

Appendix L Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	Total No. recorded since project commencement
1-Hr TSP	Action	7	19
	Limit	0	2
24-Hr TSP	Action	1	5
	Limit	0	1
Water Quality	Action	0	5
	Limit	0	0
Impact Dolphin Monitoring	Action	0	0
	Limit	0	0

Table Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (Jan 2014)	0	0	0
Total No. received since project commencement	0	0	0

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To ENVIRON - Hong Kong, Limited (ENPO)

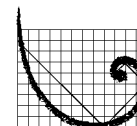
From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun-Chek Lap
Kok Link-Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Air Quality
Impact Monitoring

Date 14 January 2014

16/F DCH Commercial Centre,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com



ERM

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

0212330_3January2014_1hrTSP_Station AQMS1
0212330_3January2014_1hrTSP_Station ASR5
0212330_3January2014_1hrTSP_Station ASR1
0212330_3January2014_24hrTSP_Station AQMS1

A total of four Action Level Exceedances were recorded on 3 January 2014.

Regards,

A handwritten signature in black ink, appearing to read 'Jovy Tam', is positioned above the printed name.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/08
 TUEN MUN – CHEK LAP KOK LINK –
 NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

Air Quality Impact Monitoring
 Notification of Exceedance

Log No.	0212330_3January2014_1hrTSP_Station AQMS1 0212330_3January2014_1hrTSP_Station ASR5 0212330_3January2014_1hrTSP_Station ASR1 0212330_3January2014_24hrTSP_Station AQMS1 [Total No. of Exceedances = 4]	
Date	3 January 2014 (Measured) 12 January 2014 (Laboratory results received by ERM)	
Monitoring Station	ASR1, ASR5, AQMS1	
Parameter(s) with Exceedance(s)	1-hr TSP 24-hr TSP	
Action Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR1 = 331 ASR5 = 340 ASR10 = 337 AQMS1 = 335 AQMS2 = 338
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR1 = 213 ASR5 = 238 ASR10 = 214 AQMS1 = 213 AQMS2 = 238
Limit Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	500
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	260
Measured Levels	Action Level Exceedance on 1-hr TSP is observed at AQMS1 ($336 \mu\text{g}/\text{m}^3$) during 1534 - 1634 hrs. Action Level Exceedance on 1-hr TSP is observed at ASR5 ($391 \mu\text{g}/\text{m}^3$) during 1411 - 1511 hrs. Action Level Exceedance on 1-hr TSP is observed at ASR1 ($419 \mu\text{g}/\text{m}^3$) during 1524 - 1624 hrs. Action Level Exceedance on 24-hr TSP is observed at AQMS1 ($228 \mu\text{g}/\text{m}^3$).	
Works Undertaken (at the time of monitoring event)	On 3 January 2014, marine dredging works were carried out by one dredger Crown Asia 1 at Portion N-A. At the time of monitoring during 1411 to 1634 hrs, dredging was undertaken by one dredger at Portion N-A which is at more than 100 m from the air quality monitoring stations. At Site WA-18, construction of site office and substation were undertaken. At Portion N6, site clearance was undertaken.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • Considering the generally high level of 1-hour TSP between 1411 and 1634 hrs at three of the five monitoring stations, it is probably unlikely that the level of land-based construction activities under this Contract can cause increase in 1-hour TSP of this magnitude and scale. It is considered that the observed exceedances for 1-hour TSP may represent sporadic event associated with traffic emissions and anthropogenic activities during afternoon rush hour at Lung Mun Road and River Trade Terminal. • According to the construction diary provided by the Contractor, the majority of construction works on 3 January 2014 were marine-based with the dredging works being undertaken by one dredger (Crown Asia 1) at Portion N-A, whilst only minor land-based construction works, including site office and substation construction at WA-18 and site clearance at Portion N6. All land-based constructions at WA-18 and Portion N6 were considered to have minor effect on dust generation. • Whilst exceedances of Action Level were observed at AQMS1, ASR1, ASR5, the average 1-hr TSP levels at these monitoring stations (AQMS1 = 276 µg/m³; ASR1 = 299 µg/m³; ASR5 = 310 µg/m³) on 3 January 2014 were in compliance with the Action and Limit Levels. • According to the air quality monitoring recorded by the closest EPD air monitoring station in Yuen Long and Tuen Mun on 3 January 2014, the Air Quality Health Index (AQHI) from 1400 to 1700 hrs showed a Very High to Serious Pollution Level (Yuen Long AQHI ranged from 8 to 10+; Tuen Mun AQHI ranged from 8 to 10). The observed exceedances could be resulting from the area-wide scale pollution in Hong Kong. • With reference to the recorded wind direction (ranged between 267° and 299°, blowing to a westerly direction) and wind speed (ranged from 1.60 to 2.20 m/s) during the period of observed 1-hr TSP exceedances, Stations AQMS1, ASR1 and ASR5 are located upstream of the major construction activities at dredging barge Crown Asia 1 at Portion N-A, Site WA-18 and Portion N6, thus they should not be affected by the dust, if any, generated by the concerned construction activities. Wind speed recorded from 14:00 to 17:00 shows a relatively higher measurement (ranged 1.60 to 2.20 m/s) in comparison to the period outside the monitoring period on the same day. As such, dust particles could be transported in a relatively higher rate across a wide area and resulting in the observed exceedances. • Under the strong wind condition, the recycling yard next to ASR5 is likely to generate large amount of dust with the ongoing of loading and unloading of recycle materials which is not part of the construction works of the Project. This practice under strong wind condition could be one of the major factors contributing to the exceedance at ASR5. • As stated in the EIA report (Section 4.2.3), the background TSP level of Tuen Mun is higher than the other region of Hong Kong, thus the exceedances may be also contributed cumulatively by the other construction works / traffic within the Tuen Mun Area rather than causing by the construction works of the Project.
Actions Taken / To Be Taken	<p>The Contractor was reminded to ensure all dust mitigating measures are provided at WA 18 and Portion N6. The ET will monitor for future trends in exceedances.</p>
Remarks	<p>The monitoring results, the locations of air quality monitoring stations, wind data and construction works schedule are attached.</p>

