Appendix L

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

 Table L1
 Cumulative Statistics on Exceedances

Parameters	Level of Exceedance	Total No. recorded in this reporting month	Total No. recorded since project commencement
1-hr TSP	Action	5	87
	Limit	1	6
24-hr TSP	Action	0	8
	Limit	0	4
Water Quality	Action	0	20
	Limit	0	1
Impact Dolphin	Action	0	11
Monitoring	Limit	0	14

Table L2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Cumulative Statistics						
	Complaints	Notifications of	Successful				
		Summons	Prosecutions				
This Reporting Month (January 2019)	0	0	0				
Total No. received since project commencement	16	1	0				

Email message **Environmental** Resources Management

To Ramboll Hong Kong, Limited (ENPO)

2507, 25/F One Harbourfront 18 Tak Fung Street Hunghom, Kowloon

Hong Kong

Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660

From ERM- Hong Kong, Limited

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 17 January 2019



Dear Sir or Madam,

Ref/Project number

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

0212330_8January2019_1hrTSP_Station ASR5

One Action Level Exceedance was recorded on 8 January 2019.

Regards,

Dr Jasmine Ng

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.	02123	330_8January2019_1hrTSP_Station ASR5
		[Total No. of Exceedances = 1]
Date		8 January 2019 (Measured)
	17 Januai	ry 2019 (Laboratory results received by ERM)
Monitoring Station	A	SR1, ASR5, ASR6, ASR10 and AQMS1
Parameter(s) with Exceedance(s)		1-hr TSP
Action Levels	24-hr TSP (μg/m³)	ASR1 = 213
		ASR5 = 238
		AQMS1 = 213
		ASR6 = 238
		ASR10 = 214
	1-hr TSP (μg/m³)	ASR1 = 331
		ASR5 = 340
		AQMS1 = 335
		ASR6 = 338
		ASR10 = 337
Limit Levels	1-hr TSP (μg/m³)	500
	24-hr TSP (μg/m³)	260
Measured Levels	Action Level Exceedance for 1-h	r TSP is observed at ASR5 (354 μ g/m3) during 1320 – 1420 hrs.
Works Undertaken (at	On 8 January 2019, TBM tunnel	works and surcharge removal was carried out at Portion N-C.
the time of monitoring		
event)		
Possible Reason for	I	due to this Contract, in view of the following:
Action or Limit Level		ction information provided by the Contractor, the majority of
Exceedance(s)	<u>-</u>	anuary 2019 was TBM tunnel works and surcharge removal.
		land-based construction works, the Contractor has implemented the
		sures as per the EP, approved EIA and Updated EM&A Manual (e.g.
	1 2 2 2	ed soil within the Project site and associated works areas; exposed
	soil covered by tarpaulin	,
		y to be due to this Contract as dust suppression measures were
	1	n site. Water spraying was applied on site to prevent dust.
	Based on the above, the exceedar	nces are unlikely to be due to this Contract.

Actions Taken/To Be Taken	According to the construction information provided by the Contractor, TBM tunnel works and surcharge removal was carried out on 8 January 2019. Dust suppression measures were properly implemented. Water spraying was applied to prevent dust. Photos are provided in Annex A. Water spraying record is also provided. The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual including watering to maintain all exposed road					
	surfaces and dust sources wet, use of sprinklers for water spraying, covering the materials having the potential to create dust by clean tarpaulin, use of water truck and watering on all exposed soil within the Project site) throughout the construction period.					
Remarks	The monitoring results, wind data and the locations of air quality monitoring stations are attached.					

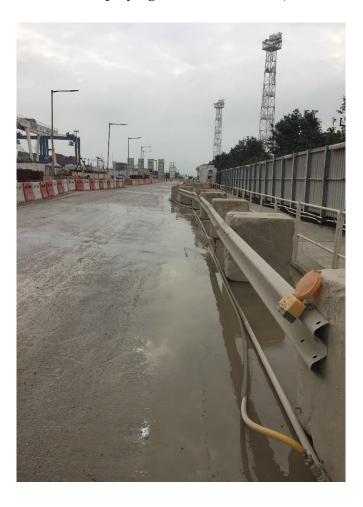


Annex A Photos provided by the Contractor

*Note: Photos taken on 8/1/2019



Water truck is used for water spraying at the works area. (Works Area Portion N-C)

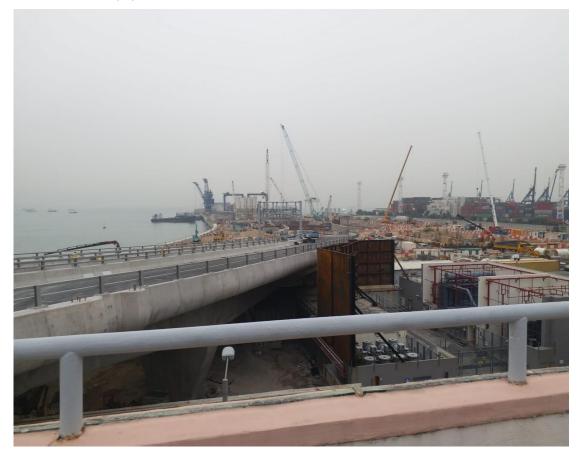


Water spraying was applied on the main haul road. (Works Area Portion N-A)

