


**CCECC & CRWJ Joint Venture**

**Contract No. HY/2003/19**

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

**Quarterly EM&A Report  
(Version 2.0)**

May 2009 to July 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.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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## **EXECUTIVE SUMMARY**

### ***Introduction***

1. This is the 19<sup>th</sup> Quarterly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha” (the Project). This summary report presents EM&A works performed in the period between May 2009 and July 2009.
2. The construction activities undertaken in the reporting quarter were:
  1. Landscaping works;
  2. Street furniture installation;
  3. Utilities installation;
  4. Construction of drainage;
  5. Reinstatement works of the footpath;
  6. Construction of the baffle wall and stepped channel; and
  7. Construction of retaining wall.

### ***Environmental Monitoring Works***

3. Environmental monitoring for the Project was performed regularly as stipulated in the Updated EM&A Manual 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 the non-compliance of the reporting month is tabulated in Table I.

**Table I Summary Table for Non-compliance Recorded in the Reporting Quarter**

Parameter	Number of Exceedances due to the Project		Action Taken	Results of Action Taken
	Action Level	Limit Level		
<i>May 2009</i>				
Air Quality	0	0	N.A.	N.A.
Noise	0	0	N.A.	N.A.
Water Quality	0	0	N.A.	N.A.
<i>June 2009</i>				
Air Quality	0	0	N.A.	N.A.
Noise	0	0	N.A.	N.A.
Water Quality	0	0	N.A.	N.A.
<i>July 2009</i>				
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 period. 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), and Water Discharge License (License No.: EP890/W7/XP089, EP890/W7/XP090 and EP890/W2/XG013).

***Key Information in the Reporting Quarter***

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

**Table II Summary Table for Key Information in the Reporting Quarter**

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	1	Water Quality	Complaint Investigation	Investigation Report Submitted	---
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. A total of 1 environmental complaint was received during the reporting quarter.
12. No warning and no summons or notifications of successful prosecution was received in the reporting period.

***Future Key Issues***

13. Key issues to be considered in the coming month include:
- Runoff from exposed slope;
  - Wastewater and runoff discharge from site;
  - Regular removal of silt, mud and sand along u-channels, culverts and gullies;
  - Review and implementation of temporary drainage system for the surface runoff;
  - Proper storage of construction materials near streams;
  - Noise from operation of the equipment, especially for rock-breaking activities and machinery on-site;

- Dust generation from stockpiles of dusty materials, exposed retain wall, excavation works and rock breaking activities;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Watering for rock breaking activity, soil nailing and on haul road;
- Accumulation of general and construction waste near stream and on site;
- Proper sorting and segregation of C&D materials in designated areas;
- Provide wheel washing facilities at the site entrance/exit.

## 1. INTRODUCTION

- 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. A varied Environmental Permit (EP) (EP-170/2003/B) was issued in June 2006. 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 Wujia 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 19<sup>th</sup> quarterly EM&A report summarizing the EM&A works for the Project in the period between May 2009 and July 2009.



## 2. PROJECT CHARACTERISTICS

### Project Organization and Contacts of Key Management

- 2.1 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
- 2.2 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.
- 2.3 The key contacts of the Project are shown in Table 2.1.

**Table 2.1 Key Project Contacts**

Party	Role	Name	Position	Phone No.	Fax No.
HyD	Project Proponent	Mr. Sam Wong	Chief Engineer	2762 3622	2714 5289
Mott Connell	Engineer	Mr. K.W. Lee	The Engineer	9108 6050	2827 1823
		Mr. P.H. Ho	Senior Resident Engineer	6533 3500	2988 1677
CCECC and CRJV Joint Venture	Contractor	Mr. Alan Kwong	Project Director	2988 2217	2988 1601
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089	3107 1388
ENSR	Independent Environmental Checker	Mr. Y.T. Tang	Independent Environmental Checker	3105 8537	2891 0305
24-hour Emergency Hotline				2988 1259/ 6025 5655	-

### Construction Programme and Synopsis of Work

- 2.4 The construction programme is presented in Appendix A.

### **3. ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS**

#### **Monitoring Parameters and Monitoring Locations**

- 3.1 The EM&A Manual designates locations for the ET to monitor environmental impacts in terms of air quality, noise and water quality due to the Project. The Project area and monitoring locations are depicted in Figures 3. Appendix B gives details of monitoring requirements.

#### **Monitoring Methodology and Calibration Details**

- 3.2 Monitoring works/equipments were conducted/calibrated regularly in accordance with the EM&A Manual. Copies of calibration certificates are attached in the appendices of the Monthly Reports.

#### **Environmental Quality Performance Limits (Action and Limit Levels)**

- 3.3 The environmental quality performance limits, i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in Appendix C.

#### **Environmental Mitigation Measures**

- 3.4 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the EM&A Manual for the Contractor to implement. A list of mitigation measures is given in Appendix G.

#### **4. MONITORING RESULTS**

##### **Weather Conditions**

- 4.1 The weather during monitoring sessions was generally sunny. The weather conditions for each individual monitoring session were presented in the field record sheets.

##### **Air Quality**

- 4.2 24-hr TSP monitoring at 3 monitoring stations, AM1, AM2 and AM4, were conducted as scheduled in the reporting quarter.
- 4.3 No Action Level / Limit Level exceedance was recorded in the reporting quarter.
- 4.4 The graphical presentations of the air quality monitoring results are shown in Appendix D.

##### **Construction Noise**

- 4.5 Noise monitoring was conducted as scheduled at the seven designated stations NM1, NM2, NM3, NM4, NM5, NM6 and NM8, in this reporting month.
- 4.6 No Action/Limit Level exceedance was recorded in the reporting quarter.
- 4.7 The graphical presentations of the noise monitoring results are shown in Appendix E.

##### **Water Quality**

- 4.8 Water quality monitoring was conducted as schedule, 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 period. Streams 2, 3, 4, 19, 30, 31, 33, 34, 36, 37 and 43 were observed to be dry throughout the reporting month. Therefore, no water monitoring was conducted at those streams. As the water depth of Tung Chung Bay was less than 3m, only the mid-depth level was monitored.
- 4.9 Exceedances of suspended solids (SS) were recorded in water samples in the reporting quarter. The summary of exceedances for each water quality parameters are provided in Table 4.1.

**Table 4.1 Summary of Water Quality Exceedances in the Reporting Quarter**

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	39	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 quarter.

- 4.10 As reported in monthly report, all exceedances for water quality parameters recorded in the reporting quarter 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.
  - ✧ Natural humus materials were observed in the streams during monitoring.
- 4.11 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.
- 4.12 The graphical presentations of the water quality monitoring results are shown in Appendix F.

## 5. ENVIRONMENTAL AUDIT

### Implementation Status of Environmental Mitigation Measures

- 5.1 The implementation status of environmental mitigation measures (EMIS) is given in Appendix G.

### Site Audit Summary

- 5.2 No non-compliance was issued during site inspections in the reporting period.
- 5.3 The observations and recommendations made during the reporting period are summarized in Appendix H.
- 5.4 The major deficiencies identified in the reporting quarter are summarized as follow:

#### *Water Quality*

- Exposed slope near Streams without properly cover and soil erosion were observed. The Contractor was recommended to cover exposed slope near Streams with tarpaulin sheet and hydroseeding.
- Silty water was observed discharging to public road and culvert. The Contractor was reminded to provide stream diversion to divert the stream water around the working area.
- Oil leakage was observed from the excavator. The Contractor was reminded to clear the waste oil and well-maintain the plant equipment.
- Seepage of silty water from the hole of concrete band was observed. The Contractor was reminded to provided mitigation measures to prepare any wastewater from discharging to the downstream.
- Concrete breaking was observed. The Contractor was reminded to provide mitigation measures to minimize the water quality impact to the stream.
- Stream water at Stream 20 was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.

#### *Air Quality*

- Stockpile without covering was observed. The Contractor was recommended to cover it.
- Exposed slope was observed. The Contractor was reminded to hydroseed and plant the slope as soon as practicable.
- Dusty haul road was observed. The Contractor was reminded to provide water spraying more frequently.
- The Contractor was reminded to provide water spraying during the loading/unloading

and dusty activities.

#### *Waste/ Chemical Management*

- Accumulation of C&D waste and false works were observed. The Contractor was recommended to remove the C&D waste more frequently.
- Accumulation of general refuse was observed. The Contractor was reminded to remove the waste regularly.
- Abandoned cement bags were observed. The Contractor was reminded to clear it.
- Empty oil containers were observed storing improperly. The contractor was reminded to remove and store it properly.
- Oil leakage was observed from the excavator. The Contractor was reminded to clear the waste oil and well-maintain the plant equipment.

#### **Effectiveness of Mitigation Measures**

- 5.5 The mitigation measures recommended in the EIA report and required by the EP are considered effective in minimizing environmental impacts. The Contractor has implemented the recommended mitigation measures, it is however considered that the Contractor could put greater efforts into proper implementation of these measures to ensure their intended effects are fully achieved.

#### **Status of Environmental Licensing and Permitting**

- 5.6 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), and Water Discharge License (License No.: EP890/W7/XP089, EP890/W7/XP090 and EP890/W2/XG013).
- 5.7 The status of these licenses and permits obtained for the Project is summarized in Appendix I.

#### **Status of Waste Management**

- 5.8 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.
- 5.9 The solid waste generated from the Project was mainly general refuse that was collected by a licensed collector on an as need basis.
- 5.10 The monthly summary of waste flow tables from May 2009 and July 2009 are shown in Appendix J.

## 6. NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

### Summary of Exceedances

6.1 Environmental monitoring works were performed in the reporting period and all monitoring results were checked and reviewed. A summary of exceedances is attached in Appendix K. The details of each exceedance were attached in the Monthly Reports.

#### *Air Quality*

6.2 No Action/ Limit Level exceedance was recorded in the reporting quarter.

#### *Construction Noise*

6.3 No Action/ Limit Level exceedance was recorded in the reporting quarter.

#### *Water Quality*

6.4 Exceedances of suspended solids (SS) were recorded in water samples in the reporting quarter.

6.5 As reported in monthly report, all exceedances for water quality parameters recorded in the reporting quarter 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.
- ✧ Natural humus materials were observed in the streams during monitoring.

6.6 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.

### **Construction Impacts on Suspended Solids**

6.7 The measured mean levels of suspended solid for impact monitoring stations during baseline monitoring and impact monitoring (this quarter) are summarized in Table 6.1. Although the measured mean levels of SS at Impact Stations of 27 exceeded 130% of mean value of Baseline data, the finding of Table 6.1 indicates that additional mitigation measures for this stream is not required at this stage. The reasons are listed as below:

- The mean SS values at the Impact Stations of Streams 27 are low; and
- The mean SS levels at Reference Stations of Streams 27 in this quarter also exceeded 130% of mean SS values

**Table 6.1 Summary of Measured levels of Suspended Solids**

Station No.	Measured Mean Level of Suspended Solids (mg/l <sup>3</sup> )			Within 130% of mean value of Baseline data (Yes/No)	
	Baseline Impact Station	Reference Station *	Impact Station*	Reference Station	Impact Station
		(May 09– July 09)	(May 09– July 09)	(May 09– July 09)	(May 09– July 09)
15	2.35	2.50	2.50	Yes	Yes
18	4.72	2.50	2.50	Yes	Yes
21	1.98	2.50	2.50	Yes	Yes
23	2.60	2.50	2.50	Yes	Yes
		2.50		Yes	
26	2.35	2.50	2.50	Yes	Yes
27	1.60	2.50	2.50	No	No
40	9.10	2.50	2.50	Yes	Yes
CSS	3.38	2.50	2.50	Yes	Yes
TCB	9.00	2.50	2.50	Yes	Yes
TCS	4.59	2.50	2.50	Yes	Yes

\* 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.

### Review of the Reasons for and the Implications of Non-compliance

- 6.8 No non-compliance was issued in the reporting quarter.
- 6.9 The observations and recommendations made in each individual site audit session were attached in the Monthly Reports.



**7. ENVIRONMENTAL COMPLAINTS AND PROSECUTIONS**

- 7.1 A total of 1 environmental complaint was received during the reporting quarter. The updated Complaint Log is attached in Appendix L.
- 7.2 No warning and no summons or notifications of successful prosecutions was received in the reporting period.
- 7.3 There were a total of 55 environmental complaints, 13 warnings, 3 summons and 2 successful prosecutions received since the commencement of the Project.
- 7.4 The Complaint Log is attached in Appendix L and the summary of warnings issued by the EPD and prosecution is attached in Appendix M.

## 8. COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

8.1 The major construction activities in the coming month include:

### *Northern Section*

- Installation of street furniture at Zone A to F;
- Reinstatement works of the footpath.

### *Southern Section*

- Slope reinstatement works from STR010 to STR013.

8.2 According to the environmental audit performed in the reporting quarter, the following recommendations were made:

### *Dust Impact*

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

### *Noise Impact*

- To implement appropriate mitigation measures, such as cover the tip of the hammer, in order to minimize the noise emitted during rock-breaking activities.
- To review the works sequence of site activities so as to reduce the number of noisy equipment in concurrent operation.
- To follow up any exceedance caused by the construction works.
- To employ quiet powered mechanical equipment if possible.
- 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 clear the silt and sediment in the sedimentation tanks.
- To ensure properly maintenance for de-silting facilities.
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge.
- To review the capacity of de-silting facilities for discharge.
- To review and implement temporary drainage system.
- To identify any wastewater discharges from site.
- To follow up any exceedance caused by the construction works.

#### *Waste / Chemical Management*

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

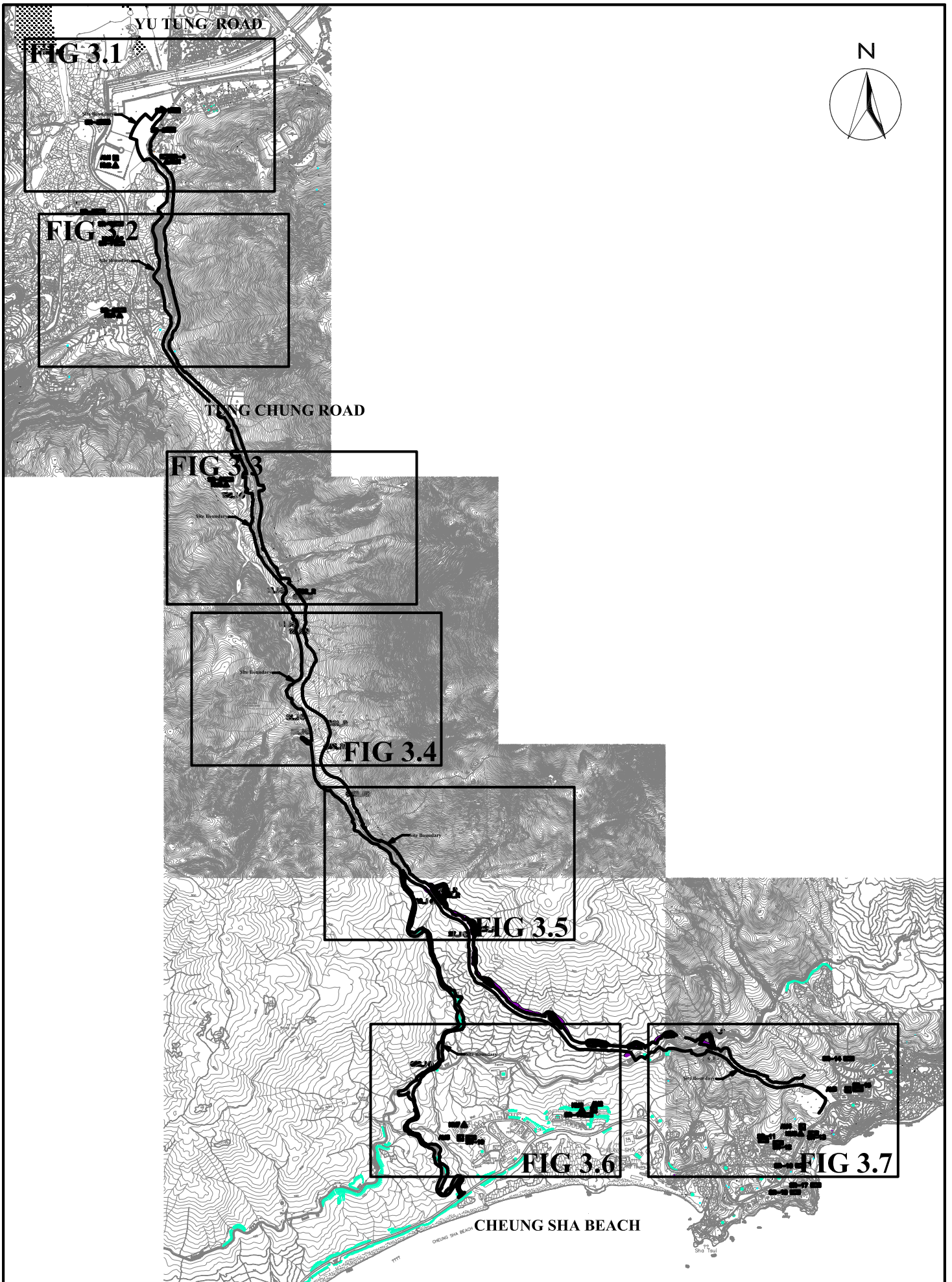
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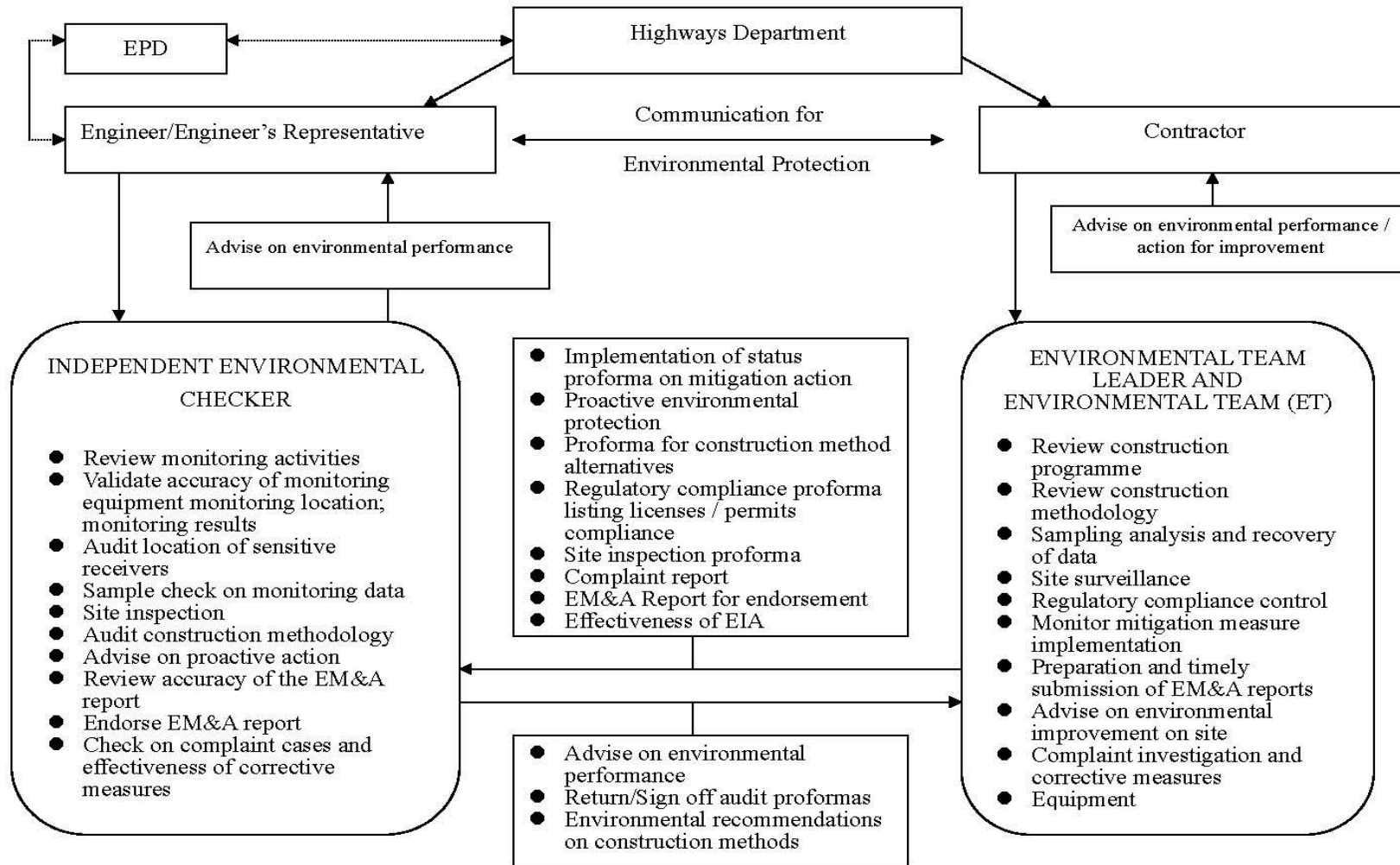
## FIGURES

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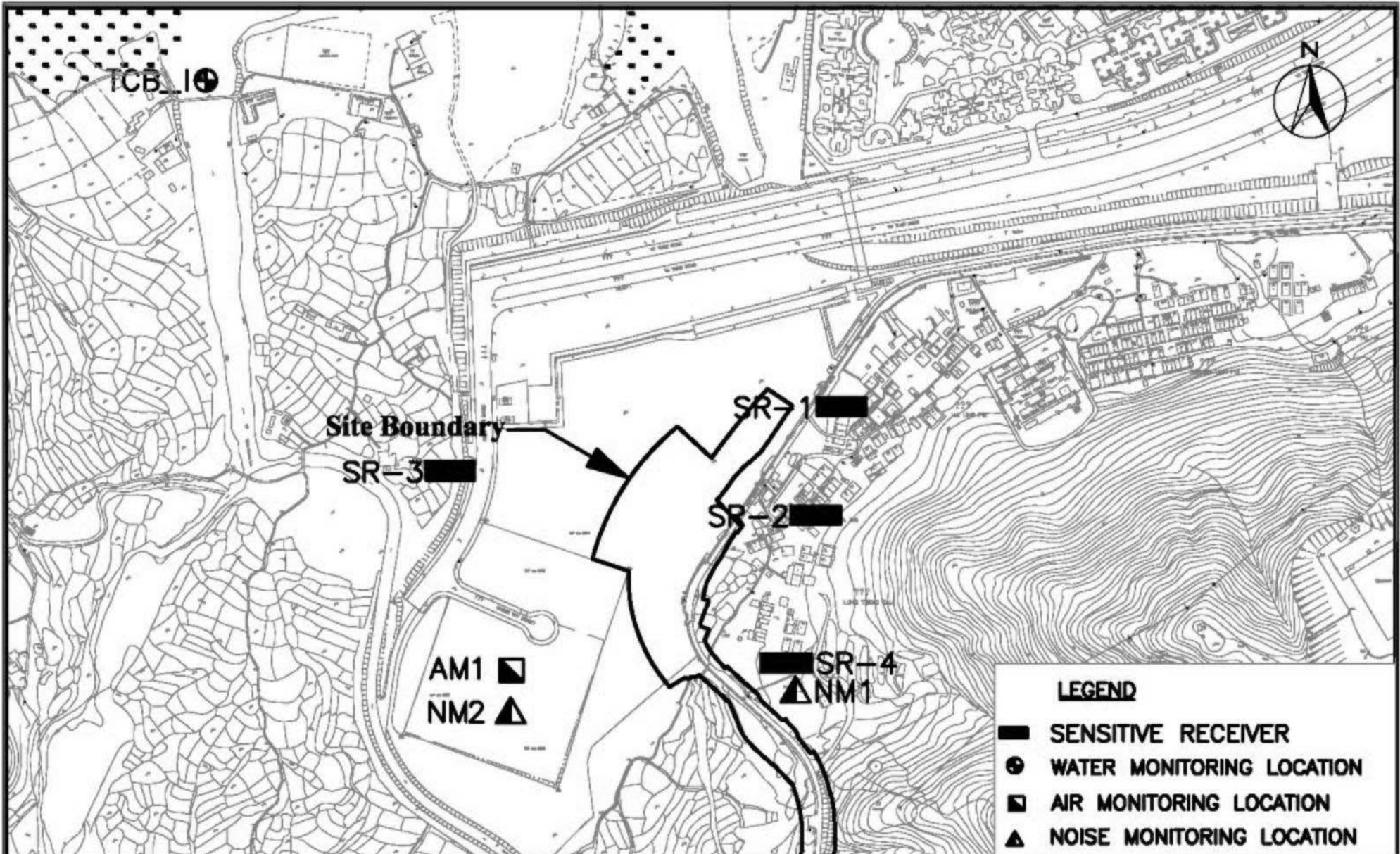
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 <p><b>CINOTECH</b> Cinotech Consultants Limited</p>	<p><b>IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA</b></p> <p><b>SITE LOCATION PLAN</b></p>	SCALE	N.T.S.	DATE	OCT 2006
		CHECK	JY	DRAWN	VL
		JOB No.	MA6030	DRAWING No.	FIG 1



SCALE	N.T.S.	DATE	2007
CHECK	KL	DRAWN	FL
JOB NO.	MA6030	DRAWING No.	2
		Rev	1



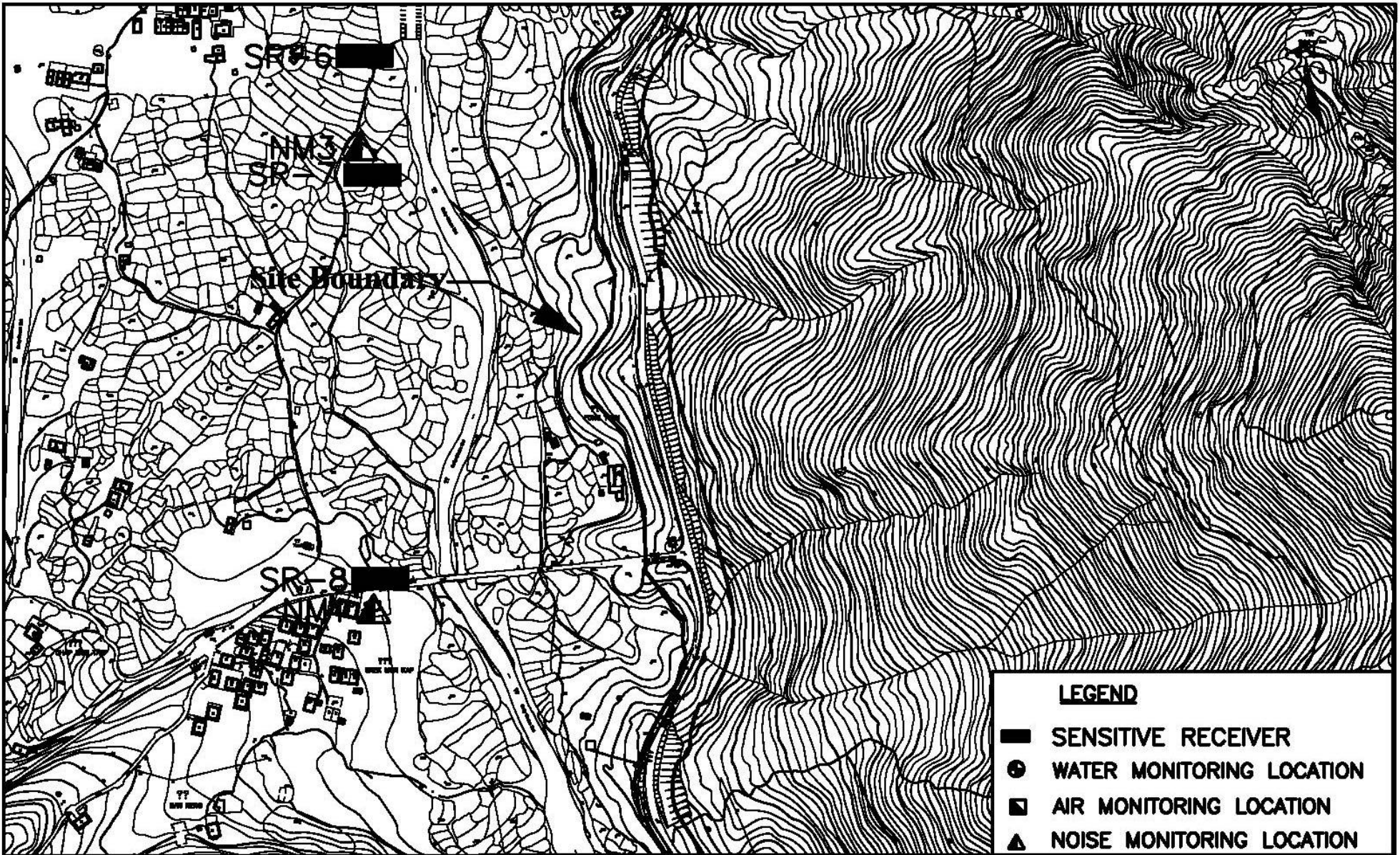
LEGEND	
	SENSITIVE RECEIVER
	WATER MONITORING LOCATION
	AIR MONITORING LOCATION
	NOISE MONITORING LOCATION





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

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



**MONITORING LOCATIONS**  
(SHEET 1 OF 7)



LEGEND	
	SENSITIVE RECEIVER
	WATER MONITORING LOCATION
	AIR MONITORING LOCATION
	NOISE MONITORING LOCATION

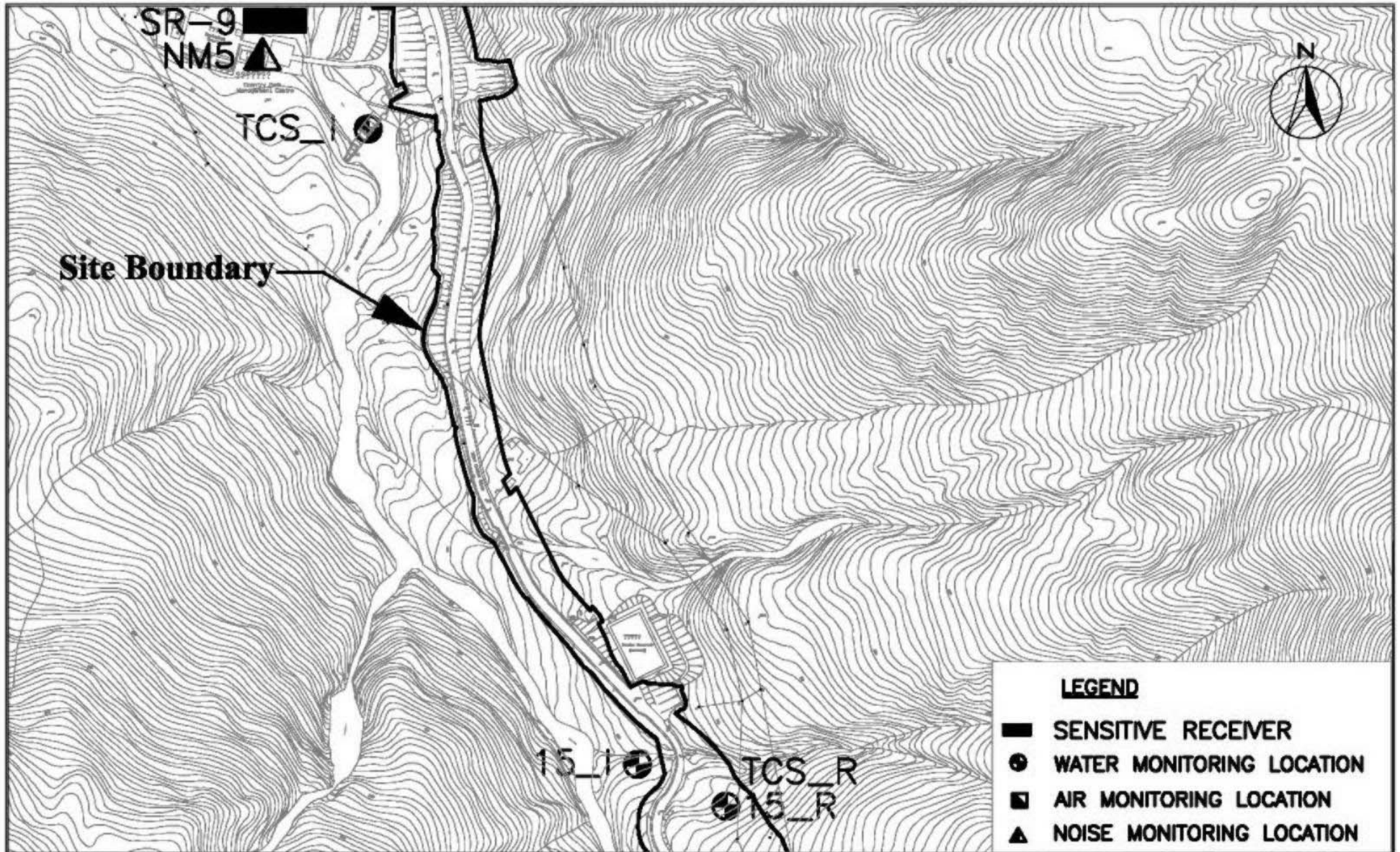
IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA

