

Table I1 *Cumulative Statistics on Exceedances*

Monitoring Parameters	Action/Limit Level	Total No. recorded in this reporting quarter	Total No. recorded since project commencement
1-Hr TSP	Action	0	30
	Limit	0	2
24-Hr TSP	Action	0	5
	Limit	0	1
Water Quality	Action	0	6
	Limit	0	1
Impact Dolphin Monitoring	Action	0	9
	Limit	1	5

Table I2 *Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions*

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Period (March 2016 to May 2016)	1	0	0
Total No. received since project commencement	5	0	0

Email
message

Environmental
Resources
Management

To Ramboll Environ - Hong Kong, Limited (ENPO)

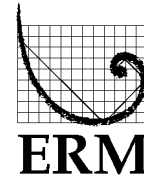
From ERM- Hong Kong, Limited

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 Impact Dolphin
Monitoring

Date 26 August 2016

16/F Berkshire House,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
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Dear Sir or Madam,

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

0212330_Mar2016/May2016_dolphin_STG&ANI_NEL&NWL

A total of one limit level exceedance was recorded in the quarterly impact
dolphin monitoring data between March 2016 and May 2016.

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

Impact Dolphin Monitoring Notification of Exceedance

Log No.	0212330_Mar2016/May2016_dolphin_STG&ANI_NEL&NWL [Total No. of Exceedances = 1 Limit Level Exceedance]	
Date	March to May 2016 (monitored) 8 July 2016 (results received by ERM)	
Monitoring Area	Northeast Lantau (NEL) and Northwest Lantau (NWL)	
Parameter(s) with Exceedance(s)	Quarterly encounter rate of dolphin sightings (STG) Quarterly encounter rate of total number of dolphins (ANI)	
Action Levels	North Lantau Social cluster	NEL: STG < 4.2 & ANI < 15.5 or NWL: STG < 6.9 & ANI < 31.3
Limit Levels		NEL: STG < 2.4 & ANI < 8.9 and NWL: STG < 3.9 & ANI < 17.9
Recorded Levels	NEL	STG = 0.0 & ANI = 0.0
	NWL	STG = 0.98 & ANI = 4.78
	One Limit Level Exceedance was recorded in the quarterly impact dolphin monitoring at NEL and NWL between March and May 2016. The exceedance was reported in the approved <i>Thirty-First Monthly EM&A Report</i> dated 14 June 2016.	
Statistical Analyses	<p>Further to the review of the available and relevant dolphin monitoring data in the EM&A programme by this Contract, statistical analyses were conducted as follows:</p> <ul style="list-style-type: none"> A two-way ANOVA with repeated measures and unequal sample size was conducted using Period (2 levels: baseline vs impact – present quarter, March to May 2016) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and present impact monitoring quarter. By setting $\alpha = 0.05$ as the significance level in the statistical tests, significant differences in STG ($p = 0.0019$) and ANI ($p = 0.0173$) were detected between Periods. A two-way ANOVA with repeated measures and unequal sample size was conducted using Cumulative Period (2 levels: baseline vs impact – cumulative quarters*, December 2012 to May 2016) and Location (2 levels: NEL and NWL) as fixed factors to examine whether there were any significant differences in the average encounter rates between the baseline and cumulative impact monitoring quarters. By setting $\alpha = 0.00005$ as the significance level in the statistical tests, significant difference in STG ($p = 0.000019$) and in ANI ($p = 0.000005$) between Cumulative Period and Location were detected. <p>*Note: The commencement date under <i>Contract No. HY/2012/08</i> is 1 November 2013.</p>	
Works Undertaken (in the monitoring quarter)	In the quarter between March 2016 and May 2016, no marine works was carried out in this Contract.	