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To ENVIRON - Hong Kong, Limited (ENPO)

From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun-Chek Lap
Kok Link-Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Air Quality
Impact Monitoring

Date 30 January 2014

16/F DCH Commercial Centre,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com



ERM

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

0212330_15January2014_1hrTSP_Station ASR1

A total of one Action Level Exceedance was recorded on 15 January 2014.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam'.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/08
 TUEN MUN – CHEK LAP KOK LINK –
 NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

Air Quality Impact Monitoring
 Notification of Exceedance

Log No.	0212330_15January2014_1hrTSP_Station ASR1 [Total No. of Exceedances = 1]	
Date	15 January 2014 (Measured) 30 January 2014 (Laboratory results received by ERM)	
Monitoring Station	ASR1	
Parameter(s) with Exceedance(s)	1-hr TSP	
Action Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR1 = 331
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR1 = 213
Limit Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	500
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	260
Measured Levels	Action Level Exceedance on 1-hr TSP is observed at ASR1 ($375 \mu\text{g}/\text{m}^3$) during 1631 - 1731 hrs.	
Works Undertaken (at the time of monitoring event)	On 15 January 2014, marine dredging works were carried out by one dredger Crown Asia 1 at Portion N-B. At the time of monitoring during 1631 to 1731 hrs, dredging was undertaken by one dredger at Portion N-B which is at least 200 m from ASR1. At Site WA-18, construction of site office and substation were undertaken. At Portion N6, foundation works was undertaken.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance(s) are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • Considering the generally high level of 1-hour TSP between 1405 and 1640 hrs at all monitoring stations, it is probably unlikely that the level of land-based construction activities under this Contract can cause increase in 1-hour TSP of this magnitude and scale. It is considered that the observed exceedance for 1-hour TSP at ASR1 and generally high level of 1-hour TSP at all monitoring stations may represent sporadic event associated with traffic emissions and anthropogenic activities during evening rush hour at Lung Mun Road and River Trade Terminal. • According to the construction diary provided by the Contractor, the majority of construction works on 15 January 2014 were marine-based with the dredging works being undertaken by one dredger (Crown Asia 1) at Portion N-B, whilst only minor land-based construction works, including site office and substation construction at WA-18 and foundation works at Portion N6. All land-based constructions at WA-18 and Portion N6 were considered to have minor effect on dust generation. • Whilst exceedance of Action Level were observed at ASR1, the average 1-hr TSP level at the monitoring station (ASR1 = 294 µg/m³) on 15 January 2014 was in compliance with the Action and Limit Levels. • Same level and extent of construction works were carried out at the same works area on 9th January while no exceedance was recorded. • With reference to the recorded wind direction (ranged between 117° and 138°, blowing from a South-easterly direction) and wind speed (ranged from 1.68 to 2.65 m/s) during the period of observed 1-hr TSP exceedance, Station ASR1 is located downstream of the marine-based construction activities at dredging barge Crown Asia 1 at Portion N-B, whilst located at least 400 m away from the land-based construction area (i.e. Site WA-18 and Portion N6), thus ASR1 should not be affected by the dust, if any, generated by the land-based construction activities. • As stated in the EIA report (Section 4.2.3), the background TSP level of Tuen Mun is higher than the other region of Hong Kong, thus the exceedances may be also contributed cumulatively by the other construction works / traffic within the Tuen Mun Area rather than causing by the construction works of the Project.
Actions Taken / To Be Taken	<p>The Contractor was reminded to ensure all dust mitigating measures are provided at WA 18 and Portion N6. The ET will monitor for future trends in exceedances.</p>
Remarks	<p>The monitoring results, the locations of air quality monitoring stations, wind data and construction works schedule are attached.</p>

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To ENVIRON - Hong Kong, Limited (ENPO)

From ERM- Hong Kong, Limited

Ref/Project number Contract No. HY/2012/08 Tuen Mun-Chek Lap
Kok Link-Northern Connection Sub-sea Tunnel
Section

Subject Notification of Exceedance for Air Quality
Impact Monitoring

Date 6 February 2014

16/F DCH Commercial Centre,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com



ERM

Dear Sir or Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

0212330_27January2014_1hrTSP_Station ASR6

0212330_27January2014_1hrTSP_Station ASR5

0212330_27January2014_1hrTSP_Station ASR1

A total of three Action Level Exceedances were recorded on 27 January 2014.