**CNOTECH**  
Cinotech Consultants Limited

**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

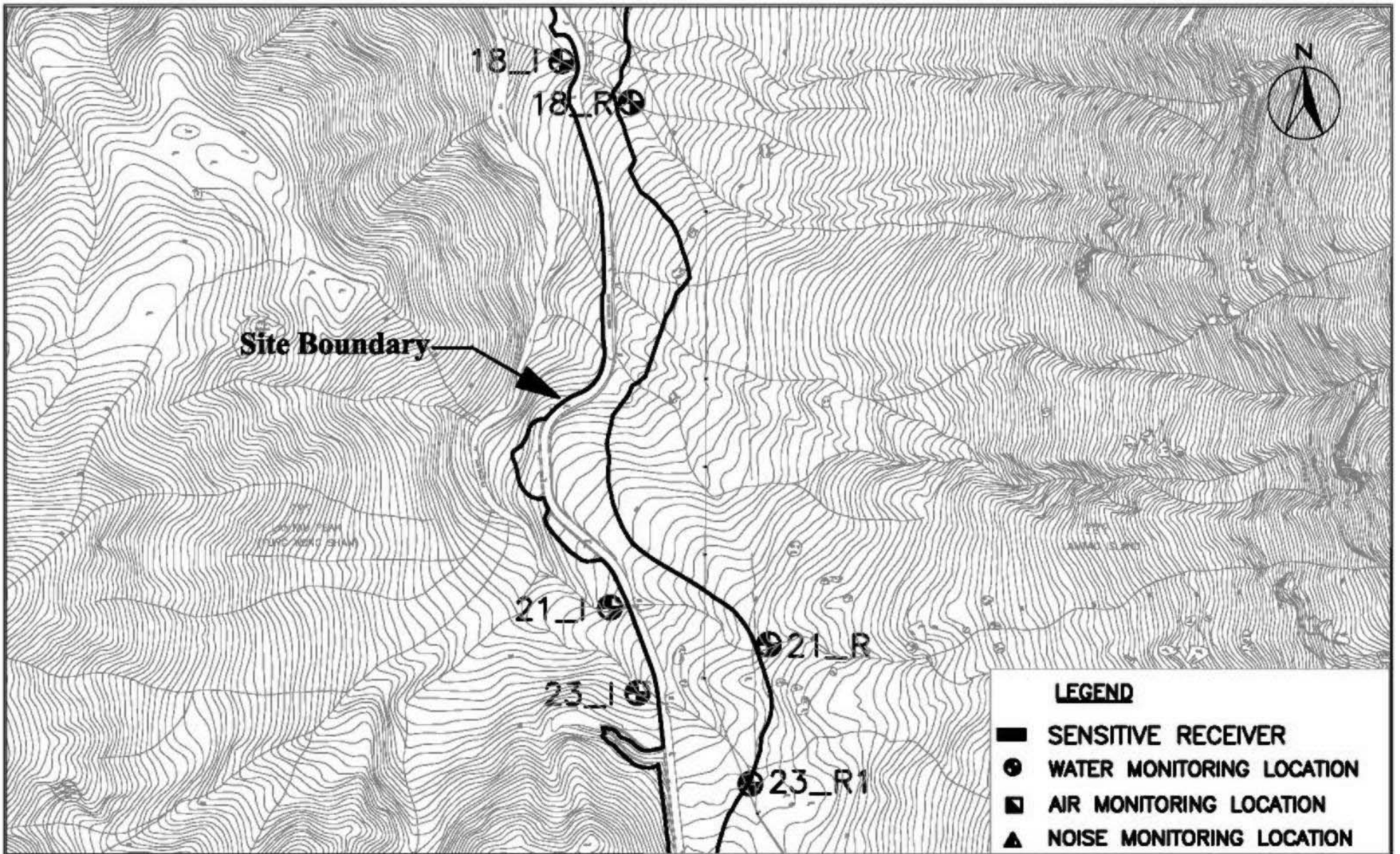




**LEGEND**

- SENSITIVE RECEIVER
- WATER MONITORING LOCATION
- AIR MONITORING LOCATION
- ▲ NOISE MONITORING LOCATION

 Cinotech Consultants Limited	IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA		SCALE	A4 1:4000	DATE	OCT 2006
	<b>MONITORING LOCATIONS</b> (SHEET 3 OF 7)		CHECK	JY	DRAWN	VL
			JOB No.	MA6030	DRAWING No.	FIG 3.3



**LEGEND**

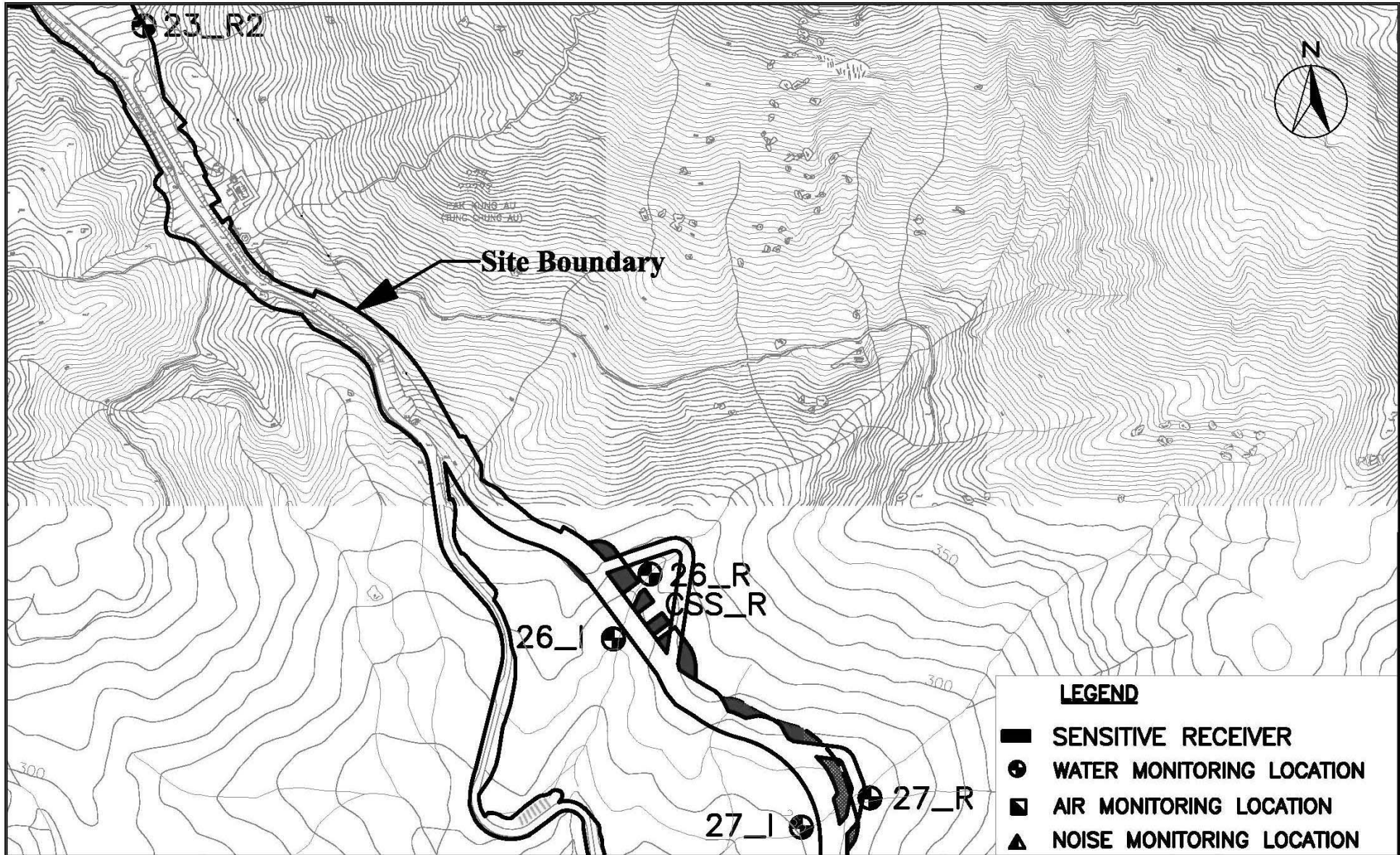
- SENSITIVE RECEIVER
- WATER MONITORING LOCATION
- AIR MONITORING LOCATION
- ▲ NOISE MONITORING LOCATION



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
CHECK	JY	DRAWN	VL
JOB No.	MA6030	DRAWING No.	FIG 3.4
		REV	1

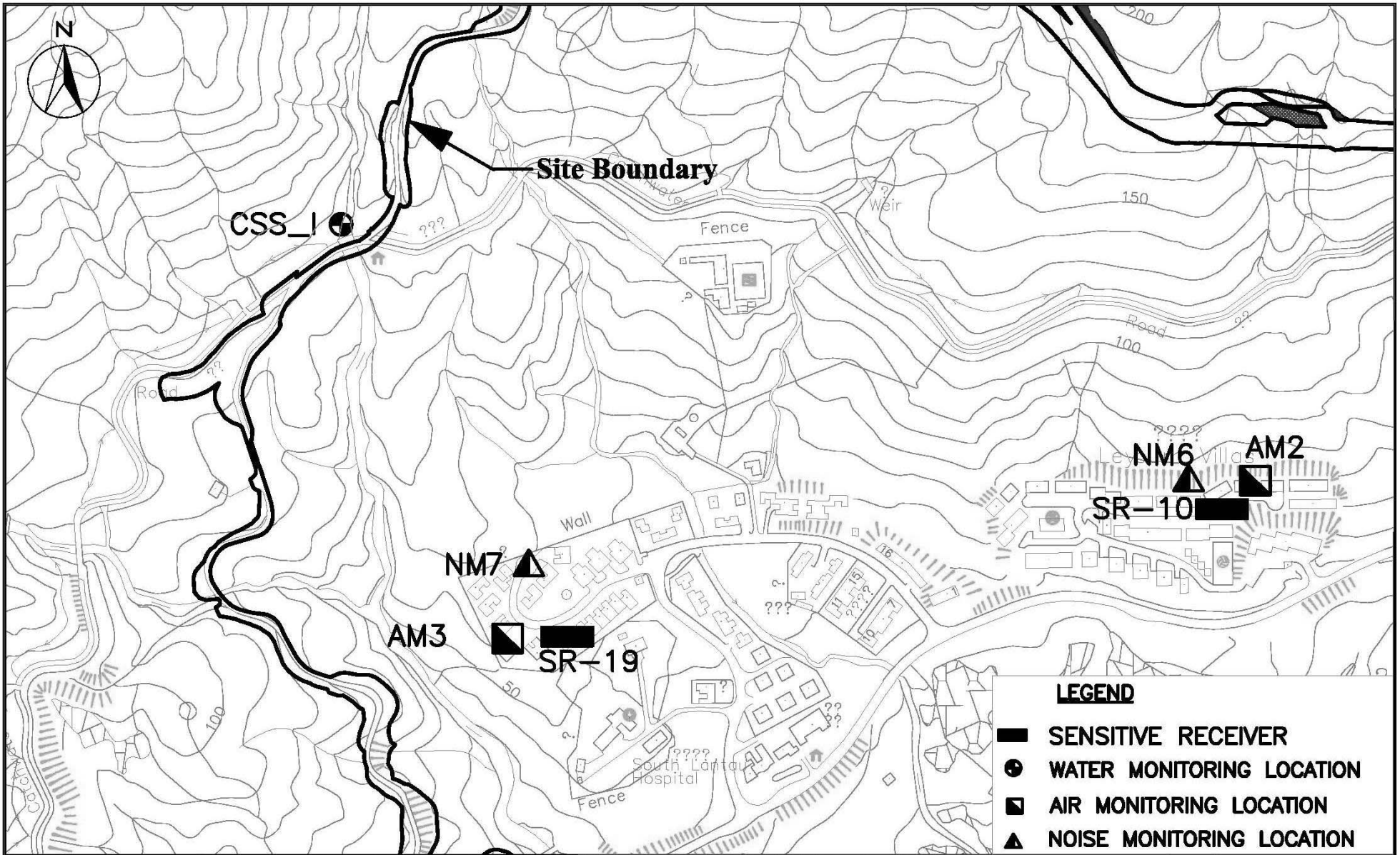


IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA



**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



**LEGEND**

- SENSITIVE RECEIVER
- WATER MONITORING LOCATION
- AIR MONITORING LOCATION
- NOISE MONITORING LOCATION

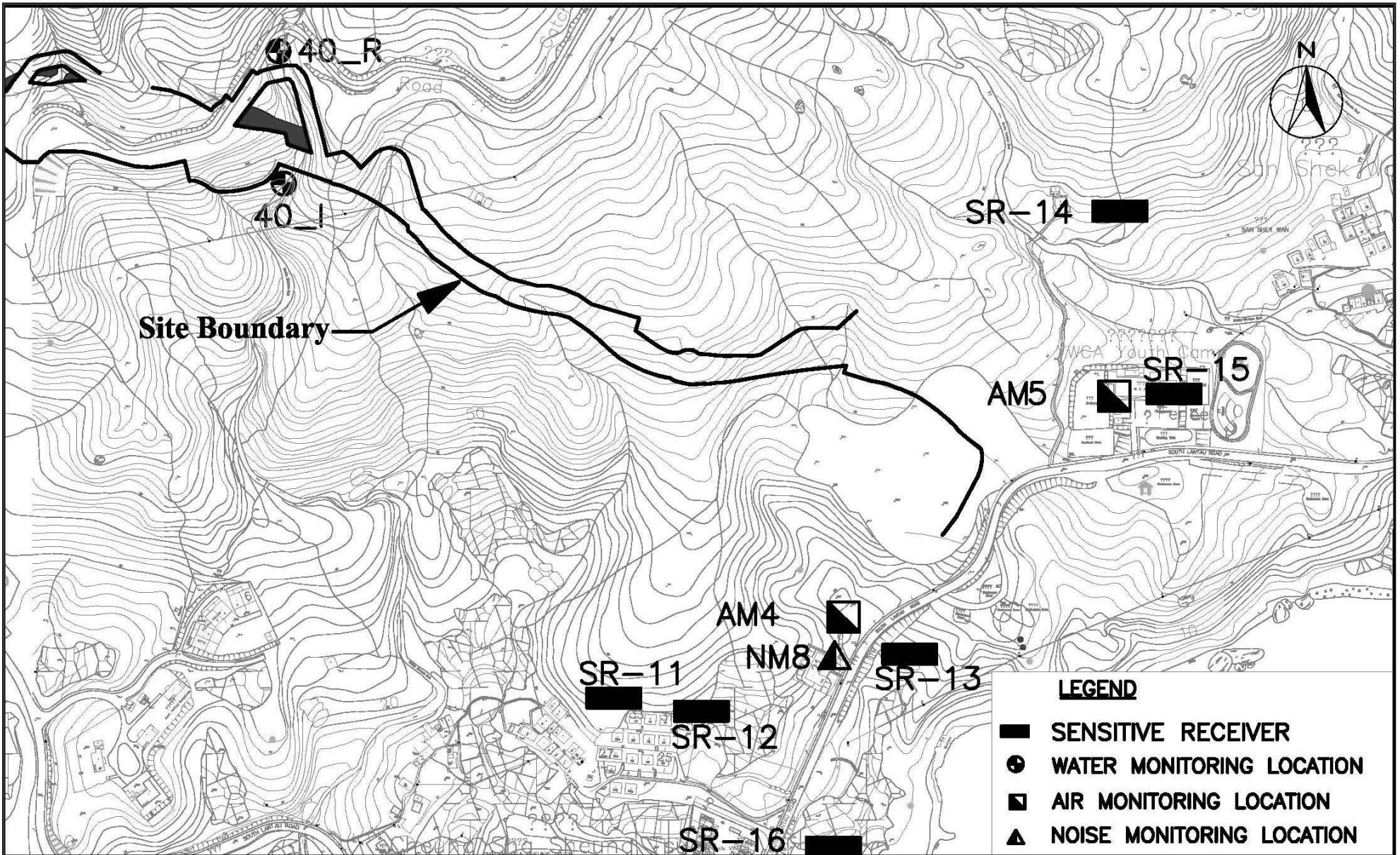


**CINOTECH**  
Cinotech Consultants Limited

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

**MONITORING LOCATIONS**  
(SHEET 6 OF 7)

SCALE	A4 1:4000	DATE	OCT 2006
CHECK	JY	DRAWN	VL
JOB No.	MA6030	DRAWING No.	FIG 3.6
		REV	1



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  
CONSTRUCTION PROGRAMME**

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Item No.	Description	Unit	Qty	Start Date	End Date	Remarks
ZAKD0000	Commencement of Contract	0	100	28JUN04 A		
ZAKD0001	Complete Works in Section 1	0	0	30JUN09	0	S1-1030, S1-1122, S1-1530,
ZAKD0002	Complete Works in section 2	0	100	08FEB06 A		S2-1250
ZAKD0003	Complete Works in Section 1A	0	0	31AUG11	0	S1-6920
ZAKD0004	Complete Works in Section 2A	0	0	31AUG11	0	S2-8740
ZAKD0005	Complete Works in Section 3	0	0	31JUL11	0	S3-3300, S3-3330, S3-3860,
ZAKD0006	Complete Works in Section 3A	0	0	30AUG12	0	S3-3610
ZAKD0007	Complete Works in Undefined Section	0	0	30JUN09	0	S1-2420, S1-2460, S1-2580,
ZAKD0008	Complete Establish'd Works in Undefined Section	0	0	31AUG11	0	S2-8010
ZAKD0029	Extended Completion Date of Section 1	0	100	18APR07 A		
ZAKD0035	Extended Completion Date of Section 1A	0	100	15APR07 A		
ZAKD0060	Extended Completion Date of Section 2	0	100	06JAN07 A		
ZAKD0065	Extended Completion Date of Section 2A	0	100	05JAN09 A		
ZAKD0080	Extended Completion Date of Section 3	0	100	15JUL97 A		
ZAKD0100	Extended Completion Date of Section 3A	0	0	14JUL09 *	0	
D470	Waste Management Plan	2450	84	04NOV04 A	31AUG11	361d
D480	Environment Monitoring and Audit	2450	84	04NOV04 A	31AUG11	361d
S1-1500	Footpath drainage works for S&D structures	91	52	01JAN09 A	25APR09	49d
S1-1530, S1-2338, S1-2370						
S1-1545	Landscape Earth Bund/associated Rdwk ch.920-1020	50	0	02NOV09 *	31DEC09	814d
S1-2080	Recompact fill slope remedial works ch1755-1945	22	0	01APR09 *	30APR09	45d
S1-2084	Rremedial slope works @ ch.1900	13	0	16APR09 *	30APR09	49d
S1-2338	Footpath and Verge (Remedial Works)	4	0	27APR09	30APR09	49d
S1-2370	Additional street furnitures	4	0	27APR09	30APR09	49d

Complete Works in Section 1  
 Complete Works in section 2  
 Complete W  
 Complete W  
 Complete Work  
 Complete Works in Undefined Section  
 Complete E

Extended Completion Date of Section 2A  
 Extended Completion Date of Section 3A

Waste Mana  
 Environment

Footpath drainage works for S&D structures

Landscape Earth Bund/associated Rdwk ch.920-1020

Recompact fill slope remedial works ch1755-1945  
 Rremedial slope works @ ch.1900

Footpath and Verge (Remedial Works)  
 Additional street furnitures

date 26JUN04  
 I date 30AUG12  
 date 01MARD09  
 Revision 18  
 number 1A  
 of name RV18A  
 Prepared by System, Inc.

- Entry bar
- Progress bar
- Critical bar
- 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 18		

Item No.	Description	Orig. Dur	Comp	Start	End	Est. Cost	Actual Cost	Progress	Remarks
<b>Retaining Wall RW09</b>									
S1-3590	Additional Toe Wall	28	0	02MAR09	31MAR09	49d		S1-3600	
S1-3600	Backfilling	9	0	01APR09	15APR09	49d	S1-3650	S1-3633, S1-3810	<input type="checkbox"/> Additional Toe Wall
S1-3810	Slope drainage	13	0	15APR09	30APR09	49d	S1-3600	ZAKD001	<input type="checkbox"/> Backfilling
<b>Roadworks</b>									
S1-3833	Outfencing parapet b/w RW005 and RW006	8	0	18APR09	25APR09	49d	S1-3631, S1-3600	S1-3634, S1-3635	<input type="checkbox"/> Slope drainage
S1-3634	Street furniture remedial works	4	0	27APR09	30APR09	49d	S1-3633	ZAKD001	<input type="checkbox"/> Outstanding parapet b/w RW005 and RW006
S1-3635	Footpath and Verge remedial works	4	0	27APR09	30APR09	49d	S1-3633	ZAKD001	<input type="checkbox"/> Street furniture remedial works
<b>Zone D (CH. 2725 - 3100)</b>									
<b>Retaining Wall RW07</b>									
S1-4241	Additional Drainage Works	28	0	02MAR09	31MAR09	49d		S1-4260	<input type="checkbox"/> Additional Drainage Works
S1-4260	Backfilling (Remaining)	16	0	01APR09	25APR09	49d	S1-4241	S1-4421, S1-4430	<input type="checkbox"/> Backfilling (Remaining)
<b>Roadworks</b>									
S1-4421	Footpath Remedial Works	4	0	27APR09	30APR09	49d	S1-4260	ZAKD001	<input type="checkbox"/> Footpath Remedial Works
S1-4430	Street Furniture remedial works	4	0	27APR09	30APR09	49d	S1-4260	ZAKD001	<input type="checkbox"/> Street Furniture remedial works
<b>Zone E (CH. 3100 - 4012)</b>									
<b>Slope Works</b>									
S1-5151	V.O. 202	163	42	02DEC08 A	30JUN09	0		ZAKD001	<input type="checkbox"/> V.O. 202
<b>Retaining Wall RW10</b>									
S1-5350	Additional drainage v/s @ ch 3403	22	0	01APR09	30APR09	49d		ZAKD001	<input type="checkbox"/> Additional drainage v/s @ ch 3403
<b>Retaining Wall RW11</b>									
S1-5450	Additional drainage works	95	25	01FEB09 A	30MAY09	0		S1-5838, S1-5847	<input type="checkbox"/> Additional drainage works
S1-5463	Backfilling	95	25	01FEB09 A	30MAY09	0		S1-5838, S1-5847	<input type="checkbox"/> Backfilling
<b>Roadworks</b>									
S1-5845	Additional drainage works	254	76	02JUN08 A	30MAY09	0		S1-5838, S1-5847	<input type="checkbox"/> Additional drainage works
S1-5847	Footpath and verge remedial works	28	0	01JUN09	30JUN09	0	S1-5450, S1-5463, S1-5848	ZAKD001	<input type="checkbox"/> Footpath and verge remedial works
S1-5838	Additional street furniture	26	0	01JUN09	30JUN09	0	S1-5450, S1-5463, S1-5848	ZAKD001	<input type="checkbox"/> Additional street furniture
<b>Zone F (CH. 4010 - 4650)</b>									
<b>Retaining Wall RW16</b>									
S1-6355	Additional nosing	14	0	16MAR09	31MAR09	71d		ZAKD001	<input type="checkbox"/> Additional nosing
<b>Retaining Wall RW38</b>									
S1-6530	Additional drainage works	72	33	01FEB09 A	30APR09	49d		ZAKD001	<input type="checkbox"/> Additional drainage works
<b>Culvert at CH. 4631</b>									
S1-6515	1050mm dia. pipeline under existing TCR	29	55	11FEB09 A	16MAR09	84d		ZAKD001	<input type="checkbox"/> 1050mm dia. pipeline under existing TCR

Start date	22.JUN04	<input type="checkbox"/> Each bar
Finish date	30.AUG12	<input type="checkbox"/> Progress bar
Date data	01.MAR09	<input type="checkbox"/> Critical bar
Number/Version	Revision 10	<input type="checkbox"/> Summary bar
Page number	1A	<input type="checkbox"/> Summary point
Project name	SU18A	<input type="checkbox"/> Start milestone point
© Primavera Systems, Inc.		<input type="checkbox"/> Finish milestone point

Contract No. HY2003/19  
 Improvement to Tung Chung Road  
 Works Programme Rev. 15

Date	Revision	Checked	Approved
27MAR09	Revision 15		



ACT ID	Description	Orig. Dur	Comp.	START	FINISH	Planned	Actual	Subcontract
S1-6722	Road Junction @ ch4300	54	35	07FEB09 A	15APR09	46d		S1-6724, S1-6725
S1-6723	Road Junction @ ch4570	34	35	07FEB09 A	15APR09	43d		S1-6724, S1-6725
S1-6724	Additional footpath & verge	13	0	18APR09	30APR09	49d	S1-6722, S1-6723	ZAKD001
S1-6725	Additional street furniture	13	0	18APR09	30APR09	49d	S1-6722, S1-6723	ZAKD001
Pump House for Fire Hydrant @ CH. 4368								
S1-6922	Testing & commissioning	66	50	01MAY09 A	30APR09	46d		S1-6923
S1-6923	Fencing & ground level works	48	0	02MAR09	30APR09	49d	S1-6922	ZAKD001
Transformer Room at CH. 4360								
S1-6903	Fencing & ground level works	22	0	01APR09 *	30APR09	49d		ZAKD001
Zone F (CH. 4010 - 4866)								
Landscape Softworks								
S1-6910	Landscape Softworks	123	0	01APR09 *	31AUG09	0		S1-6920
Establishment works								
S1-6920	Establishment Works for Section 1A (chain no.084)	710	0	01SEP09 *	31AUG11	0	S1-6910	ZAKD003
Section 2A								
Remaining Works								
S2-1250	Completion of section 2	0	100		06FEB09 A			ZAKD002
S2-1500	Defects and Outstanding Works	300	9	07FEB09 A	06FEB10	783d		
Section 2B								
Zone J-S								
Landscape Softworks								
S2-6730	Landscape Softworks	422	65	01APR09 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	Install soil nail (199 nos.)	29	86	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	16MAR09	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	06APR09	07MAY09	396d	S3-3060	S3-3070, S3-3080
S3-3070	Slope surface protection	14	0	05MAY09	23MAY09	579d	S3-3040, S3-3065	S3-3110
Feature No. 13NE-B/C63								
S3-3080	Install soil nail (111 nos.)	19	0	06MAY09	30MAY09	396d	S3-3065	S3-3090

Start date 28JUN04  
 Finish date 30AUG11  
 Date data 01MAY09  
 Number/Version Revision 18  
 Page number 2A  
 Project name RV18A  
 Primevera Systems, Inc.

Early bar  
 Progress bar  
 Critical bar  
 Summary bar  
 Summary point  
 Start milestone point  
 Finish milestone point

Contract No. HY2003/19  
 Improvement to Tung Chung Road  
 Works Programme Rev. 16

Date	Revision	Checked	Approved
27MAR09	Revision 18		

ID	Description	On	Comp	Start	Finish	Plan	Precedence	Location	Remarks
S3-3090	Pull out test (5 nos.)	8	0	01JUN09	09JUN09	396d	S3-3060	S3-3100	0 Pull out test (5 nos.)
S3-3100	300mm stepped & u-channel	20	0	10JUN09	03JUL09	396d	S3-3090	S3-3110, S3-3120	<input type="checkbox"/> 300mm stepped & u-channel
S3-3110	Slope surface protection	14	0	04JUL09	20JUL09	549d	S3-3070, S3-3100	S3-3150	<input type="checkbox"/> Slope surface protection
Feature No. 13HE-B/C62									
S3-3120	Install soil nail (144 nos.)	22	0	04JUL09	29JUL09	396d	S3-3100	S3-3130	<input type="checkbox"/> Install soil nail (144 nos.)
S3-3130	Pull out tests (5 nos.)	8	0	30JUL09	07AUG09	396d	S3-3120	S3-3140	0 Pull out tests (5 nos.)
S3-3140	300mm stepped & u channel	20	0	08AUG09	31AUG09	396d	S3-3130	S3-3150, S3-3160	<input type="checkbox"/> 300mm stepped & u channel
S3-3150	Slope surface protection	14	0	01SEP09	16SEP09	510d	S3-3110, S3-3140	S3-3220	<input type="checkbox"/> Slope surface protection
Feature No. 13HE-B/F64									
S3-3160	Recompact slope	14	0	01SEP09	16SEP09	396d	S3-3140	S3-3170	<input type="checkbox"/> Recompact slope
S3-3170	Reconstruct 750mm stepped channel & stairway	20	0	17SEP09	10OCT09	366d	S3-3160	S3-3180, S3-3190	<input type="checkbox"/> Reconstruct 750mm stepped channel & stairway
S3-3180	300mm u channel	14	0	12OCT09	28OCT09	687d	S3-3170	S3-3260	<input type="checkbox"/> 300mm u channel
Feature No. 13HE-B/C63									
S3-3190	Install soil nail (42 nos.)	12	0	12OCT09	24OCT09	396d	S3-3170	S3-3200	<input type="checkbox"/> Install soil nail (42 nos.)
S3-3200	Pull out test (1 nos.)	8	0	27OCT09	04NOV09	396d	S3-3190	S3-3210	0 Pull out test (1 nos.)
S3-3210	300mm u channel	14	0	05NOV09	20NOV09	396d	S3-3200	S3-3220, S3-3230	<input type="checkbox"/> 300mm u channel
S3-3220	Slope surface protection	14	0	21NOV09	07DEC09	456d	S3-3150, S3-3210	S3-3260	<input type="checkbox"/> Slope surface protection
Feature No. 13HE-B/C233									
S3-3230	Install soil nail (44 nos.)	12	0	21NOV09	04DEC09	396d	S3-3210	S3-3240	<input type="checkbox"/> Install soil nail (44 nos.)
S3-3240	Pull out tests (2 nos.)	8	0	05DEC09	14DEC09	396d	S3-3230	S3-3250	0 Pull out tests (2 nos.)
S3-3250	Reconstruct 300mm u channel	14	0	15DEC09	02JAN10	396d	S3-3240	S3-3260, S3-3270	<input type="checkbox"/> Reconstruct 300mm u channel
S3-3260	Slope surface protection	20	0	04JAN10	28JAN10	436d	S3-3220, S3-3250	S3-3300	<input type="checkbox"/> Slope surface protection
Feature No. 13HE-B/C/R72									
S3-3270	Install soil nail (113 nos.)	20	0	04JAN10	28JAN10	396d	S3-3250	S3-3280	<input type="checkbox"/> Install soil nail (113 nos.)
S3-3280	Pull out tests (3 nos.)	8	0	27JAN10	04FEB10	396d	S3-3270	S3-3290	0 Pull out tests (3 nos.)
S3-3290	300mm u channel	14	0	06FEB10	23FEB10	396d	S3-3280	S3-3300, S3-3310	<input type="checkbox"/> 300mm u channel
S3-3300	Slope surface protection	20	0	24FEB10	18MAR10	414d	S3-3260, S3-3290	ZAKD005	<input type="checkbox"/> Slope surface protection
Feature No. 13HE-B/F/R68									
S3-3310	Remove existing rubble wall	10	0	24FEB10	06MAR10	356d	S3-3290	S3-3320	0 Remove existing rubble wall
S3-3320	Recompact slope	14	0	08MAR10	23MAR10	396d	S3-3310	S3-3330	<input type="checkbox"/> Recompact slope
S3-3330	300mm u channel at toe	14	0	24MAR10	12APR10	396d	S3-3320	ZAKD005	<input type="checkbox"/> 300mm u channel at toe
Feature No. 13HE-B/C/115									
S3-3370	Slope surface protection	14	36	24FEB09 A	11MAR09	588d	S3-3360	S3-3410	<input type="checkbox"/> Slope surface protection
Feature No. 13HE-B/C/116									
S3-3350	Install soil nail (75 nos.)	14	0	02APR09	22APR09	0	S3-3390	S3-3390	<input checked="" type="checkbox"/> Install soil nail (75 nos.)
S3-3390	Pull out tests (4 nos.)	8	0	23APR09	04MAY09	0	S3-3380	S3-3400	<input checked="" type="checkbox"/> Pull out tests (4 nos.)
S3-3400	300mm u channel at toe	14	0	05MAY09	20MAY09	0	S3-3390	S3-3410, S3-3420	<input checked="" type="checkbox"/> 300mm u channel at toe

Start date	28 AUG 04	<input type="checkbox"/> Early bar
Est. date	30 AUG 12	<input type="checkbox"/> Progress bar
As. date	01 MAR 09	<input type="checkbox"/> Critical bar
Member/Version	Rev. 1.0 / 1.0	<input type="checkbox"/> Summary bar
Page number	46	<input type="checkbox"/> Summary point
Plot name	RV16A	<input type="checkbox"/> Start milestone point
© Primavera Systems, Inc.		<input type="checkbox"/> Finish milestone point

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

Date	Revision	Checked	Approved
27/MAR/09	Revision 10		

Item No.	Description	Orig. Dur.	Comp.	Start	Finish	Total	IS	IS	IS
S3-3410	Slope surface protection	20	0	21MAY09	13JUN09	54d	S3-3370, S3-3400, S3-3700	S3-3400	
Feature No. 13NE-B/C1722									
S3-3420	Recompact slope	20	0	21MAY09	13JUN09	0	S3-3420	S3-3430	
S3-3430	300mm stepped & u channel at crest & toe	20	0	15JUN09	08JUL09	0	S3-3420	S3-3440	
Feature No. 13NE-B/FR00									
S3-3440	Recompact slope	20	0	09AUG09	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	06SEP09	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	45d	S3-3480, S3-3490	S3-3530	
Feature No. 13NE-B/C244									
S3-3500	Install soil nail (69 nos.)	17	0	02OCT09	21OCT09	0	S3-3490	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	42d	S3-3490, S3-3520	S3-3590	
Feature No. 13NE-B/FR65									
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	S3-3580	
S3-3560	300mm stepped & u channel at toe	20	0	29DEC09	21JAN10	0	S3-3550	S3-3570	
Feature No. 13NE-B/C114									
S3-3570	Install soil nail (136 nos.)	20	0	23JAN10	13FEB10	0	S3-3560	S3-3580, S3-3600	
S3-3580	Pull out tests (4 nos.)	8	0	17FEB10	25FEB10	35d	S3-3570	S3-3590, S3-3600	
S3-3590	Slope surface protection	20	0	26FEB10	20MAR10	37d	S3-3530, S3-3580	S3-3630	
Feature No. 13NE-B/C113									
S3-3600	Install soil nail (29 nos.)	11	0	26FEB10	10MAR10	35d	S3-3580	S3-3610	
S3-3610	Pull out tests (2 nos.)	8	0	11MAR10	19MAR10	35d	S3-3600	S3-3620	
S3-3620	Reconstruct 300mm u channel	14	0	20MAR10	08APR10	35d	S3-3610	S3-3630, S3-3640	
S3-3630	Slope surface protection	20	0	09APR10	03MAY10	35d	S3-3590, S3-3620	S3-3680	
Feature No. TCR/UF/C/27									
S3-3640	Install soil nail (55 nos.)	12	0	08APR10	22APR10	35d	S3-3620	S3-3650	
S3-3650	Pull out tests (2 nos.)	8	0	23APR10	03MAY10	35d	S3-3640	S3-3660	
S3-3660	Slope surface protection	20	0	04MAY10	27MAY10	35d	S3-3630, S3-3650	ZAKDO05	
Feature No. 13NE-B/C243									
S3-3670	Install soil nail (16 nos.)	10	0	02MAR09	12MAR09	0	S3-3360	S3-3680	

<input type="checkbox"/> Slope surface protection
<input checked="" type="checkbox"/> Recompact slope
<input checked="" type="checkbox"/> 300mm stepped & u channel at crest & toe
<input checked="" type="checkbox"/> Recompact slope
<input checked="" type="checkbox"/> 300mm stepped & u channel at crest & toe
<input checked="" type="checkbox"/> Install soil nail (33 nos.)
<input checked="" type="checkbox"/> Pull out tests (2 nos.)
<input checked="" type="checkbox"/> 300mm u channel
<input type="checkbox"/> Slope surface protection
<input checked="" type="checkbox"/> Install soil nail (69 nos.)
<input checked="" type="checkbox"/> Pull out tests (3 nos.)
<input checked="" type="checkbox"/> 300mm stepped & u channel at crest
<input type="checkbox"/> Slope surface protection
<input checked="" type="checkbox"/> Remove existing concrete wall
<input checked="" type="checkbox"/> Recompact slope
<input checked="" type="checkbox"/> 300mm stepped & u channel at toe
<input checked="" type="checkbox"/> Install soil nail (136 nos.)
<input checked="" type="checkbox"/> Pull out tests (4 nos.)
<input type="checkbox"/> Slope surface protection
<input type="checkbox"/> Install soil nail (29 nos.)
<input type="checkbox"/> Pull out tests (2 nos.)
<input type="checkbox"/> Reconstruct 300mm u channel
<input type="checkbox"/> Slope surface protection
<input type="checkbox"/> Install soil nail (55 nos.)
<input type="checkbox"/> Pull out tests (2 nos.)
<input type="checkbox"/> Slope surface protection
<input checked="" type="checkbox"/> Install soil nail (16 nos.)

