-CCECC & CRWJ Joint Venture

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Contract No. HY/2003/19

Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha

Monthly EM&A Report (Version 2.0)

September 2008

Certified By	Chr. (Enviro	1 M nmental Te	am Leader)
L	REN/	ARKS:	

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
HVS	High Volume Sampler
HyD	Highways Department
IEC	Independent Environmental Checker
NOE	Notification of Exceedance
QA/QC	Quality Assurance / Quality Control
RE	Resident Engineer
RH	Relative Humidity
SLM	Sound Level Meter
TSP	Total Suspended Particulates
WMP	Waste Management Plan

EXECUTIVE SUMMARY

Introduction

- 1. This is the 47th monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the project "Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha" (the Project). This report documents the findings of EM&A Works conducted in September 2008.
- 2. The construction activities undertaken in the reporting month included:
 - Construction of rock fall fencing;
 - Construction of drainage and water pipe;
 - Drainage and slope works;
 - Construction of debris trap;
 - Installation of street furniture; and
 - Raising of watermain valve pit.

Environmental Monitoring Works

- 3. Environmental monitoring for the Project was performed regularly as stipulated in the Updated EM&A Manual (Revision C) and the results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
- 4. Summary of exceedance of noise, air and water quality monitoring for the reporting month is tabulated in Table I.

Parameter	Number of Exceedances due to the Project		Action Taken	Results of Action
	Action Level	Limit Level	Такеп	Taken
Air Quality	0	0	N.A.	N.A.
Noise	0	0	N.A.	N.A.
Water Quality	0	0	N.A.	N.A.

Table I Summary Table for Exceedance Recorded in the Reporting Month

Air Quality

5. 24-hr TSP monitoring at 3 monitoring stations, AM1, AM2 and AM4, were conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded for 24-hr TSP monitoring in the reporting month.

Construction Noise

6. Noise monitoring at 7 designated monitoring stations, namely NM1, NM2, NM3, NM4, NM5, NM6 and NM8, were conducted as scheduled in the reporting month except the monitoring on 24 September 2008 was cancelled due to adverse weather and re-

scheduled to 26 September 2008. No Action/ Limit Level exceedance was recorded in the reporting month.

Water Quality

- 7. Water quality monitoring was conducted as scheduled at designated monitoring stations (Streams 15, 18, 21, 23, 26, 27, 40, Cheung Sha Stream, Tung Chung Stream and Tung Chung Bay) which are under the influence of the works in the reporting month. Streams 19, 25, 32 and 35 were observed to be dry throughout the reporting month. Therefore, no water monitoring was conducted at these streams. As the water depth of Tung Chung Bay was less than 3m, only the mid-depth level was monitored.
- 8. Exceedances of suspended solids (SS) were recorded in the month. No direct evidence demonstrated that the exceedances were caused by the Project.

Environmental Licensing and Permitting

 License/Permits granted to the Project include Environmental Permit (License No.: EP-170/2003/C), Registration of Chemical Waste Producer (License: WPN5214-950-C1213-01), Water Discharge License (License No.: EP890/W7/XP089, EP890/W7/XP090 and EP890/W2/XG013) and Construction Noise Permit (License No.: GW-RS0419-08, GW-RW0122-08, GW-RW0439-08 and GW-RS0209-08).

Key Information in the Reporting Month

10. Summary of key information in the reporting month is tabulated in Table II.

	Event Details		Action Taken	Status	Remark
Event	Number	Nature			
Complaint received	0		N.A.	N.A.	
Changes to the assumptions and key construction / operation activities recorded	0		N.A.	N.A.	
Notifications of any summons received	0		N.A.	N.A.	
Notifications of any successful prosecution received	0		N.A.	N.A.	

 Table II
 Summary Table for Key Information in the Reporting Month

Complaints and Prosecutions

- 11. No environmental complaint was received in the reporting month.
- 12. No warning and summon or notification of successful prosecution was received in the reporting month.

Future Key Issues

13. Key issues to be considered in the coming month include:

- Runoff from exposed slope;
- Wastewater and runoff discharge from site;
- Regular removal of silt, mud and sand along u-channels and sedimentation tanks;
- Review and implementation of temporary drainage system for the surface runoff;
- Proper storage of construction materials near streams;
- Noise from operation of the equipment, especially for rock-breaking activities and machinery on-site;
- Dust generation from stockpiles of dusty materials, exposed retain wall, excavation works and rock breaking activities;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Watering for rock breaking activity, soil nailing and on haul road; and
- Accumulation of general and construction waste near stream and on site.

1. INTRODUCTION

Background

- 1.1 The Project "Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha" involves the widening and realignment of Tung Chung Road between Lung Tseng Tau in North Lantau and Cheung Sha in South Lantau. The layout plan of the Project is shown in Figure 1.
- 1.2 The scope of the Project includes:
 - a) widening and realignment of a 3.6 km section of Tung Chung Road (TCR) between Lung Tseng Tau and Pak Kung Au from a single-lane road for two-way traffic to a single two-lane road for two-way traffic with a footpath having a minimum width of 1.6 m, and construction of a 2.6 km long single two-lane road between Pak Kung Au and Cheung Sha, including elevated highway structures of a total length of 750 m, with a footpath of a minimum width of 1.6 m;
 - b) provision of 21 passing bays/bus-bays along the road and a roundabout at Cheung Sha; and
 - c) associated works including road rehabilitation, drainage, utility, environmental mitigation measures, landscaping, slope stabilization, traffic aids, road safety enhancement measures, lighting, traffic control and surveillance system, and electrical and mechanical (E&M) works.
- 1.3 The Environmental Impact Assessment (EIA) Report for the Project was approved on 4 July 2002 under the Environmental Impact Assessment Ordinance (EIAO). An Environmental Permit (EP- 170/2003) for the works was also granted on 27 June 2003. Two varied Environmental Permits (EP) (EP-170/2003/B and EP-170/2003/C) were issued in June 2006 and July 2007 respectively. Environmental Monitoring and Audit (EM&A) Manual for the Project was also included as part of the EIA reports in the register. An updated EM&A Manual (Revision C) has been issued on 28 April 2006.
- 1.4 Highways Department awarded the construction of the Project to CCECC & CRWJ Joint Venture (being a joint venture of China Civil Engineering Construction Corporation & China Railway Wuju Group Corporation) (hereinafter called "the Contractor") in June 2004. The construction works commenced on 4 November 2004 and are scheduled to be completed by September 2007.
- 1.5 Cinotech Consultants Limited (Cinotech) was commissioned by the Contractor to undertake the Environmental Team (ET) Services for the Project since 1 September 2006. All environmental and audit works were conducted by Cinotech and the laboratory testing works were conducted by a HOKLAS laboratory, Wellab Limited. This is the 47th monthly EM&A report summarizing the EM&A works for the Project in September 2008.

Project Organizations

- 1.6 Different parties with different levels of involvement in the project organization include:
 - Project Proponent Major Works Project Management Office (MWPMO) of Highways Department (HyD)
 - Engineer (E) / Engineer's Representative (ER) Mott Connell Limited
 - Contractor CCECC & CRWJ Joint Venture
 - Environmental Team (ET) Cinotech Consultants Limited
 - Independent Environmental Checker (IEC) ENSR Asia (HK) Limited
- 1.7 The responsibilities of respective parties are detailed in Section 1.5 of the Updated EM&A Manual (Revision C, issued on 28 April 2006) of the Project. The project organization chart is presented in Figure 2.

Construction Programme

1.8 The construction activities undertaken in the reporting month were:

Northern Section

- Drainage works at Zone A;
- Debris trap construction and slope works at Zone B;
- Rock fall fencing construction and slope works at Zone C;
- Installation of street furniture at Zone D;
- Slope and drainage works at Zone E; and
- Rock fall fencing, water pipe construction and drainage works at Zone F.

Southern Section

- Raising of watermain valve pit at Zone 1 and Zone 2;
- Installation of street furniture at Zone 3;
- Drainage construction and slope works at Zone 4 and Zone 5; and
- Drainage works at Zone 6.

Summary of EM&A Requirements

- 1.9 The EM&A programme requires construction phase monitoring for air quality and construction noise, water quality and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
 - All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event Action Plans;

- Environmental mitigation measures, as recommended in the project EIA report; and
- Environmental requirements in contract documents.
- 1.10 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 5 of this report.
- 1.11 This report presents the environmental monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely air quality, noise levels, water quality and audit works for the Project in the reporting month.

2. AIR QUALITY

Monitoring Requirements

2.1 Monitoring of 1-hour and 24-hour TSP was conducted to monitor the air quality. Appendix A shows the established Action/Limit Levels for the environmental monitoring works.

Monitoring Locations

- 2.2 In accordance with the updated EM&A Manual, 24-hour TSP monitoring shall only be conducted at the monitoring location when there are Project related construction activities being undertaken within a radius of 500 m from the monitoring location.
- 2.3 Five designated monitoring stations, AM1 to AM5 were selected for impact dust monitoring for the Project. Table 2.1 describes the air quality monitoring locations and Figure 3 shows their locations.

Monitoring Station	Description	Location
AM1	YMCA of Hong Kong Christian College	Rooftop
AM2	D 68 Leyburn Villas	House
AM3 ⁽¹⁾	Butterfly Crest	House
AM4	No. 31 South Lantau Road	House
AM5 ⁽²⁾	YWCA	To be confirmed

Table 2.1 Locations for Air Quality Monitoring

Remarks:

⁽¹⁾ Monitoring at AM3 will be conducted when the Project related construction activities are being undertaken within a radius of 500 m from the monitoring location.

⁽²⁾ Monitoring at AM5, YWCA, will be resumed when YWCA re-open.

Monitoring Equipment

2.4 Table 2.2 summarizes the equipment used for the air quality monitoring. Copies of calibration certificates are attached in Appendix B.

Table 2.2 Air Quality Monitoring Equipment

Equipment	Model and Make	Quantity
Calibrator	GMW25; S/N: 1536	1
HVS Sampler	Graseby GMW Model GS2310 High Volume TSP Sampler and associated equipment and shelter	3

Monitoring Parameters, Frequency and Duration

2.5 Table 2.3 summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting period is shown in Appendix C.

Table 2.3	Impact Dust Monitoring Parameters, Frequency and Duration
1 abic 2.5	impact Dust Monitoring I arameters, Frequency and Duration

Parameters	Frequency	
1-hr TSP ^(a)	Three times / 6 days	
24-hr TSP	Once / 6 days	

Note:

(a) 1-hour TSP monitoring will be carried out in case that an exceedance of 24-hour TSP level is identified to be due to the Project.

Monitoring Methodology and QA/QC Procedure

Instrumentation

2.6 Graseby GMW Model GS2310 TSP High Volume Sampler (HVS) was employed for 1-hour & 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50). Moreover, the HVS also met all the requirements in Section 3.2 of the Updated EM&A Manual.

Operating/Analytical Procedures

- 2.7 Operating/analytical procedures for the operation of HVS were as follows:
 - A horizontal platform was provided with appropriate support to secure the samplers against gusty wind.
 - No two samplers were placed less than 2 meters apart.
 - The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
 - A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
 - A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
 - No furnaces or incineration flues were nearby.
 - Airflow around the sampler was unrestricted.
 - The sampler was more than 20 meters from the drip line.
 - Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- 2.8 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50. For TSP sampling, fiberglass filters (G810) were used.

- 2.9 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 2.10 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.11 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- 2.12 The shelter lid was closed and secured with the aluminum strip. The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number). After sampling, the filter was removed and sent to the laboratory for weighing. The elapsed time was also recorded.
- 2.13 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ± 3 °C; the relative humidity (RH) should be < 50% and not vary by more than ± 5 %. A convenient working RH is 40%.

Maintenance/Calibration

- 2.14 The following maintenance/calibration was required for the HVS:
 - The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
 - High volume samplers were calibrated at bi-monthly intervals using GMW-25 Calibration Kit throughout all stages of the air quality monitoring.

Wind Data

2.15 Wind data was required to be taken from the Hong Kong Observatory Weather Stations including HK International Airport and Cheung Chau.

Results and Observations

- 2.16 24-hr TSP monitoring at 3 monitoring stations, AM1, AM2 and AM4, were conducted as scheduled in the reporting month.
- 2.17 The monitoring data, graphical presentations and wind data for the reporting month are summarized in Appendix D. No Action/Limit Level exceedance was recorded for 24-hr TSP monitoring in the reporting month.

3. NOISE

Monitoring Requirements

- 3.1 Monitoring and audit of construction noise levels is required to be conducted, in accordance with the Updated EM&A Manual, to ensure that any unacceptable noise impacts could be readily detected and timely and appropriate action be undertaken to rectify the situation.
- 3.2 The construction noise levels shall be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). Leq (30min) shall be used as the monitoring parameter for the time period between 0700-1900 hours on normal weekdays. For all other time periods, Leq (5min) shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. As supplementary information for data auditing, statistical results such as L₁₀ and L₉₀ shall also be obtained for reference.

Monitoring Locations

- 3.3 In accordance with the Updated EM&A Manual, noise monitoring shall only be conducted at the monitoring location when there are Project related construction activities being undertaken within a radius of 300m from the monitoring location.
- 3.4 Eight designated noise monitoring stations, NM1 to NM8 were selected for noise impact monitoring. Appendix A shows the established Action and Limit Levels for the environmental monitoring works. Table 3.1 describes the noise monitoring locations and Figure 3 shows their locations.

Stations	Description	Location
NM1	No. 28 Lung Tseng Tau	Ground Floor
NM2	YMCA of Hong Kong Christian College	Rooftop
NM3	No. 37 Shek Lau Po	Ground Floor
NM4	No. 1 Shek Mun Kap	Ground Floor
NM5	Tung Chung Au Country Parks Management Centre	Ground Floor
NM6	D75 Leyburn Villa	Ground Floor
NM7 ⁽¹⁾	House in Butterfly Crest House 22	Rooftop
NM8	No. 31 South Lantau Road	Ground Floor

Remarks:

⁽¹⁾ Monitoring at NM7 will be conducted when the Project related construction activities are being undertaken within a radius of 300 m from the monitoring location.

Monitoring Equipment

3.5 Table 3.2 summarizes the noise monitoring equipment model being used. Copies of calibration certificates are attached in Appendix B.

Table 3.2Noise Monitoring Equipment

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	B&K Model 2238	5
Calibrator	B&K 4231	3
Wind Speed Anemometer	RS232 Integral Vane Digital Anemometer	1

Monitoring Parameters, Frequency and Duration

3.6 Table 3.3 summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is attached in Appendix C.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Station	Parameter	Period ¹	Frequency	Measurement
NM1				Façade ⁽¹⁾
NM2				Façade ⁽¹⁾
NM3		(-) 0700 1000 hms an and 1 have		Façade ⁽¹⁾
NM4	$L_{10}(30 \text{ min.})dB(A)$	 (a) 0700-1900 hrs. on weekdays (b) 1900-2300 hrs. on weekdays (c) 0700-2300 hrs. on holidays (d) 2300-0700 hrs on any days 	Once every	Façade ⁽¹⁾
NM5	$L_{90}(30 \text{ min.})dB(A)$ $L_{eq}(30 \text{ min.})dB(A)$		6 working days	Façade ⁽¹⁾
NM6				Façade ⁽¹⁾
NM7				Façade ⁽¹⁾
NM8				Façade ⁽¹⁾

Remarks:

⁽¹⁾Noise measurements were taken at 1m from the exterior of the building facade.

(b), (c) and (d) will only be conducted if construction works are undertaken during these periods.

Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was generally set on a tripod at a height of 1.2 m above the ground, depending to the actual monitoring condition.
- For free field measurement (if any), the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB(A).
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

- frequency weighting
- time weighting

time measurement

- : A : Fast
- : 30 minutes / 5 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the L_{eq} , L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

Maintenance and Calibration

3.7 The microphone head of the sound level meter and calibrator was cleaned with soft cloth regularly. The meters were sent to the supplier to check and calibrate on a yearly interval.

Results and Observations

- 3.8 Noise monitoring was conducted as scheduled, except the monitoring on 24 September 2008 was cancelled due to adverse weather and re-scheduled to 26 September 2008, at the seven designated stations NM1, NM2, NM3, NM4, NM5, NM6 and NM8, in this reporting month. Noise monitoring results and graphical presentations are shown in Appendix E.
- 3.9 No Action/Limit Level exceedance was recorded in the reporting month.

4. WATER QUALITY

Monitoring Requirements

4.1 Water quality monitoring was conducted in accordance with the Updated EM&A Manual. Appendix A shows the established Action Limit Levels for the environmental monitoring works.

Monitoring Equipment

4.2 Table 4.1 summarizes the equipment used in the impact water quality monitoring program. All the monitoring equipment complied with the specifications stipulated in the EM&A Manual. Copies of the calibration certificates of the equipment are attached in Appendix B.

Table 4.1 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Multi-parameter Water Quality System	YSI 6820	2

Monitoring Parameters, Frequency and Duration

- 4.3 Table 4.2 summarizes the monitoring parameters, monitoring period and frequencies of water quality monitoring. The water quality monitoring schedule is attached in Appendix C.
- 4.4 In-situ measurements were taken at designated monitoring stations which are under the influence of the works at least three times per week during the course of the construction period. In addition, water samples for suspended solid analysis have been collected at the designated stations and delivered to Wellab for further laboratory analysis.

Table 4.2 Fr	requency and Parameters	of Water Qual	ity Monitoring
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Parameters	Frequency	No. of Depth
DO Saturation (%), DO (mg/L), Turbidity (NTU), SS (mg/L), Temperature (°C), & pH	3 times per week	Sub-surface

Monitoring Locations

4.5 The water quality monitoring locations are shown in Figure 3 and their details are provided in Table 4.3.

Monitoring Station	Туре	Easting	Northing
(Stream No.)			
Tung Chung Stroom	Reference	811853	813289
Tung Chung Stream	Impact	811601	813716
Chaung Sha Straam	Reference	812525	811980
Cheung Sha Stream	Impact	812447	811165
Stream 15	Reference	811853	813289
Stream 15	Impact	811781	813298
Stream 18	Reference	811889	813107
Stream 18	Impact	811836	813138
Stream 19	Reference	811920	812927
Stream 19	Impact	811858	812987
Stream 21	Reference	811994	812695
Stream 21	Impact	811873	812723
	Reference1	811980	812589
Stream 23	Reference 2	812079	812386
	Impact	811894	812658
Stream 25	Reference	812353	812052
Stream 23	Impact	812324	812017
Stream 26	Reference	812525	811980
Stream 20	Impact	812456	811895
Stream 27	Reference	812658	811770
Stream 27	Impact	812604	811747
Stream 32	Reference	812980	811410
Stream 52	Impact	812988	811327
Stream 25	Reference	813231	811275
Stream 35	Impact	813218	811218
Stream 10	Reference	813686	811311
Stream 40	Impact	813690	811211
Tung Chung Dou	Reference	810679	816038
Tung Chung Bay	Impact	810787	815706

 Table 4.3
 Water Quality Monitoring Locations

Monitoring Methodology, Calibration Details and QA/QC Procedures

Instrumentation

4.6 A multi-parameter meter (Model YSI 6820 CE-C-M-Y) was used to measure DO, turbidity, salinity, pH and temperature.

Operating/Analytical Procedures

- 4.7 At each monitoring location, two consecutive measurements were taken for water samples being collected on site. The probes were retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.
- 4.8 For SS, measurement and grab samples of surface water were collected. Water samples of about 1,000 ml were collected and stored in polyethylene bottles. Following collection, water samples were stored in high density polythene bottles with preservative appropriately added, packed in ice and cooled to 4°C (without being frozen), delivered to the HOKLAS accredited laboratory, Wellab Limited and analyzed.

Maintenance and Calibration

4.9 Before each round of monitoring, a zero check in distilled water was performed with the turbidity probe of YSI 6820. The probe was then calibrated with a solution of known NTU.

Results and Observations

- 4.10 Water quality monitoring was conducted as scheduled at designated monitoring stations (Streams 15, 18, 21, 23, 26, 27, 40, Cheung Sha Stream, Tung Chung Stream and Tung Chung Bay), which are under the influence of the works, in the reporting month. As Streams 19, 25, 32 and 35 were observed dry, no water monitoring at these locations was conducted in the reporting month.
- 4.11 During monitoring, the weather conditions were mainly sunny. The monitoring data and graphical presentations of the monitoring results are shown in Appendix F and the Quality Control reports for the laboratory analysis are provided in Appendix G.
- 4.12 Exceedances of suspended solids (SS) were recorded in water samples in the reporting month. The exceedance reports are attached in Appendix H. The summary of exceedances for each water quality parameters are provided in Table 4.4.

Station	DO		pН	Turb	oidity	S	S
No.	Action	Limit	Limit	Action	Limit	Action	Limit
15_I	0	0	0	0	0	0	0
18_I	0	0	0	0	0	0	0
19_I*	0	0	0	0	0	0	0
21_I	0	0	0	0	0	0	0
23_I	0	0	0	0	0	0	0
25-I*	0	0	0	0	0	0	0
26_I	0	0	0	0	0	0	0
27_I	0	0	0	0	0	11	2
32_I*	0	0	0	0	0	0	0
35_I*	0	0	0	0	0	0	0
40_I	0	0	0	0	0	1	0
CSS_I	0	0	0	0	0	0	0
TCB_I	0	0	0	0	0	0	0
TCS_I	0	0	0	0	0	1	0

 Table 4.4
 Summary of Water Quality Exceedances in the reporting month

Remarks: * indicates the stream was not sampled in the reporting month.

- 4.13 As shown in the exceedance reports attached in Appendix H, all exceedances for water quality parameters recorded in the reporting month were not due to the Project based on the following observations:
 - \diamond No construction activity was observed in the vicinity of the sampling locations.
 - \diamond No pollution discharge from construction activity was observed.
 - ♦ Measured value at the reference station was higher than at the impact monitoring stations.
- 4.14 According to the ET's investigation, no direct evidence demonstrated the exceedances of Action/Limit level for water monitoring parameters were caused by the Project.

5. ENVIRONMENTAL AUDIT

Site Audits

- 5.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 5.2 ET site audits were conducted on 4th, 10th, 18th and 25th September 2008 in the reporting month. IEC site inspections were conducted on 10th September 2008. The summaries of site audits are attached in Appendix I.

Review of Environmental Monitoring Procedures

5.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations were recorded for the monitoring works:

Air Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations within and outside of the construction site.
- The monitoring team recorded the temperature, air pressure and weather conditions on the monitoring day.

Noise Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

Water Quality Monitoring

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- The monitoring team recorded the weather and river conditions on the monitoring day.

Status of Environmental Licensing and Permitting

5.4 All permits/licenses obtained for the Project are summarized in Table 5.1.

Table 5.1	Summary of Environmental Licensing and Permit Status
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D '4 N	Valid	Period		<u>C</u> ()
Permit No.	From	То	Details	Status
Environmental Peri	mit (EP)		·	
EP-170/2003/C	31/7/07	N/A	Construction of (a) Widening and realignment of an approximate 3.6 kilometre long section of Tung Chung Road between Lung Tseng Tau and Pak Kung Au from a single-lane road for two-way traffic to a single two-lane road with footpath; (b) Construction of an approximate 2.6 kilometre long single two-lane road between Pak Kung Au and Cheung Sha with footpath and elevated highway structures; and © Provision of passing bays/bus lay-bys along Tung Chung Road.	Valid
Registration of Che	mical Waste	e Producer		
WPN5214 – 950- C1213-01		N/A	Chemical waste types: spent Indication oil, surplus paint, spent diesel, spent thinner, mixing residue containing pesticides, spent mineral oil	Valid
Water Discharge Li	cense			
EP890/W7/XP089		N/A	Discharge from Sewage Treatment System (Northern Section)	Valid
EP890/W7/XP090		N/A	Industrial discharge (Northern Section)	Valid
EP890/W2/XG013		N/A	Industrial discharge (Southern Section)	Valid
Construction Noise	Permit (CN	P)	• · · · · · · ·	
GW-RS0419-08	25/06/08	24/12/08	Construction Noise Permit for Tung Chung Road between Lung Tseng Tau and Cheung Sha	Valid
GW-RW0122-08	20/03/08	19/09/08	Construction Noise Permit for Cheung Tung Road near Sunny Bay Station, Lantau Island, H.K.	Expired
GW-RW0439-08	20/09/08	19/03/09.	Construction Noise Permit for Cheung Tung Road near Sunny Bay Station, Lantau Island, H.K.	Valid
GW-RS0209-08	10/04/08	09/10/08	Construction Noise Permit for Construction Site for Roadworks between Pak Kung Au and Cheung Sha Sheung Tsuen	Valid

Status of Waste Management

- 5.5 The waste management of the Project has to follow the requirements and procedures stated in the Waste Management Plan which was prepared by the Contractor.
- 5.6 The solid waste generated from the Project was mainly general refuse that was collected by a licensed collector on an as need basis.
- 5.7 The monthly summary of waste flow table and the timber summary for September 2008 are provided in Appendix O.

Implementation Status of Environmental Mitigation Measures

5.8 During site inspections in the reporting month, no non-conformance was identified.

The observations and recommendations are summarized in Table 5.2.

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	04/09/08	Contractor was reminded to clear the silt and	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: Clear the sediment on the paved road near the entrance of STR7. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	followings:	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	The Contractor was reminded of the followings: - Properly cover the exposed slope at STR7 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: Clear the tree debris and sediments at existing TCR (near STR7). 	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	 The Contractor was reminded of the followings: Properly cover the exposed surface at underneath STR8. 	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	 The Contractor was reminded of the followings: Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and paved road to prevent any sediment from carrying out. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: To pave the uneven area at STR9A to prevent standing water. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed slope with tarpaulin at underneath STR10. 	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	followings:	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	The Contractor was reminded of the	Rectification/improvement was

Parameters	Date	Observations and Recommendations	Follow-up
		followings:Hydroseed/cover the exposed slope at underneath STR13.	observed during the follow-up audit session.
	04/09/08	 The Contractor was reminded of the followings: Properly cover the exposed slope at underneath STR16. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed surface at STR14.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Clear sediment and debris near catchment.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Remove the discarded sedimentation tank that retains the standing water at STR18 .	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	The Contractor was reminded of the followings: - Clear sediment and debris at the paved road along existing TCR .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Keep clear the sediment at the culvert at RW6 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings:Properly cover the exposed slope at opposite to RW7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan . The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	 The Contractor was reminded of the followings: Clear the sediment on the paved road near the entrance of STR7. 	Rectification/improvement was observed during the follow-up audit session.
	10/09/08	The Contractor was reminded of the followings: - Properly cover the exposed slope at STR7 (RW14).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:	This item was not rectified during the follow-up audit

Parameters	Date	Observations and Recommendations	Follow-up
		- To pave the uneven area at STR9A to	session. Follow-up action was
		prevent standing water.	needed for the outstanding item.
	10/09/08	 The Contractor was reminded of the followings: Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and paved road to prevent 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
		any sediment from carrying out.	
	10/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed surface at STR14. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings: - Clear sediment and debris near catchment.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	 The Contractor was reminded of the followings: Properly cover the catchment channel at underneath STR16. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:Clear sediment and debris at the paved road along existing TCR.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:Keep clear the sediment at the culvert at RW6.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	Clear the addiment of the subject near Stream	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:Properly cover the exposed slope at opposite to RW7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	 The Contractor was reminded of the followings: Properly cover the exposed slope at underneath STR16. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan . The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	Silty water was observed discharging to Tung	This item was not rectified

Parameters	Date	Observations and Recommendations	Follow-up
		Chung Stream at Stream11 and Stream 13	during the follow-up audit
		due to the exposed surface and sediment	session. Follow-up action was needed for the outstanding item.
		accumulates at the culvert (partly from the	needed for the outstanding item.
		landslip). The Contractor was reminded to	
		arrange the stream diversion, cover the	
		exposed surface and clear the culvert to	
		prevent any silty water discharging out.	
	18/09/08	The Contractor was reminded of the followings: - Properly cover the exposed slope at STR7 (RW14).	Rectification/improvement was observed during the follow-up audit session.
	18/09/08	 The Contractor was reminded of the followings: Properly cover the stockpile and remove away from the culvert at STR7-8. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Properly cover/ hydroseed the exposed slope at underneath STR 8. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Clear the oil stains at STR8 .	Rectification/improvement was observed during the follow-up audit session.
	18/09/08	 The Contractor was reminded of the followings: Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and paved road to prevent any sediment from carrying out. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed surface at STR14.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed slope at underneath STR16. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Properly cover the catchment channel at underneath STR16. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Clear sediment and debris near catchment.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings:	This item was not rectified during the follow-up audit

Parameters	Date	Observations and Recommendations	Follow-up
		- Clear sediment and debris at the paved road along existing TCR.	session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Clear the sediment at the culvert near Stream 19 (downstream).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Properly cover the exposed slope at opposite to RW7 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Hydroseed/ cover the exposed surface at STR6.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan . The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly. (in-progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	Silty water was observed discharging to the public road at underneath STR7. The Contractor was reminded to cover the exposed surface to prevent any silty runoff.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Clear the standing water in the drip tray at the entrance of STR7 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Properly cover/ hydroseed the exposed slope at underneath STR 8 and STR9 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Properly cover the exposed slope at STR11 , STR12 and STR13 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Re- arrange the stream diversion at Stream 30 .	Rectification/improvement was observed during the follow-up audit session.
	25/09/08	The Contractor was reminded of the followings: - Properly cover the exposed surface at STR14.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Properly cover the catchment channel at underneath STR16 and STR17 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

Parameters	Date	Observations and Recommendations	Follow-up
	25/09/08	The Contractor was reminded of the followings: - Clear sediment and debris near catchment. (in- progress)	Rectification/improvement was observed during the follow-up audit session.
	25/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed slope at underneath STR16 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Clear sediment and debris at the paved road along existing TCR .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Clear the sediment at the culvert near Stream 19 (downstream).	Rectification/improvement was observed during the follow-up audit session.
	25/09/08	The Contractor was reminded of the followings: - Re- arrange the stream diversion at Stream 6 , Stream 7 and Stream 13 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Keep clear the culvert near Stream 11 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Clear the sediment at the public road near Stream 7 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings:Properly cover the exposed slope at opposite to RW7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed surface at STR6.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
Air Quality	04/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile near Stream 25 .	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	 The Contractor was reminded of the followings: Properly cover the stockpile at STR7-8 when it is not in works. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile at underneath	Rectification/improvement was observed during the follow-up audit session.

Parameters	Date	Observations and Recommendations	Follow-up
		STR8.	
	04/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile at STR9 .	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed slope with tarpaulin at underneath STR10. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed slope with tarpaulin at underneath STR12. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile at STR11 , STR12 and STR13 after the works.	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed slope at underneath STR13 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed surface at STR14. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Hydroseed the exposed surface at STR6 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	De-bagging and cement mixing has observed without enclosure at STR19. The Contractor was reminded to provide it 3 sides enclosure with top shelter during the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:Properly cover the stockpile and remove away from the culvert at STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:Hydroseed/cover the exposed surface at STR14.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	 The Contractor was reminded of the followings: Provide water-spray on dust-generation activities (rock breaking) at STR14. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings:	This item was not rectified during the follow-up audit

Parameters	Date	Observations and Recommendations	Follow-up
		- Hydroseed the exposed surface at STR6.	session. Follow-up action was needed for the outstanding item.
	18/09/08	De-bagging and cement mixing has observed without enclosure at STR8. The Contractor was reminded to provide it 3 sides enclosure with top shelter during the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile and remove away from the culvert at STR7-8 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Properly cover/hydroseed the exposed slop at underneath STR 8. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed surface at STR14.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Hydroseed/cover the exposed slope at underneath STR16. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Hydroseed /cover the exposed surface at STR6.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	De-bagging and cement mixing were observed without enclosure at STR10 . The Contractor was reminded to provide it 3 sides enclosure with top shelter during the works as soon as possible.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile at between STR7-8 .	Rectification/improvement was observed during the follow-up audit session.
	25/09/08	The Contractor was reminded of the followings: - Properly cover/ hydroseed the exposed slope at underneath STR 8 and STR9 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed slope at underneath STR16 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: - Properly cover the stockpile at Pak Kung	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

Parameters	Date	Observations and Recommendations	Follow-up
		Au near existing TCR.	
	25/09/08	The Contractor was reminded of the followings: - Hydroseed/cover the exposed surface at STR6.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
Waste / Chemical Management	04/09/08	Oil leakage from the plant equipment and oil stains were observed at STR8. The Contractor was reminded to clear them as soon as possible and provide drip tray for the equipment to prevent land contamination.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Clear C&D waste at STR7 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Provide drip tray for the oil container at STR7 -8.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	 The Contractor was reminded of the followings: Clear C&D waste at Stream 28, Stream 29, Stream 31 and Stream 19 (downstream). 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/09/08	The Contractor was reminded of the followings: - Clear C&D waste at underneath STR12 .	Rectification/improvement was observed during the follow-up audit session.
	04/09/08	The Contractor was reminded of the followings: - Clear discarded tree debris at underneath STR13 .	Rectification/improvement was observed during the follow-up audit session.
	10/09/08	The Contractor was reminded of the followings:Provide drip tray for the oil containers at STR7.	Rectification/improvement was observed during the follow-up audit session.
	10/09/08	 The Contractor was reminded of the followings: Clear C&D waste and general refuse at the U-Channel at STR7. 	Rectification/improvement was observed during the follow-up audit session.
	10/09/08	The Contractor was reminded of the followings:Provide drip tray for the plant equipment at STR8.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings: - Remove C&D waste near the culvert at STR9A.	Rectification/improvement was observed during the follow-up audit session.
	10/09/08	The Contractor was reminded of the	This item was not rectified

Parameters	Date	Observations and Recommendations	Follow-up
		followings: - Clear C&D waste at Stream 28 , Stream 29 , Stream 31 , Stream 34 and Stream 19 (downstream).	during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings: - Provide drip tray for the plant equipment at STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Clear C&D waste at Stream 28, Stream 29, Stream 31, Stream 34 and Stream 19 (downstream). 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: -Provide drip tray for the plant equipment at STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: -Clear C&D waste at Stream 28, Stream 29, Stream 31, Stream 34, Stream 35 and Stream 19 (downstream).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings: -Clear C&D waste at underneath STR12 .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
General	04/09/08	 The Contractor was reminded of the followings: Clear the discarded tree debris, sediment, stones and debris in the drainage system (U-Channel, culvert, gullies and underground channel) more frequently. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	The Contractor was reminded of the followings: - Clear the sediment and debris in the drainage system (U-Channel, culvert, gullies and underground channel) more frequently.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/09/08	 The Contractor was reminded of the followings: Erect fencing for the stream near the construction works especially for the Stream 29. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	 The Contractor was reminded of the followings: Clear the sediment and debris in the drainage system (U-Channel, culvert, gullies and underground channel) after the rainstorm. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

Parameters	Date	Observations and Recommendations	Follow-up
	18/09/08	 The Contractor was reminded of the followings: Erect fencing for the stream near the construction works especially for the Stream 29. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/09/08	The Contractor was reminded of the followings:Clear the stagnant water at the uneven area and the valley after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	 The Contractor was reminded of the followings: Clear the sediment and debris in the drainage system (U-Channel, culvert, gullies and underground channel) after the rainstorm. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	 The Contractor was reminded of the followings: Erect fencing for the stream near the construction works especially for the Stream 29 and Stream 31. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	The Contractor was reminded of the followings:Clear the stagnant water at the uneven area and pit after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/09/08	 The Contractor was reminded of the followings: Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and the paved road to prevent any sediment from carrying out. 	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

Non-compliance Recorded during Site Inspections

5.9 No non-compliance was recorded in the reporting period.

Summary of Mitigation Measures Implemented

5.10 The Contractor has implemented the mitigation measures as recommended in the EIA and the Updated EM&A Manual. The mitigation measures implemented by the Contractor in the reporting month are summarized as follow:

Water Quality

- (1) Clear the standing water in the drip tray at STR7 and STR8.
- (2) Clear the tree debris and sediments at existing TCR (near STR7).
- (3) Properly cover the exposed surface at underneath STR8.
- (4) Hydroseed/cover the exposed slope with tarpaulin at underneath STR10.

- (5) Hydroseed/cover the exposed slope at underneath STR13.
- (6) Remove the discarded sedimentation tank that retains the standing water at STR18.
- (7) Clear the sediment on the paved road near the entrance of STR7.
- (8) Re- arrange the stream diversion at Stream 30.
- (9) Clear sediment and debris near catchment.
- (10) Clear the sediment at the culvert near Stream 19 (downstream).

Air Quality

- (11) Properly cover the stockpile near Stream 25.
- (12) Properly cover the stockpile at underneath STR8.
- (13) Properly cover the stockpile at STR9.
- (14) Properly cover the stockpile at STR11, STR12 and STR13 after the works.
- (15) Properly cover the stockpile at between STR7-8.

Waste/Chemical Management

- (16) Clear C&D waste at underneath STR12
- (17) Clear discarded tree debris at underneath STR13.
- (18) Provide drip tray for the oil containers and at STR7.
- (19) Clear C&D waste and general refuse at the U-Channel at STR7.
- (20) Remove C&D waste near the culvert at STR9A.
- 5.11 According to the Updated EM&A Manual, mitigation measures are required to be implemented. An updated summary of the EMIS is provided in Appendix J.

Summary of Exceedances of the Environmental Quality Performance Limit

24-hr TSP Monitoring

5.12 No Action/Limit Level exceedance was recorded in the reporting month.

Construction Noise Monitoring

5.13 No Action/Limit Level exceedance was recorded in the reporting month.

Water Quality Monitoring

- 5.14 Exceedances of suspended solids (SS) were recorded in water samples in the reporting month. The summary of exceedances is provided in Table 4.4.
- 5.15 All exceedances recorded for water quality parameters in the reporting month were not considered due to the Project due to the following observations:
 - \diamond No construction activity was observed in the vicinity of the sampling locations.
 - \diamond No pollution discharge from construction activity was observed.
 - ♦ Measured value at the reference station was higher than at the impact monitoring stations.
- 5.16 No direct evidence demonstrated the exceedances of Action/Limit level for water monitoring parameters in the reporting month were caused by the Project.

Implementation Status of Event Action Plans

- 5.17 The Event Action Plans for air quality, noise and water quality are presented in Appendix K.
- 5.18 No valid exceedance of Action and Limit levels for air quality, noise and water quality monitoring due to the Project was recorded. No action was required to be carried out.

Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution

- 5.19 No environmental complaint was received in the reporting month.
- 5.20 No warning and summon or notification of successful prosecution was received in the reporting month.
- 5.21 There were a total of 51 environmental complaints, 12 warnings, 3 summons and 2 successful prosecutions received since the commencement of the Project.
- 5.22 The Complaint Log is attached in Appendix L and the summary of warnings issued by the EPD and prosecution is attached in Appendix M.

6. FUTURE KEY ISSUES

Key Issues for the Coming Month

- 6.1 Key issues to be considered in the coming month include:
 - Runoff from exposed slope;
 - Wastewater and runoff discharge from site;
 - Regular removal of silt, mud and sand along u-channels and sedimentation tanks;
 - Review and implementation of temporary drainage system for the surface runoff;
 - Proper storage of construction materials near streams;
 - Noise from operation of the equipment, especially for rock-breaking activities and machinery on-site;
 - Dust generation from stockpiles of dusty materials, exposed retain wall, excavation works and rock breaking activities;
 - Storage of chemicals/fuel and chemical waste/waste oil on site;
 - Watering for rock breaking activity, soil nailing and on haul road; and
 - Accumulation of general and construction waste near stream and on site.

Monitoring Schedule for the Next Month

6.2 The tentative monitoring schedule for the next month is given in Appendix C.

Construction Program for the Project (Construction Program for the Next Month)

6.3 The major construction activities in the coming month include:

Northern Section

- Installation of street furniture at Zone A to C;
- Slope work slope drainage and street furniture at Zone D;
- Slope work at Zone E; and
- Slope work and street furniture at Zone F.

Southern Section

- Construction of footpath at Zone 1 to 3;
- Erection of rock fall protection fence at Zone 4; and
- Slope works at Zone 5 and Zone 6.

7. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 7.1 Air quality, noise and water quality monitoring works were performed in the reporting month and all monitoring results were checked and reviewed.
- 7.2 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded in the reporting month.
- 7.3 Construction noise monitoring was conducted as scheduled except the monitoring on 24 September 2008 was cancelled due to adverse weather and re-scheduled to 26 September 2008 in the reporting month. No Action/Limit Level exceedance was recorded in the reporting month.
- 7.4 Water quality monitoring was conducted as scheduled in the reporting month.
- 7.5 No valid Action/Limit Level exceedance for water quality was recorded in the reporting month.
- 7.6 No environmental complaint was received in the reporting month.
- 7.7 No warning and summon and notification of successful prosecution was received in the reporting month.

Recommendations

7.8 According to the environmental audit performed in the reporting month, the following recommendations were made:

Dust Impact

- To implement dust control measures for the dust generation work such as cement mixing, soil nailing, excavation, piling works and rock breaking.
- To implement dust suppression measures on all haul roads, stockpiles and dry surfaces in dry weather.
- To cover soil stockpiles and exposed slope surface by impervious tarpaulin sheets or other means.
- To ensure water spray being applied for the dust emissive works, such as soil nail installation, loading and unloading of soil materials, excavation works and rock dowel installation.
- To ensure that all vehicles carrying dusty material are properly covered before leaving the site.
- To maintain the machinery and vehicles in a good working condition on site.

