



Teemax Environmental and Energy Management Limited

Unit 9-10, 16/F., Shatin Galleria, No. 18-24 Shan Mei Street, Fo Tan, Shatin, N.T., Hong Kong
Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telemaxeem.com

Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area

Environmental Monitoring and Audit Report

Final Report





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Environmental Monitoring and Audit Report

Final Report

Verified By:

A handwritten signature in black ink, appearing to read 'Grace Kwok', is positioned above a horizontal line.

Grace KWOK

Position:

Independent Environmental Checker

Date:

3 November 2020



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Certified By:

A handwritten signature in black ink, appearing to read 'Nelson Tam', is written over a horizontal line.

Ir Nelson TAM

Position:

Environmental Team Leader

Date:

3 November 2020

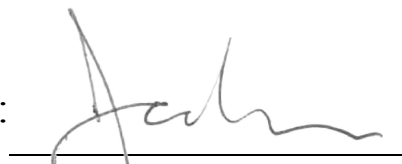


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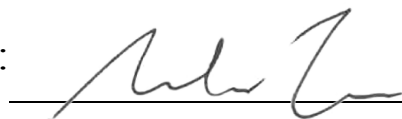
Environmental Monitoring and Audit Report

Final Report


Author:


Jackson TSE

Checked:


Ir Nelson TAM

Approved:


Ir Nelson TAM



Issue	Date	Prepared by	Checked by	Approved by	Remark
1	19 th Oct 2020	Jackson Tse (Assistant Engineer)	Nelson Tam (Associate Director)	Nelson Tam (Associate Director)	--
2	28 th Oct 2020	Jackson Tse (Assistant Engineer)	Nelson Tam (Associate Director)	Nelson Tam (Associate Director)	--
3	2 nd Nov 2020	Jackson Tse (Assistant Engineer)	Nelson Tam (Associate Director)	Nelson Tam (Associate Director)	--





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1.0 Executive Summary

- 1.1 Telex Environmental and Energy Management Limited (TEEM) was appointed to conduct an Environmental Monitoring and Audit (EM&A) program for operation phase for the proposed Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area (FEHD). FEHD noticed EPD that the operation date of the project was 28 June 2019 and all EM&A works were undertaken in accordance with the EM&A Manual and the requirements under the Environmental Permit EP-454/2013. The notification letter was attached in *Appendix J*. This report is the final monthly EM&A report, which detailed the environmental monitoring and audit results recorded during the period from 28 June 2019 to 30 September 2020.
- 1.2 In accordance with Section 2.4.5 of the EM&A Manual of the Project, quarterly basis odor removal tests were carried out during the first year of operation in order to ensure adequate maintenance and operation of the deodorization equipment. If all results fulfil the minimum requirement, i.e. at least 85% of odor removal efficiency, the odor monitoring program can be ceased. Otherwise, the program shall be increased to monthly monitoring and extended until in consecutive 3 times fulfilling the minimum.
- 1.3 There were total four quarterly basis odor monitoring works. The first quarterly basis odor monitoring was carried out on 5 September 2019. The second quarterly basis odor monitoring was carried out on 5 December 2019. Due to the COVID-19 situation in Hong Kong, the third quarterly basis odor monitoring was postponed to 19 June 2020. The final quarterly basis odor monitoring has been carried out on 23 September 2020. The details of the monitoring date were shown in *Appendix C*. In all four quarterly basis odor monitoring works, all three deodorization equipments showed more than 85% odor removal efficiency. The detailed laboratory reports were shown in *Appendix F*.
- 1.4 There are no complaints since the operation of the Project.
- 1.5 The monitoring results and statistics of non-compliance indicated that the EIA process with its recommended mitigation and EM&A programme were effective for protection of the environment. There was no unacceptable environmental impact posed by the Project during the first year of operation phase.

2.0 Project Information

Background and Contacts of Key Management

- 2.1 The project proponent is the reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West Kowloon Reclamation Area (FEHD) and the Works Agent is the Architectural Services Department (ArchSD).
- 2.2 The proposed office-cum-vehicle depot building will be a five-story building comprising various facilities for vehicle washing and repair operation, parking of vehicles as well as offices. It will occupy a site area of about 8,278 m².
- 2.3 The Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot is categorized as a designated project under the Environmental Impact Assessment Ordinance (EIAO) and therefore a detailed Environmental Impact Assessment (EIA-216/2013) has been conducted in year 2013 and an Environmental Permit number EP-454/2013 was issued by Environmental Protection Department in November 2013.
- 2.4 The subject site is located at Yen Ming Road, West Kowloon Reclamation Area given in **Appendix G**. The subject site is bounded to the north by Nam Cheong Station, to the east by CLP Tak Kok Tsui Substation, to the south by Yuen Fat Building, and to the west by Cheung Sha Wan Wholesales Fish and Food Markets. Sir Ellis Kadoorie Secondary School (West Kowloon) and Fu Cheong Estate Fu Yun House, being the nearest educational and residential establishment, are located at around 100m and 270m from the site boundary respectively.
- 2.5 The operation date of the project was 28 June 2019. A notification letter of the operation date was sent to EPD on 28 May 2019. The notification letter was attached in **Appendix J**.



2.6 Key personnel and contact particulars are summarized in **Table 1**.

Table 1 Contact Details of Key Personnel

Role	Department / Company	Names	Contact Number
Project Proponent	Food and Environmental Hygiene Department	Mr. Kenneth Lee	2309 2049
Works Agent	Architectural Services Department	Mr. Alan Nip	2867 3655
Architect's representative	P&T Architects and Engineers (Architectural)	Mr. Jim Hung	2832 3016
Main Contractor	China Road and Bridge Corporation	Mr. Vincent Chung	2283 1688
Environmental Team Leader	Telex Environmental and Energy Management Ltd.	Ir Nelson Tam	3610 8701
Independent Environmental Checker	Allied Environmental Consultants Ltd.	Ms. Grace Kwok	2815 7028

3.0 Summary of EM&A Requirement

3.1 According to the environmental findings detailed in the Environmental Impact Assessment (EIA) report and the EM&A Manual of the Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area Project ("the Project"), the EM&A requirements of the noise, air quality, water quality, waste management, landscape and visual and environmental audit are summarized as follows:

Air

3.2 According to the EIA report, the EM&A works related to traffic air quality for the operational phase is not considered as necessary. However, the odor is expected to result in significant impact to the adjacent sensitive receivers during the operational phase. Therefore, a commissioning test and a quarterly basis odor monitoring program are required for this project.

Noise

3.3 According to the EIA report, noise monitoring during the operation phase are considered not necessary as the project would not be expected to result in significant noise impact to adjacent identified NSRs with the implementation of the recommended mitigation measures.

Water

3.4 According to EIA report, EM&A for water quality is considered not necessary.

Waste Management and Land Contamination

3.5 According to EIA report, the land contamination at the project is identified to be insignificant during operation phase, no EM&A for contaminated land is recommended.

Landscape and Visual

3.6 Since 15 trees within the project site was fell, compensatory trees were adopted as

mitigation measures to compensate for the tress lost. The compensatory trees were planted in June 2019, and the as-built landscape drawings and photo records were approved by EPD.

Environmental Audit

- 3.7 According to Table 10-1 of the EIA report, no audit is required in operational phase while the odor monitoring is required.

4.0 Commissioning Tests for the Deodorization Equipment

- 4.1. The commissioning tests were carried out during 19 June 2019 to 5 July 2019 for three (3) deodorization equipments, namely WSF-UGF-1, WSF-UGF-2 and WSF-UGF-3. All deodorization equipments performed more than 85% odor removal efficiency. The latest results were listed in **Table 2** and the test reports were attached in **Appendix E**.

Table 2 Commissioning Test Results on 5 July 2019

Deodorization Equipments	Odor Removal Efficiency
WSF-UGF-1	99.26%
WSF-UGF-2	99.30%
WSF-UGF-3	99.27%

5.0 Quarterly Basis Odor Monitoring

- 5.1. Odor monitoring in a quarterly basis odor monitoring for the first year of operation is required for the project. The requirement is at least 85% of odor removal efficiency for each deodorization equipment.
- 5.2. Passive sampling technique at the sampling locations will be applied. A Nalophan sampling bag will be placed inside an air-tight sampler and then drawn to vacuum for sampling. Approximately 60 liters of gas sample is collected into the sampling bag for testing.



- 5.3. All samples were collected during normal operation hour, and the collected samples were returned to laboratory for olfactometry analysis within 24 hours after sampling.
- 5.4. The designated locations for the odor monitoring were listed in **Table 3** and were shown in **Appendix D**.

Table 3 Proposed Odor Sampling Locations

Inlet		Outlet		Deodorization Equipment
ID	Location	ID	Location	
A1	Vehicle Washing Bay	A2	After WSF-UGF-2	Scrubber
B1	Washing Filling Points	B2	After WSF-UGF-3	Scrubber
C1	Automatic Vehicle Washing Machine Area	C2	After WSF-UGF-1	Scrubber

- 5.5. Total four quarterly basis odor monitoring works were carried out in during the first year of operation. All three deodorization equipments showed more than 85% of odor removal efficiency in the quarterly basis odor monitoring works. The results were shown in **Table 4** and the detailed laboratory reports were attached in **Appendix F**.

Table 4 Odor Removal Efficiency of Deodorization Equipment

Inlet		Outlet		Deodorization Equipment	Removal Efficiency (%)				
ID	Location	ID	Location		September 2019	December 2019	June 2020*	September 2020*	
A1	Vehicle Washing Bay	A2	After WSF-UGF-2	Scrubber	1 st time	98.8	98.9	98.6	98.7
					2 nd time	99.2	98.8	98.6	98.6
B1	Washing Filling Points	B2	After WSF-UGF-3	Scrubber	1 st time	99.0	98.8	98.6	98.6
					2 nd time	99.3	98.9	98.7	98.6
C1	Automatic Vehicle Washing Area	C2	After WSF-UGF-1	Scrubber	1 st time	99.0	98.5	98.5	98.7
					2 nd time	98.7	98.5	98.5	98.5

*Due to the COVID-19, the original 3rd quarterly basis odor monitoring (i.e. March 2020) was postponed to June 2020, and the rest of the quarterly basis odor monitoring works were postponed accordingly.

- 5.6. As shown in **Table 4**, all deodorization equipments shown more than 85% of odor





removal efficiency during the first year of operation. Therefore, the monitoring results were considered satisfactory.

6.0 Non-compliance, Complaints, Notifications of Summons and Status of Prosecutions

5.1 The cumulative statistics for non-compliances, complaints, notifications of summons and status of prosecutions for the Project since the date of commencement of operation are summarized in *Table 5* and provided in *Appendix H*.

Table 5 Statistics for Non-compliance, Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Cumulative Statistics			
	Non-compliances	Complaints	Notifications of Summons	Successful Prosecutions
28/6/2019 – 30/9/2020	0	0	0	0

Record on Notifications of Summons and Successful Prosecution

5.2 During the first year of operation phase, no notifications of summons nor successful prosecution were received. No actions nor follow-up procedures were required during the first year of operation.

7.0 Comments, Recommendations and Conclusions

6.1 Environmental impact monitoring had been carried out for Re-provisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot, Yen Ming Road, West kowloon Reclamation Area.

6.2 The operation date of the project was 28 June 2019, which a notification letter of the operation date was sent to EPD on 28 May 2019.





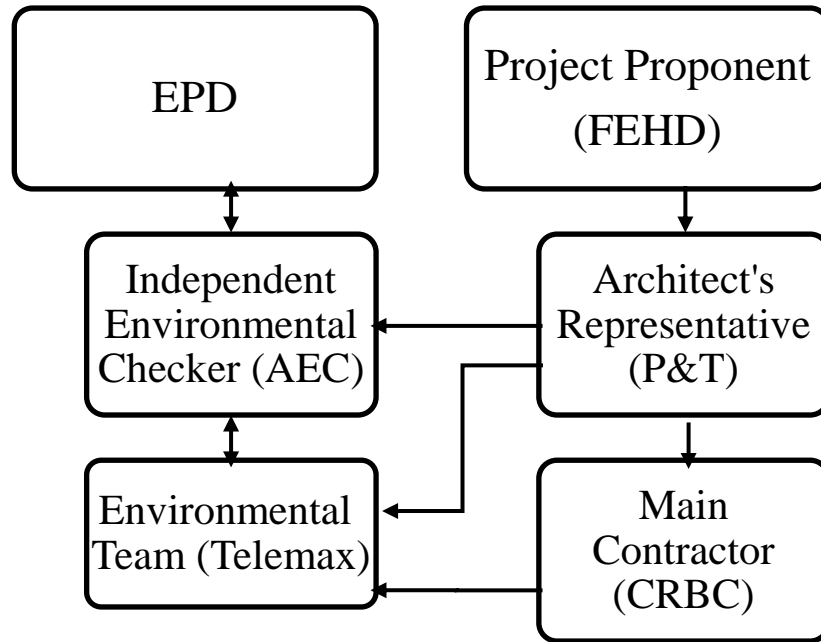
6.3 In the reporting period, no environmental complaint and no notification of summons or successful prosecution was received.

6.4 There were total four quarterly basis odor monitoring works. The first quarterly basis odor monitoring was carried out on 5 September 2019. The second quarterly basis odor monitoring was carried out on 5 December 2019. Due to the COVID-19 situation in Hong Kong, the third quarterly basis odor monitoring was postponed to 19 June 2020. The final quarterly basis odor monitoring has been carried out on 23 September 2020. In all four quarterly basis odor monitoring works, all three deodorization equipments showed more than 85% odor removal efficiency.





Appendix A Organization Chart



Appendix B Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Air Quality (Construction)					
• Use of regular watering, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Use of frequent watering for particularly dusty construction areas close to ASRs	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Side enclosure and covering of any practicable owing to frequent usage, watering should be applied to aggregate fines;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage piles near ASRs;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Tarpaulin covering of all dust vehicle loads transported to, from and between site locations;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Imposition of speed controls for vehicle son unpaved site roads. 8 km/hr is the recommended limit;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) , if applicable, should be covered entirely buy impervious sheeting or placed in an area sheltered on the top and the 3-sides; and	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Loading, unloading, transfer, handling or storage of large amount of cement or dry PFA should be carried out in a totally enclosed system or facility, and nay vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)



					phase)
<ul style="list-style-type: none"> 3-sides enclosed washing bays and maintenance workshops, served with mechanical ventilations to maintain all the time with proper negative air pressure. 	Washing bays & maintenance workshops	✓			
<ul style="list-style-type: none"> Deodorization system such as active carbon filters or chemical scrubber (or equivalent) will be applied at the ventilation duct prior to discharging to the atmosphere, having odor removal efficiency of 85% or above at normal operation, and under regular and proper maintenance and replacement. 	Washing bays & maintenance workshops	✓			
<ul style="list-style-type: none"> Commissioning test requirement should be incorporated in the specification during commissioning period in order to ensure the odor removal efficiency (at least 85%) of the proposed odor removal unit. 	Washing bays & maintenance workshops				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Monitoring test on odor removal efficiency of the odor removal unit should be carried out quarterly in the first year of operation. Development of monitoring and investigation plan, as well as work procedure, prior to operation of the unit is recommended. 	Washing bays & maintenance workshops	✓			



Noise – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
<ul style="list-style-type: none"> Carefully arrange the timing and sequencing of the various construction activities according to the actual site work situation; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Limit the quantity of PME to be operated concurrently and their proportion of usage were recommended in the Project and incorporated in the Noise Impact Assessment; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> The proposed quantity of PMEs and their proportion of usage should be confirmed feasible by the Engineer; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> In the case during school examination, more stringent construction noise criteria should be imposed, the potentially most disruptive construction activities should be avoided, and arranged to be conducted during school holidays as far as practicable. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> The use of Sound Power Levels (SWLs) for typical PME provided in the GWTM and that for equivalent “quiet” plants: <ul style="list-style-type: none"> Loader, wheeled (Back-hoe)Excavator, Tracked Generator Mobile Crane 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> The use of temporary noise barriers if applicable: <ul style="list-style-type: none"> Movable barriers with skid footing and a small cantilevered upper portion Noise jacket/muffler Applicable PME with temporary noise barriers: excavator and mobile crane Selection of insulation material: acoustic mats 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> The use of temporary noise barriers if applicable <ul style="list-style-type: none"> Movable barriers with skid footing and a small cantilevered upper portion Noise jacket/muffler Applicable PME with temporary noise barriers: excavator and mobile crane Selection of insulation material: acoustic mats 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plants should be operated on-site and plants should be serviced regularly during the construction period; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Mobile plant, if any, should be sited as far from NSRs as possible; 	All areas				✓ (As suggested in the



					EIA report, it is not applicable in operation phase
• Plant known to emit noise strongly in one direction should, wherever possible, be properly oriented so that the noise is directed away from the nearby NSRs;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Use of site hoarding as a noise barrier to screen noise at low level NSRs;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Any material stockpiles and other structures should be effectively utilised, wherever practicable, to screen the noise from on-site construction activities	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• The Workshop Vehicle Repair Activities should be carried out under the covered area of the Transport Workshop Section on the G/F as the building of FEHD Depot itself provides screening effect to the NSRs	Transport Workshop Section	✓			
• The workshop vehicle repair activities should not be carried out during night-time period	Transport Workshop Section	✓			
• Acoustic treatment, such as acoustic louvres, silencers, enclosures could be applied to achieve noise attenuation on the use of MVAC and other Building Service Equipment so that the SWL of the equipment shall not exceed the specified “maximum allowable SWL” in various plant rooms.	Transport Workshop Section	✓			

Water Quality – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Water Quality and Sewerage					
• At the establishment of works site, perimeter cut-off drains to direct offsite water around the Site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels) both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided to divert the stormwater to silt removal facilities. The design of the temporary on-site drainage system will be	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)





					phase)
undertaken by the Contractor prior to the commencement of construction;					✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Dikes or embankments for flood protection should be implemented around the boundaries of earthworks areas. Temporary ditches should be provided to facilitate the run-off discharge into an appropriate watercourse, through a silt / sediment trap. Silt / sediment traps should also be incorporated in the permanent drainage channels to enhance deposition rates;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt / sand traps should be 5 minutes under maximum flow conditions. The sizes may vary depending upon the flow rate, but for a flow rate of 0.1m ³ /s, a sedimentation basin of 30m ³ would be required and for a flow rate of 0.5m ³ /s the basin would be 150m ³ . The detailed design of the sand / silt traps should be undertaken by the Contractor prior to the commencement of construction;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• The construction works should be programmed to minimize surface excavation works during rainy seasons (April to September), as soon as possible after the earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• The overall slope of works sites should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads should be protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during the prolonged periods of inclement weather and the reduction of surface sheet flows;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure their proper and efficient operation at all times particularly following rainstorms. Deposited silts and grits should be removed regularly and disposed of by spreading evenly over stable, vegetated areas;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Measures should be taken to minimize the ingress of site drainage into excavations. If the excavation of trenches in wet season is inevitable, they should be dug and backfilled in short sections wherever practicable. The water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• All open stockpiles of construction materials (for example, aggregates, sand and fill material should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silts or debris into any drainage system;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm run-off being directed into foul sewers;	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)





					phase)
<ul style="list-style-type: none"> Precautions to be taken at any time of the year when rainstorms are likely actions to be taken when a rainstorm is imminent or forecasted and during or after rainstorms, are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface run-off during storm events; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving the Site to ensure no earth, mud, debris and the like is deposited by them on roads. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Oil interceptors should be provided in the drainage system downstream of any oil / fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Oil interceptors should be provided in the drainage system downstream of any oil / fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain; 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching the nearby WSRs. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Application to the EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge license. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the Technical Memorandum. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Minimum distance of 100m should be maintained between the discharge points of construction site effluent and the existing seawater intakes. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)





<ul style="list-style-type: none"> No new effluent discharges in nearby typhoon shelters should be allowed. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., would minimise water consumption and reduce the effluent discharge volume. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Portable chemical toilets and sewage holding tanks are recommended for the handling of the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Any maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> All sewage arising from the Project should be collected and diverted to the public sewerage system via proper connections to minimise water quality impact from the operation of the Project and ensure compliance with Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Water under the WPCO. 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> To prevent the potential contaminated wastewater from entering the existing public sewerage systems, run-offs from the covered areas including the vehicle washing bays and vehicle parking space will be properly treated prior to the discharge into the sewerage system. The treated effluent for discharging into the public sewerage system should comply with the effluent standards as stated in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters under the WPCO. 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> There is a need to apply to the EPD for a discharge licence for discharge of the operational effluent from the Project under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. 	The Office-cum-Vehicle Depot	✓			





