

Contract No. HY/2013/01 -
Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities – Passenger Clearance Building
Notifications of Environmental Quality Limits Exceedances Notification No.: 20180117_Air_24hr_v2

Date of Notification: 29 January 2018 **Date of Investigation Report:** 20 February 2018

Date of Environmental Quality Limit Exceedance: 17 January 2018 and the results were issued on 29 January 2018

Monitoring Location: AMS2 – Tung Chung Pier and AMS3B – Site Boundary of Site Office Area at Works Area WA2

Monitoring Date: 17 January 2018 **Start Time:** 08:00

Action & Limit Level (AL & LL) / Measured Level:

<u>PARAMETER</u>	<u>STATION</u>	<u>AL (µg/m³)</u>	<u>LL (µg/m³)</u>	<u>MEASURED LEVEL, µg/m³</u>
24-hr TSP	AMS2 – Tung Chung Pier	176	260	<i>184</i>
24-hr TSP	AMS3B – Site Boundary of Site Office Area at Works Area WA2	167	260	<i>183</i>

Notes: ***Bold Italic*** means AL exceedance
Bold Italic with underline means LL exceedance

Possible reason for Action / Limit Level Non-compliance:

On 17 January 2018, one AL exceedance of 24-hr TSP at AMS2 and one AL exceedance of 24-hr TSP at AMS3B were recorded.

Based on the information from the Contractor, the construction works undertaken on 17 and 18 January 2018 are shown as below:

- Backfilling
- Falsework stripping
- Pipework and ductwork installation
- Wet trade works
- Dry trade works
- MEP High Level Containment
- Removal of temporary works
- Window wall glazing
- Hanging scaffolding removal
- Southern toilet
- MISC steelwork
- Glazed Lift installation
- Road & Kerbing
- EVA Roadwork

Contractor confirmed that the mitigation measures according to Water Spraying Plan in January 2018 (Appendix A) are implemented to avoid dust emission. Photos of haul road condition and dust suppression are included in Appendix A. Contractor has provided the guideline to remind the site vehicles travel within speed limit of 8km/hr.

The Air Quality Health Index (AQHI) of Tung Chung station with the wind data from the on-site wind station are shown in Appendix B. The hourly AQHI of Tung Chung Station ranged 3 to 10+ (Low to Serious) on 17 and 18 January 2018 during monitoring period. According to the wind data at on-site wind station, no prevailing wind direction was found in the monitoring period. The PCB site of HKBCF is far away from AMS2 and AMS3B (more than 1km). No potential dust source was observed near the monitoring station at AMS2 and AMS3B during the monitoring period.

Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

The Water Spraying Plan including the information of watering schedule, routing of trucks of for watering and the location of water filling, was prepared and submitted to RE and ENPO. The Contractor was also reminded to implement all necessary mitigation as specified in EIA (Section 5.5.6.3), EM&A Manual (EM&A Log Ref: A3), EMP, Method Statements, General and Particular Specifications of this Project to minimize the potential dust impact during construction activities.

Prepared by: Ruby Law Title: Environmental Team Representative

Signature:  Date: 20 February 2018

Checked by: Keith Chau Title: Environmental Team Leader

Signature:  Date: 20 February 2018

Copied to : Contractor, Engineer Representative and IEC/ENPO



Contract No. HY/2013/01
Hong Kong – Zhuhai – Macao – Bridge
Boundary Crossing Facility – Passenger Clearance Building

