KINGSFORD ENVIRONMENTAL (H.K.) LTD.
Consultancy Engineering & Contracting

CONTRACT NO. DE/2005/04

SUPPLY AND INSTALLATION OF ELECTRICAL AND MECHANICAL EQUIPMENT FOR UPGRADING OF TING KOK ROAD PUMPING STATION NO. 5

ENVIRONMENTAL MONITORING AND AUDIT

QUARTERLY EM&A SUMMARY REPORT NO. 1

FROM JUNE TO AUGUST 2007

for

Biwater Man Lee Limited

Submitted by

Kingsford Environmental (H.K.) Ltd.

CONTROLLED DOCUMENT	Revision: A Approved by: SL	Revision Date: 31/8/07 Distribution Date: 31/8/07

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CUSTOMER: **Biwater Man Lee Limited**

PROJECT NAME: **Supply and Installation of Electrical and Mechanical Equipment for Upgrading of Ting Kok Road Pumping Station No. 5**

PROJECT NO.: 81901

Author: _____ (Signature) Ms. A. Lau (Name)

Date: 31/8/2007

Review and Approved by: _____ (Signature) Mr. S. Lau (Name)

Date: 31/8/2007

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APPROVAL

Certified by : LGT Leader

Signature: _____ Date: 31 August 2007

Mr. Stanley Lau

DISTRIBUTION LIST

Title	Name	No. of Copies
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E&M Contractor (Biwater Man Lee Limited)	Mr. Thomas Jim	1
Independent Environmental Checker (CH2M HILL Hong Kong Limited)	Mr. K. S. Lee	1

EXECUTIVE SUMMARY

This is the first Quarterly Environmental Monitoring and Audit (EM&A) Summary Report for the Drainage Services Department Contract No. DE/2005/04 entitled "Supply and Installation of Electrical and Mechanical Equipment for Upgrading of Ting Kok Road Pumping Station No. 5". Biwater Man Lee Limited has employed an independent Landfill Gas Team (LGT), Kingsford Environmental (H.K.) Limited, to monitor landfill gas parameter and audit the implementation of the landfill gas hazard mitigation measures, as required in the contract.

The LGT's duties are to review/comment on the contractor's method statements regarding actions, investigate complaints, provide monthly and quarterly reports on the environmental status, and certification of reports and all submissions under the EP in accordance with the requirement of the Report on Landfill Gas Hazard Assessment as per section 8 and the Environmental Permit. The Independent Checker (Landfill Gas) (IC(LG)) for the project is to review and verify the reports and all submissions under the EP in accordance with the requirement of the Report on Landfill Gas Hazard Assessment as per section 8.2.4.

For the landfill gas monitoring activities, Action and Limit (A/L) Levels are defined levels of impact recorded which represent levels at which a prescribed response is required. Action Limit Level is provided by the baseline monitoring results documented in the baseline monitoring report (Report No. EA01284R002) for the Project. The A/L Level for the methane are 0.5%/1.0%, the A/L Level for the carbon dioxide are 0.5%/1.5% and the A/L Level for the oxygen are 19.0%/18.0%.

In the first quarter (June – August 2007), the major site activities included the installation of E&M equipment at Transformer Room and Pumping Station. Note that the Transformer Room was handover to CLP on 17 August 2007.

The site handover date was on 15 May 2007 and no site work was conducted in May 2007 by Biwater Man Lee Limited. Therefore, Environmental Monitoring and Audit was commended in June 2007. In this quarter, weekly site inspection and landfill gas monitoring, as recommended in the Report on Landfill Gas Hazard Assessment as per section 8, were conducted.

No exceedance of monitoring parameters was found and no deficiency was found during the site inspections in this quarter. Thus, the work activities and mitigation measures were in compliance with the environmental protection regulations, contract requirements and the requirement of the environmental permit during this quarter.

Ir. Stanley Lau was approved by EPD and ER as the LGT Leader for the Drainage Services Department Contract No. DE/2005/04 entitled "Supply and Installation of Electrical and Mechanical Equipment for Upgrading of Ting Kok Road Pumping Station No.5" in this quarter.

Three monthly EM&A meetings were attended for the months of June to August 2007 with all of the parties (DSD, civil and E&M contractors, LGTs, and the IC(LG)) to review the environmental issues and communication between the parties.

There were no complaints received during the quarter.

There was no reporting change during the reporting quarter.

The planned activities for September – November 2007 as regards E&M equipment are mainly the installation and T&C (if required) for the following one scheduled site works:- 1) Pumping Station.

1 Introduction

This is the first Quarterly Environmental Monitoring and Audit (EM&A) Summary Report for the Drainage Services Department Contract No. DE/2005/04 entitled "Supply and Installation of Electrical and Mechanical Equipment for Ting Kok Road Pumping Station No.5". The report was prepared by the Landfill Gas Team, Kingsford Environmental (H.K.) Limited, of the E&M Contractor, Biwater Man Lee Limited. This report is submitted to the Client, the Drainage Services Department, and Independent Checker, CH2M HILL Hong Kong Limited, for the project. In addition, this report is to be submitted to EPD in accordance with the requirement of the environmental permit (EP-212/2005) and Report on Landfill Gas Hazard Assessment as per section 8 (EM&A).

This report presents the summary results of the landfill gas monitoring and environmental auditing of the project activities regarding to the E&M equipment site work conducted during the months of June to August 2007. The various landfill gas parameters at the beginning of each half working day for E&M installation work (i.e. morning and afternoon) was monitored and auditing works including mainly regular site inspections for verification of the mitigation measures implementation as recommended in the Report on Landfill Gas Hazard Assessment was conduct by LGT.

The contact information for the key personnel is shown in Appendix 1.

2 Basic Project Information

The major parties involved in the project with respect to environmental protection are shown in Appendix 1 (Ref.: Report on Landfill Gas Hazard Assessment). These include the Biwater Man Lee Limited, the Landfill Gas Team, the DSD Client, and the Independent Checker (Landfill Gas), or IC(LG) and EPD. A chart showing the duties of the parties regarding inspections and follow-up is also shown.

The management of Biwater Man Lee Limited and project team is shown in Appendix 1. The LGT consists of an LGT Leader and 1-2 landfill gas technicians. The LGT will co-ordinated with the Site Agent of Biwater Man Lee Limited for site inspection.

The site works for the E&M equipment and for testing and commissioning of the various systems has commenced on 15 May 2007 and to be completed by 15 November 2007. The master construction program schedule is attached in Appendix 2. The major E&M work packages are listed below in Table 1.

Table 1: Master Construction Program for E&M Works

Section	Task Description	Date
I	- Submissions and approval of Major Equipment, Drawing and Design	16 Jan '06 – 15 May '06
II	- Equipment Manufacture and Delivery	15 May '07 – 15 Nov '07
	- Site installation, Public Utilities and T&C	21 Jun '07 – 15 Nov '07

EM&A contact information for the key personnel is shown in Table 2. Ir Stanley Lau was approved by EPD and ER as the LGT Leader. The appointment letter of LGT Leader is attached in Appendix 3.

Table 2: EM&A Contact Information for Key Personnel

Name	Title	Telephone	Fax
Mr. Thomas Jim (BML)	Site Agent	2671-2350 / 9080-4998	2671-2351
Mr. Tommy Lo (BML)	Deputy Site Agent	2416-2828	2413-6278
Mr. Thomas Jim (BML)	Site Waste Manager / Co-ordinator	2671-2350 / 9080-4998	2671-2351
Mr. K. C. Lau (BML)	Site Supervisor	9056-7887	2413-6278
Mr. Stanley Lau (LEL)	LGT Leader	2612-2817	2614-7012
Ms. Angela Lau (KEL)	LGT Assistance	2612-2817	2614-7012
Mr. C. W. Tse (DSD)	Engineer's Representative	2594-7309	2827-8532
Mr. K. S. Lee (CH2M)	The Independent Checker (Landfill Gas)	2507-2203	2507-2293

3 Environmental Requirements

The works performed for this contract shall comply with the relevant Hong Kong government ordinances, regulations, guidelines, practice notes, etc. as regards environmental protection, as detailed in the Report on Landfill Gas Hazard Assessment, Section 8 (Environmental Monitoring and Audit) and Environmental Permit.

The Report on Landfill Gas Hazard Assessment, Section 8 (Environmental Monitoring and Audit) specifies environmental auditing to ensure that the mitigation measures recommended in the Report on Landfill Gas Hazard Assessment are effectively implemented. A summary of the required environmental protection and mitigation measures for the construction phase extracted from Appendix G of the Project Profile ("Implementation Schedule for Landfill Gas Hazard Mitigation Measures") is attached in Appendix 4.

The environmental aspects for the construction phase include plant noise, dust, water quality, waste materials (including chemicals) and landfill gas hazard. Landfill gas monitoring is required at the beginning of each half working day for the E&M installation work (i.e. morning and afternoon). Since no excavation work is carried out by Biwater Man Lee Limited. Therefore, impact monitoring of landfill gas is to be carried out at selected location (i.e. Transformer Room and Pumping Station). Landfill gas parameters to be monitored comprise methane, carbon dioxide and oxygen. In addition, temperature is also recorded. The gas analyzer equipments (Manufacture: Geotechnical Instrument GA 2000 and Serial No.: GA 08277 and Gas Data Model GFM410 Landfill and Serial No. 10239) were used for landfill gas monitoring and the calibration records for the equipment used for landfill gas monitoring is attached in Appendix 5.

For the landfill gas monitoring, Action and Limit (A/L) Levels are defined levels of impact recorded which represent levels at which a prescribed response is required. Action Limited Level is provided by the baseline monitoring results documented in the baseline monitoring report (Report No. EA01284R002) for Project. The Event and Action Plans (EAPs) is to provide, in association with the monitoring and audit activities, procedures for ensuring that if any significant environmental incident (either accidental or through inadequate implementation of mitigation measures) does occur, the cause will be quickly identified and remediated, and the risk of a similar event recurring is reduced. This also applies to the exceedances of A/L criteria identified in the Report on Landfill Gas Hazard Assessment. A summary of the event/action plant for the Project extracted from Report on Landfill Gas Hazard Assessment is attached in Appendix 4.

The Environmental Permit, i.e. section 6.21 of the Particular Specification, is shown in Appendix 6.

4 Implementation Status of Environmental Protection

Weekly site inspections were conducted during this quarter, as required. Frequency of the site inspections depends upon the work activities as regards environmental protection. The site inspections and audits conducted during this quarter are summarized in Table 3.

Table 3: Site Inspections/Audits for June to August 2007

Month	Date of Site Inspections/Audits	
	by ER/LGT/BML	by EPD
Jun 2007	6, 14, 21 and 26	n/a
Jul 2007	6, 12, 19 and 26	n/a
Aug 2007	3, 9, 15, 23 and 29	n/a

The work activities and dates of occurrence of each activity in this quarter are summarized in Table 4.

In the first quarter (June – August 2007), the major site activities included the installation of E&M equipment at Transformer Room and Pumping Station. Note that the Transformer Room was handover to CLP on 17 August 2007.

Table 4: Work Activities from June to August 2007

Transformer Room	
Installations of E&M equipment	21 Jun '07 – 5 Jul '07, 10 Jul '07, 1 Aug '07, 7 Aug '07 and 14 – 17 Aug '07
Pumping Station	
Installations of E&M equipment	4 Jul '07 – 31 Aug '07*

* *Scheduled dates only for completion of the activities.*

Noise, air quality, water quality and waste/ chemicals Management

The job nature of the E&M contractor, Biwater Man Lee Limited, is mainly for installation of E&M equipment inside the Transformer Room and Pumping Station, all hand-held's breakers, bulldozer, concrete lorry mixer, dump truck and hand-held's poker, vibratory would not be used so that the impact from noise and dust would be low. For water quality, appropriate mitigation measure e.g. regular removal of stagnant water and/or spraying larvicide will be implemented in place, if necessary.

The minor construction waste materials are preferred to be removed promptly from the site. No inert C&D materials will be generated from installation of E&M equipment whereas the minor non-inert C&D waste will be disposed to Tseung Kwan O landfill. Note that the C&D materials should be reduced, reused and recycled if possible, before disposal. Any substance identified as chemical waste would be disposed of properly by a licensed collector. A trip ticket system for the disposal of C&D waste should be conducted as required by the Particular Specification. Rubbish bins are provided on-site for collecting general refuses as necessary. The general refuse would be removed regularly and disposed to landfills by a licensed collector. A proper record of each waste disposal, including the new bar-coded disposal delivery form, would be kept to verify proper handling and disposal.

In this quarter, a refuse bins and waste storage/sorting area were provided for the collection of general refuse and sorting the C&D materials. No C&D waste was disposed during this quarter by the licensed waste collector.

In August 2007, accumulations of water were observed in the cable trench at Pumping Station. The accumulated water in cable trench was removed accordingly.

Landfill Gas Hazard

The installation of E&M equipment is carried out inside the Transformer House and Pumping Station and no excavation work will be carried out by Biwater Man Lee Limited.

Appropriate mitigation measure will be implemented in place e.g. smoking and naked flames are not allowed within the working area and worker is not allowed to work alone at any time in the confined area. In addition, Safety Officer, trained to familiar with gas detection equipment and landfill gas-related hazards, is appointed on site. Also, safe portable instruments, appropriately calibrated and capable of measuring the methane (0-100% LEL and 0-100% by volume), carbon dioxide (0-100%) and oxygen (0-21%) is provided.

For the confined space, welding, flame-cutting or other hot works are only allowed to be carried out in accordance with the requirement of the Report on Landfill Gas Hazard Assessment as per section 6 and mitigation measures for the construction phase extracted from Appendix G of the Project Profile ("Implementation Schedule for Landfill Gas Hazard Mitigation Measures").

The temporary site offices or buildings that have enclosed spaces with the capacity to accumulate landfill gas, then they are located on an area which has been proven to be free of landfill gas and monitoring manually by the Safety Officer or an approved and appropriately qualified person to ensure that hazardous concentration of landfill gas does not occur; or be raised clear of the ground. Also, adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets will be made available on site. Lastly, periodic environmental monitoring report with LFG control measures evaluation during construction phase should be provided by contractor.