Noise Impact

- To implement appropriate mitigation measures, such as cover the tip of the hammer, in order to minimize the noise emitted during rock-breaking activities.
- To review the works sequence of site activities so as to reduce the number of noisy equipment in concurrent operation.
- To employ quiet powered mechanical equipment if possible.
- To ensure compliance of CNP conditions during restricted-hour works.
- To follow up any exceedance caused by the construction works.
- To space out noisy equipment and position as far away as possible from sensitive receivers.

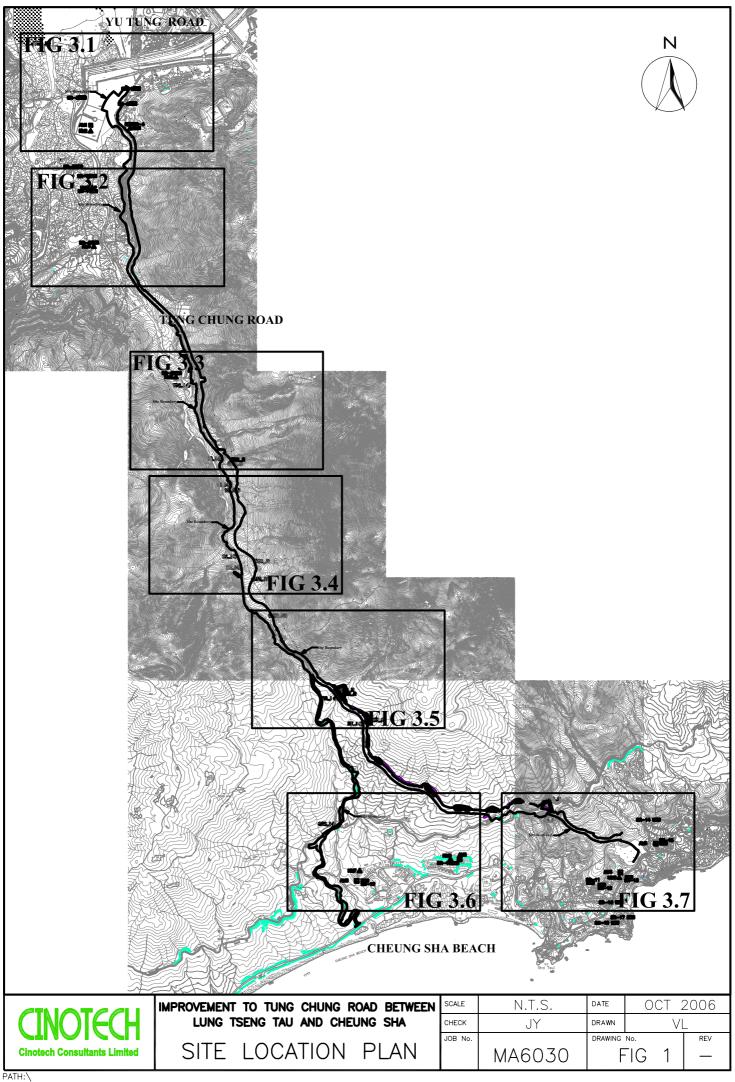
Water Quality Impact

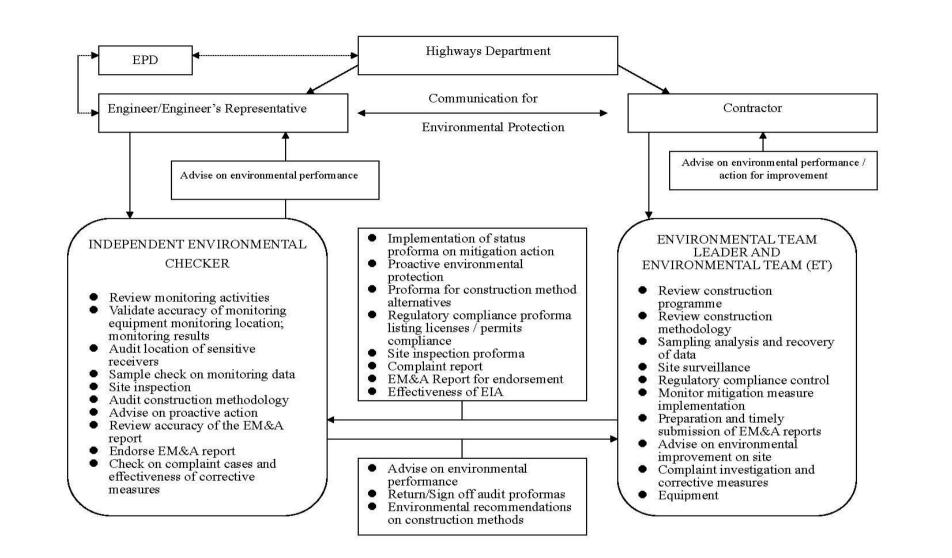
- To prevent any surface runoff discharge into any stream course.
- To avoid accumulation of stagnant and ponding water on site.
- To ensure properly maintenance for de-silting facilities.
- To clear the silt and sediment in the sedimentation tanks.
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge.
- To review the capacity of de-silting facilities for discharge.
- To review and implement temporary drainage system.
- To identify any wastewater discharges from site.
- To follow up any exceedance caused by the construction works.

Waste / Chemical Management

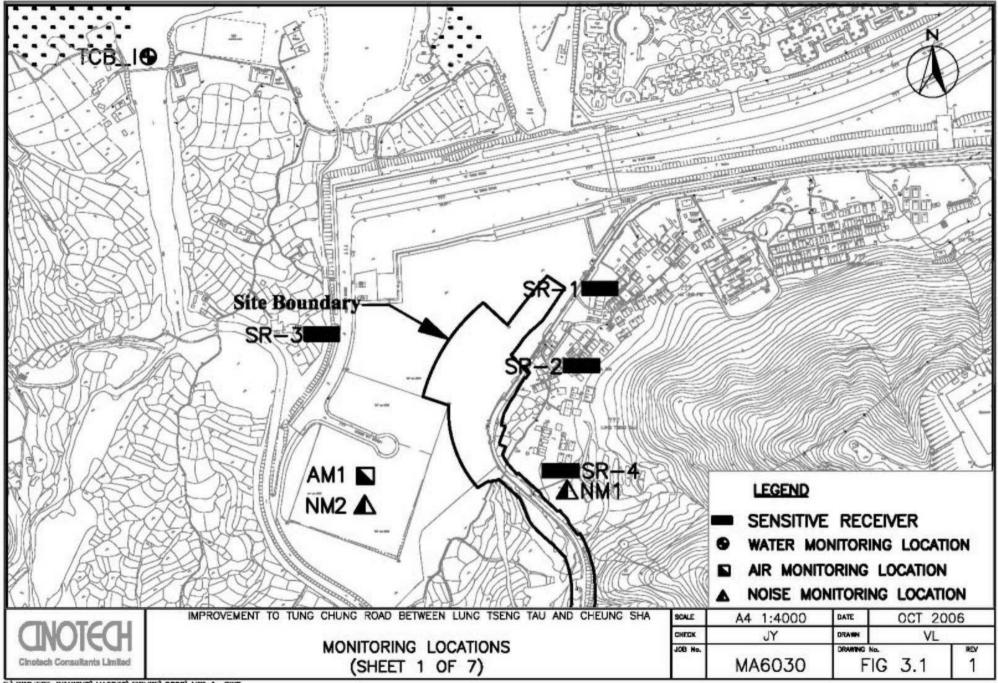
- To ensure no sediment and debris in the drainage system (U-Channel, culvert, gullies and underground channel) after the rainstorm.
- To avoid any discharge or accidental spillage of chemical waste directly from the site.
- To remove ponding water regularly in drip trays on site.
- To ensure the performance of sorting of C&D materials at source (during generation).
- To carry out inspection of dump truck at site exit to ensure inert and non-inert C&D materials are properly segregated before removing off site.
- To ensure proper collection and disposal of rubbish generated on site.
- To avoid storage of oil container within the Country Park.
- To avoid storage of construction materials at any stream.
- To check for any accumulation of waste materials or rubbish on site.

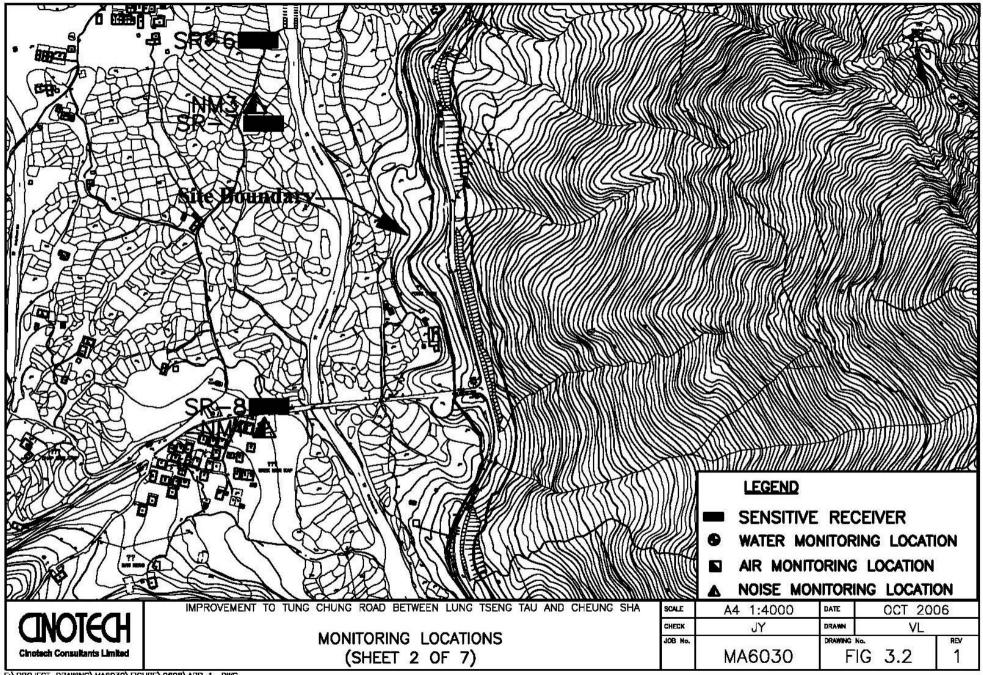
FIGURES

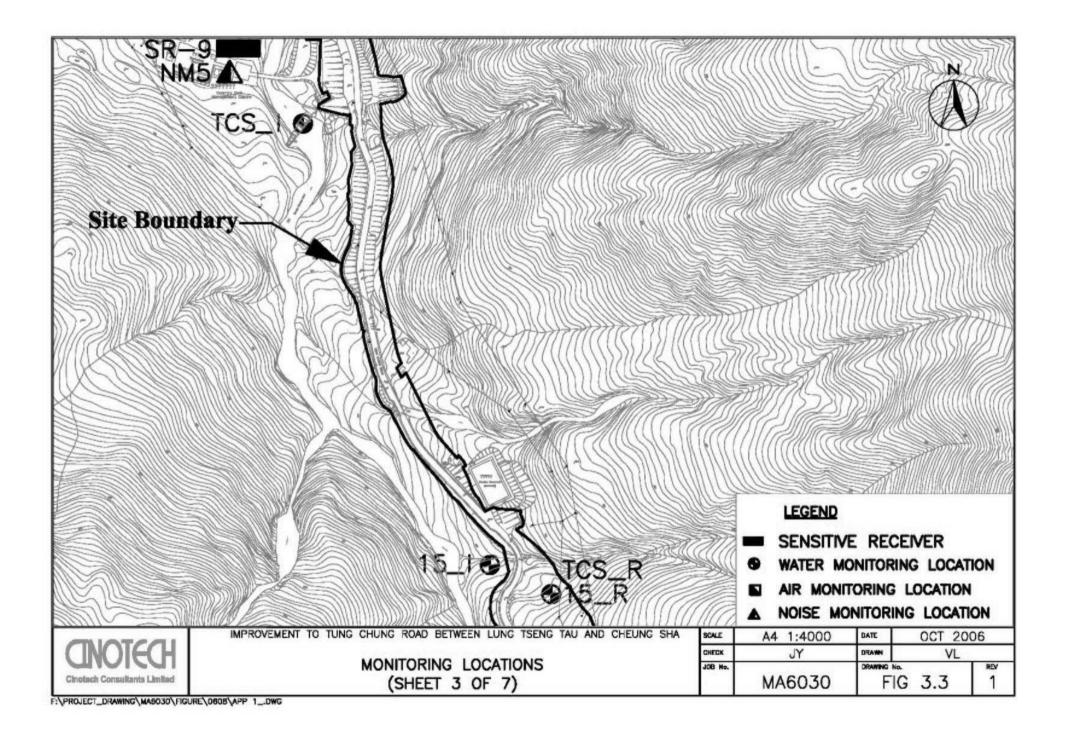


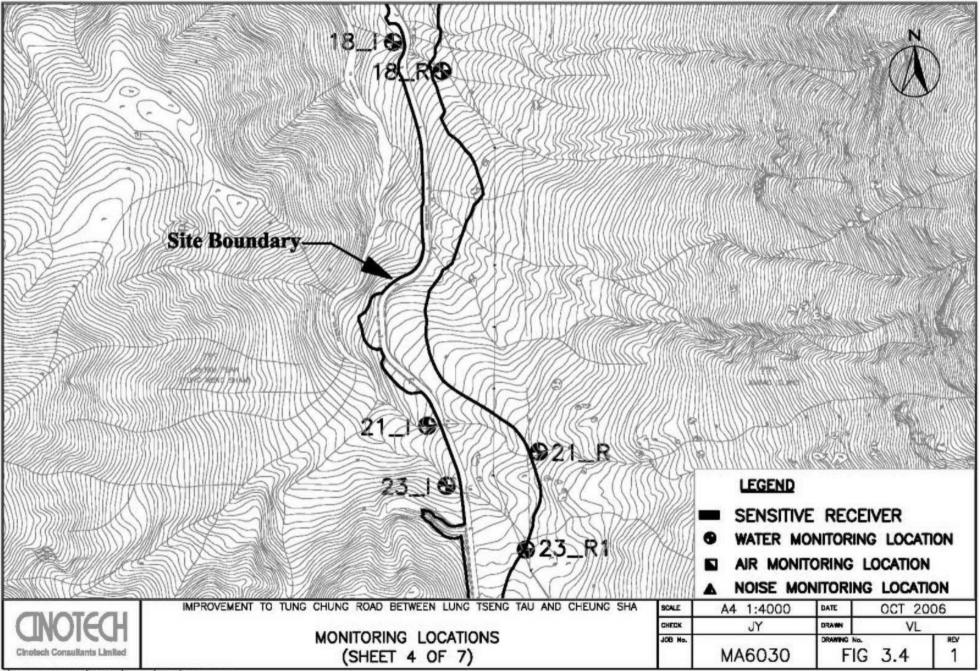


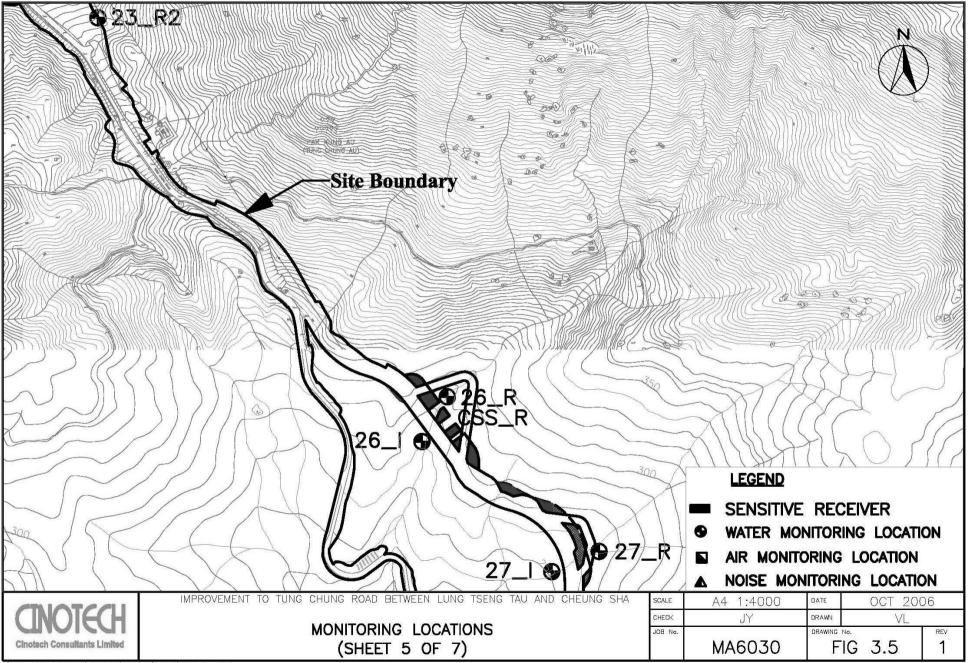
CINOTECH	Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha	SCALE CHECK	N.T.S.	DATE DRAWN	200 FL	7
Cinotech Consultants Limited	Organization Chart	JOB NO.	MA6030	DRAWING	No. 2	Rev 1



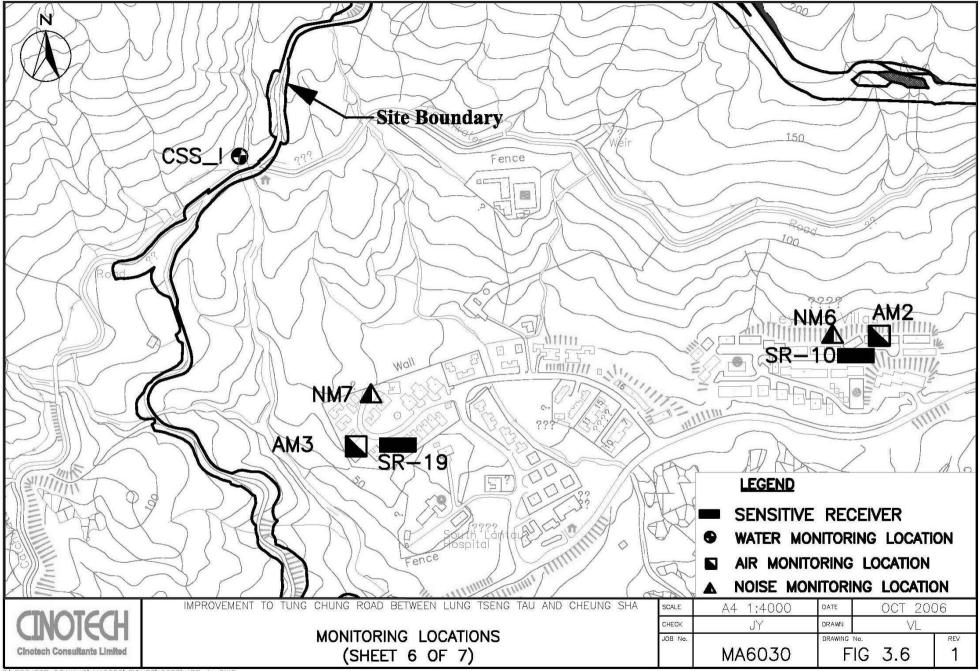


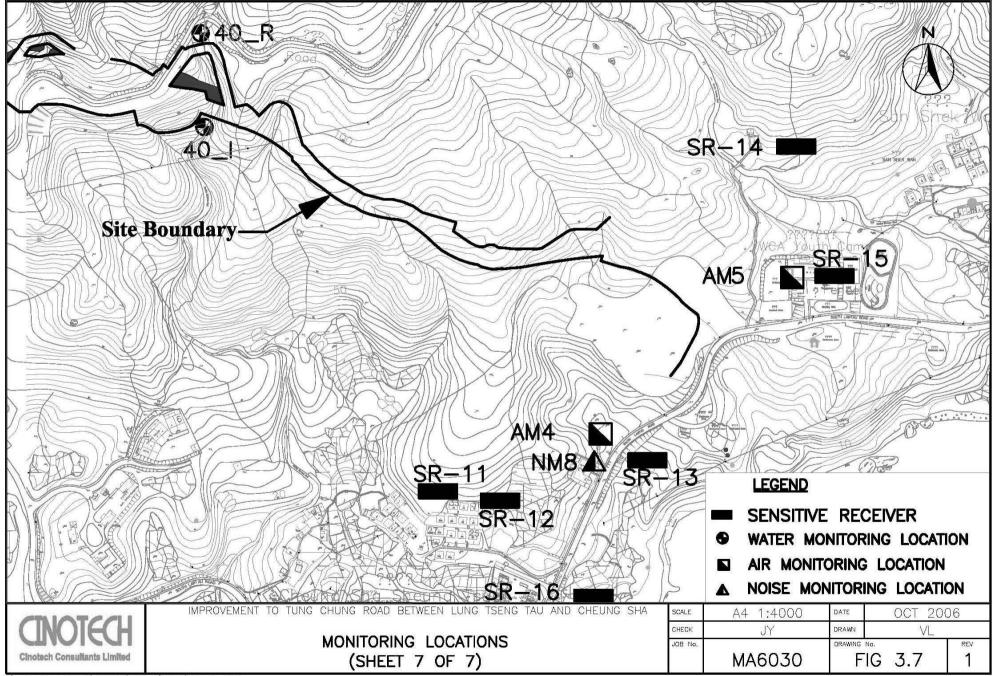






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APPENDIX A ACTION AND LIMIT LEVELS FOR AIR QUALITY, NOISE AND WATER QUALITY

Appendix A - Action and Limit Levels

Location	Action Level, µg/m ³	Limit Level, µg/m ³
AM1	312	
AM2	328	
AM3	302	500
AM4	305	
AM5	342	

Table A-1Action and Limit Levels for 1-Hour TSP

Location	Action Level, µg/m ³	Limit Level, µg/m ³
AM1	155	
AM2	151	
AM3	141	260
AM4	145	
AM5	153	

Table A-3Action and I	Limit Levels for	Construction Noise
-----------------------	------------------	---------------------------

Period	Action Level ⁽²⁾	Limit	Level
0700-1900 hrs on normal weekdays		75 dB(A)	70 dB(A)
1900-2300 hrs on holidays & 0700-2300 hrs on all other days	When one documented complaint is received	_ (1)	
2300-0700 hrs of next day		-	(1)

*Free field noise levels were adjusted with a correction of +3 dB(A)

Notes:

- (1) The noise limits shall be determined by EPD during the application of the construction noise permit (CNP).
- (2) Stated in the "Environmental Monitoring and Audit Guidelines for Development Projects in Hong Kong", Appendix D2, Section 2.6, Table 2.1

Monitoring	DO, mg/L			рН	Turbidity, NTU				SS, r	ng/L		
Stations	Action	Limit	Action	Limit	A	Action]	Limit	A	Action	Ι	Limit
TCS_I	6.10	4.00	-	<6.5 or >8.5	5.95		13.30		10.30		12.00	
CSS_I	6.40	4.00	-	<6.5 or >8.5	7.91		10.50		9.90		16.00	
15_I	5.94	4.00	-	<6.5 or >8.5	11.00		16.10		6.10		8.20	
18_I	6.43	4.00	-	<6.5 or >8.5	6.84	or 120% of	11.10	or 130% of	14.00	or 120% of	16.00	or 130% of
19_I	6.55	4.00	-	<6.5 or >8.5	7.52	the upstream control	9.03	the upstream control	14.00	the upstream control	18.00	the upstream control
21_I	6.73	4.00	-	<6.5 or >8.5	7.70	station's Tby	8.30	station's Tby	6.60	station's SS	20.00	station's SS
23_I	6.55	4.00	-	<6.5 or >8.5	6.37	(at the sme tide on the	6.62	(at the sme tide on the	8.50	(at the sme tide on the	17.00	(at the sme tide on the
26_I	6.49	4.00	-	<6.5 or >8.5	7.53	same day if	8.10	same day if	6.70	same day if	15.00	same day if
27_I	5.33	4.00	-	<6.5 or >8.5	6.05	appropriate)	6.76	appropriate)	2.10	appropriate)	3.00	appropriate)
32_I	5.94	4.00	-	<6.5 or >8.5	10.30]	14.20		15.00		18.00	
40_I	6.42	4.00	-	<6.5 or >8.5	9.38]	10.60		14.00		15.00	
TCB_I	6.31	4.00	-	<6.5 or >8.5	17.10		41.40		19.00		20.00	

Table A-4Compliance Level for Water Quality

APPENDIX B COPIES OF CALIBRATION CERTIFCATES

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

CINOTECH

File No.	MA6030/46/0012

Station	AM1 - YMCA d	of HK Christian	College	Operator:	WK	1.1	MA6030/46/0012
Date:	8-Aug-08	<u>or riff official</u>	Next Due Date:				
Equipment No.:	and the second sec				1315		
			Ambient	Condition			
Temperatur	re, Ta (K)	298,2	Pressure, P	a (mmHg)		756.6	
			ifice Transfer St Slope, mc		1		and state of the state
Equipme	Equipment No.: A-04-06			0.0575	Intercept		0.0395
Last Calibration Date: 10-Mar-08					bc = [AH x (Pa/76		
Next Calibra	ation Date:	9-Mar-09	1440 M - 144	Qstd = { $ \Delta H $	x (Pa/760) x (298	/Ta)] ^{1/2} -bc} / 1	ne
	111	197022809 (ULL)	Collibration o	f TSP Sampler	200	一形は	
		Ort	ga. c	1 101 Sumplet		HVS	
Calibration Point	∆H (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] ^{1/2}		Qstd (CFM) X - axis	ΔW (HVS), in. of oil		0) x (298/Ta)] ^{1/2} Y axis
1	11.4	3	.37	57.88	8.8		2.96
2	10.0	3	.15	54.17	7.1		2.66
3	7.5	2	.73	46.82	5.2		2.27
4	4,9	2	.21	37.71	3.3		1.81
5	3.I	1	.76	29.85	1.9		1.37
By Linear Regr Slope , mw ≈ Correlation co		•	983	Intercept, bw	-0.272	2	
If Correlation C	Coefficient < 0.99	0, check and reca	librate.		-1.077 - 2008		1000
	Not 19	Not to	Set Point	Calculation	5 Å 8	erd ^{al} le	202
From the Regres	sion Equation, the	Curve, take Qstd = e "Y" value accor mw x Q w x Qstd + bw) ²	rding to Qstd + bw = [ΔW		298/Ta)] ^{1/2} 4.39	5	
Therefore, Se	et Point; W = (m	w x Qstd + bw) ²	x (760 / Pa) x (Ta / 298) =	4.39		

1			7.10 - 2017A -	8 18 108
Conducted by: N -K. TANA	Signature:	- KNAS	Date:	8/8/00
Checked by:	Signature:	'n	Date:	8 Aug 08
			6.00.0076-5.	0
		ę.		

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



File No. MA6030/11/0012

Station	AM2 - Leyburn '	Villas		Operator:	WK	10	WA0030/11/0012
Date:	8-Aug-08		1	•	7-Oct-08		
Equipment No.:			Distriction and the second sec		. 1805		
						199997-07	
	ж.,		Ambient	Condition	8.9		
Temperature	e, Ta (K)	298,2	Pressure, Pa	a (mmHg)		756.6	
			- Action 1				
	in a super-	Or	ifice Transfer St		decovering and the second		
Equipment No.: A-04-06			Slope, mc	0.0575	Intercep		0.0395
Last Calibrat	tion Date:	10-Mar-08			oc = [ΔH x (Pa/76		
Next Calibra	tion Date:	9-Mar-09		$Qstd = \{[\Delta H]$	x (Pa/760) x (298	/Ta)] ^{1/2} -bc} / m	c
		•					San D. San Maria
	101		Calibration of	TSP Sampler			
Calibration		Orl	lice		1000	HVS	(0.0 m 1/)
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	۵W (HVS), in. of oil) x (298/Ta)] ^{1/2} Y- axis
1	11.9	3	.44	59.15	8.9	a Antonio	2.98
2	10.3	3	.20	54.98	7.5		2,73
3	7,6	2	.75	47.13	5.4		2.32
4	5.2	2	.27	38.87	3.2		1.78
5	3.0	1	.73	29.36	2.0	03808655	1.41
Slope , mw = _ Correlation co *If Correlation Co		0.9 0, check and reca	970	Intercept, bw - -	-0.216	53	
) i ii	1.14	nouni obsitut	Set Point (Calculation			
From the TSP Fic From the Regress		e "Y" value accoi	43 CFM	-58	98/Ta)] ^{1/2}		
Therefore, Se	et Point; W = (m	w x Qstd + bw) ²	x (760 / Pa)x ('	Ta / 298) =	4.38		
Remarks:						7079	

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET



							MA6030/AM4/001
100 100 100 100 100 100 100 100 100 100	No. 31 South La	ntau Road (Al			WK		2
Date:	8-Aug-08		M		7-Oct-		
Equipment No.:	A-01-06			Serial No.	10576		_
ala alatantes social di			Ambient (Condition	•	12234 - 23 - 23 -	
Temperatur	re, Ta (K)	298.2	Pressure, Pa	(mmHg)		756.6	
		Ori	fice Transfer Sta	ndard Inform	ation		
Equipme	nt No.:	A-04-06	Slope, mc	0.0575	Intercept	, bc	0.0395
Last Calibration Date: 10-Mar-08			n	ic x Qstd + bc	= [ΔH x (Pa/760)		1 ^{1/2}
Next Calibra	ation Date:	9-Mar-09	Ç)std = {[∆H x ((Pa/760) x (298/T	a)] ^{1/2} -bc} /	me
		*	Calibration of	TSP Sampler	18	a i	
		0	fice			HVS	
Calibration Point	∆H (orifice), in. of water	[AH x (Pa/7	50) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	∆W (HVS), in. of oil	[∆W x (Pa/	/760) x (298/Ta)] ^{1/2} Y-axis
1	11.3		3.35	57.62	7.9		2.80
2	9.9		3.14	53.89	6,8	01120 X	2.60
3	7.0		2.64	45.21	5.0		2.23
4	4.9		2.21	37.71	3.2		1.78
5	2.9		1.70	28.85	1.7		1.30
By Linear Regro Slope , mw = Correlation co	0.0519	-	9985	ntercept, bw •	-0.174	9	-
*If Correlation C				e.			
n al an			Set Point C	alculation			
From the TSP Fic	eld Calibration C	urve, take Qst	d = 43 CFM				
From the Regress	sion Equation, the		cording to std + bw = [ΔW a	(Do/760) × (*)	08/Ta)1/2		
Therefore, Set 1	Point; W = (mw		² x (760 / Pa) x (4.26		
Remarks:	e en contra tra Article Article Contra en la Tra		ануулы байлай жилийн ар тэрэгээс байлаас о То				

Conducted by: W.K. TANA	Signature:	Knai	Date:	8/8/08
Checked by: VI-9	Signature:	h	Date:	8 Aug 08
19532 ····· 196		<i>y</i>		0



Unit C, 1/F., Goldlion Holdings Center. 13-15 Yuen Shun Circuit, Shatin, NT, HK. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

1 of 1

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/07/80502
	Room 1710, Technology Park,	Date of Issue:	2008-05-03
	18 On Lai Street,	Date Received:	2008-05-02
	Shatin, NT, Hong Kong	Date Tested:	2008-05-02
		Date Completed:	2008-05-03
		Next Due Date:	2009-05-02

Page:

ATTN: Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description	: RS232 Integral Vane Digital Anemometer
Manufacturer	: AZ Instrument
Model No.	: 451104
Serial No.	: 9020746
Equipment No.	: A-03-01
tions:	
D T	21.1

Test conditions:

Room Temperature: 21 degree CelsiusRelative Humidity: 65%Pressure: 101.3 kPa

Methodology:

The anemometer has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

	Reference Set Point	Instrument Readings
Measuring Air Velocity, m/s	2.00	2.00
Temperature, °C	21.0	21.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

(

PATRICK TSE Laboratory Manager



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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Operator Tisch Orifice I.D. - 0999 Ta (K) -295 Pa (mm) - 746.76 0999 METER ORFICE PLATE VOLUME VOLUME DIFF DIFF DIFF DIFF OR START STOP VOLUME TIME Hg H20 Run # (m3)(m3)(m3) (mm) (in.) (min) --------------------1 NA NA 1.00 1.3890 3.2 2.00 2 6.3 NA NA 1.00 0.9850 4.00 3 7.8 NA NA 1.00 0.8810 5.00 4 NA NA 1.00 0.8410 8.6 5.50 5 0.6950 NA NA 1.00 12.5 8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9917 0.9876 0.9854 0.9844 0.9792	0.7139 1.0026 1.1185 1.1706 1.4090	1.4113 1.9959 2.2315 2.3405 2.8227	0.9957 0.9916 0.9894 0.9884 0.9832	0.7168 1.0067 1.1231 1.1753 1.4147	0.8874 1.2549 1.4030 1.4715 1.7747
Ostd slo intercep coeffici y axis =	ot (b) = .ent (r) =	2.03154 -0.03970 0.99999 Pa/760)(298/Ta)]	Qa slop intercep coeffici y axis =	t (b) = ent (r) =	1.27212 -0.02496 0.99999 Ta/Pa)]

CALCULATIONS

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

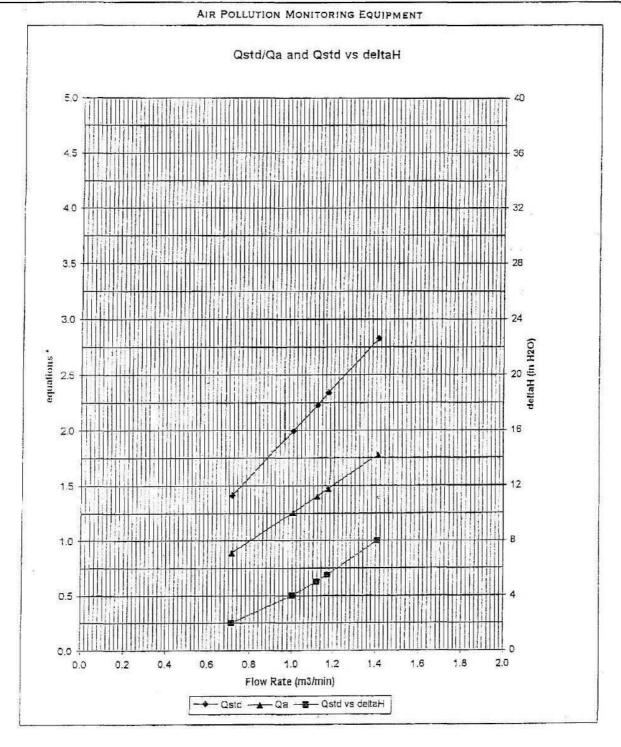
Va = Diff Vol [(Pa-Diff Hg)/Pa] Qa = Va/Time

For subsequent flow rate calculations:

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



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* y-axis equations: Qstd series:

$$\frac{\sqrt{\Delta H} \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}{\sqrt{(\Delta H (Ta / Pa))}}$$

Qa series:



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TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/71213/1
	Room 1710, Technology Park,	Date of Issue:	2007-12-14
	18 On Lai Street,	Date Received:	2007-12-13
	Shatin, NT, Hong Kong	Date Tested:	2007-12-14
		Date Completed:	2007-12-14
		Next Due Date:	2008-12-13

ATTN:

Mr. Henry Leung

1 of 1

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Microphone No. Equipment No. : Integrating Sound Level Meter : Brüel & Kjær : B&K 2238 : 2337665 : 2289749 : N-01-01

Page:

Test conditions:

Room Temperatre Relative Humidity : 20 degree Celsius : 60%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE Senior Chemist



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TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/71116/1
	Room 1710, Technology Park,	Date of Issue:	2007-11-16
	18 On Lai Street,	Date Received:	2007-11-15
	Shatin, NT, Hong Kong	Date Tested:	2007-11-15
		Date Completed:	2007-11-16

ATTN: Mr. Henry Leung

Page:

Next Due Date:

1 of 1

2008-11-15

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Microphone No. Equipment No. : Integrating Sound Level Meter : Brüel & Kjær : B&K 2238 : 2337666 : 2289750 : N-01-02

Test conditions:

Room Temperatre Relative Humidity : 20 degree Celsius : 59%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE Senior Chemist

WELLAB 匯 Testing and Research 力 Room 1516 & 816, Technology Park 18 On Lai Street, Shatin, N.T., Hong Kong Tel: 2898 7388 Fax: 2898 7076 Website http://www.wellab.com.hk E-mail: wellab@wellab.com.hk

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No.:	C/N/80903-1
	Room 1710, Technology Park,	Date of Issue:	2008-09-03
	18 On Lai Street,	Date Received:	2008-09-02
	Shatin, NT, Hong Kong	Date Tested:	2008-09-02
		Date Completed:	2008-09-03
		Next Due Date:	2009-09-02

ATTN:

Mr. Henry Leung

1 of 1

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Microphone No. Equipment No. : Integrating Sound Level Meter : Brüel & Kjær : B&K 2238 : 2359311 : 2346382 : N-01-03

Page:

Test conditions:

Room Temperatre Relative Humidity : 21 degree Celsius : 61%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE Laboratory Manager



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1 of 1

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/80903-2
	Room 1710, Technology Park,	Date of Issue:	2008-09-03
	18 On Lai Street,	Date Received:	2008-09-02
	Shatin, NT, Hong Kong	Date Tested:	2008-09-02
		Date Completed:	2008-09-03
		Next Due Date:	2009-09-02

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Equipment No.

Test conditions:

Room Temperatre Relative Humidity : 21 degree Celsius : 61%

: Brüel & Kjær

: B&K 2238

:2359303

: N-01-04

Page:

: Integrating Sound Level Meter

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

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PATRICK TSE Laboratory Manager



TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/71015/1
	Room 1710, Technology Park,	Date of Issue:	2007-10-15
	18 On Lai Street,	Date Received:	2007-10-13
	Shatin, NT, Hong Kong	Date Tested:	2007-10-13
		Date Completed:	2007-10-15
		Next Due Date:	2008-10-14

ATTN:

Mr. Henry Leung

1 of 1

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Microphone No. Equipment No. : Integrating Sound Level Meter : Brüel & Kjær : B&K 2238 : 2394976 : 2407349 : N-01-05

Page:

Test conditions:

Room Temperatre Relative Humidity : 21 degree Celsius : 60%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

Reference Set Point, dB	Instrument Readings, dB	
94	94.0	
114	114.0	

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

10

PATRICK TSE Senior Chemist



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1 of 1

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/71116/2
	Room 1710, Technology Park,	Date of Issue:	2007-11-16
	18 On Lai Street,	Date Received:	2007-11-15
	Shatin, NT, Hong Kong	Date Tested:	2007-11-15
		Date Completed:	2007-11-16
		Next Due Date:	2008-11-15

Page:

ATTN: Mr. Henry Leung

Item for calibration:

Description	: Acoustical Calibrator	
Manufacturer	: Brüel & Kjær	
Model No.	: 4231	
Serial No.	: 2326353	
Project No.	: C13	
Equipment No.	: N-02-01	

Test conditions:

Room Temperatre	: 20 degree Celsius
Relative Humidity	: 59%
Pressure	: 1015.2 hPa

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE Senior Chemist



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1 of 1

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/06/80305
	Room 1710, Technology Park,	Date of Issue:	2008-03-05
	18 On Lai Street,	Date Received:	2008-03-03
	Shatin, NT, Hong Kong	Date Tested:	2008-03-03
		Date Completed:	2008-03-05
		Next Due Date:	2009-03-04

Page:

ATTN: Mr. Henry Leung

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2343007
Project No.	: C13
Equipment No.	: N-02-02
Test conditions:	
Room Temperatre	: 20 degree Celsius
Relative Humidity	: 65%
Pressure	: 1020.1hPa

Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.2 dB

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

Thill

PATRICK TSE Laboratory Manager

2009-09-02

1 of 1

TEST REPORT

APPLICANT:	Cinotech Consultants Limited	Test Report No .:	C/N/80903-3
	Room 1710, Technology Park,	Date of Issue:	2008-09-03
	18 On Lai Street,	Date Received:	2008-09-02
	Shatin, NT, Hong Kong	Date Tested:	2008-09-02
		Date Completed:	2008-09-03

ATTN: Mr. Henry Leung

Item for calibration:

Description Manufacturer Model No. Serial No. Equipment No. : Acoustical Calibrator : Brüel & Kjær : 4231 : 2412367 : N-02-03

Next Due Date:

Page:

Test conditions:

Room Temperatre Relative Humidity : 21 degree Celsius : 61%

Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

Patinhelse

PATRICK TSE Laboratory Manager



Room 1516 & 816, Technology Park 18 Cm Lai Street, Shatin, N.T., Hong Koug Tel: 2898 7388 Fax: 3898 7076 Website: http://www.wellab.com.hk E-mail: wellab@wellab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited Room 1710, Technology Park, 18 On Lai Street, Shatin, NT, Hong Kong

Mr. Henry Leung

Test Report No .:	C/W/80805-1
Date of Issue:	2008-08-06
Date Received:	2008-08-05
Date Tested:	2008-08-05
Date Completed:	2008-08-06
Next Due Date:	2008-11-05
Page:	1 of 2

nen an an a

ATTN:

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Equipment No. Project No. : Sonde Environmental Monitoring System : YSI : 6820-C-M : 02D0126AA : W.03.01 : C013

Test conditions:

Room Temperature Relative Humidity

: 23 degree Celsius : 63%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, S/N: 05A1209

1. Conductivity performance check with Potassium Chloride standard solution

2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, S/N: 04A0145

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 05A1610AJ

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, S/N: 01J

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual

2. In-house method with reference to APHA and ISO standards

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE Laboratory Manager

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TEST REPORT

Test Report No.:	C/W/80805-1
Date of Issue:	2008-08-06
Date Received:	2008-08-05
Date Tested:	2008-08-05
Date Completed:	2008-08-06
Next Due Date:	2008-11-05
Page:	2 of 2

Results:

1. Conductivity performance check

Specific (Conductivity, µS/cm	Correction, µS/cm	Acceptable range
Salinity Meter (C1) Theoretical Value (C2)		D = C1 - C2	1010/ ACCA
1421	1420	2	1420 ± 20

2. Salinity Performance check

Salini	ty, ppt	Correction, ppt	Acceptable range
Instrument Reading Theoretical Value			
30.0	30.0	0.0	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in	Dissolved Oxygen, mg O ₂ /L		Correction, mg	Acceptable
water at 20°C	D.O. Meter	Winkler Titration	O_2/L	range
Saturated	9.1	9.1	0.0	± 0.2
Half-saturated	5.6	5.6	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 ± 0.05
100	100	0	100 ± 5

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_i , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.00	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range	
1.0	1.00	0.00	1.00 ± 0.05	

TEST REPORT

APPLICANT: Cinotech Consultants Limited Room 1710, Technology Park, 18 On Lai Street, Shatin, NT, Hong Kong

Test Report No .:	C/W/80805-2
Date of Issue:	2008-08-06
Date Received:	2008-08-05
Date Tested:	2008-08-05
Date Completed:	2008-08-06
Next Due Date:	2008-11-05
Page:	1 of 2

ATTN:

Mr. Henry Leung

Certificate of Calibration

Item for calibration:

Description Manufacturer Model No. Serial No. Equipment No. Project No.