Water Truck License Plate Number: TH7681

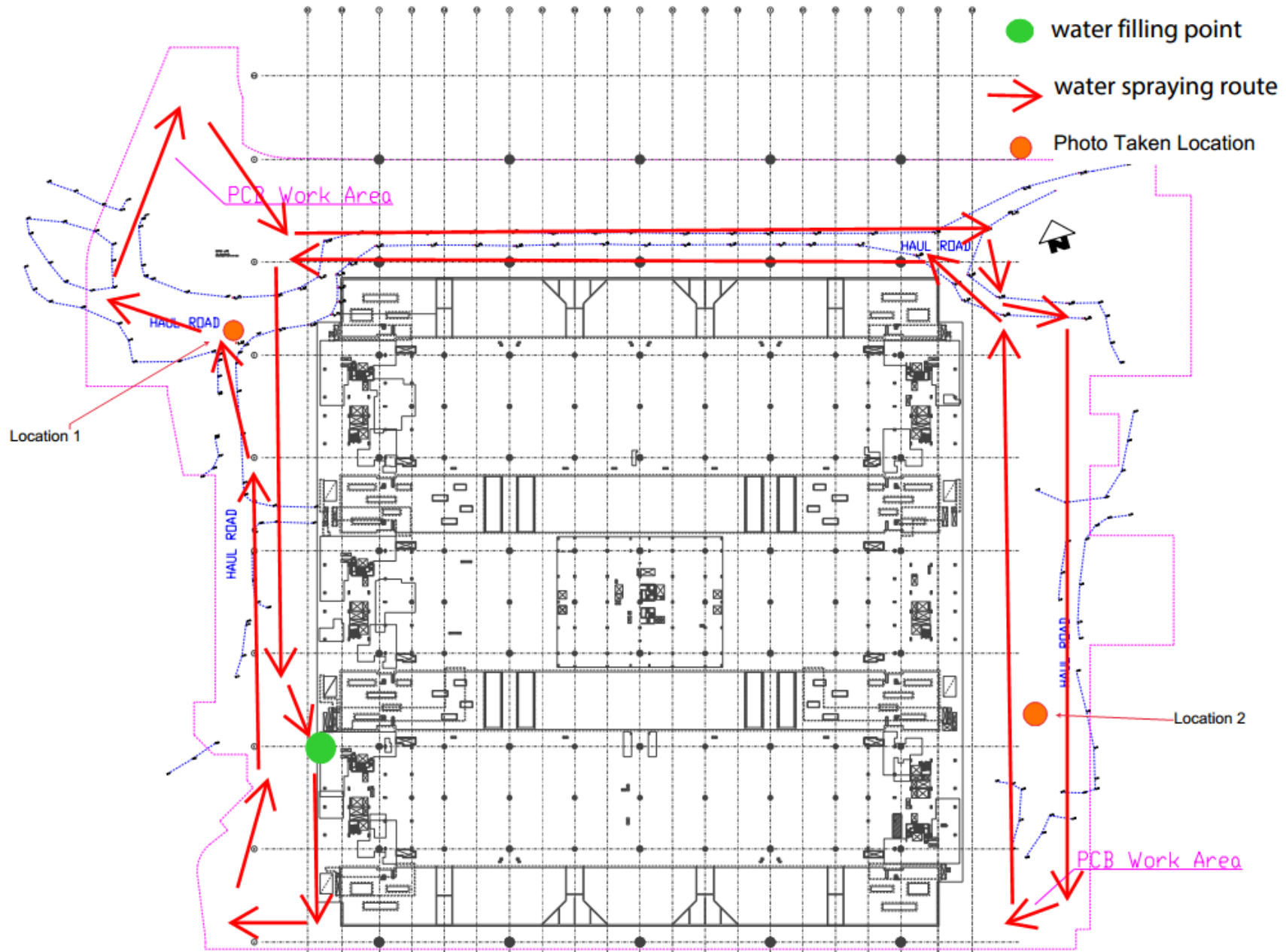
Capacity of Water Truck: 18000L

Volume of water / distance travelled = 11.4L/m

Water Truck could spray 18000L in one 50 minutes trip.

Planned Schedule of Watering Spraying by Water Truck

Cycle	Time of water spraying
1	08:00 – 09:15
2	09:15 – 10:30
3	10:30 – 11:45
4	13:00 – 14:15
5	14:15 – 15:30
6	15:30 – 16:45
7	16:45 – 18:00
8	18:00 – 19:00



Plan on PCB Site Haul Road surveyed on 03-Nov-2017

Water spraying record



Haul road is wet (Location 1)



Water spray on haul road (Location 2)

Appendix B

Date	Hour	AQHI at Tung Chung Station	Average Wind Speed (m/s) #	Average Wind Direction #
17/01/2018	08:00	6	0	SW
17/01/2018	09:00	6	0	SW
17/01/2018	10:00	6	0	SSW
17/01/2018	11:00	8	0	SSW
17/01/2018	12:00	10	0	W
17/01/2018	13:00	10+	0	---
17/01/2018	14:00	10+	0	W
17/01/2018	15:00	10+	0	W
17/01/2018	16:00	10+	0	W
17/01/2018	17:00	10+	0	W
17/01/2018	18:00	10+	0	E
17/01/2018	19:00	10+	0	---
17/01/2018	20:00	9	0	SSE
17/01/2018	21:00	6	0	SSE
17/01/2018	22:00	5	0	E
17/01/2018	23:00	5	0	SE
18/01/2018	00:00	5	0	SSE
18/01/2018	01:00	4	0	E
18/01/2018	02:00	4	0	SE
18/01/2018	03:00	4	0	SSE
18/01/2018	04:00	4	0	SE
18/01/2018	05:00	4	0	SSE
18/01/2018	06:00	3	0	SSW
18/01/2018	07:00	3	0	---
18/01/2018	08:00	3	0	---