In this quarter, daily field measurement recording sheet was checked and no exceedances for Action or Limit Level at any locations were recorded during the reporting period. In August 2007, hot works were carried out on the ground floor at Pumping Station and the installation of E&M equipments at Pumping Station were carried out in confined space. Hot works and installation works in confined space were carried out when controlled by a 'permit to work' procedure. In addition, adequate fire extinguishing equipments were made available on site.

5 Landfill Gas Monitoring Results

The landfill gas monitoring by Landfill Gas Team was carried out in June - August 2007 to monitor the landfill gas parameters comprising methane, carbon dioxide and oxygen. Note that temperature is also recorded. The site works of the E&M contractor, Biwater Man Lee Limited, is mainly for installation of E&M equipment inside the Transformer Room and Pumping Station and no excavation work is carried out by Biwater Man Lee Limited. Therefore, monitoring locations were selected at Transformer Room and Pumping Station.

The M1 (new deep borehole) and M3 (existing manhole) monitored by civil contractor (Maeda) was recorded for the analysis of potential risk and identify any adverse impacts arising from the boreholes to protect the worker safety.

The results are summarized below in Table 5 and the site layout of work areas and the monitoring location code is shown in Appendix 7.

Table 5: Monitoring results by civil contractor (Maeda) at fixed location for June - August 2007

Fixed Monitoring Station	Date of measurement	Flammable gas Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temp. (^{0}C)	Remarks
M1	29-Jun-07	0.0	0.0	19.7	30.0	
M3	29-Jun-07	0.0	0.0	19.8	30.0	
M1	27-Jul-07	0.0	0.0	19.7	28.9	
M3	27-Jul-07	0.0	0.0	19.8	28.9	
M1	29-Aug-07	0.0	0.0	19.8	25.8	
M3	29-Aug-07	0.0	0.0	19.8	25.8	

The landfill gas monitoring was carried out according to the working area of E&M installation (inside Transformer Room and Pumping Station) at the beginning of each half working day for the E&M installation works (i.e. morning and afternoon).

In June, July and August 2007, the number of reading monitored at Transformer Room and pumping Station were 40, 63 and 167, respectively. Thus, a total 270 numbers of readings at Transformer Room and Pumping Station were monitored in this quarter.

No exceedances for Action or Limit Level at any locations were recorded during the reporting period. Refer to field measurement recording sheet and monitoring location in Appendix 7.

6 Summary of Deficiencies and Remedial Actions

There were no deficiencies noted from the site inspections in this quarter (June – August 2007).

7 Summary of Complaints and Remedial Actions

No complaints were received during this quarter (June – August 2007). In the event of complaints, the procedure for handling of the complaints is detailed in the Report on Landfill Gas Hazard Assessment.

8 Comments, Conclusions and Recommendations

The landfill gas monitoring for the coming three months (September – November 2007) will be continued. In addition, the planned activities for the coming three months (September – November 2007) as regards E&M equipment consists of E&M equipment installation and T&C (if required), as listed below:-

- Pumping Station

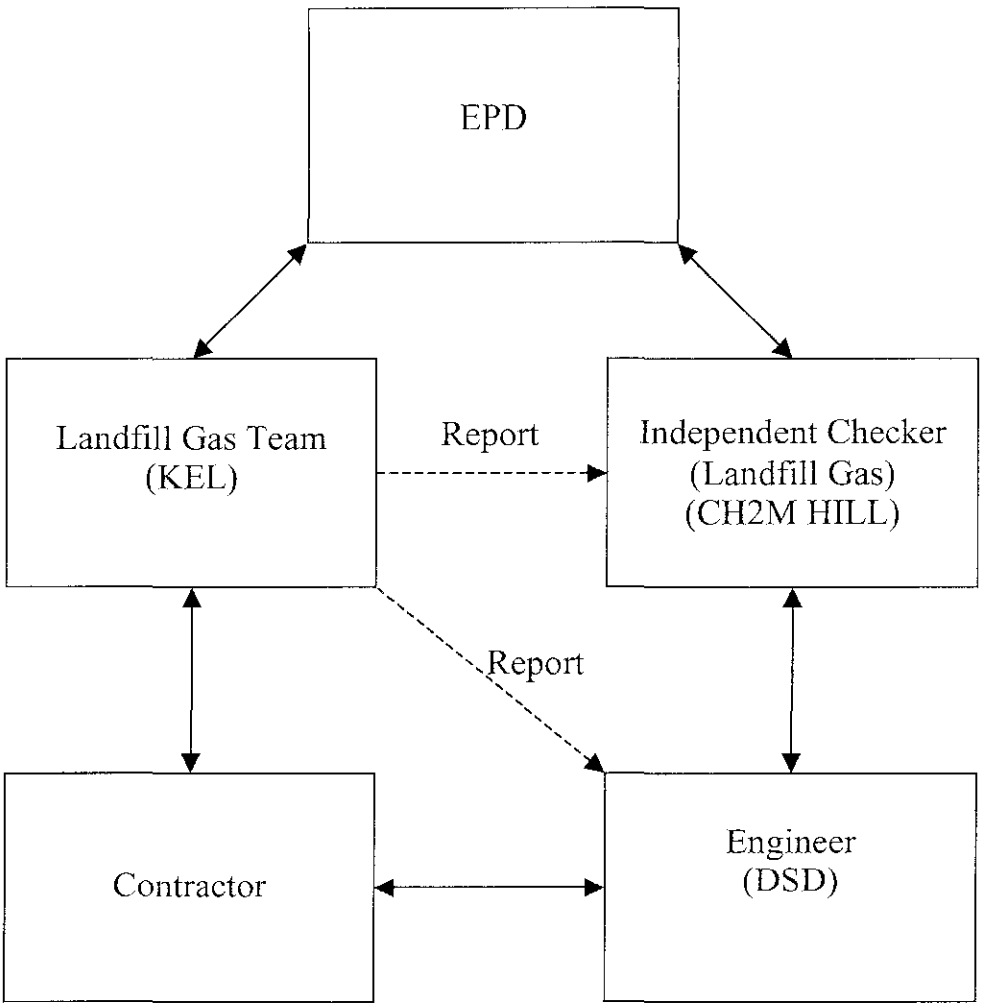
The anticipated landfill gas issues for September – November 2007 will be as follows:-

- Pumping Station
  - No significant landfill gas issue.

Appendix 1

Reporting Structure

and Contractor Project Management Structure



Communication Line

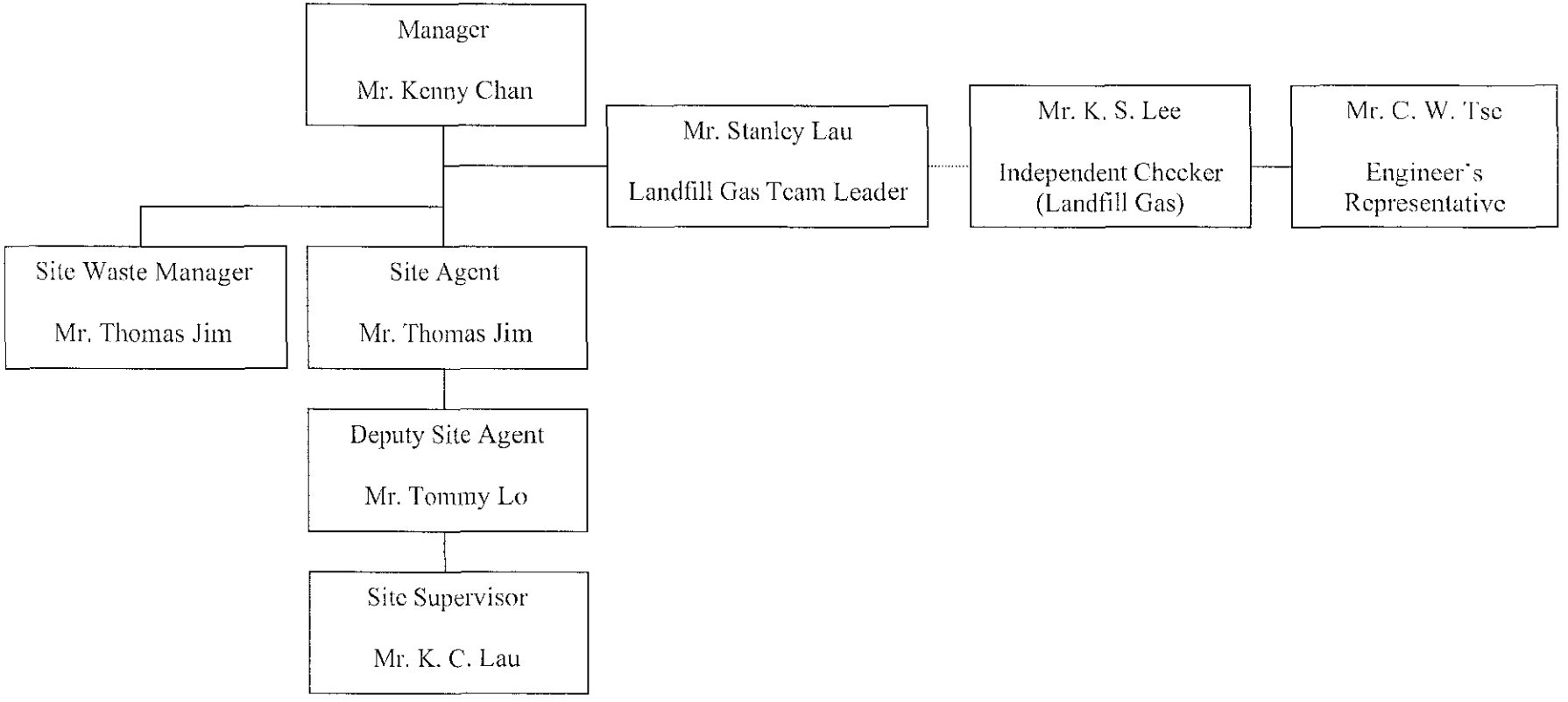
Reporting Line

Upgrading of Ting Kok Road Pumping Station No. 5
Project Organization

CONTRACT NO. DE/2005/04

SUPPLY AND INSTALLATION OF ELECTRICAL AND MECHANICAL EQUIPMENT FOR UPGRADING OF TING KOK ROAD PUMPING STATION NO. 5

Project Team Organization Chart relevant to EM&A



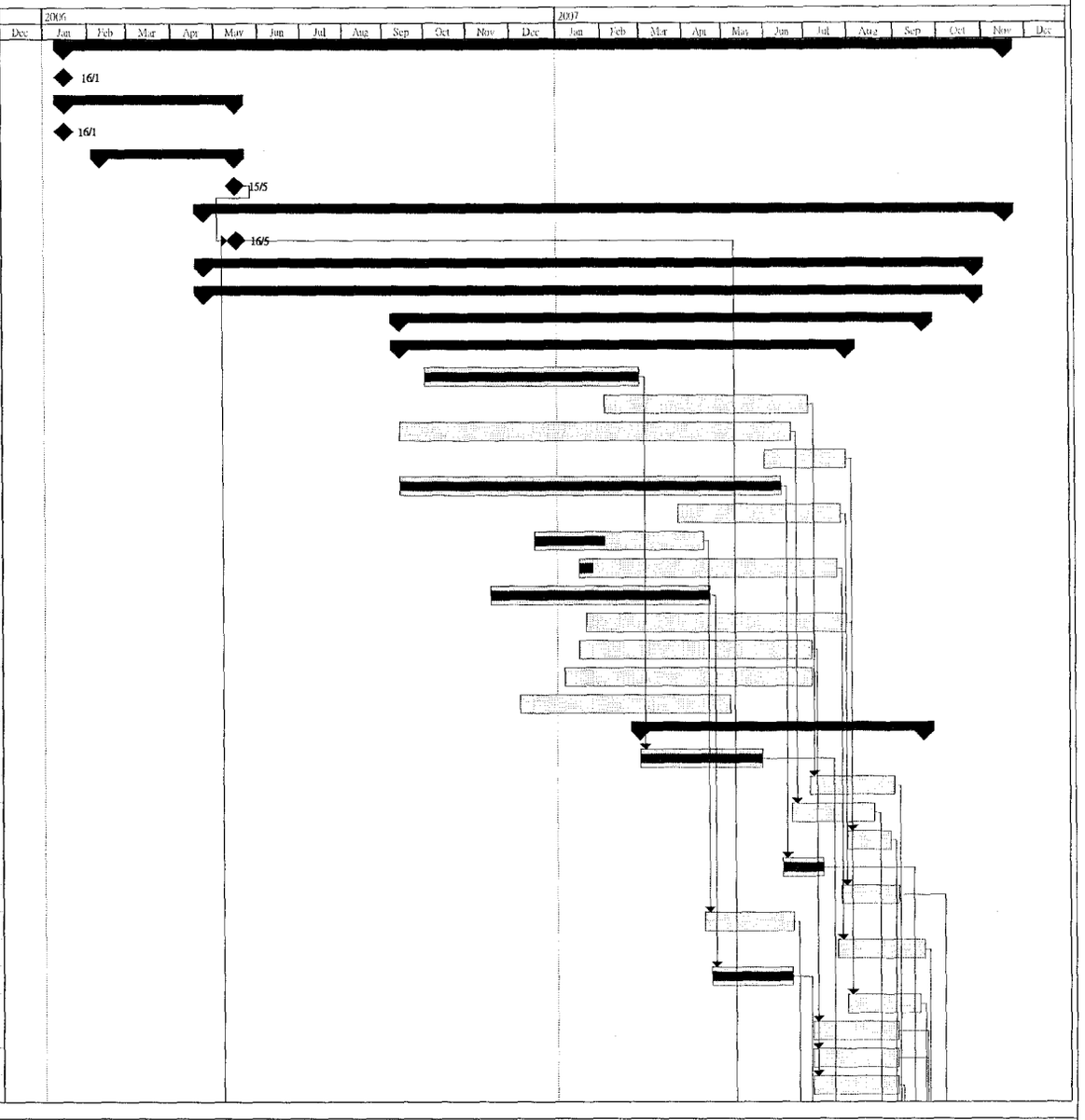
EM&A Contact Information for Key Personnel