Waste – Schedule of Recommended Mitigation Measures

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Waste Management and Land Contamination					
<ul style="list-style-type: none"> The requirements as stipulated in the ETWB TC(W) No. 19/2005 “Environmental Management on Construction Sites” and the other relevant guidelines should be included in the Particular Specification for the Contractor as appropriate. Contractor should be required to implement the recommended waste management measures through establishing a Waste Management Plan (WMP) in accordance with the ETWB TC(W) No.19/2005 so as to provide an overall framework of waste management and reduction. The WMP should be submitted to the Project/Site Engineer prior to the construction commencement of the Project for approval and include the followings: <ul style="list-style-type: none"> Waste management policy; Record of generated waste; Waste reduction target; Waste reduction programme; Role and responsibility of waste management team; Benefit of waste management; Analysis of waste materials; Reuse, recycling and disposal plans; Transportation process of waste products; and Monitoring and action plan. The waste management hierarchy below should be strictly followed. This hierarchy should be adopted to evaluate the waste management options in order to maximise the extent of waste reduction and cost reduction. The records of quantities of waste generated, recycled and disposed (location) should be properly documented 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D Materials arising. The use of more durable formwork or plastic facing for construction works should also be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should be carefully planned in order to avoid over-ordering and wastage. The Contractor should recycle as many C&D materials as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> A recording system for the amount of waste generated, recycled and disposed (locations) should be established. The future Contractor should also provide proper training to workers regarding the appropriate concepts of site cleanliness and waste management procedures, e.g. waste reduction, reuse and recycling all the time. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> All waste containers shall be in a secure area on hardstanding. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Training of site personnel in, site cleanliness, proper waste management and chemical handling procedures. 	All areas				✓





					(As suggested in the EIA report, it is not applicable in operation phase)
• Provision of sufficient waste disposal points and regular collection of waste.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Appropriate of sufficient waste disposal points and regular collection of waste by either covering trucks or by transporting wastes in enclosed containers.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Separation of chemical wastes for special handling and appropriate treatment.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• The site and surroundings shall be kept tidy and litter free.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• No waste shall be burnt on-site	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Make provisions in contract documents to allow and promote the use of recycled aggregates where appropriate.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
• Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)





<ul style="list-style-type: none"> Sorting of demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.). 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Encourage collection of aluminum cans by providing separate labeled bins to enable this waste to be segregated from other general refuse generated by the workforce. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Proper storage and site practices to minimize the potential for damage or contamination of construction materials. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Waste haulier must hold a valid permit for the collection of waste as stipulated in their permits, Removal of waste should be done in a timely manner. 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Register as a Chemical Waste Producers to the EPD 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>
<ul style="list-style-type: none"> Having a capacity of <450L unless the specifications have been approved by the EPD; 	All areas				<p style="text-align: center;">✓</p> <p>(As suggested in the EIA report, it is not applicable in operation phase)</p>





					phase) ✓
<ul style="list-style-type: none"> • Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations; 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Clearly labelled and used solely for the storage of chemical wastes; 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Enclosed with at least 3 sides; 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container of 20% by volume of the chemical waste stored in the area, whichever is greatest; 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Adequate ventilation; 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Incompatible materials are adequately separated. 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • Adequate numbers of portable toilet should be provide for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilizing them. Night soil should be regularly collected by licensed collectors. 	All areas				(As suggested in the EIA report, it is not applicable in operation phase) ✓
<ul style="list-style-type: none"> • The requirements stipulated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes should be followed in handling of chemical waste as in construction phase. 	The Office-cum-Vehicle Depot	✓			





<ul style="list-style-type: none"> A trip-ticket system should be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation to monitor all movements of chemical wastes which would be collected by a licensed collector to a licensed facility for final treatment and disposal. 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> The recommendations proposed for the mitigation of impacts from chemical waste in construction phase should also be followed. 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Provide recycling bins at designated areas for proper recycling of papers, aluminum cans and plastics bottles 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Separation from other waste types and collected by licensed collectors at daily basis to minimize the potential impacts from odour and vermin. 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Storage of Chemicals and Chemical Wastes 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Emergency Procedures 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Spillage/leakage of Liquid Chemical/Waste at Storage Area 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Spillage/Leakage at Repairing and Maintenance Areas 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Record of Incidents 	The Office-cum-Vehicle Depot	✓			
<ul style="list-style-type: none"> Procedures for Disposal of Wastes 	The Office-cum-Vehicle Depot	✓			





Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially Implemented	Not Implemented	Not Applicable
Landscape and Visual					
<ul style="list-style-type: none"> Cautiously arrangement of the operation or placement of the construction plant and machinery, and the transportation or storage of material to reduce and confined the potential adverse impacts in certain areas in the Site 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Minimise the height of temporary structures such as hoardings and site offices, and restore the temporary construction site locally to the existing condition in order to minimise any negative impacts and associated uncomfortable views. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Check the site boundaries regularly to ensure the working area does not exceed and causes further damage to the surrounding area. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> In case of nighttime construction is conducted, control of nighttime lighting on the works areas to prevent undesired light pollution to the surrounding area, such as viewers from roads, should be implemented. 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Provision of temporary landscape treatment during construction phase, such as temporary planting around the site office, applying aesthetic treatments on site hoardings and/or façade of site office 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Provision of green roof of site office 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Erection of fencing around the trees 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Avoidance of placing any construction materials close to the trees 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Apply mulching beyond root collar 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)
<ul style="list-style-type: none"> Conduct visual checking/monitoring in regular basis 	All areas				✓ (As suggested in the EIA report, it is not applicable in operation phase)





<ul style="list-style-type: none"> • Proper arrangement of materials for operational activities, including vehicle repair, maintenance, operation and parking, carried out within the office-cumvehicle depot building. 	All areas	✓			
<ul style="list-style-type: none"> • Ground Floor Planting – Pedestrian Zone • Vertical Greening • Roof Gardens • Hard Landscape Features <p>Planting of these trees should be completed before the completion of construction work of the Project. Approval on tree felling would be obtained from the relevant government departments including Lands Department. If it is required, monitoring of the compensatory planting after establishment should be conducted according to the tree felling approval conditions as required by the approval authorities.</p>	All areas	✓			





Appendix C Monitoring Schedule

First Quarterly Basis Odor Monitoring Schedule (September 2019)

September 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 1 st Odor monitoring	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					





Second Quarterly Basis Odor Monitoring Schedule (December 2019)

December 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 2 nd Odor monitoring	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				





Third Quarterly Basis Odor Monitoring Schedule (June 2020)

June 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19 3 rd Odor Monitoring	20
21	22	23	24	25	26	27
28	29	30				





Final Quarterly Basis Odor Monitoring Schedule (September 2020)

September 2020						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23 4 th Odor Monitoring	24	25	26
27	28	29	30			



Telex Environmental and Energy Management Limited

Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telemaxeem.com



Appendix D Proposed Monitoring Locations

香港沙田火炭山尾街 18-24 號沙田商業中心 16 樓 9-10 室 Tel.: (852) 3563 7003 Fax.: (852) 3563 7018 網址 : <http://www.telemaxeem.com>
Unit 9-10, 16/F, Shatin Galleria, No. 18-24 Shan Mei Street, Fo Tan, N.T., Hong Kong





NOTES :

- CO CO SENSOR
- IFP INTERFACING PANEL
- LMCP LMCP

Rev.	Description	Date
C	AS-FITTED DRAWING SUBMISSION	13-3-2019
B	AS PER PTME'S COMMENT ON 16/6/2017	23-6-2017
A	REVISION A SUBMISSION	18-10-2016
O	FIRST SUBMISSION	25-5-2016

REVISION

ARCHITECT CONSULTANT

P&T Architects and Engineers Ltd
巴丹拿建築及工程師有限公司
www.p-t-group.com

STRUCTURAL CONSULTANT

P&T Architects and Engineers Ltd
巴丹拿建築及工程師有限公司
www.p-t-group.com

BUILDING SERVICES CONSULTANT

P & T (M&E) Ltd.

MAIN CONTRACTOR

中國路橋工程有限責任公司
CHINA ROAD & BRIDGE CORPORATION

MVAC SUB-CONTRACTOR

WESTCO 威高
Airconditioning Ltd.
(Member of Chimney Alliance Group Ltd.)

Design	Drawn	Checked	Approved	Name	DATE
				P&T (M&E) Ltd.	
				ZENITH LEUNG	DATE 13-3-2019
				RICKY CHEUNG	DATE 13-3-2019
				RICKY CHEUNG	DATE 13-3-2019

Contract No. : SS D505

Title :

REPROVISIONING OF FEHD SAI YEE STREET ENVIRONMENTAL HYGIENE OFFICES - CUM-VEHICLE DEPOT WEST KOWLOON RECLAMATION AREA

Drawing Title :

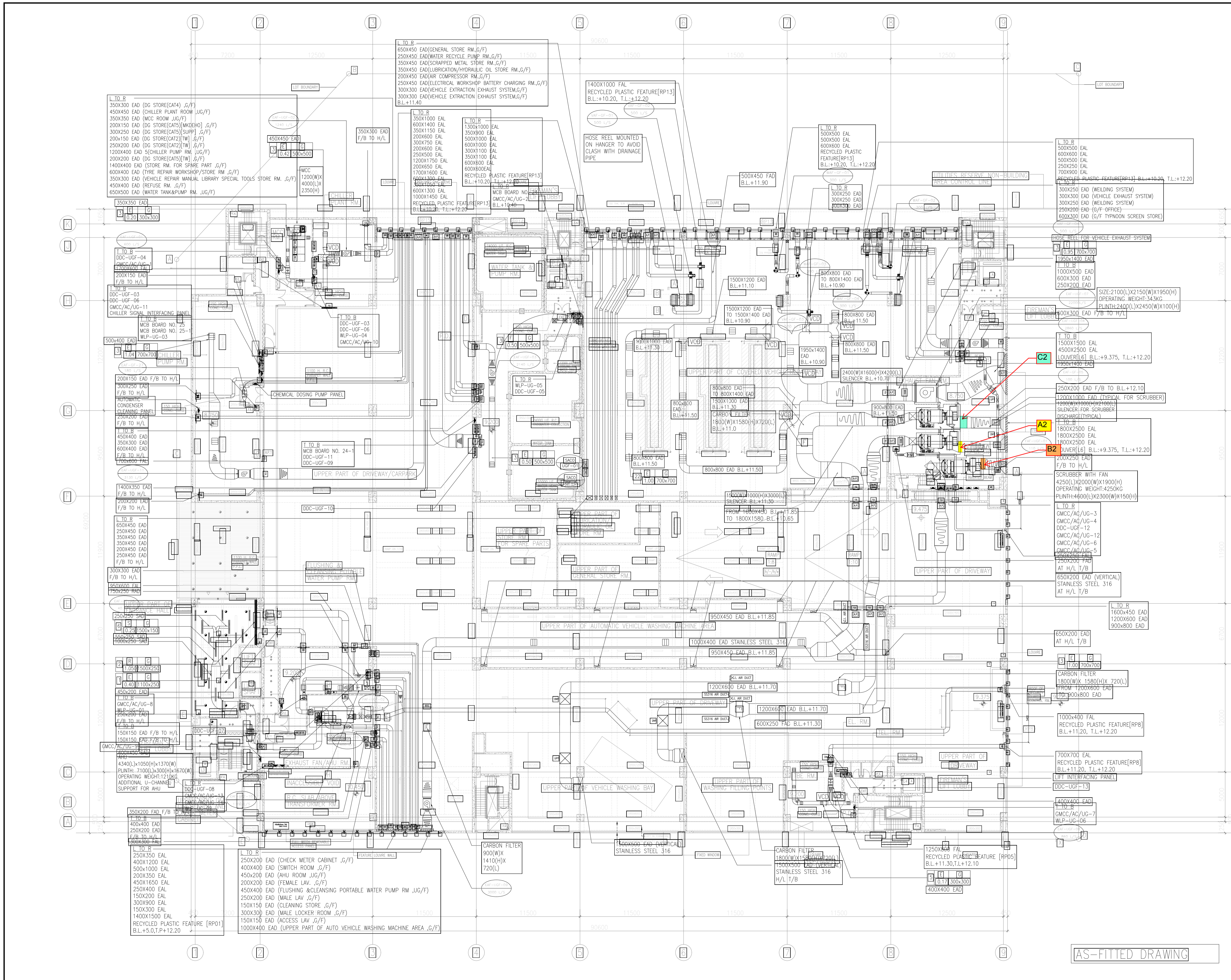
G/F AIR SIDE MVAC LAYOUT

Drawing No. : SSD505-SD-AC-201 **Rev. :** C

Scale : 1:200@A1 **Date :** 13-3-2019

ARCHITECTURAL SERVICES DEPARTMENT

AS-FITTED DRAWING



NOTES :

- ① TEMPERATURE SENSOR FOR EXHAUST FAN
- ◀ GMCC PANEL

AS-FITTED DRAWING	13-3-2019
AS PER PTME'S COMMENT ON 16/6/2017	23-06-2017
REVISION A SUBMISSION	28-10-2016
FIRST SUBMISSION	29-5-2016
Rev.	Description Date

REVISION

ARCHITECT CONSULTANT
P&T Architects and Engineers Ltd
 巴丹拿建築及工程師有限公司
 www.p-t-group.com

STRUCTURAL CONSULTANT
P&T Architects and Engineers Ltd
 巴丹拿建築及工程師有限公司
 www.p-t-group.com

BUILDING SERVICES CONSULTANT
P & T (M&E) Ltd.

MAIN CONTRACTOR
 中國路橋工程有限責任公司
 CHINA ROAD & BRIDGE CORPORATION

MVAC SUB-CONTRACTOR

WESTCO 威高
 (Member of Chimney Alliance Group Ltd.)

Designed	P&T (M&E) Ltd.	DATE	08-01-2016
Drawn	ZENITH LEUNG	DATE	13-3-2019
Checked	RICKY CHEUNG	DATE	13-3-2019
Approved	RICKY CHEUNG	DATE	13-3-2019

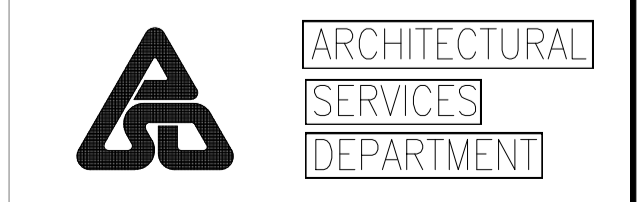
Contract No.: **SS D505**

Title :
 REPROVISIONING OF FEHD SAI YEE STREET ENVIRONMENTAL HYGIENE OFFICES - CUM - VEHICLE DEPOT WEST KOWLOON RECLAMATION AREA

Drawing Title :
 UG/F AIR SIDE MVAC LAYOUT

Drawing No.:	SSD505-SD-AC-202	Rev.:	0
Scale:	1:200@A1	Date:	13-3-2019

AS-FITTED DRAWING



Telex Environmental and Energy Management Limited

Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telexeem.com



Appendix E Commissioning Test Reports



TEST REPORT

Address : Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.

Tel. No. : (852) 3568 6872

Fax No. : (852) 3568 6875

Report No : TR(A)1907/00012

Issue Date : 2019-07-08

Application No : PIT-A-050719-01

Page No. : P. 1 of 6

Applicant Name : ENVIRONWORK (ASIA) COMPANY LIMITED

Applicant Address : Room B, 9/F, Southtex Building, 51 Tsun Yip Street,
Kwun Tong, Kowloon, Hong Kong

Project Title : SSD505 FEHD Depot

Sample Descriptions : Three (3) sampling points for H₂S (Inlet & Outlet)

Sampling Site : 87 Yen Chow St W, Cheung Sha Wan

Sample Received : 05th Jul 2019

Test Method : 1. H₂S: Refer to Method 701: Determination of Hydrogen Sulfide Content of the
Atmosphere

Result : WSF-UGF-1: 99.3%
WSF-UGF-2: 99.3%
WSF-UGF-3: 99.3%

For and on behalf of PIT Ltd.

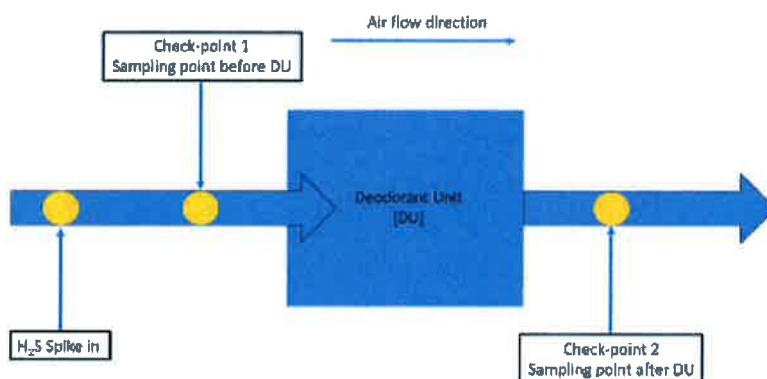
Authorized Signature :



Mr Chun-Pong, Hui
Technical Manager

Address : Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.
 Tel. No. : (852) 3568 6872 Fax No. : (852) 3568 6875
 Report No : TR(A)1907/00012 Issue Date : 2019-07-08
 Application No : PIT-A-050719-01 Page No. : P. 2 of 6

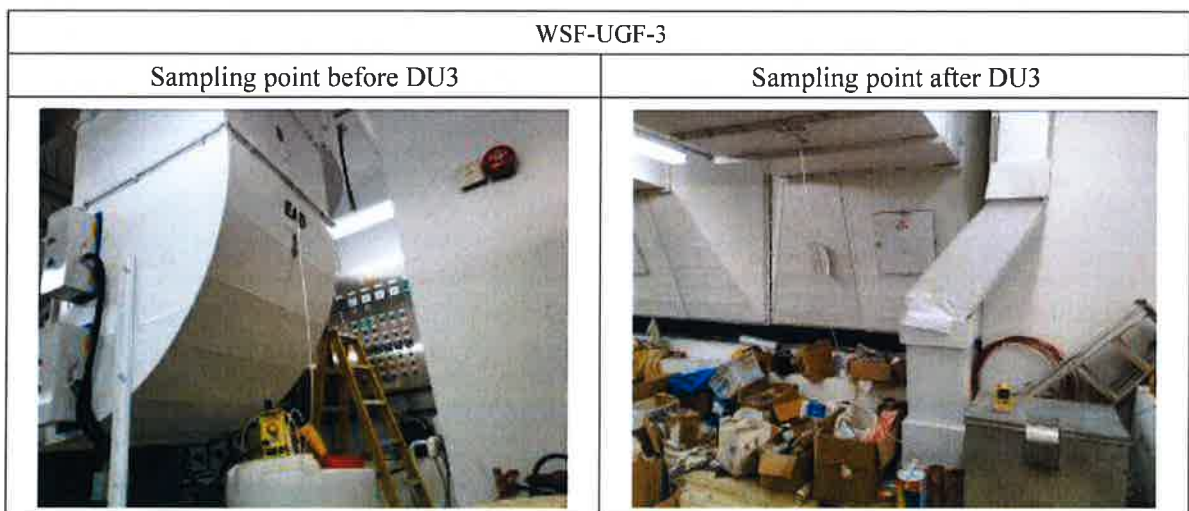
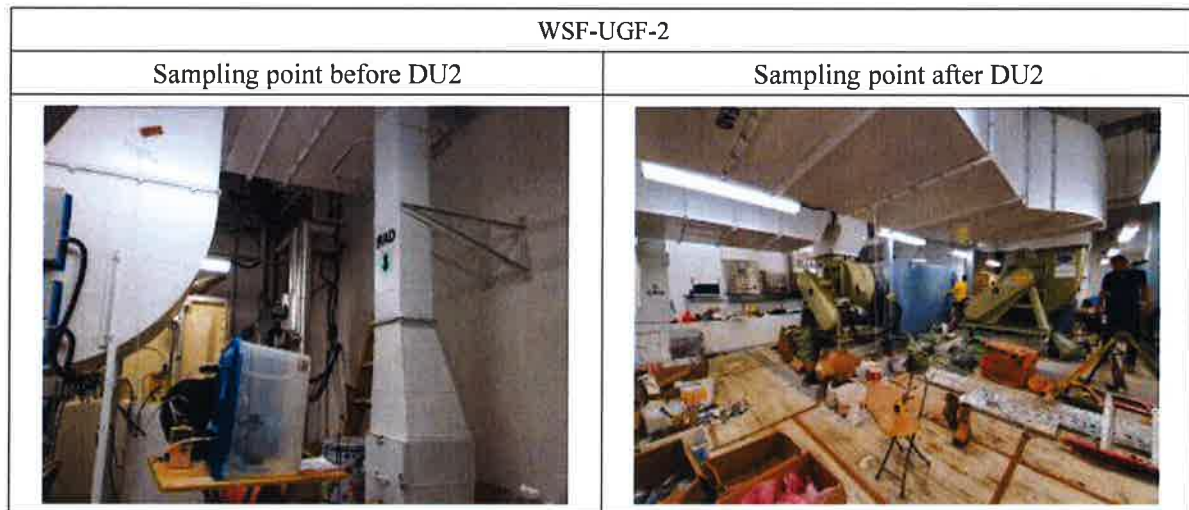
1. Set-up:



2. Photo:

WSF-UGF-1	
Sampling point before DU	Sampling point after DU

Address : Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.
 Tel. No. : (852) 3568 6872 Fax No. : (852) 3568 6875
 Report No : TR(A)1907/00012 Issue Date : 2019-07-08
 Application No : PIT-A-050719-01 Page No. : P. 3 of 6



Address : Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.
 Tel. No. : (852) 3568 6872 Fax No. : (852) 3568 6875
 Report No : TR(A)1907/00012 Issue Date : 2019-07-08
 Application No : PIT-A-050719-01 Page No. : P. 4 of 6

3. Result Table:

DU system 1: WSF-UGF-1

Part A: Concentration of H2S (Spike-in) before the DU System:

A1	DU System	:	On
A2	Impinger sampling point before the DU system	:	26.9 ppm (5 minutes sampling with 1 LPM)

Part B: Concentration of H2S (Spike-in) after the DU System:

B1	DU System	:	On
B2	Impinger sampling point after the DU system	:	< 0.2 ppm (5 minutes sampling with 1 LPM)

Part C: Calculation of the Removal Efficiency:

C3 *Rate of changes* $[(A2-B2)/A2] \times 100\%$ = 99.26%

That mean the removal efficiency is more than 99.3%.