Regards,

A handwritten signature in black ink, appearing to be 'Jovy Tam', written in a cursive style.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/08
 TUEN MUN – CHEK LAP KOK LINK –
 NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

Air Quality Impact Monitoring
 Notification of Exceedance

Log No.	0212330_27January2014_1hrTSP_Station ASR1 0212330_27January2014_1hrTSP_Station ASR5 0212330_27January2014_1hrTSP_Station ASR6 [Total No. of Exceedances = 3]	
Date	27 January 2014 (Measured) 6 February 2014 (Laboratory results received by ERM)	
Monitoring Station	ASR1 ASR5 ASR6	
Parameter(s) with Exceedance(s)	1-hr TSP	
Action Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR1 = 331 ASR5 = 340 ASR6 = 338
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	ASR1 = 213 ASR5 = 238 ASR6 = 238
Limit Levels	1-hr TSP ($\mu\text{g}/\text{m}^3$)	500
	24-hr TSP ($\mu\text{g}/\text{m}^3$)	260
Measured Levels	Action Level Exceedance on 1-hr TSP is observed at ASR1 ($398 \mu\text{g}/\text{m}^3$) during 1506 - 1606 hrs. Action Level Exceedance on 1-hr TSP is observed at ASR5 ($423 \mu\text{g}/\text{m}^3$) during 1352 - 1452 hrs. Action Level Exceedance on 1-hr TSP is observed at ASR6 ($377 \mu\text{g}/\text{m}^3$) during 1545 - 1645 hrs.	
Works Undertaken (at the time of monitoring event)	On 27 January 2014, marine dredging works were carried out by one dredger Crown Asia 1 at Portion N-B. At the time of monitoring during 1352 to 1645 hrs, land-based works were undertaken at Site WA-18 for the construction of site office and substation, and at Portion N6 for ground investigation.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance(s) are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • Considering the generally high level of 1-hour TSP between 1352 and 1645 hrs at all monitoring stations (except for ASR10), it is probably unlikely that the level of land-based construction works under this Contract can cause increase in 1-hour TSP of this magnitude and scale. It is considered that the observed exceedances for 1-hour TSP at ASR1, ASR5, ASR6 and generally high level of 1-hour TSP at most of the monitoring stations may represent sporadic event associated with traffic emissions and anthropogenic activities during afternoon rush hour at Lung Mun Road and River Trade Terminal. • According to the construction diary provided by the Contractor, the majority of construction works on 27 January 2014 were marine-based with the dredging works being undertaken by one dredger (Crown Asia 1) at Portion N-B, whilst only minor land-based construction works, including construction of site office and substation at WA-18 and ground investigation works at Portion N6. All land-based constructions at WA-18 and Portion N6 were considered to have minor effect on dust generation. • Whilst exceedance of Action Level were observed at ASR1, ASR5, ASR6, the average 1-hr TSP levels at these monitoring stations (ASR1 = 320 µg/m³; ASR5 = 336 µg/m³; ASR6 = 269 µg/m³) on 27 January 2014 were in compliance with the Action and Limit Levels. • Same level and extent of construction works were carried out at the same works area on 21st January while no exceedance was recorded. • With reference to the recorded wind direction (ranged between 90° and 121°, blowing from a Easterly direction) and wind speed (ranged from 2.0 to 2.53 m/s) during the period of the observed 1-hr TSP exceedances, Stations ASR1, ASR5 and ASR6 are located perpendicular to the marine-based construction activities at dredging barge Crown Asia 1 at Portion N-B, and ASR5 and ASR6 are located upstream from the land-based construction area (i.e. Site WA-18 and Portion N6), thus the observed exceedances should not be affected by the dust, if any, generated by the construction activities under this Contract. • As stated in the EIA report (Section 4.7.9.6), the operating chimneys of Butterfly Beach Laundry is identified as one of the point emission source in Tuen Mun, thus the observed exceedances appear to be contributed largely by the stack emission from the Butterfly Beach Laundry rather than causing by the construction works of the Project. • As stated in the EIA report (Section 4.2.3), the background TSP level of Tuen Mun is higher than the other region of Hong Kong, thus the exceedances may be also contributed cumulatively by the other construction works / traffic within the Tuen Mun Area rather than causing by the construction works of the Project.
Actions Taken/ To Be Taken	<p>The Contractor was reminded to ensure all dust mitigating measures are provided at WA 18 and Portion N6. The ET will monitor for future trends in exceedances.</p>
Remarks	<p>The monitoring results, the locations of air quality monitoring stations, wind data and construction works schedule are attached.</p>