-CCECC & CRWJ Joint Venture

Contract No. HY/2003/19

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

Monthly EM&A Report (Version 3.0)

August 2009

Certified By

(Environmental Team Leader)

REMARKS:

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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CINOTECH CONSULTANTS LTD
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong
Tel: (852) 2151 2083
Fax: (852) 3107 1388
Email: info@cinotech.com.hk

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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 58th 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 August 2009.

2. The construction activities undertaken in the reporting month included:
   - Landscaping works;
   - Street furniture installation; and
   - Reinstatement works of the footpath.

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.

Table I Summary Table for Exceedance Recorded in the Reporting Month

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

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. 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. No water monitoring was conducted at the streams which were observed dry in the reporting month. 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 reporting month. No direct evidence demonstrated that the exceedances were caused by the Project.

Environmental Licensing and Permitting

9. 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).

Key Information in the Reporting Month

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

Table II Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	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.	---

Complaints and Prosecutions

11. No environmental complaint was received in the reporting month.

12. No warning and summons or notification of successful prosecution was received in the reporting month.

Future Key Issues

13. All civil works for this project have been substantially completed by the Contractor and the proposal for cessation of construction phase EM&A program has been submitted to EPD.
    No key issue was identified for the coming month.

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 58th monthly EM&A report summarizing the EM&A works for the Project in August 2009.

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

- Street furniture installation at Zone A to Zone F;
- Reinstatement work of the footpath.

Southern Section

- Slope reinstatement works from STR010 to STR013.

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.

Table 2.1 Locations for Air Quality Monitoring

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

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

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 m^3/min. and 1.4 m^3/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 L_{10} and L_{90} 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.

Table 3.1 Noise Monitoring Stations

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 3.2 Noise Monitoring Equipment

Equipment	Model and Make	Quantity
Integrating Sound Level Meter	B&K Model 2238	4
Calibrator	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	L_{10}(30 min.)dB(A) L_{90}(30 min.)dB(A) L_{eq}(30 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 6 working days	Façade(1)
NM2				Façade(1)
NM3				Façade(1)
NM4				Façade(1)
NM5				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 : A
- time weighting : Fast
- time measurement : 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 re-calibration 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 at the seven designated stations NM1, NM2, NM3, NM4, NM5, NM6 and NM8, in this reporting month.

3.9 Noise monitoring results and graphical presentations are shown in Appendix E.

3.10 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 Frequency and Parameters of Water Quality Monitoring

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.

Table 4.3 Water Quality Monitoring Locations

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

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. No water monitoring was conducted at the streams which were observed dry in the reporting month.

4.11 During monitoring, the weather conditions were generally 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.

Table 4.4 Summary of Water Quality Exceedances in the reporting month

Station No.	DO		pH	Turbidity		SS	
	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	13	0
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	0	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	0	0

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:

- ✧ No construction activity was observed in the vicinity of the sampling locations.
- ✧ 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 6th, 12th, 20th and 27th August 2009 in the reporting month. IEC site inspection was conducted on 12th August 2009. 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

Permit No.	Valid Period		Details	Status
	From	To		
Environmental Permit (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 Chemical Waste 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 License				
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

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 August 2009 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.

Table 5.2 Observations and Recommendations of Site Inspections

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	06/08/09	Soil erosion was observed at **STR 17, 18** and **near Stream 35** above the catchwater. The Contractor was reminded to provide mitigation measures to protect the slope. (In – progress).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at **Shan Shek Wan.**	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in the culvert and U-channel along **Tung Chung Road** (**Southern** and **Northern Sections**) especially at **STR17**, **Shan Shek Wan**, **CH7000**, near **Stream 20**, **Pak Kung Au**, **SD7-13**, **SD6-12**, **SD5-11, SD4-7**, underneath **STR7**and **Stream21**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at **SD4-7**and **SD5-11** after the works.	The situation was observed improved/rectified in audit session 90812.
	06/08/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at **Site Office**, **SD6-12 and SD5-11.** (In progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at **Shan Shek Wan**.(In progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	Soil erosion was observed at **STR 17, 18** and **near Stream 35 and 17** above the catchwater. The Contractor was reminded to provide mitigation measures to protect the slope. (In – progress).	The situation was observed improved/rectified in audit session 90820.
	12/08/09	Silty water was observed at catchwater.	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at **Shan Shek Wan.**	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in the culvert and U-channel along **Tung Chung Road** (**Southern** and **Northern Sections**) especially at **STR17**, **Shan Shek Wan**, **CH7000**, near **Stream 20**, **Pak Kung Au**, **SD7-13**, **SD6-12**, **SD5-11, SD4-7**, underneath **STR7**and **Stream21**.	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at **SD5-11** after the works.	The situation was observed improved/rectified in audit session 90820.

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	12/08/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at **Site Office**, **SD6-12 and SD5-11.**	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at **Shan Shek Wan**.(In progress)	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Reinstate the exposed slope at the **Catchwater** as soon as possible.	The situation was observed improved/rectified in audit session 90820.
	20/08/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at **Shan Shek Wan.**	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	20/08/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in especially culverts at **Stream 20, 21**, **SD7-13**, **SD6-12**, **SD5-11, SD4-7** and **CH7000**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/08/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at **Shan Shek Wan.**	Follow-up action will be maintained by the contractor.
	27/08/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in especially culverts at **Stream 20, 21**, **SD7-13**, **SD6-12**, **SD5-11, SD4-7** and **CH7000**.	Follow-up action will be maintained by the contractor.
Air Quality	06/08/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along **Tung Chung Road** (**Southern and Northern Section**) especially after the rainstorm.(In-progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along **Tung Chung Road** (**Southern and Northern Section**) especially after the rainstorm.	The situation was observed improved/rectified in audit session 90820.
Waste / Chemical Management	06/08/09	Empty oil containers were observed at **SD4-7**. The Contractor was reminded to dispose them as chemical waste.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	Discarded hose were observed at **Shan Shek Wan** and **STR 19**. The Contractor was reminded to clear them.	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
Waste / Chemical Management	06/08/09	The Contractor was reminded of the followings: - Clear the discarded "protection material for hydroseed" that was hanging on the trees along **Southern Section** of **Tung Chung Road** and **Stream 21**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at **near SD6-12, SD5-11, SD4-7 and Stream 20.**	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at **Shan Shek Wan**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	06/08/09	The Contractor was reminded of the followings: - Clear the cement bag at **SD4-7**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	Empty oil containers were observed at **SD4-7**. The Contractor was reminded to dispose them as chemical waste.	The situation was observed improved/rectified in audit session 90820.
	12/08/09	Discarded hose were observed at **Shan Shek Wan** and **STR 19**. The Contractor was reminded to clear them.	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at **Shan Shek Wan.**	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	The Contractor was reminded of the followings: - Clear the discarded "protection material for hydroseed" that was hanging on the trees along **Southern Section** of **Tung Chung Road**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at **near SD6-12, SD5-11, SD4-7 and Stream 20.**	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at **Shan Shek Wan**.	The situation was observed improved/rectified in audit session 90820.
	12/08/09	The Contractor was reminded of the followings: - Clear the cement bag at **SD4-7**	The situation was observed improved/rectified in audit session 90820.
	20/08/09	Discarded hose were observed at **Shan Shek Wan**. The Contractor was reminded to clear them.	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
Waste / Chemical Management	20/08/09	The Contractor was reminded of the followings: - Clear the discarded "protection material for hydroseed" that was hanging on the trees along **Southern Section** of **Tung Chung Road**.	The situation was observed improved/rectified in audit session 90827.
	27/08/09	Discarded hose were observed at **Shan Shek Wan**. The Contractor was reminded to clear them.	Follow-up action will be maintained by the contractor.
	27/08/09	The Contractor was reminded of the followings: - Oil container was observed at **Shan Shek Wan**. The Contractor was reminded to remove it.	Follow-up action will be maintained by the contractor.
Ecology	06/08/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at **Stream 21**, **22**, **27**, **30, 34 and 36-38**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	12/08/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at **Stream 21**, **22**, **27**, **30, 34 and 36-38**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	20/08/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at **Stream 21**, **22**, **27**, **30, 34 and 36-38**.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/08/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at **Stream 21**, **22**, **27**, **30, 34 and 36-38**.	Follow-up action will be maintained by the contractor.
General	06/08/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road at **site office** to prevent any mud from carrying to the public road.	The situation was observed improved/rectified in audit session 90812.

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) Properly cover/compact the exposed area at SD4-7and SD5-11 after the works.
(2) Prevention of Soil erosion at STR 17, 18 and near Stream 35 and 17 above the

catchwater.

(3) The construction waste, silt, debris and sediment in the culvert and U-channel along Tung Chung Road (Southern and Northern Sections) especially at STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7, underneath STR7and Stream21 were cleared.

(4) Avoidance of the present of standing water at the wheel washing bay (abandoned) at Site Office, SD6-12 and SD5-11.

(5) Use of mosquito larvicide for the stagnant water at Shan Shek Wan.

Air Quality

(1) Properly maintenance of hydroseeded slopes along Tung Chung Road (Southern and Northern Section).

Waste/Chemical Management

(1) Cleared cement bag's at underneath at SD4-7.

(2) Proper disposal of empty oil containers and discarded hose at SD4-7, Shan Shek Wan and STR 19

(3) C&D wastes were kept clear and sorted near SD6-12, SD5-11, SD4-7 and Stream 20.and at Shan Shek Wan.

(4) Clear the discarded "protection material for hydroseed" that was hanging on the trees along Southern Section of Tung Chung Road

General

(1) Provide mitigation measures at between the outstanding construction area and paved road at site office to prevent any mud from carrying to the public road.

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:

- ✧ No construction activity was observed in the vicinity of the sampling locations.

- ✧ 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 summons or notification of successful prosecution was received in the reporting month.

5.21 There were a total of 55 environmental complaints, 13 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:

All civil works for this project have been substantially completed by The Contractor and the proposal for cessation of construction phase EM&A program has been submitted to EPD.
No key issue was identified for the coming month.

Monitoring Schedule for the Next Month

6.2 No tentative monitoring schedule for the next month.

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

6.3 Construction activities were will be undertaken in the coming month:

- Landscaping works;
- Street furniture installation; and
- Reinstatement works of the footpath

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 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 summons 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 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 ensure compliance of CNP conditions during restricted-hour works.
- To space out noisy equipment and position as far away as possible from sensitive receivers.

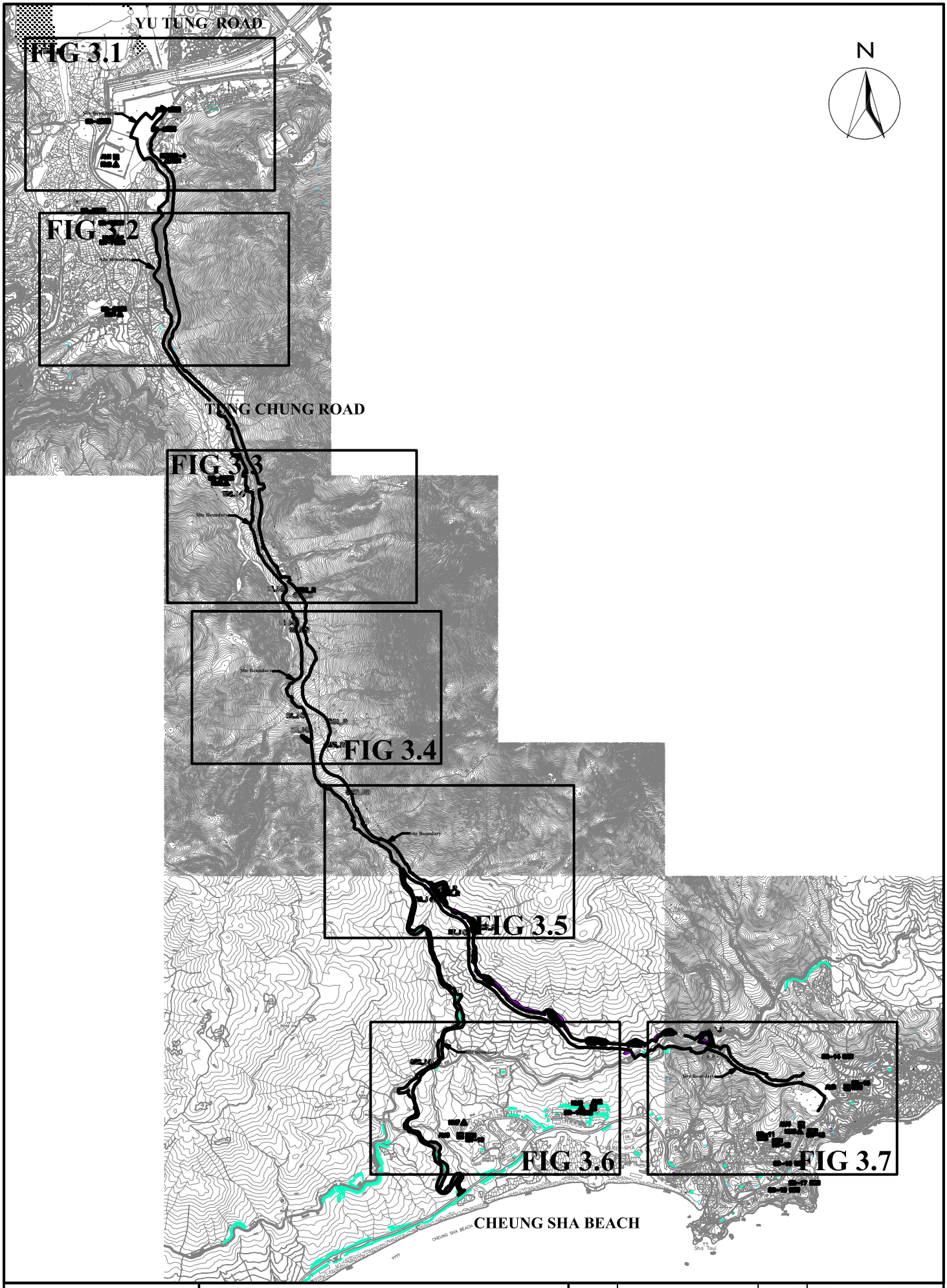
Water Quality Impact

- To prevent any surface runoff discharge into any stream course.
- To avoid accumulation of stagnant and ponding water on site.
- To review the capacity of de-silting facilities for discharge.

Waste / Chemical Management

- To remove ponding water regularly in drip trays on site.
- To ensure proper collection and disposal of rubbish generated on site.
- To avoid storage of construction materials at any stream.
- To check for any accumulation of waste materials or rubbish on site.
- To sort and segregate C&D materials in designated areas properly.

FIGURES



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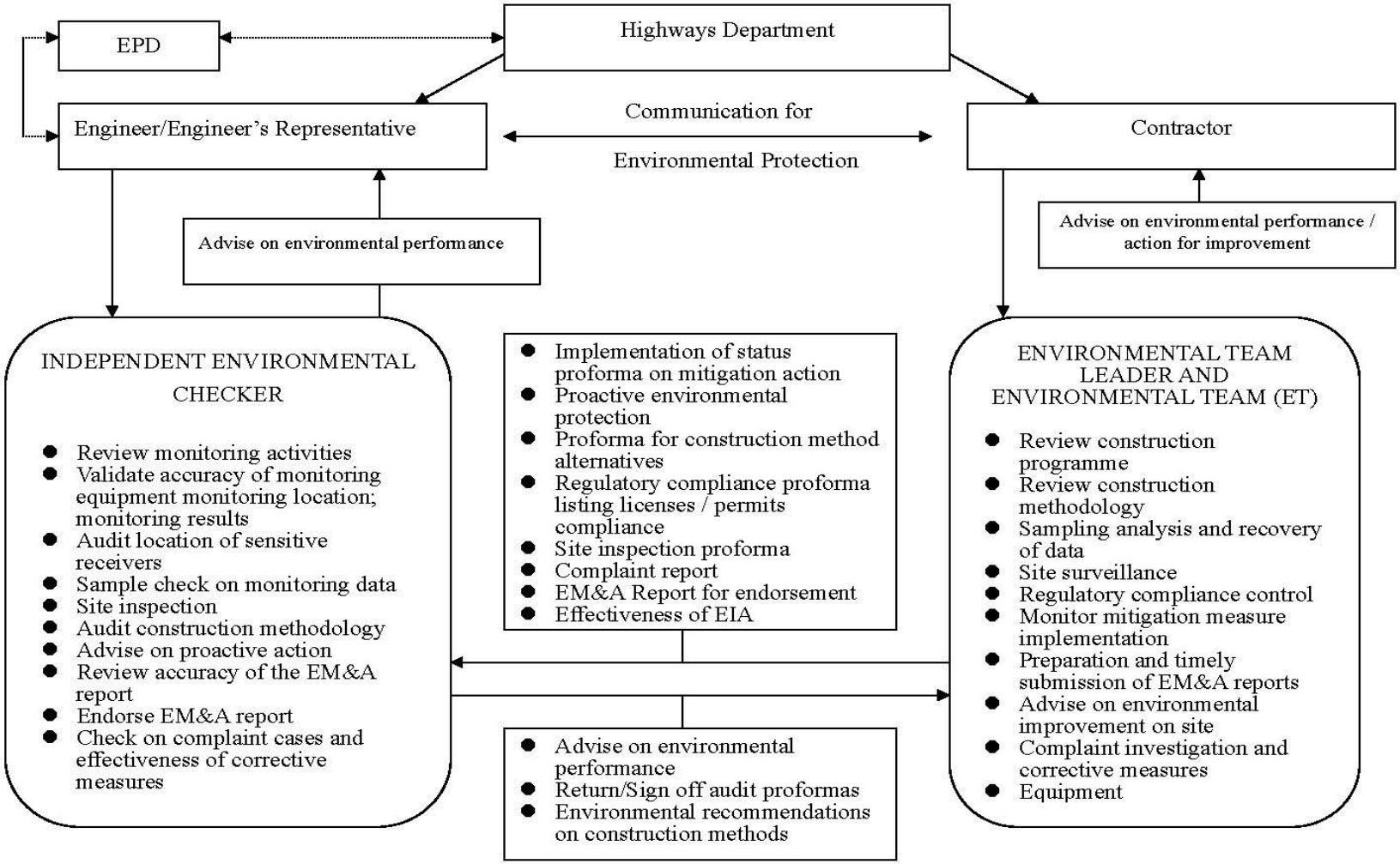
	SITE LOCATION PLAN	JOB No.	MA6030	DRAWING No.	FIG 1
				REV	—

PATH:\



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

Organization Chart

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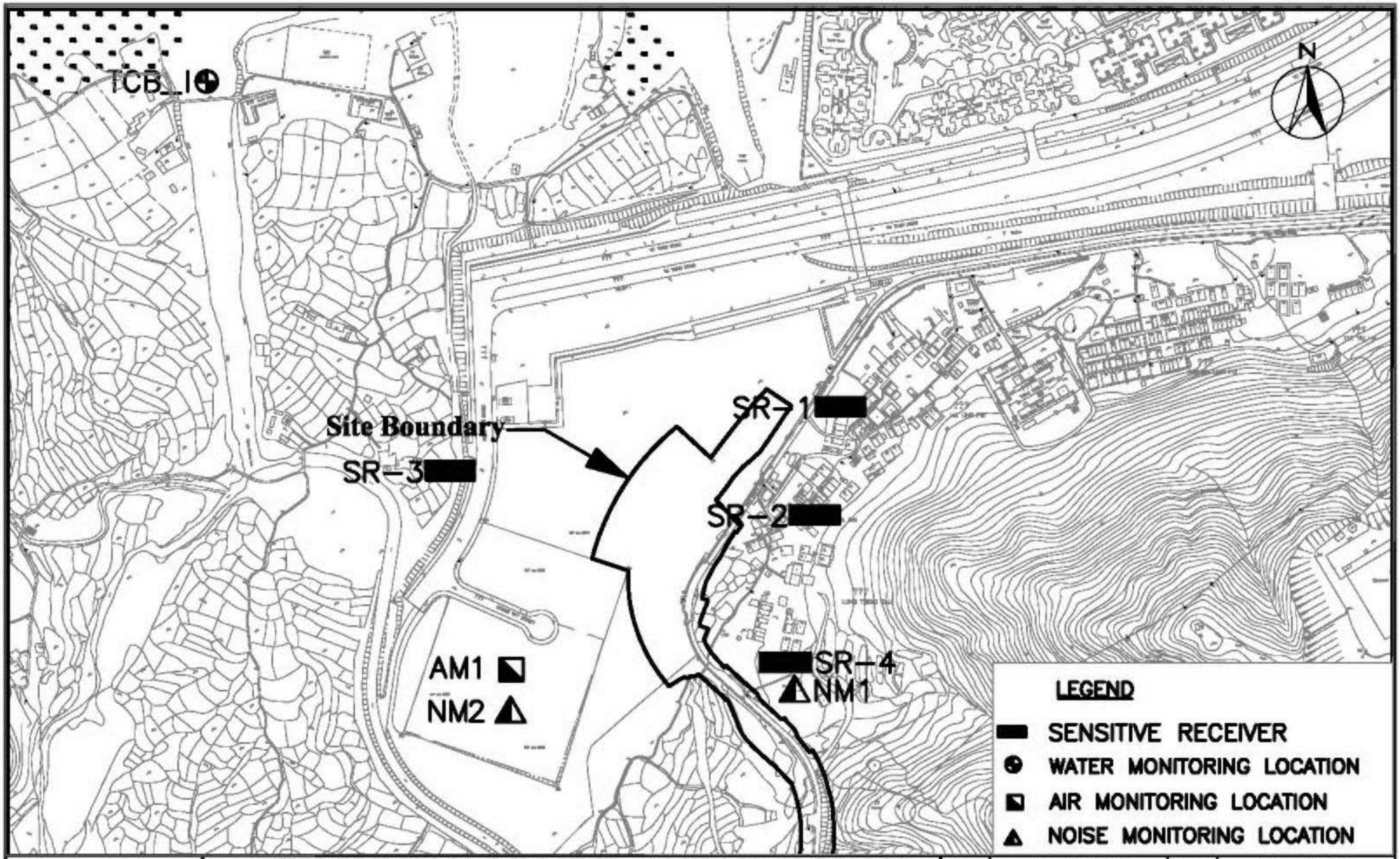
CHECK	KL	DRAWN	FL
JOB NO.	MA6030	DRAWING No. 2	Rev 1



IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

MONITORING LOCATIONS
(SHEET 1 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
CHECK	JY	DRAWN	VL
JOB No.	MA6030	DRAWING No. FIG 3.1	REV 1

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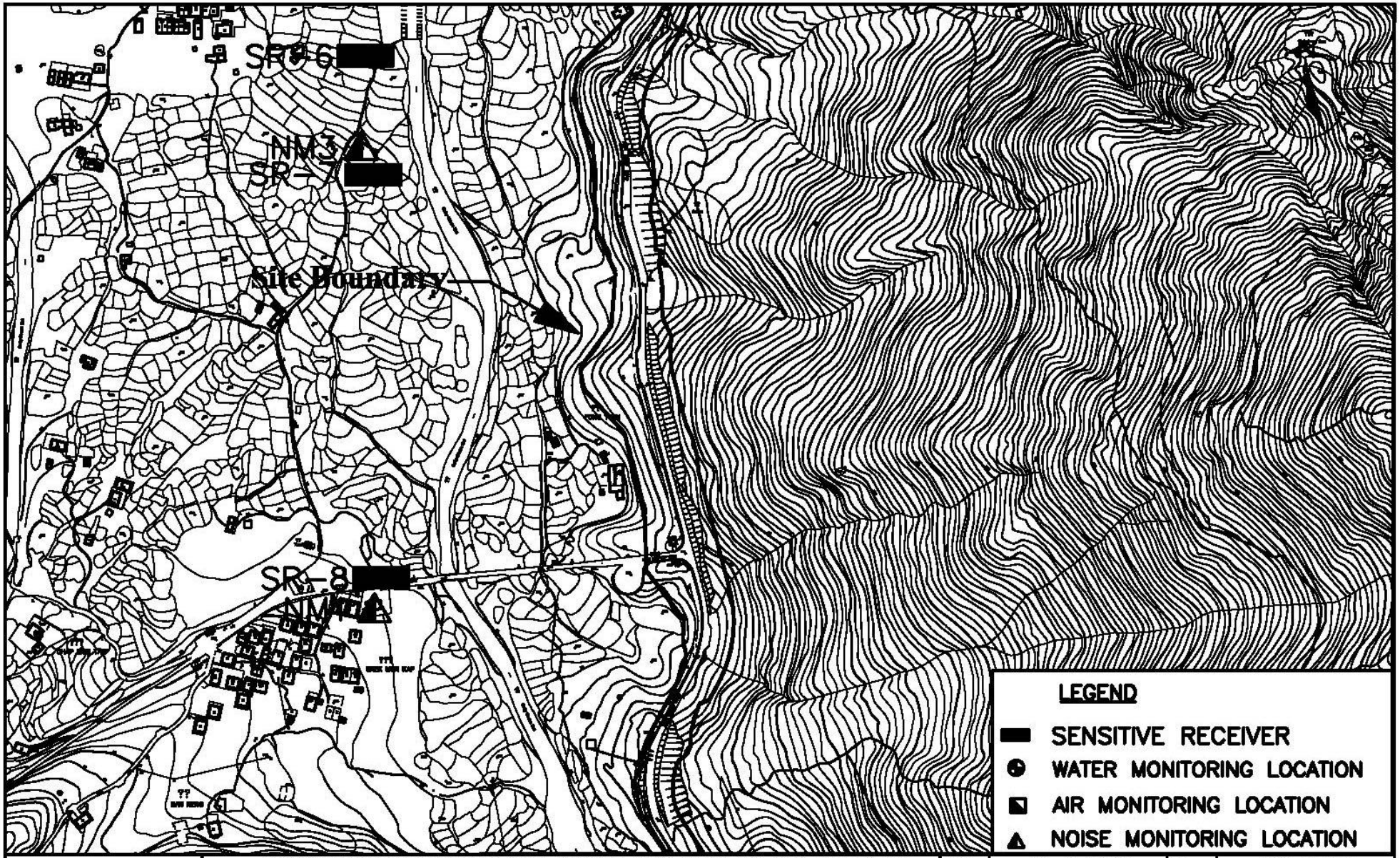

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IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

MONITORING LOCATIONS
(SHEET 2 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
CHECK	JY	DRAWN	VL
JOB No.	MA6030	DRAWING No. FIG 3.2	REV 1

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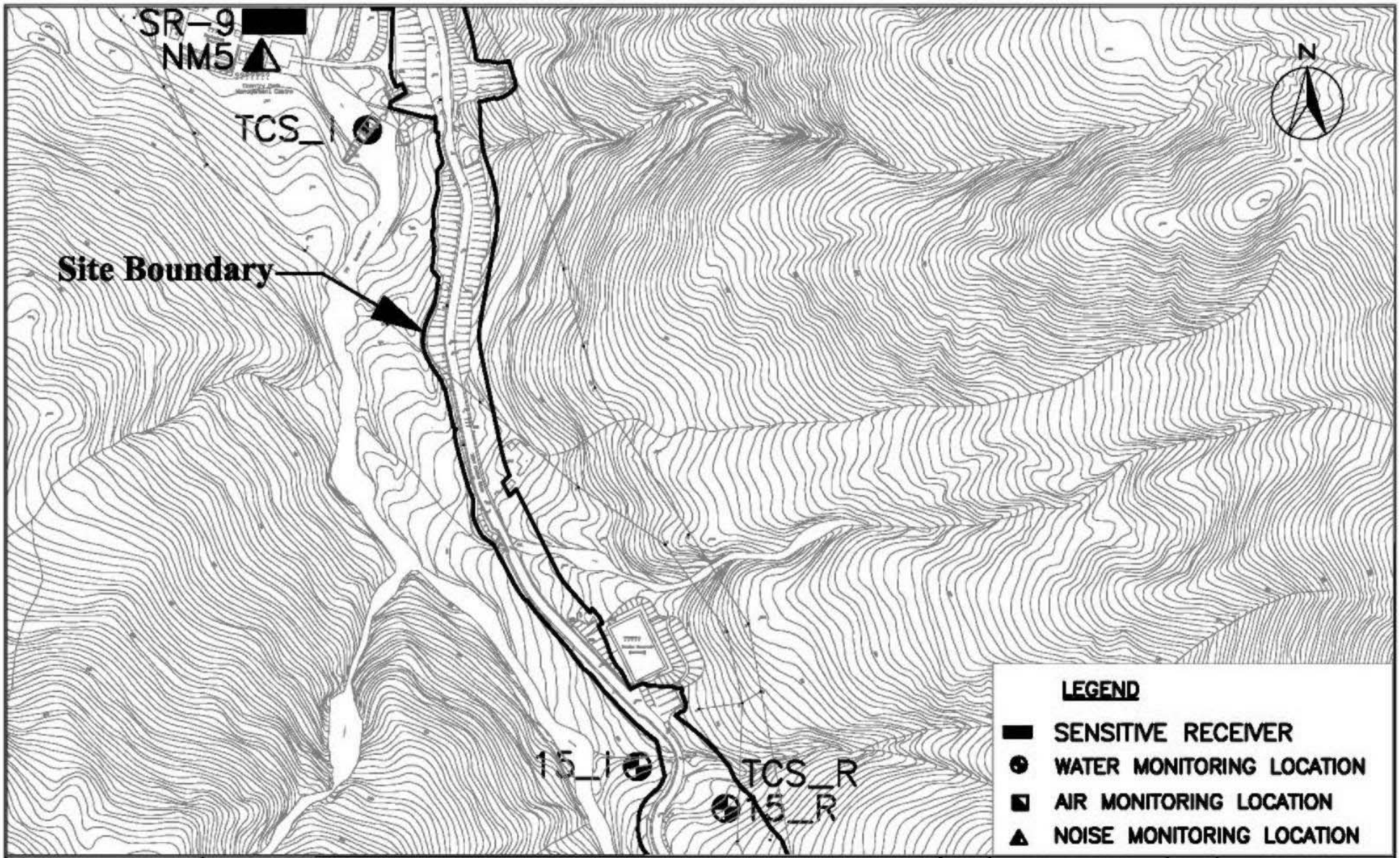

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IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

MONITORING LOCATIONS
(SHEET 3 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
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		REV	1

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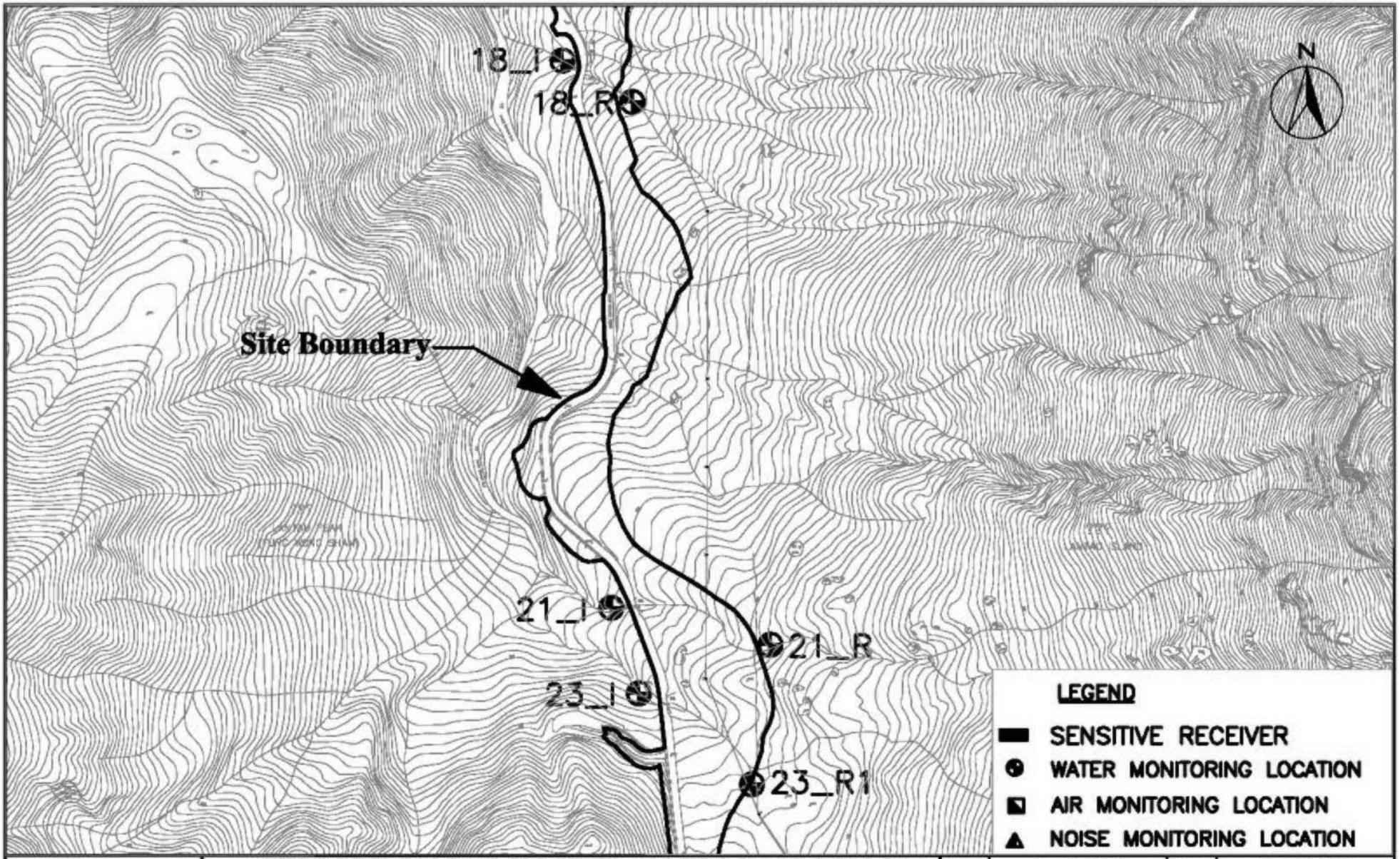

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IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

MONITORING LOCATIONS
(SHEET 4 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
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JOB No.	MA6030	DRAWING No.	FIG 3.4
		REV	1

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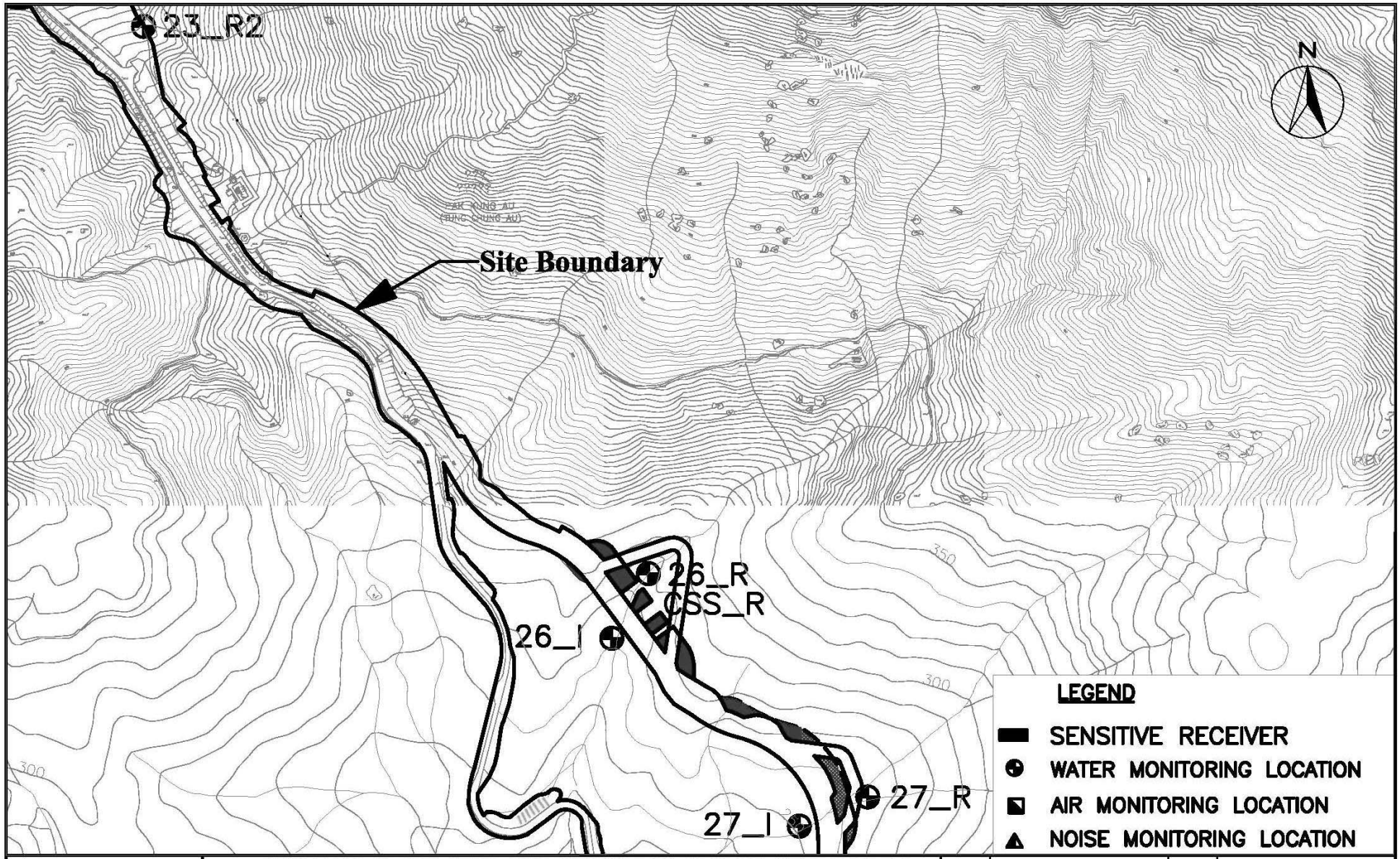

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IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

MONITORING LOCATIONS
(SHEET 5 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
CHECK	JY	DRAWN	VL
JOB No.	MA6030	DRAWING No. FIG 3.5	REV 1

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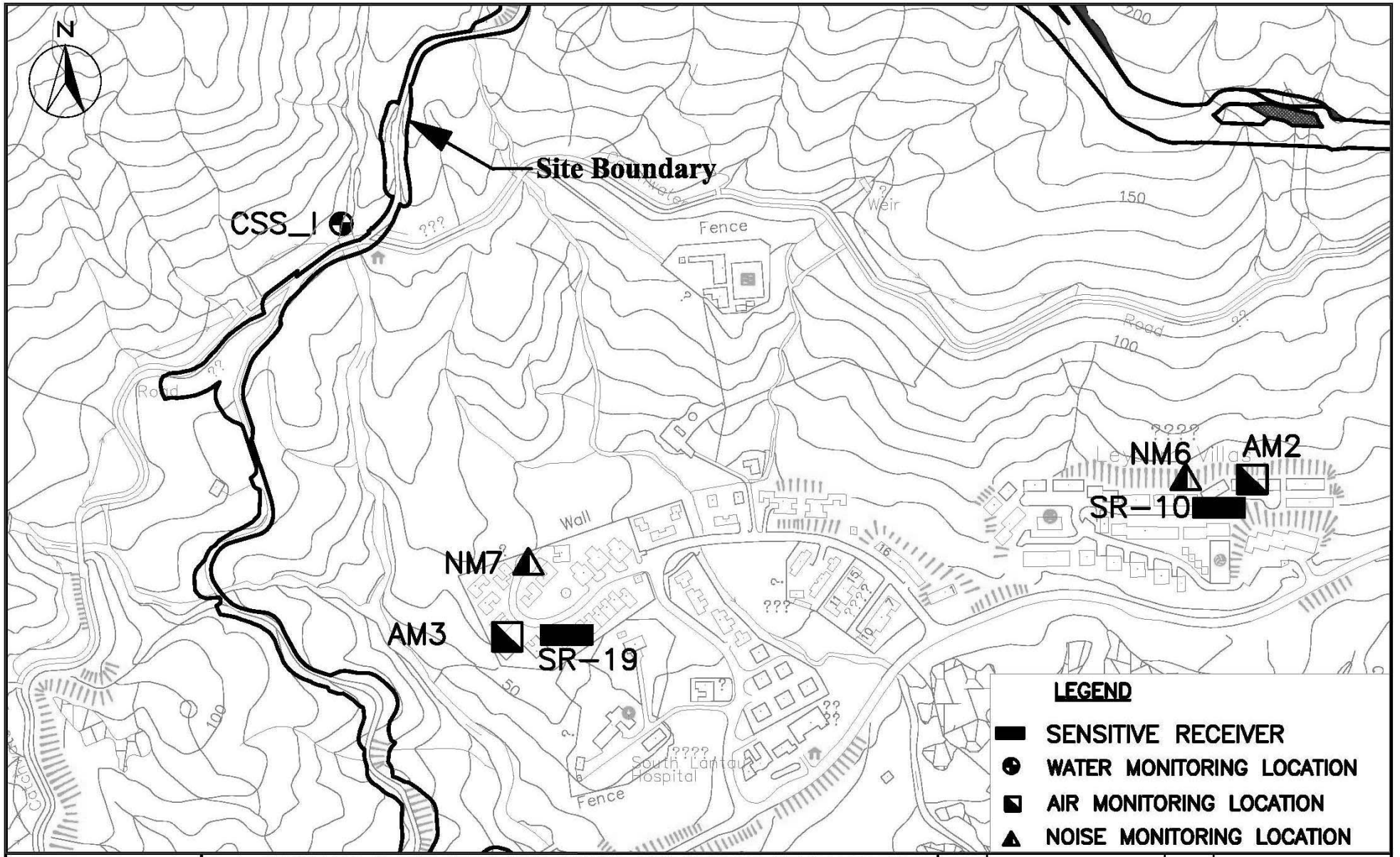

Cinotech Consultants Limited	IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA	SCALE: A4 1:4000	DATE: OCT 2006
		CHECK: JY	DRAWN: VL
	MONITORING LOCATIONS (SHEET 6 OF 7)	JOB No.: MA6030	DRAWING No.: FIG 3.6 / REV: 1

