# Contract No. : EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38

# ENVIRONMENTAL MONITORING AND AUDIT MONTHLY EM&A REPORT for

February 2009

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# APPROVAL SHEET

DOCUMENT DATE: 28 February 2009	
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#### **EXECUTIVE SUMMARY**

This is the thirty-second monthly Environmental Monitoring and Audit (EM&A) Report for the Environmental Protection Department Contract No. EP/SP/52/06 entitled "Development of EcoPark in Tuen Mun Area 38". (Environmental Permit No. EP-226/2005).

This report contains the results and findings of site inspection activities and EM&A works carried out by the Environmental Team (ET) of the Works Contractor as required in the contract during February 2009.

The site activities in the reporting period mainly consisted of excavation and site formation works and construction of drainage in Phase II construction site.

Several environmental issues, such as dust problem arising from open stockpiles of excavated materials and improper accommodation of chemical drums, have been identified by ET during weekly site inspections in the reporting month. Contractor has implemented some mitigation measures to address those problems as advised by ET. Some of the measures taken by the contractor were considered as effective to minimize negative impact to the environment. On-going investigation will be carried out to observe performance and effectiveness of those measures. Outstanding environmental items will be inspected in the following month.

LFG monitoring was carried out during the reporting month, on weekly basis, when specified instruments, provided by contractor, were available on site. Oxygen level monitoring works have been suspended for two weeks due to instrument breakdown. The measurement results from ET shown in Table 3.5 were within Action and Limit Levels in accordance with EM&A manual.

There were no notifications of summons or successful prosecution during February 2009.

Planned activities for March 2009 with regard to development of EcoPark consist of:

- 1) Site formation works,
- 2) Excavation works,
- 3) Road formation works and
- 4) Construction of drainage, sewerage & water mains

#### 1. BASIC PROJECT INFORMATION

#### 1.1 Introduction

This is the thirty-second monthly Environmental Monitoring and Audit (EM&A) Report for the Environmental Protection Department Contract No. EP/SP/52/06 entitled "Development of EcoPark in Tuen Mun Area 38". The site layout plan is shown in Appendix 1. The report was prepared by the Environmental Team, Environmental Pioneers & Solutions Limited, of the Works Contractor, Kaden Construction Limited. The report is to be submitted to the Works Contractor, the Engineer and the Environmental Protection Department for the project.

This report presents the results of the environmental monitoring of the project activities conducted during the month of February 2009. This included regular site inspections once per week for verification of implementation of the mitigation measures as recommended in the EM&A Manual and the Contractor's Environmental Management Plan (EMP).

The construction works of Phase I have already commenced in July 2006 and have been completed in November 2008.

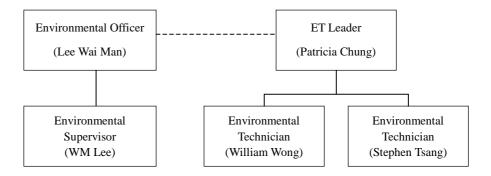
The construction works of Phase II commenced in December 2008 and is anticipated to be completed in December 2009.

The contact person and telephone number of key personnel for the captioned project are shown in Appendix 2.

#### 1.2 Project Organization and Management

The Works Contractor has commissioned Environmental Pioneers & Solutions Limited as the Environmental Team, which comprises the environmental team leader and the environmental technicians to undertake the environmental monitoring and audit work for this project. The project Organization Chart of Environmental Team is shown in Figure 1.1.

Figure 1.1 Organization Chart of Environmental Team



# 2. SUMMARY OF WORK ACTIVITIES AND CONSTRUCTION STATUS

#### 2.1 Works Undertaken during the Month

A summary of the site installation works in this month, with the information of locations, activities, equipment/materials and dates of occurrence, is provided by the Contractor, as shown in Table 2.1.

Table 2.1 Work Activities for February 2009						
Item	Work Activities & Location	Date of Occurrence				
1	Site formation works	1 Feb 2009 – 28 Feb 2009				
2	Excavation works	1 Feb 2009 – 28 Feb 2009				
3	Road Formation works	1 Feb 2009 – 28 Feb 2009				
4	Construction of drainage	1 Feb 2009 – 28 Feb 2009				

	Machineries				
	Equipment/ Plant	Quantity			
1	Mobile Crane	0			
2	Excavator	6			
3	Generator	2			
4	Air Compressor	1			
5	Roller	0			
6	Loader	1			
7	Grab Lorry	0			
8	Crane Lorry	1			
9	Water Truck	1			
10	Dump Truck	1			

#### Remarks:

- As informed by the Contractor, most equipment is mobile at site subject to work progress.
- Refer to Appendix 1 Site layout plan for location of construction activities.