Possible Reason for Action or Limit Level Exceedance(s)	<p>The potential factors that may have contributed to the observed exceedance are reviewed below:</p> <ul style="list-style-type: none"> • Blocking of CWD travelling corridor: The <i>Monitoring of Marine Mammals in Hong Kong Waters (2014 – 15)</i> ⁽¹⁾ reported that dolphin usage and traveling activities to the northern side of the airport (dolphin traveling corridor) are affected by frequent high-speed ferry traffic from Sky Pier (not related to this Contract), which is likely a major factor resulting in the decrease in dolphin abundances in North Lantau. • Marine works of the Contract: As per the findings from the EIA report (<i>Section 8.11.9</i>), the major influences on the Chinese White Dolphin (CWD) <i>Sousa chinensis</i> under this Contract are marine traffics, reclamation and dredging works. The Contractor implemented the marine traffic control in the reporting period as per the requirements in the <i>EP-354/2009/D</i> and the updated <i>EM&A Manual</i>. The reclamation and dredging works of this Contract (Phase 1) was completed in December 2014. Thus, underwater noise emission from this Contract had been relatively low in the reporting period when comparing to the previous quarters (Nov 2013 to Feb 2015). During dolphin monitoring in this quarter, no unacceptable impact on CWD due to the activities under this Contract was observed. <p>In view of the above, marine ecological mitigation measures were considered properly implemented, and thus no unacceptable impact on CWD or its habitat was associated with this Contract in this quarter from March 2016 and May 2016.</p>
Actions Taken/ To Be Taken	<p>A joint team meeting was held on 22 July 2016 for discussion on CWD trend, with attendance of ENPO, HyD, Representatives of Resident Site Staff (RSS), Representatives of Environmental Team (ET) for Contract No. HY/2010/02, HY2011/03, HY/2012/07 and HY/2012/08, and Representatives of Main Contractor for Contract No. HY/2012/08. The discussion/recommendation as recorded in the minutes of the meeting, which might be relevant to this Contract are summarized below. It was concluded that the HZMB works is one of the contributing factors affecting the dolphins. It was also concluded the contribution of impacts due to the HZMB works as a whole (or individual marine contracts) cannot be quantified or separate from the other stress factors. ENPO presented the CWD survey results in mainland waters obtained from Hong Kong-Zhuhai-Macao Bridge Authority that some CWDs that were previously more often sighted in Hong Kong waters have expanded their ranges into mainland waters, and some with reduced usage in Hong Kong waters, while they are partially accounted for the local decline. It was reminded that the ETs shall keep reviewing the implementation status of the dolphin related mitigation measures and remind the contractor to ensure the relevant measures are fully implemented. The ETs were also reminded to update the BMP boundary in the Regular Marine Travel Route Plan. The participants were requested by ENPO to collect and report the marine traffic statistics. It was recommended that the marine works of HZMB projects should be completed as soon as possible so as to reduce the overall duration of impacts and allow the dolphins population to recover as early as possible. It was also suggested that the protection measures (e.g., speed limit control) for the proposed Brothers Marine Park (BMP) shall be brought forward as soon as possible before its establishment so as to provide a better habitat for dolphin recovery.</p>
Remarks	<p>The results of impact water quality and impact dolphin monitoring, the status of implemented marine ecological mitigation measures are documented in the approved <i>Twenty-Ninth to Thirty-First Monthly EM&A Reports</i>.</p>

(1) Hung SKY (2015). Prepared for AFCD. Available from:
http://www.afcd.gov.hk/english/conservation/con_mar/con_mar_chi/con_mar_chi_chi/con_mar_chi_chi.html

ENVIRONMENTAL COMPLAINT INVESTIGATION REPORT

Our Reference: 0212330_Complaint LOG_20160519_04

Basic Information of Complaints

Reference Numbers:	N/A
Date of Complaints Received	19 May 2016
Location of Complaints	Southern Landfall – Barge Area
Nature of Complaints	Dust emission
Complaints Received by	Environmental Protection Department (EPD)
Via	Email
Complainants	Not disclosed

Details of Complaints

On 19 May 2016, a complaint case was received by EPD regarding dust emission from the barge area at Southern Landfall. The Contractor and the ET received the complaint notification on 20 May 2016. The ET was informed that the case is categorized as complaint in nature upon the investigation, discussion and agreement between different parties (i.e. the Contractor (DBJV), SOR and ENPO).

Investigation Report

Upon receiving the case notification from EPD on 20 May 2016, the Contractor had promptly checked the works summary.

