

**DRAINAGE SERVICES DEPARTMENT (DSD)
CONTRACT NO. DC/2005/02**

**CONSTRUCTION OF SEWERS, RISING MAINS
& SEWAGE PUMPING STATION AT KAM TIN, NAM SANG
WAI AND AU TAU IN YUEN LONG**



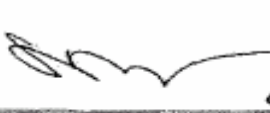


**13th Monthly Construction Phase EM&A Report for
April 2007
(Designated Elements)**

PREPARED FOR

Leader Civil Engineering Corporation Ltd

Quality Index

Date	Reference No.
02 May 2007	TCS/00310/06/600/R0292

Prepared by	Reviewed by	Certified by	Approved by	Verified by
Ben Tam (Project Supervisor)	Ken Wong (Deputy Project ETL)	David Yeung (Project I/TL)	TW Tam (General Manager)	Dr Anne F Kerr (Project IEC)
				

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Executive Summary

- ES.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project requires an Environmental Monitoring and Audit (EM&A) program to be implemented by an Environmental Team (ET) throughout the contract period in compliance with the requirements as stated in the project Environmental Permit (EP-220/2005) and the project's Updated EM&A (Designated Elements) Manual.
- ES.02 This is the 13th Monthly Construction Phase EM&A Report (April 2007, Report No. 13) reporting the environmental impact monitoring and audit (EM&A) conducted from 01 to 30 April 2007. The EM&A in April 2007 covered air quality, noise and waste management.

Breach of Action and Limit (AL) Levels

- ES.03 No Action/Limit Level exceedance was recorded in this reporting month. All the monitoring results were complied with standard.

Complaint Log

- ES.04 No environmental complaint was received in this reporting month.

Notification of Any Summons and Successful Prosecution

- ES.05 There was no environmental summon or prosecution in this reporting month.

Reporting Changes

- ES.06 There are no changes to be reported in this reporting month.

Future Key Issues

- ES.07 Construction activities to be undertaken in May 2007 include excavation at Kam Tin pumping station, excavation at Nam Sang Wai pumping station, sheeting piling, excavation, pipe laying, backfilling, concreting and extract sheet pile at S4, backfilling, concreting, pipe jacking works and extract sheet pile at S5 & S6. Potential environmental impacts arising from the works include air quality, noise and water quality (particularly site runoff). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

1.0 BASIC PROJECT INFORMATION

1.01 Leader Civil Engineering Corporation Ltd (the Contractor) has been awarded the DSD Contract DC/2005/02 Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long (the Project). The Project is part of the Yuen Long and Kam Tin Sewerage and Sewage Disposal (YLKTSSD) Scheme. A site layout map showing the site boundary and the work areas is shown in **Annex A**.

1.02 This 13th Monthly Construction Phase EM&A Report (April 2007, Report No. 13) summarizes the impact monitoring results and audit findings in the reporting month from 01 to 30 April 2007.

Project Organization

1.03 The organization chart and lines of communication with respect to the on-site environmental management and monitoring program are shown in **Annex B**.

Construction Program of the Reporting Period

1.04 A construction program showing the construction work undertaken in this reporting month was shown in **Annex C**. Environmental mitigation measures implemented are shown in **Table 2-1**.

Management Structure

1.05 The management structure of the Project is shown in **Annex B**.

Works Undertaken in the Reporting Period

1.06 The construction works undertaken during the reporting month under the Environmental Permit (EP-220/2005) were shown as follows:

Kam Tin Pumping Station (P1)

- Excavation

Sha Po Pumping Station (P2)

- Sheet piling

Nam Sang Wai Pumping Station (P3)

- Excavation

Nam Sang Wai Road (S4)

- Sheet piling
- Excavation
- Pipe laying
- Backfilling
- Concreting
- Extract sheet pile

Pok Wai South Road (S5 and S6)

- Backfilling
- Concreting
- Pipe jacking
- Extract sheet pile

2.0 ENVIRONMENTAL STATUS

Work Undertaken in the Reporting Period with Illustrations

2.01 A summary of the work undertaken in this reporting month with illustrations and environmental mitigation measures implemented is shown in **Table 2-1**.

Table 2-1 Work Undertaken in the Reporting Period with Illustrations of Mitigation Measures

Location	Description of Construction Activities	Environmental Mitigation Measures	EM&A Ref.
P1 (Kam Tin Pumping Station)	<ul style="list-style-type: none"> • Sheet piling • Footing construction 	<ul style="list-style-type: none"> • Erect 2.4m high noise barrier hoarding around the works area at P1, P2 and P3 • Remove dust and spray water at the construction access • Cover the stockpiles of dusty material properly • Spray water to all dusty materials immediately before loading and unloading • Wash the wheels of vehicles before leaving the site 	A1 & F6 A2 A3 A4 A5
P2 (Sha Po Pumping Station)	<ul style="list-style-type: none"> • Hoarding erection 		
P3 (Nam Sang Wai Pumping Station)	<ul style="list-style-type: none"> • Pipe jacking 	<ul style="list-style-type: none"> • Install and use power-operated cover at the dump trucks • Spray water at the pavement breaking locations • Spray the working area of excavation frequently • Maximize the use of quiet PME on site 	A6 A7 A8 B1, B2 & F5
S4 (Nam Sang Wai Road)	<ul style="list-style-type: none"> • Drilling and grouting 	<ul style="list-style-type: none"> • Apply and obtain appropriate waste disposal licenses • Handle, store and dispose of chemical wastes as per relevant regulations • Implement trip-ticket system for waste disposal • Restrict open fires and provide fire fighting equipment in the works area 	D1 D2, D3 & D4 D5 F9
S5 & S6 (Pok Wai South Road)	<ul style="list-style-type: none"> • Pipe jacking 	<ul style="list-style-type: none"> • Perform weekly inspection with ET and monthly audit with IEC • Conduct noise and dust monitoring as per EM&A manual during construction • Provide sedimentation tanks for treating site discharge. • Recycle wheel washing water and provide sedimentation tanks for treating site discharge. 	H1 I1 & I2 - -

2.02 Photographic records showing the implemented 2.4m high noise barrier at the pumping station (S3) are shown in **Annex D**.

Project Drawings

2.03 Drawings showing the work areas under EP-220/2005 and the locations of the designated monitoring stations are presented in **Annex E**.

- 2.04 There are four designated air quality (AM1, AM5, AM6 & AM7) and four noise monitoring stations (AM1, AM5, AM6 & AM7) under the project EP.

Station ID	Nature of Premise	Site Work Description	Station Coordinates
AM1	Site Boundary in NSW	Sheet piling and trench excavation.	835829 N 822910 E
AM5	Site Boundary in FKH		835121 N 823515 E
AM6	Site Boundary in KT		833308 N 823987 E
AM7	Site Boundary in NSW		836171 N 822586 E
NM3	Village House in NSW		835808 N 822817 E
NM4	Village House in NSW		835282 N 822811 E
NM6	Village House in KT		833288 N 823999 E
NM7	Village House in FKH		835121 N 823495 E

- 2.05 In this reporting month, the impact monitoring was carried out at four designated air and four noise monitoring stations in according to the monitoring schedule.

3.0 SUMMARY OF EM&A REQUIREMENTS

Monitoring Parameters

- 3.01 Environmental monitoring and audit requirements are set out in the Updated EM&A manual. Air quality and construction noise have been identified to be the key monitoring parameters during the impact phase for the construction of the project.
- 3.02 A summary of the impact EM&A requirements for air quality and construction noise as per the project Updated EM&A Manual are shown in **Table 3-1**.

Table 3-1 Summary of EM&A Requirements

Environmental Aspect	Monitoring Parameters
Air Quality	24-Hr TSP
Construction Noise	Leq 30min during day time 07:00 to 19:00
	Supplementary L10 and L90 for reference.

Environmental Quality Performance Limits

- 3.03 A summary of the Action/Limit (A/L) Levels for air quality and construction noise is shown in **Tables 3-2** and **3-3**.

Table 3-2 Action and Limit Levels for Air Quality Monitoring

Monitoring Location	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-Hr TSP	24-Hr TSP	1-Hr TSP	24-Hr TSP
AM1	391	184	500	260
AM5	353	237	500	260
AM6	329	183	500	260
AM7	383	204	500	260

Table 3-3 Action and Limit Levels for Construction Noise

Parameter	Action Level in dB(A)	Limit Level in dB(A)
0700-1900 hrs on normal weekdays	When one or more documented complaints are received	> 75 dB(A)

Event and Action Plans

- 3.04 An Event Action Plan for air quality and construction noise has been implemented for this project. Details of the Event Action Plan are presented in **Annex F**.

Environmental Mitigation Measures

- 3.05 The project EIA report has recommended environmental mitigation measures to minimize potential environmental impacts arising from the construction of the project. A full list of the mitigation measures is detailed in **Annex G**.

Environmental Requirements in Contract Documents

- 3.06 The environmental requirements in the contract documents generally refer to the compliance of the requirements as stipulated in the project EP and the updated EM&A Manual.

4.0 IMPLEMENTATION STATUS

- 4.01 The implementation status of environmental protection and pollution control/mitigation measures as recommended in the project EIA report is summarized in **Table 2-1** and the implementation schedule as shown in **Annex G**.
- 4.02 A summary status of the permits, licences, and/or notifications on environmental protection for this Project in this reporting period is presented in **Table 4-1**.

Table 4-1 Status of Environmental Licenses and Permits

Item	Item Description	Permit Status
1	Environmental Permit No.: EP-220/2005	Issued in June 2005
2	Air Pollution Control (Construction Dust)	Notified EPD on 24 Dec 2005
3	Chemical Waste Producer Registration (No. 5213-528-L2544-08)	Registration on 27 Jan 2006
4	Water Pollution Control (Discharge License No. 1U434/1)	Issued on 08 May 2006
5	Account for Disposal of Construction Waste No. 5004959	Registration on 27 Dec 2005
6	Construction Noise Permit (CNP No. PP-RN0036-06)	Valid (8 Dec 2006 to 07 Apr 2007)
7	Construction Noise Permit (CNP No. PP-RN0001-07)	Valid (7 Mar 2007 to 06 Dec 2007)
8	Construction Noise Permit (CNP No. GW-RN0591-06)	Valid (8 Dec 2006 to 07 Apr 2007)
9	Construction Noise Permit (CNP No. GW-RN0083-07)	Valid (8 Mar 2007 to 07 Sep 2007)
10	Construction Noise Permit (CNP No. GW-RN0118-07)	Valid (28 Mar 2007 to 27 Sep 2007)

5.0 MONITORING RESULTS

MONITORING METHODOLOGY OF AIR QUALITY MONITORING

- 5.01 The 24-Hr TSP monitoring was carried out by a High volume sampler (HVS) in compliance with the updated EM&A Manual. The HVS employed complied with the PS specifications including.
- Power supply of 220v/50 hz for 24-hour continuous operation;
 - 0.6-1.7 m³/min (20-60 SCFM) adjustable flow rate;
 - A 7-day mechanical timer for 24-hour operation;
 - An elapsed time indicator with ± 2 minutes accuracy for 24-Hr operation;
 - Minimum exposed area of 63 in²;
 - Flow control accuracy of $\pm 2.5\%$ deviation over 24-Hr operation;
 - An anodized aluminum shelter to protect the filter and sampler;
 - A motor speed-voltage control to control mass flow rate with accuracy of $\pm 2.5\%$ deviation over 24-hr sampling period;
 - Provision of a flow recorder for continuous monitoring;
 - Provision of a peaked roof inlet;
 - Incorporation with a manometer; and
 - An 8"x10" stainless steel filter holder to hold, seal and easy to change the filter paper.
- 5.02 The filter papers used in 24-Hr TSP monitoring were of size 8"x10" and provided by a local HOKLAS-accredited laboratory, ALS Techichem Pty (HK) Limited (HOKLAS No. 66). The filters papers after measurements were returned to the laboratory for the required treatment and analysis. In house QA/QC procedures for all monitoring practices to ensure the validity of monitoring data. Blank filters samples were collected and delivered to the HOKLAS-accredited laboratory for QA/QC check.
- 5.03 The meteorological information during the reporting period was obtained from Lau Fau Shan Station of the Hong Kong Observatory (HKO).

MONITORING METHODOLOGY OF CONSTRUCTION NOISE MONITORING

- 5.04 Noise measurements were taken in terms of the A-weighted equivalent sound pressure level (Leq) measured in decibels (dB). Supplementary statistical results (L₁₀ and L₉₀) were also obtained for reference.
- 5.05 Hand-held sound level meters (B&K Model 2238) and associated acoustical calibrators in compliance with the International Electrotechnical Commission (IEC) Publication 651:1979 (Type 1) and 804:1985 (Type 1) specification were used for taking the baseline noise measurements.
- 5.06 Windshield was fitted in all measurements. All noise measurements were made with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq).
- 5.07 No noise measurement was made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s.

LABORATORY AND MONITORING EQUIPMENT USED

- 5.08 A local HOKLAS-accredited laboratory, ALS Technichem (HK) Pty Ltd (HOKLAS No. 66), is responsible for the analytical testing of the 24-Hr TSP filter papers.
- 5.09 The monitoring equipment used in the impact EM&A program is presented in **Table 5-1**:

Table 5-1 Monitoring Equipment Used in Impact EM&A Program

Parameters	Monitoring Equipment	
Air Quality	24-Hr TSP	Greasby Anderson GMWS2310 High Volume Sampler
Noise	Leq30min	B&K Type 2238
	On-site Calibration	B&K Type 4231

EQUIPMENT CALIBRATION

- 5.10 Initial calibration of the HVS was performed upon installation and thereafter at a six month intervals in accordance with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A). The calibration data are properly documented and the records are maintained by ET for future reference.
- 5.11 The sound level meters were calibrated using an acoustic calibrator prior to and after measurements. The meters are regularly calibrated in accordance with the manufacturer's instructions. Prior to and following each noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were considered valid only if the calibration levels before and after the noise measurement agree to within 1.0 dB.
- 5.12 The renew calibration certificates of the monitoring equipment used during the impact monitoring program in this month are attached in **Annex H**.

PARAMETERS MONITORED

- 5.13 The environmental parameters monitoring in this reporting period were compliance with the monitoring requirements as in **Table 3-1**.

MONITORING LOCATIONS

- 5.14 There are four designated air quality and four noise monitoring stations under the project EP. For this reporting month, monitoring was carried out at four designated air (AM1, AM5, AM6 & AM7) and four noise (NM3, NM4, NM6 & NM7) monitoring stations. The locations of the designated monitoring stations are shown in **Table 5-2** and geographically in **Annex E**.

Table 5-2 Location of Air Quality and Construction Noise Monitoring Stations

Air Quality (4 Stations)	
AM1	Worksite boundary facing scattered house in Nam Sang Wai
AM5	Worksite boundary facing Fung Kat Heung
AM6	Worksite boundary facing scattered near Route 3
AM7	Worksite boundary facing scattered house in Nam Sang Wai
Construction Noise (4 Stations)	
NM3	Village House in Nam Sang Wai
NM4	Village House in Nam Sang Wai
NM6	Scattered House near Route 3
NM7	Fung Kat Heung

MONITORING FREQUENCY AND PERIOD

- 5.15 The impact 24-Hr TSP monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 20 monitoring events were carried out in this reporting month.
- 5.16 The impact noise monitoring was conducted at the designated stations once every 6 days in compliance with the updated EM&A manual. A total of 16 monitoring events were carried out in this reporting month.

MONITORING RESULTS WITH DATE AND TIME

- 5.17 The air quality monitoring data for this reporting period were summarized in **Table 5-3**.

Table 5-3 Summary of Air Quality Monitoring Results

Date	24-Hr TSP ($\mu\text{g}/\text{m}^3$)			
	AM1	AM5	AM6	AM7
3-Apr-07	60	100	44	35
11-Apr-07	71	103	60	65
17-Apr-07	51	112	55	53
23-Apr-07	26	33	32	32
28-Apr-07	58	79	79	55
Average (Range)	53 (26-71)	85 (33-112)	54 (32-79)	48 (32-65)

All 24-Hr TSP monitoring were preset to start at 00:00 on each monitoring date.

* Action/Limit Level exceedances were recorded.

- 5.18 No Action/Limit Level exceedance was recorded in this reporting month.

5.19 The impact noise monitoring results are summarized in **Tables 5-4 to 5-7**.

Table 5-4 Summary of Noise Monitoring Results at NM3

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
04-Apr-07	13:00	49.2	48.7	53.8	56.9	54.3	53.4	53.6	56.6
12-Apr-07	13:01	53.2	52.8	52.8	54.2	54.0	53.3	53.4	56.4
19-Apr-07	13:00	51.4	52.5	52.8	52.8	53.6	54.0	52.9	55.9
25-Apr-07	13:42	54.2	55.9	63.1	61.7	53.5	58.2	59.3	62.3
Limit Level									75

* A façade correction of +3 dB(A) has been added according to acoustical principles and EPD guidelines.

Table 5-5 Summary of Noise Monitoring Results at NM4

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
4-Apr-07	10:44	53.4	52.9	56.3	54.8	53.2	51.7	54.0	57.0
12-Apr-07	10:43	58.8	57.7	57.6	58.4	58.6	59.3	58.4	61.4
19-Apr-07	10:22	53.5	55.2	53.9	54.3	52.0	59.4	55.4	58.4
25-Apr-07	10:33	52.1	53.4	53.4	48.3	53.9	58.5	54.3	57.3
Limit Level									75

* A façade correction of +3 dB(A) has been added according to acoustical principles and EPD guidelines.

Table 5-6 Summary of Noise Monitoring Results at NM6

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
4-Apr-07	13:46	64.0	72.3	62.7	56.6	55.9	54.8	65.7	No Correction Required
12-Apr-07	14:55	64.4	65.4	65.6	64.5	64.7	64.4	64.9	
19-Apr-07	15:10	58.9	62.0	57.9	58.9	56.4	57.5	59.0	
25-Apr-07	10:42	66.5	64.4	60.3	57.3	60.8	58.7	62.5	
Limit Level									75

* Noise monitoring was undertaken at the façade, correction was not necessary.

Table 5-7 Summary of Noise Monitoring Results at NM7

Date	Start Time	1st Leq5	2nd Leq5	3rd Leq5	4th Leq5	5th Leq5	6th Leq5	Leq30	Corrected * Leq30
4-Apr-07	13:49	47.3	47.7	51.0	54.7	47.6	46.6	50.3	No Correction Required
12-Apr-07	13:39	49.1	55.7	55.6	49.5	62.9	55.4	57.3	
19-Apr-07	13:37	57.5	50.3	51.2	50.0	51.0	53.8	53.2	
25-Apr-07	14:27	56.3	54.3	54.7	55.6	52.2	52.4	54.5	
Limit Level									75

* Noise monitoring was undertaken at the façade, correction was not necessary.

5.20 The monitoring schedule for the next reporting month is shown in **Table 5-8**.

Table 5-8 Monitoring Schedule for the Next Reporting Month

Date		Air Quality	Noise Leq 30min
1-May-07	Tue		
2-May-07	Wed		
3-May-07	Thu		
4-May-07	Fri		
5-May-07	Sat		
6-May-07	Sun		
7-May-07	Mon		
8-May-07	Tue		
9-May-07	Wed		
10-May-07	Thu		
11-May-07	Fri		
12-May-07	Sat		
13-May-07	Sun		
14-May-07	Mon		
15-May-07	Tue		
16-May-07	Wed		
17-May-07	Thu		
18-May-07	Fri		
19-May-07	Sat		
20-May-07	Sun		
21-May-07	Mon		
22-May-07	Tue		
23-May-07	Wed		
24-May-07	Thu		
25-May-07	Fri		
26-May-07	Sat		
27-May-07	Sun		
28-May-07	Mon		
29-May-07	Tue		
30-May-07	Wed		

	Monitoring Day
	Sunday or Public Holiday

WEATHER CONDITIONS DURING THE MONITORING PERIOD

5.21 The meteorological data on the monitoring dates are summarized in **Annex I**.

GRAPHICAL PLOTS OF TRENDS OF MONITORED PARAMETERS

5.22 The graphical plots of air quality and construction noise monitoring data are presented in **Annex J**.

MAJOR ACTIVITY CARRIED OUT DURING THE MONITORING PERIOD

5.23 There were construction activities of sheet piling and trench excavation undertaken during the monitoring period.

WEATHER CONDITIONS THAT AUGUST AFFECT THE MONITORING RESULTS

5.24 The weather conditions at the time of monitoring were considered acceptable for monitoring activities and did not have significant impact on the monitoring results obtained.

OTHER FACTORS INFLUENCING THE MONITORING RESULTS

- 5.25 There were no other noticeable external factors generally affecting the monitoring results in this reporting month.

QA/QC RESULTS AND DETECTION LIMITS

- 5.26 Not applicable.

6.0 REPORT ON NON-COMPLIANCE (NC), COMPLAINTS, NOTIFICATIONS OF SUMMONS (NoS) AND SUCCESSFUL PROSECUTIONS

RECORD OF NON-COMPLIANCE OF ACTION AND LIMIT LEVELS

- 6.01 There was no Action or Limit Level exceedance in this reporting month.