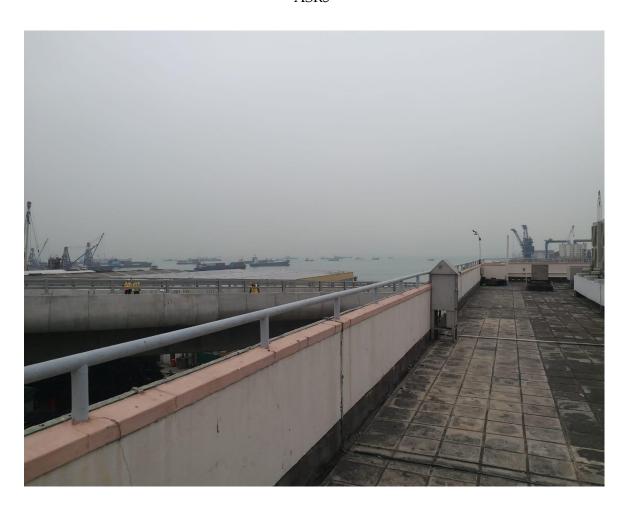


Annex A Photos taken during AQM

*Note: Photos taken on 8/1/2019



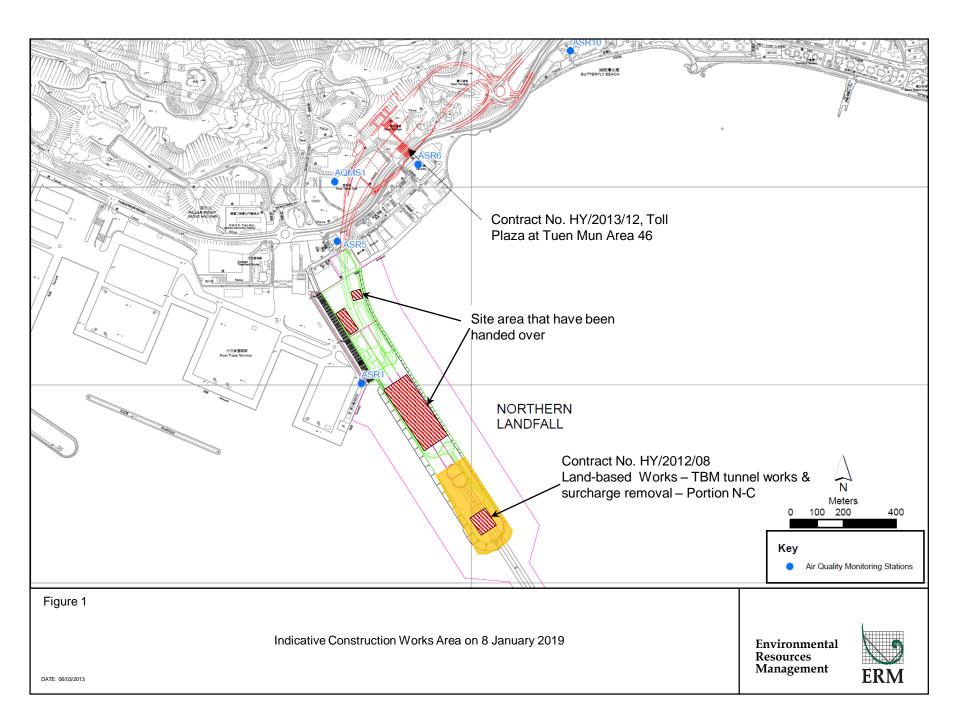
ASR5



ASR5

Air quality monitoring results on 8/1/2019									
Drainat	Works	Date	Station	Weather	Start time		Results	Unit	
Project						Parameters			
TMCLKL	HY/2012/08	2019-01-08	AQMS1	Cloudy	13:41	1-hour TSP	179	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	AQMS1	Cloudy	14:43	1-hour TSP	192	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	AQMS1	Cloudy	15:45	1-hour TSP	193	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR1	Cloudy	13:30	1-hour TSP	184	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR1	Cloudy	14:32	1-hour TSP	281	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR1	Cloudy	15:34	1-hour TSP	193	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR10	Cloudy	13:00	1-hour TSP	162	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR10	Cloudy	14:02	1-hour TSP	189	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR10	Cloudy	15:04	1-hour TSP	192	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR5	Cloudy	13:20	1-hour TSP	354	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR5	Cloudy	14:22	1-hour TSP	292	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR5	Cloudy	15:24	1-hour TSP	275	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR6	Cloudy	13:10	1-hour TSP	239	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR6	Cloudy	14:12	1-hour TSP	231	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR6	Cloudy	15:14	1-hour TSP	197	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	AQMS1	Cloudy	16:47	24-hour TSP	97	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR1	Cloudy	16:36	24-hour TSP	135	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR10	Cloudy	16:06	24-hour TSP	90	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR5	Cloudy	16:26	24-hour TSP	175	ug/m3	
TMCLKL	HY/2012/08	2019-01-08	ASR6	Cloudy	16:16	24-hour TSP	119	ug/m3	

Meteorological Data for Impact Monitoring in the reporting period							
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction(degree)				
19/01/08	0:00	0	-				
19/01/08	1:00	0	-				
19/01/08	2:00	0	-				
19/01/08	3:00	0.4	47				
19/01/08	4:00	0.9	44				
19/01/08	5:00	1.3	93				
19/01/08	6:00	0.9	111				
19/01/08	7:00	1.3	95				
19/01/08	8:00	0.4	88				
19/01/08	9:00	0.9	113				
19/01/08	10:00	0.4	163				
19/01/08	11:00	0.9	159				
19/01/08	12:00	1.3	228				
19/01/08	13:00	0.9	210				
19/01/08	14:00	0.9	204				
19/01/08	15:00	0.9	221				
19/01/08	16:00	0.4	250				
19/01/08	17:00	0.9	182				
19/01/08	18:00	1.8	345				
19/01/08	19:00	1.3	309				
19/01/08	20:00	1.3	295				
19/01/08	21:00	0.9	299				
19/01/08	22:00	1.3	297				
19/01/08	23:00	0.4	346				





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

Weekly Water Spraying Record 每週灑水檢查記錄

Site	e Location 地盤	全位置:		Porthern L	and full					
Da	te 日期] :	_ 5 Jan 2019 to 至 11 Jan 2019							
	<u>Time</u> 時間	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	Friday 星期五	Saturday 星期六	Sunday 星期日		
1	8:00 - 8:45		1/	1/		1		1		
2	8:45 – 9:30		V			1/		1/		
3	9:30 – 10:15		V		\checkmark			V		
4	10:15 – 11:00				V	/	1/			
5	11:00 – 11:45				V		1/	/		
6	11:45 – 12:30					V	V	V		
7	12:30 – 13:15	V	V		V	V	\vee	1		
8	13:15 – 14:00	V				/	V	1/		
9	14:00 – 14:45		V			V	V	V		
10	14:45 – 15:30	V		V	V		V	V		
11	15:30 – 16:45			V	V	V	V	V		
12	16:45 – 17:30	\checkmark	V	\vee	\vee	V	$\overline{}$	/		
	Verified by Site Foreman 地盤科文簽署確認	T		7	7	7	7	7		
B.1.2 - 1										
Nigh	nt shift 夜間工作(it necessary	如需要)			-				
	17:30 - 19:00									
	19:00 - 20:30									

*Please -

tick ($\sqrt{}$) in the box if complete the spraying of water. circle (O) in the box if it is raining.

