baseline Action/Limit Levels as well as higher the range of baseline turbidity concentration (3.13-13.5 NTU). Construction activities, such as disposal of C&D materials, site cleaning and tidying as well as shotcrete to shaft wall, were undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be contributed by the high turbidity level of control station (I-1-C) and no action should be taken as the turbidity result at monitoring station was below the action and limit level of control station.
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: 07-Jan-10

Photographic record for exceedance of Turbidity recorded at Sik Sik Yuen Ho Fung College (I-1) on 06-Jan-10



Site photo



Photo taken at I-1



Photo taken at I-1-C




Construction activities 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	06-Jan-10
Time	10:30 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	13.6
Possible reason for Action or Limit Level Non-compliance	A high SS level of 16.3 is recorded at Control Station (I-1-C). Other construction activities were carried out at control station during the measurement. (Refer to the photos below).
Actions taken / to be taken	The measured SS level was above baseline Action/Limit Levels as well as higher than the range of baseline SS concentration (1-10.5mg/L). Construction activities, such as disposal of C&D materials, site cleaning and tidying as well as shotcrete to shaft wall, were undertaken during the measurement and no direct disturbance was observed from the site. Thus, the exceedance is considered to be contributed by the high SS level of control station (I-1-C) and no action should be taken as the SS result at monitoring station was below the action and limit level of control station.
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) Water quality mitigation measures were implemented at working area 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: 11-Jan-10

Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 06-Jan-10



Site photo



Photo taken at I-1



Photo taken at I-1-C




Construction activities 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	22-Jan-10
Time	10:29 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	5.9 (higher than 120% of control station's SS)
Possible reason for Action or Limit Level Non-compliance	A lower SS level of 4.8 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). Construction activities, such as site cleaning and tidying, disposal of C&D materials, shotcrete to shaft wall, and soil nailing for the support of Shing Mun Channel, 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 bridge to avoid wastewater from site activities directly running down to the channel of I-1. (2) Water quality mitigation measures were implemented at working area 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: 28-Jan-10

Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 22-Jan-10



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	27-Jan-10
Time	10:00 AM
Monitoring Location	Sik Sik Yuen Ho Fung College (I-1)
Parameter	Suspended Solid
Action & Limit Levels	8.85 / 10.17
Measured Level	10.15 (higher than baseline Action Level)
Possible reason for Action or Limit Level Non-compliance	SS level of 9.5 is recorded at Control Station (I-1-C)
Actions taken / to be taken	The measured SS level was above baseline Action Level but below baseline Limit Level, and it is within the range of baseline SS concentration (1-10.5mg/L). Construction activities, such as site cleaning and tidying, soil nailing as well as shotcrete to shaft wall, 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 bridge to avoid wastewater from site activities directly running down to the channel of I-1. (2) Water quality mitigation measures were implemented at working area 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: 04-Feb-10

Photographic record for exceedance of Suspended Solid recorded at Sik Sik Yuen Ho Fung College (I-1) on 27-Jan-10



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	19-Jan-10
Time	N/A
Monitoring Location	Squatter (NSR 6) facing to the Inatke -3 construction site
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	Rock breaking work
Actions taken / to be taken	Provide sufficient mitigation measures during any noisy work near the NSR at I3: (1) Sound insulation sheets were installed covering the working area during breaking and rock drilling in order to block the line of sight to the NSR. (2) Noise insulation materials were used to enclose the drilling rig tightly.
Remarks	Please refer to CIR-13 as attached for details.

Prepared by: Terence Kong

Designation: Environmental Team Leader

Signature:



Date: 4-Feb-10

Interim Notifications of Environmental Quality Limits Exceedances

Incident Report on Action Level or Limit Level Non-compliance

Project	Tsuen Wan Drainage Tunnel
Date	21-Jan-10
Time	N/A
Monitoring Location	Squatter (NSR 6) facing to the Inatke -3 construction site
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	Rock breaking work
Actions taken / to be taken	Provide sufficient mitigation measures during any noisy work near the NSR at I3: (1) Sound insulation sheets were installed covering the working area during breaking and rock drilling in order to block the line of sight to the NSR. (2) Noise insulation materials were used to enclose the drilling rig tightly.
Remarks	Please refer to CIR-13 as attached for details.

