Monthly Environmental Monitoring & Auditing Report for

Drainage Diversion Works for the Comprehensive Residential Development at Various Lots in DD227 & DD229, Tai Po Tsai, Sai Kung

January 2013

Environmental Pioneers & Solutions Limited

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EXECUTIVE SUMMARY

This is the fifth monthly Environmental Monitoring and Audit (EM&A) Report for Drainage Diversion Works for the Comprehensive Residential Development at Various Lots in DD227 & DD229, Tai Po Tsai, Sai Kung under New World Project Management Ltd. This report concludes the impact monitoring for the activities undertaken during the period from 1st of January 2013 to 31st January 2013. The major site activities in this reporting period were mainly tree retain, transplant and felling, stream course diversion works, soil nail works and ELS works.

The Environmental Team (ET) is responsible for the EM&A works required in the Particular Specifications (PS). Site inspections were carried out on weekly basis to investigate and audit the equipment and work methodologies with respect to pollution control and environmental mitigation. The weekly inspections and photos records were kept.

Noise, water quality and air quality monitoring were performed during the reporting period. Results were compared with the established Action/Limit (A/L) level.

In general, waste management was satisfactory during the reporting period.

Impact monitoring for construction noise and air quality was conducted in the reporting period. No exceedance of A/L level was reported.

Furthermore, impact monitoring for water quality was conducted. Total 3 numbers of Limit Level exceedance were recorded in this reporting period. For the non-compliance events, no particular observation of defective site activities causing water contamination was found and the exceedance records were believed to be mainly caused by other construction site activities outside this project site.

There was no complaint, notification of any summons and successful prosecutions against the project received during the reporting period.

It is expected that noise, water quality and air quality impacts may be resulted

from the site works. ET has reminded the contractor to provide environmental pollution control measures wherever necessary and to keep a good environmental management at site practice. The recommended mitigation measures proposed for the project as well as implementation status can refer to section 13.3.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the PS and Environmental Permit requirement.

1 Introduction

This is the fifth monthly Environmental Monitoring and Audit (EM&A) Report for Drainage Diversion Works for the Comprehensive Residential Development at Various Lots in DD227 & DD229, Tai Po Tsai, Sai Kung under New World Project Management Ltd.. The site layout plan is shown in **Appendix A**. The Environmental Team, Environmental Pioneers & Solutions Limited was appointed by Hip Seng Construction Co. Ltd. to prepare the report. The report is to be submitted to the Contractor, the Engineer and the IEC.

This report presents the results of the environmental monitoring of the project activities conducted within the reporting period from 1st January 2013 to 31st January 2013. This report included the noise monitoring, water quality monitoring, air quality monitoring and regular site inspections for verification of implementation of the mitigation measures as recommended in the Environmental Permit (FEP-02/428/2011/A) (EP), PS and the Contractor's Environmental Management Plan (EMP).

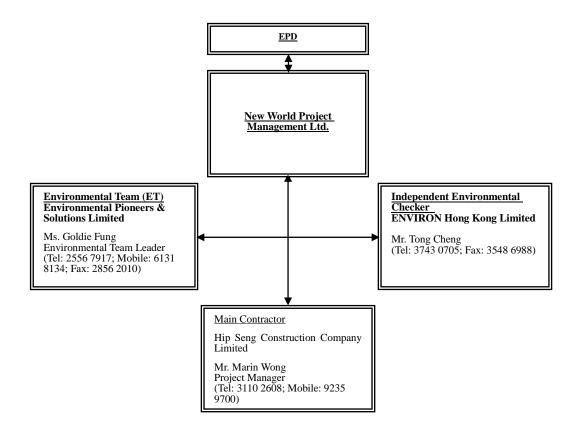
2 **Project Information**

Construction works of "Drainage Diversion Works for the Comprehensive Residential Development at Various Lots in DD227 & DD229, Tai Po Tsai, Sai Kung" project has been commenced in Sep 2012 and is expected to completed by July 2013. Construction master program is shown in **Appendix A**.

3 Project Organization

The Main Contractor, Hip Seng Construction Company Limited, has commissioned Environmental Pioneers & Solutions Limited as the Environmental Team, which comprises the environmental team leader, the environmental technicians to undertake the environmental monitoring and audit work for this project.

The Environmental management structure is shown in Fig. 3.1



3.1 Key personal contact information chart

Detail contact of key persons involved in environmental aspect of the project is shown in **Appendix B**.

4 Construction Stage

4.1 Construction Activities in Reporting Period

Major activities in the reporting period included the followings:

- Tree retain, transplant and felling
- Stream course diversion works
 - Excavation of Box Culvert Area
 - Excavation of Concrete Pipe Area
 - Excavation of Temporary U Channel at Zone B2
 - Concreting Works of Box Culvert
 - Concrete Pipe Installation
 - Concrete Bedding of Concrete Pipe
 - Manhole Construction
 - Concrete Bedding of Temporary U Channel at Zone B2
 - Temporary stream diversion works
- Soil nail works
 - Survey checking and setting out works
 - Excavation of soil nail area
- ELS works
 - Survey checking and setting of monitoring checking point
 - Delivery stockpile outside site

4.2 Construction Activities for Coming Months

Proposed key construction works in the coming month will include:

- Site Clearance for Stream Course Diversion Works
- Excavation at Zone B2 & B3 and Zone Type I Soil Nail Area
- Construction of Manhole S5B, S5A, S5, S4A, S4, S3A1, S2 & Sand Trap at Zone B1
- Box Culvert Construction of outlet, Bay 8 & 12 at Zone A1
- Transplant Trees
- Drilling hole for soil nail
- Soil Nail Construction
- Open Excavation
- Sheet Pile Installation
- Pre-boring work

4.3 Environmental Status

The site layout plan is shown in **Appendix A**.

Locations of the monitoring and control stations with environmental sensitive receivers are presented in Section 5.3, 6.3, and 7.3 for noise monitoring, water quality monitoring, and air quality monitoring respectively.

5 Noise Monitoring

5.1 Monitoring Parameters and Methodology

The construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). $L_{eq (30minutes)}$ was used as the monitoring parameter for the impact monitoring in the time period between 0700 to 1900 hours on normal weekdays. For all other time period, $L_{eq (5minutes)}$ was employed for comparison with the Noise Control Ordinance (NCO) criteria.

Noise measurement results obtained from each monitoring location were recorded in the Construction Noise Monitoring Data Sheet immediately after the measurement. As supplementary information for data auditing, statistical results L_{10} and L_{90} were also be recorded for reference.

In case of non-compliance with the construction noise criteria, more frequent monitoring, as specified in the Action plan in Table 5.7.2, shall be carried out. This additional monitoring shall be carried out until the recorded noise levels are rectified or proved to be irrelevant to the construction activities.

5.2 Monitoring Equipment

The sound level meters and calibrators comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications as referred to in the Technical Memorandum (TM) to the Noise Control Ordinance was deployed as monitoring equipment for noise measurement.

Noise measurement was not be made in the presence of fog, rain, wind with a steady speed exceeding 5ms⁻¹ or wind with gust exceeding 10ms⁻¹. Thus wind speed was checked by the portable wind speed indicator capable of measuring the wind speed in m/s. Table 5.2.1 summarizes the equipment list for noise monitoring

Equipment	Manufacturer & Model No.	Precision Grade	Qty
Integrated sound	Svantek 949	IEC 651 Type 1	2
level meter	Svantek 955	IEC 804 Type 1	
Acoustical	Svantek SV30A	IEC 942 Type 1	1
calibrator			
Remarks: Calibra	tion details of the sound level 1	meter and acoustical ca	librator
are given in Appe	ndix C for reference		

Table 5.2.1 Equipment List for Noise Monitoring

5.3 Monitoring Locations

According to the PS, impact noise monitoring was undertaken at four locations during the construction phase of the project. The monitoring locations are summarized in Table 5.3.1 and are shown in Figure 5.3.1.

Noise measurement for N4 location was taken at a point 1m from the exterior of the selected premises and at a height with no disturbance to the dweller and least obstructed view, so that façade measurement was made for monitoring location N4 and the free field measurements were made for monitoring locations N1, N2 and N3.

Identification No.	Noise Monitoring Locations
N1	Staff Quarters 1-12, HKUST
N2	174, Lots in DD227 & DD229, Tai Po Tsai, Sai Kung
N3	152A, Lots in DD227 & DD229, Tai Po Tsai, Sai Kung
N4	109, Lots in DD227 & DD229, Tai Po Tsai, Sai Kung

Table 5.3.1 Noise Monitoring Locations during Construction Phase

In accordance with the requirements in the PS, weekly impact monitoring was conducted. For the time period between 0700 and 1900 hours on normal weekdays, and noise parameter of $L_{eq~(30minutes)}$ was measured. As if the construction works were carried out during restricted period (i.e. 1900-2300, 2300-0700 of next day and Sundays / general holiday), impact monitoring that comprises 3 consecutive $L_{eq~(5minutes)}$ would be carried out.

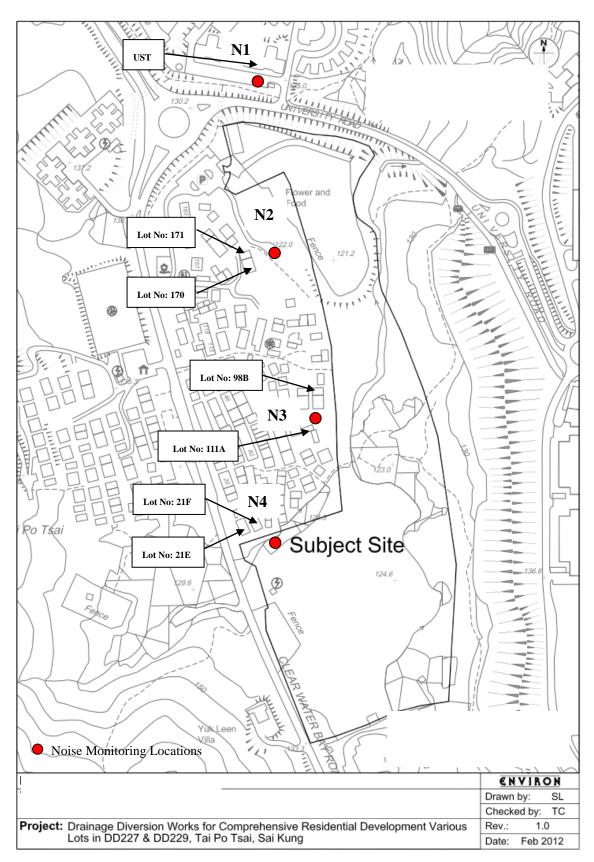


Figure 5.3.1 Impact noise monitoring locations

5.4 Monitoring Frequency

The regular monitoring for each location was performed on a basis of once in every 6 days.

Monitoring was carried out on 3rd, 9th, 14th, 19th, 25th and 31st of January 2013.

5.5 Monitoring Results and Interpretation

Relevant details of the noise monitoring results are presented in Table 5.5.1. The results of N1 ranged between 61.5dB (A) and 67.2dB (A), N2 ranged between 58.9dB (A) and 63.3dB (A), N3 ranged between 60.2dB (A) and 63.1dB (A) and N4 ranged between 61.0dB (A) and 66.7dB (A) were within the limit levels and therefore no exceedance was found.

Table 5.5.	Table 5.5.1 Noise Monitoring Results for the reporting month											
Location	Parameter	Date	Time	L _{Aeq} dB(A)	Limit dB(A)	Exceedance	Weather					
*N1	Leq30min	3-Jan-13	14:02	61.5	75	Ν	Overcast					
*N1	Leq30min	9-Jan-13	13:29	63.5	75	Ν	Cloudy					
*N1	Leq30min	14-Jan-13	13:40	64.9	75	Ν	Cloudy					
*N1	Leq30min	19-Jan-13	13:37	67.2	75	Ν	Cloudy					
*N1	Leq30min	25-Jan-13	13:45	66.3	75	Ν	Sunny					
*N1	Leq30min	31-Jan-13	13:42	64.1	75	Ν	Cloudy					
*N2	Leq30min	3-Jan-13	11:30	59.8	75	Ν	Overcast					
*N2	Leq30min	9-Jan-13	14:02	58.9	75	Ν	Cloudy					
*N2	Leq30min	14-Jan-13	13:02	61.7	75	Ν	Cloudy					
*N2	Leq30min	19-Jan-13	13:02	63.3	75	Ν	Cloudy					
*N2	Leq30min	25-Jan-13	13:08	61.2	75	Ν	Sunny					
*N2	Leq30min	31-Jan-13	13:08	60.2	75	Ν	Cloudy					
*N3	Leq30min	3-Jan-13	9:53	63.0	75	Ν	Overcast					
*N3	Leq30min	9-Jan-13	10:17	60.2	75	Ν	Cloudy					
*N3	Leq30min	14-Jan-13	10:01	62.8	75	Ν	Cloudy					
*N3	Leq30min	19-Jan-13	9:42	63.1	75	Ν	Cloudy					
*N3	Leq30min	25-Jan-13	10:35	62.1	75	Ν	Sunny					
*N3	Leq30min	31-Jan-13	10:26	60.4	75	Ν	Cloudy					

N4	Leq30min	3-Jan-13	10:27	61.0	75	N	Overcast
N4	Leq30min	9-Jan-13	10:51	61.1	75	Ν	Cloudy
N4	Leq30min	14-Jan-13	10:37	66.7	75	Ν	Cloudy
N4	Leq30min	19-Jan-13	10:15	62.1	75	Ν	Cloudy
N4	Leq30min	25-Jan-13	10:01	65.5	75	Ν	Sunny
N4	Leq30min	31-Jan-13	9:50	64.7	75	Ν	Cloudy

*The equivalent noise level of N1, N2 and N3 is corrected by +3dB(A).

Remarks: Raw datasheet for noise monitoring are attached in **Appendix D** for reference.

5.6 Action and Limit Level for Construction noise

The Action and Limit (A/L) levels for construction noise are defined in Table 5.6.1. Should non-compliance of the criteria occur, action in accordance with the Action Plan in Table 5.6.2 should be carried out.

There was no exceedance recorded in the reporting period.

Table 5.6.1 Action and Limit Levels for Construction Noise at All Sensitive											
Receivers											
Time Period	Action	Limit									
Daytime		75 dB(A)*									
0700 – 1900 hrs on normal	X 71										
weekdays	When one										
1900 – 2300 on all days and 0700 –	documented	60/65/70 dB(A)**									
2300 on general holidays (including	complaint is										
Sundays)	received										
2300 – 0700 on all days		45/50/55 dB(A)**									

EVENT		ET Leader		IEC		ER		CONTRACTOR
Exceedance	1.	Identify source,	1.	Check monitoring	1.	Notify	1.	Rectify any
for one		investigate the		data submitted by		Contractor.		unacceptable
sample in		causes of		ET.				practice.
Action		exceedance and	2.	Check			2.	Amend working
Level		propose remedial		Contractor's				methods if
		measures.		working method.				appropriate.
	2.	Inform ER, IEC						
		and Contractor.						
	3.	Repeat						
		measurement to						
		confirm finding.						
	4.	Increase						
		monitoring						
		frequency to daily.						

Table 5.6.2 Event / Action Plan for Construction Noise

Encord and	1 Ideatify	4		4		1	0.1
Exceedance	1. Identify source,	1.	Checking	1.	Confirm receipt	1.	Submit proposals
for two or	investigate the		monitoring data		of notification of		for remedial
more	causes of		submitted by ET.		failure in writing.		actions to IEC
consecutive	exceedance and	2.	Check	2.	Notify		within three
samples in	propose remedial		Contractor's		Contractor.		working days of
Action	measures.		working method.	3.	Ensure remedial		notification.
Level.	2. Inform IEC and	3.	Discuss with ET		measures	2.	Implement the
	Contractor.		and Contractor		properly		agreed proposals.
	3. Repeat		on possible		implemented.	3.	Amend proposals
	measurements to		remedial				if appropriate.
	confirm findings.		measures.				
	4. Increase	4.	Advise the ER on				
	monitoring		the effectiveness				
	frequency to		of the proposed				
	daily.		remedial				
	5. Discuss with IEC		measures.				
	and Contractor	5.	Supervisor				
	on remedial		implementation				
	actions.		of remedial				
	6. If exceedance		measures.				
	continues,						
	arrange meeting						
	with IEC and ER.						
	7. If exceedance						
	stops, cease						
	additional						
	monitoring.						
	6						
L		I		L		l	

			4		-		1	
Exceedance	1.	Identify source,	1.	Checking	1.	Confirm receipt	1.	Take immediate
for on		investigate the		monitoring data		of notification of		action to avoid
sample in		causes lof		submitted by ET		failure in writing.		further
Limit Level		exceedance and	2.	Check	2.	Notify		exceedance.
		propose remedial		Contractor's		Contractor.	2.	1 1
		measures.		working method	3.	Ensure remedial		for remedial
	2.	Inform ER,	3.	Discuss with ET		measures		actions to IEC
		Contractor and		and Contractor on		properly		within three
		EPD.		possible remedial		implemented.		working days of
	3.	Repeat		measures				notification.
		measurement to	4.	Advise the ER on			3.	Implement the
		confirm finding.		the effectiveness				agreed proposals.
	4.	Increase		of the proposed			4.	Amend proposal
		monitoring		remedial				if appropriate.
		frequency to		measures.				
		daily.	5.	Supervisor				
	5.	-		implementation				
		effectiveness of		of remedial				
		Contractor's		measures.				
		remedial actions						
		and keep IEC,						
		EPD and ER						
		informed of the						
		results.						
		robuito.						
	l		L		l			

[]								
Exceedance	1.	Identify source,	1.	Discuss amongst	1.	Confirm receipt	1.	Take immediate
for two or		investigate the		ER, ET and		of notification of		action to avoid
more		causes of		Contractor on the		failure in writing.		further
consecutive		exceedance and		potential remedial	2.	Notify		exceedance.
samples in		prpose remedial		actions.		Contractor.	2.	Submit proposals
Limit Level		measures.	2.	Review	3.	In consultation		for remedial
	2.	Notify IEC, ER,		Contractor's		with the IEC,		actions to IEC
		Contractor and		remedial actios		agree with the		within three
		EPD.		whenever		Contractor on the		working days of
	3.	Repeat		necessary to		remedial		notification.
		measurement to		assure their		measures to be	3.	Implement the
		confirm findings.		effectiveness and		implemented.		agreed proposals.
	4.	Increase		advise the ER	4.	Ensure remedial	4.	Resubmit
		monitoring		accordingly.		measures		proposals if
		frequency to	3.	Supervise the		properly		problem still not
		daily.		implementation		implemented		under control.
	5.	Carry out		of remedial	5.	If exceedance	5.	Stop the relevant
	5.	analysis of		measures.		continues		portion of works
		Contractor's				consider what		as determined by
		working				portion of the		the ER until the
		procedures to				work is		exceedance is
		determine				responsible and		abated.
		possible				instruct the		
		mitigation to be				Contractor to stop		
		implemented.				that portion of		
	6	Arrange meeting				work until the		
	0.	with IEC and ER				exceedance is		
		to discuss the				abated remedial		
		remedial actions				actions.		
		to be taken.						
	7							
	1.	Assess						
		effectiveness of						
		Contractor's						
		remedial actions						
		and keep IEC,						
		EPD and ER						

inform	med of the		
8. If exc			
	os, cease itional		
mor	nitoring		

5.7 Monitoring Schedule for the next reporting period

Noise monitoring schedule is proposed to be carried out on 6th, 14th, 20th and 26th of February 2013.

6 Water Monitoring

6.1 Water Quality Monitoring Parameters and Methodology

Turbidity in Nephelometric Turbidity Unit (NTU), and Dissolved Oxygen (DO) in mg/L, temperature, water depth and pH measurements were in-situ measurements and suspended solids measurements were performed by a HOKLAS accredited laboratory using recommended reference method APHA 2540D.

6.2 Monitoring Equipment

Turbidity, DO, Salinity, pH and temperature was measured by an instrument complied with the following requirements:

The instrument is a portable as well as weatherproof multimeter complete with cable and uses a DC power source. It is capable of measuring:

- A turbidity between 0-1000NTU;
- A dissolved Oxygen level in the range of 0-20mg/L and 0-200% saturation;
- A temperature of 0-50°C;
- pH in the range of 0-14.

The measurements were performed by a portable and weatherproof multi-meter, model TOA-DKK WQC-24. The equipment was calibrated and verified by certified laboratory every 3 months to ensure they perform to the same level of accuracy as stated in the manufacturer's specification. Detailed calibration records of the multi-meter were shown in Appendix C for reference

Suspended solids were determined by the water samples collected from the monitoring locations for further analysis in accredited HOKLAS laboratory. Water samples were contained by polythene bottles, packed in ice (cooled in 4° C without frozen) and delivered to the laboratory for analysis as soon as possible after collection.

Since water depths for all monitoring stations were less than 0.5m during the impact measurement period, only mid-depth level was monitored. The monitoring parameters and measurement methods of water quality monitoring are summarized in Table 6.2.1.

Table 6.2.1 – Water Quality Monitoring Parameters and Measurement					
Methods	Methods				
Parameter	Measurement Method				
Temperature (°C)					
Turbidity (NTU)	in-situ				
рН					
Dissolved Oxygen (mg/L and %)					
Suspended Solids (mg/L)	Reference method APHA 2540D				

6.3 Monitoring Locations

In accordance with the PS, monitoring stations were established at two locations, which are summarized in Table 6.3.1.

Table 6.3.1 – Water Quality Monitoring Locations				
Monitoring Station	Coordinates			
Monitoring Station	Easting	Northing		
W1 (upstream)	E:844944	N:821720		
W2 (downstream)	E:844959	N:822249		

As illustrated in Figure 6.3.1, W1 served as the control station while W2 was the monitoring location of water quality.