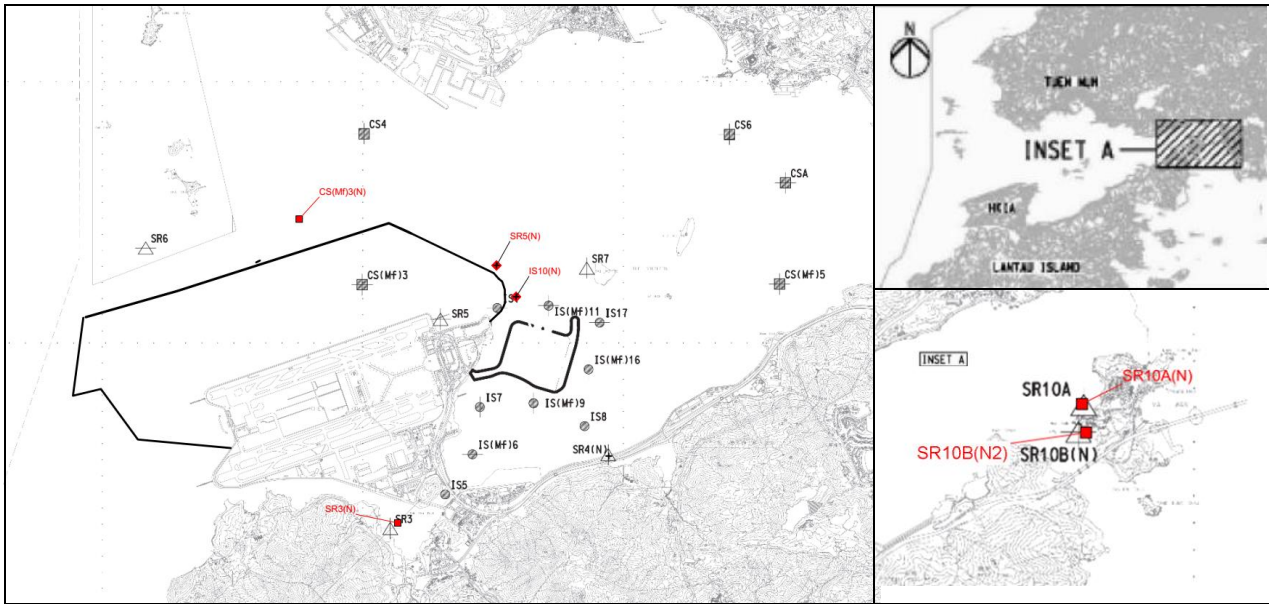
Remark:

#- The related wind data is obtained from the on-site wind station.

Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building Notifications of Environmental Quality Limits Exceedances							Notification No.: 20180131SS
Date of Notification: 7 February 2018				Date of Investigation Report: 9 February 2018			
Works Inspected: Data collected from water sampling works on 31 January 2018 and the results were issued on 7 February 2018							
Monitoring Location: Water Quality Monitoring Station							
Parameter: Dissolved Oxygen (DO) / Suspended Solid (SS)/ Turbidity (TURB)							
Action & Limit Level (AL & LL) / Measured Level:							
PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)	
SS	SR6	Depth Average	23.5 and 120% (i.e. 18.2 for mid-ebb/14.4 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 19.7 for mid-ebb/15.6 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	26.2	21.5	
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. <u>Bold with underline</u> means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA							

Possible reason for Action / Limit Level Non-compliance:

On 31 January 2018, one AL exceedance of SS at SR6 was recorded during mid-ebb tide.



As confirmed by the Contractor, there was no marine transportation on 31 January 2018. According to information from Contractor, temporary loading and unloading facility dismantling which is marine-based work conducted on 31 January 2018 and the work was conducted within silt curtain. Although AL exceedance was recorded, the exceedance station, SR6, was far away from marine based work (more than 6km). No exceedances were recorded at monitoring stations IS10(N) and SR5(N), which are closer to the marine-based works, on the same day. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Actions were taken under action plan:

1. Not applicable as SS was not measured in situ;
2. After considering the above-mentioned investigation results, it appears that it was unlikely that the suspended solids exceedance was attributed to active construction activities of this Contract;
3. IEC, Contractor and ER were informed via email;
4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
5. Since it is considered that the suspended solids exceedance is unlikely to be contract related, as such, Actions 5-7 under the EAP are not considered applicable.

However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Prepared by: Ruby Law Title: Environmental Team Representative

Signature:  Date: 9 February 2018

Checked by: Keith Chau Title: Environmental Team Leader

Signature:  Date: 9 February 2018

Copied to : Contractor, Engineer Representative and IEC/ENPO