*如果 - 已經完成灑水,請於方格內加上剔號(√)。 是下兩天, 請於方格內加上圓圈(O)。

Remarks:

- (1) Pursuant to EP Clause 3.15, the Permit Holder shall undertake watering at least 12 times per day on all exposed soil within the Project site and associated work areas in Tuen Mun area throughout the construction phase.
- (2) Spraying position includes the main haul road, open area, slopes, stockpiles and any other dusty materials.
- (3) If it is raining, no water spraying is needed.

20:30 - 22:00 22:00 - 23:00

(4) The no of spraying will be increased due to site condition.

備註:

- (1) 根據環境許可證 3.15 條例,在整個施工階段內,許可證持有人須每天至少 12 次在屯門區項目工地和相關的工作區域內的所有暴露土壤灑水。
- (2) 灑水位置包括主要運輸道路,空曠地帶,斜坡,存料堆,以及任何其他產生塵埃物料。
- (3) 當下雨時,地盤將不需要灑水。
- (4) 如果地盤情況更改或有需要時,灑水次數會相應增加。

Email message **Environmental** Resources Management

To Ramboll Hong Kong, Limited (ENPO)

2507, 25/F One Harbourfront 18 Tak Fung Street Hunghom, Kowloon

Hong Kong

From ERM- Hong Kong, Limited

Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660

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 17 January 2019



Dear Sir or Madam,

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

 $0212330_11January 2019_1hrTSP_Station\ ASR1$ 0212330_11January2019_1hrTSP_Station ASR5

Two Action Level Exceedances were recorded on 11 January 2019.

Regards,

Dr Jasmine Ng

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_11January2019_1hrTSP_Station ASR1							
	0212330_11January2019_1hrTSP_Station ASR5							
	[Total No. of Exceedances = 2]							
Date	11 January 2019 (Measured)							
	17 Januar	y 2019 (Laboratory results received by ERM)						
Monitoring Station	AS	SR1, ASR5, ASR6, ASR10 and AQMS1						
Parameter(s) with		1-hr TSP						
Exceedance(s)		1-10 151						
Action Levels	24-hr TSP (μg/m³)	ASR1 = 213						
		ASR5 = 238						
		AQMS1 = 213						
		ASR6 = 238						
		ASR10 = 214						
	1-hr TSP (μg/m³)	ASR1 = 331						
		ASR5 = 340						
		AQMS1 = 335						
		ASR6 = 338						
		ASR10 = 337						
Limit Levels	1-hr TSP (μg/m³)	500						
	24-hr TSP (μg/m³)	260						
Measured Levels	Action Level Exceedance for 1-h	TSP is observed at ASR1 (335 μg/m3) during 1339 – 1439 hrs.						
	Action Level Exceedance for 1-hi	TSP is observed at ASR5 (398 μ g/m3) during 1327 – 1427 hrs.						
Works Undertaken (at	On 11 January 2019, TBM tunnel	works and surcharge removal was carried out at Portion N-C.						
the time of monitoring	-							
event)								
Possible Reason for	The exceedance is unlikely to be	due to this Contract, in view of the following:						
Action or Limit Level	According to the construction information provided by the Contractor, the majority of							
Exceedance(s)	construction works on 11 January 2019 was TBM tunnel works and surcharge removal.							
	During the period of the l	and-based construction works, the Contractor has implemented the						
	required mitigation measures as per the EP, approved EIA and Updated EM&A Manual (e.g.							
	water spraying on expose	d soil within the Project site and associated works areas; exposed						
	soil covered by tarpaulin	-						
	, ,	y to be due to this Contract as dust suppression measures were						
	·	site. Water spraying was applied on site to prevent dust.						
		nces are unlikely to be due to this Contract.						
	Ji die de J. e, die exceedd							

Actions Taken/To Be	Follow-up site inspection was carried out on 23 January 2019. Dust suppression measures were							
Taken	properly implemented. Water spraying was applied to prevent dust. Photos are provided in							
	Annex A.							
	The Contractor has been reminded to implement the required mitigation measures as per the EP,							
	approved EIA and Updated EM&A Manual including watering to maintain all exposed road							
	surfaces and dust sources wet, use of sprinklers for water spraying, covering the materials having							
	the potential to create dust by clean tarpaulin, use of water truck and watering on all exposed soil							
	within the Project site) throughout the construction period.							
Remarks	The monitoring results, wind data and the locations of air quality monitoring stations are attached.							



*Note: Photos taken on 23/1/2019



Water truck is used for water spraying at works area. (Works Area Portion N-C)



Exposed soil is covered by tarpaulin sheets to prevent dust. (Works Area Portion N-C)