Start date: 25JUN04  
 Finish date: 30MAY12  
 Date: 01MAR09  
 Number/Revision: 18  
 Page number: 54  
 Project name: RV18A  
 Primavera Systems, Inc.

Early bar  
 Progress bar  
 Critical bar  
 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		

ID	Description	Orig. Dur	Comp	Start	End	Plan	Resources	Success	Notes
S3-3680	Pull out test (1 nos.)	8	0	13MAR09	21MAR09	0	S3-3670	S3-3680	
S3-3690	300mm tr channel at toe	14	0	23MAR09	08APR09	0	S3-3680	S3-3380, S3-3700	<input checked="" type="checkbox"/> 300mm tr channel at toe
S3-3700	Slope surface protection	20	0	08APR09	07MAY09	555d	S3-3690	S3-3410	<input type="checkbox"/> Slope surface protection
<b>Utilities</b>									
S3-3600	Utilities installation	540	0	22JAN10	31JUL11	0	S3-3570	ZAKD006	<input type="checkbox"/> Utilities installation
<b>Landscape Softworks</b>									
S3-3805	Landscape softworks	124	0	01APR10	31AUG10	0		S3-3810	<input type="checkbox"/> Landscape softworks
<b>Establishment works</b>									
S3-3810	Establishment Works for Section 3A (claim no.084)	719	0	01SEP10	30AUG12	0	S3-3805	ZAKD008	
<b>Undefined Section of Works</b>									
<b>Zone B (CH. 1665 - 2150)</b>									
<b>Straining &amp; Deflection Structure SD 2-5</b>									
S1-2420	Additional Stairway	38	0	16MAR09	30APR09	49d		ZAKD007	<input type="checkbox"/> Additional Stairway
<b>Straining &amp; Deflection Structure DT-1-1-4</b>									
S1-2460	Additional Stairway	38	0	16MAR09	30APR09	49d		ZAKD007	<input type="checkbox"/> Additional Stairway
<b>Straining &amp; Deflection Structure SD 4-7</b>									
S1-2503	Additional Stairway & drainage works	88	35	01FEB09 A	25APR09	49d		S1-2531	<input type="checkbox"/> Additional Stairway & drainage works
<b>Flexible Debris Barrier at CH. 1700 (DFB1)</b>									
S1-2580	Boulder mitigation stream S-8	72	33	02FEB09 A	30APR09	49d	S1-2550	ZAKD007	<input type="checkbox"/> Boulder mitigation stream S-8
<b>Flexible Debris Barrier at CH. 1800 (DFB2)</b>									
S1-2531	Remaining Barrier (affected by SD4-7)	4	0	27APR09	30APR09	49d	S1-2500	ZAKD007	<input type="checkbox"/> Remaining Barrier (affected by SD4-7)
<b>Zone C (CH. 2130 - 2725)</b>									
<b>Straining &amp; Deflection Structure SD 5-11</b>									
S1-3708	Additional slope works & drainage works	85	33	01FEB09 A	30APR09	56d		ZAKD007	<input type="checkbox"/> Additional slope works & drainage works
<b>Zone D (CH. 2725 - 3100)</b>									
<b>Straining &amp; Deflection Structure SD 6-12</b>									
S1-4462	Additional slope works & drainage works	85	33	01FEB09 A	30APR09	56d		ZAKD007	<input type="checkbox"/> Additional slope works & drainage works
<b>Straining &amp; Deflection Structure SD 7-13</b>									
S1-4562	Additional slope works & drainage works	85	33	01FEB09 A	30APR09	56d		ZAKD007	<input type="checkbox"/> Additional slope works & drainage works
<b>Zone E (CH. 3100 - 4010)</b>									
<b>Straining &amp; Deflection Structure SD 10-18</b>									
S1-5502	Additional slope works & drainage works	143	20	01FEB09 A	30JUN09	0		ZAKD007	<input type="checkbox"/> Additional slope works & drainage works
<b>Landscape Works in Undefined Section</b>									

Start date	26JUL04	<input type="checkbox"/> Early bar
Finish date	30AUG12	<input checked="" type="checkbox"/> Progress bar
Data date	01MAR09	<input checked="" type="checkbox"/> Critical bar
Number/Version	Revision 16	<input type="checkbox"/> Summary bar
Page number	6A	<input type="checkbox"/> Summary point
Project name	RV16A	<input checked="" type="checkbox"/> Start milestone point
© Primavera Systems, Inc.		<input checked="" type="checkbox"/> Finish milestone point

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

Date	Revision	Checked	Approved
27MAR09	Revision 16		

ACT ID	Description	Orig Bar	Comp	Early Start	Early Finish	Total Float	Predecessors	Successors	Bill
S2-8000	Landscape Softworks In Undefined Section	145	0	01APR09*	31AUG09	0 S2-8725	S2-8010		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
S2-8010	Establishment Works for Undefined Section	710	0	01SEP09*	31AUG11	0 S2-8000	ZAKDC68		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

act date	25JUN04		Early bar
dash date	30AUG12		Progress bar
ata date	01MAR09		Critical bar
ambact/version	Revision 16		Summary bar
age number	TA		Summary point
code name	RV1&&		Start milestone point
client name	Firestorm Systems, Inc.		Finish milestone point

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

Date	Revision	Checked	Approved
27MAR06	Revision 16		

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**APPENDIX B  
MONITORING REQUIREMENTS**

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## Appendix B - Environmental Impact Monitoring Requirements

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Air Quality	1 hour TSP <sup>(1)</sup>	Three times / 6 days	<ul style="list-style-type: none"> <li>• AM1 (YMCA of Hong Kong Christian College)</li> <li>• AM2 (D 68 Leyburn Villas)</li> <li>• AM3 (Butterfly Crest)<sup>(2)</sup></li> <li>• AM4 (No. 31 South Lantau Road)</li> <li>• AM5 (YWCA)<sup>(3)</sup></li> </ul>	<ul style="list-style-type: none"> <li>• AM1 – Rooftop</li> <li>• AM2 – House</li> <li>• AM3 – House</li> <li>• AM4 – House</li> <li>• AM5 – To be confirmed</li> </ul>
	24 hour TSP	Once / 6 days		

Remarks:

- <sup>(1)</sup> 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.
- <sup>(2)</sup> 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.
- <sup>(3)</sup> Monitoring at AM5, YWCA, will be resumed when YWCA re-open.

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Noise	$L_{eq}$ , $L_{90}$ & $L_{10}$ at 30 minute intervals during (0700 to 1900 on normal weekdays)	Once per week	<ul style="list-style-type: none"> <li>• NM1 (No. 28 Lung Tseng Tau)</li> <li>• NM2 (YMCA of Hong Kong Christian College)</li> <li>• NM3 (No. 37 Shek Lau Po)</li> <li>• NM4 (No. 1 Shek Mun Kap)</li> <li>• NM5 (Tung Chung Au Country Parks Management Centre)</li> <li>• NM6 (D75 Leyburn Villa)</li> <li>• NM7 (House in Butterfly Crest House 22) <sup>(2)</sup></li> <li>• NM8 (No. 31 South Lantau Road)</li> </ul>	<ul style="list-style-type: none"> <li>• NM1 - Facade measurement</li> <li>• NM2 - Facade measurement</li> <li>• NM3 - Facade measurement</li> <li>• NM4 - Facade measurement</li> <li>• NM5 - Facade measurement</li> <li>• NM6 - Facade measurement</li> <li>• NM7 - Facade measurement</li> <li>• NM8 - Facade measurement</li> </ul>
	$L_{eq}$ , $L_{90}$ & $L_{10}$ at 5 minute intervals during (1900 to 2300) <sup>(1)</sup>	Once per week (include 3 consecutive 5-min measurements)		
	$L_{eq}$ , $L_{90}$ & $L_{10}$ at 5 minute intervals during (2300 to 0700 of next day) <sup>(1)</sup>	Once per week (include 3 consecutive 5-min measurements)		
	$L_{eq}$ , $L_{90}$ & $L_{10}$ at 5 minute intervals during (0700 to 1900 on holidays) <sup>(1)</sup>	Once per week (include 3 consecutive 5-min measurements)		

Remarks:

<sup>(1)</sup> – Conduct noise monitoring only when construction work is carried out.

<sup>(2)</sup> 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.



Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Water Quality	<ul style="list-style-type: none"> <li>• Temperature (oC)</li> <li>• pH (pH unit)</li> <li>• Turbidity (NTU)</li> <li>• Water depth (m)</li> <li>• Salinity (mg/L)</li> <li>• Dissolved oxygen (DO) (mg/L and % of saturation)</li> <li>• Suspended solids (SS) (mg/L)</li> </ul>	Three times per week	<ul style="list-style-type: none"> <li>• 15_I (811781E, 813298N)</li> <li>• 15_R (811853E, 813289N)</li> <li>• 18_I (811836E, 813138)</li> <li>• 18_R (811889E, 813107N)</li> <li>• 19_I (811858E, 812987N)</li> <li>• 19_R (811920E, 812927N)</li> <li>• 21_I (811873E, 812723N)</li> <li>• 21_R (811994E, 812695N)</li> <li>• 23_I (811894E, 812658N)</li> <li>• 23_R1 (811980E, 812589N)</li> <li>• 23_R2 (812079E, 812386N)</li> <li>• 25_I (812324E, 812017N)</li> <li>• 25_R (812353E, 812052N)</li> <li>• 26_I (812456E, 811895N)</li> <li>• 26_R (812525E, 811980N)</li> <li>• 27_I (812604E, 811747N)</li> <li>• 27_R (812658E, 811770N)</li> <li>• 32_I (812988E, 811327N)</li> <li>• 32_R (812980E, 811410N)</li> <li>• 35_I (813218E, 811218N)</li> <li>• 35_R (813231E, 811275N)</li> <li>• 40_I (813690E, 811211N)</li> <li>• 40_R (813686E, 811311N)</li> <li>• CSS_I (812447E, 811165N)</li> <li>• TCS_I (811601E, 813716N)</li> <li>• TCB_I (810787E, 815706N)</li> <li>• TCB_R (810679E, 816038N)</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-surface</li> </ul>

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**APPENDIX C  
ACTION AND LIMIT LEVELS FOR AIR  
QUALITY, NOISE AND WAER QUALITY**

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## Appendix C - Action and Limit Levels

**Table C-1 Action and Limit Levels for 1-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	312	500
AM2	328	
AM3	302	
AM4	305	
AM5	342	

**Table C-2 Action and Limit Levels for 24-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	155	260
AM2	151	
AM3	141	
AM4	145	
AM5	153	

**Table C-3 Action and Limit Levels for Construction Noise**

Period	Action Level <sup>(2)</sup>	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		- <sup>(1)</sup>	
2300-0700 hrs of next day		- <sup>(1)</sup>	

\*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 C-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	

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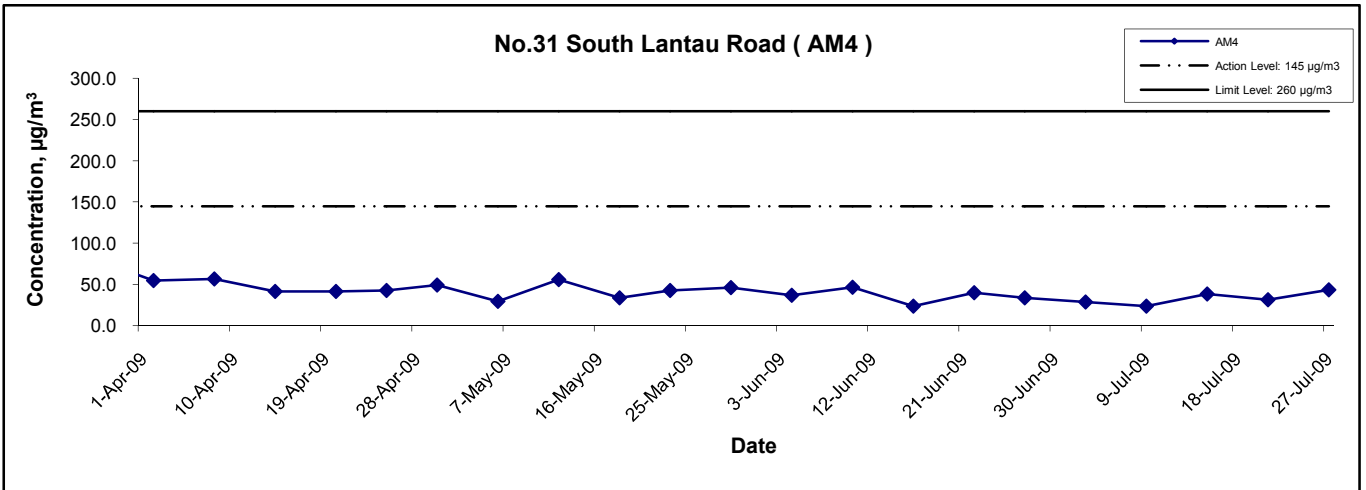
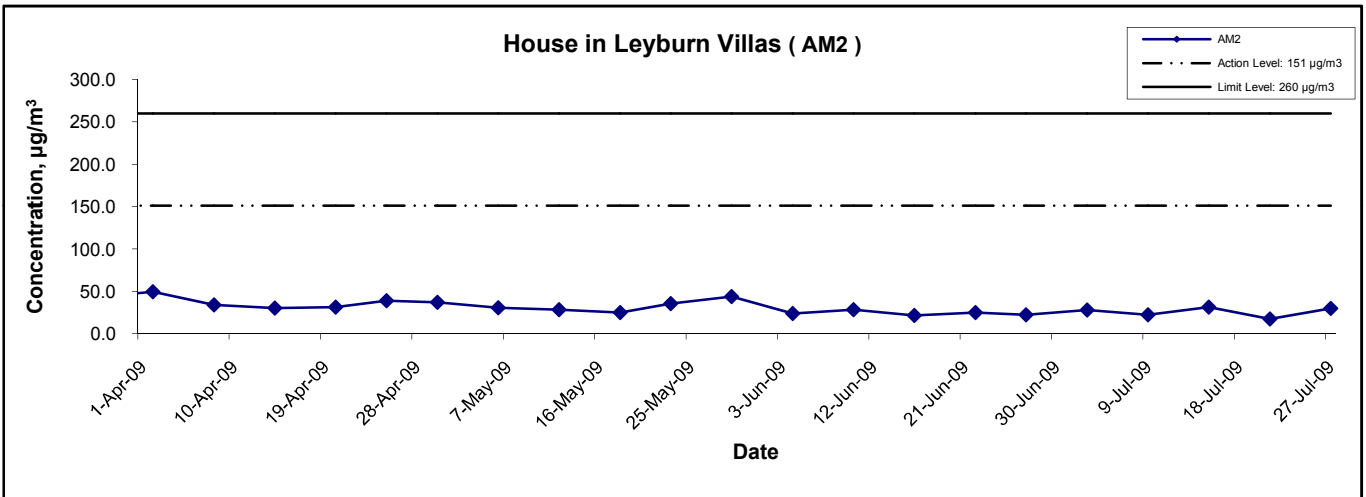
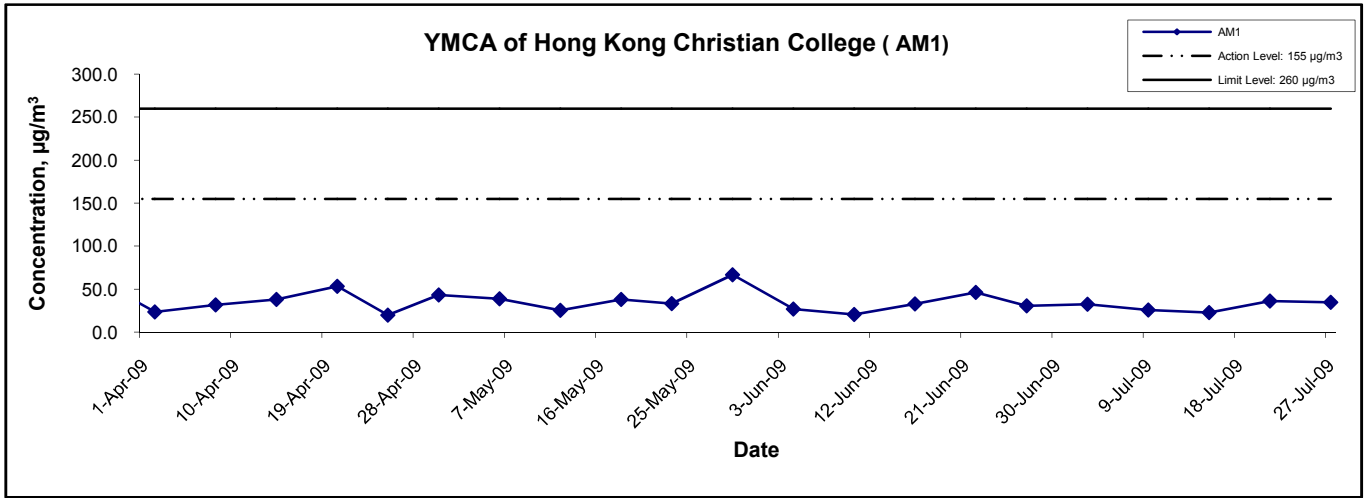
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**APPENDIX D  
GRAPHICAL PRESENTATION OF AIR  
QUALITY MONITORING RESULTS**

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## 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**  
 Jul 09

**Project No.**  
 MA6030  
**Appendix**  
 D



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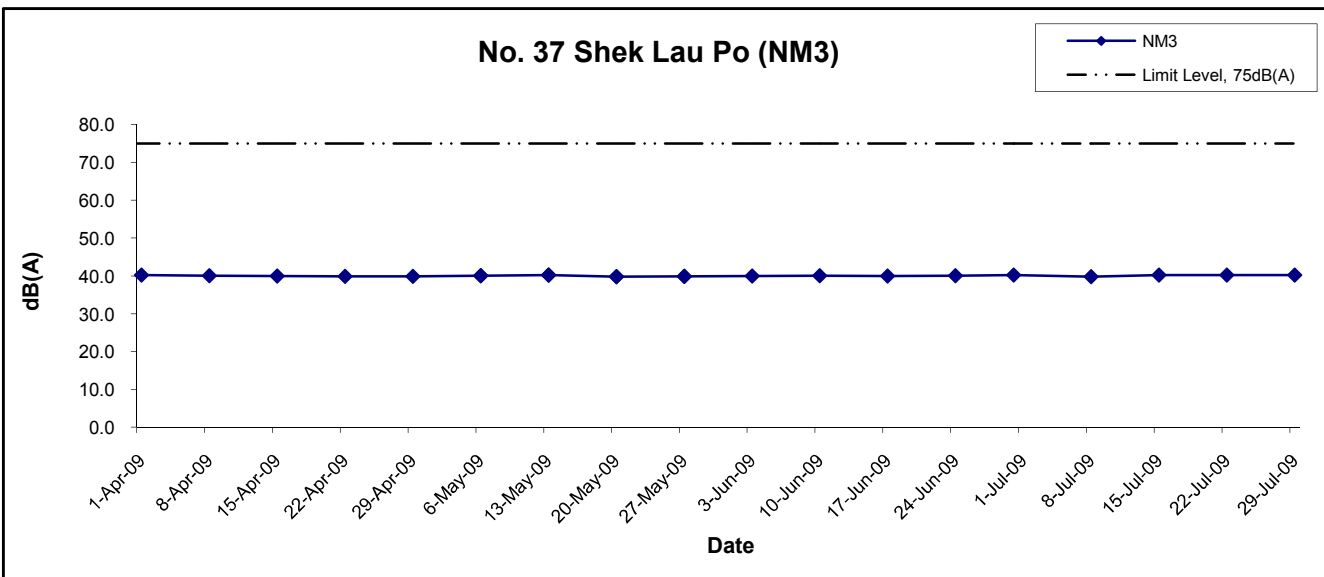
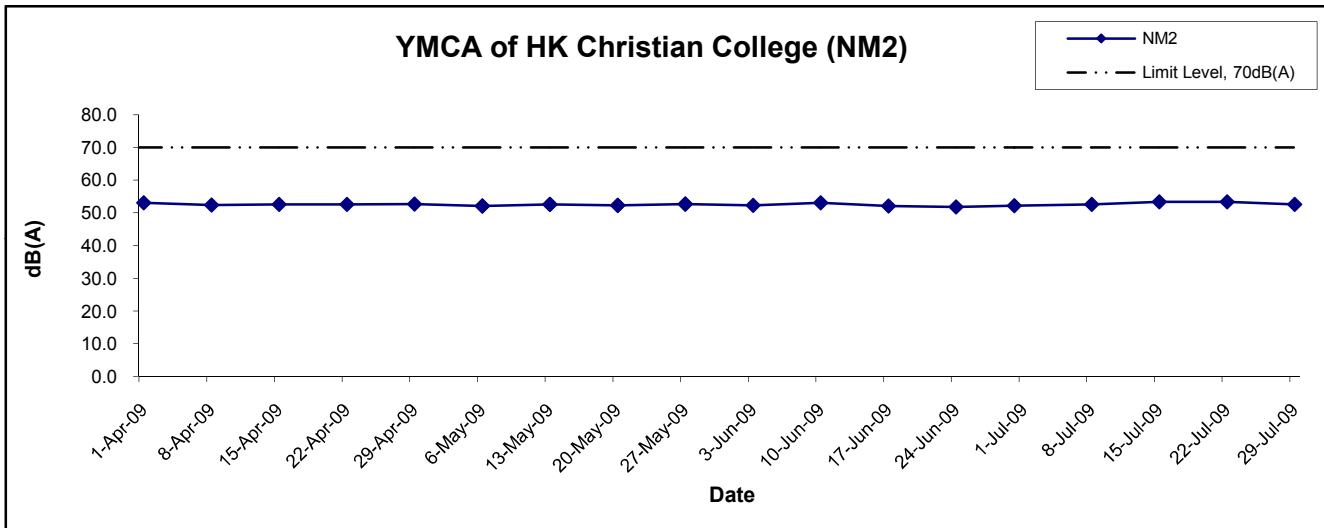
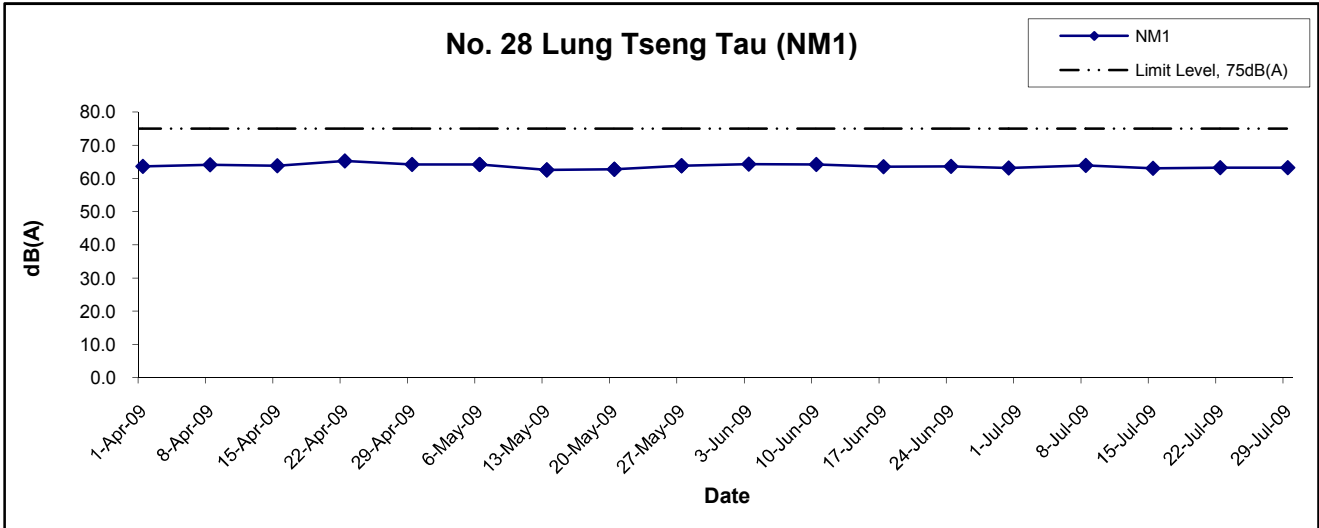
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**APPENDIX E  
GRAPHICAL PRESENTATION OF  
NOISE MONITORING RESULTS**

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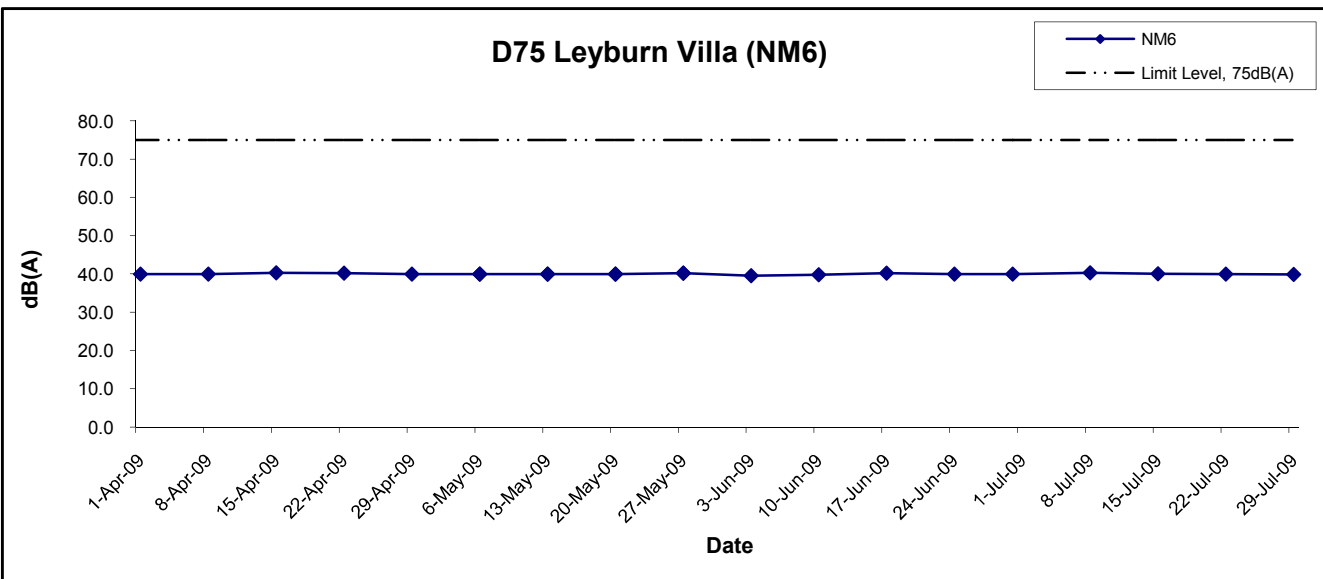
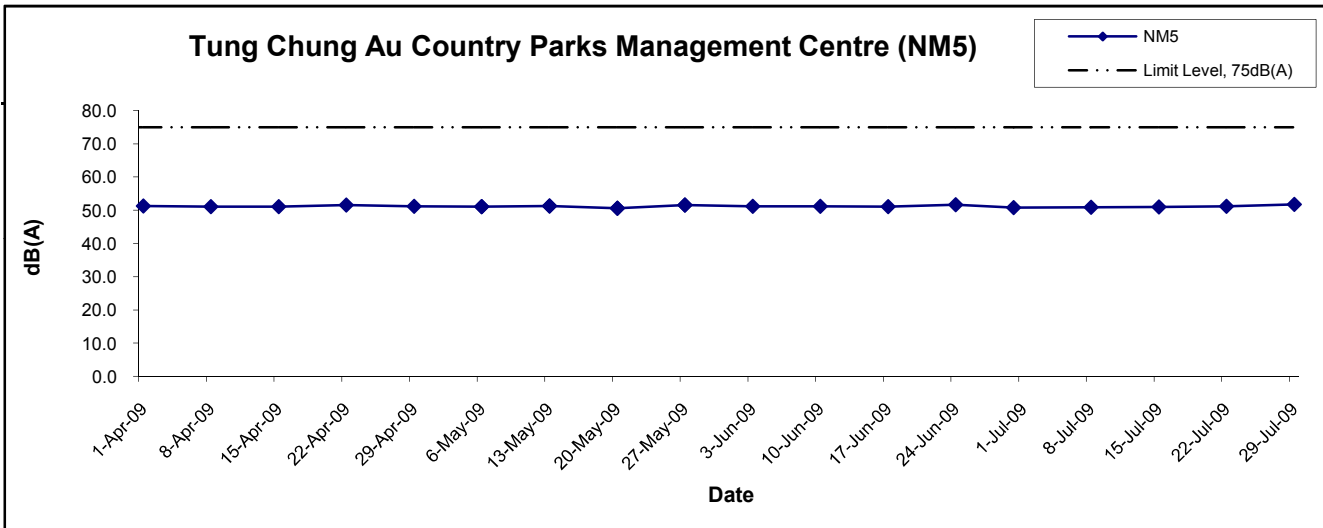
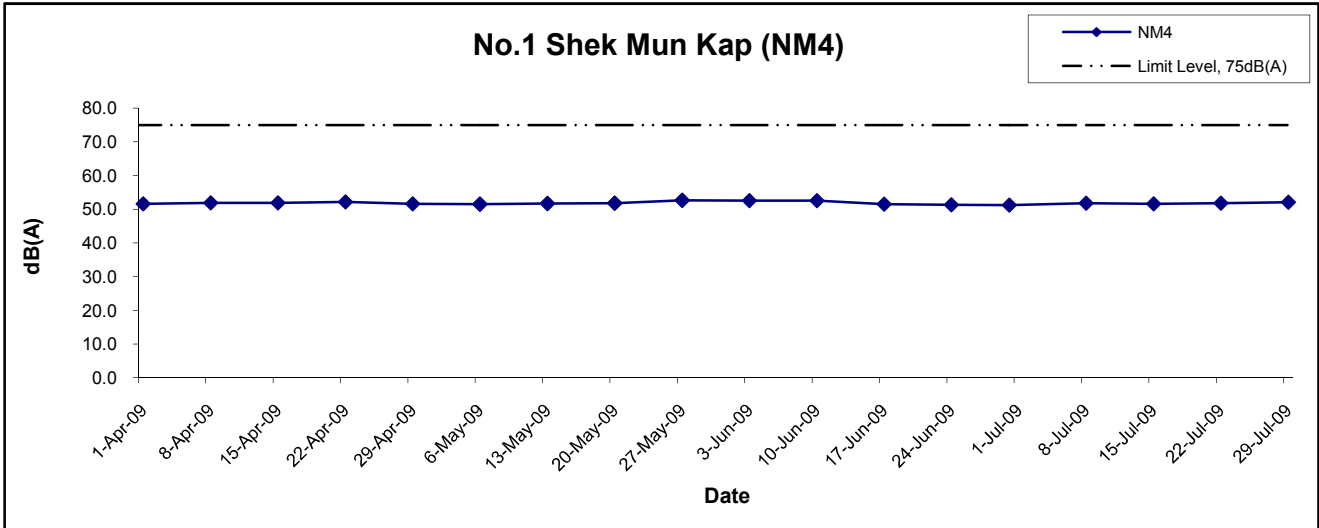
## Noise Levels