: YSI : 6820-C-M

: Sonde Environmental Monitoring System

: 02D0293AA : W.03.02

: C013

Test conditions:

Room Temperature Relative Humidity : 23 degree Celsius : 63%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, S/N: 02C0886

1. Conductivity performance check with Potassium Chloride standard solution

- 2. Salinity performance check with Sodium Chloride standard solution
- Dissolved Oxygen Sensor, Model: 6562, S/N: 0261137

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 05F2030AQ

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, S/N: 02A

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual

2. In-house method with reference to APHA and ISO standards

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE Laboratory Manager

TEST REPORT

Test Report No .:	C/W/80805-2
Date of Issue:	2008-08-06
Date Received:	2008-08-05
Date Tested:	2008-08-05
Date Completed:	2008-08-06
Next Due Date:	2008-11-05
Page:	2 of 2

Results:

1.1	11 .	• •	Contractory of the second			and Charles and	4
	1 0333/	1110 1117		041044	00000	0400	1-
1000	1	III CHEV	нуп	erne	mance	12011202	ĸ

Specific (Conductivity, µS/cm	Correction, µS/cm	Acceptable range
Salinity Meter (C1) Theoretical Value (C2)		D = C1 - C2	0 5000 80/46
1420	1420	0	1420 ± 20

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.1	30.0	0.1	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in	Dissolved O	xygen, mg O ₂ /L	Correction, mg	Acceptable
water at 20°C	D.O. Meter	Winkler Titration	O ₂ /L	range
Saturated	9.0	9.0	0.0	± 0.2
Half-saturated	5.8	5.8	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 ± 0.05
100	100	0	100 ± 5

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_1 , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.01	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 ± 0.05

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APPENDIX C ENVIRONMENTAL MONITORING SCHEDULES

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep	6-Sep
	Water Quality	24 hr TSP	Water Quality Noise		Water Quality	
7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep
	Water Quality		Water Quality		Water Quality	
	24 hr TSP		Noise			24 hr TSP
14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
		Water Quality	Water Quality Noise		Water Quality 24 hr TSP	
21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep
	Water Quality		Water Quality	24 hr TSP	Water Quality Noise	
28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct
	Water Quality	24 hr TSP				

Contract No. HY/2003/19 - Improvement to Tung chung Road between Lung Tseng Tau and Cheung Sha Air, Noise and Water Quality Monitoring Schedule for September 2008

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	3-Oct	4-Oct
	Water Quality	24 hr TSP		Water Quality Noise	Water Quality	
5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct
	Water Quality 24 hr TSP		Water Quality Noise		Water Quality	24 hr TSP
12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	17-Oct	18-Oct
	Water Quality		Water Quality Noise		Water Quality 24 hr TSP	
19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct	25-Oct
	Water Quality		Water Quality Noise	24 hr TSP	Water Quality	
26-Oct	27-Oct	28-Oct	29-Oct	30-Oct	31-Oct	1-Nov
	Water Quality		Water Quality Noise 24 hr TSP		Water Quality	

Contract No. HY/2003/19 - Improvement to Tung chung Road between Lung Tseng Tau and Cheung Sha Tentative Air, Noise and Water Quality Monitoring Schedule for October 2008

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

APPENDIX D 24-HOUR TSP MONITORING RESULTS ,GRAPHICAL PRESENTATION AND WIND DATA

Appendix D - 24-hour TSP Monitoring Results

Date	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	se Time	Sampling	Conc.	Weather	Air	Atmospheric	Particulate	Av. flow	Total vol.
	Initial	Final	Initial	Final	Initial	Final	Time(hrs.)	(µg/m ³)	Condition	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)
2-Sep-08	2.8471	2.9023	1.22	1.22	4061.7	4085.7	24.0	31.5	Cloudy	300.3	761.0	0.0552	1.22	1754.2
8-Sep-08	2.8188	2.9912	1.22	1.22	4085.7	4109.7	24.0	98.3	Sunshine	301.3	762.4	0.1724	1.22	1753.0
13-Sep-08	2.8104	2.8588	1.21	1.21	4109.7	4133.7	24.0	27.7	Sunshine	302.4	758.2	0.0484	1.21	1745.9
19-Sep-08	2.8366	2.9570	1.22	1.22	4133.7	4157.7	24.0	68.5	Cloudy	299.3	761.5	0.1204	1.22	1757.2
25-Sep-08	2.8566	2.9250	1.21	1.21	4157.7	4181.7	24.0	39.1	Cloudy	302.0	760.1	0.0684	1.21	1748.9
30-Sep-08	2.8105	3.0600	1.22	1.22	4181.7	4205.7	24.0	142.0	Sunshine	299.7	761.8	0.2495	1.22	1756.5
							Min	27.7						
							Max	142.0						
							Average	67.9						

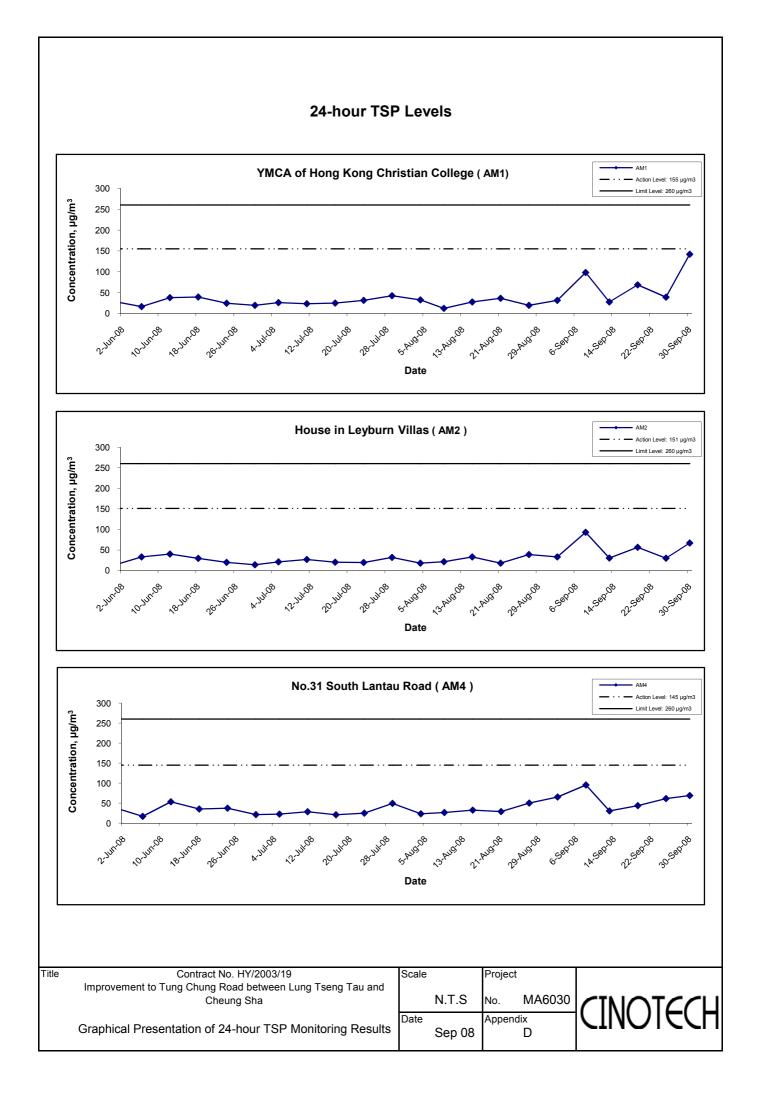
Location AM1 - YMCA of Hong Kong Christian College

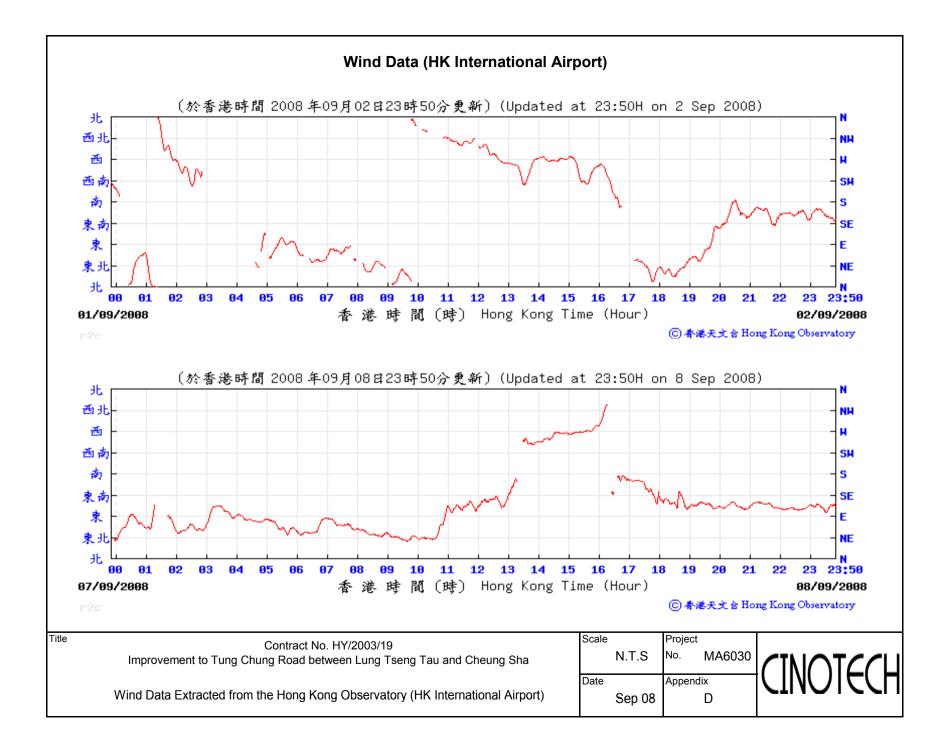
Location AM2 - House in Leyburn Villas

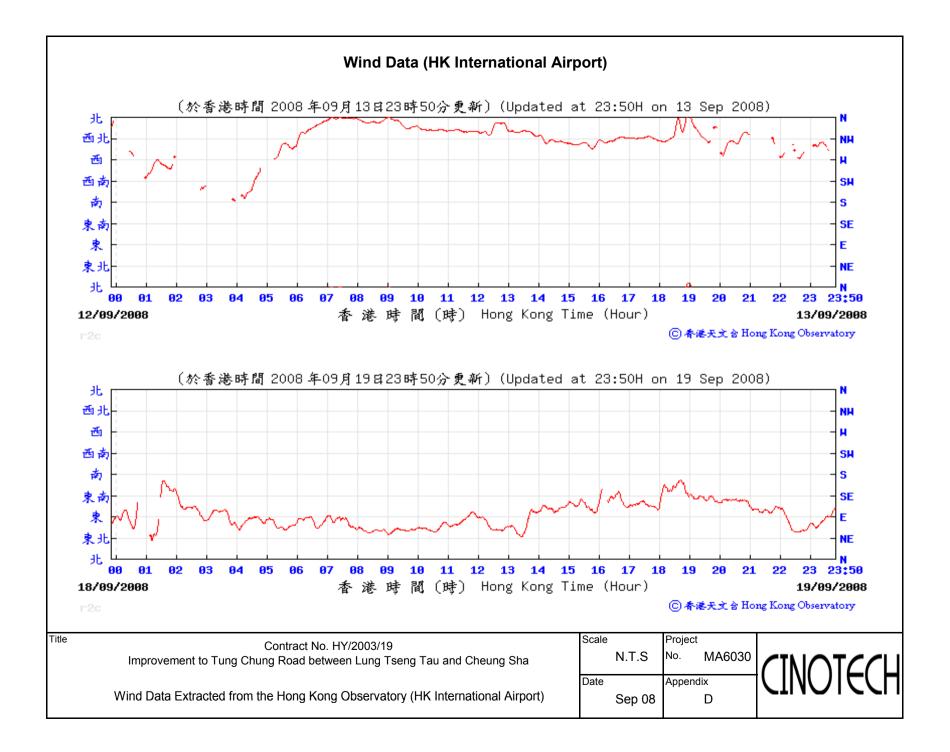
Date	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	se Time	Sampling	Conc.	Weather	Air	Atmospheric	Particulate	Av. flow	Total vol.
	Initial	Final	Initial	Final	Initial	Final	Time(hrs.)	(µg/m ³)	Condition	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)
2-Sep-08	2.9002	2.9580	1.22	1.22	8855.3	8879.3	24.0	32.9	Cloudy	300.3	761.0	0.0578	1.22	1754.2
8-Sep-08	2.8221	2.9850	1.22	1.22	8879.3	8903.3	24.0	92.9	Sunshine	301.3	762.4	0.1629	1.22	1753.0
13-Sep-08	2.8367	2.8899	1.21	1.21	8903.3	8927.3	24.0	30.5	Sunshine	302.4	758.2	0.0532	1.21	1745.8
19-Sep-08	2.8333	2.9325	1.22	1.22	8927.3	8951.3	24.0	56.4	Cloudy	299.3	761.5	0.0992	1.22	1757.3
25-Sep-08	2.8329	2.8855	1.21	1.21	8951.3	8975.3	24.0	30.1	Cloudy	302.0	760.1	0.0526	1.21	1748.8
30-Sep-08	2.8281	2.9455	1.22	1.22	8975.3	8999.3	24.0	66.8	Sunshine	299.7	761.8	0.1174	1.22	1756.6
	-		-				Min	30.1						-
							Max	92.9						
							Average	51.6						

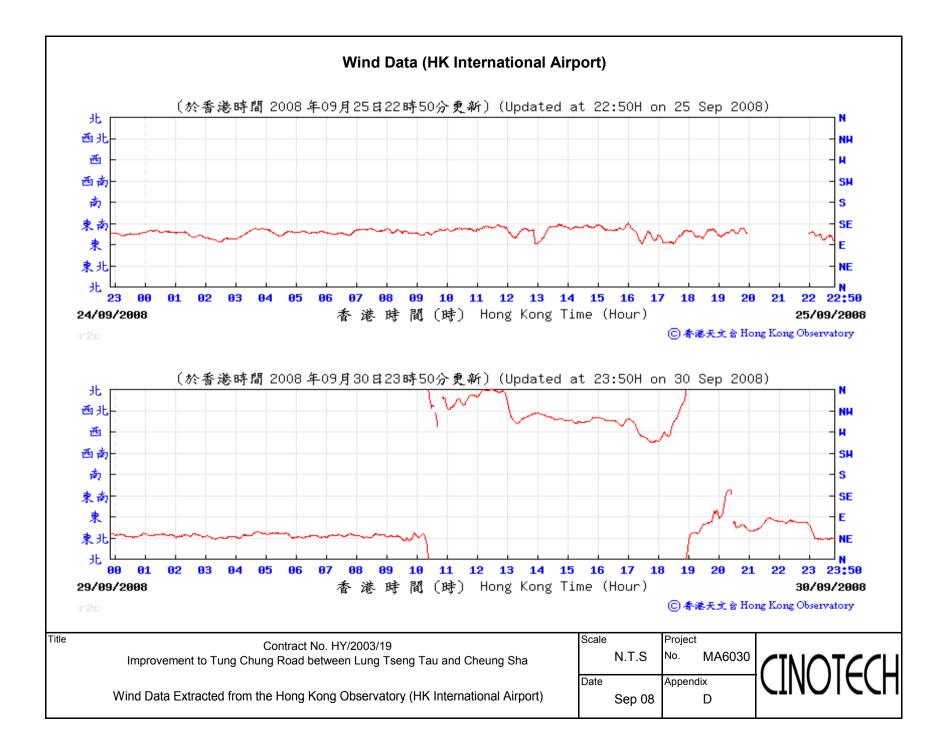
Location AM4 - No.31 South Lantau Road

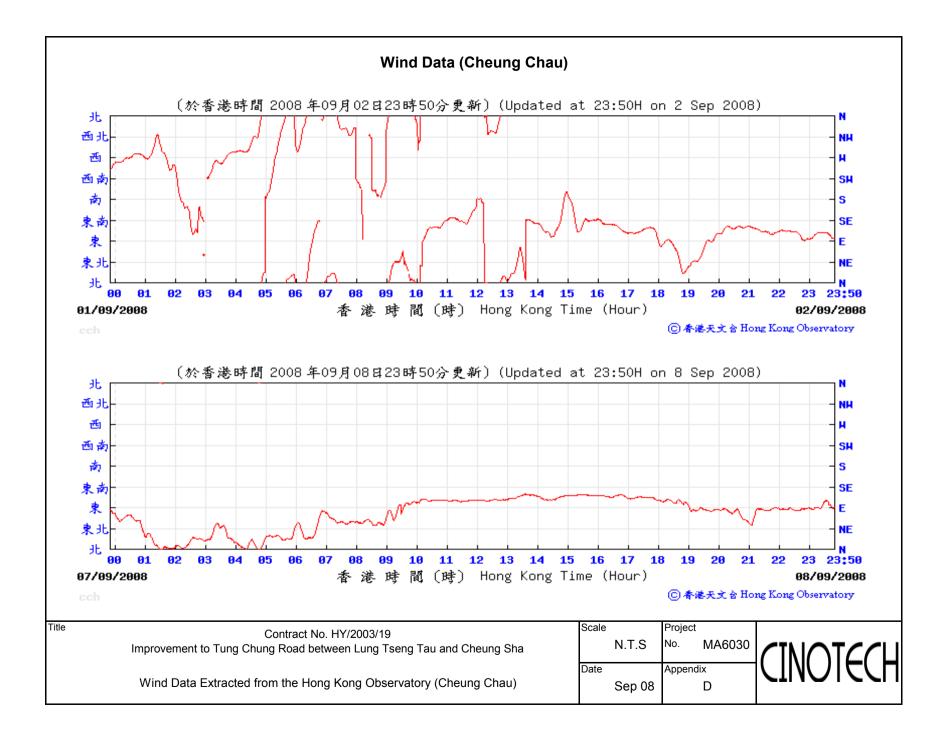
Date	Filter W	eight (g)	Flow Rate	e (m ³ /min.)	Elaps	e Time	Sampling	Conc.	Weather	Air	Atmospheric	Particulate	Av. flow	Total vol.
	Initial	Final	Initial	Final	Initial	Final	Time(hrs.)	(µg/m ³)	Condition	Temp. (K)	Pressure(Pa)	weight(g)	(m ³ /min)	(m ³)
2-Sep-08	2.8014	2.9161	1.22	1.22	8710.5	8734.5	24.0	65.2	Cloudy	300.3	761.0	0.1147	1.22	1760.4
8-Sep-08	2.8520	3.0193	1.22	1.22	8734.5	8758.5	24.0	95.1	Sunshine	301.3	762.4	0.1673	1.22	1759.1
13-Sep-08	2.8707	2.9242	1.22	1.22	8758.5	8782.5	24.0	30.5	Sunshine	302.4	758.2	0.0535	1.22	1751.8
19-Sep-08	2.8546	2.9317	1.22	1.22	8782.5	8806.5	24.0	43.7	Cloudy	299.3	761.5	0.0771	1.22	1763.6
25-Sep-08	2.9016	3.0087	1.22	1.22	8806.5	8830.5	24.0	61.0	Cloudy	302.0	760.1	0.1071	1.22	1754.9
30-Sep-08	2.7522	2.8737	1.22	1.22	8830.5	8854.5	24.0	68.9	Sunshine	299.7	761.8	0.1215	1.22	1762.9
							Min	30.5						
							Max	95.1						
							Average	60.7						

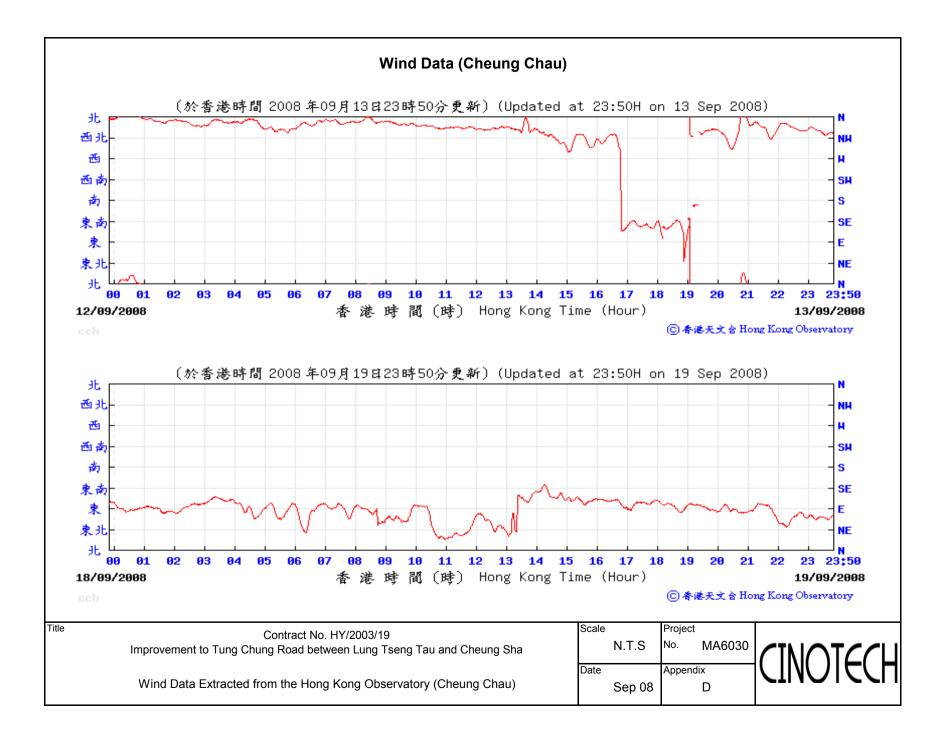


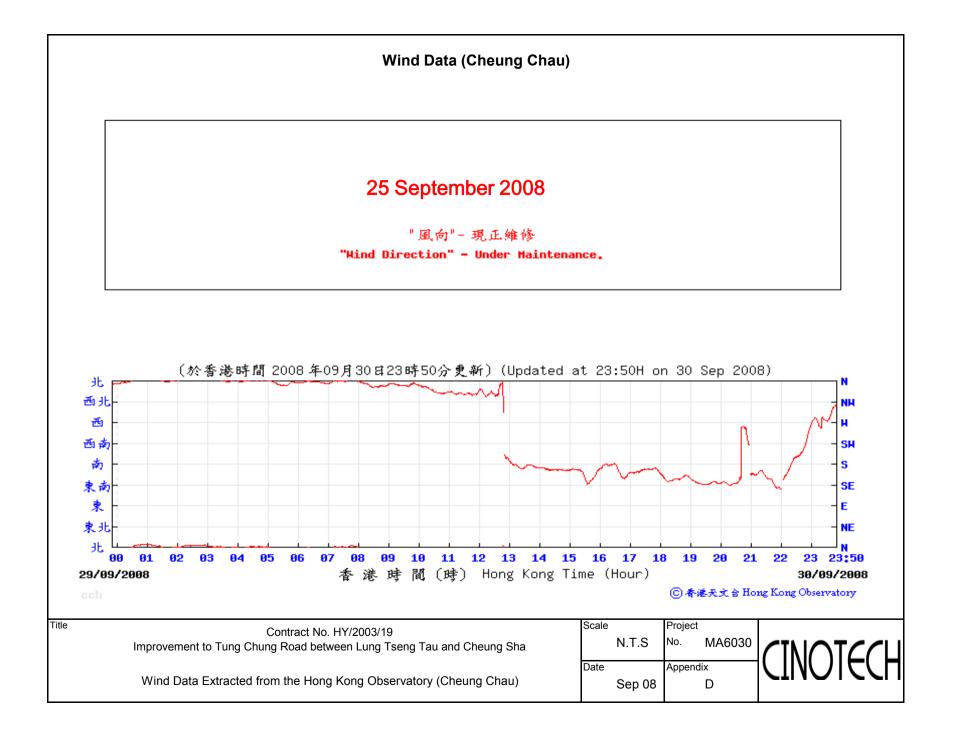












APPENDIX E NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - Noise Monitoring Results

Location NM1	- No. 28 Lur	Location NM1 - No. 28 Lung Tseng Tau										
Dete	Time		dE	3 (A) (30-min)							
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀							
3-Sep-08	09:40	Sunny	64.6	66.5	62.5							
10-Sep-08	09:40	Sunny	63.7	66.0	61.0							
17-Sep-08	09:40	Fine	63.2	66.5	61.5							
26-Sep-08	09:40	Cloudy	64.3	66.5	61.5							
		Average	64.0	66.4	61.7							
		Minimum	63.2	66.0	61.0							
		Maximum	64.6	66.5	62.5							

Location NM2 - YMCA of HK Christian College									
Dete	T :	\A/e ath ar	dB (A) (30-min)						
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀				
3-Sep-08	09:00	Sunny	53.2	55.5	49.5				
10-Sep-08	09:00	Sunny	53.1	55.5	50.0				
17-Sep-08	09:00	Fine	52.7	54.5	50.5				
26-Sep-08	09:00	Cloudy	52.6	54.5	50.0				
		Average	52.9	55.0	50.0				
		Minimum	52.6	54.5	49.5				
		Maximum	53.2	55.5	50.5				

Location NM3	Location NM3 - No. 37 Shek Lau Po										
Dete	Time	\A/a ath ar	dB (A) (30-min)								
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀						
3-Sep-08	10:20	Sunny	39.7	41.5	38.5						
10-Sep-08	10:20	Sunny	39.8	40.5	38.5						
17-Sep-08	10:20	Fine	40.2	41.5	38.5						
26-Sep-08	10:20	Cloudy	40.1	41.5	38.5						
		Average	40.0	41.3	38.5						
		Minimum	39.7	40.5	38.5						
		Maximum	40.2	41.5	38.5						

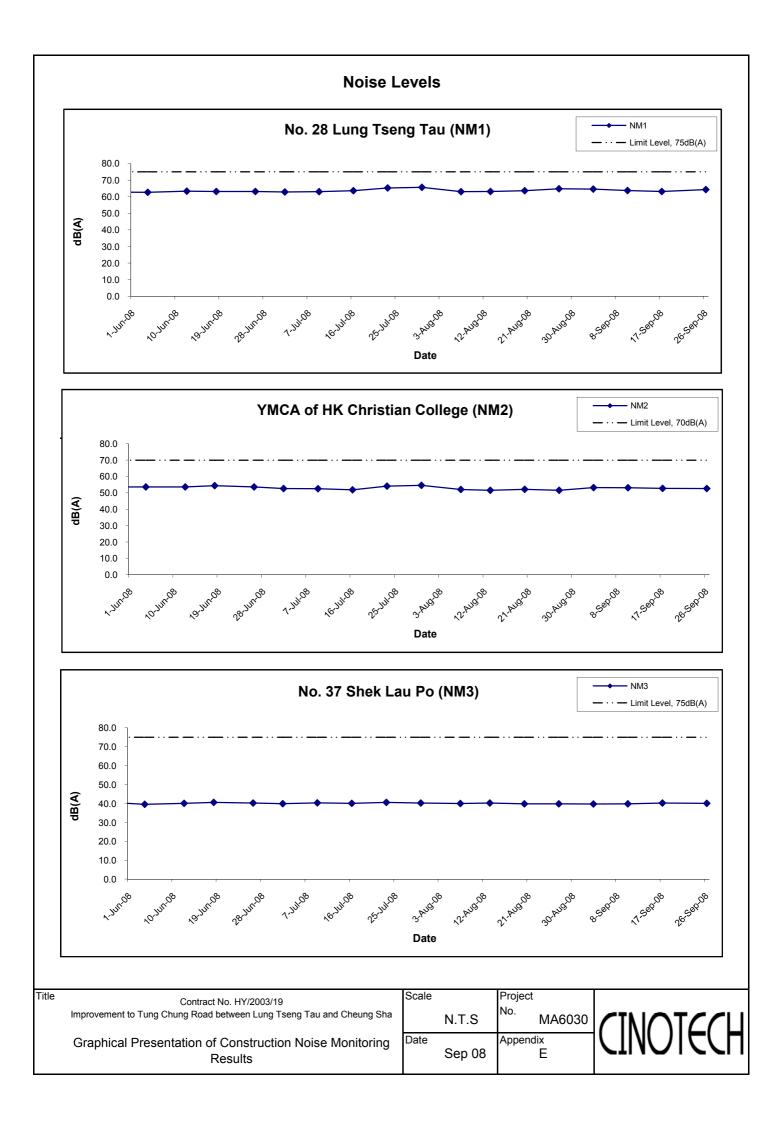
Location NM4	Location NM4 - No.1 Shek Mun Kap										
Dete	Time	\A/a ath an	dE	3 (A) (30-min))						
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀						
3-Sep-08	11:00	Suinny	51.2	53.5	48.5						
10-Sep-08	11:00	Sunny	51.2	52.5	48.5						
17-Sep-08	11:00	Fine	51.4	53.5	49.5						
26-Sep-08	11:00	Cloudy	52.1	53.5	50.5						
		Average	51.5	53.3	49.3						
		Minimum	51.2	52.5	48.5						
		Maximum	52.1	53.5	50.5						

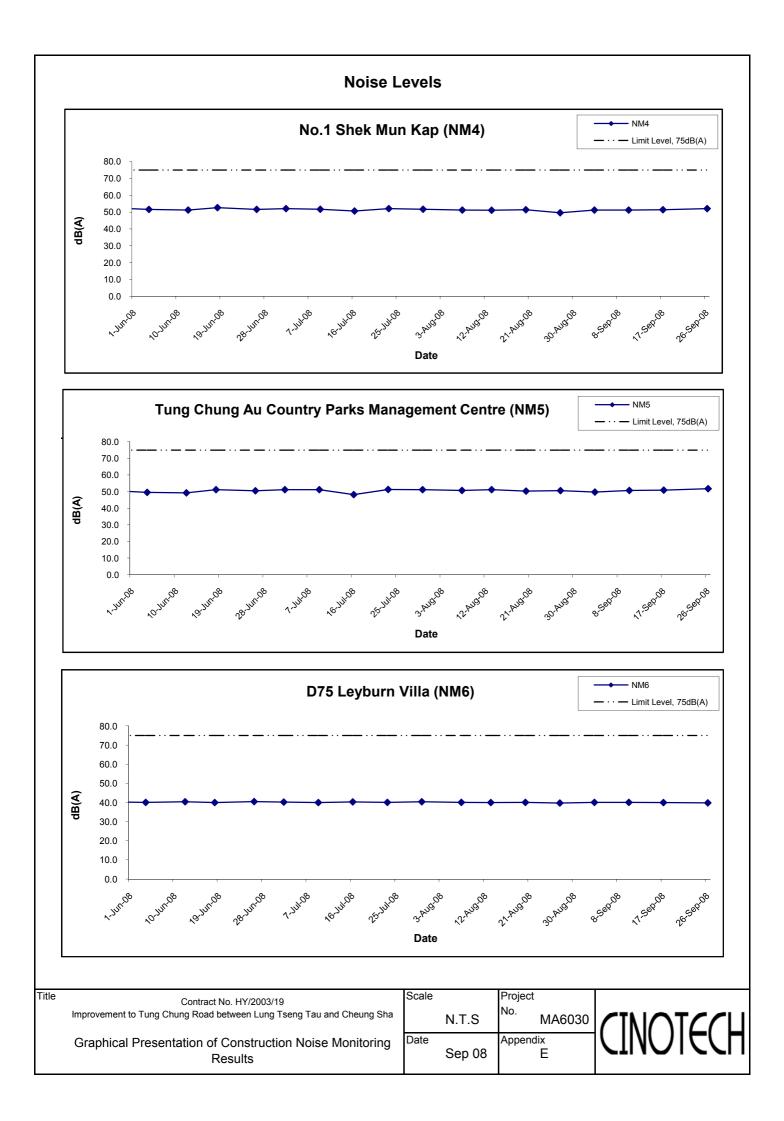
Appendix E - Noise Monitoring Results

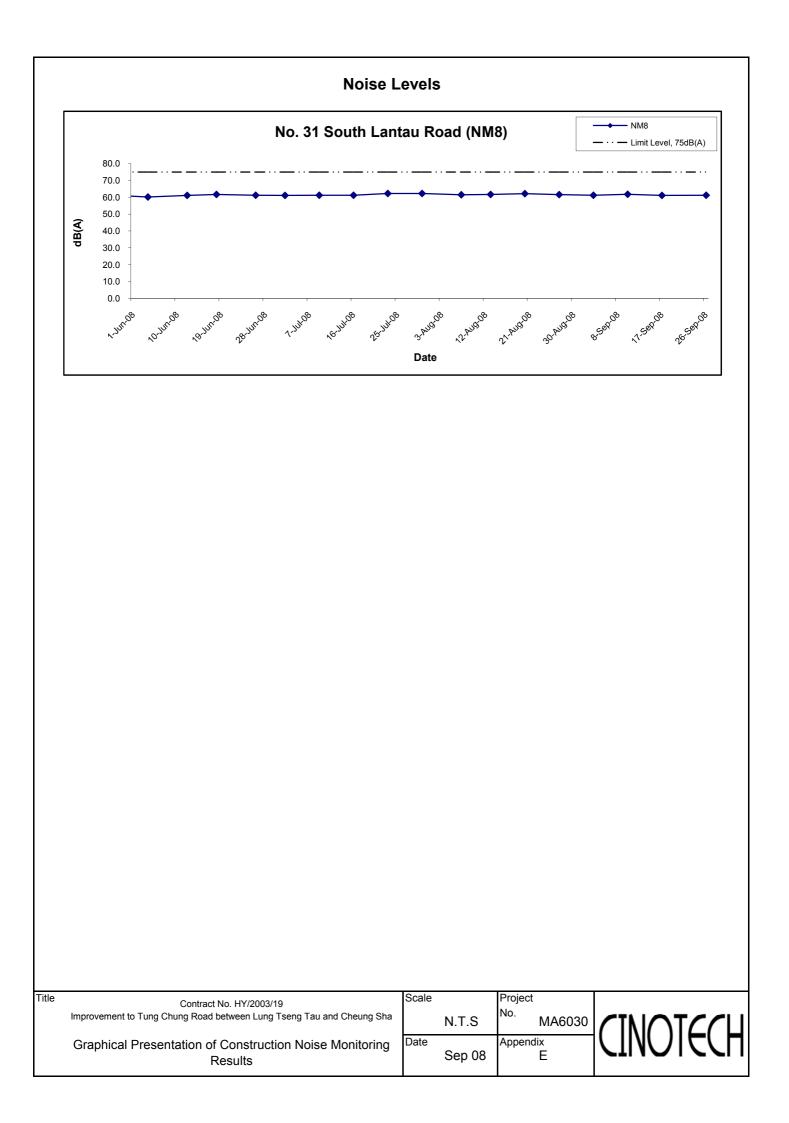
Location NM5	- Tung Chui	ng Au Country	[,] Parks Manag	jement Centi	re
Dete	Time	\\/e ath ar	dE	3 (A) (30-min)	
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀
3-Sep-08	13:00	Sunny	49.8	53.0	47.5
10-Sep-08	13:00	Sunny	50.7	52.5	47.5
17-Sep-08	13:00	Fine	50.9	52.0	48.5
26-Sep-08	13:00	Cloudy	51.8	53.5	48.5
		Average	50.9	52.8	48.0
		Minimum	49.8	52.0	47.5
		Maximum	51.8	53.5	48.5

Location NM6	Location NM6 - D75 Leyburn Villa										
Data	Time		dB (A) (30-min)								
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀						
3-Sep-08	13:45	Sunny	40.1	42.0	38.5						
10-Sep-08	13:45	Sunny	40.1	41.5	39.0						
17-Sep-08	13:45	Fine	40.0	41.5	39.0						
26-Sep-08	13:45	Cloudy	39.8	41.0	38.5						
		Average	40.0	41.5	38.8						
		Minimum	39.8	41.0	38.5						
		Maximum	40.1	42.0	39.0						

Location NM8	Location NM8 - No. 31 South Lantau Road										
Dete	Time	\\/e ath ar	dB (A) (30-min)								
Date	Time	Weather	L _{eq}	L ₁₀	L ₉₀						
3-Sep-08	14:20	Sunny	61.2	64.5	59.5						
10-Sep-08	14:25	Sunny	61.8	63.5	58.5						
17-Sep-08	14:25	Fine	61.1	63.5	59.0						
26-Sep-08	14:25	Cloudy	61.2	64.0	58.5						
		Average	61.3	63.9	58.9						
		Minimum	61.1	63.5	58.5						
		Maximum	61.8	64.5	59.5						







APPENDIX F WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATION

Water Quality Monitoring Results at 15_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	p	Η	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ity(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depu	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:22	Middle	0.09	21.9 21.9	21.9	7.5 7.5	7.5	0.02 0.02	0.02	92.0 91.8	91.9	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:29	Middle	0.09	21.8 21.9	21.9	7.4 7.4	7.4	0.02 0.02	0.02	90.8 90.6	90.7	7.3 7.3	7.3	2.0 2.0	2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:45	Middle	0.09	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	91.6 91.4	91.5	7.6 7.6	7.6	2.1 2.1	2.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:53	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.5 92.3	92.4	7.9 7.9	7.9	2.0 2.0	2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:43	Middle	0.09	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	91.8 91.6	91.7	7.6 7.6	7.6	1.7 1.7	1.7	6.0 6.0	6
12-Sep-08	Sunny	Calm	12:08	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.7 92.5	92.6	7.9 7.9	7.9	1.8 1.8	1.8	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:22	Middle	0.09	22.0 22.0	22	7.5 7.5	7.5	0.02 0.02	0.02	92.1 91.9	92	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:48	Middle	0.09	22.0 22.0	22	7.5 7.5	7.5	0.02 0.02	0.02	91.8 91.6	91.7	7.7 7.6	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	11:12	Middle	0.09	22.1 22.1	22.1	7.6 7.5	7.6	0.02 0.02	0.02	91.4 91.2	91.3	7.5 7.5	7.5	1.8 1.8	1.8	<2.5 <2.5	<2.5
22-Sep-08	Sunny	Calm	12:56	Middle	0.09	22.0 22.1	22.1	7.5 7.5	7.5	0.02 0.02	0.02	90.5 90.3	90.4	7.2 7.2	7.2	1.6 1.6	1.6	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:57	Middle	0.09	21.9 21.9	21.9	7.4 7.4	7.4	0.02 0.02	0.02	89.8 89.6	89.7	7.0 6.9	7	1.9 1.9	1.9	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:52	Middle	0.09	22.1 22.1	22.1	7.5 7.5	7.5	0.02 0.02	0.02	89.0 88.8	88.9	6.7 6.7	6.7	2.1 2.1	2.1	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:31	Middle	0.09	22.1 22.1	22.1	7.5 7.5	7.5	0.02 0.02	0.02	89.9 89.7	89.8	7.2 7.1	7.2	1.8 1.8	1.8	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 15_R

Date	Weather	Sea	Sampling	Dept	n (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	iration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Бери	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:15	Middle	0.08	21.9 21.9	21.9	7.4 7.4	7.4	0.02 0.02	0.02	92.5 92.3	92.4	7.8 7.8	7.8	2.0 1.9	2	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:22	Middle	0.08	21.8 21.8	21.8	7.3 7.3	7.3	0.02 0.02	0.02	91.3 91.1	91.2	7.4 7.4	7.4	2.2 2.1	2.2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:39	Middle	0.08	21.7 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	92.1 91.9	92	7.6 7.6	7.6	2.3 2.2	2.3	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:46	Middle	0.08	21.8 21.8	21.8	7.5 7.5	7.5	0.02 0.02	0.02	93.0 92.8	92.9	7.9 7.9	7.9	2.2 2.1	2.2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:37	Middle	0.08	21.7 21.8	21.8	7.5 7.5	7.5	0.02 0.02	0.02	92.3 92.1	92.2	7.7 7.7	7.7	1.9 1.8	1.9	6.0 6.0	6
12-Sep-08	Sunny	Calm	12:02	Middle	0.08	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	93.2 93.0	93.1	8.0 8.0	8	2.0 1.9	2	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:15	Middle	0.08	22.0 22.0	22	7.5 7.5	7.5	0.02 0.02	0.02	92.6 92.4	92.5	7.8 7.8	7.8	1.9 1.8	1.9	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:42	Middle	0.08	22.0 22.0	22	7.4 7.4	7.4	0.02 0.02	0.02	92.3 92.1	92.2	7.7 7.7	7.7	2.0 1.9	2	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	11:063	Middle	0.08	22.0 22.0	22	7.5 7.5	7.5	0.02 0.02	0.02	91.9 91.7	91.8	7.6 7.6	7.6	2.0 1.9	2	<2.5 <2.5	<2.5
22-Sep-08	Sunny	Calm	12:49	Middle	0.08	22.0 22.0	22	7.4 7.4	7.4	0.02 0.02	0.02	91.0 90.8	90.9	7.3 7.2	7.3	1.8 1.7	1.8	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:51	Middle	0.08	21.9 21.9	21.9	7.4 7.4	7.4	0.02 0.02	0.02	90.3 90.1	90.2	7.0 7.0	7	2.1 2.0	2.1	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:46	Middle	0.08	22.0 22.0	22	7.4 7.4	7.4	0.02 0.02	0.02	89.5 89.3	89.4	6.8 6.8	6.8	2.3 2.2	2.3	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:25	Middle	0.08	22.0 22.0	22	7.5 7.5	7.5	0.02 0.02	0.02	90.4 90.2	90.3	7.2 7.2	7.2	2.0 1.9	2	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 18_I