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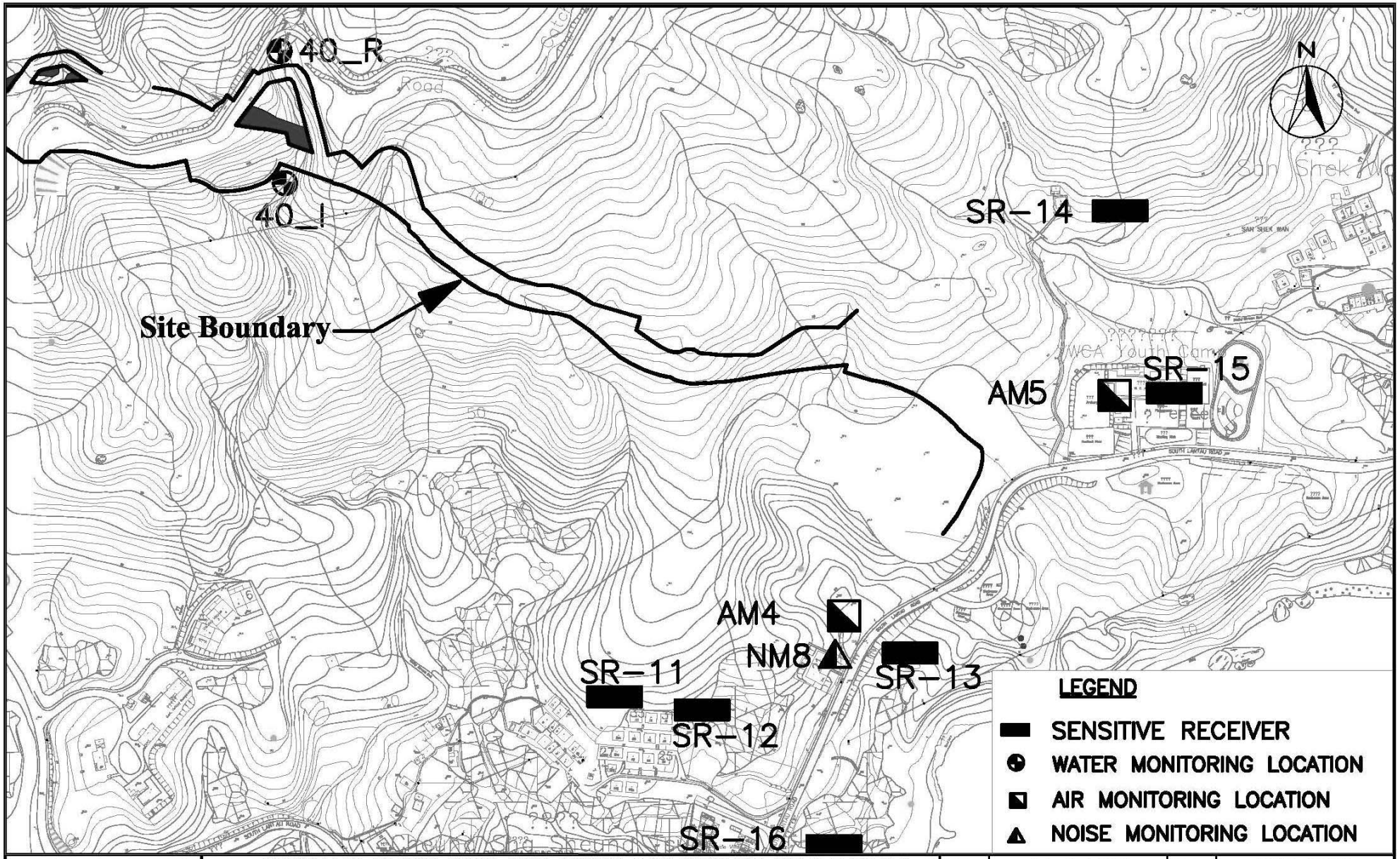

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IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

MONITORING LOCATIONS
(SHEET 7 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
CHECK	JY	DRAWN	VL
JOB No.	MA6030	DRAWING No. FIG 3.7	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

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

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

Table A-2 Action and Limit Levels for 24-Hour TSP

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

Table A-3 Action and Limit Levels for Construction Noise

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

Table A-4 Compliance Level for Water Quality

Monitoring Stations	DO, mg/L		pH		Turbidity, NTU				SS, mg/L			
	Action	Limit	Action	Limit	Action		Limit		Action		Limit	
TCS_I	6.10	4.00	-	<6.5 or >8.5	5.95	or 120% of the upstream control station's Tby (at the sme tide on the same day if appropriate)	13.30	or 130% of the upstream control station's Tby (at the sme tide on the same day if appropriate)	10.30	or 120% of the upstream control station's SS (at the sme tide on the same day if appropriate)	12.00	or 130% of the upstream control station's SS (at the sme tide on the same day if appropriate)
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		11.10		14.00		16.00	
19_I	6.55	4.00	-	<6.5 or >8.5	7.52		9.03		14.00		18.00	
21_I	6.73	4.00	-	<6.5 or >8.5	7.70		8.30		6.60		20.00	
23_I	6.55	4.00	-	<6.5 or >8.5	6.37		6.62		8.50		17.00	
26_I	6.49	4.00	-	<6.5 or >8.5	7.53		8.10		6.70		15.00	
27_I	5.33	4.00	-	<6.5 or >8.5	6.05		6.76		2.10		3.00	
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	

APPENDIX B
COPIES OF CALIBRATION CERTIFCATES

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA6030/46/0017

Station: AM1 - YMCA of HK Christian College
Operator: CH
Date: 5-Jun-09
Next Due Date: 4-Aug-09
Equipment No.: A-01-46
Serial No. 1315

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	754.4

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	6-Mar-09	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	5-Mar-10	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.5	3.49	60.07	8.7	2.91
2	10.6	3.22	55.26	7.2	2.65
3	7.4	2.69	46.06	5.1	2.23
4	5.2	2.25	38.50	3.0	1.71
5	3.3	1.79	30.53	1.9	1.36

By Linear Regression of Y on X

Slope , mw = 0.0533
Intercept, bw = -0.2820
Correlation coefficient* = 0.9978

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.14

Remarks:

Conducted by: [illegible] Signature: [signature] Date: 5/6/09
Checked by: [illegible] Signature: [signature] Date: 5 June 2009

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA6030/46/0018

Station: AM1 - YMCA of HK Christian College
Operator: CH
Date: 3-Aug-09
Next Due Date: 2-Oct-09
Equipment No.: A-01-46
Serial No. 1315

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	751.3

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	6-Mar-09	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	5-Mar-10	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.2	3.44	59.21	7.8	2.75
2	10.3	3.16	54.35	6.8	2.57
3	7.5	2.70	46.28	5.1	2.23
4	5.3	2.27	38.79	3.3	1.79
5	3.3	1.79	30.46	1.9	1.36

By Linear Regression of Y on X

Slope , mw = 0.0491 **Intercept, bw :** -0.1085

Correlation coefficient* = 0.9973

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.12**

Remarks:

Conducted by: Signature: Date: 3/8/09

Checked by: Signature: Date: 3 August 2009

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA6030/11/0017

Station: AM2 - Leyburn Villas
Operator: CH
Date: 5-Jun-09
Next Due Date: 4-Aug-09
Equipment No.: A-01-11
Serial No. 1805

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	754.4

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	6-Mar-09	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	5-Mar-10	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.2	3.45	59.33	8.4	2.86
2	10.4	3.19	54.73	6.8	2.58
3	7.5	2.71	46.37	5.1	2.23
4	5.3	2.27	38.87	3.2	1.77
5	3.2	1.77	30.05	2.0	1.40

By Linear Regression of Y on X

Slope , mw = 0.0501 **Intercept, bw :** -0.1306

Correlation coefficient* = 0.9978

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.19**

Remarks:

Conducted by: TEO CHING HANG Signature: Date: 5/6/09

Checked by: tbv Signature: Date: 5 June 2009

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA6030/11/0018

Station: AM2 - Leyburn Villas
Date: 3-Aug-09
Equipment No.: A-01-11

Operator: CH
Next Due Date: 2-Oct-09
Serial No. 1805

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	751.3

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	6-Mar-09	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	5-Mar-10	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.5	3.49	59.94	8.6	2.89
2	10.1	3.13	53.81	6.8	2.57
3	7.3	2.66	45.64	5.2	2.25
4	5.2	2.25	38.42	3.3	1.79
5	3.0	1.71	29.01	1.6	1.25

By Linear Regression of Y on X

Slope , mw = 0.0528
Intercept, bw = -0.2450
Correlation coefficient* = 0.9970

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.22

Remarks:

Conducted by: cy Signature: cy Date: 3/8/09
Checked by: bn Signature: Date: 3 August 2009

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA6030/AM4/0017

Station: No. 31 South Lantau Road (AM4) Operator: CH

Date: 5-Jun-09 Next Due Date: 4-Aug-09

Equipment No.: A-01-06 Serial No. 10576

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	754.4

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	6-Mar-09	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	5-Mar-10	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.0	3.42	58.84	8.1	2.81
2	9.8	3.09	53.11	6.7	2.56
3	7.6	2.72	46.68	5.2	2.25
4	5.4	2.30	39.24	3.3	1.79
5	3.2	1.77	30.05	1.9	1.36

By Linear Regression of Y on X

Slope , mw = 0.0514 **Intercept, bw =** -0.1853

Correlation coefficient* = 0.9986

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.19

Remarks:

Conducted by: Tso Ching Hung Signature: Date: 5/6/09

Checked by: LA Signature: Date: 5 June 2009

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA6030/AM4/0018

Station: No. 31 South Lantau Road (AM4) Operator: CH

Date: 3-Aug-09 Next Due Date: 2-Oct-09

Equipment No.: A-01-06 Serial No. 10576

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	751.3

Orifice Transfer Standard Information					
Equipment No.:	A-04-06	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	6-Mar-09	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	5-Mar-10	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	12.1	3.43	58.96	8.1	2.81
2	9.8	3.09	53.00	6.8	2.57
3	7.7	2.74	46.90	5.1	2.23
4	5.2	2.25	38.42	3.3	1.79
5	3.0	1.71	29.01	1.7	1.29

By Linear Regression of Y on X

Slope , mw = 0.0515 **Intercept, bw =** -0.1930

Correlation coefficient* = 0.9990

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.20**

Remarks:

Conducted by: CW Signature: CW Date: 3/8/09

Checked by: BR Signature: BR Date: 3 August 2009

WELLAB 匯力
Testing and Research

Rms 816, 1516 & 1701, 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**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/09/90430
Date of Issue:	2009-05-02
Date Received:	2009-04-30
Date Tested:	2009-04-30
Date Completed:	2009-05-01
Next Due Date:	2010-05-01

ATTN: **Mr. Henry Leung**

Page: 1 of 1

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

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 67%
Pressure	: 101.5 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
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 06, 2009 Rootsmeter S/N 9833640 Ta (K) - 296
Operator Tisch Orifice I.D. - 0999 Pa (mm) - 747.20

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H20 (in.)
1	NA	NA	1.00	1.3890	3.2	2.00
2	NA	NA	1.00	0.9850	6.3	4.00
3	NA	NA	1.00	0.8810	7.8	5.00
4	NA	NA	1.00	0.8410	8.6	5.50
5	NA	NA	1.00	0.6950	12.5	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9917	0.7139	1.4113		0.9957	0.7168	0.8874
0.9876	1.0026	1.9959		0.9916	1.0067	1.2549
0.9854	1.1185	2.2315		0.9894	1.1231	1.4030
0.9844	1.1706	2.3405		0.9884	1.1753	1.4715
0.9792	1.4090	2.8227		0.9832	1.4147	1.7747
Qstd slope (m) =		2.03154		Qa slope (m) =		1.27212
intercept (b) =		-0.03970		intercept (b) =		-0.02496
coefficient (r) =		0.99999		coefficient (r) =		0.99999
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(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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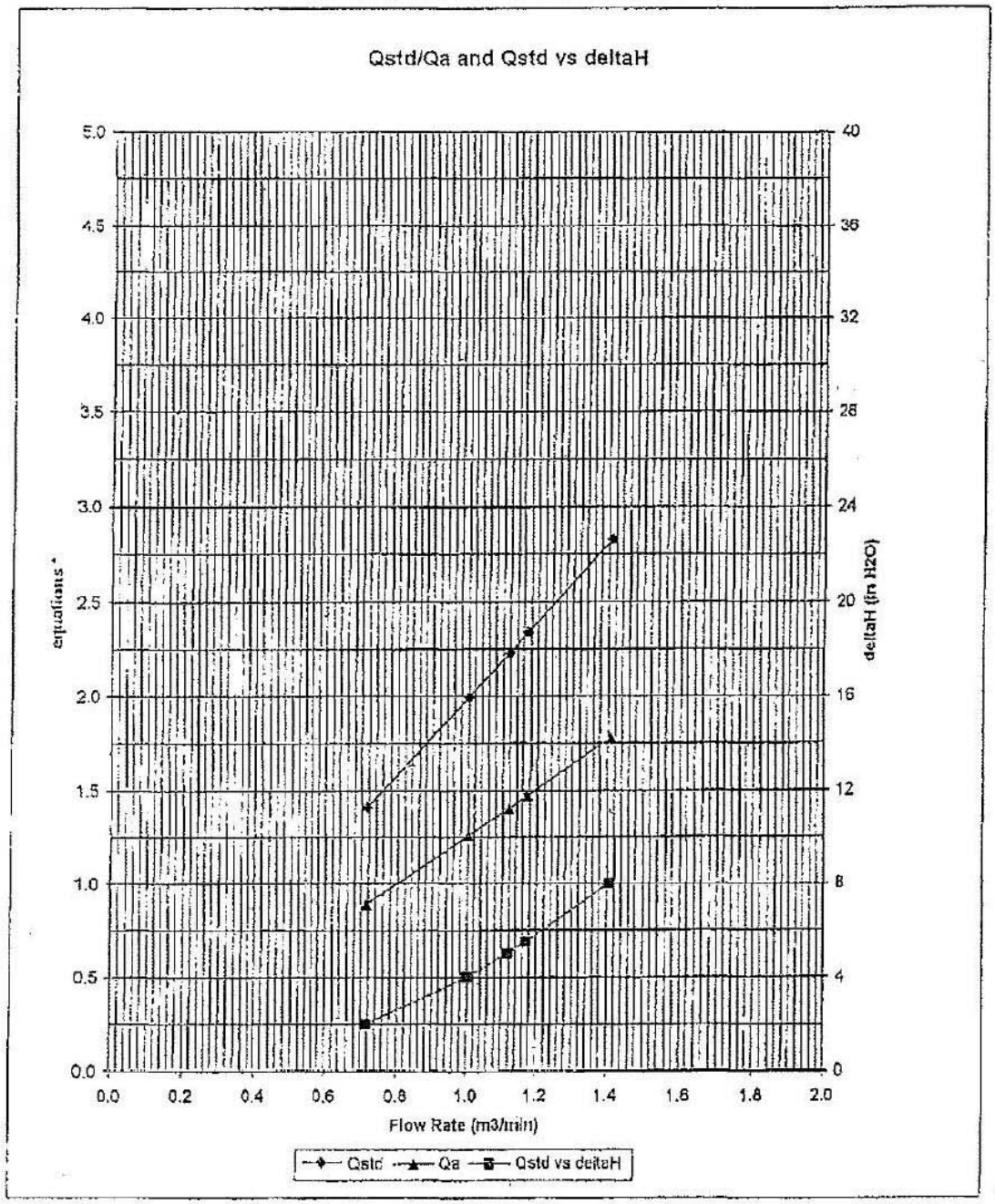
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

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

Qa series: $\sqrt{(\Delta H\ (Ta\ /\ Pa))}$

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Testing and Research

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**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/N/81013/1
Date of Issue:	2007-10-15
Date Received:	2008-10-13
Date Tested:	2008-10-13
Date Completed:	2008-10-14
Next Due Date:	2009-10-14

ATTN: **Mr. Henry Leung**

Page: 1 of 1

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room Temperatre	: 21 degree Celsius
Relative Humidity	: 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
Laboratory Manager

WELLAB 匯力
Testing and Research

Rms 816, 1516 & 1701, 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**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. Henry Leung**

Test Report No.:	C/06/90305
Date of Issue:	2009-03-05
Date Received:	2009-03-04
Date Tested:	2009-03-04
Date Completed:	2009-03-05
Next Due Date:	2010-03-04
Page:	1 of 1

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.**

PATRICK TSE
Laboratory Manager

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**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/W/90731-1
Date of Issue:	2009-08-01
Date Received:	2009-07-31
Date Tested:	2009-07-31
Date Completed:	2009-08-01
Next Due Date:	2009-10-31

ATTN: **Mr. Henry Leung**

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room Temperature	: 24 degree Celsius
Relative Humidity	: 66%

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

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

Test Report No.:	C/W/90731-1
Date of Issue:	2009-08-01
Date Received:	2009-07-31
Date Tested:	2009-07-31
Date Completed:	2009-08-01
Next Due Date:	2009-10-31
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	
1421	1420	2	1420 ± 20

2. Salinity Performance check

Salinity, 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 water at 20°C	Dissolved Oxygen, mg O_2/L		Correction, mg O_2/L	Acceptable range
	D.O. Meter	Winkler Titration		
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_j , 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

**********END OF REPORT**********

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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**
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

ATTN: **Mr. Henry Leung**

Test Report No.:	C/W/90731-2
Date of Issue:	2009-08-01
Date Received:	2009-07-31
Date Tested:	2009-07-31
Date Completed:	2009-08-01
Next Due Date:	2009-10-31
Page:	1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 02D0293AA
Equipment No.	: W.03.02
Project No.	: C013

Test conditions:

Room Temperature	: 24 degree Celsius
Relative Humidity	: 66%

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

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Room 1516 & 816, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7388 Fax: 2698 7076
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT

Test Report No.:	C/W/90731-2
Date of Issue:	2009-08-01
Date Received:	2009-07-31
Date Tested:	2009-07-31
Date Completed:	2009-08-01
Next Due Date:	2009-10-31
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	
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 water at 20°C	Dissolved Oxygen, mg O_2/L		Correction, mg O_2/L	Acceptable range
	D.O. Meter	Winkler Titration		
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_j , 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

**********END OF REPORT**********

APPENDIX C
ENVIRONMENTAL MONITORING SCHEDULES

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 August 2009

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

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

Remarks: * Construction Noise Levels will be monitored when construction works perform at 19:00 - 23:00 and within a radius of 300m from the noise monitoring locaitons.

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

Appendix D - 24-hour TSP Monitoring Results

Location AM1 - YMCA of Hong Kong Christian College

Date	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Sampling	Conc.	Weather	Air	Atmospheric	Particulate	Av. flow	Total vol.
	Initial	Final	Initial	Final	Initial	Final	Time(hrs.)	($\mu g/m^3$)	Condition	Temp. (K)	Pressure(Pa)	weight(g)	(m^3/min)	(m^3)
1-Aug-09	3.4022	3.4342	1.21	1.21	5429.7	5453.7	24.0	18.3	Sunny	302.9	755.5	0.0320	1.21	1746.6
7-Aug-09	3.1835	3.2102	1.22	1.22	5453.7	5477.7	24.0	15.3	Cloudy	301.9	750.8	0.0267	1.22	1749.6
13-Aug-09	3.2199	3.2494	1.23	1.23	5477.7	5501.7	24.0	16.7	Cloudy	298.4	757.9	0.0295	1.23	1767.2
19-Aug-09	3.3417	3.3776	1.22	1.22	5501.7	5525.7	24.0	20.5	Sunny	305.6	761.8	0.0359	1.22	1752.0
25-Aug-09	3.4611	3.5209	1.22	1.22	5525.7	5549.7	24.0	34.0	Cloudy	302.3	759.6	0.0598	1.22	1758.3
31-Aug-09	3.4144	3.4817	1.22	1.22	5549.7	5573.7	24.0	38.2	Cloudy	301.9	759.9	0.0673	1.22	1759.6
							Min	15.3						
							Max	38.2						
							Average	23.8						

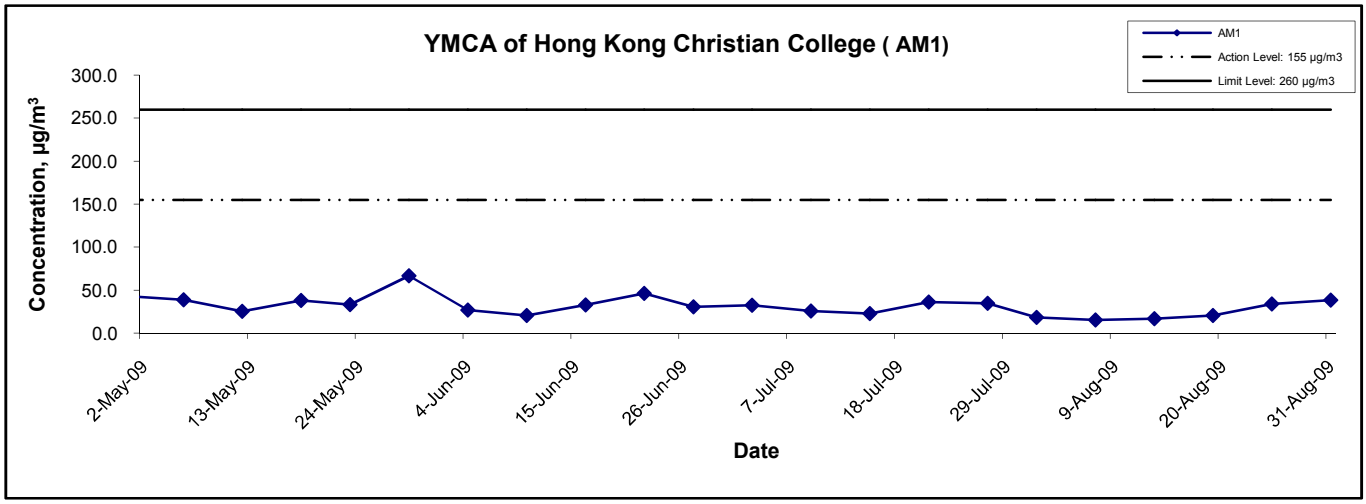
Location AM2 - House in Leyburn Villas

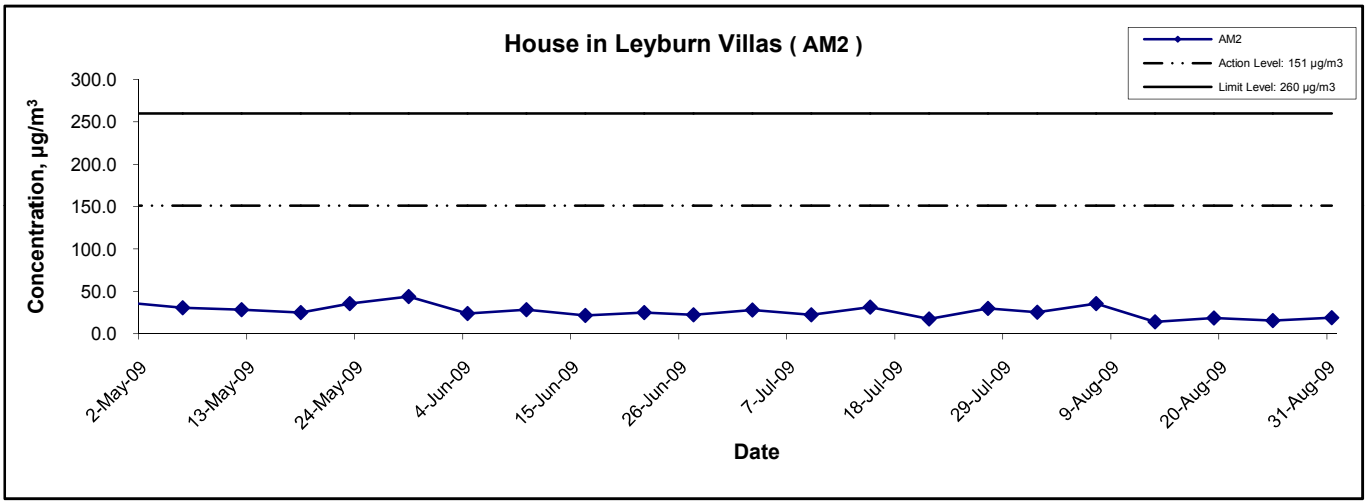
Date	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Sampling	Conc.	Weather	Air	Atmospheric	Particulate	Av. flow	Total vol.
	Initial	Final	Initial	Final	Initial	Final	Time(hrs.)	($\mu g/m^3$)	Condition	Temp. (K)	Pressure(Pa)	weight(g)	(m^3/min)	(m^3)
1-Aug-09	3.1843	3.2290	1.22	1.22	10223.3	10247.3	24.0	25.5	Sunny	302.9	755.5	0.0447	1.22	1754.8
7-Aug-09	3.4540	3.5159	1.22	1.22	10247.3	10271.3	24.0	35.4	Cloudy	301.9	750.8	0.0619	1.22	1751.0
13-Aug-09	3.1910	3.2156	1.23	1.23	10271.3	10295.3	24.0	13.9	Cloudy	298.4	757.9	0.0246	1.23	1767.6
19-Aug-09	3.4456	3.4783	1.22	1.22	10295.3	10319.3	24.0	18.7	Sunny	305.6	761.8	0.0327	1.22	1753.3
25-Aug-09	3.2273	3.2544	1.22	1.22	10319.3	10343.3	24.0	15.4	Cloudy	302.3	759.6	0.0271	1.22	1759.2
31-Aug-09	3.3770	3.4102	1.22	1.22	10343.3	10367.3	24.0	18.9	Cloudy	301.9	759.9	0.0332	1.22	1760.5
							Min	13.9						
							Max	35.4						
							Average	21.3						

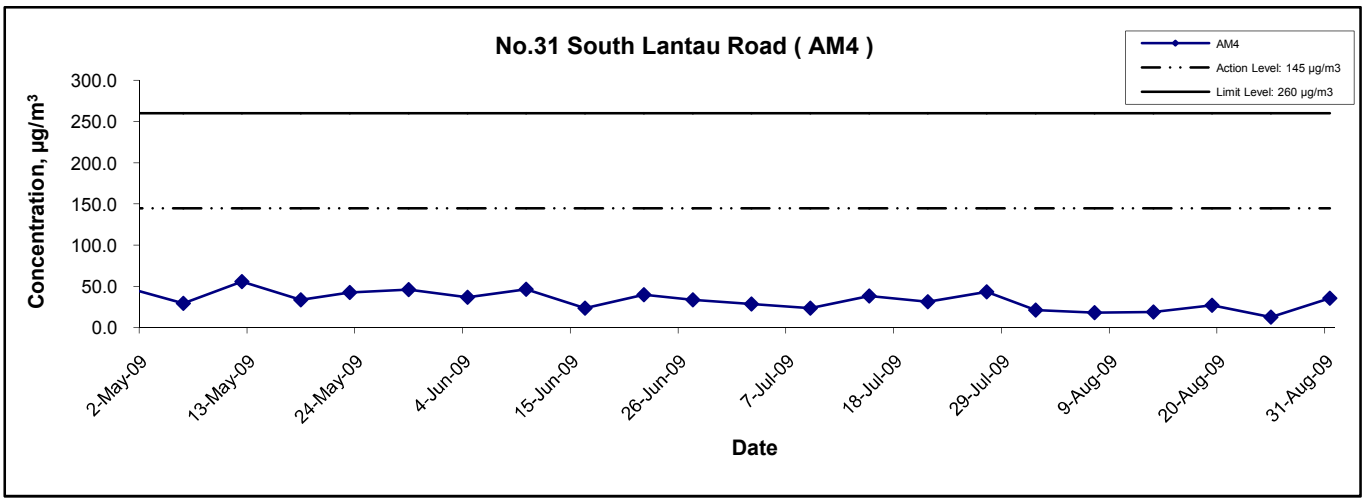
Location AM4 - No.31 South Lantau Road

Date	Filter Weight (g)		Flow Rate (m^3/min.)		Elapse Time		Sampling	Conc.	Weather	Air	Atmospheric	Particulate	Av. flow	Total vol.
	Initial	Final	Initial	Final	Initial	Final	Time(hrs.)	($\mu g/m^3$)	Condition	Temp. (K)	Pressure(Pa)	weight(g)	(m^3/min)	(m^3)
1-Aug-09	3.4073	3.4447	1.22	1.22	10078.5	10102.5	24.0	21.3	Sunny	302.9	755.5	0.0374	1.22	1753.8
7-Aug-09	3.4439	3.4760	1.22	1.22	10102.5	10126.5	24.0	18.3	Cloudy	301.9	750.8	0.0321	1.22	1754.1
13-Aug-09	3.4389	3.4727	1.23	1.23	10126.5	10150.5	24.0	19.1	Cloudy	298.4	757.9	0.0338	1.23	1772.0
19-Aug-09	3.4381	3.4859	1.22	1.22	10150.5	10174.5	24.0	27.2	Sunny	305.6	761.8	0.0478	1.22	1756.4
25-Aug-09	3.3441	3.3668	1.22	1.22	10174.5	10198.5	24.0	12.9	Cloudy	302.3	759.6	0.0227	1.22	1762.5
31-Aug-09	3.4678	3.5309	1.23	1.23	10198.5	10222.5	24.0	35.8	Cloudy	301.9	759.9	0.0631	1.23	1763.8
							Min	12.9						
							Max	35.8						
							Average	22.4						

24-hour TSP Levels

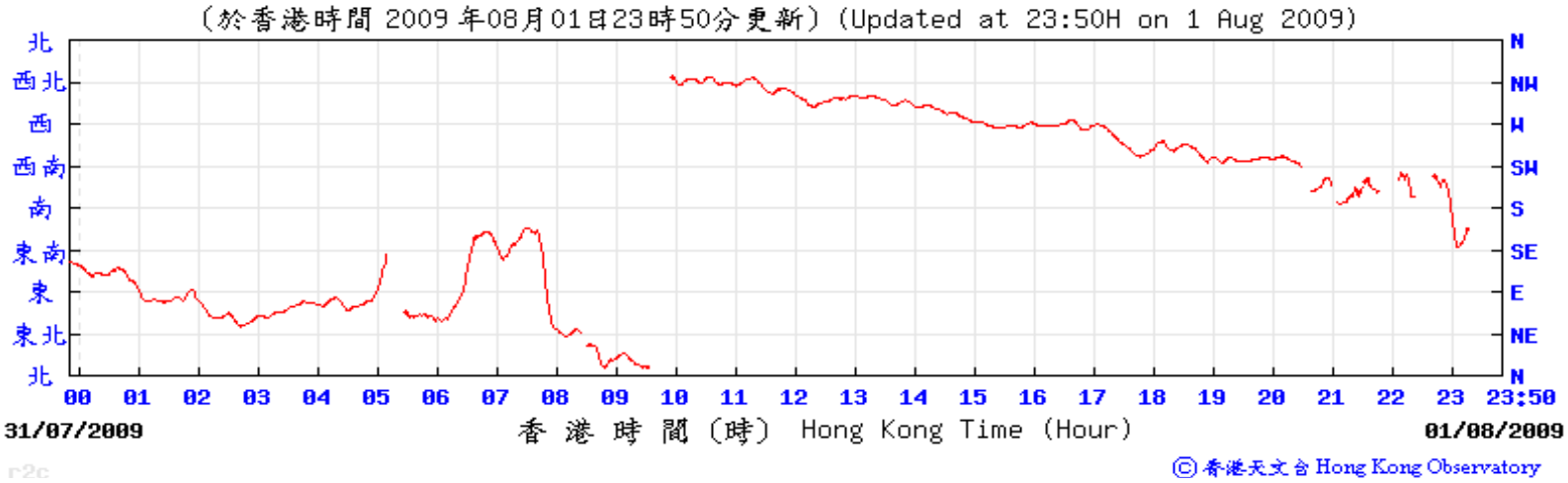


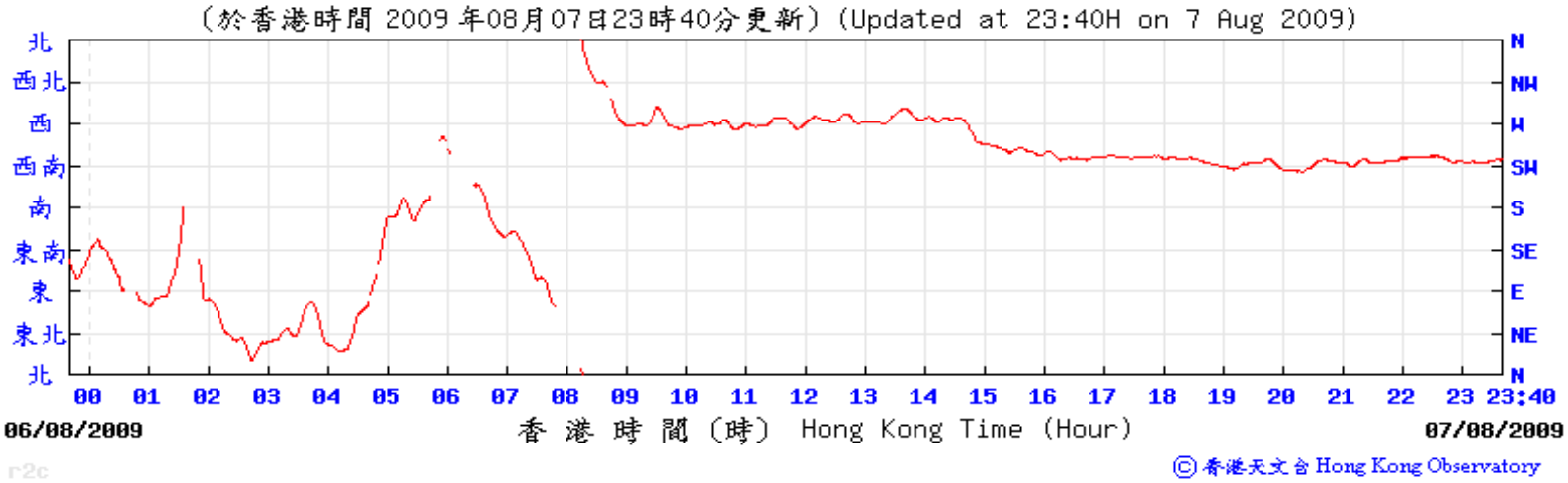




Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: D	CINOTECH

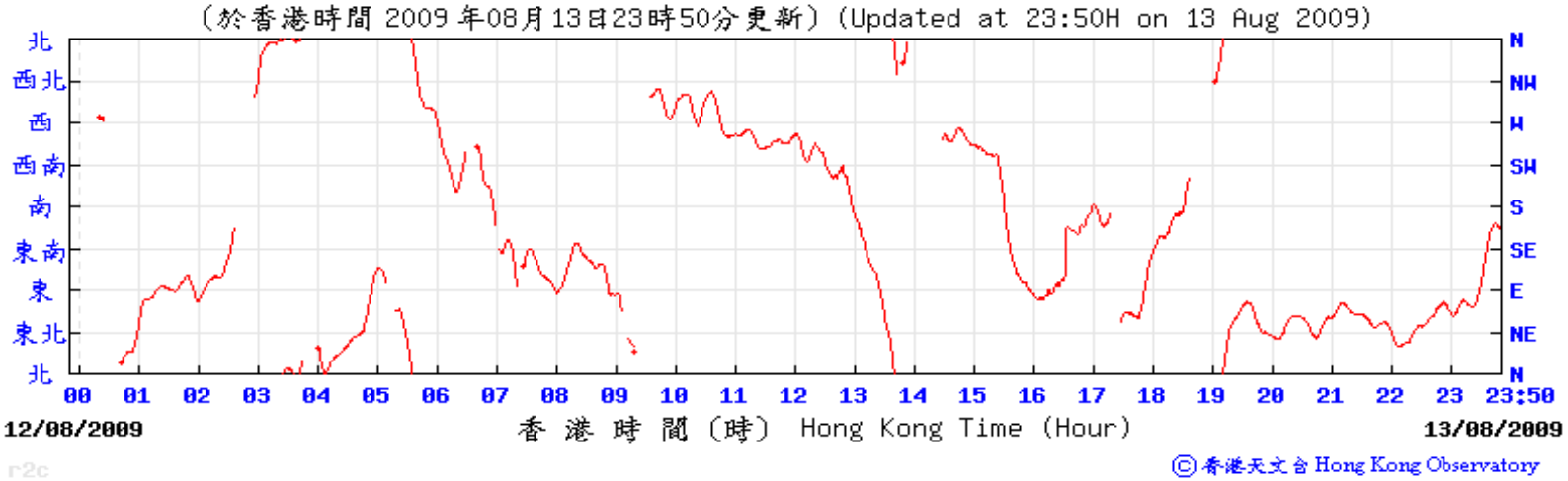
Wind Data (HK International Airport)

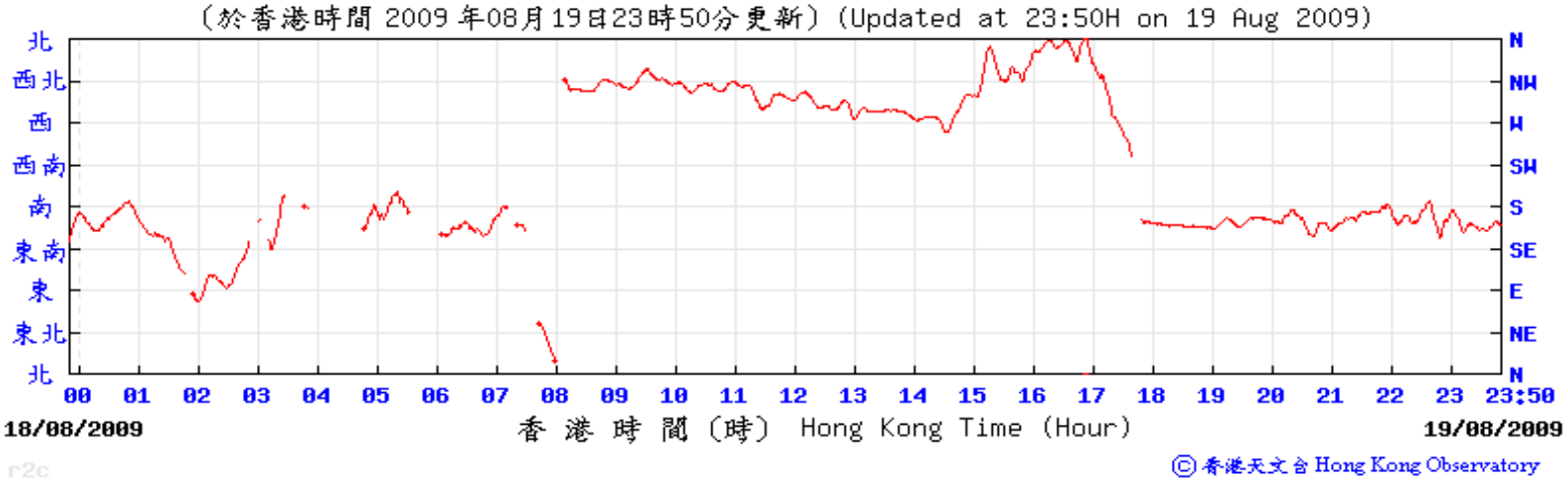




Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Wind Data Extracted from the Hong Kong Observatory (HK International Airport)	Scale: N.T.S	Project No.: MA6030	CINOTECH
	Date: Aug 09	Appendix: D	

Wind Data (HK International Airport)





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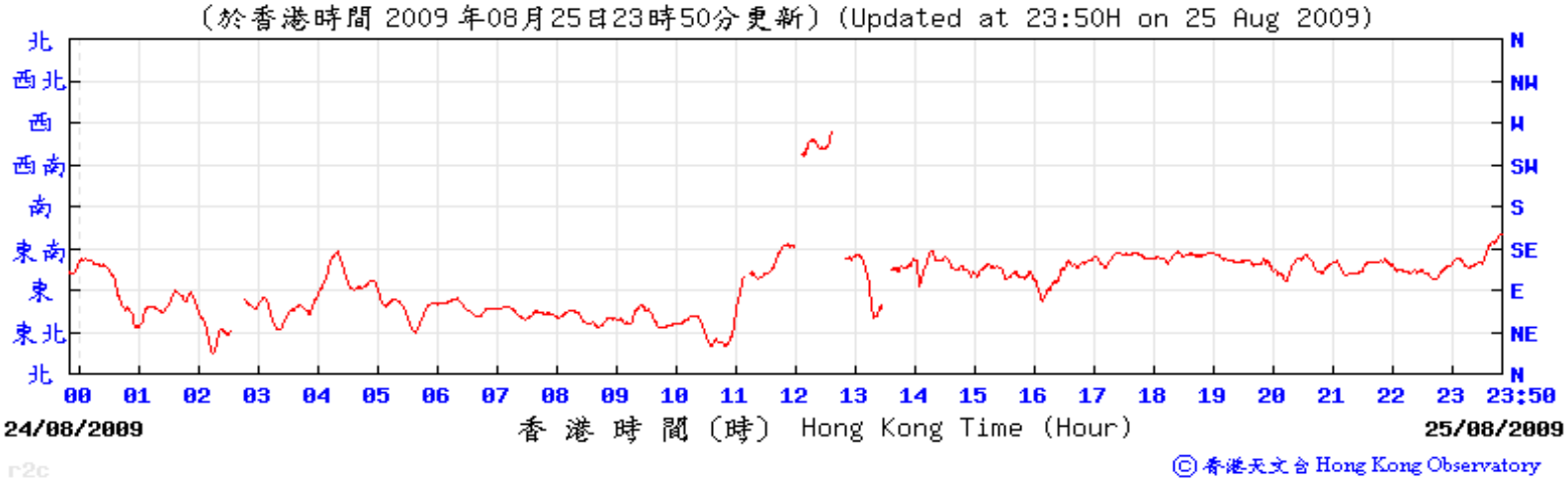
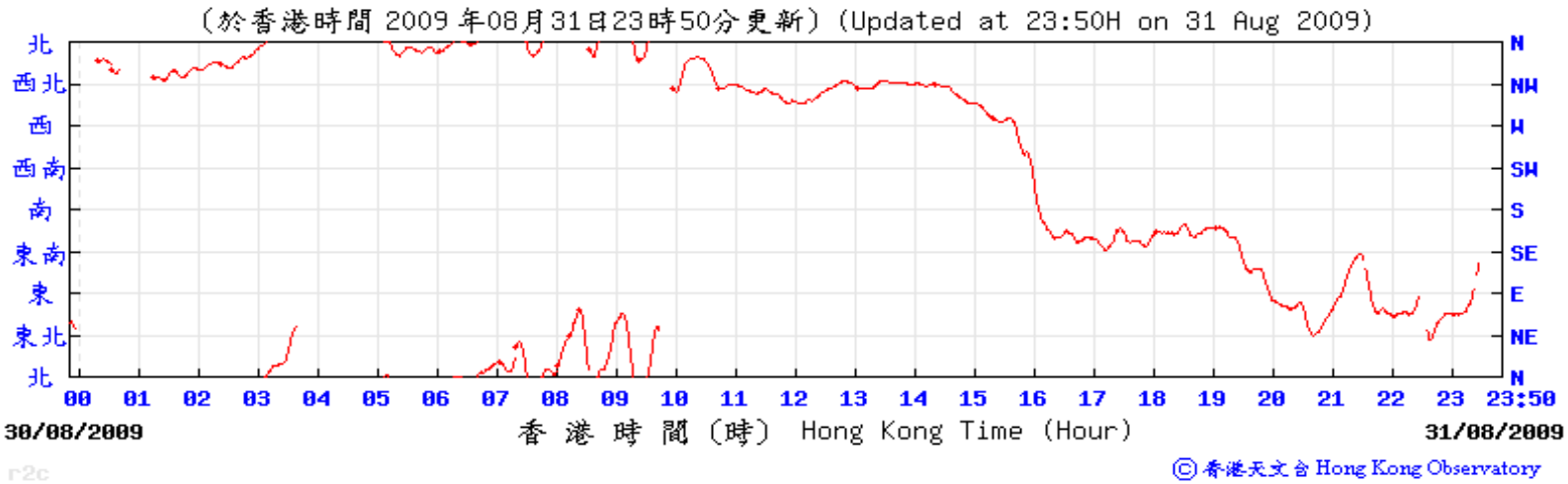
	Date: Aug 09	Appendix: D	