Address : Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.
 Tel. No. : (852) 3568 6872 Fax No. : (852) 3568 6875
 Report No : TR(A)1907/00012 Issue Date : 2019-07-08
 Application No : PIT-A-050719-01 Page No. : P. 5 of 6

DU system 2: WSF-UGF-2

Part A: Concentration of H₂S (Spike-in) before the DU System:

A1	DU System	:	On
A2	Impinger sampling point before the DU system	:	28.4 ppm (5 minutes sampling with 1 LPM)

Part B: Concentration of H₂S (Spike-in) after the DU System:

B1	DU System	:	On
B2	Impinger sampling point after the DU system	:	< 0.2 ppm (5 minutes sampling with 1 LPM)

Part C: Calculation of the Removal Efficiency:

C3 $Rate\ of\ changes\ [(A2-B2)/A2] \times 100\%$ = 99.30%

That mean the removal efficiency is more than 99.3%.

Address : Room 1601, 16/F, Cheung Fung Ind. Bldg., 23-39 Pak Tin Par St., Tsuen Wan, N. T., H. K.
 Tel. No. : (852) 3568 6872 Fax No. : (852) 3568 6875
 Report No : TR(A)1907/00012 Issue Date : 2019-07-08
 Application No : PIT-A-050719-01 Page No. : P. 6 of 6

DU system 3: WSF-UGF-3

Part A: Concentration of H2S (Spike-in) before the DU System:

A1	DU System	:	On
A2	Impinger sampling point before the DU system	:	27.5 ppm (5 minutes sampling with 1 LPM)

Part B: Concentration of H2S (Spike-in) after the DU System:

B1	DU System	:	On
B2	Impinger sampling point after the DU system	:	< 0.2 ppm (5 minutes sampling with 1 LPM)

Part C: Calculation of the Removal Efficiency:

C3 *Rate of changes* $[(A2-B2)/A2] \times 100\%$ = 99.27%

That mean the removal efficiency is more than 99.3%.

Result Table

******* End of Report *******

Appendix

I. Calibration Certificates



Calibration Certificate



4. Result of Calibration

Certificate No.: CC0091905

1. Description	
Equipment description:	UV/Vis Spectrometer
Manufacturer:	Olympica
Type / Model No.:	15410 DR-315
Serial No.:	0444058
Assigned equipment no.:	P1-2018
Adjustment:	N/A
Remark:	Received with good condition

2. Customer information	
Customer:	P1 Limber
Address:	Room 1001, 10/F, Cheong Fung Kee Bldg., 23-29 Pak Tin Pkwy., Tuen Mun, N.T., H.K.
Date of receipt:	15 May 2019

3. Date of performance of the calibration	
Date of calibration:	15 May 2019

			Technical Requirement
Wavelength accuracy	Section A	0.9 nm	+/- 2.0nm
	Section B	0.9 nm	+/- 5.0nm
Wavelength repeatability	Section A	0.0 nm	+/- 3.0nm
	Section B	0.0 nm	+/- 5.0nm
Transmittance accuracy	Section A	-0.2%	+/- 2.0%
	Section B	-0.2%	+/- 3.0%
Transmittance repeatability	Section A	0.0%	+/- 3.0%
	Section B	0.0%	+/- 3.0%
Stray light	Section A	0.0% (120nm)	+/- 2.0% (120nm)
	Section B	0.2% (160nm)	+/- 1.0% (160nm)
Abs	0% Base	0.00% 2nm	+/- 0.5%
	100% Base	0.1% 2nm	+/- 1.0%
	0.1%	0.1% 30 nm	+/- 1.0%
Residual Wavelength	Section A	-0.005 Abs	+/- 0.010 Abs
	Section B	-0.004 Abs	+/- 0.010 Abs

Note: The tolerance requirement is refer to Table 1 of an ISO 17025

Approved Signature:
Waiyin Yeung

Company Chop:
Certificate issue date: 21 May 2019

1. The calibration shall not be reproduced except in full, without the approval of CAL LAB LTD.
2. The certificate is issued in accordance with the Terms and Conditions, available at our website.

Page 1 of 2

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2. The certificate is issued subject to the Terms and Conditions, available at our website.

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CAL Lab Limited
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Tel: (852) 2606020 Fax: (852) 2606021 Email: info@cal-lab.com.hk Website: www.cal-lab.com.hk

CAL Lab Limited
Address: Room 1001, 10/F, Cheong Fung Kee Building, 23-29 Pak Tin Pkwy., Tuen Mun, N.T., H.K.
Tel: (852) 2606020 Fax: (852) 2606021 Email: info@cal-lab.com.hk Website: www.cal-lab.com.hk



5. Reference method for calibration

UV/Vis Spectrometer	HK 178-2007
---------------------	-------------

6. Environment condition of calibration

Temperature: °C	23.3
Relative humidity: %RH	41.50%

7. Reference equipment used in the calibration

Item	Serial No.	Expiry Date	Responsible to
Hydrion Oxide Glass Filter	4818	Feb 2019	GBW

Note: The standard expanded uncertainty have been assessed to "Uncertainty and propagation of uncertainty in measurements" and give as expanded uncertainty have a level of confidence of 95%. A message for 1) a normal distribution shall be used. The standard for the reference used in the calibration is traceable to national or international recognized standard through a chain of comparison to the International System of Units (SI) or other units derived from SI. The report is subject to the conditions set in the conditions of the contract on the date of calibration and may be subject to change following the long term stability of the instrument.

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Tel: (852) 2606020 Fax: (852) 2606021 Email: info@cal-lab.com.hk Website: www.cal-lab.com.hk

***** End of Appendix *****

Telex Environmental and Energy Management Limited

Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telexeem.com



Appendix F Quarterly Basis Odor Removal Laboratory Report





September 2019 Monitoring Report

CERTIFICATE OF ANALYSIS

CLIENT:	China Road & Bridge Corporation	WORK ORDER:	HK1938565
CONTACT:	Mr Ricky Luk	LABORATORY:	Hong Kong
ADDRESS:	Units C-D, 10/F, Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon	SUB-BATCH:	0
PROJECT:	Odour Testing of the Odour Removal Units at FEHD Environmental Hygiene Office	DATE RECEIVED:	5-9-2019
SITE:	Vehicle Depot - West Kowloon Reclamation Area	DATE OF ISSUE:	11-9-2019
PO:	---	SAMPLE TYPE:	Air
		NO. of SAMPLES:	13

COMMENTS

Odour sampling was conducted by ALS Technichem (HK) staff on 5th September 2019. The sample(s) were analysed and reported on an as received basis. Sample information (Project name, Sample ID) was provided by the client.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
Managing Director - Hong Kong

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1. SUMMARY OF WORK

Three (3) odour removal units (Water Scrubbers) were selected for the sampling of odour at both the inlet and outlet side. Odour samples at the inlet and outlet side were collected simultaneously by using passive sampling technique and then delivered to ALS Hong Kong laboratory for Olfactometry Analysis. The removal efficiency were determined by comparing the results of the Inlet and outlet odour concentration for each Unit.

The Removal Efficiency of each scrubber is calculated as below:

$$= \frac{(\text{Inlet Odour Concentration} - \text{Outlet Odour Concentration})}{\text{Inlet Odour Concentration}} \times 100\%$$

2. SAMPLING LOCATION DETAILS

Site Name	Water Scrubbers Unit ID
FEHD Environmental Hygiene Office – Vehicle Depot, West Kowloon Reclamation Area	WSF-UGF-1
	WSF-UGF-2
	WSF-UGF-3

3. SAMPLING PERIOD

Parameter	Water Scrubbers Unit ID	Sampling Period	No. of Samples
Odour	WSF-UGF-1 ^[1]	5-Sep-2019 15:42 – 15:51	2
	WSF-UGF-2 ^[1]	5-Sep-2019 16:07 – 16:16	2
	WSF-UGF-3 ^[1]	5-Sep-2019 15:56 – 16:05	2

Note:

[1] Both inlet and outlet sides were sampled simultaneously.

4. SAMPLING SUMMARY

4.1 Odour Sampling



Figure 1a: Sampling Bag & Air-tightened Sampler

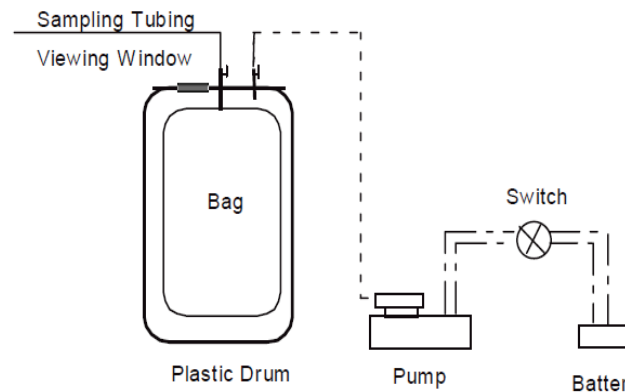


Figure 1b: Schematic Diagram of Sampling Device

Odour gas samples were collected by using the passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler which was drawn to vacuum by using a sampling pump. Approximately 60 litres of gas sample was collected into the sampling bag for testing. Diagram of the passive sampling equipment that was used was shown in Figure 1.

4.2 Olfactometry Analysis

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: ou_E/m^3 . The odour concentration was measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold was by the definition as $1\ ou_E/m^3$. The odour concentration was then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1\ ou_E/m^3$ to $10^7\ ou_E/m^3$.



Olfactometry analysis was performed by using the Scentroid™ SS6000 Olfactometer. The testing was performed by at least five qualified panellists who have been trained and selected through an n-butanol screening test. All the panellists are complied with the requirement of the European Standard method: BS EN13725 in the range of 20 to 80 ppbv and a standard deviation of $R < 2.3$. A nasal calibration by using n-butanol is performed every time before conducting odour sample analysis.

All samples were analysed within 24 hours after sampling.

5. SITE WEATHER DATA AND OBSERVATION

5.1 Site Weather Data

Unit ID	Location	Temp (°C)	Relative Humidity (%)	Wind Direction	Wind Speed
WSF-UGF-1	Inlet	29.6	80.0	-	-
	Outlet	29.4	82.2	-	-
WSF-UGF-2	Inlet	30.4	78.6	-	-
	Outlet	29.6	80.2	-	-
WSF-UGF-3	Inlet	30.5	80.1	-	-
	Outlet	29.4	81.0	-	-

5.2 Site Observation

Unit ID	Location	Odour detected during sampling	Observation
WSF-UGF-1	Inlet	Refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-2	Inlet	Refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-3	Inlet	Refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed



6. RESULT
6.1 WSF-UGF-1:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK1938565-01	Inlet	OU _E /m ³	11	1451	99.0
HK1938565-03	Outlet			15	
HK1938565-02	Inlet			951	98.7
HK1938565-04	Outlet			12	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.2 WSF-UGF-2:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK1938565-05	Inlet	OU _E /m ³	11	1451	98.8
HK1938565-07	Outlet			17	
HK1938565-06	Inlet			1451	99.2
HK1938565-08	Outlet			12	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.3 WSF-UGF-3:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK1938565-09	Inlet	OU _E /m ³	11	1451	99.0
HK1938565-11	Outlet			15	
HK1938565-10	Inlet			1583	99.3
HK1938565-12	Outlet			11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).



6.4 Field Blank Result:

ALS Sample ID	Unit	LOR ^[1]	Odour Concentration
HK1938565-13	OU _E /m ³	11	<11

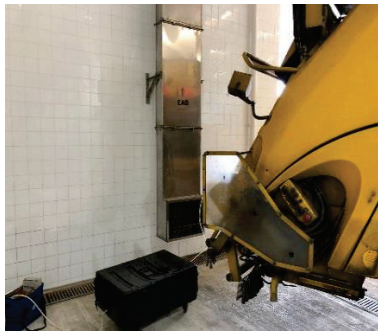
Note:

[1] LOR denotes Limit of Reporting

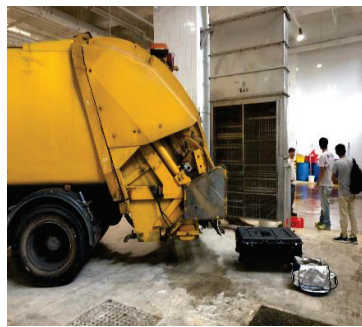
[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

APPENDIX 1

Photos for the Sampling Locations



WSF-UGF-1 Inlet



WSF-UGF-2 Inlet



WSF-UGF-3 Inlet



WSF-UGF-1 Outlet



WSF-UGF-2 Outlet



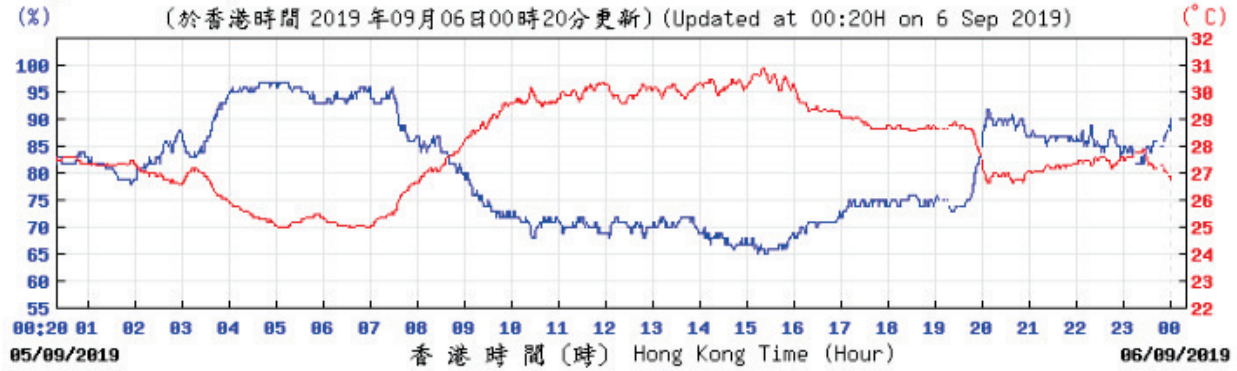
WSF-UGF-3 Outlet



APPENDIX 2

Meteorological Data from Nearby Tsing Yi Observatory Station

Temperature/Humidity:

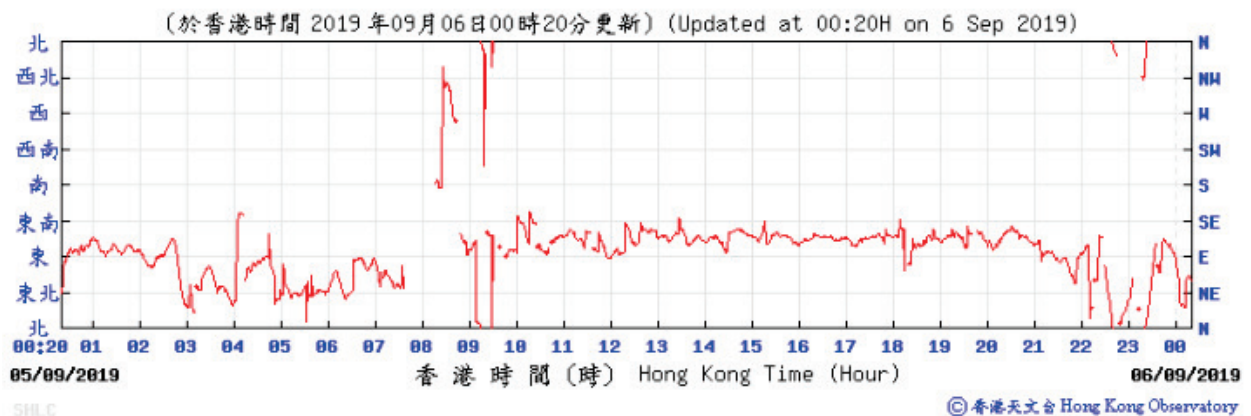


TY1

Pressure:

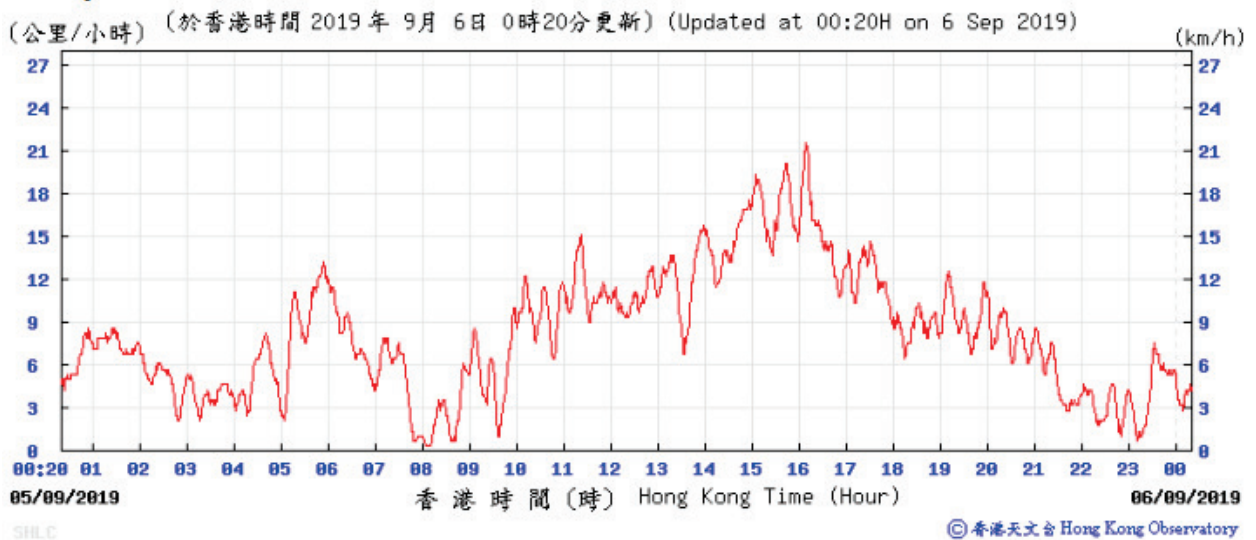


Wind Direction:



SHLC

Wind Speed:





Work Order: HK1938565

APPENDIX 3

Certificates of the Odour Panellists



Certificate for a Qualified Odour Panellist

This is to certify that

Ho Tsz Kin

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 16 April 2019 to 06 September 2019

with Individual Threshold: 38 ppb/v; Standard Deviation: 1.52

and

fulfil the Requirement of the European Standard Method of Air Quality –
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 – 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

06 September 2019

Issue Date

05 September 2020

Valid Until

Fung Lim Chee, Richard



Certificate for a Qualified Odour Panellist

This is to certify that

Wong Hei Wang

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 15 June 2019 to 06 September 2019

with Individual Threshold: 42 ppb/v; Standard Deviation: 1.49

and

fulfil the Requirement of the European Standard Method of Air Quality - Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

06 September 2019
Issue Date

05 September 2020
Valid Until


Fung Lim Chee, Richard



ALS Life Sciences | Environmental

Certificate no.: C0337-04



Certificate for a Qualified Odour Panellist

This is to certify that
Cheung Wai Hung

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 15 April 2019 to 06 September 2019

with Individual Threshold: 48 ppb/v; Standard Deviation: 1.27

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

06 September 2019

Issue Date

Fung Lim Chee, Richard

05 September 2020

Valid Until

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



ALS Life Sciences | Environmental

Certificate no.: C0404-04

Certificate for a Qualified Odour Panellist



This is to certify that

Poon Kwong Lun

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 08 April 2019 to 06 September 2019

with **Individual Threshold: 37 ppb/v; Standard Deviation: 1.26**

and

fulfil the Requirement of the European Standard Method of Air Quality - Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

06 September 2019
Issue Date

05 September 2020
Valid Until


Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



ALS Life Sciences | Environmental

Certificate no.: C0515-02



Certificate for a Qualified Odour Panellist

This is to certify that

Yu Kai Ho

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 16 April 2019 to 06 September 2019

with **Individual Threshold: 37 ppb/v; Standard Deviation: 1.35**

and

fulfil the Requirement of the European Standard Method of Air Quality – Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 – 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

06 September 2019

Issue Date

05 September 2020

Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610 1044

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APPENDIX 4
Annual Performance Test of the Olfactometer



Work Order: HK1938565



Olfactometer Performance Check Record

(ALS ID : HK1231)

Calibration Period 25-June-2019 to 26-June-2019
Next Calibration Date 25-Jun-2020

Prepared By Edwin Wong
Date 28-June-2019

Checked By Allen Poon
Date 03-July-2019

**Summary of the Performance Check****Part A Instability and Accuracy**

Setting Dilution	Real Dilution	Average of Instability (%)	Acceptance Criteria ($\leq 5\%$)	Accuracy of the Dilution Setting	Acceptance Criteria (≤ 0.20)
4	4.00	1.6	PASS	0.015	PASS
8	7.92	0.9	PASS	0.022	PASS
16	15.22	0.3	PASS	0.057	PASS
32	28.68	0.4	PASS	0.126	PASS
64	69.59	1	PASS	0.094	PASS
128	153.34	1.2	PASS	0.180	PASS
256	278.52	3.2	PASS	0.149	PASS
512	532.67	2.2	PASS	0.069	PASS
1024	1006.09	2	PASS	0.059	PASS
2048	2092.07	0.3	PASS	0.034	PASS
4096	4079.42	0.4	PASS	0.016	PASS
8192	8461.00	0.9	PASS	0.092	PASS
16384	19810.35	0.8	PASS	0.194	PASS
32768	35633.87	0.8	PASS	0.117	PASS
65536	72158.60	2.7	PASS	0.132	PASS

Part B Air Flow of Port

Station	FlowRate ≥ 20 L/min	Air Velocity ≥ 0.2 m/s	Deviation between Cups $\leq 10\%$	Comment
1	YES	YES	YES	PASS
2	YES	YES	YES	PASS
3	YES	YES	YES	PASS
4	YES	YES	YES	PASS
5	YES	YES	YES	PASS
6	YES	YES	YES	PASS

Part C Uniform Distribution of Port Opening

Location	Deviation (%)	Acceptance Criteria ($\leq 10\%$)
1	-0.4	PASS
2	-0.9	PASS
3	1.5	PASS
4	-1.3	PASS
5	1.1	PASS

Comment: The olfactometer pass the performance check.