Date	Weather	Sea	Sampling	Dept	n (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	uration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:07	Middle	0.1	21.7 21.7	21.7	7.6 7.6	7.6	0.02 0.02	0.02	91.7 91.6	91.7	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:14	Middle	0.1	21.6 21.6	21.6	7.5 7.5	7.5	0.02 0.02	0.02	90.5 90.4	90.5	7.3 7.3	7.3	2.0 2.0	2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:30	Middle	0.1	21.6 21.6	21.6	7.7 7.7	7.7	0.02 0.02	0.02	91.3 91.2	91.3	7.6 7.6	7.6	2.1 2.1	2.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:38	Middle	0.1	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	92.2 92.1	92.2	7.9 7.9	7.9	2.0 2.0	2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:28	Middle	0.1	21.6 21.6	21.6	7.7 7.7	7.7	0.02 0.02	0.02	91.5 91.4	91.5	7.6 7.6	7.6	1.7 1.7	1.7	3.0 4.0	3.5
12-Sep-08	Sunny	Calm	11:54	Middle	0.1	21.7 21.7	21.7	7.8 7.8	7.8	0.02 0.02	0.02	92.4 92.3	92.4	7.9 7.9	7.9	1.9 1.9	1.9	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:07	Middle	0.1	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	91.8 91.7	91.8	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:34	Middle	0.1	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	91.5 91.4	91.5	7.7 7.6	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:58	Middle	0.1	21.9 21.9	21.9	7.7 7.7	7.7	0.02 0.02	0.02	91.1 91.0	91.1	7.5 7.5	7.5	1.9 1.9	1.9	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	12:41	Middle	0.1	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	90.2 90.1	90.2	7.2 7.2	7.2	1.7 1.7	1.7	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:42	Middle	0.1	21.7 21.7	21.7	7.6 7.6	7.6	0.02 0.02	0.02	89.5 89.4	89.5	7.0 7.0	7	2.0 2.0	2	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:38	Middle	0.1	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	88.7 88.6	88.7	6.7 6.7	6.7	2.2 2.2	2.2	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:16	Middle	0.1	21.8 21.9	21.9	7.7 7.7	7.7	0.02 0.02	0.02	89.6 89.5	89.6	7.2 7.2	7.2	1.9 1.9	1.9	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 18_R

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	ъН	Salir	ity ppt	DO Satu	uration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Вери	n (m)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:03	Middle	0.175	21.7 21.7	21.7	7.6 7.6	7.6	0.02 0.02	0.02	92.0 91.6	91.8	7.8 7.7	7.8	1.8 1.8	1.8	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:10	Middle	0.175	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	90.8 90.4	90.6	7.4 7.3	7.4	2.0 2.0	2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:27	Middle	0.175	21.5 21.6	21.6	7.7 7.7	7.7	0.02 0.02	0.02	91.6 91.2	91.4	7.6 7.6	7.6	2.1 2.1	2.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:34	Middle	0.175	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	92.5 92.1	92.3	7.9 7.9	7.9	2.0 2.0	2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:25	Middle	0.175	21.6 21.6	21.6	7.7 7.7	7.7	0.02 0.02	0.02	91.8 91.4	91.6	7.7 7.6	7.7	1.7 1.7	1.7	5.0 6.0	5.5
12-Sep-08	Sunny	Calm	11:50	Middle	0.175	21.7 21.7	21.7	7.8 7.8	7.8	0.02 0.02	0.02	92.7 92.3	92.5	8.0 7.9	8	1.9 1.9	1.9	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:03	Middle	0.175	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	92.1 91.7	91.9	7.8 7.7	7.8	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:30	Middle	0.175	21.8 21.8	21.8	7.7 7.6	7.7	0.02 0.02	0.02	91.8 91.4	91.6	7.7 7.6	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:54	Middle	0.175	21.8 21.9	21.9	7.7 7.7	7.7	0.02 0.02	0.02	91.4 91.0	91.2	7.6 7.5	7.6	1.9 1.9	1.9	4.0 4.0	4
22-Sep-08	Sunny	Calm	12:37	Middle	0.175	21.8 21.8	21.8	7.7 7.6	7.7	0.02 0.02	0.02	90.5 90.1	90.3	7.2 7.2	7.2	1.7 1.7	1.7	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:39	Middle	0.175	21.7 21.7	21.7	7.6 7.6	7.6	0.02 0.02	0.02	89.8 89.4	89.6	7.0 7.0	7	2.0 2.0	2	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:34	Middle	0.175	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	89.0 88.6	88.8	6.8 6.7	6.8	2.2 2.2	2.2	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:13	Middle	0.175	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	89.9 89.5	89.7	7.2 7.1	7.2	1.9 1.9	1.9	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 21_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	uration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	(III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:59	Middle	0.14	21.6 21.6	21.6	7.7 7.7	7.7	0.02 0.02	0.02	92.1 92.4	92.3	7.8 7.8	7.8	2.1 2.1	2.1	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:06	Middle	0.14	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	90.9 91.2	91.1	7.4 7.4	7.4	2.2 2.2	2.2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:23	Middle	0.14	21.5 21.5	21.5	7.7 7.8	7.8	0.02 0.02	0.02	91.7 92.0	91.9	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:30	Middle	0.14	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	92.6 92.9	92.8	8.0 8.0	8	1.7 1.7	1.7	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:21	Middle	0.14	21.5 21.5	21.5	7.7 7.8	7.8	0.02 0.02	0.02	91.9 92.2	92.1	7.7 7.7	7.7	1.4 1.4	1.4	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	11:46	Middle	0.14	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	92.8 93.1	93	8.0 8.0	8	1.6 1.6	1.6	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:59	Middle	0.14	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	92.2 92.5	92.4	7.8 7.8	7.8	1.5 1.5	1.5	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:26	Middle	0.14	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	91.9 92.2	92.1	7.7 7.8	7.8	1.5 1.5	1.5	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:50	Middle	0.14	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	91.5 91.8	91.7	7.6 7.6	7.6	1.7 1.7	1.7	<2.5 <2.5	<2.5
22-Sep-08	Sunny	Calm	12:33	Middle	0.14	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	90.6 90.9	90.8	7.3 7.3	7.3	1.5 1.5	1.5	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:35	Middle	0.14	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	89.9 90.2	90.1	7.1 7.1	7.1	1.8 1.8	1.8	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:30	Middle	0.14	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	89.1 89.4	89.3	6.8 6.8	6.8	2.0 2.0	2	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:09	Middle	0.14	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	90.0 90.3	90.2	7.2 7.3	7.3	1.7 1.7	1.7	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 21_R

Date	Weather	Sea	Sampling	Dept	n (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	iration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Бери	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:55	Middle	0.1	21.6 21.6	21.6	7.7 7.7	7.7	0.02 0.02	0.02	93.2 92.6	92.9	7.9 7.9	7.9	2.0 2.1	2.1	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:02	Middle	0.1	21.5 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	92.0 91.4	91.7	7.5 7.5	7.5	2.1 2.2	2.2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:18	Middle	0.1	21.5 21.5	21.5	7.8 7.7	7.8	0.02 0.02	0.02	92.8 92.2	92.5	7.8 7.7	7.8	1.9 1.9	1.9	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:26	Middle	0.1	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	93.7 93.1	93.4	8.1 8.0	8.1	1.8 1.8	1.8	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:16	Middle	0.1	21.5 21.5	21.5	7.8 7.7	7.8	0.02 0.02	0.02	93.0 92.4	92.7	7.8 7.8	7.8	1.5 1.5	1.5	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	11:04	Middle	0.1	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	93.9 93.3	93.6	8.1 8.1	8.1	1.6 1.6	1.6	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:55	Middle	0.1	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	93.3 92.7	93	7.9 7.9	7.9	1.5 1.5	1.5	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:21	Middle	0.1	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	93.0 92.4	92.7	7.8 7.8	7.8	1.5 1.5	1.5	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:45	Middle	0.1	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	92.6 92.0	92.3	7.7 7.6	7.7	1.7 1.7	1.7	4.0 4.0	4
22-Sep-08	Sunny	Calm	12:29	Middle	0.1	21.7 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	91.7 91.1	91.4	7.4 7.3	7.4	1.5 1.5	1.5	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:30	Middle	0.1	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	91.0 90.4	90.7	7.2 7.1	7.2	1.8 1.8	1.8	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:25	Middle	0.1	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	90.2 89.6	89.9	6.9 6.9	6.9	2.0 2.0	2	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:04	Middle	0.1	21.7 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	91.1 90.5	90.8	7.3 7.3	7.3	1.7 1.7	1.7	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 23_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	uration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	(III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:48	Middle	0.09	21.8 21.8	21.8	7.5 7.5	7.5	0.02 0.02	0.02	93.0 92.6	92.8	7.9 7.9	7.9	1.7 1.7	1.7	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:56	Middle	0.09	21.7 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	91.8 91.4	91.6	7.5 7.5	7.5	1.8 1.8	1.8	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:12	Middle	0.09	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	92.6 92.2	92.4	7.7 7.7	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:20	Middle	0.09	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	93.5 93.1	93.3	8.0 8.0	8	1.8 1.8	1.8	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:10	Middle	0.09	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	92.8 92.4	92.6	7.8 7.8	7.8	1.5 1.5	1.5	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	11:35	Middle	0.09	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	93.7 93.3	93.5	8.1 8.1	8.1	1.6 1.6	1.6	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:48	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	93.1 92.7	92.9	7.9 7.9	7.9	1.4 1.4	1.4	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:15	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.8 92.4	92.6	7.8 7.8	7.8	1.4 1.4	1.4	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:39	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.4 92.0	92.2	7.7 7.6	7.7	1.6 1.6	1.6	<2.5 <2.5	<2.5
22-Sep-08	Sunny	Calm	12:22	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	91.5 91.1	91.3	7.4 7.3	7.4	1.4 1.4	1.4	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:24	Middle	0.09	21.8 21.8	21.8	7.5 7.5	7.5	0.02 0.02	0.02	90.8 90.4	90.6	7.1 7.1	7.1	1.7 1.7	1.7	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:19	Middle	0.09	21.9 21.9	21.9	7.5 7.6	7.6	0.02 0.02	0.02	90.0 89.6	89.8	6.9 6.9	6.9	1.9 1.9	1.9	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:58	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	90.9 90.5	90.7	7.3 7.3	7.3	1.6 1.6	1.6	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 23_R1

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	ъН	Salin	ity ppt	DO Satu	uration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	(III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:35	Middle	0.09	21.7 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	95.0 94.1	94.6	8.1 8.0	8.1	1.8 1.9	1.9	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:43	Middle	0.09	21.6 21.6	21.6	7.5 7.5	7.5	0.02 0.02	0.02	93.8 92.9	93.4	7.7 7.6	7.7	1.9 2.0	2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:59	Middle	0.09	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	94.6 93.7	94.2	7.9 7.9	7.9	2.0 2.1	2.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:07	Middle	0.09	21.6 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	95.5 94.6	95.1	8.2 8.2	8.2	1.9 2.0	2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:57	Middle	0.09	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	94.8 93.9	94.4	8.0 7.9	8	1.6 1.7	1.7	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	11:22	Middle	0.09	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	95.7 94.8	95.3	8.3 8.2	8.3	1.7 1.8	1.8	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:35	Middle	0.09	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	95.1 94.2	94.7	8.1 8.0	8.1	1.5 1.6	1.6	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:02	Middle	0.09	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	94.8 93.9	94.4	8.0 7.9	8	1.5 1.6	1.6	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:26	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	94.4 93.5	94	7.9 7.8	7.9	1.7 1.8	1.8	5.0 4.0	4.5
22-Sep-08	Sunny	Calm	12:10	Middle	0.09	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	93.5 92.6	93.1	7.6 7.5	7.6	1.5 1.6	1.6	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:11	Middle	0.09	21.7 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	92.8 91.9	92.4	7.3 7.2	7.3	1.8 1.9	1.9	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:06	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.0 91.1	91.6	7.1 7.0	7.1	2.0 2.1	2.1	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:45	Middle	0.09	21.8 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.9 92.0	92.5	7.5 7.4	7.5	1.7 1.8	1.8	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 23_R2

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	þ	Η	Salin	ity ppt	DO Satu	iration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Вери		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:41	Middle	0.1	21.7 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	94.4 94.1	94.3	8.0 8.0	8	1.7 1.7	1.7	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:49	Middle	0.1	21.6 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	93.2 92.9	93.1	7.6 7.6	7.6	1.8 1.8	1.8	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:05	Middle	0.1	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	94.0 93.7	93.9	7.9 7.9	7.9	1.9 1.9	1.9	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	11:13	Middle	0.1	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	94.9 94.6	94.8	8.2 8.1	8.2	1.8 1.8	1.8	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:03	Middle	0.1	21.6 21.6	21.6	7.6 7.6	7.6	0.02 0.02	0.02	94.2 93.9	94.1	7.9 7.9	7.9	1.5 1.5	1.5	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	11:28	Middle	0.1	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	95.1 94.8	95	8.2 8.2	8.2	1.6 1.6	1.6	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:41	Middle	0.1	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	94.5 94.2	94.4	8.0 8.0	8	1.4 1.4	1.4	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:08	Middle	0.1	21.8 21.8	21.8	7.6 7.6	7.6	0.02 0.02	0.02	94.2 93.9	94.1	7.9 7.9	7.9	1.4 1.4	1.4	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:32	Middle	0.1	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	93.8 93.5	93.7	7.8 7.8	7.8	1.6 1.6	1.6	5.0 5.0	5
22-Sep-08	Sunny	Calm	12:15	Middle	0.1	21.8 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.9 92.6	92.8	7.5 7.5	7.5	1.4 1.4	1.4	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:17	Middle	0.1	21.7 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	92.2 91.9	92.1	7.3 7.2	7.3	1.7 1.7	1.7	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:12	Middle	0.1	21.9 21.9	21.9	7.6 7.5	7.6	0.02 0.02	0.02	91.4 91.1	91.3	7.0 7.0	7	1.9 1.9	1.9	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:51	Middle	0.1	21.9 21.9	21.9	7.6 7.6	7.6	0.02 0.02	0.02	92.3 92.0	92.2	7.4 7.4	7.4	1.6 1.6	1.6	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 26_I

Date	Weather	Sea	Sampling	Dept	n (m)	Tempera	ature (°C)	F	Η	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbid	ity(NTU)	Suspended	Solids (mg/L
Dute	Condition	Condition*	Time	Бера	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:01	Middle	0.14	21.7 21.7	21.7	7.8 7.8	7.8	0.03 0.03	0.03	94.4 94.3	94.4	8.0 7.9	8	1.8 1.7	1.8	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:08	Middle	0.14	21.6 21.6	21.6	7.7 7.7	7.7	0.03 0.03	0.03	93.2 93.1	93.2	7.6 7.5	7.6	2.0 1.9	2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:25	Middle	0.14	21.6 21.6	21.6	7.9 7.9	7.9	0.03 0.03	0.03	94.0 93.9	94	7.8 7.8	7.8	2.1 2.0	2.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:32	Middle	0.14	21.7 21.7	21.7	7.9 7.9	7.9	0.03 0.03	0.03	94.9 94.8	94.9	8.1 8.1	8.1	2.0 1.9	2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:23	Middle	0.14	21.6 21.6	21.6	7.9 7.9	7.9	0.03 0.03	0.03	94.2 94.1	94.2	7.9 7.8	7.9	1.7 1.6	1.7	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	10:48	Middle	0.14	21.7 21.7	21.7	7.9 7.9	7.9	0.03 0.03	0.03	95.1 95.0	95.1	8.2 8.1	8.2	1.8 1.7	1.8	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:01	Middle	0.14	21.8 21.8	21.8	7.8 7.8	7.8	0.03 0.03	0.03	94.5 94.4	94.5	8.0 7.9	8	1.7 1.6	1.7	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:28	Middle	0.14	21.8 21.8	21.8	7.8 7.8	7.8	0.03 0.03	0.03	94.2 94.1	94.2	7.9 7.8	7.9	1.8 1.7	1.8	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	9:52	Middle	0.14	21.9 21.9	21.9	7.9 7.9	7.9	0.03 0.03	0.03	93.8 93.7	93.8	7.8 7.7	7.8	1.9 1.8	1.9	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	11:35	Middle	0.14	21.8 21.8	21.8	7.8 7.8	7.8	0.03 0.03	0.03	92.9 92.8	92.9	7.5 7.4	7.5	1.7 1.6	1.7	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	9:37	Middle	0.14	21.7 21.7	21.7	7.7 7.7	7.7	0.03 0.03	0.03	92.2 92.1	92.2	7.2 7.2	7.2	2.0 1.9	2	3.0 4.0	3.5
26-Sep-08	Sunny	Calm	10:32	Middle	0.14	21.9 21.9	21.9	7.8 7.8	7.8	0.03 0.03	0.03	91.4 91.3	91.4	7.0 6.9	7	2.2 2.1	2.2	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:11	Middle	0.14	21.8 21.8	21.8	7.9 7.9	7.9	0.03 0.03	0.03	92.3 92.2	92.3	7.4 7.3	7.4	1.9 1.8	1.9	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 26_R

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	uration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	(III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:25	Middle	0.09	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	93.5 93.0	93.3	7.9 7.9	7.9	1.9 2.0	2	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:33	Middle	0.09	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	92.3 91.8	92.1	7.5 7.5	7.5	2.1 2.2	2.2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:49	Middle	0.09	21.7 21.7	21.7	7.8 7.8	7.8	0.02 0.02	0.02	93.1 92.6	92.9	7.8 7.7	7.8	2.2 2.3	2.3	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:57	Middle	0.09	21.7 21.8	21.8	7.9 7.9	7.9	0.02 0.02	0.02	94.0 93.5	93.8	8.1 8.0	8.1	2.1 2.2	2.2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:47	Middle	0.09	21.7 21.7	21.7	7.8 7.8	7.8	0.02 0.02	0.02	93.3 92.8	93.1	7.8 7.8	7.8	1.8 1.9	1.9	3.0 3.0	3
12-Sep-08	Sunny	Calm	11:12	Middle	0.09	21.8 21.8	21.8	7.9 7.9	7.9	0.02 0.02	0.02	94.2 93.7	94	8.1 8.1	8.1	1.9 2.0	2	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:25	Middle	0.09	21.9 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	93.6 93.1	93.4	7.9 7.9	7.9	1.8 1.9	1.9	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:52	Middle	0.09	21.9 21.9	21.9	7.8 7.7	7.8	0.02 0.02	0.02	93.3 92.8	93.1	7.8 7.8	7.8	1.8 1.9	1.9	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:16	Middle	0.09	22.0 22.0	22	7.8 7.8	7.8	0.02 0.02	0.02	92.9 92.4	92.7	7.7 7.7	7.7	1.9 2.0	2	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	11:59	Middle	0.09	21.9 21.9	21.9	7.8 7.7	7.8	0.02 0.02	0.02	92.0 91.5	91.8	7.4 7.4	7.4	1.7 1.8	1.8	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	10:01	Middle	0.09	21.8 21.8	21.8	7.7 7.7	7.7	0.02 0.02	0.02	91.3 90.8	91.1	7.1 7.1	7.1	2.0 2.1	2.1	6.0 6.0	6
26-Sep-08	Sunny	Calm	10:56	Middle	0.09	22.0 22.0	22	7.7 7.7	7.7	0.02 0.02	0.02	90.5 90.0	90.3	6.9 6.9	6.9	2.2 2.3	2.3	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:35	Middle	0.09	21.9 22.0	22	7.8 7.8	7.8	0.02 0.02	0.02	91.4 90.9	91.2	7.3 7.3	7.3	1.9 2.0	2	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 27_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	p	ъН	Salin	ity ppt	DO Satu	iration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Вери		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:19	Middle	0.08	21.7 21.7	21.7	7.7 7.7	7.7	0.03 0.03	0.03	94.8 94.7	94.8	8.1 8.1	8.1	1.9 1.9	1.9	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:26	Middle	0.08	21.6 21.7	21.7	7.7 7.7	7.7	0.03 0.03	0.03	93.6 93.5	93.6	7.7 7.7	7.7	2.1 2.1	2.1	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:43	Middle	0.08	21.6 21.6	21.6	7.8 7.8	7.8	0.03 0.03	0.03	94.4 94.3	94.4	7.9 7.9	7.9	2.0 2.0	2	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:51	Middle	0.08	21.7 21.7	21.7	7.9 7.9	7.9	0.03 0.03	0.03	95.3 95.2	95.3	8.2 8.2	8.2	1.7 1.7	1.7	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:41	Middle	0.08	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	94.6 94.5	94.6	8.0 8.0	8	1.4 1.4	1.4	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	11:06	Middle	0.08	21.7 21.7	21.7	7.9 7.9	7.9	0.02 0.02	0.02	95.5 95.4	95.5	8.3 8.3	8.3	1.5 1.5	1.5	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:19	Middle	0.08	21.8 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	94.9 94.8	94.9	8.1 8.1	8.1	1.4 1.4	1.4	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:46	Middle	0.08	21.8 21.8	21.8	7.8 7.8	7.8	0.02 0.02	0.02	94.6 94.5	94.6	8.0 8.0	8	1.5 1.5	1.5	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:10	Middle	0.08	21.9 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	94.2 94.1	94.2	7.9 7.8	7.9	1.6 1.6	1.6	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	11:53	Middle	0.08	21.8 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	93.3 93.2	93.3	7.5 7.5	7.5	1.4 1.4	1.4	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	9:55	Middle	0.08	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	92.6 92.5	92.6	7.3 7.3	7.3	1.7 1.7	1.7	4.0 4.0	4
26-Sep-08	Sunny	Calm	10:50	Middle	0.08	21.9 21.9	21.9	7.8 7.7	7.8	0.02 0.02	0.02	91.8 91.7	91.8	7.1 7.1	7.1	1.9 1.9	1.9	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:29	Middle	0.08	21.9 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	92.7 92.6	92.7	7.5 7.5	7.5	1.6 1.6	1.6	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 27_R

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	p	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Вери	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	10:09	Middle	0.13	21.7 21.7	21.7	7.8 7.8	7.8	0.03 0.03	0.03	96.2 95.7	96	8.2 8.2	8.2	2.1 2.1	2.1	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	11:17	Middle	0.13	21.6 21.6	21.6	7.7 7.7	7.7	0.03 0.03	0.03	95.0 94.5	94.8	7.8 7.8	7.8	2.3 2.3	2.3	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:33	Middle	0.13	21.6 21.6	21.6	7.8 7.8	7.8	0.03 0.03	0.03	95.8 95.3	95.6	8.1 8.0	8.1	2.0 2.1	2.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:41	Middle	0.13	21.7 21.6	21.7	7.9 7.9	7.9	0.03 0.03	0.03	96.7 96.2	96.5	8.4 8.3	8.4	1.7 1.8	1.8	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:31	Middle	0.13	21.6 21.6	21.6	7.8 7.8	7.8	0.02 0.02	0.02	96.0 95.5	95.8	8.1 8.1	8.1	1.4 1.5	1.5	3.0 3.0	3
12-Sep-08	Sunny	Calm	10:56	Middle	0.13	21.7 21.7	21.7	7.9 7.9	7.9	0.02 0.02	0.02	96.9 96.4	96.7	8.4 8.4	8.4	1.5 1.6	1.6	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	11:09	Middle	0.13	21.8 21.8	21.8	7.8 7.8	7.8	0.02 0.02	0.02	96.3 95.8	96.1	8.2 8.2	8.2	1.4 1.5	1.5	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:36	Middle	0.13	21.8 21.8	21.8	7.8 7.8	7.8	0.02 0.02	0.02	96.0 95.5	95.8	8.1 8.1	8.1	1.5 1.6	1.6	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	10:00	Middle	0.13	21.9 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	95.6 95.1	95.4	8.0 7.9	8	1.6 1.7	1.7	5.0 4.0	4.5
22-Sep-08	Sunny	Calm	11:43	Middle	0.13	21.8 21.8	21.8	7.8 7.8	7.8	0.02 0.02	0.02	94.7 94.2	94.5	7.7 7.6	7.7	1.4 1.5	1.5	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	9:45	Middle	0.13	21.7 21.7	21.7	7.7 7.7	7.7	0.02 0.02	0.02	94.0 93.5	93.8	7.5 7.4	7.5	1.7 1.8	1.8	4.0 4.0	4
26-Sep-08	Sunny	Calm	10:40	Middle	0.13	21.9 21.9	21.9	7.8 7.8	7.8	0.02 0.02	0.02	93.2 92.7	93	7.2 7.2	7.2	1.9 2.0	2	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	10:19	Middle	0.13	21.8 21.8	21.8	7.8 7.8	7.8	0.02 0.02	0.02	94.1 93.6	93.9	7.7 7.6	7.7	1.6 1.7	1.7	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 40_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	F	Η	Salin	ity ppt	DO Satu	iration (%)	Dissolved O	xygen (mg/L)	Turbid	ity(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Бера	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	9:41	Middle	0.09	21.9 21.9	21.9	7.7 7.7	7.7	0.04 0.04	0.04	100.0 99.8	99.9	8.2 8.2	8.2	2.0 2.0	2	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	10:48	Middle	0.09	21.9 21.9	21.9	7.6 7.6	7.6	0.04 0.04	0.04	98.8 98.6	98.7	7.8 7.8	7.8	2.3 2.3	2.3	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:05	Middle	0.09	21.8 21.8	21.8	7.8 7.8	7.8	0.04 0.04	0.04	99.6 99.4	99.5	8.1 8.1	8.1	2.4 2.4	2.4	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:13	Middle	0.09	21.9 21.9	21.9	7.8 7.8	7.8	0.04 0.04	0.04	100.5 100.3	100.4	8.4 8.4	8.4	2.1 2.1	2.1	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:03	Middle	0.09	21.8 21.8	21.8	7.8 7.8	7.8	0.04 0.04	0.04	99.8 99.6	99.7	8.1 8.1	8.1	1.8 1.8	1.8	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	10:28	Middle	0.09	21.9 21.9	21.9	7.9 7.9	7.9	0.04 0.04	0.04	100.7 100.5	100.6	8.4 8.4	8.4	1.9 1.9	1.9	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	10:41	Middle	0.09	22.1 22.1	22.1	7.8 7.7	7.8	0.04 0.04	0.04	100.1 99.9	100	8.2 8.2	8.2	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:08	Middle	0.09	22.0 22.0	22	7.7 7.7	7.7	0.05 0.05	0.05	99.8 99.6	99.7	8.1 8.1	8.1	1.9 1.9	1.9	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	9:32	Middle	0.09	22.1 22.1	22.1	7.8 7.8	7.8	0.05 0.05	0.05	99.4 99.2	99.3	8.0 8.0	8	2.0 2.0	2	4.0 4.0	4
22-Sep-08	Sunny	Calm	11:15	Middle	0.09	22.1 22.1	22.1	7.7 7.7	7.7	0.05 0.05	0.05	98.5 98.3	98.4	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	9:17	Middle	0.09	21.9 21.9	21.9	7.7 7.7	7.7	0.05 0.05	0.05	97.8 97.6	97.7	7.5 7.4	7.5	2.1 2.1	2.1	3.0 3.0	3
26-Sep-08	Sunny	Calm	10:12	Middle	0.09	22.1 22.1	22.1	7.7 7.7	7.7	0.05 0.05	0.05	97.0 96.8	96.9	7.2 7.2	7.2	2.3 2.3	2.3	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	9:51	Middle	0.09	22.1 22.1	22.1	7.8 7.8	7.8	0.05 0.05	0.05	97.9 97.7	97.8	7.7 7.6	7.7	2.0 2.0	2	<2.5 <2.5	<2.5

Water Quality Monitoring Results at 40_R

Date	Weather	Sea	Sampling	Dept	n (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	iration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Dute	Condition	Condition*	Time	Бери	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	9:36	Middle	0.2	21.9 21.9	21.9	7.7 7.7	7.7	0.04 0.04	0.04	99.3 99.5	99.4	7.8 7.8	7.8	2.1 2.1	2.1	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	10:43	Middle	0.2	21.9 21.9	21.9	7.7 7.7	7.7	0.04 0.04	0.04	98.1 98.3	98.2	7.4 7.4	7.4	2.4 2.4	2.4	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	9:59	Middle	0.2	21.8 21.8	21.8	7.8 7.8	7.8	0.04 0.04	0.04	98.9 99.1	99	7.6 7.6	7.6	2.5 2.5	2.5	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:07	Middle	0.2	21.9 21.9	21.9	7.9 7.9	7.9	0.04 0.04	0.04	99.8 100.0	99.9	7.9 7.9	7.9	2.2 2.2	2.2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	9:57	Middle	0.2	21.8 21.8	21.8	7.8 7.8	7.8	0.04 0.04	0.04	99.1 99.3	99.2	7.7 7.7	7.7	1.9 1.9	1.9	4.0 5.0	4.5
12-Sep-08	Sunny	Calm	10:23	Middle	0.2	21.9 21.9	21.9	7.9 7.9	7.9	0.04 0.04	0.04	100.0 100.2	100.1	8.0 8.0	8	2.0 2.0	2	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	10:36	Middle	0.2	22.0 22.0	22	7.8 7.8	7.8	0.04 0.04	0.04	99.4 99.6	99.5	7.8 7.8	7.8	1.9 1.9	1.9	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:03	Middle	0.2	22.0 22.0	22	7.8 7.7	7.8	0.05 0.05	0.05	99.1 99.3	99.2	7.7 7.7	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	9:27	Middle	0.2	22.1 22.1	22.1	7.8 7.8	7.8	0.05 0.05	0.05	98.7 98.9	98.8	7.5 7.6	7.6	2.1 2.1	2.1	<2.5 <2.5	<2.5
22-Sep-08	Sunny	Calm	11:10	Middle	0.2	22.1 22.1	22.1	7.8 7.7	7.8	0.05 0.05	0.05	97.8 98.0	97.9	7.2 7.2	7.2	1.9 1.9	1.9	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	9:11	Middle	0.2	21.9 21.9	21.9	7.7 7.7	7.7	0.05 0.05	0.05	97.1 97.3	97.2	7.0 7.0	7	2.2 2.2	2.2	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	10:07	Middle	0.2	22.1 22.1	22.1	7.8 7.7	7.8	0.05 0.05	0.05	96.3 96.5	96.4	6.8 6.8	6.8	2.4 2.4	2.4	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	9:45	Middle	0.2	22.1 22.1	22.1	7.8 7.8	7.8	0.05 0.05	0.05	97.2 97.4	97.3	7.2 7.2	7.2	2.1 2.1	2.1	<2.5 <2.5	<2.5

Water Quality Monitoring Results at CSS_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	1 (11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	9:48	Middle	0.19	21.8 21.8	21.8	7.7 7.8	7.8	0.03 0.03	0.03	98.9 99.0	99	8.2 8.2	8.2	2.3 2.2	2.3	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	10:55	Middle	0.19	21.7 21.7	21.7	7.7 7.7	7.7	0.03 0.03	0.03	97.7 97.8	97.8	7.8 7.8	7.8	2.6 2.5	2.6	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	10:11	Middle	0.19	21.6 21.6	21.6	7.8 7.8	7.8	0.03 0.03	0.03	98.5 98.6	98.6	8.0 8.1	8.1	2.7 2.6	2.7	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	10:19	Middle	0.19	21.7 21.7	21.7	7.9 7.9	7.9	0.03 0.03	0.03	99.4 99.5	99.5	8.3 8.3	8.3	2.4 2.3	2.4	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	10:09	Middle	0.19	21.7 21.7	21.7	7.8 7.8	7.8	0.03 0.03	0.03	98.7 98.8	98.8	8.1 8.1	8.1	2.1 2.0	2.1	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	10:35	Middle	0.19	21.8 21.8	21.8	7.9 7.9	7.9	0.03 0.03	0.03	99.6 99.7	99.7	8.4 8.4	8.4	2.2 2.1	2.2	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	10:48	Middle	0.19	21.9 21.9	21.9	7.8 7.8	7.8	0.03 0.03	0.03	99.0 99.1	99.1	8.2 8.2	8.2	2.1 2.0	2.1	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	10:14	Middle	0.19	21.9 21.9	21.9	7.8 7.8	7.8	0.03 0.03	0.03	98.7 98.8	98.8	8.1 8.1	8.1	2.2 2.1	2.2	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	9:39	Middle	0.19	21.9 21.9	21.9	7.8 7.8	7.8	0.03 0.03	0.03	98.3 98.4	98.4	8.0 8.0	8	2.3 2.2	2.3	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	11:22	Middle	0.19	21.9 21.9	21.9	7.8 7.8	7.8	0.03 0.03	0.03	97.4 97.5	97.5	7.7 7.7	7.7	2.1 2.0	2.1	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	9:23	Middle	0.19	21.8 21.8	21.8	7.7 7.7	7.7	0.03 0.03	0.03	96.7 96.8	96.8	7.4 7.4	7.4	2.4 2.3	2.4	3.0 4.0	3.5
26-Sep-08	Sunny	Calm	10:19	Middle	0.19	21.9 22.0	22	7.8 7.8	7.8	0.03 0.03	0.03	95.9 96.0	96	7.2 7.2	7.2	2.6 2.5	2.6	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	9:57	Middle	0.19	21.9 21.9	21.9	7.8 7.8	7.8	0.03 0.03	0.03	96.8 96.9	96.9	7.6 7.6	7.6	2.3 2.2	2.3	<2.5 <2.5	<2.5

Water Quality Monitoring Results at TCB_I

Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	ъН	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Depti	(III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:51	Middle	0.35	22.9 22.9	22.9	7.3 7.3	7.3	12.71 12.72	12.72	98.1 97.9	98	7.9 7.9	7.9	4.0 4.1	4.1	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:58	Middle	0.35	22.8 22.8	22.8	7.2 7.2	7.2	12.59 12.60	12.6	96.9 96.7	96.8	7.5 7.5	7.5	4.4 4.5	4.5	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	12:15	Middle	0.35	22.8 22.8	22.8	7.4 7.4	7.4	12.47 12.48	12.48	97.7 97.5	97.6	7.7 7.7	7.7	5.0 5.1	5.1	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	12:22	Middle	0.35	22.8 22.8	22.8	7.4 7.4	7.4	12.66 12.67	12.67	98.6 98.4	98.5	8.0 8.0	8	4.5 4.6	4.6	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	12:13	Middle	0.35	22.8 22.8	22.8	7.4 7.4	7.4	12.69 12.68	12.69	97.9 97.7	97.8	7.8 7.8	7.8	3.9 4.0	4	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	12:38	Middle	0.35	22.9 22.9	22.9	7.5 7.5	7.5	12.75 12.74	12.75	98.8 98.6	98.7	8.1 8.1	8.1	4.2 4.3	4.3	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:51	Middle	0.35	23.0 23.0	23	7.4 7.4	7.4	12.84 12.83	12.84	98.2 98.0	98.1	7.9 7.9	7.9	4.0 4.1	4.1	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	12:18	Middle	0.35	23.0 23.0	23	7.3 7.3	7.3	12.66 12.65	12.66	97.9 97.7	97.8	7.8 7.8	7.8	3.9 4.0	4	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	11:42	Middle	0.35	23.1 23.1	23.1	7.4 7.4	7.4	12.71 12.70	12.71	97.5 97.3	97.4	7.7 7.7	7.7	4.3 4.4	4.4	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	13:25	Middle	0.35	23.0 23.0	23	7.3 7.3	7.3	12.77 12.76	12.77	96.6 96.4	96.5	7.4 7.4	7.4	3.7 3.8	3.8	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	11:27	Middle	0.35	22.9 22.9	22.9	7.3 7.3	7.3	12.66 12.65	12.66	95.9 95.7	95.8	7.1 7.1	7.1	4.3 4.4	4.4	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	12:22	Middle	0.35	23.1 23.1	23.1	7.3 7.3	7.3	12.69 12.68	12.69	95.1 94.9	95	6.9 6.9	6.9	4.7 4.8	4.8	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	12:01	Middle	0.35	23.0 23.0	23	7.4 7.4	7.4	12.36 12.35	12.36	96.0 95.8	95.9	7.3 7.3	7.3	4.1 4.2	4.2	<2.5 <2.5	<2.5

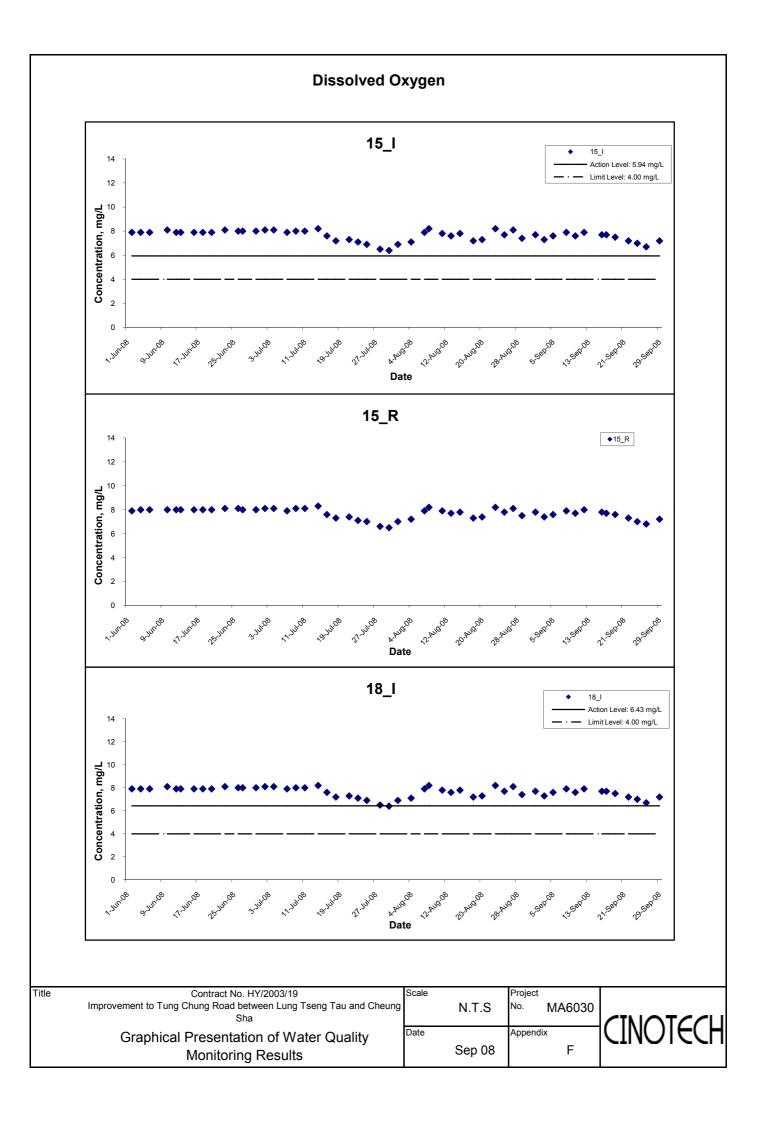
Water Quality Monitoring Results at TCB_R