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	
	Date Jul 09	Appendix E	

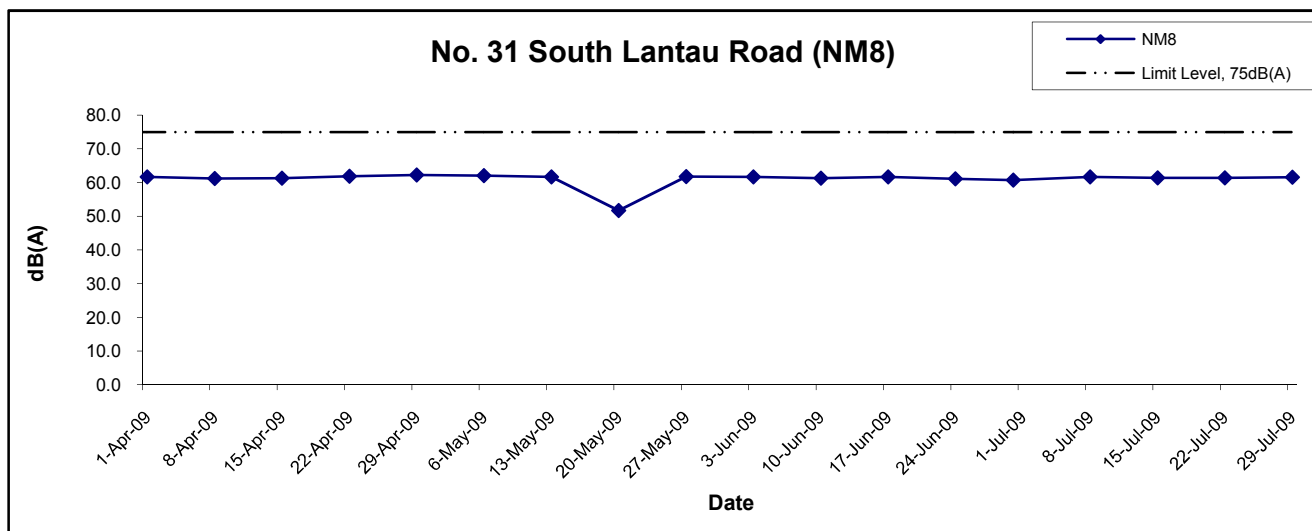


## Noise Levels



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	Project No. MA6030	
	Date Jul 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	Project No. MA6030	
	Date Jul 09	Appendix E	

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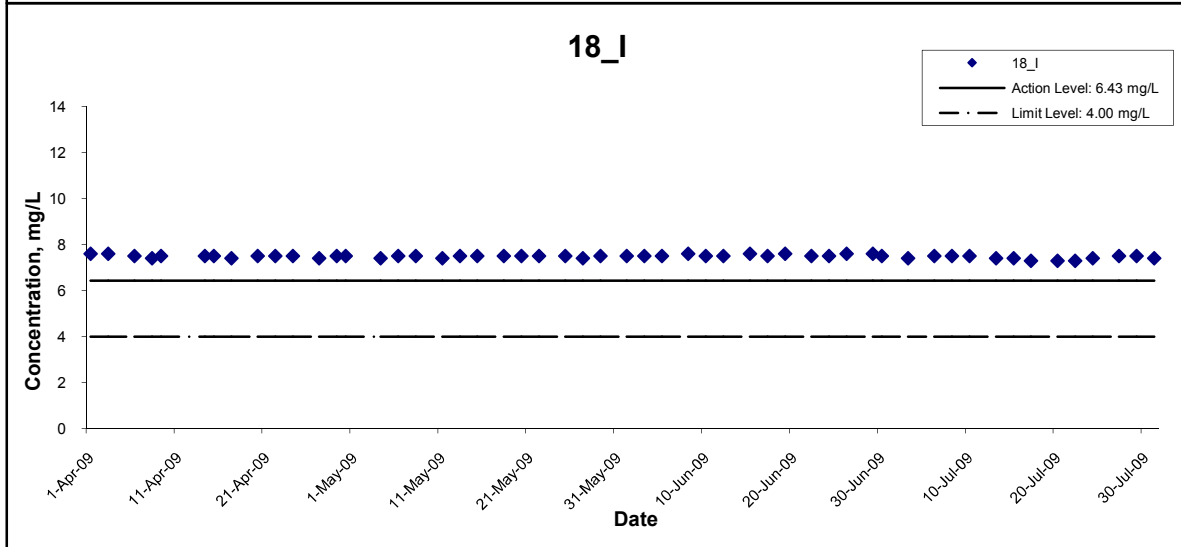
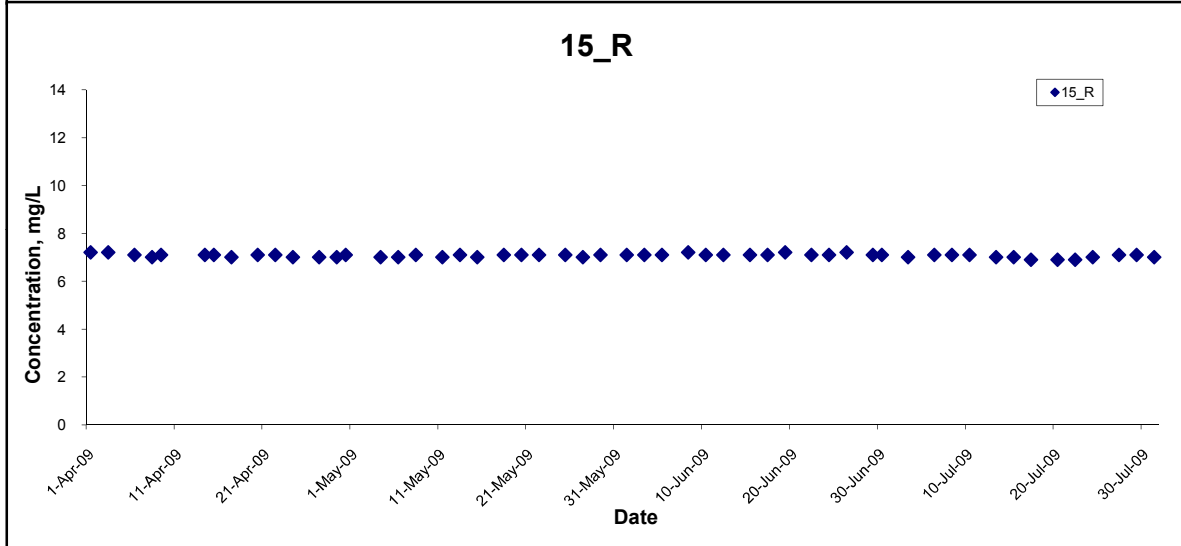
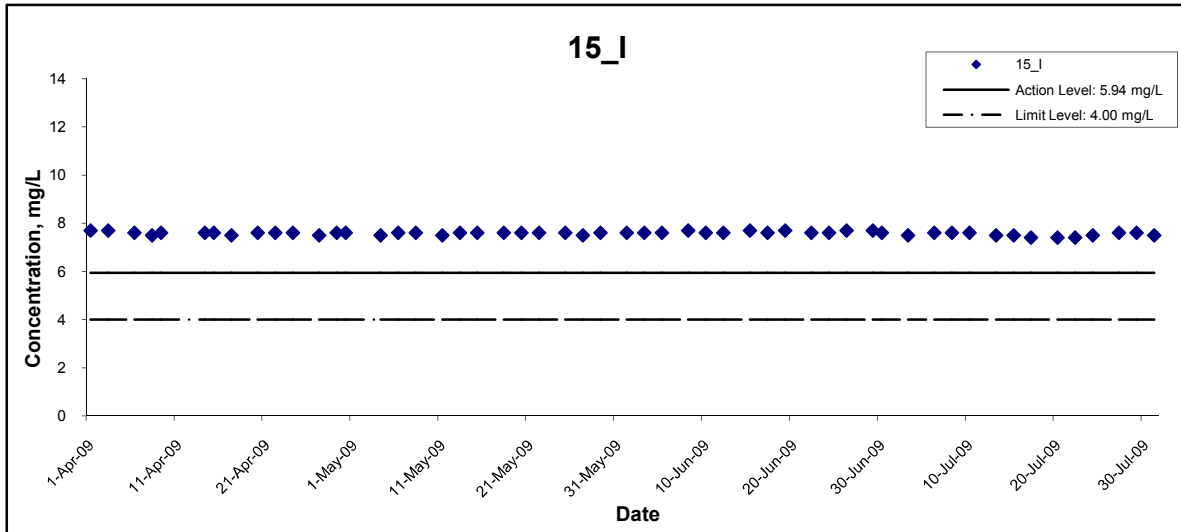
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**APPENDIX F  
GRAPHICAL PRESENTATION OF  
WATER QUALITY MONITORING  
RESULTS**

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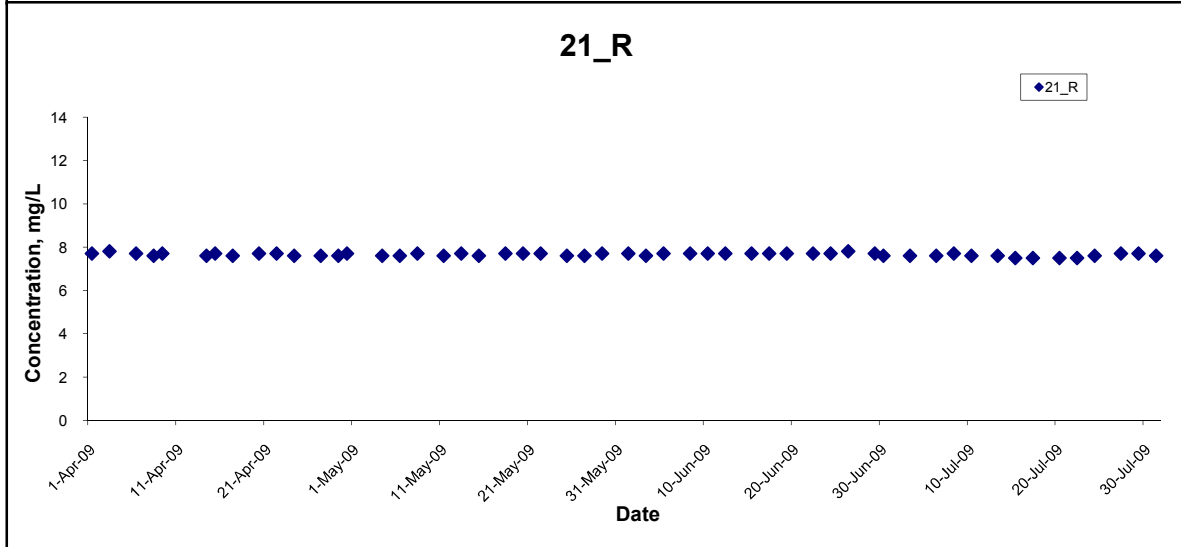
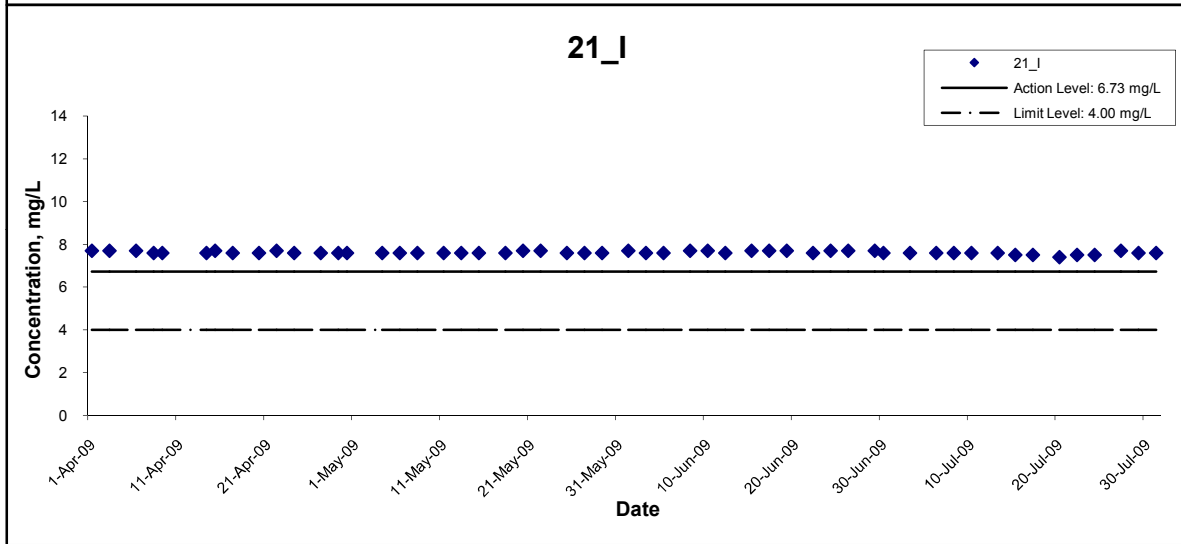
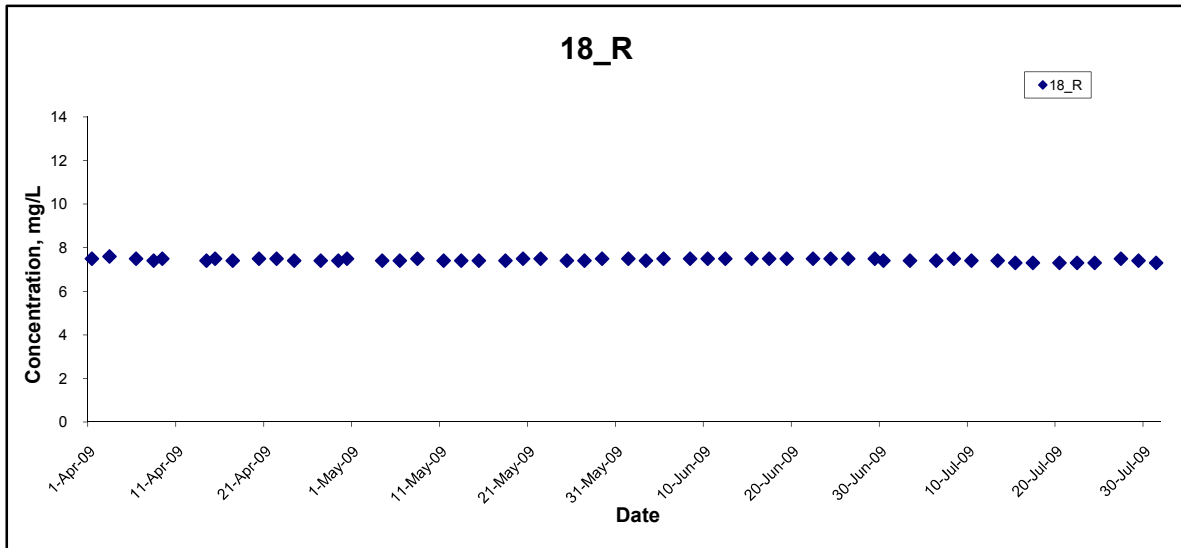
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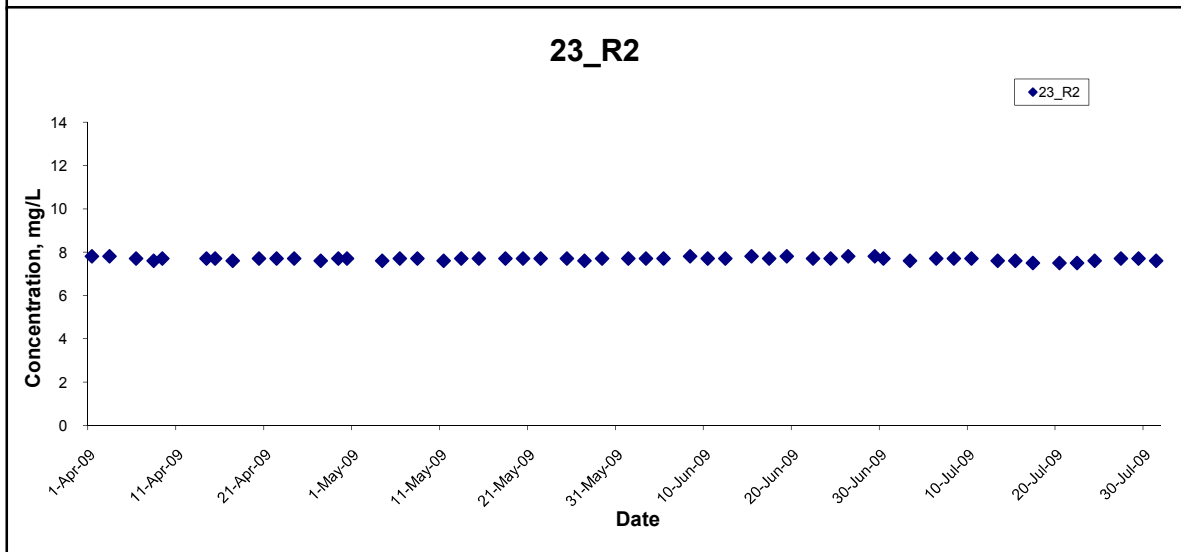
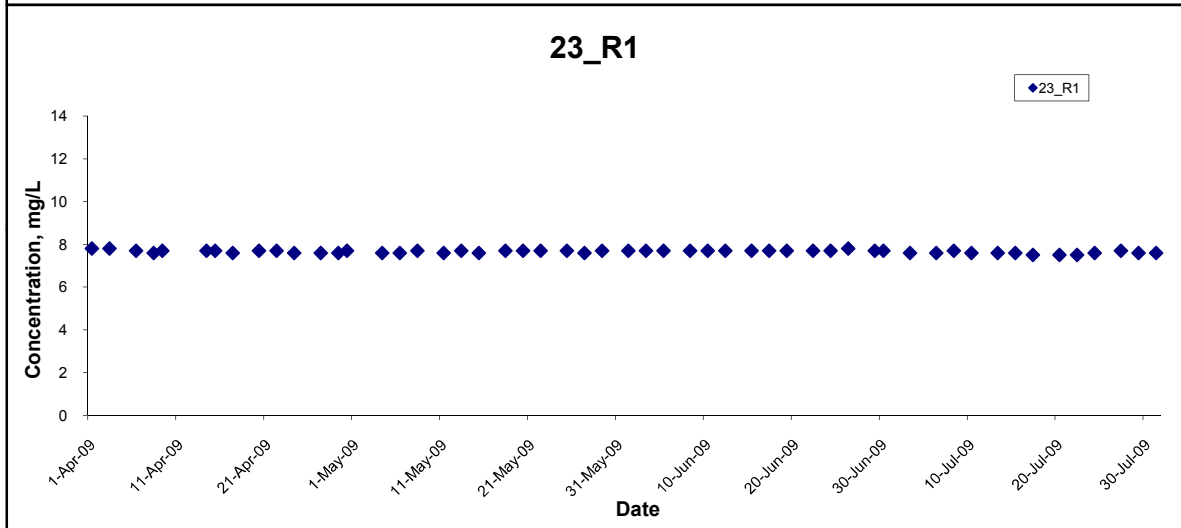
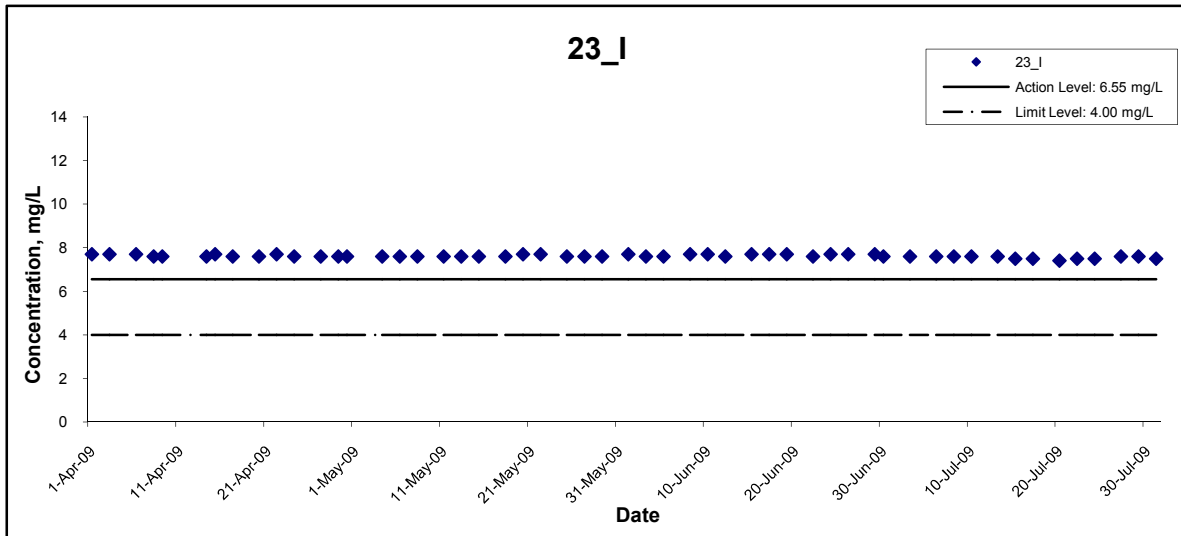
Title Contract No. HY/2003/19 Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha  Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA6030	
	Date Jul 09	Appendix F	

## Dissolved Oxygen



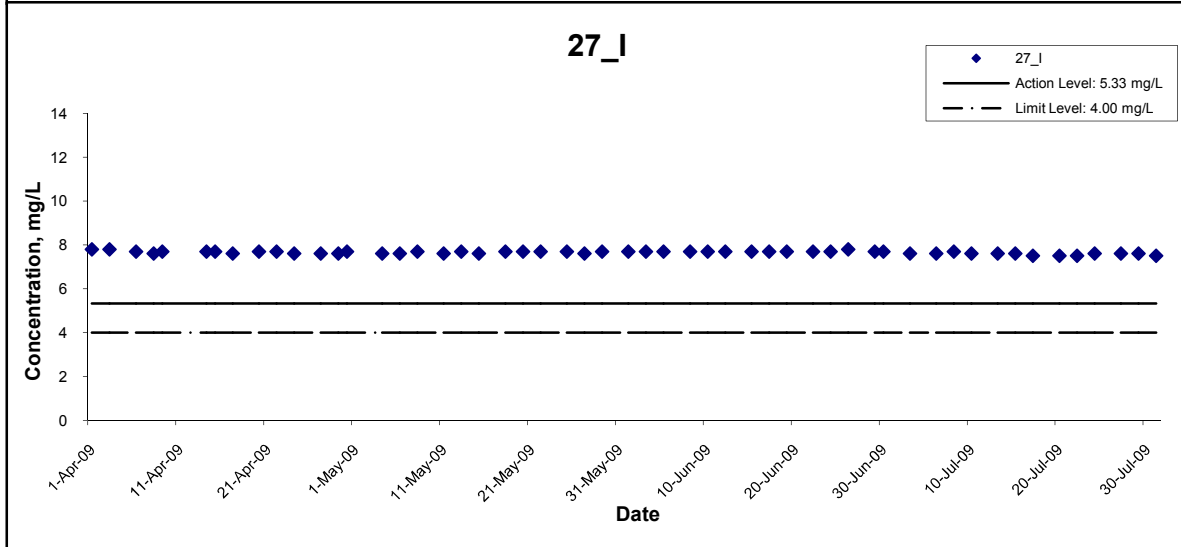
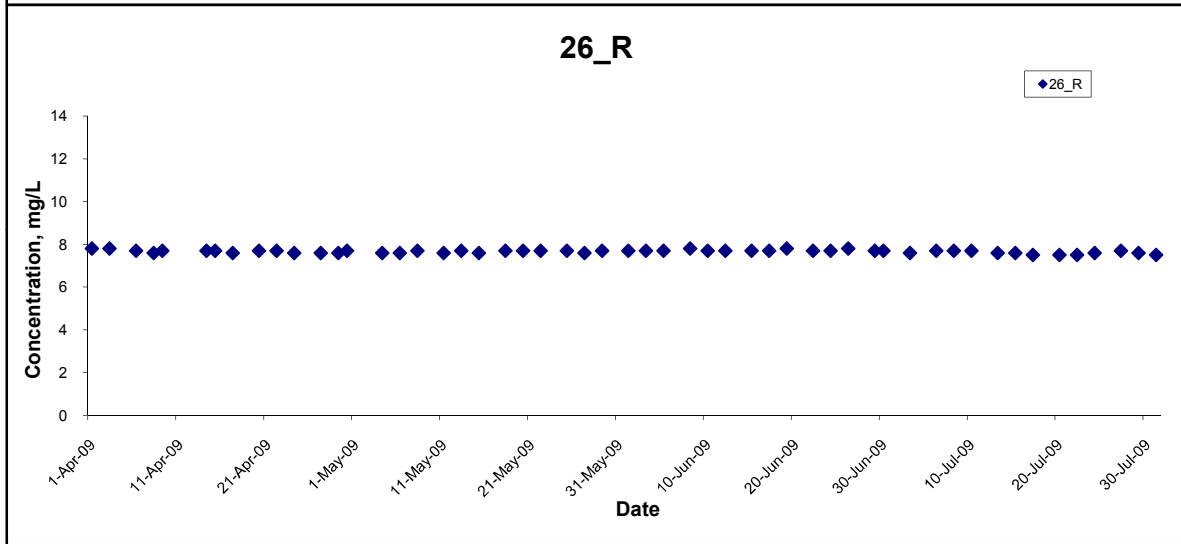
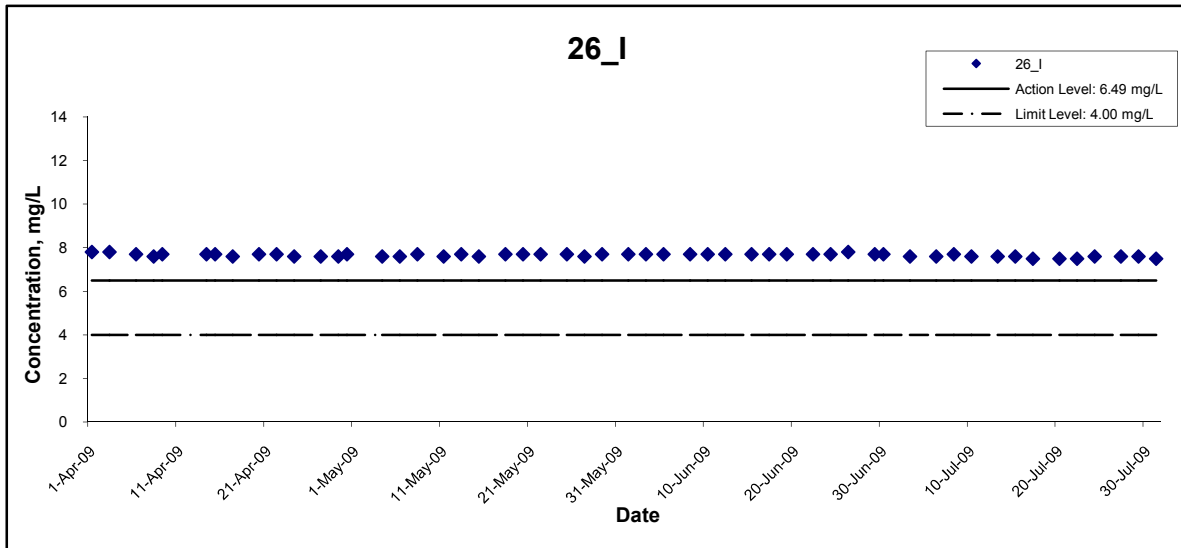
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	Date Jul 09	Appendix F	

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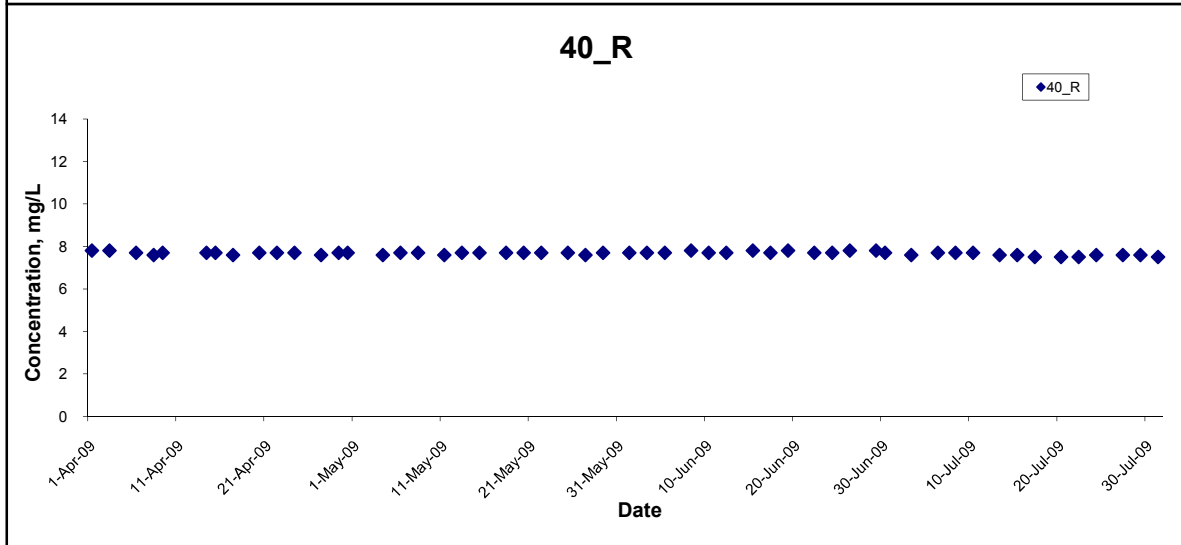
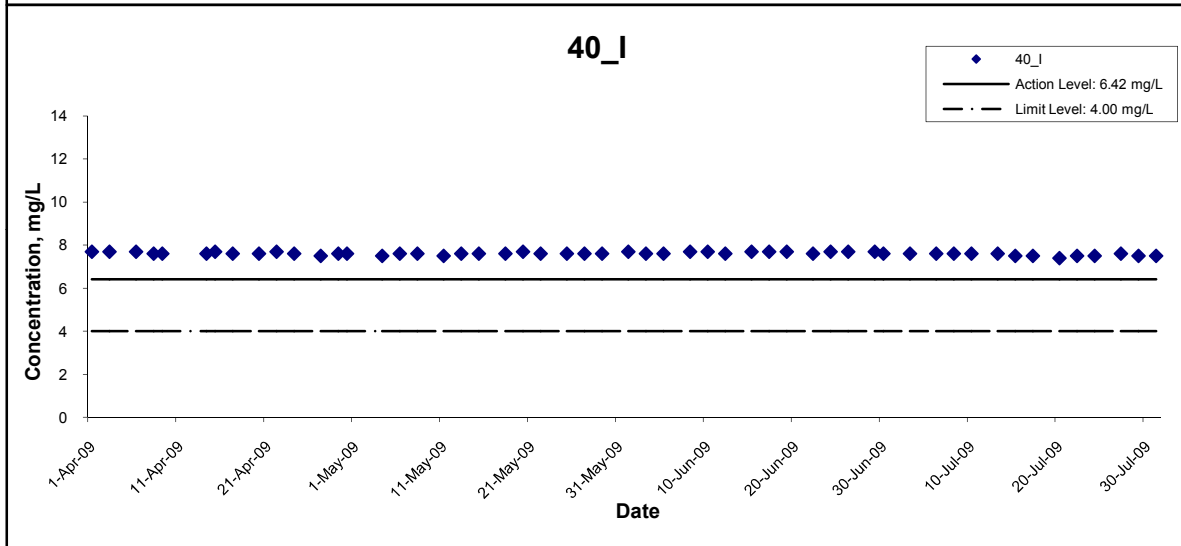
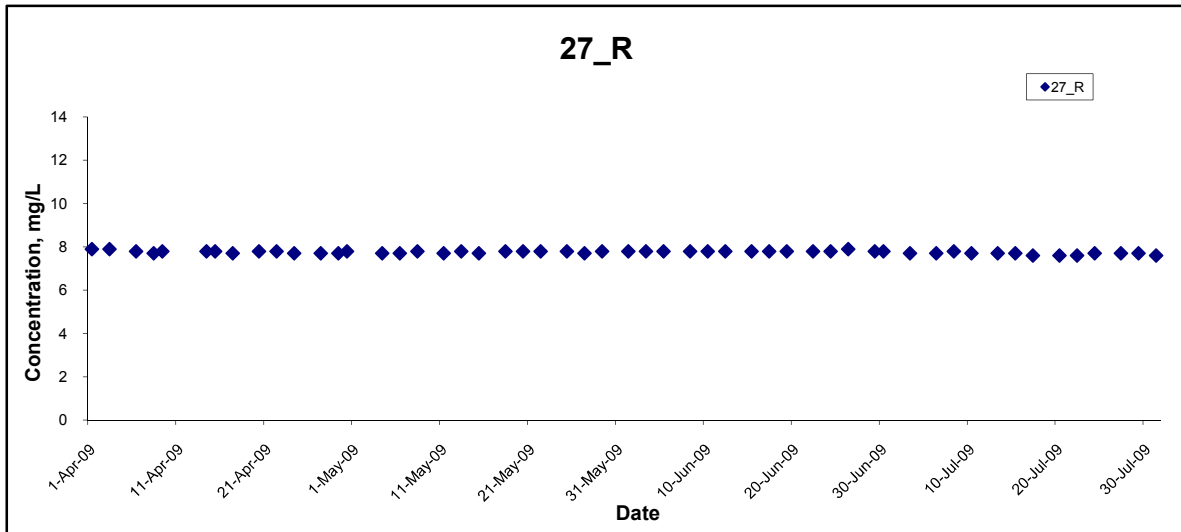
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	Date Jul 09	Appendix F	