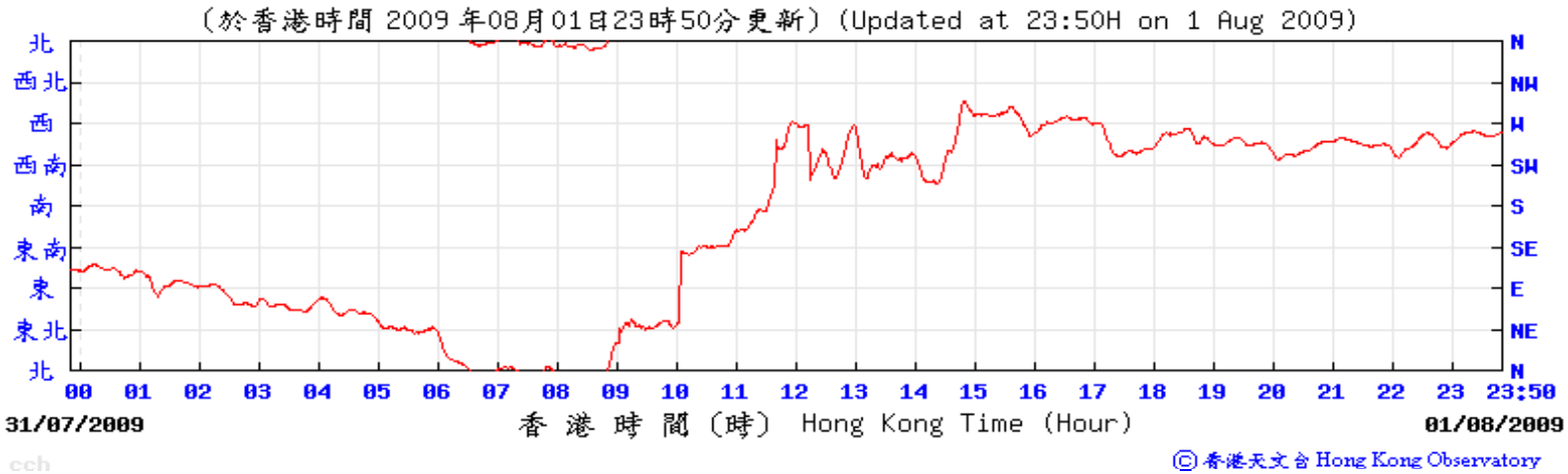
Wind Data (HK International Airport)

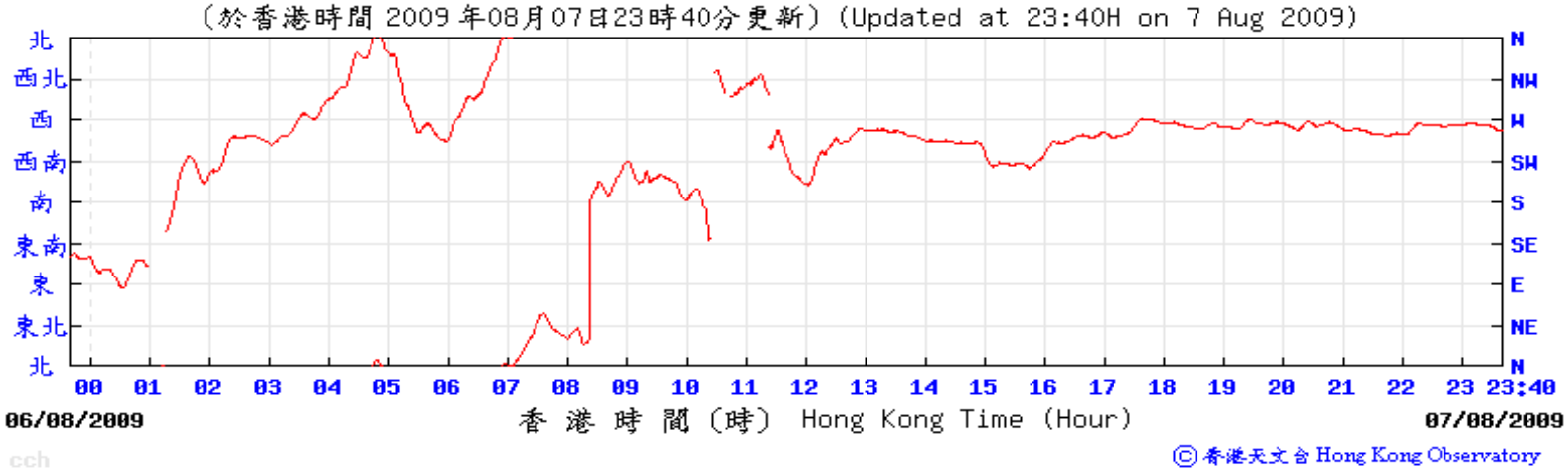




Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Wind Data Extracted from the Hong Kong Observatory (HK International Airport)	Scale: N.T.S	Project No. MA6030	CINOTECH
	Date: Aug 09	Appendix: D	

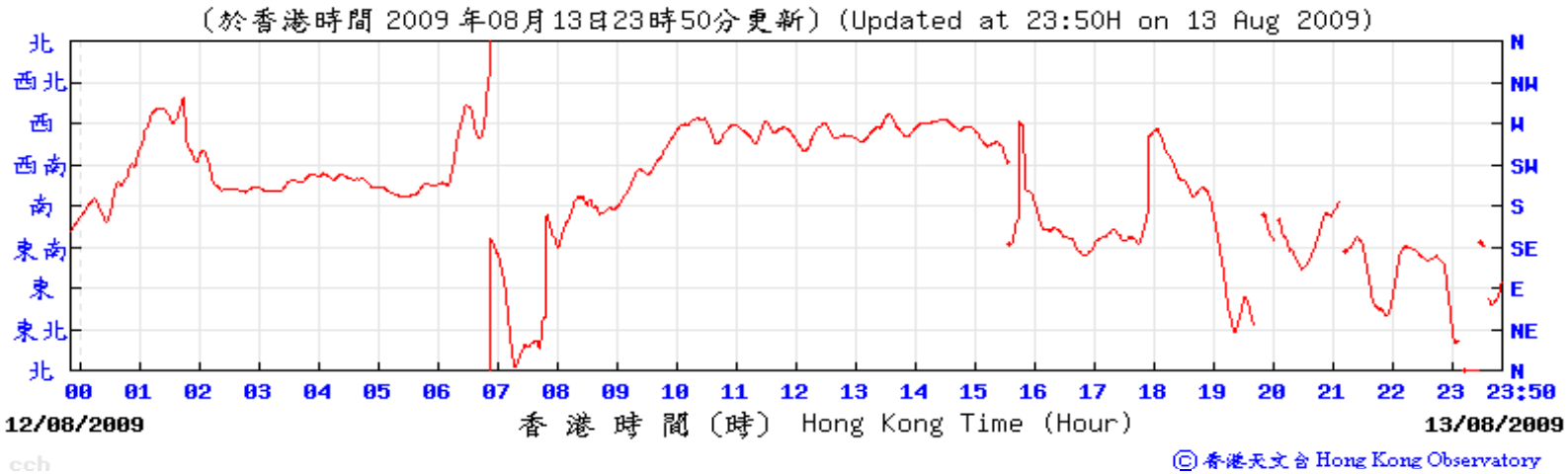
Wind Data (Cheung Chau)

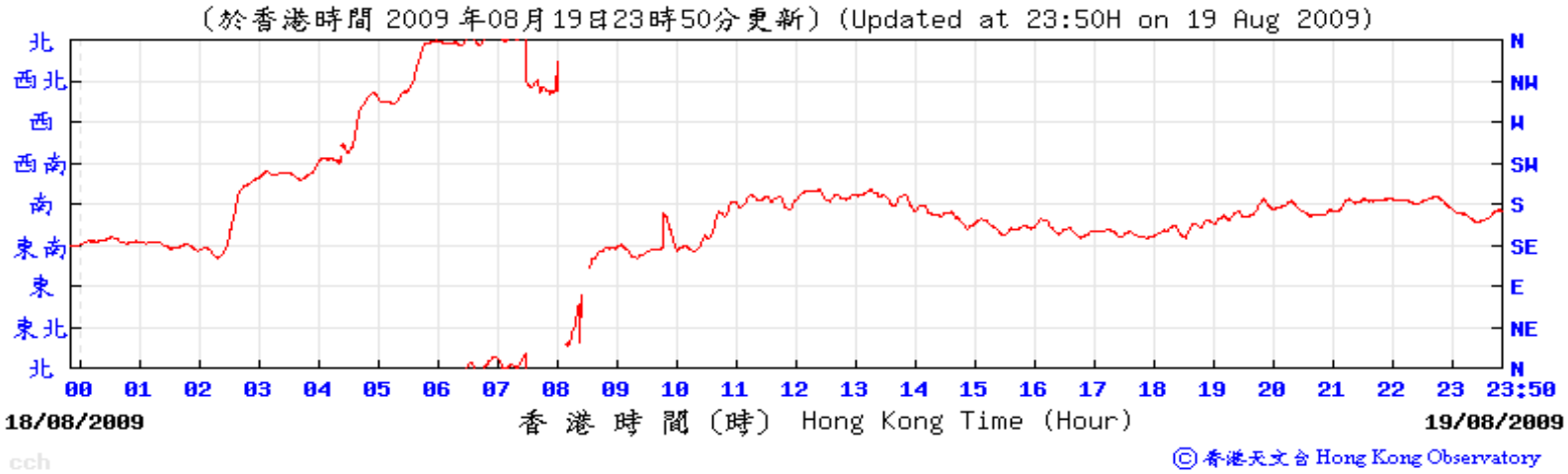




Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Wind Data Extracted from the Hong Kong Observatory (Cheung Chau)	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: D	CINOTECH

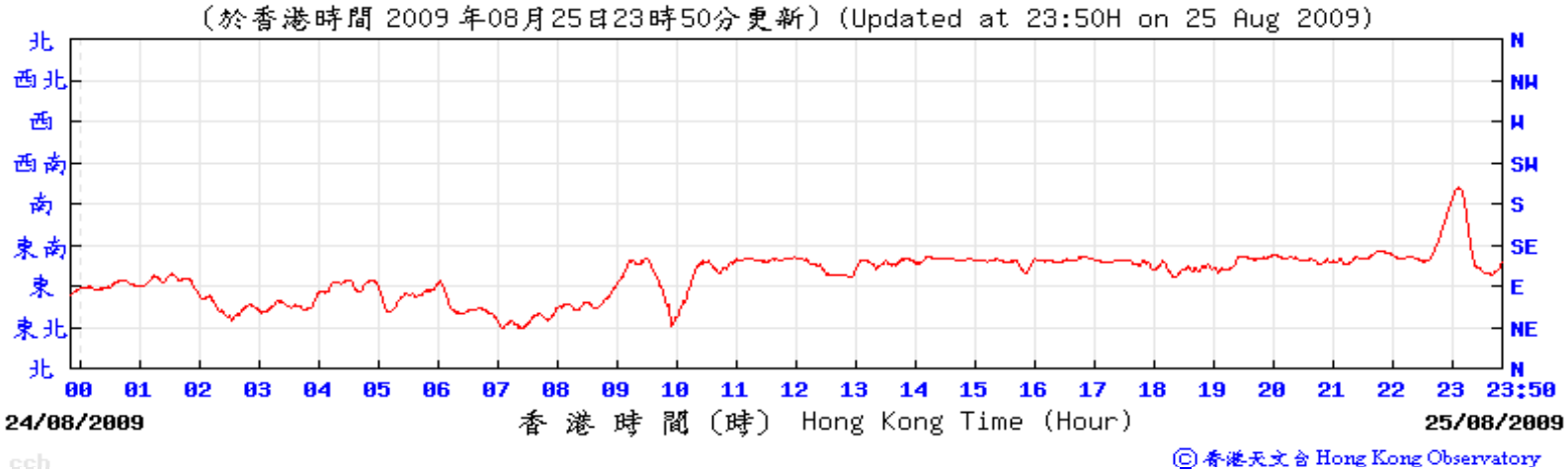
Wind Data (Cheung Chau)

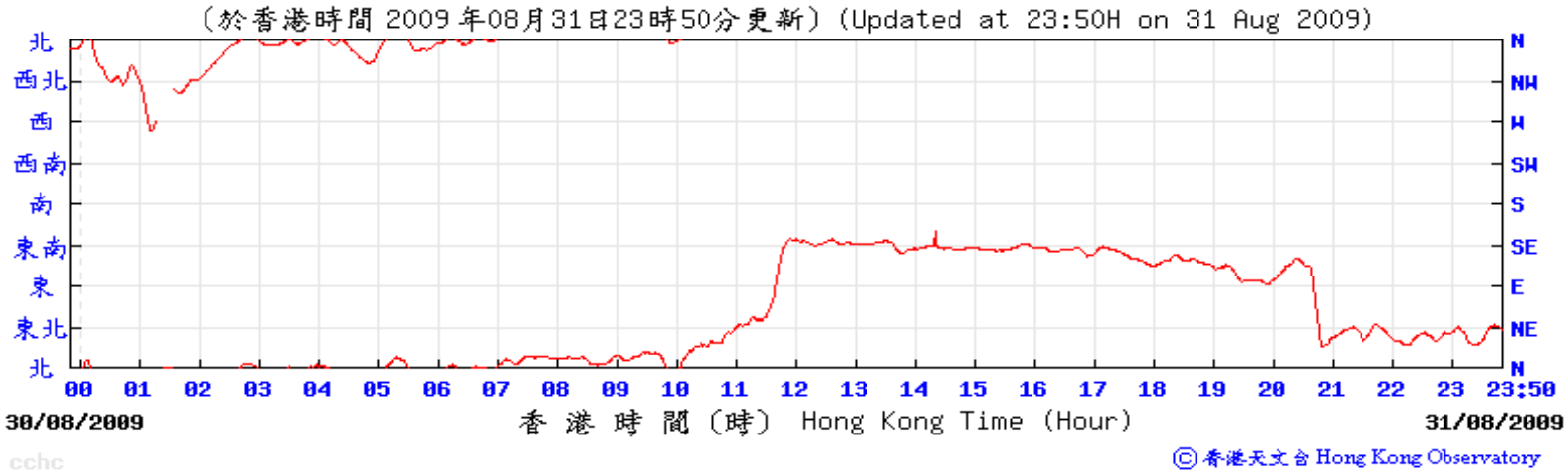




Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Wind Data Extracted from the Hong Kong Observatory (Cheung Chau)	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: D	CINOTECH

Wind Data (Cheung Chau)





Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Wind Data Extracted from the Hong Kong Observatory (Cheung Chau)	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: D	CINOTECH

APPENDIX E
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - Noise Monitoring Results

Location NM1 - No. 28 Lung Tseng Tau					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	09:40	Cloudy	63.8	65.5	61.5
12-Aug-09	09:40	Cloudy	63.3	65.5	61.0
19-Aug-09	09:40	Fine	63.1	65.5	61.0
26-Aug-09	09:40	Cloudy	63.6	65.5	60.0
		Average	63.5	65.5	60.9
		Minimum	63.1	65.5	60.0
		Maximum	63.8	65.5	61.5

Location NM2 - YMCA of HK Christian College					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	09:00	Cloudy	52.3	54.5	50.5
12-Aug-09	09:00	Cloudy	52.6	53.5	49.5
19-Aug-09	09:00	Fine	51.8	53.0	49.5
26-Aug-09	09:00	Cloudy	52.1	53.5	49.5
		Average	52.2	53.7	49.8
		Minimum	51.8	53.0	49.5
		Maximum	52.6	54.5	50.5

Location NM3 - No. 37 Shek Lau Po					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	10:20	Cloudy	40.2	41.5	39.0
12-Aug-09	10:20	Cloudy	40.4	41.5	39.0
19-Aug-09	10:20	Fine	40.2	41.5	39.0
26-Aug-09	10:20	Cloudy	40.4	41.5	39.5
		Average	40.3	41.5	39.1
		Minimum	40.2	41.5	39.0
		Maximum	40.4	41.5	39.5

Location NM4 - No.1 Shek Mun Kap					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	11:00	Cloudy	52.1	53.5	49.5
12-Aug-09	11:00	Cloudy	51.8	53.5	49.5
19-Aug-09	11:00	Fine	51.6	53.0	48.0
26-Aug-09	11:00	Cloudy	52.6	54.0	51.0
		Average	52.0	53.5	49.6
		Minimum	51.6	53.0	48.0
		Maximum	52.6	54.0	51.0

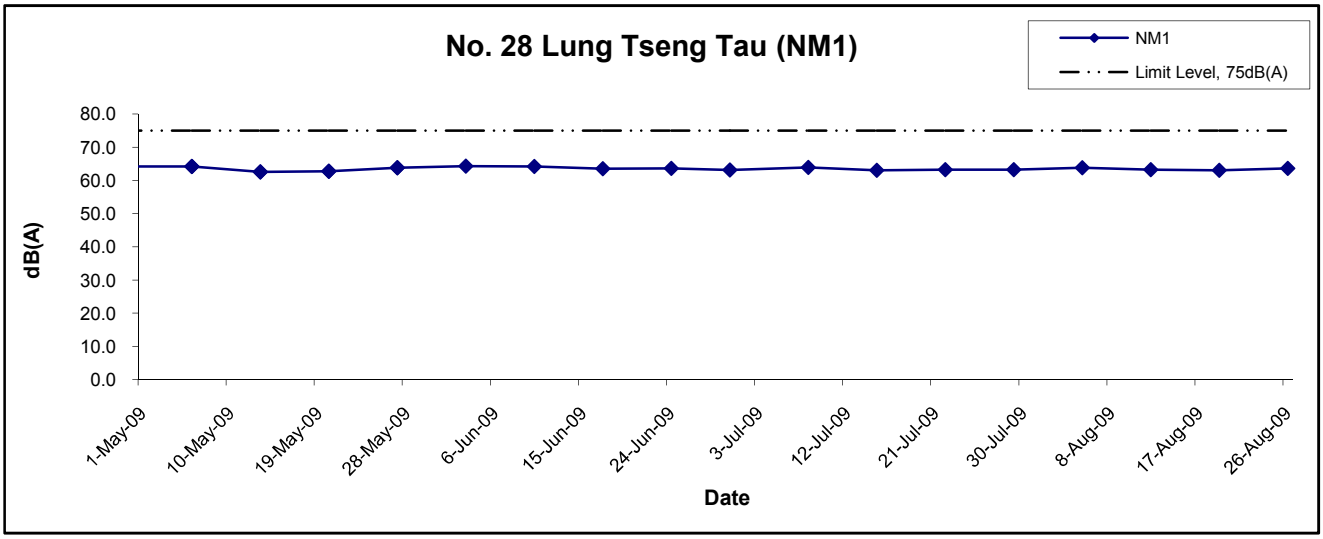
Appendix E - Noise Monitoring Results

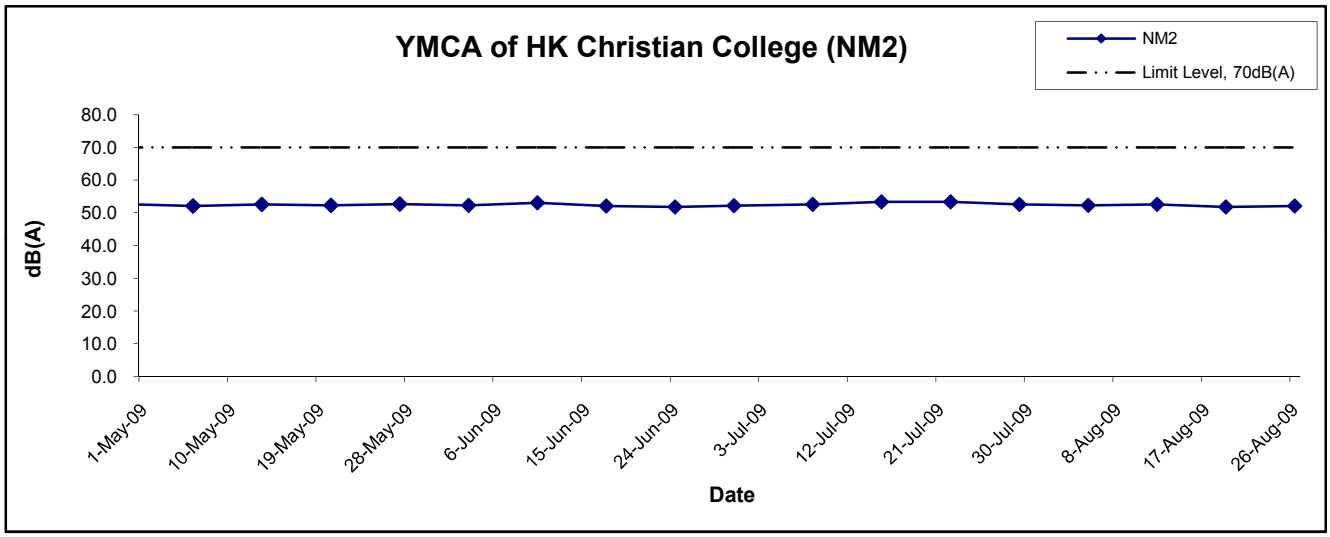
Location NM5 - Tung Chung Au Country Parks Management Centre					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	13:00	Cloudy	51.2	52.5	48.5
12-Aug-09	13:00	Cloudy	50.9	52.5	48.5
19-Aug-09	13:00	Fine	50.9	52.0	48.0
26-Aug-09	13:00	Cloudy	51.7	52.5	49.0
		Average	51.2	52.4	48.5
		Minimum	50.9	52.0	48.0
		Maximum	51.7	52.5	49.0

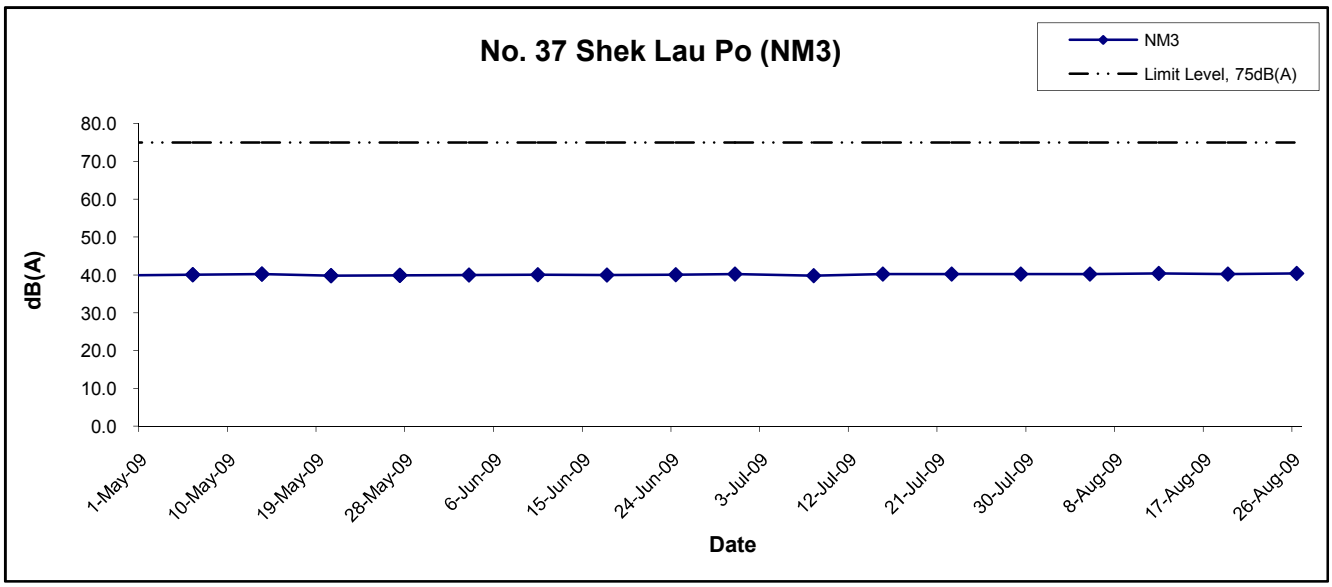
Location NM6 - D75 Leyburn Villa					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	13:45	Cloudy	40.1	41.0	39.0
12-Aug-09	13:45	Cloudy	40.1	41.0	39.0
19-Aug-09	13:45	Fine	40.1	41.0	39.0
26-Aug-09	13:40	Cloudy	40.2	41.0	39.0
		Average	40.1	41.0	39.0
		Minimum	40.1	41.0	39.0
		Maximum	40.2	41.0	39.0

Location NM8 - No. 31 South Lantau Road					
Date	Time	Weather	dB (A) (30-min)		
			L_{eq}	L_{10}	L_{90}
5-Aug-09	14:25	Cloudy	61.7	63.5	60.0
12-Aug-09	14:25	Cloudy	61.1	63.5	58.5
19-Aug-09	14:25	Fine	61.5	63.5	58.5
26-Aug-09	14:25	Cloudy	62.3	64.5	59.5
		Average	61.7	63.8	59.2
		Minimum	61.1	63.5	58.5
		Maximum	62.3	64.5	60.0

Noise Levels



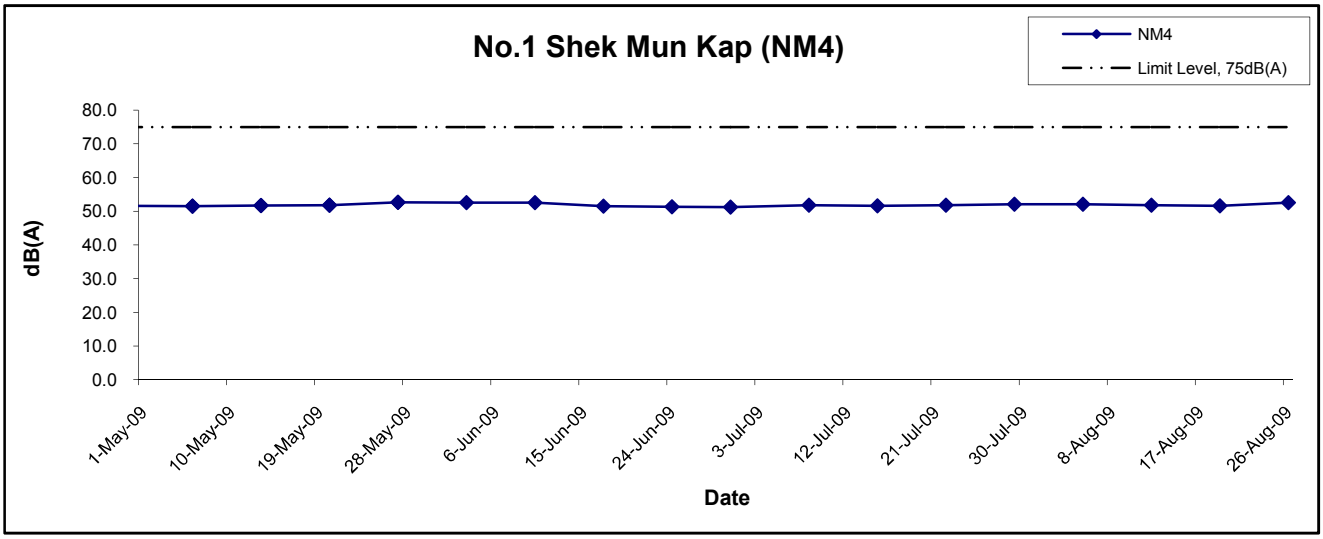


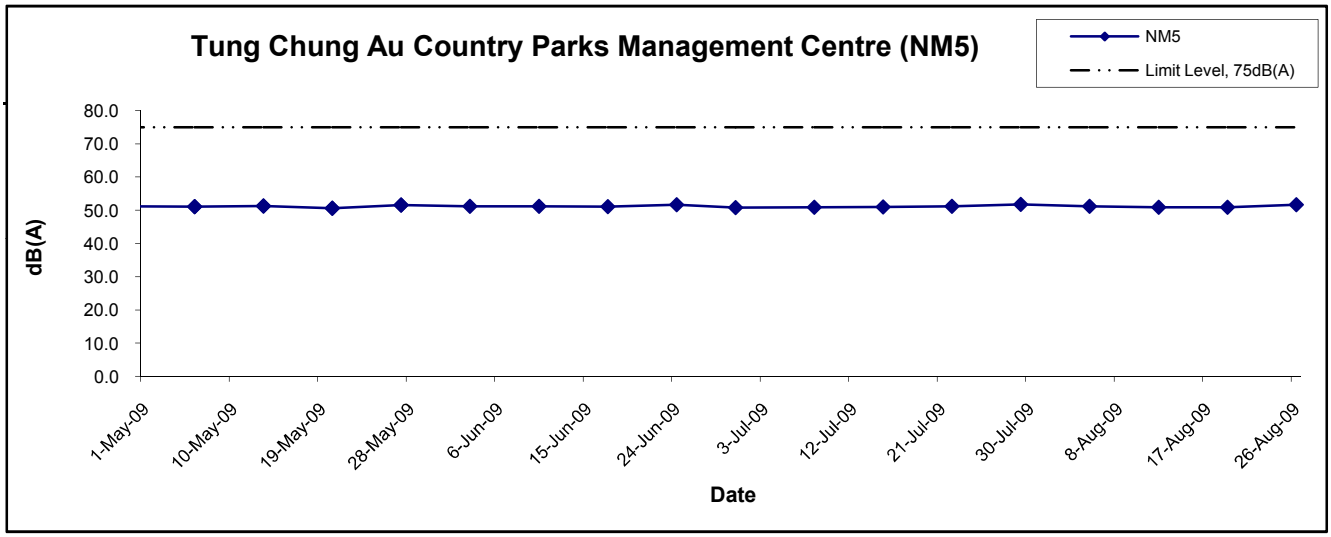


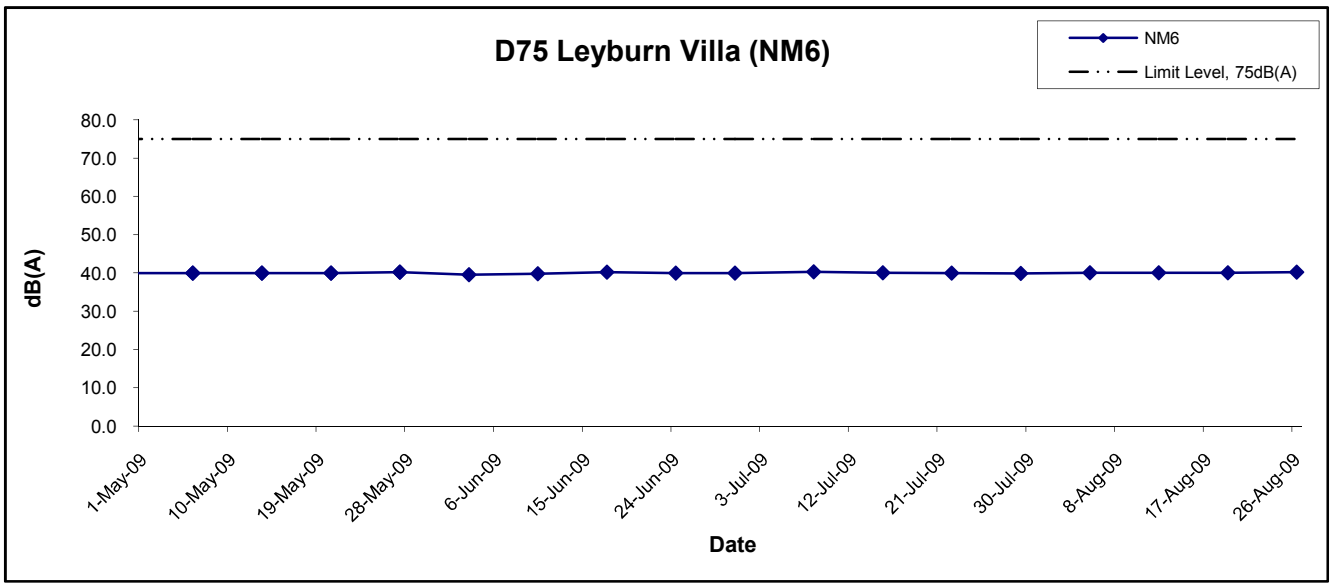
Title	Scale	Project No.
Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Construction Noise Monitoring Results	N.T.S	MA6030
	Date: Aug 09	Appendix: E