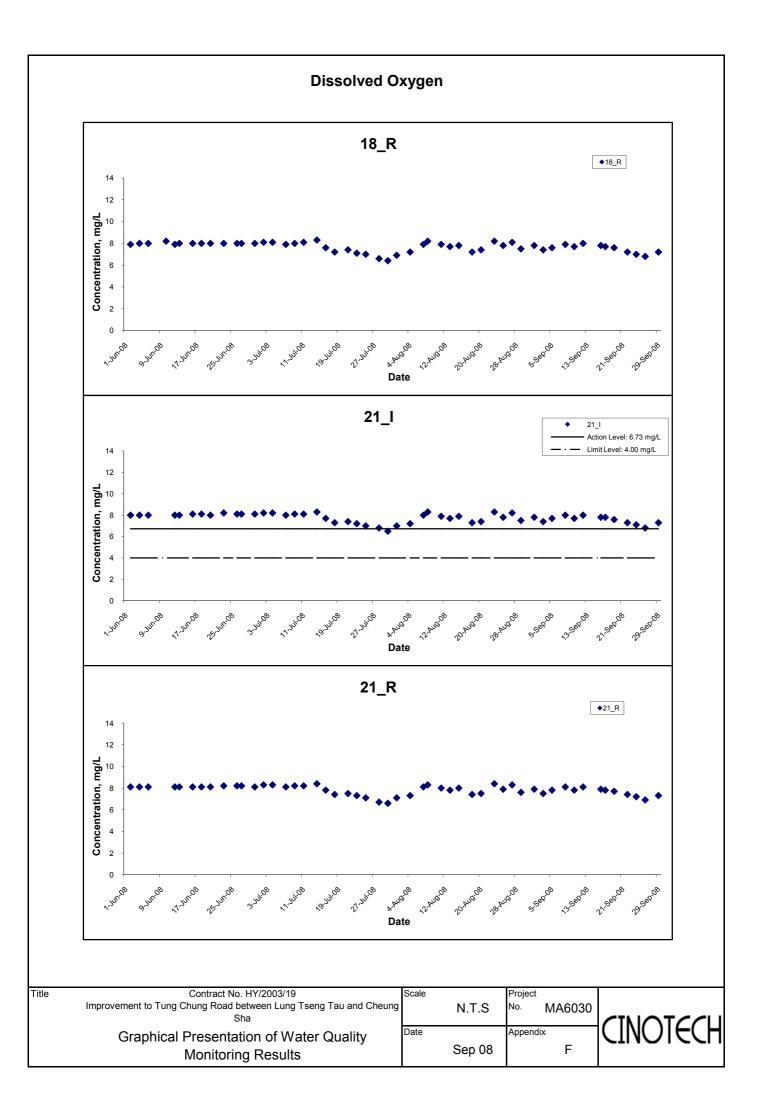
Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	þ	Η	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Dept		Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:46	Middle	0.2	23.0 23.0	23	7.3 7.4	7.4	19.17 19.18	19.18	97.1 96.9	97	7.8 7.8	7.8	5.2 5.1	5.2	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:53	Middle	0.2	22.9 22.9	22.9	7.3 7.3	7.3	19.05 19.06	19.06	95.9 95.7	95.8	7.4 7.4	7.4	5.6 5.5	5.6	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	12:10	Middle	0.2	22.8 22.8	22.8	7.4 7.4	7.4	18.96 18.95	18.96	96.7 96.5	96.6	7.6 7.6	7.6	6.7 6.6	6.7	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	12:17	Middle	0.2	22.9 22.9	22.9	7.5 7.5	7.5	19.15 19.14	19.15	97.6 97.4	97.5	7.9 7.9	7.9	6.2 6.1	6.2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	12:08	Middle	0.2	22.8 22.8	22.8	7.4 7.4	7.4	19.17 19.18	19.18	96.9 96.7	96.8	7.7 7.7	7.7	5.6 5.5	5.6	<2.5 <2.5	<2.5
12-Sep-08	Sunny	Calm	12:33	Middle	0.2	22.9 23.0	23	7.5 7.5	7.5	19.23 19.24	19.24	97.8 97.6	97.7	8.0 8.0	8	5.9 5.8	5.9	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:46	Middle	0.2	23.1 23.1	23.1	7.4 7.4	7.4	19.32 19.33	19.33	97.2 97.0	97.1	7.8 7.8	7.8	5.6 5.5	5.6	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	12:13	Middle	0.2	23.0 23.1	23.1	7.4 7.4	7.4	18.98 18.99	18.99	96.9 96.7	96.8	7.7 7.7	7.7	5.4 5.3	5.4	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	11:37	Middle	0.2	23.1 23.1	23.1	7.4 7.4	7.4	19.03 19.04	19.04	96.5 96.3	96.4	7.6 7.6	7.6	5.8 5.7	5.8	3.0 4.0	3.5
22-Sep-08	Sunny	Calm	13:20	Middle	0.2	23.1 23.1	23.1	7.4 7.4	7.4	19.09 19.10	19.1	95.6 95.4	95.5	7.3 7.2	7.3	5.2 5.1	5.2	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	11:22	Middle	0.2	23.0 23.0	23	7.3 7.3	7.3	18.98 18.99	18.99	94.9 94.7	94.8	7.0 7.0	7	5.5 5.7	5.6	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	12:17	Middle	0.2	23.1 23.1	23.1	7.4 7.4	7.4	19.01 19.02	19.02	94.1 93.9	94	6.8 6.8	6.8	5.9 6.1	6	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:56	Middle	0.2	23.1 23.1	23.1	7.4 7.4	7.4	18.68 18.69	18.69	95.0 94.8	94.9	7.2 7.2	7.2	5.3 5.5	5.4	<2.5 <2.5	<2.5

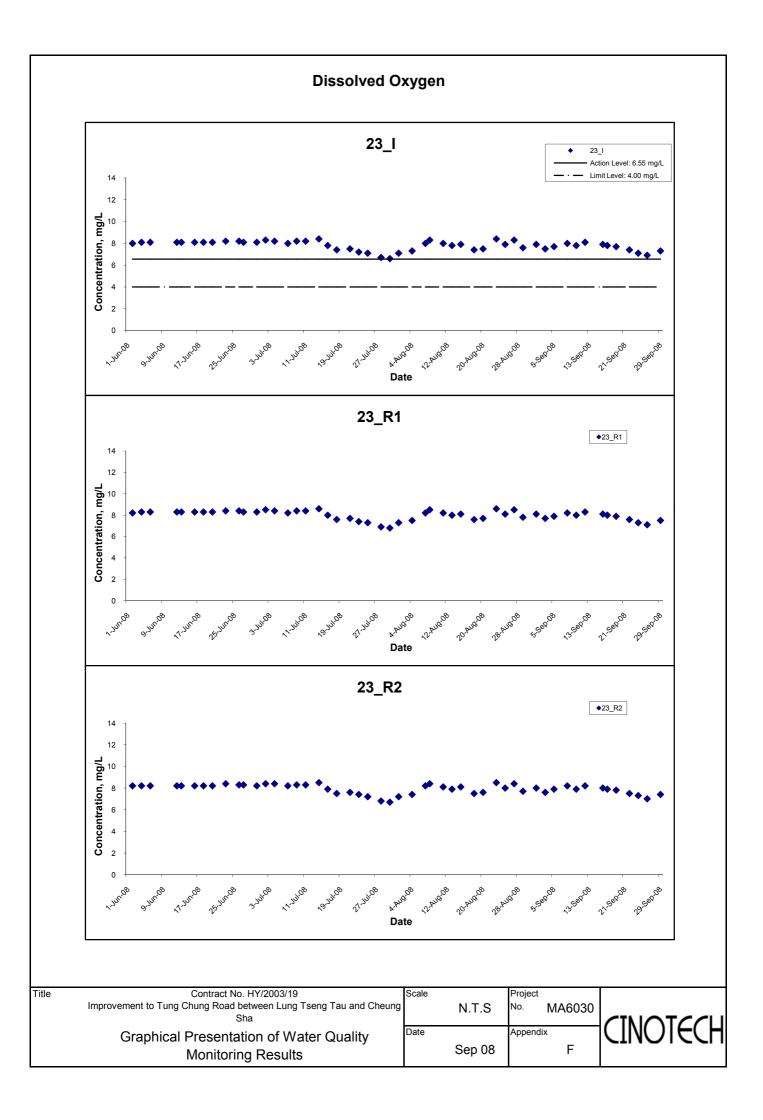
Water Quality Monitoring Results at TCS_I

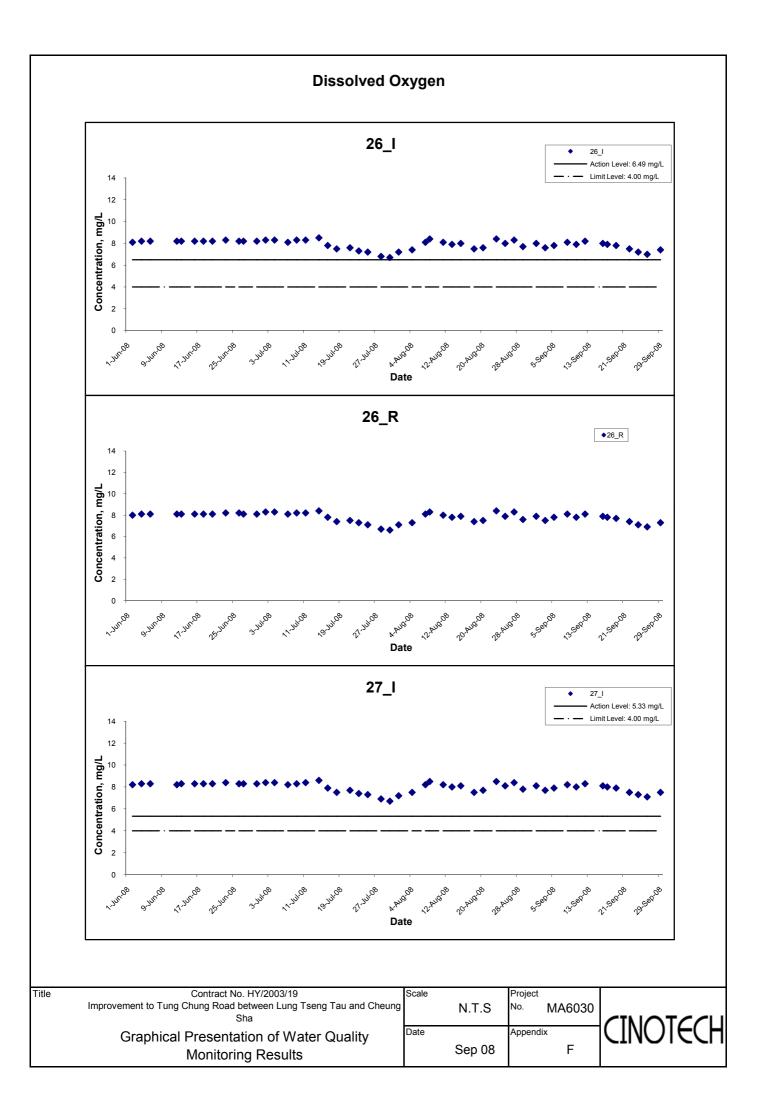
Date	Weather	Sea	Sampling	Dept	h (m)	Tempera	ature (°C)	ŗ	рН	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L
Date	Condition	Condition*	Time	Вери	(11)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Sep-08	Sunny	Calm	11:28	Middle	0.2	21.7 21.7	21.7	7.4 7.4	7.4	0.02 0.02	0.02	93.3 92.9	93.1	7.7 7.7	7.7	2.0 2.0	2	<2.5 <2.5	<2.5
3-Sep-08	Sunny	Calm	12:35	Middle	0.2	21.6 21.6	21.6	7.3 7.3	7.3	0.02 0.02	0.02	92.1 91.7	91.9	7.3 7.3	7.3	2.2 2.2	2.2	<2.5 <2.5	<2.5
5-Sep-08	Rainy	Calm	11:52	Middle	0.2	21.5 21.6	21.6	7.5 7.5	7.5	0.02 0.02	0.02	92.9 92.5	92.7	7.6 7.6	7.6	2.3 2.3	2.3	<2.5 <2.5	<2.5
8-Sep-08	Sunny	Calm	12:00	Middle	0.2	21.6 21.7	21.7	7.5 7.5	7.5	0.02 0.02	0.02	93.8 93.4	93.6	7.9 7.8	7.9	2.2 2.2	2.2	<2.5 <2.5	<2.5
10-Sep-08	Sunny	Calm	11:50	Middle	0.2	21.6 21.6	21.6	7.5 7.5	7.5	0.02 0.02	0.02	93.1 92.7	92.9	7.6 7.6	7.6	1.9 1.9	1.9	3.0 3.0	3
12-Sep-08	Sunny	Calm	12:15	Middle	0.2	21.7 21.7	21.7	7.6 7.6	7.6	0.02 0.02	0.02	94.0 93.6	93.8	7.9 7.9	7.9	2.0 2.0	2	<2.5 <2.5	<2.5
16-Sep-08	Sunny	Calm	12:28	Middle	0.2	21.8 21.8	21.8	7.4 7.5	7.5	0.02 0.02	0.02	93.4 93.0	93.2	7.7 7.7	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
17-Sep-08	Sunny	Calm	11:55	Middle	0.2	21.8 21.8	21.8	7.4 7.4	7.4	0.02 0.02	0.02	93.1 92.7	92.9	7.6 7.6	7.6	1.9 1.9	1.9	<2.5 <2.5	<2.5
19-Sep-08	Rainy	Calm	11:19	Middle	0.2	21.8 21.9	21.9	7.5 7.5	7.5	0.02 0.02	0.02	92.7 92.3	92.5	7.5 7.5	7.5	2.0 2.0	2	4.0 4.0	4
22-Sep-08	Sunny	Calm	13:02	Middle	0.2	21.8 21.8	21.8	7.4 7.4	7.4	0.02 0.02	0.02	91.8 91.4	91.6	7.2 7.2	7.2	1.6 1.6	1.6	<2.5 <2.5	<2.5
24-Sep-08	Rainy	Calm	11:04	Middle	0.2	21.7 21.7	21.7	7.4 7.4	7.4	0.02 0.02	0.02	91.1 90.7	90.9	6.9 6.9	6.9	1.9 1.9	1.9	<2.5 <2.5	<2.5
26-Sep-08	Sunny	Calm	11:59	Middle	0.2	21.9 21.9	21.9	7.4 7.4	7.4	0.02 0.02	0.02	90.3 89.9	90.1	6.7 6.7	6.7	2.1 2.1	2.1	<2.5 <2.5	<2.5
29-Sep-08	Sunny	Calm	11:38	Middle	0.2	21.8 21.8	21.8	7.5 7.5	7.5	0.02 0.02	0.02	91.2 90.8	91	7.1 7.1	7.1	1.8 1.8	1.8	<2.5 <2.5	<2.5

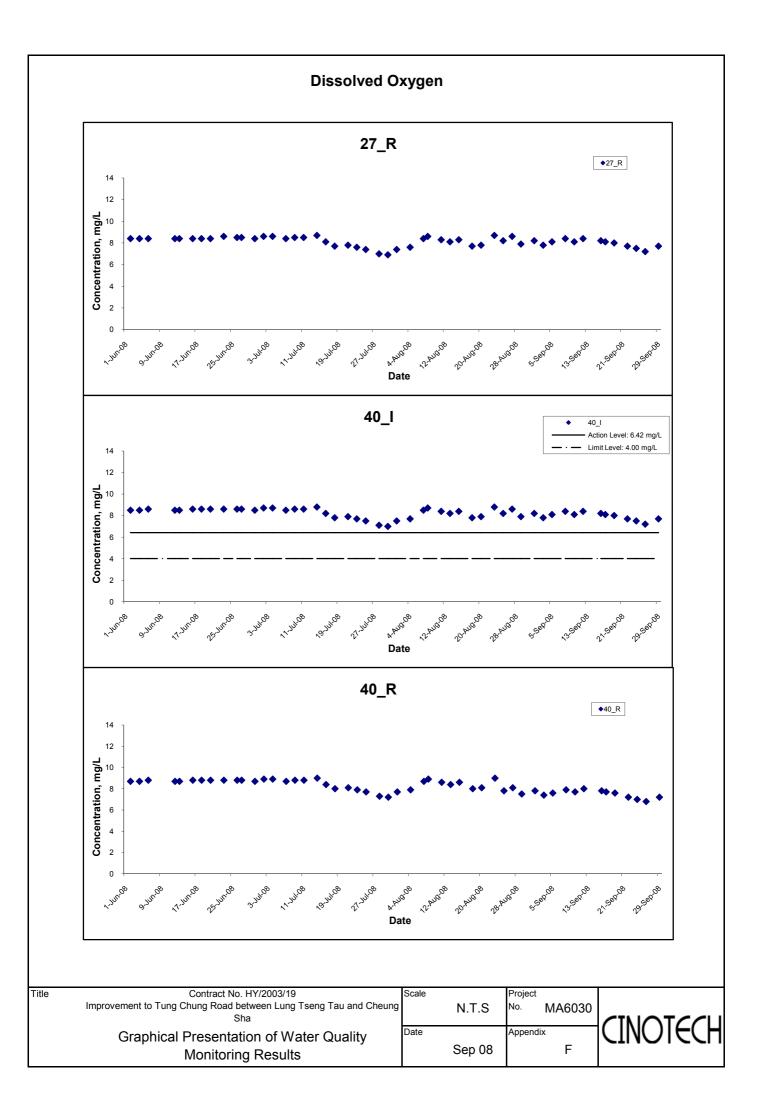
The reporting limit for laboratory analysis of suspended solids is 2.5 mg/L. For the results below the reporting limit, the SS level will be taken as 2.5 mg/L.