Name	Title	Telephone	Fax
Mr. Thomas Jim (BML)	Site Agent	26712350 / 90804998	26712351
Mr. Tommy Lo (BML)	Deputy Site Agent	24162828	24136278
Mr. Thomas Jim (BML)	Site Waste Manager / Co-ordinator	26712350 / 90804998	26712351
Mr. K. C. Lau (BML)	Site Supervisor	97569316	24136278
Mr. Stanley Lau (KEL)	LGT Leader	2612-2817	2614-7012
Ms. Angela Lau (KEL)	LGT Assistance	2612-2817	2614-7012
Mr. C. W. Tse (DSD)	Engineer's Representative	25947309	28278532
Mr. K. S. Lee (CH2M)	The Independent Checker (Landfill Gas)	2507-2203	2507-2293

Appendix 2

Master Construction Work Program

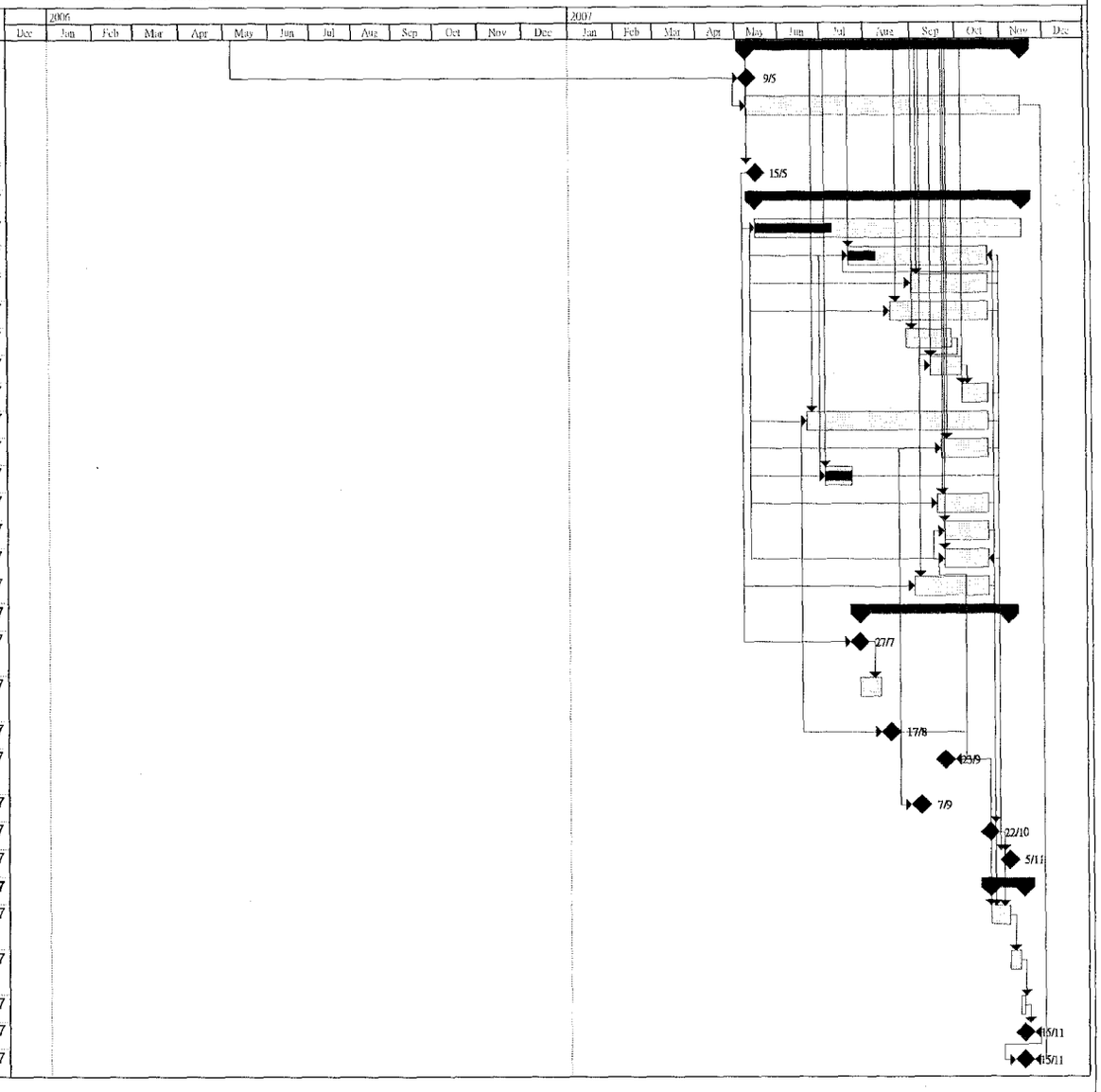
ID	Task Name	Duration	Start	Finish
1	**Contract Period**	**669 days**	**16 Jan '06**	**15 Nov '07**
2	Contract Commencement Day	0 days	16 Jan '06	16 Jan '06
4	**Works of Section I**	**120 days**	**16 Jan '06**	**15 May '06**
4	Section 1 Commencement	0 days	16 Jan '06	16 Jan '06
5	**Submission & Approval**	**95 days**	**10 Feb '06**	**15 May '06**
27	Completion of Section I	0 days	15 May '06	15 May '06
28	**Works of Section 2**	**571 days**	**24 Apr '06**	**15 Nov '07**
29	Section 2 Commencement	0 days	16 May '06	16 May '06
30	**Remaining Submission**	**550 days**	**24 Apr '06**	**25 Oct '07**
31	**Minor Equipment**	**550 days**	**24 Apr '06**	**25 Oct '07**
42	**Equipment Manufacture & Delivery**	**373 days**	**13 Sep '06**	**20 Sep '07**
43	**Manufacturing**	**320 days**	**13 Sep '06**	**29 Jul '07**
44	✓ Penstock & Actuator	150 days	1 Oct '06	27 Feb '07
45	Inlet Screens	150 days	3 Feb '07	2 Jul '07
46	Submersible Pumps	280 days	13 Sep '06	19 Jun '07
47	DI Pipework & Fittings	60 days	31 May '07	29 Jul '07
48	✓ Valves	273 days	13 Sep '06	12 Jun '07
49	Valve's Actuators	120 days	28 Mar '07	25 Jul '07
50	Building Service Equipment	120 days	17 Dec '06	15 Apr '07
51	Fire Service Equipment	188 days	16 Jan '07	22 Jul '07
52	✓ Lifting Appliances	155 days	17 Nov '06	20 Apr '07
53	Deodorization Plant	190 days	21 Jan '07	29 Jul '07
54	MACS Equipment	170 days	16 Jan '07	4 Jul '07
55	Electrical Switchboard	180 days	6 Jan '07	4 Jul '07
56	Minor Equipment & Others	150 days	7 Dec '06	5 May '07
57	**Delivery**	**205 days**	**28 Feb '07**	**20 Sep '07**
58	✓ Penstock & Actuator	90 days	28 Feb '07	28 May '07
59	Inlet Screens	60 days	3 Jul '07	31 Aug '07
60	Submersible Pumps	59 days	20 Jun '07	17 Aug '07
61	DI Pipework & Fittings	30 days	30 Jul '07	28 Aug '07
62	✓ Valves	30 days	13 Jun '07	12 Jul '07
63	Valve's Actuators	40 days	26 Jul '07	3 Sep '07
64	Building Service Equipment	66 days	16 Apr '07	20 Jun '07
65	Fire Service Equipment	60 days	23 Jul '07	20 Sep '07
66	✓ Lifting Appliances	60 days	21 Apr '07	19 Jun '07
67	Deodorization Plant	50 days	30 Jul '07	17 Sep '07
68	MACS Equipment	60 days	5 Jul '07	2 Sep '07
69	Electrical Switchboard	60 days	5 Jul '07	2 Sep '07
70	Minor Equipment & Others	60 days	5 Jul '07	2 Sep '07



Biwater Man Lee Limited

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary

ID	Task Name	Duration	Start	Finish
71	**Site Installation**	**191 days**	**9 May '07**	**15 Nov '07**
72	Availbility of Work Area "E"	0 days	9 May '07	9 May '07
73	Possession of storage area and Provide DSD container Office (assume handover to be agreed)	191 days	9 May '07	15 Nov '07
74	Site Handover for P/S & Transformer Rm.	0 days	15 May '07	15 May '07
75	**Site installation Period**	**185 days**	**15 May '07**	**15 Nov '07**
76	Landfill Gas Monitoring	185 days	15 May '07	15 Nov '07
77	Penstock & Actuator	94 days	21 Jul '07	22 Oct '07
78	Inlet Screen	52 days	1 Sep '07	22 Oct '07
79	Submersible Pumps	66 days	18 Aug '07	22 Oct '07
80	DI Pipework & Fittings	30 days	29 Aug '07	27 Sep '07
81	Valves	21 days	14 Sep '07	4 Oct '07
82	Valve's Actuators	18 days	5 Oct '07	22 Oct '07
83	Building Service Equipment	124 days	21 Jun '07	22 Oct '07
84	Fire Service Equipment	32 days	21 Sep '07	22 Oct '07
85	✓ Lifting Appliances	19 days	4 Jul '07	22 Jul '07
86	Deodorization Plant	35 days	18 Sep '07	22 Oct '07
87	MACS Equipment	30 days	23 Sep '07	22 Oct '07
88	Electrical Switchboard	30 days	23 Sep '07	22 Oct '07
89	Other Associated Equipment	50 days	3 Sep '07	22 Oct '07
90	**Pubilc Utilities**	**101 days**	**27 Jul '07**	**5 Nov '07**
91	Builder's Completion of (Section 7) Sewers, cable/telephone duct & exterior of P/S &	0 days	27 Jul '07	27 Jul '07
92	PCCW TelephoneLine / Fire Link / Leased Line Available	14 days	28 Jul '07	10 Aug '07
93	Handover to CLP's Installation	0 days	17 Aug '07	17 Aug '07
94	Switchboard Power Energize (Assumed to be agreed with CLP)	0 days	23 Sep '07	23 Sep '07
95	FSI Form 314 Submission	0 days	7 Sep '07	7 Sep '07
96	FSI Form 501 Submission	0 days	22 Oct '07	22 Oct '07
97	FSD Inspection	0 days	5 Nov '07	5 Nov '07
98	**Testing & Commissioning Period**	**24 days**	**23 Oct '07**	**15 Nov '07**
99	Functional Testing of Individual System/ Equipment	14 days	23 Oct '07	5 Nov '07
100	Preparation and Continous Commissioning Test Period	7 days	6 Nov '07	12 Nov '07
101	72 Hrs Continous Commissioning Test	3 days	13 Nov '07	15 Nov '07
102	Finish of Section II	0 days	15 Nov '07	15 Nov '07
103	Completion of Contract	0 days	15 Nov '07	15 Nov '07



Biwater Man Lee Limited

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary

Appendix 3

Appointment Letter of Landfill Gas Team Leader

本署檔號 OUR REF: f(4) in EP2/N5/F/43 Pt.4
來函檔號 YOUR REF:
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傳真 FAX NO.: 2802 4511
電子郵件 E-MAIL:
網址 HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Branch Office
28th Floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong.

環境保護署分處
香港灣仔
軒尼詩道
一百三十號
修頓中心廿八樓

By Post & Fax : 2827 8532

14 May 2007

Drainage Services Department
44/F, Revenue Tower
5 Gloucester Road
Wan Chai, Hong Kong
(Attn : Mr. C W Tse, Engineer/Electrical & Mechanical Projects Division)

Dear Mr. Tse,

Environmental Impact Assessment (EIA) Ordinance, Cap. 499,
Environmental Permit No. EP-212/2005 for
Upgrading of Ting Kok Road Pumping Station No. 5

Landfill Gas Team (LGT) Leader

I refer to your memo under reference DSD EM/8/DE0504/SM of 10 May 2007.

Having reviewed the information of Mr. Stanley C T LAU attached to your memo, I am satisfied that his EM&A experience met the requirements for LGT Leader set out in Section 8.2.2 of the Project Profile (No. PP-238/2005) for the captioned project. Pursuant to Section 8.2.2 of the Project Profile, I hereby approve Mr. Stanley C T LAU as the LGT Leader for the captioned project. Please ensure that he will be an independent party from the Contractor during the project while he is in the position of LGT Leader.

Yours sincerely,

(Maurice YEUNG)
Principal Environmental Protection Officer
for Director of Environmental Protection

Drainage Services Department
E & M Projects Division
44th floor, Revenue Tower, 5 Gloucester Road,
Wan Chai, Hong Kong.

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機電工程部
香港灣仔告士打道5號
稅務大樓44樓

FAX IN

本署檔號 Our Ref : ( ) in DSD EM/8/DE0504/SM
來函檔號 Your Ref :
電 話 Telephone : (852) 2594 7309
圖文傳真 Fax : (852) 2827 8532

14 May 2007

Biwater Man Lee Ltd.
Suite 202, Block 1,
Hofai Commercial Centre,
Sai Lau Kok Rd.,
Tsuen Wan, N.T.

(Attn. : Thomas Jim)

Dear Sir,

Contract No. DE/2005/04
Supply and Installation of Electrical and Mechanical Equipment For Upgrading of Ting Kok Road Pumping Station No. 5

Appointment of Landfill Gas Team Leader

I attach herewith a letter ref. f(4) in EP2/N5/F/43 Pt. 4 dated 14.5.2007 and would advise the approval of appointment of Mr. Stanley C T Lau as the landfill gas team leader for your reference. You are reminded of the duties and responsibilities of the landfill gas team stated in Clause 8.2.2 of the Project Profile and the independence of the leader from your company.

Yours faithfully,

(C W TSE)
Engineer's Representative
Electrical & Mechanical Projects Division
Drainage Services Department

c.c. CE/SP, DSD (Attn. Messrs. Raymond Lee and Tim W Y Tsoi) w/e

Appendix 4

EM&A Key Requirements List and Complaint Procedure

charge of the Site.