CINOTECH

Noise Levels

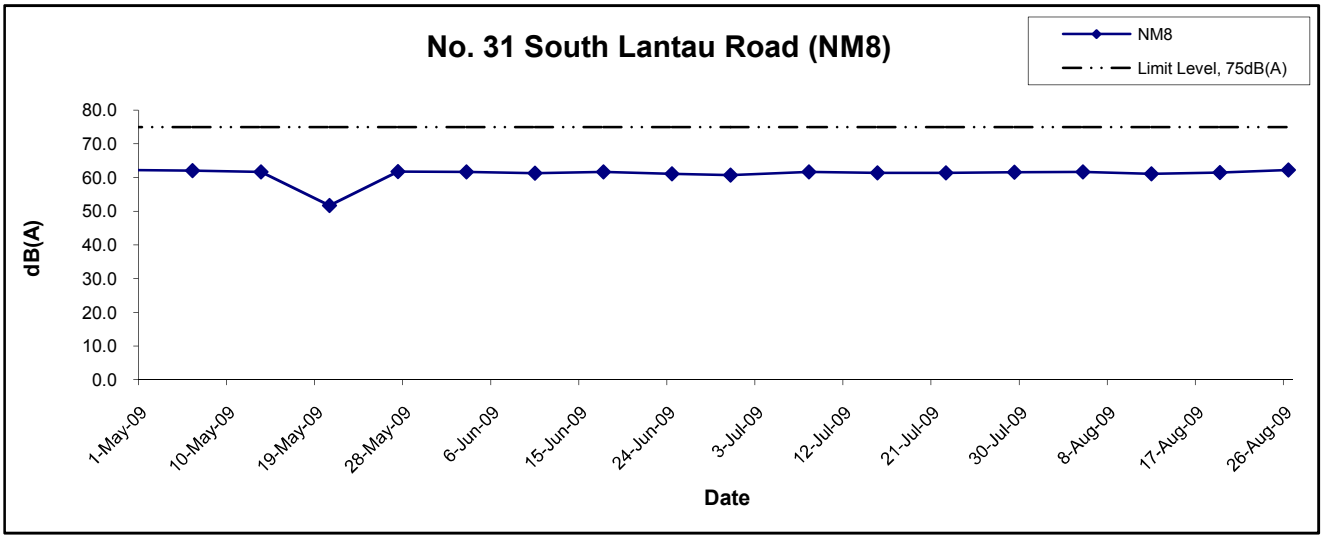






Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
	Date: Aug 09	Appendix: E	

Noise Levels



Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: E	CINOTECH

APPENDIX F
WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATION

Water Quality Monitoring Results at 15_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:21:53	Middle	0.09	19.2 19.2	19.2	7.6 7.6	7.6	0.05 0.05	0.05	94.7 94.5	94.6	7.5 7.5	7.5	1.7 1.6	1.7	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:38:13	Middle	0.09	19.0 19.0	19	7.5 7.5	7.5	0.05 0.05	0.05	97.1 96.9	97	7.7 7.6	7.7	1.8 1.7	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	11:14:51	Middle	0.09	19.1 19.1	19.1	7.5 7.5	7.5	0.03 0.03	0.03	96.2 96.0	96.1	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:23:41	Middle	0.09	18.3 18.3	18.3	7.5 7.5	7.5	0.02 0.02	0.02	93.2 93.0	93.1	7.8 7.8	7.8	1.5 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:35:54	Middle	0.09	18.7 18.7	18.7	7.5 7.5	7.5	0.02 0.02	0.02	94.0 93.8	93.9	7.7 7.6	7.7	1.6 1.7	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:28:37	Middle	0.09	19.2 19.2	19.2	7.5 7.5	7.5	0.02 0.02	0.02	92.3 92.1	92.2	7.4 7.3	7.4	1.6 1.7	1.7	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	12:00:20	Middle	0.09	18.4 18.4	18.4	7.5 7.5	7.5	0.02 0.02	0.02	91.7 91.5	91.6	7.5 7.5	7.5	1.4 1.6	1.5	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:30:50	Middle	0.09	18.6 18.6	18.6	7.5 7.5	7.5	0.02 0.02	0.02	91.8 91.6	91.7	7.7 7.7	7.7	1.6 1.7	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:31:54	Middle	0.09	19.7 19.7	19.7	7.7 7.7	7.7	0.02 0.02	0.02	91.9 91.7	91.8	7.6 7.6	7.6	1.7 1.8	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:57:59	Middle	0.09	18.6 18.6	18.6	7.6 7.6	7.6	0.02 0.02	0.02	91.5 91.3	91.4	7.4 7.4	7.4	1.6 1.7	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:25:28	Middle	0.09	19.1 19.1	19.1	7.6 7.6	7.6	0.02 0.02	0.02	91.1 90.9	91	7.3 7.3	7.3	1.6 1.8	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:50:08	Middle	0.09	19.0 19.1	19.1	7.6 7.6	7.6	0.02 0.02	0.02	91.8 91.6	91.7	7.4 7.4	7.4	1.4 1.6	1.5	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:45:16	Middle	0.09	19.2 19.2	19.2	7.5 7.5	7.5	0.02 0.02	0.02	95.3 95.1	95.2	7.6 7.6	7.6	1.6 1.6	1.6	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 15_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:15:13	Middle	0.08	19.1 19.1	19.1	7.7 7.7	7.7	0.05 0.05	0.05	90.2 90.1	90.2	7.1 7.1	7.1	1.6 1.6	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:31:33	Middle	0.08	18.9 18.9	18.9	7.6 7.6	7.6	0.05 0.05	0.05	92.6 92.5	92.6	7.2 7.2	7.2	1.7 1.7	1.7	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	11:08:11	Middle	0.08	19.0 19.0	19	7.6 7.6	7.6	0.03 0.03	0.03	91.3 91.2	91.3	7.1 7.1	7.1	1.6 1.7	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:17:01	Middle	0.08	18.2 18.2	18.2	7.5 7.5	7.5	0.02 0.02	0.02	91.0 90.9	91	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:29:14	Middle	0.08	18.7 18.7	18.7	7.6 7.6	7.6	0.02 0.02	0.02	90.3 90.2	90.3	7.3 7.3	7.3	1.7 1.8	1.8	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:21:57	Middle	0.08	19.2 19.2	19.2	7.5 7.5	7.5	0.02 0.02	0.02	90.7 90.6	90.7	7.2 7.2	7.2	1.7 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:53:39	Middle	0.08	18.4 18.4	18.4	7.5 7.5	7.5	0.02 0.02	0.02	90.8 90.7	90.8	7.4 7.4	7.4	1.5 1.5	1.5	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:24:10	Middle	0.08	18.5 18.5	18.5	7.5 7.5	7.5	0.02 0.02	0.02	91.6 91.5	91.6	7.7 7.6	7.7	1.6 1.6	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:25:14	Middle	0.08	19.6 19.6	19.6	7.7 7.7	7.7	0.02 0.02	0.02	86.7 86.5	86.6	7.1 7.1	7.1	1.7 1.8	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:51:19	Middle	0.08	18.6 18.6	18.6	7.6 7.6	7.6	0.02 0.02	0.02	89.1 88.9	89	7.2 7.2	7.2	1.6 1.7	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:18:48	Middle	0.08	19.1 19.1	19.1	7.5 7.6	7.6	0.02 0.02	0.02	90.2 90.0	90.1	7.2 7.2	7.2	1.6 1.7	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:43:28	Middle	0.08	19.0 19.0	19	7.6 7.6	7.6	0.02 0.02	0.02	86.2 86.0	86.1	6.9 6.9	6.9	1.5 1.6	1.6	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:38:36	Middle	0.08	19.1 19.2	19.2	7.6 7.6	7.6	0.02 0.02	0.02	90.2 90.1	90.2	7.1 7.1	7.1	1.6 1.7	1.7	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 18_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:07:00	Middle	0.1	19.0 19.0	19	7.7 7.7	7.7	0.05 0.05	0.05	93.1 93.4	93.3	7.4 7.4	7.4	1.6 1.5	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:23:20	Middle	0.1	18.8 18.8	18.8	7.7 7.7	7.7	0.05 0.05	0.05	95.5 95.8	95.7	7.5 7.6	7.6	1.8 1.7	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:59:58	Middle	0.1	18.9 18.9	18.9	7.7 7.7	7.7	0.03 0.03	0.03	94.6 94.9	94.8	7.5 7.5	7.5	1.6 1.6	1.6	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:08:48	Middle	0.1	18.1 18.1	18.1	7.7 7.7	7.7	0.02 0.02	0.02	92.3 92.4	92.4	7.7 7.7	7.7	1.5 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:21:01	Middle	0.1	18.5 18.5	18.5	7.8 7.8	7.8	0.02 0.02	0.02	92.7 92.9	92.8	7.6 7.6	7.6	1.6 1.7	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:13:44	Middle	0.1	19.0 19.0	19	7.7 7.7	7.7	0.02 0.02	0.02	91.5 91.6	91.6	7.3 7.3	7.3	1.7 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:43:29	Middle	0.1	18.2 18.2	18.2	7.7 7.7	7.7	0.02 0.02	0.02	91.1 91.1	91.1	7.4 7.4	7.4	1.5 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:15:57	Middle	0.1	18.4 18.4	18.4	7.7 7.7	7.7	0.02 0.02	0.02	91.5 91.5	91.5	7.7 7.7	7.7	1.6 1.6	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:17:01	Middle	0.1	19.4 19.4	19.4	7.9 7.9	7.9	0.02 0.02	0.02	90.2 90.5	90.4	7.5 7.5	7.5	1.8 1.8	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:43:06	Middle	0.1	18.4 18.4	18.4	7.8 7.8	7.8	0.02 0.02	0.02	90.5 90.6	90.6	7.4 7.4	7.4	1.8 1.8	1.8	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:10:35	Middle	0.1	18.9 18.9	18.9	7.8 7.8	7.8	0.02 0.02	0.02	90.5 90.5	90.5	7.3 7.3	7.3	1.9 1.9	1.9	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:35:15	Middle	0.1	18.8 18.9	18.9	7.9 7.9	7.9	0.02 0.02	0.02	90.0 90.2	90.1	7.3 7.3	7.3	1.7 1.7	1.7	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:30:23	Middle	0.1	19.0 19.0	19	7.8 7.8	7.8	0.02 0.02	0.02	93.7 94.0	93.9	7.5 7.5	7.5	1.7 1.7	1.7	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 18_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:03:11	Middle	0.175	19.0 19.0	19	7.7 7.7	7.7	0.05 0.05	0.05	92.9 93.0	93	7.4 7.4	7.4	1.6 1.5	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:19:31	Middle	0.175	18.8 18.8	18.8	7.7 7.7	7.7	0.05 0.05	0.05	95.3 95.4	95.4	7.5 7.5	7.5	1.8 1.7	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:56:09	Middle	0.175	18.9 18.9	18.9	7.7 7.7	7.7	0.03 0.03	0.03	94.4 94.5	94.5	7.5 7.5	7.5	1.7 1.6	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:04:59	Middle	0.175	18.1 18.1	18.1	7.7 7.7	7.7	0.02 0.02	0.02	92.4 92.2	92.3	7.7 7.7	7.7	1.5 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:17:12	Middle	0.175	18.5 18.5	18.5	7.8 7.8	7.8	0.02 0.02	0.02	92.7 92.6	92.7	7.6 7.6	7.6	1.7 1.7	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:09:55	Middle	0.175	19.0 19.0	19	7.7 7.7	7.7	0.02 0.02	0.02	91.7 91.4	91.6	7.3 7.3	7.3	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:39:40	Middle	0.175	18.2 18.2	18.2	7.7 7.7	7.7	0.02 0.02	0.02	91.2 91.0	91.1	7.5 7.4	7.5	1.5 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:12:08	Middle	0.175	18.3 18.3	18.3	7.7 7.7	7.7	0.02 0.02	0.02	91.7 91.4	91.6	7.7 7.7	7.7	1.6 1.6	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:13:12	Middle	0.175	19.4 19.4	19.4	7.9 7.9	7.9	0.02 0.02	0.02	90.1 90.0	90.1	7.5 7.4	7.5	1.9 1.9	1.9	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:39:17	Middle	0.175	18.4 18.4	18.4	7.9 7.8	7.9	0.02 0.02	0.02	90.6 90.3	90.5	7.4 7.3	7.4	1.8 1.8	1.8	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:06:46	Middle	0.175	18.9 18.9	18.9	7.8 7.8	7.8	0.02 0.02	0.02	90.7 90.3	90.5	7.3 7.3	7.3	1.9 1.9	1.9	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:31:26	Middle	0.175	18.8 18.8	18.8	7.9 7.9	7.9	0.02 0.02	0.02	89.8 89.7	89.8	7.3 7.3	7.3	1.8 1.8	1.8	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:26:34	Middle	0.175	19.0 19.0	19	7.8 7.8	7.8	0.02 0.02	0.02	93.5 93.6	93.6	7.4 7.5	7.5	1.8 1.7	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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 21_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:59:10	Middle	0.14	18.9 18.9	18.9	7.6 7.7	7.7	0.05 0.05	0.05	95.5 95.5	95.5	7.6 7.6	7.6	1.5 1.5	1.5	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:15:30	Middle	0.14	18.7 18.7	18.7	7.6 7.6	7.6	0.05 0.05	0.05	97.9 97.9	97.9	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:52:08	Middle	0.14	18.8 18.9	18.9	7.6 7.6	7.6	0.03 0.03	0.03	96.6 96.6	96.6	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:00:58	Middle	0.14	18.0 18.0	18	7.6 7.7	7.7	0.02 0.02	0.02	93.5 93.7	93.6	7.9 7.9	7.9	1.6 1.5	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:13:11	Middle	0.14	18.5 18.5	18.5	7.6 7.7	7.7	0.02 0.02	0.02	94.2 94.3	94.3	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:05:54	Middle	0.14	19.0 19.0	19	7.6 7.6	7.6	0.02 0.02	0.02	92.5 92.7	92.6	7.4 7.4	7.4	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:34:32	Middle	0.14	18.2 18.2	18.2	7.7 7.7	7.7	0.02 0.02	0.02	91.9 92.1	92	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:08:07	Middle	0.14	18.3 18.3	18.3	7.7 7.7	7.7	0.02 0.02	0.02	91.9 92.1	92	7.7 7.8	7.8	1.6 1.6	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:09:11	Middle	0.14	19.4 19.4	19.4	7.8 7.8	7.8	0.02 0.02	0.02	92.1 92.2	92.2	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:35:16	Middle	0.14	18.3 18.3	18.3	7.8 7.8	7.8	0.02 0.02	0.02	91.6 91.8	91.7	7.5 7.5	7.5	1.7 1.7	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:02:45	Middle	0.14	18.8 18.9	18.9	7.8 7.8	7.8	0.02 0.02	0.02	91.2 91.5	91.4	7.4 7.4	7.4	1.7 1.7	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:27:25	Middle	0.14	18.8 18.8	18.8	7.8 7.8	7.8	0.02 0.02	0.02	92.0 92.2	92.1	7.5 7.5	7.5	1.6 1.6	1.6	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:22:33	Middle	0.14	19.0 19.0	19	7.6 7.6	7.6	0.02 0.02	0.02	95.5 95.5	95.5	7.6 7.6	7.6	1.7 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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 21_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:54:48	Middle	0.1	18.9 18.9	18.9	7.7 7.7	7.7	0.05 0.05	0.05	95.9 95.7	95.8	7.6 7.6	7.6	1.6 1.5	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:11:08	Middle	0.1	18.7 18.7	18.7	7.6 7.6	7.6	0.05 0.05	0.05	98.3 98.1	98.2	7.8 7.7	7.8	1.8 1.7	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:47:46	Middle	0.1	18.8 18.8	18.8	7.6 7.6	7.6	0.03 0.03	0.03	97.0 96.8	96.9	7.7 7.7	7.7	1.8 1.7	1.8	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:56:36	Middle	0.1	18.0 18.0	18	7.7 7.7	7.7	0.02 0.02	0.02	94.3 93.9	94.1	7.9 7.9	7.9	1.6 1.5	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:08:49	Middle	0.1	18.4 18.5	18.5	7.7 7.7	7.7	0.02 0.02	0.02	94.8 94.5	94.7	7.8 7.7	7.8	1.8 1.7	1.8	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:01:32	Middle	0.1	18.9 18.9	18.9	7.7 7.6	7.7	0.02 0.02	0.02	93.3 92.9	93.1	7.5 7.5	7.5	1.9 1.8	1.9	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:30:07	Middle	0.1	18.1 18.2	18.2	7.7 7.7	7.7	0.02 0.02	0.02	92.8 92.3	92.6	7.6 7.6	7.6	1.7 1.6	1.7	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:03:45	Middle	0.1	18.3 18.3	18.3	7.7 7.7	7.7	0.02 0.02	0.02	92.8 92.3	92.6	7.8 7.8	7.8	1.6 1.6	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:04:49	Middle	0.1	19.3 19.4	19.4	7.8 7.8	7.8	0.02 0.02	0.02	93.0 92.5	92.8	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:30:54	Middle	0.1	18.3 18.3	18.3	7.8 7.8	7.8	0.02 0.02	0.02	92.6 92.1	92.4	7.6 7.5	7.6	1.7 1.7	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:58:23	Middle	0.1	18.8 18.8	18.8	7.8 7.8	7.8	0.02 0.02	0.02	92.3 91.7	92	7.5 7.4	7.5	1.7 1.7	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:23:03	Middle	0.1	18.7 18.8	18.8	7.8 7.8	7.8	0.02 0.02	0.02	93.0 92.4	92.7	7.6 7.5	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:18:11	Middle	0.1	18.9 18.9	18.9	7.6 7.6	7.6	0.02 0.02	0.02	95.9 95.7	95.8	7.7 7.7	7.7	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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 23_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:48:43	Middle	0.09	19.1 19.1	19.1	7.5 7.5	7.5	0.05 0.05	0.05	94.8 94.6	94.7	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:05:03	Middle	0.09	18.9 18.9	18.9	7.4 7.4	7.4	0.05 0.05	0.05	97.2 97.0	97.1	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:41:41	Middle	0.09	19.0 19.0	19	7.4 7.5	7.5	0.03 0.03	0.03	96.3 96.1	96.2	7.7 7.6	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:50:31	Middle	0.09	18.1 18.1	18.1	7.5 7.5	7.5	0.02 0.02	0.02	93.8 93.5	93.7	7.9 7.9	7.9	1.7 1.6	1.7	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:02:44	Middle	0.09	18.6 18.6	18.6	7.5 7.5	7.5	0.02 0.02	0.02	94.3 94.1	94.2	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:55:27	Middle	0.09	19.1 19.1	19.1	7.5 7.5	7.5	0.02 0.02	0.02	93.0 92.7	92.9	7.5 7.4	7.5	1.7 1.7	1.7	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:24:05	Middle	0.09	18.3 18.3	18.3	7.6 7.6	7.6	0.02 0.02	0.02	92.5 92.1	92.3	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:57:40	Middle	0.09	18.4 18.4	18.4	7.6 7.6	7.6	0.02 0.02	0.02	92.6 92.2	92.4	7.8 7.8	7.8	1.7 1.6	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:58:44	Middle	0.09	19.5 19.5	19.5	7.7 7.7	7.7	0.02 0.02	0.02	92.5 92.0	92.3	7.7 7.7	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:24:49	Middle	0.09	18.5 18.5	18.5	7.7 7.7	7.7	0.02 0.02	0.02	92.3 91.8	92.1	7.6 7.5	7.6	1.5 1.5	1.5	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:52:18	Middle	0.09	19.0 19.0	19	7.6 7.7	7.7	0.02 0.02	0.02	92.0 91.6	91.8	7.4 7.4	7.4	1.5 1.5	1.5	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:16:58	Middle	0.09	18.9 18.9	18.9	7.6 7.6	7.6	0.02 0.02	0.02	92.4 92.0	92.2	7.5 7.5	7.5	1.4 1.4	1.4	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:12:06	Middle	0.09	19.1 19.1	19.1	7.5 7.5	7.5	0.02 0.02	0.02	95.4 95.2	95.3	7.6 7.6	7.6	1.7 1.7	1.7	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 23_R1

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:35:44	Middle	0.09	19.0 19.0	19	7.5 7.5	7.5	0.05 0.05	0.05	95.2 94.9	95.1	7.6 7.6	7.6	1.6 1.7	1.7	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:52:04	Middle	0.09	18.8 18.8	18.8	7.4 7.4	7.4	0.05 0.05	0.05	97.6 97.3	97.5	7.7 7.7	7.7	1.8 1.9	1.9	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:28:42	Middle	0.09	18.9 18.9	18.9	7.4 7.4	7.4	0.03 0.03	0.03	96.7 96.4	96.6	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:37:32	Middle	0.09	18.1 18.1	18.1	7.5 7.5	7.5	0.02 0.02	0.02	95.1 94.5	94.8	8.0 7.9	8	1.7 1.7	1.7	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:49:45	Middle	0.09	18.5 18.5	18.5	7.5 7.5	7.5	0.02 0.02	0.02	95.2 94.7	95	7.8 7.8	7.8	1.8 1.7	1.8	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:42:28	Middle	0.09	19.0 19.0	19	7.5 7.5	7.5	0.02 0.02	0.02	94.4 93.7	94.1	7.6 7.6	7.6	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:11:05	Middle	0.09	18.2 18.2	18.2	7.6 7.6	7.6	0.02 0.02	0.02	94.1 93.4	93.8	7.8 7.7	7.8	1.8 1.8	1.8	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:44:41	Middle	0.09	18.3 18.4	18.4	7.6 7.6	7.6	0.02 0.02	0.02	94.3 93.5	93.9	8.0 7.9	8	1.7 1.8	1.8	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:45:45	Middle	0.09	19.4 19.4	19.4	7.7 7.7	7.7	0.02 0.02	0.02	93.7 93.0	93.4	7.8 7.8	7.8	1.8 1.8	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:11:50	Middle	0.09	18.4 18.4	18.4	7.7 7.7	7.7	0.02 0.02	0.02	93.9 93.1	93.5	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:39:19	Middle	0.09	18.9 18.9	18.9	7.6 7.6	7.6	0.02 0.02	0.02	93.8 93.0	93.4	7.6 7.6	7.6	1.7 1.7	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:03:59	Middle	0.09	18.8 18.9	18.9	7.6 7.6	7.6	0.02 0.02	0.02	93.7 93.0	93.4	7.7 7.6	7.7	1.6 1.5	1.6	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:59:07	Middle	0.09	19.0 19.0	19	7.4 7.5	7.5	0.02 0.02	0.02	95.8 95.5	95.7	7.7 7.6	7.7	1.8 1.7	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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 23_R2

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:41:41	Middle	0.1	19.0 19.0	19	7.5 7.5	7.5	0.05 0.05	0.05	95.4 95.3	95.4	7.6 7.6	7.6	1.7 1.5	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:58:01	Middle	0.1	18.8 18.8	18.8	7.4 7.4	7.4	0.05 0.05	0.05	97.8 97.7	97.8	7.8 7.8	7.8	1.9 1.7	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:34:39	Middle	0.1	18.9 18.9	18.9	7.4 7.4	7.4	0.03 0.03	0.03	96.9 96.8	96.9	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:43:29	Middle	0.1	18.1 18.1	18.1	7.5 7.5	7.5	0.02 0.02	0.02	94.8 94.6	94.7	8.0 8.0	8	1.6 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:55:42	Middle	0.1	18.5 18.6	18.6	7.5 7.5	7.5	0.02 0.02	0.02	95.1 95.0	95.1	7.8 7.8	7.8	1.7 1.7	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:48:25	Middle	0.1	19.0 19.0	19	7.5 7.5	7.5	0.02 0.02	0.02	94.1 93.9	94	7.6 7.6	7.6	1.8 1.7	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	11:17:06	Middle	0.1	18.2 18.3	18.3	7.6 7.6	7.6	0.02 0.02	0.02	93.7 93.4	93.6	7.7 7.7	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:50:38	Middle	0.1	18.4 18.4	18.4	7.6 7.6	7.6	0.02 0.02	0.02	93.8 93.5	93.7	7.9 7.9	7.9	1.7 1.6	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:51:42	Middle	0.1	19.4 19.5	19.5	7.7 7.7	7.7	0.02 0.02	0.02	93.7 93.4	93.6	7.8 7.8	7.8	1.7 1.7	1.7	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:17:47	Middle	0.1	18.4 18.4	18.4	7.7 7.7	7.7	0.02 0.02	0.02	93.6 93.3	93.5	7.7 7.7	7.7	1.7 1.7	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:45:16	Middle	0.1	18.9 18.9	18.9	7.7 7.6	7.7	0.02 0.02	0.02	93.4 93.1	93.3	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:09:56	Middle	0.1	18.9 18.9	18.9	7.6 7.6	7.6	0.02 0.02	0.02	93.7 93.4	93.6	7.6 7.6	7.6	1.5 1.5	1.5	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:05:04	Middle	0.1	19.0 19.0	19	7.5 7.5	7.5	0.02 0.02	0.02	96.0 95.9	96	7.7 7.7	7.7	1.7 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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 26_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:01:12	Middle	0.14	19.0 19.0	19	7.8 7.8	7.8	0.06 0.06	0.06	94.9 94.8	94.9	7.6 7.6	7.6	1.7 1.6	1.7	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:17:32	Middle	0.14	18.8 18.8	18.8	7.7 7.7	7.7	0.06 0.06	0.06	97.3 97.2	97.3	7.7 7.7	7.7	1.8 1.7	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	09:54:10	Middle	0.14	18.9 18.9	18.9	7.7 7.7	7.7	0.04 0.04	0.04	96.7 96.6	96.7	7.7 7.7	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:03:00	Middle	0.14	18.1 18.1	18.1	7.8 7.8	7.8	0.03 0.03	0.03	94.7 94.7	94.7	8.0 7.9	8	1.6 1.5	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:15:13	Middle	0.14	18.5 18.5	18.5	7.8 7.8	7.8	0.03 0.03	0.03	95.1 95.1	95.1	7.8 7.8	7.8	1.7 1.6	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:07:56	Middle	0.14	19.0 19.0	19	7.8 7.8	7.8	0.03 0.03	0.03	94.1 94.0	94.1	7.5 7.5	7.5	1.7 1.6	1.7	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:30:24	Middle	0.14	18.2 18.2	18.2	7.8 7.8	7.8	0.03 0.03	0.03	93.6 93.6	93.6	7.7 7.6	7.7	1.5 1.4	1.5	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:10:09	Middle	0.14	18.3 18.3	18.3	7.8 7.8	7.8	0.03 0.03	0.03	93.7 93.7	93.7	7.9 7.8	7.9	1.6 1.5	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:11:13	Middle	0.14	19.5 19.5	19.5	7.9 7.9	7.9	0.03 0.03	0.03	93.7 93.6	93.7	7.8 7.7	7.8	1.9 1.8	1.9	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	10:37:18	Middle	0.14	18.4 18.4	18.4	7.9 7.9	7.9	0.03 0.03	0.03	93.6 93.5	93.6	7.6 7.6	7.6	1.7 1.6	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:04:47	Middle	0.14	18.9 18.9	18.9	7.9 7.9	7.9	0.03 0.03	0.03	93.4 93.3	93.4	7.5 7.5	7.5	1.7 1.6	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:29:27	Middle	0.14	18.8 18.8	18.8	7.9 7.9	7.9	0.03 0.03	0.03	93.8 93.6	93.7	7.6 7.6	7.6	1.7 1.8	1.8	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:24:35	Middle	0.14	19.0 19.0	19	7.7 7.7	7.7	0.03 0.03	0.03	96.0 95.9	96	7.7 7.6	7.7	1.7 1.6	1.7	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 26_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:25:32	Middle	0.09	19.0 19.1	19.1	7.7 7.7	7.7	0.05 0.05	0.05	94.8 94.6	94.7	7.6 7.6	7.6	1.8 1.8	1.8	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:41:52	Middle	0.09	18.9 18.9	18.9	7.6 7.6	7.6	0.05 0.05	0.05	97.2 97.0	97.1	7.7 7.7	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:18:30	Middle	0.09	19.0 19.0	19	7.6 7.6	7.6	0.03 0.03	0.03	96.6 96.4	96.5	7.7 7.7	7.7	1.8 1.9	1.9	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:27:20	Middle	0.09	18.2 18.2	18.2	7.7 7.7	7.7	0.03 0.03	0.03	94.2 93.9	94.1	7.9 7.9	7.9	1.7 1.6	1.7	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:39:33	Middle	0.09	18.6 18.6	18.6	7.7 7.7	7.7	0.02 0.02	0.02	94.8 94.6	94.7	7.8 7.8	7.8	1.8 1.8	1.8	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:32:16	Middle	0.09	19.1 19.1	19.1	7.7 7.7	7.7	0.02 0.02	0.02	93.5 93.1	93.3	7.5 7.5	7.5	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:59:49	Middle	0.09	18.3 18.3	18.3	7.8 7.8	7.8	0.02 0.02	0.02	92.9 92.5	92.7	7.6 7.6	7.6	1.6 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:34:29	Middle	0.09	18.4 18.5	18.5	7.8 7.8	7.8	0.02 0.02	0.02	93.0 92.6	92.8	7.8 7.8	7.8	1.6 1.6	1.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:35:33	Middle	0.09	19.6 19.6	19.6	7.9 7.9	7.9	0.02 0.02	0.02	93.3 92.8	93.1	7.7 7.7	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	11:01:38	Middle	0.09	18.5 18.5	18.5	7.9 7.9	7.9	0.02 0.02	0.02	92.9 92.4	92.7	7.6 7.6	7.6	1.7 1.8	1.8	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:29:07	Middle	0.09	19.0 19.0	19	7.8 7.8	7.8	0.02 0.02	0.02	92.6 92.1	92.4	7.5 7.4	7.5	1.8 1.9	1.9	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:53:47	Middle	0.09	18.9 18.9	18.9	7.8 7.8	7.8	0.02 0.02	0.02	93.3 92.8	93.1	7.6 7.6	7.6	1.6 1.7	1.7	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:48:55	Middle	0.09	19.1 19.1	19.1	7.6 7.6	7.6	0.02 0.02	0.02	95.9 95.7	95.8	7.7 7.7	7.7	1.7 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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 27_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:19:24	Middle	0.08	19.0 19.0	19	7.7 7.7	7.7	0.05 0.05	0.05	94.8 94.6	94.7	7.6 7.6	7.6	1.7 1.7	1.7	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:35:44	Middle	0.08	18.8 18.8	18.8	7.6 7.6	7.6	0.05 0.05	0.05	97.2 97.0	97.1	7.7 7.7	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:12:22	Middle	0.08	18.9 18.9	18.9	7.6 7.6	7.6	0.03 0.03	0.03	96.6 96.4	96.5	7.7 7.7	7.7	1.7 1.8	1.8	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:21:12	Middle	0.08	18.1 18.1	18.1	7.7 7.7	7.7	0.03 0.03	0.03	94.9 94.7	94.8	8.0 8.0	8	1.6 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:33:25	Middle	0.08	18.5 18.5	18.5	7.7 7.7	7.7	0.02 0.02	0.02	95.2 95.0	95.1	7.8 7.8	7.8	1.8 1.9	1.9	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:26:08	Middle	0.08	19.0 19.0	19	7.7 7.7	7.7	0.02 0.02	0.02	94.3 94.2	94.3	7.6 7.6	7.6	1.8 1.8	1.8	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:53:36	Middle	0.08	18.2 18.3	18.3	7.8 7.8	7.8	0.02 0.02	0.02	93.9 93.8	93.9	7.8 7.7	7.8	1.6 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:28:21	Middle	0.08	18.4 18.4	18.4	7.8 7.8	7.8	0.02 0.02	0.02	94.0 93.9	94	8.0 7.9	8	1.7 1.7	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:29:25	Middle	0.08	19.5 19.5	19.5	7.9 7.9	7.9	0.02 0.02	0.02	93.7 93.5	93.6	7.8 7.8	7.8	1.9 2.0	2	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	10:55:30	Middle	0.08	18.4 18.5	18.5	7.9 7.9	7.9	0.02 0.02	0.02	93.8 93.6	93.7	7.7 7.7	7.7	1.8 1.9	1.9	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:22:59	Middle	0.08	18.9 19.0	19	7.8 7.8	7.8	0.02 0.02	0.02	93.7 93.5	93.6	7.6 7.6	7.6	1.9 1.9	1.9	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:47:39	Middle	0.08	18.8 18.9	18.9	7.8 7.8	7.8	0.02 0.02	0.02	93.8 93.6	93.7	7.7 7.6	7.7	1.8 1.8	1.8	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:42:47	Middle	0.08	19.0 19.0	19	7.6 7.6	7.6	0.02 0.02	0.02	95.9 95.7	95.8	7.7 7.7	7.7	1.7 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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 27_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	11:09:42	Middle	0.13	19.0 18.9	19	7.7 7.7	7.7	0.05 0.05	0.05	95.7 95.4	95.6	7.7 7.7	7.7	1.8 1.7	1.8	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:26:02	Middle	0.13	18.8 18.8	18.8	7.6 7.6	7.6	0.05 0.05	0.05	98.1 97.8	98	7.8 7.8	7.8	1.9 1.8	1.9	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	10:02:40	Middle	0.13	18.9 18.9	18.9	7.6 7.6	7.6	0.03 0.03	0.03	97.5 97.2	97.4	7.8 7.8	7.8	1.8 1.8	1.8	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	12:11:30	Middle	0.13	18.1 18.1	18.1	7.7 7.7	7.7	0.03 0.03	0.03	96.0 95.6	95.8	8.1 8.1	8.1	1.6 1.6	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:23:43	Middle	0.13	18.5 18.5	18.5	7.7 7.7	7.7	0.02 0.02	0.02	96.2 95.8	96	7.9 7.9	7.9	1.9 1.9	1.9	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	11:16:26	Middle	0.13	19.0 19.0	19	7.7 7.7	7.7	0.02 0.02	0.02	95.5 95.1	95.3	7.7 7.7	7.7	1.8 1.9	1.9	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:38:56	Middle	0.13	18.2 18.2	18.2	7.8 7.8	7.8	0.02 0.02	0.02	95.2 94.7	95	7.9 7.8	7.9	1.6 1.6	1.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	13:18:39	Middle	0.13	18.3 18.3	18.3	7.8 7.8	7.8	0.02 0.02	0.02	95.3 94.9	95.1	8.1 8.0	8.1	1.7 1.7	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	09:19:43	Middle	0.13	19.5 19.5	19.5	7.9 7.9	7.9	0.02 0.02	0.02	95.3 94.8	95.1	8.0 7.9	8	2.0 2.0	2	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	10:45:48	Middle	0.13	18.4 18.4	18.4	7.9 7.9	7.9	0.02 0.02	0.02	95.3 94.8	95.1	7.9 7.8	7.9	1.9 1.9	1.9	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	12:13:17	Middle	0.13	18.9 18.9	18.9	7.9 7.9	7.9	0.02 0.02	0.02	95.1 94.6	94.9	7.8 7.7	7.8	1.9 2.0	2	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:37:57	Middle	0.13	18.8 18.8	18.8	7.8 7.8	7.8	0.02 0.02	0.02	95.4 94.9	95.2	7.8 7.8	7.8	1.8 1.9	1.9	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:33:05	Middle	0.13	19.0 19.0	19	7.7 7.7	7.7	0.02 0.02	0.02	96.8 96.5	96.7	7.8 7.7	7.8	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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 40_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	10:41:26	Middle	0.09	19.2 19.2	19.2	7.7 7.7	7.7	0.08 0.08	0.08	94.9 94.7	94.8	7.5 7.5	7.5	2.1 2.2	2.2	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	12:57:46	Middle	0.09	19.0 19.0	19	7.7 7.7	7.7	0.08 0.08	0.08	97.3 97.1	97.2	7.6 7.6	7.6	2.3 2.4	2.4	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	09:34:24	Middle	0.09	19.1 19.1	19.1	7.6 7.6	7.6	0.07 0.07	0.07	97.0 96.8	96.9	7.6 7.6	7.6	2.1 2.1	2.1	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	11:43:14	Middle	0.09	18.3 18.3	18.3	7.7 7.7	7.7	0.06 0.06	0.06	97.8 97.6	97.7	8.1 8.1	8.1	1.8 1.8	1.8	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	13:55:27	Middle	0.09	18.7 18.7	18.7	7.7 7.7	7.7	0.06 0.06	0.06	97.0 96.8	96.9	7.8 7.8	7.8	2.0 2.0	2	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	10:48:10	Middle	0.09	19.2 19.2	19.2	7.7 7.7	7.7	0.06 0.06	0.06	97.8 97.6	97.7	7.7 7.7	7.7	2.0 2.0	2	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:10:25	Middle	0.09	18.5 18.5	18.5	7.8 7.7	7.8	0.05 0.05	0.05	98.0 97.8	97.9	7.9 7.9	7.9	1.8 1.8	1.8	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	12:50:23	Middle	0.09	18.6 18.6	18.6	7.8 7.8	7.8	0.05 0.05	0.05	98.2 98.0	98.1	8.1 8.1	8.1	1.8 1.8	1.8	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	08:51:27	Middle	0.09	19.7 19.7	19.7	7.9 7.8	7.9	0.05 0.05	0.05	96.6 96.4	96.5	7.8 7.8	7.8	2.1 2.1	2.1	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	10:17:32	Middle	0.09	18.6 18.7	18.7	7.8 7.8	7.8	0.05 0.05	0.05	97.8 97.6	97.7	7.8 7.8	7.8	2.0 2.0	2	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	11:45:01	Middle	0.09	19.2 19.2	19.2	7.8 7.8	7.8	0.05 0.05	0.05	98.3 98.1	98.2	7.7 7.7	7.7	2.0 2.0	2	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:09:41	Middle	0.09	19.1 19.1	19.1	7.8 7.8	7.8	0.06 0.06	0.06	96.9 96.7	96.8	7.7 7.6	7.7	1.9 1.9	1.9	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:33:05	Middle	0.13	19.0 19.0	19	7.7 7.7	7.7	0.02 0.02	0.02	96.8 96.5	96.7	7.8 7.7	7.8	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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at 40_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	10:36:01	Middle	0.2	19.2 19.2	19.2	7.8 7.8	7.8	0.08 0.08	0.08	95.4 95.4	95.4	7.6 7.6	7.6	2.0 2.1	2.1	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	12:52:21	Middle	0.2	19.0 19.0	19	7.8 7.7	7.8	0.08 0.08	0.08	97.8 97.8	97.8	7.7 7.7	7.7	2.2 2.3	2.3	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	09:28:59	Middle	0.2	19.1 19.1	19.1	7.7 7.7	7.7	0.07 0.07	0.07	97.5 97.5	97.5	7.7 7.7	7.7	2.0 2.1	2.1	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	11:37:49	Middle	0.2	18.3 18.3	18.3	7.8 7.8	7.8	0.06 0.06	0.06	98.8 98.9	98.9	8.2 8.2	8.2	1.8 1.9	1.9	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	13:50:02	Middle	0.2	18.7 18.7	18.7	7.8 7.8	7.8	0.06 0.06	0.06	97.8 97.8	97.8	7.9 7.9	7.9	2.0 2.1	2.1	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	10:42:45	Middle	0.2	19.2 19.2	19.2	7.7 7.7	7.7	0.06 0.06	0.06	97.9 98.0	98	7.8 7.8	7.8	2.1 2.1	2.1	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:05:01	Middle	0.2	18.4 18.4	18.4	7.8 7.8	7.8	0.05 0.05	0.05	98.1 98.3	98.2	8.0 8.0	8	1.8 1.9	1.9	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	12:44:58	Middle	0.2	18.6 18.6	18.6	7.8 7.8	7.8	0.05 0.05	0.05	99.0 99.1	99.1	8.3 8.3	8.3	1.9 1.9	1.9	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	08:46:02	Middle	0.2	19.7 19.7	19.7	7.9 7.9	7.9	0.06 0.06	0.06	97.5 97.6	97.6	8.0 8.0	8	2.2 2.1	2.2	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	10:12:07	Middle	0.2	18.6 18.6	18.6	7.9 7.9	7.9	0.05 0.05	0.05	97.9 98.1	98	7.9 7.9	7.9	2.1 2.0	2.1	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	11:39:36	Middle	0.2	19.1 19.1	19.1	7.9 7.8	7.9	0.05 0.05	0.05	98.0 98.2	98.1	7.8 7.8	7.8	2.1 2.0	2.1	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:04:16	Middle	0.2	19.1 19.1	19.1	7.9 7.9	7.9	0.06 0.06	0.06	97.3 97.4	97.4	7.8 7.8	7.8	2.0 1.9	2	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	09:59:24	Middle	0.2	19.2 19.2	19.2	7.7 7.7	7.7	0.07 0.06	0.07	97.1 97.1	97.1	7.7 7.7	7.7	2.1 2.1	2.1	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at CSS_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	10:47:57	Middle	0.19	19.1 19.1	19.1	7.7 7.7	7.7	0.06 0.06	0.06	95.8 95.8	95.8	7.6 7.6	7.6	2.0 2.0	2	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	13:04:17	Middle	0.19	18.9 18.9	18.9	7.6 7.6	7.6	0.06 0.06	0.06	98.2 98.2	98.2	7.8 7.7	7.8	2.2 2.1	2.2	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	09:40:55	Middle	0.19	19.0 19.0	19	7.6 7.6	7.6	0.04 0.04	0.04	97.6 97.6	97.6	7.7 7.7	7.7	2.0 1.9	2	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	11:49:45	Middle	0.19	18.1 18.1	18.1	7.7 7.7	7.7	0.03 0.03	0.03	97.5 97.6	97.6	8.2 8.2	8.2	1.8 1.7	1.8	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	14:01:58	Middle	0.19	18.6 18.6	18.6	7.7 7.7	7.7	0.03 0.03	0.03	97.0 97.0	97	7.9 7.9	7.9	2.0 1.9	2	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	10:54:41	Middle	0.19	19.1 19.1	19.1	7.7 7.7	7.7	0.03 0.03	0.03	97.3 97.3	97.3	7.7 7.7	7.7	2.1 2.0	2.1	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	10:19:02	Middle	0.19	18.3 18.3	18.3	7.8 7.8	7.8	0.03 0.03	0.03	97.3 97.4	97.4	7.9 7.9	7.9	1.8 1.7	1.8	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	12:56:54	Middle	0.19	18.4 18.4	18.4	7.8 7.8	7.8	0.03 0.03	0.03	97.5 97.6	97.6	8.1 8.1	8.1	1.7 1.6	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	08:57:58	Middle	0.19	19.5 19.6	19.6	7.9 7.9	7.9	0.02 0.02	0.02	96.5 96.5	96.5	7.9 7.9	7.9	2.1 2.1	2.1	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	10:24:03	Middle	0.19	18.5 18.5	18.5	7.9 7.9	7.9	0.02 0.02	0.02	97.2 97.3	97.3	7.8 7.8	7.8	2.0 2.0	2	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	11:51:33	Middle	0.19	19.0 19.0	19	7.8 7.9	7.9	0.03 0.03	0.03	97.4 97.5	97.5	7.7 7.7	7.7	2.2 2.1	2.2	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	09:16:12	Middle	0.19	18.9 18.9	18.9	7.8 7.8	7.8	0.03 0.03	0.03	96.7 96.7	96.7	7.7 7.7	7.7	2.0 2.0	2	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	10:11:20	Middle	0.19	19.1 19.1	19.1	7.6 7.7	7.7	0.03 0.03	0.03	96.9 96.9	96.9	7.7 7.7	7.7	2.0 1.9	2	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at TCB_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:51:15	Middle	0.35	21.4 21.4	21.4	7.5 7.5	7.5	10.10 10.07	10.09	93.2 93.0	93.1	7.3 7.3	7.3	3.6 3.5	3.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	15:07:35	Middle	0.35	21.2 21.2	21.2	7.4 7.4	7.4	9.86 9.83	9.85	95.6 95.4	95.5	7.4 7.4	7.4	3.7 3.6	3.7	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	11:44:13	Middle	0.35	21.2 21.2	21.2	7.4 7.4	7.4	9.41 9.38	9.4	95.3 95.1	95.2	7.4 7.4	7.4	3.3 3.2	3.3	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:53:03	Middle	0.35	19.3 19.3	19.3	7.4 7.4	7.4	10.74 10.74	10.74	96.0 95.8	95.9	7.8 7.8	7.8	3.7 3.7	3.7	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	16:05:16	Middle	0.35	20.3 20.3	20.3	7.4 7.4	7.4	9.77 9.75	9.76	95.3 95.1	95.2	7.6 7.5	7.6	3.5 3.5	3.5	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:57:59	Middle	0.35	20.7 20.7	20.7	7.3 7.3	7.3	11.27 11.25	11.26	96.0 95.8	95.9	7.4 7.4	7.4	3.7 3.6	3.7	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	12:30:42	Middle	0.35	19.2 19.2	19.2	7.4 7.4	7.4	11.69 11.68	11.69	96.1 95.9	96	7.5 7.5	7.5	3.6 3.5	3.6	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	15:00:12	Middle	0.35	19.0 19.0	19	7.4 7.4	7.4	11.80 11.81	11.81	96.6 96.4	96.5	7.8 7.8	7.8	3.2 3.2	3.2	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	11:01:16	Middle	0.35	20.5 20.5	20.5	7.5 7.5	7.5	10.23 10.23	10.23	94.1 93.9	94	7.5 7.4	7.5	3.5 3.4	3.5	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	12:27:21	Middle	0.35	19.8 19.8	19.8	7.5 7.5	7.5	11.47 11.47	11.47	95.6 95.4	95.5	7.4 7.4	7.4	3.5 3.4	3.5	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:54:50	Middle	0.35	20.4 20.4	20.4	7.4 7.4	7.4	12.16 12.15	12.16	96.2 96.0	96.1	7.4 7.4	7.4	3.5 3.4	3.5	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	11:19:30	Middle	0.35	20.4 20.4	20.4	7.5 7.5	7.5	10.42 10.41	10.42	94.2 93.9	94.1	7.3 7.2	7.3	3.3 3.2	3.3	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	12:14:38	Middle	0.35	21.3 21.3	21.3	7.4 7.4	7.4	8.88 8.86	8.87	94.9 94.7	94.8	7.4 7.4	7.4	3.5 3.4	3.5	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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Water Quality Monitoring Results at TCB_R

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:46:12	Middle	0.2	21.5 21.5	21.5	7.2 7.3	7.3	19.94 19.96	19.95	95.5 95.4	95.5	7.3 7.3	7.3	4.3 4.4	4.4	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	15:02:32	Middle	0.2	21.3 21.3	21.3	7.1 7.2	7.2	19.78 19.80	19.79	97.9 97.8	97.9	7.4 7.4	7.4	4.4 4.5	4.5	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	11:39:10	Middle	0.2	21.3 21.3	21.3	7.1 7.2	7.2	19.40 19.42	19.41	97.3 97.2	97.3	7.4 7.4	7.4	4.3 4.3	4.3	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:48:00	Middle	0.2	19.4 19.4	19.4	7.3 7.3	7.3	19.16 19.18	19.17	96.4 96.2	96.3	7.7 7.7	7.7	3.9 3.9	3.9	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	16:00:13	Middle	0.2	20.3 20.3	20.3	7.2 7.2	7.2	19.12 19.14	19.13	96.3 96.1	96.2	7.5 7.5	7.5	4.1 4.0	4.1	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:52:56	Middle	0.2	20.8 20.8	20.8	7.3 7.3	7.3	19.10 19.12	19.11	96.0 95.8	95.9	7.3 7.3	7.3	4.3 4.3	4.3	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	12:25:42	Middle	0.2	19.2 19.3	19.3	7.4 7.4	7.4	19.06 19.07	19.07	95.8 95.6	95.7	7.5 7.4	7.5	4.1 4.1	4.1	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:55:09	Middle	0.2	19.0 19.0	19	7.4 7.4	7.4	19.17 19.19	19.18	96.0 95.8	95.9	7.7 7.7	7.7	4.5 4.6	4.6	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:56:13	Middle	0.2	20.6 20.6	20.6	7.4 7.4	7.4	19.39 19.42	19.41	95.5 95.2	95.4	7.4 7.3	7.4	4.5 4.5	4.5	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	12:22:18	Middle	0.2	19.8 19.8	19.8	7.4 7.5	7.5	19.21 19.23	19.22	95.8 95.6	95.7	7.3 7.3	7.3	4.4 4.5	4.5	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:49:47	Middle	0.2	20.5 20.5	20.5	7.4 7.4	7.4	19.19 19.20	19.2	95.8 95.6	95.7	7.3 7.3	7.3	4.3 4.4	4.4	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	11:14:27	Middle	0.2	20.5 20.5	20.5	7.4 7.4	7.4	19.42 19.44	19.43	95.6 95.4	95.5	7.2 7.2	7.2	4.2 4.2	4.2	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	12:09:35	Middle	0.2	21.3 21.3	21.3	7.2 7.2	7.2	19.39 19.42	19.41	96.6 96.5	96.6	7.4 7.3	7.4	4.4 4.3	4.4	<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.

Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

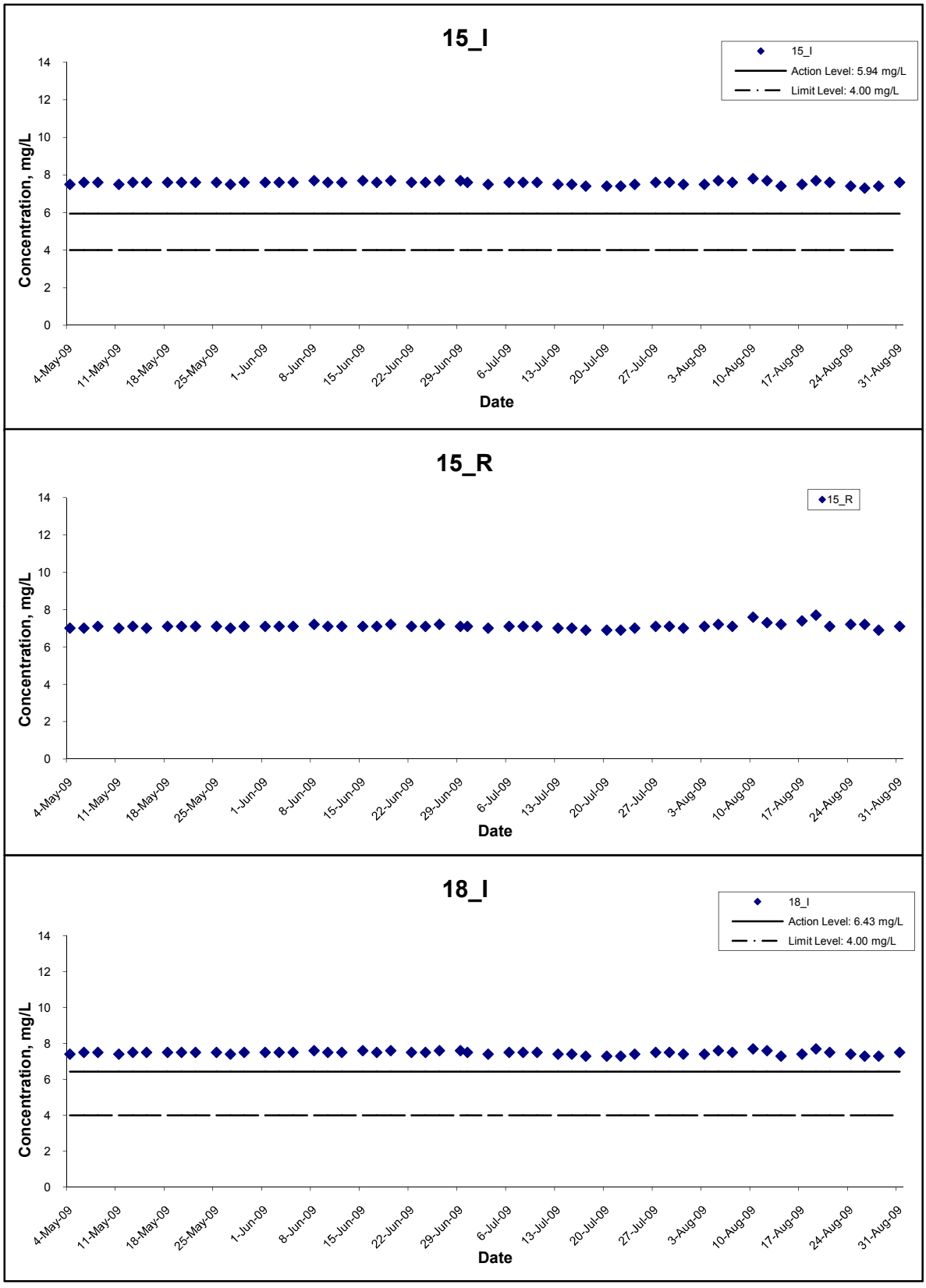
Water Quality Monitoring Results at TCS_I

Date	Weather Condition	Sea Condition*	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3-Aug-09	Cloudy	Calm	12:28:27	Middle	0.2	19.0 19.0	19	7.5 7.5	7.5	0.05 0.05	0.05	95.5 95.1	95.3	7.6 7.6	7.6	1.6 1.5	1.6	<2.5 <2.5	<2.5
5-Aug-09	Rainy	Calm	14:44:47	Middle	0.2	18.8 18.8	18.8	7.4 7.4	7.4	0.05 0.05	0.05	97.9 97.5	97.7	7.7 7.7	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
7-Aug-09	Sunny	Calm	11:21:25	Middle	0.2	18.9 18.9	18.9	7.4 7.4	7.4	0.03 0.03	0.03	97.0 96.6	96.8	7.7 7.6	7.7	1.6 1.5	1.6	<2.5 <2.5	<2.5
10-Aug-09	Rainy	Calm	13:30:15	Middle	0.2	18.1 18.1	18.1	7.4 7.4	7.4	0.02 0.02	0.02	94.3 93.9	94.1	7.8 7.8	7.8	1.6 1.5	1.6	<2.5 <2.5	<2.5
12-Aug-09	Fine	Calm	15:42:28	Middle	0.2	18.5 18.5	18.5	7.4 7.4	7.4	0.02 0.02	0.02	94.9 94.5	94.7	7.7 7.7	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
14-Aug-09	Rainy	Calm	12:35:11	Middle	0.2	19.0 19.0	19	7.4 7.4	7.4	0.02 0.02	0.02	93.4 93.0	93.2	7.4 7.3	7.4	1.7 1.7	1.7	<2.5 <2.5	<2.5
17-Aug-09	Sunny	Calm	12:06:51	Middle	0.2	18.2 18.2	18.2	7.5 7.5	7.5	0.02 0.02	0.02	92.9 92.5	92.7	7.5 7.5	7.5	1.7 1.7	1.7	<2.5 <2.5	<2.5
19-Aug-09	Sunny	Calm	14:37:24	Middle	0.2	18.3 18.4	18.4	7.5 7.5	7.5	0.02 0.02	0.02	93.0 92.7	92.9	7.7 7.7	7.7	1.7 1.6	1.7	<2.5 <2.5	<2.5
21-Aug-09	Sunny	Calm	10:38:28	Middle	0.2	19.4 19.4	19.4	7.6 7.6	7.6	0.02 0.02	0.02	93.3 92.8	93.1	7.6 7.6	7.6	1.8 1.7	1.8	<2.5 <2.5	<2.5
24-Aug-09	Sunny	Calm	12:04:33	Middle	0.2	18.4 18.4	18.4	7.6 7.6	7.6	0.02 0.02	0.02	92.8 92.4	92.6	7.4 7.4	7.4	1.7 1.6	1.7	<2.5 <2.5	<2.5
26-Aug-09	Sunny	Calm	13:32:02	Middle	0.2	18.9 18.9	18.9	7.5 7.5	7.5	0.02 0.02	0.02	92.4 92.0	92.2	7.3 7.3	7.3	1.7 1.7	1.7	<2.5 <2.5	<2.5
28-Aug-09	Sunny	Calm	10:56:42	Middle	0.2	18.8 18.8	18.8	7.5 7.5	7.5	0.02 0.02	0.02	93.3 92.7	93	7.4 7.4	7.4	1.6 1.5	1.6	<2.5 <2.5	<2.5
31-Aug-09	Cloudy	Calm	11:51:50	Middle	0.2	19.0 19.0	19	7.4 7.4	7.4	0.02 0.02	0.02	96.1 95.7	95.9	7.6 7.6	7.6	1.7 1.6	1.7	<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.

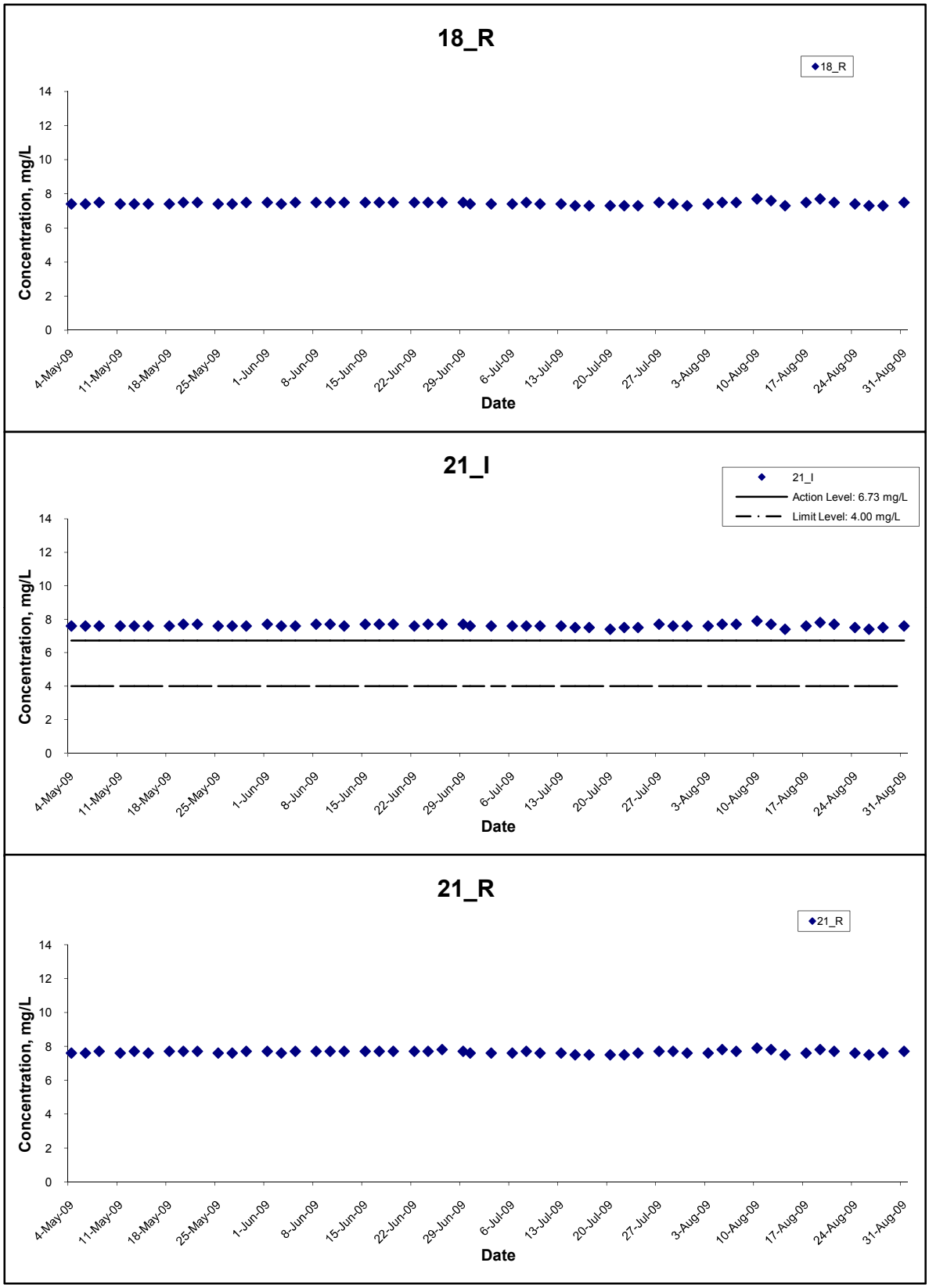
Remarks: * Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher

Dissolved Oxygen



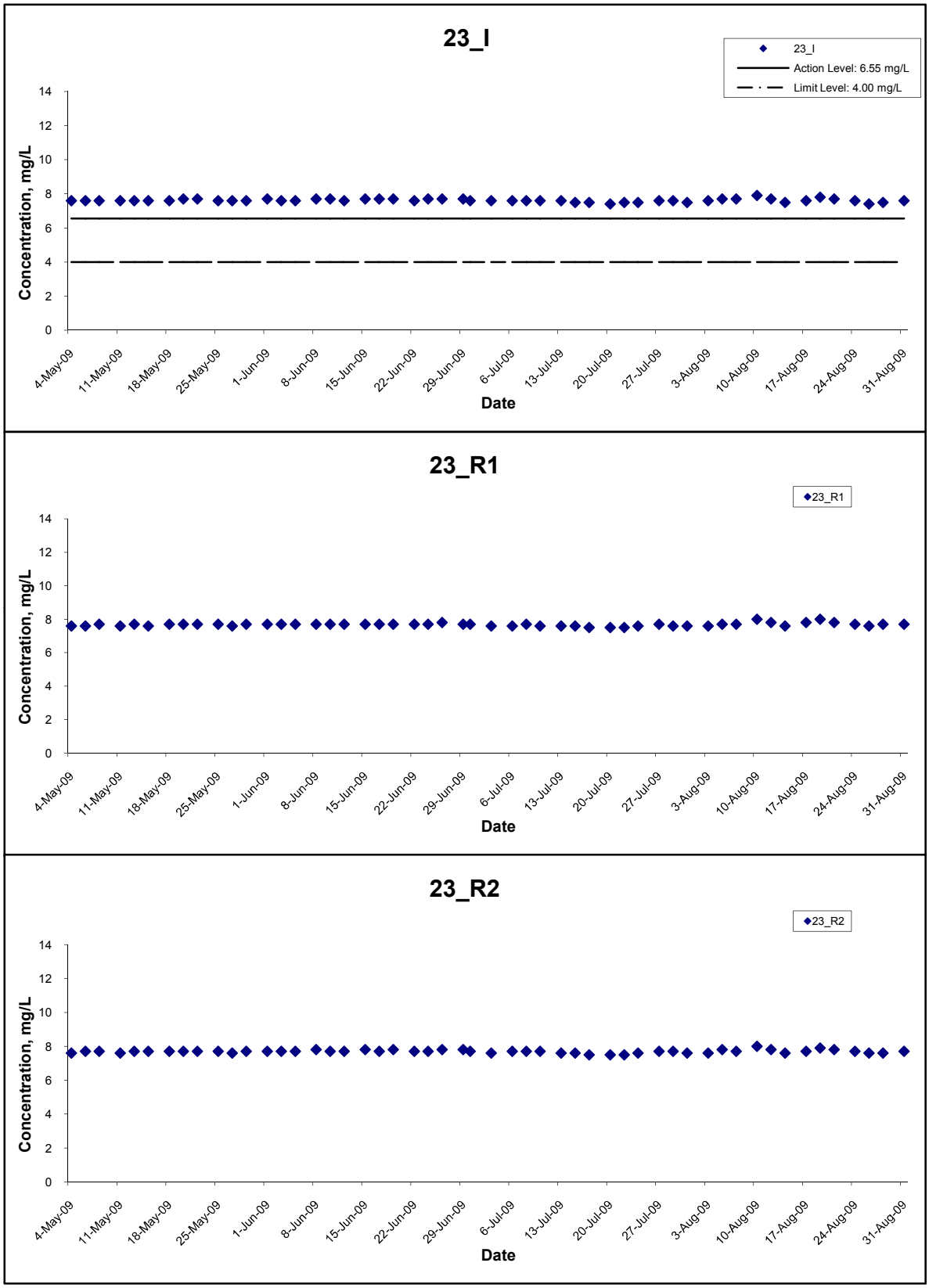
Title: Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
	Date: Aug 09	Appendix: F	

Dissolved Oxygen



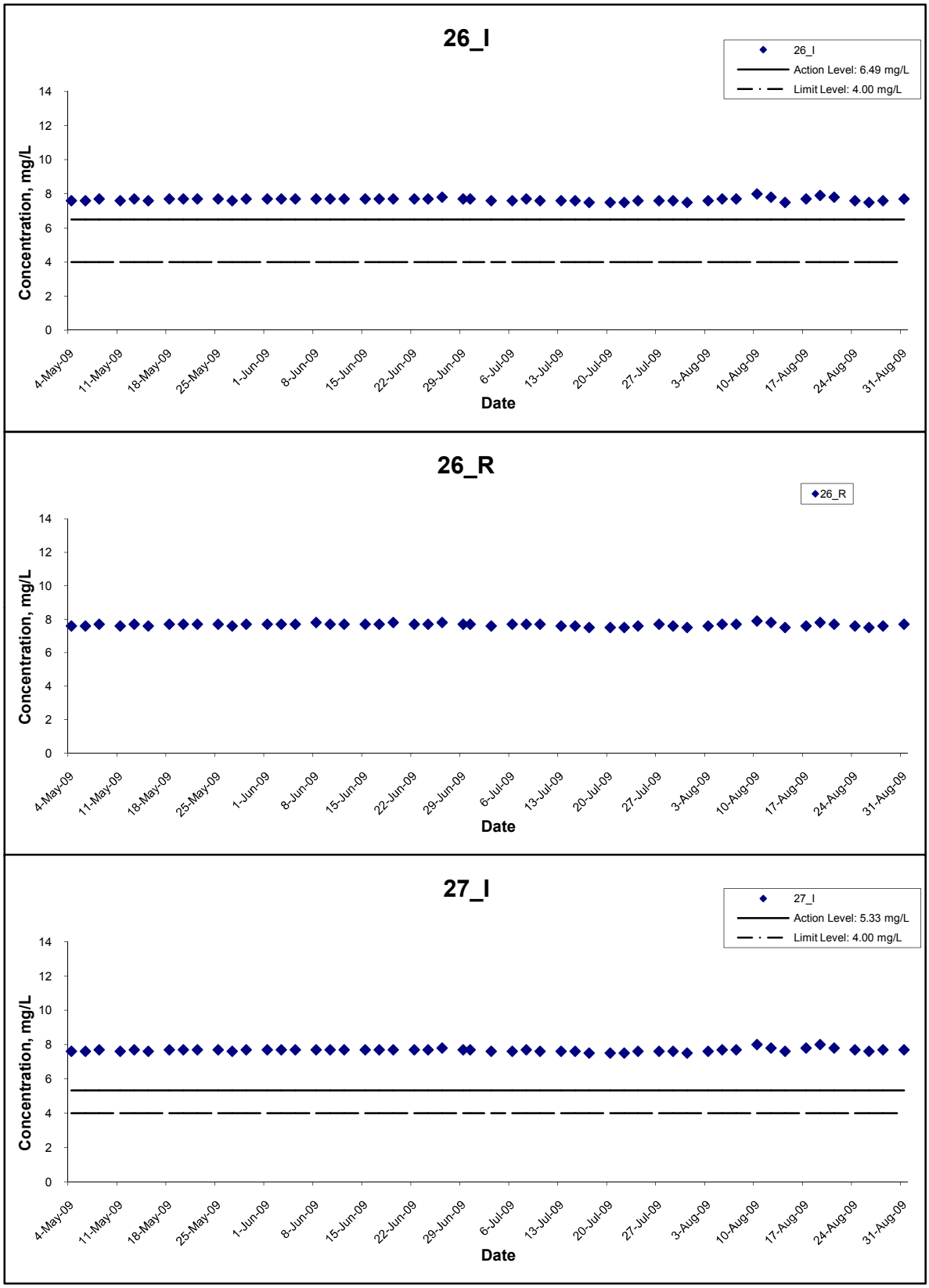
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

Dissolved Oxygen



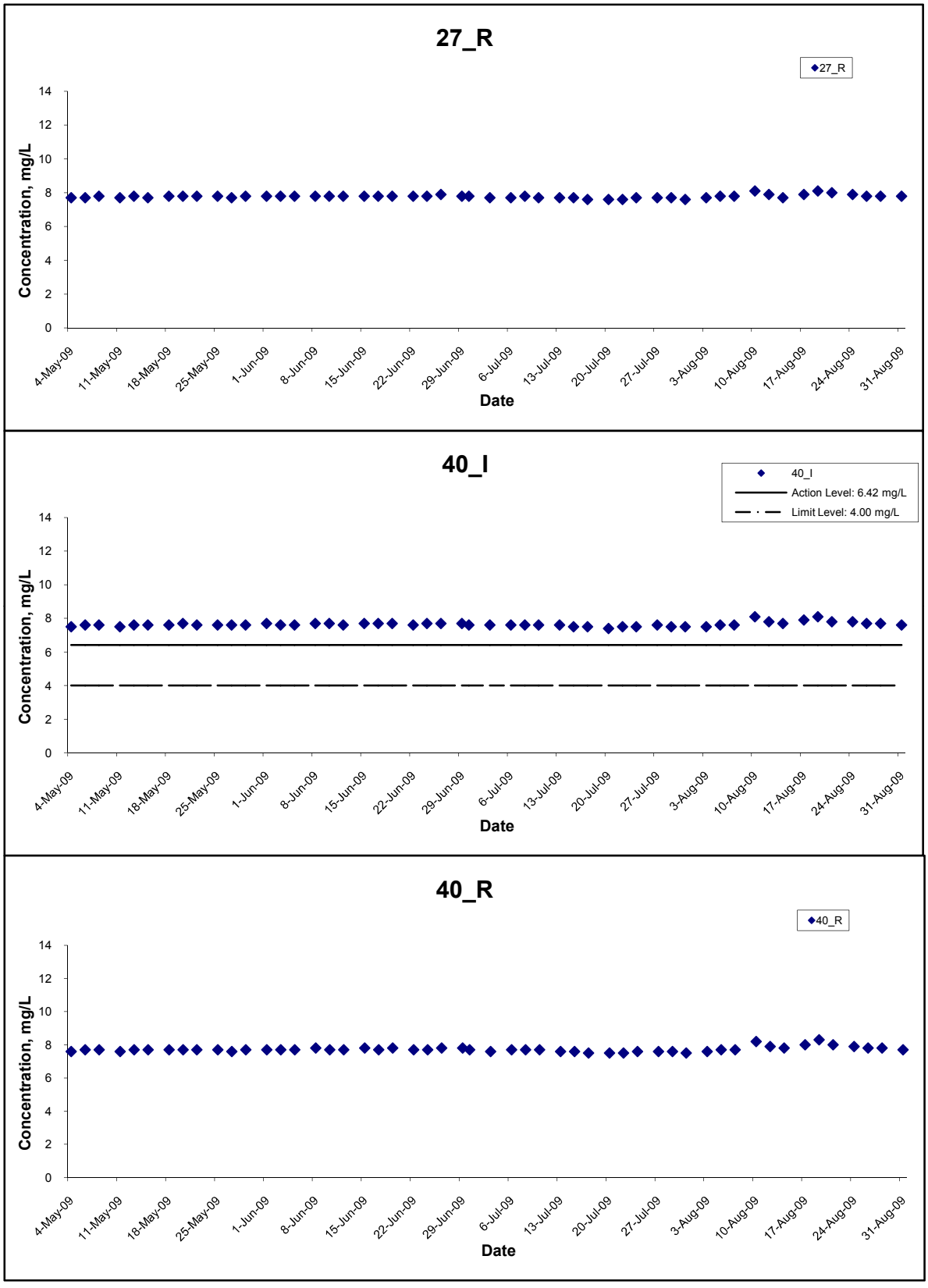
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

Dissolved Oxygen



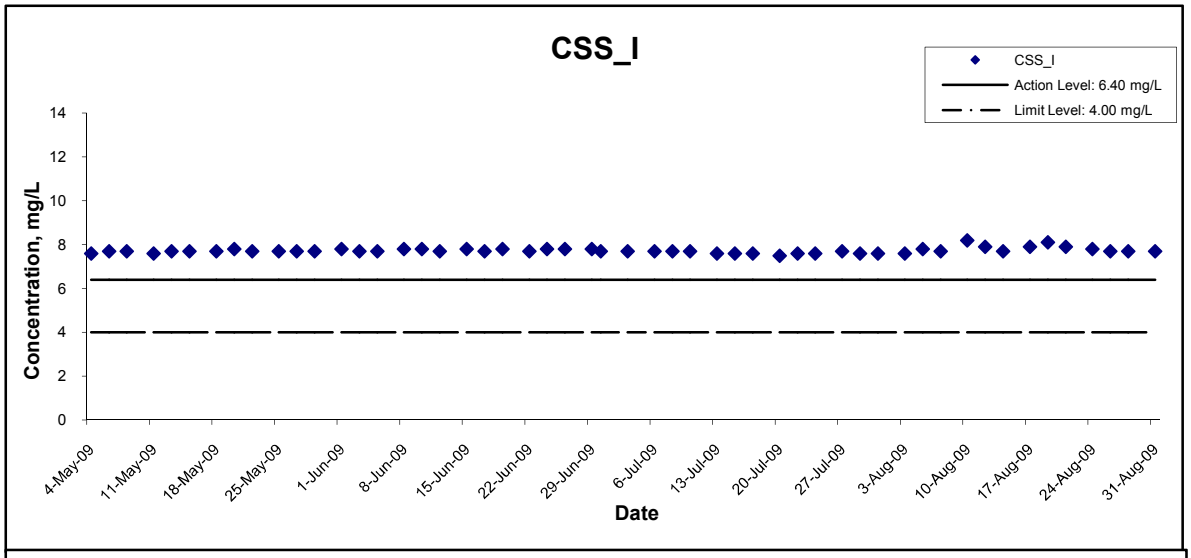
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

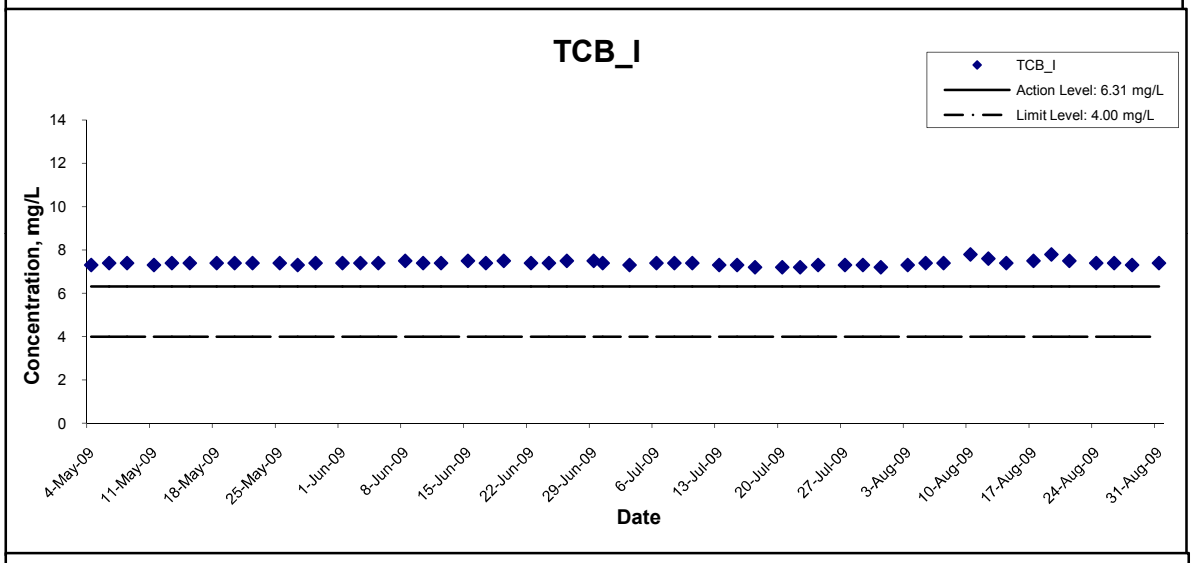
Dissolved Oxygen

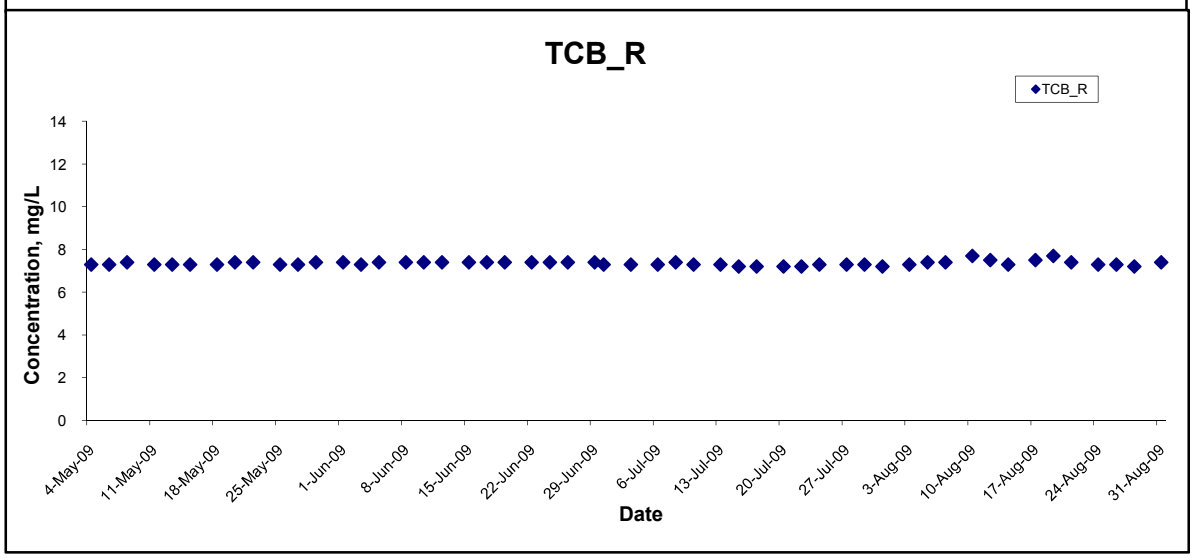


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

Dissolved Oxygen

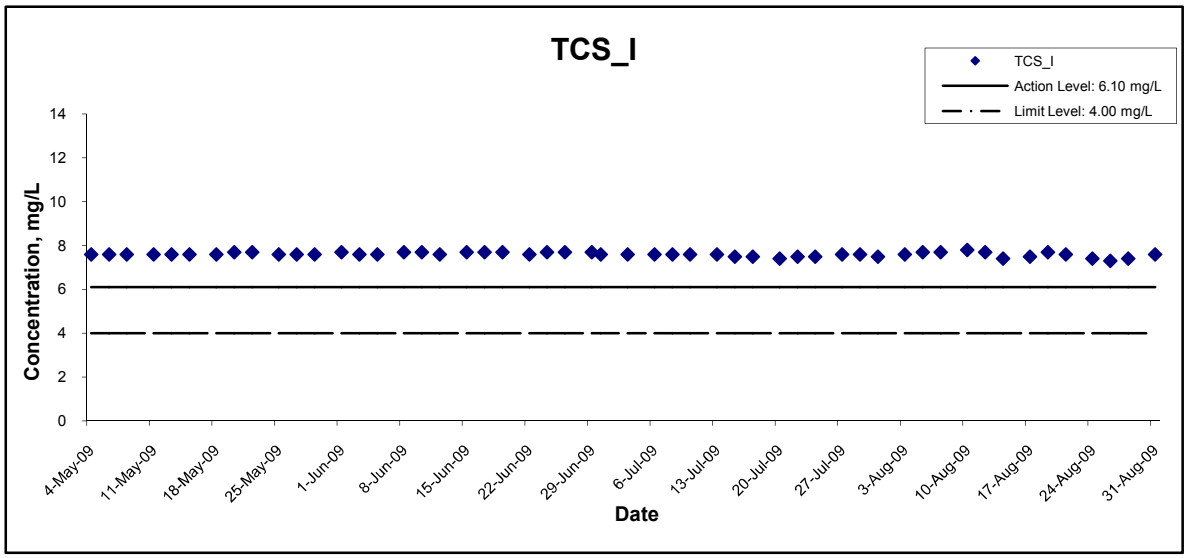






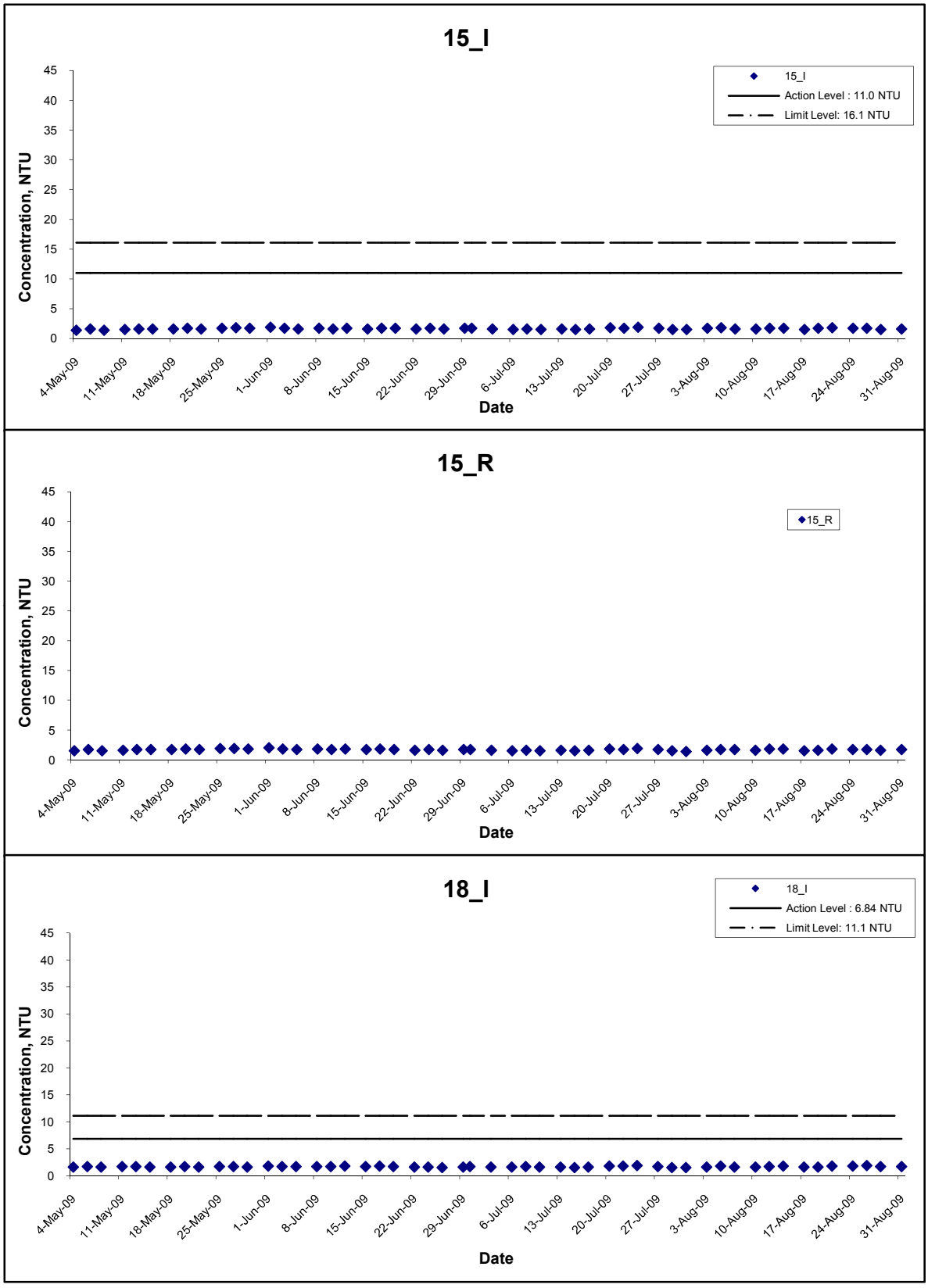
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Dissolved Oxygen



Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

Turbidity



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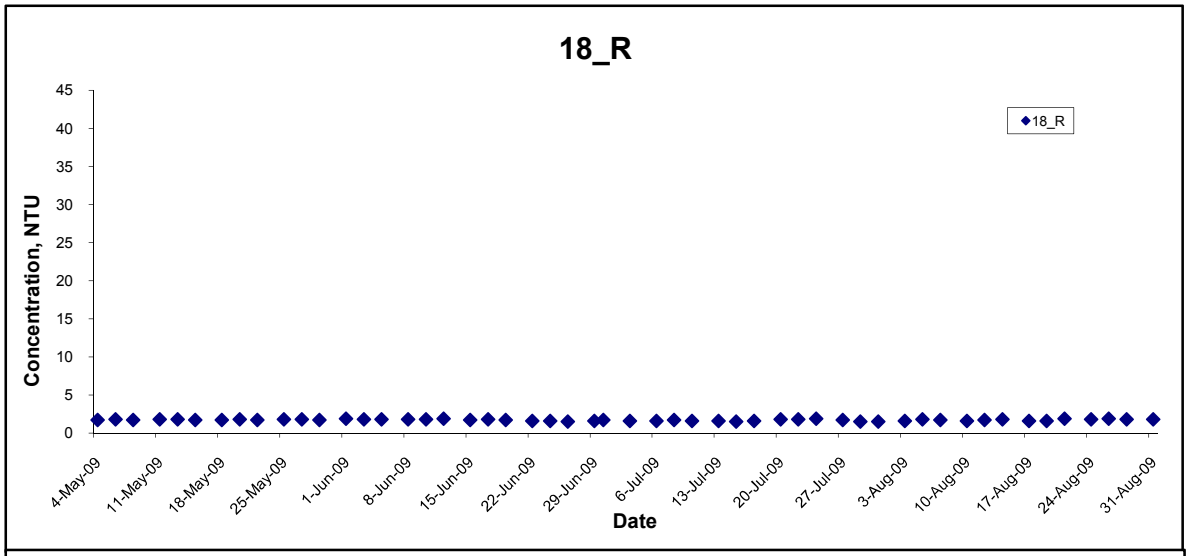
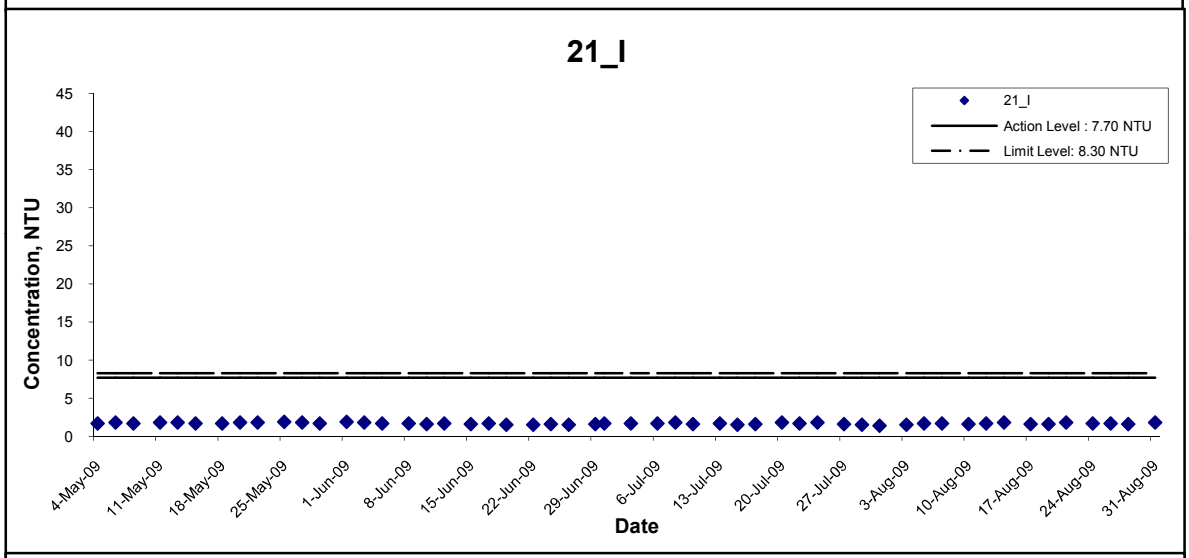
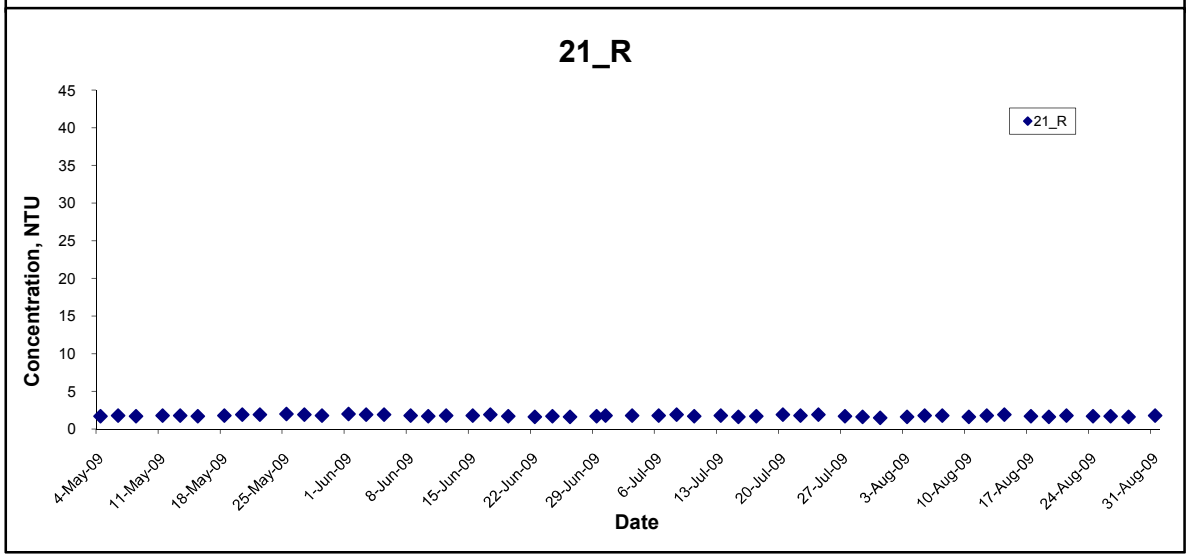
Turbidity