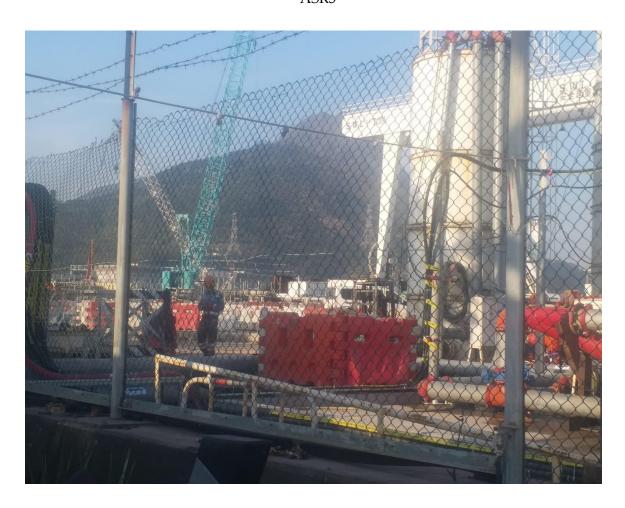


Annex A Photos taken during AQM

*Note: Photos taken on 11/1/2019



ASR5



ASR1

Project	Works	Date	Station	Weather	Start time	Parameters	Results	Unit
TMCLKL	HY/2012/08	11/1/2019	AQMS1	Cloudy	13:50	1-hour TSP	214	ug/m3
TMCLKL	HY/2012/08	11/1/2019	AQMS1	Cloudy	14:52	1-hour TSP		ug/m3
TMCLKL	HY/2012/08	11/1/2019	AQMS1	Cloudy	15:54	1-hour TSP	108	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR1	Cloudy	13:39	1-hour TSP	335	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR1	Cloudy	14:41	1-hour TSP	129	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR1	Cloudy	15:43	1-hour TSP	120	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR10	Cloudy	13:05	1-hour TSP	116	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR10	Cloudy	14:07	1-hour TSP	155	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR10	Cloudy	15:09	1-hour TSP	95	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR5	Cloudy	13:27	1-hour TSP	398	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR5	Cloudy	14:29	1-hour TSP	327	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR5	Cloudy	15:31	1-hour TSP	243	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR6	Cloudy	13:16	1-hour TSP	214	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR6	Cloudy	14:18	1-hour TSP	125	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR6	Cloudy	15:20	1-hour TSP	153	ug/m3
TMCLKL	HY/2012/08	11/1/2019	AQMS1	Cloudy	16:56	24-hour TSP	127	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR1	Cloudy	16:45	24-hour TSP	120	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR10	Cloudy	16:11	24-hour TSP	137	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR5	Cloudy	16:33	24-hour TSP	196	ug/m3
TMCLKL	HY/2012/08	11/1/2019	ASR6	Cloudy	16:22	24-hour TSP	191	ug/m3

Meteorological Data for Impact Monitoring in the reporting period							
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction(degree)				
19/01/11	0:00	0	-				
19/01/11	1:00	0	-				
19/01/11	2:00	0	-				
19/01/11	3:00	0	-				
19/01/11	4:00	0.9	89				
19/01/11	5:00	0.4	113				
19/01/11	6:00	1.3	51				
19/01/11	7:00	1.8	71				
19/01/11	8:00	0.9	137				
19/01/11	9:00	0.9	284				
19/01/11	10:00	0.9	162				
19/01/11	11:00	1.3	223				
19/01/11	12:00	0.9	160				
19/01/11	13:00	0.9	112				
19/01/11	14:00	1.3	155				
19/01/11	15:00	2.2	69				
19/01/11	16:00	1.8	55				
19/01/11	17:00	0.9	90				
19/01/11	18:00	0.4	88				
19/01/11	19:00	0	-				
19/01/11	20:00	0	-				
19/01/11	21:00	0	-				
19/01/11	22:00	0	-				
19/01/11	23:00	0	-				



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

Weekly Water Spraying Record 每週灑水檢查記錄

Site	e Location 地盤	位置:	Northern Landfall							
Da	te 日期] :						2019		
	Time 時間	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	Friday 星期五	Saturday 星期六	Sunday 星期日		
1	8:00 - 8:45		_				_			
2	8:45 - 9:30									
3	9:30 - 10:15									
4	10:15 - 11:00						_			
5	11:00 - 11:45									
6	11:45 – 12:30									
7	12:30 - 13:15				_					
8	13:15 - 14:00									
9	14:00 - 14:45			_						
10	14:45 – 15:30									
11	15:30 - 16:45		_							
12	16:45 – 17:30	/	/			/	/	/		
	Verified by Site Foreman 地盤科文簽署確認	7	7	7	7	7	7	7		
Nigi	ht shift 夜間工作(if necessary	如需要)							
	17:30 – 19:00									

*Please -

tick ($\sqrt{}$) in the box if complete the spraying of water. circle (O) in the box if it is raining.

*如果 - 已經完成灑水,請於方格內加上剔號(√)。 是下兩天, 請於方格內加上圓圈(O)。

Remarks:

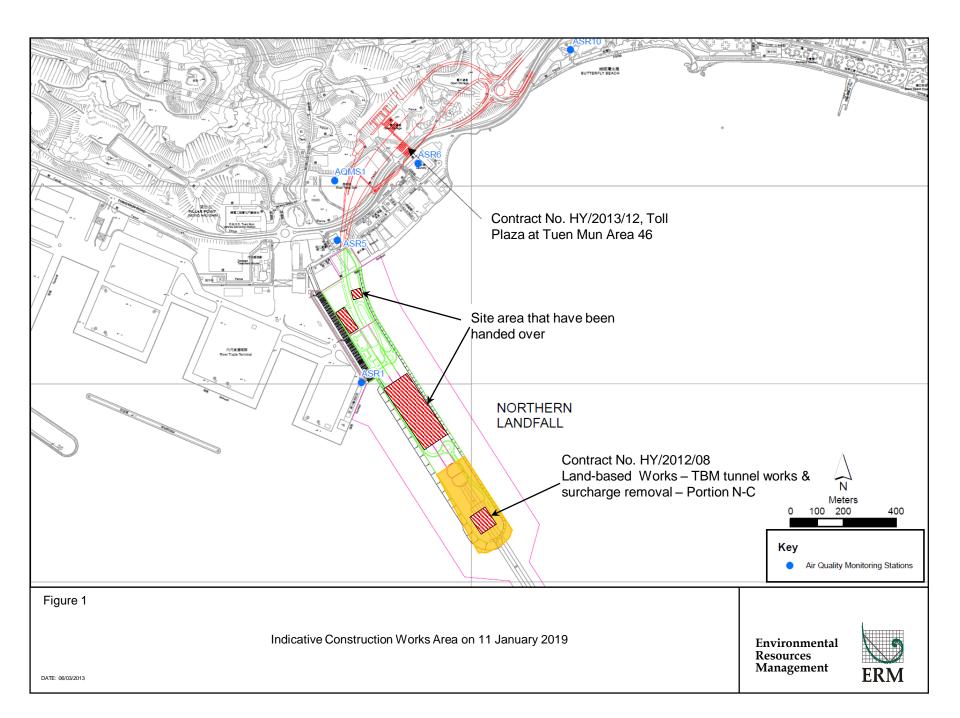
- (1) Pursuant to EP Clause 3.15, the Permit Holder shall undertake watering at least 12 times per day on all exposed soil within the Project site and associated work areas in Tuen Mun area throughout the construction phase.
- (2) Spraying position includes the main haul road, open area, slopes, stockpiles and any other dusty materials.
- (3) If it is raining, no water spraying is needed.

