

*Appendix L Cumulative Statistics on Exceedances*

		Total No. recorded in this reporting month	Total No. recorded since project commencement
1-Hr TSP	Action	8	12
	Limit	1	2
24-Hr TSP	Action	4	4
	Limit	1	1
Water Quality	Action	5	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 (Dec 2013)	0	0	0
Total No. received since project commencement	0	0	0

Email  
message

Environmental  
Resources  
Management

**To** ENVIRON - Hong Kong, Limited (ENPO)

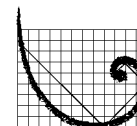
**From** ERM- Hong Kong, Limited

**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 Water Quality  
Impact Monitoring

**Date** 30 December 2013

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**

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Dear Sir or Madam,

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

0212330\_4December 2013\_SS\_F\_Station IS15

A total of one exceedance was recorded on 4 December 2013.

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

Marine Water Quality Impact Monitoring  
Notification of Exceedance

Log No.	0212330_4December 2013_SS_F_Station IS15 [Total No. of Exceedances = 1]	
Date	4 December 2013 (Measured) 7 December 2013 ( <i>In situ</i> results received by ERM) 23 December 2013 (Laboratory results received by ERM)	
Monitoring Station	CS4, CS6, SR8, SR9, SR10A, IS12, IS13, IS14, IS15	
Parameter(s) with Exceedance(s)	Depth-averaged Suspended Solids (mg/L)	
Action Levels	SS	120% of upstream control station at the same tide of the same day (i.e., CS6: $9.76 \times 120\% = 11.7$ mg/L for mid-flood) <u>and</u> 95%-ile of baseline data (i.e., 23.5 mg/L).
Limit Levels	SS	130% of upstream control station at the same tide of the same day and 10mg/L for WSD Seawater Intakes at Tuen Mun (i.e., CS6: $9.76 \times 130\% = 12.7$ mg/L for mid flood) <u>and</u> 99%-ile of baseline data. (i.e., 34.4 mg/L)
Measured Levels	Action Level Exceedance is observed at IS15 (23.9 mg/L) during mid-flood tide.	
Works Undertaken (at the time of monitoring event)	On 4 December 2013, all the dredging activities stopped before 19:00 and the dredging barge has already left Portion N-a at 19:00 hence no marine works was undertaken during the time of monitoring at IS15 during mid-flood tide (1900 to 1917 hrs).	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedance is unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• According to the site diary, no marine works was undertaken at the monitoring period after 1900 hrs at Portion N-a. Therefore the exceedance is highly unlikely to be project-related.</li> <li>• Apart from IS15, depth-averaged SS levels at all other monitoring stations were in compliance with the Action and Limit Levels during both mid-flood and mid-ebb tides on the same day. Depth-averaged SS levels at IS15 at both tides were similar to those at other stations apart from the marginal exceedance observed at mid-flood tide. Consequently the observed SS exceedance is well within the natural range and is not considered to be any environmental concern.</li> <li>• Depth-averaged Turbidity levels at all stations were relatively low and were in compliance with the Action and Limit Levels during both tides on the same day.</li> </ul>	
Actions Taken/ To Be Taken	With reference to the site inspection record on 4-Dec, the cage-type silt curtain was properly installed at the dredging site. Dredging grab was maintained to avoid spillage and controlled to prevent splashing of dredged material to the surrounding water. No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	
Remarks	The monitoring results and the locations of water quality monitoring stations are attached.	

Email  
message

Environmental  
Resources  
Management

**To** ENVIRON - Hong Kong, Limited (ENPO)

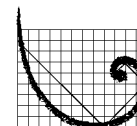
**From** ERM- Hong Kong, Limited

**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 Water Quality  
Impact Monitoring

**Date** 30 December 2013

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**

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Dear Sir or Madam,

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

0212330\_6December2013\_SS\_F\_Station\_SR8  
0212330\_6December2013\_SS\_F\_Station\_SR9  
0212330\_6December2013\_SS\_E\_Station\_IS15  
0212330\_6December2013\_SS\_E\_Station\_SR9

A total of four exceedances were recorded on 6 December 2013.