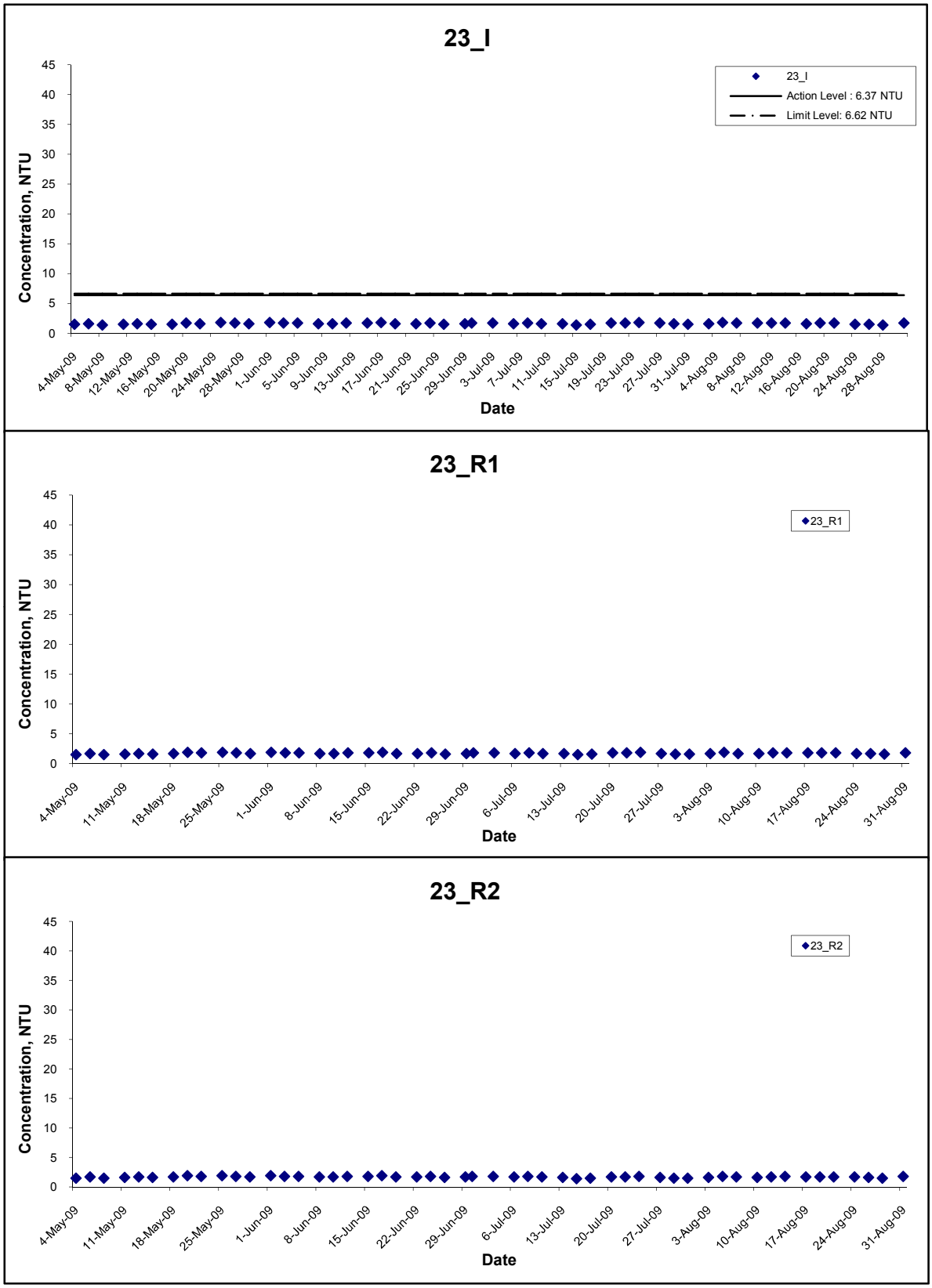






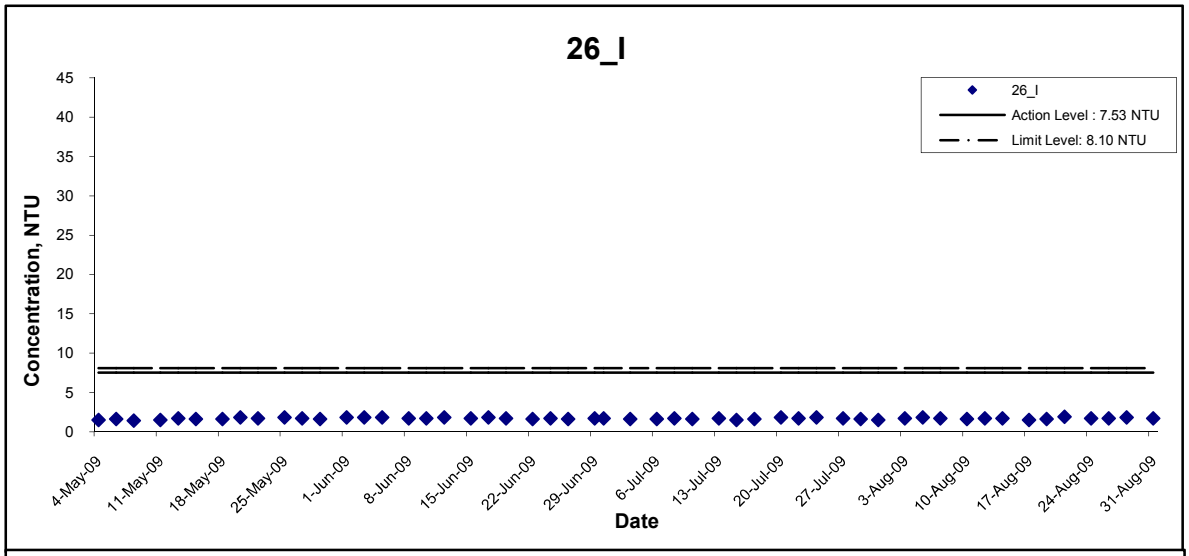
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

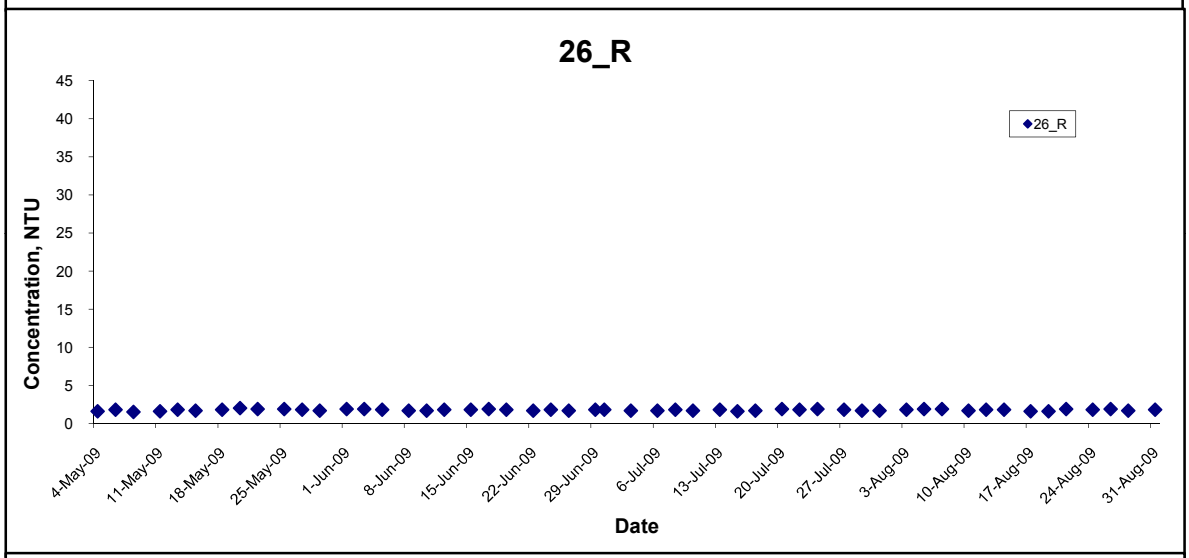
Turbidity

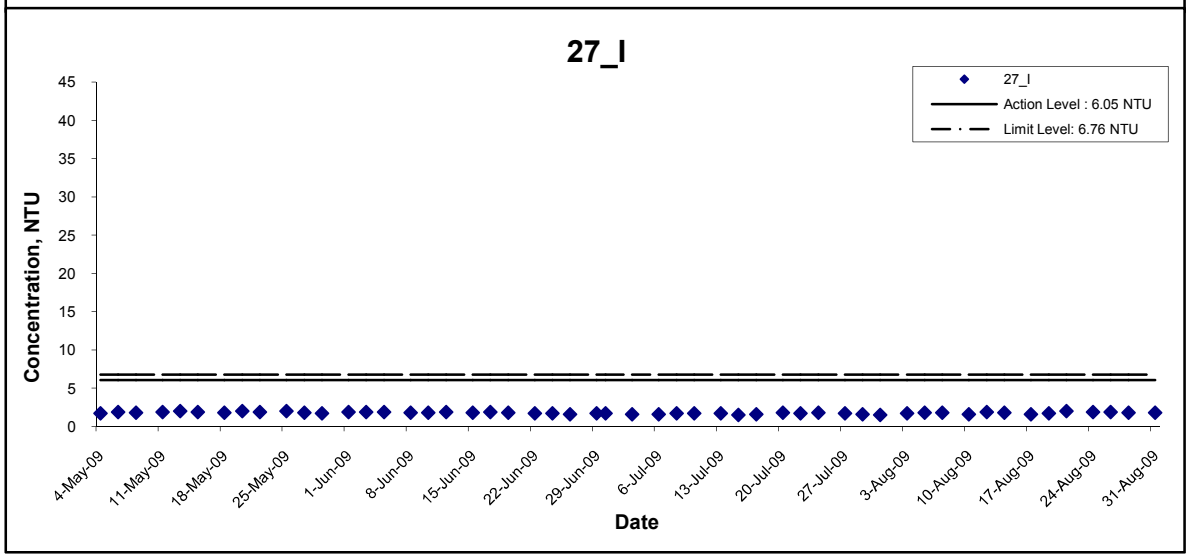


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Turbidity



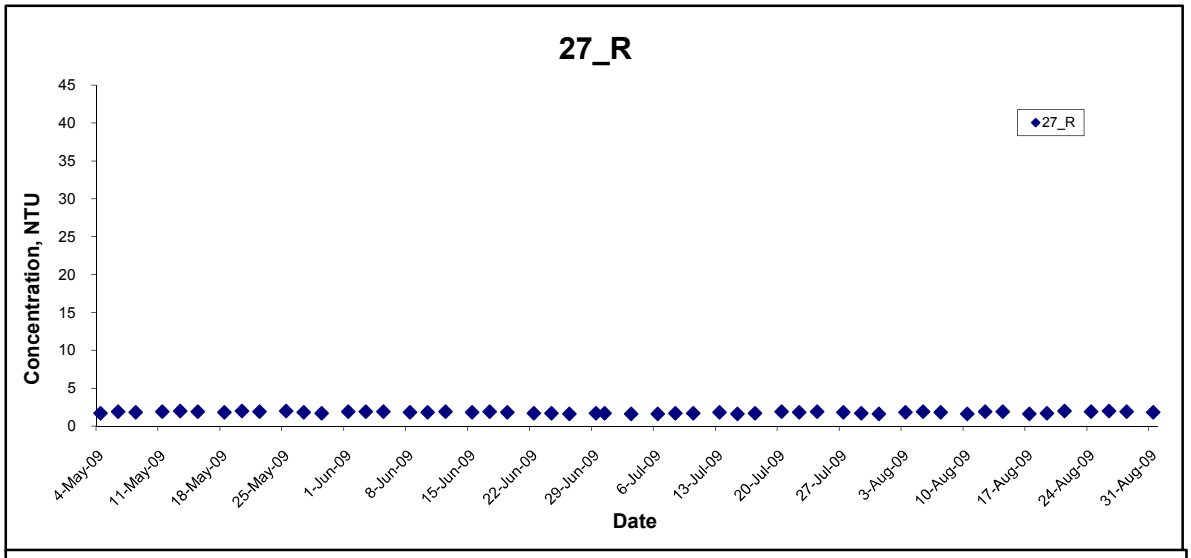


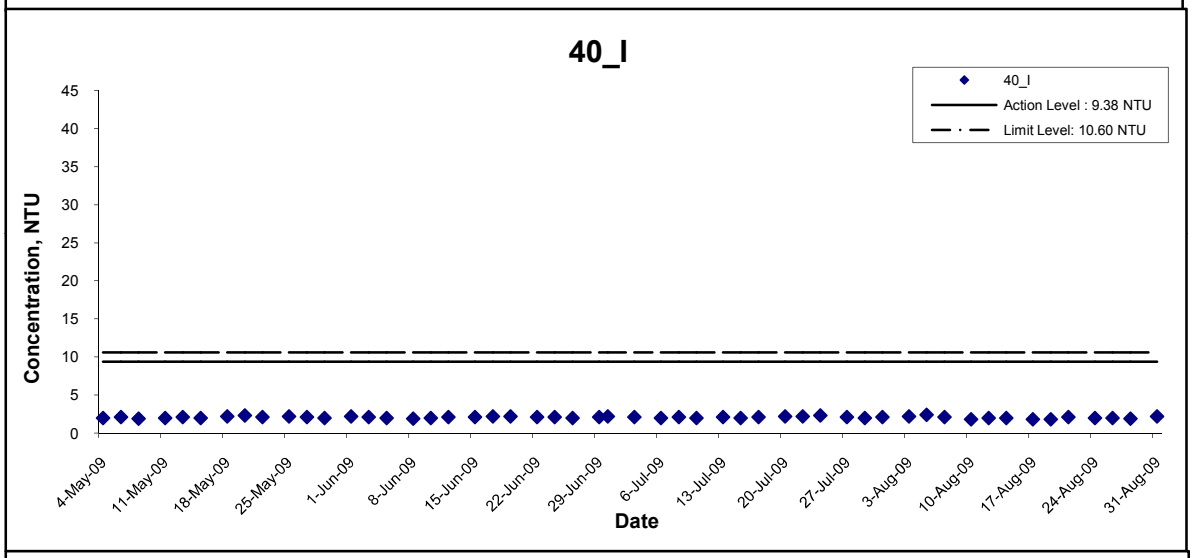


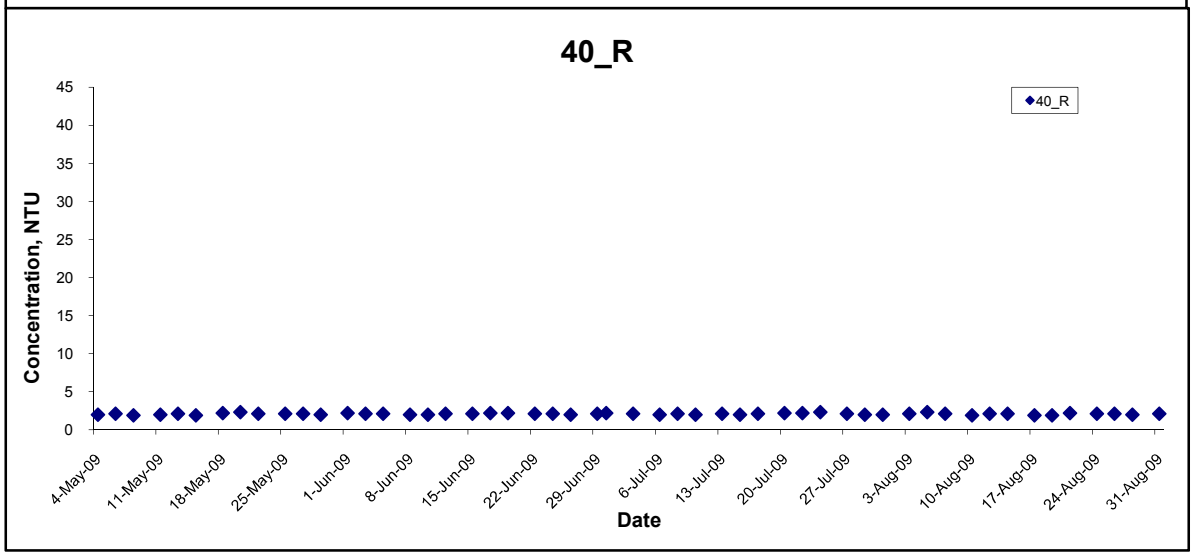
Title: Graphical Presentation of Water Quality Monitoring Results	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: F

CINOTECH

Turbidity

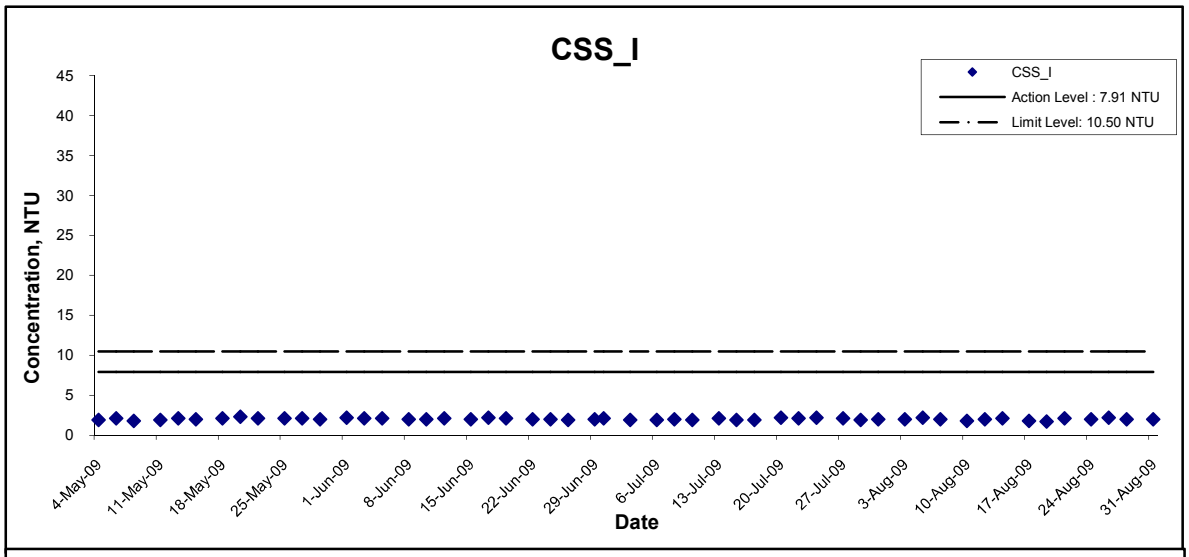


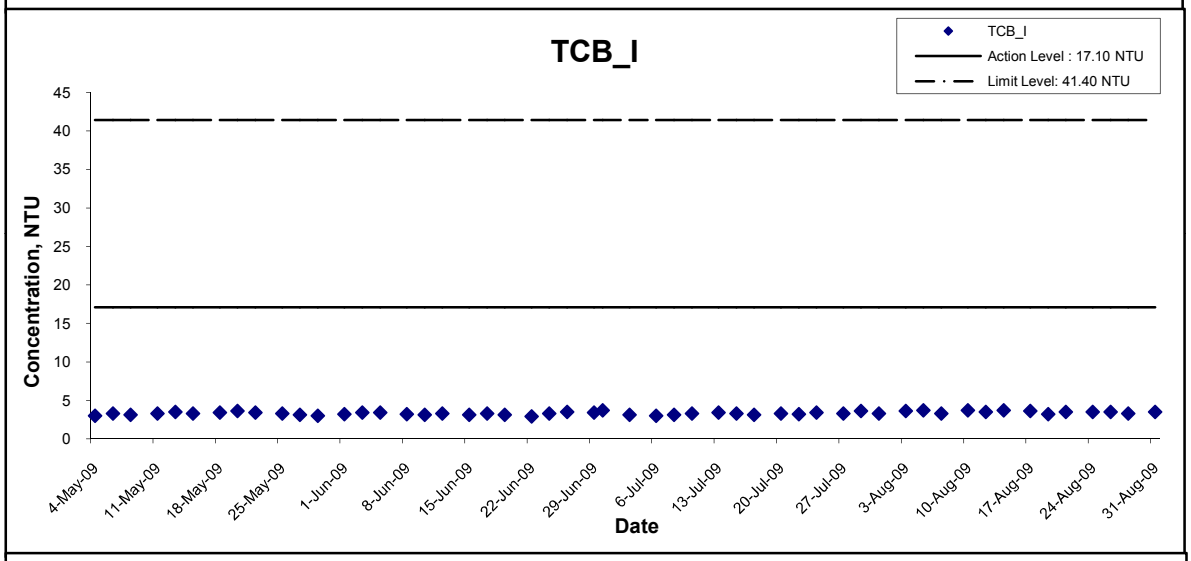


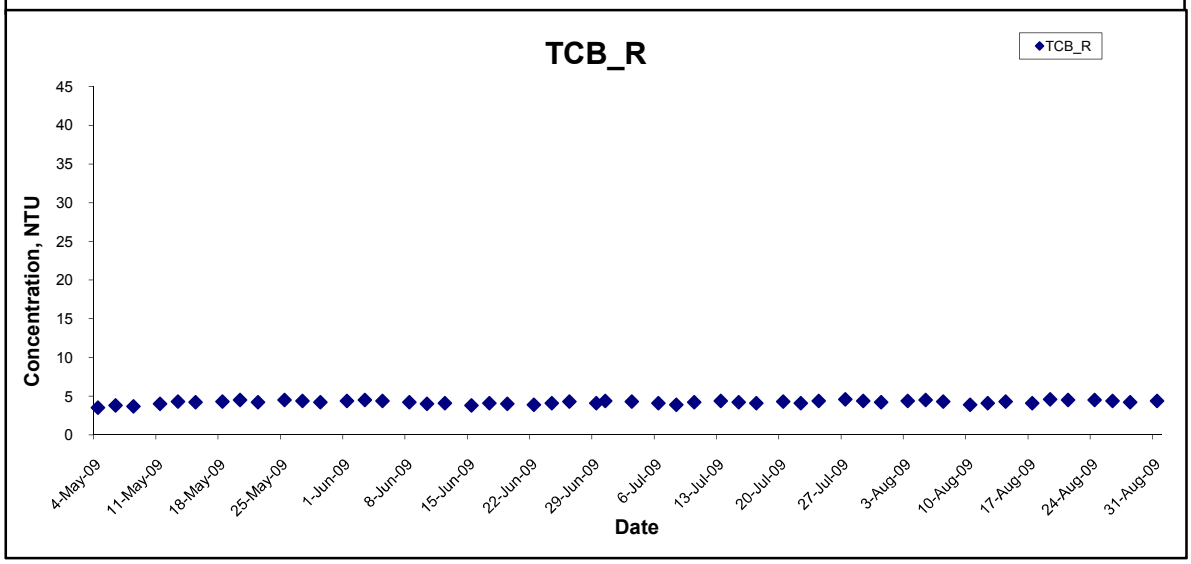


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Turbidity

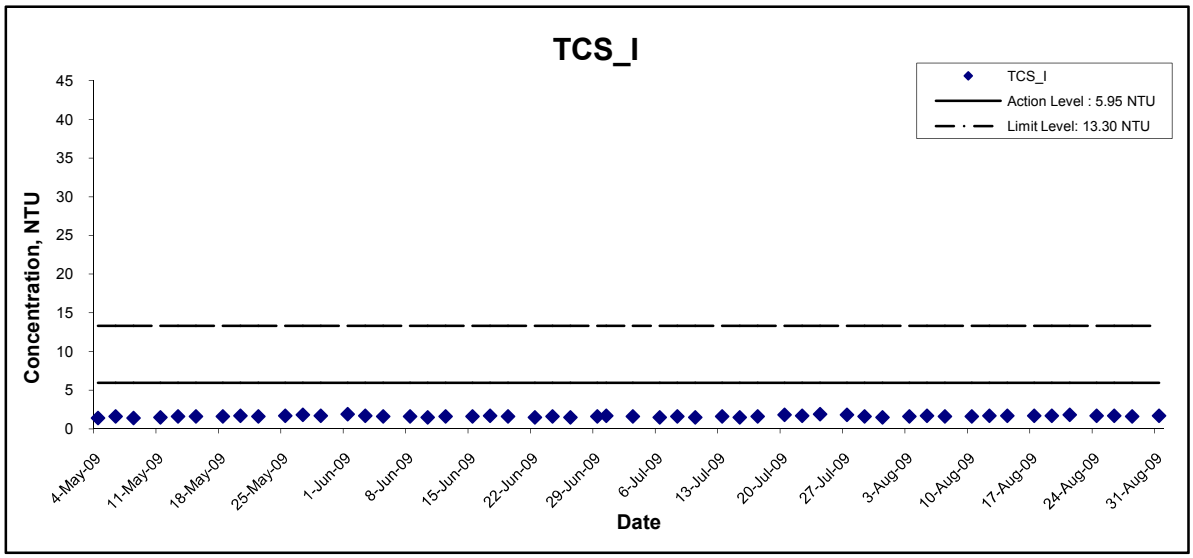






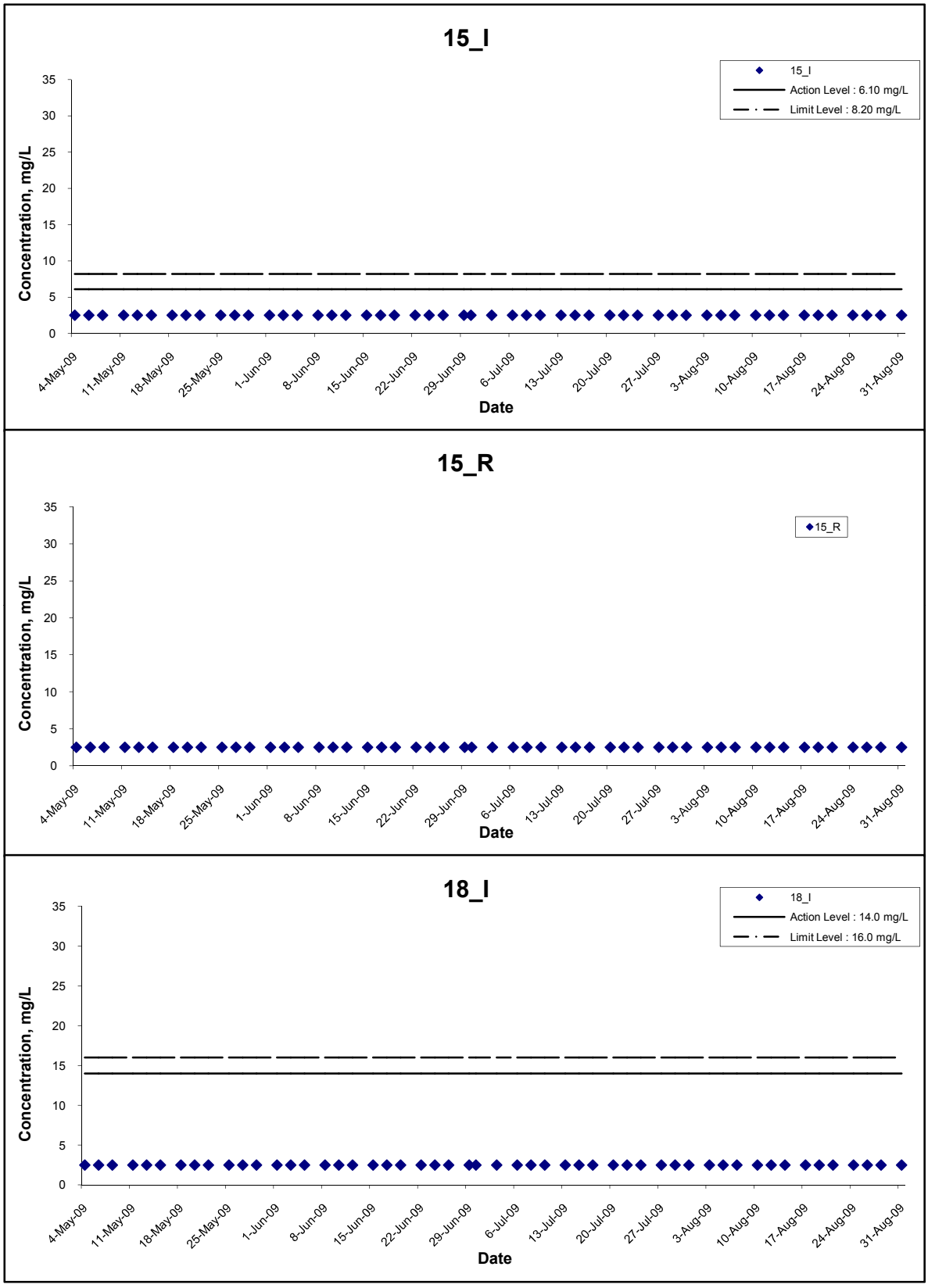
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

Turbidity



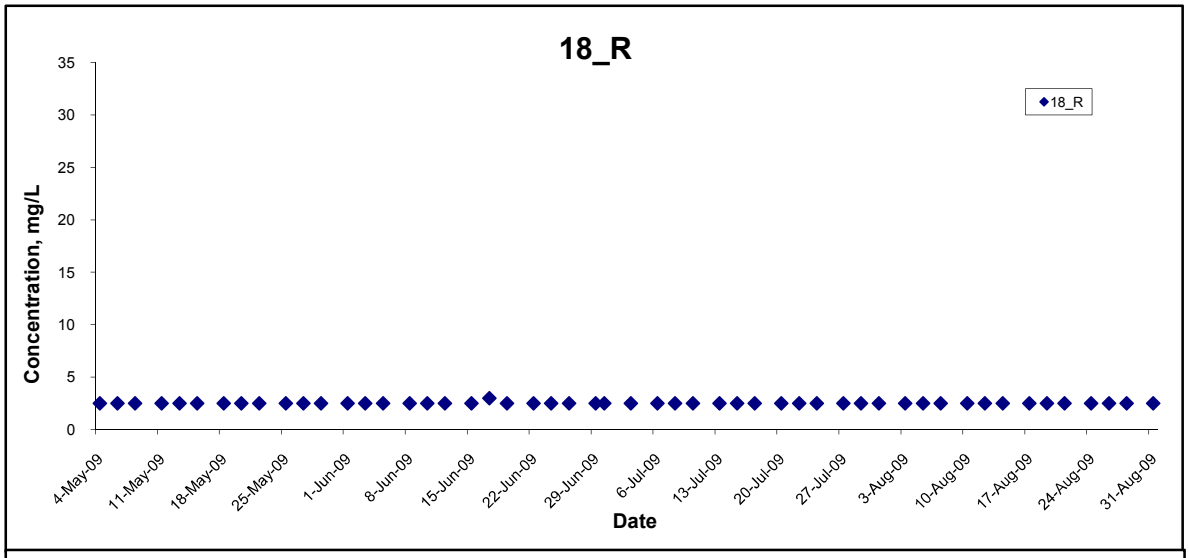
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S Date Aug 09	Project No. MA6030 Appendix F	CINOTECH

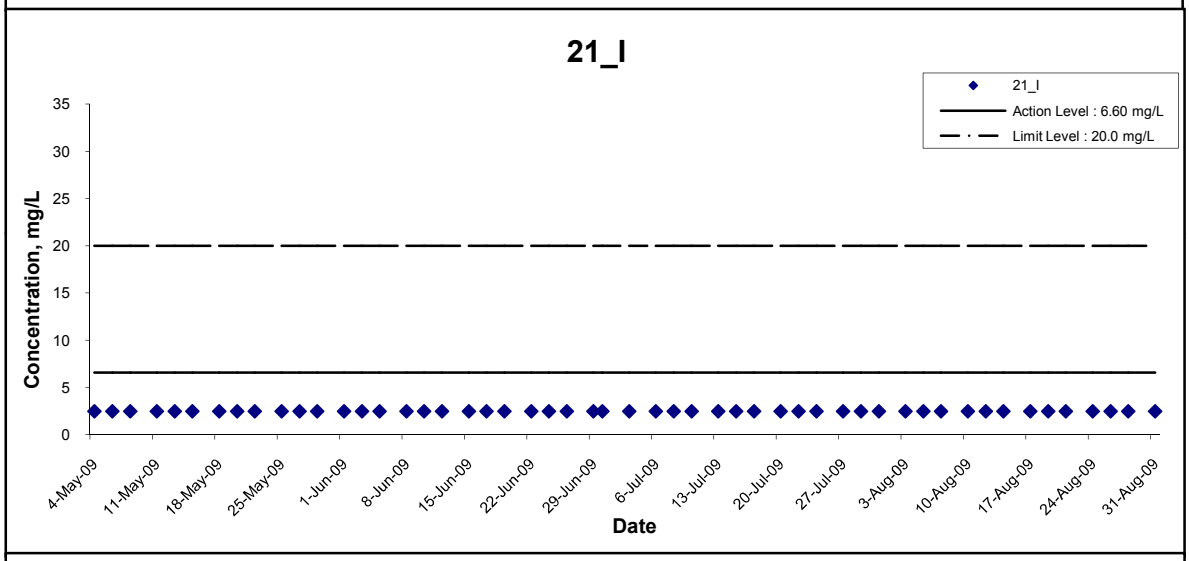
Suspended Solids

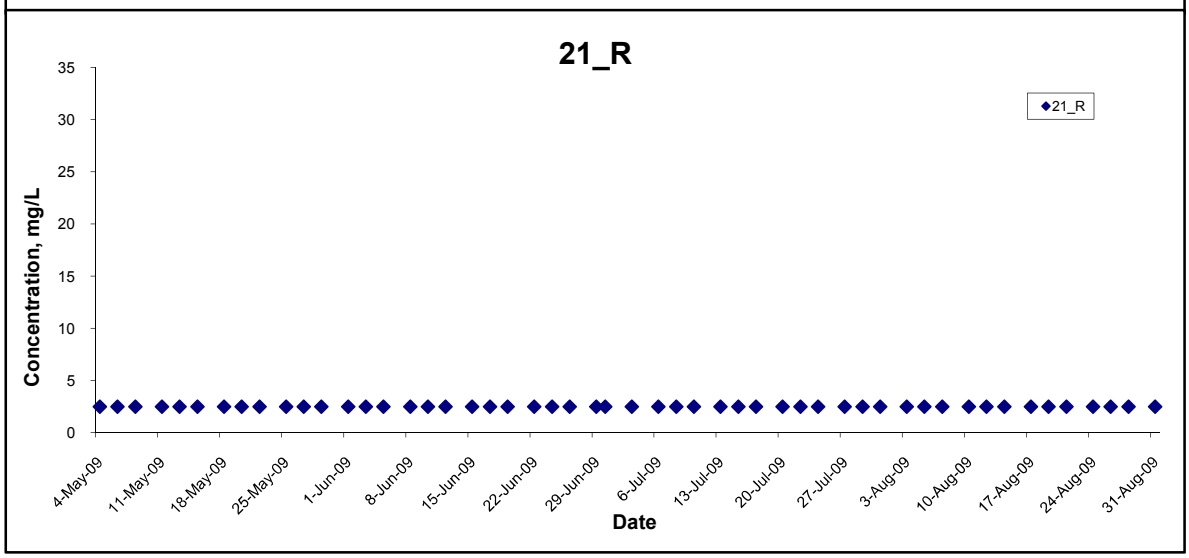


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Suspended Solids

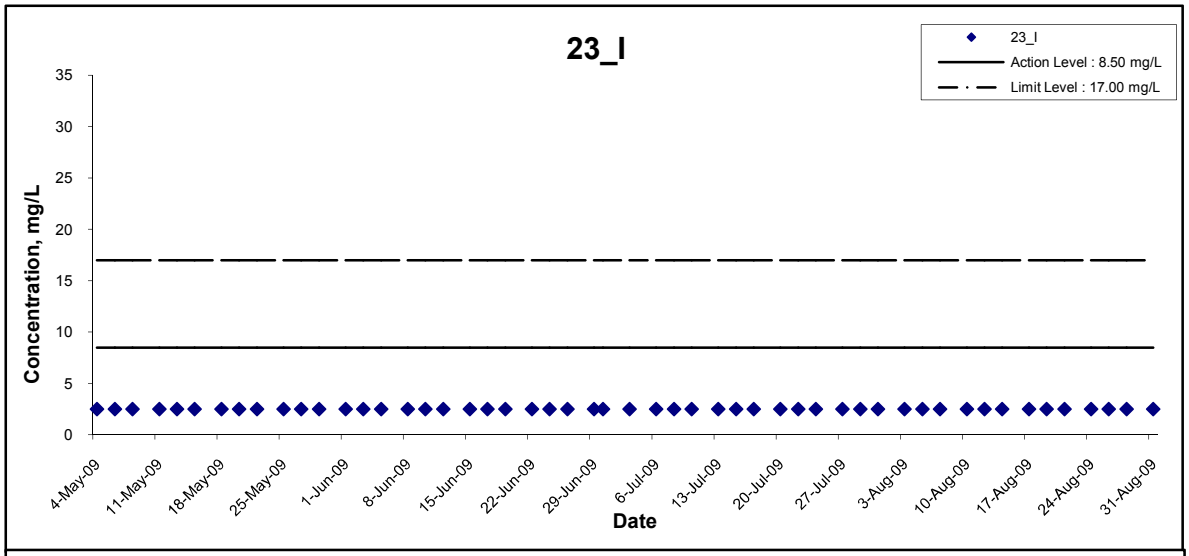


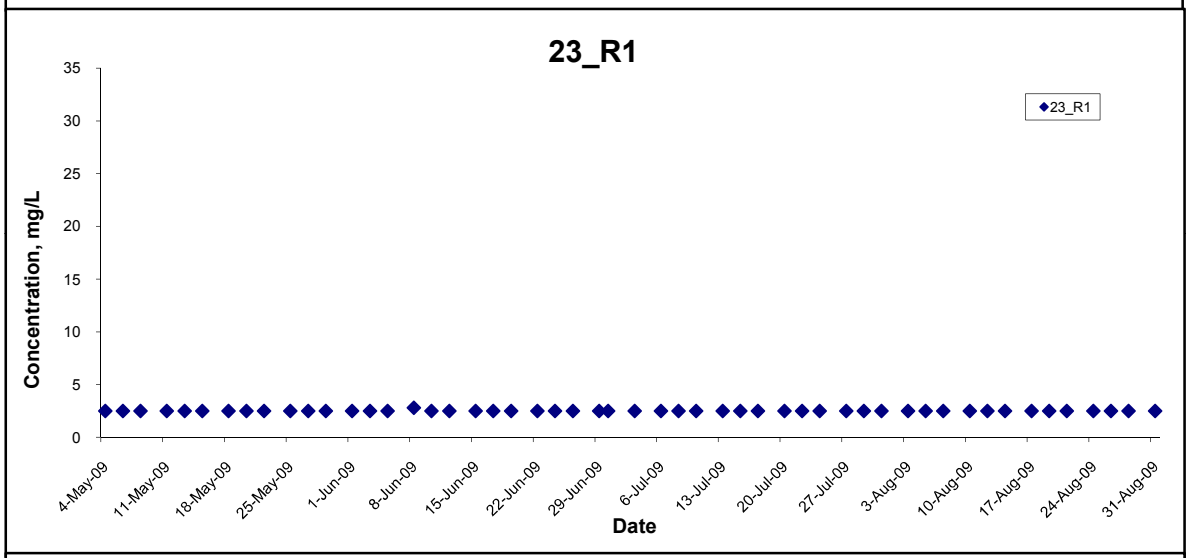


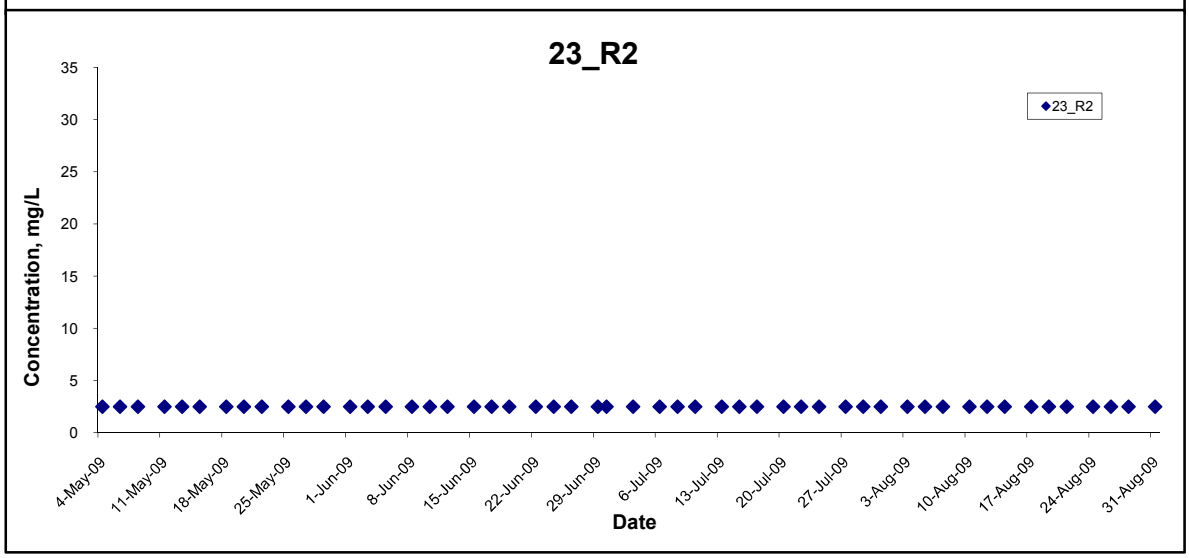


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Suspended Solids

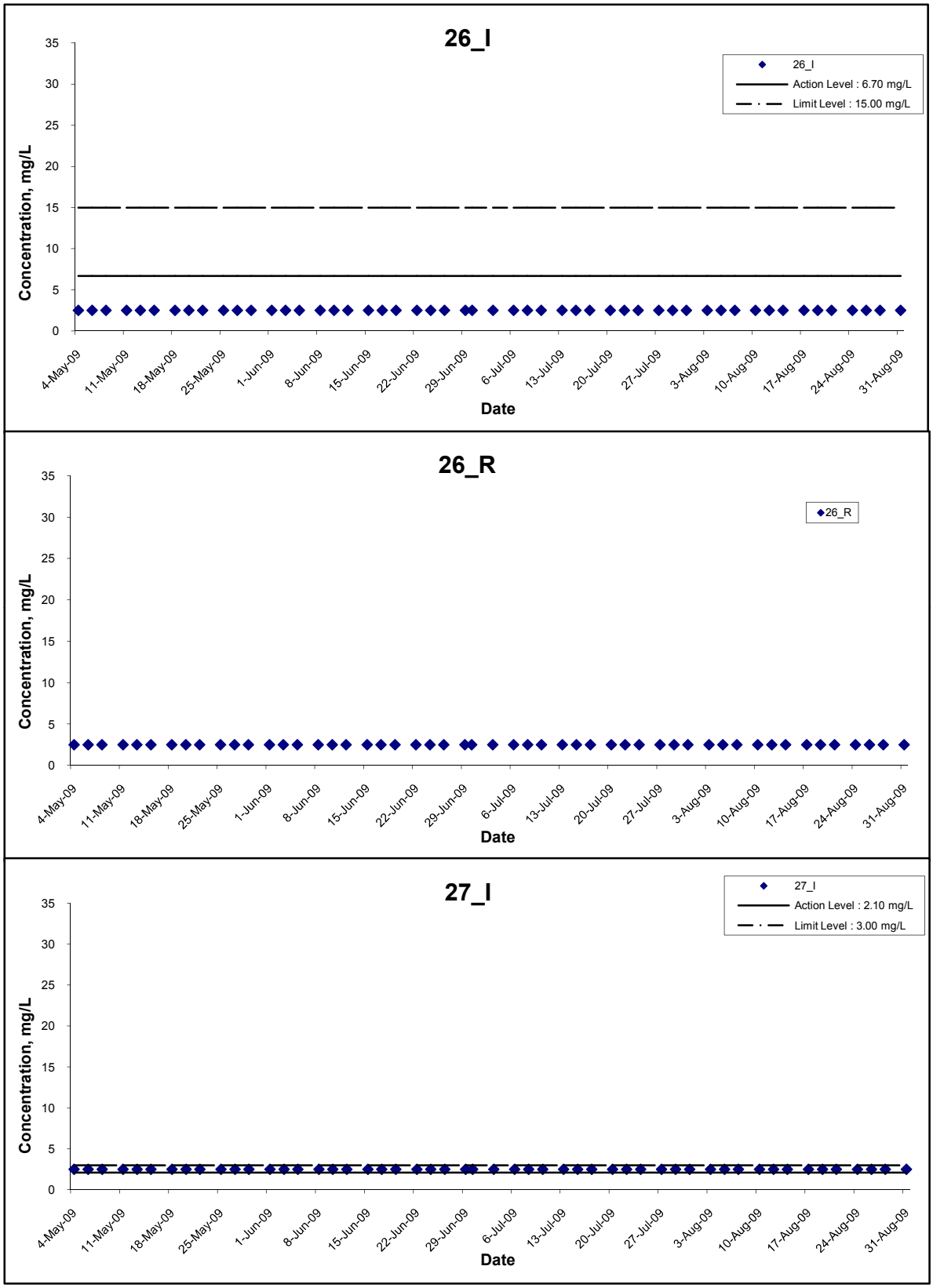






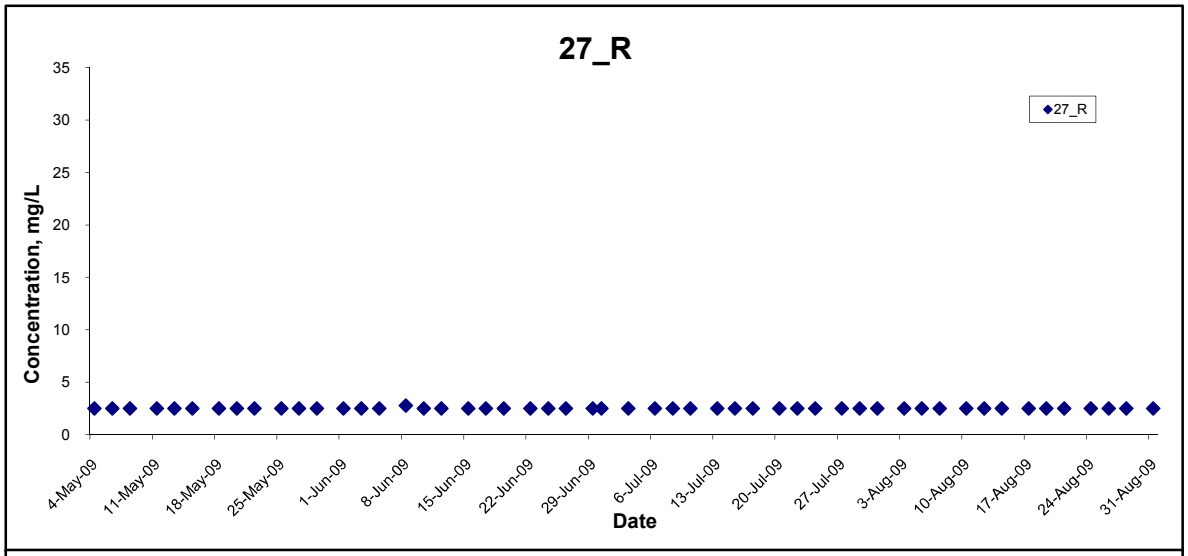
Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: F	CINOTECH