## 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	Project No. MA6030	CINOTECH
	Date Jul 09	Appendix F	

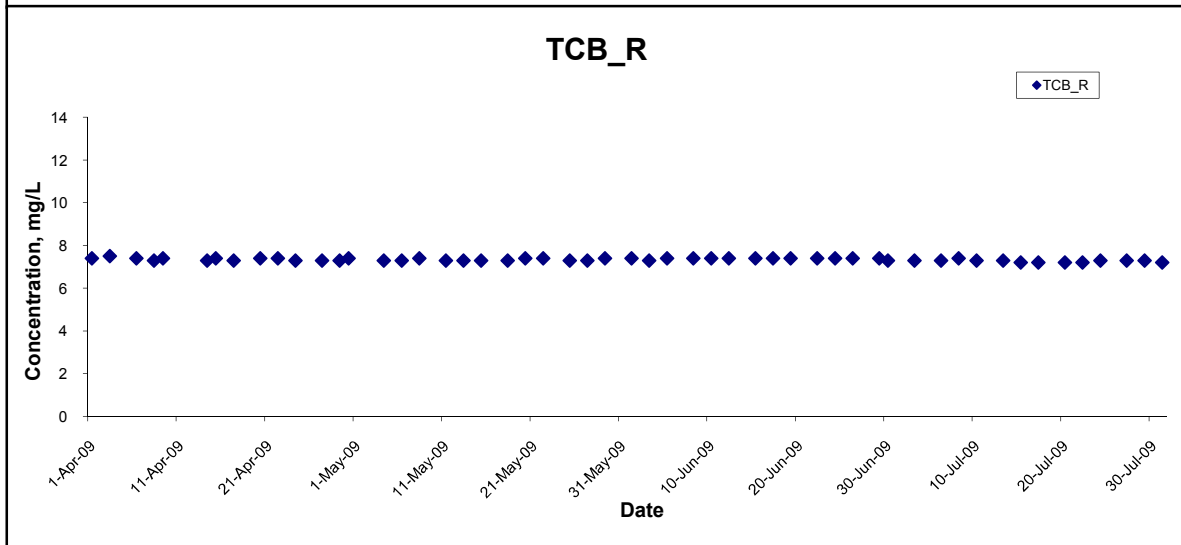
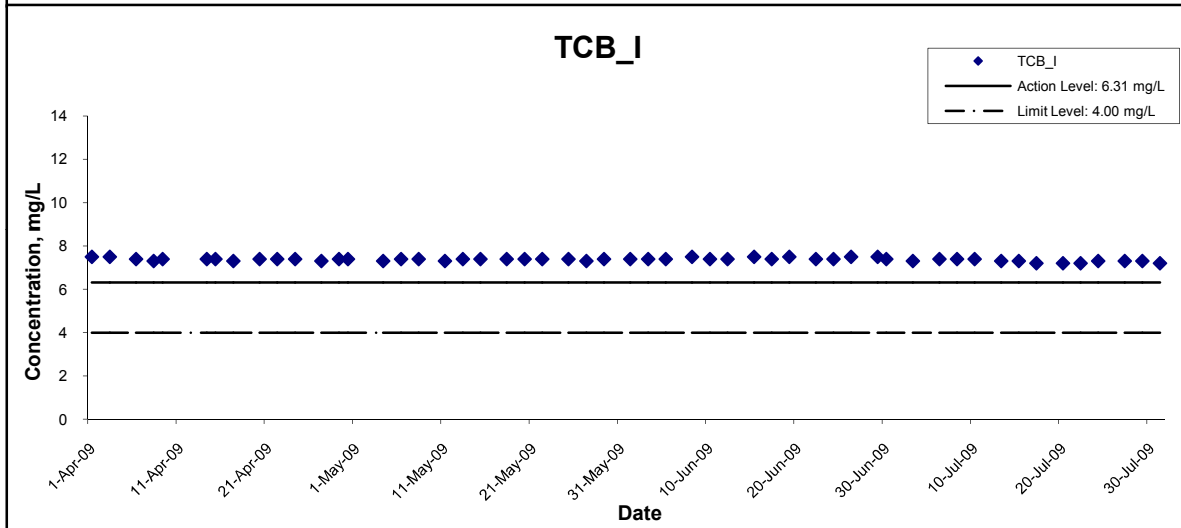
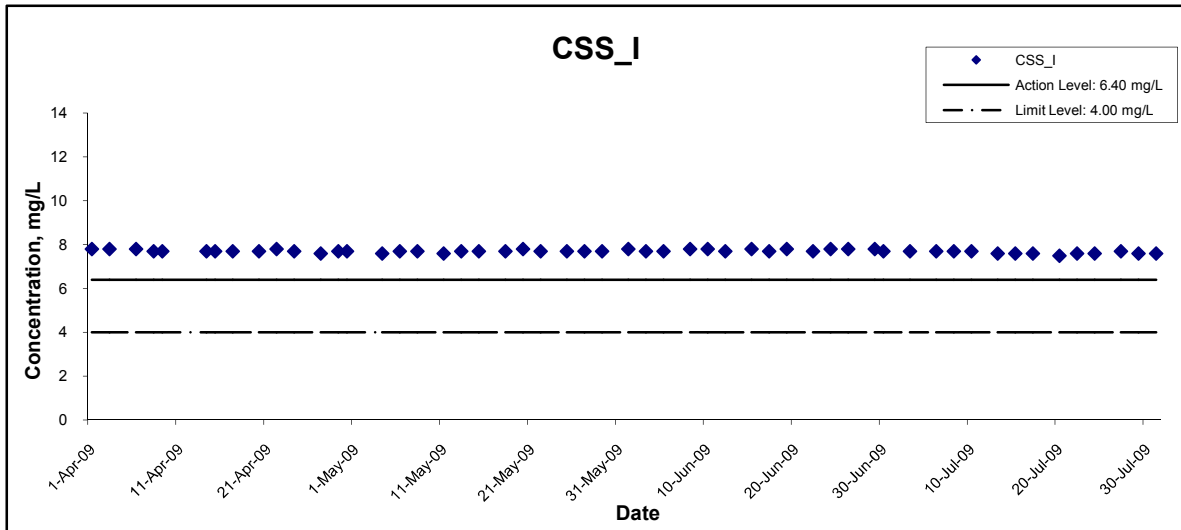
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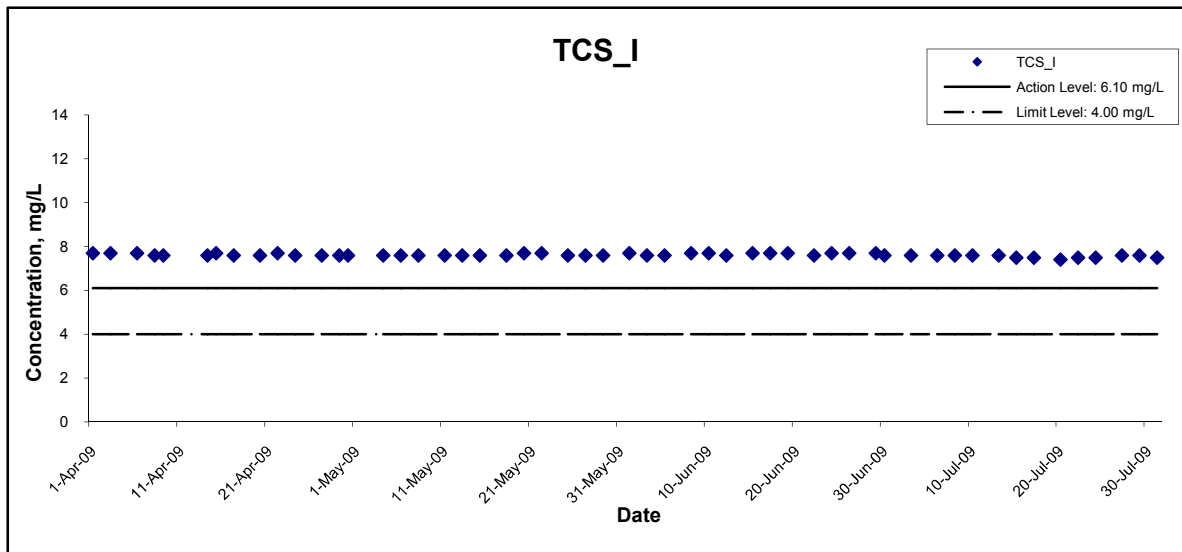


## Dissolved Oxygen



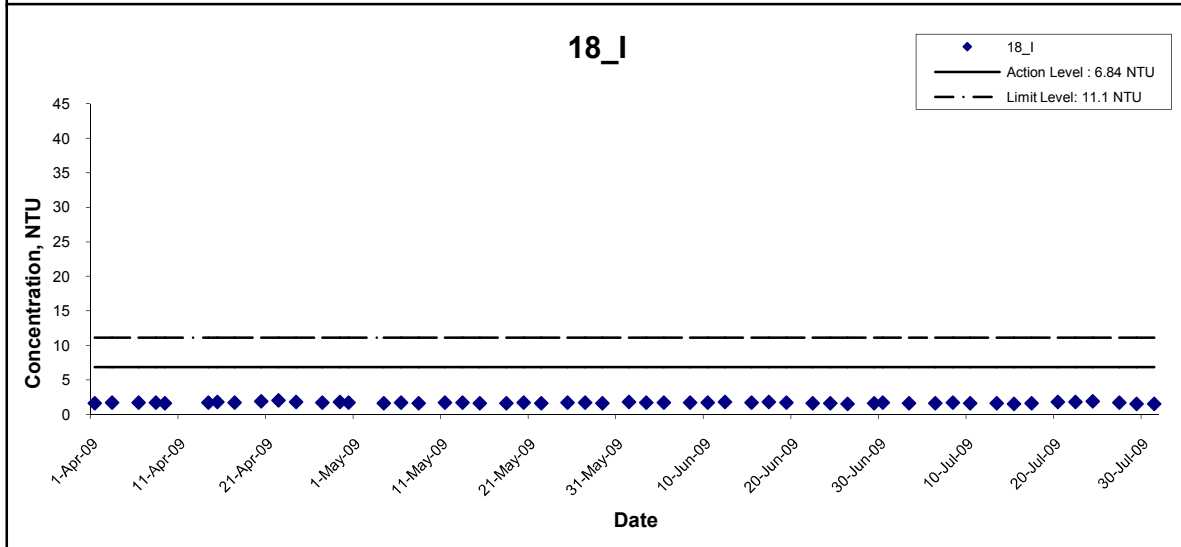
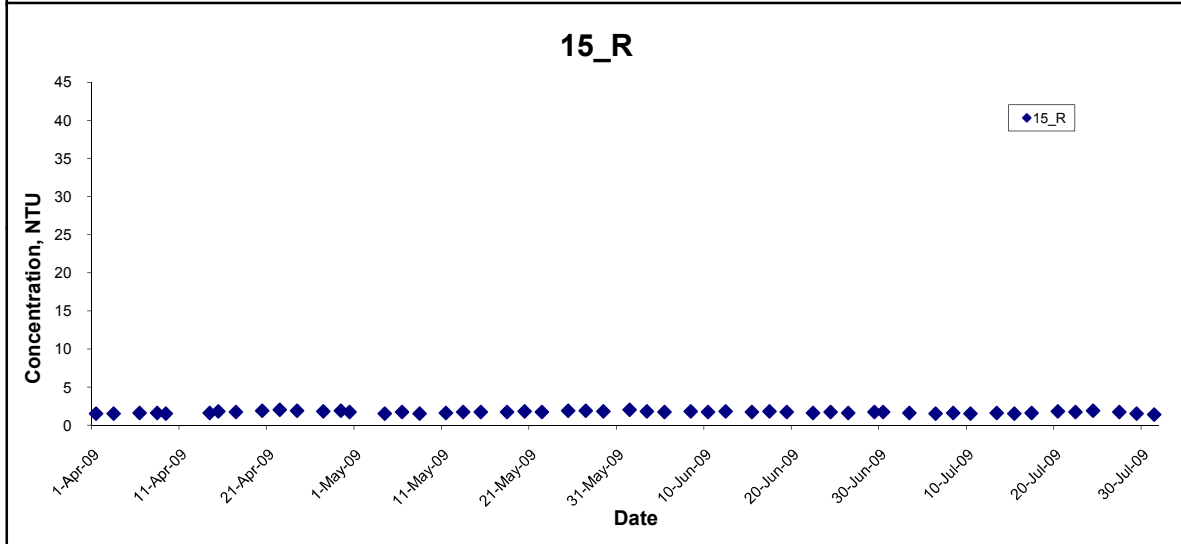
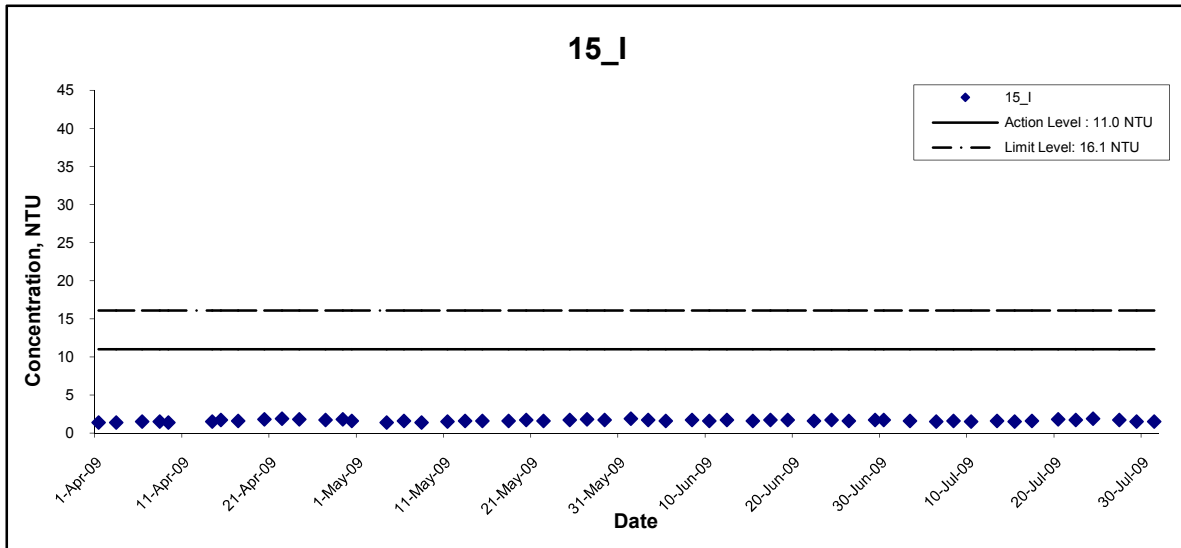
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## Dissolved Oxygen



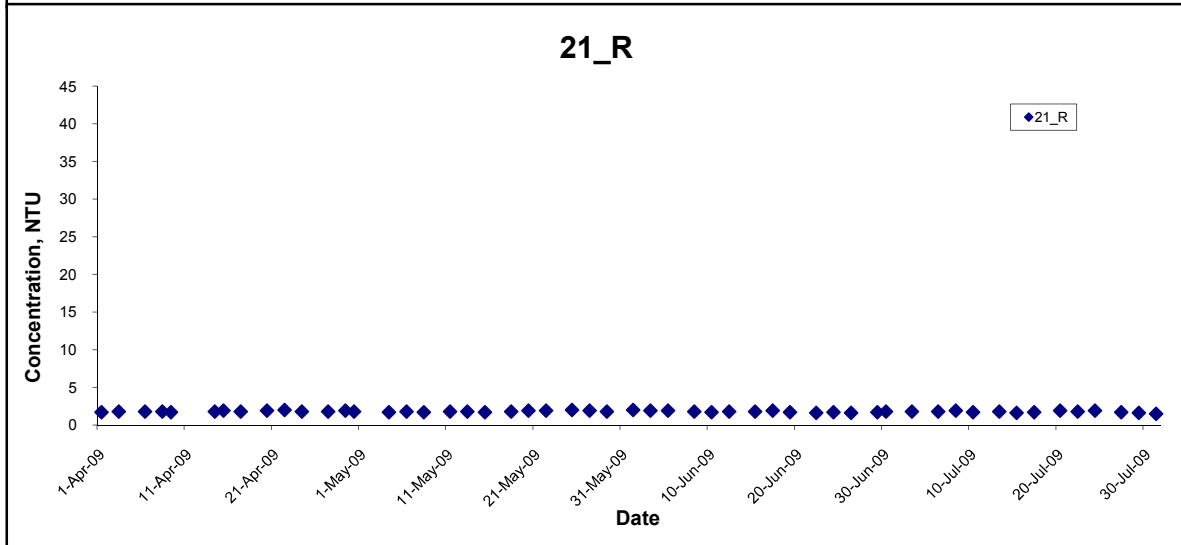
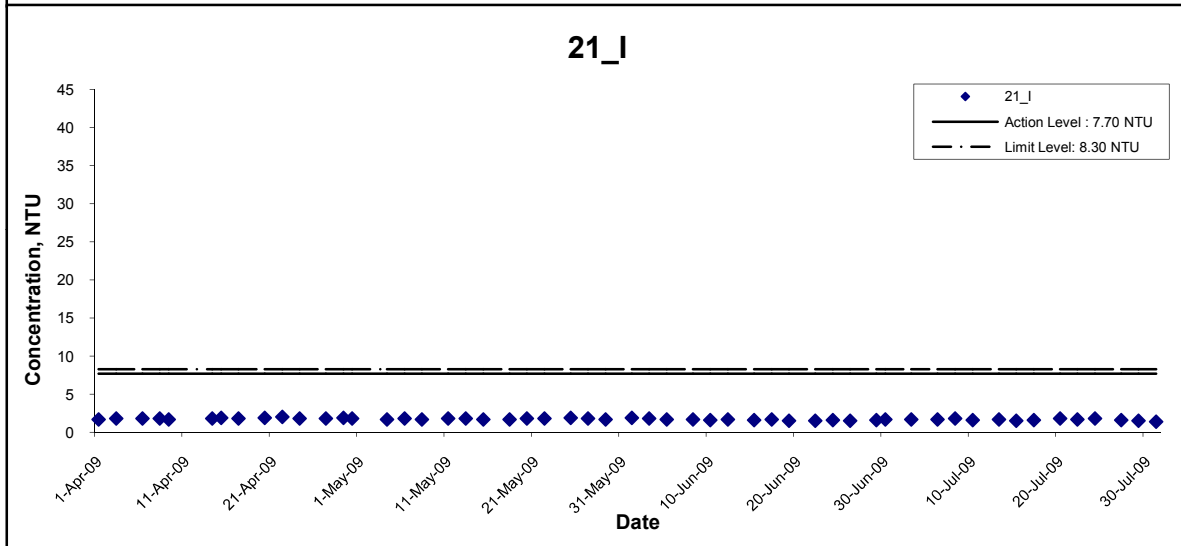
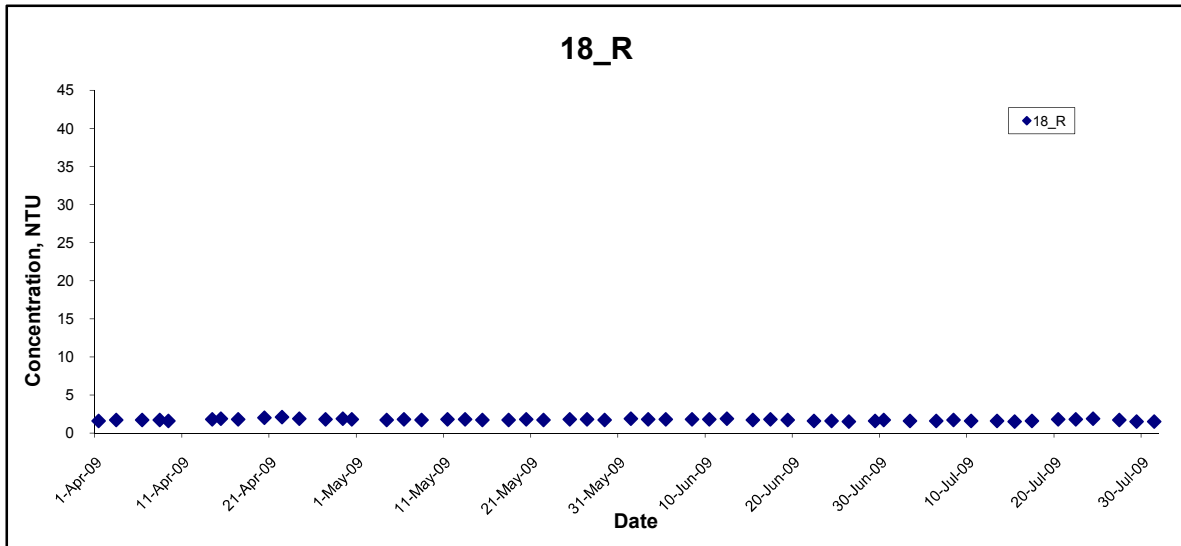
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## Turbidity