December 2019 Monitoring Report

CERTIFICATE OF ANALYSIS

CLIENT:	China Road & Bridge Corporation	WORK ORDER:	HK1951391
CONTACT:	Mr Vincent Wong	LABORATORY:	Hong Kong
ADDRESS:	Units C-D, 10/F, Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon	SUB-BATCH:	0
		DATE RECEIVED:	5-12-2019
		DATE OF ISSUE:	13-12-2019
PROJECT:	Odour Testing of the Odour Removal Units at FEHD Environmental Hygiene Office	SAMPLE TYPE:	Air
SITE:	Vehicle Depot - West Kowloon Reclamation Area	NO. of SAMPLES:	13
PO:	---		

COMMENTS

Odour sampling was conducted by ALS Technichem (HK) staff on 5th December 2019. The sample(s) were analysed and reported on an as received basis. Sample information (Project name, Sample ID) was provided by the client.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
Managing Director - Hong Kong

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1. SUMMARY OF WORK

Three (3) odour removal units (Water Scrubbers) were selected for the sampling of odour at both the inlet and outlet side. Odour samples at the inlet and outlet side were collected simultaneously by using passive sampling technique and then delivered to ALS Hong Kong laboratory for Olfactometry Analysis. The removal efficiency were determined by comparing the results of the Inlet and outlet odour concentration for each Unit.

The Removal Efficiency of each scrubber is calculated as below:

$$= \frac{(\text{Inlet Odour Concentration} - \text{Outlet Odour Concentration})}{\text{Inlet Odour Concentration}} \times 100\%$$

2. SAMPLING LOCATION DETAILS

Site Name	Water Scrubbers Unit ID
FEHD Environmental Hygiene Office – Vehicle Depot, West Kowloon Reclamation Area	WSF-UGF-1
	WSF-UGF-2
	WSF-UGF-3

3. SAMPLING PERIOD

Parameter	Water Scrubbers Unit ID	Sampling Period	No. of Samples
Odour	WSF-UGF-1 ^[1]	5-Dec-2019 15:54 - 16:04	2
	WSF-UGF-2 ^[1]	5-Dec-2019 16:23 - 16:33	2
	WSF-UGF-3 ^[1]	5-Dec-2019 16:08 - 16:18	2

Note:

[1] Both inlet and outlet sides were sampled simultaneously.

4. SAMPLING SUMMARY

4.1 Odour Sampling



Figure 1a: Sampling Bag & Air-tightened Sampler

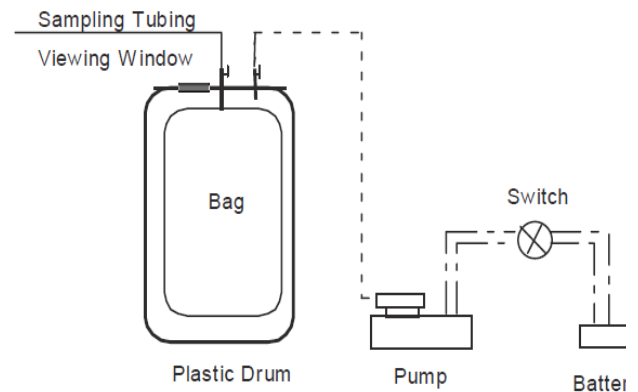


Figure 1b: Schematic Diagram of Sampling Device

Odour gas samples were collected by using the passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler which was drawn to vacuum by using a sampling pump. Approximately 60 litres of gas sample was collected into the sampling bag for testing. Diagram of the passive sampling equipment that was used was shown in Figure 1.

4.2 Olfactometry Analysis

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: ou_E/m^3 . The odour concentration was measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold was by the definition as $1\ ou_E/m^3$. The odour concentration was then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1\ ou_E/m^3$ to $10^7\ ou_E/m^3$.



Olfactometry analysis was performed by using the Scentroid™ SS6000 Olfactometer. The testing was performed by at least five qualified panellists who have been trained and selected through an n-butanol screening test. All the panellists are complied with the requirement of the European Standard method: BS EN13725 in the range of 20 to 80 ppbv and a standard deviation of R<2.3. A nasal calibration by using n-butanol is performed every time before conducting odour sample analysis.

All samples were analysed within 24 hours after sampling.

5. SITE WEATHER DATA AND OBSERVATION

5.1 Site Weather Data

Unit ID	Location	Temp (°C)	Relative Humidity (%)	Wind Direction (Deg)	Wind Speed (m/s)
WSF-UGF-1	Inlet	18.3	43.5	-	-
	Outlet	17.3	40.0	-	-
WSF-UGF-2	Inlet	18.5	44.5	-	-
	Outlet	17.1	40.5	-	-
WSF-UGF-3	Inlet	18.3	48.8	-	-
	Outlet	17.1	41.0	-	-

5.2 Site Observation

Unit ID	Location	Odour detected during sampling	Observation
WSF-UGF-1	Inlet	Minor refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-2	Inlet	Minor refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-3	Inlet	Minor refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed



6. RESULT
6.1 WSF-UGF-1:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK1951391-01	Inlet	OU _E /m ³	11	732	98.5
HK1951391-03	Outlet			<11	
HK1951391-02	Inlet			735	98.5
HK1951391-04	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.2 WSF-UGF-2:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK1951391-05	Inlet	OU _E /m ³	11	1031	98.9
HK1951391-07	Outlet			<11	
HK1951391-06	Inlet			899	98.8
HK1951391-08	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.3 WSF-UGF-3:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK1951391-09	Inlet	OU _E /m ³	11	899	98.8
HK1951391-11	Outlet			11	
HK1951391-10	Inlet			1031	98.9
HK1951391-12	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).



6.4 Field Blank Result:

ALS Sample ID	Unit	LOR ^[1]	Odour Concentration
HK1951391-13	OU _E /m ³	11	<11

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

APPENDIX 1

Photos for the Sampling Locations



WSF-UGF-1 Inlet



WSF-UGF-2 Inlet



WSF-UGF-3 Inlet



WSF-UGF-1 Outlet



WSF-UGF-2 Outlet



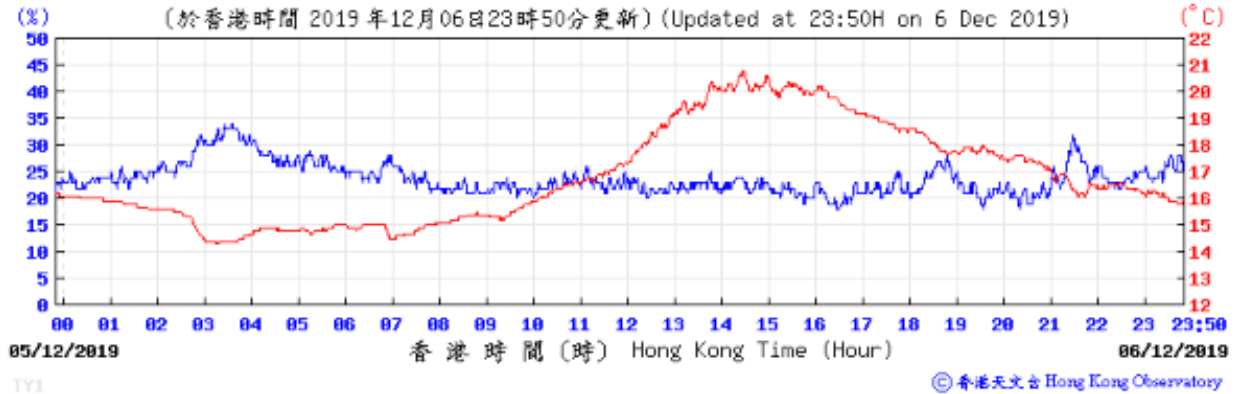
WSF-UGF-3 Outlet



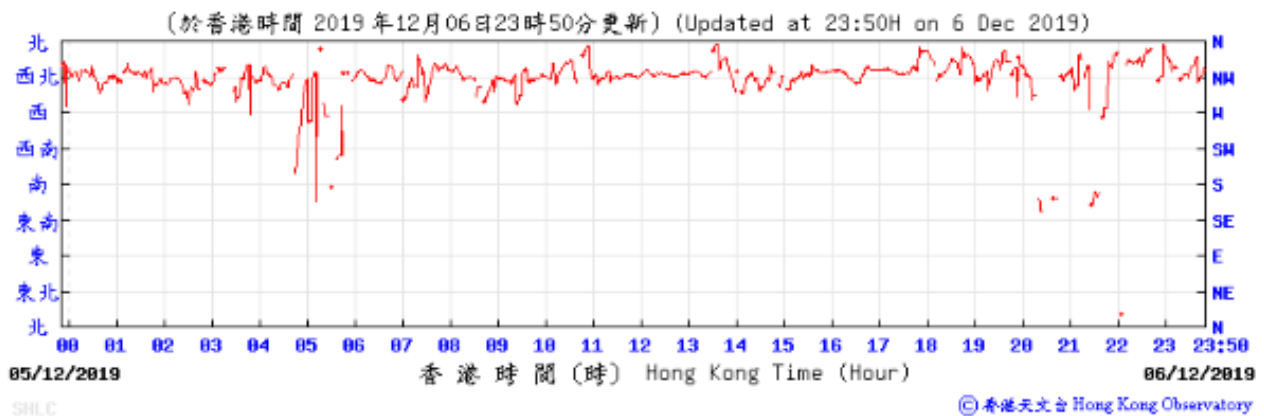
APPENDIX 2

Meteorological Data from Nearby Tsing Yi Observatory Station

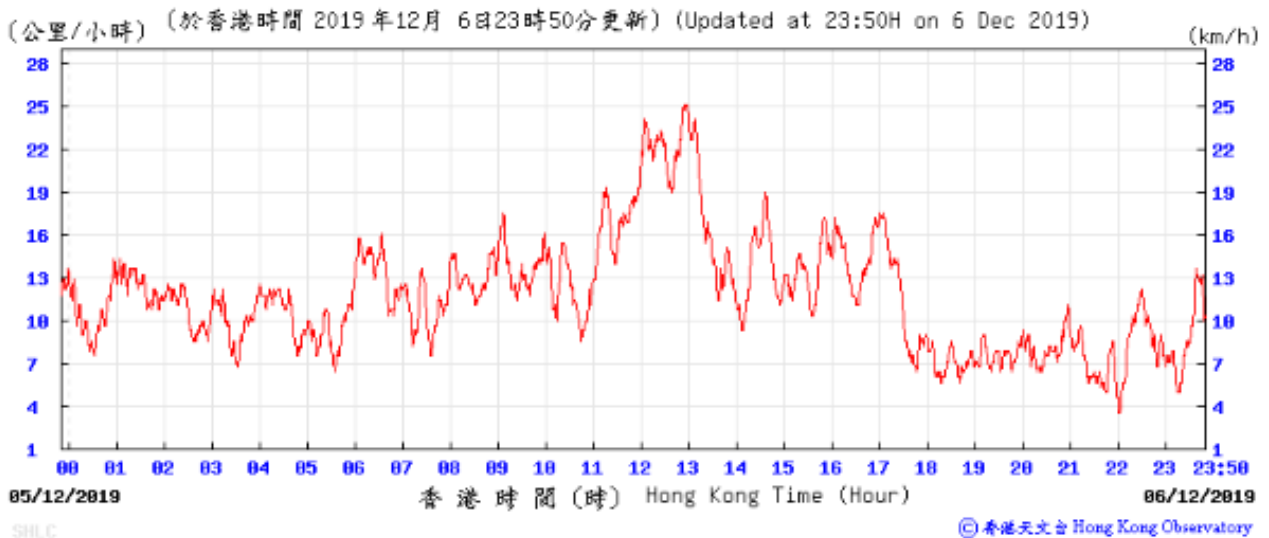
Temperature/Humidity:



Wind Direction:



Wind Speed:





Work Order: HK1951391

APPENDIX 3

Certificates of the Odour Panellists



Work Order: HK1951391



ALS Life Sciences | Environmental

Certificate no.: C0087-05

Certificate for a Qualified Odour Panellist

This is to certify that

Ho Tsz Kin

has participated in Ten (10) sets of individual n-Butanol Screening Tests

during 16 July 2019 to 05 December 2019

with Individual Threshold: 46 ppb/v; Standard Deviation: 1.32

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019

Issue Date

04 December 2020

Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK1951391



ALS Life Sciences | Environmental

Certificate no.: C0230-05

Certificate for a Qualified Odour Panellist

This is to certify that

Wong Hei Wang

has participated in Ten (10) sets of individual n-Butanol Screening Tests

during 18 July 2019 to 05 December 2019

with Individual Threshold: 46 ppb/v; Standard Deviation: 1.38

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

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1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK1951391



ALS Life Sciences | Environmental

Certificate no.: C0337-05

Certificate for a Qualified Odour Panellist

This is to certify that

Cheung Wai Hung

has participated in Ten (10) sets of individual n-Butanol Screening Tests

during 19 June 2019 to 05 December 2019

with Individual Threshold: 48 ppb/v; Standard Deviation: 1.28

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
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Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK1951391



ALS Life Sciences | Environmental

Certificate no.: C0404-05

Certificate for a Qualified Odour Panellist

This is to certify that

Poon Kwong Lun

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 16 July 2019 to 05 December 2019

with Individual Threshold: 43 ppb/v; Standard Deviation: 1.31

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

04 December 2020
Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK1951391



ALS Life Sciences | Environmental

Certificate no.: C0515-03

Certificate for a Qualified Odour Panellist

This is to certify that

Yu Kai Ho

has participated in Ten (10) sets of individual n-Butanol Screening Tests

during 17 July 2019 to 05 December 2019

with Individual Threshold: 43.9 ppb/v; Standard Deviation: 1.44

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

04 December 2020
Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER

APPENDIX 4
Annual Performance Test of the Olfactometer



Work Order: HK1951391

Olfactometer Performance Check Record

(ALS ID : HK1231)

Calibration Period 25-June-2019 to 26-June-2019
Next Calibration Date 25-Jun-2020

Prepared By Edwin Wong
Date 28-June-2019

Checked By Allen Poon
Date 03-July-2019

**Summary of the Performance Check****Part A Instability and Accuracy**

Setting Dilution	Real Dilution	Average of Instability (%)	Acceptance Criteria ($\leq 5\%$)	Accuracy of the Dilution Setting	Acceptance Criteria (≤ 0.20)
4	4.00	1.6	PASS	0.015	PASS
8	7.92	0.9	PASS	0.022	PASS
16	15.22	0.3	PASS	0.057	PASS
32	28.68	0.4	PASS	0.126	PASS
64	69.59	1	PASS	0.094	PASS
128	153.34	1.2	PASS	0.180	PASS
256	278.52	3.2	PASS	0.149	PASS
512	532.67	2.2	PASS	0.069	PASS
1024	1006.09	2	PASS	0.059	PASS
2048	2092.07	0.3	PASS	0.034	PASS
4096	4079.42	0.4	PASS	0.016	PASS
8192	8461.00	0.9	PASS	0.092	PASS
16384	19810.35	0.8	PASS	0.194	PASS
32768	35633.87	0.8	PASS	0.117	PASS
65536	72158.60	2.7	PASS	0.132	PASS

Part B Air Flow of Port

Station	FlowRate ≥ 20 L/min	Air Velocity ≥ 0.2 m/s	Deviation between Cups $\leq 10\%$	Comment
1	YES	YES	YES	PASS
2	YES	YES	YES	PASS
3	YES	YES	YES	PASS
4	YES	YES	YES	PASS
5	YES	YES	YES	PASS
6	YES	YES	YES	PASS

Part C Uniform Distribution of Port Opening

Location	Deviation (%)	Acceptance Criteria ($\leq 10\%$)
1	-0.4	PASS
2	-0.9	PASS
3	1.5	PASS
4	-1.3	PASS
5	1.1	PASS

Comment: The olfactometer pass the performance check.



June 2020 Monitoring Report

CERTIFICATE OF ANALYSIS

CLIENT:	China Road & Bridge Corporation	WORK ORDER:	HK2023243
CONTACT:	Mr Vincent Wong	LABORATORY:	Hong Kong
ADDRESS:	Units C-D, 10/F, Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon	SUB-BATCH:	0
		DATE RECEIVED:	19-6-2020
		DATE OF ISSUE:	2-7-2020
PROJECT:	Odour Testing of the Odour Removal Units at FEHD Environmental Hygiene Office	SAMPLE TYPE:	Air
SITE:	Vehicle Depot - West Kowloon Reclamation Area	NO. of SAMPLES:	13
PO:	---		

COMMENTS

Odour sampling was conducted by ALS Technichem (HK) staff on 19th June 2020.
The sample(s) were analysed and reported on an as received basis.
Sample information (Project name, Sample ID) was provided by the client.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.


Richard Fung
Managing Director - Hong Kong

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1. SUMMARY OF WORK

Three (3) odour removal units (Water Scrubbers) were selected for the sampling of odour at both the inlet and outlet side. Odour samples at the inlet and outlet side were collected simultaneously by using passive sampling technique and then delivered to ALS Hong Kong laboratory for Olfactometry Analysis. The removal efficiency were determined by comparing the results of the Inlet and outlet odour concentration for each Unit.

The Removal Efficiency of each scrubber is calculated as below:

$$= \frac{(\text{Inlet Odour Concentration} - \text{Outlet Odour Concentration})}{\text{Inlet Odour Concentration}} \times 100\%$$

2. SAMPLING LOCATION DETAILS

Site Name	Water Scrubbers Unit ID
FEHD Environmental Hygiene Office – Vehicle Depot, West Kowloon Reclamation Area	WSF-UGF-1
	WSF-UGF-2
	WSF-UGF-3

3. SAMPLING PERIOD

Parameter	Water Scrubbers Unit ID	Sampling Period	No. of Samples
Odour	WSF-UGF-1 ^[1]	19-Jun-2020 15:05 – 15:15	2
	WSF-UGF-2 ^[1]	19-Jun-2020 15:15 – 15:25	2
	WSF-UGF-3 ^[1]	19-Jun-2020 15:25 – 15:35	2

Note:

[1] Both inlet and outlet sides were sampled simultaneously.