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

Marine Water Quality Impact Monitoring  
Notification of Exceedance

<b>Log No.</b>	0212330_6December 2013_SS_F_Station SR8 0212330_6December 2013_SS_F_Station SR9 0212330_6December 2013_SS_E_Station IS15 0212330_6December 2013_SS_E_Station SR9 [Total No. of Exceedances = 4]		
<b>Date</b>	6 December 2013 (Measured) 10 December 2013 ( <i>In situ</i> results received by ERM) 23 December 2013 (Laboratory results received by ERM)		
<b>Monitoring Station</b>	CS4, CS6, SR8, SR9, SR10A, IS12, IS13, IS14, IS15		
<b>Parameter(s) with Exceedance(s)</b>	Depth-averaged Suspended Solids (mg/L)		
<b>Action Levels</b>	SS	120% of upstream control station at the same tide of the same day (i.e., CS6: 11.2 x 120% = 13.4 mg/L for mid-flood; CS4: 12.0 x 120% = 14.4 mg/L for mid-ebb) <u>and</u> 95%-ile of baseline data (i.e., 23.5 mg/L).	
<b>Limit Levels</b>	SS	130% of upstream control station at the same tide of the same day and 10mg/L for WSD Seawater Intakes at Tuen Mun (i.e., CS6: 11.2 x 130% = 14.6 mg/L for mid-flood; CS4: 12.0 x 130% = 15.6 mg/L for mid-ebb) <u>and</u> 99%-ile of baseline data. (i.e., 34.4 mg/L)	
<b>Measured Levels</b>	Action Level Exceedance is observed at SR8 (23.8 mg/L) during mid-flood tide. Action Level Exceedance is observed at SR9 (27.4 mg/L) during mid-flood tide. Action Level Exceedance is observed at IS15 (26.2 mg/L) during mid-ebb tide. Action Level Exceedance is observed at SR9 (24.0 mg/L) during mid-ebb tide.		
<b>Sampling Time</b>	Sampling Station	Start Time	End Time
	SR8 (Mid-Flood)	09:20	09:35
	SR9 (Mid-Flood)	09:42	09:57
	IS15 (Mid-Ebb)	15:20	15:37
	SR9 (Mid-Ebb)	15:43	15:58
<b>Works Undertaken (at the time of monitoring event)</b>	According to the site diary, on 6 December 2013 dredging activities was undertaken by one closed grab dredger at Portion N-A from 07:00 to 17:00.		

<b>Possible Reason for Action or Limit Level Exceedance(s)</b>	<p>The exceedance is unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• Apart from IS15, SR8 and SR9, depth-averaged SS levels at all other monitoring stations were in compliance with the Action and Limit Levels during both mid-flood and mid-ebb tides on the same day. Depth-averaged SS levels at SR8 at both tides were similar to those at other stations apart from the marginal exceedance observed at mid-flood tide. Consequently the observed SS exceedance is well within the natural range and is not considered to be any environmental concern.</li> <li>• Depth-averaged Turbidity levels at all stations were in compliance with the Action and Limit Levels during both tides on the same day. Likewise, DO at all levels were relatively high and were in compliance with the Action and Limit Levels in both mid-ebb and mid-flood tides.</li> <li>• Heavy marine traffic was observed at monitoring station IS15 during site visit. The high usage of cargo vessels and sand barges (not associated with the Project) in the channel would be a possible factor contributing to the observed exceedances.</li> <li>• With reference to the daily marine dumping record, the daily dredging rate on 6-Dec (1,500 m<sup>3</sup>) was in compliance with the EP conditions (EP condition 3.7). In addition, one closed grab dredger was operated with both cage-type silt curtain and single layer silt curtain being deployed throughout the period of dredging activities.</li> <li>• No malpractice was observed during the sampling process.</li> <li>• With reference to site inspection 4 and 10 Dec, the cage-type silt curtain was properly maintained and no sediment outflow was observed.</li> </ul>
<b>Actions Taken/ To Be Taken</b>	<p>With reference to the site inspection record on 4-Dec, the cage-type silt curtain was properly installed at the dredging site. Dredging grab was maintained to avoid spillage and controlled to prevent splashing of dredged material to the surrounding water. No immediate action is considered necessary. The ET will monitor for future trends in exceedances.</p>
<b>Remarks</b>	<p>The monitoring results and the locations of water quality monitoring stations are attached.</p>