19:00 - 20:30 20:30 - 22:00 22:00 - 23:00

(4) The no of spraying will be increased due to site condition.

備註:

- (1) 根據環境許可證 3.15 條例,在整個施工階段內,許可證持有人須每天至少 12 次在屯門區項目工地和相關的工作區域內的所有暴露土壤灑水。
- (2) 灑水位置包括主要運輸道路,空曠地帶,斜坡,存料堆,以及任何其他產生塵埃物料。
- (3) 當下雨時,地盤將不需要灑水。
- (4) 如果地盤情況更改或有需要時、灑水次數會相應增加。



Email message

Environmental Resources Management

To Ramboll Hong Kong, Limited (ENPO)

2507, 25/F One Harbourfront 18 Tak Fung Street Hunghom, Kowloon

Hong Kong

Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660

From ERM- Hong Kong, Limited

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 29 January 2019



Dear Sir or Madam,

Ref/Project number

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

0212330_17January2019_1hrTSP_Station ASR1 0212330_17January2019_1hrTSP_Station ASR5

One Action Level and one Limit Level Exceedances were recorded on 17 January 2019.

Regards,

Dr Jasmine Ng

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_17January2019_1hrTSP_Station ASR1				
	02123	30_17January2019_1hrTSP_Station ASR5			
		[Total No. of Exceedances = 2]			
Date		17 January 2019 (Measured)			
	29 Januar	ry 2019 (Laboratory results received by ERM)			
Monitoring Station	A	SR1, ASR5, ASR6, ASR10 and AQMS1			
Parameter(s) with		1-hr TSP			
Exceedance(s)					
Action Levels	24-hr TSP (μg/m³)	ASR1 = 213			
		ASR5 = 238			
		AQMS1 = 213			
		ASR6 = 238			
		ASR10 = 214			
	1-hr TSP (μg/m³)	ASR1 = 331			
		ASR5 = 340			
		AQMS1 = 335			
		ASR6 = 338			
		ASR10 = 337			
Limit Levels	1-hr TSP (μg/m³)	500			
	24-hr TSP (μg/m³)	260			
Measured Levels	Action Level Exceedance for 1-h	r TSP is observed at ASR5 (354 μ g/m3) during 1552 – 1652 hrs.			
	Limit Level Exceedance for 1-hr	TSP is observed at ASR1 (519 μ g/m3) during 1604 – 1704 hrs.			
Works Undertaken (at	On 17 January 2019, TBM tunnel	works and surcharge removal was carried out at Portion N-C.			
the time of monitoring					
event)					
Possible Reason for	The exceedance is unlikely to be	due to this Contract, in view of the following:			
Action or Limit Level	According to the construction	ction information provided by the Contractor, the majority of			
Exceedance(s)	construction works on 17	January 2019 was TBM tunnel works and surcharge removal.			
	During the period of the	land-based construction works, the Contractor has implemented the			
	required mitigation meas	sures as per the EP, approved EIA and Updated EM&A Manual (e.g.			
		ed soil within the Project site and associated works areas; exposed			
	soil covered by tarpaulin	sheets).			
	The exceedance is unlike.	ly to be due to this Contract as dust suppression measures were			
	implemented properly or	n site. Water truck was used for water spraying at the works area			
	to prevent dust.	1 , 0			
	•	orded wind direction (ranged between 284° and 351°, blowing from			
		n) and wind speed (ranged from 0.9 to 2.2 m/s) during the period of			
	_	ceedances, Stations ASR1 and ASR5 are located upstream to the			
		rtion N-C. Thus the observed exceedances should not be affected by			
		d by the construction activities under this Contract.			
		nces are unlikely to be due to this Contract.			
	Sussea of the above, the exceeda	need are arminer, to be due to this continue.			

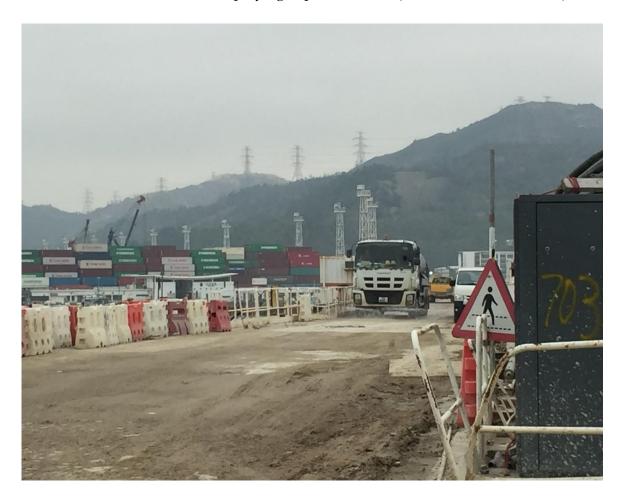
Actions Taken/To Be	According to the construction information provided by the Contractor, TBM tunnel works and
Actions Taken / To Be Taken	According to the construction information provided by the Contractor, TBM tunnel works and surcharge removal was carried out on 17 January 2019. Dust suppression measures were properly implemented. Water spraying was applied to prevent dust. Photos taken on 17 January 2019 are provided in Annex A. The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual including watering to maintain all exposed road surfaces and dust sources wet, use of sprinklers for water spraying, covering the materials having the potential to create dust by clean tarpaulin, use of water truck and watering on all exposed soil within the Project site) throughout the construction period.
Remarks	The monitoring results, wind data and the locations of air quality monitoring stations are attached.