In accordance with the PS, measurements shall be taken at 3 water depths, namely, 1m below water surface, mid-depth and 1m above river bed, except where the water depth less than 6m, the mid-depth station may be omitted. Should the water depth be less than 3m, only the mid-depth station will be monitored.

As the depth of water was less than 3m, water samples were collected at mid-depth of each monitoring stations for measurements and sample collection.

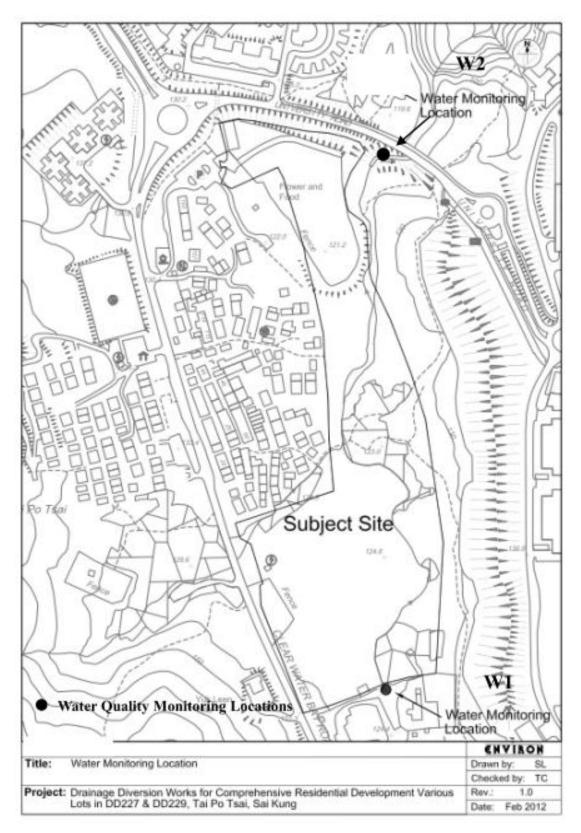


Figure 6.3.1 Water Quality Monitoring Locations

6.4 Monitoring Frequency

Water quality monitoring for each monitoring station was performed at mid-flood or mid-ebb tides for 3 days per week during the course of the construction river works.

Monitoring was carried out on 2nd, 4th, 8th, 10th, 11th, 12th, 14th, 15th, 17th, 19th, 22nd, 24th, 26th, 29th and 31st of January 2013.

6.5 Monitoring Results and Interpretation

Water quality monitoring was carried out fifteen times in this reporting month. Detailed on-site measurements are shown in Appendix E. Table 6.5.1 presents consolidated results throughout the reporting month.

There were 3 numbers of Limit Level exceedance (Turbidity & SS) were record in this reporting period as shown in table 6.5.2. ET has arranged site investigations for the abnormal incidents on same day and found that no construction activities had been carried out at the river bed. It was believed that the exceedances of water quality were not affected by the construction activities. According to the site investigation, we believed that the exceedance records at W2 were caused by other construction activities of other project site. Therefore, the exceedances records at W2 were unlikely to be related to this project.

Table 6.5.1	Table 6.5.1 Summary of Water Quality Monitoring Results of this reporting month					
	Average of M	Average of Monitoring Results				
	TemperatureTurbidity ($^{\circ}C$)pHOxygenOxygen($^{\circ}C$)(NTU)0					Suspended Solids (mg/L)
W1	20.7	2.1	7.89	10.56	119.3	3.71
W2	20.7	8.9	7.63	9.74	110.8	5.71

		Parameter		
Date	Location	Turbidity (NTU)	SS (mg/l)	Interpretations
10/1/2013	W1	1.0	2.0	Exceedances were caused by
10/1/2013	W2	47.0	26.0	other construction activities
11/1/2013	W1	0.4	8.0	Exceedances were caused by
11/1/2013	W2	20.0	6.0	other construction activities
12/1/2013	W1	1.8	3.0	Exceedances were caused by
12/1/2013	W2	19.0	4.0	other construction activities

Table 6.5.2 3 numbers of Limit Level exceedance during the reporting month

6.6 Action and Limit Level for Water Quality

Based on the criteria stipulated in PS (Table 6.6.1) and baseline water quality monitoring data obtained, the A/L levels are shown in Table 6.6.2. The A/L levels for W1 were ignored since W1 functions as the control station for the project. If the water quality monitoring results at any impact stations exceeded the criteria, the actions in accordance with the Event and Action Plan in Table 6.6.3 should be taken.

Total 3 numbers of Limit Level exceedance were recorded during the reporting period. The repeated measurements were carried out on the 11th, 12th & 14th Jan 2013. And, the site inspection for the exceedance was carried out at the same day. We found that the exceedances of water quality at W2 were not to relate to the project.

Table 6.6.1 Action and Limit Levels for Water Quality at All Monitoring					
Stations	Stations				
Parameters	Action	Limit			
DO in mg/L	5 percentile of baseline data	4 mg/L or 1 percentile of			
	5 percentile of baseline data	baseline data			
	95 percentile of baseline data	99 percentile of baseline data or			
SS in ma/I	or 120% of upstream control	130% of upstream control			
SS in mg/L	station's SS recorded on the	station's SS recorded on the			
	same day	same day			
	95 percentile of baseline data	99 percentile of baseline data or			
Turbidity in	or 120% of upstream control	130% of upstream control			
NTU	station's Turbidity recorded on	station's Turbidity recorded on			
	the same day	the same day			
	<6.5 or >8.4 or > the upstream				
рН	control station's pH recorded	<6.0 or >9.0			
	on the same day				

Table 6.6.2 A	ction and Limit Levels for Water Quality at All Monitoring			
Stations				
	Monitoring Stations			
W2				
Parameters	Action	Limit		

Parameters	W2			
rarameters	Action	Limit		
	Level	Level		
DO in mg/L	6.42	6.24		
SS in mg/L	18.9	19.8		
Turbidity in NTU	6.2	6.2		
pН	<6.5 or >8.4	<6.0 or >9.0		

Remarks:

- 1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- 2. For SS and Turbidity, non-compliance of the water quality limits occurs when monitoring results is higher than the limits.
- 3. For pH, for the action level, reference is made to the data recorded at EPD' river monitoring stations at the nearby Tseng Lan Shue Stream (JR3, JR6 and JR22) from year 2006 to 2010; while the limit level is referring to the water quality objective for Inland Water of Junk Bay Water Control Zone.

Event	ET Leader	IEC	ER	Contractor
ACTION LEV	EL	·		
Exceedance	1. Repeat in-site	1. Discuss with ET	1. Discuss with	1. Inform the ER
for one	measurement to	and Contractor	IEC on the	and confirm
sample day	confirm findings.	on the	proposed	notification of the
	2. Identify source(s)	mitigation	mitigation	non-compliance
	of impact.	measures.	measures.	in writing.
	3. Inform IEC and	2. Review	2. Make	2. Rectify
	Contractor.	proposals on	agreement on	unacceptable
	4. Check monitoring	mitigation	mitigation	practice.
	data, all plant,	measures	measures to	3. Check all plant
	equipment and	submitted by	be	and equipment.
	Contractor's	Contractor and	implemented.	4. Consider changes
	working methods.	advise the ER	3. Assess	of working
	5. Discuss mitigation	accordingly;	effectiveness	methods.
	measures with	3. Assess	of	5. Discuss with ET,
	IEC and	effectiveness of	implemented	IEC and propose
	Contractor.	the implemented	mitigation	mitigation
	6. Repeat	mitigation	measures.	measures to IEC
	measurement on	measures.		and ER.
	next day of			6. Implement the
	exceedance.			agreed mitigation
				measures.

Table 6.6.3 Event and action Plan for Water Quality

E 1	1 Dam (1)	1 D'		П
Exceedance	1. Repeat in-situ	1. Discuss with ET	1. Discuss with 1. Inform the E	ĸ
for more than		and Contractor	IEC on the and confirm	
one	confirm findings.	on the	proposed notification of	
consecutive	2. Identify source(s)	mitigation	mitigation non-complian	nce
sampling	of impact.	measures.	measures. in writing.	
days	3. Inform IEC and	2. Review	2. Make 2. Rectify	
	Contractor.	proposals on	agreement on unacceptable	
	4. Check monitoring	mitigation	the mitigation practice.	
	data, all plant,	measures	measures to 3. Check all pla	nt
	equipment and	submitted by	be and equipment	nt.
	Contractor's	Contractor and	implemented. 4. Consider cha	nges
	working methods.	advise the ER	3. Assess of working	
	5. Discuss mitigation	accordingly.	effectiveness methods.	
	measures with	3. Assess	of the 5. Discuss with	ΕT
	IEC and	effectiveness of	implemented and IEC and	
	Contractor.	the implemented	mitigation propose	
	6. Ensure mitigation	mitigation	measures. mitigation	
	measures are	measures.	measures wit	hin
	implemented.		three working	g
	7. Prepare to increase		days.	
	the monitoring		6. Implement th	ie
	frequency to daily.		agreed mitiga	ation
	8. Repeat		measures.	
	measurement on			
	next day of			
	exeedance.			
LIMIT LEV	VEL			
Exceedance	1. Repeat in-situ	1. Discuss with ET	1. Discuss with 1. Inform the E	R
for one	measurements to	and Contractor	IEC, ET and and confirm	
sampling	confirm findings.	on the	Contractor on notification of	of the
day	2. Identify source(s) of	mitigation	the proposed non-complian	nce
	impact.	measures.	mitigation in writing.	
	3. Inform EPD, IEC,	2. Review	measures. 2. Rectify	
	Contractor.	proposals on	2. Request unacceptable	
	4. Check monitoring	mitigation	Contractor to practice.	
	data, all plant,	measures	critically 3. Check all pla	nt
	equipment and	submitted by	review the and equipment	
	* 1	2	11	

[]			· · ·	0 11 1
	Contractor's	Contractor and	e	. Consider changes
	working methods;	advise the ER	methods.	of working
	5. Discuss mitigation	accordingly.	3. Make	methods.
	measures with IEC,	3. Assess	e	. Discuss with ET,
	ER and Contractor.	effectiveness of	the mitigation	IEC and ER and
	6. Ensure mitigation	the implemented	measures to	propose
	measures are	mitigation	be	mitigation
	implemented.	measures.	implemented.	measures to IEC
	7. Increase the		4. Assess the	and ER within
	monitoring		effectiveness	three working
	frequency to daily		of the	days.
	until no exceedance		implemented 6.	. Implement the
	of Limit level.		mitigation	agreed mitigation
			measures.	measures.
Exceedance	1. Repeat in-situ	1. Discuss with ET	1. Discuss with 1.	. Inform the ER
for more	measurements to	and Contractor	IEC, ET and	and confirm
than on	confirm findings.	on the	Contractor on	notification of the
consecutive	2. Identify source(s) of	mitigation	the proposed	non-compliance
sampling	impact.	measures.	mitigation	in writing.
days	3. Inform EPD, IEC	2. Review	measures. 2.	. Rectify
	and Contractor.	proposals on	2. Request	unacceptable
	4. Check monitoring	mitigation	Contractor to	practice.
	data, all plant,	measures	critically 3.	. Check all plant
	equipment and	submitted by	review the	and equipment.
	Contractor's	Contractor and	working 4.	. Consider changes
	working methods.	advise the ER	methods.	of working
	5. Discuss mitigation	accordingly.	3. Make	methods.
	measures with IEC,	3. Assess the	agreement on 5.	. Discuss with ET,
	ER and Contractor.	effectiveness of	the mitigation	IEC and ER and
	6. Ensure mitigation	the implemented	measures to	propose
	measures are	mitigation	be	mitigation
	implemented.	measures.	implemented.	measures to IEC
	7. Increase the		4. Assess the	and ER within
	monitoring		effectiveness	three working
	frequency to daily		of the	days.
	inequency to during			j = ·

until no exceedance	implemented	6.	Implement the
of Limit level for	mitigation		agreed mitigation
two consecutive	measures.		measures.
days.	5. Consider and	7.	As directed by
	instruct, if		the ER, to slow
	necessary, the		down or to stop
	Contractor to		all or part of the
	slow down or		work or
	to stop all or		construction
	part of the		activities.
	work until no		
	exceedance of		
	Limit Level.		

6.7 Monitoring Schedule for Next Reporting Period

Water quality monitoring schedule is proposed to be carried out on 2nd, 5th, 7th, 9th, 14th, 16th, 19th, 21st, 23rd, 26th and 28th of February 2013.

7 Air Quality Monitoring

7.1 Monitoring Methodology and Parameters

1-hr and 24-hrs air quality monitoring have been carried out during the reporting period.

Measurements of 1-hr TSP monitoring were taken by a Dust Trak aerosol monitor or its equivalent that is a portable and battery-operated laser photometer capable of performing real time 1-hr TSP measurements.

24-hrs TSP was measured by the High Volume Sampler. The filter papers for each monitoring locations were sent to the accredited HOKLAS laboratory for further analysis.

Other relevant data such as monitoring location, time, weather conditions and any other special phenomena at the construction site were recorded during the measurement period.

7.2 Monitoring Equipment

24-hrs TSP was measured by the High Volume Sampler. And the 3 sets of 1-hr TSP were carried out by the portable dust meter. The measurement equipments are listed in Table 7.2.1 and Calibration Certificates of the equipments are shown in **Appendix C**.

Equipment	Manufacturer & Model No.	Parameter	Qty
Laser Dust Monitor	SIBATA/LD-3B	1-hr TSP	2
High Volume	TE-5025A	24-hrs TSP	4
Sampler			

Table 7.2.1 Air Quality Monitoring Equipments

7.3 Monitoring Locations

Monitoring locations were established at 4 locations, which are summarized in Table 7.3.1 and are shown in Figure 7.3.1

Identification No. TSP Monitoring Locations			
D1	Staff Quarters 1-12, HKUST		
D2	174, Lots in DD227 & DD229, Tai Po Tsai, Sai Kung		
D3	152A, Lots in DD227 & DD229, Tai Po Tsai, Sai Kung		
D4	109, Lots in DD227 & DD229, Tai Po Tsai, Sai Kung		

Table 7.3.1 Air Quality Monitoring Locations

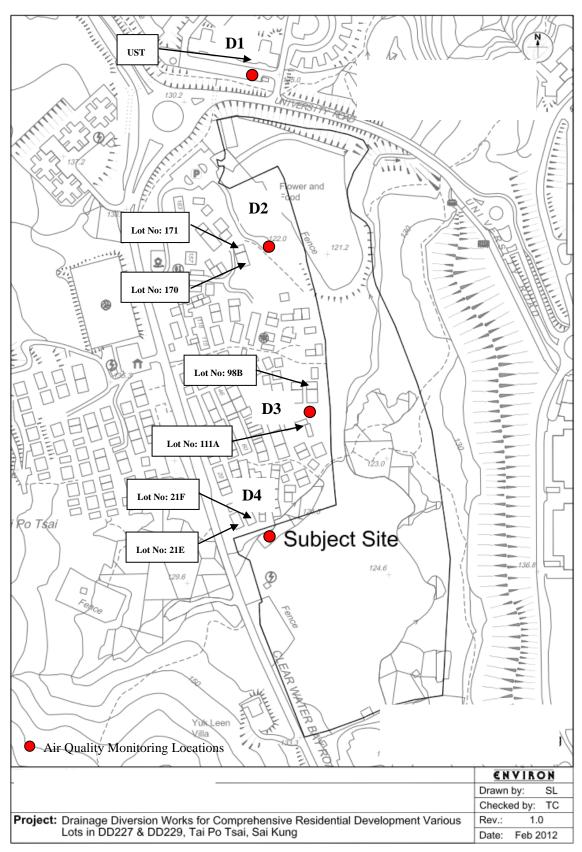


Figure 7.3.1 Air Quality Monitoring Locations

7.4 Monitoring Frequency

For 1-hr and 24-hr TSP monitoring, the sampling frequency of at least once in every six days.

Monitoring was carried out on 3rd, 9th, 14th, 19th, 25th and 31st of January 2013.

7.5 Monitoring Results and Interpretation

1-hr TSP and 24-hrs TSP were carried out during this reporting. And, no exceedance was recorded.

1-hr TSP monitoring was conducted at four designated monitoring locations. The monitoring results are summarized in Table 7.5.1.

Table 7.5.1 A summarized of average 1-hr TSP monitoring data				
Location	Range (µg/m3)	Average (µg/m3)		
Location	(Min – Max)			
D1	66-134	98.2		
D2	52-134	87.6		
D3	61-147	116.9		
D4	77-143	103.3		

24-hrs TSP monitoring data was obtained at four designated monitoring locations. The monitoring results are summarized in Table 7.5.2.

Table 7.5.2 A summarized of average 24-hrs TSP monitoring data				
Location	Range (µg/m3)	Average (µg/m3)		
Location	(Min – Max)			
D1	78.5-107.9	96.7		
D2	69.5-102.0	88.9		
D3	79.6108.2	93.9		
D4	86.5-130.9	101.3		

Details of the monitoring data were presented in Appendix F.

7.6 Action and Limit Level for 1-hr TSP and 24-hrs TSP

The Action and Limit levels for all monitoring stations are summarized in Table 7.6.1 and Table 7.6.2, which would be applied for compliance assessment of air quality for this project. If the air quality monitoring results at any impact stations exceeded the criteria, the actions in accordance with the Event and Action Plan in Table 7.6.3 should be taken.

Table 7.6.1 Action and Limit Levels for 1-hr TSP at All Monitoring Stations					
Monitoring Station	Monitoring Frequency	Action Level	Limit Level		
D1		$285.6 \mu g/m^3$	$500 \ \mu g/m^3$		
D2	1 h	279.4 μ g/m ³	$500 \ \mu g/m^3$		
D3	1-hr	$289.4 \mu g/m^3$	$500 \ \mu g/m^3$		
D4		284.3 μ g/m ³	$500 \mu\text{g/m}^3$		

Table 7.6.2 Action and Limit Levels for 24-hrs TSP at All Monitoring Stations					
Monitoring Station	Monitoring Frequency	Action Level	Limit Level		
D1		156.4 µg/m3	$260 \mu\text{g/m}^3$		
D2	24-hrs	153.8 µg/m3	$260 \ \mu g/m^3$		
D3		155.2 µg/m3	$260 \ \mu g/m^3$		
D4		$158.0 \mu g/m^3$	$260 \ \mu g/m^3$		

Event	ЕТ	Leader	IE	С	ER		Con	tractor
ACTION LE	VE						•	
Exceedance for one sample	 1. 2. 3. 4. 	Identify source, investigate the cause s of exceedance and propose remedial measures. Inform ER , IEC and Contractor. Repeat measurement to confirm finding. Increase monitoring frequency to daily.	2	. Check monitoring data submitted by ET. 2. Check Contractor's working method.	1.	Notify Contractor.		Rectify any unacceptable practice. Amend working methods if appropriate.
Exceedance for two or more consecutive samples	 1. 2. 3. 4. 5. 6. 7. 	Identify source, investigate the causes of exceedance and propose remedial measures. Inform IEC and Contractor. Repeat measurements to confirm findings Increase monitoring frequency to daily. Discuss with IEC and Contractor on remedial actions. If exceedance continues, arrange meeting with IEC and ER If exceedance stops,	1. 2. 3. 4.	Checking monitoring data submitted by ET. Check Contractor's working method. Discuss with ET and Contractor on Possible remedial measures. Advise the ER on the effectiveness of the proposed remedial measures. Supervisor implementation of remedial measures.	2.	Confirm receipt of notification of failure in writing. Notify Contractor. Ensure remedial measures properly implemented	2.	Submit proposals for remedial actions to IEC within three working days of notification. Implement the agreed proposals. Amend proposal if appropriate.

Table 7.6.3 Event and action Plan for Air Quality

		cease additional					
		monitoring.					
LIMIT LE	CVE	ČL.					
Exceedance	1.	Identify source,	1.Checking	1.	Confirm	1.	Take immediate
for one		investigate the	monitoring data		receipt of		action to avoid
sample		causes of	submitted by ET.		notification		further
		exceedance and	2. Check		of failure in		exceedance.
		propose remedial	Contractor's		writing.	2.	Submit proposals
		measures.	working method	2.	Notify		for remedial
	2.	Inform ER,	3. Discuss with ET		Contractor.		actions to IEC
		Contractor and EPD.	and Contractor on	3.	Ensure		within three
	3.	Repeat measurement	possible remedial		remedial		working days of
		to confirm finding.	measures		measures		notification.
	4.	Increase monitoring	4. Advise the ER on		properly	3.	Implement the
		frequency to daily.	the effectiveness		implemented.		agreed proposals.
	5.	Assess effectiveness	of the proposed			4.	Amend proposal if
		of Contractor's	remedial				appropriate.
		remedial actions and	measures.				
		keep IEC, EPD and	5. Supervisor				
		ER informed of the	implementati on				
		result.	of remedial				
			measures.				
Exceedance	1.	Identify source,	1. Discuss amongst	1.	Confirm	1.	Take immediate
for two or		investigate the causes	ER, ET and		receipt of		action to avoid
more		of exceedance and	Contractor on		notification		further
consecutive		propose remedial	the potenrial		of failure in		exceedance.
samples		measures.	remedial		writing.	2.	Submit proposals
	2.	Notify IEC, ER,	actions.	2.	Notify		for remedial
		Contractor and EPD.	2. Reviews		Contractor.		actions to IEC
	3.	Repeat measurement	Contractor's	3.	In		within three
		to confirm findings.	remedial actions		consultation		working days of
	4.	Increase monitoring	whenever		with the IEC,		notification.
		frequency to daily.	necessary to		agree with	3.	Implement the
	5.	Carry out analysis of	assure their		the		agreed proposals
		Contractor's working	effectiveness		Contractor on	4.	Resubmit
		procedures to	and advise the		the remedial		proposals if
		determine possible	ER accordingly.		measures to		problem still not

		2 0 1 1		,		1 . 1
	mitigation to be	3. Supervisor the		be		nder control.
	implemented.	implementati on		implemented.		top the relevant
		of remedial	4.	Ensure	p	ortion of works
6.	Arrange meeting with	measures.		remedial	a	s determined by
	IEC and ER to discuss			measures	t	he ER until the
	the remedial actionsto			properly	e	xceedance is
	be taken.			implemented.	a	bated
7.	Assess effectiveness		5.	If exceedance		
	of Contractor's			continues,		
	remedial actions and			consider		
	keep IEC, EPD and			what portion		
	ER informed of the			of the work is		
	results.			responsible		
8.	If exceedance stops,			and instruct		
	cease additional			the		
	monitoring			Contractor to		
	C			stop that		
				portion of		
				work until		
				the		
				exceedance is		
				abated		
				remedial		
				actions.		