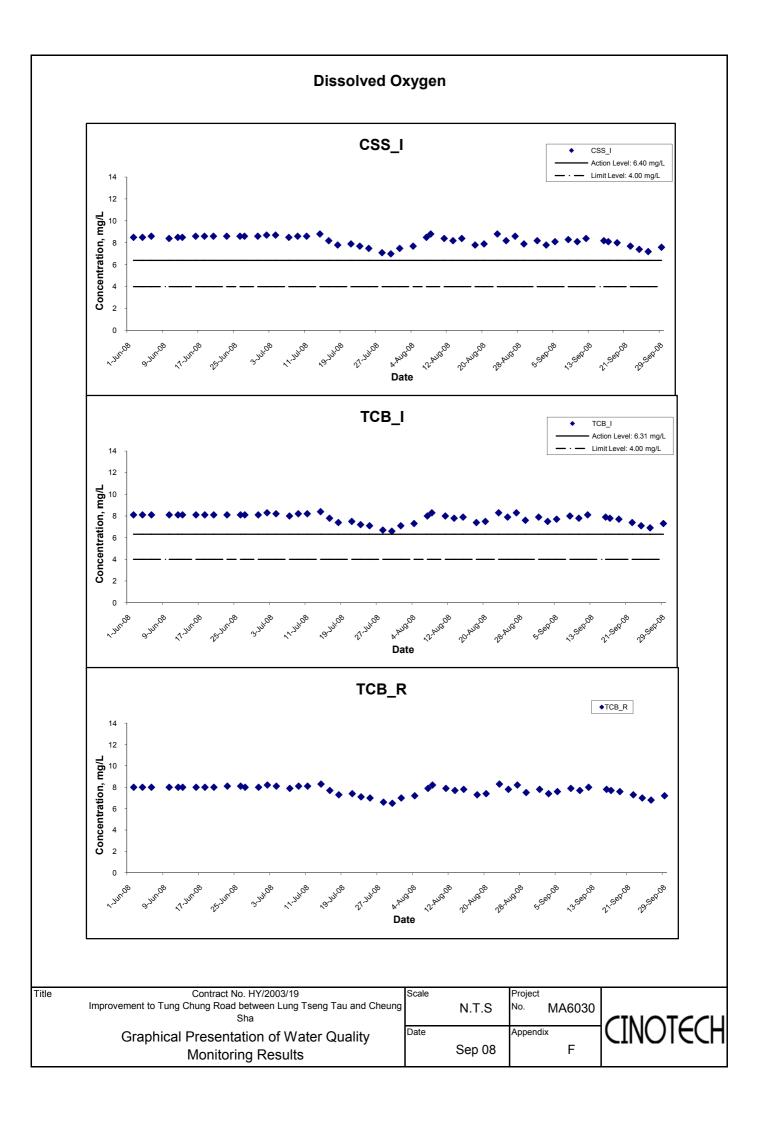


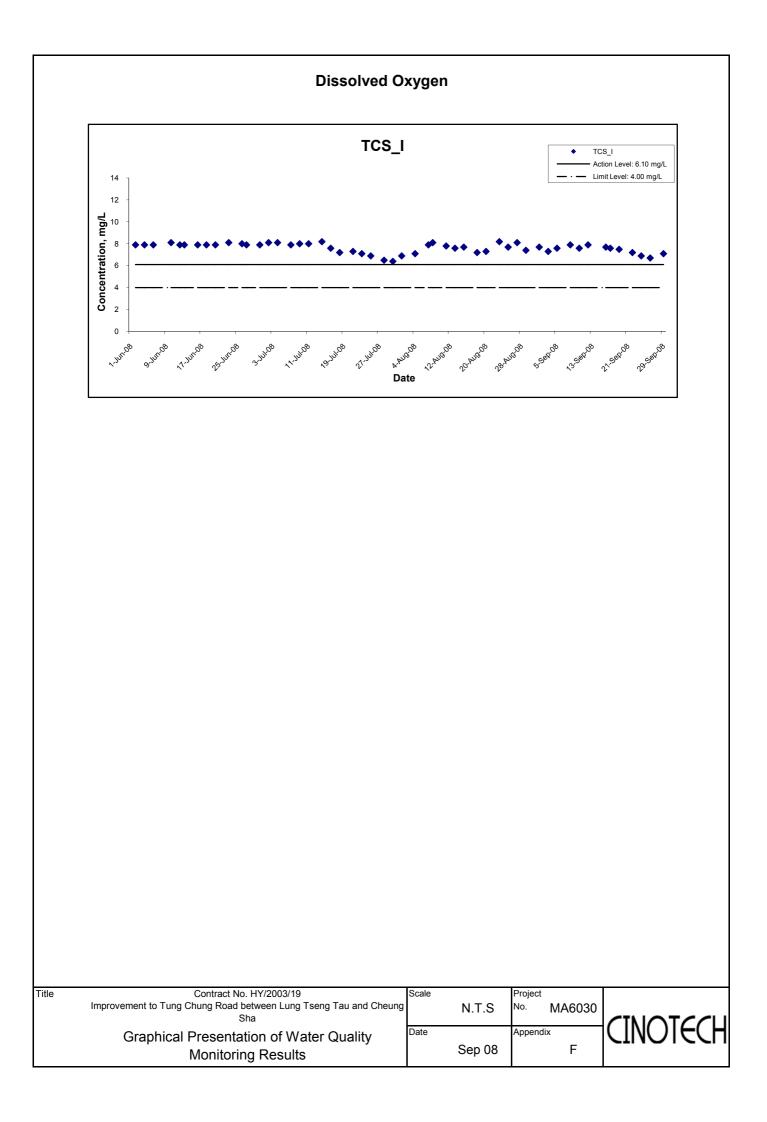


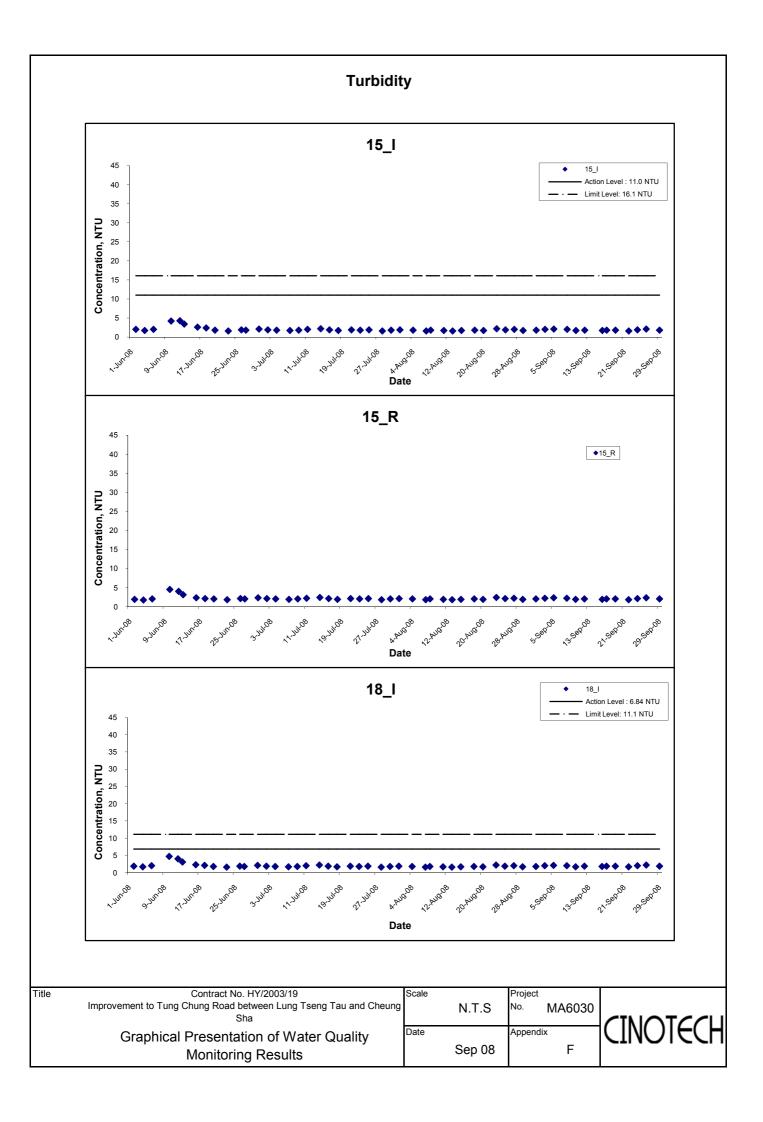


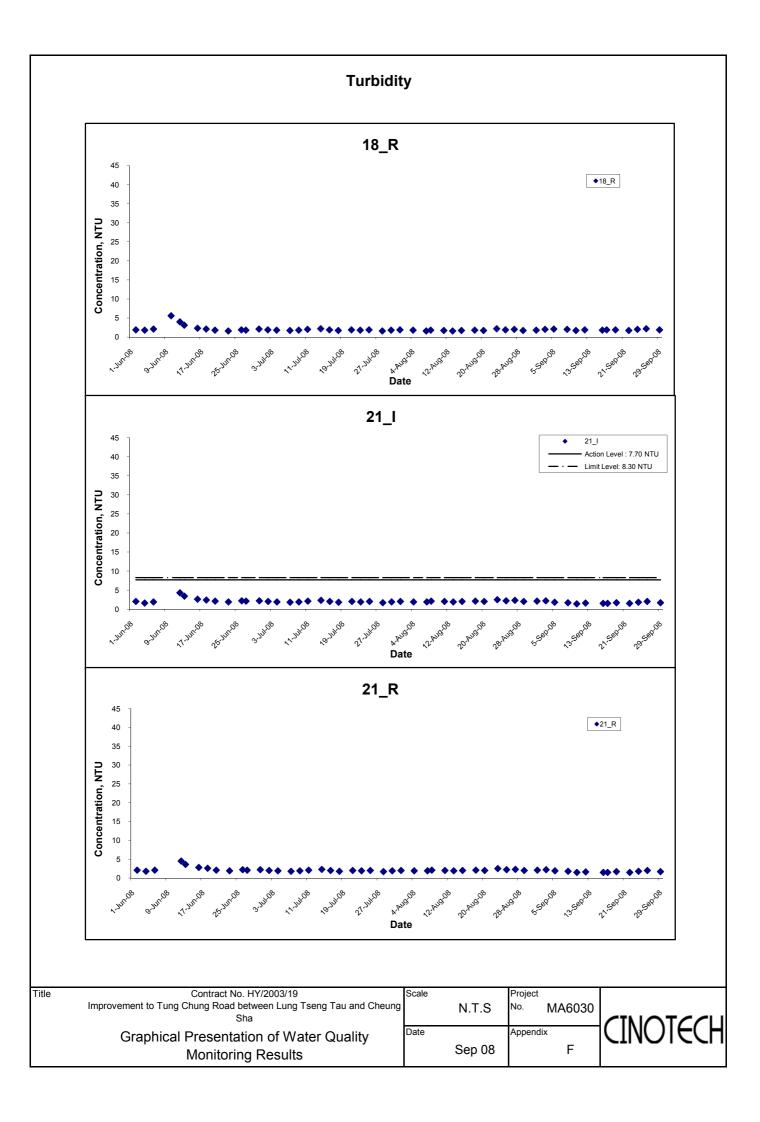


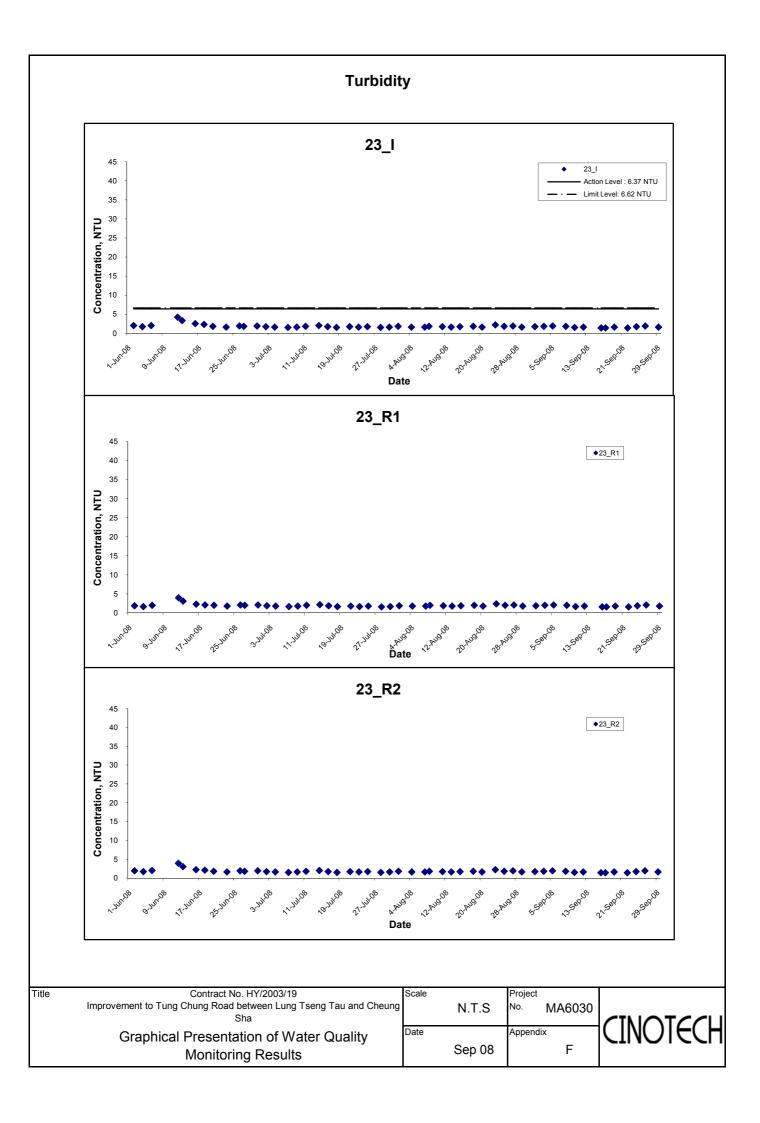


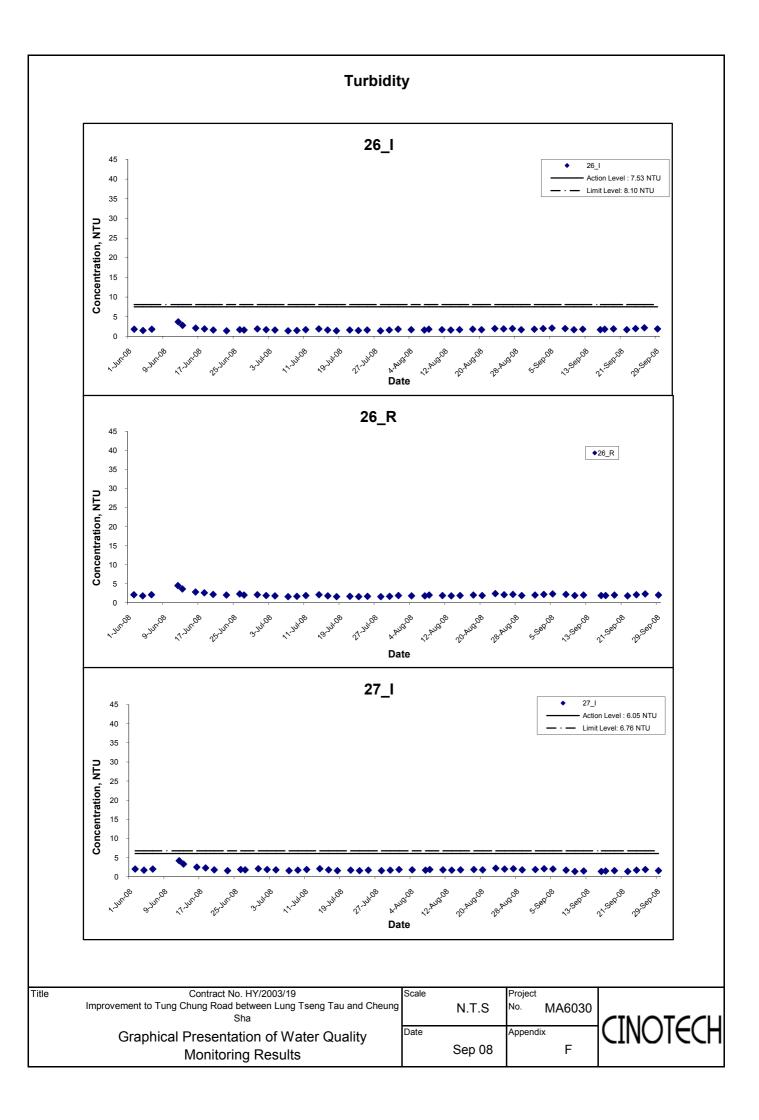


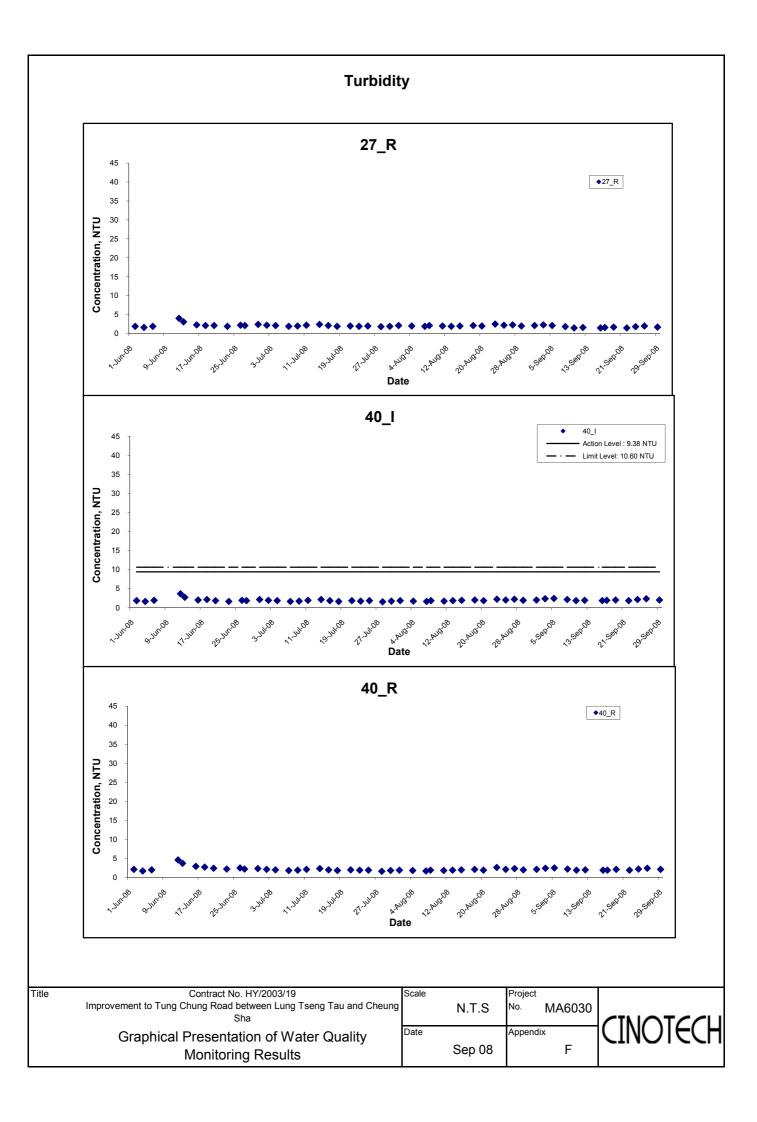


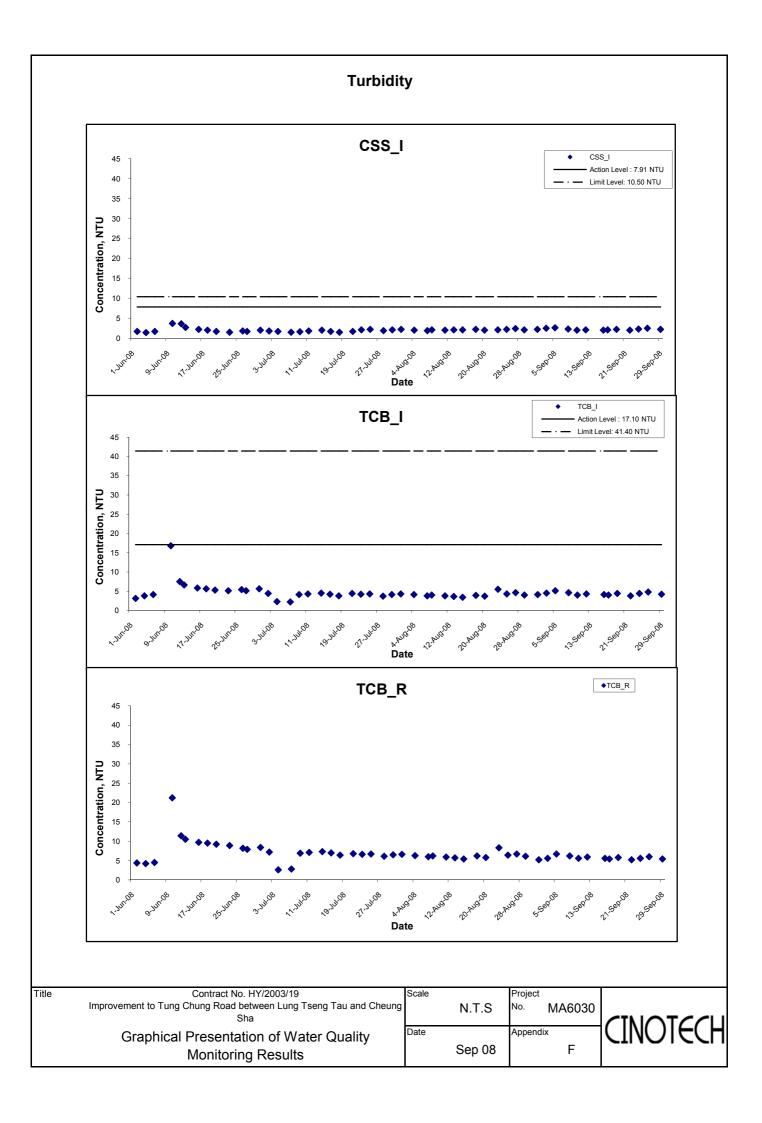


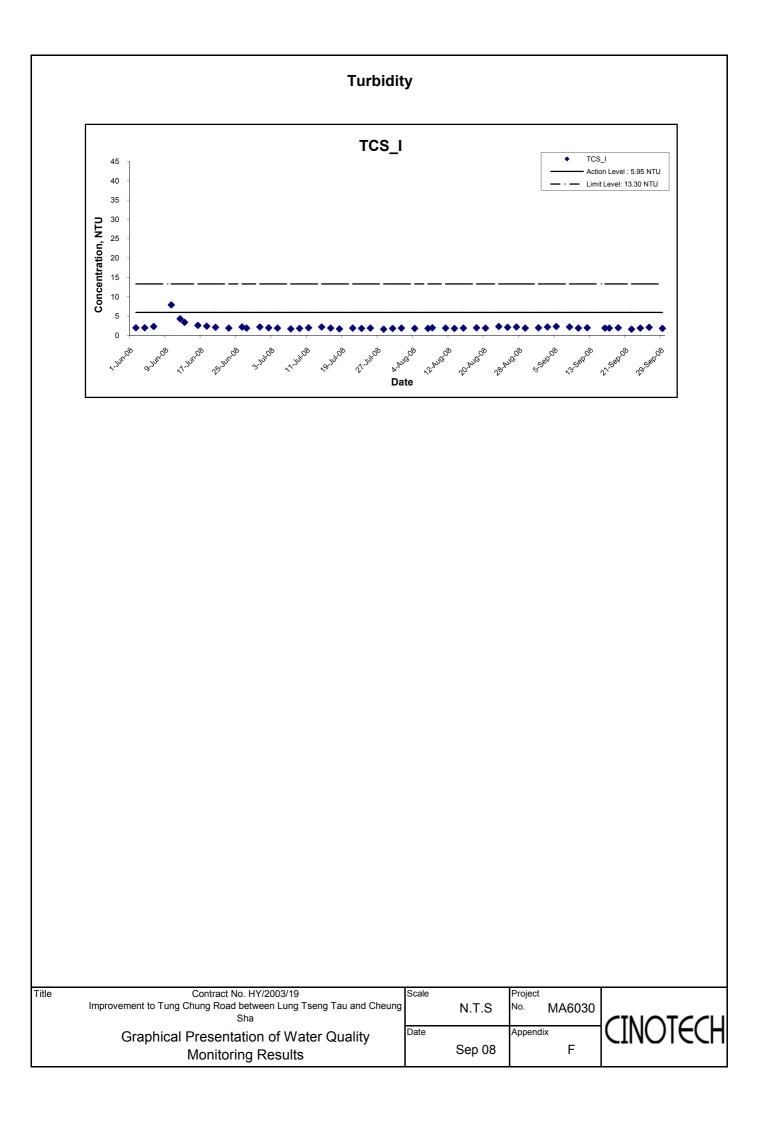


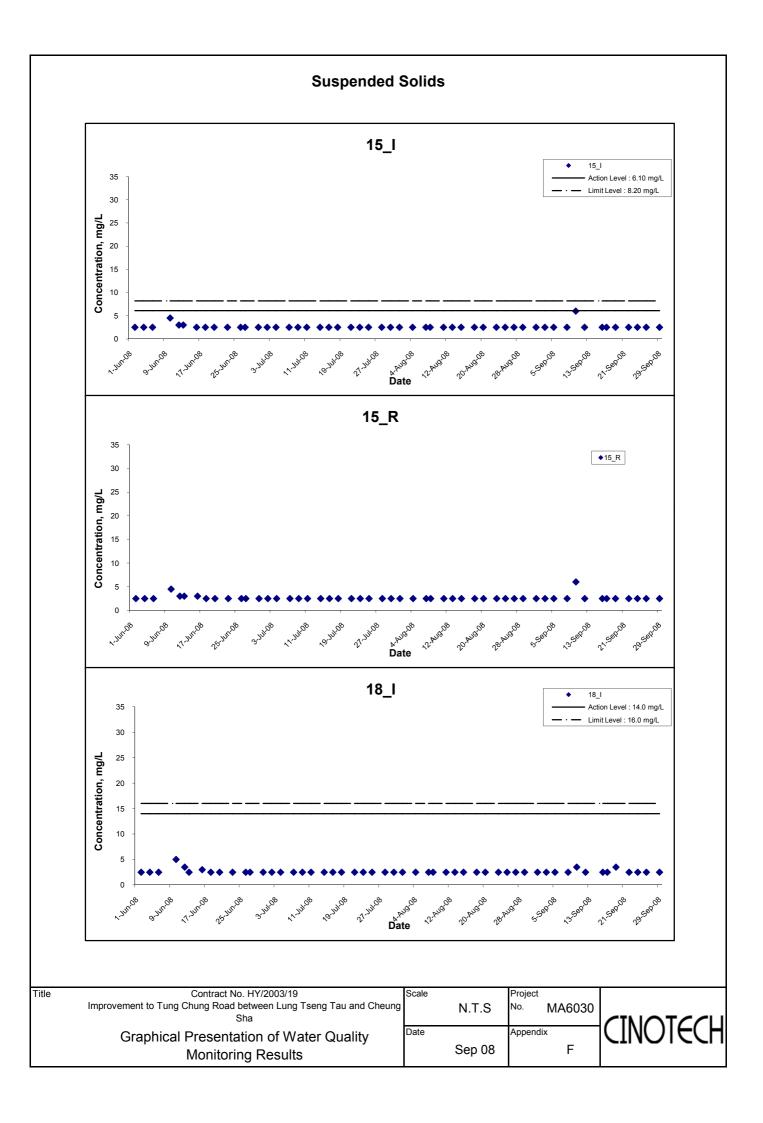


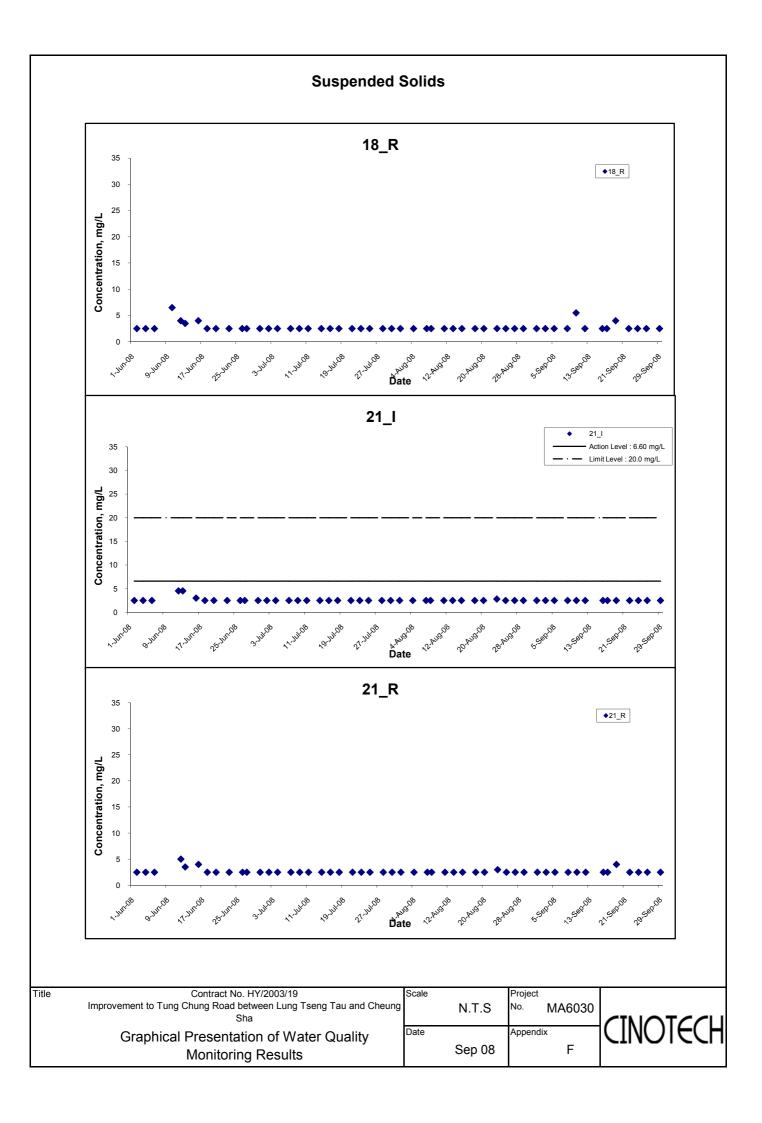


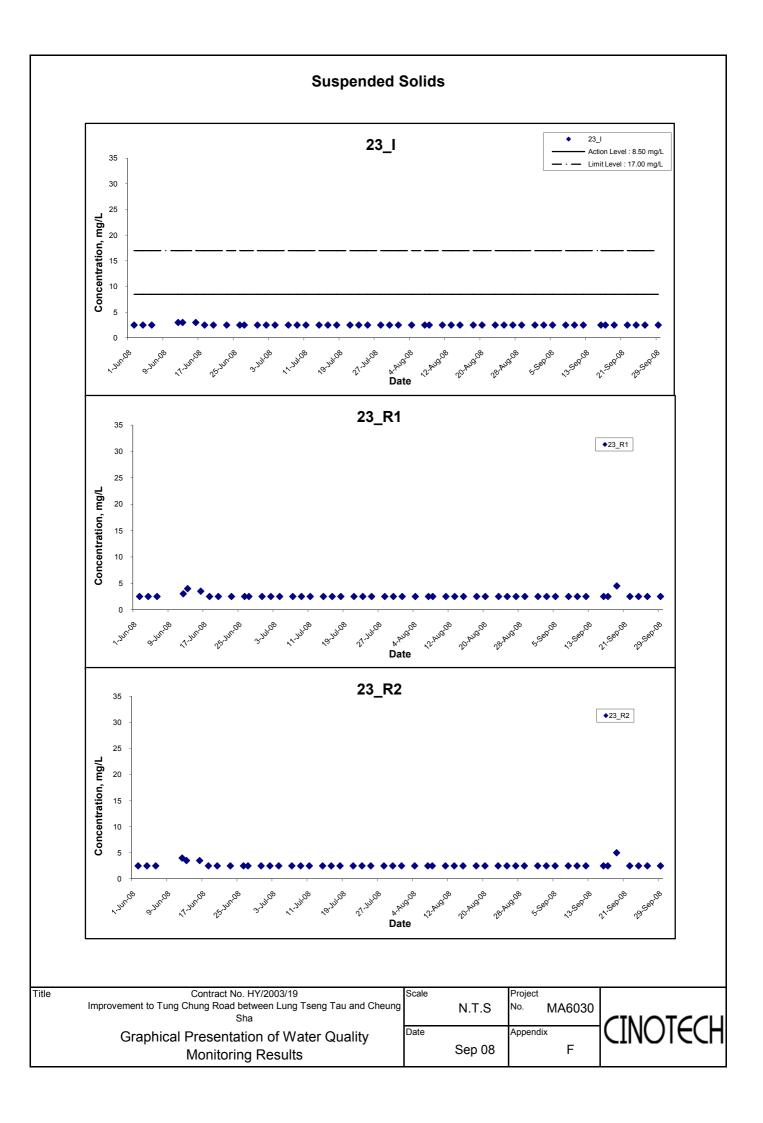


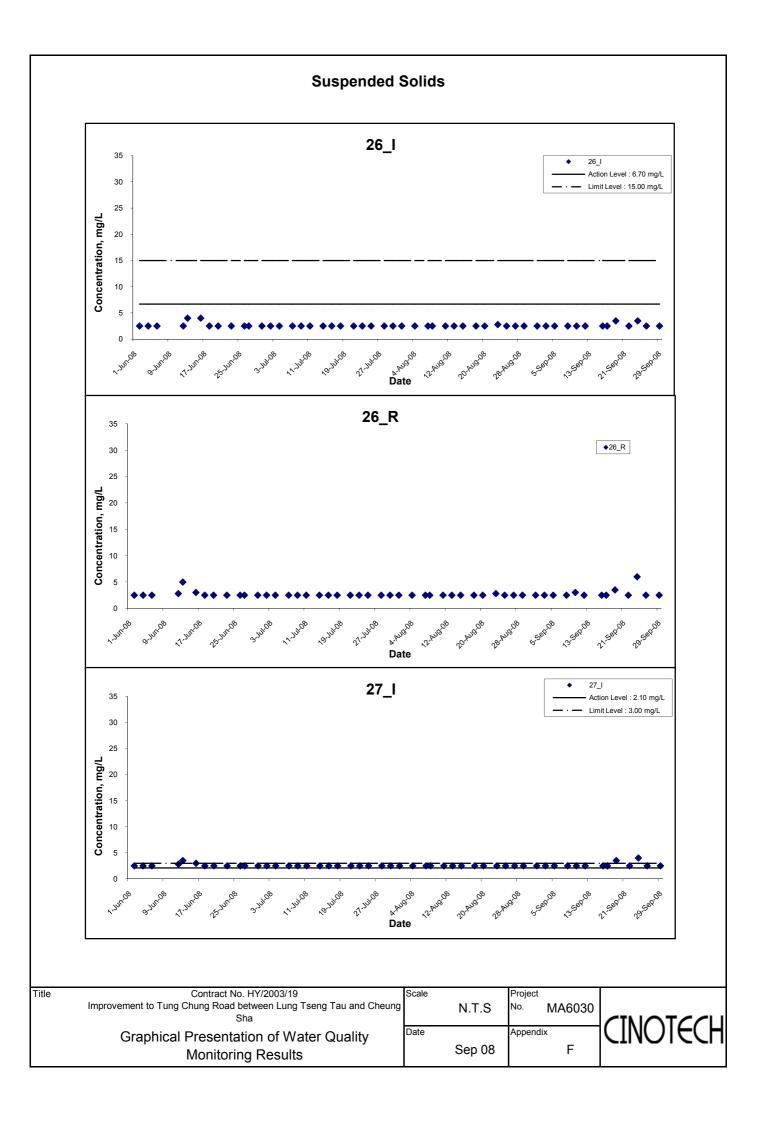


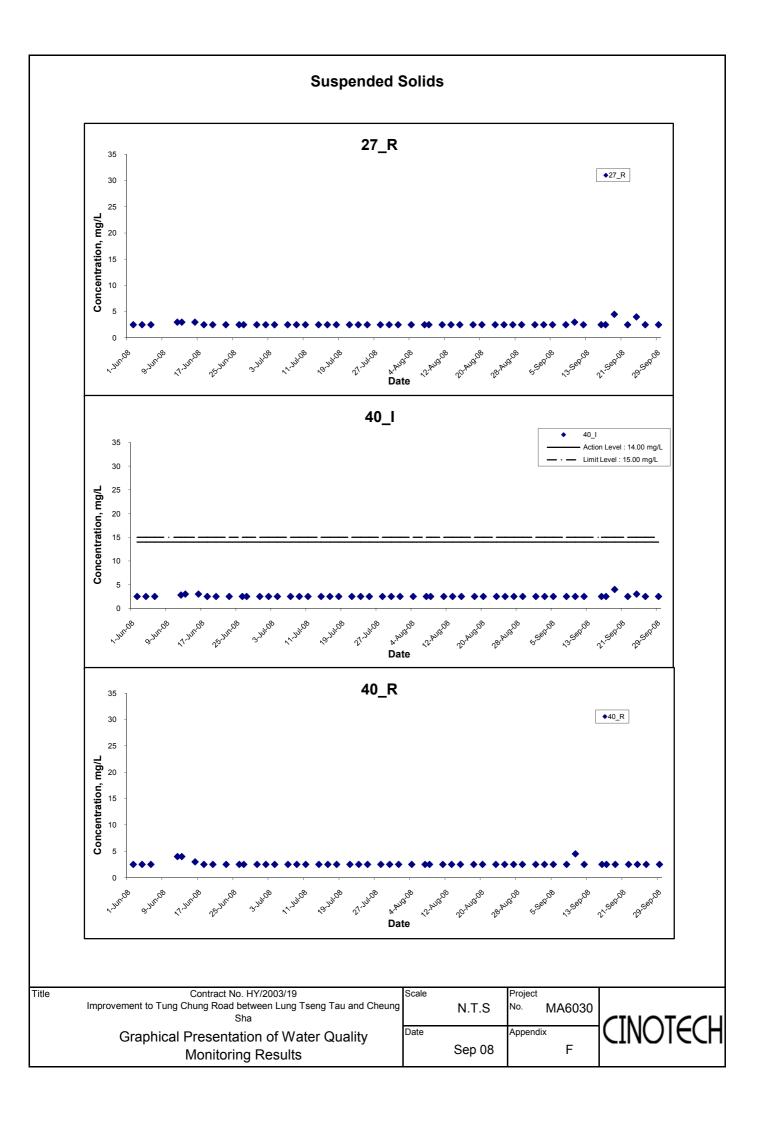


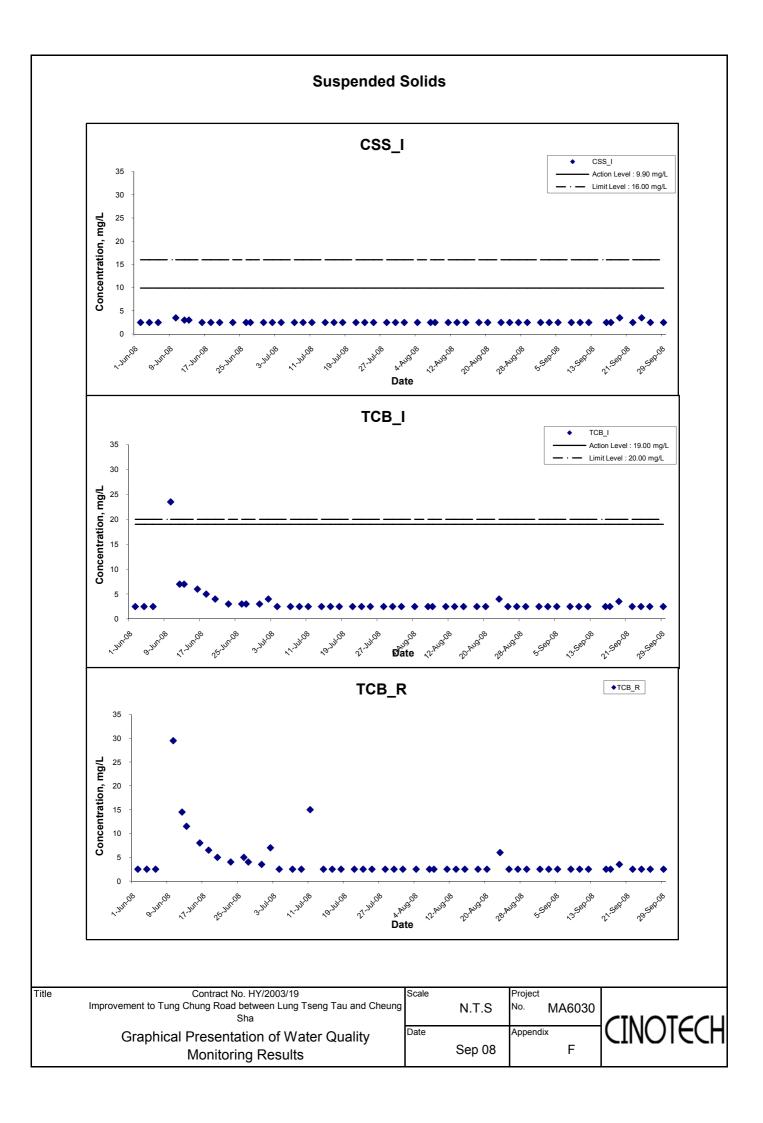


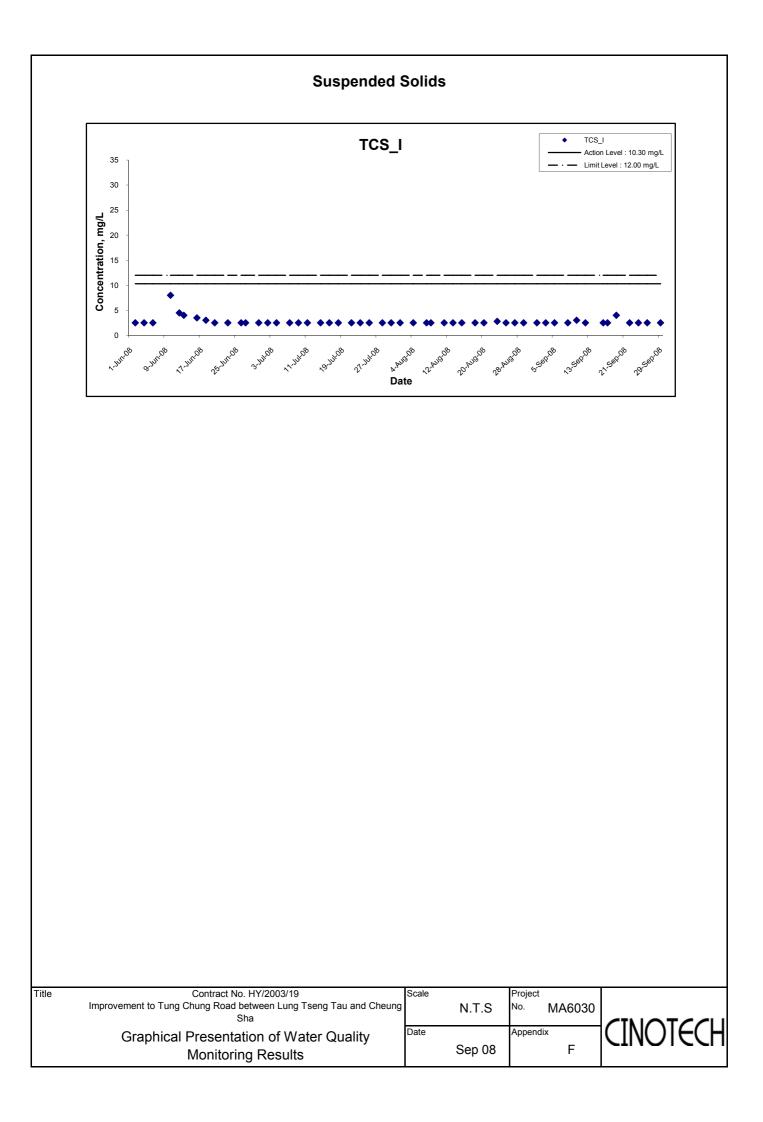












APPENDIX G QUALITY CONTROL REPORTS FOR LABORATORY ANALYSIS



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/01
Number of Sample:	38
Custody No.:	MA6030/80901
*****	******

Laboratory No.:	07214
Date of Issue:	2008/09/02
Date Received:	2008/09/01
Date Tested:	2008/09/01
Date Completed:	2008/09/02
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26 I<2.5</td><2.5</td>N/A96

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road				
Project No.:	MA6030				
Sampling Date:	2008/09/03				
Number of Sample:	38				
Custody No.:	MA6030/80903				

Laboratory No.:	07227
Date of Issue:	2008/09/04
Date Received:	2008/09/03
Date Tested:	2008/09/03
Date Completed:	2008/09/04
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%15_I<2.5</td><2.5</td>N/A96

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/05
Number of Sample:	38
Custody No.:	MA6030/80905
*****	*****

Laboratory No.:	07243
Date of Issue:	2008/09/08
Date Received:	2008/09/05
Date Tested:	2008/09/05
Date Completed:	2008/09/08
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_I<2.5</td><2.5</td>N/A

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/08
Number of Sample:	38
Custody No.:	MA6030/80908
*****	********

Laboratory No.:	07249
Date of Issue:	2008/09/09
Date Received:	2008/09/08
Date Tested:	2008/09/08
Date Completed:	2008/09/09
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_I<2.5</td><2.5</td>N/A92

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road				
Project No.:	MA6030				
Sampling Date:	2008/09/10				
Number of Sample:	38				
Custody No.:	MA6030/80910				

Laboratory No.:	07264
Date of Issue:	2008/09/11
Date Received:	2008/09/10
Date Tested:	2008/09/10
Date Completed:	2008/09/11
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%23_I<2.5</td><2.5</td>N/A

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/12
Number of Sample:	38
Custody No.:	MA6030/80912
*****	******

Laboratory No.:	07277
Date of Issue:	2008/09/16
Date Received:	2008/09/12
Date Tested:	2008/09/12
Date Completed:	2008/09/16
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_I<2.5</td><2.5</td>N/A96

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PATRICK TSE Laboratory Manager



TEST REPORT QC REPORT

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/16
Number of Sample:	38
Custody No.:	MA6030/80916
*****	*******

Laboratory No.:	07284
Date of Issue:	2008/09/17
Date Received:	2008/09/16
Date Tested:	2008/09/16
Date Completed:	2008/09/17
Page:	1 of 1

Total Suspended Solids	Duplicate Analysis		QC Recovery, %	
Sampling Point	Trial 1,	Trial 2,	Difference,	
	mg/L	mg/L	%	
26_I	<2.5	<2.5	N/A	92

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road	
Project No.:	MA6030	
Sampling Date:	2008/09/17	
Number of Sample:	38	
Custody No.:	MA6030/80917	

Laboratory No.:	07297
Date of Issue:	2008/09/18
Date Received:	2008/09/17
Date Tested:	2008/09/17
Date Completed:	2008/09/18
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26 I<2.5</td><2.5</td>N/A

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/19
Number of Sample:	38
Custody No.:	MA6030/80919
*****	******

Laboratory No.:	07307
Date of Issue:	2008/09/22
Date Received:	2008/09/19
Date Tested:	2008/09/19
Date Completed:	2008/09/22
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26 I550101

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/22
Number of Sample:	38
Custody No.:	MA6030/80922
*****	*****

Laboratory No.:	07311
Date of Issue:	2008/09/23
Date Received:	2008/09/22
Date Tested:	2008/09/22
Date Completed:	2008/09/23
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_I<2.5</td><2.5</td>N/A96

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road
Project No.:	MA6030
Sampling Date:	2008/09/24
Number of Sample:	38
Custody No.:	MA6030/80924
*****	********

Laboratory No.:	07325
Date of Issue:	2008/09/25
Date Received:	2008/09/24
Date Tested:	2008/09/24
Date Completed:	2008/09/25
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_R6711

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road	
Project No.:	MA6030	
Sampling Date:	2008/09/26	
Number of Sample:	38	
Custody No.:	MA6030/80926	

Laboratory No.:	07342
Date of Issue:	2008/09/29
Date Received:	2008/09/26
Date Tested:	2008/09/26
Date Completed:	2008/09/29
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_I<2.5</td><2.5</td>N/A96

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PATRICK TSE Laboratory Manager



TEST REPORT <u>QC REPORT</u>

APPLICANT: Cinotech Consultants Limited RM 1710, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong

ATTN: Mr. Henry Leung

Sampling Site:	Tung Chung Road		
Project No.:	MA6030		
Sampling Date:	2008/09/29		
Number of Sample:	38		
Custody No.:	MA6030/80929		

Laboratory No.:	07355
Date of Issue:	2008/09/30
Date Received:	2008/09/29
Date Tested:	2008/09/29
Date Completed:	2008/09/30
Page:	1 of 1

Total Suspended SolidsDuplicate AnalysisQC Recovery, %Sampling PointTrial 1,
mg/LTrial 2,
mg/LDifference,
%26_I<2.5</td><2.5</td>N/A

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PATRICK TSE Laboratory Manager

APPENDIX H SUMMARY OF EXCEEDANCES

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80903W-80901_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80905W-80903_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80909W-80905_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80911W-80908_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80912W-80910_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.6	3.0	3.9	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80918W-80916_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	ia				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80918W-80912_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	ia				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80922W-80917_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80924W-80919_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	ia				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	3.5	2.1	5.4	3.0	5.9	Limit	(2), (4) & (5)	Ν	Ν
40_I	4.0	14.0	3.0	15.0	3.3	Limit	(1) & (5)	Ν	Ν
TCS_I	4.0	10.3	3.0	12.0	3.3	Limit	(2) & (5)	Ν	Ν

*Remarks

(1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

(4) – Reference point value already exceeded either the Action or Limit Levels.

(5) – Landslip due to heavy rainstorm

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80925W-80922_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80930W-80926_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80930W-80929_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha - Exceedance Report Report No. 80930W-80924_S

Part A – Exceedance Summary Tables

 Table 1:
 Parameter – Suspended Solids (mg/L)

			Exceedan	ces Criteri	a				Action
Stream Location	Measured Value	Action value	120% of Reference value [*]	Limit Value	130% of Reference Value [*]	Action / Limit Levels	Justification [*]	Validity (Y/N)	Taken (Y/N)
27_I	4.0	2.1	4.8	3.0	5.2	Limit	(2) & (4)	Ν	Ν

*Remarks (1) – No construction activity was observed.

(2) – No pollution discharge from construction activity was observed.

(3) – Natural humus or mosses was observed.

APPENDIX I SITE AUDIT SUMMARY

Inspection Information

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Checklist Reference Number	80904	
Date	4 September 2008 (Thursday)	
Time	9:00 - 14:00	

		Related Item No.
Ref. No.	Non-Compliance	item no.
-	None identified	Related
Ref. No.	Remarks/Observations	Item No.
	A. Water Quality	
80904-001	• Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan. The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly. (in-progress)	B5iii & iv.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste / Chemical Management	
80904-002	• Oil leakage from the plant equipment and oil stains were observed at STR8 . The Contractor was reminded to clear them as soon as possible and provide drip tray for the equipment to prevent land contamination.	E7i.
	E. Ecology	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	 All environmental deficiencies identified in previous audit session were improved/rectified by the Contractor except items (80828-O01, R02 – R11, R03, R13 – R23 and G24). Follow-up action is needed for the outstanding items. 	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	A. Water Quality	
80904-R03	Clear the sediment on the paved road near the entrance of STR7.	B18
80904-R04	Clear the standing water in the drip tray at STR7 and STR8.	B11
80904-R05	Properly cover the exposed slope at STR7.	B8
80904-R08	• Clear the tree debris and sediments at existing TCR (near STR7) (in-progress).	B18
80904-R12	Properly cover the exposed surface at underneath STR8.	B8
80904-R14	• Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction	B2
	area and paved road to prevent any sediment from carrying out.	
80904-R15	• To pave the uneven area at STR9A to prevent standing water.	B11
80904-R16	Hydroseed/cover the exposed slope with tarpaulin at underneath STR10.	B8
80904-R19	Hydroseed/cover the exposed slope with tarpaulin at underneath STR12.	B8
80904-R21	Hydroseed/cover the exposed slope at underneath STR13.	B8
80904-R22	Properly cover the exposed slope at underneath STR16.	B8
80904-R23	Hydroseed/cover the exposed surface at STR14.	B8
80904-R24	Clear sediment and debris near catchment. (in-progress)	B18
80904-R25	• Remove the discarded sedimentation tank that retains the standing water at STR18.	B11
80904-R26	Clear sediment and debris at the paved road along existing TCR.	B18
80904-R27	• Keep clear the sediment at the culvert at RW6.	B18

80904-R28	Properly cover the exposed slope at opposite to RW7.	B8
	B. Air Quality	
80904-R07	Properly cover the stockpile near Stream 25.	C7
80904-R10	• Properly cover the stockpile at STR7-8 when it is not in works.	C7
80904-R11	Properly cover the stockpile at underneath STR8.	C7
80904-R13	• Properly cover the stockpile at STR9.	C7
80904-R16	Hydroseed/cover the exposed slope with tarpaulin at underneath STR10.	C13
80904-R19	Hydroseed/cover the exposed slope with tarpaulin at underneath STR12.	C13
80904-R20	Properly cover the stockpile at STR11, STR12 and STR13 after the works.	C7
80904-R21	Hydroseed/cover the exposed slope at underneath STR13.	C13
80904-R23	Hydroseed/cover the exposed surface at STR14.	C13
80904-R29	Hydroseed the exposed surface at STR6.	C13
	C. Waste / Chemical Management	
80904-R06	Clear C&D waste at STR7.	E4ii.
80904-R09	• Provide drip tray for the oil container at STR7-8.	E 7 ii.
80904-R17	• Clear C&D waste at Stream 28, Stream 29, Stream 31 and Stream 19 (downstream).	E4ii.
80904-R18	Clear C&D waste at underneath STR12 (in-progress).	E4ii.
80904-R30	Clear discarded tree debris at underneath STR13.	E4ii,
	•	
	D. General	
80904-G31	• Clear the discarded tree debris, sediment, stones and debris in the drainage system (U-Channel, culvert, gullies and underground channel) more frequently.	B1

Ref. No.	Proposed Completion Date	Completion Date	Remarks
80828-R12	4 September 2008	4 September 2008	Rectified
80904-001		4 September 2008	Rectified
80904-001			
80904-R02			
80904-R03			
80904-R05			
80904-R06			
80904-R07			
80904-R08			
80904-R09			
80904-R10			
80904-R11			
80904-R12			Follow Up Required
80904-R13			ronow op Required
80904-R14	10 September 2008		
80904-R15			
80904-R16			
80904-R17			
80904-R18			
80904-R19			
80904-R20			
80904-R21			
80904-R22			
80904-R23			
80904-R24			
80904-R25			
80904-R26			
80904-R27			

80904-R28		
80904-R29		
80904-R30		
80904-G31		

Signature	Date
	4 September 2008
	4 September 2008
	m Jun a Choy W

Inspection Information

Checklist Reference Number	80910
Date	10 September 2008 (Wednesday)
Time	9:00 – 13:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
80910-001	• Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan. The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly. (in-progress)	B5iii & iv.
	B. Air Quality	
80910-002	 De-bagging and cement mixing has observed without enclosure at STR19. The Contractor was reminded to provide it 3 sides enclosure with top shelter during the works. 	C7
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	E. Ecology	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	 All environmental deficiencies identified in previous audit session were improved/rectified by the Contractor except items (80904-O01, O02, R03, R5, R6, R9, R10, R14, R15, R17, R22 – R24, R26 – R29 and G31). Follow-up action is needed for the outstanding items. 	- - - -

•	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	A. Water Quality	
80910-R03	• Clear the sediment on the paved road near the entrance of STR7.	B18
80910-R05	Properly cover the exposed slope at STR7 (RW14).	<u>B8</u>
80910-R10	• To pave the uneven area at STR9A to prevent standing water.	B11
80910-R12	 Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and paved road to prevent any sediment from carrying out. 	B2
80910-R13	Hydroseed/cover the exposed surface at STR14.	B8
80910-R15	Clear sediment and debris near catchment. (in-progress)	B18
80910-R16	Properly cover the catchment channel at underneath STR16.	Bĺ
80910-R17	Clear sediment and debris at the paved road along existing TCR.	B18
80910-R18	• Keep clear the sediment at the culvert at RW6.	B18
80910-R19	• Clear the sediment at the culvert near Stream 19 (downstream).	B18
80910-R20	Properly cover the exposed slope at opposite to RW7.	B8
80910-R21	Properly cover the exposed slope at underneath STR16.	B8
	B. Air Quality	07
80910-R07	Properly cover the stockpile and remove away from the culvert at STR7.	<u>C7</u>
80910-R13	• Hydroseed/cover the exposed surface at STR14.	C13
80910-R14	 Provide water-spray on dust-generation activities (rock breaking) at STR14. 	C6

		C13
80910-R22	Hydroseed the exposed surface at STR6.	
	C. Waste / Chemical Management	
80910-R04	Provide drip tray for the oil containers at STR7.	E7ii
80910-R06	• Clear C&D waste and general refuse at the U-Channel at STR7.	Eliii.
00710-1000		&E4ii.
80910-R08	Provide drip tray for the plant equipment at STR8.	E7ii.
80910-R09	Remove C&D waste near the culvert at STR9A.	E4ii.
80910-R11	• Clear C&D waste at Stream 28, Stream 29, Stream 31, Stream 34 and Stream 19	E4ii.
	(downstream).	
	D. General	
80910-G23	· Clear the sediment and debris in the drainage system (U-Channel, culvert, gullies and	B1
	underground channel) more frequently.	
80910-G24	• Erect fencing for the stream near the construction works especially for the Stream 29.	<u>F1</u>

Ref. No.	Proposed Completion Date	Completion Date	Remarks
80904-R04			
80904-R07			
80904-R08			
80904-R11			
80904-R12			
80904-R13		10.0	
80904-R16	10 September 2008	10 September 2008	
80904-R18			
80904-R19			
80904-R20			
80904-R21			
80904-R25			
80904-R30			
80910-001			
80910-002			
80910-R03			
80910-R04			
80910-R05			
80910-R06			
80910-R07			
80910-R08			
80910-R09			
80910-R10			
80910-R11			
80910-R12	18 September 2008		
80910-R13	to deprember acco		
80910-R14			
80910-R15			
80910-R16			
80910-R17			
80910-R18			
80910-R19			
80910-R20			
80910-R21			
80910-R22			
80910-R23			
80910-G24			

Contract No. HY/2003/19 Improvement to Tung Chung Road Between Lung Tseng Tau and Cheung Sha

	Name	Signature	Date
Recorded by	Ivy Tam	Two	10 September 2008
Checked by	Dr. Priscilla Choy	ATT-	10 September 2008

Inspection Information		
Checklist Reference Number	80918	
Date	18 September 2008 (Thursday)	
Time	9:00-13:30	

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
80918-001	• Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan. The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly. (in-progress)	B5iii & iv.
80918-003	• Silty water was observed discharging to Tung Chung Stream at Stream11 and Stream 13 due to the exposed surface and sediment accumulates at the culvert (partly from the landslip). The Contractor was reminded to arrange the stream diversion, cover the exposed surface and clear the culvert to prevent any silty water discharging out.	B24
	B. Air Quality	
80918-002	 De-bagging and cement mixing has observed without enclosure at STR8. The Contractor was reminded to provide it 3 sides enclosure with top shelter during the works. 	C6
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	E. Ecology	
	No environmental deficiency was identified during site inspection.	
	F. Others	
	 All environmental deficiencies identified in previous audit session were improved/ rectified by the Contractor except items (80910-001, 002, R05, R07, R08, R10-13, R15-22, G23 and G24). Follow-up action is needed for the outstanding items. An item (80910-R14) was not observed during site inspection because no construction activities was being carried out. 	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	A. Water Quality	
80918-R04	Properly cover the exposed slope at STR7 (RW14).	B8
80918-R06	 Properly cover the stockpile and remove away from the culvert at STR7-8. 	B9
80918-R07	Properly cover/ hydroseed the exposed slope at underneath STR 8.	B8
80918-R08	Clear the oil stains at STR8.	B22
80918-R09	 Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and paved road to prevent any sediment from carrying out. 	B2
80918-R11	Hydroseed/cover the exposed surface at STR14.	B8
80918-R12	Hydroseed/cover the exposed slope at underneath STR16.	B8
80918-R13	Properly cover the catchment channel at underneath STR16.	B1
80918-R14	Clear sediment and debris near catchment. (in-progress)	B18
80918-R15	Clear sediment and debris at the paved road along existing TCR.	B18
80918-R16	• Clear the sediment at the culvert near Stream 19 (downstream).	B18

80918-R17	Properly cover the exposed slope at opposite to RW7.	B8
80918-R18	Hydroseed/ cover the exposed surface at STR6.	B8
	•	
	B. Air Quality	
80918-R06	Properly cover the stockpile and remove away from the culvert at STR7-8.	<u>C7</u>
80918-R07	 Properly cover/hydroseed the exposed slop at underneath STR 8. 	C13
80918-R11	Hydroseed/cover the exposed surface at STR14.	C13
80918-R12	Hydroseed/cover the exposed slope at underneath STR16.	C13
80918-R18	Hydroseed /cover the exposed surface at STR6.	C13
	C. Wester / Chamical Manufarmant	
00010 005	C. Waste / Chemical Management Provide drip tray for the plant equipment at STR7.	E7ii.
80918-R05	• Clear C&D waste at Stream 28, Stream 29, Stream 31, Stream 34 and Stream 19	E4ii.
80918-R10	• Clear C&D waste at Stream 28, Stream 29, Stream 31, Stream 34 and Stream 19 (downstream).	
	D. General	
80918-G19	• Clear the sediment and debris in the drainage system (U-Channel, culvert, gullies and underground channel) after the rainstorm.	B1
80918-G20	• Erect fencing for the stream near the construction works especially for the Stream 29.	F1
80918-G21	Clear the stagnant water at the uneven area and the valley after the rainstorm.	B11

Ref. No.	Proposed Completion Date	Completion Date	Remarks
80910-R03			
80910-R04	18 September 2008	18 September 2008	
80910-R06	18 September 2008	18 September 2008	
80910-R09			
80918-001			:
80918-002			
80918-003			
80918-R04			
80918-R05			
80918-R06			
80918-R07			
80918-R08			
80918-R09			
80918-R10			
80918-R11	25 September 2008		
80918-R12	*		
80918-R13			
80918-R14		ł	
80918-R15			
80918-R16			
80918-R17			
80918-R18			
80918-G19			
80918-G20			
80918-G21			

	Name	Signature	Date
Recorded by	Ivy Tam	Im	18 September 2008
Checked by	Dr. Priscilla Choy	NIL	18 September 2008

Inspection Information

Inspection Intol mation	
Checklist Reference Number	80925
Date	25 September 2008 (Thursday)
Time	9:00 - 14:00

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Ref. No.	Non-Compliance	Related Item No.
IXE1. 130.	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
1000 1000	A. Water Quality	
80925-O01	• Sediment was observed accumulate at the sedimentation tanks at Shan Shek Wan. The Contractor was reminded to clear the silt and sediment to maintain the tank can function properly.	B5iii & iv.
80925-002	 Silty water was observed discharging to the public road at underneath STR7. The Contractor was reminded to cover the exposed surface to prevent any silty runoff. 	B2 &8
	B. Air Quality	
80925-003	 De-bagging and cement mixing were observed without enclosure at STR10. The Contractor was reminded to provide it 3 sides enclosure with top shelter during the works as soon as possible. 	C6
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	E. Ecology	
	No environmental deficiency was identified during site inspection.	
<u> </u>	F. Others	
	 All environmental deficiencies identified in previous audit session were improved/ rectified by the Contractor except items (80918-001- 003, R05- R07, R09- R 22 and G23- G 24). Follow-up action is needed for the outstanding items. 	