6.21.8 The Contractor shall display a copy of these Environmental Permits (including the most updated Environmental Permit) on the Site at all vehicular site entrances/exits or at convenient location or as directed by the Engineer for public information at all times. The Contractor shall ensure that most updated information about the Environmental Permit, including any amended Permits, are displayed at such locations.

6.21.9 In accordance with the Permits as shown in Appendix VII, the Contractor shall establish an Landfill Gas Team (hereinafter referred to in this Clause as the "LGT") after handover of the Site from the Civil Contractor to undertake monitoring, analysis and reporting of landfill gas and other relevant works required by the Permits.

6.21.10 The Contractor shall provide assistance to LGT to undertake the landfill gas monitoring and audit and accompany joint site inspection undertaken by the LGT.

6.21.11 The LGT should report to the Contractor and be led and managed by the LGT Leader. The LGT Leader and the LGT should be employed to conduct the E&MA programme and ensure the Contractor's compliance with the project's landfill gas requirements during construction. The LGT Leader should be an independent party from the Contractor and has relevant professional qualifications, or have sufficient relevant experience in landfill gas hazards subject to approval of the ER and the EPD.

6.21.12 The duties and responsibilities of the LGT are defined in Appendix E Clause 8.2.2 of Project Profile (as mentioned in the EP) of Upgrading of Ting Kok Road Pumping Station No.5 which include the followings:

(a) to monitor various landfill gas parameters as required;
(b) to analyse the landfill gas monitoring and audit data and review the success of EM&A programme to cost-effectively confirm the adequacy of mitigation measures implemented and to identify any adverse impacts arising;
(c) to carry out regular site inspection to investigate and audit the Contractor's site practice, equipment and work methodologies with respect to landfill gas hazard, and effect proactive action to pre-empt problems;
(d) to carry out monthly EM&A report, quarterly E&MA summary report and final E&MA review report;
(d) to audit and prepare audit repots on the landfill gas monitoring data and its conditions;
(e) to report on the landfill gas monitoring and audit results to the relevant parties, the Engineer and EPD or its delegated representative;
(f) to recommend suitable mitigation measures to the Contractor in accordance with the Event and Action Plan; and
(g) to adhere to the procedures for carrying out complaint investigation.

Event and Action Plan (EAP) for Landfill Gas

The Event and Action Plan for landfill gas detected in utilities and any on-site areas following construction are shown in the table below.

Event and Action Plan for Landfill Gas

Parameter	Level	Action
Oxygen	<19%	- Ventilate to restore oxygen to >19%
	<18%	- Stop works - Evacuate personnel/prohibit entry - Increase ventilation to restore oxygen to >19%
Methane	>10% LEL (i.e. >0.5% by volme)	- Post "No Smoking" signs - Prohibit hot works - Ventilate to restore methane to <10% LEL
	>20% LEL (i.e. >1% by volme)	- Stop works - Evacuate personnel/prohibit entry - Increase ventilation to restore oxygen to <10% LEL
Carbon Dioxide	>0.5%	- Ventilate to restore carbon dioxide to <0.5%
	>1.5%	- Post "No Smoking" signs - Prohibit hot works - Increase ventilate to restore carbon dioxide to <0.5%

Section	Environmental Protection Measures	Location	Implementation Agent	Implementation Stage	Relevant Legislation & Guidelines
6.1	Safety Officer, trained in the use of gas detection equipment and landfill gas-related hazards, should be appointed on site throughout the ground works phase. The Safety Officer should be provided with intrinsically safe portable instruments, appropriately calibrated and capable of measuring the following gases in the ranges indicated: methane 0-100% LEL and 0-100% by volume; carbon dioxide 0-100%; and oxygen 0-21%	Within the work site	Contractor	Construction	*Code of Practice on Safety and Health at Work in Confined Space,* *Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)*
6.2	No smoking and naked flames should be allowed.				
6.2	No worker should work alone at any time in the confined area or any excavation trenches.				
6.2	Construction equipment should be equipped with a vertical exhaust at least 0.6m above ground level and/or with spark arrestors.				*Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)*
6.2	Electrical motors and electrical extension cords should be explosion-proof or intrinsically safe.				
6.2	Welding, flame-cutting or other hot works should only be carried out in trenches or confined spaces when controlled by a 'permit to work' procedure, properly authorized by the Safety Officer.				
6.2	Forced ventilation should be required for workers, if in a trench deeper than 1m.				

Section	Environmental Protection Measures	Location	Implementation Agent	Implementation Stage	Relevant Legislation & Guidelines
6.2	During piping assembly or conduiting construction, all valves/seals should be closed as installed to prevent the migration of gases through the pipeline/conduit. Forced ventilation and gas monitoring should be performed before staff entering and working in large diameter pipe.	Within the work site	Contractor	Construction	*Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)*
6.2	The Safety Officer should set down the monitoring frequency and areas prior to commencement of construction works.				
6.2	Daily and routine monitoring should be carried out in all excavations.				
6.2	All measurements in excavations should be made with the extended monitoring tube located not more than 10mm from the exposed ground surface. Monitoring should be performed properly to make sure that the area is free of landfill gas before any man enters the area.				
6.2	For excavations deeper than 1m, measurements should be carried out: • at the ground surface before excavation commences; • immediately before any worker enters the excavation; • at the beginning of each half working day (i.e. morning and afternoon) for the entire period the excavation remains open; and • periodically through the working day whilst workers are in the excavation.				
6.2	For excavations between 300mm and 1m deep, measurements should be carried out: • directly after the excavation has been completed; and • periodically whilst the excavation remains open.				

Section	Environmental Protection Measures	Location	Implementation Agent	Implementation Stage	Relevant Legislation & Guidelines
6.2	The landfill gas precautionary measures involved with excavation and piping works should be included in the Safety Plan.	Within the work site	Contractor	Construction	*Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97)*
6.3	The cracks on the ground level at the working area should be monitored during ground-works construction				
6.4	Where there are any temporary site offices, or any other buildings that have enclosed spaces with the capacity to accumulate landfill gas, then they should either: • Be located on an area which has been proven to be free of landfill gas and monitored manually by the Safety Officer or an approved and appropriately qualified person to ensure that hazardous concentration of landfill gas does not occur; or • Be raised clear of the ground. If buildings are raised clear of the ground, a minimum, clear separation distance should be 500mm.				
6.5	Such offices or buildings should be provided with some kinds of control of gas by mechanical means e.g. forced ventilation using fans or blowers.				
6.6	Adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets should be made available on site.				
6.7	Periodic environmental monitoring report with LFG control measures evaluation during construction phase should be provided by contractor and submitted to SP/DSD and EPD.				

Appendix G

Implementation Schedule for LFG Hazard Mitigation Measures

Section	Environmental Protection Measures	Location	Implementation Agent	Implementation Stage	Relevant Legislation & Guidelines
7.1	When service voids, manholes or inspection chambers within the proposed site are entered for maintenance, monitoring and a checklist system of safety requirements should be performed before entry	Manhole/ chamber	DSD	Operation	*Code of Practice on Safety and Health at Work in Confined Spaces*
7.2	A procedure should be developed as part of the station operation to respond to gas detector alarms. The detection system should be maintained and calibrated regularly in accordance with the manufacturer's recommendations. In the event of a power failure, the detectors should have an 8-hour battery back-up system, and the procedures should indicate for manual monitoring in the station in the event of prolonged power failure (of longer than 8 hours).	Pumping station			
7.3	Forced ventilation should be used if methane of more than 0.5 % (by volume) in the internal atmosphere (e.g. in service voids, manholes, inspection chambers or rooms as mentioned above) is detected.	Manhole/ chamber/ Pumping station			
7.4	No person should enter or remain in any confined spaces or trenches where the carbon dioxide concentration exceeds 1.5 % (by volume).				
7.5	Oxygen concentration should be monitored and no person should enter or remain in any confined spaces or trenches where the oxygen content of air has fallen below 18 % by volume.				
7.6	All the access to these confined spaces would be restricted only to authorize personnel who should be aware of the LFG hazard. No member of general public should be permitted or allowed to access these confined spaces, manholes or inspection chambers.				

Landfill Gas Complaint

Landfill gas complaint should be referred to the LGT Leader for action. The LGT Leader should undertake the following procedures upon receipt of any complaint:

- log complaint and date of receipt onto the complaint database and inform the IC(LG) and the ER immediately;
- investigate the complaint to determine its validity, and assess whether the source of the problem is due to works activities;
- identify mitigation measures in consultation with the IC(LG) if a complaint is valid and due to works;
- advise the Contractor if mitigation measures are required;
- review the Contractor's response to identified mitigation measures, and the updated situation;
- if the complaint is transferred from the EPD, submit interim report to the EPD on status of the complaint investigation and follow-up action within the time frame assigned by the EPD;
- undertake additional monitoring and audit to verify the situation if necessary, and review that circumstances leading to the complaint do not recur;
- report investigation results and subsequent actions to complainant (if the source of complaint is EPD, the results should be reported within the timeframe assigned by the EPD); and
- record the complaint, investigation, the subsequent actions and the results in the monthly EM&A reports.

Appendix 5

Calibration records for equipment used for landfill gas monitoring

Hong Kong
Productivity Council
香港生產力促進局

COPY

Environmental Management Division

CALIBRATION REPORT

Client : Maeda Corporation
Address : Tai Po Site Office,
Ting Kok Road,
Tai Po

Report No. : CR 000075
Page No. : 2 of 2
Issue Date : 23/08/2006

Received Date : 19/08/2006
Completion Date : 22/08/2006
Approved Signatory : Grace Ting
Remarks :

Calibration Results:

Item : Gas Analyser model GA 2000, Geotechnical Instruments

Serial No. : GA 08277

Calibration Method : In house method (calibrated and checked with certified gas standards)

Date of Calibration : 22/08/2006

Results: :

Carbon Dioxide

Expected, %	Reading, %
0.0	0.0
11.1	10.6
21.3	21.1
30.1	31.2
40.0	39.9

Approval Signatory:

TEST DATE AND CONDITIONS	
Date	27/07/2007
Atmospheric Pressure	996 mB
Ambient Temp	19 °C
Environics Serial No.	3268

GAS DATA LTD
Pegasus House
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LB
Tel 02476303311 Fax 02476307711

GFM410 FINAL INSPECTION & CALIBRATION CERTIFICATE

INSTRUMENT DETAILS	
Serial No	Customer
10239	science international corporation

INSTRUMENT CHECKS			
Keyboard	✓	Pump Flow	400 cc/min
Display Contrast	✓	Pump Flow @ -200mB	300 cc/min
Clock Set / Running	✓	S/W Version	G410.0022/0004
Labels Fitted	✓	Recalibration Date	27/7/2008

GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	CH4 (%)	tol. (% vol.)	CO2 (%)	tol. (% vol.)	O2 (%)	tol. (% vol.)
N2	100%	0.0	0.0	0.0	0.0	0.0	+0.1
CH4	5 %	5.1	+/-0.3	0.0	0.0	0.0	+0.1
	60%	59.2	+/-3.0	0.0	0.0	0.0	+0.1
CO2	5%	0.0	0.0	4.9	+/-0.3	0.0	+0.1
	40%	0.0	0.0	39.4	+/-3.0	0.0	+0.1
AIR (20.9% O2, 400ppm CO2)	100%	0.0	0.0	0.0	+0.1	20.9	+/-0.5

PRESSURE CHECKS							
Calibration Pressure		Instrument Pressure Channels Read					
Pressure @	Applied Pressure	Atmospheric [Ap] (mB)	tol. (mB)	Static [Sp] (mB)	tol. (mB)		
All ports	current atmospheric	996	+/-2.0	0	0.0		
Ap port (internal)	+800mB(a)	800	+/-5.0	0	0.0		
	+1200mB(a)	1200	+/-5.0	0	0.0		
Gas IN port	+400mB(g)	996	n/a	400	+/-2.0		
	-400mB(g)	996	n/a	-399	+/-2.0		

TEST DATE AND CONDITIONS	
Date	27/07/2007
Atmospheric Pressure	996 mB
Ambient Temp	19°C
Environics Serial No.	3268

GAS DATA LTD
Pegasus House
Seven Stars Estate
Wheler Rd
Coventry
CV3 4LB
Tel 02476303311 Fax 02476307711

GFM410 FINAL INSPECTION & CALIBRATION CERTIFICATE

FLOW CHECKS

OPTIONAL GAS CHECKS								
Calibration Gas		Instrument Gas Channels Read						
Gas Type	Applied Conc.	Label / Range						tol. (% vol.)
N2	100%							0.0
								+/- 5.0
								+/- 5.0
								+/- 5.0
								+/- 5.0
								+/- 5.0

OPTIONAL TEMPERATURE CHECK

PACKING							
Instrument	✓	AC Powered Battery Charger		UK	EUR	US	
Gas Sample Pipe	✓	Manual	✓	Carry Case			✓
Spares Pot	✓	Allen Key	✓				
USB Lead		PC Software					
Vane Anemometer		Extra Items					

TESTED ps sarkaria ..... **APPROVED** .....

Appendix 6

Permits

6.21 ENVIRONMENTAL PERMIT

6.21.1 The Works in Ting Kok Road Pumping Station No.5 are classified as a Designated Project under the Environmental Impact Assessment Ordinance (EIAO) and thus its construction and operation are to be governed by an Environmental Permit issued by Environmental Protection Department (EPD). In accordance with the Clause 30 of the General Conditions of Contract, the Contractor shall conform in all respects with the conditions of the Environmental Permit. The concerned Environmental Permit No. EP-212/2005 for Upgrading of Ting Kok Pumping Station No.5 under the Permit Holder of Sewerage Projects/Drainage Services Department is attached in Appendix VII.

6.21.2 For the purpose of this Contract, the "Environmental Permit" (EP) means any environmental permit issued by the Director of Environmental Protection in respect of the Works or project which the Works form a part thereof under the Environmental Impact Assessment Ordinance (Cap. 499) including any variation of the environmental permits. The Works of this Contract are therefore subject to the conditions stipulated in the Environmental Permit.