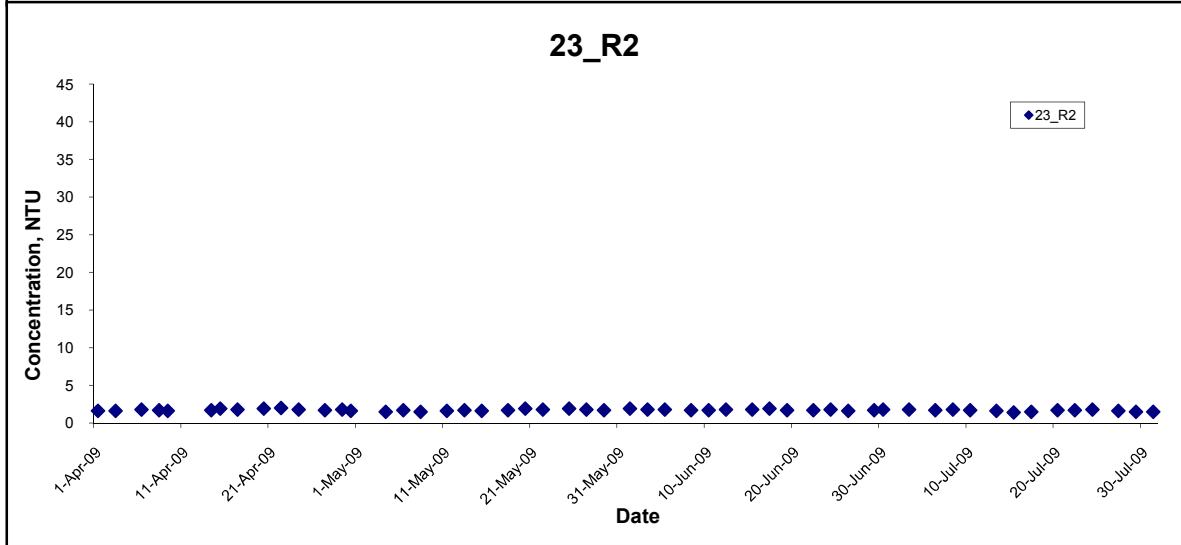
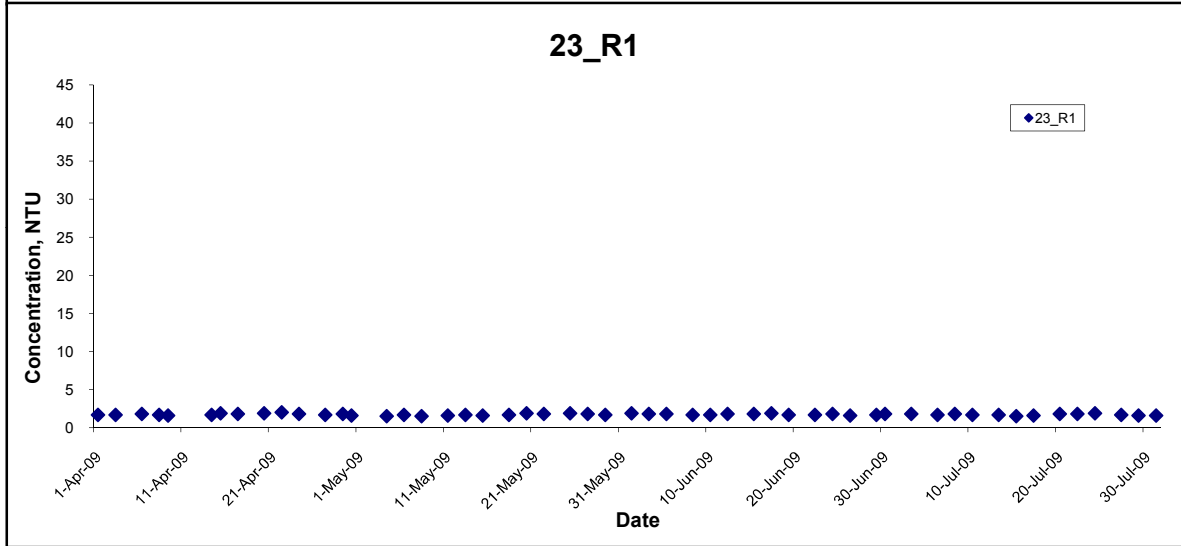
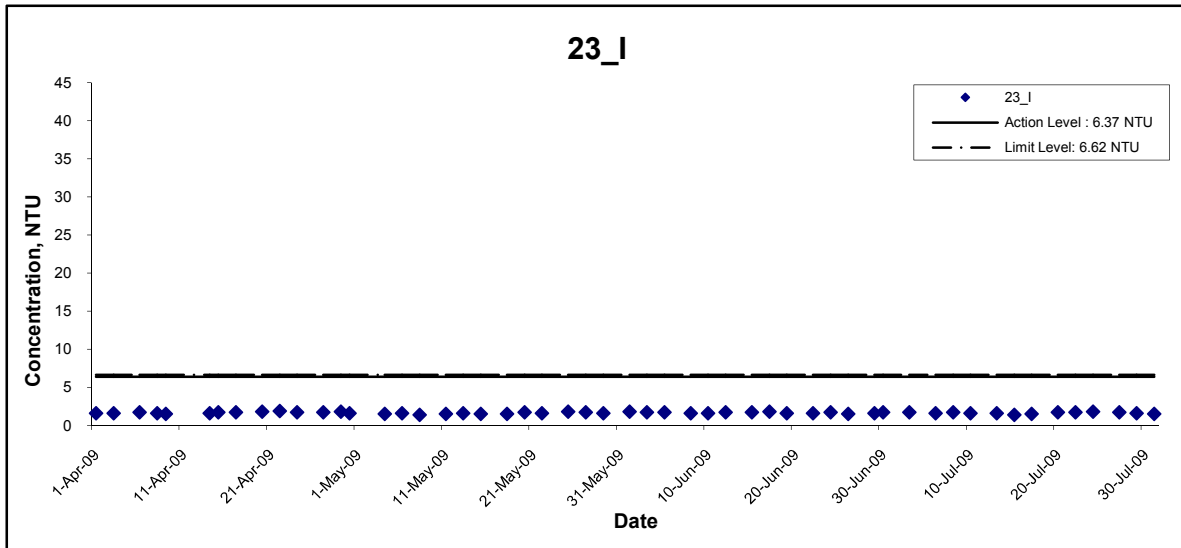
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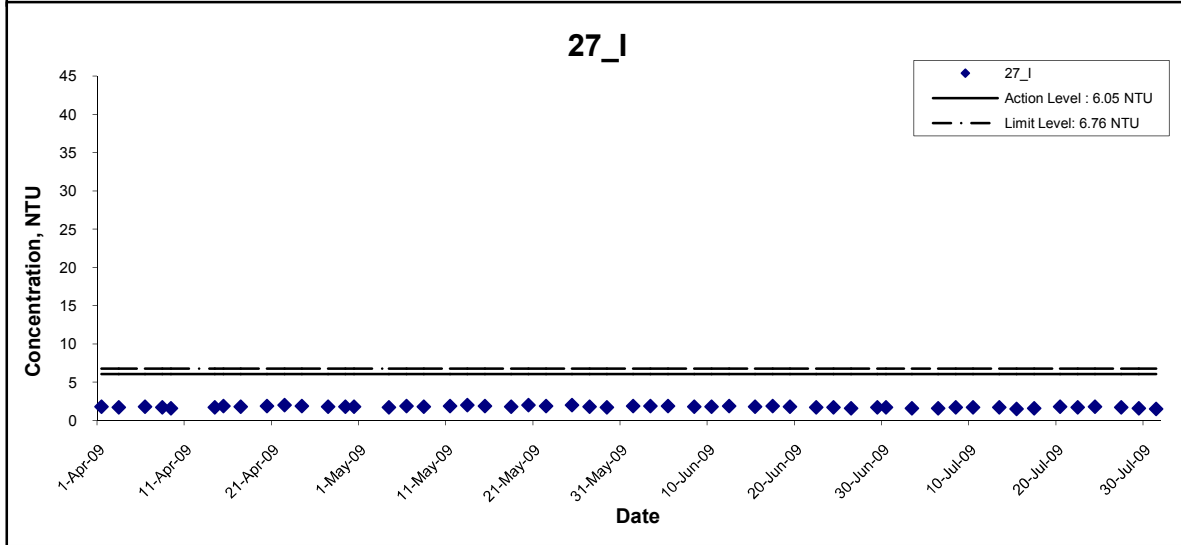
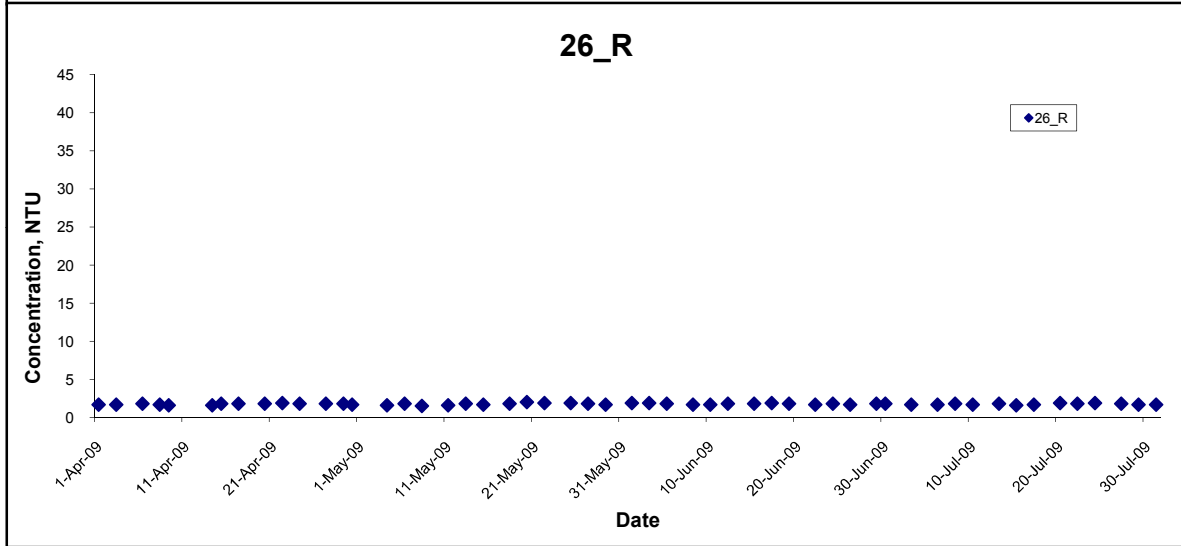
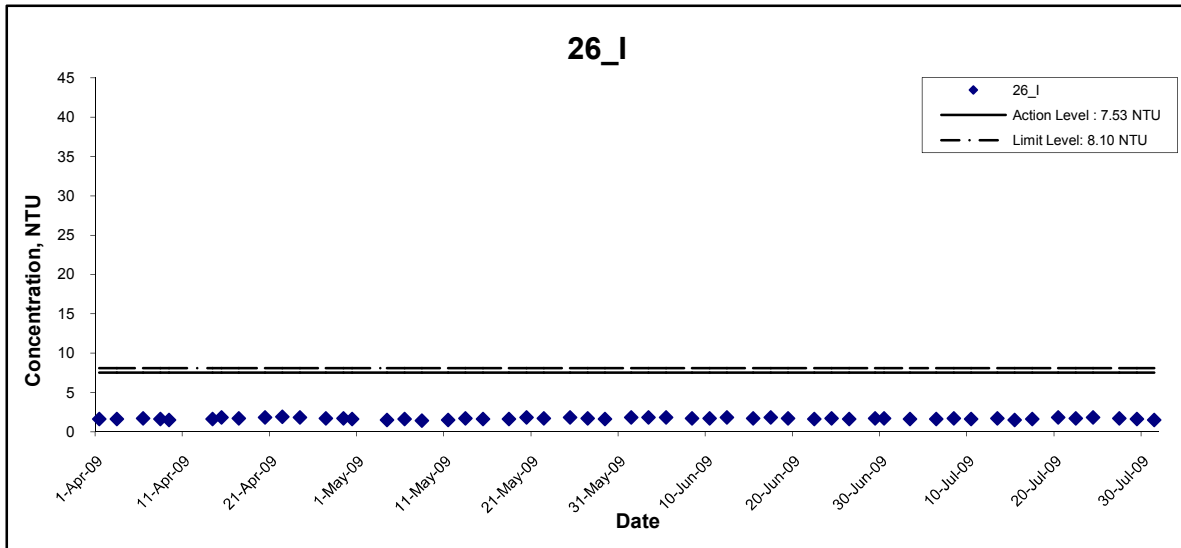
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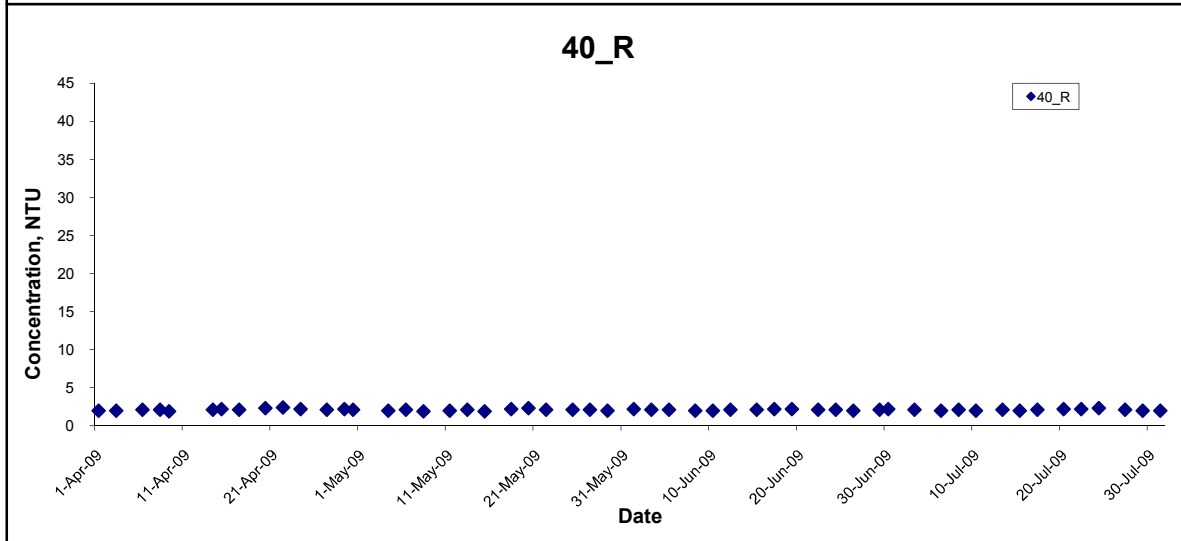
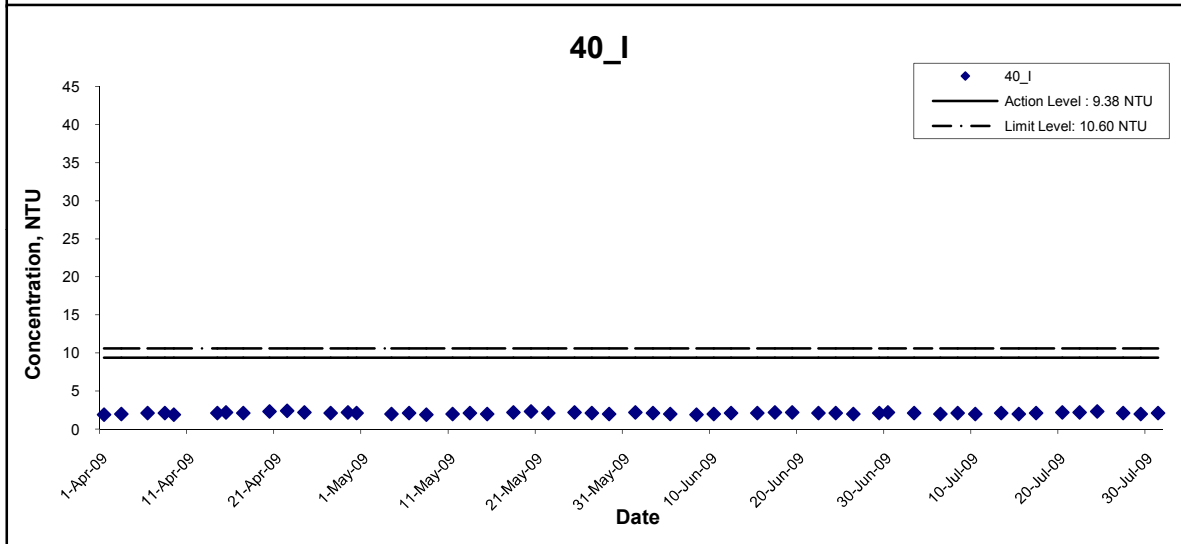
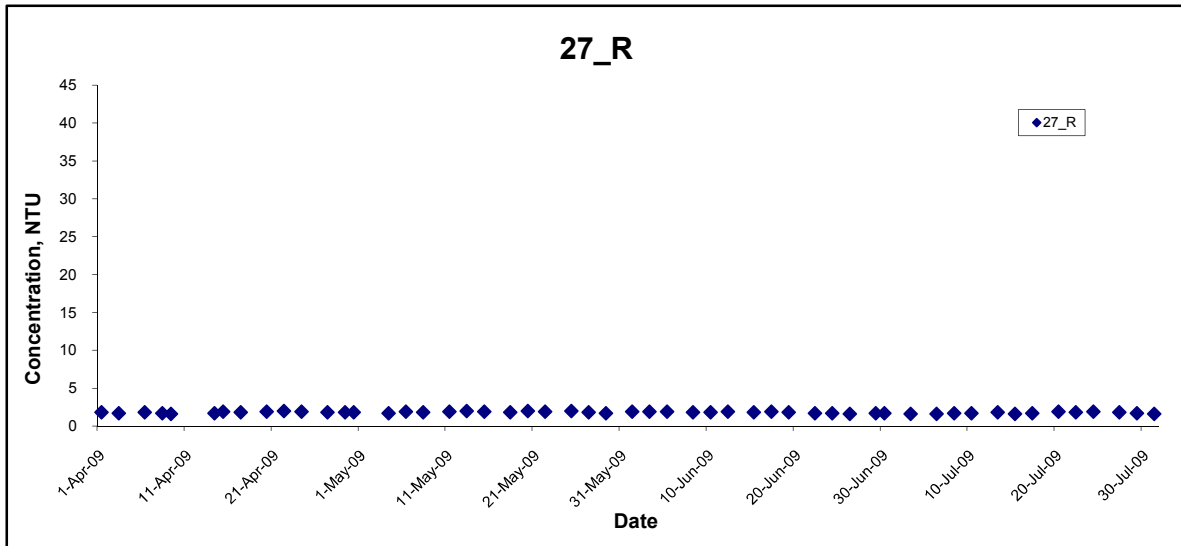
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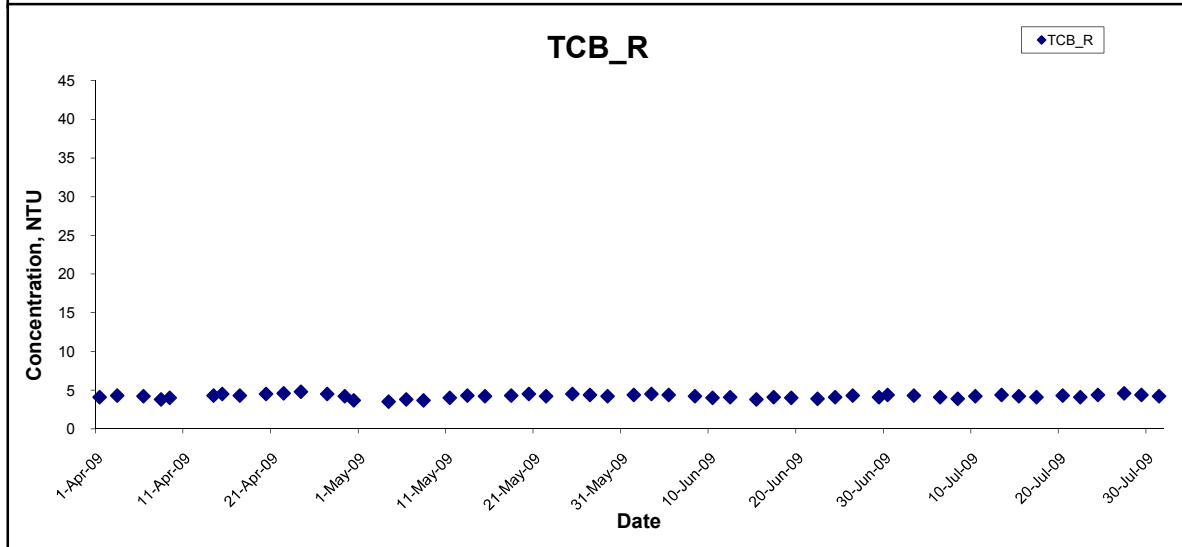
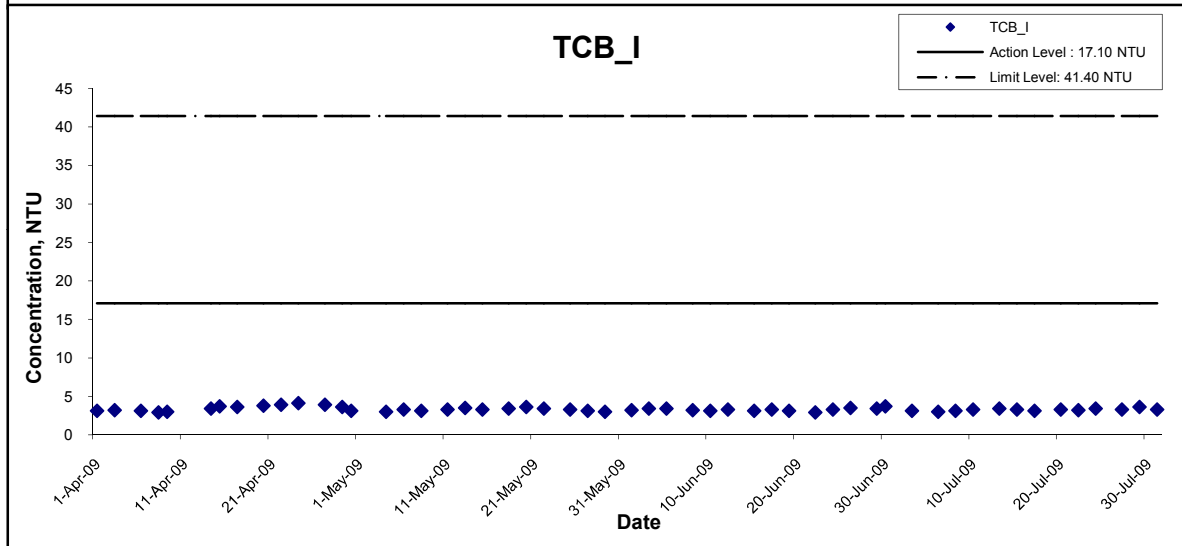
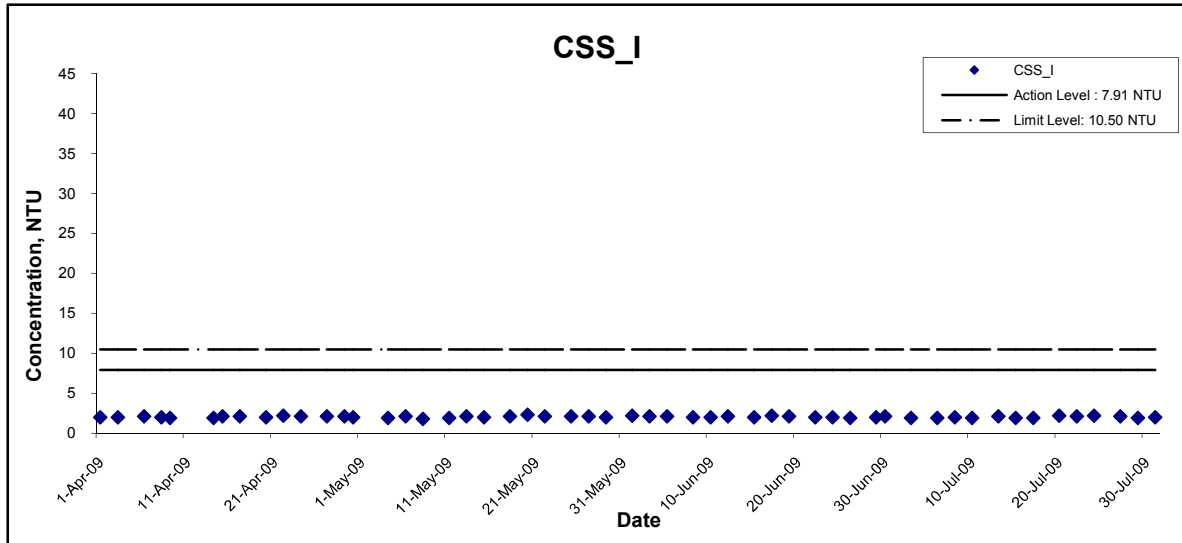
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## Turbidity



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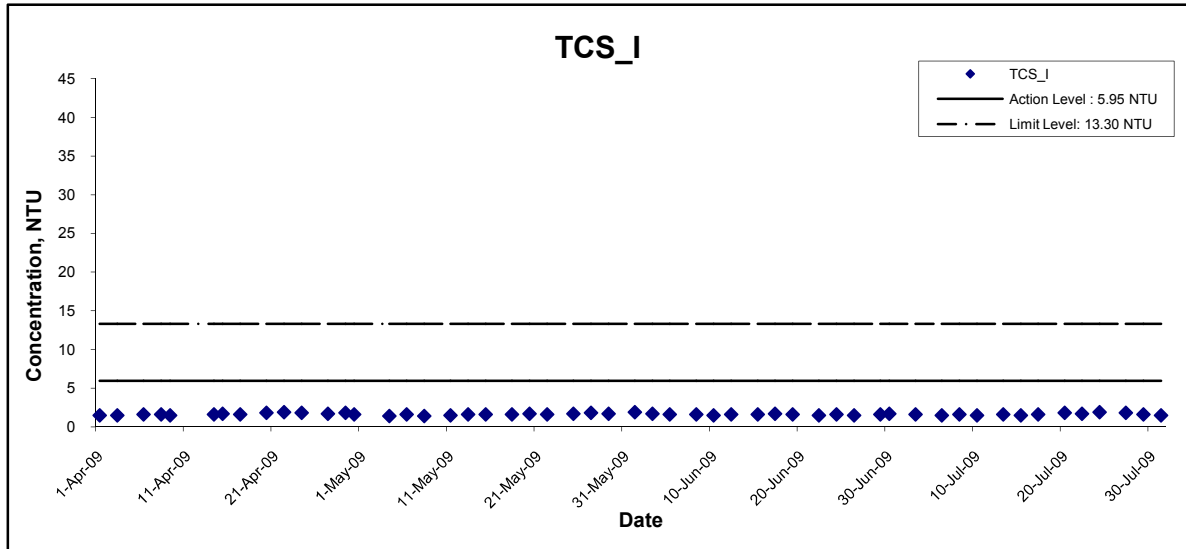
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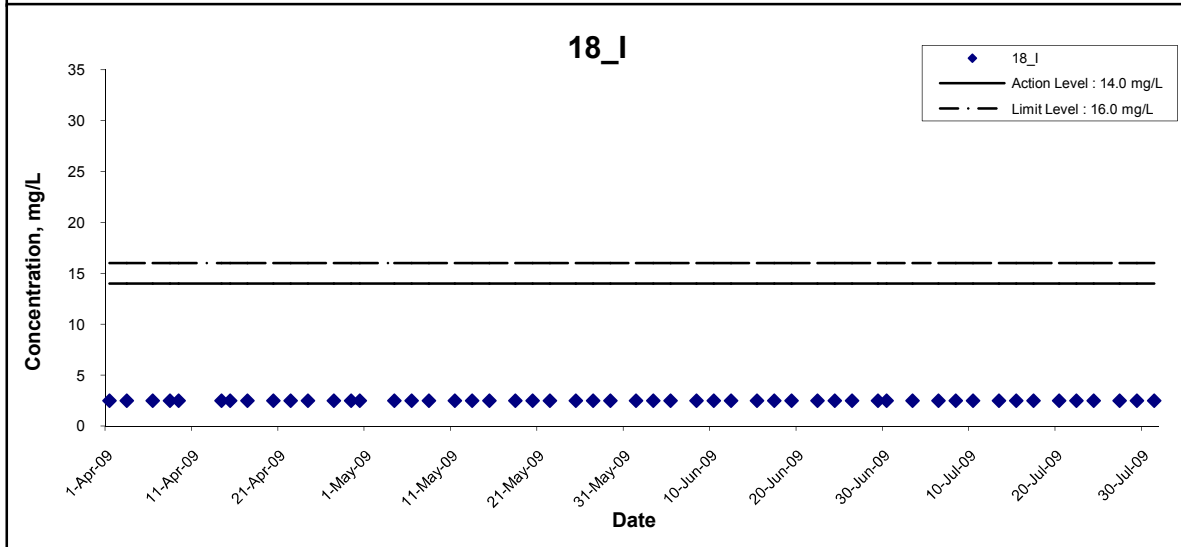
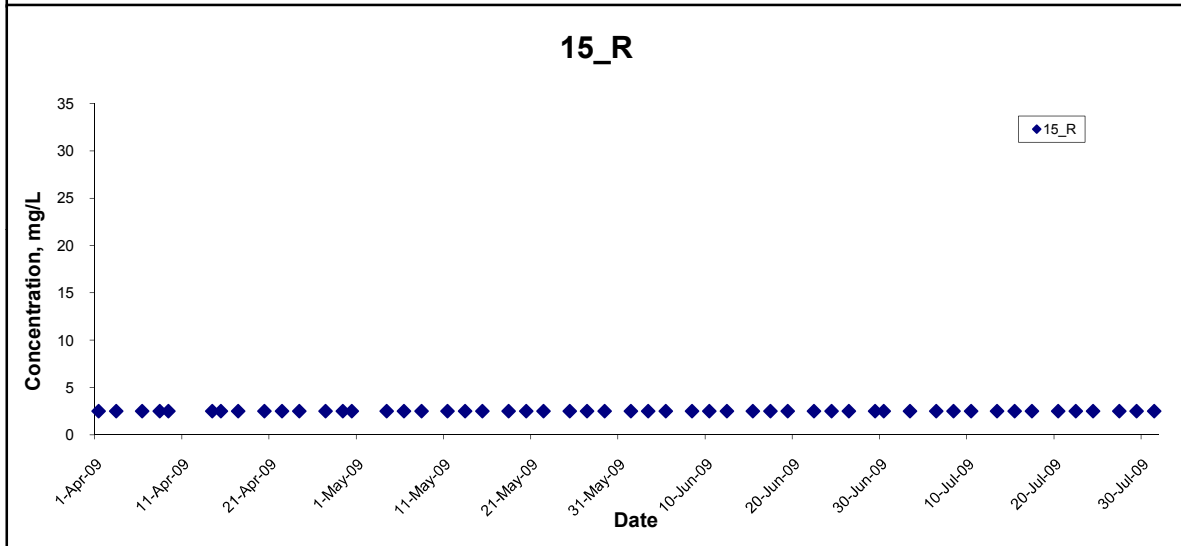
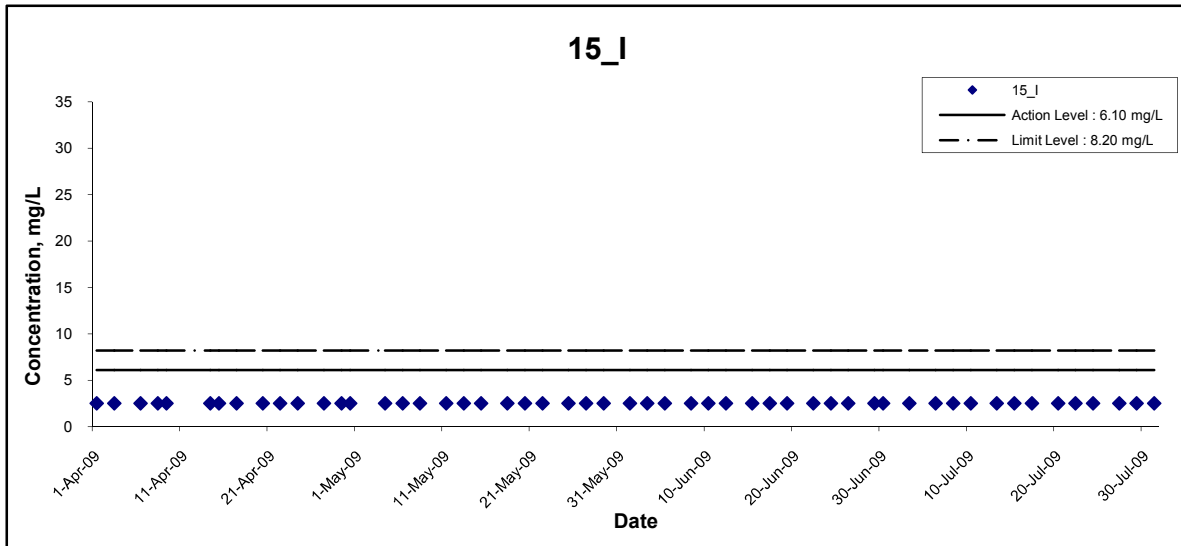


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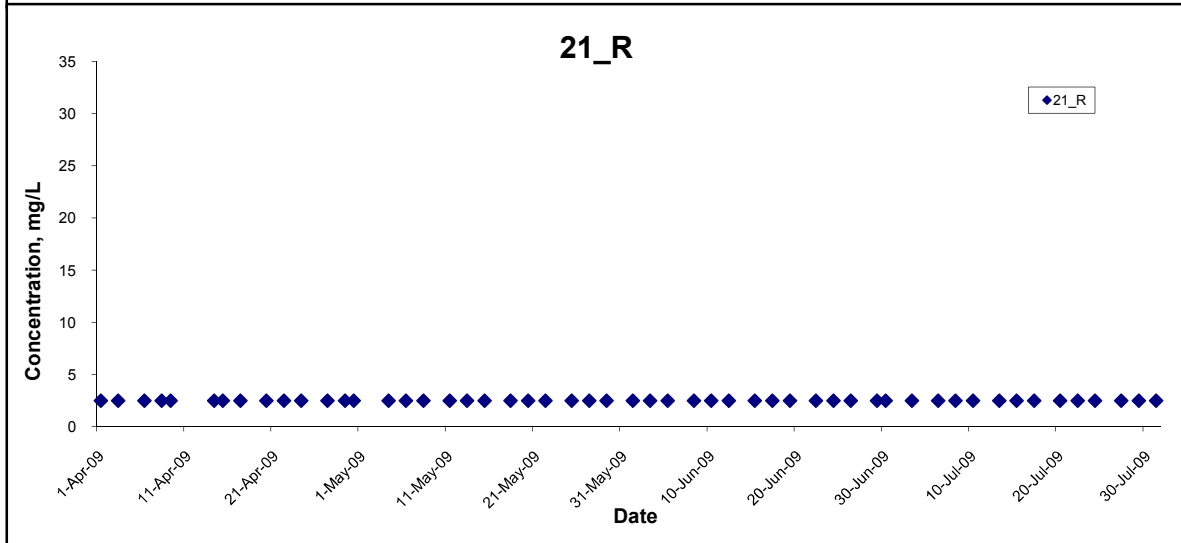
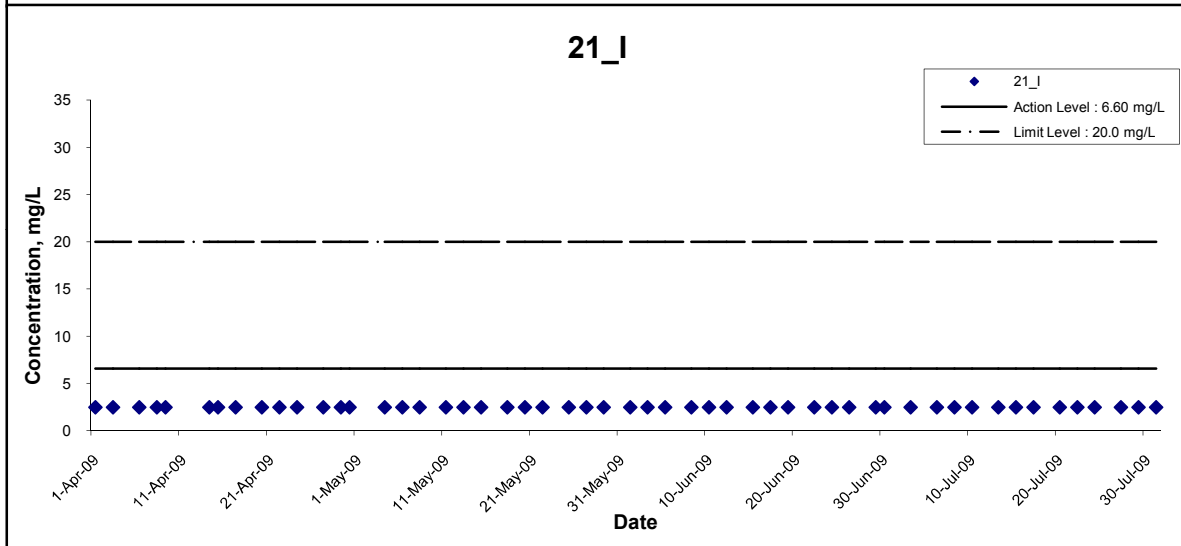
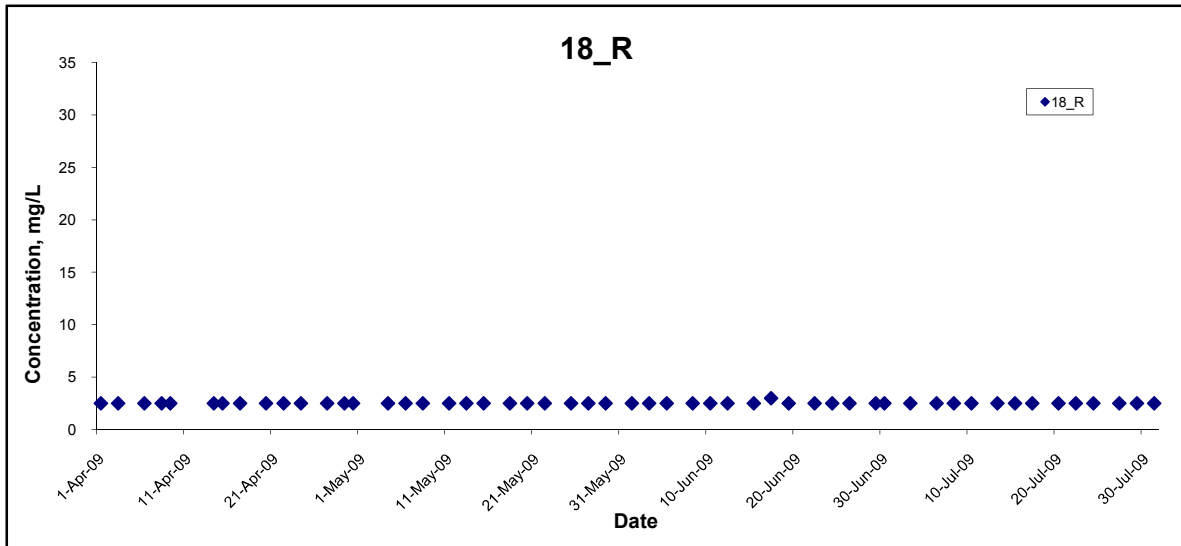
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## Suspended Solids