•	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	A. Water Quality	
80925-R04	• Clear the standing water in the drip tray at the entrance of STR7.	B11
80925-R07	• Properly cover/ hydroseed the exposed slope at underneath STR 8 and STR9.	<u>B8</u>
80925-R09	Properly cover the exposed slope at STR11, STR12 and STR13.	B8
80925-R10	• Re- arrange the stream diversion at Stream 30.	B15
80925-R12	Properly cover the exposed surface at STR14.	B8
80925-R13	• Properly cover the catchment channel at underneath STR16 and STR17.	<u>B1</u>
80925-R14	Properly cover the exposed surface at STR14.	B18
80925-R15	Hydroseed/cover the exposed slope at underneath STR16.	B8
80925-R16	Clear sediment and debris at the paved road along existing TCR.	B18
80925-R17	• Clear the sediment at the culvert near Stream 19 (downstream).	B18
80925-R19	• Re- arrange the stream diversion at Stream 6, Stream 7 and Stream 13.	B15
80925-R20	Keep clear the culvert near Stream 11.	B18
80925-R21	Clear the sediment at the public road near Stream 7.	B18
80925-R22	Properly cover the exposed slope at opposite to RW7.	B8
80925-R23	Hydroseed/cover the exposed surface at STR6.	B8
00720 1120		

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	B. Air Quality	
80925-R06	• Properly cover the stockpile at between STR7-8.	C7
80925-R07	 Properly cover/ hydroseed the exposed slope at underneath STR 8 and STR9. 	C13
80925-R15	Hydroseed/cover the exposed slope at underneath STR16.	C13
80925-R18	Properly cover the stockpile at Pak Kung Au near existing TCR.	C7
80925-R23	Hydroseed/cover the exposed surface at STR6.	C13
	C. Waste / Chemical Management	
80925-R05	Provide drip tray for the plant equipment at STR7.	E7ii.
80925-R08	• Clear C&D waste at Stream 28, Stream 29, Stream 31, Stream 34, Stream 35 and Stream 19	E4ii.
	(downstream).	
80925-R11	Clear C&D waste at underneath STR12.	E4ii.
	D. General	
80925-G24	• Clear the sediment and debris in the drainage system (U-Channel, culvert, gullies and underground channel) after the rainstorm.	B1
80925-G25	• Erect fencing for the stream near the construction works especially for the Stream 29 and Stream 31.	C11
80925-G26	Clear the stagnant water at the uneven area and pit after the rainstorm.	B11
80925-G27	 Provide mitigation measures (sand bag bund/cover with tarpaulin) at between the construction area and the paved road to prevent any sediment from carrying out. 	B2

Ref. No.	Proposed Completion Date	Completion Date	Remarks
80918-R04			
80918-R08	25 September 2008	25 September 2008	
80925-001			
80925-002			
80925-003			
80925-R04			
80925-R05			
80925-R06			
80925-R07			
80925-R08			
80925-R09			
80925-R10			
80925-R11			
80925-R12			
80925-R13			
80925-R14	2 October 2008		
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	Name	Signature	Date
Recorded by	Ivy Tam	Iw	25 September 200
Checked by	Dr. Priscilla Choy	WI	25 September 2008

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APPENDIX J ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

Types of Impacts	Mitigation Measures	Status
	 A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones. Vehicle washing facilities should be provided at every exit point. The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet. The portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials. Any stockpile of dusty materials should be either covered entirely be impervious sheeting, placed in an area sheltered on the top and the 3 sides or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet. During cement debagging or concrete batching operation in an area sheltered on top and 3 sides. All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to remove any dusty materials from its body and wheels immediately before leaving a 	Status * ^ N/A ^ * * ^ * *
	 construction site. The working area of any excavation should be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet. 	^
	• All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.	^
	 and immediately after the operation so as to maintain the entire surface wet. Proper enclosures and water spraying should be implemented for the main dust-generating activities, such as soil nailing or piling works. 	^
	 Proper plant maintenance should be provided to avoid black smoke emission from plants/equipment. 	^

Appendix J - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
•	 Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works. Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. 	^
Construction	 Plant know to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS. Mobile plant should be sited as far away from NSRs as possible. 	
Noise	• Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	^
	Use quite plant and Working Method	^
	 Reduce the number of plant operating in critical areas close NSRs. Construct temporary and movable noise barriers 	N/A
Water Quality	Construction Runoff and Drainage	
	• Discharges to natural water courses shall only take place when the effluent can be shown to comply with the standards specified in the Technical Memorandum, Standards for Effluents Discharged in to Drainage and Sewerage Systems, Inland and Coastal Waters. Discharges in the water gathering grounds should meet Group A standard for inland waters.	*
	• Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow.	*
	• Boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilities runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates.	^
	• All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment traps should be regularly cleaned and maintained. The temporarily diverted drainage should be reinstated to its original condition when the construction works has finished or the temporary diversion is no longer required	*
	• Sand silt in the wash water from the wheel washing facilities, which ensure no earth, mud and debris is deposited on roads, should be settled out the removed before discharging into storm drains. A section of the road between the wheel washing bay and the public road should be paved with backfill to prevent wash water or other site runoff form entering public road drains.	^
	• Oil interceptors should be provided in the drainage system and regularly emptied to prevent the release of oils and grease into the storm water drainage system after accidental spillage. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	N/A
	• Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.	^
	• Silt removal facilities, channels and manholes shall be suitably maintained with the deposited silt and grit being removed at least once a week, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	*

• Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate intercepting channels	
shall be provided along the site boundary or at the locations agreed with the ET Leader. Rainwater pumped out from trenches or foundation excavations shall be discharged into silt removal facilities before discharge into storm drains.	۸
• All generators, fuel and oil storage shall be within bunded areas. Drainage from the areas shall be connected to storm drains via a petrol interceptor.	*
Tunnelling Work	
• Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials form the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps.	N/A
enhance deposition rates and to remove silt.	N/A
• Spend grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill.	N/A
General Construction Activities	
• Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts.	*
• All fuel tanks and storage areas will be provided with locks and be located on sealed areas (within bunds of a capacity equal to 110% of the storage capacity of the largest tank or 20% by volume of the fuel stored in that areas, whichever in the greatest).	*
Sewage Effluent	
sewer wherever feasible. However, for areas where existing trunk sewer is not available, it is recommended that appropriate and adequate on site portable chemical toilets should be provided by a licensed contractor who will be responsible for appropriate disposal and maintenance of these facilities.	^
• It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away form streams and catchments and other requirements for the proposed septic tank and soakaway should be referred to EPD's Practice Note for Professional Persons, Drainage Plans.	
	N/A
	 All generators, fuel and oil storage shall be within bunded areas. Drainage from the areas shall be connected to storm drains via a petrol interceptor. <i>Tunnelling Work</i> Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials form the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps. Ground water pumped out of tunnels should be discharged into the drainage channels which incorporated sediment traps to enhance deposition rates and to remove silt. Spend grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill. <i>General Construction Activities</i> Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts. All fuel tanks and storage areas will be provided with locks and be located on sealed areas (within bunds of a capacity equal to 110% of the storage capacity of the largest tank or 20% by volume of the fuel stored in that areas, whichever in the greatest). <i>Sewage Effluent</i> Construction work force sewage discharges form fixed toilet facilities on-site should be connected that appropriate and adequate on site portable chemical toilets should be provided by a licensed contractor who will be responsible for appropriate disposal and maintenance of these facilities. It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away form streams and catchments and other requirements for the proposed septic tank and soakaway s

Types of Impacts	Mitigation Measures										
Waste /	General										
Chemical	• Training and instruction shall be given at a site to construction staff to increase awareness and draw attention to waste management issues and the need to minimise waste generation. The training requirement shall be included in the site waste management plan.	^									
	Storage, Collection and Transportation of Waste										
	• Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage.	^									
	 Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits. 	^									
	• Waste shall be removed on a daily basis.	^									
	• Waste storage area shall be maintained and cleaned on a daily basis.	^									
	• Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers.	^									
	• Obtain necessary waste disposal permits from the appropriate authorities if they are required.	^									
	• Wastes shall be disposed of at licensed waste disposal facilities.	^									
	• Develop procedure such as ticketing system to facilitate tracking of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur.	^									
	 Maintain records of the quantities of wastes generated, recycled and disposed. 	^									
	Surplus Excavated Materials										
	• Due to the high risk of loose material being washed into the existing nullah, stockpile materials should be properly compacted and covered from water erosion and located at least 10m away from the nullah wall.	٨									
	Construction and Demolition (C&D) Waste										
	• Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts.	^									
	 The handling and disposal of bentonite slurries shall be undertaken in accordance with Practice Note for Professional Persons – Construction Site Drainage (ProPECC PN 1/94) on construction site drainage. 	N/A									
	• Construction and demolition (C&D) material shall be segregated to inert and non-inert parts. The inert portion shall re-used at areas of reclamation or land formation, or to public filling area shall such allocation is deemed necessary. The non-inert portion shall be disposed of to landfill.	*									
	Chemical Waste										
	Chemical waste that is produce during construction shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.	۸									

Types of Impacts	Mitigation Measures	Status
	 Containers used for the storage of chemical wastes should: Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations. 	^
	 The storage area for chemical wastes should: a. Be clearly labelled and used solely for the storage of chemical waste; b. Be enclosed on at least 3 sides; c. Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is largest; d. Have adequate ventilation; 	^
	e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary);f. Be arranged so that incompatible materials are adequately separated.	
	 Disposal of chemical waste shall be via a licensed waste collector; and to a facility licensed to receive chemical waste; or a re- user of the waste (under approval from EPD). 	^
	General Refuse	
	 General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D and chemical wastes, on a daily for every second day basis to minimise odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law. 	۸
	 Reusable rather than disposable dishware shall be used if feasible. 	^
	Oil and Fuel	
	• The storage area for chemical wastes should have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container;	*
	• No storage of oil or fuel should be stored within the Country Park or the water gathering ground.	*
Landscape and Visual	 Refinement of the route alignment and design of associated structures to minimise loss of woodland and other landscape resources; 	^
Impact	• Minimising working areas as far as possible;	^
_	• Protection and retention of existing vegetation where possible;.	^
	• Transplanting of trees where appropriate	^
	• Protection and retention of existing natural rocky outcrops, slope profiles, vegetation, landscape features;	٨
	Advance planting and visual screening, where possible;	^

Types of Impacts	Mitigation Measures	Status				
	• Compensatory planting;	^				
	 Sensitively designed site hoarding, where possible (ie the sensitive design of site hoarding will be disrupted by hoarding panels showing the Highways Department logo, at regular intervals as per the approved engineering design);and 					
	Grassing and woodland planting of soil slopes and disturbed areas	^				
Ecology	Construction activities in the stream and other disturbances to it should be avoided.					
Remarks:	^Compliance of mitigation measure;XNon-compliance of mitigation measure;N/ANot Applicable;•Non-compliance but rectified by the contractor;*Recommendation was made during site audit#Non-compliance but rectified/improved by thebut improved/rectified by the contractor.*Compliance but rectified/improved by the					

APPENDIX K EVENT ACTION PLANS

Appendix K – Event Action Plans

Event /Action Plan for Air Quality

EVENT		ACTION						
	EJ	ſ	IE	с	EF	1	Co	ntractor
Action Level								
1. Excee dance for one sample	1. 2. 4. 5.	Inform the IEC and the Contractor about the exceedance within 24 hours of identification of exceedance; Identify the source, investigate the causes of exceedance and propose remedial measures; Report the results of the investigation to the Contractor; Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. Repeat measurement to confirm finding. If exceedance is indicated due to the Project construction works, increase 24-hour TSP monitoring frequency to 1- hour monitoring with 3 times every six days until no exceedance is recorded.	1. 2. 3.	submitted by the ET. Confirm the ET assessment regarding the action and/or limit level exceedance during the impact monitoring;	1.	Confirm receipt of NOE in writing. Notify EPD and other relevant Government departments within 24 hours of identification of exceedance.	 1. 2. 3. 4. 	remedial to ER within 3 working days of notification ET if exceedance is due to the Project construction works Rectify any unacceptable practice;

EVENT	ACTION				
	ET	IEC	ER	Contractor	
Action Level					
 Excee dance for two or more consecutive samples 	 Inform the IEC and the Contractor about the exceedance within 24 hours of identification of exceedance; Identify the source. Supervise implementation of remedial measures; Report the results of the investigation to the Contractor; A dvise the ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with the IEC and the Contractor on remedial actions required; If exceedance continues, arrange meeting with the IEC and the ER. If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by the ET; Check the Contractor's working method; Discuss with the ET and the Contractor on possible remedial measures; A dvise the ER on the effectiveness of the proposed remedial measures; Supervisor implementation of remedial measures. 	 Confirm receipt of NOE in writing. Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance; Ensure reme dial measures properly implemented. 	 Inform IEC and ER within 24 hours of identification of exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. 	

EVENT	ACTION							
	ET	IEC	ER	Contractor				
LimitLevel								
 Exceedance for one sample 	 Notify the IEC and the Contractor within 24 hours of identification of exceedance; Identify the source, investigate the causes of exceedance and propose remedial measures; Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. Repeat measurement to confirm finding. If exceedance is indicated due to the Project construction works, increase 24-hour TSP monitoring frequency to 1-hour monitoring with 3 times every six days until no exceedance is recorded; Assess effectiveness of Contractor's remedial actions and keep the IEC, the DEP and the ER informed of the results. 	 Check monitoring data submitted by the ET. Check Contractor's working method. Discuss with the ET, the Contractor and the ER on possible remedial measures. A dvise the ER on the effectiveness of the proposed remedial measures. Supervise implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify EPD and other relevant Government departments within 24 hours of identification of exceedance; Ensure reme dial measures are properly implemented. 	 Inform ER and IEC within 24 hours of identification of exceedance; Take immediate action to avoid further exceedance; Submit proposals for remedial actions to ER and IEC within 3 working days of notification by ET; Implement the agreed proposals; Report effectiveness of remedial actions to IEC and ER; Amend proposal if appropriate. 				

EVENT	ACTION			
	ET	IEC	ER	Contractor
 Exceedance for two or more consecutive samples 	 Notify the IEC and the Contractor within 24 hours of identification of exceedance; Identify the source; Repeat measurements to confirm findings if the exceedance is due to the Project construction works; Increase monitoring frequency to daily; Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with the IEC and the ER to discuss the remedial actions to be taken; Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the ER informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst the ER, ET and the Contractor on the potential remedial actions; Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance;. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures are properly implemented; If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	 Inform ER and IEC within 24 hours of identification of exceedance; Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification by ET; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Implement the agreed proposals; Resubmit proposals if problem still not under control; Report effectiveness of remedial actions to IEC and ER; Stop the relevant activity of works as determined by the ER until the exceedance is abated.

 $Note: \quad ET-Environmental \ Team, IEC-Independent \ Environmental \ Checker, ER-Engineer's \ Representative$

Event Action Plan for Construction Noise

EVENT	ACTION							
	ET	IEC	ER	Contractor				
Action Level	 Notify the IEC and the Contractor within 24 hours of identification of exceedance. Carry out investigation. Report the results of investigation to the IEC and the Contractor. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. Discuss with the Contractor and formulate remedial measures. Increase monitoring frequency to check mitigation effectiveness. 	 Review the analysed results submitted by the ET. Review the proposed remedial measures by the Contractor and advise the ER accordingly. Supervise the implementation of remedial measures. 	 Confirm receipt of NOE in writing. Notify the EPD and other relevant Government departments within 24 hours of identification of excee dance. Require the Contractor to propose reme dial measures for the analysed noise problem. Ensure remedial measures are properly implemented. 	 Submit noise mitigation proposals to IEC Implement noise mitigation proposals 				

EVENT	ACTION			
	ET	IEC	IEC ER	
Limit Level	 Notify the IEC and the Contractor within 24 hours of identification of exceedance. Identify the source. Repeat measurement to confirm findings. Increase monitoring frequency. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. Inform the IEC, the ER and the DEP the causes & actions taken for the exceedances. Assess effectiveness of the Contractor's reme dial actions and keep the IEC, the DEP and the ER informed of the results. If exceedance stops, cease ad ditional monitoring. 	 Discuss amongst the ER, the ET and the Contractor on the potential remedial actions. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly. Supervise the implementation of remedial measures. 	 Confirm receipt of NOE in writing. Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance. Require the Contractor to propose remedial measures for the analysed noise problem. Ensure remedial measures are properly implemented. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	 Take immediate action to avoid further exceedance Submit proposals for remedial actions to IEC within 3 working days of notification Implement the agreed proposals Resubmit proposals if problem still not under control Stop the relevant activity of works as determined by the ER until the exceedance is abated.

Note: ET - Environmental Team, IEC - Independent Environmental Checker, ER - Engineer's Representative

Event / Action Plan for Water Quality

EVENT	ACTION			
	ET	IEC	ER	Contractor
Action Level being exceeded by one sampling day	 Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform the IEC and the Contractor; Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD with 24 hours of identification of exceedance Check monitoring data, all plant, equipment and the Contractor's working methods; Discuss mitigation measures with the IEC and the Contractor; Repeat measurement on next day of exceedance. 	submitted by the Contractor and advise the ER accordingly;	 Discuss with the IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. 	 Inform the ER and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET and the IEC and propose mitigation measures to the IEC and the ER; Implement the agreed mitigation measures.
Action Level being exceeded by more than one consecutive sampling days	 Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform the IEC and the Contractor; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with the IEC and the Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; 	 Discuss with the ET and the Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; Access the 	Discuss with IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Access the effectiveness of the implemented mitigation measures.	 Inform the ER and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET and the IEC and propose mitigation measures to the IEC and ER within 3 working days; Implement the agreed mitigation measures.

EVENT	ACTION						
	ET	IEC	ER	Contractor			
	8. Repeat measurement on next day of exceedance.	effectiveness of the implemented mitigation measures.					
Limit Level being exœeded by one consecutive sampling day	 Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform the IEC and the Contractor; Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD with 24 hours of identification of exceedance. Check monitoring data, all plant, equipment and the Contractor's working methods; Discuss mitigation measures with the IEC, the ER and the Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit Level. 	 Discuss with the ET and the Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; Access the effectiveness of the implemented mitigation measures. 	 Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; Request the Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Access the effectiveness of the implemented mitigation measures. 	 Inform the Engineer and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; Implement the agreed mitigation measures. 			

EVENT	ACTION						
	ET	IEC	ER	Contractor			
Limit Level being exceeded by more than one consecutive sampling days	 Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform the IEC, the Contractor and DEP; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with the IEC, the ER and the Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days. 	 Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; Access the effectiveness of the implemented mitigation measures. 	 Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemente d; Access the effectiveness of the implemente d mitigation measures; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works until no exceedance of Limit Level. 	 Inform the ER and confirm notification of the non- compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; Implement the agreed mitigation measures; As directed by the ER, slow down or stop all or part of the construction activities. 			

APPENDIX L COMPLAINT LOGS

Appendix L - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S63	Tung Chung Road and Cheung Sha Stream	14 Sep 06	The complaint, which was lodged by Green Lantau Association on 13th September 2006, accused the failure of the site drainage system to check the discharge of silt-laden surface water from the site on that day.	but the accusation is not substantiated by scientific data in that the rainstorm event was 1 in 25 years. It is therefore beyond the Contractor's	Closed
S65-S69	Tung Chung Road Southern Section; Cheung Sha Stream;	19 Sep 06	 Five complaints, which were lodged by Green Lantau Association on 15th September 2006, accused the failure of the drainage system for the Project on 13th September 2006. The subject of complaints are listed as below: (i) Failed Filtration System (ii) Contaminated Stream (iii) Polluted Cheung Sha Stream (iv) Polluted Cheung Sha Stream (v) Site Debris on Road 	ETL is of the view that the complaints are justifiable but the accusation is not substantiated by scientific data in that the rainstorm event was 1 in 25 years. It is therefore beyond the Contractor's terms of contract to design, operate and maintain the carrier pipe and the sedimentation tank to cater for this rainstorm. The Contractor has a defendable case under this increment weather condition.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S71	Northern Section, Tung Chung Road	3 Nov 06	The complaint, which was referred by Resident Site Staff (RSS) to ET on 3 rd November 2006, was raised by a resident living Lantau Island on 17 th October 2006 concerning the Tung Chung Road condition on 16 th October 2006.	Based on the meteorological data extracted from HKO, the total rainfall between 0:45 and 6:45 hours in Lantau was 196 mm with an average intensity of 32.67 mm/hr on 16 th October. Based on the results derived from Table 2 "the Intensity-Duration-Frequency (IDF) for various return periods" and Table 4 "Depth-Duration- Frequency (DDF) for durations of than 4 hours" of the "Stormwater Drainage Manual", the return period should be less than 1 in 10 years. Therefore, the complaint was considered justifiable since the EIA report has recommended the provision of site drainage system shall be 1 in 10 years. The Contractor has implemented remedial measures and preventive measures.	Closed
\$72	Lung Tseng Tau Village, Tung Chung	3 Nov 06	The public complaint, which was referred by RSS to ET on 3 rd November 2006, was received by the Integrated Complaint Centre (ICC) on 26 th October 2006 regarding dust nuisance generated from the Project.	Based on the information collected and the monitoring results, the complaint was considered not justifiable due to the following since no exceedance of the air quality monitoring results was recorded in October 2006. During site inspections in the month, dust mitigation measures have been implemented by the Contractor; and no observation was recorded during the site inspections. According to the information provided by the Contractor and the RSS, the Contractor has implemented additional mitigation measures, including increased water spraying on the public road to more than once a day and covered the stockpiling materials.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S73	Southern Section of the Project	3 Nov 06	The complaint, which was referred by RSS to ET on 3 rd November 2006, was raised by a resident living at Cheung Sha on 24 th October 2006 concerning noise generated from rock breaking in Southern Section of the Project.	According to the EM&A records, no exceedance of noise level and no non-compliance were recorded in the month. As advised by the Contractor and RSS, silent rock breaking equipment has been used and noise insulation materials have been used to minimize the noise impact generated from the rock breaking activity. Based on the provided information and the monitoring results, the complaints are considered not justifiable. The Contractor has implemented the mitigation measures to minimize the noise generation from construction activities and was still reminded to continuously implement their practice to prevent noise nuisance generation from the construction works.	Closed
\$74	Tung Chung Stream	24 Nov 06	Highways Department (HyD) of HKSAR received a complaint for Agriculture, Fisheries and Conservation (AFCD) regarding untreated site runoff discharged to Tung Chung Stream during the site visit on 21 st November 2006. The Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 24 th November 2006.	The investigation revealed that, based on the meteorological data extracted from HKO, the highest rainfall recorded was between 13:45 and 15:45, with a total of 93mm in two hours. With the above rainfall intensities extracted from HKO, together with the Intensity-Duration-Frequency (IDF) for various return periods derived from Table 2 of the "Stormwater Drainage Manual", the return period should be less than 10 years. Therefore, the complaint was considered justifiable and the Contractor has implemented remedial measures and preventive measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S75	West of the new Tung Chung Road Southern Section Discharge Point	21 Nov 06	Both Environmental Protection Department (EPD) and China Civil Engineering Construction Corporation and China Railway Wuju Joint Venture (the Contractor) received the same public complaint, regarding muddy water discharged to Chueng Sha on 21 st November 2006. The Contractor subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on the same day.	The complainant considered that this stream was muddy and discharging muddy water into the sea. As stated in the above paragraph, the investigation revealed that the return period for the rainfall between 13:45 and 15:45 was 41 years. As the complaint was lodged at 14:58 on 21 st November 2006, it is reasonable to consider the rainfall recorded in the hour between 13:45 to 14:45 which was 57mm. According to "Stormwater Drainage Manual", the return period should be less than 10 years. Therefore, the complaint was considered justifiable and the Contractor has implemented remedial measures and preventive measures.	Closed
S76	Pui O Wan	27 Nov 06	China Civil Engineering Construction Corporation and China Railway Wuju Joint Venture (the Contractor) received the same public complaint, regarding muddy water discharged into Pui O Wan on 23 rd November 2006. According to the complainant, muddy water was discharged into Pui O Wan from the new Tung Chung Road Southern Section Discharge Point (near proposed round about on South Lantau Road) in the morning of 23 rd November 2006. The complainant suspected that the muddy water was being pumped off site through failed filtration systems into the sea as there had been no recent rainfall on that day.	The investigation revealed that the complaint was considered not justifiable since (1) no muddy water was generated due to the construction activities in the vicinity of the discharged point; and (2) no surface runoff as no rainfall was recorded on 23 rd November 2006.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S77	Sheung Ling Pei, Ha Ling Pei, Wong Ka Wai & Lung Tseng Tau Villages	18 Dec 06	Highways Department (HyD) and the Resident Engineer received a complaint against Water Quality Supply (Muddy Water) at Sheung Ling Pei, Ha Ling Pei, Wong Ka Wai & Lung Tseng Tau Villages via District Office (Islands) on 29 th November 2006. The complainants claimed that subject villages were suffering from muddy water supplied from the water main on the past few days before 29 th November 2006.	Upon receipt of the complaint, the Contractor inspected all streams (above AFCD entrance) in the Northern Section. Muddy water was observed at Stream 13 which was believed the source of muddy water. However, no water flow was found at the stream. The muddy water was considered probably due to the seepage of underground water mixed with excavated soil to Stream 13. Furthermore, an ad-hoc meeting between DO/WSD/AFCD/MOTT/CCJV/IEC/ET was held on 14 December 2006 to discuss this issue. The complaint was considered due to the construction activities of the Project. Emergency remedial works had been taken by the Contractor to rectify the situation and preventive measures had also been implemented.	Closed
S80	Tung Chung Road near Lung Tseng Tau Village	3 Jan 07	The complaint was lodged by a resident at Lung Tseng Tau Village regarding dust nuisance at Tung Chung Road near Lung Tseng Tau Village. According to the complainant, the dust was generated by vehicle movements (about 5 to 7 per day). The complainant noticed that there was only once per day for water spraying on the road. She suggested that the frequency of water spraying should be increased to 1 to 2 per hour. In addition, she requested to provide more water-spraying practice for the concerned area.	According to the Contractor and the RSS, the main dust emission in the vicinity of Lung Tseng Tau Village was due to the vehicle movements on Tung Chung Road. Base on the information collected and the monitoring results, the complaint was considered not justifiable since (1) no exceedance of the air quality monitoring results was recorded in December 2006; (2) dust mitigation measures have been implemented by the Contractor; and (3) no observation was recorded during the site inspections. In response to the complaint, the Contractor had stepped up the dust suppression control immediately. A water truck was mobilized to spray water at Tung Chung Road within particular in the vicinity of the complainant's house from once per day to at least 3 times per day.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S81	Lung Tseng Tau	20 Dec 06	The Contractor, CCECC and CRWJ Joint Venture (CCJV) and Highways Department (HyD) of HKSAR received a complaint regarding dust control at Lung Tseng Tau from the Office of Islands District Councilor, Wong Fuk- kan on 6 th December 2006. According to the complainant, he had received a number of complaints from residents in South Lantau regarding the dust nuisance when their vehicles passing through Tung Chung Road near Lung Tseng Tau. The residents said their vehicles were full of dust whenever they had passed through Tung Chung Road.	Base on the site inspection records and information collected from the RSS and the Contractor, the complaint was considered due to due to the vehicle movements on Tung Chung Road. In response to the complaint, the RSS has conducted site inspection in the afternoon on 18 th December 2006. The Contractor had immediately mobilized labors to clear the mud trail on Tung Chung Road between ch.3700-4000 using sweepers. In order to maintain the condition of Tung Chung Road, the Contractor has mobilized more staff to clear the mud deposits on the whole Northern Section of Tung Chung Road on 23 rd December 2006. The Contractor has provision wheel washing facilities at each site exit/entrance. In order to maintain Tung Chung Road condition, the Contractor has mobilized a water truck solely for wheel washing purpose at the site entrance near RW37 between ch.3700-4000 since 23 rd December 2006. The location is the most busy site exit/entrance for soil removal as wheel washing facilities. Wheels of each vehicle shall be washed before leaving the site. The wastewater after wheel washing at each site exit/entrance shall be collected and treated before discharge at designated location.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S82	The nullah near the Yat Tung Estate	15 Jan 07	The complaint was lodged by the Legislative Councillor Hon. Albert W.Y. Chan regarding frequent discharge of muddy water from the Tung Chung Road improvement project on 15 th December 2006. According to Mr. Chan's letter, the complainant was a resident living in Tung Chung. The DSD letter pointed out that muddy water was being frequently discharged to the nullah near the Yat Tung Estate, and confirmed that the site of Tung Chung Road improvement project was the source of such discharge.	 was largely due to the deposited silts caused by previous heavy rainstorms in November. The contractor has responded promptly in deploying a number of actions to remedy the matter. These include de-silting operation at Wong Lung Hang nullah on 23rd December 2006 to remove the accumulated soil and silt materials washed down by the discharges, of which photographs are provided. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S86	Slope opposite to the AFCD's Office at Tung Chung Road near mileage M2.5	8 Feb 07	The complaint was lodged by a resident in Lantau Island regarding the construction noise generated from the road works at the slope opposite to the AFCD's Office at Tung Chung Road near mileage M2.5.	the Project. According to the Contractor, soil nailing works was conducted at RW6 and the first stage of soil nailing works at RW6 has been	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
\$90	Northern and Southern Section of Tung Chung Road	20 May 07	The complaint was lodged by the Green Lantau Association at on 20 May 2007 regarding failed drainage for the Project on that day.	According to the Contractor, the main concern in the Northern Section is that a large amount of seepage from the permanent slope near the Stream 18 and Stream 21 was observed. The permanent hinterland u-channel was not able to collect most of the hinterland water which ultimately collected by the carrier pipe and increased the loading of the treatment facilities at Shek Mun Kap. As advised by the Contractor, the main problem in Southern Section was due to the fact that the silt is too fine to be settled within a short time, i.e. 3 minutes, as stated in the EIA Report. Due to the large catchments of the site, muddy water could not be completely settled or treated before discharged or overflowed. No bigger sedimentation tank can be constructed due to the site constraint to retain all surface water in heavy rainy days. The complaint was considered justifiable. However, it is beyond the Contractor's capability to completely avoid muddy water discharging or overflowing to sea due to the site conditions and constraints under increment weather conditions.	The complaint investigation report was commented

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S91	Zone 4 (STR 14)	1 June 07	The complaint was lodged by a resident in Butterfly Crest, Lantau Island regarding the construction noise generated from the Project on Sunday, which is likely to be 27 th May 2007.	Equipment (11112) used on that day mended 2	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S93	Western Section of Pui O Bay	22 May 07	The complaint was lodged by the Green Lantau Association at on 22 May 2007 regarding muddy water was observed at 50m west of the Tung Chung Road southern section around 11am on 22 May 2007.	As advised by the Contractor, the main problem in Southern Section was due to the fact that the silt is too fine to be settled within a short time, i.e. 3 minutes, as stated in the EIA Report. Due to the large catchments of the site, muddy water could not be completely settled or treated before discharged or overflowed. No bigger sedimentation tank can be constructed due to the site constraint to retain all surface water in heavy rainy days. In the site near Pui O Wan, the Contractor has exhausted their efforts including to pump the water from sedimentation tanks back to the stockpile area. Unfortunately, one of the pumps was out of order in the early days of that rainy period. However, the pump has been rectified on 22 May 2007. The complaint was considered justifiable. However, it is beyond the Contractor's capability to completely avoid muddy water discharging or overflowing to sea due to the site conditions and constraints under increment weather conditions.	The complaint investigation report was commented

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
\$100	Stream water behind WSD's weir	27 July 07	The complaint was lodged by a resident living at Lung Tseng Tau area during the meeting between RSS and the representatives from the villages at Lung Tseng Tau area on 17 th July 2007 regarding turbid water supply from DO main to the village houses at Lung Tseng Tau area.	 The RSS and the Contractor had a site investigation with the complainant at his household water supply, the WSD weir and a work area immediately upstream of the weir (STR02 near the Stream 12) on the same day. It was observed that the water directly from the household supply was found with low degree of turbidity when comparing it with portable water supply. According to the visual inspection of the RSS and the Contractor, the stream water behind the WSD's weir, which is the source of water supply to the villagers via a DO main, was found clear and there was no sign of contamination. Inspection of the work site at STR02 upstream of the weir indicated no activities affecting the upstream water quality. By reviewing the water quality monitoring data at Tung Chung Stream during early of July 2007, the turbidity and SS values are considered to be low and the data revealed that the Tung Chung Stream and the WSD weir were not contaminated during the above mentioned period. Nevertheless, In order to minimize the water quality impacts, the Contractor has implemented following mitigation measures: To erect sand bag bund in the vicinity of STR02; To shotcrete the soil surface near Stream 12. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S104	Tung Chung Road and Tung Chung Au near AFCD's Office	6 August 07	The complaint was lodged by Mr. Ho on 6 th August 2007 regarding a suspected case of silty runoff and muddy water generated from construction site flowing on public road. Turbid water was observed behind the weir near the AFCD's office at Tung Chung Au.		Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S113	Upper and Lower Cheung Sha Village	12 December 2007	The complaint was lodged by Mr. Liu on 12 December 2007 regarding dust nuisance at Upper and Lower Cheung Sha Village.	According to the Contractor, the main dust emission in the vicinity of Cheung Sha Village was due to the road works and associated vehicle movements on Tung Chung Road. The Contractor has implemented following	
				mitigation measures:	
				 Cleared the silts on the haul road; Applied watering on the road by water hose at San Shek Wan; Increased the number of water browsers; and Covered the exposed slope and stockpiles with tarpaulin sheets. 	Closed
				By reviewing the air quality monitoring data, there was no exceedance of air quality monitoring results on 8 th and 14 th December 2007 and dust mitigation measures have been implemented by the Contractor.	
				According to the RSS and the Contractor, no further complaint regarding dust nuisance from concerned area was received after implementation of the aforesaid mitigation measures.	

APPENDIX M SUMMARY OF WARNING / DIRECTION ISSUED BY THE EPD AND PROSECUTION

Appendix M - Summary of Warnings / Direction Issued by the EPD and Prosecution

Date of Letter	Warnings/Direction
3 February 2005	The Contractor was requested to construct catch pits and perimeter channels in
	advance of site formation and earth works
17 May 2005	The Contractor was requested to immediately re-provide the on-site wastewater
	management systems to adequately cater the rainwater runoff and to submit the
	detail proposal for runoff management and treatment systems.
4 October 2005	The Contractor was requested to rectify the situation in order to comply with EP
	Conditions 2.4 & 2.5 regarding the provision of drainage systems, EP Condition
	3.16 regarding site runoff mitigation measures and EP Condition 3.6 regarding
	no works of the Project shall be carried out outside the "limit of works area".
15 December 2005	The Contractor was requested to rectify the situation of Zone D where fuel oil
	was found spilled onto ground of the works area in contravention to Section
	7.5.2.1 of the Waste Management Plan (WMP). The Section stipulates
	provisions against spillage of fuels to prevent contamination of the construction site.
24 March 2006	The Contractor was requested to rectify the situation in order to comply with EP
24 Iviaicii 2000	Condition 3.9 regarding the stipulated span of temporary bridges used during
	construction to cross the stream.
13 April 2006	The Contractor was requested to rectify the situation of Zone E where fuel oil
10 11pm 2000	was stored within the Country Park in contravention to condition 3.14 of the EP.
29 June 2006	The Contractor was requested to rectify the situation that site runoff will not be
	discharged into Tung Chung Stream in order to comply with EP Condition 2.4.
26 September 2006	The Contractor was requested to rectify the situation that excessive dust
	emission occurred. Watering programme shall maintain to ensure that all
	exposed road surfaces and dust sources are wet in order to comply with EP
	Condition 1.7.
4 October 2006	-The Contractor was requested to rectify the situation that site runoff will not be
	discharged into Tung Chung Stream in order to comply with EP Condition 2.4.
	-The Contractor was requested to rectify the situation in order to comply with
	EP Condition 3.9 regarding the stipulated span of temporary bridges used
	during construction to cross the stream 28
	The Contractor was requested to rectify the situation in order to comply with
	EP Condition 3.9 regarding the stipulated span of temporary bridges used during construction to cross the stream 32.
	- The Contractor was requested to rectify the situation in order to comply with
	EP Condition 3.9 regarding the stipulated span of temporary bridges used
	during construction to cross the stream 33.
13 February 2007	The Contractor was requested to rectify the situation that site runoff will not be
	discharged into Tung Chung Stream in order to comply with EP Condition 2.4.
19 February 2008	The Contractor was requested to take all necessary actions to rectify the
	situation that surface run-off from the construction site discharged into storm
	drain without treatment in order to comply with EP Condition 3.16.
14 April 2008	The Contractor was required to take all necessary actions to rectify the situation

Summary of Warnings / Direction Issued by the EPD

Date of Letter	Warnings/Direction			
	that a section of the site near Pak Kung Au was not provided with vehicle washing facilities including high pressure water jet at vehicular exit points so as not to contravene the statutory requirement.			

Summary of Notification of Summons

Date of Summons	Details of the Summons	Status		
25 January 2007	Construction works at a slope next to Stream no. 28	Withdrawn by		
	along Tung Chung Road, Cheung Sha, Lantau Island	EPD		
	which contrary to EP Condition 3.9 concerning works at			
	Stream 28 on 26 July 2006			
16 February 2007	Construction works near Stream no. 8 along Tung Chung	The Contractor		
	Road, Cheung Sha, Lantau Island which contrary to EP	was fined \$7500		
	Condition 2.4 by discharging runoff during construction			
	into Tung Chung Stream on 16 August 2006			
17 May 2007	Construction works near Stream no. 8 along Tung Chung	The Contractor		
	Road, Cheung Sha, Lantau Island which contrary to EP	was fined \$7500		
	Condition 2.4 by discharging runoff during construction			
	into Tung Chung Stream on 21 November 2006			

Summary of Notification of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status
4 June 2007	Construction works near Stream no. 8 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 2.4 by discharging runoff during construction into Tung Chung Stream on 16 August 2006	The Contractor was fined \$7500 on 4 June 2007
4 June 2007	Construction works near Stream no. 8 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 2.4 by discharging runoff during construction into Tung Chung Stream on 21 November 2006	The Contractor was fined \$7500 on 4 June 2007

APPENDIX N CONSTRUCTION PROGRAMME

	Act	Description	Orig	%	Early	Early		SEP	2008 OCT	NOV		
Con	ID Imencement & K		Dur	Comp	Start	Finish	01 0	8 15 22	29 06 13 20	27 03 10 17 24	2009 20	10 2011 2
	evised Key Dates											
	ZAKD0000	Commencement of Contract	0	100	28JUN04 A		Contra					
	ZAKD0000	Complete Works in Section 1	0	0	200011047	30APR 09					A Com	plete Worl
	ZAKD001 ZAKD002		_	0								ete Works
		Complete Works in section 2	0	-		31DEC08					Compi	
	ZAKD003	Complete Works in Section 1A	0	0		31AUG11						♦ Co
	ZAKD0035	Extended Completion Date of Section 1A(Claim 62)	0	0		08MAR09 *					Exten	ded Comp
	ZAKD004	Complete Works in Section 2A	0	0		31AUG11						◆ Co
	ZAKD005	Complete Works in Section 3	0	0		01AUG11						♦ Cd
	ZAKD006	Complete Works in Section 3A	0	0		30AUG12						
	ZAKD007	Complete Works in Undefined Section	0	0		21AUG09					♦ Cor	mplete Wo
	ZAKD008	Complete Establish'nt Works in Undefined Section	0	0		31AUG11						♦ Cc
Con	pletion Dates			1	1							
	ZAKD0020	Extended Completion Date of Section 1 (Claim 62)	0	100		09MAR07 A	nded Cor	mpletion Date	of Section 1 (Claim			
	ZAKD0050	Extended Completion Date of Section 2 (Claim 62)	0	100		06JAN07 A	ded Com	pletion Date c	f Section 2 (Claim			
	ZAKD0065	Extended Completion Date of Section 2A(Claim 62)	0	0		05JAN09 *					Extend	ed Compl
	ZAKD0080	Extended Completion Date of Section 3 (Claim 62)	0	100		09JUN07 A	ended Co	ompletion Date	e of Section 3 (Claim			
	ZAKD0100	Extended Completion Date of Section 3A(Claim 62)	0	0		08JUN09 *					♦ Exte	nded Corr
Gen	eral	1	1									
M	onthly Monitoring	g Submission										
	0470	Waste Management Plan	2323	53	04NOV04 A	25APR11					<u> </u>	🗩 Wast
	0480	Environment Monitoring and Audit	2323	53	04NOV04 A	25APR11	<u> </u>				<u> </u>	
				ļ								
Start Finis	n date 304	JUN04 Early bar AUG12 Progress bar							Date 01AUG08	Revision 3M update	Checked	Approved
Data Numb	date 01A per/Version Rev	vision 15		•								
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	Act ID	Description	Orig		Early Start	Early Finish	SEP	2008	NOV		
Sect	tion 1		Dur	Comp	Start	Finish	01 08 15 22	29 06 13 20	27 03 10 17 24	2009 2	010 2011 2
	one A (CH. 1000	- 1565)									
	Drainage Works										
	S1-1500	Footpath and verge (Additional Work)	64	0	16JUN08 A	01SEP08	Footpath and verge (A)	Additional Work)			
	Roadworks										
	S1-1530	Street Furniture (Additional Works)	50	52	01JUL08 A	30SEP08	4	Street Furniture (Ad	dditional Works)		
	Landscaping										
	S1-1545	Landscape Earth Bund Ch.920-1020	22	0	01APR09*	30APR 09				● Lanc	lscape Eart
Zo	one B (CH. 1565	- 2130)			<u> </u>					1	
	Slope Works										
	S1-2080	Recompact fill slope remedial works ch	1755-1945 50	0	01AUG08 *	30SEP08	[Recompact fill slop	e remedial works ch1755-1	945	
	S1-2084	Outlet of Culvert @ Ch2021 remedial w	orks 38	0	16AUG08 *	30SEP08		Outlet of Culvert @	Ch2021 remedial works		
l l r	Roadworks										
	S1-2337	Additional drainage Pipe Desilting Wor	ks 115	0	14AUG08	31DEC08 *				Additic	nal drainad
	S1-2338	Footpath and Verge (Remedial Works)	6	0	01NOV08 *	07NOV08			Footpath and Ve		
	S1-2330	Additional street furnitures	20	0	08NOV08 *	01DEC08					nal street fu
			20	0	00110700	UIDEC00	-				
	one C (CH. 2130 Slope Works	- 2725)									
	S1-3194	Recompacted fill slope (VO50 & 83) rer	medial work 89	0	16JUN08 *	30SEP08	Ļ	Recompacted fill sl	ope (VO50 & 83) remedial	work	
	Retaining Wall R	2W06									
	04.0050					0005000	L				Domodia
	S1-2350	Utilities (Remedial Works)	119	0	01AUG08 *	22DEC08					s (Remedia
	S1-3890	RC structure Bay 8	25	0	16OCT08 *	13NOV08			RC structur	_	
ļļļ	S1-3900	Backfilling	13	0	14NOV08	28NOV08				Backfillin	°
	S1-3910	Slope drainage	25	0	29NOV08	30DEC08				Slope of	drainage
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S1-3631	Waterworks remedial works	6	0	23DEC08 *	31DEC08										Waterw	orks rer
S1-3632	HyD remedial works (kerb)	12	0	02JAN09 *	15JAN09										HyD rer	nedial v
S1-3633	Additional U channel	9	0	02JAN09 *	12JAN09										Addition	nal U ch
S1-3634	Street furniture remedial works	16	0	24JAN09 *	14FEB09										Street f	urniture
S1-3635	Footpath and Verge remedial works	7	0	16JAN09 *	23JAN09										Footpat	h and \
one D (CH. 272	25 - 3100)			•		Π										
Slope Works																
S1-4069	Utility remedial works CH2760-3060 downhill	50	0	01SEP08 *	31OCT08							— Util	ity remedial	works C	H2760-3	060 do
S1-4080	Top channel (CH. 2940 - 3060) remedial works	26	0	01NOV08	01DEC08								,		Top cha	
S1-4081	Concrete verge	12	0	02DEC08 *	15DEC08										Concrete	
Retaining Wall	-	12		0202000	1302000											
ketaming wan	KWU/															
S1-4241	Utility remedial works	166	0	01AUG08 *	21FEB09	1 4									Utility r	emedia
S1-4260	Backfilling (Remaining)	226	0	01APR08 *	31DEC08	┝									Backfilli	ng (Re
S1-4270	Slope Drainage	163	0	17JUN08 *	31DEC08	ţĘ									Slope D	rainage
Roadworks																
Road work	1	1	1		•											
S1-4416	Utility remedial works	166	0	01AUG08 *	21FEB09										Otility r	emedia
S1-4417	Waterworks remedial works	13	0	23FEB09 *	09MAR09										I Waterv	vorks r
S1-4418	HyD remedial works (kerb)	13	0	10MAR09*	24MAR09										∎HyD re	emedia
S1-4419	Additional U channel	11	0	10MAR09 *	21MAR09										Additio	nal U c
			1	1	r										- .	
S1-4421	Footpath remedial works	6	0	25MAR09 *	31MAR09										Footpa	
S1-4430	Street Furniture remedial works	9	0	01APR09*	15APR09	Ц									I Street	Furnitu
ne E (CH. 310 Slope Works	0 - 4010)															
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							П				1	
	S1-5151	9SE-D/F9 (Closure of existing TCR)	38	0	16SEP08 *	31OCT08				9SE-D/F9 (Closure of	existing T	CR)
	S1-5152	TCR/UF/C/10 (Closure of existing TCR)	25	0	01AUG08 *	30AUG08	"	TCR/UF/C/10 (Closure	e of existing TCR)			
	Retaining Wall F	RW10					Π					
			_									
	S1-5390	Backfilling	176	0	01APR08 *	31OCT08	F			Backfilling		
	Retaining Wall F	RW11										
			1 10								Dealsfill	
	S1-5450	Backfilling	48	0	01DEC08 *	31JAN09					P Backfill	Ţ.
	S1-5463	U channel	24	0	02FEB09 *	28FEB09	Ц				I U char	nel
l l r	Retaining Wall F	RW12					1					
	S1-5500	Backfilling & Reinstatement of Carriageway	37	0	01AUG08 *	16SEP08	۱Ļ	Backfilling	& Reinstatement of	Carriageway		
	Roadworks						┢╋					
	Road work						11					
	S1-5843	HyD remedial works (kerb)	23	0	02JAN09 *	31JAN09					HyD re	medial wo
	S1-5844	Waterworks remedial works	20	0	02JAN09 *	24JAN09					l Waterw	orks reme
	S1-5846	Additional drainage works	223	0	02JUN08 *	28FEB09	Ę				Additio	nal draina
	S1-5847	Footpath and verge additional works	26	0	02MAR09*	31MAR09					IFootpa	ath and ve
	I	I	1				H					
	S1-5836	Utilities remedial works	113	0	16AUG08 *	31DEC08					Utilities	remedial v
	S1-5838	Additional street furniture	22	0	01APR09 *	30APR 09	11				Additi	onal stree
Zo	one F (CH. 4010	- 4686)					Π					
	Slope Works											
	S1-6111	9SE-D/C20 (Closure of existing TCR)	126	0	01APR08 *	30AUG08		9SE-D/C20 (Closure o	f existing TCR)			
	S1-6113	TCR/UF/C/12 (Closure of existing TCR)	25	0	01AUG08 *	30AUG08	ĻΪ	TCR/UF/C/12 (Closure				
	S1-6114	9SE-D/C35 (Closure of existing TCR)	40	0	02JAN09	20FEB09	Ш				95E-D	/C35 (Clos
₁	Retaining Wall F	RW14					1					
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Start Finisl		AUG12 Progress bar							Date 01AUG08	Revision C 3M update	Checked	Approved
Data	date 01A	APR08 Critical bar										
		vision 15	(Contrac	t No. HY/2	003/19						
	number 4A ct name R1					Chung Roa	d					
		Start milestone point 3M				9.08 to 30		1.08				
с	Primavera Systen	ns, Inc. • Finish milestone point					••					