RECORD OF ENVIRONMENTAL COMPLAINTS RECEIVED

- 6.02 There was no environmental complaint received in this reporting month.

RECORD OF NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTION

- 6.03 There was no notification of summon or prosecution received in this reporting month.

REVIEW OF REASONS FOR AND IMPLICATIONS OF NC, COMPLAINTS AND NOS

- 6.04 No NC, complaints or NoS received in this reporting month.

DESCRIPTION OF FOLLOW-UP ACTIONS TAKEN

- 6.05 No NC, complaints or NoS received in this reporting month.

7.0 OTHERS

FUTURE KEY ISSUES

- 7.01 Construction activities to be undertaken in May 2007 include excavation at Kam Tin pumping station, excavation at Nam Sang Wai pumping station, sheeting piling, excavation, pipe laying, backfilling, concreting and extract sheet pile at S4, backfilling, concreting, pipe jacking works and extract sheet pile at S5 & S6. Potential environmental impacts arising from the works include air quality, noise and water quality (particularly site runoff). Environmental mitigation measures will be properly implemented and maintained as per the Mitigation Implementation Schedule to ensure site environmental performance is acceptable.

SOLID AND LIQUID WASTE MANAGEMENT STATUS

- 7.02 The quantities of waste for disposal or reuse in this reporting month are summarized in **Tables 7-1** and **7-2**.

Table 7-1 Summary of Quantities of Waste for Disposal

Type of Waste	Quantity	Disposal Location
C&D Materials (Inert) (tons) – Disposed	5,968	Tuen Mun 38 Fill Bank
C&D Materials (Inert) (tons) – Reused	110	DSD Contract DC/2005/0
C&D Materials (Non-Inert) (tons)	-	NA
Chemical Waste (Litres)	60	NA
General Refuse (tons)	3	Refuse Collector

Table 7-2 Summary of Quantities of Waste for Reuse/Recycling

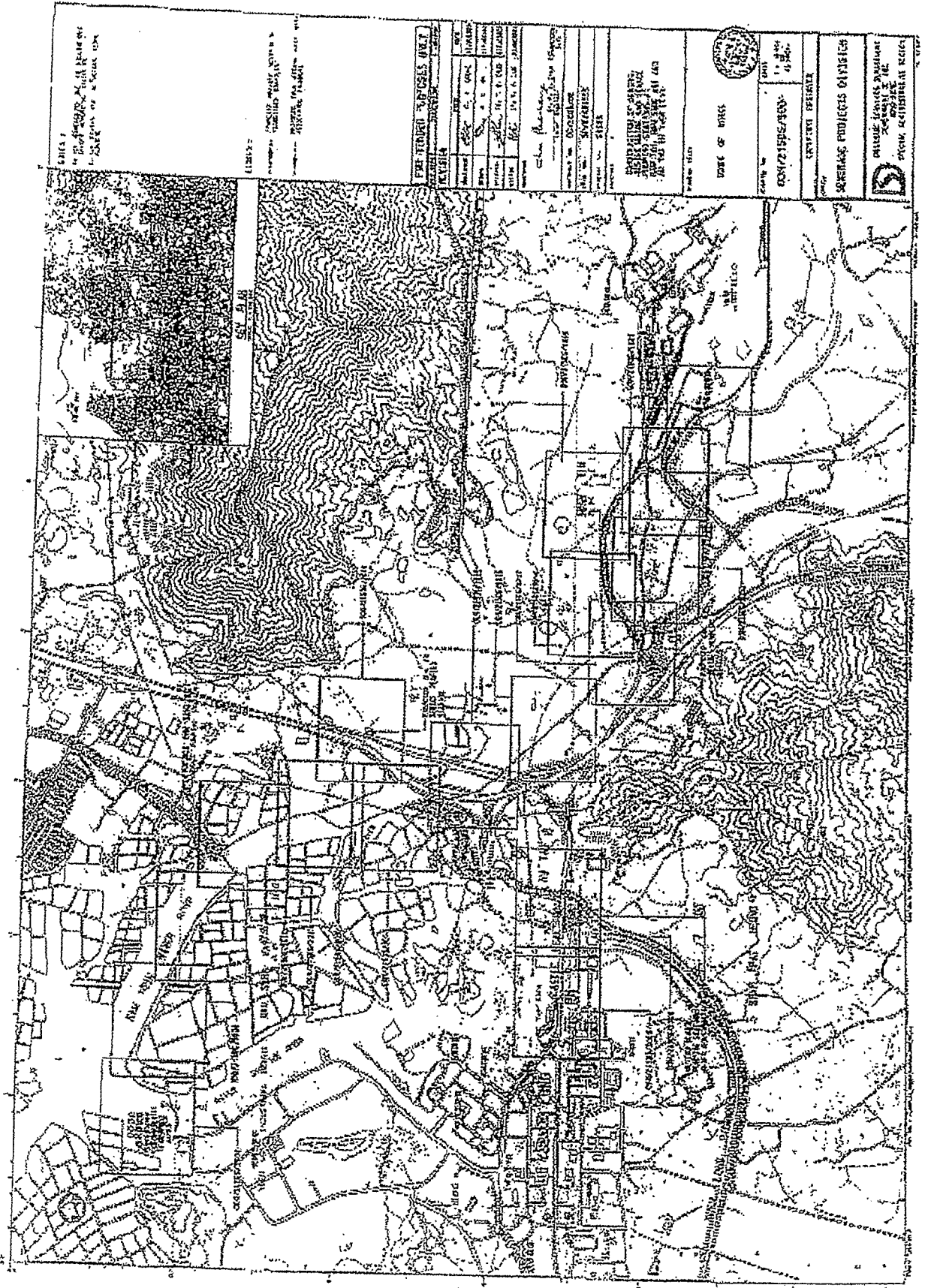
Type of Waste	Quantity	Disposal Location
Metals for Recycling (kg)	0	NA
Paper for Recycling (kg)	0	NA
Plastics for Recycling (kg)	0	NA

- 7.03 There was no site effluent discharged but an estimated volume of less than 50m³ of surface runoff was discharged in the reporting month.

SUBMISSION OF PROFORMA

- 7.04 Representatives of the Engineer, the Contractor and ET carried out regular weekly joint site inspection on 03, 17 and 26 April 2007 to evaluate the site environmental performance. The IEC monthly joint site inspection with RE, Contractor and ET for April 2007 was held on 13 April 2007. No non-compliance was noted and seven observations were recorded in weekly and monthly site inspection.
- 7.05 Proforma of the weekly ET site inspection activities are presented in **Annex K**.

Annex A
Project Site Layout



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 TOPOGRAPHIC MAPS OF THE PHILIPPINES
 SERIES 1

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 3. TOPOGRAPHIC MAPS OF THE PHILIPPINES

THE PHILIPPINE GOVERNMENT

OFFICE OF THE CHIEF OF DEFENSE PLANNING AND DEVELOPMENT

GENERAL INVESTIGATION DIVISION

RESEARCH AND ANALYSIS SECTION

PROJECT NO. 100-100-100-100

DATE OF REPORT: 1960

BY: [Name]

FOR: [Name]

PHILIPPINE GOVERNMENT
 OFFICE OF THE CHIEF OF DEFENSE
 PLANNING AND DEVELOPMENT
 GENERAL INVESTIGATION DIVISION
 RESEARCH AND ANALYSIS SECTION

DATE OF ISSUE: 1960

SCALE: 1:50,000

PROJECT NO. 100-100-100-100

BY: [Name]

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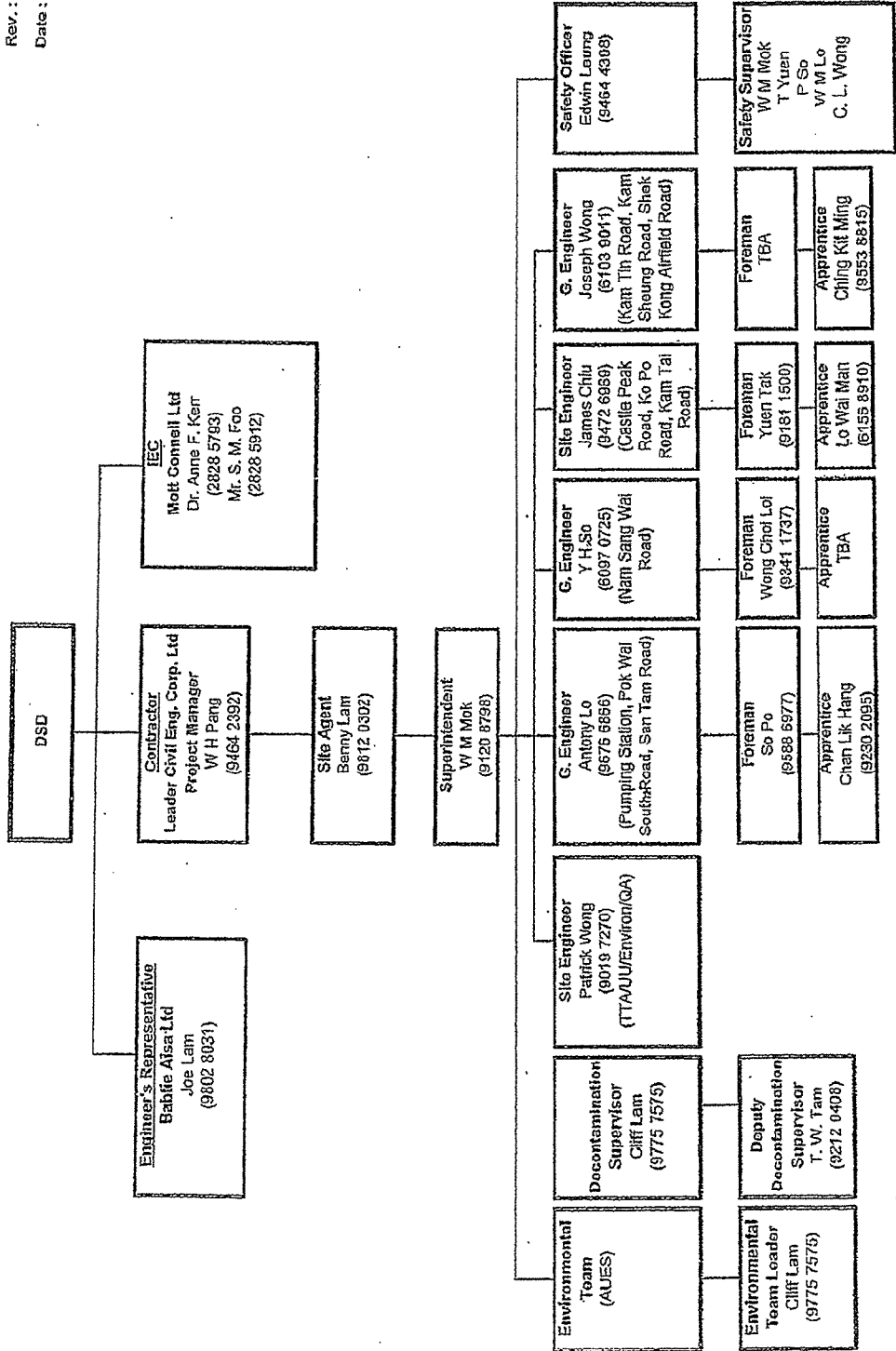
PHILIPPINE GOVERNMENT
 OFFICE OF THE CHIEF OF DEFENSE
 PLANNING AND DEVELOPMENT
 GENERAL INVESTIGATION DIVISION
 RESEARCH AND ANALYSIS SECTION

Annex B

Project Organization and Management Structure

DSD Contract No. DC/2005/02
Construction of Sewers, Rising Mains and Sewage Pumping Station at Kam Tin,
Nam Sang Wai and Au Tau in Yuen Long
Project Environmental Organization Chart

Rev.: 01
 Date: 12-May-06



Annex C

Construction Program

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish
SUN1500	Approve Temp Work - Kam Tin P/Station	6d	-75d	95	10NOV06 A	30APR07	10NOV06 A	24JAN07
SUN1700	Approve Temp Work - Sha Po P/Station	6d	53d	95	11JAN07 A	30APR07	11JAN07 A	04JUL07
Method Statement Submission								
SUO1100	Approve Temp Work - Kam Tin P/Station	6d	-75d	95	10NOV06 A	30APR07	10NOV06 A	24JAN07
SUO1200	Prepare/Submit Temp Work - Sha Po P/Station	30d		100	10NOV06 A	20APR07 A	10NOV06 A	20APR07 A
SUO1300	Approve Temp Work - Sha Po P/Station	6d	53d	95	21APR07 A	30APR07	21APR07 A	04JUL07
Preliminaries								
PR2900	Deliver Ductile Iron Pipe	800d	54d	42	29APR06 A	21NOV08	29APR06 A	29JAN09
PR3100	Deliver Precast Concrete Pipe	800d	70d	44	24APR06 A	03NOV08	24APR06 A	29JAN09
PR3300	Deliver Vitrified Clay Pipe	800d	40d	40	10APR06 A	09DEC08	10APR06 A	29JAN09
PR3400	Structural Monitoring by ISE	835d	34d	42	06APR06 A	16DEC08	06APR06 A	29JAN09
PR3500	Environmental monitoring by ET	814d	72d	45	06APR06 A	01NOV08	06APR06 A	29JAN09
Section A - Kam Tin Sewage Pumping Station								
Portion A								
Earthworks								
SIAG1100	Excavate to Level of 1st Layer of Waling	4d	-75d	10	24APR07 A	05MAY07	24APR07 A	29JAN07
SIAG1200	Install 1st Layer Waling & Strut	4d	-75d	10	26APR07 A	09MAY07	26APR07 A	01FEB07
SIAG1300	Excavate to Level of 2nd Layer of Waling	10d	-75d	0	09MAY07	21MAY07	02FEB07	13FEB07
SIAG1400	Install 2nd Layer Waling & Strut	4d	-75d	0	21MAY07	28MAY07	14FEB07	21FEB07
SIAG1500	Excavate to Level of 3rd Layer of Waling	13d	-75d	0	26MAY07	11JUN07	22FEB07	08MAR07
SIAG1600	Install 3rd Layer Waling & Strut	4d	-75d	0	11JUN07	15JUN07	09MAR07	13MAR07
SIAG1700	Excavate to Level of 4th Layer of Waling	14d	-75d	0	15JUN07	04JUL07	14MAR07	29MAR07
SIAG1800	Install 4th Layer Waling & Strut	4d	-75d	0	04JUL07	09JUL07	30MAR07	03APR07
SIAG1900	Excavate to Level of 5th Layer of Waling	17d	-75d	0	09JUL07	28JUL07	04APR07	27APR07
SIAG2000	Install 5th Layer Waling & Strut	4d	-75d	0	28JUL07	02AUG07	28APR07	03MAY07
Geotechnical Works								
SIAP1000	Monitoring of Instruments	384d	95d	35	16NOV06 A	03MAR08	16NOV06 A	27JUN08
Additional Works / Disruption								
Pumping Test at KT P/S (Claim No. 023)								
SIAY1080	Baseline & Pumping Test	15d		100	25FEB07 A	02APR07 A	25FEB07 A	02APR07 A
SIAY1090	Prepare & Submit Ass. Report	12d		100	03APR07 A	16APR07 A	03APR07 A	16APR07 A
SIAY1100	Engineer Confirm Acceptance	6d	-75d	95	17APR07 A	30APR07	17APR07 A	24JAN07
Section B - Sha Po Sewage Pumping Station								
Portion B								
Earthworks								
S28G1000	Drive Sheepile	16d		100	26FEB07 A	04APR07 A	26FEB07 A	04APR07 A

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Drive Sheepile

Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 3-Month Rolling Programme - 3M01 at 29 April 2007

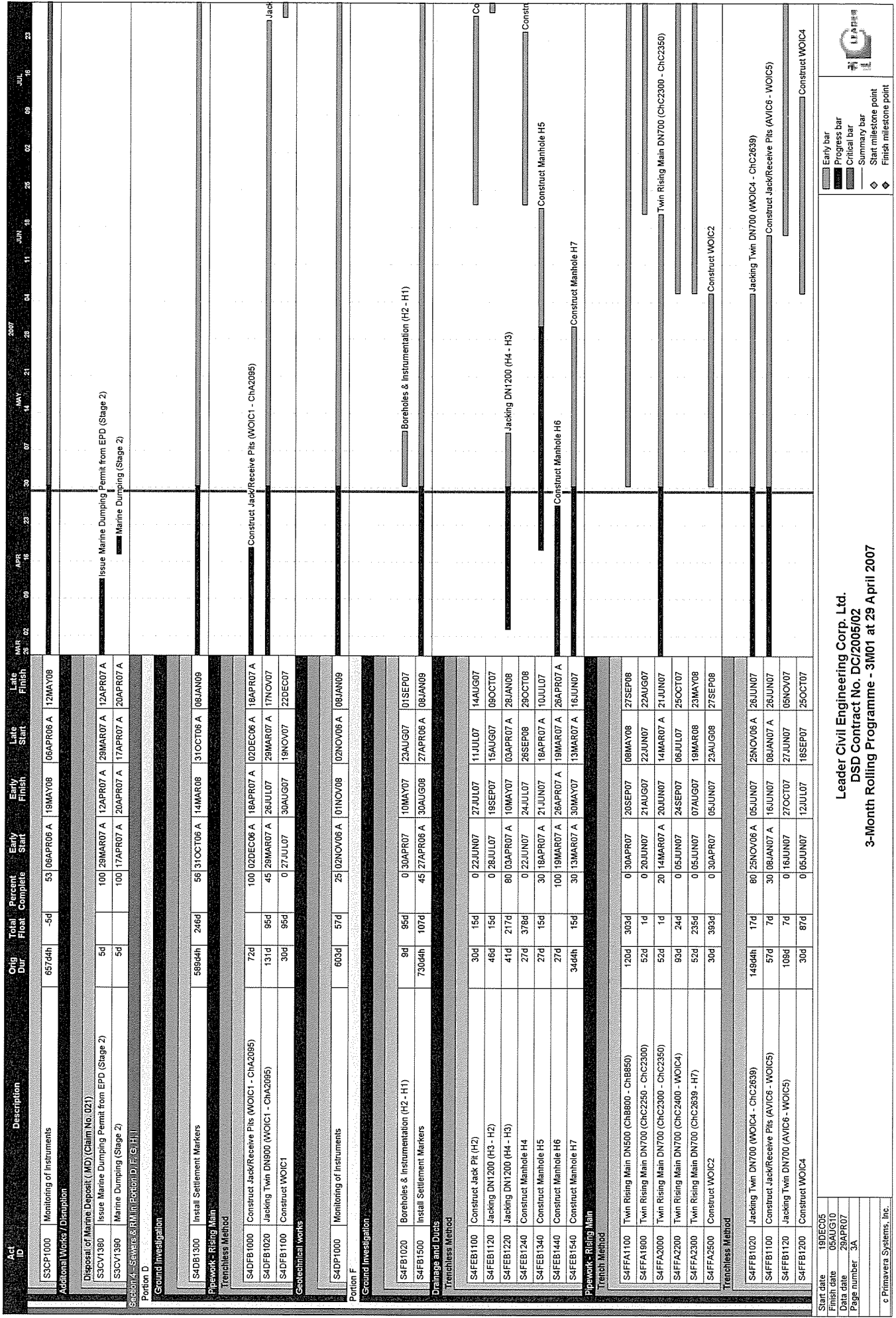
Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ◆ Start milestone point
 ◆ Finish milestone point