Based on the record of the Contractor's works summary, dust nuisance was recorded at the barge area of Southern Landfall on 18 May 2016 at around 4:10pm. According to the construction information provided by the Contractor, the majority of works during that period was jet grouting. After dust emission was observed from the barge, the grouting operator has stopped the works within two (2) minutes. Upon thorough investigation, it was found that the pressure of the pipe accidentally increased which caused damage on the pipe and malfunction on the filter, and thus created the dust emission. All related works had stopped. A new filter was added and the damaged pipe was replaced by a new pipe on 19 May 2016. No dust emissions were observed after the replacement.

Also, a joint site inspection was carried out with the Contractor, SOR and EPD on 23 May 2016 to verify the remedial measures (see photo records on Annex A). No further defects were observed and no adverse comments were received.

According to the complaint notification from EPD, the dust nuisance was observed by the complainant in the afternoon of 18 May 2016. After investigation and discussion with the Contractor, it was concluded that the dust nuisance observed by the complainant was the same as the dust nuisance observed by the Contractor.

Mitigation Measures and Follow-Up Actions Recommended to/Undertaken by Contractor

The Contractor has been reminded to adhere strictly to implement all relevant dust mitigation measures recommended or specified in the EP (EP-354/2009/D), the approved EIA and the Updated EM&A Manual of this Project to avoid causing dust nuisance.

The loading, unloading, transfer and handling of cement and PFA shall be carried out in a totally enclosed system, and any vent or exhaust shall be fitted with an effective fabric filter.

In the above case, 24-hour supervision of the grouting process has been recommended in order to prevent accidental dust emission. The Contractor has also been reminded to carry out weekly inspection and maintenance of the facility including pipes, filters and tanks, etc. Contingency plan should be implemented to mitigate the environmental impacts. The Contractor should stop the works immediately if similar incident occur. Verification of the facility by the ET is required before the resumption of works.

The Contractor has been reminded to document the mitigation measures in the method statement of construction activities with same cement transportation/handling procedures. No other additional action is required.

Date of File Closed : 27 May 2016

Approved and Filed by:



(Jovy Tam, ET Leader)

Date: 27 May 2016

CEMENT SILO
+
CEMENT SILO

(2 Safety valve)

(2 lines)

(2 Non-return valve)

Non return valve
Safety Valve

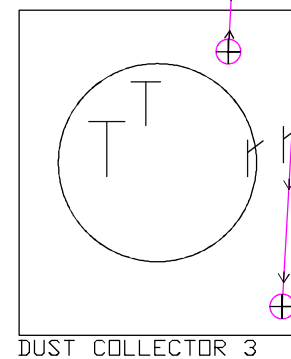
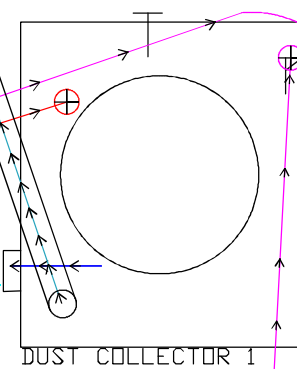
→ → → Air* circuit in operational pipe line
going out from the Non-return valve
→ → → Air* circuit in safety pipe line
going out from the Safety valve

NOTE: DUST COLLECTOR 1 link to the operational line (non-return valve)
and DUST COLLECTOR 3 link to the safety line (safety valve)