7.7 Monitoring Schedule for Next Reporting Period

1-hr TSP and 24-hrs TSP monitoring schedule is proposed to be carried out on 6^{th} , 14^{th} , 20^{th} and 26^{th} of February 2013.

8 Ecology

During the reporting period, tree protection measures have been implemented by contractor, such as provision of tree protective fencing for the retained trees and transplanted trees. The tree protection zone has enough space to prevent the construction activities to damage the trees. And, the felled trees were also removed accordingly.

As the existing river was diverted temporarily, contractor was reminded that the water flow in the existing river within the site should be maintained.

9 Action Taken in Event of Exceedance

If the measurements (Noise, Water and Air) exceed the action / limit level, exceedance details will be reported and follow-up actions will be taken by relevant parties involved.

During the reporting month there was no exceedance for noise and air measurements recorded; therefore, no actions were taken.

For water quality monitoring, total 3 numbers of Limit Level exceedance (Turbidity & SS) were record in this reporting month in accordance with the established level. ET has arranged site investigations for the exceedance on same day and found that no construction activities had been carried out at the river bed. It was believed that the exceedances of water quality were not affected by the construction activities. According to the site investigation, we believed that the exceedance records at W2 were caused by other construction activities of other project site. Therefore, the exceedances records at W2 were unlikely to be related to this project.

10 Construction Waste Disposal

It is the contractor's responsibility to ensure that all wastes produced during the construction phase for the drainage improvement works are handled, stored and disposed in accordance with good waste management practices and EPD's regulation and requirement. Waste materials generated during construction activities, such as construction and demolition (C&D) material, chemical wastes and general refuse, are recommended to be audited at regular intervals to ensure that proper storage, transportation and disposal practices are being implemented.

Table 10.1 is a summary of figures of the construction wastes disposal provided by Contractor.

Table 10.1 Summary of Construction Waste Disposal

	1	Actual Quantities of	Inert C & D M	laterials Generat	ted Monthly		Actu	ual Quantities of C	C & D Waste	es Generated	Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastics (see note3)	Chemical Waste	Others, e.g. general refuse
	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)
Year 2012	3.9	0	0	0	3.9	0	0	0	0	0	36.66
Jan 2013	26.44	0	0	0	26.44	0	0	0	0	0	0
Total	3.9	0	0	0	30.34	0	0	0	0	0	36.66
		F	Forecast of Tota	I Quantities of	C & D Materi	als to be Gen	erated from	the Contract			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastics (see note3)	Chemical Waste	Others, e.g. general refuse
	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)
	348000	1000	108000	0	239000	0	0	0	0	0	240

11 Status of Permits and Licenses

Table 11.1 is the updated status of environmental related permits/ license obtained for the construction activities

Table 11.1 Status of	Permits and Licenses	Obtained			
Description	License / Permit No.#	Date of Issue	Site	Date of expiry	Status
EP	EP-428/2011	4 November 2011			Superseded by VEP
EP	EP-428/2011/A	1 June 2012			Valid
FEP	FEP-01/428/2011/A	9 July 2012	Various Lots in DD227 &		Surrendered on 28 Nov 2012
FEP	FEP-02/428/2011/A	26 November 2012	DD227 & DD229, Fai Po Tsai, Sai		Valid
Discharge License	WT00014162-2012	18 October 2012	Kung		Valid
Registration as a Chemical Waste Producer	349704	27 Sep 2012		N/A	Valid
Waste Disposal	N/A	N/A	N/A		N/A
Notification Pursuant to Section 3(1) of The Air Pollution Control (Construction Dust) Regulation	349519	4 Sep 2012	Various Lots in DD227 & DD229, Tai Po Tsai, Sai Kung		Valid

12 Compliant Log

There was no formal complaint received during the reporting period. Therefore, no follow up actions for the environmental complaint is required.

Table 12.1 Summ	nary of Forma	l Complaints r	eceived	
	Noise	Water	Air	Others
Year 2012	0	0	0	0
January 2013	0	0	0	0
Total	0	0	0	0

13 Site Environmental Audits

13.1 Site Inspection

Site inspections were undertaken weekly to inspect the construction activities in active site areas to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented.

Within this reporting period, site inspections were conducted on 2nd, 10th, 19th, 23rd and 31st of January 2013. A detailed checklist of each site inspection together with comments and relevant photos have been filed and kept. The findings from inspection were summarized in Table 13.1.

Table 13.1 Summary results of site inspections findings

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
12, 19 & 24 Dec 12 2 Jan 13	Reminder	breaking activities were observed.	Contractor was reminded that noise barriers should be provided adequately and located properly.	Boulder breaking activities have been completed.	10 Jan 13	N/A
24 Dec 12	Observation	tarpaulin sheets were	Contractor was reminded to replace the tarpaulin sheets and covered	Damaged tarpaulin sheets were replaced by contractor.	2 Jan 13	N/A

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
			properly.			
			~		.	
		Open	Contractor was	Open stockpile	23 Jan 13	N/A
2, 10 &		stockpile was	reminded to provide	was covered		
19 Jan 13	Observation	not covered	the tarpaulin sheets	with tarpaulin		
17 Jan 13		with tarpaulin	for dust suppression.	sheets.		
		sheets.				
		Haul road was	Contractor was	To be followed	N/A	N/A
		dry and dusty.	reminded that	during next		
23 & 31	Observation		routine water	reporting		
Jan 13	Observation		spraying should be	period.		
			implemented for			
			dust suppression.			

13.2 Compliance with Legal and Contractual Requirement

There was no non-compliance recorded for the month of January 2013.

13.3 Implementation Status and Effectiveness of Mitigation Measures

Contractor has implemented mitigation measures to address those problems as advised by ET. Some of the measures taken by the contractor were considered as effective to minimize negative impact to the environment. Ongoing investigation will be carried out to observe performance and effectiveness of those measures. Outstanding environmental items will be inspected in next month.

As there were some ongoing follow up practices, contractor was reminded to regularly review and rectify the discrepancy once found and maintain good site condition. The contractor implemented various environmental mitigation measures as recommended in the Environmental Permit.

14 Future Key Issues and Recommendations

According to the forecasted site activities, key environmental issues to be considered should at least include the following items:

- Site water control and relevant protective measures
- Dust suppression
- Noise control
- Control and disposal for construction wastes generated from works

Tree protective measures for tree planting and transplanting should be implemented such as tree protection zone and regular watering.

Conclusions

Tree retain, transplant and felling, stream course diversion works, soil nail works and ELS works were major site activities being carried out within this reporting period.

Regular site meetings and inspection audits led by the seniors for discussing site environmental matters were held among Contractor and the ET on weekly basis. Also monthly site meeting and inspection audits with the above parties and IEC were carried out on 23rd Jan 2013.

No exceedance was recorded for Noise and Air during the reporting period.

Impact monitoring for water quality was conducted. Total 3 numbers of Limit Level exceedance were recorded in this reporting period. For the non-compliance events, ET has arranged site investigation for the abnormal incidents on the same day and found that no construction activities had been carried out at the river bed and could disturb the water quality. It was believed that the exceedances of water quality were not affected by construction activities. According to the site investigation, we believed that the exceedance records at W2 were affected by other construction activities of other project site. Therefore, the exceedances records at W2 were unlikely to be related to this project.

Also, there was no notification of summons, formal prosecution or complaints being recorded during the reporting period.

ET has reminded the contractor to provide environmental pollution control measures wherever necessary, and to keep a good environmental management at site practice.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the PS and Environmental Permit requirements.

Appendix A

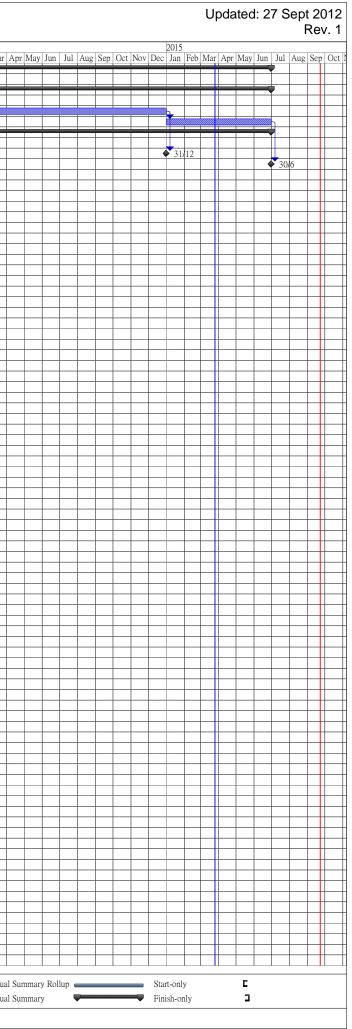
Construction Master Programme and Site Location Plan



Your complimentary use period has ended. Thank you for using

Outline Works Programme

	BD Comment	30 days	Tue 16/10/12		2 4/11	
	BD Amendment Submission for ELS Works (Stage 1) BD Amendment Submission	30 days 0 days	Mon 15/10/12 Mon 15/10/12 Mon 15/10/12	Wed 14/11/12	2	
Γ	Design Drawing Available for Soil Nail, Shetting Piling, Excavation and Lateral Support (By Consultant) Soil Nail, Sheet Piling, Excavation & Laternal Support	0 days 157 days	Mon 1/10/12 Mon 15/10/12			
	Design and Pocurement Stage Design and Submission	172 days 172 days	Mon 1/10/12 Mon 1/10/12	Thu 21/3/1	3	
5	5) Soil Nail, Sheet Piling, Excavation and Shoring, Foundation Design and Popurament Stage	505 days	Mon 1/10/12 Mon 1/10/12			
	BA14 Submission and Aknowledgement	30 days	Tue 11/6/13	Wed 10/7/1	3	
	Manhole and Pipe Installation	60 days	Fri 12/4/13	Mon 10/6/1	3	
-	Application of Excavation Permit and Approval Sheet Piling and Laterial Support	90 days 30 days	Thu 13/12/12 Wed 13/3/13			
	Zone C2 (outside site boundary)	180 days	Thu 13/12/12	Mon 10/6/1	3	
-	Zone C1 (within site boundary) Excavation, Construction Works and Soil Backfill	100 days 100 days	Thu 13/12/12 Thu 13/12/12			
	Zone C	180 days	Thu 13/12/12	Mon 10/6/1	3	
	Zone B4 Zone B5	40 days	Wed 13/3/13	Sun 21/4/1		
	Zone B3 Zone B4	85 days 30 days	Fri 30/11/12 Sat 23/2/13			
	Zone B2	50 days	Thu 11/10/12	Thu 29/11/1	2	
	Zone B Zone B1	203 days 50 days	Mon 1/10/12 Mon 1/10/12			
	Zone A5	30 days	Wed 30/1/13	Thu 28/2/1	3	
	Zone A4	40 days	Sun 20/1/13	Thu 28/2/1		
	Zone A2 Zone A3	70 days 105 days	Thu 25/10/12 Wed 14/11/12			
	Zone A1	105 days	Sat 15/9/12			
	Zone A	167 days	Sat 15/9/12	Thu 28/2/11	3	
	Zone B5 Excavation, Construction Works and Soil Backfill	30 days 299 days	Thu 29/11/12 Sat 15/9/12			
Ĺ	Zone A1 to A5, B1 to B4 (not include Area still under BD Amendment)	30 days	Tue 30/10/12			
_	BA14 Submission and Aknowledgement	60 days	Tue 30/10/12	Fri 28/12/12	2	
-	Zone B5	30 days	Tue 30/10/12			
	Zone A1 to A5, B1 to B4 (not include Area still under BD Amendment) Zone A1 to A5, B1 to B4 (Area under BD Amendment)	30 days 15 days	Sat 15/9/12 Mon 15/10/12			
	Installation Works	75 days	Sat 15/9/12 Sat 15/0/12		2	
	Sheet Piling Works	105 days	Sat 15/9/12	Fri 28/12/12	2	
	Survey Re-design of Drainage at Zone C	14 days 15 days	Mon 15/10/12 Mon 29/10/12			
	Subletting Survey	21 days 14 days	Mon 24/9/12 Mon 15/10/12			
	Additional Drainage Verification	50 days	Mon 24/9/12			
	Preparation Works and Monitoring Point Set-up	14 days	Sat 1/9/12	Fri 14/9/1	2	
	BD Approval Stream Course Diversion Works	0 days 313 days	Sat 1/9/12		3	
	BD Comment BD Approval	30 days 0 days	Tue 13/11/12 Wed 12/12/12			
	Submission of BD Amendment	0 days	Mon 12/11/12		2 • 12/11	
	Zone C	30 days	Mon 12/11/12	Wed 12/12/12		
	BD Approval	0 days	Tue 9/10/12			
-	Submission of BD Amendment BD Comment	0 days 30 days	Mon 10/9/12 Mon 10/9/12		2	
	Zone A & B Submission of BD Amendment	30 days	Mon 10/9/12 Mon 10/9/12			
	BD Submission	94 days	Mon 10/9/12	Wed 12/12/12	2	
4	4) Site Formation and Foundation Works	313 days	Sat 1/9/12		3	
-		120 days	wion 1/10/12	IVION 28/1/1.		
ŀ	Tree Felling Tree Transplant	21 days 120 days	Mon 5/11/12 Mon 1/10/12			
	Submission of Tree Felling Plan Amendment to DLO and Approval	30 days	Sun 16/9/12	Mon 15/10/1	2	
	Tree Felling outside Site Boundary	71 days	Sun 16/9/12	Sun 25/11/12	2	
ŀ	Trees in Zone D	5 days	Wed 24/10/12 Wed 31/10/12			
	Trees in Zone C Trees in Zone D	10 days 7 days	Sun 14/10/12 Wed 24/10/12			
	Trees in Zone B	20 days	Mon 24/9/12	Sat 13/10/12	2	
t	Trees in Zone A and C which affect the Commencement of Stream Course Diversion Works	7 days	Mon 17/9/12	Sun 23/9/1	2	
	Protection and Fencing for Retain and Transplant Trees Tree Felling within Site Boundary	21 days 49 days	Mon 10/9/12 Mon 17/9/12			
	Finalization of Tree Felling Plan and Approval from Government Depart	0 days	Sun 9/9/12	Sun 9/9/1	2 • 99	
	Submission of Method Statement for Tree Felling and Transplant and Approval	21 days	Sat 1/9/12 Sat 1/9/12			
2	2) Pre-construction Works Tree Felling / Transplant	150 days 150 days	Sat 1/9/12 Sat 1/9/12			
~			0.1041			
	Supersucture (Obtain CC)	0 days	Tue 30/6/15			
	Site Formation, Stream Course Diversion and Foundation Superstructure (Obtain OP)	0 days 0 days	Tue 15/10/13 Wed 31/12/14			◆ 15/10
	Contract Completion Date	623 days	Tue 15/10/13			15/10
	Superstructure (Obtain CC)	181 days	Thu 1/1/15	Tue 30/6/1	5	
	Superstructure (Obtain OP)	410 days 442 days	Wed 16/10/13			
	Site Formation, Stream Course Diversion and Foundation	1033 days 410 days	Sat 1/9/12 Sat 1/9/12		5	
	ed Pages and Expanded Features	0 days	Sat 1/9/12	Sat 1/9/1	2	
6	re to upgrade to	1033 days	Sat 1/9/12	Tue 30/6/1	Aug Sep Oct Nov Dec Jan Feb Mar Apr M	nuy sui sui riug sep eet riet bee .