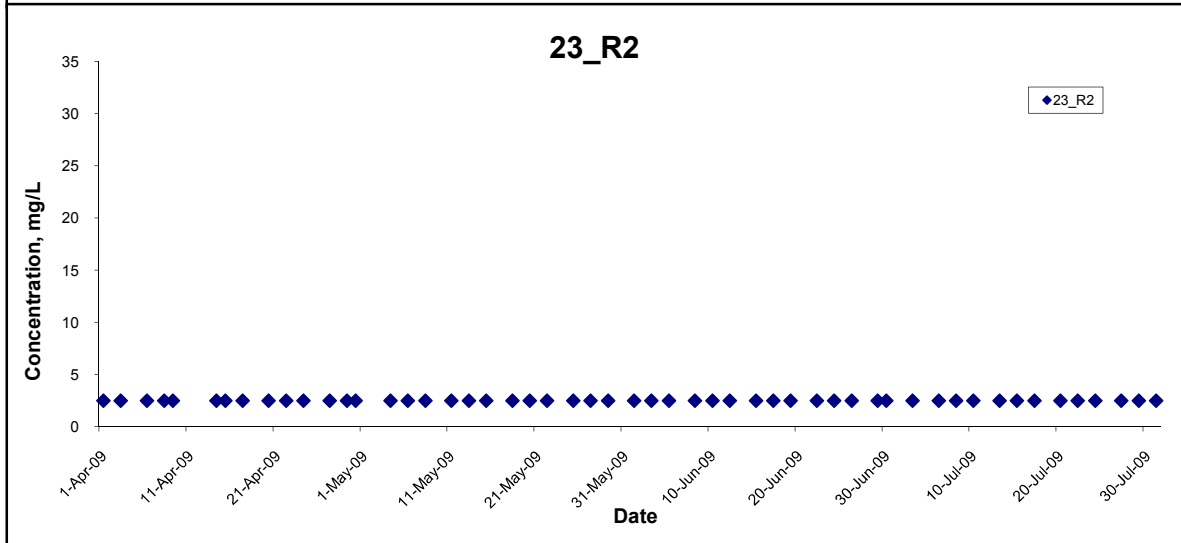
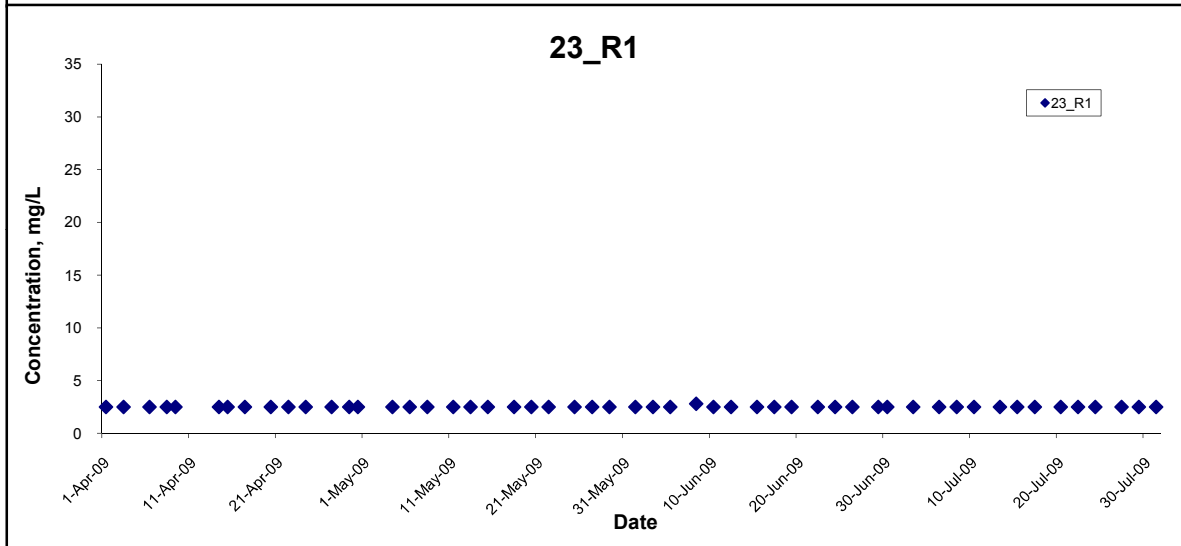
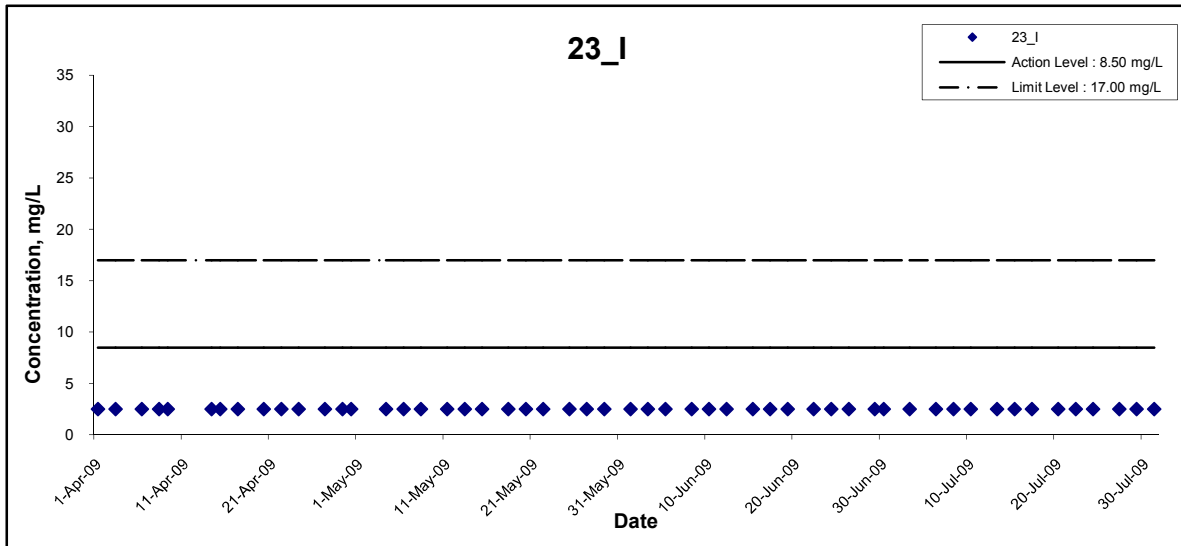
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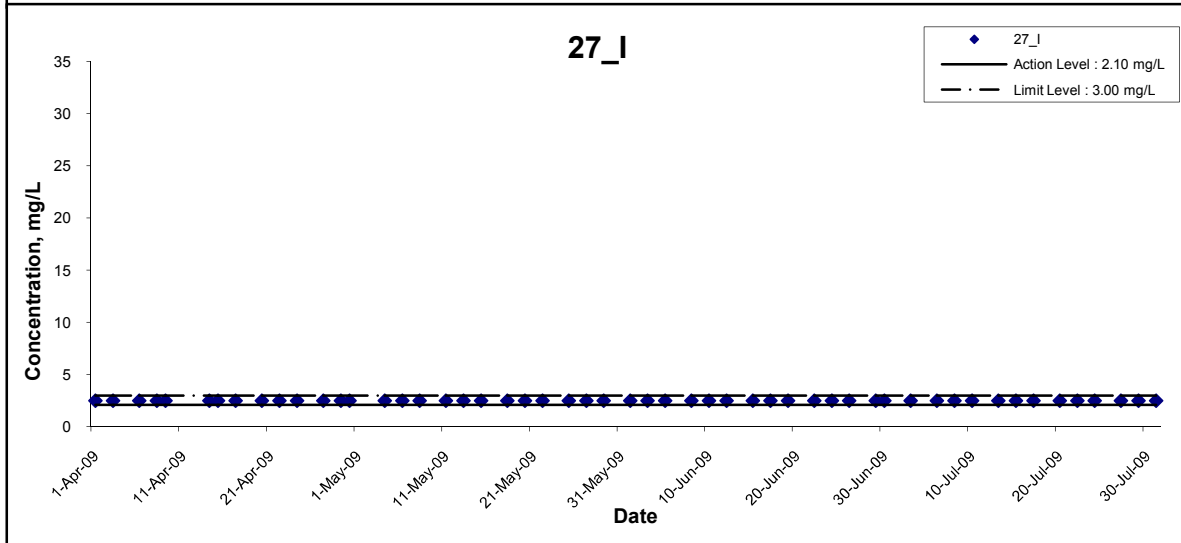
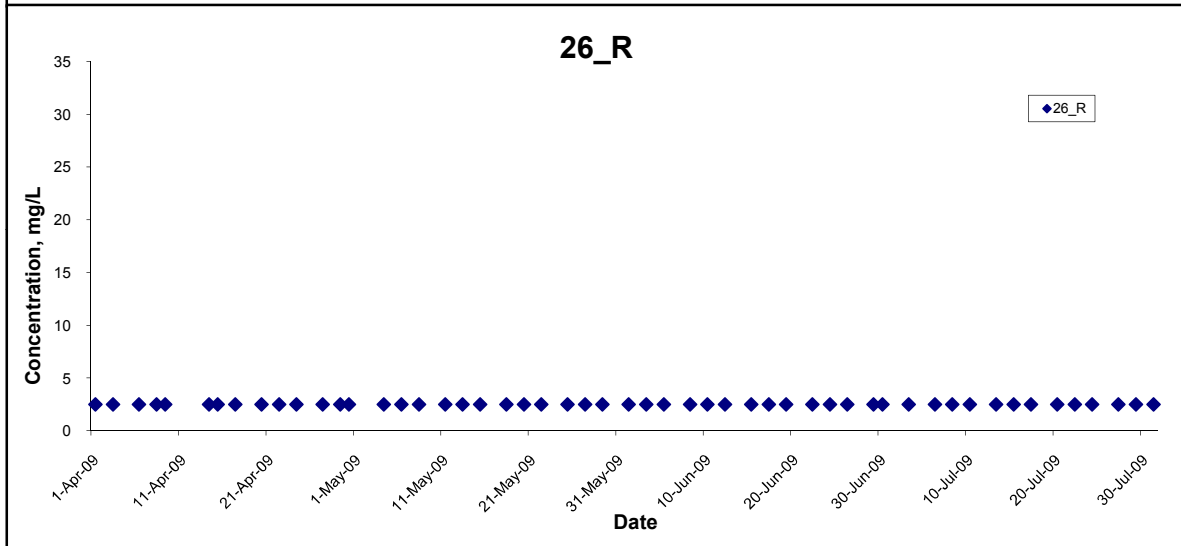
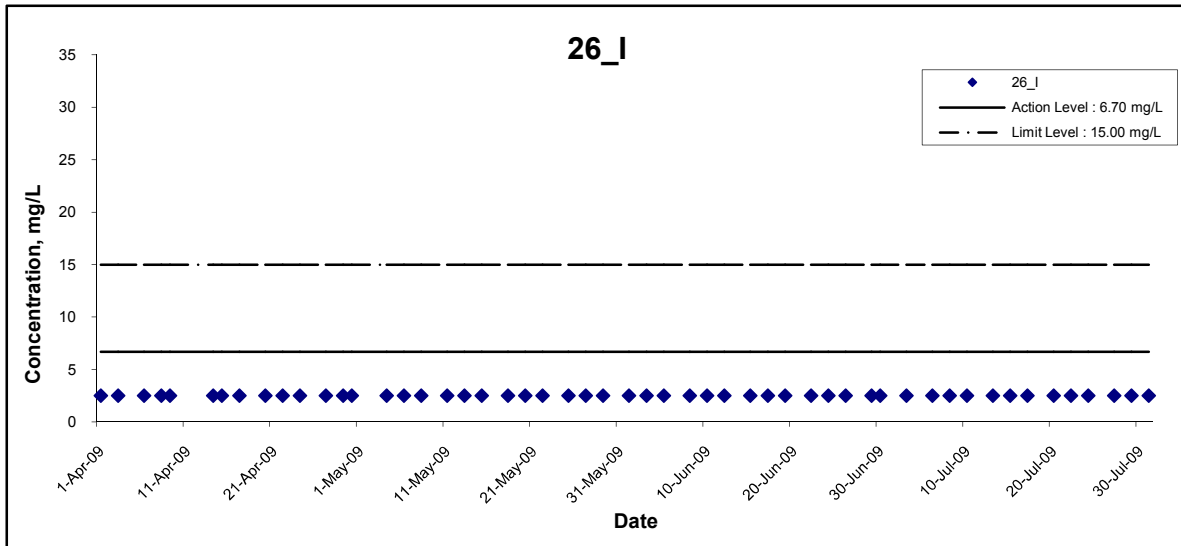
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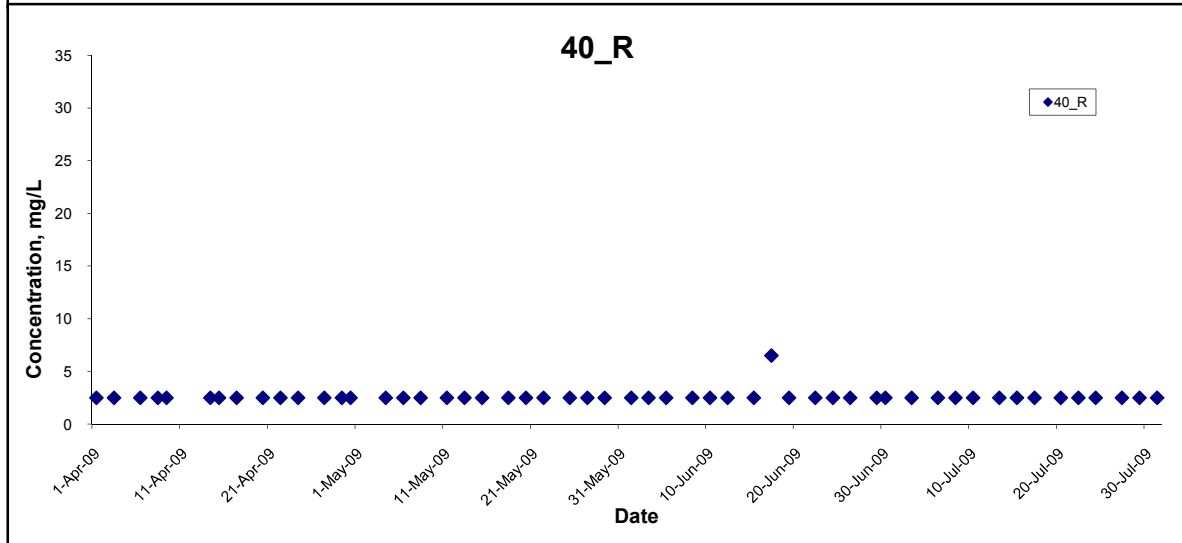
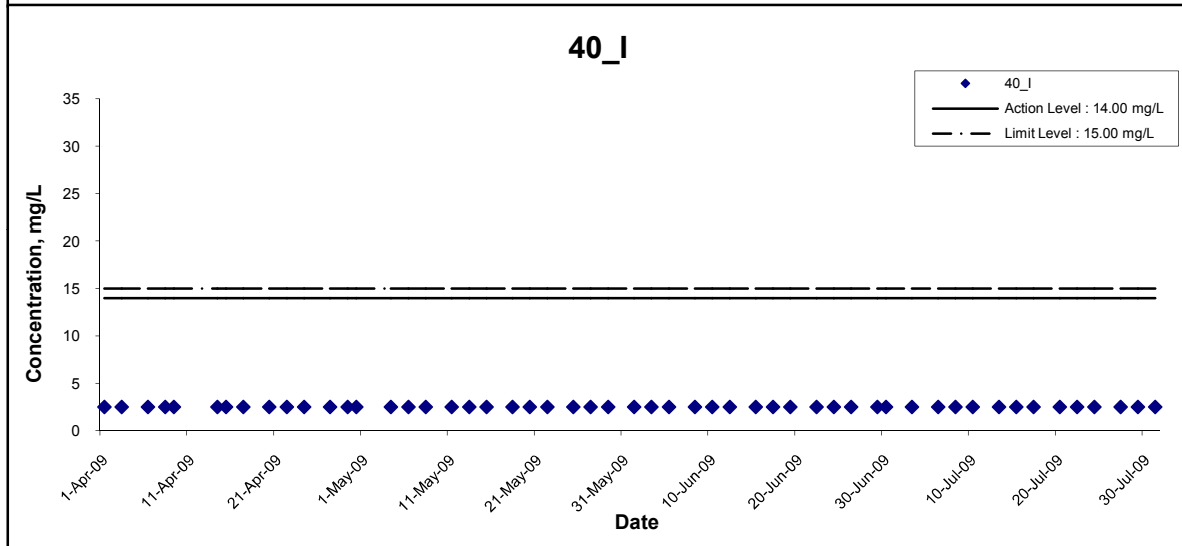
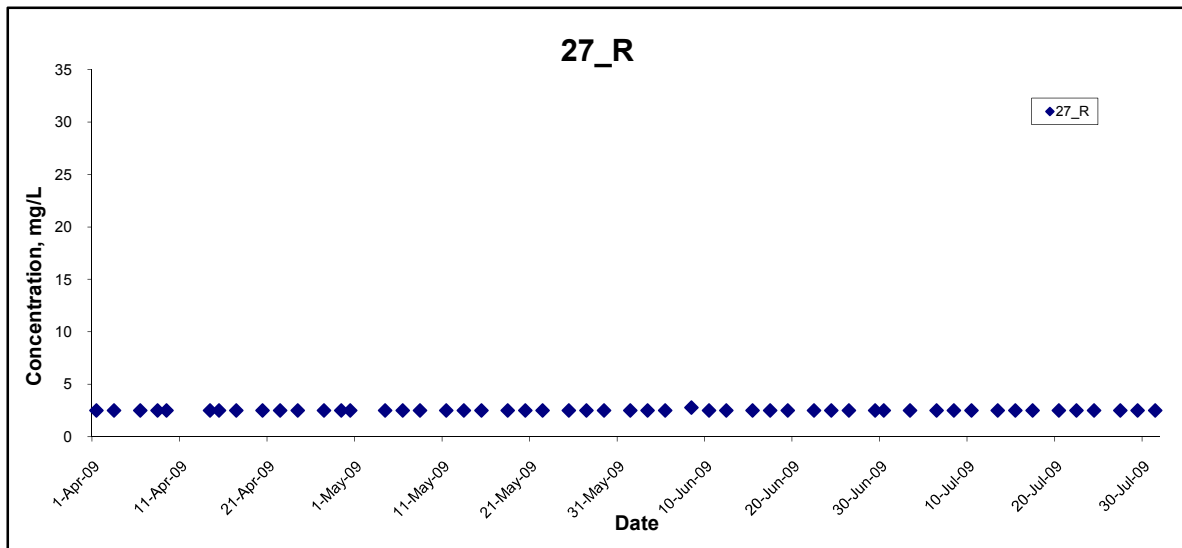
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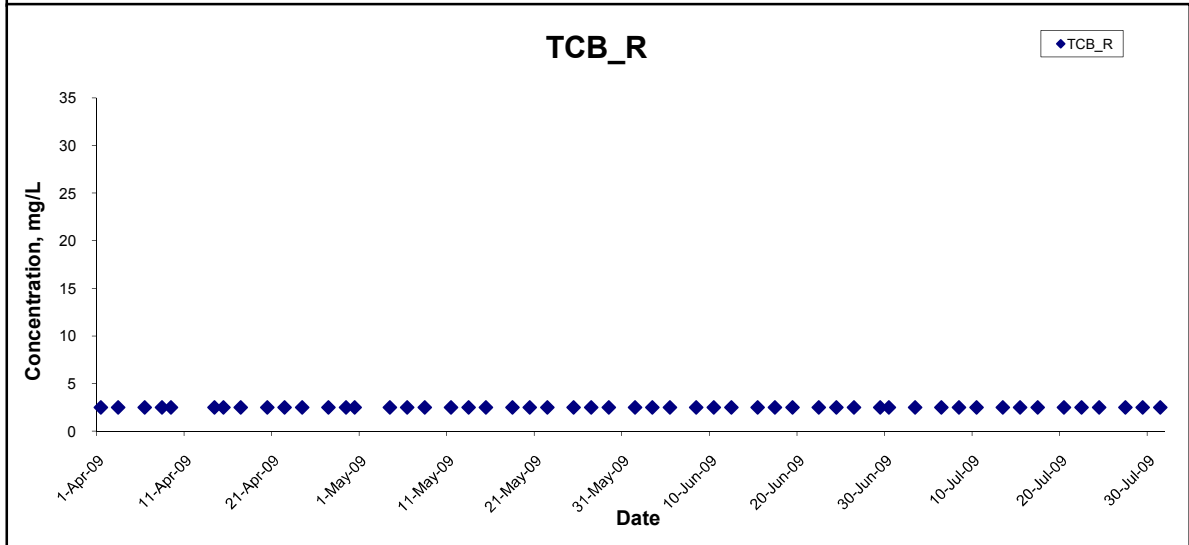
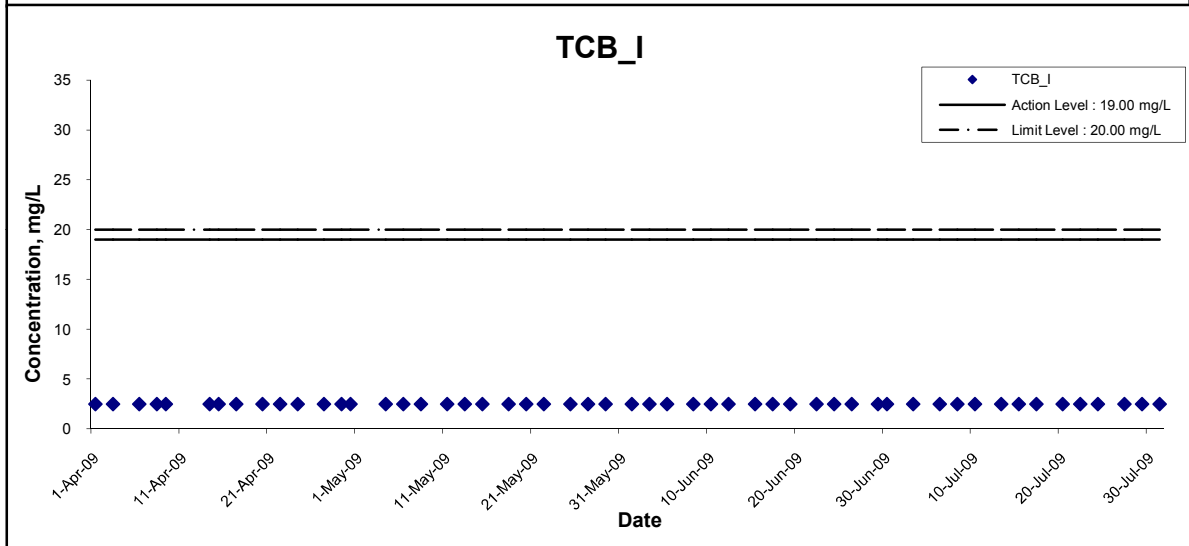
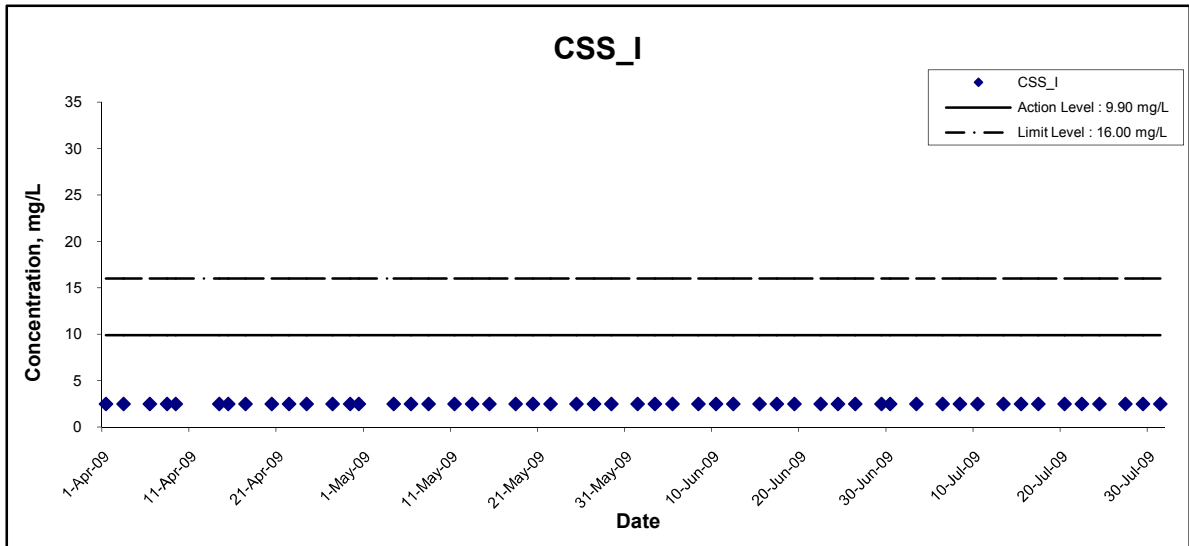
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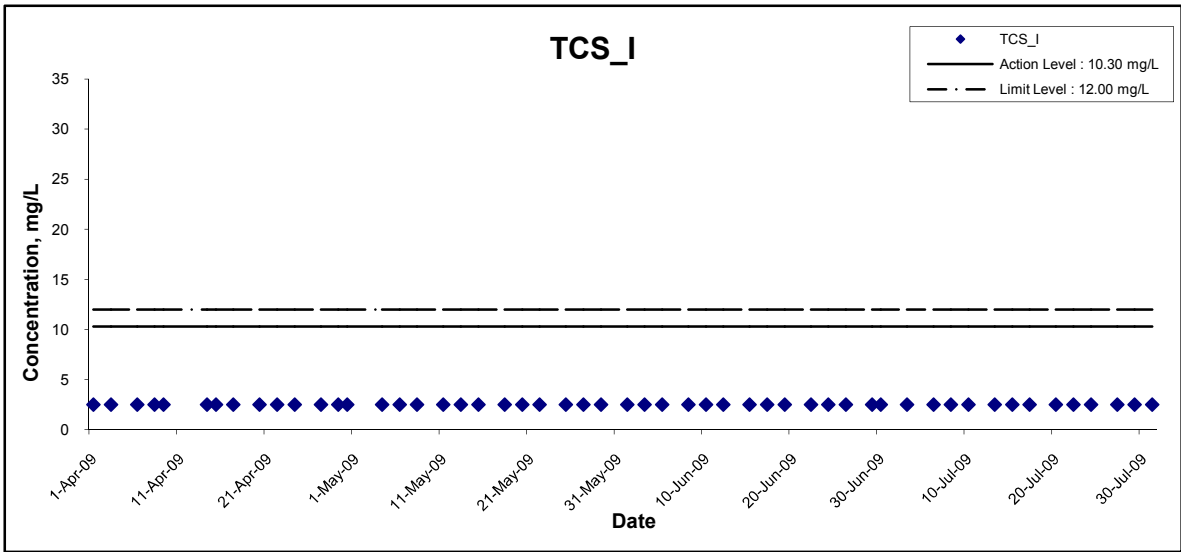
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**APPENDIX G  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

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**Appendix G - Summary of Environmental Mitigation Implementation Schedule**

Types of Impacts	Mitigation Measures	Status
<p align="center"><b>Construction Dust</b></p>	<ul style="list-style-type: none"> <li>• A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones.</li> </ul>	*
	<ul style="list-style-type: none"> <li>• Vehicle washing facilities should be provided at every exit point.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>• Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet.</li> </ul>	*
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Any stockpile of dusty materials should be either covered entirely by 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.</li> </ul>	*
	<ul style="list-style-type: none"> <li>• During cement debagging or concrete batching operation in an area sheltered on top and 3 sides.</li> </ul>	*
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Proper enclosures and water spraying should be implemented for the main dust-generating activities, such as soil nailing or piling works.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Proper plant maintenance should be provided to avoid black smoke emission from plants/equipment.</li> </ul>	^

Types of Impacts	Mitigation Measures	Status
<p><b>Construction Noise</b></p>	<ul style="list-style-type: none"> <li>• Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works.</li> <li>• Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li> <li>• Plant know to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS.</li> <li>• Mobile plant should be sited as far away from NSRs as possible.</li> <li>• Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> <li>• Use quite plant and Working Method</li> <li>• Reduce the number of plant operating in critical areas close NSRs.</li> <li>• Construct temporary and movable noise barriers</li> </ul>	<p>^ ^ ^ ^ ^ ^ ^ N/A</p>
	<p><b>Water Quality</b></p>	<p><i>Construction Runoff and Drainage</i></p>
<ul style="list-style-type: none"> <li>• 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.</li> </ul>		<p>*</p>
<ul style="list-style-type: none"> <li>• Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow.</li> <li>• 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.</li> <li>• 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</li> <li>• 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.</li> <li>• 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.</li> <li>• Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.</li> <li>• 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.</li> </ul>		<p>* ^ * ^ N/A ^ *</p>

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	<p style="text-align: center;">*</p> <p style="text-align: center;">*</p>
	<p><i>Tunnelling Work</i></p> <ul style="list-style-type: none"> <li>• Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials from the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps.</li> <li>• 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.</li> <li>• Spent 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.</li> </ul>	<p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p>
	<p><i>General Construction Activities</i></p>	
	<ul style="list-style-type: none"> <li>• Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts.</li> <li>• 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).</li> </ul>	<p style="text-align: center;">*</p> <p style="text-align: center;">^</p>
	<p><i>Sewage Effluent</i></p> <ul style="list-style-type: none"> <li>• Construction work force sewage discharges from 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.</li> <li>• It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away from 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.</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p>

Types of Impacts	Mitigation Measures	Status
Waste / Chemical	<i>General</i>	
	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^
	<i>Storage, Collection and Transportation of Waste</i>	
	<ul style="list-style-type: none"> <li>• Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Waste shall be removed on a daily basis.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Waste storage area shall be maintained and cleaned on a daily basis.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Obtain necessary waste disposal permits from the appropriate authorities if they are required.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Wastes shall be disposed of at licensed waste disposal facilities.</li> </ul>	^
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^	
<ul style="list-style-type: none"> <li>• Maintain records of the quantities of wastes generated, recycled and disposed.</li> </ul>	^	
<i>Surplus Excavated Materials</i>		
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	*	
<i>Construction and Demolition (C&amp;D) Waste</i>		
<ul style="list-style-type: none"> <li>• Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts.</li> </ul>	^	
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	N/A	
<ul style="list-style-type: none"> <li>• Construction and demolition (C&amp;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.</li> </ul>	*	
<i>Chemical Waste</i>		
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	^	

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> <li>• Containers used for the storage of chemical wastes should:               <ol style="list-style-type: none"> <li>a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;</li> <li>b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD;</li> <li>c. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations.</li> </ol> </li> <li>• The storage area for chemical wastes should:               <ol style="list-style-type: none"> <li>a. Be clearly labelled and used solely for the storage of chemical waste;</li> <li>b. Be enclosed on at least 3 sides;</li> <li>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;</li> <li>d. Have adequate ventilation;</li> <li>e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary);</li> <li>f. Be arranged so that incompatible materials are adequately separated.</li> </ol> </li> <li>• 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).</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">*</p> <p style="text-align: center;">^</p>
	<p><i>General Refuse</i></p> <ul style="list-style-type: none"> <li>• General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&amp;D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&amp;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.</li> <li>• Reusable rather than disposable dishware shall be used if feasible.</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<p><i>Oil and Fuel</i></p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• No storage of oil or fuel should be stored within the Country Park or the water gathering ground.</li> </ul>	<p style="text-align: center;">*</p> <p style="text-align: center;">*</p>
<p><b>Landscape and Visual Impact</b></p>	<ul style="list-style-type: none"> <li>• Refinement of the route alignment and design of associated structures to minimise loss of woodland and other landscape resources;</li> <li>• Minimising working areas as far as possible;</li> <li>• Protection and retention of existing vegetation where possible;</li> <li>• Transplanting of trees where appropriate</li> <li>• Protection and retention of existing natural rocky outcrops, slope profiles, vegetation, landscape features;</li> <li>• Advance planting and visual screening, where possible;</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> <li>• Compensatory planting;</li> <li>• 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</li> <li>• Grassing and woodland planting of soil slopes and disturbed areas</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
<b>Ecology</b>	<ul style="list-style-type: none"> <li>• Construction activities in the stream and other disturbances to it should be avoided.</li> </ul>	<p style="text-align: center;">^</p>

Remarks:

<p>^ Compliance of mitigation measure;</p> <p>N/A Not Applicable;</p> <p>* Recommendation was made during site audit but improved/rectified by the contractor.</p>	<p>X Non-compliance of mitigation measure;</p> <p>• Non-compliance but rectified by the contractor;</p> <p># Non-compliance but rectified/improved by the contractor and awaiting IEC's further comment;</p>
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**APPENDIX H**  
**SITE AUDIT SUMMARY**

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## Appendix H - Summary of Observation and Recommendation Made during Site Inspection