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	
S2B0100	Excavate to Level of 1st Layer of Walling	3d	-20d	0	28JUL07	01AUG07	05JUL07	07JUL07	
Geotechnical Works									
S2B01000	Monitoring of Instruments	255d	142d	20	28FEB07 A	04JAN08	28FEB07 A	27JUN08	
Additional Works / Disruption									
Pumping Test at PSP (Claim No. 022)									
S2BV1030	ER Review & Comments	6d	-20d	100	07MAR07 A	23APR07 A	07MAR07 A	23APR07 A	
S2BV1040	Respond to ER's Comments	6d	-20d	95	14MAR07 A	30APR07	14MAR07 A	31MAR07	
S2BV1050	Receive Engineer's Consent	6d	-20d	0	30APR07	08MAY07	02APR07	12APR07	
S2BV1060	Drill Pump & Obs. Wells	28d	-20d	0	08MAY07	11JUN07	13APR07	16MAY07	
S2BV1070	Install Pump & Equipment	6d	-20d	0	11JUN07	18JUN07	17MAY07	23MAY07	
S2BV1080	Baseline & Pumping Test	15d	-20d	0	18JUN07	07JUL07	24MAY07	11JUN07	
S2BV1090	Prepare & Submit Ass. Report	12d	-20d	0	07JUL07	21JUL07	12JUN07	26JUN07	
S2BV1100	Engineer Confirm Acceptance	6d	-20d	0	21JUL07	28JUL07	27JUN07	04JUL07	
Section 3 - Naim Shari Wall/Sewage Pumping Station									
Portion C									
Drainage and Ducts									
Trench Method									
SCEA1700	Install Geotextile Filter to F/L of Base Slab	1d	-114d	0	13JUN07	14JUN07	20JAN07	20JAN07	
SCEA1750	Install Geotextile Filter up to -9.0mPD	1d	-114d	0	19JUL07	20JUL07	27FEB07	27FEB07	
Pipework - Rising Main									
Trench Method									
SCEFA1000	Twin Rising Main DN600	6d	-104d	0	26JUL07	02AUG07	17MAR07	23MAR07	
Earthworks									
S3CG1900	Excavate to Level of 5th Layer of Walling	22d		100	23MAR07 A	04APR07 A	23MAR07 A	04APR07 A	
S3CG2000	Install 5th Layer of Walling & Strut	4d		100	27MAR07 A	16APR07 A	27MAR07 A	16APR07 A	
S3CG2100	Excavate to Level of 6th Layer of Walling	22d	-114d	50	17APR07 A	12MAY07	17APR07 A	18DEC06	
S3CG2200	Install 6th Layer of Walling & Strut	4d	-114d	20	20APR07 A	17MAY07	20APR07 A	21DEC06	
S3CG2300	Excavate to Formation Level	22d	-114d	0	17MAY07	13JUN07	22DEC06	19JAN07	
S3CG2400	Fill Grade 200 Rockfill	7d	-114d	0	14JUN07	23JUN07	22JAN07	29JAN07	
S3CG2450	Backfill to -9.0mPD	5d	-114d	0	20JUL07	26JUL07	28FEB07	05MAR07	
Formwork									
S3C11000	Erect Formwork to Base Slab	6d	-114d	0	25JUN07	03JUL07	31JAN07	06FEB07	
S3C11100	Erect Kicker to Base Slab	6d	-114d	0	10JUL07	17JUL07	14FEB07	23FEB07	
Steel Reinforcement									
S3CK1000	Fix Re-bar to Base Slab	6d	-114d	0	03JUL07	10JUL07	07FEB07	13FEB07	
S3CK1100	Fix Re-bar to -6.8mPD	8d	-114d	0	26JUL07	04AUG07	06MAR07	14MAR07	
In-Situ Concrete									
S3CL1000	Cast Blinding Concrete	1d	-114d	0	23JUN07	25JUN07	30JAN07	30JAN07	
S3CL1100	Cast Base Slab	2d	-114d	0	17JUL07	19JUL07	24FEB07	26FEB07	
Geotechnical Works									
Cast Base Slab									

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Leader Civil Engineering Corp. Ltd.
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Start date	19DEC05
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Leader Civil Engineering Corp. Ltd.
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Act ID	Description	Orig Dur	Total Float	Complete	Early Start	Early Finish	Late Start	Late Finish
Geotechnical works								
Portion G								
Ground Investigation								
S4FP1000	Monitoring of Instruments	748d	37d	37	05JUN06 A	25NOV08	05JUN06 A	08JAN09
Pipeline								
Boreholes & Instrumentation (AV/C4 - P/S)								
S4GB1020	Boreholes & Instrumentation (AV/C4 - P/S)	30d	83d	0	30APR07	05JUN07	09AUG07	12SEP07
S4GB1500	Install Settlement Markers	748d4h	89d	44	21APR08 A	22SEP08	21APR08 A	08JAN09
Pipework - Rising Main								
Trench Method								
S4GFA1300	Twin Rising Main DN500 (ChB450 - ChB550)	84d	372d	0	30APR07	09AUG07	30JUL08	07NOV08
S4GFA1600	Construct AV/C2	30d	465d	30	02APR07 A	24MAY07	02APR07 A	12DEC08
Trenchless Method								
S4GFB1000	Construct Jack/Receive Pits (AV/C4 - P/S)	57d	83d	0	06JUN07	13AUG07	13SEP07	21NOV07
Geotechnical Works								
S4GPF1000	Monitoring of Instruments	749d	61d	41	22APR06 A	27OCT08	22APR06 A	08JAN09
Portion H								
Ground Investigation								
Boreholes & Instrumentation (A2 - A3)								
SAHB1020	Boreholes & Instrumentation (A2 - A3)	10d	191d	0	19MAY07	31MAY07	08JAN08	18JAN08
SAHB1040	Boreholes & Instrumentation (ChC1302 - ChC1376)	10d	149d	0	08JUN07	21JUN07	05DEC07	15DEC07
SAHB1300	Install Settlement Markers	727d4h	111d	46	26MAY08 A	27AUG08	26MAY08 A	08JAN09
Drainage and Ducts								
Trench Method								
SAHEA1100	DN500 Pipe & Manhole (A6 - A9)	100d	45d	0	28MAY07	22SEP07	21JUL07	17NOV07
SAHEA1200	DN500 Pipe & Manhole (A9 - A12)	90d	45d	85	03JUL06 A	18MAY07	03JUL06 A	11JUL07
SAHEA1500	DN400 Pipe & Manhole (A16 - A18)	73d	63d	0	12MAY07	08AUG07	27JUL07	24OCT07
Pipework - Rising Main								
Trench Method								
SAHFA1200	Twin Rising Main DN700 (ChC290 - ChC410)	45d	45d	81	03JUL06 A	26MAY07	03JUL06 A	20JUL07
SAHFA1700	Twin Rising Main DN700 (ChC780 - ChC850)	50d	63d	80	09JAN07 A	11MAY07	09JAN07 A	27JUL07
SAHFA1900	Twin Rising Main DN700 (ChC950 - ChC1050)	87d	65d	0	30APR07	13AUG07	18JUL07	31OCT07
SAHFA2000	Twin Rising Main DN700 (ChC1050 - ChC1150)	94d		100	04JAN07 A	24APR07 A	04JAN07 A	24APR07 A
SAHFA2500	Twin Rising Main DN700 (ChC1550 - ChC1650)	223d	-24d	9	16DEC08 A	27FEB08	16DEC08 A	25JAN08
SAHFA2600	Twin Rising Main DN700 (ChC1650 - ChC1750)	134d4h	-24d	67	19JUN08 A	23JUN07	19JUN08 A	24MAY07
SAHFA3000	Construct AV/C7	20d	159d	0	23JUN07	18JUL07	03JAN08	25JAN08
SAHFA3400	Construct WO/C6	20d	159d	0	23JUN07	18JUL07	03JAN08	25JAN08
Geotechnical Works								
SAHP1000	Monitoring of Instruments	749d	34d	37	26MAY06 A	28NOV08	26MAY06 A	08JAN09
Portion I								
Ground Investigation								
SAIB1020	Boreholes & Instrumentation (C1 - C2)	9d	332d	0	01JUN07	11JUN07	14JUL08	23JUL08

Legend:
 Early bar
 Progress bar
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 Start milestone point
 Finish milestone point

Leader Civil Engineering Corp. Ltd.
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 3-Month Rolling Programme - 3M01 at 29 April 2007

Start date: 19DEC05
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c.Prinavera Systems, Inc.

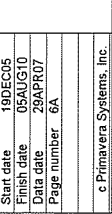
Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2007												
									MAR	APR	MAY	JUN	JUL	01	02	03	04	05	06	07	
S4IB1040	Boreholes & Instrumentation (ChD0 to ChD55)	6d	300d	0	30APR07	05MAY07	05MAY08	13MAY08	Boreholes & Instrumentation (ChD0 to ChD55)												
S4IB1300	Install Settlement Markers	736d4h	102d	45	26JUN06 A	06SEP08	26JUN06 A	06JAN09	DN500 Pipe & Manhole (C12 - C13)												
Drainage and Ducts										DN500 Pipe & Manhole (C29 - C31)											
Trench Method										DN500 Pipe & Manhole (C31 - C32)											
S4IEA1400	DN500 Pipe & Manhole (C12 - C13)	58d	21d	90	05DEC06 A	07MAY07	05DEC06 A	01JUN07	DN500 Pipe & Manhole (C12 - C13)												
S4IEA1500	DN500 Pipe & Manhole (C13 - C14)	81d	21d	0	07MAY07	13AUG07	02JUN07	06SEP07	DN500 Pipe & Manhole (C29 - C31)												
S4IEA2300	DN500 Pipe & Manhole (C29 - C31)	54d	13d	50	09MAR07 A	01JUN07	09MAR07 A	16JUN07	DN500 Pipe & Manhole (C29 - C31)												
S4IEA2320	DN500 Pipe & Manhole (C31 - C32)	53d	13d	0	02JUN07	04AUG07	18JUN07	20AUG07	DN500 Pipe & Manhole (C31 - C32)												
Geotechnical Works										Non Work Period 01 Nov 06 - 31 Mar 07											
S4IP1000	Monitoring of Instruments	728d	39d	36	28JUN06 A	22NOV08	28JUN06 A	08JAN09	Non Work Period 01 Nov 06 - 31 Mar 07												
Section G - Sewers & RM in Portion E										Non Work Period 01 Nov 06 - 31 Mar 07											
Portion E										Non Work Period 01 Nov 06 - 31 Mar 07											
Preliminaries										Non Work Period 01 Nov 06 - 31 Mar 07											
S5EA1100	Non Work Period 01 Nov 06 - 31 Mar 07	125d		100	01NOV06 A	31MAR07 A	01NOV06 A	31MAR07 A	Non Work Period 01 Nov 06 - 31 Mar 07												
Ground Investigation										Non Work Period 01 Nov 06 - 31 Mar 07											
S5EB1400	Install Settlement Markers (Stage 2)	138d	38d	17	29MAR07 A	14SEP07	29MAR07 A	31OCT07 *	Non Work Period 01 Nov 06 - 31 Mar 07												
Drainage and Ducts										Non Work Period 01 Nov 06 - 31 Mar 07											
Trenchless Method										Non Work Period 01 Nov 06 - 31 Mar 07											
S5EEB1000	Construct Jack/Receive Pits (H11 - H10)	30d	165d	0	06JUN07 *	12JUL07	21DEC07	28JAN08	Construct Jack/Receive												
S5EEB1020	Jacking DN600 (H11 - H10)	95d	165d	0	13JUL07	03NOV07	29JAN08	27MAY08	Construct Jack/Receive												
Pipeline - Rising Main										Construct Jack/Receive											
Trench Method										Construct Jack/Receive											
S5EFA1300	Twin Rising Main DN900 (ChA350 - ChA400)	33d	5d	0	28JUN07	06AUG07	05JUL07	11AUG07	Twin Rising Main DN900 (ChA400 - ChA450)												
S5EFA1400	Twin Rising Main DN900 (ChA400 - ChA450)	32d	5d	50	10APR07 A	18MAY07	10APR07 A	24MAY07	Twin Rising Main DN900 (ChA450 - ChA500)												
S5EFA1800	Twin Rising Main DN900 (ChA600 - ChA650)	32d	5d	0	19MAY07	27JUN07	26MAY07	04JUL07	Twin Rising Main DN900 (ChA650 - ChA700)												
S5EFA2200	Twin Rising Main DN900 (ChA800 - ChA850)	33d	7d	0	26JUN07	04AUG07	05JUL07	11AUG07	Twin Rising Main DN900 (ChA850 - ChA900)												
S5EFA2300	Twin Rising Main DN900 (ChA850 - ChA900)	33d	7d	0	16MAY07	26JUN07	24MAY07	04JUL07	Twin Rising Main DN900 (ChA900 - ChA950)												
S5EFA2400	Twin Rising Main DN900 (ChA900 - ChA950)	33d	7d	60	02APR07 A	16MAY07	02APR07 A	23MAY07	Twin Rising Main DN900 (ChA950 - ChA1000)												
S5EFA2900	Twin Rising Main DN900 (ChA1150 - ChA1200)	32d	44d	0	21JUN07	30JUL07	14AUG07	19SEP07	Twin Rising Main DN900 (ChA1200 - ChA1250)												
S5EFA3000	Twin Rising Main DN900 (ChA1200 - ChA1250)	33d	44d	0	11MAY07	21JUN07	06JUL07	13AUG07	Twin Rising Main DN900 (ChA1250 - ChA1300)												
S5EFA3100	Twin Rising Main DN900 (ChA1250 - ChA1300)	33d	44d	70	10APR07 A	11MAY07	10APR07 A	05JUL07	Twin Rising Main DN900 (ChA1300 - ChA1350)												
S5EFA3500	Twin Rising Main DN900 (ChA1450 - ChA1500)	33d	21d	0	19JUL07	25AUG07	13AUG07	19SEP07	Twin Rising Main DN900 (ChA1500 - ChA1550)												
S5EFA3600	Twin Rising Main DN900 (ChA1500 - ChA1550)	32d	21d	0	09JUN07	18JUL07	06JUL07	11AUG07	Twin Rising Main DN900 (ChA1550 - ChA1600)												
S5EFA3700	Twin Rising Main DN900 (ChA1550 - ChA1600)	33d	21d	0	30APR07 *	08JUN07	26MAY07	05JUL07	Twin Rising Main DN900 (ChA1600 - ChA1650)												
Trenchless Method										Twin Rising Main DN900 (ChA1650 - ChA1700)											
S5EFB1040	Install Twin DN900 (ChA18 - ChA20B)	30d	-63d	0	30APR07	05JUN07	07FEB07	16MAR07	Install Twin DN900 (ChA18 - ChA20B)												
Geotechnical Works										Install Twin DN900 (ChA18 - ChA20B)											
S5EFP1000	Monitoring of Instruments	535d	42d	43	01AUG06 A	10MAY08	01AUG06 A	30JUN08	Install Twin DN900 (ChA18 - ChA20B)												
Section G - Sewers in Portion I										Install Twin DN900 (ChA18 - ChA20B)											
Portion J										Install Twin DN900 (ChA18 - ChA20B)											
Ground Investigation										Install Twin DN900 (ChA18 - ChA20B)											

Start date 19DEC05
 Finish date 05AUG10
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Leader Civil Engineering Corp. Ltd.
 DSD Contract No. DC/2005/02
 3-Month Rolling Programme - 3M01 at 29 April 2007

Act ID	Description	Orig Dur	Total Float	Percent Complete	Early Start	Early Finish	Late Start	Late Finish	2007	2008	2009
S6J1020	Boreholes & Instrumentation (D1 - D2)	13d	148d	0	23MAY07	08JUN07	20NOV07	04DEC07			
S6J1040	Boreholes & Instrumentation (D6 - D7)	13d	122d	50	13JUN06 A	08MAY07	13JUN06 A	02OCT07			
S6J1060	Boreholes & Instrumentation (D7 - D8)	13d	136d	0	08MAY07	23MAY07	23OCT07	08NOV07			
S6J1500	Install Settlement Marker 1st Stage	765d	58d	40	20APR06 A	11NOV08	20APR06 A	20JAN09			
S6J2100	Install Settlement Markers 2nd Stage	600d4h	144d	38	07JUL06 A	31JUL08	07JUL06 A	20JAN09			
Drainage and Ducts											
Trench Method											
S6JEA1800	TTA JA8-2 DN400 Pipe & Manhole (D16 - D18)	75d	-266d	0	14JUL07	12OCT07	19AUG06	17NOV06			
S6JEA1820	TTA JA8-1 DN400 Pipe & Manhole (D18 - D20)	81d	-266d	50	29JAN07 A	18JUN07	29JAN07 A	25JUL06			
S6JEA1830	TTA JA8-1 Road Reinstatement	6d	-266d	0	07JUL07	14JUL07	12AUG06	18AUG06			
S6JEA2520	TTA JB7-1 DN400 Pipe & Manhole (D31 - D33)	88d	-464d	0	30JUN07	15OCT07	03DEC05	21MAR06			
S6JEA3100	DN400 Pipe & Manhole (D37 - D40)	87d	83d	27	28MAR07 A	17JUL07	28MAR07 A	25OCT07			
S6JEA3200	DN300 Pipe & Manhole (D40 - D42)	65d	83d	0	17JUL07	03OCT07	25OCT07	12JAN08			
S6JEA3600	DN300 Pipe & Manhole (D51 - D54)	30d	480d	95	02JAN07 A	02MAY07	02JAN07 A	06DEC08			
S6JEA3920	TTA JD1-2 DN750 Pipe & Manhole (E2 - E3)	55d	-408d	5	31MAR07 A	04JUL07	31MAR07 A	13FEB06			
S6JEA4000	TTA JD2 DN750 Pipe & Manhole (E3 - E5)	74d	-408d	0	04JUL07	29SEP07	14FEB06	17MAY06			
Cerotechnical Works											
S6JF1000	Monitoring of Instruments	1220d	-386d	26	21APR06 A	08MAY10	21APR06 A	20JAN09			
Additional Works / Disruption											
Kam Tin Road A/C Watermain (Claim No. 019)											
S6JV1260	TTA JA8-1 WIM Permanent Diversion	15d	-266d	0	18JUN07	07JUL07	26JUL06	11AUG06			
S6JV1270	TTA JA8-2 WIM Temporary Diversion	18d	-208d	80	21MAR07 A	04MAY07	21MAR07 A	18AUG06			
S6JV1280	TTA JA7-1 WIM Temporary Diversion	18d	-124d	0	04MAY07	26MAY07	29NOV06	19DEC06			
S6JV1310	TTA JA7-2 WIM Temporary Diversion	18d	-65d	0	26MAY07	16JUN07	05MAR07	24MAR07			
S6JV1330	TTA JA7-3 WIM Temporary Diversion	18d	-23d	0	16JUN07	10JUL07	21MAY07	11JUN07			
S6JV1350	TTA JA6 WIM Temporary Diversion	18d	26d	0	10JUL07	31JUL07	10AUG07	30AUG07			
S6JV1450	TTA JB7-1 WIM Temporary Diversion	103d	-464d	51	20MAR07 A	30JUN07	20MAR07 A	02DEC05			
S6JV1470	TTA JB7-2 WIM Temporary Diversion	18d	-372d	0	30JUN07	23JUL07	25MAR06	19APR06			
S6JV1490	TTA JB6-1 WIM Temporary Diversion	18d	-294d	0	23JUL07	13AUG07	26JUL06	15AUG06			
Kam Sheung Rd Utilities Obs. (Claim No. 027)											
S6JV2230	TTA JD1-2 Remove Abandoned A/C WIM	5d		100	24MAR07 A	30MAR07 A	24MAR07 A	30MAR07 A			
Kam Sheung Road A/C Watermain (Claim No. 018)											
S6JV2410	Prepare TTAs for Trial Pits	18d		100	10MAR07 A	12APR07 A	10MAR07 A	12APR07 A			
S6JV2420	Present & Endorse TTAs for Trial Pits	18d		100	13APR07 A	25APR07 A	13APR07 A	25APR07 A			
S6JV2430	Implement TTAs for Trial Pits	1d	-171d	0	30APR07	30APR07	27SEP06	27SEP06			
S6JV2440	Dig Trial Pits	18d	-171d	0	02MAY07	22MAY07	28SEP06	20OCT06			
S6JV2450	WSD Plan Diversion & Apply Excavation Permit	36d	-171d	0	23MAY07	06JUL07	21OCT06	02DEC06			
S6JV2460	TTA JD5-1 WIM Temporary Diversion	18d	-171d	0	07JUL07	27JUL07	04DEC06	23DEC06			
S6JV2480	TTA JD5-2 WIM Temporary Diversion	18d	-106d	0	28JUL07	17AUG07	17MAR07	11APR07			
Section 7 - Sewers in Position											
Pointon K											
Ground Investigation											
S7KE1020	Boreholes & Instrumentation (M4 - M19)	16d	-129d	0	30APR07	18MAY07	18NOV06	06DEC06			
S7KE1500	Install Settlement Markers	423d4h	53d	74	08MAY06 A	07SEP07	08MAY06 A	10NOV07			
Drainage and Ducts											
Trench Method											
Start date	19DEC05										
Finish date	05AUG10										
Data date	29APR07										
Page number	6A										

Leader Civil Engineering Corp. Ltd.
DSD Contract No. DC/2005/02
3-Month Rolling Programme - 3M01 at 29 April 2007