6.21.3 The Contractor shall observe and abide by the conditions set out in the EP attached at Appendix VII when carrying out the Works. The Contractor shall display the EP at the Site throughout the construction period. The Contractor needs not apply for a further environmental permit for the Works. The Engineer will coordinate any application for variation of the EP conditions where it is necessary and shall notify the contractor upon any change or variation approved by DEP. If the Contractor choose to apply for and hold a further EP for the Works for any reasons, he can do so but will be at his own risks and he will not be entitled to an extension or to any compensation or cost.

6.21.4 The Contractor shall ensure full compliance with all conditions of the EP before and during carrying out the Works. Any non-compliance may constitute a contravention of the EIAO (Cap. 499) and shall be definite ground for enforcement action. The Contractor shall assume all the responsibilities under the EP as if the Contractor is the Permit Holder as far as it is applicable to this Contract. The Contractor is required to indemnify the Employer against any charge for any non-compliance with the EP. The Contractor will not be compensated for any additional cost and/or time incurred due to the Contractor's non-compliance with any conditions of the EP.

6.21.5 The Contractor shall comply with all Enactments which shall include but not limited to the following:

Noise Control Ordinance (Cap. 400);

Air Pollution Control Ordinance (Cap. 311);

Water Pollution Control Ordinance (Cap. 358);

Dumping at Sea Ordinance (Cap. 466); and

Water Disposal Ordinance (Cap. 354).

6.21.6 The Contractor shall make copies of this Environmental Permit available at all times for inspection by the Director of Environmental Protection at the Site.

6.21.7 The Contractor shall give a copy of this Environmental Permit to the person(s) in

charge of the Site.

6.21.8 The Contractor shall display a copy of these Environmental Permits (including the most updated Environmental Permit) on the Site at all vehicular site entrances/exits or at convenient location or as directed by the Engineer for public information at all times. The Contractor shall ensure that most updated information about the Environmental Permit, including any amended Permits, are displayed at such locations.

6.21.9 In accordance with the Permits as shown in Appendix VII, the Contractor shall establish an Landfill Gas Team (hereinafter referred to in this Clause as the "LGT") after handover of the Site from the Civil Contractor to undertake monitoring, analysis and reporting of landfill gas and other relevant works required by the Permits.

6.21.10 The Contractor shall provide assistance to LGT to undertake the landfill gas monitoring and audit and accompany joint site inspection undertaken by the LGT.

6.21.11 The LGT should report to the Contractor and be led and managed by the LGT Leader. The LGT Leader and the LGT should be employed to conduct the E&MA programme and ensure the Contractor's compliance with the project's landfill gas requirements during construction. The LGT Leader should be an independent party from the Contractor and has relevant professional qualifications, or have sufficient relevant experience in landfill gas hazards subject to approval of the ER and the EPD.

6.21.12 The duties and responsibilities of the LGT are defined in Appendix E Clause 8.2.2 of Project Profile (as mentioned in the EP) of Upgrading of Ting Kok Road Pumping Station No.5 which include the followings:

(a) to monitor various landfill gas parameters as required;
(b) to analyse the landfill gas monitoring and audit data and review the success of EM&A programme to cost-effectively confirm the adequacy of mitigation measures implemented and to identify any adverse impacts arising;
(c) to carry out regular site inspection to investigate and audit the Contractor's site practice, equipment and work methodologies with respect to landfill gas hazard, and effect proactive action to pre-empt problems;
(d) to carry out monthly EM&A report, quarterly E&MA summary report and final E&MA review report;
(d) to audit and prepare audit repots on the landfill gas monitoring data and its conditions;
(e) to report on the landfill gas monitoring and audit results to the relevant parties, the Engineer and EPD or its delegated representative;
(f) to recommend suitable mitigation measures to the Contractor in accordance with the Event and Action Plan; and
(g) to adhere to the procedures for carrying out complaint investigation.

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
Section 10
環境影響評估條例
(第 499 章)
第 10 條

ENVIRONMENTAL PERMIT TO CONSTRUCT AND OPERATE A DESIGNATED PROJECT
建造及營辦指定工程項目的環境許可證

PART A (MAIN PERMIT)
A 部 (許可證主要部分)

Pursuant to Section 10 of the Environmental Impact Assessment Ordinance (the Ordinance), the Director of Environmental Protection (the Director) grants this environmental permit to the Drainage Services Department (hereinafter referred as the "Permit Holder") to construct and operate the designated project described in Part B subject to the conditions specified in Part C. The issue of this environmental permit is based on the documents, approvals or permissions described below:

根據環境影響評估條例(本條例)第 10 條的規定，環境保護署署長(署長)將本環境許可證批予渠務署(許可證持有人)以建造及營辦 B 部所說明的指定工程項目，但須遵守 C 部所列明的條件。本環境許可證依據下列文件、批准或許可而發發：

Application No. 申請書編號	AEP-212/2005
Document in the Register: 登記冊上的文件:	1. Project Profile - "Upgrading of Ting Kok Road Pumping Station No.5" (Register No.: PP-238/2005) 工程項目簡介 - "汀角路 5 號泵房改建工程" (登記冊編號: PP-238/2005) 2. Application for Environmental Permit submitted by the Permit Holder on 8 March 2005 (Application No.: AEP-212/2005) 許可證持有人於 2005 年 3 月 8 日提交的申請文件 (申請書編號: AEP-212/2005)

Application No. 申請書編號	AEP-212/2005
Director's Permission to Apply Directly for Environmental Permit 署長批准直接申請環境許可證	Letter Reference: (15) in EP 2/N5/F/43 信件檔號: (15) in EP 2/N5/F/43 Date: 25 February 2005 日期: 2005年2月25日

4 April 2005

Date
日期

(Louis P.L. CHAN)
Principal Environmental Protection Officer (Acting)
for Director of Environmental Protection
環境保護署署長
(署理首席環境保護主任 陳保林代行)

PART B (DESCRIPTION OF DESIGNATED PROJECT)
B 部 (指定工程項目的說明)

Hereunder is the description of the designated project mentioned in Part A of this environmental permit (hereinafter referred to as "the Permit"):
下列為本環境許可證(下稱"許可證")A部所提述的指定工程項目的說明:

Title of Designated Project 指定工程項目的名稱	Upgrading of Ting Kok Road Pumping Station No.5 [This designated project is hereinafter referred to as "the Project"] 汀角路5號泵房擴建工程 [此指定工程項目下稱"工程項目"]
Nature of Designated Project 指定工程項目的性質	Upgrading of the existing pumping station to cope with the sewerage needs of development along Ting Kok Road of Tai Po Industrial Estate up to Tai Mei Tuk 擴建現有汀角路5號泵房，使能應付由大埔工業邨至大尾督，沿汀角路一帶發展對污水收集系統的需要
Location of Designated Project 指定工程項目的地點	Ting Kok Road (adjacent to the Tai Po East Fire Station). The location of the Project is shown in Figure 1 of this Permit. 汀角路 (毗鄰大埔東消防局)，工程項目的位置見載於本許可證夾附的圖一。
Scale and Scope of Designated Project 指定工程項目的規模和範圍	The design flow of the existing sewage pumping station is increased from 2,888 m3/day to 11,520 m3/day. The scope of works of the Project includes the following : i) To construct a new sewage pumping station of design capacity of 11,520 m3/day; i) To install 350m long of 450mm diameter twin rising mains and 250m long of 600mm diameter gravity sewers extending to the Tai Po Sewage Treatment Works; and ii) To demolish the existing sewage pumping station upon commissioning of the new sewage pumping station. 污水泵房的設計流量將由每日 2,888 立方米增至 11,520 立方米。工程範圍包括: i) 興建一座每日設計流量為 11,520 立方米的污水泵房； ii) 安裝長 350 米直徑 450 毫米雙管式污水渠隧及長 250 米直徑 600 毫米無壓污水渠至大埔污水處理廠；及 iii) 在新泵房啓用後，拆卸現有污水泵房的結構物。

EIAO EPD

PART C (PERMIT CONDITIONS)

I. General Conditions

1.1 The Permit Holder and any person working on the Project shall comply with all conditions set out in this Permit. Any non-compliance by any person may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap.499) and may become the subject of appropriate action being taken under the Ordinance.

1.2 The Permit Holder shall ensure full compliance with all legislation from time to time in force including without limitation the Noise Control Ordinance (Cap. 400), Air Pollution Control Ordinance (Cap. 311), Water Pollution Control Ordinance (Cap. 358), Waste Disposal Ordinance (Cap. 354) and Country Parks Ordinance (Cap.208). This Permit does not of itself constitute any ground of defense against any proceedings instituted under any legislation or imply any approval under any legislation.

1.3 The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit and the documents referred to in Part A of the Permit readily available at all times for inspection by the Director or his authorized officers at all sites/offices covered by this Permit. Any reference to the Permit shall include all documents referred to in the Permit and also the relevant documents in the Register.

1.4 The Permit Holder shall give a copy of this Permit to the person(s) in charge of the site(s) and ensure that such person(s) fully understands all conditions and all requirements incorporated in the Permit. The site(s) refers to site(s) of construction of the Project and shall mean the same hereafter.

1.5 The Permit Holder shall display conspicuously a copy of this Permit on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including any amended Permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).

1.6 The Permit Holder shall construct the Project in accordance with the project description in Part B of this Permit.

1.7 The Permit Holder shall ensure that the Project is designed and constructed in accordance with the information and recommendations described in the Project Profile (Register No. PP-238/2005) in the EIA Ordinance Register, the information and mitigation measures described in this Permit, and mitigation measures to be recommended under on-going surveillance and monitoring activities during all stages of the Project. Where recommendations referred to in the documents of the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or impliedly amended in this Permit.

1.8 The Permit Holder shall notify the Director in writing the commencement date of construction of the Project no later than one month prior to the commencement of construction of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement date of the construction.

1.9 For the purpose of this Permit, "commencement of construction" does not include works related to site clearance and preparation, or other works as agreed by the Director.

EIAO EPD

2. Specific Conditions

2.1 Any pumping unit at the pumping station that is not functional properly shall be replaced immediately.

2.2 The Permit Holder shall keep and maintain in operation condition a standby pumping unit for the purpose of Condition 2.1.

2.3 The pumping station shall be provided with two duty and one standby pumps; one duty and one standby mechanical screens, and at least 1.5 hour emergency storage capacity. A telemetry system shall be provided to transmit signals showing irregularity or operation problem to the existing Tai Po Sewage Treatment Works.

2.4 The Permit Holder shall notify immediately the Director of Water Supplies of any sewage overflow from the pumping station into Tolo Harbour to avoid causing water quality impact on the Tai Po Salt Water Pumping Station.

2.5 The inlet chamber, screen chamber and wet well shall be located underground with cover, and enclosed by a reinforced concrete superstructure. Exhaust air from the pumping station shall be ventilated through a deodourizer capable of achieving at least 99% odour removal, prior to discharge at a direction away from the sensitive receivers at the southeastern and southwestern sides of the pumping station.

2.6 All pumps shall be enclosed inside the infrastructure of the pumping station.

Notes :

1. This Permit consists of three parts, namely, Part A (Main Permit), Part B (Description of Designated Project) and Part C (Permit Conditions). Any person relying on this permit should obtain independant legal advice on the legal implications under the Ordinance, and the following notes are for general information only.

2. If there is a breach of any conditions of this Permit, the Director or his authorized officer may, with the consent of the Secretary for the Environment, Transport and Works, order the cessation of associated work until the remedial action is taken in respect of the resultant environmental damage, and in that case the Permit Holder shall not carry out any associated works without the permission of the Director or his authorized officer.

3. The Permit Holder may apply under Section 13 of the Environmental Impact Assessment Ordinance (the "Ordinance") to the Director for a variation of the conditions of this Permit. The Permit Holder shall replace the original permit displayed on the Project site by the amended permit.

4. A person who assumes the responsibility for the whole or a part of the Project may, before he assumes responsibility of the Project, apply under Section 12 of the Ordinance to the Director for a further environmental permit.

5. Under Section 14 of the Ordinance, the Director may with the consent of the Secretary for the Environment, Transport and Works, suspend, vary or cancel this Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site.

6. If this Permit is cancelled or surrendered during construction of the Project, another environmental permit must be obtained under the Ordinance before the Project could be continued. It is an offence under Section 26 (1) of the Ordinance to construct a designated project listed in Schedule 2 of the Ordinance without a valid environmental permit.

EIA EPD

7. Any person who constructs the Project contrary to the conditions in the Permit, and is convicted of an offence under the Ordinance, is liable:

(i) on a first conviction on indictment to a fine of $2 million and to imprisonment for 6 months;
(ii) on a second or subsequent conviction on indictment to a fine of $5 million and to imprisonment for 2 years;
(iii) on a first summary conviction to a fine at level 6 and to imprisonment for 6 months;
(iv) on a second or subsequent summary conviction to a fine of $1 million and to imprisonment for 1 year; and
(v) in any case where the offence is of a continuing nature, the court or magistrate may impose a fine of $10,000 for each day on which he is satisfied the offence continued.

8. The Permit Holder may appeal against any condition of this Permit under Section 17 of the Ordinance within 30 days of receipt of this Permit.

9. The Notes are for general reference only and that the Permit Holder should refer to the EIA Ordinance for details and seek independent legal advice.