Email  
message

Environmental  
Resources  
Management

**To** ENVIRON - Hong Kong, Limited (ENPO)

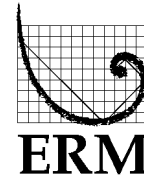
**From** ERM- Hong Kong, Limited

**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** 27 December 2013

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



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Dear Sir or Madam,

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

0212330\_11December2013\_1hrTSP\_Station ASR1  
0212330\_11December2013\_1hrTSP\_Station ASR5  
0212330\_11December2013\_1hrTSP\_Station AQMS2  
0212330\_11December2013\_24hrTSP\_Station ASR1  
0212330\_11December2013\_24hrTSP\_Station ASR5

A total of five exceedances were recorded on 11 December 2013.

Regards,

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

<b>Log No.</b>	0212330_11December2013_1hrTSP_Station ASR1 0212330_11December2013_1hrTSP_Station ASR5 0212330_11December2013_1hrTSP_Station AQMS2 [Total No. of Exceedances = 6]	
<b>Date</b>	11 December 2013 (Measured) 19 December 2013 (Laboratory results received by ERM)	
<b>Monitoring Station</b>	ASR1, ASR5, AQMS2	
<b>Parameter(s) with Exceedance(s)</b>	1-hr TSP	
<b>Action Levels</b>	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	ASR1 = 331 ASR5 = 340 AQMS2 = 338
<b>Limit Levels</b>	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	500
<b>Measured Levels</b>	Action Level Exceedance is observed at ASR1 ( $359 \mu\text{g}/\text{m}^3$ ) during 0832 - 0932 hrs. Action Level Exceedance is observed at ASR1 ( $474 \mu\text{g}/\text{m}^3$ ) during 0934 - 1034 hrs. Action Level Exceedance is observed at ASR5 ( $361 \mu\text{g}/\text{m}^3$ ) during 0823 - 0923 hrs. Limit Level Exceedance is observed at ASR5 ( $559 \mu\text{g}/\text{m}^3$ ) during 0925 - 1025 hrs. Action Level Exceedance is observed at AQMS2 ( $425 \mu\text{g}/\text{m}^3$ ) during 0811 - 0911 hrs. Action Level Exceedance is observed at AQMS2 ( $400 \mu\text{g}/\text{m}^3$ ) during 0913 - 1013 hrs.	
<b>Works Undertaken (at the time of monitoring event)</b>	On 11 December 2013, marine dredging works were carried out by one dredger Crown Asia 1 at Portion N-a. At the time of monitoring during 0811 to 1034 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, excavation and foundation for site formation were undertaken.	