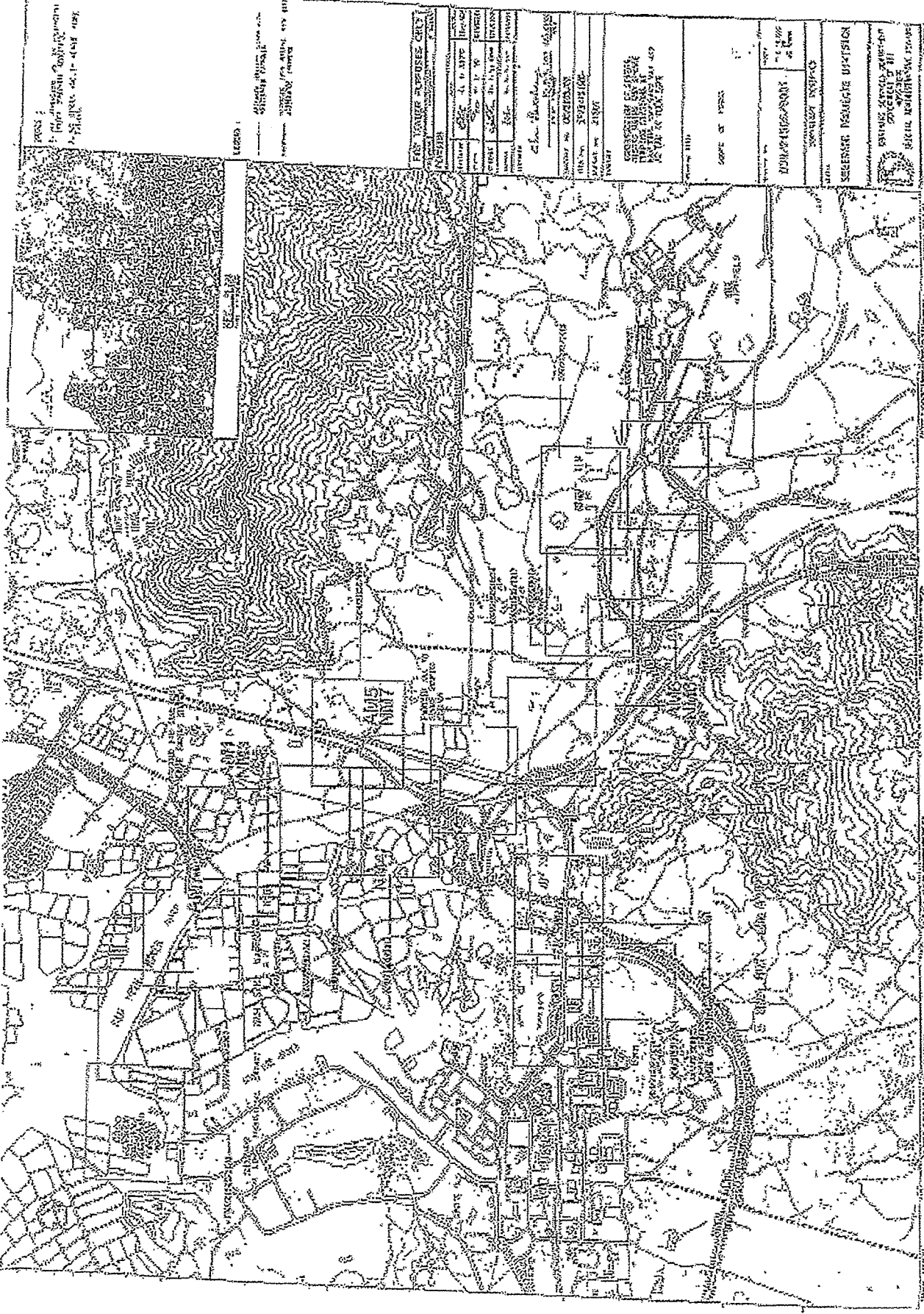
Annex D

Photographical Records – Noise Barrier On-Site



Annex E

Locations of Monitoring Stations



PROJ: 1
SCALE: 1:50,000
DATE: 1964
SHEET: 1 OF 1

1:50,000
SCALE
DATE: 1964

PROJ: 1		SCALE: 1:50,000		DATE: 1964	
SHEET: 1 OF 1		PROJ: 1		SCALE: 1:50,000	
DATE: 1964		SHEET: 1 OF 1		PROJ: 1	
SCALE: 1:50,000		DATE: 1964		SHEET: 1 OF 1	
PROJ: 1		SCALE: 1:50,000		DATE: 1964	
SHEET: 1 OF 1		PROJ: 1		SCALE: 1:50,000	
DATE: 1964		SHEET: 1 OF 1		PROJ: 1	
SCALE: 1:50,000		DATE: 1964		SHEET: 1 OF 1	

PROJ: 1
SCALE: 1:50,000
DATE: 1964
SHEET: 1 OF 1

PROJ: 1
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SHEET: 1 OF 1

PROJ: 1
SCALE: 1:50,000
DATE: 1964
SHEET: 1 OF 1

ADIS
1907

1:50,000
SCALE
DATE: 1964

PROJ: 1
SCALE: 1:50,000
DATE: 1964
SHEET: 1 OF 1

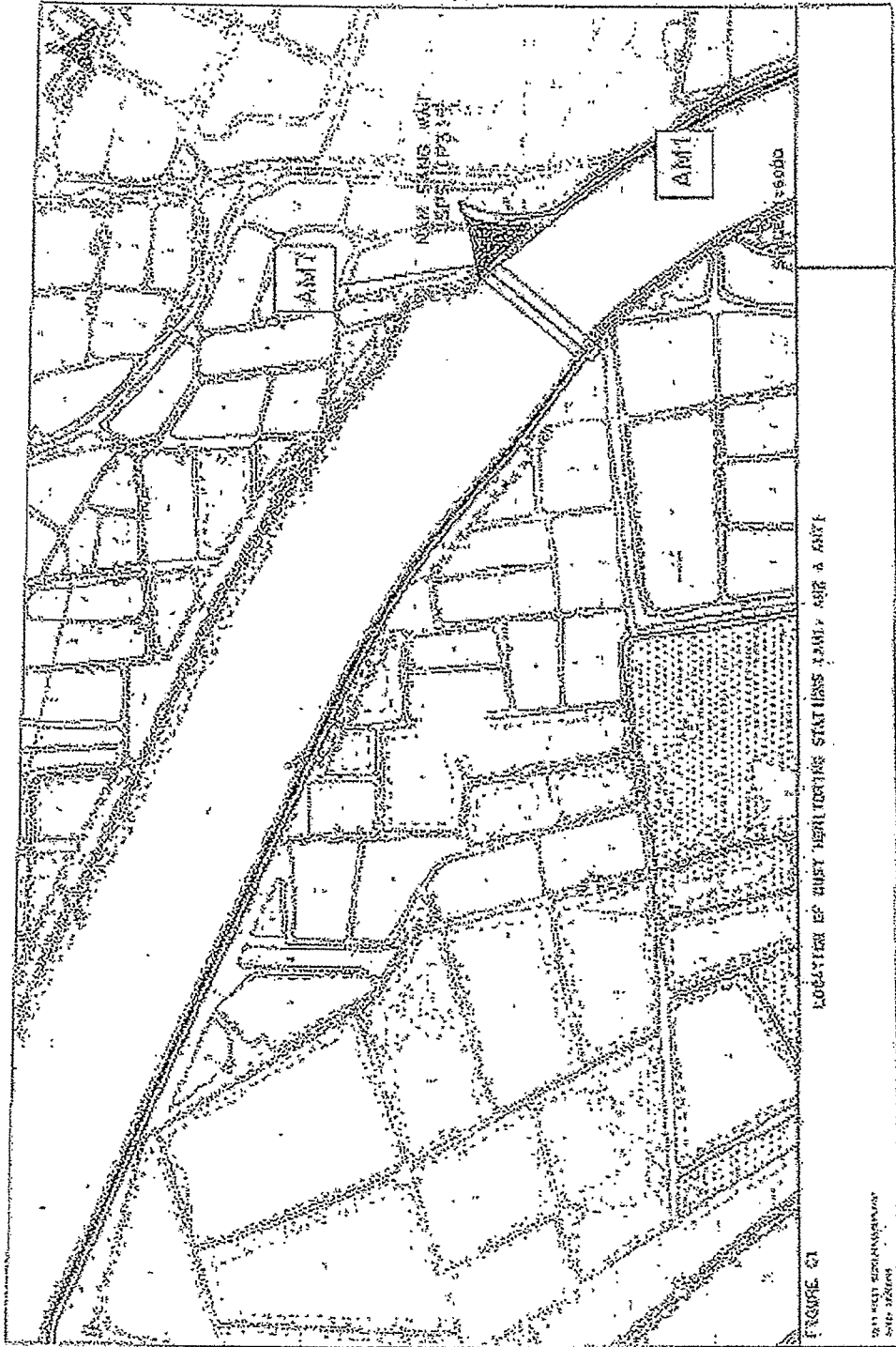
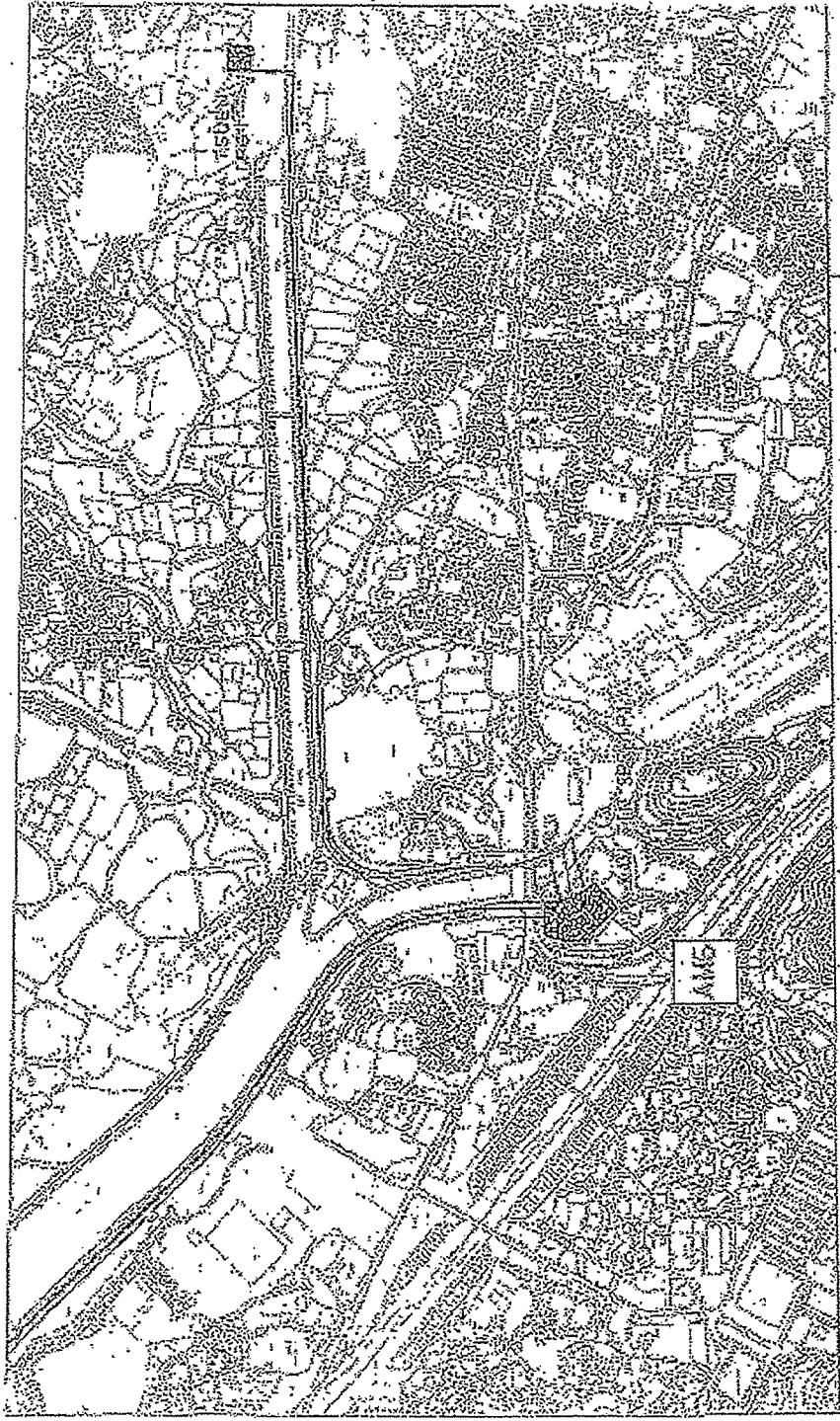




FIGURE OF BEST MONITORING STATION (1981)

FIGURE 62

Scale: 1:50,000
1981



LOCATION OF BEST MONITORING STATIONS (AMS, AMS 2, AMS3)

FIGURE 20

AMERICAN OVERSEAS AIRWAYS
1980-1981

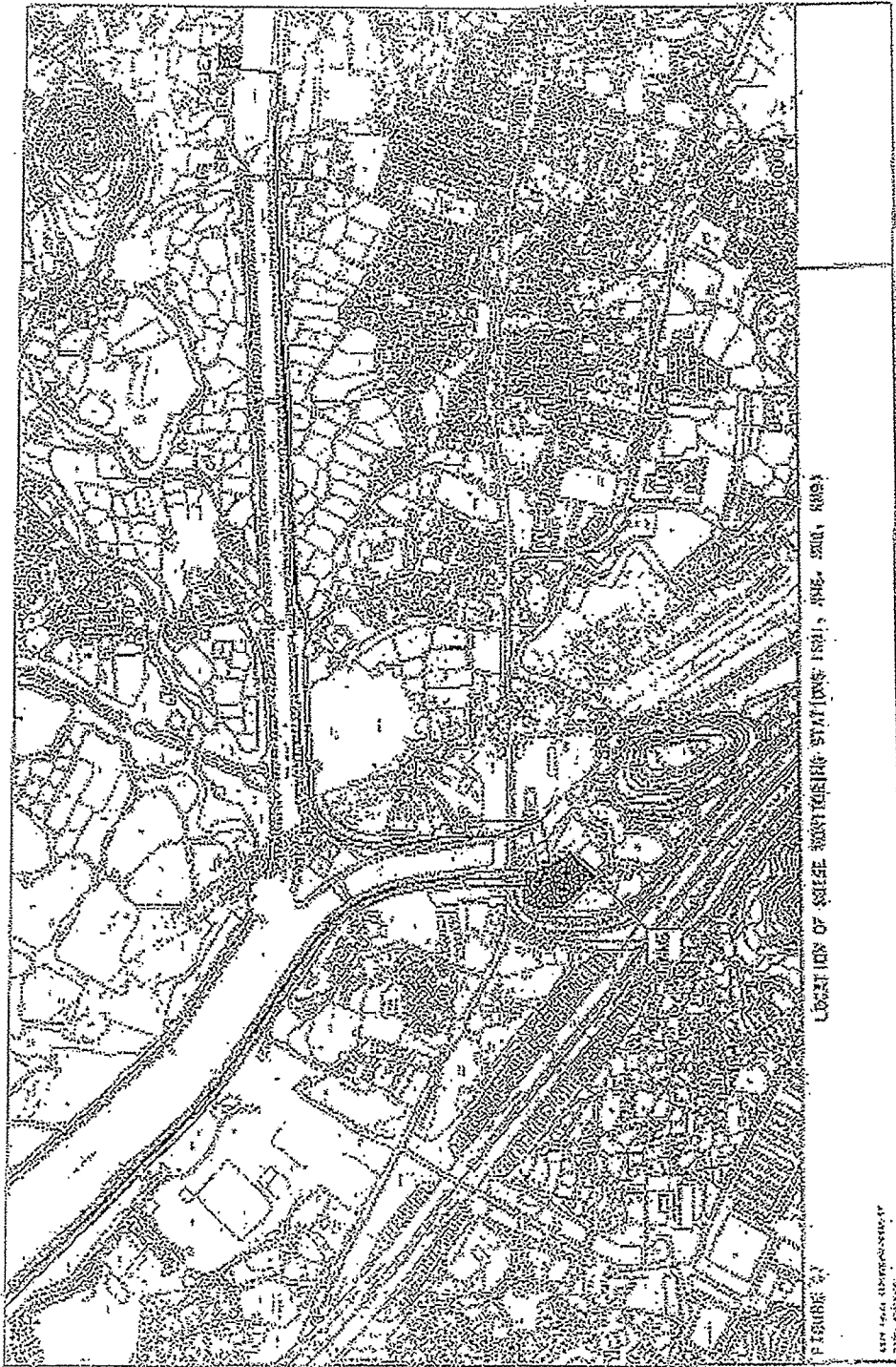


FIGURE 4
 LOCATIONS OF THREE MONITORING STATIONS (STA. 1581, STA. 200, STA. 888)

BY THE U.S. GEOLOGICAL SURVEY
 WASHINGTON, D.C.

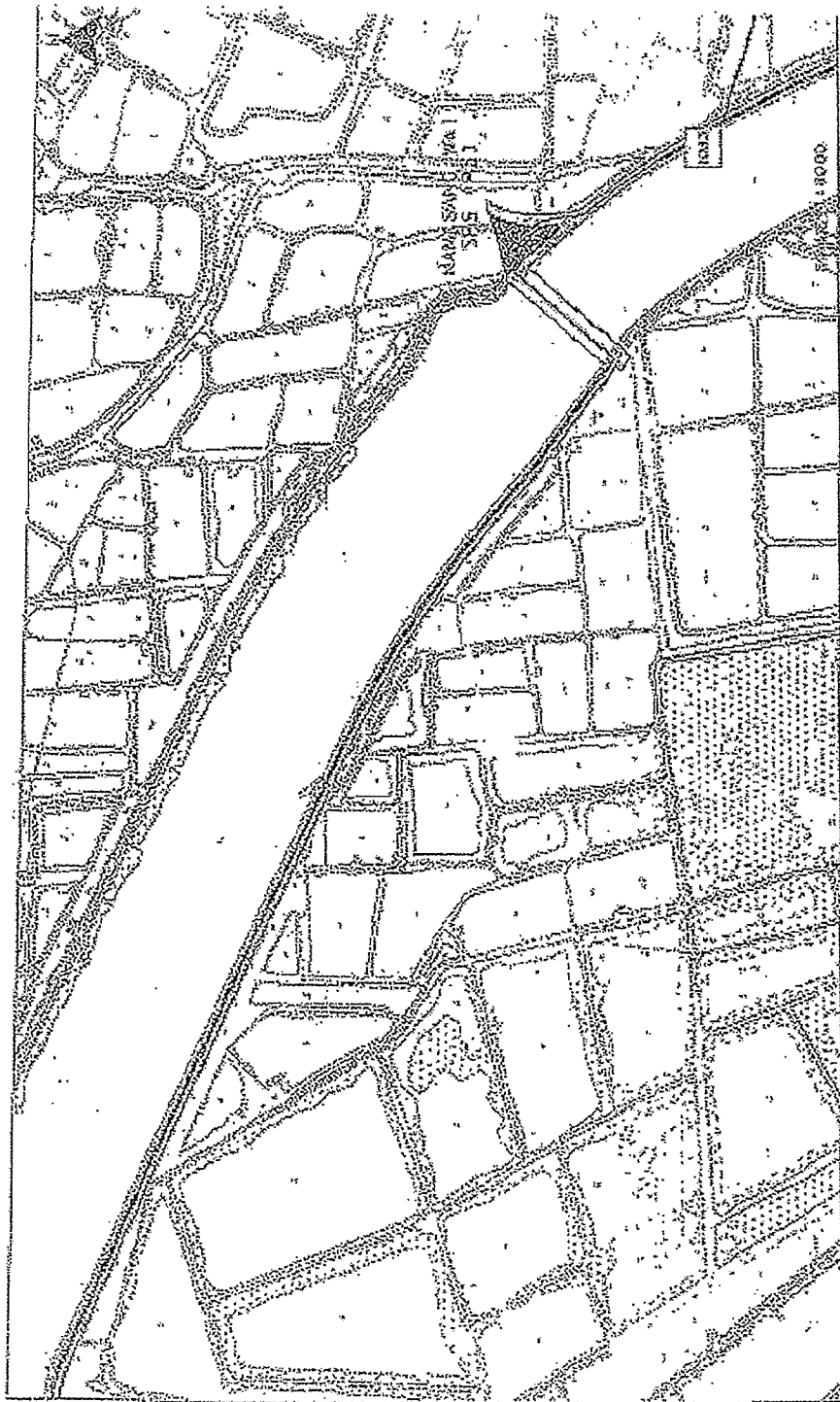


FIGURE 10

LOCATION OF HOUSE FOUNDATIONS STATIONS (IND.) AND I

GENERAL ENGINEERING
AND ARCHITECTURE



LOCATION OF NOISE MEASURING STATIONS FROM NO. 3

FIGURE NO. 2

ENVIRONMENTAL ENGINEERING
DIVISION

Annex F

Event and Action Plan

Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION			
	EIT Leader	IEC	Engineer	Contractor
<p>Action Level</p> <p>Exceedance for one sample</p>	<ol style="list-style-type: none"> Identify source (s) of exceedance and inform IEC, Contractor and Engineer Repeat dust measurements to confirm findings Increase monitoring frequency to daily Assess efficacy of remedial measures and keep the Contractor, IEC, and Engineer informed 	<ol style="list-style-type: none"> Check monitoring data submitted by ET Check monitoring data trends and Contractors working methods Check and confirm Contractors proposed remedial actions and working methods are appropriate 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Remind the Contractor of his contractual obligations and review the Contractor's working methods Discuss remedial actions with the Contractor and IEC Inform complainant of actions taken, if necessary 	<ol style="list-style-type: none"> Rectify any unacceptable practice Liaise with Engineer and IEC to develop appropriate remedial measures to reduce dust impact Amend working methods and remedial proposals if required by the Engineer or IEC Implement the agreed remedial actions upon instruction from the Engineer and IEC
<p>Exceedance for two or more consecutive samples</p>	<ol style="list-style-type: none"> Identify source (s) of exceedance and inform IEC, Contractor and Engineer Repeat measurements to confirm findings Increase the monitoring frequency to daily to assess the efficacy of remedial measures and keep the Contractor informed Discuss remedial actions with IEC and Contractor If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions If exceedance stops, inform the Contractor and cease additional monitoring 	<ol style="list-style-type: none"> Check monitoring data submitted by ET Check monitoring data trends and Discuss with Contractor and Engineer on possible remedial measures Check and confirm Contractors proposed remedial measures are appropriate Determine the efficacy of remedial actions and keep the Engineer informed 	<ol style="list-style-type: none"> Confirm receipt of notification of exceedance in writing Remind the Contractor of his contractual obligations and review the Contractor's working methods Discuss remedial actions with the Contractor and IEC Ensure remedial measures are properly implemented Inform complainant of actions taken, if necessary. 	<ol style="list-style-type: none"> Rectify any unacceptable practice, if possible Submit proposals for remedial actions to Engineer and IEC within three working days of notification Discuss and amend remedial actions, if required, by the Engineer and IEC Implement the remedial action (s) immediately upon instruction from the Engineer Discuss with Engineer and IEC to optimise the effectiveness of the agreed remedial actions
<p>Limit Level</p>				