EIAO EPD

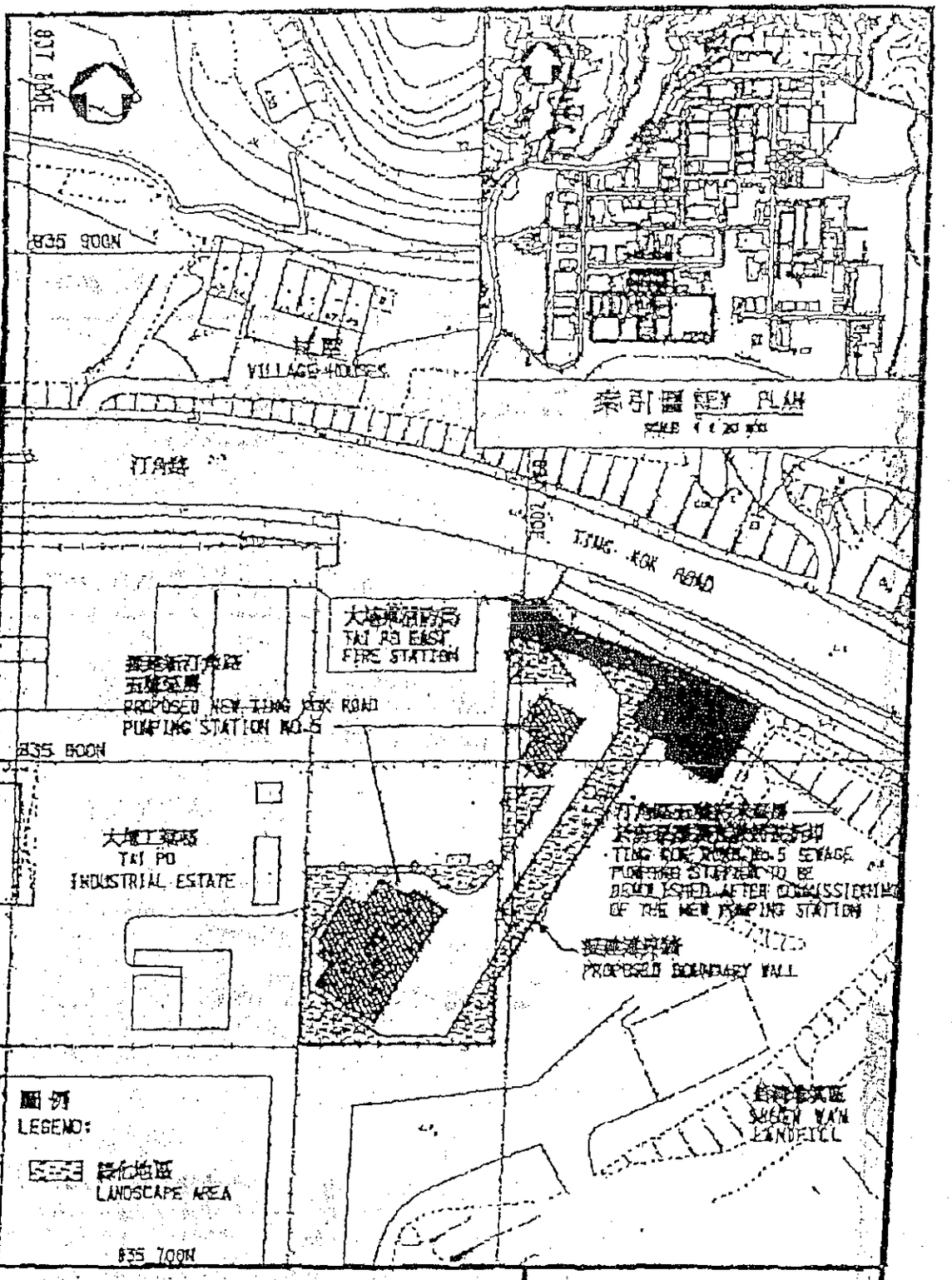


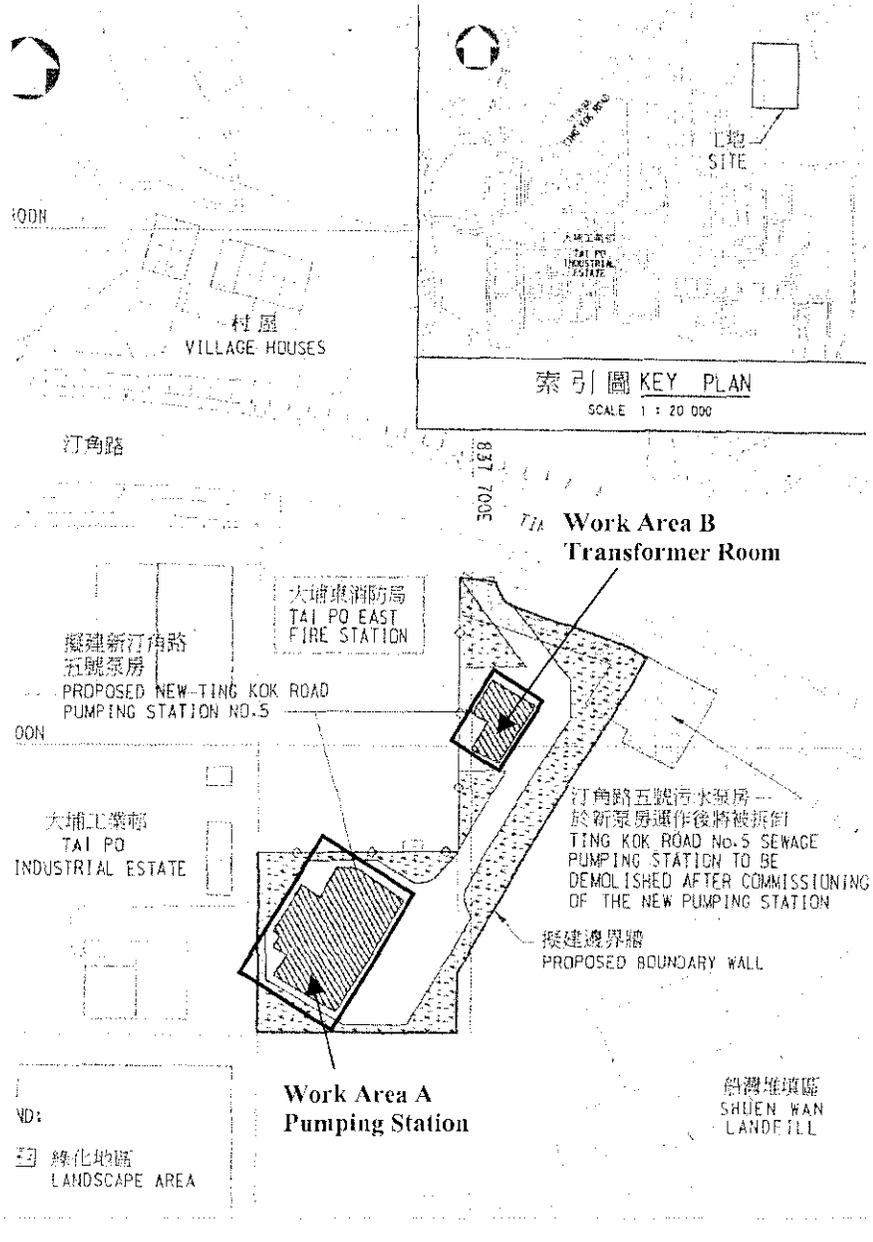
Figure 1 Upgrading of Ting Kok Road Pumping Station No.5	Environmental Permit No. EP-212/2005
圖一　　汀角路5號泵房擴建工程	環境許可證號碼　EP-212/2005

EIAO EPD

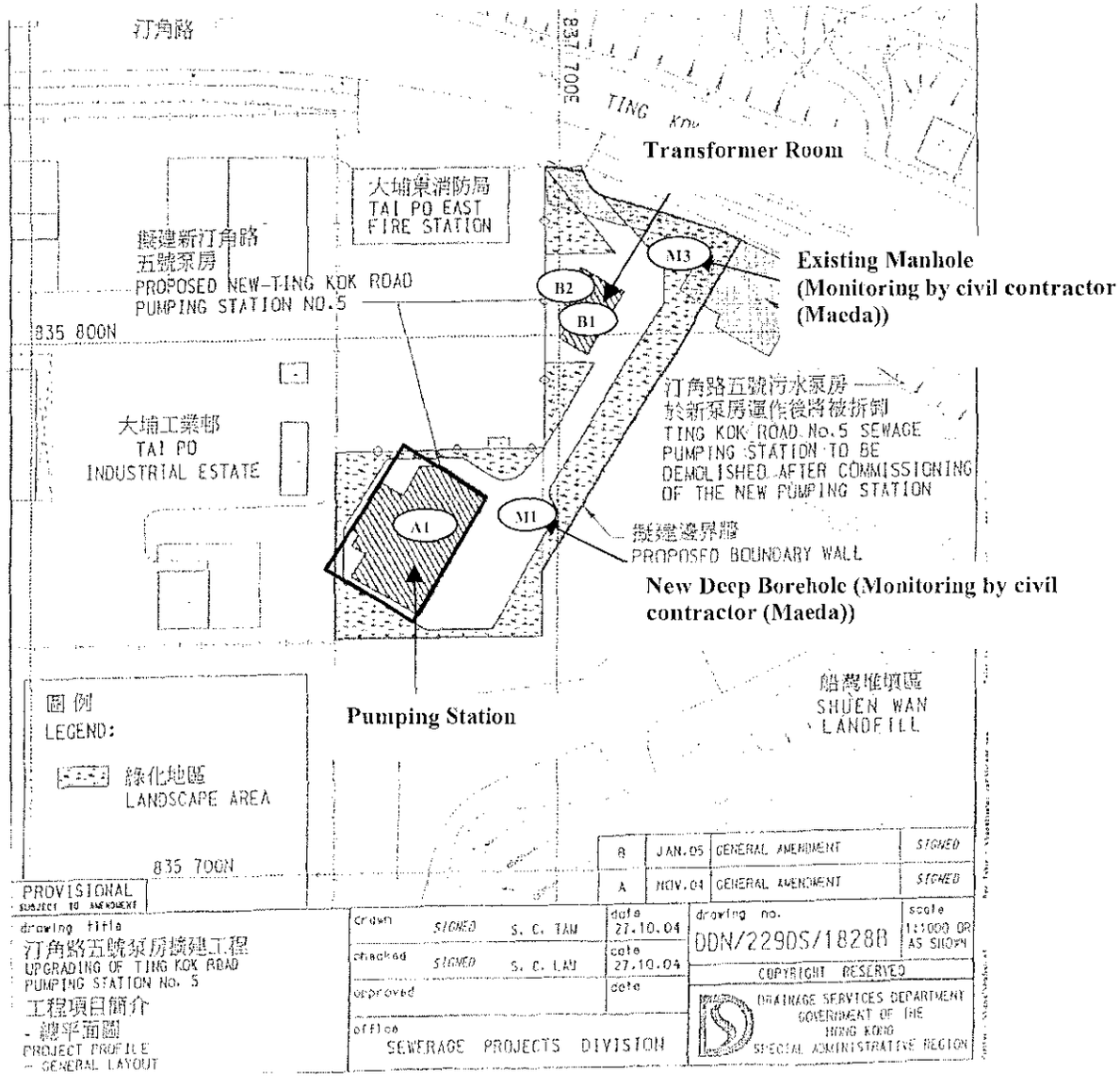
Appendix 7

Site Layout of Work Areas
and
Landfill Gas Monitoring Results

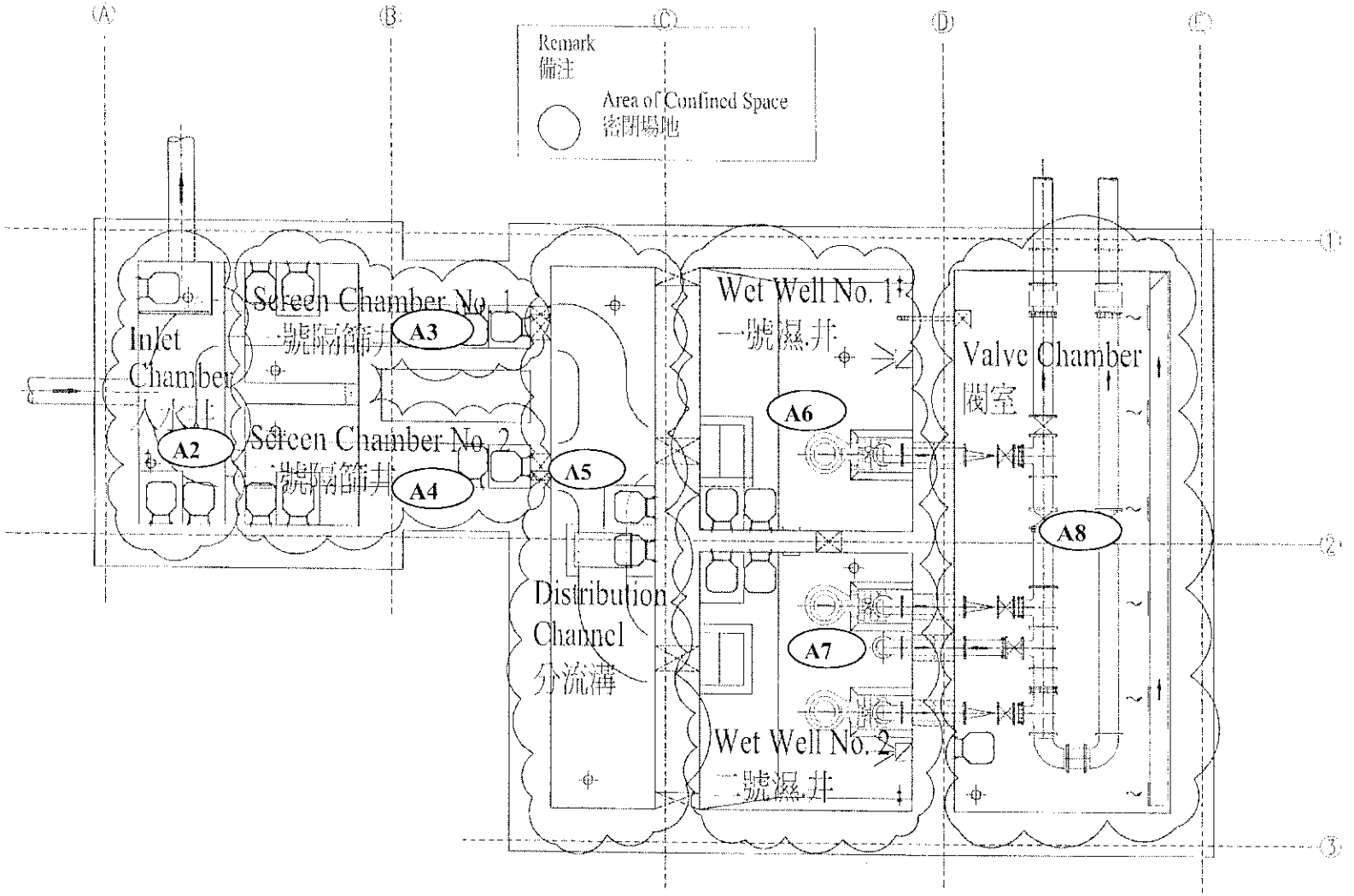
Unpgrading Ting Kok Road Pumping Station No. 5 – E&M Works
EM&A Site Inspection – June - August 2007
Site Layout