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nite	ed Pages and Expanded Features	30 days Thu 20/12/12 Fri 18/1/13	
	BD Amendment Submission for Raft Footing	0 days Fri 18/1/13 Fri 18/1/13	
	BD Amendment Submission	0 days Fri 14/12/12 Fri 14/12/12	
	BD Comment	60 days Sat 15/12/12 Tue 12/2/13	
-	BD Approval Consent Application	0 days Tue 12/2/13 1 2/2 1 <th1< th=""> <th1< th=""> <th1< th=""></th1<></th1<></th1<>	
	Consent Obtained	0 days Thu 21/3/13 Thu 21/3/13 21	
	Socket H-Pile & Pile Cap		
	BD Amendment Submission	97 days Fri 14/12/12 Thu 21/3/13 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
-	BD Comment BD Approval	60 days Sat 15/12/12 Tue 12/2/13 0 days Tue 12/2/13 Tue 12/2/13	
-	Consent Application	0 days Tue 12/213 0 days Tue 12/213 0 days 0	
	Consent Obtained	0 days Thu 21/3/13 Thu 21/3/13	
	Procurement	135 days Mon 1/10/12 Tue 12/2/13	
-	Tender Preparation and Subletting for Soil Nail and Excavation Tender Preparation and Subletting for Sheet Piling and Excavation and Shoring, Socket H-Pile Works	60 days Mon 1/10/12 Thu 29/11/12 Image: Comparison of the compar	
+	Tender Preparation and Subjecting for Formwork, Reinforcement Fixing and Concreting Works	60 days Sati 51/2/12 Tue 12/2/13	
	Tender Preparation and Subletting for Socket H-Pile Works	60 days Sat 15/12/12 Tue 12/2/13	
	Tender Preparation and Subletting for Formwork, Reinforcement Fixing and Concreting Works	60 days Thu 15/11/12 Sun 13/1/13	
-	Preparation Works and Mobilization Preparation Works and Mobilization for Soil Nail & Excavation	90 days Fri 30/11/12 Wed 27/2/13 Image: Comparison of the second sec	
-	Preparation Works and Mobilization for Sheet Piling and ELS Works	15 days Sat 15/12/12 Sat 29/12/12	╷╴┼╶┼╶┼╶┼╴┼╴┽╴╫╶┼╶┼╶┼╴┼
	Preparation Works and Mobilization for Socket H-Pile	15 days Wed 13/2/13 Wed 27/2/13	
	Construction Works	430 days Sat 15/12/12 Mon 17/2/14	
	Zone A (Tower 7 to Tower 19) Zone A1	351 days Sat 15/12/12 Sat 30/11/13 195 days Sat 15/12/12 Thu 27/6/13	
-	Zone A1 Excavation and Soil Nailing	195 days Sat 15/12/12 Sat 13/4/13	┍─┼┼┼┼┼┼╫┼┼┼┼
	Plate Load Test for Soil Stratum and Report Submission to BD	7 days Sun 14/4/13 Sat 20/4/13	
	Apply Consent for Foundation	28 days Sun 21/4/13 Sat 18/5/13	
	Construction of Raft Footing Zone A2	40 days Sun 19/5/13 Thu 27/6/13 Image: Constraint of the second seco	
	Zone AZ Excavation and Soil Nailing	155 days Fri 1/3/13 Fri 2/8/13 90 days Fri 1/3/13 Wed 29/5/13	╷─┼┼┼┼┼┼┼╫┼┼┼┼
	Plate Load Test for Soil Stratum and Report Submission to BD	7 days Thu 30/5/13 Wed 5/6/13	
	Apply Consent for Foundation	28 days Thu 6/6/13 Wed 3/7/13	
	Construction of Raft Footing	30 days Thu 4/7/13 Fri 2/8/13	
	Zone A3 Excavation and Soil Nailing	155 days Mon 22/4/13 Mon 23/9/13 Image: Comparison of the compar	
	Plate Load Test for Soil Stratum and Report Submission to BD	7 days Sun 21/7/13 Sat 20/7/13	
	Apply Consent for Foundation	28 days Sun 28/7/13 Sat 24/8/13	
	Construction of Raft Footing	30 days Sun 25/8/13 Mon 23/9/13	
	Zone A4 Pre-drilling, Socket H-Pile Installation	254 days Fri 22/3/13 Sat 30/11/13	
	Loading Test	14 days Thu 20/6/13 Wed 3/7/13	┍─┼┼┼┼┼┼╫┼┼┼┼
	Submission of BA14 and Consent Application for Pile Cap Construction	28 days Thu 4/7/13 Wed 31/7/13 Image: Control of the	
	Open Cut Excavation	30 days Thu 4/7/13 Fri 2/8/13	
	Part of Pile Cap Construction Soil Nail & Excavation	30 days Sat 3/8/13 Sun 1/9/13 Composition Composite 100 minition Composition	┍─┼┼┼┼┼┼╫┼┼┼┼
	Soil Nail & Excavation Sheet Piling	30 days Thu 20/6/13 Fri 19/7/13	┍─┼┼┼┼┼┼╫┼┼┼┼
	ELS	60 days Mon 2/9/13 Thu 31/10/13	
	Remaining Pile Cap and Basement Slab Construction	30 days Fri 1/11/13 Sat 30/11/13	
	Zone B B (Tower 20 to Tower 27)	415 days Sun 30/12/12 Mon 17/2/14	
	Zone B1 Open Cut Excavation & Portion of Footing Construction	180 days Sun 30/12/12 Thu 27/6/13 100 days Sun 30/12/12 Mon 8/4/13	
	Plate Load Test for Soil Stratum and Report Submission to BD	7 days Tue 9/4/13 Mon 15/4/13	
	Apply Consent for Foundation	28 days Tue 16/4/13 Mon 13/5/13	
	Construction of Raft Footing	45 days Tue 14/5/13 Thu 27/6/13	
	Zone B2 Open Cut Excavation	110 days Mon 25/3/13 Fri 12/7/13 Image: Constraint of the second sec	
	Plate Load Test for Soil Stratum and Report Submission to BD	7 days Thu 9/5/13 Wed 8/5/13	╷─┼┼┼┼┼┼┼╫┼┼┼┼
	Apply Consent for Foundation	28 days Thu 16/5/13 Wed 12/6/13	
	Construction of Raft Footing	30 days Thu 13/6/13 Fri 12/7/13	
	Zone B3 Sheet Piling, Excavation and Lateral Support	125 days Tue 9/4/13 Sun 11/8/13 Control of the second	
	Plate Load Test for Soil Stratum and Report Submission to BD	7 days Sat 8/6/13 Fri 14/6/13	╷╴┼╶┼╶┼╶┼╴┼╴┽╴╫╶┼╶┼╶┼╴┼
	Apply Consent for Foundation	28 days Sat 15/6/13 Fri 12/7/13	
	Construction of Raft Footing	30 days Sat 13/7/13 Sun 11/8/13	
	Zone B4 Short Diling, Evaquation and Lateral Support	125 days Sat 8/6/13 Thu 10/10/13 Image: Constraint of the second	
	Sheet Piling, Excavation and Lateral Support Plate Load Test for Soil Stratum and Report Submission to BD	60 days Sat 8/6/13 Tue 6/8/13 Common 7 days Wed 7/8/13 Tue 13/8/13 Image: Common Address of the second seco	
	Apply Consent for Foundation	28 days Wed 1/6/15 Tue 10/9/13	
	Construction of Raft Footing	30 days Wed 11/9/13 Thu 10/10/13	
	Zone B5 Shar Piling Europeation and Lateral Summert	125 days Wed 16/10/13 Mon 17/2/14	
	Sheet Piling, Excavation and Lateral Support Plate Load Test for Soil Stratum and Report Submission to BD	60 days Wed 16/10/13 Sat 14/12/13 Image: Constraint of the set of the	
	Apply Consent for Foundation	28 days Sun 22/12/13 Sat 18/1/14	
	Construction of Raft Footing	30 days Sun 19/1/14 Mon 17/2/14 Source State Sta	
	Zone C (Tower 1 to Tower 6)	272 days Fri 22/3/13 Wed 18/12/13	
	Zone C1 Pre-drilling, Socket H-Pile Installation and Excavation	147 days Fri 22/3/13 Thu 15/8/13 75 days Fri 22/3/13 Tue 4/6/13	
	Loading Test	14 days Wed 5/6/13 Tue 18/6/13	
	Submission of BA14 and Consent Application for Pile Cap Construction	28 days Wed 19/6/13 Tue 16/7/13	
	Pile Cap and Basement Slab Construction Zone C2	30 days Wed 17/7/13 Thu 15/8/13	
		147 days Fri 22/3/13 Thu 15/8/13	
_	Task Summary	✓ Inactive Task ✓ Inactive Milestone ◇ Manual Task ✓ Manual Summary	y Rollup Start-only C
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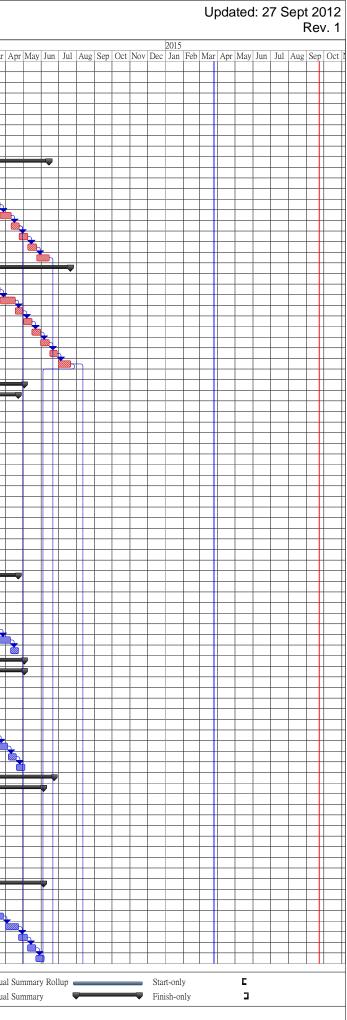
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ed Pages and Expanded Features	75 days Fri 22/3/13 Tue 4/6/13 Image: Comparison of the field	
Pile Cap and Basement Slab Construction	28 days Wed 19/6/13 Tue 16/7/13 Image: Comparison of the compari	
Open Cut Excavation	60 days Fri 22/3/13 Mon 20/5/13	
Plate Load Test for Soil Stratum and Report Submission to BD Apply Consent for Foundation	7 days Tue 21/5/13 Mon 27/5/13 Image: Comparison of the comparis	
Pile Cap and Basement Slab Construction	28 days Tue 28/5/13 Mon 24/6/13 Image: Constraint of the constra	
Zone C3 Pre-drilling, Socket H-Pile Installation and Excavation	147 days Wed 5/6/13 Tue 29/10/13 Control	
Loading Test	14 days Mon 19/8/13 Sun 19/13	
Submission of BA14 and Consent Application for Pile Cap Construction	28 days Mon 2/9/13 Sun 29/9/13	
Pile Cap and Basement Slab Construction Zone C4	30 days Mon 30/9/13 Tue 29/10/13	
Pre-drilling, Socket H-Pile Installation and Excavation	75 days Wed 5/6/13 Sun 18/8/13	
Loading Test Submission of BA14 and Consent Application for Pile Cap Construction	14 days Mon 19/8/13 Sun 1/9/13 Sun 29/9/13 Sun 29/9/13 <t< td=""><td></td></t<>	
Pile Cap and Basement Slab Construction	30 days Mon 30/9/13 Tue 29/10/13	
Open Cut Excavation Plate Load Test for Soil Stratum and Report Submission to BD	60 days Wed 5/6/13 Sat 3/8/13 Control Control <thcontrol< th=""> Control</thcontrol<>	
Apply Consent for Foundation	28 days Sun 11/8/13 Sat 7/9/13	
Pile Cap and Basement Slab Construction Zone C5	30 days Sun 8/9/13 Mon 7/10/13	
Sheet Piling, Excavation and Lateral Support	125 days Fri 16/8/13 Wed 18/12/13 Comparison Comparison <thcomparison< th=""> Comparison Compari</thcomparison<>	
Plate Load Test for Soil Stratum and Report Submission to BD	7 days Tue 15/10/13 Mon 21/10/13	
Apply Consent for Foundation Construction of Raft Footing	28 days Tue 22/10/13 Mon 18/11/13 Image: Constraint of the second se	
Superstructure (R.C. Works) BD Submission	676 days Fri 14/9/12 Mon 21/7/14 326 days Fri 14/9/12 Mon 5/8/13	
GBP Submission	326 days Fri 14/9/12 Mon 5/8/13	
1st BD Submission for GBP BD Comment	0 days Fri 14/9/12 Fri 14/9/12 ◆14/9 60 days Fri 14/9/12 Mon 12/11/12	
Withdraw and Re-submit for GBP	0 days Sat 1/12/12 Sat 1/12/12 Sat 1/12/12	
BD Comment Approval of GBP	60 days Sun 2/12/12 Wed 30/1/13	
Cosent Application	30 days Wed 20/2/13 Thu 21/3/13	
Consent Obtained	0 days Thu 21/3/13 Thu 21/3/13 C	
BD Major Amendment BD Comment	0 days Sun 31/3/13 Sun 31/3/13	
BD Approval	0 days Thu 30/5/13 Thu 30/5/13	
Cosent Application Consent Obtained	30 days Sun 7/7/13 Mon 5/8/13	
Structural Drawing Submission	228 days Thu 20/12/12 Mon 5/8/13	
BD Submission	0 days Thu 20/12/12 Thu 20/12/12 Thu 20/12/12 Thu 20/12/12	
BD Comment BD Approval	60 days Fri 21/12/12 Mon 18/2/13 0 days Mon 18/2/13 Mon 18/2/13 ↓ 18/2	
Consent Application	30 days Wed $20/2/13$ Thu $21/3/13$	
Consent Obtained BD Major Amendment	0 days Thu 21/3/13 Thu 21/3/13	
BD Comment	60 days Thu 2/5/13 Sun 30/6/13	
BD Approval	0 days Sun 30/6/13 Sun 30/6/13 Sun 30/6/13 30 days Sun 7/7/13 Mon 5/8/13 Sun 30/6/13 0 days Sun 7/7/13 Mon 5/8/13 Sun 30/6/13	
Cosent Application Consent Obtained	30 days Sun 7/7/13 Mon 5/8/13	
Precast Façade Submission	165 days Thu 20/12/12 Mon 3/6/13	
BD Submission BD Comment	0 days Thu 20/12/12 Thu 20/12/12 20/12 1 <th1< th=""> 1 <th1< th=""> <th< td=""><td></td></th<></th1<></th1<>	
BD Approval	0 days Mon 18/2/13 Mon 18/2/13	
Consent Application Consent Obtained	30 days Wed 20/2/13 Thu 21/3/13 0 days Thu 21/3/13	
BD Amendment	0 days Sat 4/5/13 Sat 4/5/13 Sat 4/5/13	
BD Comment	30 days Sun 5/5/13 Mon 3/6/13	
BD Approval Tender Preparation and Subletting	0 days Mon 3/6/13 Mon 3/6/13 114 days Mon 4/2/13 Tue 28/5/13	
Tender Preparation and Subletting for Precast Façade and Window (if any)	60 days Mon 4/2/13 Thu 4/4/13	
Tender Preparation and Subletting for Structural Works Precast Façade	60 days Sat 30/3/13 Tue 28/5/13 146 days Fri 5/4/13 Wed 28/8/13	
Shop Drawing Submission and Approval	28 days Fri 5/4/13 Thu 2/5/13	
Mould Fabrication and Trail Panel Construction (if necessary) Mass Production of Mould and Construction of 1st Batch of Precast Façade	28 days Fri 3/5/13 Thu 30/5/13 Image: Comparison of the second secon	
Mass Production of Mould and Construction of 1st Batch of Precast Paçade Mobilization and Preparation Works	30 days Wed 29/5/13 Thu 27/6/13	
Construction Works	389 days Fri 28/6/13 Mon 21/7/14	
Zone A (Tower 7 to Tower 19) Type 6 Tower	510 days FrI 20/0/15 Molt 21/1/14	
Zone A1 (Tower 11, 12 & 13)	166 days Fri 28/6/13 Wed 15/1/14	
Basement to G/F Slab (including U/G Drainage & Utilities Installaion Works) G/F to 1/F Slab	52 days Fri 28/6/13 Wed 28/8/13 Comment	
1/F to 2/F Slab	18 days Thu 19/9/13 Fri 11/10/13	
2/F to 3/F Slab 3/F to 4/F Slab	12 days Sat 12/10/13 Sat 26/10/13 Image: Control of the control of	
4/F to 5/F Slab	12 days Mon 11/11/13 Sat 23/11/13	
5/F to 6/F Slab 6/F to R/F Slab	12 days Mon 25/11/13 Sat 7/12/13 Image: Control of the state	
R/F	18 days Mon 23/12/13 Wed 15/1/14	
Zone A2 (Tower 7, 8, 9 & 10)	166 days Sat 3/8/13 Fri 28/2/14	
Task	Summary Inactive Task ? Inactive Milestone \diamond Manual Task Manual Summa	ry Rollup Start-only C
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Ζι	Type 3 Tower Zone B1 (Tower 21) Basement to LG/F Slab LG/F to G/F Slab (including U/G Drainage & Utilities Installaion Works) G/F to 1/F Slab 1/F to 2/F Slab	237 days 150 days 26 days 52 days	Fri 28/6/13 Fri 28/6/13	Sat 3/5/14			. 11 1 1
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	Zone B1 (Tower 21) Basement to LG/F Slab LG/F to G/F Slab (including U/G Drainage & Utilities Installaion Works) G/F to I/F Slab 1/F to 2/F Slab	150 days 26 days 52 days	Fri 28/6/13	Tue 22/4/14			
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	G/F to 1/F Slab 1/F to 2/F Slab		Tue 30/7/13	Sat 28/9/13			.╢─┨─╢──
	1/F to 2/F Slab	18 days	Mon 30/9/13	Tue 22/10/13			
		18 days	Wed 23/10/13	Tue 12/11/13			
	2/F to 3/F Slab	12 days	Wed 13/11/13	Tue 26/11/13			
	3/F to R/F Slab	12 days	Wed 27/11/13	Tue 10/12/13			
	R/F	12 days	Wed 11/12/13	Tue 24/12/13			
	Zone B2 (Tower 20)	150 days	Sat 13/7/13	Fri 10/1/14			
	Basement to LG/F Slab	26 days	Sat 13/7/13	Mon 12/8/13			
	LG/F to G/F Slab (including U/G Drainage & Utilities Installaion Works)	52 days	Tue 13/8/13	Tue 15/10/13			
	G/F to 1/F Slab	18 days	Wed 16/10/13	Tue 5/11/13			
	1/F to 2/F Slab	18 days	Wed 6/11/13	Tue 26/11/13			
	2/F to 3/F Slab	12 days	Wed 27/11/13	Tue 10/12/13			
	3/F to R/F Slab	12 days	Wed 11/12/13	Tue 24/12/13			
	R/F	12 days	Fri 27/12/13	Fri 10/1/14			
	Zone B4 (Tower 22)	150 days	Fri 11/10/13	Tue 22/4/14			
	Basement to LG/F Slab	26 days	Fri 11/10/13	Mon 11/11/13			
	LG/F to G/F Slab (including U/G Drainage & Utilities Installaion Works)	52 days	Tue 12/11/13	Tue 14/1/14			
	G/F to 1/F Slab	18 days	Wed 15/1/14	Tue 4/2/14			
	1/F to 2/F Slab	18 days	Wed 5/2/14	Thu 6/3/14			+
	2/F to 3/F Slab	12 days	Fri 7/3/14	Thu 20/3/14		┼─┼─┼─┼─╫╫╢─┼──	+
	3/F to R/F Slab	12 days	Fri 21/3/14	Tue 8/4/14			
	R/F	12 days	Wed 9/4/14	Tue 22/4/14			
	Type 7 Tower	209 days	Mon 12/8/13	Sat 3/5/14			
	Zone B3 (Tower 23, 24, 25, 26 & 27)	209 days	Mon 12/8/13	Sat 3/5/14			
	Basement to Clubhouse Slab	26 days	Mon 12/8/13	Tue 10/9/13			
	Basement to G/F Slab (including U/G Drainage & Utilities Installaion Works)	52 days	Wed 11/9/13	Wed 13/11/13		┤─┼┼┼┼╢╨╨┉┉┉	┦
	G/F to 1/F Slab	18 days	Fri 27/12/13	Fri 17/1/14		┼─┼─┼─┼─╫┼╢─┼──	
	1/F to 2/F Slab 2/F to 3/F Slab	18 days	Sat 18/1/14 Tue 18/2/14	Mon 17/2/14 Mon 3/3/14		┼─┼─┼─╫┼╢─┼──	
	3/F to 3/F Slab	12 days 12 days	Tue 18/2/14 Tue 4/3/14	Mon 3/3/14 Mon 17/3/14			+++++
	3/F to 5/F Slab	12 days 12 days	Tue 18/3/14	Thu 3/4/14			
	5/F to R/F Slab	12 days	Sat 5/4/14	Fri 18/4/14			
	R/F	12 days	Sat 3/4/14 Sat 19/4/14	Sat 3/5/14		┼┼┼┼┼╫╫┼─	+++++++++++++++++++++++++++++++++++++++
7	ione C (Tower 1 to Tower 6)	246 days	Fri 16/8/13	Mon 23/6/14		┤─ ┤╶┤╶┤╶╢╛╧╧╼╧	
니	Type 1 Tower	240 days 232 days	Fri 16/8/13	Thu 5/6/14			
	Zone CI (Tower I)	142 days	Fri 16/8/13	Tue 4/2/14			
	Cap / Basement to LG/F (including U/G Drainage & Utilities Installaion Works)	52 days	Fri 16/8/13	Fri 18/10/13			
	Cap' to G/F Slab	18 days	Sat 19/10/13	Fri 8/11/13			
	G/F to 1/F Slab	18 days	Sat 9/11/13	Fri 29/11/13			
	1/F to 2/F Slab	18 days	Sat 30/11/13	Fri 20/12/13			
	2/F to 3/F Slab	12 days	Sat 21/12/13	Tue 7/1/14			
	3/F to R/F Slab	12 days	Wed 8/1/14	Tue 21/1/14			
	R/F	12 days	Wed 22/1/14	Tue 4/2/14			
	Zone C3 (Tower 2)	171 days	Wed 30/10/13	Thu 5/6/14			v∐= =
	Cap / Basement to LG/F (including U/G Drainage & Utilities Installaion Works)	52 days	Wed 30/10/13	Tue 31/12/13			
		18 days	Wed 5/2/14	Thu 6/3/14			
	LG/F to G/F Slab	18 days	Fri 7/3/14	Thu 27/3/14			
	LG/F to G/F Slab G/F to 1/F Slab	18 days	Tue 1/4/14	Tue 22/4/14			
	LG/F to G/F Slab	12 days	Wed 23/4/14	Wed 7/5/14			
	LG/F to G/F Slab G/F to 1/F Slab 1/F to 2/F Slab 2/F to 3/F Slab		Thu 8/5/14	Thu 22/5/14			
	LG/F to G/F Slab G/F to 1/F Slab 1/F to 2/F Slab 2/F to 3/F Slab 3/F to R/F Slab	12 days	D : 00 / 5 / 1				
	LG/F to G/F Slab G/F to 1/F Slab 1/F to 2/F Slab 2/F to 3/F Slab		Fri 23/5/14	Thu 5/6/14			
	LG/F to G/F Slab G/F to 1/F Slab 1/F to 2/F Slab 2/F to 3/F Slab 3/F to R/F Slab	12 days	Fn 23/5/14				
Seng	LG/F to G/F Slab G/F to 1/F Slab 1/F to 2/F Slab 2/F to 3/F Slab 3/F to R/F Slab R/F	12 days 12 days		Thu 5/6/14	ve Milestone 🗇	Manual Task	
-	LG/F to G/F Slab G/F to 1/F Slab 1/F to 2/F Slab 2/F to 3/F Slab 3/F to R/F Slab	12 days	C 🔍	Thu 5/6/14 Inactiv	ive Milestone \diamond	Manual Task	