Event and Action Plan for Construction Phase Air Quality

EVENT	ACTION				
	ET Leader	IEC	Engineer	Contractor	Contractor
Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat dust measurements to confirm findings 3. Increase monitoring frequency to daily 4. Assess efficacy of remedial measures and keep the Contractor, IEC, Engineer and EPD informed 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractor's working methods 3. Check and confirm Contractor's proposed remedial actions and working methods are appropriate 4. Check and confirm Contractor's proposed remedial measures are appropriate 5. Determine the efficacy of remedial actions and keep the Engineer informed 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC, 4. Ensure remedial measures are properly implemented 5. Inform complainant of actions taken, if necessary. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat measurements to confirm findings 3. Increase the monitoring frequency to daily to assess the efficacy of remedial measures and keep the Contractor informed 4. Discuss remedial actions with IEC and Contractor 5. If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions 6. If exceedance stops, inform the Contractor and cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss with Contractor and Engineer on possible remedial measures 2. Check and confirm Contractor's proposed remedial measures are appropriate 3. Determine the efficacy of remedial actions and keep the Engineer informed 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Ensure remedial measures are properly implemented 5. If exceedance continues, instruct the Contractor to stop the relevant portion of work until the exceedance is abated 6. Inform complainant of actions taken, if necessary. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice, if possible 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice, if possible 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC, to optimise the effectiveness of the agreed remedial actions

Event and Action Plan for Construction Noise		ACTION		
EVENT	ET Leader	IEC	Engineer	Contractor
<p><i>Limit Level</i></p> <p>Exceedance for one sample</p>	<ol style="list-style-type: none"> 1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer findings 2. Repeat dust measurements to confirm findings 3. If repeat measurements confirm exceedance, increase monitoring frequency to daily 4. Assess efficacy of remedial measures and keep the Contractor, IEC, and Engineer informed 5. If exceedance stops, inform Contractor and cease additional noise monitoring 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractor working methods 3. Check and confirm Contractor proposed remedial actions and working methods are appropriate 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Inform complainant of actions taken, if necessary 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice 2. Liaise with Engineer and IEC to develop appropriate remedial measures to reduce noise impact 3. Amend working methods and remedial proposals if required by the Engineer or IEC 4. Implement the agreed remedial actions upon instruction from the Engineer and IEC
<p>Exceedance for two or more consecutive samples</p>	<ol style="list-style-type: none"> 1. Identify source (s) of exceedance and inform IEC, Contractor and Engineer 2. Repeat measurements to confirm findings 3. Increase the monitoring frequency to daily 4. Discuss remedial actions with IEC, Engineer and the EPD 5. Assess the efficacy of remedial measures and keep the Contractor informed 6. If exceedance continues, arrange meeting with Engineer, IEC and Contractor to review working practices and identify further remedial actions 7. If exceedance stops, inform the Contractor and cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET 2. Check monitoring data trends and Contractor working methods 3. Discuss with Contractor and Engineer on possible remedial measures 4. Check and confirm Contractor proposed remedial measures are appropriate 5. Determine the efficacy of remedial actions and keep the Engineer informed 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing 2. Remind the Contractor of his contractual obligations and review the Contractor's working methods 3. Discuss remedial actions with the Contractor and IEC 4. Ensure remedial measures are properly implemented 5. If exceedance continues, instruct the Contractor to stop the relevant portion of work until the exceedance is abated 6. Inform complainant of actions taken, if necessary. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice, if possible 2. Submit proposals for remedial actions to Engineer and IEC within three working days of notification 3. Discuss and amend remedial actions, if required, by the Engineer and IEC 4. Implement the remedial action (s) immediately upon instruction from the Engineer 5. Discuss with Engineer and IEC to optimise the effectiveness of the agreed remedial actions 6. Stop the relevant portion of work as determined by the Engineer until the exceedance is abated

Annex G

Mitigation Implementation Schedule

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long
 Updated Environmental Monitoring and Audit (Designated Elements) Manual

AUES

EA/EP/ER	EMPA/RE	Environmental Protection Measures	Objectives of the Remedial Activities / Main Concerns	Location of the Remedial Activities	Implementation Agency	Implementation Stage	Relevant Legislation
CONSTRUCTION PHASE							
AIR QUALITY - Construction Phase							
3.5	A1	<p>The following measures are enforceable under the <i>Air Pollution Control (Construction Dust) Regulations</i></p> <ul style="list-style-type: none"> Site boundary and entrance <ul style="list-style-type: none"> where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the boundaries of the seven pumping stations sites and the works area where the Engineer's site office and the Contractor's site office erected; 	To prevent access to the site and control potential dust impacts from construction works.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓	Part III, Clause 13 (c), <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A2	<p>Access Road</p> <ul style="list-style-type: none"> the portion of any road leading only to a construction site that is within 30 m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials; 	To control potential dust impacts from vehicle movements.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓	Part III, Clause 14, (b), <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A3	<p>Stockpiling of Dusty Materials</p> <ul style="list-style-type: none"> any stockpile of dusty materials should be either covered entirely by impervious sheeting and placed in an area sheltered on the top and the 3 sides or sprayed with water so as to maintain the entire surface wet; 	To control potential dust impacts during excavation and stockpiling activities.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓	Part IV, Clause 18, (a, b & c), <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A4	<p>Loading, unloading or transfer of dusty materials</p> <ul style="list-style-type: none"> all dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading and unloading so as to maintain the dusty materials wet; 	To control potential dust impacts during material handling and truck movements.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓	Part IV, Clause 19, <i>Air Pollution Control (Construction Dust) Regulations</i>
3.5	A5	<p>Use of vehicles</p> <ul style="list-style-type: none"> every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site; 	To control potential dust impacts from vehicle movements.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓	Part IV, Clause 21, (1), <i>Air Pollution Control (Construction Dust) Regulations</i>

AUES

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long
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IEA No.	EM&A Ref.	Environmental Objectives of the Recommended Measures	Objectives of the Recommended Measures	Responsible Parties	Implementation Agent	Implementation Stage	Start Date	End Date	Relevant Legislation & Guidelines
3.5	A6	<ul style="list-style-type: none"> Where a vehicle leaving a construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle; 	To control potential dust impacts during material transportation.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓			Dust) Regulations Part IV, Clause 21, (2), Air Pollution Control (Construction Dust) Regulations
3.5	A7	<ul style="list-style-type: none"> Power-driven drifting, and cutting water should be continuously sprayed on the surface where any mechanical breaking operation that causes dust emission is carried out, unless the process is accompanied by the operation of an effective dusty extraction and filtering device; 	To control potential dust impacts during mechanical breaking.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓			Part IV, Clause 22, Air Pollution Control (Construction Dust) Regulations
3.5	A8	<ul style="list-style-type: none"> Excavation and earth moving the working area of excavation should be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet; 	To control potential dust impacts arising from excavation works.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓			Part IV, Clause 24, Air Pollution Control (Construction Dust) Regulations
3.5	A9	<ul style="list-style-type: none"> Construction of the superstructure of a building where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the round floor level of the SPS, or if a canopy is provided at the first floor level, from the first floor level, up to the highest level of the scaffolding; and 	To control potential dust impacts from SPS building construction works.	Full duration of SPS construction contract.	The Contractor	✓			Part I, Clause 6, (a), Air Pollution Control (Construction Dust) Regulations
3.5	A10	<ul style="list-style-type: none"> any skip hoist for material transport should be totally enclosed by the impervious sheeting. 	To control potential dust impacts during material transportation.	Full duration of SPS construction contract.	The Contractor	✓			Part I, Clause 6, (b), Air Pollution Control (Construction Dust) Regulations

EIA IDP	EM&A Ref	HEAVY METALS CONTAMINATION CONCENTRATION MEASUREMENTS	OBJECTIVES OF THE RECOMMENDED MITIGATION MEASURES	LOCATION OF THE HEAVY METALS CONCENTRATION MEASUREMENTS	IMPLEMENTATION RESPONSIBILITY	IMPLEMENTATION STATUS			RELEVANT REGULATION & SUBSIDIARIES	
						Dis	Con	Dec		
			NOISE - Construction Phase							
			General Site Clearance - Demolition Works							
4.7.1	B1		<ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997 (Examples of these PME are shown in Table F2), 	To control potential noise impacts during site clearance and demolition works	The Contractor		✓		Annex 5 of EIAO-TM	
4.7.1	B2		Construction of Sewage Pumping Stations P1, P2 & P3 <ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997, Adoption of temporary noise barrier, in the form of a site hoarding (with a superficial density of at least 20kg/m², with no substantial gaps), along the site boundary of the pumping station sites. 	To minimise potential noise impacts arising during the construction of P1, P2 & P3	The Contractor		✓		Annex 5 of EIAO-TM	
4.7.1	B3		Sewers and Rising Mains using Open Trench Method <ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997, 	To minimise potential noise impacts arising during the construction of P1, P2 & P3	The Contractor		✓		Annex 5 of EIAO-TM	
4.7.1	B4		<ul style="list-style-type: none"> Use of handhold breakers for all initial road opening activities, when breaking farmac/concrete road surface to a depth of 300mm or when granular material is reached. 	To control potential noise impacts during excavation works.	The Contractor		✓		Annex 5 of EIAO-TM	
4.7.1	B5		<ul style="list-style-type: none"> Use of movable noise barriers or 3 sided enclosures for all initial road opening activities 	To control potential noise impacts during road opening activities.	The Contractor		✓		Annex 5 of EIAO-TM	

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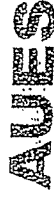
AUEs

EIA Ref.	EIA Ref.	Environmental Protection Measures to be Implemented	Activities	Line of sight	Implementation Agency	Design	EIA Ref.	Relevant Legislation & Guidelines
4.7.1	B6	enclosures for all initial road opening activities (breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached), where there are NSRs located within 50m of the line of sight from the works area. <i>Sewers and Rising Mains using Pipe Jacking Method</i> <ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997.</i> Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997.</i> 	activities.	line of sight: Throughout the full duration of the road opening activities.	The Contractor	✓		Annex 5 of EIAO-TM
4.7.1	B7	<ul style="list-style-type: none"> Use of quiet PME which meet the SWLs taken from British Standard, <i>Noise and Vibration Control on Construction Open Sites, BS 5228: Part 1: 1997.</i> 	To control potential noise impacts from PME during construction works	Site wide and throughout the full duration of the construction contract.	The Contractor	✓		Annex 5 of EIAO-TM
6.6.2	D1	WATER QUALITY - Construction Phase No water quality monitoring is required under this study. WASTE - Construction Phase The Contractor shall obtain the necessary waste disposal permits from the appropriate authorities for the disposal of chemical and C&D waste, <ul style="list-style-type: none"> Chemical Waste Producer and Chemical Waste Disposal Licence (<i>Waste Disposal (Chemical Waste) (General) Regulations</i>); and Dumping Licence (<i>Land (Miscellaneous Provisions) Ordinance (Cap 28)</i>) 	To monitor the collection, handling and disposal of chemical waste and C&D waste, and in compliance with relevant Hong Kong Standards and Regulations.	Site wide and throughout the full duration of the construction contract.	The Contractor	✓		<i>Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354), the Land (Miscellaneous Provisions) Ordinance (Cap 28)</i>

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EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Recommended Measure	Locations/Time/Phase	Implementation Agency	Implementation Stage						Relevant Legislation & Guidelines
						Design	Procurement	Construction	Operation	Handover	Post-handover	
6.6.2	D2	<p>Chemical Waste Chemical waste that is produced, as defined by Schedule 1 of the <i>Waste Disposal (Chemical Waste) (General) Regulation</i>, should be handled in accordance with the regulations and Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows. All chemical waste producers should be registered with the EPD.</p> <p>Storage, Packaging and Labelling of Chemical Waste Containers used for storage of Chemical wastes should:</p> <ul style="list-style-type: none"> • be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; • have a capacity of less than 450 L unless the specifications have been approved by the EPD; and • display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations. <p>Storage of chemical waste The storage area for chemical wastes should:</p> <ul style="list-style-type: none"> • be clearly labelled and used solely for the storage of chemical waste; • be enclosed on at least 3 sides; • 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 that area, whichever is the greatest; • have adequate ventilation; • be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste, if necessary); and • be arranged so that incompatible materials are 	<p>To control the handling, storage and disposal of chemical waste, in order to minimise potential spillages/leakages and human health and environmental impacts.</p> <p>To ensure the proper storage, packaging and labelling of chemical waste in accordance with the Regulations.</p> <p>To ensure the proper storage of chemical waste in accordance with the Regulations.</p>	<p>To be implemented at all work sites throughout the full duration of the construction phase.</p> <p>To be implemented at all work sites throughout the full duration of the construction phase.</p> <p>To be implemented at all work sites throughout the full duration of the construction phase.</p>	The Contractor	✓					<p>Part II, (6) <i>Waste Disposal (Chemical Waste) (General) Regulation</i></p> <p>Part IV, (9, 10, 11 & 12) <i>Waste Disposal (Chemical Waste) (General) Regulation</i></p> <p>Part IV, (13, 14, 15, 16, 17, & 18) <i>Waste Disposal (Chemical Waste) (General) Regulation</i></p>	
6.6.2	D3				The Contractor							
6.6.2	D4				The Contractor							

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long
Updated Environmental Monitoring and Audit (Designated Elements) Manual



EIA Ref.	EM&AR Environmental Protection Measures	Objectives of the Environmental Protection Measures & Main Controls	Location of the measuring station	Implementation Agent	Implementation Stage		Relevant Legislation & Guidelines
					Pre-Commencement	During Construction	
	adequately separate						
6.6.2	<p>Disposal of chemical waste</p> <p>The Contractor should ensure that the disposal of chemical waste is via a licensed Waste Collector and in accordance with the <i>Waste Disposal (Chemical Waste) (General) Regulations</i>.</p>	To control the disposal of chemical waste in accordance with the Regulations.	To be implemented at all work sites throughout the full duration of the construction phase.	The Contractor	✓		Part IV, (20-23) <i>Waste Disposal (Chemical Waste) (General) Regulation</i>
	<p>Management of Waste Disposal</p> <p>A trip-ticket system should be established which monitors the disposal of C&DM and solid wastes at public filling facilities and landfills and to control fly-tipping, in accordance with <i>Land (Miscellaneous Provisions) Ordinance (Cap28)</i> and the <i>Works Bureau Technical Circular No. 599</i>.</p>	To monitor the disposal of C&DM and solid wastes at public filling facilities and landfills and to control fly-tipping.	To be implemented at all work sites throughout the full duration of the construction phase.	The Engineer/ Contractor	✓		<i>Land (Miscellaneous Provisions) Ordinance (Cap 285) and Works Bureau Technical Circular No. 599.</i>
7.5.6	<p>LAND CONTAMINATION- Construction Phase</p> <p>A revised CAP should be submitted to the EPD for approval before the commencement of the construction works. Following receipt of the EPD's approval, the CAP shall be implemented and the findings of the investigations will be reported in the Contaminated Assessment Report (CAR) before ground disturbance is allowed at the concerned sites.</p> <p>If land contamination is confirmed, a Remediation Action Plan (RAP) shall be prepared, and both the CAR and the RAP shall be submitted as a combined report to the EPD for approval before disturbing the ground of the concerned sites. If applicable and required in consultation with the</p>	To determine the presence of soil and groundwater contamination and remedy any potential concerns to acceptable levels.	To be implemented before the commencement of the construction works.	To be implemented by DSD or their sub-consultants at the Detailed Design Stage, depending upon when site access can be gained.	✓		EIAO TM Annex 19/3.1.1 & 3.1.2

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Updated Environmental Monitoring and Audit (Designated Elements) Manual

AUES

EIA Ref	EWS Ref	Environmental Protection Measures	Objectives of the Recommended Works	Design Information	Implementation Ability	Implementation Stage			Relevant Legislation & Guidelines
						Des	CO	Dea	
8.7.1	F1	<p>EPD, the contaminated site(s) shall be remediated in accordance with the approved CAR/RAP.</p> <p>ECOLOGICAL - Construction Phase Mitigation Measures Adopted - Avoidance Construction activities shall be prohibited during the winter season (November to March) along the section of the proposed sewerage alignment, which fall within the Deep Bay Wetland Conservation Area and the Deep Bay Wetland Buffer Area (WCA and WBA) and close to the localities of ecologically sensitive species (including Intermediate Egret, Black-faced Spoonbill, Buzzard, Imperial Eagle and Avocet). (See Figure 8.7a attached). Regular site inspections (at least twice a month) should be conducted by the Environmental Team during the winter season (November to March) to ensure proper implementation of this restriction</p> <p>Mitigation Measures Adopted - Minimisation Pipe jacking method should be used instead of dredging where sewers and rising mains cross over existing MDC within the WCA and WBA.</p>	<p>To schedule construction works in order to minimise potential impacts to winter visiting birds. To be confirmed by regular site inspections.</p>	The Contractor	✓				
8.7.2	F2	<p>Regular inspections (at least twice a month) should be conducted by the ET during the winter season (November to March) for the remaining sections of the proposed sewerage alignment (including parts of S4, S5 and S6) within the WCA and WBA, where construction activities cannot be rescheduled.</p> <p>The site inspections shall check and report the number of workfronts and implementation of</p>	<p>To minimise potential construction noise impacts to ecological sensitive receivers within the WCA/WBA.</p>	For the full duration of the construction contract.	The Contractor	✓			
8.7.2	F4		<p>To schedule noisy construction activities to minimise potential impacts to winter visiting birds.</p>	Work fronts other than identified sections within WBA & WCA (see Figure 8.7a attached) throughout the full duration of the construction contract.	The Contractor	✓			

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Updated Environmental Monitoring and Audit (Designated Elements) Manual

AEUES

EIA Ref.	EM&A Ref.	Objectives of the Recommended Measures	Implementation Stage	Implementation Agent	Relevant Legislation
8.7.3	F5	<p>Mitigation measures (i.e. erection of movable noise barriers with a suitable footing along the sites) in the monthly EM&A reports.</p> <p><i>Mitigation Measures Adopted</i></p> <p>Quietened construction plant and equipment (as shown in Table F2) should be used for the construction of pumping stations (P3 and P2) and sewerage alignment (S4, S3 and S6) located within the WCA and WSA.</p>		The Contractor	
8.7.4	F6	<p>Erection of fences along the boundary of pumping station construction sites (P1 to P3) before the commencement of construction works to prevent tipping, vehicle movements, and encroachment of personnel into adjacent areas, and P2 to avoid disturbance to the remaining pond areas (0.7 ha);</p> <p>No filling and dumping to the remaining abandoned fishpond at P2.</p>		The Contractor	
8.7.4	F7	<p>To avoid disturbance to abandoned fishponds from construction activities and illegal dumping.</p>		The Contractor	
8.7.4	F8	<p>To install silt removal facilities in potentially impact streams and ponds to prevent sedimentation.</p> <p>Installation and operation of silt removal facilities at construction sites of P1 to P3. The silt removal facilities should be designed in accordance with Appendix A1 of ProPECC Note PN1/94 Construction Site Drainage. The minimal total combined volume of the silt removal facilities at Nam Sang Wai SPS (P3) should be 15m³.</p>		The Contractor	
8.7.4	F9	<p>To prohibit open fires, thereby</p>		The Contractor	Air Pollution Control

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wat and Au Tau in Yuen Long
Updated Environmental Monitoring and Audit (Designated Elements) Manual