Unpgrading Ting Kok Road Pumping Station No. 5 – E&M Works
Landfill Gas Monitoring – June - August 2007
Site Layout



Unpgrading Ting Kok Road Pumping Station No. 5 – E&M Works
Landfill Gas Monitoring – June - August 2007
Pumping Station Layout - Confined Space



Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 6 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	6 June 2007	14:40	Overcast	79.3	0.0	0.0	20.6	32.0	
B1	6 June 2007	14: 43	Overcast	79.3	0.0	0.0	20.6	32.0	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 14 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	14 June 2007	13:54	Rain	79.3	0.0	0.0	20.6	27	
B1	14 June 2007	14: 00	Rain	79.3	0.0	0.0	20.6	27	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 21 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	21 June 2007	9:00	Sunny	79.3	0.0	0.0	20.6	30	
B2	21 June 2007	9:15	Sunny	79.4	0.0	0.0	20.5	31	
B1	21 June 2007	13:00	Sunny	79.4	0.0	0.0	20.6	31	
B2	21 June 2007	13:05	Sunny	79.4	0.0	0.0	20.6	31	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 22 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	22 June 2007	9:00	Sunny	79.4	0.0	0.0	20.5	31	
B2	22 June 2007	9:15	Sunny	79.3	0.0	0.0	20.6	31	
B1	22 June 2007	13:00	Sunny	79.4	0.0	0.0	20.5	31	
B2	22 June 2007	13:05	Sunny	79.4	0.0	0.0	20.5	31	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 23 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	23 June 2007	9:00	Sunny	79.3	0.0	0.0	20.6	32	
B2	23 June 2007	9:15	Sunny	79.3	0.0	0.0	20.6	32	
B1	23 June 2007	13:00	Sunny	79.3	0.0	0.0	20.5	33	
B2	23 June 2007	13:05	Sunny	79.3	0.0	0.0	20.5	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 25 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	25 June 2007	9:00	Sunny	79.4	0.0	0.0	20.5	31	
B2	25 June 2007	9:10	Sunny	79.4	0.0	0.0	20.5	31	
B1	25 June 2007	13:00	Sunny	79.3	0.0	0.0	20.6	32	
B2	25 June 2007	13:07	Sunny	79.3	0.0	0.0	20.6	32	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 26 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	26 June 2007	9:00	Sunny	79.4	0.0	0.0	20.5	30	
B2	26 June 2007	9:10	Sunny	79.3	0.0	0.0	20.6	30	
B1	26 June 2007	13:00	Sunny	79.4	0.0	0.0	20.5	32	
B2	26 June 2007	13:08	Sunny	79.3	0.0	0.0	20.6	32	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 27 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	27 June 2007	9:00	Rain	79.4	0.0	0.0	20.6	29	
B2	27 June 2007	9:06	Rain	79.4	0.0	0.0	20.6	29	
B1	27 June 2007	12:57	Rain	79.3	0.0	0.0	20.5	30	
B2	27 June 2007	13:05	Rain	79.3	0.0	0.0	20.6	30	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 28 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	28 June 2007	8:58	Rain	79.4	0.0	0.0	20.6	29	
B2	28 June 2007	9:07	Rain	79.4	0.0	0.0	20.6	29	
B1	28 June 2007	13:03	Rain	79.4	0.0	0.0	20.6	29	
B2	28 June 2007	13:09	Rain	79.4	0.0	0.0	20.6	29	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 29 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	29 June 2007	9:01	Rain	79.3	0.0	0.0	20.5	29	
B2	29 June 2007	9:06	Rain	79.4	0.0	0.0	20.6	29	
B1	29 June 2007	13:00	Rain	79.4	0.0	0.0	20.6	29	
B2	29 June 2007	13:05	Rain	79.3	0.0	0.0	20.5	29	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 30 June 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	30 June 2007	9:00	Rain	79.3	0.0	0.0	20.5	29	
B2	30 June 2007	9:05	Rain	79.3	0.0	0.0	20.5	29	
B1	30 June 2007	13:01	Rain	79.4	0.0	0.0	20.6	29	
B2	30 June 2007	13:07	Rain	79.3	0.0	0.0	20.5	29	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 3 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
B1	3 July 2007	8:58	Rain	79.3	0.0	0.0	20.6	29	
B2	3 July 2007	9:02	Rain	79.3	0.0	0.0	20.6	29	
B1	3 July 2007	13:04	Overcast	79.3	0.0	0.0	20.6	30	
B2	3 July 2007	13:09	Overcast	79.4	0.0	0.0	20.5	30	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 4 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	4 July 2007	8:50	Fine	79.4	0.0	0.0	20.5	29	
B1	4 July 2007	8:56	Fine	79.4	0.0	0.0	20.5	29	
B2	4 July 2007	9:01	Fine	79.3	0.0	0.0	20.6	29	
A1	4 July 2007	12:58	Rain	79.3	0.0	0.0	20.6	29	
B1	4 July 2007	13:05	Rain	79.4	0.0	0.0	20.5	29	
B2	4 July 2007	13:08	Rain	79.3	0.0	0.0	20.6	29	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 5 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	5 July 2007	8:57	Rain	79.3	0.0	0.0	20.6	28	
B1	5 July 2007	9:05	Rain	79.4	0.0	0.0	20.5	28	
B2	5 July 2007	9:10	Rain	79.3	0.0	0.0	20.6	28	
A1	5 July 2007	13:00	Rain	79.3	0.0	0.0	20.6	28	
B1	5 July 2007	13:07	Rain	79.3	0.0	0.0	20.6	28	
B2	5 July 2007	13:12	Rain	79.3	0.0	0.0	20.6	28	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 6 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	6 July 2007	8:58	Overcast	79.3	0.0	0.0	20.6	30	
A1	6 July 2007	12:57	Sunny	79.3	0.0	0.0	20.6	32	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 7 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	7 July 2007	9:03	Fine	79.4	0.0	0.0	20.5	29	
A1	7 July 2007	13:02	Fine	79.3	0.0	0.0	20.6	31	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 9 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	9 July 2007	8:58	Sunny	79.3	0.0	0.0	20.6	31	
A1	9 July 2007	13:01	Sunny	79.3	0.0	0.0	20.6	33	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 10 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	10 July 2007	8:56	Sunny	79.3	0.0	0.0	20.6	31	
B1	10 July 2007	9:06	Sunny	79.4	0.0	0.0	20.5	31	
B2	10 July 2007	9:10	Sunny	79.3	0.0	0.0	20.6	31	
A1	10 July 2007	13:03	Sunny	79.3	0.0	0.0	20.6	34	
B1	10 July 2007	13:09	Sunny	79.4	0.0	0.0	20.5	34	
B2	10 July 2007	13:14	Sunny	79.3	0.0	0.0	20.6	34	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 11 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	11 July 2007	9:02	Sunny	79.4	0.0	0.0	20.5	33	
A1	11 July 2007	13:00	Sunny	79.3	0.0	0.0	20.6	35	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 12 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	12 July 2007	9:00	Sunny	79.3	0.0	0.0	20.6	32	
A1	12 July 2007	13:06	Sunny	79.3	0.0	0.0	20.6	34	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 13 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	13 July 2007	8:57	Sunny	79.4	0.0	0.0	20.5	32	
A1	13 July 2007	13:01	Sunny	79.3	0.0	0.0	20.6	34	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 14 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	14 July 2007	9:02	Sunny	79.3	0.0	0.0	20.6	33	
A1	14 July 2007	13:03	Sunny	79.4	0.0	0.0	20.5	35	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 16 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	16 July 2007	9:01	Sunny	79.3	0.0	0.0	20.6	33	
A1	16 July 2007	13:00	Sunny	79.3	0.0	0.0	20.6	34	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 17 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	17 July 2007	9:00	Sunny	79.3	0.0	0.0	20.6	32	
A1	17 July 2007	13:03	Sunny	79.3	0.0	0.0	20.6	34	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 18 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	18 July 2007	9:05	Sunny	79.3	0.0	0.0	20.6	31	
A1	18 July 2007	13:08	Sunny	79.3	0.0	0.0	20.6	32	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 19 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	19 July 2007	9:02	Sunny	79.3	0.0	0.0	20.6	31	
A1	19 July 2007	13:06	Sunny	79.3	0.0	0.0	20.6	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 20 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	20 July 2007	9:01	Sunny	79.3	0.0	0.0	20.6	31	
A1	20 July 2007	13:07	Sunny	79.4	0.0	0.0	20.5	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 21 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	21 July 2007	8:56	Sunny	79.3	0.0	0.0	20.6	33	
A1	21 July 2007	13:10	Sunny	79.4	0.0	0.0	20.5	34	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 23 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	23 July 2007	9:06	Sunny	79.3	0.0	0.0	20.6	32	
A1	23 July 2007	13:02	Sunny	79.4	0.0	0.0	20.5	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 24 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	24 July 2007	9:00	Sunny	79.4	0.0	0.0	20.5	32	
A1	24 July 2007	13:01	Sunny	79.4	0.0	0.0	20.5	34	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 25 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	25 July 2007	8:58	Sunny	79.4	0.0	0.0	20.5	32	
A1	25 July 2007	13:05	Sunny	79.4	0.0	0.0	20.5	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 26 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	26 July 2007	15:25	Sunny	79.3	0.0	0.0	20.6	32	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 27 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	27 July 2007	9:01	Sunny	79.3	0.0	0.0	20.6	32	
A1	27 July 2007	13:04	Sunny	79.3	0.0	0.0	20.6	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 28 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	28 July 2007	9:00	Sunny	79.3	0.0	0.0	20.6	33	
A1	28 July 2007	13:03	Sunny	79.3	0.0	0.0	20.6	33	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 30 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	30 July 2007	8:57	Sunny	79.3	0.0	0.0	20.6	32	
A1	30 July 2007	13:01	Sunny	79.3	0.0	0.0	20.6	33	

Field Technician: _____ (Site Agent)

Checked by: _____ (RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 31 July 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	31 July 2007	8:58	Sunny	79.3	0.0	0.0	20.6	32	
A1	31 July 2007	13:00	Sunny	79.3	0.0	0.0	20.6	32	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 1 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	1 Aug 2007	8:58	Sunny	79.3	0.0	0.0	20.6	28	
A2	1 Aug 2007	9:04	Sunny	79.4	0.0	0.0	20.5	28	Confined space
B1	1 Aug 2007	9:20	Sunny	79.3	0.0	0.0	20.6	28	
A1	1 Aug 2007	13:00	Rain	79.3	0.0	0.0	20.6	28	
A2	1 Aug 2007	13:07	Rain	79.4	0.0	0.0	20.5	28	Confined space
B1	1 Aug 2007	13:15	Rain	79.3	0.0	0.0	20.6	28	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 2 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	2 Aug 2007	8:59	Sunny	79.3	0.0	0.0	20.6	29	
A2	2 Aug 2007	9:10	Sunny	79.4	0.0	0.0	20.5	29	Confined space
A1	2 Aug 2007	12:48	Sunny	79.3	0.0	0.0	20.6	31	
A2	2 Aug 2007	12:55	Sunny	79.4	0.0	0.0	20.5	31	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 3 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	3 Aug 2007	8:58	Sunny	79.3	0.0	0.0	20.6	29	
A2	3 Aug 2007	9:11	Sunny	79.4	0.0	0.0	20.5	29	Confined space
A1	3 Aug 2007	12:49	Sunny	79.3	0.0	0.0	20.6	30	
A2	3 Aug 2007	12:55	Sunny	79.4	0.0	0.0	20.5	30	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 4 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (^{0}C)	Remark
A1	4 Aug 2007	8:58	Sunny	79.3	0.0	0.0	20.6	29	
A1	4 Aug 2007	13:04	Sunny	79.3	0.0	0.0	20.6	30	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 6 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (^{o}C)	Remark
A1	6 Aug 2007	8:43	Rain	79.3	0.0	0.0	20.6	28	
A2	6 Aug 2007	8:57	Rain	79.4	0.0	0.0	20.5	28	Confined space
A1	6 Aug 2007	12:48	Sunny	79.3	0.0	0.0	20.6	30	
A2	6 Aug 2007	12:58	Sunny	79.4	0.0	0.0	20.5	30	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 7 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	7 Aug 2007	9:06	Fine	79.3	0.0	0.0	20.6	27	
A2	7 Aug 2007	9:20	Fine	79.4	0.0	0.0	20.5	27	Confined space
A4	7 Aug 2007	9:27	Fine	79.4	0.0	0.0	20.5	27	Confined space
B1	7 Aug 2007	9:35	Fine	79.3	0.0	0.0	20.6	27	
A1	7 Aug 2007	12:50	Overcast	79.3	0.0	0.0	20.6	27	
A2	7 Aug 2007	12:58	Overcast	79.4	0.0	0.0	20.5	27	Confined space
A4	7 Aug 2007	13:07	Overcast	79.4	0.0	0.0	20.5	27	Confined space
B1	7 Aug 2007	13:12	Overcast	79.3	0.0	0.0	20.6	27	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 8 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	8 Aug 2007	8:57	Overcast (T1)	79.3	0.0	0.0	20.6	27	
A2	8 Aug 2007	9:06	Overcast (T1)	79.4	0.0	0.0	20.5	27	Confined space
A4	8 Aug 2007	9:12	Overcast (T1)	79.4	0.0	0.0	20.5	27	Confined space
A1	8 Aug 2007	12:42	Rain (T1)	79.3	0.0	0.0	20.6	27	
A2	8 Aug 2007	12:50	Rain (T1)	79.4	0.0	0.0	20.5	27	Confined space
A4	8 Aug 2007	12:57	Rain (T1)	79.4	0.0	0.0	20.5	27	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 9 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	9 Aug 2007	9:14	Overcast	79.3	0.0	0.0	20.6	26	
A2	9 Aug 2007	9:20	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A4	9 Aug 2007	9:29	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A5	9 Aug 2007	9:36	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A1	9 Aug 2007	13:23	Overcast	79.3	0.0	0.0	20.6	26	
A2	9 Aug 2007	13:30	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A4	9 Aug 2007	13:36	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A5	9 Aug 2007	13:43	Overcast	79.4	0.0	0.0	20.5	26	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 10 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	10 Aug 2007	9:10	Rain (T1)	79.3	0.0	0.0	20.6	25	
A2	10 Aug 2007	9:16	Rain (T1)	79.4	0.0	0.0	20.5	25	Confined space
A5	10 Aug 2007	9:26	Rain (T1)	79.4	0.0	0.0	20.5	25	Confined space
A1	10 Aug 2007	12:54	Rain (T8)	79.3	0.0	0.0	20.6	25	
A2	10 Aug 2007	13:00	Rain (T8)	79.4	0.0	0.0	20.5	25	Confined space
A5	10 Aug 2007	13:06	Rain (T8)	79.4	0.0	0.0	20.5	25	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 11 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	11 Aug 2007	8:58	Rain	79.3	0.0	0.0	20.6	25	
A1	11 Aug 2007	13:02	Rain	79.3	0.0	0.0	20.6	25	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 13 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	13 Aug 2007	9:09	Overcast	79.3	0.0	0.0	20.6	26	
A2	13 Aug 2007	9:16	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A5	13 Aug 200	9:23	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A1	13 Aug 2007	12:45	Rain	79.3	0.0	0.0	20.6	26	
A2	13 Aug 2007	12:50	Rain	79.3	0.0	0.0	20.6	26	Confined space
A5	13 Aug 200	12:57	Rain	79.4	0.0	0.0	20.5	26	Confined space