<b>Possible Reason for Action or Limit Level Exceedance(s)</b>	<p>The exceedances are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• Considering the generally high level of 1-hour TSP between 0800 and 1045 hrs at most of the monitoring stations, it is probably unlikely that the level of land-base construction activities under this Contract can cause increase in 1-hour TSP of this magnitude and scale. It is considered that the observed high 1-hour TSP may represent sporadic event associated with traffic emissions and anthropogenic activities during morning rush hour at Lung Mun Road and River Trade Terminal.</li> <li>• According to the construction diary provided by the Contractor, the majority of construction works on 11 December 2013 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 at WA-18 were undertaken. Referring to the construction site diary on 11 December 2013, land-based construction works undertaken such as installation of site office's steel structure at WA-18, construction of u-channel are considered to have insignificant effect on dust generation.</li> <li>• Whilst exceedance of Action Level was observed at ASR1, the average 1-hr TSP level (328 µg/m<sup>3</sup>) at the monitoring station on 11 December 2013 was in compliance with the Action and Limit Levels. Likewise, average 1-hr TSP level at ASR5 (319µg/m<sup>3</sup>) was also in compliance with the Action and Limit Levels on 11 December 2013. The 1-hr TSP at ASR1 and ASR5 returned to level below the Action/Limit Levels at the third TSP measurement taken after morning traffic rush hours on the same day.</li> <li>• Same level and extent of construction works were carried out at the same locations on 5<sup>th</sup> December while no exceedance was recorded.</li> <li>• With reference to the recorded wind direction (ranged between 108° and 119°, blowing to a southeasterly direction) and wind speed (ranged from 2.79 to 4.67 m/s) during the period of observed 1-hr TSP exceedances, Stations ASR1, AQMS2 and ASR5 are located upstream of the major construction activities at dredging barge Crown Asia 1 at Portion N-A, thus they should not be affected by the dust, if any, generated by the concerned construction activities. Wind speed recorded from 08:00 to 10:00 shows a significantly higher measurement (4.46m/s) with comparison to previous monitoring records; hence dust particles were transported in a relatively higher rate across a wide area. The Exceedances are likely to be resulted from the high wind speed during the monitoring period.</li> <li>• 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 is possible one of the major factors contributing to the exceedance for ASR5.</li> <li>• 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.</li> </ul>
<b>Actions Taken/ To Be Taken</b>	<p>The Contractor was reminded to ensure all dust mitigating measures are provided at WA 18. The ET will monitor for future trends in exceedances.</p>
<b>Remarks</b>	<p>The monitoring results, the locations of air quality monitoring stations, wind data and construction works schedule are attached.</p>

Email  
message

**Environmental  
Resources  
Management**

**To** ENVIRON - Hong Kong, Limited (ENPO)

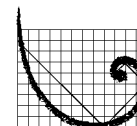
**From** ERM- Hong Kong, Limited

**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 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\_23December2013\_1hrTSP\_Station ASR5  
0212330\_23December2013\_1hrTSP\_Station AQMS2  
0212330\_23December2013\_24hrTSP\_Station AQMS2

A total of three exceedances were recorded on 23 December 2013.

Regards,



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

<b>Log No.</b>	0212330_23December2013_1hrTSP_Station ASR5 0212330_23December2013_1hrTSP_Station AQMS2 0212330_23December2013_24hrTSP_Station AQMS2 [Total No. of Exceedances = 3]	
<b>Date</b>	23 December 2013 (Measured) 1 January 2014 (Laboratory results received by ERM)	
<b>Monitoring Station</b>	ASR5, AQMS2	
<b>Parameter(s) with Exceedance(s)</b>	1-hr TSP 24-hr TSP	
<b>Action Levels</b>	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
<b>Limit Levels</b>	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	500
	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	260
<b>Measured Levels</b>	Action Level Exceedance on 1-hr TSP is observed at ASR5 ( $386 \mu\text{g}/\text{m}^3$ ) during 0822 - 0922 hrs. Action Level Exceedance on 1-hr TSP is observed at AQMS2 ( $344 \mu\text{g}/\text{m}^3$ ) during 0912 - 1012 hrs. Limit Level Exceedance on 24-hr TSP is observed at AQMS2 ( $269 \mu\text{g}/\text{m}^3$ ).	
<b>Works Undertaken (at the time of monitoring event)</b>	On 23 December 2013, marine dredging works were carried out by one dredger Crown Asia 1 at Portion N-A. At the time of monitoring during 0822 to 1012 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, excavation and foundation for site formation were undertaken.	