EIA Ref	EM&A Ref	Environmental Protection Measures	Objectives of the Remedial Measures / Mitigation Measures	Location of the measures	Implementation Agent	Implementation Stage						Relevant Legislation & Guidelines	
						A	B	C	D	E	F		G
8.7.4	F7	construction and provide temporary fire fighting equipment in the work areas. No filling and dumping to the remaining abandoned fishpond at P2.	minimising potential damage to trees and shrubs. To avoid disturbance to abandoned fishponds from construction activities and illegal dumping.	the full duration of the construction contract. At P2 for full duration of the construction contract	The Contractor								(Open Burning) Regulation
8.7.4	F8	Installation and operation of silt removal facilities at construction sites of P1 to P3. The silt removal facilities should be designed in accordance with Appendix A1 of ProPECC Note PN1/04 Construction Site Drainage.	To install silt removal facilities in potentially impact streams and ponds to prevent sedimentation.	At P1 to P3 for full duration of the construction contract.	The Contractor								
8.7.4	F9	No open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas.	To prohibit open fires, thereby minimising potential damage to trees and shrubs.	Site wide and throughout the full duration of the construction contract.	The Contractor								Air Pollution Control (Open Burning) Regulation
		FISHERIES - Construction Phase No specific mitigation measures are required for inclusion in the EP.											
		CULTURAL HERITAGE - Not Applicable for Package 1A-1T (DC/2005/02)											
		LANDSCAPE AND VISUAL - Construction Phase The site inspections shall check and report the implementation of mitigation measures (i.e. top-soil are reused and new compensatory planting works are carried out immediately after the construction of the civil structure) in the monthly EM&A reports. The first monthly EM&A Report should also report the appearance of the temporary hoarding barriers.	To minimise potential landscape and visual impacts.	To be implemented during the construction phases of the project.	The Contractor								
	IH2	Prior to application for an Environmental Permit, a set of landscape plans and building elevations of the proposed pumping stations should be	To minimise potential landscape and visual impacts.	To be implemented during the design and construction phases of the	The DSD and Contractor								

EIA Item	EM&A/EPD	Environmental Protection Objectives of the Designated Element	Location of the measuring location	Implementation Agent	Implementation Staff	DES	IG	DC	DCS	DCD	DCS	DCD	DCS	DCD
		submitted for approval by the EPD.												
		<p>The landscape plans and pumping station elevations should demonstrate that the following elements are considered:</p> <ul style="list-style-type: none"> existing landscape elements (such as mature trees), translocation of valuable trees, new compensatory planting incorporate information on materials, details and textures so as to be as visually recessive as possible and in a style that fits with the surrounding village buildings. colour should be of low chromatic intensity to reduce the potential contrast between the structures and their background. The external finishing of the Pumping Stations shall be designed in conjunction with the landscape scheme. a minimum screen planting of 3m width and use of trees with a dense canopy of up to 5 m in height subject to constraints such as engineering and land availability. felling of mature trees are kept to a minimum. 												
3.7	11	<p>EM&A REQUIREMENTS - Construction Phase</p> <p><i>Air Quality</i></p> <p>Subject to the Environmental Protection Departments (EPDs) agreement, construction phase dust monitoring shall be undertaken at the following localities in accordance with the recommendations of the EIA.</p> <ul style="list-style-type: none"> Worksite boundary facing Scattered house in Nam Sang Wai (AM1); Worksite boundary facing Fung Kat Heung (AM5); Worksite boundary facing Scattered House near Route 3 (AM6); 	Installations of the dust monitoring stations to ensure the action and limit levels are not exceeded.	To be undertaken by the Environmental Team (ET) and reviewed and audited by the Engineer/DSD	✓									Air Pollution Control (Construction Dust) Regulations

DSD Contract DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long
 Updated Environmental Monitoring and Audit (Designated Elements) Manual

AUES

EIA Ref	EMSA Ref	Environmental Protection Measures	Objective of the Recommended Measures	Locations of the Measures	Implementation Agent	Implementation Stage			Relevant Legislation / Guidelines
						Des	Op	Dec	
4.9.1 12		<ul style="list-style-type: none"> at any additional locations, where considered necessary, in agreement with EPD. <p><i>Construction Noise</i> Subject to the Environmental Protection Departments (EPDs) agreement, construction phase noise monitoring shall be undertaken at the following locations in accordance with the recommendations of the EIA:</p> <ul style="list-style-type: none"> (NM3) Scattered House in Nam San Wai (D12); (NM4) Scattered House in Nam San Wai (D11); (NM6) Scattered House near Route 3 (D17); (NM7) Fung Kat Heung (D19); and at any additional locations, where considered necessary, in agreement with EPD 	Installations of the noise monitoring stations to ensure the action and limit levels are not exceeded.	All specified noise monitoring locations throughout the duration of the construction works.	To be undertaken by the Environmental Team (ET) and reviewed and audited by the Engineer	✓			Noise Control Ordinance

Des = Design, C = Construction, O = Operation, Dec = Decommissioning

Annex H

Equipment Calibration Certificates

Equipment Calibration List for Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Project

Item	Aspect	Description of Equipment	Serial No.	Date of Calibration	Date of Next Calibration
1	Air	Greasby Anderson GMWS2310 High Volume Sampler	0329 (AM1)	21 Feb 07	21 May 07
2*		Greasby Anderson GMWS2310 High Volume Sampler	0355 (AM5)	14 Apr 07	14 Jul 07
3*		Greasby Anderson GMWS2310 High Volume Sampler	10394 (AM6)	02 Apr 07	02 Jul 07
4		Greasby Anderson GMWS2310 High Volume Sampler	1283 (AM7)	21 Feb 07	21 May 07
5*	Noise	Brueel & Kjaer 4231 Acoustical Calibrator	2292168	17 Apr 07	17 Apr 08
6*		Brueel & Kjaer 2238 Integrating Sound Level Meter	2285721	17 Apr 07	17 Apr 08

Note: Calibration certificates will only be provided if monitoring equipment is re-calibrated or new.

* Calibration done in this reporting month, see calibration certificate attached.

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Sha Po Pumping Station	Date of Calibration: 14-Apr-07
Location ID : AM5	Next Calibration Date: 14-Jul-07
	Technician: Mr. Ben Tam

CONDITIONS

Sea Level Pressure (hPa)	1021	Corrected Pressure (mm Hg)	765.75
Temperature (°C)	18.3	Temperature (K)	291

CALIBRATION ORIFICE

Make-> TISCH	Qstd Slope ->
Model-> 515N	1.54431
Serial # -> 355	Qstd Intercept ->
	-0.01988

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.5	5.5	11	2.193	59	60.58	Slope = 36.2718 Intercept = -19.9489 Corr. coeff. = 0.9962
13	4.4	4.4	8.8	1.963	49	50.32	
10	3.8	3.8	7.6	1.825	46	47.24	
7	2.7	2.7	5.4	1.541	33	33.89	
5	1.2	1.2	2.4	1.031	18	18.48	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I) [\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

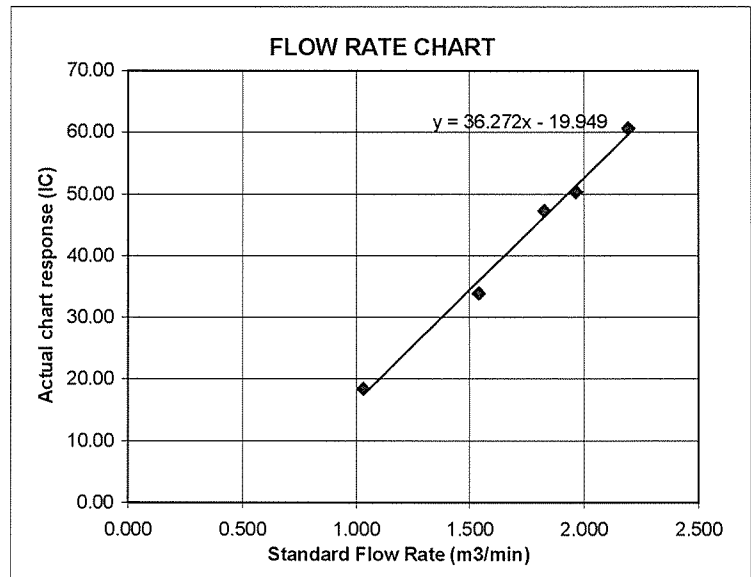
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Tai Hing Car Shop (Scattered House near Route 3) Date of Calibration: 2-Apr-07
 Location ID : AM 6 Next Calibration Date: 2-Jul-07
 Technician: Mr. Ben Tam

CONDITIONS

Sea Level Pressure (hPa)	1016.9	Corrected Pressure (mm Hg)	762.675
Temperature (°C)	18.6	Temperature (K)	292

CALIBRATION ORIFICE

Make-> TISCH	Qstd Slope ->
Model-> 515N	1.54431
Serial # -> 10394	Qstd Intercept ->
	-0.01988

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	4.2	4.2	8.4	1.913	42	43.00	Slope = 36.4277 Intercept = -27.7485 Corr. coeff. = 0.9965
13	3.3	3.3	6.6	1.698	32	32.76	
10	2.8	2.8	5.6	1.565	28	28.66	
7	2.1	2.1	4.2	1.357	22	22.52	
5	1.3	1.3	2.6	1.070	11	11.26	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760)]-b)$$

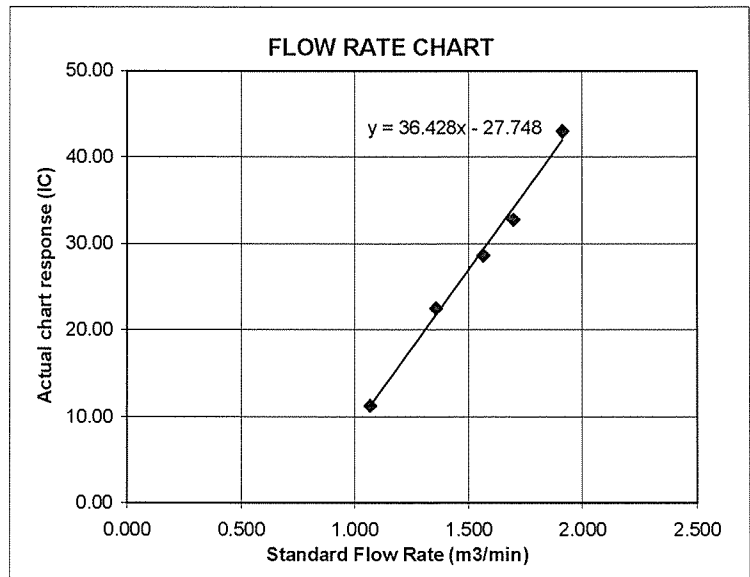
m = sampler slope

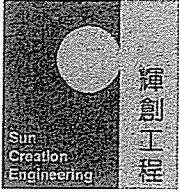
b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure





輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C071764

Certificate of Calibration

This is to certify that the equipment

Description : Acoustical Calibrator (EQ017)

Manufacturer : Bruel & Kjaer

Model No. : 4231

Serial No. : 2292168

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C071764.*

The equipment is supplied by

Co. Name : Action-United Environmental Services and Consulting

*Address : Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.*

Date of Issue : 17 April 2007

Certified by :

K C Lee

The test equipment used for testing are traceable to the National Standards as specified in this report.
This report shall not be reproduced except in full and with prior written approval from this laboratory.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

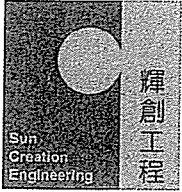
c/o A.F. Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

Tel: 2927 2606

Fax: 2744 8986

E-mail: callab@suncreation.com

Website: www.suncreation.com



輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C071765

Certificate of Calibration

This is to certify that the equipment

Description : Integrating Sound Level Meter (EQ010)

Manufacturer : Bruel & Kjaer

Model No. : 2238

Serial No. : 2285721

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C071765.*

The equipment is supplied by

Co. Name : Action-United Environmental Services and Consulting

*Address : Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.*

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c/o 4/F. Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

Equipment Calibration List for Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long Project

Item	Aspect	Description of Equipment	Serial No.	Date of Calibration	Date of Next Calibration
1	Air	Greasby Anderson GMWS2310 High Volume Sampler	0329 (AM1)	21 Feb 07	21 May 07
2*		Greasby Anderson GMWS2310 High Volume Sampler	0355 (AM5)	14 Apr 07	14 Jul 07
3*		Greasby Anderson GMWS2310 High Volume Sampler	10394 (AM6)	02 Apr 07	02 Jul 07
4		Greasby Anderson GMWS2310 High Volume Sampler	1283 (AM7)	21 Feb 07	21 May 07
5*	Noise	Bruel & Kjaer 4231 Acoustical Calibrator	2292168	17 Apr 07	17 Apr 08
6*		Bruel & Kjaer 2238 Integrating Sound Level Meter	2285721	17 Apr 07	17 Apr 08

Note: Calibration certificates will only be provided if monitoring equipment is re-calibrated or new.

* Calibration done in this reporting month, see calibration certificate attached.

Annex I

Meteorological Data in the Reporting Month

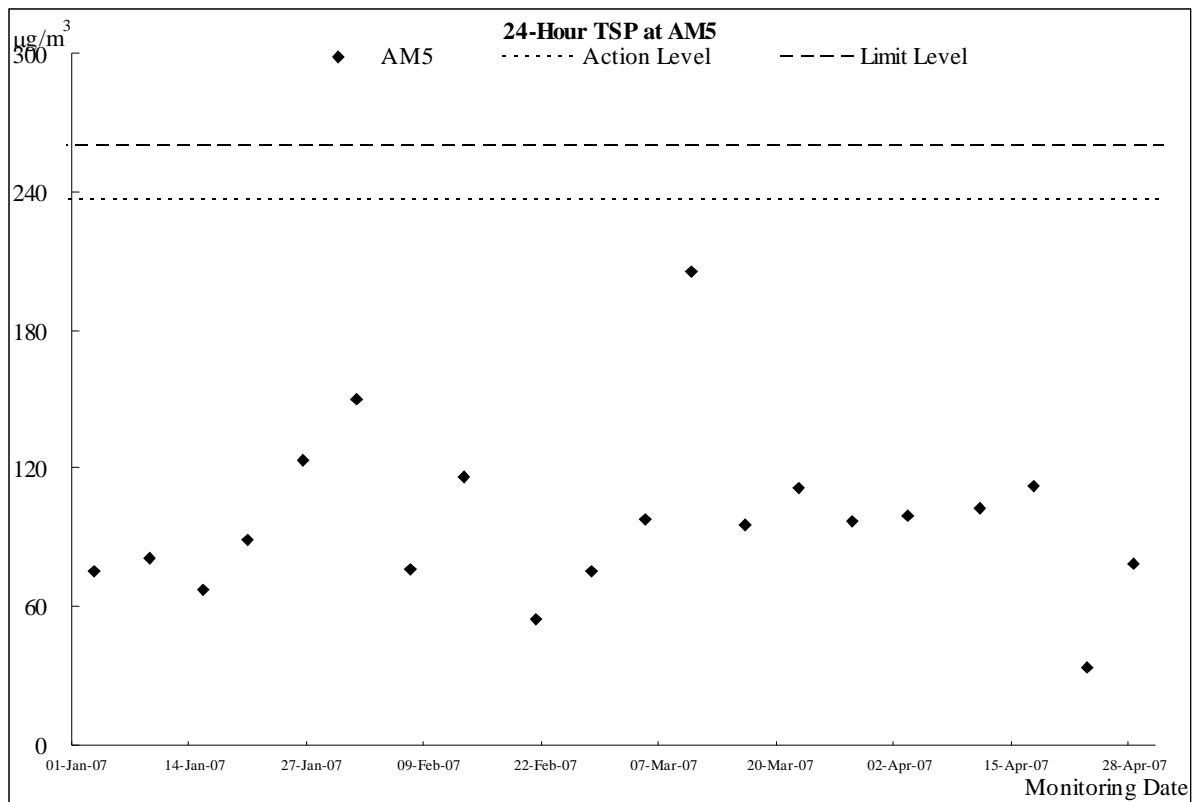
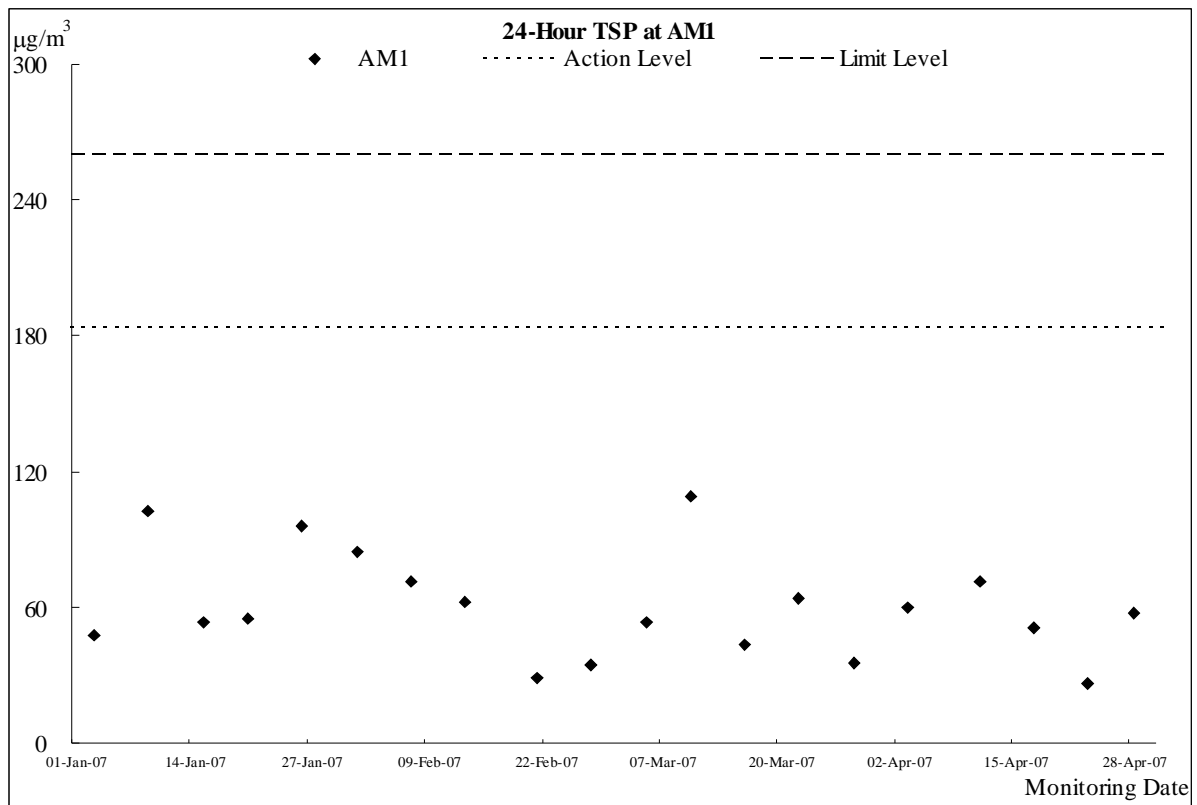
Meteorological Data Extracted From the HK Observatory at Lau Fau Shan Weather Station