4. SAMPLING SUMMARY

4.1 Odour Sampling



Figure 1a: Sampling Bag & Air-tightened Sampler

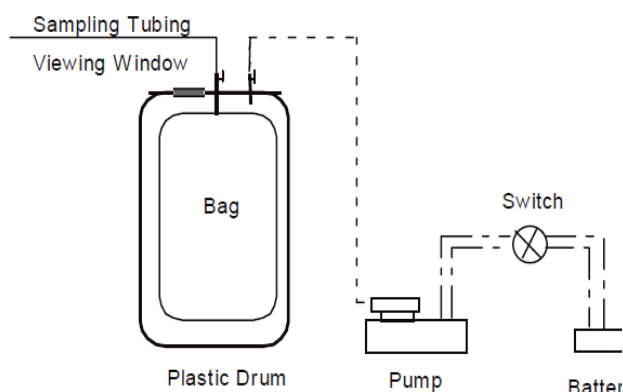


Figure 1b: Schematic Diagram of Sampling Device

Odour gas samples were collected by using the passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler which was drawn to vacuum by using a sampling pump. Approximately 60 litres of gas sample was collected into the sampling bag for testing. Diagram of the passive sampling equipment that was used was shown in Figure 1.

4.2 Olfactometry Analysis

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: ou_E/m^3 . The odour concentration was measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold was by the definition as $1\ ou_E/m^3$. The odour concentration was then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1\ ou_E/m^3$ to $10^7\ ou_E/m^3$.



Olfactometry analysis was performed by using the Scentroid™ SS6000 Olfactometer. The testing was performed by at least five qualified panellists who have been trained and selected through an n-butanol screening test. All the panellists are complied with the requirement of the European Standard method: BS EN13725 in the range of 20 to 80 ppbv and a standard deviation of $R < 2.3$. A nasal calibration by using n-butanol is performed every time before conducting odour sample analysis.

All samples were analysed within 24 hours after sampling.

5. SITE WEATHER DATA AND OBSERVATION

5.1 Site Weather Data

Unit ID	Location	Temp (°C)	Relative Humidity (%)	Wind Direction (Deg)	Wind Speed (m/s)
WSF-UGF-1	Inlet	29.3	77.0	-	-
	Outlet	30.3	84.0	-	-
WSF-UGF-2	Inlet	29.3	76.9	-	-
	Outlet	30.4	83.6	-	-
WSF-UGF-3	Inlet	29.5	76.5	-	-
	Outlet	30.2	84.4	-	-

5.2 Site Observation

Unit ID	Location	Odour detected during sampling	Observation
WSF-UGF-1	Inlet	Refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-2	Inlet	Refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-3	Inlet	Refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed



6. **RESULT**
6.1 **WSF-UGF-1:**

ALS Sample ID	Sampling Location	Unit	LOR [1]	Odour Concentration	Removal Efficiency (%)
HK2023243-01	Inlet	OU _E /m ³	11	732	98.5
HK2023243-03	Outlet			<11	
HK2023243-02	Inlet			732	98.5
HK2023243-04	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.2 **WSF-UGF-2:**

ALS Sample ID	Sampling Location	Unit	LOR [1]	Odour Concentration	Removal Efficiency (%)
HK2023243-05	Inlet	OU _E /m ³	11	797	98.6
HK2023243-07	Outlet			<11	
HK2023243-06	Inlet			784	98.6
HK2023243-08	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.3 **WSF-UGF-3:**

ALS Sample ID	Sampling Location	Unit	LOR [1]	Odour Concentration	Removal Efficiency (%)
HK2023243-09	Inlet	OU _E /m ³	11	784	98.6
HK2023243-11	Outlet			<11	
HK2023243-10	Inlet			839	98.7
HK2023243-12	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

**6.4 Field Blank Result:**

ALS Sample ID	Unit	LOR ^[1]	Odour Concentration
HK2023243-13	OU _E /m ³	11	<11

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

APPENDIX 1

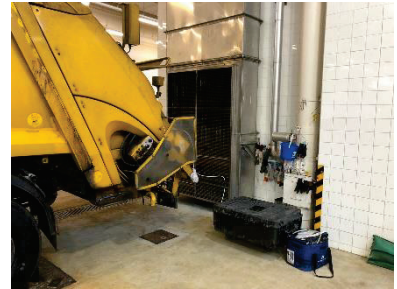
Photos for the Sampling Locations



WSF-UGF-1 Inlet



WSF-UGF-2 Inlet



WSF-UGF-3 Inlet



WSF-UGF-1 Outlet



WSF-UGF-2 Outlet



WSF-UGF-3 Outlet



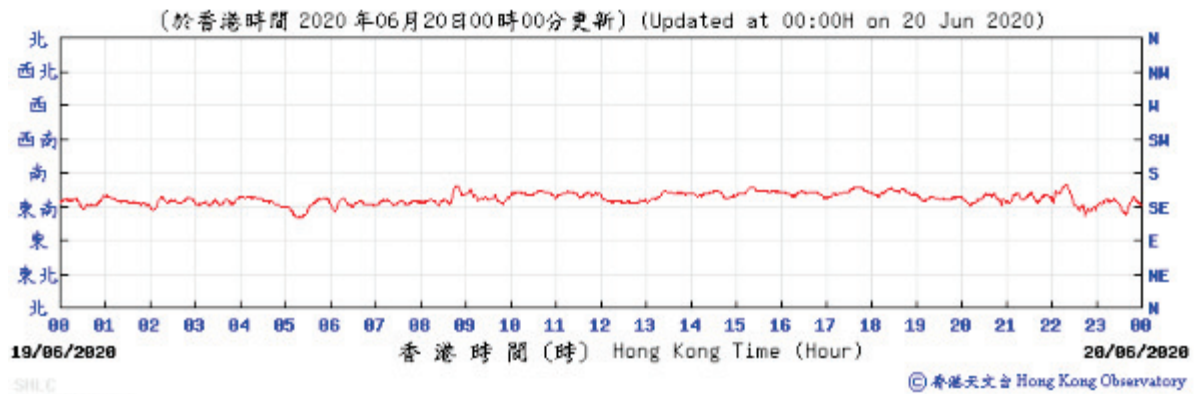
APPENDIX 2

Meteorological Data from Nearby Tsing Yi Observatory Station

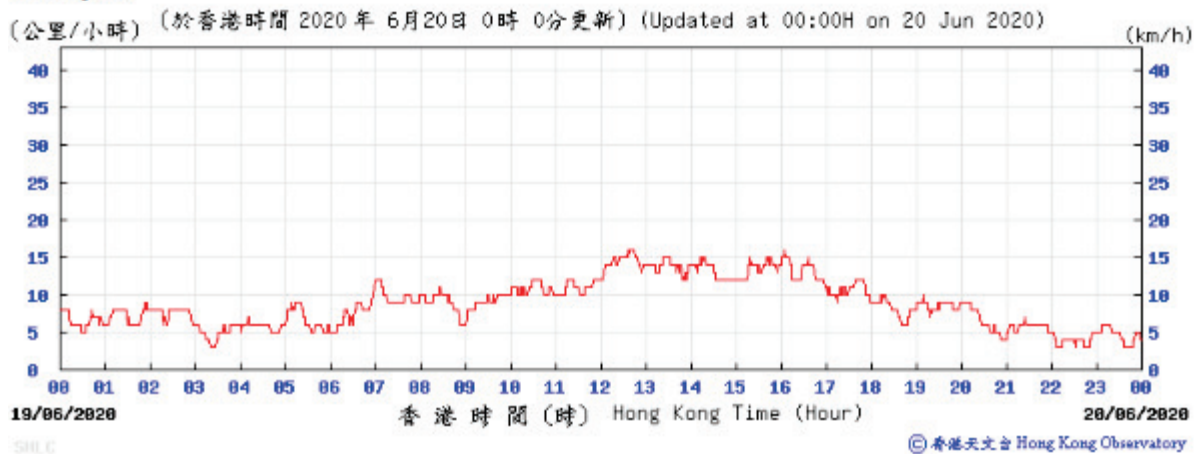
Temperature/Humidity:



Wind Direction:



Wind Speed:





Work Order: HK2023243

APPENDIX 3

Certificates of the Odour Panellists



Work Order: HK2023243



ALS Life Sciences | Environmental

Certificate no.: C0087-05

Certificate for a Qualified Odour Panellist

This is to certify that

Ho Tsz Kin

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 16 July 2019 to 05 December 2019

with Individual Threshold: 46 ppb/v; Standard Deviation: 1.32

and

fulfil the Requirement of the European Standard Method of Air Quality - Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019

Issue Date

04 December 2020

Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2023243



ALS Life Sciences | Environmental

Certificate no.: C0230-05

Certificate for a Qualified Odour Panellist

This is to certify that

Wong Hei Wang

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 18 July 2019 to 05 December 2019

with Individual Threshold: 46 ppb/v; Standard Deviation: 1.38

and

fulfil the Requirement of the European Standard Method of Air Quality - Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

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Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2023243



ALS Life Sciences | Environmental

Certificate no.: C0337-05

Certificate for a Qualified Odour Panellist

This is to certify that

Cheung Wai Hung

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 19 June 2019 to 05 December 2019

with Individual Threshold: 48 ppb/v; Standard Deviation: 1.28

and

fulfil the Requirement of the European Standard Method of Air Quality – Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 – 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019

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11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

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Work Order: HK2023243



ALS Life Sciences | Environmental

Certificate no.: C0404-05

Certificate for a Qualified Odour Panellist

This is to certify that

Poon Kwong Lun

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 16 July 2019 to 05 December 2019

with Individual Threshold: 43 ppb/v; Standard Deviation: 1.31

and

fulfil the Requirement of the European Standard Method of Air Quality - Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

04 December 2020
Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2023243



ALS Life Sciences | Environmental

Certificate no.: C0318-01

Certificate for a Qualified Odour Panellist

This is to certify that

Chan Wai Hung

has participated in Ten (10) sets of individual n-Butanol Screening Tests during 12 July 2019 to 19 June 2020

with Individual Threshold: 36 ppb/v; Standard Deviation: 1.36

and

fulfil the Requirement of the European Standard Method of Air Quality - Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 – 80 ppb/v with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

19 June 2020

Issue Date

18 June 2021

Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER

APPENDIX 4
Annual Performance Test of the Olfactometer



Work Order: HK2023243

Olfactometer Performance Check Record

(ALS ID : HK1231)

Calibration Period 25-June-2019 to 26-June-2019
Next Calibration Date 25-Jun-2020

Prepared By Edwin Wong
Date 28-June-2019

Checked By Allen Poon
Date 03-July-2019

**Summary of the Performance Check****Part A Instability and Accuracy**

Setting Dilution	Real Dilution	Average of Instability (%)	Acceptance Criteria ($\leq 5\%$)	Accuracy of the Dilution Setting	Acceptance Criteria (≤ 0.20)
4	4.00	1.6	PASS	0.015	PASS
8	7.92	0.9	PASS	0.022	PASS
16	15.22	0.3	PASS	0.057	PASS
32	28.68	0.4	PASS	0.126	PASS
64	69.59	1	PASS	0.094	PASS
128	153.34	1.2	PASS	0.180	PASS
256	278.52	3.2	PASS	0.149	PASS
512	532.67	2.2	PASS	0.069	PASS
1024	1006.09	2	PASS	0.059	PASS
2048	2092.07	0.3	PASS	0.034	PASS
4096	4079.42	0.4	PASS	0.016	PASS
8192	8461.00	0.9	PASS	0.092	PASS
16384	19810.35	0.8	PASS	0.194	PASS
32768	35633.87	0.8	PASS	0.117	PASS
65536	72158.60	2.7	PASS	0.132	PASS

Part B Air Flow of Port

Station	FlowRate ≥ 20 L/min	Air Velocity ≥ 0.2 m/s	Deviation between Cups $\leq 10\%$	Comment
1	YES	YES	YES	PASS
2	YES	YES	YES	PASS
3	YES	YES	YES	PASS
4	YES	YES	YES	PASS
5	YES	YES	YES	PASS
6	YES	YES	YES	PASS

Part C Uniform Distribution of Port Opening

Location	Deviation (%)	Acceptance Criteria ($\leq 10\%$)
1	-0.4	PASS
2	-0.9	PASS
3	1.5	PASS
4	-1.3	PASS
5	1.1	PASS

Comment: The olfactometer pass the performance check.



September 2020 Monitoring Report

CERTIFICATE OF ANALYSIS

CLIENT:	China Road & Bridge Corporation	WORK ORDER:	HK2036489
CONTACT:	Mr Vincent Wong	LABORATORY:	Hong Kong
ADDRESS:	Units C-D, 10/F, Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon	SUB-BATCH:	0
		DATE RECEIVED:	23 rd September 2020
		DATE OF ISSUE:	5 th October 2020
PROJECT:	Odour Testing of the Odour Removal Units at FEHD Environmental Hygiene Office	SAMPLE TYPE:	Air
SITE:	Vehicle Depot - West Kowloon Reclamation Area	NO. of SAMPLES:	13
PO:	---		

COMMENTS

Odour sampling was conducted by ALS Technichem (HK) staff on 23rd September 2020. The sample(s) were analysed and reported on an as received basis. Sample information (Project name, Sample ID) was provided by the client.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Richard Fung
Managing Director - Hong Kong

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1. SUMMARY OF WORK

Three (3) odour removal units (Water Scrubbers) were selected for the sampling of odour at both the inlet and outlet side. Odour samples at the inlet and outlet side were collected simultaneously by using passive sampling technique and then delivered to ALS Hong Kong laboratory for Olfactometry Analysis. The removal efficiency were determined by comparing the results of the Inlet and outlet odour concentration for each Unit.

The Removal Efficiency of each scrubber is calculated as below:

$$= \frac{(\text{Inlet Odour Concentration} - \text{Outlet Odour Concentration})}{\text{Inlet Odour Concentration}} \times 100\%$$

2. SAMPLING LOCATION DETAILS

Site Name	Water Scrubbers Unit ID
FEHD Environmental Hygiene Office – Vehicle Depot, West Kowloon Reclamation Area	WSF-UGF-1
	WSF-UGF-2
	WSF-UGF-3

3. SAMPLING PERIOD

Parameter	Water Scrubbers Unit ID	Sampling Period	No. of Samples
Odour	WSF-UGF-1 ^[1]	23-Sep-2020 15:13 - 15:22	2
	WSF-UGF-2 ^[1]	23-Sep-2020 15:33 - 15:43	2
	WSF-UGF-3 ^[1]	23-Sep-2020 15:24 - 15:31	2

Note:

[1] Both inlet and outlet sides were sampled simultaneously.

4. SAMPLING SUMMARY
4.1 Odour Sampling



Figure 1a: Sampling Bag & Air-tightened Sampler

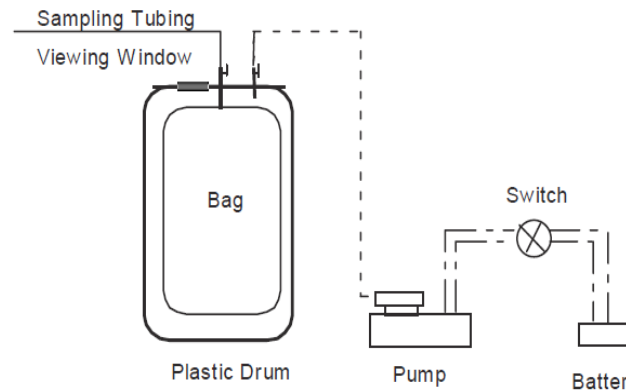


Figure 1b: Schematic Diagram of Sampling Device

Odour gas samples were collected by using the passive sampling technique. A Nalophan™ sampling bag was placed inside an air-tight sampler which was drawn to vacuum by using a sampling pump. Approximately 60 litres of gas sample was collected into the sampling bag for testing. Diagram of the passive sampling equipment that was used was shown in Figure 1.

4.2 Olfactometry Analysis

Odour concentration was determined by a Forced-choice Dynamic Olfactometer in accordance with the European Standard Method (EN13725).

This European Standard specifies a method for the objective determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors and the emission rate of odours emanating from point sources, area sources with outward flow and area sources without outward flow.

This European Standard is applicable to the measurement of odour concentration of pure substances, defined mixtures and undefined mixtures of gaseous odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor.

The unit of measurement is the odour unit per cubic metre: ou_E/m^3 . The odour concentration was measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold was by the definition as $1\ ou_E/m^3$. The odour concentration was then expressed in terms of multiples of the detection threshold. The range of measurement including pre-dilution prior to the olfactometry analysis is typically from $10^1\ ou_E/m^3$ to $10^7\ ou_E/m^3$.



Olfactometry analysis was performed by using the Scentroid™ SS6000 Olfactometer. The testing was performed by at least five qualified panellists who have been trained and selected through an n-butanol screening test. All the panellists are complied with the requirement of the European Standard method: BS EN13725 in the range of 20 to 80 ppbv and a standard deviation of $R < 2.3$. A nasal calibration by using n-butanol is performed every time before conducting odour sample analysis.

All samples were analysed within 24 hours after sampling.

5. SITE WEATHER DATA AND OBSERVATION

5.1 Site Weather Data

Unit ID	Location	Temp (°C)	Relative Humidity (%)	Wind Direction (Deg)	Wind Speed (m/s)
WSF-UGF-1	Inlet	29.8	75.8	-	-
	Outlet	29.7	77.0	-	-
WSF-UGF-2	Inlet	30.4	73.9	-	-
	Outlet	29.5	77.5	-	-
WSF-UGF-3	Inlet	30.3	73.7	-	-
	Outlet	29.5	77.5	-	-

5.2 Site Observation

Unit ID	Location	Odour detected during sampling	Observation
WSF-UGF-1	Inlet	Minor refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-2	Inlet	Minor refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed
WSF-UGF-3	Inlet	Minor refuse smell	From the Refuse Collecting Vehicle
	Outlet	Nil	No specific activities were observed



6. RESULT
6.1 WSF-UGF-1:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK2036489-01	Inlet	OU _E /m ³	11	839	98.7
HK2036489-03	Outlet			<11	
HK2036489-02	Inlet			732	98.5
HK2036489-04	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.2 WSF-UGF-2:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK2036489-05	Inlet	OU _E /m ³	11	869	98.7
HK2036489-07	Outlet			<11	
HK2036489-06	Inlet			784	98.6
HK2036489-08	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

6.3 WSF-UGF-3:

ALS Sample ID	Sampling Location	Unit	LOR ^[1]	Odour Concentration	Removal Efficiency (%)
HK2036489-09	Inlet	OU _E /m ³	11	784	98.6
HK2036489-11	Outlet			<11	
HK2036489-10	Inlet			784	98.6
HK2036489-12	Outlet			<11	

Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

[3] The results are complied with the requirement of the specification (at least 85% removal efficiency).

**6.4 Field Blank Result:**

ALS Sample ID	Unit	LOR ^[1]	Odour Concentration
HK2036489-13	OU _E /m ³	11	<11

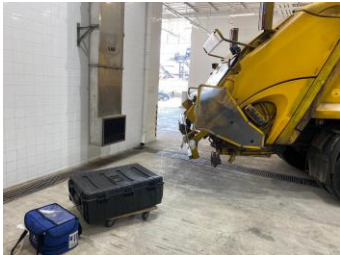
Note:

[1] LOR denotes Limit of Reporting

[2] The collected sample volume of the gas sample is sufficient for olfactometry analysis.