*Note: Photos taken on 17/1/2019



Water truck is used for water spraying to prevent dust. (Works Area Portion N-A)



Water truck is used for water spraying at works area. (Works Area Portion N-C)



*Note: Photos taken on 17/1/2019

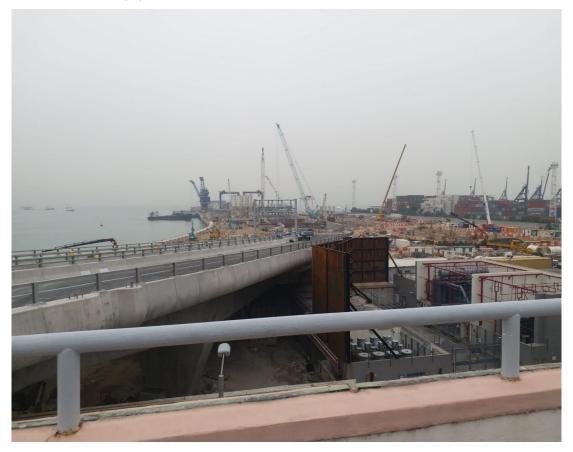


Exposed soil are covered by tarpaulin sheets to prevent dust. (Works Area Portion N-C)



Annex A Photos taken during AQM

*Note: Photos taken on 17/1/2019



ASR5



ASR1

Air quality monitoring results on 17/1/2019								
- ·							.	·
Project	Works	Date	Station	Weather	Start time	Parameters	Results	Unit
TMCLKL	HY/2012/08	17/1/2019	AQMS1	Cloudy	14:13	1-hour TSP	101	ug/m3
TMCLKL	HY/2012/08	17/1/2019	AQMS1	Cloudy	15:14	1-hour TSP	194	ug/m3
TMCLKL	HY/2012/08	17/1/2019	AQMS1	Cloudy	16:16	1-hour TSP	165	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR1	Cloudy	14:00	1-hour TSP	154	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR1	Cloudy	15:02	1-hour TSP	200	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR1	Cloudy	16:04	1-hour TSP	519	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR10	Cloudy	13:26	1-hour TSP	223	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR10	Cloudy	14:28	1-hour TSP	156	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR10	Cloudy	15:30	1-hour TSP	113	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR5	Cloudy	13:48	1-hour TSP	140	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR5	Cloudy	14:50	1-hour TSP	269	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR5	Cloudy	15:52	1-hour TSP	354	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR6	Cloudy	13:37	1-hour TSP	97	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR6	Cloudy	14:39	1-hour TSP	304	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR6	Cloudy	15:41	1-hour TSP	255	ug/m3
TMCLKL	HY/2012/08	17/1/2019	AQMS1	Cloudy	17:18	24-hour TSP	82	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR1	Cloudy	17:06	24-hour TSP	137	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR10	Cloudy	16:32	24-hour TSP	73	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR5	Cloudy	16:54	24-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	17/1/2019	ASR6	Cloudy	16:43	24-hour TSP	98	ug/m3

Meteorological Data for Impact Monitoring in the reporting period						
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	s) Average of Wind Direction(degree)			
19/01/17	0:00	1.3	342			
19/01/17	1:00	1.8	340			
19/01/17	2:00	2.2	32			
19/01/17	3:00	1.8	30			
19/01/17	4:00	1.8	22			
19/01/17	5:00	1.8	49			
19/01/17	6:00	1.8	17			
19/01/17	7:00	1.3	55			
19/01/17	8:00	0.9	32			
19/01/17	9:00	1.8	45			
19/01/17	10:00	2.2	47			
19/01/17	11:00	2.2	52			
19/01/17	12:00	1.8	29			
19/01/17	13:00	2.2	207			
19/01/17	14:00	2.2	274			
19/01/17	15:00	3.1	276			
19/01/17	16:00	2.2	284			
19/01/17	17:00	0.9	351			
19/01/17	18:00	1.8	90			
19/01/17	19:00	1.3	85			
19/01/17	20:00	0.9	32			
19/01/17	21:00	1.3	37			
19/01/17	22:00	1.3	42			
19/01/17	23:00	1.3	44			



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

Weekly Water Spraying Record 每週灑水檢查記錄

Site Location Date	地 盤 位置: 日期:	No	orthern Landf 4 Jan 2016		至	0 Jan E	% (d
Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
時間	星期一	星期二	星期三	星期四	星期五	星期六	星期日

	<u>Time</u> 時間	Monday 星期一	Tuesday 星期二	Wednesday 星期三	Thursday 星期四	<u>Friday</u> 星期五	Saturday 星期六	Sunday 星期日
1	8:00 - 8:45				_	_		
2	8:45 - 9:30	_						
3	9:30 – 10:15						/.	_
4	10:15 - 11:00						/	
5	11:00 - 11:45		/					
6	11:45 – 12:30	_	/					
7	12:30 - 13:15	/						
8	13:15 – 14:00		/					
9	14:00 - 14:45		_					
10	14:45 – 15:30						_	
11	15:30 – 16:45	/	/				/	/
12	16:45 – 17:30		/	/	/		/	/
	Verified by Site Foreman 地盤科文簽署確認	7	7	7	7	7	7	7

Night shift 夜間工作 (if necessary 如需要)							
17:30 – 19:00							
19:00 – 20:30							
20:30 22:00							
22:00 - 23:00							

*Please - tick ($\sqrt{}$) in the box if complete the spraying of water. circle (O) in the box if it is raining.