<b>Possible Reason for Action or Limit Level Exceedance(s)</b>	<p>The exceedances are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• It is considered that the observed high 1-hour TSP may represent sporadic event associated with traffic emissions and anthropogenic activities during morning rush hour at Lung Mun Road and River Trade Terminal.</li> <li>• According to the construction diary provided by the Contractor, the majority of construction works on 23 December 2013 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 at WA-18 were undertaken. Referring to the construction site diary on 23 December 2013, land-based construction works undertaken was installation of roof panel at WA-18, construction of substation are considered to have minor effect on dust generation.</li> <li>• Whilst exceedance of Action Level was observed at ASR5, the average 1-hr TSP level (277 µg/m<sup>3</sup>) at the monitoring station on 23 December 2013 was in compliance with the Action and Limit Levels. Likewise, average 1-hr TSP level at ASR5 was also in compliance with the Action and Limit Levels on 17 and 28 December 2013. The 1-hr TSP at ASR5 returned to level below the Action/Limit Levels at the third TSP measurement taken after high traffic flow in morning on the same day.</li> <li>• Same level and extent of construction works were carried out at the same locations on 17<sup>th</sup> December while no exceedance was recorded.</li> <li>• With reference to the recorded wind direction (ranged between 113° and 168°, blowing to a southeasterly direction) and wind speed (ranged from 1.47 to 2.65 m/s) during the period of observed 1-hr TSP exceedances, Stations AQMS2 and ASR5 are located upstream of the major construction activities at dredging barge Crown Asia 1 at Portion N-A, thus they should not be affected by the dust, if any, generated by the concerned construction activities. Wind speed recorded from 08:00 to 10:00 shows a relatively higher measurement (1.98m/s) in comparison to previous monitoring records; hence dust particles were transported in a relatively higher rate across a wide area. The Exceedances are likely to be resulted from the high wind speed during the monitoring period.</li> <li>• 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 is possible one of the major factors contributing to the exceedance for ASR5.</li> <li>• 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.</li> </ul>
<b>Actions Taken/ To Be Taken</b>	<p>The Contractor was reminded to ensure all dust mitigating measures are provided at WA 18. The ET will monitor for future trends in exceedances.</p>
<b>Remarks</b>	<p>The monitoring results, the locations of air quality monitoring stations, wind data and construction works schedule are attached.</p>

Email  
message

Environmental  
Resources  
Management

**To** ENVIRON - Hong Kong, Limited (ENPO)

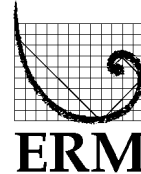
**From** ERM- Hong Kong, Limited

**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 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



---

Dear Sir or Madam,

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

0212330\_28December2013\_1hrTSP\_Station ASR5  
0212330\_28December2013\_1hrTSP\_Station ASR10  
0212330\_28December2013\_1hrTSP\_Station AQMS2  
0212330\_28December2013\_24hrTSP\_Station ASR1  
0212330\_28December2013\_24hrTSP\_Station ASR5

A total of five exceednaces were recorded on 28 December 2013.