APPENDIX 1

Photos for the Sampling Locations



WSF-UGF-1 Inlet



WSF-UGF-2 Inlet



WSF-UGF-3 Inlet



WSF-UGF-1 Outlet



WSF-UGF-2 Outlet



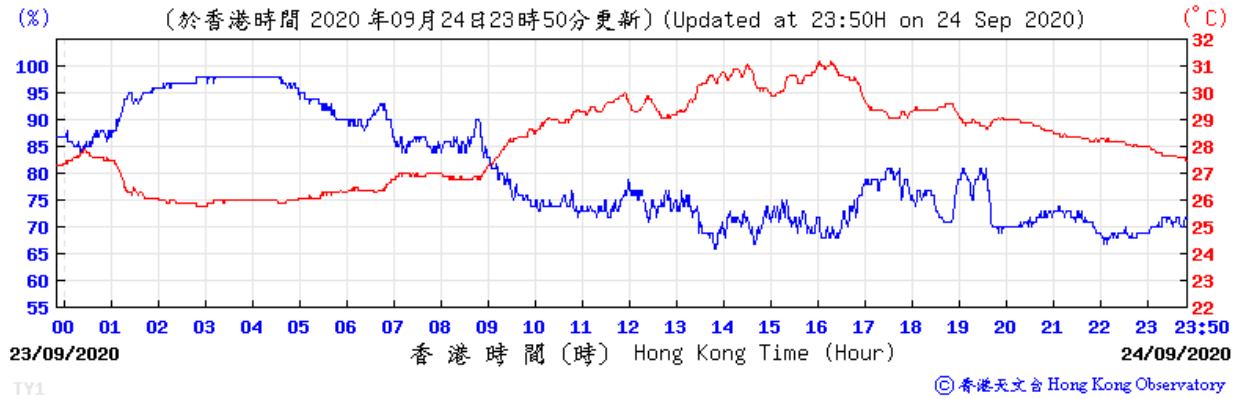
WSF-UGF-3 Outlet



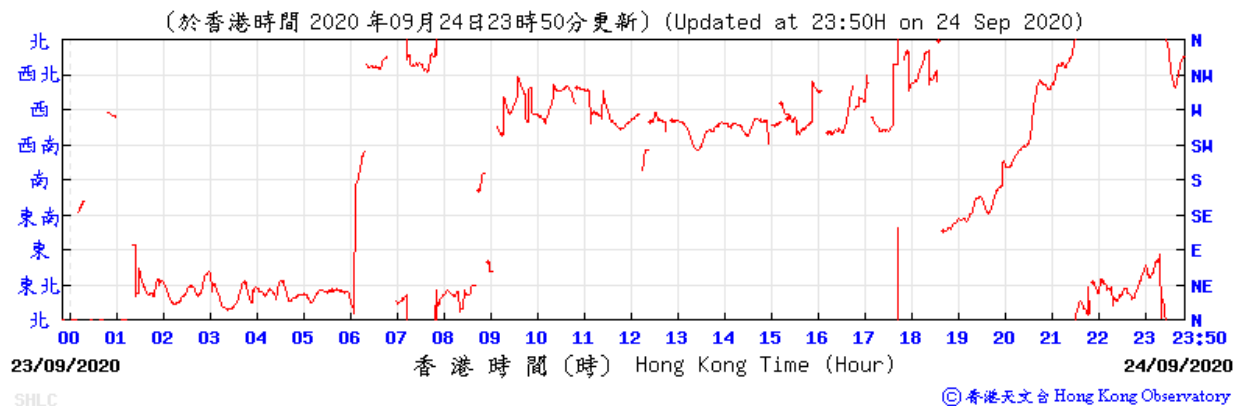
APPENDIX 2

Meteorological Data from Nearby Tsing Yi Observatory Station

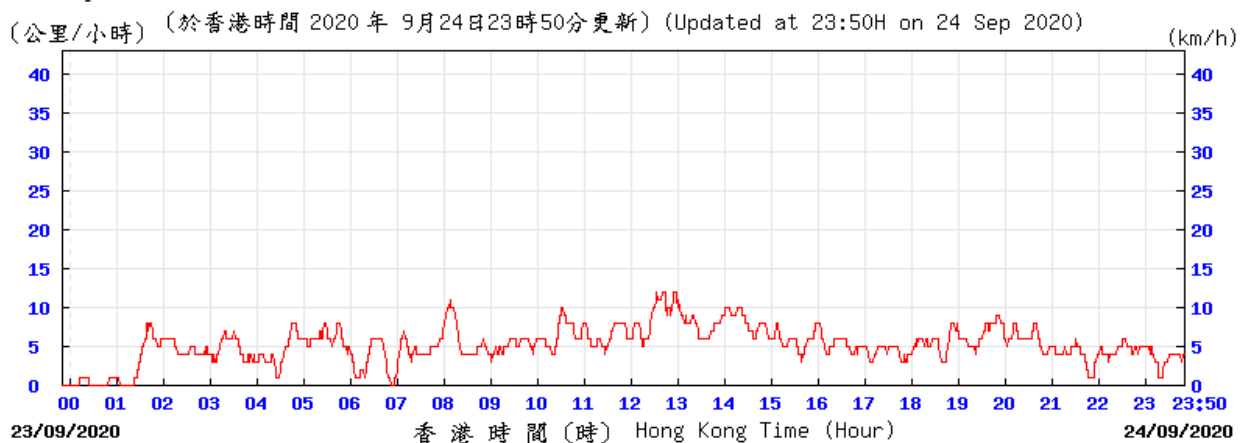
Temperature/Humidity:



Wind Direction:



Wind Speed:





Work Order: HK2036489

APPENDIX 3

Certificates of the Odour Panellists



Work Order: HK2036489



ALS Life Sciences | Environmental

Certificate no.: C0087-05

Certificate for a Qualified Odour Panellist

This is to certify that

Ho Tsz Kin

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 16 July 2019 to 05 December 2019

with Individual Threshold: 46 ppb/v; Standard Deviation: 1.32

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019

Issue Date

04 December 2020

Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2036489



ALS Life Sciences | Environmental

Certificate no.: C0230-05

Certificate for a Qualified Odour Panellist

This is to certify that

Wong Hei Wang

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 18 July 2019 to 05 December 2019

with Individual Threshold: 46 ppb/v; Standard Deviation: 1.38

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

04 December 2020
Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2036489



ALS Life Sciences | Environmental

Certificate no.: C0337-05

Certificate for a Qualified Odour Panellist

This is to certify that

Cheung Wai Hung

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 19 June 2019 to 05 December 2019

with Individual Threshold: 48 ppb/v; Standard Deviation: 1.28

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 - 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

04 December 2020
Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2036489



ALS Life Sciences | Environmental

Certificate no.: C0404-05

Certificate for a Qualified Odour Panellist

This is to certify that

Poon Kwong Lun

has participated in Ten (10) sets of individual n-Butanol Screening Tests
during 16 July 2019 to 05 December 2019

with Individual Threshold: 43 ppb/v; Standard Deviation: 1.31

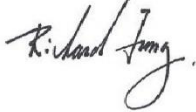
and

fulfil the Requirement of the European Standard Method of Air Quality –
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 – 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

05 December 2019
Issue Date

04 December 2020
Valid Until


Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER



Work Order: HK2036489



ALS Life Sciences | Environmental

Certificate no.: C0318-01

Certificate for a Qualified Odour Panellist

This is to certify that

Chan Wai Hung

has participated in Ten (10) sets of individual n-Butanol Screening Tests

during 12 July 2019 to 19 June 2020

with Individual Threshold: 36 ppb/v; Standard Deviation: 1.36

and

fulfil the Requirement of the European Standard Method of Air Quality -
Determination of Odour Concentration by Dynamic Olfactometry (EN13725)

The Requirement of the Odour Threshold of n-Butanol in Nitrogen Gas in the Range of 20 – 80 ppb/v
with at least 10 sets of Individual threshold estimates and standard deviation less than 2.3

19 June 2020

Issue Date

18 June 2021

Valid Until

Fung Lim Chee, Richard

ALS Technichem (HK) Pty Ltd
1044

11/F Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, NT, Hong Kong

Tel: 852-2610

RIGHT SOLUTIONS | RIGHT PARTNER

APPENDIX 4
Annual Performance Test of the Olfactometer



Olfactometer Performance Check Record
(ALS ID : HK1231)

Calibration Period 15-July-2020 to 16-July-2020
Next Calibration Date 15-Jul-2021

Prepared By Edwin Wong
Date 21-July-2020

Checked By Allen Poon
Date 23-July-2020

**Summary of the Performance Check****Part A Instability and Accuracy**

Setting Dilution	Real Dilution	Average of Instability (%)	Acceptance Criteria ($\leq 5\%$)	Accuracy of the Dilution Setting	Acceptance Criteria (≤ 0.20)
4	4.43	0.3	PASS	0.101	PASS
8	8.96	0.5	PASS	0.112	PASS
16	17.10	0.3	PASS	0.068	PASS
32	33.34	0.3	PASS	0.042	PASS
64	55.65	0.2	PASS	0.152	PASS
128	123.01	0.3	PASS	0.063	PASS
256	255.64	3.3	PASS	0.022	PASS
512	459.03	0.2	PASS	0.120	PASS
1024	925.20	0.9	PASS	0.119	PASS
2048	1807.25	0.6	PASS	0.156	PASS
4096	3637.43	1.4	PASS	0.150	PASS
8192	9437.71	1.7	PASS	0.157	PASS
16384	20333.11	1.7	PASS	0.199	PASS
32768	35940.67	2.4	PASS	0.143	PASS
65536	64113.31	4	PASS	0.088	PASS

Part B Air Flow of Port

Station	FlowRate ≥ 20 L/min	Air Velocity ≥ 0.2 m/s	Deviation between Cups $\leq 10\%$	Comment
1	YES	YES	YES	PASS
2	YES	YES	YES	PASS
3	YES	YES	YES	PASS
4	YES	YES	YES	PASS
5	YES	YES	YES	PASS
6	YES	YES	YES	PASS

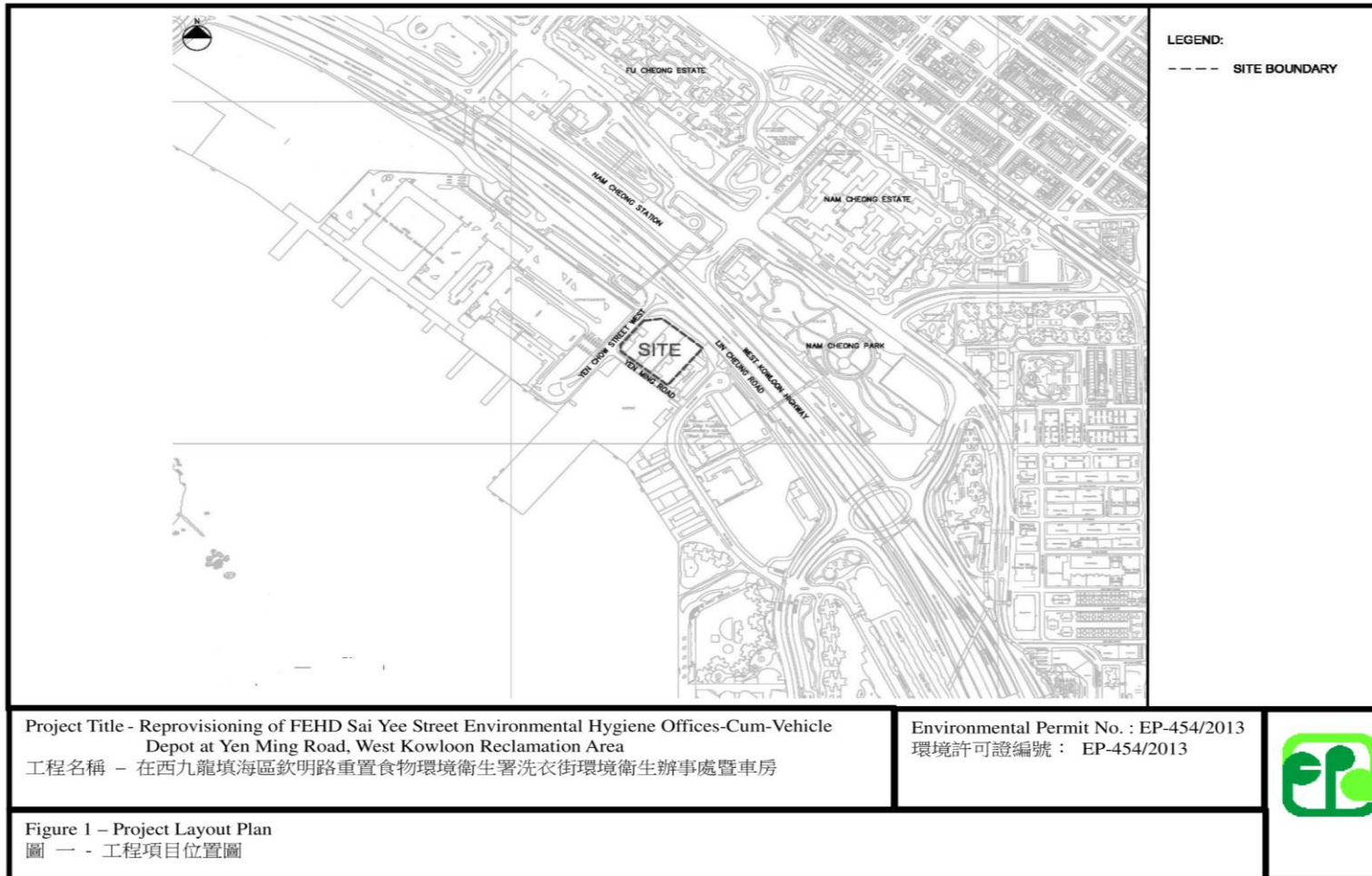
Part C Uniform Distribution of Port Opening

Location	Deviation (%)	Acceptance Criteria ($\leq 10\%$)
1	0.0	PASS
2	0.0	PASS
3	-0.2	PASS
4	0.2	PASS
5	0.0	PASS

Comment: The olfactometer is pass the performance check.



Appendix G Project Layout





Appendix H Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of operational phase (i.e. 28 June 2019) to the end of the reporting month and are summarized in the Table L-1 below.

Table L1 Statistics for complaints, notifications of summons and successful prosecutions

Reporting Period	Received Date	Cumulative Statistics				
		Complaints	Notifications of summons	Successful prosecutions	Type	Status
This reporting month		0	0	0		
From 28 June 2019 to 30 September 2020		0	0	0		



Appendix I Environmental Licenses / Permits

(a) Environmental Permit

Environmental Permit No. EP-454/2013
環境許可證編號EP-454/2013

**ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
Section 10**

環境影響評估條例
(第499章)
第10條

**ENVIRONMENTAL PERMIT TO CONSTRUCT AND OPERATE
A DESIGNATED PROJECT**

建造及營辦指定工程項目的環境許可證

PART A (MAIN PERMIT)

A部 (許可證主要部分)

Pursuant to Section 10 of the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection (the Director) grants this environmental permit to the **Food and Environmental Hygiene Department** (hereinafter referred to as the "Permit Holder") to construct and operate the designated project described in **Part B** subject to the conditions specified in **Part C**. The issue of this environmental permit is based on the documents, approvals or permissions described below :-

根據《環境影響評估條例》(環評條例)第10條的規定，環境保護署署長(署長)將本環境許可證批予**食物環境衛生署**(下稱許可證持有人)以建造及營辦**B部**所說明的指定工程項目，但須遵守**C部**所列明的條件。本環境許可證是依據下列文件、批准或許可而簽發：-

Application No. 申請書編號	AEP-454/2013
Document in the Register 登記冊上文件	<p>(1) Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area (Register No.: AEIAR-177/2013)</p> <ul style="list-style-type: none"> - Environmental Impact Assessment Report (June 2013) [Hereinafter referred to as the "EIA Report"] - Environmental Monitoring and Audit Manual (June 2013) [Hereinafter referred to as the "EM&A Manual"] - Executive Summary (June 2013) <p>在西九龍填海區欽明路重置食物環境衛生署洗衣街環境衛生辦事處暨車房 (登記冊編號: AEIAR-177/2013)</p> <ul style="list-style-type: none"> - 環境影響評估報告 (2013年6月) [下稱「環評報告」] - 環境監察審核手冊 (2013年6月) [下稱「環監手冊」] - 行政摘要 (2013年6月) <p>(2) The Director's letter of approval of the EIA report dated 12 November 2013 referenced (69) in EP 2/K20/A20 Pt.2</p> <p>署長於2013年11月12日發出批准環評報告的信件，檔案編號: (69) in EP 2/K20/A20 Pt.2</p> <p>(3) Application for an Environmental Permit submitted by the Permit Holder on 24 June 2013 (Application No.: AEP-454/2013)</p> <p>許可證持有人於2013年6月24日提交的环境許可證申請 (申請書</p>

編號: AEP-454/2013)

12 November 2013
2013年11月12日

Date
日期

(Ken Y.K. Wong)
Principal Environmental Protection Officer
for Director of Environmental Protection
環境保護署署長
(首席環境保護主任 黃耀光代行)

PART B (DESCRIPTION OF DESIGNATED PROJECT)

B部 (指定工程項目的說明)

Hereunder is the description of the designated project mentioned in Part A of this environmental permit (hereinafter referred to as the "Permit"):-

下列為本環境許可證(下稱“許可證”)A部所提及的指定工程項目的說明:

<p>Title of Designated Project(s) 指定工程項目的名稱</p>	<p>Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area [This designated project is hereinafter referred to as "the Project"]</p> <p>在西九龍填海區欽明路重置食物環境衛生署洗衣街環境衛生辦事處暨車房 [這指定工程項目下稱“工程項目”]</p>
<p>Nature of Designated Project(s) 指定工程項目的性質</p>	<p>A transport depot located less than 200m from the nearest boundary of an existing or planned residential area / educational institution</p> <p>運輸車廠的位置距離一個現有的或計劃中的住宅區或教育機構的最近界線少於200米</p>
<p>Location of Designated Project(s) 指定工程項目的地點</p>	<p>The Project is located at Yen Ming Road, West Kowloon Reclamation Area. The location of this Project is shown in <u>Figure 1</u> attached to this Permit.</p> <p>工程項目位於西九龍填海區欽明路。工程項目的位置見載於本許可證夾附的圖1。</p>
<p>Scale and Scope of Designated Project(s) 指定工程項目的規模和範圍</p>	<p>The project is to construct and operate a five-storey building comprising various facilities for vehicle washing and repair operation, parking of vehicles as well as offices.</p> <p>工程項目為建造及營辦一座五層高的大樓，提供車輛清洗和維修設施、車輛停泊處及辦公室。</p>

PART C (PERMIT CONDITIONS)

C部 (許可證條件)

1. General Conditions

一般條件

- 1.1 The Permit Holder and any person working on the Project shall comply with all conditions set out in this Permit. Any non-compliance by any person may constitute a contravention of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) and may become the subject of appropriate action being taken under the EIAO.
- 1.2 The Permit Holder shall ensure full compliance with all legislation from time to time in force including, without limitation to, the Air Pollution Control Ordinance (Cap. 311), Waste Disposal Ordinance (Cap. 354), Water Pollution Control Ordinance (Cap. 358) and Noise Control Ordinance (Cap. 400). This Permit does not of itself constitute any ground of defence against any proceedings instituted under any legislation or imply any approval under any legislation.
- 1.3 The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit and the documents referred to in Part A of the Permit readily available at all times for inspection by the Director or his authorised officers at all sites/offices covered by this Permit. Any reference to the Permit shall include all documents referred to in the Permit and also the relevant documents in the Register.
- 1.4 The Permit Holder shall give a copy of this Permit to the person(s) in charge of the site(s) and ensure that such person(s) fully understands all conditions and all requirements incorporated in the Permit. The site(s) refers to site(s) of construction of the Project and shall mean the same hereafter.
- 1.5 The Permit Holder shall display conspicuously a copy of this Permit on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including any amended Permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).
- 1.6 The Permit Holder shall construct and operate the Project in accordance with the project description in Part B of this Permit.
- 1.7 The Permit Holder shall ensure that the Project is designed, constructed and operated in accordance with the information and recommendations described in the approved EIA Report (Register No.: AEIAR-177/2013), the application document for environmental permit (Application No.: AEP-454/2013), other relevant documents in the Register, the information and mitigation measures described in this Permit, mitigation measures to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in this Permit, and mitigation measures to be recommended under on-going surveillance and monitoring activities during all stages of the Project. Where recommendations referred to in the documents of the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or impliedly amended in this Permit.
- 1.8 All deposited submissions, as required under this Permit, shall be rectified and resubmitted in accordance with the comments, if any, made by the Director within one month of the receipt of the Director's comments or otherwise as specified by the Director.
- 1.9 All submissions approved by the Director, all submissions deposited without comments by the Director, or all submissions rectified in accordance with comments by the Director under this Permit shall be construed as part of the permit conditions described in Part C of this Permit. Any variation of the submissions shall be approved by the Director in writing or as prescribed in the relevant permit conditions. Any non-compliance with the submissions may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap. 499). All submissions or any variation of the submissions shall be certified by the Environmental Team (ET) Leader and verified by the Independent

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Environmental Checker (IEC) referred to in Conditions 2.1 and 2.2 below, before submitting to the Director under this Permit.

- 1.10 The Permit Holder shall release all finalized submissions as required under this Permit, to the public by depositing copies in the Environmental Impact Assessment Ordinance Register Office, or in any other places, or any internet websites as specified by the Director, or by any other means as specified by the Director for public inspection. For this purpose, the Permit Holder shall provide sufficient copies of the submissions.
- 1.11 All submissions to the Director required under this Permit shall be delivered either in person or by registered mail to the Environmental Impact Assessment Ordinance Register Office (currently at 27/F, Southorn Centre, 130 Hennessy Road, Wanchai, Hong Kong). Electronic copies of all finalized submissions required under this Permit shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 1.3 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies.
- 1.12 The Permit Holder shall notify the Director in writing the commencement date of construction of the Project no later than one month prior to the commencement of construction of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement date of the construction.
- 1.13 For the purpose of this Permit, "commencement of construction works" does not include works related to site clearance and preparation, or other works as agreed by the Director.
- 1.14 The Permit Holder shall notify the Director in writing the commencement date of operation of the Project no later than one month prior to the commencement of operation of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement date of the operation.