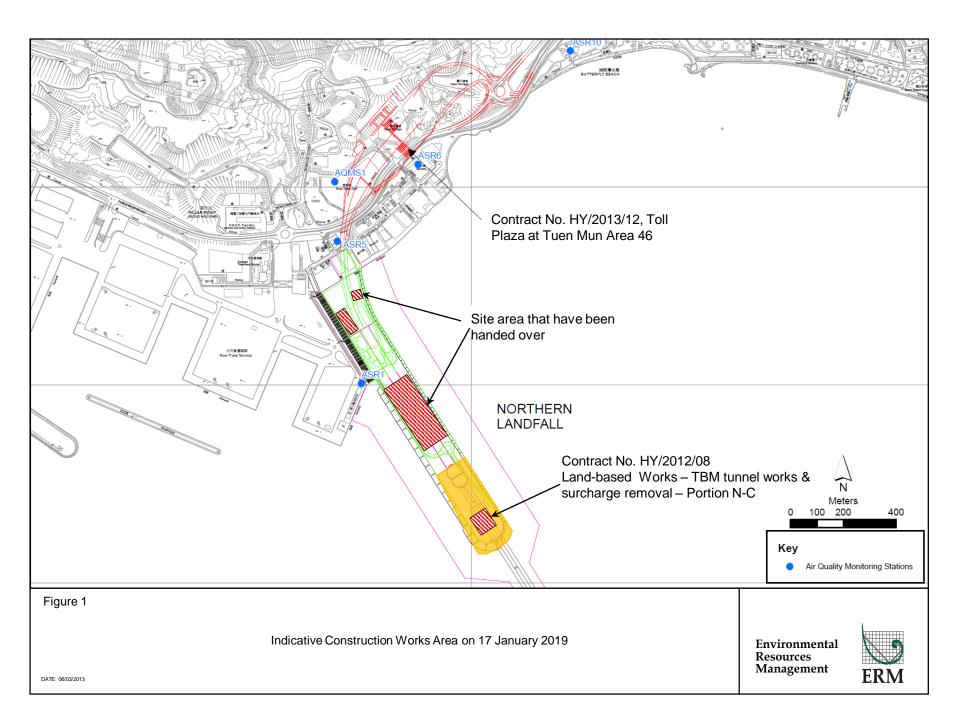
*如果 - 已經完成灑水, 請於方格內加上剔號(√)。 是下兩天, 請於方格內加上圓圈(O)。

Remarks:

- (1) Pursuant to EP Clause 3.15, the Permit Holder shall undertake watering at least 12 times per day on all exposed soil within the Project site and associated work areas in Tuen Mun area throughout the construction phase.
- (2) Spraying position includes the main haul road, open area, slopes, stockpiles and any other dusty materials.
- (3) If it is raining, no water spraying is needed.
- (4) The no of spraying will be increased due to site condition.

備註:

- (1) 根據環境許可證 3.15 條例,在整個施工階段內,許可證持有人須每天至少 12 次在屯門區項目工地和相關的工作區域內的所有暴露土壤灑水。
- (2) 灑水位置包括主要運輸道路,空曠地帶,斜坡,存料堆,以及任何其他產生塵埃物料。
- (3) 當下雨時,地盤將不需要灑水。
- (4) 如果地盤情況更改或有需要時,灑水次數會相應增加。



Email message **Environmental** Resources Management

To Ramboll Hong Kong, Limited (ENPO) 2507, 25/F One Harbourfront

18 Tak Fung Street Hunghom, Kowloon

Hong Kong

Telephone: (852) 2271 3000 Facsimile: (852) 2723 5660

From ERM- Hong Kong, Limited

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 8 February 2019



Dear Sir or Madam,

Ref/Project number

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

 $0212330_26 January 2019_1 hr TSP_Station~ASR5$

One Action Level Exceedance was recorded on 26 January 2019.

Regards,

Dr Jasmine Ng

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.	02123	0212330_26January2019_1hrTSP_Station ASR5				
		[Total No. of Exceedances = 1]				
Date	26 January 2019 (Measured)					
	8 Februar	ry 2019 (Laboratory results received by ERM)				
Monitoring Station	A	SR1, ASR5, ASR6, ASR10 and AQMS1				
Parameter(s) with		1.1 . TCD				
Exceedance(s)		1-hr TSP				
Action Levels	24-hr TSP (μg/m³)	ASR1 = 213				
		ASR5 = 238				
		AQMS1 = 213				
		ASR6 = 238				
		ASR10 = 214				
	1-hr TSP (μg/m³)	ASR1 = 331				
		ASR5 = 340				
		AQMS1 = 335				
		ASR6 = 338				
		ASR10 = 337				
Limit Levels	1-hr TSP (μg/m³)	500				
	24-hr TSP (μg/m³)	260				
Measured Levels	Action Level Exceedance for 1-h	r TSP is observed at ASR5 (399 μg/m3) during 0830 – 0930 hrs.				
Works Undertaken (at	On 26 January 2019, TBM tunnel	works and surcharge removal was carried out at Portion N-C.				
the time of monitoring	,					
event)						
Possible Reason for	The exceedance is unlikely to be	due to this Contract, in view of the following:				
Action or Limit Level	According to the construction	ction information provided by the Contractor, the majority of				
Exceedance(s)	construction works on 26	January 2019 was TBM tunnel works and surcharge removal.				
		land-based construction works, the Contractor has implemented the				
		ures as per the EP, approved EIA and Updated EM&A Manual (e.g.				
		ed soil within the Project site and associated works areas; exposed				
	soil covered by tarpaulin					
	1	y to be due to this Contract as dust suppression measures were				
		n site. Water spraying was applied on site to prevent dust.				
	1	orded wind direction (ranged between 143° and 158°, blowing from				
		and wind speed (ranged from 1.3 to 2.2 m/s) during the period of				
	l -	ceedances, Stations ASR5 are located downstream to the				
		rtion N-C. However, with similar wind direction and wind speed				
		the 1-hour TSP monitoring, no exceedances were recorded.				
		praying record, water spraying was also applied every 45 minutes to				
	prevent dust.	, , , , , , , , , , , , , , , , , , , ,				
	I -	nce is unlikely to be due to this Contract.				
	,	,				

Actions Taken / To Be	Follow-up site inspection was carried out on 8 February 2019. Dust suppression measures were
Taken	properly implemented. Water spraying was applied to prevent dust. Photos are provided in Annex A. Photos taken during AQM are also provided. The Contractor has been reminded to implement the required mitigation measures as per the EP, approved EIA and Updated EM&A Manual including watering to maintain all exposed road surfaces and dust sources wet, use of sprinklers for water spraying, covering the materials having the potential to create dust by clean tarpaulin, use of water truck and watering on all exposed soil within the Project site) throughout the construction period.
Remarks	The monitoring results, wind data and the locations of air quality monitoring stations are attached.