*Air with small amount of cement particles

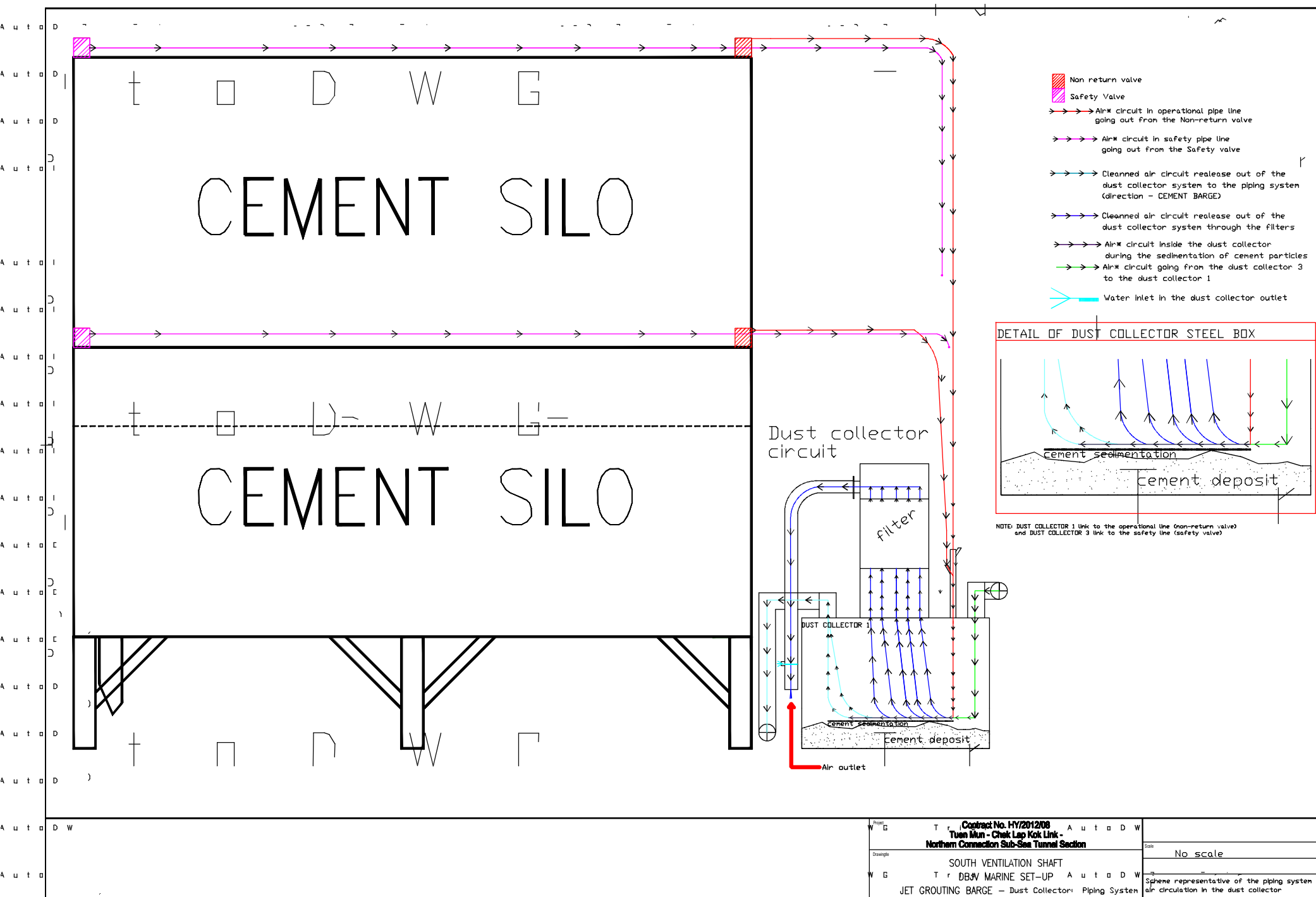
→ → → Cleaned air circuit release out of the
dust collector system to the piping system
(direction - CEMENT BARGE)
→ → → Cleaned air circuit release out of the
dust collector system through the filters
→ → → Air* circuit inside the dust collector
during the sedimentation of cement particles
→ → → Air* circuit going from the dust collector 3
to the dust collector 1

(1 line)



Air pipe line going
to the Cement Barge

Project	Contract No. HY/2012/08 Tuen Mun - Chek Lap Kok Link - Northern Connection Sub-Sea Tunnel Section	Scale
Drawings	SOUTH VENTILATION SHAFT T R DBW MARINE SET-UP JET GROUTING BARGE - Dust Collector Piping System	No scale
W G	air with small amount of cement particles	





Annex A Photo Records taken during Site Investigation

*Note: Photos taken on 23/5/2016



New filter was added. (Barge area - Southern Landfall)



The damaged pipe was replaced by a new pipe. (Barge area - Southern Landfall)



Annex A Photo Records taken during Site Investigation

*Note: Photos taken on 23/5/2016



A joint site inspection was carried out by the ET, the Contractor, SOR and EPD on 23 May 2016.
(Barge area - Southern Landfall)