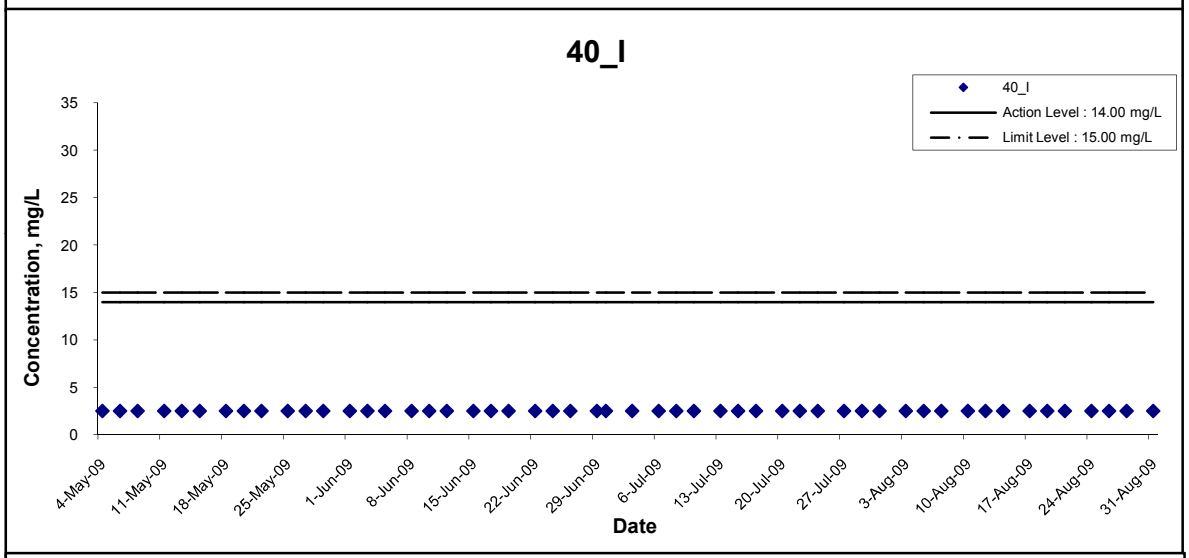
Suspended Solids

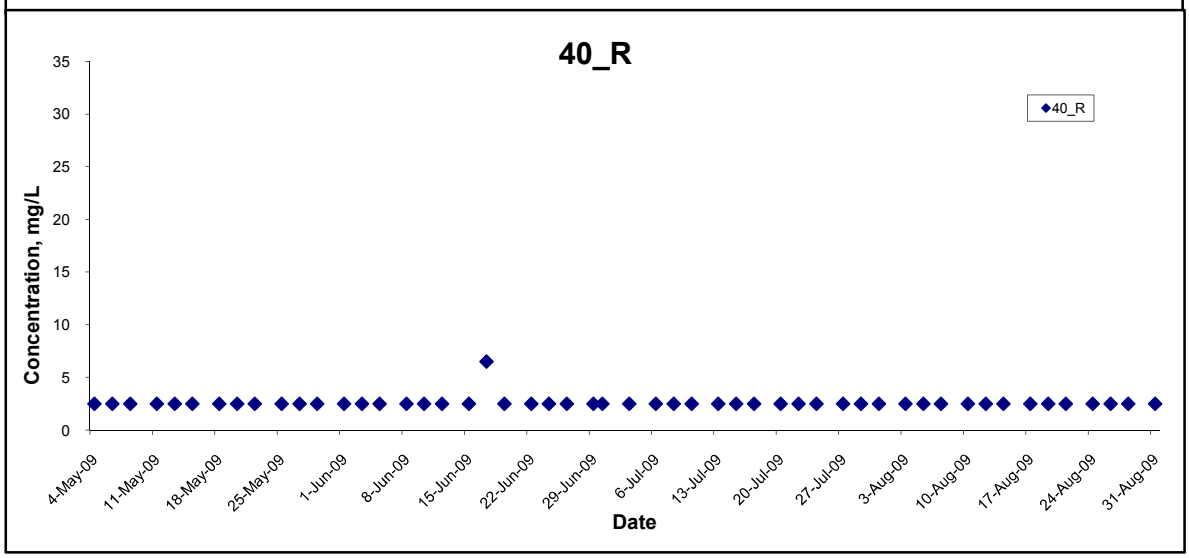


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Aug 09	Project No.: MA6030 Appendix: F	CINOTECH

Suspended Solids

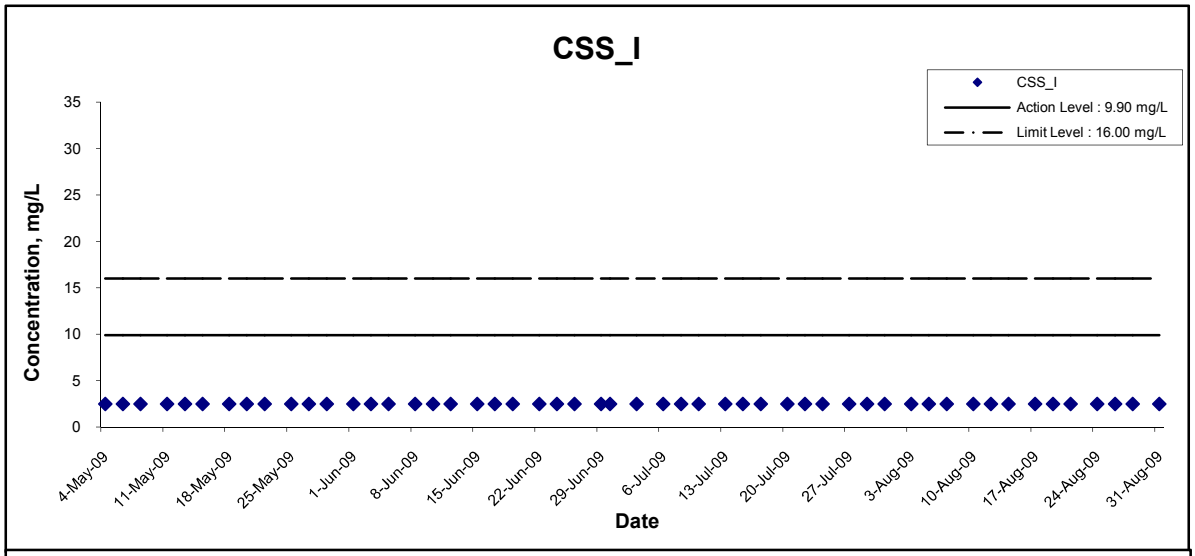


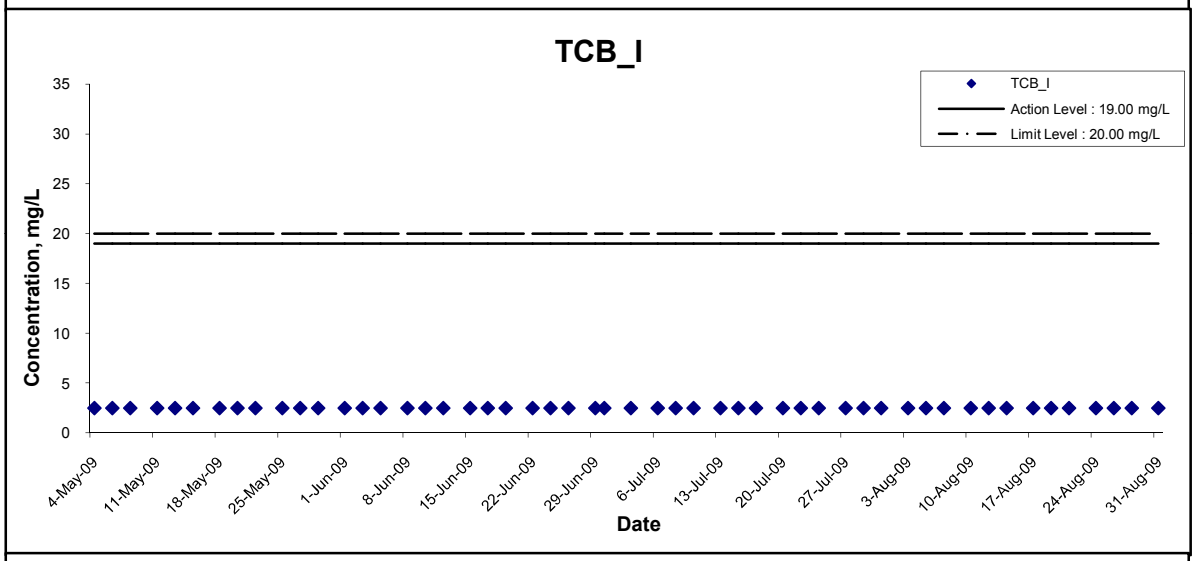


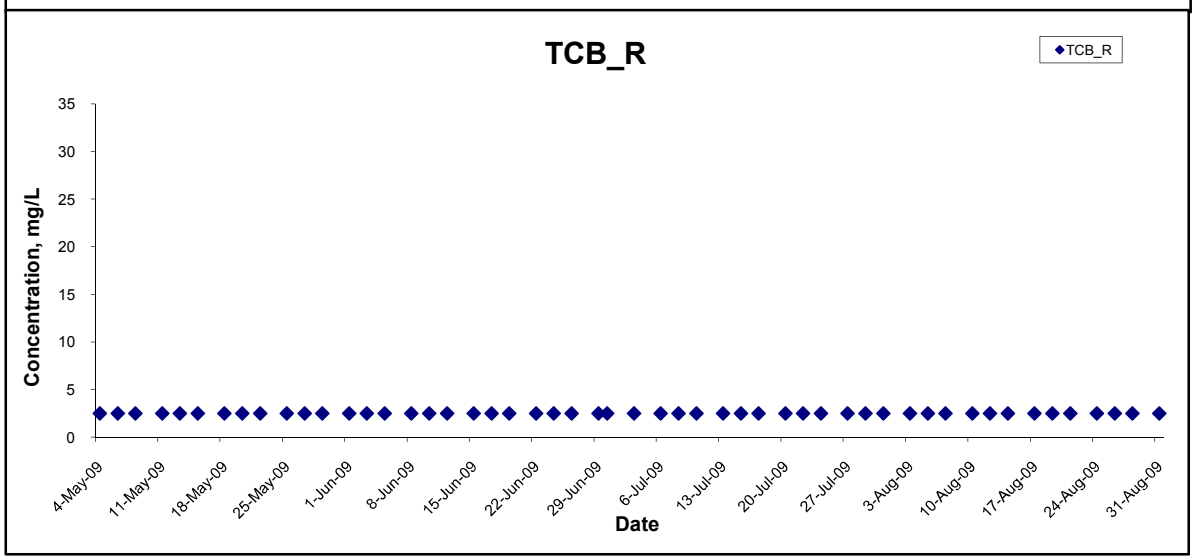


Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Suspended Solids

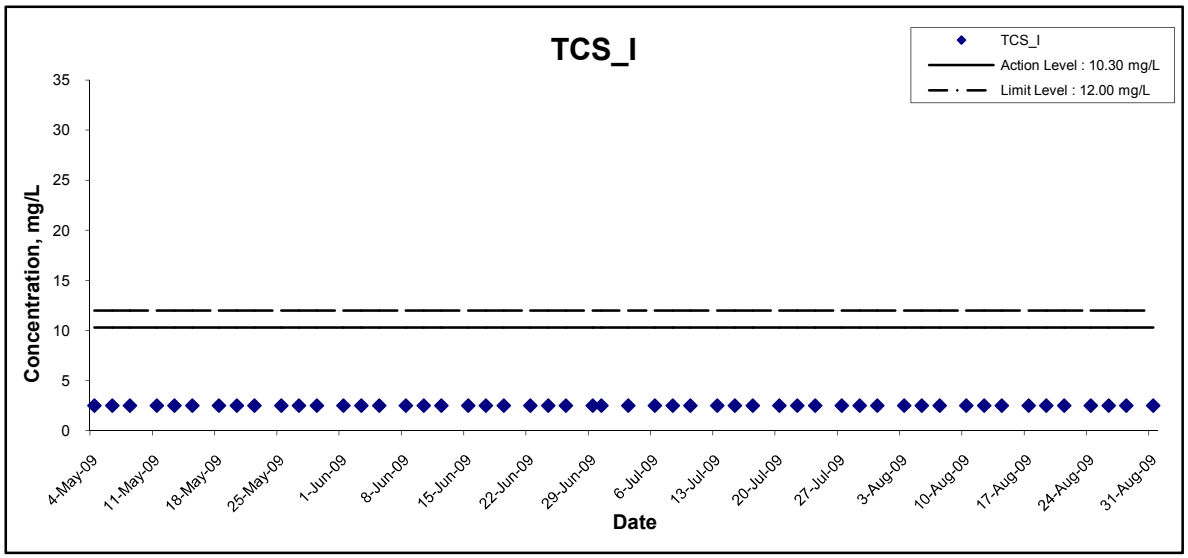






Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: MA6030	CINOTECH
		Date: Aug 09	Appendix: F	

Suspended Solids



Title	Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha	Scale N.T.S	Project No. MA6030	CINOTECH
	Graphical Presentation of Water Quality Monitoring Results	Date Aug 09	Appendix F	

APPENDIX G
QUALITY CONTROL REPORTS FOR LABORATORY ANALYSIS

WELLAB 匯
Testing and Research 力

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel 2608 7388 Fax 2608 7976
Website http://www.wellab.com.hk
E-mail wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09049
Date of Issue:	2009/08/04
Date Received:	2009/08/03
Date Tested:	2009/08/03
Date Completed:	2009/08/04

Page: 1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/03
Number of Sample: 38
Custody No.: MA6030/90803

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	91

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

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

Patrick Tse

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research

Rms 816, 1516 & 1701, 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
QC REPORT

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

Laboratory No.:	09069
Date of Issue:	2009/08/06
Date Received:	2009/08/05
Date Tested:	2009/08/05
Date Completed:	2009/08/06
Page:	1 of 1

ATTN: **Mr. Henry Leung**

Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/05
Number of Sample: 38
Custody No.: MA6030/90805

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	101

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

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

Patrick Tse

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research

Rm 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7888 Fax: 2698 7976
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09082
Date of Issue:	2009/08/10
Date Received:	2009/08/07
Date Tested:	2009/08/07
Date Completed:	2009/08/10

Page: 1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/07
Number of Sample: 38
Custody No.: MA6030/90807

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	97

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

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research

Rm 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2898 7388 Fax: 2898 7676
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09091
Date of Issue:	2009/08/11
Date Received:	2009/08/10
Date Tested:	2009/08/10
Date Completed:	2009/08/11
Page:	1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/10
Number of Sample: 38
Custody No.: MA6030/90810

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	95

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

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

PATRICK TSE
Laboratory Manager

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Testing and Research

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7388 Fax: 2698 7976
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09107
Date of Issue:	2009/08/13
Date Received:	2009/08/12
Date Tested:	2009/08/12
Date Completed:	2009/08/13
Page:	1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/12
Number of Sample: 38
Custody No.: MA6030/90812

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	96

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

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

PATRICK TSE
Laboratory Manager

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Testing and Research

Rm 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7388 Fax: 2698 7676
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09124
Date of Issue:	2009/08/17
Date Received:	2009/08/14
Date Tested:	2009/08/14
Date Completed:	2009/08/17
Page:	1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/14
Number of Sample: 38
Custody No.: MA6030/90814

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	94

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

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2898 7888 Fax: 2898 7676
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09137
Date of Issue:	2009/08/18
Date Received:	2009/08/17
Date Tested:	2009/08/17
Date Completed:	2009/08/18
Page:	1 of 1

ATTN: **Mr. Henry Leung**

Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/17
Number of Sample: 38
Custody No.: MA6030/90817

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	100

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

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7388 Fax: 2698 7676
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09147
Date of Issue:	2009/08/20
Date Received:	2009/08/19
Date Tested:	2009/08/19
Date Completed:	2009/08/20
Page:	1 of 1

ATTN: **Mr. Henry Leung**

Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/19
Number of Sample: 38
Custody No.: MA6030/90819

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	100

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

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

Patrick Tse

PATRICK TSE
Laboratory Manager

WELLAB 匯
Testing and Research 力

Rm 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2858 7388 Fax: 2858 7676
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09164
Date of Issue:	2009/08/24
Date Received:	2009/08/21
Date Tested:	2009/08/21
Date Completed:	2009/08/24
Page:	1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/21
Number of Sample: 38
Custody No.: MA6030/90821

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	97

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

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research 力

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7388 Fax: 2698 7676
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09176
Date of Issue:	2009/08/25
Date Received:	2009/08/24
Date Tested:	2009/08/24
Date Completed:	2009/08/25
Page:	1 of 1

ATTN: **Mr. Henry Leung**

Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/24
Number of Sample: 38
Custody No.: MA6030/90824

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	97

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

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

PATRICK TSE
Laboratory Manager

WELLAB 匯力
Testing and Research

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2858 7388 Fax: 2858 7976
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09190
Date of Issue:	2009/08/27
Date Received:	2009/08/26
Date Tested:	2009/08/26
Date Completed:	2009/08/27
Page:	1 of 1

ATTN: **Mr. Henry Leung**

Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/26
Number of Sample: 38
Custody No.: MA6030/90826

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	96

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

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

PATRICK TSE
Laboratory Manager

WELLAB 匯
Testing and Research 力

Rms 816, 1516 & 1701, Technology Park
18 On Lai Street, Shatin, N.T., Hong Kong
Tel: 2698 7388 Fax: 2698 7976
Website: http://www.wellab.com.hk
E-mail: wellab@wellab.com.hk

TEST REPORT
QC REPORT

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

Laboratory No.:	09206
Date of Issue:	2009/08/31
Date Received:	2009/08/28
Date Tested:	2009/08/28
Date Completed:	2009/08/31
Page:	1 of 1

ATTN: **Mr. Henry Leung**
Sampling Site: Tung Chung Road
Project No.: MA6030
Sampling Date: 2009/08/28
Number of Sample: 38
Custody No.: MA6030/90828

****

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1, mg/L	Trial 2, mg/L	Difference, %	
26_I	<2.5	<2.5	N/A	105

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

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

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. 90812W_90803_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90812W_90805_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90812W_90807_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90812W_90810_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90819W_90812_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90819W_90814_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90819W_90817_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90826W_90821_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90827W_90824_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90902W_90819_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90902W_90826_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90902W_90828_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

Contract No. HY/2003/19

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

Report No. 90902W_90831_S

Part A – Exceedance Summary Tables

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

Stream Location	Measured Value	Exceedances Criteria				Action / Limit Levels	Justification*	Validity (Y/N)	Action Taken (Y/N)
		Action value	120% of Reference value*	Limit Value	130% of Reference Value*				
27_I	2.5	2.1	3.0	3.0	3.25	Action	(2) & (4)	N	N

*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.*

APPENDIX I
SITE AUDIT SUMMARY

Inspection Information

Checklist Reference Number	90806
Date	06 August 2009 (Thursday)
Time	09:00 – 12:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	A. Water Quality	
90806-O03	• Soil erosion was observed at **STR 17, 18** and **near Stream 35** above the catchwater. The Contractor was reminded to provide mitigation measures to protect the slope. (In – progress).	B8
	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	
90806-O01	• Empty oil containers were observed at **SD4-7**. The Contractor was reminded to dispose them as chemical waste.	E2ii.
90806-O02	• Discarded hose were observed at **Shan Shek Wan** and **STR 19**. The Contractor was reminded to clear them.	E4ii.
	E. Ecology	
	• No environmental deficiency was identified during site inspection.	
	F. Others	
	• All environmental deficiencies identified in previous audit session were not improved/ rectified during the site inspection. 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	
90806-R04	• Provide sand bag at the culvert at **Shan Shek Wan.**	B2
90806-R07	• Clear the construction waste, silt, debris and sediment in the culvert and U-channel along **Tung Chung Road (Southern and Northern Sections)** especially at **STR17, Shan Shek Wan, CH7000,** near **Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7,** underneath **STR7**and **Stream21.**	B1 and B18
90806-R11	• Properly cover/compact the exposed area at **SD4-7**and **SD5-11** after the works.	B8
90806-R12	• Clear the standing water at the wheel washing bay (abandoned) at **Site Office, SD6-12 and SD5-11.** (In progress)	B11
90806-R13	• Provide mosquito larvicide for the stagnant water at **Shan Shek Wan.**(In progress)	B11
	B. Air Quality	
90806-R05	• Properly maintain the slopes which have been hydroseeded along **Tung Chung Road (Southern and Northern Section)** especially after the rainstorm.(In-progress)	C13
	C. Waste / Chemical Management	
90806-R06	• Clear the discarded "protection material for hydroseed" that was hanging on the trees along **Southern Section of Tung Chung Road** and **Stream 21.**	E4ii
90806-R08	• Clear C&D waste and sediment at **near SD6-12, SD5-11, SD4-7 and Stream 20.**	E4ii.
90806-R10	• Keep clear and sort C&D waste at **Shan Shek Wan.**	E4ii
90806-R14	• Clear the cement bag at **SD4-7.**	E4ii

	D. Ecology	
90806-R09	• Clear C&D waste and general refuse at **Stream 21, 22, 27, 30, 34 and 36-38.**	F1
	E. General	
90806-G15	• Provide mitigation measures at between the outstanding construction area and paved road at site office to prevent any mud from carrying to the public road.	B2 and C3

Ref. No.	Proposed Completion Date	Completion Date	Remarks
90806-O01	12 August 2009		
90806-O02			
90806-O03			
90806-R04			
90806-R05			
90806-R06			
90806-R07			
90806-R08			
90806-R09			
90806-R10			
90806-R11			
90806-R12			
90806-R13			
90806-R14			
90806-G15			

	Name	Signature	Date
Recorded by	Tony Ng		07 August 2009
Checked by	Dr. Priscilla Choy		07 August 2009

Inspection Information

Checklist Reference Number	90812
Date	12 August 2009 (Wednesday)
Time	09:00 – 12:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	A. Water Quality	
90812-O03	• Soil erosion was observed at **STR 17, 18** and **near Stream 35 and 17** above the catchwater. The Contractor was reminded to provide mitigation measures to protect the slope. (In – progress).	B8
90812-O04	• Silty water was observed at catchwater.	B8
	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	
90812-O01	• Empty oil containers were observed at **SD4-7**. The Contractor was reminded to dispose them as chemical waste.	E2ii.
90812-O02	• Discarded hose were observed at **Shan Shek Wan** and **STR 19**. The Contractor was reminded to clear them.	E4ii.
	E. Ecology	
	• No environmental deficiency was identified during site inspection.	
	F. Others	
	• All environmental deficiencies identified in previous audit session were not improved/ rectified by the Contractor except item 90806-G15. 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	
90812-R05	• Provide sand bag at the culvert at **Shan Shek Wan.**	B2
90812-R08	• Clear the construction waste, silt, debris and sediment in the culvert and U-channel along **Tung Chung Road (Southern and Northern Sections)** especially at **STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7**, underneath **STR7and Stream21.**	B1 and B18
90812-R12	• Properly cover/compact the exposed area at **SD5-11** after the works.	B8
90812-R13	• Clear the standing water at the wheel washing bay (abandoned) at **Site Office, SD6-12 and SD5-11.**	B11
90812-R14	• Provide mosquito larvicide for the stagnant water at **Shan Shek Wan.**(In progress)	B11
90812-R16	• Reinstate the exposed slope at the **Catchwater** as soon as possible.	B8
	B. Air Quality	
90812-R06	• Properly maintain the slopes which have been hydroseeded along **Tung Chung Road (Southern and Northern Section)** especially after the rainstorm.	C13
	C. Waste / Chemical Management	
90812-R07	• Clear the discarded "protection material for hydroseed" that was hanging on the trees along **Southern Section of Tung Chung Road.**	E4ii
90812-R09	• Clear C&D waste and sediment at **near SD6-12, SD5-11, SD4-7 and Stream 20.**	E4ii.
90812-R11	• Keep clear and sort C&D waste at **Shan Shek Wan.**	E4ii
90812-R15	• Clear the cement bag at **SD4-7.**	E4ii

	D. Ecology	
90812-R10	• Clear C&D waste and general refuse at **Stream 21, 22, 27, 30, 34 and 36-38.**	F1
	E. General	
	• No environmental deficiency was identified during site inspection.	

Ref. No.	Proposed Completion Date	Completion Date	Remarks
90806-G15	12 August 2009	12 August 2009	
90812-O01	20 August 2009		
90812-O02			
90812-O03			
90812-O04			
90812-R05			
90812-R06			
90812-R07			
90812-R08			
90812-R09			
90812-R10			
90812-R11			
90812-R12			
90812-R13			
90812-R14			
90812-R15			
90812-R16			

	Name	Signature	Date
Recorded by	Tony Ng		12 August 2009
Checked by	Dr. Priscilla Choy		12 August 2009

Inspection Information

Checklist Reference Number	90820
Date	20 August 2009 (Thursday)
Time	09:00 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	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	
90820-O01	• Discarded hose were observed at **Shan Shek Wan**. The Contractor was reminded to clear them.	E4ii.
	E. Ecology	
	• No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous audit section (Ref. No.:90812). All items were rectified by the Contractor except item 90812-O02, R05, R07, R08 and R10. 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	
90820-R02	• Provide sand bag at the culvert at **Shan Shek Wan.**	B2
90820-R04	• Clear the construction waste, silt, debris and sediment in especially culverts at **Stream 20, 21, SD7-13, SD6-12, SD5-11, SD4-7** and **CH7000.**	B1 and B18
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	•	
	C. Waste / Chemical Management	
90820-R03	• Clear the discarded "protection material for hydroseed" that was hanging on the trees along **Southern Section of Tung Chung Road.**	E4ii
	D. Ecology	
90820-R05	• Clear C&D waste and general refuse at **Stream 21, 22, 27, 30, 34 and 36-38.**	F1
	E. General	
	• No environmental deficiency was identified during site inspection.	

Ref. No.	Proposed Completion Date	Completion Date	Remarks
90812-O01	20 August 2009	20 August 2009	
90812-O03			
90812-O04			
90812-R06			
90812-R09			
90812-R11			
90812-R12			
90812-R13			
90812-R14			
90812-R15			
90812-R16			
90820-O01	27 August 2009		
90820-R02			
90820-R03			
90820-R04			
90820-R05			

	Name	Signature	Date
Recorded by	Tony Ng		21 August 2009
Checked by	Dr. Priscilla Choy		21 August 2009

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

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	90827
Date	27 August 2009 (Thursday)
Time	09:30 – 12:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	A. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	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	
90827-O01	• Discarded hose were observed at **Shan Shek Wan**. The Contractor was reminded to clear them.	E4ii.
	E. Ecology	
	• No environmental deficiency was identified during site inspection.	
	F. Others	
	• All environmental deficiencies identified in previous audit session were not improved/ rectified by the Contractor except item 90820-R03 . 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	
90827-R02	• Provide sand bag at the culvert at **Shan Shek Wan.**	B2
90827-R03	• Clear the construction waste, silt, debris and sediment in especially culverts at **Stream 20, 21, SD7-13, SD6-12, SD5-11, SD4-7** and **CH7000.**	B1 and B18
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	•	
	C. Waste / Chemical Management	
90827-R05	• Oil container was observed at **shan shek wan**. The Contractor was reminded to remove it.	E2i
	D. Ecology	
90827-R04	• Clear C&D waste and general refuse at **Stream 21, 22, 27, 30, 34 and 36-38.**	F1
	E. General	
	• No environmental deficiency was identified during site inspection.	

Weekly Site Inspection Record Summary

Ref. No.	Proposed Completion Date	Completion Date	Remarks
90820-R03	27 August 2009	27 August 2009	
90827-O01	03 September 2009		
90827-R02			
90827-R03			
90827-R04			
90827-R05			

	Name	Signature	Date
Recorded by	Tony Ng		27 August 2009
Checked by	Dr. Priscilla Choy		27 August 2009

APPENDIX J
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

Appendix J - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
Construction Dust	• 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.	N/A
	• 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 maintain the dusty materials wet.	*
	• Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving 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.	*
	• 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.	^

Types of Impacts	Mitigation Measures	Status
Construction Noise	• 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. • 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. • 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. • 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.	* ^ * ^ N/A ^ *

Types of Impacts	Mitigation Measures	Status
	• 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. • 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. • 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.	N/A N/A 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	
	• Construction work force sewage discharges form fixed toilet facilities on-site should be connected to the nearby existing trunk 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

Types of Impacts	Mitigation Measures	Status
Waste / Chemical	*General*	
	• 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.	^
	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.	^

Types of Impacts	Mitigation Measures	Status
	• Containers used for the storage of chemical wastes should: a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; c. 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. • 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 Impact	• Refinement of the route alignment and design of associated structures to minimise loss of woodland and other landscape resources; • 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; • 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;	X	Non-compliance of mitigation measure;
N/A	Not Applicable;	•	Non-compliance but rectified by the contractor;
*	Recommendation was made during site audit but improved/rectified by the contractor.	#	Non-compliance but rectified/improved by the contractor and awaiting IEC's further comment;

APPENDIX K
EVENT ACTION PLANS

Appendix K – Event Action Plans

Event /Action Plan for Air Quality

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
Action Level				
1. Exceedance for one sample	1. Inform the IEC and the Contractor about the exceedance within 24 hours of identification of exceedance; 2. Identify the source, investigate the causes of exceedance and propose remedial measures; 3. Report the results of the investigation to the Contractor; 4. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. 5. Repeat measurement to confirm finding. 6. 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. Check monitoring data submitted by the ET. 2. Confirm the ET assessment regarding the action and/or limit level exceedance during the impact monitoring; 3. Check Contractor's working method.	1. Confirm receipt of NOE in writing. 2. Notify EPD and other relevant Government departments within 24 hours of identification of exceedance.	1. Inform IEC and ER within 24 hours of identification of exceedance; 2. Submit proposals for remedial to ER within 3 working days of notification ET if exceedance is due to the Project construction works; 3. Rectify any unacceptable practice; 4. Amend working methods if appropriate and within reasonable time scale if exceedance is due to the Project construction works.

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
Action Level				
2. Exceedance for two or more consecutive samples	1. Inform the IEC and the Contractor about the exceedance within 24 hours of identification of exceedance; 2. Identify the source. 3. Supervise implementation of remedial measures; 4. Report the results of the investigation to the Contractor; 5. Advise the ER on the effectiveness of the proposed remedial measures; 6. Repeat measurements to confirm findings; 7. Increase monitoring frequency to daily; 8. Discuss with the IEC and the Contractor on remedial actions required; 9. If exceedance continues, arrange meeting with the IEC and the ER. 10. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Check the Contractor's working method; 3. Discuss with the ET and the Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervisor implementation of remedial measures.	1. Confirm receipt of NOE in writing. 2. Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance; 3. Ensure remedial measures properly implemented.	1. Inform IEC and ER within 24 hours of identification of exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
Limit Level				
1. Exceedance for one sample	1. Notify the IEC and the Contractor within 24 hours of identification of exceedance; 2. Identify the source, investigate the causes of exceedance and propose remedial measures; 3. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. 4. Repeat measurement to confirm finding. 5. 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; 6. Assess effectiveness of Contractor's remedial actions and keep the IEC, the DEP and the ER informed of the results.	1. Check monitoring data submitted by the ET. 2. Check Contractor's working method. 3. Discuss with the ET, the Contractor and the ER on possible remedial measures. 4. Advise the ER on the effectiveness of the proposed remedial measures. 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify EPD and other relevant Government departments within 24 hours of identification of exceedance; 3. Ensure remedial measures are properly implemented.	1. Inform ER and IEC within 24 hours of identification of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER and IEC within 3 working days of notification by ET; 4. Implement the agreed proposals; 5. Report effectiveness of remedial actions to IEC and ER; 6. Amend proposal if appropriate.

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
2. Exceedance for two or more consecutive samples	1. Notify the IEC and the Contractor within 24 hours of identification of exceedance; 2. Identify the source; 3. Repeat measurements to confirm findings if the exceedance is due to the Project construction works; 4. Increase monitoring frequency to daily; 5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with the IEC and the ER to discuss the remedial actions to be taken; 7. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst the ER, ET and the Contractor on the potential remedial actions; 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance;. 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures are properly implemented; 5. 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.	1. Inform ER and IEC within 24 hours of identification of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to IEC within 3 working days of notification by ET; 4. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 5. Implement the agreed proposals; 6. Resubmit proposals if problem still not under control; 7. Report effectiveness of remedial actions to IEC and ER; 8. 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 Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
Action Level	1. Notify the IEC and the Contractor within 24 hours of identification of exceedance. 2. Carry out investigation. 3. Report the results of investigation to the IEC and the Contractor. 4. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. 5. Discuss with the Contractor and formulate remedial measures. 6. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of NOE in writing. 2. Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC 2. Implement noise mitigation proposals

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
Limit Level	1. Notify the IEC and the Contractor within 24 hours of identification of exceedance. 2. Identify the source. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD within 24 hours of identification of exceedance. 6. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 7. Inform the IEC, the ER and the DEP the causes & actions taken for the exceedances. 8. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the ER informed of the results. 9. If exceedance stops, cease additional monitoring.	1. Discuss amongst the ER, the ET and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of NOE in writing. 2. Notify the EPD and other relevant Government departments within 24 hours of identification of exceedance. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. 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.	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. 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	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor; 4. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD with 24 hours of identification of exceedance. 5. Check monitoring data, all plant, equipment and the Contractor's working methods; 6. Discuss mitigation measures with the IEC and the Contractor; 7. Repeat measurement on next day of exceedance.	1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures.	1. Discuss with the IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET and the IEC and propose mitigation measures to the IEC and the ER; 6. Implement the agreed mitigation measures.
Action Level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with the IEC and the Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily;	1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. 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.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET and the IEC and propose mitigation measures to the IEC and ER within 3 working days; 6. 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 exceeded by one consecutive sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor; 4. Prepare Notification of Exceedance (NOE) to inform the Contractor, the IEC, the ER and the EPD with 24 hours of identification of exceedance. 5. Check monitoring data, all plant, equipment and the Contractor's working methods; 6. Discuss mitigation measures with the IEC, the ER and the Contractor; 7. Ensure mitigation measures are implemented; 8. Increase the monitoring frequency to daily until no exceedance of Limit Level.	1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures.	1. Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; 2. Request the Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Access the effectiveness of the implemented mitigation measures.	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; 6. Implement the agreed mitigation measures.

EVENT	ACTION			
	ET	**IEC**	**ER**	**Contractor**
Limit Level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and DEP; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with the IEC, the ER and the Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures.	1. Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Access the effectiveness of the implemented mitigation measures; 5. 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.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; 6. Implement the agreed mitigation measures; 7. 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.	ETL is of the view that the complaint is 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
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 3rd November 2006, was raised by a resident living Lantau Island on 17th October 2006 concerning the Tung Chung Road condition on 16th 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 16th 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
S72	Lung Tseng Tau Village, Tung Chung	3 Nov 06	The public complaint, which was referred by RSS to ET on 3rd November 2006, was received by the Integrated Complaint Centre (ICC) on 26th 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 3rd November 2006, was raised by a resident living at Cheung Sha on 24th 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
S74	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 21st November 2006. The Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 24th 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 21st 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 21st 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 23rd 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 23rd 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 23rd 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 29th November 2006. The complainants claimed that subject villages were suffering from muddy water supplied from the water main on the past few days before 29th 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 6th 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 18th 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 23rd 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 23rd 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. also mobilized water trucks	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 15th 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.	After investigation, the discharge of muddy water 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. In addition, several intermediate sedimentation ponds along the temporary drainage system south of Shek Mun Kap to improve de-silting capacity have been installed, and that the site condition will be closely monitored so that advice on any practical measures in improving the quality of water discharge to Wong Lung Hang nullah can be given. In addition, the Contractor is also undergoing continual inspections and monitoring on the conditions of the concerned discharge of the construction site, and is in close liaison with the ET to cap exceeding levels of future discharge.	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 site of concern is most likely at the RW6 of 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 completed before 8th February 2007. According to the noise monitoring results at monitoring station NM5, Tung Chung Au Country Parks Management Centre, which is located near the AFCD's Office, there was no exceedance recorded from 2nd January to 14th February 2007. As advised by the Contractor, the following mitigation measures will be implemented as far as possible to reduce the noise nuisance to the nearby residents when soil nailing works carry out in the future: ● To cover the soil nailing works area with tarpaulin; ● To reduce the number of machines for soil nailing; ● To orientate the machines for soil nailing works so that the major noise generating part will not directly face the Noise Sensitive Receiver; and ● To scatter the plants so that the noise being generated will not be centralized in certain direction.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S90	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 27th May 2007.	According to the Contractor, construction works were undertaken near STR 14 in the morning of 27th May 2007 and the Powered Mechanical Equipment (PME) used on that day included 2 excavators and 1 dump truck at STR 14. The concerned site was covered under the construction noise permit (CNP) no. GW-RS0281-07. As advised by the Contractor, the 2 excavators and 1 dump truck, which categorized separately as Group A and Group E of the abovementioned CNP, were utilized alternatively during the operation in order to comply with the conditions stipulated in the CNP. Base on the information collected, the complaint was considered not justifiable as the equipment used comply with the CNP conditions.	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
S100	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 17th 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 6th 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.	No non-compliance or environmental deficiency related to or in the vicinity of the concerned area was identified during these site audits. According to Hong Kong Observatory, Hong Kong was under the effect of the tropical storm over the central part of the South China Sea which brought heavy showers with 100.4 millimeters of total rainfall recorded on 6 August. The amber rainstorm warning was hoisted between 15:55pm to 17:30pm. The Contractor has confirmed there was no construction activity in the concerned area on 6th August 2007 due to heavy rainfall. According to the Contractor, muddy water was the silty runoff from nearby work sites due to the heavy rainfall on the day. The Contractor has implemented following mitigation measures: • To desilt temporary drainage channels and sedimentation tank. • To clear the silt and mud in the surface of haul road at RW06 ad RW07. • To cover exposed slope with tarpaulin at RW06 and RW07. According to the RSS and the Contractor, no further report of silt and muddy water runoff from concerned area was received after implementation of the aforesaid mitigation measures.	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. By reviewing the air quality monitoring data, there was no exceedance of air quality monitoring results on 8th and 14th 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.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S147	Zone 1 Tung Chung Road	14 November 2008	The complaint was referred to ETL from EPD by Mr. Peter Tang on 14 November 2008, regarding a suspected case about land- filling of non-inert construction waste in early 2008 and potential further land-filling of non- inert construction waste stockpiled at Zone 1 Tung Chung Road.	According to the Contractor, there are two major stockpile areas within the construction premise which are located at San Shek Wan and Tung Chung Road. The location specified in the complaint was the stockpile area at San Shek Wan. This location was used for stockpiling reusable materials. Base on the information collected, the complaint was considered not justifiable as San Shek Wan is one of the designated C&D materials sorting areas of the Project and no direct evidence shows there was land-filling activity by this project at the specified location. However, as a follow up of the complaint, the Contractor has implemented mitigation measures as follows: ● Preliminary segregation of waste was enhanced; and ● Water was sprayed on the stockpiles more frequently to further suppress dust generation. ● The Contractor was recommended to continue the following mitigation measures : ● To provide dust suppression measures to the stockpiles at San Shek Wan, especially during dry season, to minimize dust generation; ● To carry out continuous segregation of materials on site; ● To avoid accumulation of stockpiles; and ● To dispose of non-reusable material to designated outlets as soon as possible.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S152 and S154	Zone 1 Tung Chung Road	3rd and 8th April 2009	EPD received a public complaint about suspected land- filling of non-inert construction waste in early 2009 at Zone 1 of Tung Chung Road for the Project and a similar verbal complaint regarding illegal land filling of construction waste on the same site (Zone 1) was received from Lands Department.	Base on the information collected, the complaint was considered not justifiable as San Shek Wan is one of the designated C&D materials sorting areas of the Project and no direct evidence shows there was land-filling activity by this project at the specified location. Sorting and disposal of C&D materials were conducted in accordance with WMP. Nevertheless, the Contractor was recommended to continue the following mitigation measures in order to minimize the environmental impact on the nearby community and the amount of waste produced: • Stockpiled material shall be covered by tarpaulins and/or watered as appropriate to prevent windblown dust and/or surface run-off. Storage of material on site shall be kept to a minimum to avoid nuisance to local residents; • excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation; and • good site practice shall be implemented to avoid waste generation and promote waste minimization.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S157	New Tung Chung Road and near-by soil erosion in Cheung Sha Catchwater	1st June 2009	The complaint was raised by the WSD on 1st June 2009. WSD concerned about the soiled water had been collected from New Tung Chung Road and soil erosion was found at Cheung Sha Catchwater. The ETL of the Project was informed of the complaint by CCJV through the e-mail on 5th June 2009 and initiated the complaint investigation procedures.	Base on the information collected, the complaint was considered justifiable as heavy downpour of rain had caused soil erosion on exposed slopes leading to Cheung Sha Catchwater. The Contractor was recommended to take sufficient mitigation measures to minimize the exposed areas to rain by covering the exposed area with tarpaulin or soil erosion control mat, as well as to carry out slope reinstatement works as soon as practicable. The environmental conditions of the site will be continuously reviewed by the Resident Site Staff, IEC and the Environmental Team through regular and ad hoc site inspections and monitoring exercises.	Closed

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

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

Summary of Warnings / Direction Issued by the EPD

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 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 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

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.
8 December 2008	The Contractor was required to take all necessary actions to rectify the situation that a suspected chemical waste (mineral oil) was found improperly packed and stored at Zone 1 Tung Chung Road on 4 December 2008, so as not to contravene the statutory requirement of the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354).