2. Specific Conditions

Submissions and/or Measures before Commencement of Construction of the Project

Employment of Environmental Monitoring and Audit (EM&A) Personnel

- 2.1 An Environmental Team (ET) shall be established by the Permit Holder no later than one month before commencement of construction of the Project. The ET shall not be in any way an associated body of the Contractor or the Independent Environmental Checker (IEC) for the Project. The ET shall be headed by an ET Leader. The ET Leader shall be a person who has at least 7 years of experience in environmental monitoring and auditing (EM&A) or environmental management. The ET and the ET Leader shall be responsible for the implementation of the EM&A programme in accordance with the EM&A requirements as contained in the EM&A Manual of the Project. The ET Leader shall keep a contemporaneous log-book of each and every instance or circumstance or change of circumstances, which may affect the compliance with the recommendations of the EIA Report and this Permit. The ET Leader shall notify the IEC within one working day of the occurrence of any such instance or circumstance or change of circumstances. The ET Leader's log-book shall be kept readily available for inspection by all persons assisting in supervision of the implementation of the recommendations of the EIA Report and this Permit or by the Director or his authorized officers. Failure to maintain records in the log-book, failure to discharge the duties of the ET Leader as defined in the EM&A Manual of the Project or failure to comply with this Condition would entitle the Director to require the Permit Holder by notice in writing to replace the ET Leader. Failure by the Permit Holder to make replacement, or further failure to keep contemporaneous records in the log-book despite the employment of a new ET Leader may render the Permit liable to suspension, cancellation or variation.
- 2.2 An IEC shall be employed by the Permit Holder no later than one month before commencement of construction of the Project. The IEC shall not be in any way an associated body of the Contractor or the ET for the Project. The IEC shall be a person who has at least 7 years of experience in EM&A or

environmental management. The IEC shall be responsible for duties defined in the EM&A Manual and shall audit the overall EM&A performance, including the implementation of all environmental mitigation measures, submissions required in the EM&A Manual, and any other submissions required under this Permit. In addition, the IEC shall be responsible for verifying the environmental acceptability of permanent and temporary works, relevant design plans and submissions under this Permit. The IEC shall verify the log-book(s) mentioned in Condition 2.1 of this Permit. The IEC shall notify the Director by fax, within one working day of receipt of notification from the ET Leader of each and every occurrence, change of circumstances or non-compliance with the EIA Report (Register No.: AEIAR-177/2013) and this Permit, which might affect the monitoring or control of adverse environmental impacts from the Project. In the case where the IEC fails to so notify the Director of the same, fails to discharge the duties of the IEC as defined in the EM&A Manual or fails to comply with this Condition, the Director may require the Permit Holder by notice in writing to replace the IEC. Failure to replace the IEC as directed or further failure to so notify the Director despite employment of a new IEC may render the Permit liable to suspension, cancellation or variation. Notification by the Permit Holder is the same as notification by the IEC for the purpose of this Condition.

Management Organization of Main Construction Company

- 2.3 The Permit Holder shall, no later than two weeks before the commencement of construction of the Project, inform the Director in writing the management organization of the main construction companies and/or any form of joint venture associated with the construction of the Project. The submitted information shall include at least an organization chart, names of responsible persons and their contact details.

Submission of Landscape and Visual Mitigation Plan of the Project

- 2.4 The Permit Holder shall, at least one month before the commencement of construction of the corresponding component(s) of the Project, submit four hard copies and one electronic copy of a Landscape and Visual Mitigation Plan(s) to the Director for approval. The Plan(s) shall include at least the following information:-

- (a) one (1) existing tree to be retained in-situ at the location marked in Figure 2;
- (b) a tree compensation proposal showing the locations, size, number and species of trees to be planted, including the compensation of at least 27 trees of heavy standard size (100mm DBH), in accordance with the recommended tree species in Table 1 and Table 2; and
- (c) an updated landscape design for ground floor planting, vertical greening, roof gardens and hard landscape features.

The Landscape and Visual Mitigation Plan(s) shall be certified by the ET leader and verified by the IEC as conforming to the information and recommendations of landscape and visual mitigation measures contained in the EIA Report (Register No.: AEIAR-177/2013).

Submissions and/or Measures before and During Operation of the Project

Measures and Submission for Mitigating Landscape and Visual Impact before Operation of the Project

- 2.5 The landscape and visual mitigation measures shall be fully and properly implemented in accordance with the recommendations of the Landscape and Visual Mitigation Plan(s) approved under condition 2.4 above.
- 2.6 The Permit Holder shall, at least one month before the commencement of the operation of the Project, deposit with the Director four hard copies and one electronic copy of the As-Built Drawing(s) of the Project, which shall be certified by the ET Leader and verified by the IEC as conforming to the recommendations of the Landscape and Visual Mitigation Plan(s) approved under condition 2.4 above. The landscape and visual mitigation measures shall be properly maintained during operation of the

Project.

Measures for Mitigating Odour Impact during Operation of the Project

- 2.7 All refuse collection vehicles shall be emptied of refuse prior to entering the Project.
- 2.8 To mitigate operational odour impact arising from the vehicle washing bays and the maintenance workshops of the Project:-
- (a) the washing bays and maintenance workshops shall be enclosed in 3 sides and served with mechanical ventilations to maintain with proper negative air pressure at all times during the washing bays and maintenance workshops operation; and
 - (b) a deodorisation system, with an odour removal efficiency of at least 85%, shall be installed, operated and properly maintained at the ventilation system prior to discharging any vented air outside the Project.

Measures for Mitigating Noise Impact during Operation of the Project

- 2.9 To mitigate operational noise impact from the repair activities from the vehicles, the following measures shall be implemented:
- (a) all vehicle repair activities shall be limited to 0700 to 1900 hours only; and
 - (b) all vehicle repair activities shall be carried out within the covered area of the transport workshop section on ground floor of the Project as shown in Figure 2.
- 2.10 To minimise off-site traffic noise impact arising from the operation of the Project, all vehicles coming in or out of the Project shall use the in-bound and out-bound traffic routing as shown in Figure 3.

3. Environmental Monitoring and Audit Requirements

- 3.1 The EM&A programme shall be implemented in accordance with the procedures and requirements as set out in the EM&A Manual. Any change to the EM&A requirements or programme shall be justified by the ET Leader and verified by the IEC as conforming to the relevant requirements set out in the EM&A Manual and shall seek the prior approval from the Director before implementation.
- 3.2 Samples, measurements and necessary remedial actions shall be taken in accordance with the requirements of the EM&A Manual by:
- (a) conducting baseline environmental monitoring;
 - (b) conducting impact monitoring;
 - (c) carrying out remedial actions described in Event/Action Plans of the EM&A Manual in accordance with the time frames set out in Event/Action Plans, or as agreed by the Director, in case where specified criteria in the EM&A Manual are exceeded; and
 - (d) logging and keeping records of details of all parameters within 3 working days of the collection of data or completion of remedial action(s), for the purpose of preparing and submitting the monthly EM&A Reports and to make available for inspection on site.
- 3.3 Four hard copies and one electronic copy of the Baseline Monitoring Report shall be submitted to the Director at least 2 weeks before the commencement of construction of the Project. The submissions shall be certified by the ET Leader and verified by the IEC as complied with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of the submission shall be



provided upon request by the Director.

- 3.4 Four hard copies and one electronic copy of monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month throughout the entire construction period. The monthly EM&A Reports shall include a summary of all non-compliance. The submissions shall be certified by the ET Leader and verified by the IEC as complying with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of submission shall be provided upon request by the Director.
- 3.5 All EM&A data submitted under this Permit shall be true, valid and correct.

4. Electronic Reporting of EM&A Information

- 4.1 To facilitate public inspection of EM&A Reports via the EIAO Internet Website and at the EIAO Register Office, electronic copies of these Reports shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 1.3 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hardcopies as described in Condition 3.3 and 3.4 of this Permit. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of these Reports shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text from where the respective references are made. All graphics in these Reports shall be in interlaced GIF format unless otherwise agreed by the Director. The content of the electronic copies of these Reports must be the same as the hardcopies.
- 4.2 The Permit Holder shall, within six weeks after the commencement of construction of the Project, set up a dedicated web site and notify the Director in writing the Internet address where the environmental monitoring and project data is to be placed. All environmental monitoring data described in Condition 4.1 above shall be made available to the public via a dedicated web site to be set up by the Permit Holder in the shortest practicable time and in no event later than two weeks after the relevant environmental monitoring data are collected or become available, unless otherwise agreed with the Director. The Permit Holder shall maintain the dedicated website for public access of the environmental monitoring data and reports throughout the construction period of the Project, or otherwise as agreed by the Director.
- 4.3 The Internet website as described in Condition 4.2 above shall enable user-friendly public access to the monitoring and project data including the Project Profile, the approved EIA Report, the Environmental Permit(s) and all finalised submissions required under this Permit. The Internet website shall have features capable of:
 - (a) providing access to all environmental monitoring data collected since the commencement of works;
 - (b) providing access to all finalized submissions as required under this Permit;
 - (c) searching by date;
 - (d) searching by types of monitoring data; and
 - (e) hyperlinks to relevant monitoring data after searching;

or otherwise as agreed by the Director.

Table 1: Recommended Tree Species for Tree Compensation on Ground Floor*

Tree Species suitable for Ground Floor Planting	
<i>Ailanthus fordii (Ailanthus)</i>	<i>Melaleuca quinquenervia (Paper-bark tree)</i>



<i>Bauhinia purpurea</i> (Hong Kong orchid tree)	<i>Plumeria rubra</i> (Red Frangipani)
<i>Cassia surattensis</i> (Sunshine Tree)	<i>Terminalia mantaly</i> (Madagascar Almond)
<i>Grevillea robusta</i> (Silky Oak)	

Table 2: Recommended Tree Species for Tree Compensation on Roof Garden*

Tree/Large Shrub Species suitable for Green Roof Planting	
<i>Cassia surattensis</i> (Sunshine Tree)	<i>Osmanthus fragrans</i> (Sweet Osmanthus)
<i>Lagerstroemia indica</i> (Crape-myrtle)	<i>Plumeria rubra</i> (Red Frangipani)

*Based on Tree Assessment Schedule in EIA Report Appendix 8-5

Notes:

註:

1. This Permit consists of three parts, namely, **Part A** (Main Permit), **Part B** (Description of Designated Project) and **Part C** (Permit Conditions). Any person relying on this permit should obtain independent legal advice on the legal implications under the EIAO, and the following notes are for general information only.
本許可證共有3部，即**A部**（許可證主要部分）；**B部**（指定工程項目的說明）及**C部**（許可證條件）。任何援引本許可證的人士須就環評條例的法律含意徵詢獨立法律意見，下述註解只供一般參考用。
2. If there is a breach of any conditions of this Permit, the Director or his authorized officer may, with the consent of the Secretary for the Environment, order the cessation of associated work until the remedial action is taken in respect of the resultant environmental damage, and in that case the Permit Holder shall not carry out any associated works without the permission of the Director or his authorized officer.
如違反本許可證的任何條件，署長或獲授權人員徵得環境局局長的同意後可勒令停止相關工程，直至許可證持有人為所造成的環境損害採取補救行動為止。在此情況下，許可證持有人未經署長或獲授權人員同意，不得進行任何相關工程。
3. The Permit Holder may apply under Section 13 of the EIAO to the Director for a variation of the conditions of this Permit. The Permit Holder shall replace the original permit displayed on the Project site by the amended permit.
許可證持有人可根據環評條例第13條的規定向署長申請更改本許可證的條件。許可證持有人須把經修改的許可證替換在工程項目工地內展示的原有許可證。
4. A person who assumes the responsibility for the whole or a part of the designated project(s) may, before he assumes responsibility of the designated project(s), apply under Section 12 of the EIAO to the Director for a further environmental permit.
承擔工程項目整項或部分工程的責任的人，在承擔責任之前，可根據環評條例第12條的規定向署長申請新的環境許可證。
5. Under Section 14 of the EIAO, the Director may with the consent of the Secretary for the Environment, suspend, vary or cancel this Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site.
根據環評條例第14條的規定，署長可在環境局局長的同意下暫時吊銷、更改或取消本許可證。遭暫時吊銷、更改或取消的許可證必須從工程項目工地除下，不再展示。
6. If this Permit is cancelled or surrendered during construction or operation of the Project, another environmental permit must be obtained under the EIAO before the Project could be continued. It is an offence under Section 26(1) of the EIAO to construct or operate a designated project listed in Part 1 of

Schedule 2 of the EIAO without a valid environmental permit.

如果本許可證在工程項目建造或營辦期間取消或交回，則在繼續進行工程項目之前，必須先根據環評條例規定取得另一份環境許可證。根據環評條例第26(1)條的規定，任何人在沒有有效環境許可證的情況下建造或營辦環評條例附表2第1部所列明的指定工程項目，即屬犯罪。

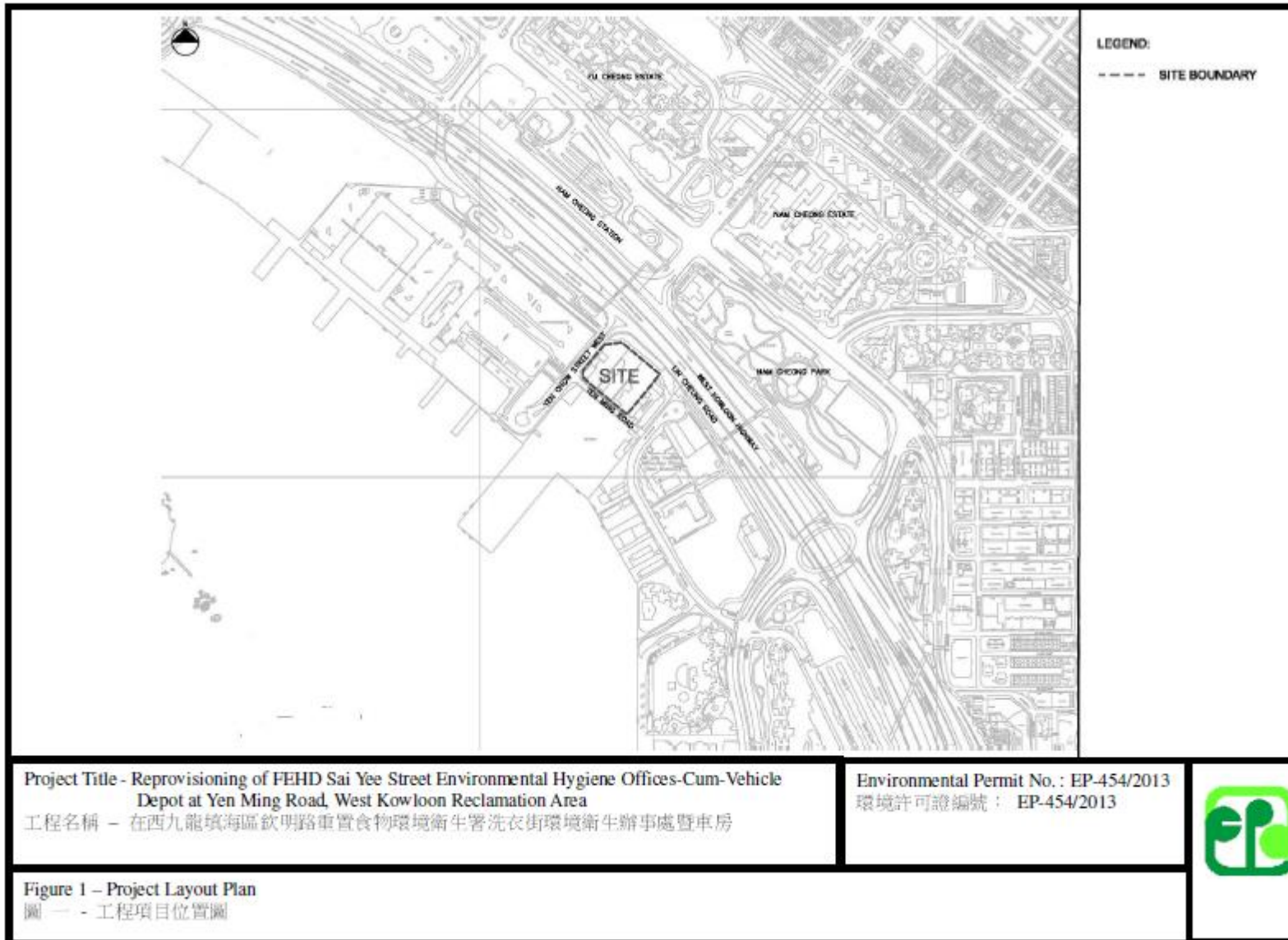
7. Any person who constructs or operates the Project contrary to the conditions in the Permit, and is convicted of an offence under the EIAO, is liable:
如任何人在違反本許可證的條件下建造或營辦工程項目，根據環評條例，即屬犯罪-
- (i) on a first conviction on indictment to a fine of \$2 million and to imprisonment for 6 months;
一經循公訴程序首次定罪，可處罰款200萬元及監禁6個月；
 - (ii) on a second or subsequent conviction on indictment to a fine of \$5 million and to imprisonment for 2 years;
一經循公訴程序第二次或其後每次定罪，可處罰款500萬元及監禁2年；
 - (iii) on a first summary conviction to a fine at level 6 and to imprisonment for 6 months;
一經循簡易程序首次定罪，可處第6級罰款及監禁6個月；
 - (iv) on a second or subsequent summary conviction to a fine of \$1 million and to imprisonment for 1 year; and
一經循簡易程序第二次或其後每次定罪，可處罰款100萬元及監禁1年；及
 - (v) in any case where the offence is of a continuing nature, the court or magistrate may impose a fine of \$10,000 for each day on which he is satisfied the offence continued.
在任何情況下如該罪行屬連續性質，法院或裁判官可就其信納該罪行連續的每一天另處罰款10,000元。
8. The Permit Holder may appeal against any condition of this Permit under Section 17 of the EIAO within 30 days of receipt of this Permit.
許可證持有人可在接獲本許可證後30天內，根據環評條例第17條就本許可證的任何條件提出上訴。
9. The Notes are for general reference only and that the Permit Holder should refer to the EIAO for details and seek independent legal advice.
上述註解只供一般參考用，欲知有關詳情，許可證持有人須參閱環評條例及徵詢獨立法律意見。