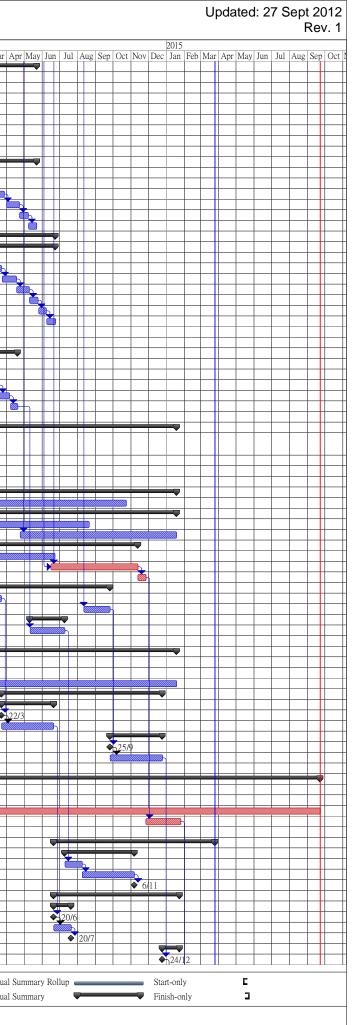




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Here to upgrade to				Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov
	220 days	Fri 16/8/13	Thu 22/5/14	
ted Pages and Expanded Features	142 days	Fri 16/8/13	Tue 4/2/14	
stallaion Works)	52 days	Fri 16/8/13	Fri 18/10/13	
LG/F to G/F Slab	18 days	Sat 19/10/13	Fri 8/11/13	
G/F to 1/F Slab	18 days	Sat 9/11/13	Fri 29/11/13	
1/F to 2/F Slab	18 days	Sat 30/11/13	Fri 20/12/13	3
2/F to 3/F Slab	12 days	Sat 21/12/13	Tue 7/1/14	4
3/F to R/F Slab	12 days	Wed 8/1/14	Tue 21/1/14	4
R/F	12 days	Wed 22/1/14	Tue 4/2/14	
Zone C4 (Tower 3)	159 days	Wed 30/10/13	Thu 22/5/14	
Cap / Basement to LG/F (including U/G Drainage & Utilities Installaion Works)	52 days	Wed 30/10/13	Tue 31/12/13	
LG/F to G/F Slab	18 days	Wed 5/2/14	Thu 6/3/14	
GF to UF Stab	18 days	Fri 7/3/14	Thu 27/3/14	
1/F to 2/F Slab	18 days	Tue 1/4/14	Tue 22/4/14	
2/F to R/F Slab	12 days	Wed 23/4/14		
R/F	12 days	Thu 8/5/14	Thu 22/5/14	
Type 4 Tower	187 days	Thu 19/12/13	Mon 23/6/14	
Zone C5 (Tower 5 & 6)	142 days	Thu 19/12/13	Mon 23/6/14	4
Cap / Basement to LG/F (including U/G Drainage & Utilities Installaion Works)	52 days	Thu 19/12/13	Sat 1/3/14	4
LG/F to G/F Slab	18 days	Mon 3/3/14	Sat 22/3/14	
G/F to 1/F Slab	18 days	Mon 24/3/14	Thu 17/4/14	
1/F to 2/F Slab	18 days	Fri 18/4/14		
2/F to 3/F Slab	12 days	Sat 10/5/14	Sat 24/5/14	
3/F to R/F Slab	12 days	Mon 26/5/14	Sat 7/6/14	
R/F	12 days	Mon 9/6/14	Mon 23/6/14	4
Transformer Room at Northern Area	60 days	Sat 9/11/13	Tue 7/1/14	
G/F to R/F Slab	60 days	Sat 9/11/13	Tue 7/1/14	
Retai	95 days	Wed 15/1/14	Sat 19/4/14	
G/F to 1/F Slab		Wed 15/1/14 Wed 15/1/14		
	18 days		Sat 1/2/14	
1/F to 2/F Slab	18 days	Mon 3/2/14	Tue 4/3/14	
2/F to 3/F Slab	12 days	Wed 5/3/14	Tue 18/3/14	
3/F to R/F Slab	12 days	Wed 19/3/14	Sat 5/4/14	4
R/F	12 days	Mon 7/4/14	Sat 19/4/14	
7) Finishing Works	720 days	Tue 29/1/13	Sun 18/1/15	5
Tender Preparation and Subletting for Specialist Works Sub-contractors (In-situ Window & Door, Metal & Glass Balustrade, Glass & Curtain Wall, etc)	60 days	Tue 29/1/13	Fri 29/3/13	
Co-ordination Works, Shop Drawing Submission and BD Submission (affect Structure Works)	90 days	Sat 30/3/13	Thu 27/6/13	3
Tender Preparation and Subletting for General Finishing Works Sub-contractors	60 days	Sat 1/6/13	Tue 30/7/13	3
Preparation Works, Submission & Material Delivery	30 days	Wed 31/7/13	Thu 29/8/13	
Finishing Works	507 days	Fri 30/8/13	Sun 18/1/15	
Internal Finishing Works for Basement	420 days	Fri 30/8/13	Thu 23/10/14	
Internal Finishing Works for Towers	421 days	Sun 24/11/13	Sun 18/1/15	
Internal Wall Finishing Works (1st Batch of Towers)	270 days	Sun 24/11/13	Wed 20/8/14	4
Internal Wall Finishing Works (2nd Batch of Towers)	270 days	Thu 24/4/14	Sun 18/1/15	
External Wall Finishing Works	323 days	Wed 25/12/13		
		Wed 25/12/13 Wed 25/12/13		
External Wall Finishing Works (1st Batch of Towers)	180 days		Sun 22/6/14	
External Wall Finishing Works (2nd Batch of Towers)	150 days	Mon 16/6/14	Wed 12/11/14	
Removal of Bamboo Scaffolding	14 days	Thu 13/11/14		
Finishing Works for Lift Machine Room	232 days	Thu 6/2/14	Thu 25/9/14	
1st Batch of Lift	45 days	Thu 6/2/14	Sat 22/3/14	
2nd Batch of Lift	45 days	Tue 12/8/14	Thu 25/9/14	
Finishng Works for Transformer Rooms	60 days	Sun 11/5/14		
Finishng Works for Transformer Rooms	60 days	Sun 11/5/14	Wed 9/7/14	4
8) E&M Installation	720 days	Tue 29/1/13	Sun 18/1/15	5
Tender Preparation and Subletting	60 days	Tue 29/1/13	Fri 29/3/13	3
CSD Co-ordination for U/G and Basement	90 days	Sat 30/3/13	Thu 27/6/13	3
E&M Installation Works	507 days	Fri 30/8/13	Sun 18/1/15	
Lift Installation	277 days	Sat 22/3/14	Wed 24/12/14	
Int Instantation Ist Batch of Lift				
	90 days	Sat 22/3/14	Fri 20/6/14	
Handover of Lift Shaft & Lift Machine Room	0 days	Sat 22/3/14	Sat 22/3/14	
Lift Installation	90 days	Sun 23/3/14		
2nd Batch of Lift	90 days	Thu 25/9/14	Wed 24/12/14	
Handover of Lift Shaft & Lift Machine Room	0 days	Thu 25/9/14	Thu 25/9/14	4
Lift Installation	90 days	Fri 26/9/14	Wed 24/12/14	
	, c anyo	2000000		
9) Fitting Works and External Works	905 days	Mon 1/4/13	Tue 22/9/15	
Tender Preparation and Subletting for Fitting Out Works	60 days	Mon 1/4/13		
Co-ordination Works and Submission (for design affecting finishing and E&M works)	60 days	Fri 31/5/13	Mon 29/7/13	
Fitting Works and External Walls	567 days	Wed 5/3/14	Tue 22/9/15	
Hand Landscape	60 days	Thu 27/11/14	Sun 25/1/15	5
10) Statutory Inspection	278 days	Fri 20/6/14	Wed 25/3/15	
CLP	120 days	Thu 10/7/14	Thu 6/11/14	
Handover of Transformer Rooms	30 days	Thu 10/7/14	Fri 8/8/14	
Installation of Trasnformer and Cable Laying & Lead-in	90 days	Sat 9/8/14	Thu 6/11/14	
Power Energization	0 days	Thu 6/11/14	Thu 6/11/14	4
EMSD Inspection	217 days	Fri 20/6/14	Fri 23/1/15	
Ist Batch of Lift	30 days	Fri 20/6/14	Sun 20/7/14	
Submission of Form 5	0 days	Fri 20/6/14	Fri 20/6/14	
EMBD Inspection	30 days	Sat 21/6/14		
Issuance of Form 6	0 days	Sun 20/7/14		
2nd Batch of Lift	30 days	Wed 24/12/14	Fri 23/1/15	
	0 days	Wed 24/12/14	Wed 24/12/14	4
Submission of Form 5				
Submission of Form 5				
Teelr Summer -	Inactive Task	↓	Ir	Inactive Milestone \diamond Manual Task
	Inactive Task			Inactive Milestone \diamond Manual Task Inactive Summary Duration-only



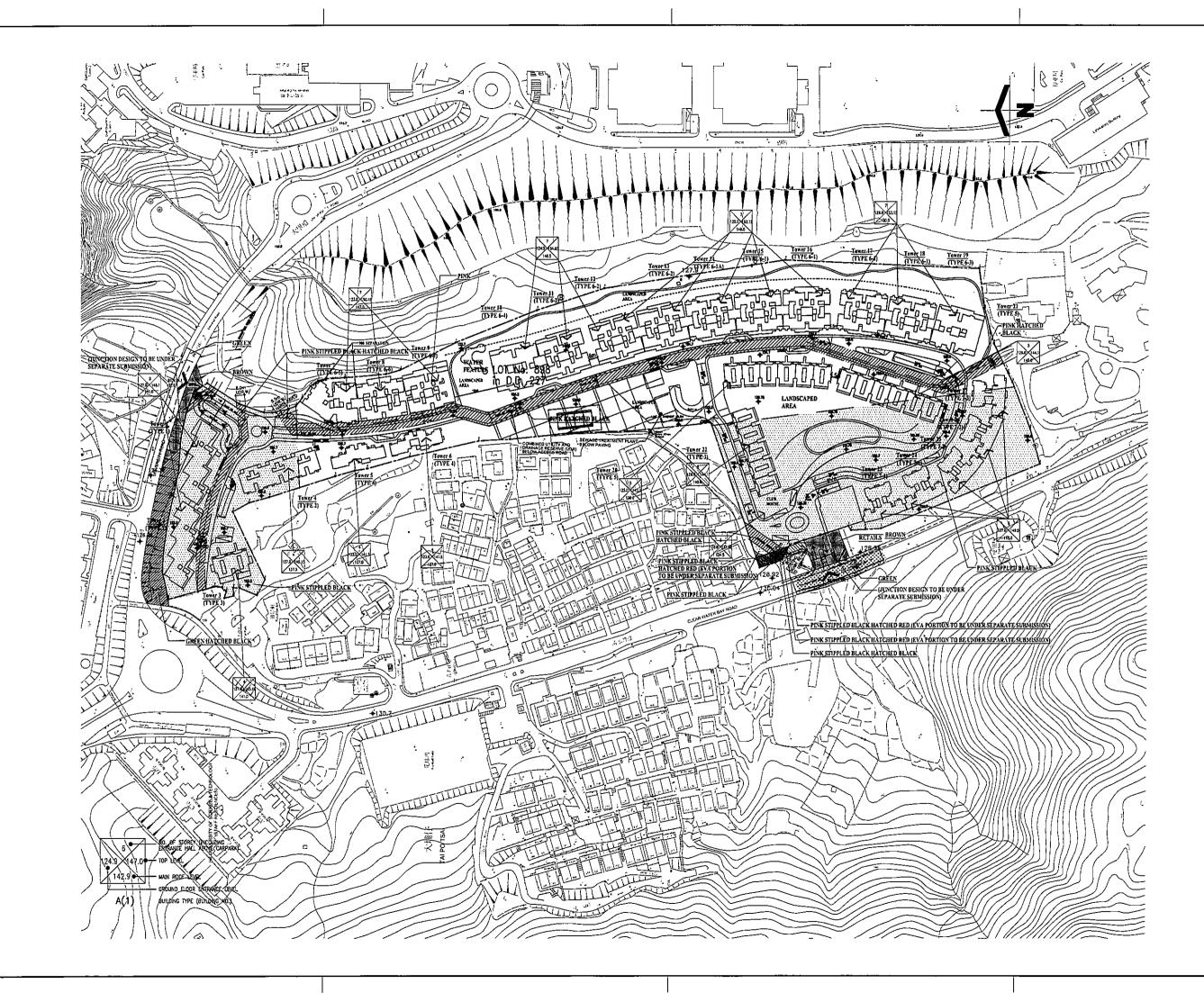


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Unlimited Pages and Expanded Features	0 days	Fri 23/1/15 Fri 23/1	/15				◆ 23/1	
	35 days	Sun 25/1/15 Sun 1/3						
428 Submission of Form 501	0 days	Sun 25/1/15 Sun 25/1	15				◆ 25/1	
429 FS Inspection	7 days	Mon 9/2/15 Sun 15/2	/15					
430 Issuance of FS Certificate	0 days	Sun 1/3/15 Sun 1/3	15				• 1/3	
431 BD Inspection	38 days	Sun 15/2/15 Wed 25/3	15					
432 Submission of BA13	0 days	Sun 15/2/15 Sun 15/2	15				◆15/2	
433 BD Inspection	7 days	Mon 23/2/15 Sun 1/2	15					
434 Withdraw and Re-submit for BA13	0 days	Sun 1/3/15 Sun 1/3	15					
435 BD Re-inpection	3 days	Mon 9/3/15 Wed 11/2	15					
436 Issuance of OP Certificate	0 days	Wed 25/3/15 Wed 25/3	15				•	25/3
437								
438 11) Works After OP	181 days	Thu 26/3/15 Tue 22/9	15					
439 Works after OP	181 days	Thu 26/3/15 Tue 22/9	15					

Hip Seng Construction Co., Ltd.	Task Milestone	♦	Summary Critical	 ve Task ve Task 🛛	♥	Inactive Milestone Inactive Summary	♦	Manual Task Duration-only	Manual S
* All public hoildays are excluded					Page 6				

al Summary Rollup	Start-only	Ľ	
al Summary	Finish-only	3	



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Appendix B

Key Personal Contact Information Chart

Key Personal Contact Information Chart

Organization Name	Role	Name	Telephone	Fax
				Number
ENVIRON Hong Kong	Independent	Mr. Tong	3743 0705	3548 6988
Limited	Environmental	Cheng		
	Checker (IEC)			
Hip Seng Construction	Main Contractor	Mr. Martin	3110 2608	3110 2606
Company Limited		Wong		
Environmental Pioneers	Environmental Team	Ms. Goldie	2556 9172	2856 2010
& Solutions Limited	(ET)	Fung		

Appendix C

Calibration Certificates for Measuring Instruments



Certificate No.	21290		Page	1 of	2 Pages
Customer :	Environmental Pioneers and So	olutions Limited			
Address :	Flat A, 19/F., Chai Wan Industr	ial Centre Building, 2	1 Lee Chung Stre	eet, Chai V	Van, HK.
Order No. :	Q20468	Date of receipt	:	2-Mar-12	
Item Tested					
Description :	Sound Level Calibrator				
Manufacturer :	Svantek				
Model :	SV30A		Serial No.	: 7908	
Test Conditi	ons	,			
Date of Test :	5-Mar-12		Supply Voltage	;	
Ambient Temp	erature : (23 ± 3)°C		Relative Humic	lity:(50 ±	25) %
Test Specific	cations				
Calibration chec	: k				
	Procedure : F21, Z02.				
Test Results	;				
All results were	within the IEC 942 Class 1 spec	ification.			
	shown in the attached page(s).				
Main Test equip	ment used:				
Equipment No.	Description	<u>Cert. No.</u>		Traceable	<u>to</u>
S014	Spectrum Analyzer	13535		NIM-PRC	& SCL-HKSAR
S024	Sound Level Calibrator	15136		NIM-PRC	& SCL-HKSAR
S041	Universal Counter	15610		SCL-HKS	AR
S206	Sound Level Meter	16338		SCL-HKS	AR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI). The test results apply to the above Unit-Under-Test only

Calibrated by :

P. F. Wona

Approved by : _

Date: 7-Mar-12

 This Certificate is issued by:
 Di

 Hong Kong Calibration Ltd.
 Di

 Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

 Tel: 2425 8801

 Fax: 2425 8646



Certificate No. 21290

Page 2 of 2 Pages

Results :

1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	94.10	± 0.3 dB
114	114.18	

Uncertainty : $\pm 0.1 \text{ dB}$

2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	1.000 kHz	± 2 %

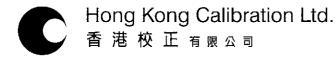
Uncertainty : \pm 3.6 x 10⁻⁶

- 3. Level Stability : 0.0 dB IEC 942 Class 1 Spec. : ± 0.1 dB Uncertainty : ± 0.01 dB
- 4. Total Harmonic Distortion : < 0.8 % IEC 942 Class 1 Spec. : < 3 % Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

- 2. The above measured values are the mean of 3 measurements.
- 3. The uncertainty claimed is for a confidence probability of not less than 95%.
- 4. Atmospheric Pressure : 1001 hPa.

----- END -----



Certificate No. 21289	Page 1 of 3 Pages
Customer: Environmental Pioneers and Solutions Limited	
Address : Flat A, 19/F., Chai Wan Industrial Centre Building	, 21 Lee Chung Street, Chai Wan, HK.
Order No.: Q20468	Date of receipt : 2-Mar-12
Item Tested	· · · · ·
Description : Digital Sound Level Meter Manufacturer : SVAN Model : 949	Serial No. : 8571
Test Conditions	
Date of Test: 5-Mar-12 Ambient Temperature: (23 ± 3)°C	Supply Voltage : Relative Humidity : (50 ± 25) %
Test Specifications	
Calibration check. Ref. Document/Procedure: Z01.	
Test Results	
All results were within the IEC 651 Type 1 & IEC 804 Type 1 spec The results are shown in the attached page(s).	ification after adjustment.
Main Test equipment used:	
Equipment No. Description Cert. No.	Traceable to
S017AMulti-Function Generator07279S024Sound Level Calibrator15136	SCL-HKSAR NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI). The test results apply to the above Unit-Under-Test only

Calibrated by :

P. F. Wong

Approved by :

Date: 7-Mar-12

Dorothy Cheuk

This Certificate is issued by: Hong Kong Calibration Ltd. Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong. Tel: 2425 8801 Fax: 2425 8646

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Certificate No. 21289

Page 2 of 3 Pages

Results :

1. SPL Accuracy

	UUT Set	ting			UUT Rea	ding (dB)
Level Range	Octave Filter	Weight	Response	Applied Value (dB)	Before	After
			-		adjust	adjust
105 dB	OFF	Α	Fast	94.0	*92.0	94.0
			Slow			94.0
		С	Fast			94.0
130 dB	OFF	Α	Fast	94.0		94.0
			Slow			94.0
		С	Fast			94.0
	OFF	Α	Fast	114.0		114.1
			Slow			114.1
		С	Fast			114.1

IEC 651 Type 1 Spec. : \pm 0.7 dB Uncertainty : \pm 0.1 dB

Level Stability : 0.0 dB
 IEC 651 Type 1 Spec. : ± 0.3 dB
 Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range	Applied			IEC 651 Type 1 Spec.
(dB)	Value (dB)	UUT Reading (dB)	Variation (dB)	(inside Primary)
130	114.0	114.0	0.0	± 0.7 dB
	104.0	104.0	0.0	
	94.0	94.0 (Ref.)		
105	84.0	84.0	0.0	
	74.0	74.0	0.0	
	64.0	64.0	0.0	
	54.0	54.0	0.0	

Uncertainty : $\pm 0.1 \text{ dB}$



Certificate No. 21289

Page 3 of 3 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
130	84.0	84.0	0.0	± 0.4 dB
	94.0	94.0 (Ref.)	0.0	
i i	95.0	95.0	0.0	± 0.2 dB

Uncertainty : $\pm 0.1 \text{ dB}$

4. Frequency Weighting

. .

A weighting		
Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-40.4	- 39.4 dB, ± 1.5 dB
63 Hz	-27.2	- 26.2 dB, ± 1.5 dB
125 Hz	-17.0	$-16.1 \text{ dB}, \pm 1 \text{ dB}$
250 Hz	-9.4	- 8.6 dB, ± 1 dB
500 Hz	-2.6	$- 3.2 dB, \pm 1 dB$
1 kHz	0.0 (Ref)	$0 dB, \pm 1 dB$
2 kHz	+1.8	$+ 1.2 dB, \pm 1 dB$
4 kHz	+1.8	$+ 1.0 dB, \pm 1 dB$
8 kHz	-0.4	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-6.3	$- 6.6 \text{ dB}, + 3 \text{ dB} \sim -\infty$

Uncertainty : $\pm 0.1 \text{ dB}$

5. Time Averaging

Applied Burst duty Factor	Applied Leq. Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	50.0		
1/10	50.0	50.2	± 0.5 dB
1/10 ²	50.0	49.8	
1/10 ³	50.0	50.1	± 1.0 dB
1/10	50.0	49.9	<u> </u>

Uncertainty : $\pm 0.1 \text{ dB}$

Remarks : 1. UUT : Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric Pressure : 1 001 hPa.
- 4. *Out of specification.

----- END -----



ISO9001 certified

FACTORY CALIBRATION DATA OF THE SVAN 955 No. 27301

with preamplifier SVANTEK type SV12L No. 25734 and microphone ACO type 7052E No. 49607

1. CALIBRATION (electrical)

LEVEL METER; Characteristic: Z; fsin=1000Hz

Nominal result [dB]	Indication [dB]	Error [dB]
114.0	114.0	0.0

2. CALIBRATION (acoustical)

LEVEL METER; Range: High; Reference frequency: 1000Hz; Sound Pressure Level: 113.89 dB.

Characteristic	Correct value [dB]	Indication [dB]	Error [dB]
Z	113.63	113.56	-0.07
Α	113.63	113.58	-0.05
C	113.63	113.58	-0.05

Calibration measured with the microphone ACO type 7052E No. 49607. Calibration factor: 1.16 dB.

3. LINEARITY TEST^{*} (electrical)

LEVEL METER; Characteristic: A; f sin= 31.5 Hz

Nominal result [dB]	25.0	26.0	28.0	30.0	40.0	60.0	80.0	98.0
Error [dB]	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0

LEVEL METER; Characteristic: A; f sin= 1000 Hz

Nominal result [dB]	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	120.0	138.0
Error [dB]	0.1	0.1	0.1	0.0	0.0	-0.1	0.0	0.0		0.0

LEVEL METER; Characteristic: A; f sin= 8000 Hz

Nominal result [dB]	25.0	26.0	28.0	30.0	40.0	60.0	80.0	100.0	120.0	137.0
Error [dB]	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

4. TONEBURST RESPONSE^{*} (electrical)

LEVEL METER; Characteristic: A; f sin # 4000 Hz; Burst duration: 2s;

Steady level nominal result = 135dB

Result	Detector	Duration [ms]	1000	500	200	100	50	20	10	5	2	1	0.5	0.25
	Fast	Indication [dB]	135.0	134.9	134.0	132.4	130.2	126.7	123,8	120.9	117.0	113.9	110.9	107.9
MAX -	rasi	Error [dB]	0.0	0,0	0.0	0.0	0,0	0.0	-0.1	0.0	0,0	-0.1	-0.1	-0.1
102 51	Slow	Indication [dB]	132.9	130,9	127.5	124.7	121.8	117.9	114,9	111.9	107.9		-	•
	010 #	Error [dB]	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0,1	-	-	-
SEL		Indication [dB]	135.0	132.0	128.0	125.0	122,0	118.0	115.0	112.0	108.0	104.9	101.9	98.9
	-	Error [dB]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0,1	-0.1	-0.1

Steady level nominal result = 55dB

Result	Detector	Duration [ms]	1000	500	200	100	50	20	10	5	2
	Fast	Indication [dB]	55.0	54.9	54.0	52.4	50,1	46.7	43.8	40.9	36.9
MAX	1 d3t	Error [dB]	0.0	0.0	0.0	0.0	-0.1	0,0	-0,1	0.0	-0.1
	Slow	Indication [dB]	52.9	50.8	47.4	44.6	41.7	37.8	34.8	31,9	27.8
	5104	Error [dB]	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2
SEL	_	Indication [dB]	55.0	51.9	48.0	45.0	42.0	38.0	35.0	32.0	28.0
		Error [dB]	0.0	-0 .1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Steady level nominal result = 35dB

Result	Detector	Duration [ms]	1000	500	200
	Fast	Indication [dB]	35.0	34.9	34.0
MAX	1 4.51	Error [dB]	0,0	-0.0	0.0
WICH A	Slow	Indication [dB]	32.9	30.8	27.4
	510 W	Error [dB]	-0.1	-0.1	-0.2
SEL		Indication [dB]	35.0	32.0	28,1
JLL	-	Error [dB]	0.0	0.0	0.1

5. FREQUENCY RESPONSE^{*} (electrical)

LEVEL METER; Characteristic: Z; Nominal result (1kHz)=135 dB;

. . .

