



Lam Geotechnics Limited

Contract No. HK/2015/01
Wanchai Development Phase II and Central Wanchai Bvoass
Sampling, Field Measurement and Testing Work (Stage3)

Summary for Notification of Exceedance

Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_16W082	13-Mar-17	Mid-ebb	WSD19	DO(mg/l)	6.68	3.66	3.28	Possible reason: Natural variation or changes of water quality in the vicinity of water quality monitoring station.
				Turbidity	3.34	8.04	9.49	Action taken/ to be taken: Checked with Contractor works and reviewed previous monitoring data.
				SS	23.50	13.00	14.43	Remarks/ Other Obs: No marine construction activity under Contract HK/2012/08 was conducted on the monitoring date. Location of the construction area was at downstream of monitoring station WSD19 during the monitoring period. In view of the above, the exceedance was considered not project related. No exceedance was recorded on the subsequent monitoring on 15 March 2017 flood tide.



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Ref no.	Date	Tidal	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action
X_16C072	15-Mar-17	Mid-ebb	P1	DO(mg/l)	7.27	3.36	2.73	Possible reason: Contaminated effluent discharge from construction site water treatment unit adjacent to monitoring location was observed during monitoring and considered as the major factor affecting the water quality at the time of sampling.
				Turbidity	9.87	9.10	10.25	Action taken/ to be taken: Immediate repeat in-situ measurement to confirm the exceedances. The water turbidity level of repeated measurement at the same monitoring location on the same date and tide was: <u>15 March 2017 ebb tide 9.54 NTU</u> . The Contractor of HK/2012/08 was immediately advised to take remedial action to rectify the defects observed. Rectification measures including addition of flocculant to enhance the particulates settling rate within the water treatment unit was implemented on 15 March 2017. No further turbidity exceedance was recorded during additional monitoring conducted on 16 March 2017: <u>16 March 2017 1.61NTU</u> , and no further suspended solid exceedance was recorded on the subsequent monitoring on 17 March 2017: <u>17 March 2017 flood tide 4.50mg/L</u> .
				SS	52.50	15.00	22.13	Remarks/ Other Obs: Earth works was conducted under Contract HK/2012/08 at the concerned location at Expo Drive West during the monitoring period on 15 March 2017 and contaminated effluent was observed discharging from the construction site water treatment unit into Victoria Harbor within HKCEC2E area during monitoring sampling and affecting the water quality at the concerned monitoring station. It was further confirmed on -site that the water treatment unit maintained under Contract HK/2012/08 located at the concerned upstream location was ineffective in particle settling. As such, it was considered that the turbidity and suspended solid exceedances were related to HK/2012/08 Project works and the Contractor of HK/2012/08 was immediately advised to take immediate action to rectify the defects observed. Rectification measures including addition of flocculant to enhance the particulates settling rate within the water treatment unit was implemented on 15 March 2017. No further turbidity exceedance was recorded during additional monitoring conducted on 16 March 2017: <u>16 March 2017 1.61NTU</u> and no further contaminated discharge from the outlet point was observed during monitoring. Also, no further suspended solid exceedance was recorded on the subsequent monitoring on 17 March 2017: <u>17 March 2017 flood tide 4.50mg/L</u> . In view of the above events, the Contractor of HK/2012/08 was advised to enhance the regular checking and maintenance of the concerned water treatment and ensure the remedial actions are strictly implemented to ensure the quality of the discharge effluent. The Contractor was also suggested to review the upcoming construction works and review the current site drainage and effluent control and treatment scheme to ensure the construction site discharge complies with relevant license requirement and avoid any potential adverse impact to nearby waters.

Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_16A031	3-Mar-17	13:00	CMA4a- SPCA	939.9	1hr TSP (ug/m ³)	312.0	500	<p>Possible reason: Elevated TSP level potentially in relate to ambient air quality and non WDII-CWB renovation works next to the monitoring station.</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Mitigation measures including covering of stockpile and watering for haul road and during loading and unloading of material were implemented by the Contractor</p> <p>Remarks / Other Obs: Despite backfilling works at Portion 3&4 and tunnel structure works at Portion 5 were conducted on 03 March 2017 on the monitoring date around the monitoring station under Contractor of HK/2009/02, dust suppression measure including covering of stockpile and watering for haul road and during loading and unloading of material were implemented by the Contractor and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period was recorded at 6 on 03 March 2017 during monitoring period). Also, elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project renovation works was conducted next to the monitoring station.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and the observed renovation works next to the monitoring station. Nevertheless, the Contractor of HK/2009/02 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>
X_16A032	2-Mar-17	8:00	CMA5b- Pedestrian Plaza	287.3	24hr TSP (ug/m ³)	181.0	260	<p>Possible reason: Elevated TSP level potentially in relate to ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Mitigation measures including maintaining haul road in dampened condition was implemented by contractor.</p> <p>Remarks / Other Obs: Despite concreting, formwork erection and rebar fixing were undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2012/08, dust suppression measure including haul road maintained in dampened condition was implemented and no particular observation regarding air quality impact was observed during sampling. Meanwhile, severe smog was reported observed on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 02 to 03 March 2017 was recorded as ranged from 5 - 6). In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date. Nevertheless, the Contractor of HK/2012/08 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_16A034	2-Mar-17	8:00	CMA5b- Pedestrian Plaza	287.3	24hr TSP (ug/m ³)	181.0	260	<p>Possible reason: Elevated TSP level potentially in relate to ambient environment and other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures.</p> <p>Remarks / Other Obs: No construction works was undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2009/01 and no particular observation regarding air quality impact was observed during sampling. Meanwhile, severe smog was reported observed on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 02 to 03 March 2017 was recorded as ranged from 5 - 6). In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date. Nevertheless, the Contractor of HK/2009/01 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>
X_16A035	3-Mar-17	8:02	CMA5b- Pedestrian Plaza	393.5	1hr TSP (ug/m ³)	332.0	500	<p>Possible reason: Elevated TSP level potentially in relate to ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Mitigation measures including maintaining haul road in dampened condition was implemented by contractor.</p> <p>Remarks / Other Obs: Despite concreting, formwork erection and rebar fixing were undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2012/08, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 03 March 2017 was recorded at 6) and elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. Nevertheless, the Contractor of HK/2012/08 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_16A036	3-Mar-17	9:30	CMA5b- Pedestrian Plaza	348.1	1hr TSP (ug/m ³)	332.0	500	<p>Possible reason: Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Mitigation measures including maintaining haul road in dampened condition was implemented by contractor.</p> <p>Remarks / Other Obs: Despite concreting, formwork erection and rebar fixing were undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2012/08, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 03 March 2017 was recorded at 6) and elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. Nevertheless, the Contractor of HK/2012/08 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>
X_16A037	3-Mar-17	13:00	CMA5b- Pedestrian Plaza	826.4	1hr TSP (ug/m ³)	332.0	500	<p>Possible reason: Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures. Mitigation measures including maintaining haul road in dampened condition was implemented by contractor.</p> <p>Remarks / Other Obs: Despite concreting, formwork erection and rebar fixing were undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2012/08, dust suppression measure including haul road maintained in dampened condition were implemented and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 03 March 2017 was recorded at 6) and elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. Nevertheless, the Contractor of HK/2012/08 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_16A038	3-Mar-17	8:02	CMA5b- Pedestrian Plaza	393.5	1hr TSP (ug/m ³)	332.0	500	<p>Possible reason: Elevated TSP level potentially in relate to ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures.</p> <p>Remarks / Other Obs: No construction works was undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2009/01 and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 03 March 2017 was recorded at 6) and elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. Nevertheless, the Contractor of HK/2009/01 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>
X_16A039	3-Mar-17	9:30	CMA5b- Pedestrian Plaza	348.1	1hr TSP (ug/m ³)	332.0	500	<p>Possible reason: Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures.</p> <p>Remarks / Other Obs: No construction works was undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2009/01 and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 03 March 2017 was recorded at 6) and elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. Nevertheless, the Contractor of HK/2009/01 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_16A040	3-Mar-17	13:00	CMA5b- Pedestrian Plaza	826.4	1hr TSP (ug/m ³)	332.0	500	<p>Possible reason: Elevated TSP level potentially in relate to other sources affecting local ambient condition such as road traffic next to the monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures.</p> <p>Remarks / Other Obs: No construction works was undertaken on the monitoring date at around Pedestrian Plaza under Contractor of HK/2009/01 and no particular observation regarding air quality impact was observed during sampling.</p> <p>Meanwhile, severe smog was reported observed across the period on 01 March 2017 and it is considered that exceedance was potentially in relate to the residual effect of the severe smog observed (AQHI at Eastern District Station during monitoring period on 03 March 2017 was recorded at 6) and elevated TSP level was observed across other monitoring stations from Wanchai to North Point Districts on the same monitoring date. In addition, non WDII-CWB Project construction activities opposite to the monitoring station was observed on the monitoring date.</p> <p>In view of the above, the exceedance was considered to be non-project related and potentially contributed by ambient air quality and other sources affecting local ambient condition such as road traffic next to the monitoring station. Nevertheless, the Contractor of HK/2009/01 was reminded to maintain regularly dust suppression measures for any potential dusty surface and dust generating operation around the concerned location to avoid any potential cumulative air quality impact.</p>



Ref. No.	Date	Time	Location	Measured TSP Level	Unit	Action Level	Limit Level	Follow-up action
X_16A047	27-Mar-17	10:35	CMA1b- Oil Street Site Office	570.6	1 hr TSP (ug/m ³)	320.1	500	<p>Possible reason: Elevated TSP level in relate to local ambient condition around monitoring station</p> <p>Action taken / to be taken: Reviewed the trend of air quality measurement across monitoring stations. Analysis of contractor's working procedures.</p> <p>Remarks / Other Obs: No construction works was undertaken under Contract HY/2009/19 on the monitoring date at around Oil Street Site Office while the haul road around the concerned location was observed maintained in dampened condition and no particular observation regarding air quality impact was observed during sampling. In view of the above, the limit level exceedance was considered to be non-project related and contributed by local ambient condition.</p>