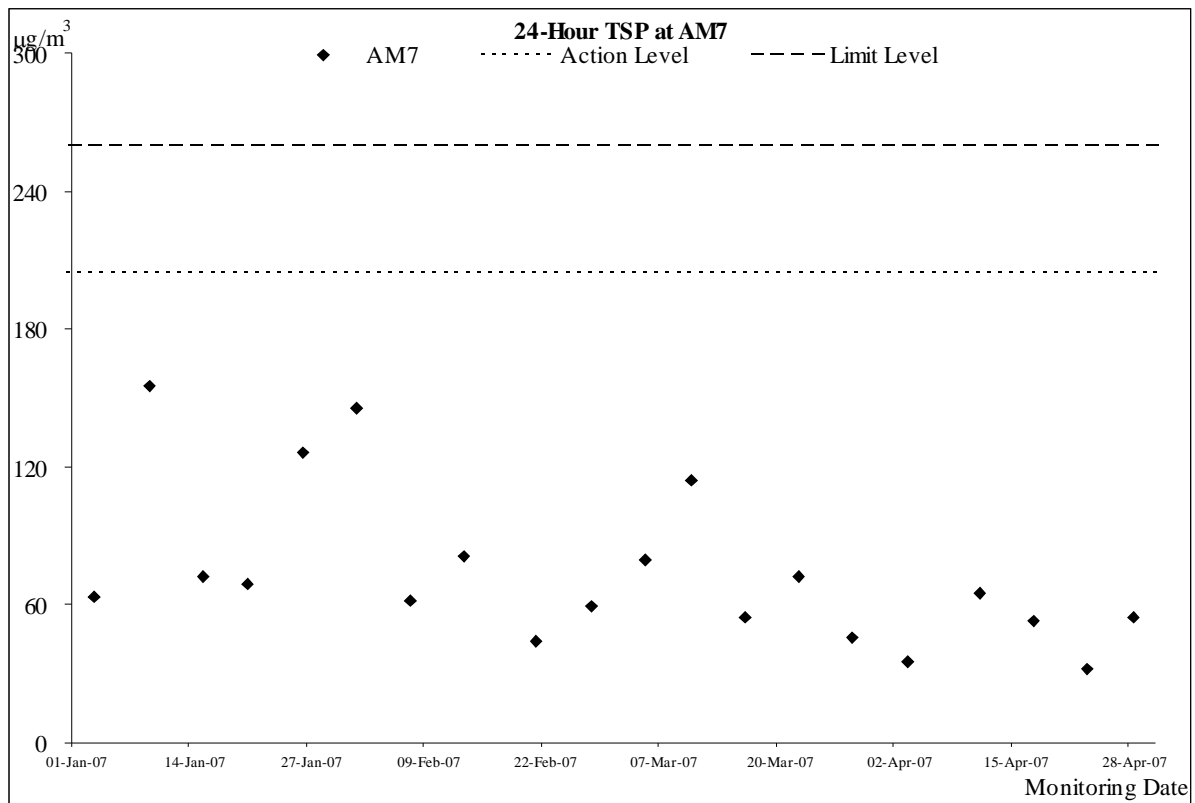
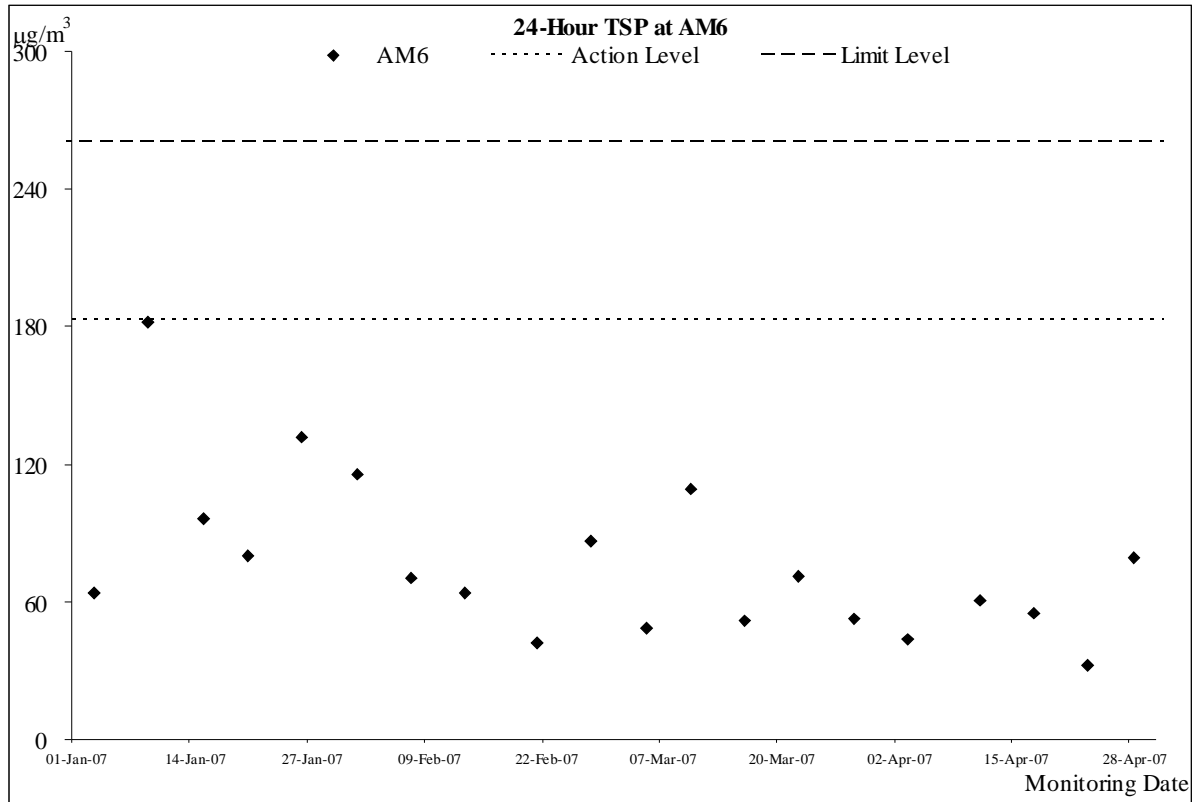
Date		Weather	Lau Fau Shan Station				
			Total Rainfall (mm)	Mean Air Temperature (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Apr-07	Sun	sunny/ showers	-	26.7	25	75	S/SW
2-Apr-07	Mon	cloudy/moderate/ rain/thunderstorms	24.2	21.7	20	95	SE/S
3-Apr-07	Tue	cool/ rain/ cloudy/ overcast/ moderate	1.6	14.2	25	75	NE
4-Apr-07	Wed	cloudy/ rain/ cool/ moderate	8.9	12.4	12	95	NE/E
5-Apr-07	Thu	cloudy/ rain	Trace	14.4	Holiday		
6-Apr-07	Fri	cloudy/ rain	1.7	16.6			
7-Apr-07	Sat	cloudy/ rain/ mist	0.6	17.3			
8-Apr-07	Sun	cloudy/ rain/ thunderstorms	0.3	18.5			
9-Apr-07	Mon	cloudy/ rain	Trace	22.2			
10-Apr-07	Tue	cloudy/ rain	6.6	18	9	90	NE/E
11-Apr-07	Wed	fine/ haze/ moderate	-	20	9	65	NE
12-Apr-07	Thu	fine/ very dry/ moderate	-	22	12	25	E
13-Apr-07	Fri	hazy/ sunny/ cloudy	-	21.2	9	65	W
14-Apr-07	Sat	cloudy/ haze/ sunny	Trace	23.8	9	65	SE/S
15-Apr-07	Sun	cloudy/ rain/ mist	-	25	18	75	SW/W
16-Apr-07	Mon	fine/ hazy/ moderate	-	25.7	6	80	SE/S
17-Apr-07	Tue	cloudy/thunderstorms/showers/moderate	6.6	24	30	75	SE/S
18-Apr-07	Wed	fine/ very dry/ moderate	-	21.6	30	35	N
19-Apr-07	Thu	fine/ dry/ moderate	-	22.4	15	55	E/SE
20-Apr-07	Fri	cloudy/ sunny/ moderate	-	23.3	11	82.5	SE/S
21-Apr-07	Sat	cloudy/mist/rain /sunny	-	24.9	12	90	E/SE
22-Apr-07	Sun	sunny/ showers/ mist	-	26.4	13	85	E/SE
23-Apr-07	Mon	cloudy/ rain/ fresh	7.8	27.1	15	70	E/SE
24-Apr-07	Tue	rain/ cloudy	64.4	22.9	16	75	S/SE
25-Apr-07	Wed	cloudy/ rain /moderate	0.5	19.8	6	96	E/NE
26-Apr-07	Thu	fine & dry/ cloudy/ rain	-	23.5	9.5	75	E/NE
27-Apr-07	Fri	fine/ a few showery	-	25.4	10.5	67.5	E/NE
28-Apr-07	Sat	a few showers/ sunny/	Trace	25.4	15	68.5	SE/E
29-Apr-07	Sun	cloudy / misty/ moderate	0.4	24.1	11.5	80	E/NE
30-Apr-07	Mon	rain/ cloudy	1.8	23.5	6.5	92	N

Annex J

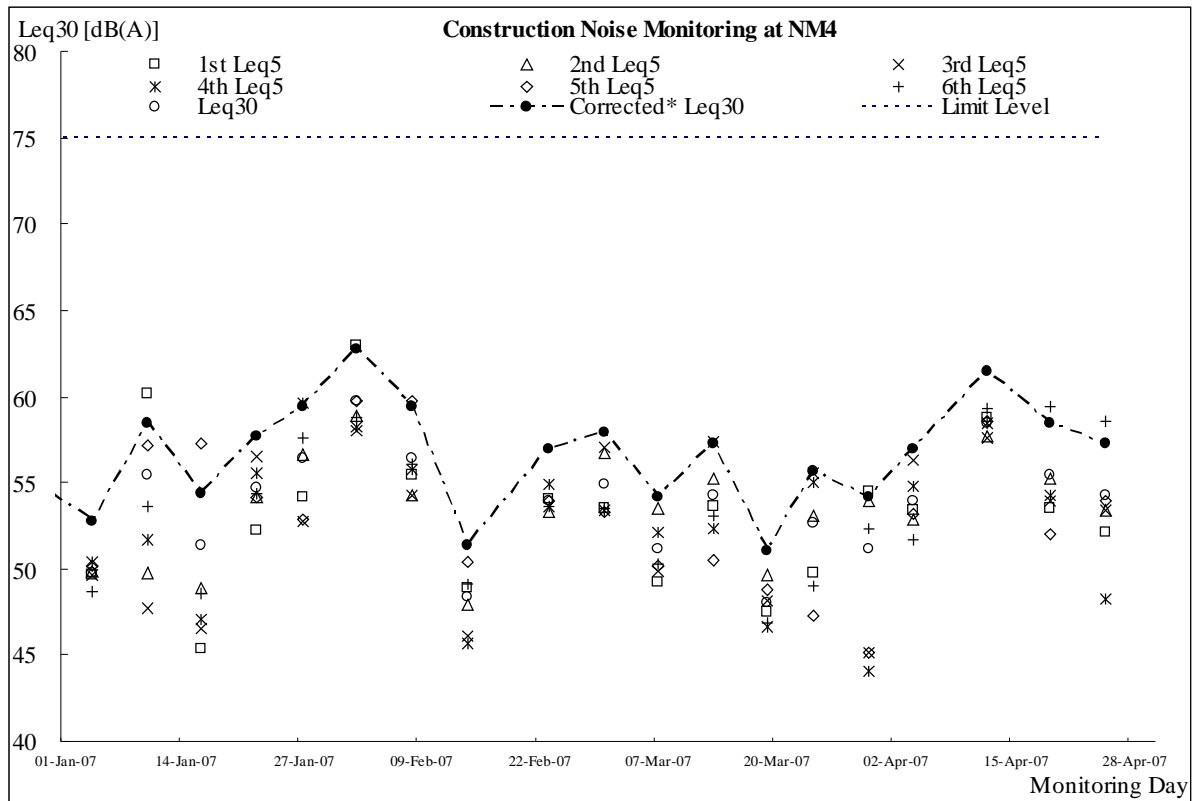
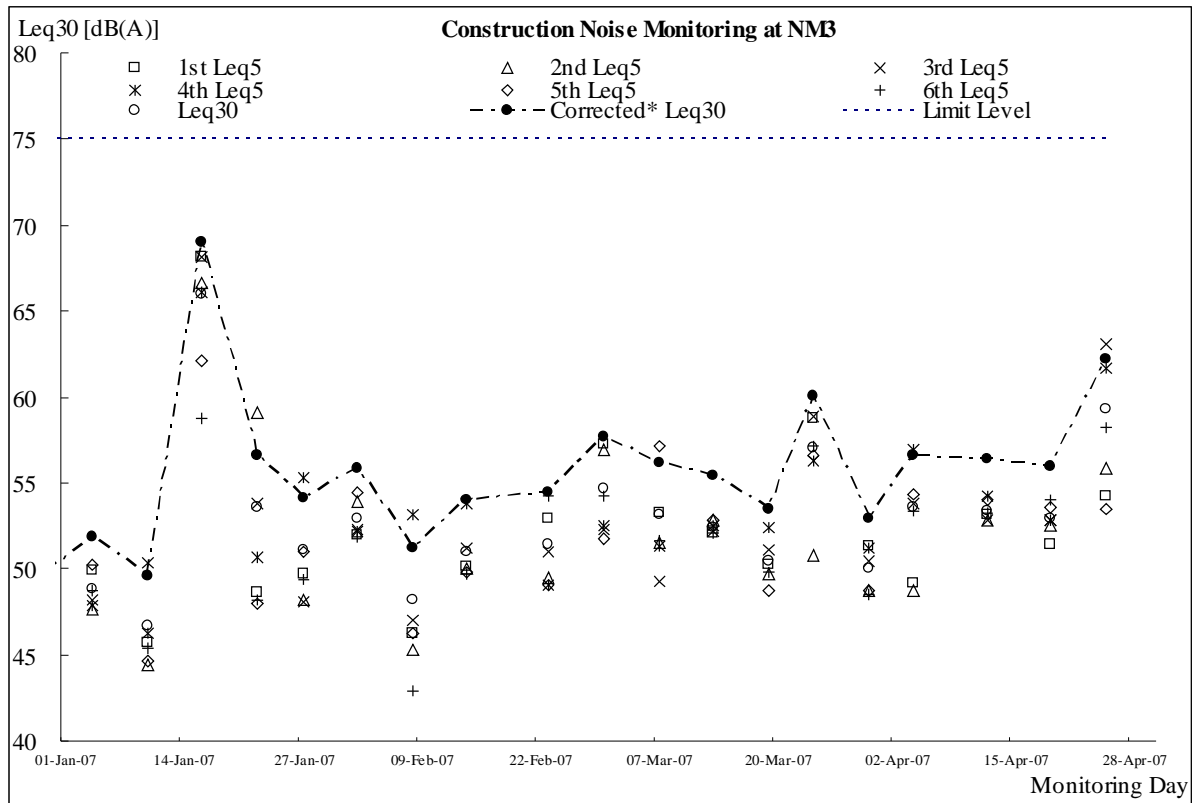
**Graphical Plots of Air Quality
&
Noise Monitoring Results**

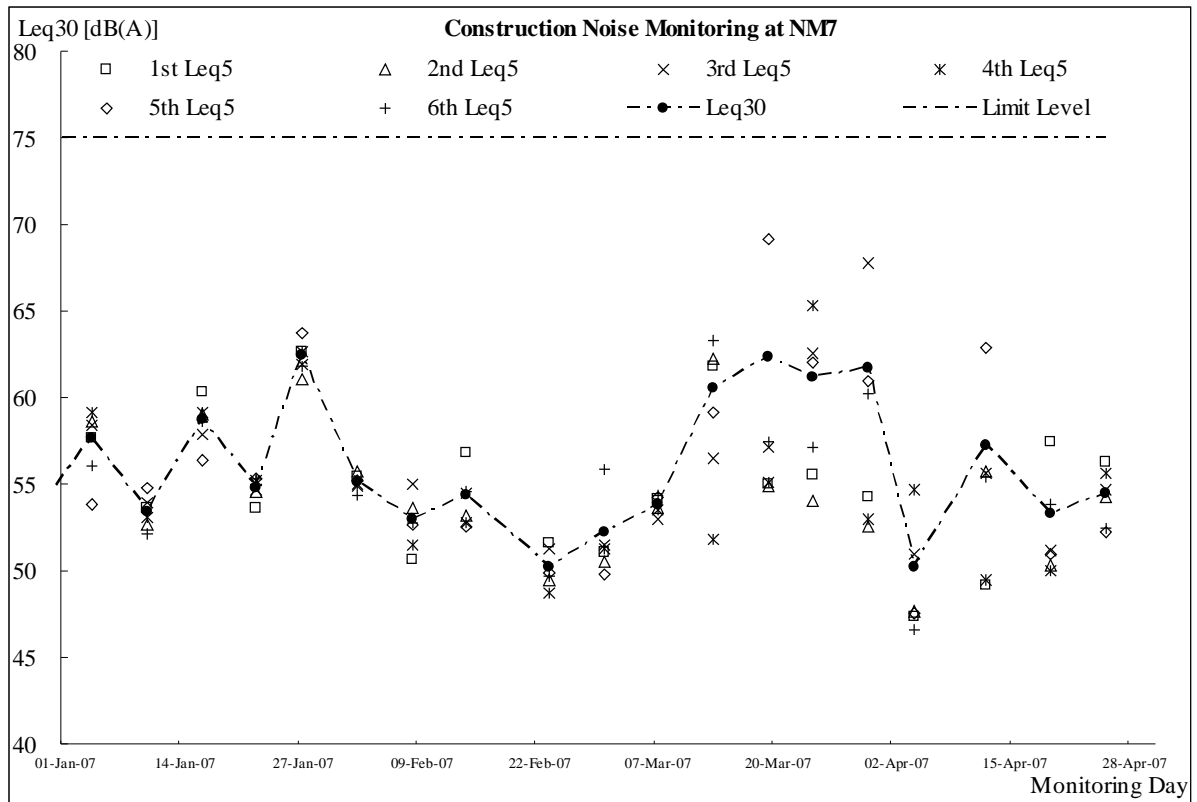
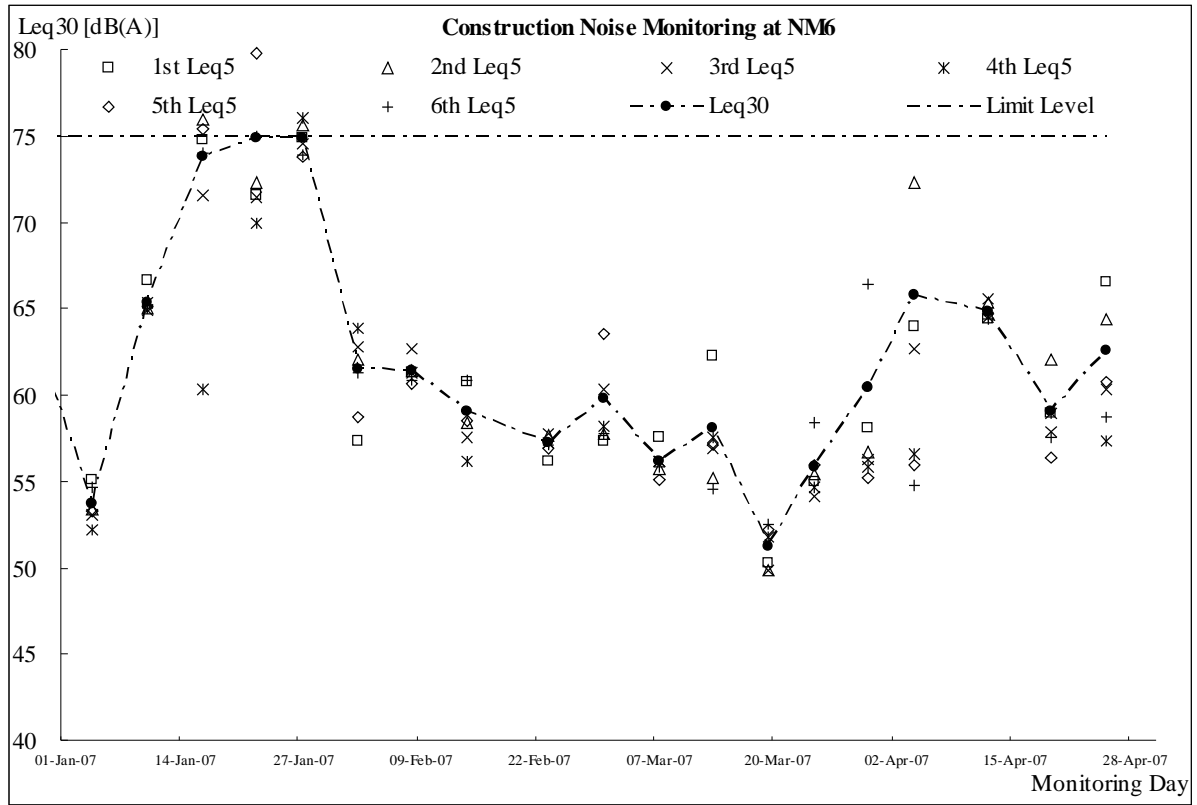
Air Quality Monitoring Results





Construction Noise Monitoring Results





Annex K

**Proforma of Site Inspection and IEC Audit
in the Reporting Period**

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	Contractor:	Leader Civil Engineering Corp. Ltd
Inspected by:	ET Auditor: Ben Tam	Engineer:	Babtie Asia Ltd
	Contractor Rep: Benny / Edwin	IEC:	Mott Connell Ltd
	IEC's Rep: Nil	Environmental Team:	Action-United Environmental Services & Consulting
	RE's Rep: Mr. S L Hui	Inspection Date & Time:	3 April 2007
		Checklist Reference No.:	DSD-AT030407

General Meteorological Information

Weather Sunny Fine Cloudy Overcast Drizzle Rain Hazy
Temp: °C
Humidity: High (RH > 90%) Moderate (90% > RH > 50%) Low (RH < 50%)
Wind: Calm Light Breeze Strong

Air Quality

	Yes	No	NA	NC	Follow-up	Remarks
Is hoarding of not less than 2.4m provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are site vehicles traveling within controlled speed limit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are site vehicles movement confined to designated haul roads?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are public roads outside site exits kept clean and free from dust?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there wheel washing facilities provided at site exits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is water spraying used during the main dust-generating activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the excavated or stockpile of dusty materials kept wet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is exposed area of ground covered or watered frequently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are load on vehicles covered by clean impervious sheeting?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are vehicles and equipment switched off while not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is smoky emissions from plants/equipment avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is open burning avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Observable dust sources	<input type="checkbox"/> Wind erosion <input type="checkbox"/> Vehicle/equipment movements <input type="checkbox"/> Loading/unloading of materials <input checked="" type="checkbox"/> Others Nil					

Construction Noise

Are the construction works scheduled to minimize noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the works or equipment sited to minimize noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are all plant and equipment well maintained and in good operating condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is idle equipment turned off or throttled down?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is silenced equipment used where appropriate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are noise enclosures or noise barriers used where necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does specified equipment has valid noise label?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are Construction Noise Permits (CNPs) available for inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Major Noise Source	<input type="checkbox"/> Traffic <input checked="" type="checkbox"/> Construction activities inside of site <input type="checkbox"/> Construction activities outside of site <input type="checkbox"/> Others _____					

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is site effluent discharged in accordance with the discharge license?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is the discharge of silty water avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is drainage adequate?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is drainage system well maintained?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there temporary ditches for runoff discharge into appropriate watercourse?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there sedimentation tanks for settling runoff prior to discharge?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the sedimentation tanks: Constructed of pre-formed individual cells?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
With adequate capacity?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Free from silt and sediment?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there neutralization tanks for concrete batching/mixing discharge?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there oil interceptors in drainage system?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is wheel wash facility provided at every site exit?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are wheel washing facilities regularly inspected and maintained?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are toilets provided on site? If so, are they properly maintained?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are manholes covered and sealed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is oil leakage or spillage avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Waste Management and Potential Land Contamination							
General Refuse: Are receptacles (rubbish bins) available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is there regular and proper disposal?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is proper sorting and recycling implemented?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Construction Waste: Is generation of construction waste minimized?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is waste sorting implemented on site?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is construction waste reused where practicable?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is construction waste properly disposed of?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are disposal records available for inspection?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical waste/waste oil Is there designated storage area?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is chemical waste stored properly?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is there proper disposal?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is chemical waste license available for inspection?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Excavated Materials Do excavated materials appear uncontaminated?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are appropriate procedures followed if contaminated materials exist?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are disposal records available for inspection?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical/Fuel Is chemical/fuel stored in bunded area?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is bund capacity adequate (>110% of the largest tank)?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are storage areas lockable?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Remarks:

Previous Audit Follow-up:

No excavated sediment accumulated at the Nam Shan Wai work front without cover.