TII	MI	TTI	m		Π	ÎÎÎ	ſ	pon 	M	ĨĨ	ĥ		iti a	ÎŤÌ	
	1		Ж	-	Π	Ш			ШŤ	Ш	T		T	Ħ	11E
		X			11	Tİİ	1			 	T		Ì	tti	
		$\boldsymbol{\lambda}$			Ħ								1		1000
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			TIII									00:0		Π	

6. INTERNAL NOISE LEVEL* (electrical - compensated)

LEVEL METER; B	acklight - off	f; Calibration fa	ctor: 0dB
Characteristic	Z	A	С
Indication [dB]	≤ 25	≤ 1 4	≤ 15

* measured with preamplifier SVANTEK type SV12L No. 25734.

7. INTERNAL NOISE LEVEL (acoustical - compensated)

Characteristic	A
Indication [dB]	<15

Noise measured in special chamber, with reference microphone G.R.A.S type 40AN No. 73421

Measured Response (f-frequency, A-attenuation)

f [Hz]	A [dB]	f [Hz]	A [dB]	f[Hz]	A [dB]
10	0.9	63	0.0	4000	0.0
12.5	0.6	125	0.0	8000	0.1
16	0.4	250	0.0	16000	0.0
20	0,3	500	0.0	.20000	0.2
25	0.2	1000	0.0		
31.5	0.i	2000	0.0		

All frequencies are nominal center values for the 1/3 octave band

ENVIRONMENTAL CONDITIONS						
Temperature	Temperature Relative humidity Ambient pressure					
24.2 °C	14 %	1027 hPa				

	TEST EQUIPMENT					
Item	Manufacturer	Model	Serial no.	Description		
1.	SVANTEK	SVAN 401	87	Signal generator		
2.	SVANTEK	SVAN 912A	6120	Sound & Vibration Analyser		
3.	KEITHLEY	2000	0910165	Digital multimeter		
4.	SVANTEK	SV30A	5369	Acoustic calibrator		
5.	SVANTEK	ST02	-	Microphone equivalent electrical impedance (18pF)		

CONFORMITY & TEST DECLARATION

1. Herewith Svantek company declares that this instrument has been calibrated and tested in compliance with the internal ISO9001 procedures and meets all specification given in the Manual(s) or respectively surpass them.

2. The acoustic calibration was performed using the Sound Calibrator and is traceable to the GUM (Central Office of Measures) reference standard - sound level calibrator type 4231 No 2292773.

3. The information appearing on this sheet has been compiled specifically for this instrument. This form is produced with advanced equipment & procedures which permit comprehensive quality assurance verification of all data supplied herein.

4. This calibration sheet shall not be reproduced except in full, without written permission of the SVANTEK Ltd.

Thela Calibration specialist: Anna Talecka ...

Test date: 2012-01-31



ALS Technichem (HK) Pty Ltd

REPORT OF EOUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: MR ALLEN CHAN CLIENT: **ENVIRONMENTAL PIONEERS & SOLUTIONS LTD** ADDRESS: FLAT 19A, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN, HONG KONG. PROIECT:

WORK ORDER: HK1230632 LABORATORY: HONG KONG 19/11/2012 **DATE RECEIVED:** DATE OF ISSUE: 20/11/2012

COMMENTS

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory. Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:	Conductivity, Dissolved Oxygen, pH, Temperature and Turbidity
Description:	Multi-meter
Brand Name:	TOA-DKK
Model No.:	WMS-24
Serial No.:	682337
Equipment No.:	
Date of Calibration:	20 November, 2012

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.

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd 11/F Chung Shun Knitting Centre 1-3 Wing Yip Street Kwai Chung HONG KONG

Phone: Fax: Email:

852-2610 1044 852-2610 2021 hongkong@alsglobal.com

dfrey Chan aboratory Manager - Aong Kong

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Page 1 of 3

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order:HK1230632Date of Issue:20/11/2012Client:ENVIRONMENTAL PIONEERS & SOLUTIONS LTD



Description:	M
Brand Name:	Т
Model No.:	W
Serial No.:	6
Equipment No.:	
Date of Calibration:	2

Multi-meter TOA-DKK WMS-24 682337 --20 November, 2012

Date of next Calibration:

20 February, 2013

Parameters:

	Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
	146.9	152.0	3.5
	6667	7030	5.4
	12890	13600	5.5
	58670	60400	2.9
olved Oxygen	Method Ref: APHA (21st edition		10.0
olved Oxygen	Method Ref: APHA (21st edition Expected Reading (mg/L)		10.0 Tolerance (mg/L)
olved Oxygen	Expected Reading (mg/L)	n), 45000: G Displayed Reading (mg/L)	Tolerance (mg/L)
olved Oxygen	Expected Reading (mg/L) 4.83	n), 45000: G Displayed Reading (mg/L) 4.82	Tolerance (mg/L) -0.01
olved Oxygen	Expected Reading (mg/L)	n), 45000: G Displayed Reading (mg/L)	Tolerance (mg/L) -0.01 -0.11
olved Oxygen	Expected Reading (mg/L) 4.83	n), 45000: G Displayed Reading (mg/L) 4.82	Tolerance (mg/L) -0.01

Method Ket: APHA (21st edition	1), 4300n;b	
Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.01	0.01
7.0	7.02	0.02
10.0	10.07	0.07
	Tolerance Limit (±unit)	0.20

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.				
Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)		
15.5	15.7	0.2		
24.0	24.2	0.2		
42.0	40.0	-2.0		
	Tolerance Limit (°C)	2.0		

Mr ghan Kwok Fai, Godfrey Laboratory Managel - Hong Kong

ALS Technichem (HK) Pty Ltd ALS Environmental

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1230632 Date of Issue: 20/11/2012 Client: **ENVIRONMENTAL PIONEERS & SOLUTIONS LTD**



Description: Brand Name: TOA-DKK Model No.: Serial No.: Equipment No.: ---Date of Calibration:

Multi-meter

WMS-24 682337 20 November, 2012

Date of next Calibration:

20 February, 2013

Parameters:

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)	
0	0.0		
4	3.8	-5.0	
40	40.1	0.3	
80	76.7	-4.1	
400	392.6	-1.8	
800	732.7	-8.4	
	Tolerance Limit (±%)	10.0	

ok Fai, Godfrey Mr Chai Laborator Manager - Hong Kong



Certificate No	o. 28204		Page 1 of 2	2 Pages
Customer	Environmental Pioneers and	Solutions Limited		
Address :	Flat A, 19/F., Chai Wan Ind	dustrial Centre Build	ng, 21 Lee Chung Street, Chai W	an HK
Order No. :	Q23005		Date of receipt :	28-Nov-12
Item Tested	1	· · · · · · · · · · · · · · · · · · ·		
Description	: Laser Dust Monitor			
Manufacturer				
Model	: LD-3B		Serial No. : 1Z563	0
Test Condi	tions			
Date of Test :			A 1 1 1 1	
Ambient Tem			Supply Voltage :	
			Relative Humidity : (50 ± 2	5) %
Test Specif	ications			
Calibration che	ck.			
Ref. Document	/Procedure : Manufacturer re	commended metho	d (gravimetric) 728	
······			(gravinicalo), 220.	
Test Result	s			· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·	-			
	1 · · · · · · · ·			
The results are	shown in the attached page((S).		
Main Test equi	oment used:			
Equipment No.		<u>Cert. No.</u>	Traceable to	
S136B	Stop Watch	26077	NIM-PRC	2
S156	Analytical Balance	27964	NIM-PRC	
S207B	Std. Flowmeter	20588	NIM-PRC	
	•			
			· · · · ·	
The values given in vill not include alloy	this Calibration Certificate only rela	te to the values measured	d at the time of the test and any uncertain	ies quoted
overloading, mis-ha	indling, or the capability of any other	r laboratory to repeat the	nmental changes, vibration and shock du measurement. Hong Kong Calibration Ltd	
or any loss or dam	age resulting from the use of the eq	uipment.		
he test equipment	used for calibration are traceable to	International System of I	Jnits (SI)	
he test results app	ly to the above Unit-Under-Test only	y		
	Dente		10-	
Calibrated by	- I row	A	pproved by :	re
in Cadificate to the State	Dorothy Cheuk		Steve Kwan	
his Certificate is issued b ong Kong Calibration I to	-	D	ate: 19-Dec-12	

This Certificate is issued by: Hong Kong Calibration Ltd. Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong, Tel: 2425 8801 Fax: 2425 8646

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Certificate No. 28204

Page 2 of 2 Pages

Results :

Applied Value (µg/m ³)	UUT Measured Value (K=1.0) (μ g/m ³), (cpm)
3192	3210

Remarks : 1. UUT : Unit-Under-Test

2. Uncertainty \pm 15 %, for a confidence probability of not less than 95%.

3. The results were the mean of 3 measurements,

4. ISO 12103-1 A1 respirable standard test dust was used for the calibration.

5. The K-Factor had been adjusted from 1.0 to 2.8

----- END -----



Certificate No.	24181		Page	e 1 of 2	Pages			
Customer :	Environmental Pioneers and Solution	ons Limited						
Address :	Address : Flat A, 19/F., Chai Wan Industrial Centre Building, 21 Lee Chung Street, Chai Wan, HK.							
	Order No.: Q21644 Date of receipt : 3-Jul-12							
Item Tested			*.	······································				
Description :	: Laser Dust Monitor							
Manufacturer	: SIBATA							
Model :	LD-3B		Serial No.	: 954254				
Test Conditi	ions							
Date of Test :	5-Jul-12 ~13-Jul-12		Supply Voltage	e :				
Ambient Temp	erature : (23 ± 3)°C		Relative Humi) %			
Test Specifi	cations				, 			
Calibration check. Ref. Document/Procedure : Manufacturer recommended method (gravimetric), Z28. Test Results								
The results are	shown in the attached page(s).							
Main Test equip	oment used:							
Equipment No.	Description	<u>Cert. No.</u>		Traceable to				
S136B	Stop Watch	13184		NIM-PRC				
S156	Analytical Balance	00352		NIM-PRC				
S201	Std. Test Dust	61291		NIST				
S207B	Std. Flowmeter	20588		NIM-PRC				
The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.								

The test equipment used for calibration are traceable to International System of Units (SI). The test results apply to the above Unit-Under-Test only

Calibrated by : Dorothy Cheuk	Approved by :	e Kwan
This Certificate is issued by:	Date: 23-Jul-12	
Hong Kong Calibration Ltd.		
Unit 88, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong K	ong.	
Tel: 2425 8801 Fax: 2425 8646		

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Certificate No. 24181

Page 2 of 2 Pages

Results :

Applied Value (µg/m ³)	UUT Measured Value (K=1.3) (μ g/m ³), (cpm)
1225.3	1266.2

Remarks : 1. UUT : Unit-Under-Test

2. Uncertainty \pm 15 %, for a confidence probability of not less than 95%.

3. The results were the mean of 3 measurements,

4. ISO 12103-1 A1 respirable standard test dust was used for the calibration.

5. The K-Factor had been adjusted from 2.0 to 1.3

----- END -----



TISCH ENVIROMENTAL, INC. 145 SOUTH MIAMI AVE. VILLAGE OF CLEVES, OH 45002 513.467.9000 877.263.7610 TOLL FREE 513.467.9009 FAX WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 17, 2012 Rootsmeter S/N0438320Ta (K) -294Operator TischOrifice I.D1483Pa (mm) -754.38						
PLATE OR Run # 1 2 3 4 5	VOLUME START (m3) NA NA NA NA NA	VOLUME STOP (m3) NA NA NA NA NA NA	DIFF VOLUME (m3) 1.00 1.00 1.00 1.00 1.00	DIFF TIME (min) 1.4140 0.9960 0.8910 0.8510 0.7020	METER DIFF Hg (mm) 3.2 6.4 7.9 8.7 12.8	ORFICE DIFF H2O (in.) 2.00 4.00 5.00 5.50 8.00
J			1.00	0.7020	12.0	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
1.0018 0.9976 0.9955 0.9945 0.9890	0.7085 1.0016 1.1173 1.1686 1.4088	1.4185 2.0061 2.2429 2.3524 2.8371		0.9957 0.9915 0.9894 0.9884 0.9830	0.7042 0.9955 1.1105 1.1615 1.4003	0.8829 1.2486 1.3959 1.4641 1.7657
intercept (b) = -0.02027 intercept (b) = -0.0126					1.26953 -0.01262 0.99996 Ta/Pa)]	

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time
Va = Diff Vol [(Pa-Diff Hg)/Pa]

Qa = Va/Time

For subsequent flow rate calculations:

Qstd = $1/m\{ [SQRT(H2O(Pa/760)(298/Ta))] - b \}$ Qa = $1/m\{ [SQRT H2O(Ta/Pa)] - b \}$

Location: Tai Po Tsai Date: December 31, 2012 Sampler: TE-5170 MFC (Serial # : 2039) Tech: Sam Wong	

		CONDI	TIONS		
Barometric Pressure	(in Hq):	40.28	Corrected Pressure	(mm Hq):	1023
Temperature	(deg F):	48	Temperature	(deg K):	282
Average Press.	(in Hg):	40.28	Corrected Average	(mm Hg):	1023
Average Temp.	(deg F):	48	Average Temp.	(deg K):	282

CALIBRATION ORIFICE					
Make:	Tisch	Qstd Slope:	2.02742		
Model:	TE-5025A	Qstd Intercept:	-0.02027		
Serial#:	1483	Date Certified:	May 17, 2012		

CALIBRATIONS								
Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION			
1	11.90	2.040	59.0	70.38	Slope =	33.4033		
2	10.20	1.889	54.0	64.42	Intercept =	1.7899		
3	8.00	1.674	48.0	57.26	Corr. coeff.=	0.9991		
4	5.20	1.352	40.0	47.72				
5	3.20	1.063	31.0	36.98	<pre># of Observations:</pre>	5		

Calculations

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]
Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

	SITE		
Location: Tai Po Tsai Sampler: TE-5170 MFC	(Serial # • 1959)		December 31, 2012 Sam Wong
Sampier: 1E-5170 MFC	(Sellal # : 1939)	recn.	Sam Wong

		CO	NDITIONS		
Barometric Pressure	(in Hg):	40.28	Corrected Pressure	(mm Hg):	1023
Temperature	(deg F):	48	Temperature	(deg K):	282
Average Press.	(in Hg):	40.28	Corrected Average	(mm Hg):	1023
Average Temp.	(deg F):	48	Average Temp.	(deg K):	282

CALIBRATION ORIFICE						
	Tisch TE-5025A 1483	Qstd Slope: Qstd Intercept: Date Certified:	2.02742 -0.02027 May 17, 2012			

CALIBRATIONS								
Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION			
1	12.40	2.082	60.0	71.58	Slope =	34.8414		
2	10.60	1.926	54.0	64.42	Intercept =	-1.8511		
3	8.20	1.695	48.0	57.26	Corr. coeff.=	0.9984		
4	5.40	1.377	38.0	45.33				
5	3.40	1.095	31.0	36.98	<pre># of Observations:</pre>	5		

Calculations

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]
Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

SITE						
Location: Tai Po Tsai Sampler: TE-5170 MFC (Seri		ecember 31, 2012 am Wong				

		CO	NDITIONS		
Barometric Pressure	(in Hg):	40.28	Corrected Pressure	(mm Hg):	1023
Temperature	(deg F):	48	Temperature	(deg K):	282
Average Press.	(in Hg):	40.28	Corrected Average	(mm Hg):	1023
Average Temp.	(deg F):	48	Average Temp.	(deg K):	282

CALIBRATION ORIFICE						
Make: Model: Serial#:	TE-5025A	Qstd Slope: Qstd Intercept: Date Certified:	2.02742 -0.02027 May 17, 2012			

CALIBRATIONS							
Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION		
1	12.40	2.082	58.0	69.19	Slope =	32.6158	
2	10.20	1.889	52.0	62.03	Intercept =	0.7018	
3	8.00	1.674	46.0	54.88	Corr. coeff.=	0.9994	
4	5.40	1.377	38.0	45.33			
5	3.20	1.063	30.0	35.79	<pre># of Observations:</pre>	5	

Calculations

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]
Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

SI	ITE
Location: Tai Po Tsai Sampler: TE-5170 MFC (Serial # :	Date: December 31, 2012 2040) Tech: Sam Wong

CONDITIONS					
Barometric Pressure	(in Hg):	40.28	Corrected Pressure	(mm Hg):	1023
Temperature	(deg F):	48	Temperature	(deg K):	282
Average Press.	(in Hg):	40.28	Corrected Average	(mm Hg):	1023
Average Temp.	(deg F):	48	Average Temp.	(deg K):	282

CALIBRATION ORIFICE						
Make:	Tisch	Qstd Slope:	2.02742			
Model:	TE-5025A	Qstd Intercept:	-0.02027			
Serial#:	1483	Date Certified:	May 17, 2012			

CALIBRATIONS						
Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION	
1	12.20	2.065	57.0	68.00	Slope =	30.4947
2	10.20	1.889	52.0	62.03	Intercept =	4.8672
3	8.00	1.674	47.0	56.07	Corr. coeff.=	0.9996
4	5.20	1.352	39.0	46.53		
5	3.20	1.063	31.0	36.98	<pre># of Observations:</pre>	5

Calculations

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]
Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

Appendix D

Construction Noise Monitoring Data

.

Noise Monitoring Data Sheet

Monitoring Location		N1	N2	N3	N4
Monitoring Method		Freefield	Freefield	Freefield	Façade
Date of Monitori	ng	3/1/2013	3/1/2013	3/1/2013	3/1/2013
Weather Conditi	ion	Cloudy	Cloudy	Cloudy	Cloudy
Measurement S	tart Time (hh:mm)	14:02	11:30	9:53	10:27
Measurement Ti	ime Length (mins)	30 r	nins	30 r	nins
SLM Model & S/	/N	SVA	N 955	SVA	N 955
Wind Speed (m/	/s)	<5, North	<5, North	<5, North	<5, North
	L _{eq} (dB(A))	61.5	59.8	63.0	61.0
Measurement Results	L ₁₀ (dB(A))	64.4	62.6	65.6	64.3
rtoouno	L ₉₀ (dB(A))	55.9	55.4	59.2	54.1
Major Construction Noise Source(s) During Monitoring		Nil	Nil	Nil	Nil
Other Noise Source(s) During Monitoring		Background noise	Background noise	Background noise	Background noise Traffic noise

<u>Name</u>

Date

Perpared by:

Lai Chi Hang

Hay

Signature

<u>3/1/2013</u>

Noise Monitoring Data Sheet

Monitoring Location		N1	N2	N3	N4
Monitoring Method		Freefield	Freefield	Freefield	Façade
Date of Monitori	ng	9/1/2013	9/1/2013	9/1/2013	9/1/2013
Weather Conditi	ion	Cloudy	Cloudy	Cloudy	Cloudy
Measurement S	tart Time (hh:mm)	13:29	14:02	10:17	10:51
Measurement Ti	ime Length (mins)	30 r	nins	30 r	nins
SLM Model & S/	/N	SVAN	N 955	SVAN	N 955
Wind Speed (m/	′s)	<5, Northeast	<5, Northeast	<5, Northeast	<5, Northeast
	L _{eq} (dB(A))	63.5	58.9	60.2	61.1
Measurement Results	L ₁₀ (dB(A))	64.9	60.2	61.5	64.1
	L ₉₀ (dB(A))	59.1	56.0	58.4	53.6
Major Construct During Monitorir	ion Noise Source(s) ng	Nil	Nil	Nil	Nil
Other Noise Source(s) During Monitoring		Background noise	Background noise	Background noise	Background noise Traffic noise

<u>Name</u>

<u>Signature</u>

Date

Perpared by:

Lai Chi Hang

Hay

<u>9/1/2013</u>

Noise Monitoring Data Sheet

Monitoring Location		N1	N2	N3	N4
Monitoring Method		Freefield	Freefield	Freefield	Façade
Date of Monitori	ng	14/1/2013	14/1/2013	14/1/2013	14/1/2013
Weather Condit	ion	Cloudy	Cloudy	Cloudy	Cloudy
Measurement S	tart Time (hh:mm)	13:40	13:02	10:01	10:37
Measurement T	ime Length (mins)	30 r	nins	30 r	nins
SLM Model & S	/N	SVA	N 955	SVA	N 955
Wind Speed (m/	/s)	<5, East	<5, East	<5, East	<5, East
	L _{eq} (dB(A))	64.9	61.7	62.8	66.7
Measurement Results	L ₁₀ (dB(A))	66.9	63.3	64.4	68.1
	L ₉₀ (dB(A))	58.8	57.8	59.3	61.3
Major Construct During Monitorir	ion Noise Source(s) ng	Nil	Nil	Nil	Nil
Other Noise Source(s) During Monitoring		Background noise	Background noise	Background noise	Background noise Traffic noise

<u>Name</u>

Date

Perpared by:

Lai Chi Hang

Hay

Signature

14/1/2013

Noise Monitoring Data Sheet

Monitoring Location		N1	N2	N3	N4
Monitoring Method		Freefield	Freefield	Freefield	Façade
Date of Monitori	ng	19/1/2013	19/1/2013	19/1/2013	19/1/2013
Weather Conditi	ion	Cloudy	Cloudy	Cloudy	Cloudy
Measurement S	tart Time (hh:mm)	13:37	13:02	9:42	10:15
Measurement Ti	ime Length (mins)	30 r	nins	30 n	nins
SLM Model & S/	/N	SVA	N 955	SVAN	N 955
Wind Speed (m/	′s)	<5, Northeast	<5, Northeast	<5, Northeast	<5, Northeast
	L _{eq} (dB(A))	67.2	63.3	63.1	62.1
Measurement Results	L ₁₀ (dB(A))	69.1	65.7	64.9	64.9
	L ₉₀ (dB(A))	59.4	59.8	51.3	52.2
Major Construct During Monitorir	ion Noise Source(s) Ig	Nil	Nil	Nil	Nil
Other Noise Source(s) During Monitoring		Background noise	Background noise	Background noise	Background noise Traffic noise

<u>Name</u>

Signature

Date

Perpared by:

Lai Chi Hang

Hay

<u>19/1/2013</u>

Noise Monitoring Data Sheet

Monitoring Location		N1	N2	N3	N4
Monitoring Method		Freefield	Freefield	Freefield	Façade
Date of Monitori	ng	25/1/2013	25/1/2013	25/1/2013	25/1/2013
Weather Conditi	ion	Sunny	Sunny	Sunny	Sunny
Measurement S	tart Time (hh:mm)	13:45	13:08	10:35	10:01
Measurement Ti	ime Length (mins)	30 r	nins	30 r	nins
SLM Model & S/	/N	SVA	N 955	SVAN	N 955
Wind Speed (m/	′s)	<5, East	<5, East	<5, East	<5, Northeast
	L _{eq} (dB(A))	66.3	61.2	62.1	65.5
Measurement Results	L ₁₀ (dB(A))	67.8	64.2	63.7	67.1
	L ₉₀ (dB(A))	59.2	57.7	58.1	59.3
Major Construct During Monitorir	ion Noise Source(s) ng	Nil	Nil	Nil	Nil
Other Noise Source(s) During Monitoring		Background noise	Background noise	Background noise	Background noise Traffic noise

<u>Name</u>

Date

Perpared by:

Andy Tsang

Andy Trank

Signature

<u>25/1/2013</u>

,

Noise Monitoring Data Sheet

Monitoring Location		N1	N2	N3	N4
Monitoring Method		Freefield	Freefield	Freefield	Façade
Date of Monitori	ng	31/1/2013	31/1/2013	31/1/2013	31/1/2013
Weather Conditi	ion	Cloudy	Cloudy	Cloudy	Cloudy
Measurement S	tart Time (hh:mm)	13:42	13:08	10:26	9:50
Measurement Ti	ime Length (mins)	30 r	nins	30 r	nins
SLM Model & S/	/N	SVA	N 955	SVAN	N 955
Wind Speed (m/	/s)	<5, East	<5, East	<5, East	<5, East
	L _{eq} (dB(A))	64.1	60.2	60.4	64.7
Measurement Results	L ₁₀ (dB(A))	65.2	61.7	62.2	65.5
	L ₉₀ (dB(A))	57.2	56.3	57.0	59.3
Major Construction Noise Source(s) During Monitoring		Nil	Nil	Nil	Nil
Other Noise Source(s) During Monitoring		Background noise	Background noise	Background noise	Background noise Traffic noise

<u>Name</u>

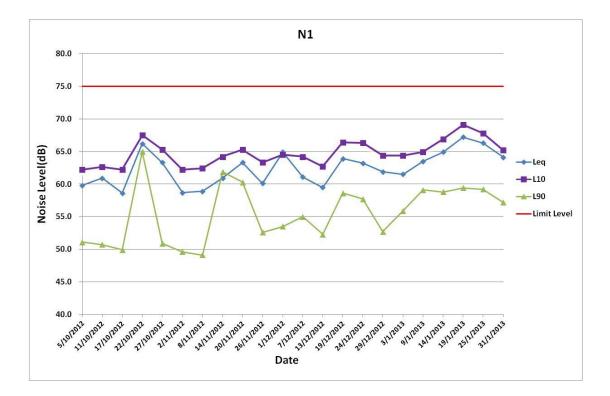
Date

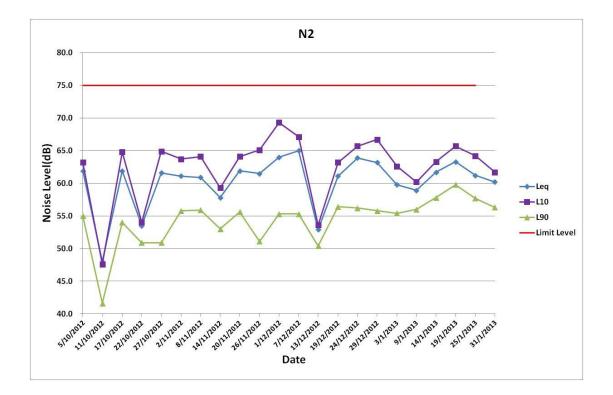
Perpared by:

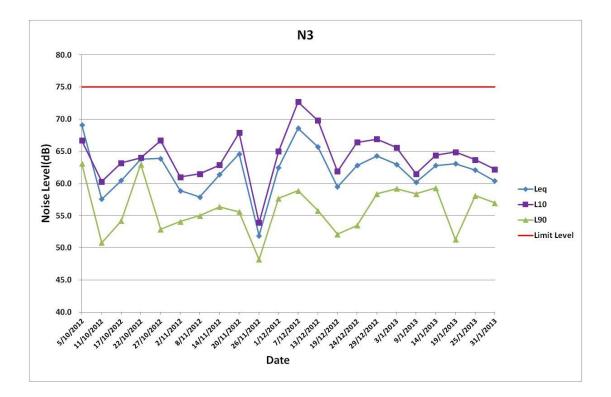
Andy Tsang

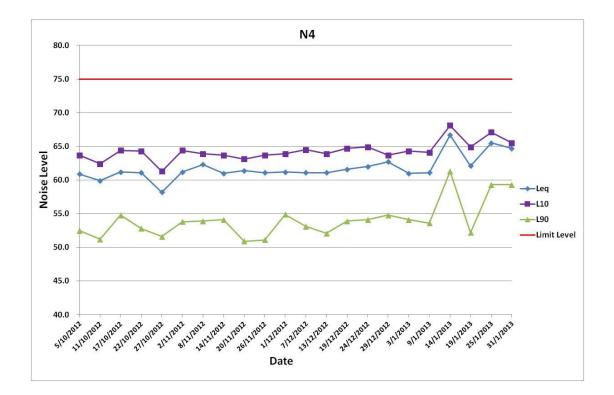
<u>Signature</u> Andry Tsant

<u>31/1/2013</u>









Appendix E

Water Quality Monitoring Data

Date of Sampling : 2/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	7.20	7.20
Temperature (°C)	20.1	20.1
Turbidity (NTU)	1.0	4.1
DO (mg/L)	7.30	7.80
DO Saturation (%)	85%	90%
Suspended Solids (mg/L)	4.0	4.0

Remark or Observation :

<u>Name</u>

<u>Signature</u>

Date

AndyTsant

Prepared By: Tsang King Yeun

2/1/2013

Date of Sampling : 4/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	11:00	11:30
Water Depth (m)	<1	<1
pH value	7.20	7.10
Temperature (°C)	19.2	19.2
Turbidity (NTU)	2.0	3.5
DO (mg/L)	6.90	8.10
DO Saturation (%)	75%	92%
Suspended Solids (mg/L)	8.0	3.0

Remark or Observation :

<u>Name</u>

Signature

Date

Andy Tsant

4/1/2013

Date of Sampling : 8/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	7.10	7.20
Temperature (°C)	20.3	20.1
Turbidity (NTU)	1.20	5.1
DO (mg/L)	8.10	8.30
DO Saturation (%)	90%	95%
Suspended Solids (mg/L)	8.0	8.0

Remark or Observation :

<u>Name</u>

<u>Signature</u>

Date

AndyTeant

8/1/2013

Date of Sampling : 10/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	7.20	7.20
Temperature (°C)	19.5	19.5
Turbidity (NTU)	1.0	47.0
DO (mg/L)	9.90	9.40
DO Saturation (%)	101%	100%
Suspended Solids (mg/L)	2.0	26.0

Remark or Observation : Turbid water was observed at W2

During the site inspection, it was found that the muddy water outside the site boudary was entering into the project site and caused the exceedance at W2

Name

<u>Signature</u>

Date

AndyTsant

Prepared By : Tsang King Yeun

10/1/2013

Date of Sampling : 11/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	7.40	7.62
Temperature (°C)	20.1	21.2
Turbidity (NTU)	0.4	20.0
DO (mg/L)	9.80	10.94
DO Saturation (%)	100%	114%
Suspended Solids (mg/L)	8.0	6.0

Remark or Observation : Turbid water was observed at W2

During the site inspection, it was found that the muddy water outside the site boudary was entering into the project site and caused the exceedance at W2

Name

Signature

Date

AndyTsant

11/1/2013

Date of Sampling : 12/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.10	7.71
Temperature (°C)	19.79	19.16
Turbidity (NTU)	1.8	19.0
DO (mg/L)	12.67	10.94
DO Saturation (%)	143%	122%
Suspended Solids (mg/L)	3.0	4.0

Remark or Observation : Turbid water was observed at W2

During the site inspection, it was found that the muddy water outside the site boudary was entering into the project site and caused the exceedance at W2

Name

<u>Signature</u>

Date

AndyTsant

12/1/2013

Date of Sampling : 14/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	7.96	7.54
Temperature (°C)	19.6	18.9
Turbidity (NTU)	2.2	4.2
DO (mg/L)	10.10	8.45
DO Saturation (%)	113%	94%
Suspended Solids (mg/L)	N/A	N/A

Remark or Observation :

<u>Name</u>

Signature

Date

AndyTeant

14/1/2013

Date of Sampling : 15/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.06	7.74
Temperature (°C)	19.38	18.83
Turbidity (NTU)	1.8	3.8
DO (mg/L)	12.19	8.65
DO Saturation (%)	136%	96%
Suspended Solids (mg/L)	2.0	6.0

Remark or Observation :

<u>Name</u>

<u>Signature</u>

Date

Andy Tsante

15/1/2013

Date of Sampling : 17/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.59	7.99
Temperature (°C)	20.3	19.96
Turbidity (NTU)	1.4	4.1
DO (mg/L)	13.44	14.05
DO Saturation (%)	153%	159%
Suspended Solids (mg/L)	2.0	5.0

Remark or Observation :

<u>Name</u>

Signature

Date

AndyTsant

Prepared By: Tsang King Yeun

17/1/2013

Date of Sampling : 19/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.71	7.96
Temperature (°C)	19.99	20.22
Turbidity (NTU)	36	3.8
DO (mg/L)	15.26	13.11
DO Saturation (%)	173%	149%
Suspended Solids (mg/L)	2.0	4.0

Remark or Observation :

<u>Name</u>

Signature

Date

AndyTsant

19/1/2013

Date of Sampling : 22/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.28	8.23
Temperature (°C)	24.13	24.2
Turbidity (NTU)	3.9	3.2
DO (mg/L)	12.21	13.49
DO Saturation (%)	148%	164%
Suspended Solids (mg/L)	2.0	5.0

Remark or Observation :

<u>Name</u>

<u>Signature</u>

Date

AndyTsant

Prepared By: Tsang King Yeun

22/1/2013

Date of Sampling : 24/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.73	7.85
Temperature (°C)	22.53	23.18
Turbidity (NTU)	3.7	2.6
DO (mg/L)	12.04	8.43
DO Saturation (%)	143%	101%
Suspended Solids (mg/L)	2.0	3.0

Remark or Observation :

<u>Name</u>

<u>Signature</u>

Date

AndyTsant

24/1/2013

Date of Sampling : 26/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.13	7.64
Temperature (°C)	21.43	21.86
Turbidity (NTU)	3.5	4.3
DO (mg/L)	8.81	6.64
DO Saturation (%)	98%	78%
Suspended Solids (mg/L)	5.0	2.0

Remark or Observation :

<u>Name</u>

<u>Signature</u>

Date

Andy Tsante

Prepared By: Tsang King Yeun

26/1/2013

Date of Sampling : 29/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	10:00	10:30
Water Depth (m)	<1	<1
pH value	8.04	7.75
Temperature (°C)	22.4	22.48
Turbidity (NTU)	3.3	4.1
DO (mg/L)	8.78	8.07
DO Saturation (%)	104%	95%
Suspended Solids (mg/L)	2.0	2.0

Remark or Observation :

<u>Name</u>

Signature

Date

AndyTeant

29/1/2013

Date of Sampling : 31/1/2013

Weather: Sunny

Monitoring Location	W1	W2
Time (hhmm)	13:00	13:30
Water Depth (m)	<1	<1
pH value	7.68	7.65
Temperature (°C)	22.0	22.29
Turbidity (NTU)	1.9	4.4
DO (mg/L)	10.93	9.67
DO Saturation (%)	128%	114%
Suspended Solids (mg/L)	2.0	2.0

Remark or Observation :

<u>Name</u>

Signature

Date

AndyTeant

31/1/2013

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	፡ 1 of 3
Contact	: MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	[:] HK1300341
Address	: FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	: Godfrey.Chan@alsglobal.com : +852 2610 1044 : +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 04-JAN-2013 : 15-JAN-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 11-JAN-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society. Specific comments for Work Order: HK1300341

Sample(s) were received in an ambient condition.

Water sample(s) analysed and reported on an as received basis.

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 This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the Electronic Transactions Ordinance of Hong Kong, Chapter 553, Section 6.

 Signatories
 Position
 Authorised results for

 Fung Lim Chee, Richard
 General Manager
 Inorganics

ALS Laboratory Group Trading Name: ALS Technichem (HK) Pty Ltd 11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong

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Analytical Results

,								
Sub-Matrix: WATER	Client sample ID		W1	W2	W1	W2		
Client sampling date / time			[02-JAN-2013]	[02-JAN-2013]	[04-JAN-2013]	[04-JAN-2013]		
Compound	CAS Number	LOR	Unit	HK1300341-001	HK1300341-002	HK1300341-003	HK1300341-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2	mg/L	4	4	8	3	



Laboratory Duplicate (DUP) Report

atrix: WATER					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	: Compound CAS Number LOR Unit Origin								
EA/ED: Physical and Aggregate Properties (QC Lot: 2679322)											
HK1300211-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	59	61	2.3			
HK1300276-006	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	67	65	3.6			
EA/ED: Physical an	d Aggregate Properties	s (QC Lot: 2681238)									
HK1300319-005	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	35	35	0.0			
HK1300353-002	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	42	41	4.0			

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

	Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
				Spike	Spike Re	covery (%)	Recovery	Limits (%)	RI	PD (%)
CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
(QC Lot: 2679322)										
	2	mg/L	<2	20 mg/L	108		88	110		
EA/ED: Physical and Aggregate Properties (QC Lot: 2681238)										
	2	mg/L	<2	20 mg/L	102		88	110		
	(QC Lot: 2679322) (QC Lot: 2681238)	(QC Lot: 2679322) 2 (QC Lot: 2681238)	CAS Number LOR Unit (QC Lot: 2679322) 2 mg/L (QC Lot: 2681238) 2	CAS Number LOR Unit Result (QC Lot: 2679322) 2 mg/L <2	CAS Number LOR Unit Result Spike Concentration (QC Lot: 2679322) 2 mg/L <2	CAS Number LOR Unit Result Spike Concentration Spike Result S	CAS Number LOR Unit Result Spike Concentration Spike Recovery (%) LCS DCS (QC Lot: 2679322) 2 mg/L <2	Spike Spike Spike Recovery (%) Recovery CAS Number LOR Unit Result Concentration LCS DCS Low (QC Lot: 2679322) 2 mg/L <2	Spike Spike Spike Recovery (%) Recovery Limits (%) CAS Number LOR Unit Result Concentration LCS DCS Low High (QC Lot: 2679322) 2 mg/L <2 20 mg/L 108 88 110 (QC Lot: 2681238) 88 110	Spike Spike Spike Recovery (%) Recovery Limits (%) Recovery Limits (%) Ref CAS Number LOR Unit Result Concentration LCS DCS Low High Value (QC Lot: 2679322) 2 mg/L <2

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

• No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	፡ 1 of 3
Contact	: MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	HK1300963
Address	[:] FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	∶ Godfrey.Chan@alsglobal.com ∶ +852 2610 1044 ∶ +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 10-JAN-2013 : 21-JAN-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 15-JAN-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific comments for Work Order: HK1300963

Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition. Water sample(s) analysed and reported on an as received basis.

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	Signatories	Position	Authorised results for				
	Fung Lim Chee, Richard	General Manager	Inorganics				

ALS Laboratory Group Trading Name: ALS Technichem (HK) Pty Ltd 11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong

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Analytical Results

, malfieur recourte								
Sub-Matrix: WATER			Client sample ID	W1	W2	W1	W2	
Client sampling date / time			[08-JAN-2013]	[08-JAN-2013]	[10-JAN-2013]	[10-JAN-2013]		
Compound	CAS Number	LOR	Unit	HK1300963-001	HK1300963-002	HK1300963-003	HK1300963-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2	mg/L	8	8	<2	26	



Laboratory Duplicate (DUP) Report

Matrix: WATER			Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical an	nd Aggregate Properties (QC Lot: 2684889)						
HK1300873-003	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	7	6	19.3
HK1301014-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	<2	<2	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RI	PD (%)
Method: Compound C	AS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 2684889)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	99.0		88	110		

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

• No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

ALS Technichem (HK) Pty Ltd

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ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3
Contact	: MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	HK1301245
Address	: FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	: Godfrey.Chan@alsglobal.com : +852 2610 1044 : +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 14-JAN-2013 : 22-JAN-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 18-JAN-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society. Specific comments for Work Order: **HK1301245**

Sample(s) were received in a chilled condition.

Water sample(s) analysed and reported on an as received basis.

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	Signatories	Position	Authorised results for				
	Fung Lim Chee, Richard	General Manager	Inorganics				

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Sub-Matrix: WATER	Client sample ID		W1	W2	W1	W2		
	Client sampling date / time		[11-JAN-2013]	[11-JAN-2013]	[12-JAN-2013]	[12-JAN-2013]		
Compound	CAS Number	LOR	Unit	HK1301245-001	HK1301245-002	HK1301245-003	HK1301245-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2	mg/L	8	6	3	4	



Matrix: WATER			Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	
EA/ED: Physical and	d Aggregate Properties (QC	Lot: 2689870)							
HK1301210-009	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	<2	<2	0.0	
HK1301225-009	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	4	5	21.3	

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Spike Recov		covery (%)	Recovery	very Limits (%) R		PD (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC L	EA/ED: Physical and Aggregate Properties (QC Lot: 2689870)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.5		88	110		

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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CERTIFICATE OF ANALYSIS

Client	ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	፡ 1 of 3
Contact	: MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	HK1301624
Address	: FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Amendment	: 1
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	: Godfrey.Chan@alsglobal.com : +852 2610 1044 : +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 17-JAN-2013 : 14-FEB-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 22-JAN-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific comments for Work Order: HK1301624

Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition. Water sample(s) analysed and reported on an as received basis.

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	Signatories	Position	Authorised results for
	Fung Lim Chee, Richard	General Manager	Inorganics

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, mary treat recease								
Sub-Matrix: WATER	Client sample ID		W1	W2	W1	W2		
		Client sa	mpling date / time	[15-FEB-2013]	[15-FEB-2013]	[17-JAN-2013]	[17-JAN-2013]	
Compound	CAS Number	LOR	Unit	HK1301624-001	HK1301624-002	HK1301624-003	HK1301624-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2	mg/L	<2	6	<2	5	



Matrix: WATER		Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical a	nd Aggregate Propertie	s (QC Lot: 2693356)						
HK1301505-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	<2	<2	0.0
HK1301729-001	Anonymous	EA025: Suspended Solids (SS)		2.0	mg/L	3.1	2.9	8.9
EA/ED: Physical a	nd Aggregate Propertie	s (QC Lot: 2695157)						
HK1301604-021	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	14	14	0.0
HK1301765-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	9	11	14.5

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

		Method Blank (MB) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
				Spike	Spike Re	covery (%)	Recovery	Limits (%)	RI	PD (%)
CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
(QC Lot: 2693356)										
	2	mg/L	<2	10 mg/L	97.5		88	110		
(QC Lot: 2695157)										
	2	mg/L	<2	10 mg/L	104		88	110		
	(QC Lot: 2693356) (QC Lot: 2695157)	(QC Lot: 2693356) 2 (QC Lot: 2695157)	CAS Number LOR Unit (QC Lot: 2693356) 2 mg/L (QC Lot: 2695157)	(QC Lot: 2693356) 2 mg/L <2 (QC Lot: 2695157)	CAS Number LOR Unit Result Spike Concentration (QC Lot: 2693356) 2 mg/L <2	CAS Number LOR Unit Result Spike Concentration Spike Result S	CAS Number LOR Unit Result Concentration LCS DCS (QC Lot: 2693356) 2 mg/L <2	CAS Number LOR Unit Result Spike Concentration Spike Recovery (%) Recovery (%)	CAS Number LOR Unit Result Concentration LCS DCS Low High (QC Lot: 2693356) 2 mg/L <2	CAS Number LOR Unit Result Spike Concentration Spike Recovery (%) LCS Recovery Limits (%) LOW Ref (QC Lot: 2693356) 2 mg/L <2

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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CERTIFICATE OF ANALYSIS

Client	ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3
Contact	LTD : MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	HK1302076
Address	[:] FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	: Godfrey.Chan@alsglobal.com : +852 2610 1044 : +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 22-JAN-2013 : 31-JAN-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 29-JAN-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific comments for Work Order: HK1302076

Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition. Water sample(s) analysed and reported on an as received basis.

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	Signatories	Position	Authorised results for	
	Fung Lim Chee, Richard	General Manager	Inorganics	

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Sub-Matrix: WATER	Client sample ID		W1	W2	W1	W2		
		Client sa	mpling date / time	[19-JAN-2013]	[19-JAN-2013]	[22-JAN-2013]	[22-JAN-2013]	
Compound	CAS Number	LOR	Unit	HK1302076-001	HK1302076-002	HK1302076-003	HK1302076-004	
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2	mg/L	2	4	2	5	



Matrix: WATER			Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)		
EA/ED: Physical and Aggregate Properties (QC Lot: 2701428)										
HK1302021-010	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	3	4	0.0		
HK1302021-020	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	4	4	0.0		
EA/ED: Physical ar	d Aggregate Properties (QC Lot: 2704347)								
HK1302027-021	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	3	3	0.0		
HK1302076-003	W1	EA025: Suspended Solids (SS)		2	mg/L	2	3	0.0		

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Spike Rec		ecovery (%)	Recovery Limits (%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Proper	ties (QC Lot: 2701428)										
EA025: Suspended Solids (SS)		2	mg/L	<2	10 mg/L	95.5		88	110		
EA/ED: Physical and Aggregate Proper	ties (QC Lot: 2704347)										
EA025: Suspended Solids (SS)		2	mg/L	<2	10 mg/L	101		88	110		

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	፡ 1 of 3
Contact	: MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	⁺ HK1302393
Address	: FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	∶ Godfrey.Chan@alsglobal.com ⊱ +852 2610 1044 ∶ +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 28-JAN-2013 : 05-FEB-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 29-JAN-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society. Specific comments for Work Order: **HK1302393**

Sample(s) were received in an ambient condition.