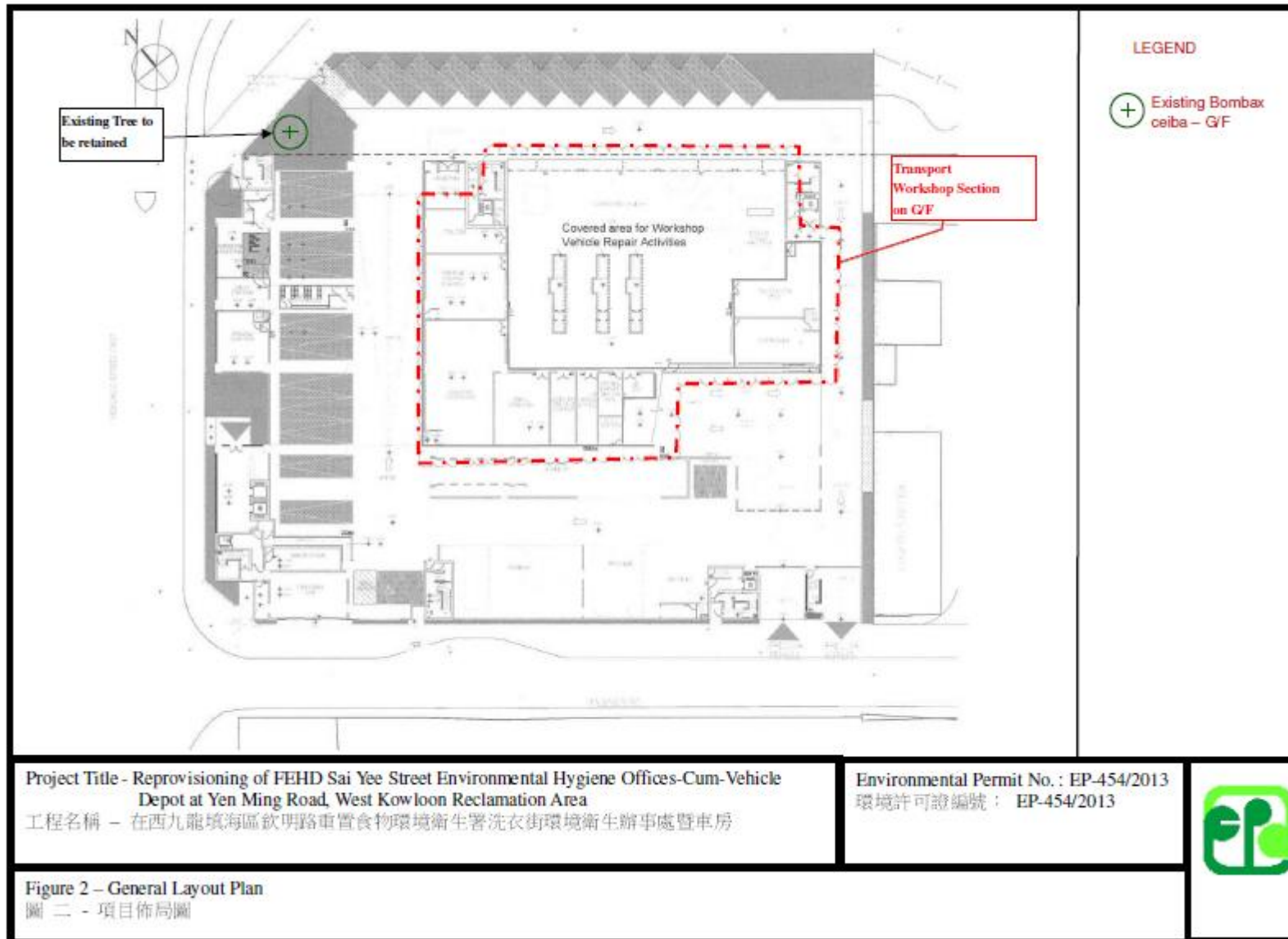
Environmental Permit No. EP-454/2013

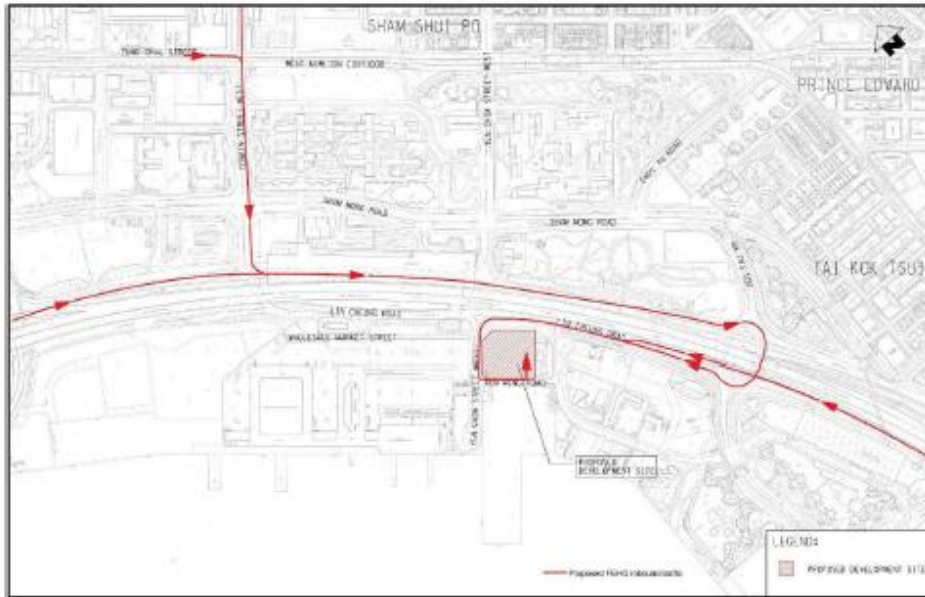
環境許可證編號EP-454/2013

[| Figure 1](#) | [| Figure 2](#) | [| Figure 3](#) |

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IN-BOUND TRAFFIC ROUTING



OUT-BOUND TRAFFIC ROUTING

<p>Project Title - Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-Cum-Vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area 工程名稱 - 在西九龍填海區欽明路重置食物環境衛生署洗衣街環境衛生辦事處暨車房</p>	<p>Environmental Permit No. : EP-454/2013 環境許可證編號 : EP-454/2013</p>	
<p>Figure 3 – In-bound and Out-bound Routing of the FEHD Traffic 圖三 - 食物環境衛生署的車隊出入路線</p>		



(b) Discharge License



Licence No.: WT00033367-2019 牌照編號: WT00033367-2019
This Licence is Valid to: 31 March 2024 本牌照有效期至: 二〇二四年三月三十一日

ENVIRONMENTAL PROTECTION DEPARTMENT
環境保護署
WATER POLLUTION CONTROL ORDINANCE (CAP. 358)
水污染管制條例(第358章)
LICENCE PURSUANT TO SECTION 15/20/23A*
按第15 / 20 / 23A*條簽發的牌照

The Director of Environmental Protection ("the Authority") grants this licence under the Water Pollution Control Ordinance ("the Ordinance") on the terms and conditions stated below.

環境保護署署長(「監督」)按下列的條款及條件,根據水污染管制條例(「本條例」)批給此牌照。

7 March 2019
Date
日期

(CHAN Wai-lun, William)
For the Authority
監督(陳偉麟 代行)

PART A 甲部 : GENERAL TERMS 一般條款

Name of Licensee ("the Licensee") 持牌人名稱(「持牌人」)	Director of Food and Environmental Hygiene 食物環境衛生署署長
Discharge Premises ("the premises") 排放處所(「處所」)	Nam Cheong Offices and Vehicle Depot G/F., 87 Yen Chow Street West, Mong Kok, Kowloon 九龍旺角欽州街西87號地下
Water Control Zone 水質管制區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港(第二期)水質管制區
Discharge Category 排放種類	Discharge of institutional trade effluent 機構污水排放
Nature of Discharge and Wastewater Treatment Facilities 排放性質及廢水處理設施	Effluent and all other wastewater arising from the premises 源自上址的污水及其他的廢水 Petrol Interceptors 截油器
Discharge Point(s) 排放點	Discharge into communal foul sewer 排放入公用污水渠
Sampling Point(s) 取樣點	Sampling Point(s) at discharge outlet(s) of Petrol Interceptor 取樣點位於截油器之出水口

*Delete as appropriate
將不適用者刪去

Reference No. 參考編號 EP482/269A/0021/1

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PART B 乙部 : SPECIFIC CONDITIONS 特別條件

B1. Limitations on Discharge 排放限制

The quantity and composition of any discharge from the premises shall not exceed the limits stated in the table below^(Note 1). All figures are upper limits unless otherwise indicated. All units are expressed as concentration in milligramme per litre unless otherwise stated.

任何源自處所之排放的量和成份不得超過下表所列的限度^(註1)。除另予表明外，所有數字均為上限，除另予說明外，所有單位均以毫克/升的濃度表示。

Determinand 測量物	Limit 限度
Flow Rate (m ³ / day) 流量(立方米/日)	3
Suspended Solids 懸浮固體	1200
Chemical Oxygen Demand 化學需氧量	3000
Oil & Grease 油脂	100
Surfactants (total) 表面活性劑 (總量)	200

B2. Self-monitoring and Reporting 自行監測及報告

The Licensee shall perform self-monitoring as and when required by the Authority.
持牌人須在監督要求時進行自行監測。

The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses in accordance with the sample type and measurement frequency specified for each determinand named below:-
持牌人須在取樣點為排放抽取樣本，並依照下列指定的測量物、取樣形式及頻率，自資予以分析。

Determinand 測量物 Unit 單位 Sample Type 取樣形式 Frequency 頻率

Results of these monitoring shall be summarized in a report on a ~~on~~ a Monthly/Bi-monthly/Quarterly/Yearly* basis and shall be submitted to the Authority.

所有監測結果須以摘要形式，每一個月/兩個月/三個月/年*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去



PART C 丙部 : STANDARD CONDITIONS 標準條件

C1. The Discharge 排放

C1.1 The discharge shall not contain polychlorinated biphenyls (PCB), polyaromatic hydrocarbon (PAH), fumigant, pesticide or toxicant, chlorinated hydrocarbons, flammable or toxic solvents, calcium carbide; any substance likely to damage the sewer or to interfere with any of the treatment processes, or to be harmful to the health and safety of any personnel engaged in the operation or maintenance of a sewerage system; waste liable to form scum or deposits in any part of the drainage or sewerage system, or the waters of Hong Kong; waste liable to form discolouration in any parts of the waters of Hong Kong; sludge, floatable substances or solids larger than 10 mm; and sludge or solid refuse of any kind.

排放不得含有多氯聯苯、聚芳烴、薰蒸劑、殺蟲劑或毒劑、氯化烴、可燃的或有毒的溶劑、碳化鈣；會損毀污水渠結構或干擾任何處理程序的物質，或有損操作及維修排污系統人員健康及安全的任何物質；足以在排水或排污系統，或香港水域任何範圍內形成浮渣或沉積物的廢物；足以在香港水域任何範圍內形成變色的廢物；污泥、漂浮物質或體積超越 10 毫米的固體；及任何種類的污泥或固體垃圾。

C1.2 No discharge shall bypass the wastewater treatment facilities, the Sampling Point(s) or the Discharge Point(s) unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternative exists.

除非避免人命傷亡或嚴重財物損失或無其他可行代替辦法，排放不得繞流不經其廢水處理設施，取樣點或排放點。

C1.3 Dilution of the discharge to achieve compliance with the limits contained in this licence is prohibited.

不得將排放稀釋，以求達到本牌照內所訂的限度。

C2. Flow Measurement 量度流量

The Licensee shall determine the flow rate of the discharge by installing, operating and maintaining a continuous flow measuring device with an accuracy certified by its manufacturer to be within plus or minus 3 percent of the actual flow, and calibrating the flow measuring device regularly according to manufacturer's recommendations. If no such device is installed, the Licensee shall determine the flow rate through using calculation methods agreed by the Authority, by making reference to the amount of water used in the premises being served by mains supply and other sources, less process consumption and any other losses.

持牌人必須設置、操作及保養一個連續性流量計作為測定排放的流量率之方法，其準確程度須經製造商證實為不超過或低於真正流量的 3%，並應根據製造商建議的方法，定期校準流量計。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處所由自來水及其他水源供應的總用水量減去工序耗水量及其他耗水量來測定流量率。

C3. Treatment 處理

C3.1 The Licensee shall provide necessary wastewater treatment facilities, and shall engage personnel with adequate qualification and experience to properly operate and maintain all wastewater treatment facilities at all times. Standby equipment shall be provided to guard against failure of major treatment equipment.

持牌人須提供必需的廢水處理設施，並須僱用有足夠資格及經驗的人士，時常妥善操作及保養所有廢水處理設施。主要處理設施須配有後備裝置，以應付故障發生。

C3.2 In the event of loss of efficiency of operation, or failure of all or part of the wastewater treatment facility, the Licensee shall take all reasonable steps to the extent necessary to maintain compliance with this licence. Such steps shall remain until operation of the wastewater treatment facility is restored or an alternative method of treatment is provided.

倘若部份或整個廢水處理設施操作失靈或發生故障，持牌人須採取所有必要的合理措施，以求達到符合本牌照的規定。此等措施須維持至廢水處理設施恢復如常操作或有其他代替的處理方法可供採用為止。

C3.3 If the wastewater treatment facilities are not properly operated and maintained to the satisfaction of the Authority, the Licensee shall take immediate and effective remedial actions as required by the Authority.

倘若廢水處理設施的操作及保養未能令監督滿意，持牌人須按監督之規定，採取即時及有效的補救行動。

C4. Disposal 棄置

Sludges, screenings, solids, oil and grease, filter backwash, or other pollutants removed in the course of treatment shall be disposed of in a proper manner^(Note b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable and accessible facility such as an inspection chamber, manhole or sampling valve at each Sampling Point to enable duly authorized officer(s) of the Authority to take samples of the discharge at any time from the premises.
持牌人須在每一個取樣點提供及保養適當及可容易到達的設施，例如檢查槽、沙井或取樣閥，以確保獲監督授權的人員隨時可在處所內抽取排放樣本。
- C5.2 For self-monitoring, "grab samples" shall be taken during the period when the determinand to be analyzed for is likely to be present in its maximum concentration. "Composite samples" shall include samples taken over daily duration of the discharge.
在自行監測中，「隨意取樣本」須在測量物的濃度很可能是最高的那段時間內抽取，「綜合樣本」須包含在每日排放期間不同時候所抽取的樣本。
- C5.3 For self-monitoring, all samples shall be analyzed in accordance with the most updated analytical methods used by the Government Chemist ^(Note d).
在自行監測中，所有樣本均須按照政府化驗師所採用的最新分析方法予以分析 ^(註明d)。

C6. Records and Reporting 紀錄及報告

- C6.1 The Licensee shall keep the following records in the premises for inspection by duly authorized officer(s) of the Authority:
持牌人須在處所內保存下列紀錄，以備獲監督授權的人員隨時查閱：
- (i) records of flow rate, nature and composition of the discharge;
排放流量率、性質及成份的紀錄；
 - (ii) updated records of all monitoring information, including all laboratory analytical results relating to samples taken, all original chart recordings for continuous flow and pH monitoring; and
所有最新監測資料的紀錄，包括所有關於已取樣本的檢驗分析結果、所有連續性流量及酸鹼值監測記錄圖表的正本；及
 - (iii) records of all desludging and degreasing operation, and records of corresponding disposal operation.
所有清除污泥和清理隔油池廢物工序的紀錄，及其棄置工序的紀錄。

Copies of all such records shall be submitted to the Authority upon request.

在監督要求時，須向監督呈交所有該等紀錄的副本。

- C6.2 The Licensee shall notify and explain to the Authority: Director of Environmental Protection, Regional Office (E), Mong Kok Section by fax (fax no.: 24028275) or electronic mail (email address: hotline_e@epd.gov.hk) within 24 hours upon the occurrence of an accidental discharge or any emergency bypass or an overflow of untreated effluent or an operation upset which places the discharge in a temporary state of non-compliance with this licence. The Licensee shall within 7 days following the incident, submit to the Authority a detailed report in writing on the cause and duration of the non-compliance and steps taken or to be taken to reduce, eliminate, or prevent recurrence of such non-compliance. Reporting in accordance with this Condition does not relieve the Licensee of any obligations imposed by this licence.

倘若有未經處理的污水意外排放、緊急繞流或溢滿的事件或操作失靈，引至排放出現短暫不符合牌照規定的情況，持牌人須在事發後 24 小時內以傳真（傳真號碼：24028275）或電郵（電郵地址：hotline_e@epd.gov.hk）通知監督：環境保護署署長，區域辦事處（東）旺角區，並予以解釋。持牌人須在事故發生後 7 天內，以書面報告，詳述事件的起因、違反牌照條件的時間及為減少、消除或防止類似事件再次發生所採取或將會採取的措施，送交監督審閱。然而，按照本條件的規定提交報告並不表示持牌人可獲免除承擔本牌照內所載的任何責任。

~~C7. Operation Manual 操作手冊~~

~~The Licensee shall prepare an operation manual which shall include, as a minimum, operating procedures, inspection programme and repair and maintenance programme for the wastewater treatment facilities. The operation manual shall be kept at the aforesaid wastewater treatment facilities and a copy of the manual shall be submitted to the Authority upon request.~~

~~持牌人須擬備廢水處理設施的操作手冊。手冊內容須最低限度包括操作程序、檢查、維修及保養工作計劃表。該手冊須保存在上述廢水處理設施內。持牌人須在監督要求時，呈交手冊副本乙份。~~

C8. Notification of Change 更改通知

The Licensee shall notify the Authority: Director of Environmental Protection, Regional Office (E), Mong Kok Section by fax (fax no.: 24028275) or electronic mail (email address: hotline_e@epd.gov.hk) in writing

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within 14 days of any changes or proposed changes in the wastewater treatment methods/facilities, the processes of manufacture or the nature of the raw materials used or of any other circumstances which may alter the nature and composition of the discharge or may result in the permanent cessation of the discharge.

倘若持牌人更改或擬更改其廢水處理設施、生產程序、或所用原料的性質、或有其他足以改變其排放的性質及成份或可導致永久性終止排放的事情，必須在 14 日內以傳真（傳真號碼：24028275）或電郵（電郵地址：hotline_e@epd.gov.hk）書面通知監督：環境保護署署長，區域辦事處（東）旺角區。

Notes 附註

- (a) For the purposes of determining compliance with the limits stated in Specific Condition B1, samples shall be taken by the duly authorized officer(s) of the Authority at the Sampling Point(s) or any other points from which the samples so taken are regarded by the duly authorized officer(s) as being representative of the quality of the discharge. When any single sample analyzed for a determinand is proved not complying with corresponding limit set out in the table, the discharge is deemed to have failed to comply with Specific Condition B1.
為釐定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任一個經分析的樣本中，證實任何一個測量物不符合表中列出的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing registered grease trap waste collector to conduct the disposal work. All registered collectors should have a Certificate of Registration issued by the Environmental Protection Department. The most updated list of the registered collectors can be obtained from the Environmental Protection Department.
妥善的隔油池廢物棄置方法包括卻不限於聘用已登記的隔油池廢物收集商進行有關的棄置工作。所有已登記的隔油池廢物收集商，均領有由環境保護署發出的登記證明書。已登記的隔油池廢物收集商最新名單，可向環境保護署索取。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (e) The Licensee shall keep this licence in the premises and make it available at all times for inspection by duly authorized officer(s) of the Authority.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (f) (i) The Licensee shall allow duly authorized officer(s) of the Authority to enter the premises for the purposes of inspection, sampling, records examination or any other duties authorized by Section 37 and Section 38 of the Ordinance.
持牌人須准許獲監督授權的人員進入處所內進行檢查、抽取樣本、審查紀錄或執行其他根據本條例第 37 及第 38 條所授權的職務。
(ii) Where the premises has security measures in force which would require proper identification and clearance before entry, the Licensee shall make necessary arrangements such that upon presentation of evidence of identity and of authorization, duly authorized officer(s) will be permitted to enter, without delay, for the purposes of performing duties.
倘若由於處所的保安理由而需先行鑑定來人的身份，持牌人必須作出必要的安排，以便獲授權人員在出示身份證明及授權文件後，即可內進執行其職務而不致受延誤。
- (g) (i) For a licence granted under Section 15 of the Ordinance, the Licensee may, not less than 2 months before expiry of the licence, apply under Section 19 of the Ordinance for a new licence. The Authority may grant the licence or otherwise.
持有根據本條例第 15 條所批給牌照的人士，可於牌照屆滿前不少於 2 個月內，根據本條例第 19 條的規定，申請一面新牌照。監督可批給或拒絕批給牌照。
(ii) For a licence granted under Section 20 or 23A of the Ordinance, the Licensee may, not more than 4 months and not less than 2 months before expiry of the licence, apply under Section 23 or 23A respectively of the Ordinance for renewal of licence. The Authority may renew the licence or otherwise.
持有根據本條例第 20 條或第 23 A 條所批給牌照的人士，可於牌照屆滿前不多於 4 個月及不少於 2 個月內，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (h) Under Section 24 of the Ordinance, the Authority may by notice in writing, impose new or amended terms and conditions on this licence or cancel this licence. Under Section 25, 26 and 27 of the Ordinance, a Licensee whose licence has been so varied or cancelled may be entitled to compensation.
根據本條例第 24 條的規定，監督可以書面通知，向本牌照施加新訂或經修訂的條款及條件，或取消本牌照。根據本條例第 25、26 及 27 條的規定，被更改或取消牌照的持牌人可能會獲得補償。
- (i) Under Section 28 of the Ordinance, the Licensee may apply to the Authority for a variation of this licence.
根據本條例第 28 條的規定，持牌人可向監督申請更改本牌照。
- (j) Under Section 49 of the Ordinance, this licence shall not be construed as a dispensation from the requirements of any other Ordinance except where that other Ordinance so provides.
根據本條例第 49 條的規定，本牌照並不得解釋為豁免符合任何其他條例的規定，除非該其他條例如此訂定。



Appendix J Notification Letter of Operation Date



Telex Environmental and Energy Management Limited

Unit 9-10, 16/F, Shatin Galleria, No. 18-24 Shan Mei Street, Fo Tan, Shatin, N.T., Hong Kong
Tel.: (852) 3563 7003 Fax: (852) 3563 7018 www.telexeem.com

Our Ref. : TEEM/334/19/L/058/JT
Date : 28 May 2019

By Hand

Environmental Protection Department
Environmental Assessment Division
Metro Assessment Group, Kowloon Section (2)
27/F Southorn Centre, 130 Hennessy Road
Wan Chai, Hong Kong

Attn: Mr. Tse Kiu Chung

Dear Sir,

Contract No. SS D505
Environmental Permit No. EP-454/2013
Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-Vehicle
Depot at Yen Ming Road, West Kowloon Reclamation Area
Notification of the commencement date of full operation of the project

Further to the notification email dated 23 May 2019 (from Food and Environmental Hygiene Department), we are writing, on behalf of Environmental Permit Holder, Food and Environmental Hygiene Department, to inform that the commencement date of full operation of the project will be on 28 June 2019 for your record in accordance with Condition 1.14 of EP-454/2013.

Should you have any questions, please do not hesitate to contact the undersigned at (852) 3610 8777 or our Ir Nelson Tam at (852) 3610 8701. Thank you.

Yours faithfully,

For and on behalf of
Telex Environmental and Energy Management Limited

Ir Nelson TAM
Environmental Team Leader

EM / NT / KM / JT / WW

Encl.

- c.c. ArchSD – Mr. Alex TSE / Mr. Alan NIP (by hand)
FEHD – Ms. May NG (by hand)
PTA – Ms. Clara PANG / Mr. Jim HUNG (by email)
AEC – Ms. Grace KWOK / Mr. HO Tin Kit (by email)
CRBC – Mr. Vincent CHUNG / Mr. FU Kwok Kwan (by email)