Field Technician:_____
(Site Agent)

Checked by:_____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 14 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	14 Aug 2007	8:42	Rain	79.3	0.0	0.0	20.6	26	
A2	14 Aug 2007	8:47	Rain	79.4	0.0	0.0	20.5	26	Confined space
A3	14 Aug 2007	8:53	Rain	79.4	0.0	0.0	20.5	26	Confined space
A5	14 Aug 2007	8:58	Rain	79.4	0.0	0.0	20.5	26	Confined space
A6	14 Aug 2007	9:03	Rain	79.4	0.0	0.0	20.5	26	Confined space
A8	14 Aug 2007	9:12	Rain	79.4	0.0	0.0	20.5	26	Confined space
B1	14 Aug 2007	9:20	Rain	79.3	0.0	0.0	20.6	26	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 14 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	14 Aug 2007	12:43	Rain	79.3	0.0	0.0	20.6	26	
A2	14 Aug 2007	12:48	Rain	79.3	0.0	0.0	20.6	26	Confined space
A3	14 Aug 2007	12:54	Rain	79.4	0.0	0.0	20.5	26	Confined space
A5	14 Aug 2007	13:00	Rain	79.4	0.0	0.0	20.5	26	Confined space
A6	14 Aug 2007	13:08	Rain	79.4	0.0	0.0	20.5	26	Confined space
A8	14 Aug 2007	13:13	Rain	79.4	0.0	0.0	20.5	26	Confined space
B1	14 Aug 2007	13:20	Rain	79.3	0.0	0.0	20.6	26	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 15 August 2007

Sampling equipment used:	Dates calibrated
Geotechnical Instrument	22 / 08 / 2006
GA 2000	
Serial No.: GA 08277	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	15 Aug 2007	8:51	Rain	79.3	0.0	0.0	20.6	26	
A2	15 Aug 2007	8:57	Rain	79.3	0.0	0.0	20.6	26	Confined space
A5	15 Aug 2007	9:02	Rain	79.4	0.0	0.0	20.5	26	Confined space
A8	15 Aug 2007	9:07	Rain	79.4	0.0	0.0	20.5	26	Confined space
B1	15 Aug 2007	9:15	Rain	79.3	0.0	0.0	20.6	26	
A1	15 Aug 2007	12:43	Rain	79.3	0.0	0.0	20.6	26	
A2	15 Aug 2007	12:46	Rain	79.3	0.0	0.0	20.6	26	Confined space
A5	15 Aug 2007	12:52	Rain	79.4	0.0	0.0	20.5	26	Confined space
A8	15 Aug 2007	12:57	Rain	79.4	0.0	0.0	20.5	26	Confined space
B1	15 Aug 2007	13:06	Rain	79.3	0.0	0.0	20.6	26	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 16 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	16 Aug 2007	8:59	Rain	79.3	0.0	0.0	20.6	25	
A2	16 Aug 2007	9:05	Rain	79.3	0.0	0.0	20.6	25	Confined space
A5	16 Aug 2007	9:11	Rain	79.4	0.0	0.0	20.5	25	Confined space
A8	16 Aug 2007	9:17	Rain	79.4	0.0	0.0	20.5	25	Confined space
B1	16 Aug 2007	9:23	Rain	79.3	0.0	0.0	20.6	26	
A1	16 Aug 2007	12:50	Rain	79.3	0.0	0.0	20.6	25	
A2	16 Aug 2007	12:54	Rain	79.3	0.0	0.0	20.6	25	Confined space
A5	16 Aug 2007	13:00	Rain	79.4	0.0	0.0	20.5	25	Confined space
A8	16 Aug 2007	13:05	Rain	79.3	0.0	0.0	20.6	25	Confined space
B1	16 Aug 2007	13:12	Rain	79.3	0.0	0.0	20.6	26	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 17 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	17 Aug 2007	8:51	Sunny	79.3	0.0	0.0	20.6	26	
A2	17 Aug 2007	8:57	Sunny	79.3	0.0	0.0	20.6	26	Confined space
A5	17 Aug 2007	9:02	Sunny	79.4	0.0	0.0	20.5	26	Confined space
A8	17 Aug 2007	9:08	Sunny	79.4	0.0	0.0	20.5	26	Confined space
B1	17 Aug 2007	9:16	Sunny	79.3	0.0	0.0	20.6	26	
A1	17 Aug 2007	12:46	Sunny	79.3	0.0	0.0	20.6	26	
A2	17 Aug 2007	12:52	Sunny	79.3	0.0	0.0	20.6	26	Confined space
A5	17 Aug 2007	13:57	Sunny	79.4	0.0	0.0	20.5	26	Confined space
A8	17 Aug 2007	13:03	Sunny	79.3	0.0	0.0	20.6	26	Confined space
B1	17 Aug 2007	13:10	Sunny	79.3	0.0	0.0	20.6	26	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 18 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	18 Aug 2007	8:58	Rain	79.3	0.0	0.0	20.6	25	
A1	18 Aug 2007	13:04	Rain	79.3	0.0	0.0	20.6	25	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 20 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	20 Aug 2007	9:08	Overcast	79.3	0.0	0.0	20.6	26	
A2	20 Aug 2007	9:15	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A1	20 Aug 2007	12:50	Overcast	79.3	0.0	0.0	20.6	26	
A2	20 Aug 2007	12:56	Overcast	79.3	0.0	0.0	20.6	26	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 21 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	21 Aug 2007	9:07	Rain	79.3	0.0	0.0	20.6	27	
A2	21 Aug 2007	9:13	Rain	79.4	0.0	0.0	20.5	27	Confined space
A1	21 Aug 2007	13:00	Overcast	79.3	0.0	0.0	20.6	28	
A2	21 Aug 2007	13:08	Overcast	79.3	0.0	0.0	20.6	28	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 22 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	22 Aug 2007	9:18	Overcast	79.3	0.0	0.0	20.6	26	
A2	22 Aug 2007	9:24	Overcast	79.3	0.0	0.0	20.6	26	Confined space
A5	22 Aug 2007	9:29	Overcast	79.3	0.0	0.0	20.6	26	Confined space
A8	22 Aug 2007	9:35	Overcast	79.4	0.0	0.0	20.5	26	Confined space
A1	22 Aug 2007	10: 00	Overcast	79.1	0.0	0.0	20.9	26	Hot work
A5	22 Aug 200	10:43	Overcast	79.2	0.0	0.0	20.7	26	Confined space
A1	22 Aug 2007	12:46	Overcast	79.2	0.0	0.0	20.7	26	
A2	22 Aug 2007	12:51	Overcast	79.3	0.0	0.0	20.6	26	Confined space
A8	22 Aug 2007	12:57	Overcast	79.3	0.0	0.0	20.6	26	Confined space
A8	22 Aug 2007	15::27	Overcast	79.3	0.0	0.0	20.6	26	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 23 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	23 Aug 2007	8:58	Overcast	79.3	0.0	0.0	20.6	27	
A2	23 Aug 2007	9:08	Overcast	79.3	0.0	0.0	20.6	27	Confined space
A5	23 Aug 2007	9:13	Overcast	79.3	0.0	0.0	20.6	27	Confined space
A1	23 Aug 2007	12:46	Overcast	79.3	0.0	0.0	20.6	27	
A2	23 Aug 2007	12:51	Overcast	79.3	0.0	0.0	20.6	27	Confined space
A5	23 Aug 2007	12:57	Overcast	79.4	0.0	0.0	20.5	27	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 24 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	24 Aug 2007	8:43	Overcast	79.3	0.0	0.0	20.6	26	
A2	24 Aug 2007	8:51	Overcast	79.3	0.0	0.0	20.6	26	Confined space
A5	24 Aug 2007	8:57	Overcast	79.3	0.0	0.0	20.6	26	Confined space
A1	24 Aug 2007	12:42	Sunny	79.3	0.0	0.0	20.6	27	
A2	24 Aug 2007	12:48	Sunny	79.3	0.0	0.0	20.6	27	Confined space
A5	24 Aug 2007	12:56	Sunny	79.4	0.0	0.0	20.5	27	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 25 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	25 Aug 2007	9:01	Sunny	79.3	0.0	0.0	20.6	28	
A1	25 Aug 2007	13:00	Sunny	79.2	0.0	0.0	20.7	29	

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 27 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	27 Aug 2007	8:40	Sunny	79.3	0.0	0.0	20.6	26	
A2	27 Aug 2007	8:46	Sunny	79.3	0.0	0.0	20.6	26	Confined space
A5	27 Aug 2007	8:52	Sunny	79.4	0.0	0.0	20.5	26	Confined space
A1	27 Aug 2007	12:37	Sunny	79.3	0.0	0.0	20.6	26	
A2	27 Aug 2007	12:41	Sunny	79.3	0.0	0.0	20.6	26	Confined space
A5	27 Aug 2007	12:48	Sunny	79.3	0.0	0.0	20.6	26	Confined space
A8	27 Aug 2007	16:47	Sunny	79.4	0.0	0.0	20.5	26	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 28 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	28Aug 2007	8:47	Sunny	79.3	0.0	0.0	20.6	27	
A2	28Aug 2007	8:53	Sunny	79.3	0.0	0.0	20.6	27	Confined space
A5	28Aug 2007	8:58	Sunny	79.4	0.0	0.0	20.5	27	Confined space
A1	28Aug 2007	12:47	Sunny	79.3	0.0	0.0	20.6	27	
A2	28Aug 2007	12:53	Sunny	79.3	0.0	0.0	20.6	27	Confined space
A5	28Aug 2007	12:58	Sunny	79.4	0.0	0.0	20.5	27	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 29 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	29 Aug 2007	8:45	Sunny	79.3	0.0	0.0	20.6	27	
A2	29 Aug 2007	8:51	Sunny	79.3	0.0	0.0	20.6	27	Confined space
A5	29 Aug 2007	8:57	Sunny	79.4	0.0	0.0	20.5	27	Confined space
A1	29 Aug 2007	12:48	Sunny	79.3	0.0	0.0	20.6	28	
A2	29 Aug 2007	12:52	Sunny	79.3	0.0	0.0	20.6	28	Confined space
A5	29 Aug 2007	12:59	Sunny	79.3	0.0	0.0	20.6	28	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 30 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	30 Aug 2007	8:44	Sunny	79.3	0.0	0.0	20.6	28	
A2	30 Aug 2007	8:50	Sunny	79.3	0.0	0.0	20.6	28	Confined space
A5	30 Aug 2007	8:57	Sunny	79.4	0.0	0.0	20.5	28	Confined space
A1	30 Aug 2007	12:53	Sunny	79.3	0.0	0.0	20.6	28	
A2	30 Aug 2007	12:57	Sunny	79.4	0.0	0.0	20.5	28	Confined space
A5	30 Aug 2007	13:02	Sunny	79.4	0.0	0.0	20.5	28	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Landfill Gas Monitoring – Field Measurement Recording Sheet

Name of Site: DE/2005/04- Ting Kok Road Pumping Station No. 5
Date of measurement: 31 August 2007

Sampling equipment used:	Dates calibrated
Gas Data	27 / 07 / 2007
Model GFM410 Landfill	
Serial No. 10239	

Sample location	Date of measurement	Sampling time	Perimeter on-site and/or off-site monitoring holes						
			Weather condition	Balance gas (%)	Flammable gas (methane %)	Carbon dioxide (%)	Oxygen (%)	Temp (°C)	Remark
A1	31 Aug 2007	8:41	Sunny	79.3	0.0	0.0	20.6	27	
A2	31 Aug 2007	8:46	Sunny	79.3	0.0	0.0	20.6	27	Confined space
A5	31 Aug 2007	8:52	Sunny	79.3	0.0	0.0	20.6	27	Confined space
A6	31 Aug 2007	8:57	Sunny	79.4	0.0	0.0	20.5	27	Confined space
A1	31 Aug 2007	12:39	Sunny	79.3	0.0	0.0	20.6	28	
A2	31 Aug 2007	12:45	Sunny	79.3	0.0	0.0	20.6	28	Confined space
A5	31 Aug 2007	12:51	Sunny	79.4	0.0	0.0	20.5	28	Confined space
A6	31 Aug 2007	12:57	Sunny	79.3	0.0	0.0	20.6	28	Confined space

Field Technician: _____
(Site Agent)

Checked by: _____
(RSO)

Appendix 8

Deficiency Investigation Reports

(Not Applicable)

Appendix 9

Complaint Reports

(Not Applicable)