	Act ID	Description	Orig Dur	% Comp	Early Start	Early Finish	SEP 01 08 15 22 2	2008 OCT 29 06 13 20	NOV 27 03 10 17 24	2009 20	10 2011 2
	S1-6231	Additional drainage works	35	0	21JUL08 *	30AUG08	Additional drainage wo			2009 20	10 2011 2
	S1-6232	Backfilling	25	0	01SEP08 *	30SEP08		Backfilling			
	Retaining Wall R	RW15									
										A statition	
	S1-6285	Additional base slab & wall (V.O.115)	22	0	02JAN09	30JAN09				Additio	nal base s
	Retaining Wall R	3W16									
	S1-6365	Proposed utilities installation	60	0	02JAN09	16MAR09				• Propos	sed utilities
	Retaining Wall R	W39									
	I			1	F					Ļ	
	S1-6530	Backfilling remedial works	50	0	01SEP08 *	31OCT08			Backfilling remedial wo	orks	
	Culvert at CH. 46	631									
	S1-6615	1050mm dia. pipeline under existing TCR	30	0	02JAN09	09FEB09				• 1050m	m dia. pipe
	Vater Works										
	·				•						
	S1-6618	Watermain water seepage around STR007	34	0	07JUL08 *	15AUG08	Watermain water seep	age around STR007			
	Drainage Works										
	S1-6750	Additional drainage works	64	0	07JUL08 *	20SEP08	Additio	onal drainage works			
	Roadworks										
	04.0700	11022 en anno 42 de consta	50		00 11 10 100 *	00411000	C I Itilitica romodial work	-			
	S1-6722	Utilities remedial works	58	0	23JUN08 *	30AUG08	• Utilities remedial works				
	S1-6723	Buttress wall near STR007	134	0	07APR08 *	16SEP08	Buttress v	vall near STR007			
	S1-6724	Additional footpath & verge	33	0	22SEP08 *	31OCT08			Additional footpath & v	1	
	S1-6725	Additional street furnitures	25	0	01NOV08 *	29NOV08				Additiona	al street fu
	Pump House for	Fire Hydrant @ CH. 4398									
	S1-6891	E&M works	126	0	01APR08 *	30AUG08	E&M works				
								Taating 9 aammini	oning		
	S1-6922	Testing & commisioning	25	0	01SEP08 *	30SEP08		Testing & commisi	oning		
Start of		UN04 Early bar						Date		Checked	Approved
Finish Data d		UG12 Progress bar						01AUG08	3M update		
Numb	er/Version Rev	ision 15		Contro	t No. HY/2	002/10					
	number 5A	Summary bar Summary point				Chung Roa	d				
Pioje	t name R15					9.08 to 30					
сF	rimavera System	is, Inc. 🔶 Finish milestone point		, i i ogia		5.00 10 30					

	Act ID	Description	Orig Dur	% Comp	Early Start	Early Finish	SEP 01 08 15 22	2008 OCT 29 06 13 20	NOV 27 03 10 17 24	2009 20	10 2011 2
	S1-6923	Fencing & ground level works	75	0	01SEP08 *	29NOV08					& ground I
	Transformer Ro	om at CH. 4660									
	S1-6903	Fencing & ground level works	151	0	02JUN08 *	29NOV08				Fencing	& ground I
Secti	on 1A				1						
Ma	aintenance Acce	ss Track									
	S1-1570	Landscape softworks Ch.0-260	422	0	01APR08 *	31AUG09					dscape so
					01741100	51A0 005					
20	ne A (CH. 1000	- 1903)									
ΙIΓ											
	S1-1550	Landscape softworks	422	0	01APR08 *	31AUG09				Lan	dscape so
Zo	ne B (CH. 1565	- 2130)			<u>I</u>						
	r	l	Г	1		(
IЦ	S1-2660	Landscape Softworks	422	0	01APR08 *	31AUG09				Lan	dscape Sc
	ne C (CH. 2130	- 2725)									
	andscaping										
	S1-3850	Landscape softworks	123	0	01APR09*	31AUG09				🗢 Lan	dscape so
	ne D (CH. 2725		l								
					-						
	S1-4600	Landscape Softworks	114	0	16APR09*	31AUG09				Lan	dscape Sc
Zo	ne E (CH. 3100	- 4010)	· · · · ·								
	S1-5915	Landscape Softworks	123	0	01APR09*	31AUG09					dscape So
			123	0	UTAFICUS	31A0 009					
	ne F (CH. 4010 andscaping	- 4080)									
l i f											
Start o		UN04 Early bar						Date		Checked	Approved
Finish Data d	late 01/	PR08 Critical bar						01AUG08	3M update		
	er/Version Rev number 6A	sision 15 Summary bar	(Contrac	t No. HY/2	003/19					
	t name R1	549 Summary point	Impro	vemer	nt to Tung (Chung Roa					
c F	rimavera Systen	Inc. Start milestone point Sinc. Finish milestone point	3M Rolling	Progra	amme 01.0	9.08 to 30	.11.08				

	Act ID	Description	Orig	% Comp	Early Start	Early Finish	SEP	2008 OCT	NOV		
	S1-6910	Landscape Softworks	Dur 123	Comp 0	01APR09 *	31AUG09	01 08 15 22 2	29 06 13 20	27 03 10 17 24	<u>. </u>	10 2011 2 dscape So
	Establishment w			Ĵ	0 // 1 / 100						
	S1-6920	Establishment Works for Section 1A(claim no.084)	710	0	01SEP09 *	31AUG11					
Sect	ion 2										
	one 1 (CH. 7013	- Outfall)									
	Roadworks										
	S2-1265	Additional toe wall & F/P near YWCA(Claim no141)	164	16	01MAR08 A	16SEP08	Additional	toe wall & F/P near	YWCA(Claim no141)		
	S2-1266	Additional works on footpath and verge	50	0	01AUG08 *	30SEP08	<u> </u>	Additional works or	n footpath and verge		
	S2-1280	CCTV and related slope	50	0	01AUG08 *	30SEP08		CCTV and related	slope		
	S2-1290	Street Furnitures & road marking (additional)	50	0	02OCT08 *	29NOV08				Street Fu	urnitures &
Zc	one 2 (CH. 6595	- 7013)									
	Roadworks										
	Road work										
	S2-2395	Additional works on footpath & Verge	64	0	16JUL08 A	30SEP08	[]	Additional works or	n footpath & Verge		
	S2-2400	Street Furnitures & Road Marking (Additional)	50	0	02OCT08 *	29NOV08				Street Fu	urnitures &
Zo	one 3 (CH. 6240	- 6595)									
	Roadworks										
	Road work S2-3736	Additional works on factmeth 8 yers a	50		01AUG08 *	30SEP08		Additional works or	footpath & vorgo		
	52-3736	Additional works on footpath & verge	50	0	UTAUG08	305EP08			riootpatri & verge	 	
	00.0740		1 50		0000 T 00 t	001101/00				Ctro at fu	raituraa 9
ΙLL	S2-3740	Street furnitures & Road Marking (Additional)	50	0	02OCT08 *	29NOV08				Street lu	rnitures &
	one 4 (CH. 5625	- 6240)									
	Roadworks Road work										
	S2-4904	Reinstatement around bridge structures	89	0	16JUL08 A	31OCT08			Reinstatement around	bridge str	ructures
	S2-4905		25	0	01NOV08	29NOV08					al works or
	32-4900	Additional works on footpath & verge	20	0	01110/000	29110 000					
	00.4040				00D E 0 00 ±	0485000				Ctroot F	
	S2-4910	Street Furnitures & Road Marking (Additional)	24	0	02DEC08 *	31DEC08				Street F	urnitures
Start of Finish		UN04 Early bar						Date 01AUG08	Revision C 3M update	Checked	Approved
Data o	date 01A	PR08 Critical bar									
	number 7A	ision 15 Summary bar	C	Contrac	t No. HY/2	003/19					
	ct name R15	49 Summary point	Impro	ov emer	nt to Tung (Chung Road	ł				
~ [Primavera System					9.08 to 30.					
U F	milavera System							1			

	Act ID	Description	Orig Dur	% Comp	Early Start	Early Finish	SEP 01 08 15 22 12	2008 OCT 29 06 13 20	NOV 27 03 10 17 24		010 2011 2
	Rockfall Protection	on System at CH.6100 (RPS7)									
	S2-4930	Delivery of material	183	0	01APR08 *	30SEP08		Delivery of material			
	S2-4940	Erect fence	39	0	02OCT08	17NOV08			Erect fe	nce	
	S2-4945	Maintenance stairway (Remedial Work)	36	0	18NOV08	31DEC08				Mainter	nance stair
Zc	ne 5 (CH. 4922 ·	5625)	-								
	Bridge STR09A										
	S2-5261	Remove dangerous boulder (SI-36) remaining works	37	0	03NOV08 *	15DEC08				⊃ Remove	e dangeroi
	Water Works			-							
	S2-5705	Construct Break Pressure Tank (E&M/finsih)	112	0	16AUG08 *	30DEC08				- Constru	uct Break F
	Roadworks										
	Road work		_	_							
	S2-5854	Reinstate't around bridge structures	89	0	16JUL08 A	31OCT08			Reinstate't around bri	dge struct	ures
	S2-5855	Additional works on footpath & verge	25	0	01NOV08	29NOV08				Addition	al works or
					I						
	S2-5860	Street Furnitures and Road Marking (Additional)	24	0	02DEC08	31DEC08				Street F	-urnitures
	ne 6 (CH. 4686 ·	4922)									
	Roadworks										
	Road work										
	S2-6709	Reinstaement around structures	100	0	16JUN08 A	15OCT08		Reinsta	ement around structures		
	S2-6710	Additional works on footpath & verge	39	0	16OCT08 *	29NOV08				Addition	al works or
				-							
	S2-6720	Street Furnitures & Raod Marking (Additional)	25	0	01DEC08 *	31DEC08				Street I	-urnitures
Sect	ion 2A		1								
	ne 1-6			_							
	_andscaping										
	S2-6730	Landscape Softworks	196	0	01APR08 A	31AUG09				Lan	dscape Sc
	S2-6735	Haul road reinstatement	73	0	01APR08 A	31MAR09				Haul r	oad reinst
				-							
Start of Finish		UN04 Early bar UG12 Progress bar						Date 01AUG08	Revision 3M update	Checked	Approved
Data		PROB Critical bar							Jim upuale		
Numb	er/Version Rev	sion 15 Critical bar Summary bar		Contrac	t No. HY/2	003/19					
	number 8A ct name R15					Chung Roa	d			ł	
i iojet	Aname R13					9.08 to 30					
сF	rimavera System	s, Inc. • Finish milestone point		, i i ogi							

	Act	Description	Orig	%	Early	Early		SEP			2008 OCT	1		NOV		
Es Es	ID tablishment w		Dur	Comp	Start	Finish	01	08 15	22	29 06	13 20	27	03 1	17	24 2009	2010 2011 2
	S2-6740	Establishment Works for Section 2A(claim no.084)	710	0	01SEP09 *	31AUG11									(Est
Section	n 3		_	_												
Fe	ature No. TCF	R/UF/C/15														
	S3-3000	Cut and Trim Slope Surface	7	0	02JAN09 *	12JAN09									l Cut	and Trim Slop
	S3-3010	300mm u channel at crest	10	0	14JAN09	31JAN09	_								I 300	mm u channe
	S3-3020	Slope Surface Protection	14	0	31JAN09	17FEB09									I Slo	pe Surface Pi
Fe	ature No. 13N	E-B/C65														
	S3-3030	Install soil nail (199 nos.)	28	0	31JAN09	05MAR09) Ins	tall soil nail (1
	S3-3040	Slope surface protection	14	0	05MAR09	21MAR09										pe surface pr
	ature No. 13N			Ŭ	00000 11000	2111/11/00	-									
	S3-3050	Install soil nail (127 nos.)	20	0	05MAR09	28MAR09									● Ins	stall soil nail (1
	S3-3060	Pull out tests (4 nos.)	8	0	28MAR09	08APR09									Ρι	ll out tests (4
	S3-3065	300mm u-channel at crest & toe	20	0	08APR09	07MAY09									• 30	0mm u-chanr
	S3-3070	Slope surface protection	14	0	07MAY09	23MAY09									١S	ope surface p
Fe	ature No. 13N	E-B/C63														
	S3-3080	Install soil roil (111 pop.)	10		07MAY09	30MAY09										stall soil nail (
		Install soil nail (111 nos.)	19	0												ull out test (5
	S3-3090	Pull out test (5 nos.)	8	0	30MAY09	09JUN09										
	S3-3100	300mm stepped & u-channel	20	0	09JUN09	03JUL09										00mm steppe
	S3-3110	Slope surface protection	14	0	03JUL09	20JUL09										Slope surface
	ature No. 13N	E-B/C62														
	S3-3120	Install soil nail (144 nos.)	22	0	03JUL09	29JUL09									- 1	nstall soil nail
	S3-3130	Pull out tests (5 nos.)	8	0	29JUL09	07AUG09									1	Pull out tests (
Start dat		UN04 Early bar	<u>I</u>	1	1						Date		Revi	sion	Checke	d Approved
Finish d Data dat	te 01A	AUG12 Progress bar PR08 Critical bar								01AUG	80	3M เ	ıpdate			
Number/ Page nu	umber 9A	Summary bar			t No. HY/2		_									
Project						Chung Roa 09.08 to 30.		08								
c Pri	mavera System	ns, Inc. • Finish milestone point 511	Connig	Frogra		53.00 10 30.		.00								

	Act	Description	Orig	%	Early	Early	_		SEP		-		2008 OCT		1		NOV			
	ID S3-3140	300mm stepped & u channel	20	Comp 0	Start 07AUG09	Finish 31AUG09	01	08	15	22	29	06		20 2'	7 03		17	24		010 2011 2 mm steppe
	S3-3150	Slope surface protection	14	0	31AUG09	16SEP09													1510	pe surface
	Feature No. 13N	IE-B/F64																		
	S3-3160	Recompact slope	14	0	31AUG09	16SEP09													I Re	compact sl
	S3-3170	Reconstruct 750mm stepped channel & stairway	20	0	16SEP09	10OCT09													l Re	construct 7
	S3-3180	300mm u channel	14	0	10OCT09	280CT09													130	0mm u cha
	Feature No. 13N	IE-B/C80																		
		1		1		1														
	S3-3190	Install soil nail (42 nos.)	12	0	10OCT09	24OCT09													l Ins	tall soil na
	S3-3200	Pull out test (1 nos.)	8	0	24OCT09	04NOV09													l Pu	III out test (
	S3-3210	300mm u channel	14	0	04NOV09	20NOV09													130	0mm u ch
	S3-3220	Slope surface protection	14	0	20NOV09	07DEC09													I SI	ope surfac
	Feature No. 13N	IE-B/C233																		
	S3-3230	Install soil nail (44 nos.)	12	0	20NOV09	04DEC09													Un	stall soil na
	S3-3240	Pull out tests (2 nos.)	8	0	04DEC09	14DEC09														ull out tests
	S3-3250	Reconstruct 300mm u channel	14	0	14DEC09	02JAN10													 I R	econstruct
	S3-3260	Slope surface protection	20	0	02JAN10	26JAN10														lope surfa
	Feature No. 13N						-													·
	S3-3270	Install soil nail (113 nos.)	20	0	02JAN10	26JAN10													l ir	nstall soil n
	S3-3280	Pull out tests (3 nos.)	8	0	26JAN10	04FEB10													١F	Pull out test
	S3-3290	300mm u channel	14	0	04FEB10	23FEB10													13	300mm u c
	S3-3300	Slope surface protection	20	0	23FEB10	18MAR10													13	Slope surfa
	Feature No. 13N	IE-B/FR68																		
	S3-3310	Demonstrating subble well	10	0	23FEB10	06MAR10														Remove ex
	53-3310	Remove existing rubble wall	10	0	ZOFEDIU	UDIVIAR IU													I	
Start	date 28.	JUN04 Early bar										0	ate			Revisi	on	C	hecked	Approved
	n date 30/	AUG12 Progress bar									01	1AUG0		3	3M upda					
Numl	er/Version Re	vision 15		Contrac	t No. HY/2	003/10														
	number 10/ ct name R1	549 Summary point				Chung Roa	Ь							$-\top$						
		Start milestone point)9.08 to 30		.08			-									
С	Primavera Syster	ns, Inc. \land Finish milestone point																		

	Act	Description	Orig	% Comm	Early	Early Finish		SEI				2008 OCT		1		OV			
	ID \$3-3320	Recompact slope	Dur 14	Comp 0	Start 06MAR10	Finish 23MAR10	01 08	1	5 22	29	06	13	20 27	03	10	17	24		10 2011 2 Lecompac
	S3-3330	300mm u channel at toe	14	0	23MAR10	12APR 10												<u>-</u> 3	00mm u q
	Feature No. 13N	IE-B/C115]														-		
	S3-3340	Install soil nail (136 nos.)	20	0	02JAN09	24JAN09											I	Install se	oil nail (13
	S3-3350	Pull out tests (5 nos.)	8	0	29JAN09	06FEB09												Pull out	tests (5 n
	S3-3360	300mm u channel at toe	14	0	07FEB09	23FEB09												I 300mm	u channe
	S3-3370	Slope surface protection	14	0	24FEB09	11MAR09												Slope s	surface pr
	Feature No. 13N	IE-B/C116		•															
	S3-3380	Install soil soil (75 pps)	14	0	02APR09	22APR 09												Linstall	soil nail (1
		Install soil nail (75 nos.)																	ut tests (4
	S3-3390	Pull out tests (4 nos.)	8	0	23APR09	04MAY09													
	S3-3400	300mm u channel at toe	14	0	05MAY09	20MAY09													m u chanı ,
	S3-3410	Slope surface protection	20	0	21MAY09	13JUN09												I Slope	surface p
	Feature No. TC	R/UF/F/22																	
	S3-3420	Recompact slope	20	0	21MAY09	13JUN09												Recor	mpact slo
	S3-3430	300mm stepped & u channel at crest & toe	20	0	15JUN09	08JUL09												I 300m	nm steppe
	Feature No. 13N	IE-B/FR90	1																
						04 11 11 00												I Dees	
	S3-3440	Recompact slope	20	0	09JUL09	31JUL09													mpact slc
	S3-3450	300mm stepped & u channel at crest & toe	20	0	01AUG09	24AUG09												J 300h	nm steppe
	Feature No. 13N	IE-B/C117																	
	S3-3460	Install soil nail (33 nos.)	10	0	25AUG09	04SEP09												Insta	all soil nail
	S3-3470	Pull out tests (2 nos.)	8	0	05SEP09	14SEP09												I Pull	out tests
	S3-3480	300mm u channel	14	0	15SEP09	30SEP09												I 300	mm u cha
	S3-3490	Slope surface protection	20	0	02OCT09	24OCT09												I Sloj	pe surface
	Feature No. 13N	IE-B/C244																	
Start Finis		UUN04 Early bar								0	D 1AUG0	Date 8	3	Mupda	Revisio te	on	Ch	necked /	Approved
Data	date 01A	AUG12 Progress bar APR08 Critical bar										-							
Page	number 11/	Summary bar			t No. HY/2		J												
	ct name R1	Start milestone point 3M				Chung Road 9.08 to 30.													
С	Primavera Systen	ns, Inc. • Finish milestone point		,															

	Act ID	Description	Orig Dur	% Comp	Early Start	Early Finish	S 01 08	EP 15 22	29 06	2008 OCT 13 20	27	NC 03 10	DV 17 24	2009 2010	2011 2
		A					1 1 1 2								
	S3-3500	Install soil nail (89 nos.)	17	0	02OCT09	21OCT09								I Install	soil na
	S3-3510	Pull out tests (3 nos.)	8	0	22OCT09	31OCT09								Pull o	ut tests
	S3-3520	300mm stepped & u channel at crest	20	0	02NOV09	24NOV09								• 300m	m step
	S3-3530	Slope surface protection	20	0	25NOV09	17DEC09								I Slope	e surfac
	eature No. 13N	IE-B/FR85													
	00.0540	Denver of discourse in the	-		051101/00	0005000								Bomo	ove exis
	S3-3540	Remove existing concrete wall	7	0	25NOV09	02DEC09									
	S3-3550	Recompact slope	20	0	03DEC09	28DEC09								• Reco	ompact
	S3-3560	300mm stepped & u channel at toe	20	0	29DEC09	21JAN10								I 300n	nm ster
	eature No. 13 I	NE-B/C114													
	S3-3570	Install soil nail (136 nos.)	20	0	22JAN10	13FEB10								I Insta	all soil r
	S3-3580	Pull out tests (4 nos.)	8	0	17FEB10	25FEB10								I Pull	out tes
	S3-3590	Slope surface protection	20	0	26FEB10	20MAR10				I Slop	pe surfa				
	eature No. 13N	IE-B/C113	1												
	I	1		1											
	S3-3600	Install soil nail (29 nos.)	11	0	26FEB10	10MAR10								Insta	all soil r
	S3-3610	Pull out tests (2 nos.)	8	0	11MAR10	19MAR10								l Pull	l out tes
	S3-3620	Reconstruct 300mm u channel	14	0	20MAR10	08APR10								IRec	construe
	S3-3630	Slope surface protection	20	0	09APR10	03MAY10								I Slo	pe surf
	eature No. TC	R/UF/C/27													
	S3-3640	Install soil nail (55 nos.)	12	0	09APR10	22APR 10								Lins	tall soil
	S3-3650	Pull out tests (2 nos.)	8	0	23APR10	03MAY10									ll out tes
	S3-3660	Slope surface protection	20	0	04MAY10	27MAY10									ope sur
	Feature No. 13N														
	S3-3670	Install soil nail (16 nos.)	10	0	24FEB09	06MAR09								I Install soi	l nail (1
Start of Finish		AUG12 Progress bar					-		01AUG	Date	3M up	Revision	n	Checked Ap	proved
Data o	date 01/	APR08							UTAUG(Siviu				
	er/Version Ren number 12/	A Summary bar			t No. HY/2										
		549 Summary point				Chung Roa									
C F	Primavera System		Rolling	J Progra	amme 01.0	9.08 to 30	11.08								

S3-3690 300mm u channel at toe 14 0 17MAR09 01APR09 S3-3700 Slope surface protection 20 0 02APR09 29APR09 1300mm Utilities	test (1 n		
Source Contraction Contraction Contraction Contraction Contraction Contraction Particle Particl	urface p		
Utilities S3-3800 Utilities installation 540 0 22JAN10 31JUL11 Section 3A			
S3-3800 Utilities installation 540 0 22JAN10 31JUL11 Image: Constraint of the section of the section of the section of Works 540 0 22JAN10 31JUL11 Image: Constraint of the section of Works Image: Constraint of the section of the section of Works Image: Constraint of the section of the section of Works Image: Constraint of the section of the sect	— Util		
Section 3A Landscaping S3-3805 Landscape softworks 124 0 01APR10* 31AUG10 Establishment works 124 0 01APR10* 31AUG10 S3-3810 Establishment Works for Section 3A(claim no.084) 719 0 01SEP10* 30AUG12 Undefined Section of Works Zone B (CH. 1565 - 2130) Establishment Works for Section 3A(claim no.084) 719 0 01SEP10* 30AUG12	— Util		
Section 3A Landscaping S3-3805 Landscape softworks 124 0 01APR 10 * S3-3805 Landscape softworks 124 0 01APR 10 * S3-3805 Landscape softworks 124 0 S3-3805 Landscape softworks 124 0 S3-3810 Establishment Works for Section 3A(claim no.084) 719 0 Undefined Section of Works Zone B (CH. 1565 - 2130) Image: Content of Works			
Landscaping S3-3805 Landscape softworks 124 0 01APR10* 31AUG10 Stablishment works 124 0 01APR10* 31AUG10 Image: Constraint of the section of the section of Works for Section 3A(claim no.084) 719 0 01SEP10* 30AUG12 Undefined Section of Works Zone B (CH. 1565 - 2130) Image: Constraint of the section of Works Image: Constraint of the section of Works Image: Constraint of the section of Works			
S3-3805 Landscape softworks 124 0 01APR10* 31AUG10 Image: Constraint of the section of the section of Works for Section 3A(claim no.084) 719 0 01SEP10* 30AUG12 Undefined Section of Works Zone B (CH. 1565 - 2130) Image: Constraint of the section of Works Image: Constraint of the section of			
Establishment works S3-3810 Establishment Works for Section 3A(claim no.084) 719 0 01SEP10 * 30AUG12 Undefined Section of Works Zone B (CH. 1565 - 2130) Vertice Vertice Vertice			
S3-3810 Establishment Works for Section 3A(claim no.084) 719 0 01SEP10* 30AUG12 Undefined Section of Works Zone B (CH. 1565 - 2130) Vertice Vertice Vertice	Landsca		
Undefined Section of Works Zone B (CH. 1565 - 2130)			
Undefined Section of Works Zone B (CH. 1565 - 2130)			
Zone B (CH. 1565 - 2130)			
Straining & Deflection Structure SD 2-5			
S1-2402 Claim 91 183 0 01APR08 A 30SEP08 Claim 91			
S1-2420 Superstructure 75 0 02OCT08 31DEC08 Superstructure Superstructure	cture		
Straining & Deflection Structure SD 3-6			
S1-2450 Claim 91 183 0 01APR08 A 30SEP08 Claim 91			
S1-2460 Superstructure 25 0 020CT08 310CT08 Superstructure			
Straining & Deflection Structure SD 4-7			
S1-2492 Claim 91 183 0 01APR08 A 30SEP08 Claim 91			
S1-2500 Superstructure 75 0 02OCT08 31DEC08	cture		
Flexible Debris Barrier at CH. 1700 (OFB1)			
S1-2580 Boulder mitigation stream 5-6 25 0 02FEB09 * 02MAR09	mitigatio		
Start date 28JUN04 Early bar Finish date 30AUG12 Progress bar	pproved		
Data date 01APR08 Critical bar			
Page number 13A Contract No. H1/2003/19			
Project name R1549 Summary point Improvement to Tung Chung Road Start milestone point Sinsh milestone point 3M Rolling Programme 01.09.08 to 30.11.08			

	Act ID	Description	Orig Dur	% Comp	Early Start	Early Finish	SEP 01 08 15 22 29	2008 OCT 06 13 20	NOV 27 03 10 17 24		10 2011 2
Π	Flexible Debris E	Barrier at CH. 1800 (OFB2)									
н			1	1							
	S1-2631	Remaining Post (affected by SD4-7)	8	0	02JAN09	10JAN09					ning Post (
н.	S1-2641	Remaining Barrier	8	0	12JAN09	20JAN09				Remain	ning Barrie
н	S1-2651	Maintenance Stairway (Remaining)	10	0	21JAN09	04FEB09				I Mainte	nance Sta
Z	one C (CH. 2130	- 2725)									
	Permanent Soil N	lails									
H.	S1-3785	Remaining Soil nails at RW006	60	0	01SEP08	12NOV08			Remaining S	oil nails a	t R\W006
		ection Structure SD 5-11	00	0	0132500	12110/00					
H.		scion Structure SD 5-11									
H.	S1-3708	Claim 91	183	0	01APR08 A	30SEP08	Cli	laim 91			
H.	S1-3710	Superstructure	50	0	02OCT08	29NOV08				Superstr	ucture
H.		Barrier at CH. 2700 (OFB3)								<u> </u>	
H.											
	S1-3770	Barrier Installation	51	0	02JUN08 A	31JUL08	Barrier Installation				
H.	S1-3780	Maintenance Stairway (Remedial Work)	25	0	01AUG08	30AUG08	Maintenance Stairway (Re	emedial Work)			
Z	one D (CH. 2725	- 3100)	1								
	Straining & Defle	ection Structure SD 6-12									
H.	S1-4462	Claim 91	400		01APR08 A	30SEP08		laim 91			
11			183	0							
н.		Superstructure	50	0	02OCT08	29NOV08				Superstr	Jcture
11	Straining & Defle	ection Structure SD 7-13									
H.	S1-4502	Claim 91	183	0	01APR08 A	30SEP08		laim 91			
H.	S1-4510	Superstructure (Outstanding Works)	50	0	02OCT08	29NOV08				Superstr	ucture (Ou
H.										I	er mitigatio
11		Boulder mitigation	96	0	01DEC08	28MAR09				Boulde	i mugauc
H.	Flexible Debris E	Barrier at CH. 2800 (OFB4)									
11	S1-4560	Delivery of material (lost during heavy rain)	101	0	01JUL08 A	31JUL08	Delivery of material (lost du	uring heavy rain)			
										<u> </u>	
		UN04 Early bar UG12 Brogress bar					01	Date 1AUG08	Revision C 3M update	Checked	Approved
Data	date 01A	PR08 Critical bar									
	ber/Version Rev e number 14A	Summary bar			t No. HY/2						
	ect name R15				nt to Tung (
С	Primavera System		Rolling	Progra	amme 01.0	9.08 10 30	.II.Uŏ				

	Act ID	Description	Orig Dur	% Comp	Early Start	Early Finish	SEP OO 01 08 15 22 29 06 13	CT NOV	2000 20	010 2011 2			
	S1-4580	Barrier Installation (outatanding part)	25	0	01AUG08	30AUG08	Barrier Installation (outatanding par		2009 20	10 2011 2			
	S1-4590	Maintenance Stairway (Remedial Works)	25	0	01SEP08	30SEP08	Maintenanc	e Stairway (Remedial Works)					
	ne E (CH. 3100												
	Straining & Defle	ection Structure SD 10-19											
	S1-5902	Claim 91	183	0	01APR08 A	30SEP08	Claim 91						
	S1-5905	005 Superstructure			02OCT08	29NOV08			Superstr	ucture			
Zc	ne F (CH. 4010	- 4686)	<u> </u>										
	Permanent Soil N	lails											
	S1-6625	Soil Nail at RW038	93	0	04MAY09	21AUG09			Soil	Nail at RV			
	Flexible Debris E	Barrier at CH. 4600 (OFB5)											
	· · · · · · · · · · · · · · · · · · ·		1	1									
	S1-6870	Erect fence (outstanding part)	51	0	02JUL08 A	01SEP08	Erect fence (outstanding part)						
	S1-6880	Maintenance access path (Remedial Works)	23	0	02SEP08	30SEP08	Maintenanc	e access path (Remedial Works)					
	Rockfall Protection	on System at CH. 4400 (RPS2)											
	04.0000	Food Food	24	0	0405000	0005000	Erect Fence	х.					
	S1-6886				01SEP08	30SEP08			(Demedic) Martes				
ΙЦ	S1-6887 Maintenance Stairway (Remedial Works)			0	02OCT08	31OCT08		Maintenance Stairway	(Remedia	al Works)			
- I	ne 5 (CH. 4922 -	- 5625) ection Structure SD 12-30											
		scion Structure SD 12-30											
	S2-5870	Claim 91	151	0	01APR08 A	30SEP08	Claim 91						
	S2-5875	Soil Nail	25	0	02OCT08	31OCT08		Contraction Soil Nail					
	S2-5880	Superstructure	50	0	01NOV08	31DEC08			Supers	tructure			
	Rockfall Protection	on System at CH. 5320 (RPS3)											
	S2-5900	Delivery of material (lost after heavy rain)	183	0	16JUL08 A	30SEP08	Delivery of	material (lost after heavy rain)					
	S2-5910	Erect fence	50	0	02OCT08	29NOV08			Erect fer	nce			
	S2-5915	Maintenance stairway (Remedial Works)	25	0	01DEC08	31DEC08			Maintenance stair				
Start of	Jate 28J	UN04 Early bar	•				Date	Revision	Checked	Approved			
Finish Data d	date 30A	UG12 Progress bar					01AUG08	3M update					
Numb	er/Version Rev	ision 15		Contrac	t No. HY/2	003/10							
	number 15A ct name R15	49 Ummary point				Chung Roa	я — — — н						
	Primavera System	Start milestone point 3M				9.08 to 30							

		Act	Description	Orig	%	Early	Early			SEP				2008 OCT				NC	V		
		ID	^	Dur	Comp	Start	Finish	0	1 08	15	22	29	06	13	20	27	03	10	17	24	2009 2010 2011 2
La	Inds	cape Works in	Undefined Section																		1
																					1
		S2-8000	Landscape Softworks in Undefined Section	145	0	01APR09 *	31AUG09														Landscape Sc
		S2-8010	Establishment Works for Undefined Section	710	0	01SEP09 *	31AUG11														Est

Start date	28JUN04	Early bar		Date	Revision	Checked	Approved
Finish date	00011040	Progress bar		01AUG08	3M update		
Data date	01APR08	Critical bar					
Number/Version	Revision 15		Contract No. HY/2003/19				
Page number	16A	Summary bar					
Project name	R1549	Summary point	Improvement to Tung Chung Road				
		 Start milestone point 	3M Rolling Programme 01.09.08 to 30.11.08				
c Primavera Systems, Inc.		Finish milestone point					

APPENDIX O WASTE GENERATED QUANTITY

Name of Department: Highways Department Project Commencement Date: June 2004 Construction Completion Date: December 2009 Approved Project Cost: \$688.5 Million

	Summary			Ior rear 2		1											
Year	Ac	ctual Quantities	s of inert C&D	Materials (in 10	³ m ³)	Actual Quantities of C&D Wastes (in 10 ³ Kg)											
	Total Quantity Generated	Broken Concrete ⁽¹	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	М	Metals		Paper/cardboard packaging		tic ⁽²⁾	Chemical Waste	Site clearance waste ⁽³⁾	Others, e.g. g (in 10	eneral refuse $(^{3} m^{3})$		
	(a)	(b)	(c)	(d)	(e)	Disposal	Recycle	Disposal	Recycle	Disposal	Recycle	Disposal	Disposal	Disposal	Timber Waste		
Jan	4.937	0	14.520	0.540	1.397	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	73.61	1.5	0		
Feb	4.135	0	8.746	3.540	1.496	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	34.21	1.5	0		
Mar	4.954	0	9.978	3.560	2.975	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	173.27	2.0	0		
Apr	2.976	0	9.010	0	0.911	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	84.83	2.2	0		
May	3.513	0	10.156	0	1.555	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	101.24	1.3	0		
Jun	5.882	0	11.020	0	8.588	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	52.51	1.7	0		
Sub-Total	26.397	0	63.430	7.640	16.922	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	519.67	10.2	0		
July	3.458	0	10.240	0	1.287	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	85.11	1.140	0.060		
Aug	3.627	0	11.144	0	0.946	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	91.00	1.710	0.090		
Sept	4.350	0	13.336	0	1.165	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	54.58	1.615	0.085		
Oct	4.122	0	12.242	0	1.497	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	72.81	1.710	0.090		
Nov	3.116	0	8.747	0	1.640	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	180.53	1.995	0.105		
Dec	3.392	0	10.234	0	1.072	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	63.99	2.090	0.110		
Total	48.462	0	129.373	7.640	24.529	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	1003.70	16.260	0.540		

Monthly Summary Waste Flow Table for Year 2007

Note: * Very small quantity of aluminum can, cardboard package and plastic bottle generated from site office were collected by the local resident.

(1) Broken concrete for recycling into aggregates

(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from package material.

(3) Site clearance waste refers to vegetation and construction debris.

(4) Please note that the total quality generated is not equivalent to the summation of the items in column (b) to (e) as part of the quality of the reused material (column c) had been counted already.

Others, e.g. general refuse

 $(in 10^3 m^3)$

Disposal

1.235

1.425

1.520

1.900

1.752

1.895

9.727

2.036

2.189

2.078

16.03

Timber

Waste

0.065

0.075

0.080

0.100

0.095

0.124

0.539

0.098

0.127

0.213

0.97

Name of Department: Highways Department **Project Commencement Date: June 2004 Construction Completion Date: December 2009 Approved Project Cost: \$688.5 Million**

Year Actual Quantities of inert C&D Materials (in 10^3 m^3) Actual Quantities of C&D Wastes (in 10^3 Kg) Broken Total Reused in Reused in Site Disposed as Paper/cardboard Chemical Plastic⁽²⁾ Concrete⁽¹ Metals Quantity the other clearance Public Fill packaging Waste waste⁽³⁾ Generated Contract Projects (a) (b) (c) (d) (e) Disposal Recycle Disposal Recycle Disposal Disposal Disposal Recvcle N/A* N/A* N/A* N/A* N/A* Jan 1.230 0 1.128 0 0.102 N/A* 0 73.61 N/A* N/A* N/A* N/A* N/A* N/A* 0 Feb 1.875 0 0.762 0 1.113 34.21 Mar 1.064 0 0.858 0 0.206 N/A* N/A* N/A* N/A* N/A* N/A* 0 56.82 N/A* N/A* Apr 0.994 0 0.765 0 0.229 N/A* N/A* N/A* N/A* 0 84.54 N/A* N/A* N/A* N/A* N/A* May 1.335 0 1.020 0 0.315 N/A* 0 78.21 N/A* Jun 0.755 0 0.467 0 0.288 N/A* N/A* N/A* N/A* N/A* 0 86.76 Sub-Total 7.253 0 4.997 0 2.253 N/A* N/A* N/A* N/A* N/A* N/A* 0 414.15 July 0.953 0 0.685 0 0.268 N/A* N/A* N/A* N/A* N/A* N/A* 0 96.88 2.875 0 5.978 0 N/A* N/A* N/A* N/A* N/A* N/A* 0 89.33 Aug 0.758 Sept 1.954 0 0 0.985 N/A* N/A* N/A* N/A* N/A* N/A* 0 1.628 85.66 Oct Nov Dec

N/A*

Monthly Summary Waste Flow Table for Year 2008

* Very small quantity of aluminum can, cardboard package and plastic bottle generated from site office were collected by the local resident. Note:

4.25

(1) Broken concrete for recycling into aggregates

0

Total

13.03

(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from package material.

0

(3) Site clearance waste refers to vegetation and construction debris.

13.28

(4) Please note that the total quality generated is not equivalent to the summation of the items in column (b) to (e) as part of the quality of the reused material (column c) had been counted already.

N/A*

N/A*

N/A*

N/A*

0

686.02

N/A*