Regards,

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

<b>Log No.</b>	0212330_28December2013_1hrTSP_Station ASR5 0212330_28December2013_1hrTSP_Station AQMS2 0212330_28December2013_1hrTSP_Station ASR10 0212330_28December2013_24hrTSP_Station ASR1 0212330_28December2013_24hrTSP_Station ASR5 [Total No. of Exceedances = 5]	
<b>Date</b>	28 December 2013 (Measured) 4 January 2014 (Laboratory results received by ERM)	
<b>Monitoring Station</b>	ASR1, ASR5, ASR10, AQMS2	
<b>Parameter(s) with Exceedance(s)</b>	1-hr TSP 24-hr TSP	
<b>Action Levels</b>	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
<b>Limit Levels</b>	1-hr TSP ( $\mu\text{g}/\text{m}^3$ )	500
	24-hr TSP ( $\mu\text{g}/\text{m}^3$ )	260
<b>Measured Levels</b>	Action Level Exceedance on 1-hr TSP is observed at ASR5 ( $379 \mu\text{g}/\text{m}^3$ ) during 0822 - 0922 hrs. Action Level Exceedance on 1-hr TSP is observed at AQMS2 ( $378 \mu\text{g}/\text{m}^3$ ) during 0811 - 0911 hrs. Action Level Exceedance on 1-hr TSP is observed at ASR10 ( $386 \mu\text{g}/\text{m}^3$ ) during 1004 - 1104 hrs. Action Level Exceedance on 24-hr TSP is observed at ASR1 ( $249 \mu\text{g}/\text{m}^3$ ). Action Level Exceedance on 24-hr TSP is observed at ASR5 ( $256 \mu\text{g}/\text{m}^3$ ).	
<b>Works Undertaken (at the time of monitoring event)</b>	On 28 December 2013, marine dredging works were carried out by one dredger Crown Asia 1 at Portion N-A. At the time of monitoring during 0822 to 1104 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, concrete paving, construction of substation were undertaken. At Portion N6, pedestrian walkway preparation at N6 was undertaken.	

<b>Possible Reason for Action or Limit Level Exceedance(s)</b>	<p>The exceedances are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> <li>• Considering the generally high level of 1-hour TSP between 0822 and 1104 hrs at most of the monitoring stations, it is probably unlikely that the level of land-base construction activities under this Contract can cause increase in 1-hour TSP of this magnitude and scale. It is considered that the observed high 1-hour TSP may represent sporadic event associated with traffic emissions and anthropogenic activities during morning rush hour at Lung Mun Road and River Trade Terminal.</li> <li>• According to the construction diary provided by the Contractor, the majority of construction works on 28 December 2013 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 at WA-18 and Portion N6 were undertaken. Referring to the construction site diary on 28 December 2013, land-based construction works undertaken were concrete paving and construction of substation at WA-18, these construction activities are considered to have minor effect on dust generation. At Portion N6, preparation works of pedestrian walkway was considered to have minor effect on dust generation.</li> <li>• Whilst exceedances of Action Level were observed at ASR10, ASR5, AQMS2, the average 1-hr TSP level (315, 279, 300 µg/m<sup>3</sup>) at these monitoring stations on 28 December 2013 was in compliance with the Action and Limit Levels. Likewise, average 1-hr TSP level at ASR10, ASR5, AQMS2 was also in compliance with the Action and Limit Levels on 23 December 2013. The 1-hr TSP at ASR5 and AQMS2 returned to level below the Action/Limit Levels at the third TSP measurement taken after high traffic flow in morning on the same day.</li> <li>• With reference to the recorded wind direction (ranged between 105° and 116°, blowing to a southeasterly direction) and wind speed (ranged from 2.90 to 3.69 m/s) during the period of observed 1-hr TSP exceedances, Stations AQMS2 and ASR5 are located upstream of the major construction activities at dredging barge Crown Asia 1 at Portion N-A and Portion N6, thus they should not be affected by the dust, if any, generated by the concerned construction activities. Wind speed recorded from 08:00 to 11:00 shows a relatively higher measurement (3.27m/s) in comparison to previous monitoring records; hence dust particles were transported in a relatively higher rate across a wide area. The Exceedances are likely to be resulted from the high wind speed during the monitoring period.</li> <li>• 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 for ASR5.</li> <li>• 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.</li> </ul>
<b>Actions Taken / To Be Taken</b>	<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>
<b>Remarks</b>	<p>The monitoring results, the locations of air quality monitoring stations, wind data and construction works schedule are attached.</p>