Prepared by: Terence Kong


Designation: Environmental Team Leader

Signature:



Date: 4-Feb-10

Complaint Investigation Report

Contractor: Maeda – CREC – SELI Joint Venture	ET Received Date: 25 January 2010	Ref: CIR – 013																														
Project: Design and Construction of Tsuen Wan Drainage Tunnel																																
COMPLAINANT																																
Name: Unknown (refer from EPD) Tel: Unknown Fax: Unknown		Address: Unknown																														
COMPLAINT INVESTIGATION																																
Description (cause of impact, type of impact and location, etc.)																																
<u>Details of the Complaint</u> EPD has received a public complaint (EPD ref: EP3/N22/RW/01319-10 & EP3/N22/RW/01444-10) regarding daytime construction noise at Intake-3 construction site on 19 & 21 January 2010. Site investigation was also carried out by EPD on the following day.																																
<u>Findings/ Observations</u> Regular daytime construction noise monitoring, in accordance with EM&A Manual are performed by Environmental Team. The monitoring station concerned is NSR6 (i.e. at Squatter facing to the construction site). Excavation, soil nailing, rock drilling and breaking, loading and unloading the materials were generally observed during monitoring period in mid-January 2010. The monitoring results from at NSR6 under EM&A requirements were summarised in the following table.																																
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Date</th><th>Start Time</th><th>End Time</th><th>L_{eq}, dB(A)</th><th>Limit Level, dB(A)</th><th>Noise Sources</th></tr></thead><tbody><tr><td>12-Jan-10</td><td>15:33</td><td>16:03</td><td>69.7</td><td>75</td><td>Excavation, Soil Nailing</td></tr><tr><td>21-Jan-10</td><td>13:28</td><td>13:58</td><td>73.4</td><td>75</td><td>Breaking by backhoe</td></tr><tr><td>26-Jan-10*</td><td>11:10</td><td>11:40</td><td>67.3</td><td>75</td><td>Soil Nailing</td></tr><tr><td>27-Jan-10</td><td>13:30</td><td>14:00</td><td>70.1</td><td>75</td><td>Soiling Nailing and Cutting</td></tr></tbody></table>			Date	Start Time	End Time	L _{eq} , dB(A)	Limit Level, dB(A)	Noise Sources	12-Jan-10	15:33	16:03	69.7	75	Excavation, Soil Nailing	21-Jan-10	13:28	13:58	73.4	75	Breaking by backhoe	26-Jan-10*	11:10	11:40	67.3	75	Soil Nailing	27-Jan-10	13:30	14:00	70.1	75	Soiling Nailing and Cutting
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Note:*Additional monitoring was carried out due to complaint.																																
In accordance with EM&A, the daytime construction noise limit is 75 dB(A) for NSR6. The measured noise levels complied with the limit level in accordance with the EM&A Manual. These cases would also be treated as two action level exceedances on noise and would be reported in the EM&A report. The Contractor and the Environmental Team were also undertaken site investigation on the subject area in response to complaint. The noise mitigation measures during the site investigation were recommended as follows:																																
<ul style="list-style-type: none">• Sound insulation sheets were installed covering the working area during breaking and rock drilling in order to block the line of sight to the NSR.• Noise insulation materials were used to enclose the drilling rig tightly.																																
<u>Conclusion/Proposed Action</u> Based on our site inspection and monitoring results, the complaint was due to noise generated by rock breaking work. The above identified mitigation measures have been discussed with the Contractor and implemented by the Contractor on 25 January 2010 and ET has also checked the implementation on 31 January 2010. The Contractor was also advised to review the mitigation measures from time to time near the NSR at I3. The ET will closely inspect the area during the routine site inspections and provide advice to the Contractor.																																
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 until no further complaint. 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.																																
Prepared & Confirmed by:																																
Name: Terence Kong (ET Leader)	Signature: 	Date: 09 February 2010																														
ATTACHMENTS: Photo records of the noise mitigation measures at I3.																																

Noise Mitigation Measures at I3



Sound insulation sheets were installed covering the working area during rock drilling in order to block the line of sight to the NSR.

Remedial Proposal for Complaint on Intake I-3 dated 19-Jan-10 and 21-Jan-10

Event:

A resident raised a complaint at intake I-3 regarding the noise generated by rock breaker and drilling rig on 19-Jan-2010 and 21-Jan-10.

Proposed Remedial Measures:

A noise barrier with sound absorption materials (3m height) plus concrete block (2m height) should be erected to screen the line of sight from the NSR to the working area.