Observations Recorded in this Site Inspection:

Nil

Signatures:

Env. Auditor

Contractor's Representative

IC(E) Auditor

Resident Site Staff

Name : Ben Tam

Name:

Name:

Name:

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	Contractor:	Leader Civil Engineering Corp. Ltd
Inspected by:	ET Auditor: Ken Wong	Engineer:	Babtie Asia Ltd
	Contractor Rep: Benny / Edwin	IEC:	Mott Connell Ltd
	IEC's Rep: Nil	Environmental Team:	Action-United Environmental Services & Consulting
	RE's Rep: Mr. S L Hui	Inspection Date & Time:	17 April 2007
		Checklist Reference No.:	DSD-AT170407

General Meteorological Information

Weather Sunny Fine Cloudy Overcast Drizzle Rain Hazy
Temp: °C
Humidity: High (RH > 90%) Moderate (90% > RH > 50%) Low (RH < 50%)
Wind: Calm Light Breeze Strong

Air Quality

	Yes	No	NA	NC	Follow-up	Remarks
Is hoarding of not less than 2.4m provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are site vehicles traveling within controlled speed limit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are site vehicles movement confined to designated haul roads?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are public roads outside site exits kept clean and free from dust?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there wheel washing facilities provided at site exits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is water spraying used during the main dust-generating activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the excavated or stockpile of dusty materials kept wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is exposed area of ground covered or watered frequently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are load on vehicles covered by clean impervious sheeting?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are vehicles and equipment switched off while not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is smoky emissions from plants/equipment avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is open burning avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Observable dust sources	<input type="checkbox"/> Wind erosion	<input type="checkbox"/> Vehicle/equipment movements				
	<input type="checkbox"/> Loading/unloading of materials	<input checked="" type="checkbox"/> Others Nil				

Construction Noise

Are the construction works scheduled to minimize noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the works or equipment sited to minimize noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are all plant and equipment well maintained and in good operating condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is idle equipment turned off or throttled down?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is silenced equipment used where appropriate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are noise enclosures or noise barriers used where necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does specified equipment has valid noise label?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are Construction Noise Permits (CNPs) available for inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Major Noise Source	<input type="checkbox"/> Traffic	<input checked="" type="checkbox"/> Construction activities inside of site				
	<input type="checkbox"/> Construction activities outside of site	<input type="checkbox"/> Others _____				

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is site effluent discharged in accordance with the discharge license?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is the discharge of silty water avoided?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is drainage adequate?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is drainage system well maintained?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there temporary ditches for runoff discharge into appropriate watercourse?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there sedimentation tanks for settling runoff prior to discharge?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the sedimentation tanks: Constructed of pre-formed individual cells?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
With adequate capacity?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Free from silt and sediment?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there neutralization tanks for concrete batching/mixing discharge?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there oil interceptors in drainage system?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is wheel wash facility provided at every site exit?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are wheel washing facilities regularly inspected and maintained?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are toilets provided on site? If so, are they properly maintained?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are manholes covered and sealed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is oil leakage or spillage avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Waste Management and Potential Land Contamination							
General Refuse: Are receptacles (rubbish bins) available?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is there regular and proper disposal?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is proper sorting and recycling implemented?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Construction Waste: Is generation of construction waste minimized?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is waste sorting implemented on site?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is construction waste reused where practicable?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is construction waste properly disposed of?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are disposal records available for inspection?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical waste/waste oil Is there designated storage area?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is chemical waste stored properly?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is there proper disposal?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is chemical waste license available for inspection?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Excavated Materials Do excavated materials appear uncontaminated?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are appropriate procedures followed if contaminated materials exist?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are disposal records available for inspection?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical/Fuel Is chemical/fuel stored in bunded area?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is bund capacity adequate (>110% of the largest tank)?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are storage areas lockable?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Remarks:

Previous Audit Follow-up:

Nil

Observations Recorded in this Site Inspection:

Silty water discharge from the sedimentation tank was observed at the Kam Tin River work front, the Contractor was reminded to review the efficiency of the desilting system as necessary.

Excavated sediment accumulated on-site without cover entirely was observed at the Lam Sham Wai, the Contractor was reminded to cover by the tarpaulin sheet entirely and remove on-site as possible.

Signatures:

Env. Auditor

Contractor's Representative

IC(E) Auditor

Resident Site Staff

Name : Ben Tam

Name:

Name:

Name:

Project	DC/2005/02 Construction of Sewers, Rising Mains & Sewage Pumping Station at Kam Tin, Nam Sang Wai and Au Tau in Yuen Long	Contractor:	Leader Civil Engineering Corp. Ltd
Inspected by:	ET Auditor: Ben Tam	Engineer:	Babtie Asia Ltd
	Contractor Rep: Benny / Edwin	IEC:	Mott Connell Ltd
	IEC's Rep: Nil	Environmental Team:	Action-United Environmental Services & Consulting
	RE's Rep: Mr. S L Hui	Inspection Date & Time:	26 April 2007
		Checklist Reference No.:	DSD-AT260407

General Meteorological Information

Weather Sunny Fine Cloudy Overcast Drizzle Rain Hazy
Temp: °C
Humidity: High (RH > 90%) Moderate (90% > RH > 50%) Low (RH < 50%)
Wind: Calm Light Breeze Strong

Air Quality

	Yes	No	NA	NC	Follow-up	Remarks
Is hoarding of not less than 2.4m provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are site vehicles traveling within controlled speed limit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are site vehicles movement confined to designated haul roads?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are public roads outside site exits kept clean and free from dust?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are haul roads and unpaved surfaces watered regularly to avoid dust generation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there wheel washing facilities provided at site exits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is water spraying used during the main dust-generating activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the excavated or stockpile of dusty materials kept wet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is exposed area of ground covered or watered frequently?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are load on vehicles covered by clean impervious sheeting?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are vehicles and equipment switched off while not in use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is smoky emissions from plants/equipment avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is open burning avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Observable dust sources	<input type="checkbox"/> Wind erosion <input type="checkbox"/> Vehicle/equipment movements <input type="checkbox"/> Loading/unloading of materials <input checked="" type="checkbox"/> Others <u>Nil</u>					

Construction Noise

Are the construction works scheduled to minimize noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the works or equipment sited to minimize noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are all plant and equipment well maintained and in good operating condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is idle equipment turned off or throttled down?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is powered mechanical equipment covered or shielded by appropriate acoustic materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is silenced equipment used where appropriate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are noise enclosures or noise barriers used where necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Does specified equipment has valid noise label?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are Construction Noise Permits (CNPs) available for inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Major Noise Source	<input type="checkbox"/> Traffic <input checked="" type="checkbox"/> Construction activities inside of site <input type="checkbox"/> Construction activities outside of site <input type="checkbox"/> Others _____					

Water Quality & Drainage		Yes	No	NA	NC	Follow-up	Remarks
Is a wastewater discharge license obtained for the Project?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is site effluent discharged in accordance with the discharge license?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is the discharge of silty water avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is drainage adequate?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is drainage system well maintained?		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there temporary ditches for runoff discharge into appropriate watercourse?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there sedimentation tanks for settling runoff prior to discharge?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are the sedimentation tanks:	Constructed of pre-formed individual cells?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	With adequate capacity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Free from silt and sediment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there neutralization tanks for concrete batching/mixing discharge?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are there oil interceptors in drainage system?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is wheel wash facility provided at every site exit?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are vehicles and plant cleaned of earth, mud & debris before leaving the site?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are wheel washing facilities regularly inspected and maintained?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are toilets provided on site? If so, are they properly maintained?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Are manholes covered and sealed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is oil leakage or spillage avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Waste Management and Potential Land Contamination							
General Refuse:	Are receptacles (rubbish bins) available?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is there regular and proper disposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is proper sorting and recycling implemented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Construction Waste:	Is generation of construction waste minimized?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is waste sorting implemented on site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is construction waste reused where practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is construction waste properly disposed of?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Are disposal records available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical waste/waste oil	Is there designated storage area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is chemical waste stored properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is there proper disposal?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is chemical waste license available for inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Excavated Materials	Do excavated materials appear uncontaminated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Are appropriate procedures followed if contaminated materials exist?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Are disposal records available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical/Fuel	Is chemical/fuel stored in bunded area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Is bund capacity adequate (>110% of the largest tank)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Are storage areas lockable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Is foam, oil, grease or other objectionable matters in water or nearby drains of sewer avoided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Remarks:

Previous Audit Follow-up:

No silty water discharge from the sedimentation tank was observed at the Kam Tin River work front.

The excavated sediment stockpile at the Nam Sham Wai work front was covered by the tarpaulin sheet.

Observations Recorded in this Site Inspection:

Stagnant water accumulated in the U-channel was observed at the Ko Po Raod work front, the Contractor was reminded to clean up and provide regular maintenance to maintain the drainage system in proper condition throughout construction stage.

Signatures:

Env. Auditor

Contractor's Representative

IC(E) Auditor

Resident Site Staff

Name : Ben Tam

Name:

Name:

Name:

Agreement No. CE37/2005 (EP)
Environmental Monitoring and Audit for
Kam Tin Trunk Sewerage Phase 1 and Au Tau trunk sewers

MONTHLY SITE INSPECTION CHECKLIST

Inspection Date	13/4/2007	Time	2.45 pm	Inspected By	Leader: Benny Lam ET: Ken Wong DSD: SL Hui IEC: Florence Yuen
Site Location	Ko Po Road Kam Tai Road Kam Tin Pumping Station Castle Peak Road				

Weather

Condition	<input checked="" type="checkbox"/> Sunny	<input type="checkbox"/> Fine	<input type="checkbox"/> Overcast	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Rain	<input type="checkbox"/> Storm	<input type="checkbox"/> Hazy
Temperature	28 °C		Humidity	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Moderate	<input type="checkbox"/> Low	
Wind	<input checked="" type="checkbox"/> Calm	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong	Direction <input type="text"/>		

EIA ref:		Close-out on last comments Y/N	N/A or not obs	Yes	No	Photo/Remarks
	Construction Phase					
	Air Quality - Construction Phase					
3.5	• Are hoardings of not less than 2.4m high provided along the site boundary?	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
3.5	• Is the portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit kept clear of dusty materials?	<input type="checkbox"/>			<input checked="" type="checkbox"/>	P1020515
3.5	• Are stockpiled dusty materials covered by impervious sheeting and placed in an area sheltered on top and 3 sides or sprayed with water?	<input type="checkbox"/>			<input checked="" type="checkbox"/>	P1020524 & P1020525
3.5	• Are dusty material loads on vehicles sprayed with water prior to loading and unloading?	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
3.5	• Are all vehicles washed to remove dusty materials from its body and wheels before leaving site?	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
3.5	• Are vehicles which are carrying dusty materials covered entirely by impervious sheeting when leaving site?	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
3.5	• Are surfaces where any mechanical breaking operation takes place sprayed?	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
3.5	• Are working area of any excavation sprayed with water, immediately before, during and immediately after the operation?	<input type="checkbox"/>		<input checked="" type="checkbox"/>		
3.5	• Where a scaffolding is erected around the perimeter of a building under construction, are effective dust screens, sheeting or netting provided to enclose the scaffolding from the ground floor level of the SPS, or a canopy from the first floor level up to the highest level of the scaffolding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
3.5	• Are skip hoists for material transport totally enclosed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

3.7	<ul style="list-style-type: none"> Have dust monitors been provided at the following locations: <ul style="list-style-type: none"> Boundary facing scattered house in NSW (AM1) Boundary facing Fung Kat Heung (AM5) Boundary facing scattered house near route 3 (AM6) 			✓			
Construction Noise							
Demolition works							
4.7.1	<ul style="list-style-type: none"> Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used? 			✓			
Sewage Pumping Stations P1, P2 & P3							
4.7.1	<ul style="list-style-type: none"> Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used? 			✓			
4.7.1	<ul style="list-style-type: none"> Are temporary noise barrier, in the form of a site hoarding (with superficial density of at least 20kg/m², with no substantial gaps), along the site boundaries of the pumping station sites adopted? 			✓			
Sewers and Rising Mains using Open Trench							
4.7.1	<ul style="list-style-type: none"> Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used? 			✓			
4.7.1	<ul style="list-style-type: none"> Are handheld breakers used for all initial road opening activities, when breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached? 			✓			
4.7.1	<ul style="list-style-type: none"> Are movable noise barriers or 3 sided enclosures installed for all initial road opening activities (breaking tarmac/concrete road surface to a depth of 300mm or when granular material is reached) where there NSRs within 50m of the line of sight? 		✓				
Sewers and Rising Mains using Pipe Jacking							
4.7.1	<ul style="list-style-type: none"> Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used? 			✓			
Road Pavement and Finishes							
4.7.1	<ul style="list-style-type: none"> Are quiet PME which meet the SWLs from BS 5228:Part 1: 1997 used? 			✓			
4.9.1	<ul style="list-style-type: none"> Have noise monitors been provided at the following locations: <ul style="list-style-type: none"> (NM3) Scattered house in NSW (NM4) Scattered house in NSW (NM6) Scattered house near Route 3 (NM7) Fung Kat Heung 			✓			
Construction Runoff and Site Drainage							
	<ul style="list-style-type: none"> Are perimeter cut-off drains to direct off-site water around the site constructed with internal drainage works and erosion and sedimentation control facilities implemented. Are channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers provided on site to direct stormwater to silt removal facilities? 			✓			
	<ul style="list-style-type: none"> Are dikes or embankments for flood protection implemented around the boundaries of earthwork areas. Are sediment/silt traps incorporated in the permanent drainage channels to enhance deposition rates? 			✓			
	<ul style="list-style-type: none"> Are silt removal facilities provided with retention time for silt/sand traps of 5 minutes under maximum flow conditions? 				✓	P1020513 P1020518	
	<ul style="list-style-type: none"> Are construction works programmed to minimize surface excavation works during the rainy seasons (April to September)? 		✓				
	<ul style="list-style-type: none"> Are slopes minimised and erosion potential reduced? 			✓			
	<ul style="list-style-type: none"> Is deposited silt and grit removed regularly and disposed of by spreading evenly over stable, vegetated areas? 		✓				

- Are measures taken to minimise the ingress of site drainage into excavations? Is water pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?

	✓		
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- Are open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ covered with tarpaulin or similar fabric during rainstorms?

	✓		
--	---	--	--
- Are manholes (including newly constructed ones) adequately covered and temporarily sealed?

		✓	
--	--	---	--
- Are precautions taken before rainstorms?

		✓	
--	--	---	--
- Are all vehicles and plant cleaned before leaving site?

		✓	
--	--	---	--
- Is solid waste, debris and rubbish on site appropriately collected, handled and disposed of properly to avoid water quality impacts?

		✓	
--	--	---	--
- Are all fuel tanks and storage areas provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby?

		✓	
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Sewage Effluent - Construction Phase

- 1) Are portable chemical toilets and sewage holding tanks provided? Is handling the construction sewage generated for collection and disposal of this waste? Is a licensed contractor employed?

		✓	
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Waste Management - Construction Phase

- 6.6.2 • Are the necessary waste disposal permits from the appropriate authorities in place for chemical and C&D wastes, in accordance with the Waste Disposal (Chemical Waste) (General) Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap 28)?

		✓	
--	--	---	--
- 6.6.2 • Is chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, being handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes?

		✓	
--	--	---	--
- 6.6.2 • Are containers used for the storage of chemical wastes suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation?

		✓	
--	--	---	--
- 6.6.2 • Is the storage area for chemical wastes clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated?

		✓	
--	--	---	--
- 6.6.2 • Is disposal of chemical waste via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD?

	✓		
--	---	--	--
- 6.6.2 • Are trip tickets for disposal available to monitor disposal of C&DM and solid wastes at public filling and landfills, and to control fly tipping?

		✓	
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Land Contamination - Construction Phase					
7.5.6	• Is a revised CAP submitted to the EPD before commencement of construction works? Is the CAP implemented and findings of the investigations reported in the CAR, before ground disturbance is allowed?		✓		
7.5.6	• If land contamination is confirmed, has a RAP been prepared and submitted to EPD?		✓		
7.5.6	• Are contaminated sites remediated in accordance with the approved CAR/RAP?		✓		
Ecology - Construction Phase					
8.7.1	• Are construction activities prohibited during November to March for the sections of works within the WCA and WBA, and close to locations of ecologically sensitive species.		✓		
8.7.1	• During November to March periods, are regular site inspections (at least twice a month) undertaken by ET to ensure proper implementation of this restriction?		✓		
8.7.2	• Is pipe jacking method used for sewers and rising mains crossing over MDC within the WCA and WBA?			✓	
8.7.2	• During November to March, are regular site inspections (at least twice a month) undertaken by ET for the remaining sewerage sections (including parts of S4, S5 and S6) within the WCA and WBA where construction activities cannot be rescheduled?		✓		
8.7.2	• The site inspections shall check and report the number of workfronts and implementation of mitigation measures in the monthly EM&A Report.			✓	
8.7.3	• Are quietened construction plant and equipment used for PS (P2 and P3) and sewers (S4, S5, S6) within the WCA and WBA?			✓	
8.7.4	• For P1-P3, have fences along the boundary of the pumping stations construction sites been erected?			✓	
8.7.4	• There shall be no filling and dumping to the remaining abandoned fishpond at P2.		✓		
8.7.4	• Are silt removal facilities, designed to the ProPECC Note PN1/94, installed and operated at the P1 to P3 sites? The minimal total combined volume of the silt removal facilities at P3 (NSW SPS) should be 15m3.		✓		
8.7.4	• There shall be no open fires within the site boundary.			✓	
8.7.4	• Have temporary fire fighting equipment provided in the works areas.			✓	
Landscape and Visual - Construction Phase					
	• Have the implementation of mitigation measures (i.e., top soil reused, new compensatory planting) been reported in the monthly EM&A?		✓		
	• The first monthly EM&A Report should report on the appearance of the temporary hoarding barriers.			✓	
	• Are screen planting (3m wide) and trees with dense canopy (up to 5m) provided?		✓		
	• Is felling of mature trees kept to a minimum?			✓	

OTHER OBSERVATIONS

Ko Po Road


- P1020513 — Stagnant water was observed in sedimentation tanks which is not in operation. The Contractor was reminded to remove the stagnant water as soon as possible.
- P1020515 — Haul road was dry. The Contractor was reminded to provide water spray more frequently to suppress dust.

Kam Tai Road

- P1020518 — The Contractor was reminded to provide better maintenance to the sedimentation tanks.

Castle Peak Road





- P1020524 & 1020525 — The Contractor was reminded to cover the stockpiles of dusty materials entirely with impervious sheeting.

DSD Representative	Contractor Representative	ETL	IEC
()	()	()	 (Florence Yuen)

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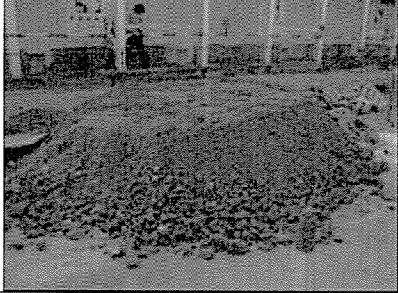
**MONTHLY SITE INSPECTION PHOTO
13 April 2007
PART 1 – Environmental Observations**

This month's observations

This month's observations	This week's observations
Ko Po Road	
	
P1020513: Stagnant water was observed in sedimentation tank which is not in operation. The Contractor was reminded to remove the stagnant water as soon as possible.	
	
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MONTHLY SITE INSPECTION PHOTO
13 April 2007
PART 1 – Environmental Observations

		
<p>P1020524 & 1020525: The Contractor was reminded to cover the stockpiles of dusty materials entirely with impervious sheeting.</p>		