*Note: Photos taken on 8/2/2019



Water truck was used for water spraying to prevent dust. (Works Area Portion N-A)



Water spraying was applied on the main haul road. (Works Area Portion N-C)



*Note: Photos taken on 8/2/2019



Exposed soil was covered by tarpaulin sheets to prevent dust. (Works Area Portion N-C)



Annex A Photos taken during AQM

*Note: Photos taken on 26/1/2019



ASR5



ASR5

Air quality monitoring results on 26/1/2019								
- ·							D 1	** .
Project	Works	Date	Station	Weather	Start time	Parameters	Results	Unit
TMCLKL	HY/2012/08	26/1/2019	AQMS1	Sunny	8:53	1-hour TSP	126	ug/m3
TMCLKL	HY/2012/08	26/1/2019	AQMS1	Sunny	9:55	1-hour TSP	69	ug/m3
TMCLKL	HY/2012/08	26/1/2019	AQMS1	Sunny	10:57	1-hour TSP	75	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR1	Sunny	8:42	1-hour TSP	245	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR1	Sunny	9:44	1-hour TSP	207	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR1	Sunny	10:46	1-hour TSP	112	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR10	Sunny	8:08	1-hour TSP	106	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR10	Sunny	9:10	1-hour TSP	74	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR10	Sunny	10:12	1-hour TSP	71	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR5	Sunny	8:30	1-hour TSP	399	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR5	Sunny	9:32	1-hour TSP	208	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR5	Sunny	10:34	1-hour TSP	208	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR6	Sunny	8:19	1-hour TSP	304	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR6	Sunny	9:21	1-hour TSP	111	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR6	Sunny	10:23	1-hour TSP	141	ug/m3
TMCLKL	HY/2012/08	26/1/2019	AQMS1	Sunny	11:59	24-hour TSP	81	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR1	Sunny	11:48	24-hour TSP	83	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR10	Sunny	11:14	24-hour TSP	73	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR5	Sunny	11:36	24-hour TSP	101	ug/m3
TMCLKL	HY/2012/08	26/1/2019	ASR6	Sunny	11:25	24-hour TSP	90	ug/m3

Meteorological Data for Impact Monitoring in the reporting period						
Date (yy-mm-dd)	Time (24hrs)	Average of Wind Speed (m/s)	Average of Wind Direction(degree)			
19/01/26	0:00	0	-			
19/01/26	1:00	0	-			
19/01/26	2:00	0.4	12			
19/01/26	3:00	2.2	34			
19/01/26	4:00	2.2	47			
19/01/26	5:00	2.2	39			
19/01/26	6:00	2.7	47			
19/01/26	7:00	1.8	14			
19/01/26	8:00	1.3	143			
19/01/26	9:00	2.2	158			
19/01/26	10:00	2.2	154			
19/01/26	11:00	1.8	221			
19/01/26	12:00	2.2	215			
19/01/26	13:00	1.3	220			
19/01/26	14:00	1.3	254			
19/01/26	15:00	2.2	213			
19/01/26	16:00	2.2	232			
19/01/26	17:00	1.3	94			
19/01/26	18:00	1.8	96			
19/01/26	19:00	1.8	95			
19/01/26	20:00	2.2	85			
19/01/26	21:00	2.7	94			
19/01/26	22:00	3.6	86			
19/01/26	23:00	3.1	95			



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

Weekly Water Spraying Record 每週灑水檢查記錄

Site Location 地盤位置: Date 日期:			No	orthern Landf 21 Jun 2	all to :	至	27 Jun	2019
	<u>Time</u> 時間	Monday 星期一	Tuesday 星期二	Wednesday <u>星期三</u>	Thursday 星期四	<u>Friday</u> 星期五	Saturday 星期六	Sunday 星期日
1	8:00 - 8:45	-	_		_	_	_	_
2	8:45 - 9:30					_		
3	9:30 – 10:15		_				_	
4	10:15 - 11:00					_	_	_
5	11:00 - 11:45							
6	11:45 – 12:30							/
7	12:30 - 13:15							_
8	13:15 - 14:00	/						
9	14:00 - 14:45							
10	14:45 – 15:30	_			/			
11	15:30 – 16:45		_					/
12	16:45 – 17:30	/	/			/	/	/
	Verified by Site Foreman 地盤科文簽署確認	7	7	7	7	7	7	7

Night shift 夜間工作 (if ne	essary 如需要)		
17:30 – 19:00			
19:00 – 20:30			
20:30 - 22:00			
22:00 – 23:00			

*Please - tick ($\sqrt{}$) in the box if complete the spraying of water. circle (O) in the box if it is raining.

*如果 - 已經完成灑水,請於方格內加上剔號(√)。 是下兩天, 請於方格內加上圓圈(O)。

Remarks:

- (1) Pursuant to EP Clause 3.15, the Permit Holder shall undertake watering at least 12 times per day on all exposed soil within the Project site and associated work areas in Tuen Mun area throughout the construction phase.
- (2) Spraying position includes the main haul road, open area, slopes, stockpiles and any other dusty materials.
- (3) If it is raining, no water spraying is needed.
- (4) The no of spraying will be increased due to site condition.

備註:

- (1) 根據環境許可證 3.15 條例,在整個施工階段內,許可證持有人須每天至少 12 次在屯門區項目工地和相關的工作區域內的所有暴露土壤灑水。
- (2) 灑水位置包括主要運輸道路,空曠地帶,斜坡,存料堆,以及任何其他產生塵埃物料。
- (3) 當下雨時,地盤將不需要灑水。
- (4) 如果地盤情況更改或有需要時,灑水次數會相應增加。