Water sample(s) analysed and reported on an as received basis.

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	Signatories	Position	Authorised results for
	Fung Lim Chee, Richard	General Manager	Inorganics

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,								
ub-Matrix: WATER			Client sample ID	W1	W2	W1	W2	
	Client sampling date / time		[24-JAN-2013]	[24-JAN-2013]	[26-JAN-2013]	[26-JAN-2013]		
Compound	CAS Number LOR Unit		HK1302393-001	HK1302393-002	HK1302393-003	HK1302393-004		
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS)		2	mg/L	<2	3	5	<2	



Matrix: WATER			Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)		
EA/ED: Physical an	d Aggregate Properties (QC	Lot: 2705321)								
HK1302333-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	203	208	2.4		
HK1302393-002	W2	EA025: Suspended Solids (SS)		2	mg/L	3	2	0.0		

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	3) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Spike I		Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QC Lot: 2705321)												
EA025: Suspended Solids (SS)		2	mg/L	<2	10 mg/L	96.0		88	110			

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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CERTIFICATE OF ANALYSIS

Client	ENVIRONMENTAL PIONEERS & SOLUTIONS	Laboratory	: ALS Technichem HK Pty Ltd	Page	፡ 1 of 3
Contact	: MR ALLEN CHAN	Contact	: Chan Kwok Fai, Godfrey	Work Order	HK1302855
Address	[:] FLAT A, 19/F, CHAI WAN INDUSTRIAL CENTRE BUILDING, 20 LEE CHUNG STREET, CHAI WAN HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail Telephone Facsimile	: allenchan@epsl.com.hk : +852 2558 7699 :	E-mail Telephone Facsimile	∶ Godfrey.Chan@alsglobal.com ∶ +852 2610 1044 ∶ +852 2610 2021		
Project Order number C-O-C number Site	: TAI PO TSAI : : :	Quote number	:	Date Samples Received Issue Date No. of samples received No. of samples analysed	: 31-JAN-2013 : 14-FEB-2013 : 4 : 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 07-FEB-2013

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific comments for Work Order: HK1302855

Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition. Water sample(s) analysed and reported on an as received basis.

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	Signatories	Position	Authorised results for
	Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group Trading Name: ALS Technichem (HK) Pty Ltd 11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong

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Sub-Matrix: WATER		Client sample ID		W1	W2	W1	W2	
	Client sampling date / time		[29-JAN-2013]	[29-JAN-2013]	[31-JAN-2013]	[31-JAN-2013]		
Compound	CAS Number LOR Unit		HK1302855-001	HK1302855-002	HK1302855-003	HK1302855-004		
EA/ED: Physical and Aggregate Properties								
EA025: Suspended Solids (SS) 2		mg/L	<2	2	<2	2		

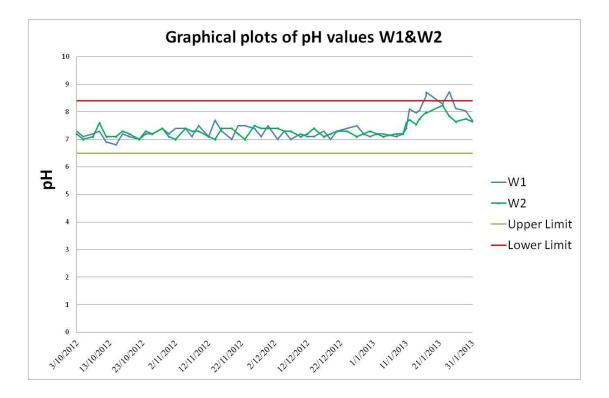


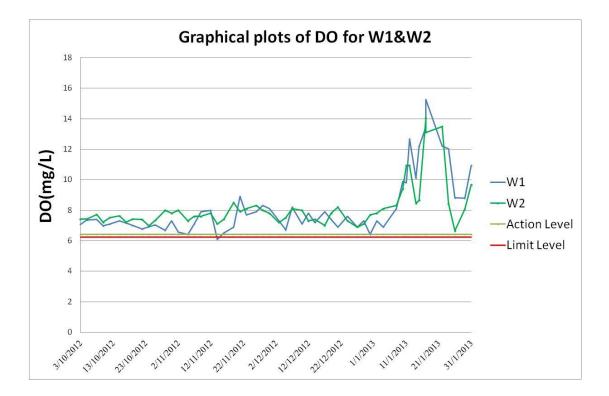
Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical an	d Aggregate Properties	s (QC Lot: 2713645)									
HK1302803-019	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	5	6	25.3			
HK1302856-001	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	9	7	18.9			
EA/ED: Physical an	d Aggregate Properties	s (QC Lot: 2718659)									
HK1302852-019	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	8	9	0.0			
HK1302870-003	Anonymous	EA025: Suspended Solids (SS)		2	mg/L	11	12	0.0			

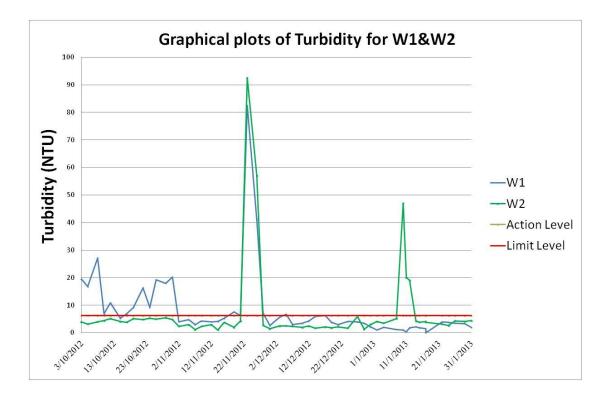
Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

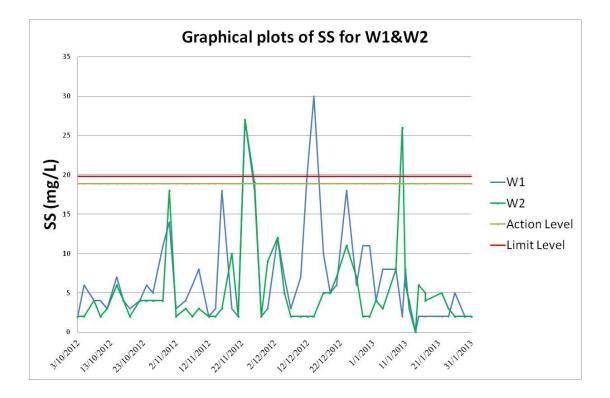
		Method Blank (ME	3) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
				Spike	Spike Re	covery (%)	Recovery	Limits (%)	RI	PD (%)		
CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit		
(QC Lot: 2713645)												
	2	mg/L	<2	10 mg/L	96.0		88	110				
EA/ED: Physical and Aggregate Properties (QC Lot: 2718659)												
	2	mg/L	<2	10 mg/L	99.0		85	115				
	(QC Lot: 2713645) (QC Lot: 2718659)	(QC Lot: 2713645) 2 (QC Lot: 2718659)	CAS Number LOR Unit (QC Lot: 2713645) 2 mg/L (QC Lot: 2718659) 2 Mg/L	(QC Lot: 2713645) 2 mg/L <2 (QC Lot: 2718659)	CAS Number LOR Unit Result Spike Concentration (QC Lot: 2713645) 2 mg/L <2	CAS Number LOR Unit Result Spike Concentration Spike Result S	CAS Number LOR Unit Result Spike Concentration Spike Recovery (%) (QC Lot: 2713645) 2 mg/L <2	Spike Spike Spike Recovery (%) Recovery CAS Number LOR Unit Result Concentration LCS DCS Low (QC Lot: 2713645) 2 mg/L <2	Spike Spike Spike Recovery (%) Recovery Limits (%) CAS Number LOR Unit Result Concentration LCS DCS Low High (QC Lot: 2713645) 2 mg/L <2 10 mg/L 96.0 88 110 (QC Lot: 2718659) 88 110	Spike Spike Spike Recovery (%) Recovery Limits (%) Recovery Limits (%) Ref CAS Number LOR Unit Result Concentration LCS DCS Low High Value (QC Lot: 2713645) 2 mg/L <2		

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report







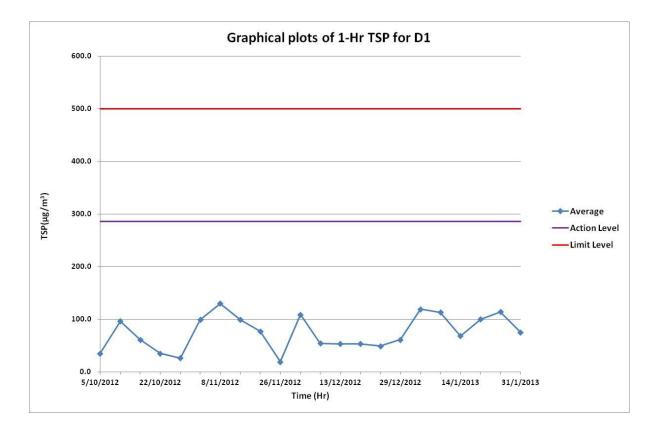


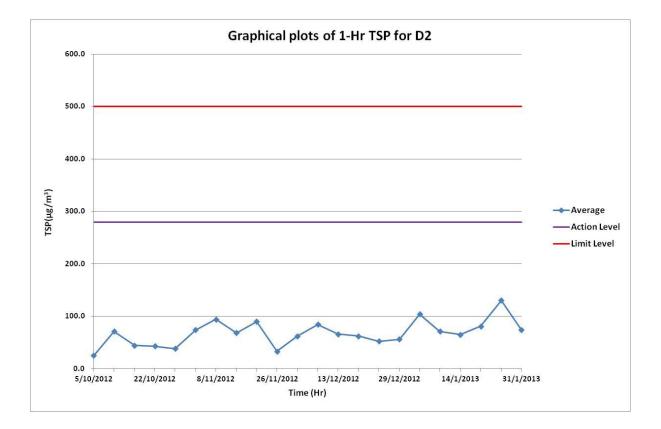
Appendix F

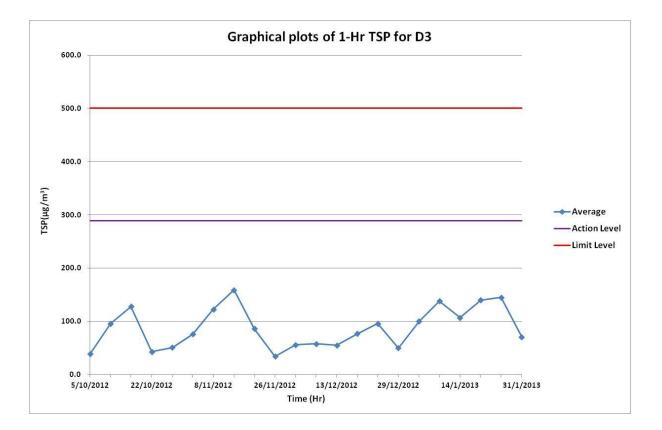
Air Quality Monitoring Data

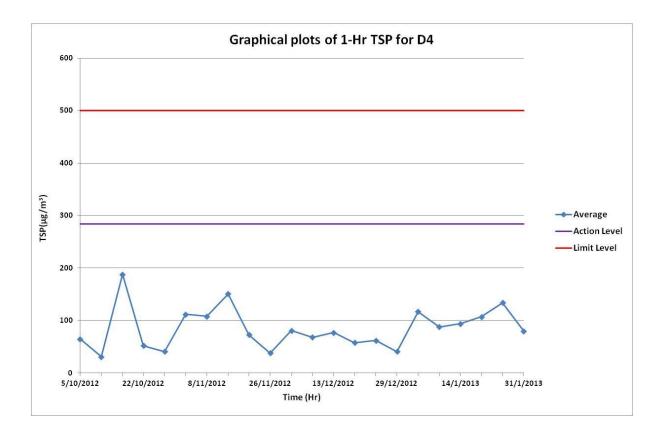
1-Hr TSP Monitoring Results

							Locatio	ons					
			D1			D2			D3			D4	
Date	Duration	Start Time	TSP Level (ug/m3)	Average (ug/m3)	Start Time	TSP Level (ug/m3)	Average (ug/m3)	Start Time	TSP Level (ug/m3)	Average (ug/m3)	Start Time	TSP Level (ug/m3)	Average (ug/m3)
		13:34	114		9:01	100		8:50	108		13:05	122	
3/1/2013	1 Hour	14:34	121	119	10:01	106	104	9:50	100	100	14:05	113	117
		15:34	122		11:01	107		10:50	93		15:05	115	
		9:00	115		13:00	72		8:45	141		8:27	92	
9/1/2013	1 Hour	10:00	114	113	14:00	73	71	9:45	138	138	9:27	88	88
		11:00	111		15:00	67		10:45	134		10:27	85	
		8:30	66		11:46	52		12:38	103		8:31	102	
14/1/2013	1 Hour	9:30	71	68	12:46	67	65	13:38	108	107	9:31	88	94
		10:30	68		13:46	77		14:38	111		10:31	91	1
		8:30	104		12:36	93		12:00	141		8:40	122	
19/1/2013	1 Hour	9:30	103	100	13:36	82	81	13:00	139	140	9:40	101	107
		10:30	93		14:36	69		14:00	141		10:40	97	
		13:45	121		9:03	131		9:01	147		13:24	120	
25/1/2013	1 Hour	14:45	134	114	10:03	134	130	10:01	147	145	14:24	140	134
		15:45	86		11:03	125		11:01	142		15:24	143	
		8:59	67		13:14	66		9:02	72		13:00	77	
31/1/2013	1 Hour	9:59	81	75	14:14	81	74	10:02	79	71	14:00	83	80
		10:59	77		15:14	75		11:02	61		15:00	80	-









D1 24-Hrs TSP Monitoring Results

		Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Total	TSP	
Sampling Date	Paper No.	Initial Wt.	Final Wt.	Wt. of dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	(m ³)	Concentration (µg/m3)	Weather
03/01/13	204389	2.7720	2.9561	0.1841	880.98	905.07	24.09	42	42	42.0	1719.02	107.0956	Cloudy
09/01/13	204403	2.7379	2.9231	0.1852	905.07	929.12	24.05	42	42	42.0	1716.17	107.9147	Hazy
14/01/13	204502	2.9262	3.0679	0.1417	929.12	953.19	24.07	42	42	42.0	1717.60	82.4989	Hazy
19/01/13	204506	2.9020	3.0678	0.1658	953.19	977.21	24.02	42	42	42.0	1714.03	96.7311	Hazy
25/01/13	204510	2.8789	3.0631	0.1842	977.21	1001.22	24.01	42	42	42.0	1713.32	107.5108	Hazy
31/01/13	204514	2.8882	3.0230	0.1348	1001.22	1025.27	24.05	42	42	42.0	1716.17	78.5470	Sunny

D2 24-Hrs TSP Monitoring Results

		Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Total	TSP	
Sampling Date	Paper No.	Initial Wt.	Final Wt.	Wt. of dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	Volume (m ³)	Concentration (µg/m3)	Weather
03/01/13	204390	2.7524	2.9183	0.1659	1190.90	1214.47	23.57	42	42	42.0	1681.92	98.6374	Cloudy
09/01/13	204404	2.7457	2.9203	0.1746	1214.47	1238.47	24.00	42	42	42.0	1712.60	101.9501	Hazy
14/01/13	204503	2.9247	3.0557	0.1310	1238.47	1262.52	24.05	42	42	42.0	1716.17	76.3327	Hazy
19/01/13	204507	2.8885	3.0440	0.1555	1262.52	1286.57	24.05	42	42	42.0	1716.17	90.6087	Hazy
25/01/13	204511	2.8917	3.0571	0.1654	1286.57	1310.59	24.02	42	42	42.0	1714.03	96.4977	Hazy
31/01/13	204515	2.8794	2.9986	0.1192	1310.59	1334.62	24.03	42	42	42.0	1714.74	69.5148	Sunny

D3 24-Hrs TSP Monitoring Results

		Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Total	TSP	
Sampling Date	Paper No.	Initial Wt.	Final Wt.	Wt. of dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	Volume (m³)	Concentration (µg/m3)	weather
03/01/13	204400	2.7728	2.9346	0.1618	1219.51	1243.56	24.05	42	42	42.0	1716.17	94.2797	Cloudy
09/01/13	204405	2.7091	2.8839	0.1748	1243.56	1267.58	24.02	42	42	42.0	1714.03	101.9819	Hazy
14/01/13	204504	2.9130	3.0495	0.1365	1267.58	1291.61	24.03	42	42	42.0	1714.74	79.6037	Hazy
19/01/13	204508	2.8783	3.0348	0.1565	1291.61	1315.62	24.01	42	42	42.0	1713.32	91.3433	Hazy
25/01/13	204512	2.8954	3.0807	0.1853	1315.62	1339.62	24.00	42	42	42.0	1712.60	108.1979	Hazy
31/01/13	204516	2.8891	3.0397	0.1506	1339.62	1363.64	24.02	42	42	42.0	1714.03	87.8631	Sunny

D4 24-Hrs TSP Monitoring Results

		Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Total	TSP	
Sampling Date	Paper No.	Initial Wt.	Final Wt.	Wt. of dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	Volume (m³)	Concentration (µg/m3)	Weather
03/01/13	204398	2.7676	2.9361	0.1685	1210.47	1234.47	24.00	42	42	42.0	1712.60	98.3883	Cloudy
09/01/13	204406	2.7122	2.8800	0.1678	1234.47	1258.51	24.04	42	42	42.0	1715.46	97.8165	Hazy
14/01/13	204505	2.8879	3.0362	0.1483	1258.51	1282.53	24.02	42	42	42.0	1714.03	86.5212	Hazy
19/01/13	204509	2.8865	3.0574	0.1709	1282.53	1306.54	24.01	42	42	42.0	1713.32	99.7481	Hazy
25/01/13	204513	2.8823	3.1067	0.2244	1306.54	1330.56	24.02	42	42	42.0	1714.03	130.9195	Hazy
31/01/13	204517	2.8920	3.0542	0.1622	1330.56	1354.59	24.03	42	42	42.0	1714.74	94.5914	Sunny

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

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Project	<u>:</u>	Quote number	:	Date received	: 03-JAN-2013
Order number	:			Date of issue	2 07-FEB-2013
C-O-C number	:			No. of samples	- Received : 24
Site	:				- Analysed : 24

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1303015 supersedes any previous reports with this reference. The completion date of analysis is 07-FEB-2013. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1303015 : Sample(s) were received in an ambient condition. Sample(s) analysed and reported on an as received basis.

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	Signatory	Position	Authorised results for:-
	Fung Lim Chee, Richard	General Manager	Inorganics

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Sub-Matrix: FILTER (TSP/RSP)		Compound	HK-TSP: Total Suspended Particulates	HK-TSP: Initial Weight	HK-TSP: Final Weight	
		LOR Unit	0.0010 g	0.0010 g	0.0010 g	
Client sample ID	Client sampling date /	Laboratory sample	EA/ED: Physical and	EA/ED: Physical and	EA/ED: Physical and	
	time	ID	Aggregate Properties	Aggregate Properties	Aggregate Properties	
204389	[03-JAN-2013]	HK1303015-001	0.1841	2.7720	2.9561	
204390	[03-JAN-2013]	HK1303015-002	0.1669	2.7524	2.9193	
204400	[03-JAN-2013]	HK1303015-003	0.1618	2.7728	2.9346	
204398	[03-JAN-2013]	HK1303015-004	0.1685	2.7676	2.9361	
204403	[09-JAN-2013]	HK1303015-005	0.1852	2.7379	2.9231	
204404	[09-JAN-2013]	HK1303015-006	0.1746	2.7457	2.9203	
204405	[09-JAN-2013]	HK1303015-007	0.1748	2.7091	2.8839	
204406	[09-JAN-2013]	HK1303015-008	0.1678	2.7122	2.8800	
204502	[14-JAN-2013]	HK1303015-009	0.1417	2.9262	3.0679	
204503	[14-JAN-2013]	HK1303015-010	0.1310	2.9247	3.0557	
204504	[14-JAN-2013]	HK1303015-011	0.1365	2.9130	3.0495	
204505	[14-JAN-2013]	HK1303015-012	0.1483	2.8879	3.0362	
204506	[19-JAN-2013]	HK1303015-013	0.1658	2.9020	3.0678	
204507	[19-JAN-2013]	HK1303015-014	0.1555	2.8885	3.0440	
204508	[19-JAN-2013]	HK1303015-015	0.1565	2.8783	3.0348	
204509	[19-JAN-2013]	HK1303015-016	0.1709	2.8865	3.0574	
204510	[25-JAN-2013]	HK1303015-017	0.1842	2.8789	3.0631	
204511	[25-JAN-2013]	HK1303015-018	0.1654	2.8917	3.0571	
204512	[25-JAN-2013]	HK1303015-019	0.1853	2.8954	3.0807	
204513	[25-JAN-2013]	HK1303015-020	0.2244	2.8823	3.1067	
204514	[31-JAN-2013]	HK1303015-021	0.1348	2.8882	3.0230	
204515	[31-JAN-2013]	HK1303015-022	0.1192	2.8794	2.9986	
204516	[31-JAN-2013]	HK1303015-023	0.1506	2.8891	3.0397	
204517	[31-JAN-2013]	HK1303015-024	0.1622	2.8920	3.0542	