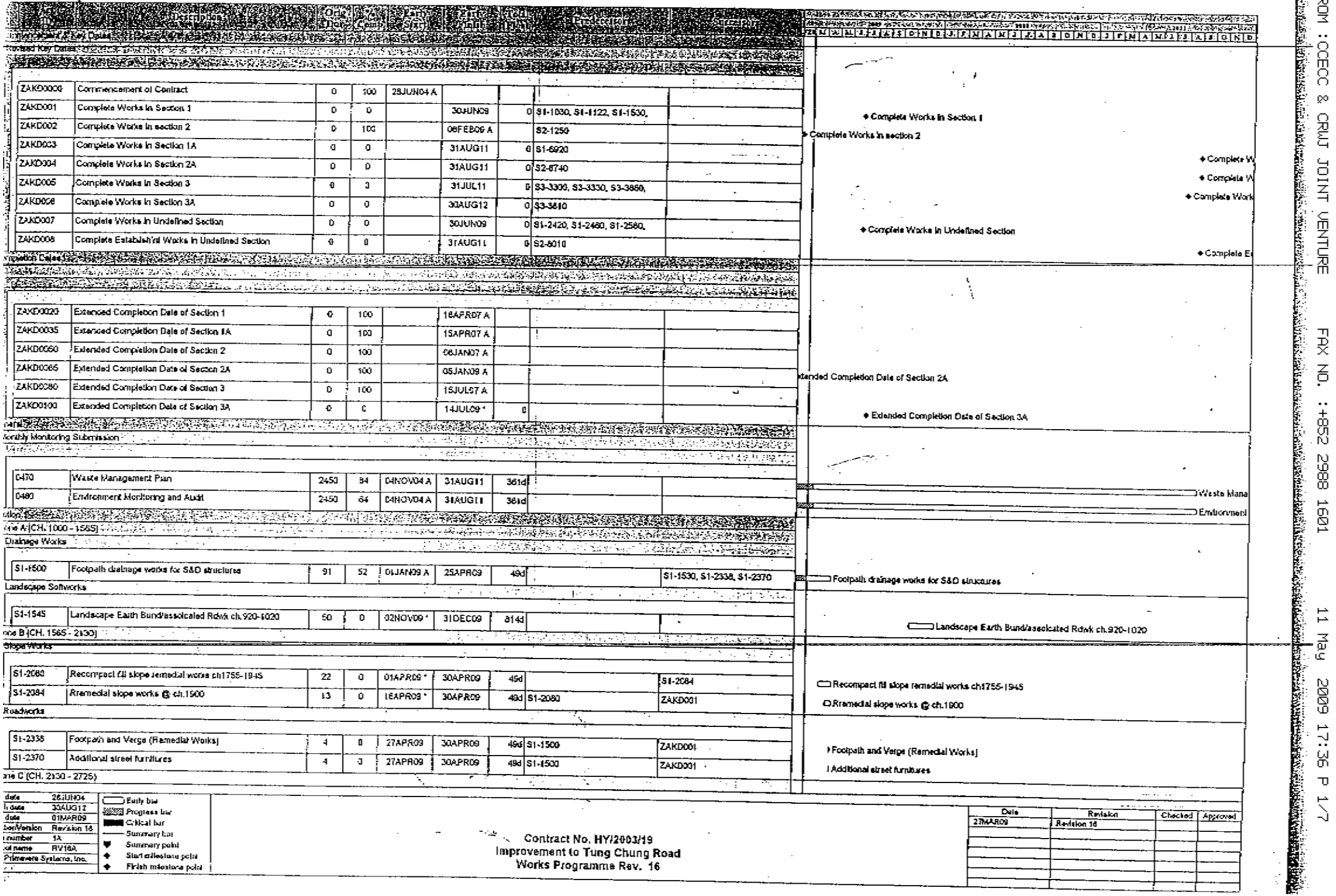
Summary of Notification of Summons

Date of Summons	Details of the Summons	Status
25 January 2007	Construction works at a slope next to Stream no. 28 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 3.9 concerning works at Stream 28 on 26 July 2006	Withdrawn by EPD
16 February 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.
17 May 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.

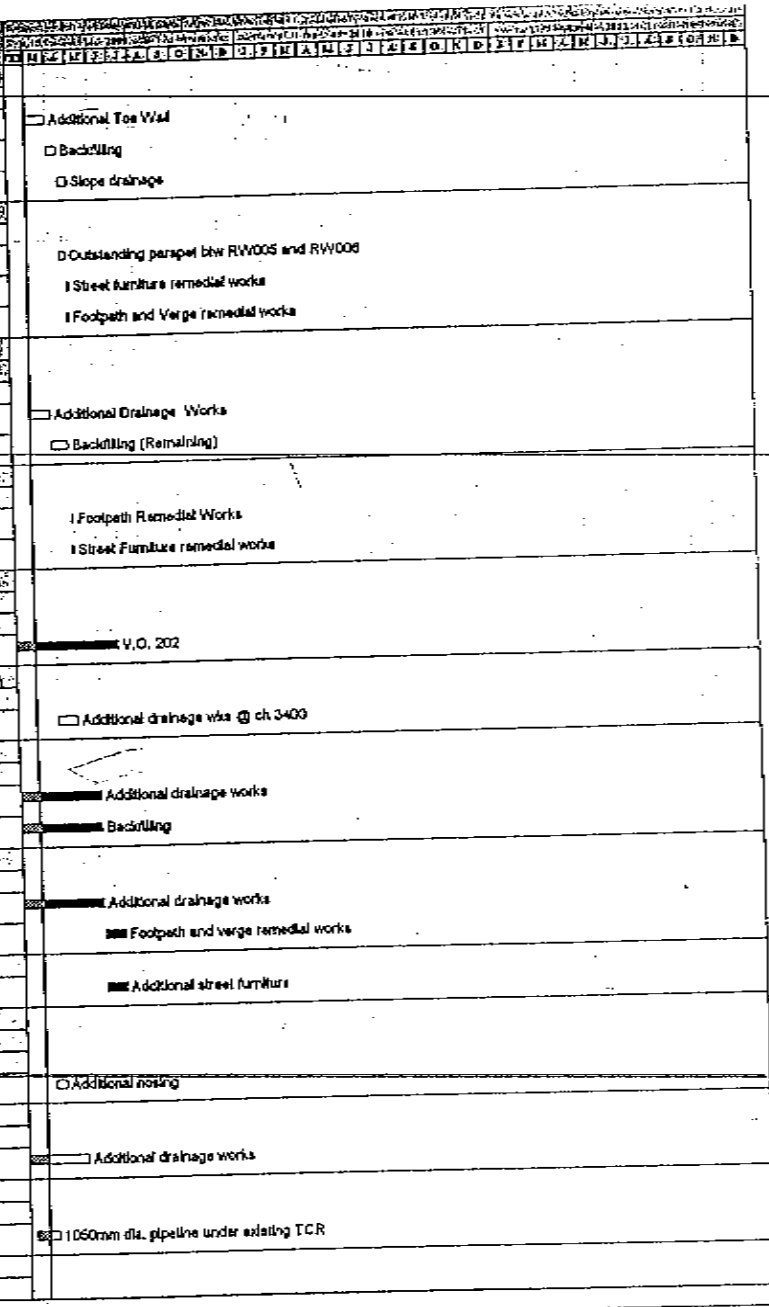
Summary of Notification of Successful Prosecution

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



Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish	Total Float	Predecessors	Successors
Retaining Wall RW08								
S1-3890	Additional Toe Wall	28	0	02MAR09 *	31MAR09	46d		S1-3900
S1-3900	Backfilling	9	0	01APR09	15APR09	49d	S1-3890	S1-3633, S1-3910
S1-3910	Slope drainage	13	0	15APR09	30APR09	49d	S1-3900	ZAKD001
Roadworks								
S1-3633	Outstanding parapet btw RW005 and RW006	8	0	15APR09	25APR09	49d	S1-3631, S1-3900	S1-3634, S1-3635
S1-3634	Street furniture remedial works	4	0	27APR09	30APR09	49d	S1-3633	ZAKD001
S1-3635	Footpath and Verge remedial works	4	0	27APR09	30APR09	49d	S1-3633	ZAKD001
Zone D (CH. 2725 - 3100)								
Retaining Wall RW07								
S1-4241	Additional Drainage Works	28	0	02MAR09 *	31MAR09	49d		S1-4260
S1-4260	Backfilling (Remaining)	16	0	01APR09	25APR09	49d	S1-4241	S1-4421, S1-4430
Roadworks								
S1-4421	Footpath Remedial Works	4	0	27APR09	30APR09	49d	S1-4260	ZAKD001
S1-4430	Street Furniture remedial works	4	0	27APR09	30APR09	49d	S1-4260	ZAKD001
Zone E (CH. 3100 - 4010)								
Slope Works								
S1-5151	V.O. 202	168	42	02DEC08 A	30JUN09	0		ZAKD001
Retaining Wall RW10								
S1-5390	Additional drainage wks @ ch 3400	22	0	01APR09 *	30APR09	49d		ZAKD001
Retaining Wall RW11								
S1-5450	Additional drainage works	95	25	01FEB09 A	30MAY09	0		S1-5836, S1-5847
S1-5463	Backfilling	95	25	01FEB09 A	30MAY09	0		S1-5838, S1-5847
Roadworks								
Road work		294	76	02JUN08 A	30MAY09	0		S1-5838, S1-5847
S1-5545	Additional drainage works	28	0	01JUN09	30JUN09	0	S1-5450, S1-5463, S1-5846	ZAKD001
S1-5847	Footpath and verge remedial works	26	0	01JUN09	30JUN09	0	S1-5450, S1-5463, S1-5846	ZAKD001
S1-5836	Additional street furniture							
Zone F (CH. 4010 - 4666)								
Retaining Wall RW16								
S1-6365	Additional nosing	14	0	16MAR09 *	31MAR09	71d		ZAKD001
Retaining Wall RW38								
S1-5530	Additional drainage works	72	33	01FEB09 A	30APR09	49d		ZAKD001
Culvert at CH. 4631								
S1-6615	1050mm dia. pipeline under existing TCR	29	55	11FEB09 A	16MAR09	84d		ZAKD001
Roadworks								



Start date	28JUN04
Finish date	30AUG12
Data date	01MAR09
Number/Version	Revision 16
Page number	1A
Project name	SV16A
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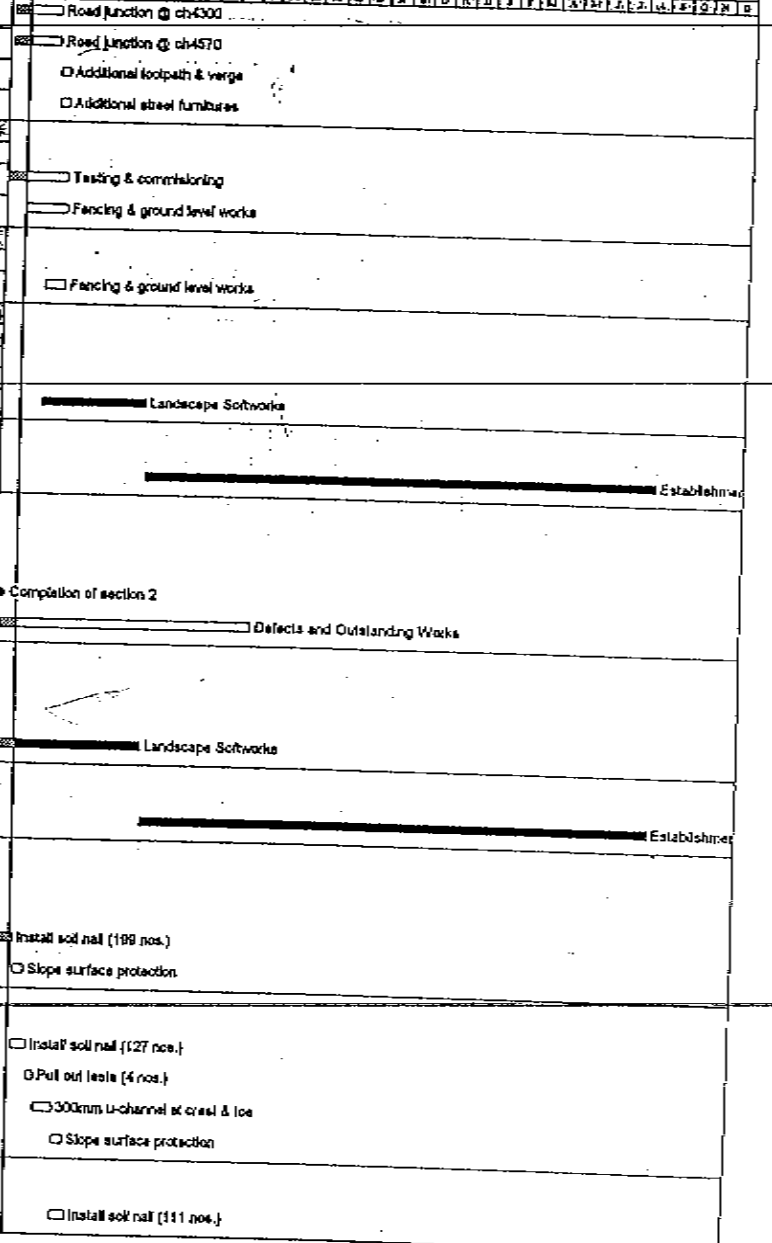
Contract No. HY/2003/19
Improvement to Tung Chung Road
Works Programme Rev. 16

Date	Revision	Checked	Approved
27MAR09	Revision 16		

Activity ID	Activity Description	Orig Dur	% Comp.	Early Start	Early Finish	Total Float	Predecessors	Successors
S1-6722	Road junction @ ch4300	54	35	07FEB09 A	15APR09	46d		S1-6724, S1-6725
S1-6723	Road junction @ ch4570	54	35	07FEB09 A	15APR09	46d		S1-6724, S1-6725
S1-6724	Additional footpath & verge	13	0	16APR09	30APR09	46d	S1-6722, S1-6723	ZAKD001
S1-6725	Additional street furnitures	13	0	16APR09	30APR09	46d	S1-6722, S1-6723	ZAKD001
Pump House for Fire Hydrant @ CH. 4398								
S1-6922	Testing & commisioning	66	50	01JAN09 A	30APR09	46d		S1-6923
S1-6923	Fencing & ground level works	48	0	02MAR09	30APR09	46d	S1-6922	ZAKD001
Transformer Room at CH. 4350								
S1-6903	Fencing & ground level works	22	0	01APR09*	30APR09	46d		ZAKD001
Section 1A								
Zone F (CH. 4010 - 4686)								
Landscape Softworks								
S1-6910	Landscape Softworks	123	0	01APR09*	31AUG09	0		S1-6920
Establishment works								
S1-6920	Establishment Works for Section 1A(claim no.084)	710	0	01SEP09*	31AUG11	0	S1-6910	ZAKD003
Section 2								
Remaining Works								
S2-1250	Completion of section 2	0	100		06FEB09 A			ZAKD002
S2-1300	Defects and Outstanding Works	300	0	07FEB09 A	06FEB10	783d		
Section 2A								
Zone J-6								
Landscape Softworks								
S2-6730	Landscape Softworks	422	65	01APR08 A	31AUG09	0		S2-6740
Establishment works								
S2-6740	Establishment Works for Section 2A	710	0	01SEP09	31AUG11	0	S2-6730	ZAKD004
Section 3								
Feature No. 13NE-B/C65								
S3-3030	Instal soil nail (199 nos.)	29	66	31JAN09 A	05MAR09	396d	S3-3010	S3-3040, S3-3050
S3-3040	Slope surface protection	14	0	06MAR09	21MAR09	813d	S3-3020, S3-3030	S3-3070
Feature No. 13NE-B/C64								
S3-3050	Install soil nail (127 nos.)	20	0	06MAR09	28MAR09	396d	S3-3030	S3-3060
S3-3060	Pull out tests (4 nos.)	3	0	30MAR09	08APR09	396d	S3-3050	S3-3065
S3-3065	300mm u-channel at crest & toe	20	0	09APR09	07MAY09	396d	S3-3060	S3-3070, S3-3080
S3-3070	Slope surface protection	14	0	08MAY09	23MAY09	579d	S3-3040, S3-3065	S3-3110
Feature No. 13NE-B/C63								
S3-3080	Install soil nail (111 nos.)	19	0	08MAY09	30MAY09	396d	S3-3065	S3-3090



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Number/Version Revision 16
Page number 3A
Project name RV16A
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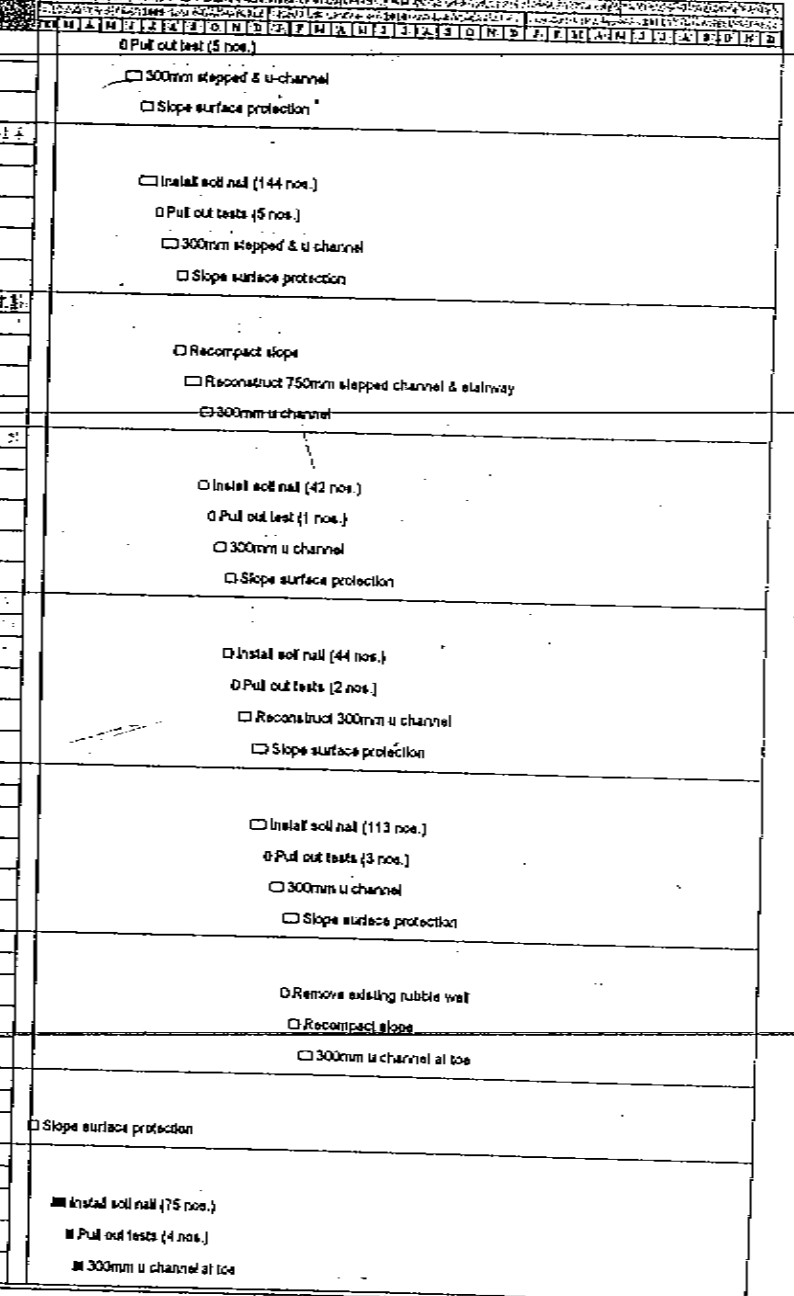
Summary bar
Summary point
Start milestone point
Finish milestone point

Contract No. HY/2003/19
Improvement to Tung Chung Road
Works Programme Rev. 16

Date	Revision	Checked	Approved
27MAR09	Revision 16		

Activity ID	Activity Description	Orig Dur	Act Comp	Early Start	Early Finish	Total Float	Predecessors	Successors
S3-3090	Pull out test (5 nos.)	8	0	01JUN09	09JUN09	396d	S3-3060	S3-3100
S3-3100	300mm stepped & u-channel	20	0	10JUN09	03JUL09	396d	S3-3090	S3-3110, S3-3120
S3-3110	Slope surface protection	14	0	04JUL09	20JUL09	546d	S3-3070, S3-3100	S3-3150
Feature No. 13NE-B/C62								
S3-3120	Install soil nail (144 nos.)	22	0	04JUL09	29JUL09	396d	S3-3100	S3-3130
S3-3130	Pull out tests (5 nos.)	8	0	30JUL09	07AUG09	396d	S3-3120	S3-3140
S3-3140	300mm stepped & u channel	20	0	08AUG09	31AUG09	396d	S3-3130	S3-3150, S3-3160
S3-3150	Slope surface protection	14	0	01SEP09	16SEP09	510d	S3-3110, S3-3140	S3-3220
Feature No. 13NE-B/F84								
S3-3160	Recompact slope	14	0	01SEP09	16SEP09	396d	S3-3140	S3-3170
S3-3170	Reconstruct 750mm stepped channel & stairway	23	0	17SEP09	19OCT09	396d	S3-3150	S3-3180, S3-3190
S3-3180	300mm u channel	14	0	12OCT09	28OCT09	567d	S3-3170	
Feature No. 13NE-B/C80								
S3-3190	Install soil nail (42 nos.)	12	0	12OCT09	24OCT09	396d	S3-3170	S3-3200
S3-3200	Pull out test (1 nos.)	8	0	27OCT09	04NOV09	396d	S3-3190	S3-3210
S3-3210	300mm u channel	14	0	05NOV09	20NOV09	396d	S3-3200	S3-3220, S3-3230
S3-3220	Slope surface protection	14	0	21NOV09	07DEC09	456d	S3-3150, S3-3210	S3-3260
Feature No. 13NE-B/C233								
S3-3230	Install soil nail (44 nos.)	12	0	21NOV09	04DEC09	396d	S3-3210	S3-3240
S3-3240	Pull out tests (2 nos.)	8	0	05DEC09	14DEC09	396d	S3-3230	S3-3250
S3-3250	Reconstruct 300mm u channel	14	0	15DEC09	02JAN10	396d	S3-3240	S3-3260, S3-3270
S3-3260	Slope surface protection	20	0	04JAN10	28JAN10	438d	S3-3220, S3-3250	S3-3300
Feature No. 13NE-B/CR72								
S3-3270	Install soil nail (113 nos.)	20	0	04JAN10	28JAN10	396d	S3-3250	S3-3280
S3-3280	Pull out tests (3 nos.)	8	0	27JAN10	04FEB10	396d	S3-3270	S3-3290
S3-3290	300mm u channel	14	0	05FEB10	23FEB10	396d	S3-3280	S3-3300, S3-3310
S3-3300	Slope surface protection	20	0	24FEB10	18MAR10	414d	S3-3260, S3-3290	ZAKD005
Feature No. 13NE-B/FR68								
S3-3310	Remove existing rubble wall	10	0	24FEB10	06MAR10	396d	S3-3290	S3-3320
S3-3320	Recompact slope	14	0	08MAR10	23MAR10	396d	S3-3310	S3-3330
S3-3330	300mm u channel at toe	14	0	24MAR10	12APR10	396d	S3-3320	ZAKD005
Feature No. 13NE-B/C115								
S3-3370	Slope surface protection	54	36	24FEB09 A	11MAR09	598d	S3-3360	S3-3410
Feature No. 13NE-B/C116								
S3-3350	Install soil nail (75 nos.)	14	0	02APR09	22APR09	0	S3-3690	S3-3390
S3-3390	Pull out tests (4 nos.)	8	0	23APR09	04MAY09	0	S3-3360	S3-3400
S3-3400	300mm u channel at toe	14	0	05MAY09	20MAY09	0	S3-3390	S3-3410, S3-3420



Data date	26JUN09
Finish date	30AUG12
Progress date	01MAR09
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Type number	4A
Project name	RV16A
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Contract No. HY/2003/19
Improvement to Tung Chung Road
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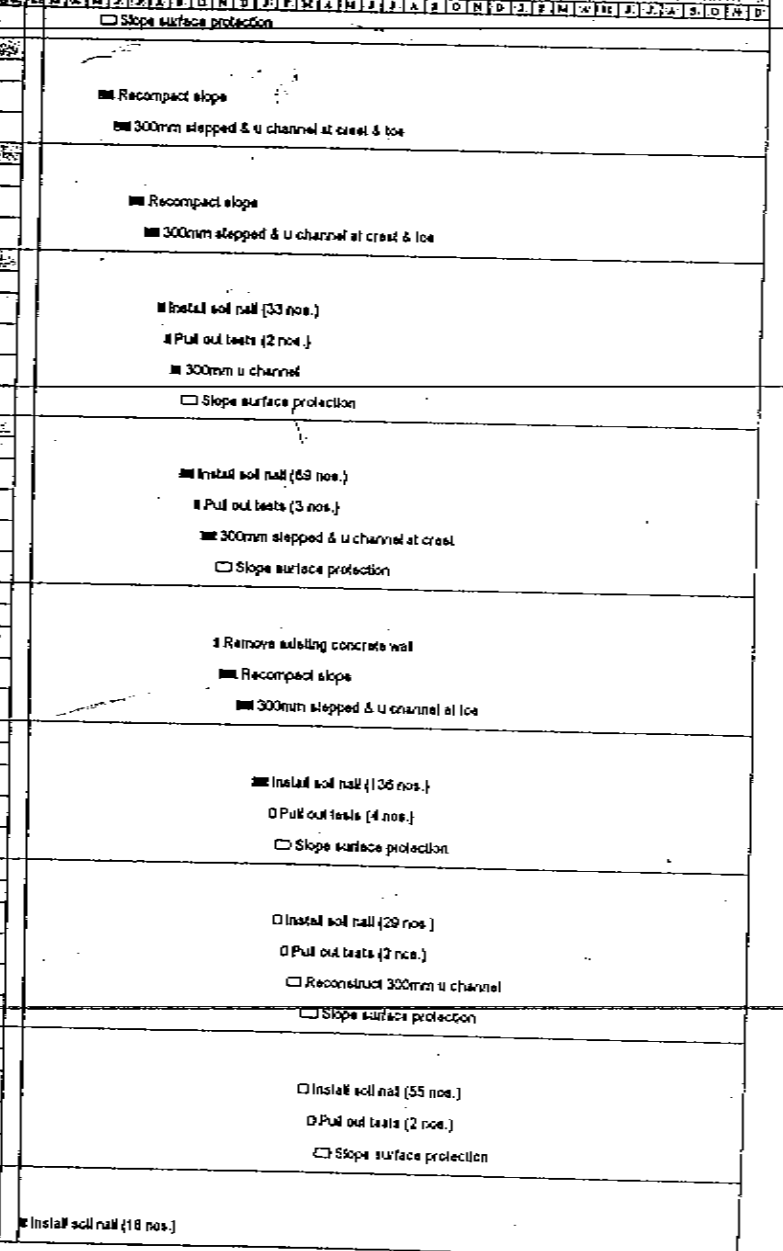
Activity ID	Activity Description	Orig Dur	Comp	Early Start	Early Finish	Total Float	Predecessors	Successors
S3-3410	Slope surface protection	20	0	26MAY09	13JUN09	544d	S3-3370, S3-3400, S3-3700	S3-3490
Feature No. TCR/UF/F/22								
S3-3420	Recompact slope	20	0	21MAY09	13JUN09	0	S3-3400	S3-3430
S3-3430	300mm stepped & u channel at crest & toe	20	0	15JUN09	08JUL09	0	S3-3420	S3-3440
Feature No. 13NE-B/FR90								
S3-3440	Recompact slope	20	0	09JUL09	31JUL09	0	S3-3430	S3-3450
S3-3450	300mm stepped & u channel at crest & toe	20	0	01AUG09	24AUG09	0	S3-3440	S3-3460
Feature No. 13NE-B/C117								
S3-3460	Install soil nail (33 nos.)	10	0	25AUG09	04SEP09	0	S3-3450	S3-3470
S3-3470	Pull out tests (2 nos.)	8	0	05SEP09	14SEP09	0	S3-3460	S3-3480
S3-3480	300mm u channel	14	0	15SEP09	30SEP09	0	S3-3470	S3-3490, S3-3500
S3-3490	Slope surface protection	20	0	02OCT09	24OCT09	452d	S3-3410, S3-3480	S3-3530
Feature No. 13NE-B/C244								
S3-3500	Install soil nail (69 nos.)	17	0	02OCT09	21OCT09	0	S3-3480	S3-3510
S3-3510	Pull out tests (3 nos.)	8	0	22OCT09	31OCT09	0	S3-3500	S3-3520
S3-3520	300mm stepped & u channel at crest	20	0	02NOV09	24NOV09	0	S3-3510	S3-3530, S3-3540
S3-3530	Slope surface protection	20	0	25NOV09	17DEC09	427d	S3-3490, S3-3520	S3-3590
Feature No. 13NE-B/FR85								
S3-3540	Remove existing concrete wall	7	0	25NOV09	02DEC09	0	S3-3520	S3-3550
S3-3550	Recompact slope	20	0	03DEC09	28DEC09	0	S3-3540	S3-3560
S3-3560	300mm stepped & u channel at toe	20	0	29DEC09	21JAN10	0	S3-3550	S3-3570
Feature No. 13 NE-B/C114								
S3-3570	Install soil nail (136 nos.)	20	0	22JAN10	13FEB10	0	S3-3560	S3-3580, S3-3600
S3-3580	Pull out tests (4 nos.)	8	0	17FEB10	25FEB10	359d	S3-3570	S3-3590, S3-3600
S3-3590	Slope surface protection	20	0	26FEB10	20MAR10	372d	S3-3530, S3-3580	S3-3630
Feature No. 13NE-B/C113								
S3-3600	Install soil nail (29 nos.)	11	0	26FEB10	10MAR10	359d	S3-3580	S3-3610
S3-3610	Pull out tests (2 nos.)	8	0	11MAR10	19MAR10	359d	S3-3600	S3-3620
S3-3620	Reconstruct 300mm u channel	14	0	20MAR10	08APR10	359d	S3-3610	S3-3630, S3-3640
S3-3630	Slope surface protection	20	0	09APR10	03MAY10	359d	S3-3590, S3-3620	S3-3650
Feature No. TCR/UF/C/27								
S3-3640	Install soil nail (55 nos.)	12	0	09APR10	22APR10	359d	S3-3620	S3-3650
S3-3650	Pull out tests (2 nos.)	5	0	23APR10	03MAY10	359d	S3-3640	S3-3660
S3-3660	Slope surface protection	20	0	04MAY10	27MAY10	359d	S3-3630, S3-3650	ZAKD005
Feature No. 13NE-B/C243								
S3-3670	Install soil nail (16 nos.)	10	0	02MAR09	12MAR09	0	S3-3360	S3-3680



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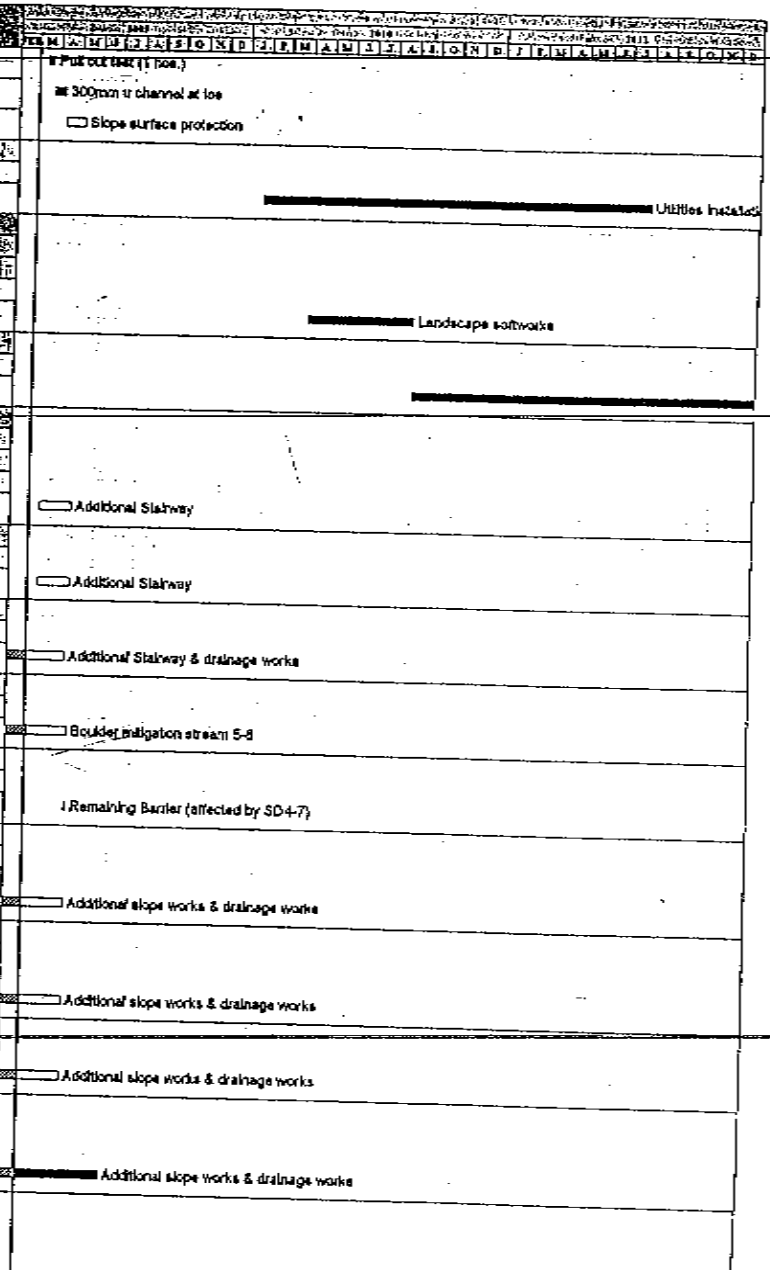
Activity ID	Description	Orig Dur	% Comp	Early Start	Early Finish	Total Float	Predecessors	Successors
S3-3680	Pull out test (1 nos.)	8	0	13MAR09	21MAR09	0	S3-3670	S3-3690
S3-3690	300mm u channel at toe	14	0	23MAR09	08APR09	0	S3-3680	S3-3380, S3-3700
S3-3700	Slope surface protection	20	0	09APR09	07MAY09	555d	S3-3690	S3-3410
Utilities								
S3-3800	Utilities Installation	540	0	22JAN10	31JUL11	0	S3-3570	ZAKD005
Section 3A								
Landscape Softworks								
S3-3805	Landscape softworks	124	0	01APR10 *	31AUG10	0		S3-3810
Establishment works								
S3-3810	Establishment Works for Section 3A(claim no.084)	719	0	01SEP10 *	30AUG12	0	S3-3805	ZAKD006
Undefined Section of Works								
Zone B (CH. 1665 - 2130)								
Straining & Deflection Structure SD 2-5								
S1-2420	Additional Stairway	38	0	16MAR09 *	30APR09	49d		ZAKD007
Straining & Deflection Structure DT-11								
S1-2460	Additional Stairway	38	0	16MAR09 *	30APR09	49d		ZAKD007
Straining & Deflection Structure SD 4-7								
S1-2500	Additional Stairway & drainage works	66	35	01FEB09 A	25APR09	49d		S1-2831
Flexible Debris Barrier at CH. 1700 (OFB1)								
S1-2580	Boulder mitigation stream 5-8	72	33	02FEB09 A	30APR09	49d	S1-2550	ZAKD007
Flexible Debris Barrier at CH. 1800 (OFB2)								
S1-2831	Remaining Barrier (affected by SD4-7)	4	0	27APR09	30APR09	49d	S1-2500	ZAKD007
Zone C (CH. 2130 - 2725)								
Straining & Deflection Structure SD 5-11								
S1-3708	Additional slope works & drainage works	85	33	01FEB09 A	30APR09	58d		ZAKD007
Zone D (CH. 2725 - 3100)								
Straining & Deflection Structure SD 6-12								
S1-4462	Additional slope works & drainage works	85	33	01FEB09 A	30APR09	58d		ZAKD007
Straining & Deflection Structure SD 7-13								
S1-4562	Additional slope works & drainage works	85	33	01FEB09 A	30APR09	58d		ZAKD007
Zone E (CH. 3100 - 4010)								
Straining & Deflection Structure SD 10-19								
S1-5902	Additional slope works & drainage works	143	20	01FEB09 A	30JUN09	0		ZAKD007
Landscape Works in Undefined Section								



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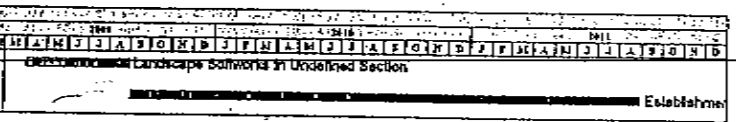
Act ID	Description	Orig Dur	% Wk Comp	Early Start	Early Finish	Total Float	Predecessors	Successors
S2-8000	Landscape Softworks in Undefined Section	145	0	01APR09 *	31AUG09	0	S2-8725	S2-8410
S2-8010	Establishment Works for Undefined Section	710	0	01SEP09 *	31AUG11	0	S2-8000	ZAKD008



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Contract No. HY/2003/19
Improvement to Tung Chung Road
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APPENDIX O
WASTE GENERATED QUANTITY

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

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

Monthly Summary Waste Flow Table for Year 2007

Year	Actual Quantities 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	Metals		Paper/cardboard packaging		Plastic(2)		Chemical Waste	Site clearance waste(3)	Others, e.g. general refuse (in 10^3 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**

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.

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

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

Monthly Summary Waste Flow Table for Year 2008

Year	Actual Quantities 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	Metals		Paper/cardboard packaging		Plastic[2]		Chemical Waste	Site clearance waste[3]	Others, e.g. general refuse (in 10^3 m^3)	
	(a)	(b)	(c)	(d)	(e)	Disposal	Recycle	Disposal	Recycle	Disposal	Recycle	Disposal	Disposal	Disposal	Timber Waste
Jan	1.230	0	1.128	0	0.102	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	73.61	1.235	0.065
Feb	1.875	0	0.762	0	1.113	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	34.21	1.425	0.075
Mar	1.064	0	0.858	0	0.206	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	56.82	1.520	0.080
Apr	0.994	0	0.765	0	0.229	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	84.54	1.900	0.100
May	1.335	0	1.020	0	0.315	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	78.21	1.752	0.095
Jun	0.755	0	0.467	0	0.288	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	86.76	1.895	0.124
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**	**9.727**	**0.539**
July	0.953	0	0.685	0	0.268	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	96.88	2.036	0.098
Aug	2.875	0	5.978	0	0.758	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	89.33	2.189	0.127
Sept	1.954	0	1.628	0	0.985	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	85.66	2.078	0.213
Oct	2.543	0	1.829	0	1.075	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	95.67	2.457	0.478
Nov	3.158	0	1.954	0	1.652	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	128.21	2.738	0.389
Dec	2.878	0	1.862	0	1.877	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	120.54	2.548	0.326
Total	**21.609**	**0**	**18.925**	**0**	**8.854**	**N/A***	**N/A***	**N/A***	**N/A***	**N/A***	**N/A***	**0**	**1030.44**	**23.773**	**2.163**

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.

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

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

Monthly Summary Waste Flow Table for Year 2009

Year	Actual Quantities 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	Metals		Paper/cardboard packaging		Plastic(2)		Chemical Waste	Site clearance waste(3)	Others, e.g. general refuse (in 10^3 m^3)	
	(a)	(b)	(c)	(d)	(e)	Disposal	Recycle	Disposal	Recycle	Disposal	Recycle	Disposal	Disposal	Disposal	Timber Waste
Jan	2.130	0	2.130	0	0	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	0	0	0
Feb	3.158	0	1.954	0	1.652	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	128.21	2.738	0.389
Mar	3.408	0	1.267	0	2.564	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	96.57	2.546	0.234
Apr	7.562	0	1.874	0	3.638	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	135.66	4.388	0.504
May	1.743	0	1.743	0	0	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	0	0	0
Jun	1.054	0	1.257	0	0.355	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	38.66	0.865	0.128
Sub-Total	**19.055**	**0**	**10.225**	**0**	**8.209**	**N/A***	**N/A***	**N/A***	**N/A***	**N/A***	**N/A***	**0**	**399.1**	**10.537**	**1.255**
July	0.577	0	0.564	0	0.118	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	20.19	0.135	0.014
Aug	0.745	0	0.678	0	0.237	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	0	30.42	0.342	0.023
Sept															
Oct															
Nov															
Dec															
Total	**20.377**	**0**	**11.467**	**0**	**8.564**	**N/A***	**N/A***	**N/A***	**N/A***	**N/A***	**N/A***	**0**	**449.71419**	**11.014**	**1.292**

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.