### Summary of Observation and Recommendation Made during Site Inspection in May 2009

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	07/05/09	Silt and sediment was observed discharging to the catchwater from the exposed slope at <b>STR 16 and 17</b> . The Contractor was reminded to cover/hydroseed the exposed slope immediately.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	Silty water was observed discharging to the public drain at <b>Shan Shek Wan</b> . The Contractor was reminded to clear the culvert and properly maintain the sand bag bund to prevent any silty water from discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	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 <b>STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD4-7 and underneath STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed surface at between <b>Stream 20 and 19</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Provide stream diversion at <b>Stream 20</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	Silt and sediment was observed discharging to the catchwater from the exposed slope at <b>STR 16 and 17</b> . The Contractor was reminded to cover/hydroseed the exposed slope immediately.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	Silty water was observed discharging to public road at <b>Stream 20</b> . The Contractor was reminded to provide stream diversion to divert the stream water around the works area.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Properly maintain the sand bag at the culvert at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in the culvert and U-channel along <b>Tung Chung Road (Southern and Northern Sections)</b> especially at <b>STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD4-7 and underneath STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed surface at between <b>Stream 20 and 19</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Clear the stagnant water at the wheel washing bag (abandoned) at <b>Site Office</b> .	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
	21/05/09	Silt and sediment was observed discharging to the catchwater from the exposed slope at <b>STR 17</b> . The Contractor was reminded to cover/hydroseed the exposed slope immediately.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	Oil leakage was observed from the excavator at <b>SD4-7</b> . The Contractor was reminded to clear the waste oil and well-maintained the plant equipments.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	Silty water was observed discharging to the culvert at <b>Stream 20</b> . The Contractor was reminded to provide stream diversion to divert the stream water around the works area. (in-progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Properly maintain the sand bag at the culvert at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in the culvert and U-channel along <b>Tung Chung Road (Southern and Northern Sections)</b> especially at <b>STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD4-7</b> and underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed surface at between <b>Stream 20 and 19 and SD6-12</b> after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Properly clear the stagnant water at the wheel washing bag (abandoned) at <b>Site Office and Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	Silt and sediment was observed discharging to the catchwater from the exposed slope at <b>STR 17</b> . The Contractor was reminded to cover/hydroseed the exposed slope immediately.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	Silty water was observed discharging to the public storm drain at <b>Stream 20</b> . The Contractor was reminded to provide stream diversion to divert the stream water around the works area. (in-progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	Seepage of silty water from the hole of concrete band was observed at <b>SD5-11</b> . The Contractor was reminded to provide mitigation measures to prepare any wastewater from discharging to the downstream.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	Concrete breaking was observed at near <b>Stream 21</b> . The Contractor was reminded to provide mitigation measures to minimize the water quality impact to the stream.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at <b>Shan Shek Wan</b> .	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
	27/05/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in the culvert and U-channel along <b>Tung Chung Road (Southern and Northern Sections)</b> especially at <b>STR17, Shan Shek Wan, CH7000</b> , near <b>Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7</b> and underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at between <b>Stream 20 and 19 and SD6-12</b> after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Clear the stagnant water at the wheel washing bag (abandoned) at <b>Site Office and Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
<i>Air Quality</i>	07/05/09	Dust generation was observed at <b>Shan Shek Wan</b> due to the dry unpaved site area and dust generation activities (rock breaking). The Contractor was reminded to provide water spray more frequently.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	Cement bags (>20 bags) were observed without cover and three sides enclosure with top shelter for de-bagging at near <b>SD5-11</b> . The Contractor was reminded to provide appropriate facilities to prevent dust emission.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	Cement bags were observed without cover and three sides enclosure with top shelter for de-bagging at near <b>SD5-11</b> . The Contractor was reminded to provide appropriate facilities to prevent dust emission.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Provide water-spray at <b>Shan Shek Wan</b> to suppress dust emission.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Provide dust suppression measures at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> .	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
	27/05/09	The Contractor was reminded of the followings: - Provide water spray for the rock breaking at <b>Site Office</b> .	This item was not observed during the site inspection.
<b>Waste / Chemical Management</b>	07/05/09	Empty oil containers were observed underneath <b>STR 7, SD7-14 and Shan Shek Wan</b> . The Contractor was reminded to remove them and dispose as chemical waste.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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.
	07/05/09	The Contractor was reminded of the followings: - Clear C&D waste accumulated at <b>RW16</b> and discarded cement bags at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Clear general refuse at the culvert at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Clear the discarded “protection material for hydroseed” that was hanging on the trees along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Clear C&D waste at near <b>SD7-13, SD6-12, SD5-11 and SD4-7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	Empty oil containers were observed underneath <b>STR 7, near Stream 20, Stream 21 and Shan Shek Wan</b> . 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.
	13/05/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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.
	13/05/09	The Contractor was reminded of the followings: - Clear C&D waste and discarded cement bags at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Clear general refuse at the culvert at underneath <b>STR7</b> .	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
	13/05/09	The Contractor was reminded of the followings: - Clear the discarded "protection material for hydroseed" that was hanging on the trees along <b>Southern Section of Tung Chung Road.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Clear C&D waste at near <b>SD7-13, SD6-12, SD5-11 and SD4-7.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Southern Section of Tung Chung Road.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Properly maintain the excavator at <b>Stream 20</b> to avoid further oil leakage.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	Empty oil containers were observed at underneath <b>STR 7 and near Stream 20.</b> 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.
	21/05/09	Discarded hose were observed at <b>Shan Shek Wan.</b> 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.
	21/05/09	Oil leakage was observed from the excavator at <b>SD4-7.</b> The Contractor was reminded to clear the waste oil and well-maintained the plant equipments.	Rectification/improvement was observed during the follow-up audit session.
	21/05/09	The Contractor was reminded of the followings: - Clear C&D waste and discarded cement bags at underneath <b>STR7.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Clear general refuse at the culvert at underneath <b>STR7.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Clear the discarded "protection material for hydroseed" that was hanging on the trees along <b>Southern Section of Tung Chung Road.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Clear C&D waste at near <b>SD7-13, SD6-12, SD5-11 and SD4-7.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Tung Chung Road especially near the catchwater.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan.</b>	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
	27/05/09	Empty oil containers were observed at underneath <b>STR 7, near Stream 20, 21 and SD4-7</b> . 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.
	27/05/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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.
	27/05/09	The Contractor was reminded of the followings: - Clear C&D waste and discarded cement bags at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Clear general refuse at the culvert at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Clear the discarded “protection material for hydroseed” that was hanging on the trees along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Clear C&D waste at near <b>SD7-13, SD6-12, SD5-11 and SD4-7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Tung Chung Road especially near the catchwater</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
<i>Ecology</i>	07/05/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	07/05/09	The Contractor was reminded of the followings: - Properly maintain the water quality at <b>Stream 21</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	The Contractor was reminded of the followings: - Properly maintain the water quality at <b>Stream 21</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	The Contractor was reminded of the followings: - Properly maintain the water quality at <b>Stream 21</b> .	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
	27/05/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
<b>General</b>	07/05/09	Provide mitigation measures (sand bag bund / cover with tarpaulin) in between the construction areas and paved road to prevent any mud from carrying to the public road. (i.e. <b>Stream 19, Stream 21, SD7-13, SD6-12, SD5-11, SD4-7, Pak Kung Au and Shan Shek Wan</b> ).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	13/05/09	Provide mitigation measures (sand bag bund / cover with tarpaulin) in between the construction areas and paved road to prevent any mud from carrying to the public road. (i.e. <b>Stream 19, Stream 21, SD7-13, SD6-12, SD5-11, SD4-7, Pak Kung Au and Shan Shek Wan</b> ).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	21/05/09	Provide mitigation measures at between the construction area and paved road to prevent any mud from carrying to the public road. (i.e. <b>STR13, Stream 19, Stream 21, SD7-13, SD6-12, SD5-11, SD4-7</b> ).	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	27/05/09	Provide mitigation measures at between the outstanding construction area and paved road to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

**Summary of Observation and Recommendation Made during Site Inspection in June 2009**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Water Quality</b>	04/06/09	Silt and sediment was observed discharging to the catchwater from the exposed slope especially at underneath <b>STR 17, 18</b> . The Contractor was reminded to cover/hydroseed the exposed slope immediately especially during rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	Stream water at <b>Stream 20</b> was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	Seepage of silty water from the hole of concrete bund was observed at <b>SD5-11</b> . The Contractor was reminded to provide mitigation measures to prevent any wastewater from discharging to the downstream.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	Concrete debris was observed at <b>Stream 21</b> due to the concrete breaking before. The Contractor was reminded to clear the debris and ensure the stream water in good condition	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	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.
	04/06/09	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 and underneath STR7.	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
	04/06/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at between Stream 20 and 19, near stream 21, SD4-7, SD6-12 and underneath STR 14 when the works were not undertaken.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	The Contractor was reminded of the followings: - Clear the stagnant water at the wheel washing bay (abandoned) at Site Office, pit area at near SD7-13 and the hole for handrail 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.
	10/06/09	Silt and sediment was observed discharging to the catchwater from the exposed slope due to the soil erosion especially at underneath <b>STR 16, 17 and 18</b> . 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.
	10/06/09	Stream water at <b>Stream 20</b> was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	Seepage of silty water from the hole of concrete bund was observed at <b>SD5-11</b> . The Contractor was reminded to provide mitigation measures to prevent any silty water from discharging to the downstream.	Rectification/improvement was observed during the follow-up audit session.
	10/06/09	Concrete debris was observed at <b>Stream 21</b> due to the concrete breaking before. The Contractor was reminded to clear the debris and ensure the stream water in good condition	Rectification/improvement was observed during the follow-up audit session.
	10/06/09	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.
	10/06/09	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 and underneath STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at between <b>Stream 20 and 19</b> , near <b>stream 21, SD4-7, SD6-12</b> and underneath <b>STR 14</b> after the links.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at <b>Site Office</b> , pit area at near <b>SD7-13</b> and the hole for handrail along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Properly maintain the sand bag bund at near <b>stream 20</b> .	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
	10/06/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at Shan Shek Wan	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	Soil erosion was observed at <b>STR 16, 17, 18</b> and <b>near Stream 35</b> . 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.
	18/06/09	Stream water at Stream 20 was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	Sediment was observed from discharging to the culverts at SD5-11 and SD6-12. The Contractor was reminded to clear the culvert and provide mitigation measures to prevent further sediment from discharging to the culvert.	Rectification/improvement was observed during the follow-up audit session.
	18/06/09	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.
	18/06/09	The Contractor was reminded of the followings: - Clear oil stain at underneath <b>STR7</b> .	Rectification/improvement was observed during the follow-up audit session.
	18/06/09	The Contractor was reminded of the followings: - Clear the construction waste, silt, debris and sediment in the culvert and U-channel along <b>Tung Chung Road (Southern and Northern Sections)</b> especially at <b>STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7</b> and underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at between <b>Stream 20</b> and <b>19</b> , near <b>stream 21, SD4-7, SD6-12</b> and underneath <b>STR 7</b> and <b>STR 14</b> after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at <b>Site Office</b> , pit area at near <b>SD7-13</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Properly maintain the sand bag bund at near Stream 20.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at Shan Shek Wan.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	Soil erosion was observed at <b>STR 16, 17, 18</b> and <b>near Stream 35</b> . 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.
	25/06/09	Stream water at <b>Stream 20</b> was observed not diverted properly around the works. The Contractor was reminded	This item was not rectified during the follow-up audit session.

Parameters	Date	Observations and Recommendations	Follow-up
		to review and re-arrange the stream diversion to prevent any wastewater discharging out.	Follow-up action was needed for the outstanding item.
	25/06/09	Silty water was observed at <b>Stream 23</b> . However, the silty water was due to the broken water pipe from other construction site at <b>old Tung Chung Road</b> . The item was also observed to be rectified during the site inspection.	Rectification/improvement was observed during the follow-up audit session.
	25/06/09	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.
	25/06/09	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 and underneath STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at between Stream 20 and 19, near stream 19, 21, SD4-7, SD5-11, SD6-12 and underneath STR 7 and STR 14 after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at Site Office and Stream 21.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Properly maintain the sand bag bund at near Stream 20. (In-progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at Shan Shek Wan.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent silty water flowing to the culvert at SD4-7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
<b>Air Quality</b>	04/06/09	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.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	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.	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
	10/06/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent dust emission during cement de-bagging works and clean the remaining cement after the works at SD 4-7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	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.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent dust emission during cement de-bagging works and clean the remaining cement after the works at SD 4-7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	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.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent dust emission during cement de-bagging works and clean the remaining cement after the works at SD 4-7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
<b>Waste / Chemical Management</b>	04/06/09	Empty oil containers were observed at underneath STR 7, near Stream 20, 21 and 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.
	04/06/09	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.
	04/06/09	The Contractor was reminded of the followings: - Clear C&D waste and discarded cement bags at underneath STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	The Contractor was reminded of the followings: - Clear general refuse at underneath STR7.	Rectification/improvement was observed during the follow-up audit session.
	04/06/09	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.
	04/06/09	The Contractor was reminded of the followings: - Clear C&D waste at near SD7-13, SD6-12, SD5-11 and SD4-7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	The Contractor was reminded of the followings: - Clear vegetation waste along Tung Chung Road especially near the catchwater.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	04/06/09	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.

Parameters	Date	Observations and Recommendations	Follow-up
	10/06/09	Empty oil containers were observed at underneath <b>STR7, near Stream 20, 21 and SD4-7</b> . 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.
	10/06/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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.
	10/06/09	The Contractor was reminded of the followings: - Clear C&D waste and discarded cement bags at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Clear oil stain at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Clear the discarded “protection material for hydroseed” that was hanging on the trees along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Clear C&D waste at near <b>SD7-13, SD6-12, SD5-11 and SD4-7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Tung Chung Road</b> especially near the catchwater.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	Empty oil containers were observed at underneath <b>STR7, near Stream 20, 21 and SD4-7</b> . 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.
	18/06/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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.
	18/06/09	The Contractor was reminded of the followings: - Clear C&D waste and discarded cement bags at underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Clear oil stain at underneath <b>STR7</b> .	Rectification/improvement was observed during the follow-up audit session.
	18/06/09	The Contractor was reminded of the followings: - Clear the discarded “protection material for hydroseed” that was hanging on the trees along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at <b>SD6-12, SD5-11 and SD4-7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

Parameters	Date	Observations and Recommendations	Follow-up
	18/06/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Tung Chung Road</b> especially near the catchwater and underneath <b>STR 7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	Empty oil containers were observed at underneath STR 7, near Stream 20, 21 and 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.
	25/06/09	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.
	25/06/09	The Contractor was reminded of the followings: - Discarded cement bag's at underneath STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	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.
	25/06/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at <b>SD6-12, SD5-11, SD4-7 and Stream 20</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Tung Chung Road</b> especially near the catchwater and underneath <b>STR 7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Clear the stockpile at underneath <b>STR 7</b> .	Rectification/improvement was observed during the follow-up audit session.
<i>Ecology</i>	04/06/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	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
<b>General</b>	04/06/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	10/06/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	18/06/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at SD6-12, Stream 20 and 21, site office to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	25/06/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at SD6-12, Stream 20 and 21, site office to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

**Summary of Observation and Recommendation Made during Site Inspection in July 2009**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Water Quality</b>	02/07/09	Soil erosion was observed at <b>STR 16, 17, 18</b> and near <b>Stream 35</b> . 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.
	02/07/09	Stream water at <b>Stream 20</b> was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	Silty water was observed at <b>Stream 23</b> . However, the silty water was due to road cleaning at <b>Tung Chung Road</b> . The item was also observed to be rectified during the site inspection.	The situation was observed improved/rectified in audit session 90708.
	02/07/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	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 <b>STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7</b> and underneath <b>STR7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	The Contractor was reminded of the followings: - Properly maintain the sand bag bund at near <b>Stream 20</b> . (In-progress)	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
	02/07/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent silty water flowing to the culvert at <b>SD4-7</b> , during the drilling.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	Soil erosion was observed at <b>STR 17, 18</b> and <b>near Stream 35</b> . 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.
	08/07/09	Stream water at <b>Stream 20</b> was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	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 <b>STR17, Shan Shek Wan, CH7000, near Stream 20, Pak Kung Au, SD7-13, SD6-12, SD5-11, SD4-7, underneath STR7and Stream21</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at between Stream 20 and 19, near stream 19, 21, SD4-7, SD5-11, SD6-12 and STR 14 after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at Site Office and Stream 21, Shan Shek Wan and SD6-12.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Properly maintain the sand bag bund at near <b>Stream 20</b> . (In-progress)	The situation was observed improved/rectified in audit session 90716.
	08/07/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at <b>Shan Shek Wan</b> .(In progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent silty water flowing to the culvert at <b>SD4-7</b> , during the drilling.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	Soil erosion was observed at <b>STR 17, 18</b> and <b>near Stream 35</b> . 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.

Parameters	Date	Observations and Recommendations	Follow-up
	16/07/09	Stream water at <b>Stream 20</b> was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	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.
	16/07/09	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 Stream 21.	Rectification/improvement was observed during the follow-up audit session 90723.
	16/07/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at SD4-7, SD5-11, SD6-12 and STR 14 after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	The Contractor was reminded of the followings: - Clear the standing water at the wheel washing bay (abandoned) at <b>Site Office, SD6-12 and SD5-11.</b>	Rectification/improvement was observed during the follow-up audit session 90723.
	16/07/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at <b>Shan Shek Wan.</b> (In progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent silty water flowing to the culvert at <b>SD4-7.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	Soil erosion was observed at STR 17, 18 and near Stream 35 and 17. 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.
	23/07/09	Stream water at Stream 20 was observed not diverted properly around the works. The Contractor was reminded to review and re-arrange the stream diversion to prevent any wastewater discharging out..	Rectification/improvement was observed during the follow-up audit session 90731.
	23/07/09	The Contractor was reminded of the followings: - Provide sand bag at the culvert at <b>Shan Shek Wan.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	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 Stream 21.	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
	23/07/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at SD4-7, SD5-11, SD6-12 and STR 14 after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	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.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Provide mosquito larvicide for the stagnant water at <b>Shan Shek Wan.</b> (In progress)	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent silty water flowing to the culvert at <b>SD4-7.</b>	Rectification/improvement was observed during the follow-up audit session 90731.
	31/07/09	Soil erosion was observed at <b>STR 17, 18 and near Stream 35 and 17</b> 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.
	31/07/09	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.
	31/07/09	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 Stream 21.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	The Contractor was reminded of the followings: - Properly cover/compact the exposed area at SD4-7, SD5-11 and SD6-12 after the works.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	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.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	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.
<b>Air Quality</b>	02/07/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> especially after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	The Contractor was reminded of the followings: - Provide mitigation measures to prevent dust emission during cement de-bagging works and clean the remaining cement after the works at <b>SD 4-7.</b>	The situation was observed improved/rectified in audit session 90708.

Parameters	Date	Observations and Recommendations	Follow-up
	08/07/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> especially after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> especially after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> especially after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	The Contractor was reminded of the followings: - Properly maintain the slopes which have been hydroseeded along <b>Tung Chung Road (Southern and Northern Section)</b> especially after the rainstorm.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
<b>Waste / Chemical Management</b>	02/07/09	Empty oil containers were observed at underneath <b>STR 7, near Stream 20, 21, SD4-7 and SD5-11</b> . 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.
	02/07/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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.
	02/07/09	The Contractor was reminded of the followings: - Discarded cement bag's at underneath <b>STR7</b> .	The situation was observed improved/rectified in audit session 90708.
	02/07/09	The Contractor was reminded of the followings: - Clear the discarded "protection material for hydroseed" that was hanging on the trees along <b>Southern Section of Tung Chung Road</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at <b>SD6-12, SD5-11, SD4-7 and Stream 20</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	02/07/09	The Contractor was reminded of the followings: - Clear vegetation waste along <b>Tung Chung Road</b> especially near the catchwater and underneath <b>STR 7</b> .	The situation was observed improved/rectified in audit session 90708.
	02/07/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	Empty oil containers were observed at near Stream 20, 21, SD4-7 and SD5-11. 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.
	08/07/09	Discarded hose were observed at <b>Shan Shek Wan</b> . 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
	08/07/09	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.
	08/07/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at <b>SD6-12, SD5-11, SD4-7 and Stream 20.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	Empty oil containers were observed at near Stream 20, 21, SD4-7 and SD5-11. 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.
	16/07/09	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.
	16/07/09	The Contractor was reminded of the followings: - Clear the discarded “protection material for hydroseed” that was hanging on the trees along <b>Southern Section of Tung Chung Road and Stream 20.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at <b>near SD6-12, SD5-11, SD4-7 and Stream 20.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	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.
	16/07/09	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.
	23/07/09	Empty oil containers were observed at near Stream 20, 21 and SD4-7. The Contractor was reminded to dispose them as chemical waste. Clear C&D waste and discarded cement bags at underneath STR7.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	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.
	23/07/09	The Contractor was reminded of the followings: - Clear the discarded “protection material for hydroseed” that was hanging on the trees along <b>Southern Section of Tung Chung Road and Stream 20.</b>	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Clear C&D waste and sediment at <b>near SD6-12, SD5-11, SD4-7 and Stream 20.</b>	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
	23/07/09	The Contractor was reminded of the followings: - Keep clear and sort C&D waste at <b>Shan Shek Wan</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Clear the cement bag at <b>SD4-7</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	Empty oil containers were observed at <b>near Stream 21 and SD4-7</b> . 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.
	31/07/09	Discarded hose were observed at <b>Shan Shek Wan and STR 19</b> . 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.
	31/07/09	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.
	31/07/09	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.
	31/07/09	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.
	31/07/09	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.
<i>Ecology</i>	02/07/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Clear C&D waste and general refuse at <b>Stream 21, 22, 27, 30, 34 and 36-38</b> .	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	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.

Parameters	Date	Observations and Recommendations	Follow-up
<b>General</b>	02/07/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at <b>SD6-12, Stream 20 and 21, site office</b> to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	08/07/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at <b>SD6-12, Stream 20 and 21, site office</b> to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	16/07/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at <b>SD6-12, Stream 20 and 21, site office</b> to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	23/07/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at <b>SD6-12, Stream 20 and 21, site office</b> to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	31/07/09	The Contractor was reminded of the followings: - Provide mitigation measures at between the outstanding construction area and paved road to at <b>SD6-12, Stream 20 and 21, site office</b> to prevent any mud from carrying to the public road.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

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**APPENDIX I  
SUMMARY STATUS OF  
ENVIRONMENTAL LICENCES AND  
PERMITS**

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## Appendix I - Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Details	Status
	From	To		
<b>Environmental Permit (EP)</b>				
EP-170/2003/C	31/7/07	N/A	<u>Construction of</u> (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
<b>Registration of Chemical Waste Producer</b>				
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
<b>Water Discharge License</b>				
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

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**APPENDIX J**  
**WASTE GENERATED QUANTITY**

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## 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 <sup>3</sup> m <sup>3</sup> )					Actual Quantities of C&D Wastes (in 10 <sup>3</sup> Kg)									
	Total Quantity Generated	Broken Concrete <sup>(1)</sup>	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals		Paper/cardboard packaging		Plastic <sup>(2)</sup>		Chemical Waste	Site clearance waste <sup>(3)</sup>	Others, e.g. general refuse (in 10 <sup>3</sup> m <sup>3</sup> )	
						Disposal	Recycle	Disposal	Recycle	Disposal	Recycle	Disposal	Disposal	Disposal	Timber Waste
(a)	(b)	(c)	(d)	(e)											
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
<b>Sub-Total</b>	<b>26.397</b>	<b>0</b>	<b>63.430</b>	<b>7.640</b>	<b>16.922</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>0</b>	<b>519.67</b>	<b>10.2</b>	<b>0</b>
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
<b>Total</b>	<b>48.462</b>	<b>0</b>	<b>129.373</b>	<b>7.640</b>	<b>24.529</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>0</b>	<b>1003.70</b>	<b>16.260</b>	<b>0.540</b>

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 <sup>3</sup> m <sup>3</sup> )					Actual Quantities of C&D Wastes (in 10 <sup>3</sup> Kg)									
	Total Quantity Generated	Broken Concrete <sup>(1)</sup>	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals		Paper/cardboard packaging		Plastic <sup>(2)</sup>		Chemical Waste	Site clearance waste <sup>(3)</sup>	Others, e.g. general refuse (in 10 <sup>3</sup> m <sup>3</sup> )	
	(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
<b>Sub-Total</b>	<b>7.253</b>	<b>0</b>	<b>4.997</b>	<b>0</b>	<b>2.253</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>0</b>	<b>414.15</b>	<b>9.727</b>	<b>0.539</b>
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
<b>Total</b>	<b>21.609</b>	<b>0</b>	<b>18.925</b>	<b>0</b>	<b>8.854</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>0</b>	<b>1030.44</b>	<b>23.773</b>	<b>2.163</b>

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 <sup>3</sup> m <sup>3</sup> )					Actual Quantities of C&D Wastes (in 10 <sup>3</sup> Kg)									
	Total Quantity Generated	Broken Concrete <sup>(1)</sup>	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals		Paper/cardboard packaging		Plastic <sup>(2)</sup>		Chemical Waste	Site clearance waste <sup>(3)</sup>	Others, e.g. general refuse (in 10 <sup>3</sup> m <sup>3</sup> )	
	(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
<b>Sub-Total</b>	<b>19.055</b>	<b>0</b>	<b>10.225</b>	<b>0</b>	<b>8.209</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>0</b>	<b>399.1</b>	<b>10.537</b>	<b>1.255</b>
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															
Sept															
Oct															
Nov															
Dec															
<b>Total</b>	<b>19.632</b>	<b>0</b>	<b>10.789</b>	<b>0</b>	<b>8.327</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>0</b>	<b>419.29</b>	<b>10.672</b>	<b>1.269</b>

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 quantity 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.

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**APPENDIX K  
SUMMARY OF EXCEEDANCES**

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**Appendix K - Summary of Exceedances Recorded in the Reporting Quarter****a) Exceedance Report for 24-hr TSP**

- No Action/Limit Level exceedance was recorded in the reporting quarter.

**b) Exceedance Report for Construction Noise**

- No Action/Limit Level exceedance was recorded in the reporting quarter.

**c) Exceedance Report for Water Quality**

- Exceedances of Suspended Solid (SS) were recorded in the reporting quarter. The exceedances are summarized as below:

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	39	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 quarter.

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**APPENDIX L  
COMPLAINT LOGS**

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**Appendix L - Complaint Log**

<b>Log Ref.</b>	<b>Location</b>	<b>Received Date</b>	<b>Details of Complaint</b>	<b>Investigation/Mitigation Action</b>	<b>Status</b>
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 defensible 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 defensible 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	<p>The complaint, which was referred by Resident Site Staff (RSS) to ET on 3<sup>rd</sup> November 2006, was raised by a resident living Lantau Island on 17<sup>th</sup> October 2006 concerning the Tung Chung Road condition on 16<sup>th</sup> October 2006.</p>	<p>Based on the meteorological data extracted from HKO, the total rainfall between 0:45 and 6:45 hours in Lantau was 196 mm with an average intensity of 32.67 mm/hr on 16<sup>th</sup> October.</p> <p>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.</p> <p>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.</p>	Closed
S72	Lung Tseng Tau Village, Tung Chung	3 Nov 06	<p>The public complaint, which was referred by RSS to ET on 3<sup>rd</sup> November 2006, was received by the Integrated Complaint Centre (ICC) on 26<sup>th</sup> October 2006 regarding dust nuisance generated from the Project.</p>	<p>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.</p> <p>During site inspections in the month, dust mitigation measures have been implemented by the Contractor; and no observation was recorded during the site inspections.</p> <p>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.</p>	Closed



<b>Log Ref.</b>	<b>Location</b>	<b>Received Date</b>	<b>Details of Complaint</b>	<b>Investigation/Mitigation Action</b>	<b>Status</b>
S73	Southern Section of the Project	3 Nov 06	The complaint, which was referred by RSS to ET on 3 <sup>rd</sup> November 2006, was raised by a resident living at Cheung Sha on 24 <sup>th</sup> October 2006 concerning noise generated from rock breaking in Southern Section of the Project.	<p>According to the EM&amp;A records, no exceedance of noise level and no non-compliance were recorded in the month.</p> <p>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.</p> <p>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.</p>	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 21 <sup>st</sup> November 2006. The Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 24 <sup>th</sup> 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 Wujia Joint Venture (the Contractor) received the same public complaint, regarding muddy water discharged to Chueng Sha on 21 <sup>st</sup> November 2006. The Contractor subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on the same day.	The complainant considered that this stream was muddy and discharging muddy water into the sea. As stated in the above paragraph, the investigation revealed that the return period for the rainfall between 13:45 and 15:45 was 41 years. As the complaint was lodged at 14:58 on 21 <sup>st</sup> 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 Wujia Joint Venture (the Contractor) received the same public complaint, regarding muddy water discharged into Pui O Wan on 23 <sup>rd</sup> November 2006. According to the complainant, muddy water was discharged into Pui O Wan from the new Tung Chung Road Southern Section Discharge Point (near proposed round about on South Lantau Road) in the morning of 23 <sup>rd</sup> November 2006. The complainant suspected that the muddy water was being pumped off site through failed filtration systems into the sea as there had been no recent rainfall on that day.	The investigation revealed that the complaint was considered not justifiable since (1) no muddy water was generated due to the construction activities in the vicinity of the discharged point; and (2) no surface runoff as no rainfall was recorded on 23 <sup>rd</sup> 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	<p>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 &amp; Lung Tseng Tau Villages via District Office (Islands) on 29<sup>th</sup> November 2006.</p> <p>The complainants claimed that subject villages were suffering from muddy water supplied from the water main on the past few days before 29<sup>th</sup> November 2006.</p>	<p>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.</p> <p>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.</p>	Closed
S80	Tung Chung Road near Lung Tseng Tau Village	3 Jan 07	<p>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.</p>	<p>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.</p> <p>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.</p> <p>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.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S81	Lung Tseng Tau	20 Dec 06	<p>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 Council, Wong Fuk-kan on 6<sup>th</sup> December 2006.</p> <p>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.</p>	<p>Base on the site inspection records and information collected from the RSS and the Contractor, the complaint was considered due to due to the vehicle movements on Tung Chung Road. In response to the complaint, the RSS has conducted site inspection in the afternoon on 18<sup>th</sup> December 2006. The Contractor had immediately mobilized labors to clear the mud trail on Tung Chung Road between ch.3700-4000 using sweepers. In order to maintain the condition of Tung Chung Road, the Contractor has mobilized more staff to clear the mud deposits on the whole Northern Section of Tung Chung Road on 23<sup>rd</sup> December 2006.</p> <p>The Contractor has provision wheel washing facilities at each site exit/entrance. In order to maintain Tung Chung Road condition, the Contractor has mobilized a water truck solely for wheel washing purpose at the site entrance near RW37 between ch.3700-4000 since 23<sup>rd</sup> 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</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S82	The nullah near the Yat Tung Estate	15 Jan 07	<p>The complaint was lodged by the Legislative Councillor Hon. Albert W.Y. Chan regarding frequent discharge of muddy water from the Tung Chung Road improvement project on 15<sup>th</sup> December 2006. According to Mr. Chan's letter, the complainant was a resident living in Tung Chung.</p> <p>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.</p>	<p>After investigation, the discharge of muddy water was largely due to the deposited silts caused by previous heavy rainstorms in November.</p> <p>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 23<sup>rd</sup> December 2006 to remove the accumulated soil and silt materials washed down by the discharges, of which photographs are provided.</p> <p>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.</p> <p>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.</p>	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.	<p>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 8<sup>th</sup> February 2007.</p> <p>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 2<sup>nd</sup> January to 14<sup>th</sup> February 2007.</p> <p>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:</p> <ul style="list-style-type: none"> <li>● To cover the soil nailing works area with tarpaulin;</li> <li>● To reduce the number of machines for soil nailing;</li> <li>● To orientate the machines for soil nailing works so that the major noise generating part will not directly face the Noise Sensitive Receiver; and</li> <li>● To scatter the plants so that the noise being generated will not be centralized in certain direction.</li> </ul>	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	<p>The complaint was lodged by the Green Lantau Association at on 20 May 2007 regarding failed drainage for the Project on that day.</p>	<p>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.</p> <p>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.</p> <p>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.</p>	<p>The complaint investigation report was commented</p>

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S91	Zone 4 (STR 14)	1 June 07	<p>The complaint was lodged by a resident in Butterfly Crest, Lantau Island regarding the construction noise generated from the Project on Sunday, which is likely to be 27<sup>th</sup> May 2007.</p>	<p>According to the Contractor, construction works were undertaken near STR 14 in the morning of 27<sup>th</sup> 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.</p> <p>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.</p> <p>Base on the information collected, the complaint was considered not justifiable as the equipment used comply with the CNP conditions.</p>	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S93	Western Section of Pui O Bay	22 May 07	<p>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.</p>	<p>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.</p> <p>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.</p> <p>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.</p>	<p>The complaint investigation report was commented</p>

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S100	Stream water behind WSD's weir	27 July 07	<p>The complaint was lodged by a resident living at Lung Tseng Tau area during the meeting between RSS and the representatives from the villages at Lung Tseng Tau area on 17<sup>th</sup> July 2007 regarding turbid water supply from DO main to the village houses at Lung Tseng Tau area.</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>Inspection of the work site at STR02 upstream of the weir indicated no activities affecting the upstream water quality.</p> <p>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.</p> <p>Nevertheless, In order to minimize the water quality impacts, the Contractor has implemented following mitigation measures:</p> <ul style="list-style-type: none"> <li>• To erect sand bag bund in the vicinity of STR02;</li> <li>• To shotcrete the soil surface near Stream 12.</li> </ul>	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	<p>The complaint was lodged by Mr. Ho on 6<sup>th</sup> 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.</p>	<p>No non-compliance or environmental deficiency related to or in the vicinity of the concerned area was identified during these site audits.</p> <p>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.</p> <p>The Contractor has confirmed there was no construction activity in the concerned area on 6<sup>th</sup> 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.</p> <p>The Contractor has implemented following mitigation measures:</p> <ul style="list-style-type: none"> <li>• To desilt temporary drainage channels and sedimentation tank.</li> <li>• To clear the silt and mud in the surface of haul road at RW06 ad RW07.</li> <li>• To cover exposed slope with tarpaulin at RW06 and RW07.</li> </ul> <p>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.</p>	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.	<p>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.</p> <p>The Contractor has implemented following mitigation measures:</p> <ul style="list-style-type: none"> <li>• Cleared the silts on the haul road;</li> <li>• Applied watering on the road by water hose at San Shek Wan;</li> <li>• Increased the number of water browsers; and</li> <li>• Covered the exposed slope and stockpiles with tarpaulin sheets.</li> </ul> <p>By reviewing the air quality monitoring data, there was no exceedance of air quality monitoring results on 8<sup>th</sup> and 14<sup>th</sup> December 2007 and dust mitigation measures have been implemented by the Contractor.</p> <p>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.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S147	Zone 1 Tung Chung Road	14 November 2008	<p>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.</p>	<p>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.</p> <p>Base on the information collected, the complaint was considered not justifiable as San Shek Wan is one of the designated C&amp;D materials sorting areas of the Project and no direct evidence shows there was land-filling activity by this project at the specified location.</p> <p>However, as a follow up of the complaint, the Contractor has implemented mitigation measures as follows:</p> <ul style="list-style-type: none"> <li>• Preliminary segregation of waste was enhanced; and</li> <li>• Water was sprayed on the stockpiles more frequently to further suppress dust generation.</li> <li>• The Contractor was recommended to continue the following mitigation measures :</li> <li>• To provide dust suppression measures to the stockpiles at San Shek Wan, especially during dry season, to minimize dust generation;</li> <li>• To carry out continuous segregation of materials on site;</li> <li>• To avoid accumulation of stockpiles; and</li> <li>• To dispose of non-reusable material to designated outlets as soon as possible.</li> </ul>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S152 and S154	Zone 1 Tung Chung Road	3 <sup>rd</sup> and 8 <sup>th</sup> 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.	<p>Base on the information collected, the complaint was considered not justifiable as San Shek Wan is one of the designated C&amp;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&amp;D materials were conducted in accordance with WMP.</p> <p>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:</p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation; and</li> <li>• good site practice shall be implemented to avoid waste generation and promote waste minimization.</li> </ul>	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	1 <sup>st</sup> June 2009	<p>The complaint was raised by the WSD on 1<sup>st</sup> 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 5<sup>th</sup> June 2009 and initiated the complaint investigation procedures.</p>	<p>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.</p> <p>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.</p> <p>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.</p>	Closed

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

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## 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	<ul style="list-style-type: none"> <li>-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.</li> <li>-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</li> <li>-.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.</li> <li>- 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.</li> </ul>
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

<b>Date of Letter</b>	<b>Warnings/Direction</b>
	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**

<b>Date of Summons</b>	<b>Details of the Summons</b>	<b>Status</b>
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**

<b>Date of Successful Prosecution</b>	<b>Details of the Successful Prosecution</b>	<b>Status</b>
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