# 2.2 Future Key Issues

The Contractor has provided an updated construction program in Table 2.2 to show the planned activities for the coming month (March 2009). The anticipated environmental issues are summarized as follow:

Table	Table 2.2 Construction Program and Anticipated Environmental Issues				
Item	Works		Anticipated Environmental Issues		
		-	Generation of C&D waste; excavated material should be reused as much as practicable.		
		-	Dust may be generated; the wheel washing machine should be in operation.		
1	Site formation works, excavation works & road works		Haul road should be sprayed regularly, by truck or sprinkler.		
	VOIRS	-	Stagnant water should be removed.		
		-	Mosquito mitigation measures should be implemented.		
		-	Landfill gas monitoring should be carried out.		
2	Construction of drainage, sewerage & water mains	-	Generation of C&D waste; excavated material should be used as much as practicable		
2		-	Dust may be generated; the wheel washing machine should be in operation		

The site inspection schedule for the next month (March 2009) is designated on 6, 13, 20 and 27 of March 2009.

#### 3. STATUS OF ENVIRONMENTAL PROTECTION AND SITE INSPECTIONS

#### 3.1 Environmental Site Inspections

Environmental site inspections are required to inspect the construction activities of the Development of EcoPark in order to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented. Regular site inspections should be carried out by the ET once per week during construction phase.

Outstanding issues at the end of January 2009 includes:

- 1) Several chemical storage tanks without labels and drip pans have been found along Road F of Phase I construction site. Improperly maintained tanks were still observed in Phase I construction site during inspection carried out on 13 February 2009. Contractor was reminded again to better maintain all chemical storage tanks in both Phase I and II construction site.
- 2) Some of the hoardings along the interface of Phase I and II construction site was removed. Hoardings installation started along Lung Mun Road on 13 February 2009. Installations for interface between Phase I and II construction site was in progress as observed on 27 February 2009 site inspection.
- 3) Well constructed wheel washing bay is not available for wheel washing machine at the entrance of Phase II construction site. ET has been informed by contractor that the existing entrance is of temporary use and they are waiting for approval for construction of a permanent entrance along Lung Mun Road. Contractor was reminded to provide effective wheel washing and washing bay at any newly constructed entrance.

Site inspection of Phase I construction site was conducted on 13 February 2009. Special observations include:

1) Drip pan has not yet been provided for the three plastic chemical drums adjacent to the cooling tower in the administration building. ET was informed that a proper drip pan is being designed.

2) Several chemical storage tanks without labels and drip pans have been found along Road F of Phase I construction site. Contractor was reminded again to better maintain all chemical storage tanks in both Phase I and II construction site.

Outstanding issues will be inspected in the next reporting month.

Site inspections for Phase II construction site were conducted on 6, 13, 20 and 27 of February 2009.

A detailed checklist of each site inspection together with comments, relevant photos and maps have been filed and kept.

The findings and results of site inspections are provided in Table 3.1:

Date	Observations	Advice from ET	Action taken	Closing Date
Feb 09	Some of the hoardings along the interface of Phase I and II site was removed	Contractor was reminded again to re-install hoardings for dust control as soon as possible	2009. Installation	To be followed i the next reporting month
Feb 09	Well constructed wheel washing bay is not available for wheel washing machine at the entrance of Phase II construction site	ET has been informed by contractor that the existing entrance is of temporary use and they are waiting for approval for construction of a permanent entrance along Lung Mun Road.  Contractor was reminded to provide effective wheel washing and washing bay at any newly constructed entrance.	Contractor was still waiting for approval for construction of a permanent entrance along Lung Mun Road.	To be followed i the next reporting month

Date Observations Advice from ET Action taken Closing						
Dute	Observations	ravice from 21	riction taken	Date		
Feb 09	Open stockpiles of excavated materials were found in the site. Dust problems existed in windy condition.	Contractor was reminded to install more water sprinklers and spray water on stockpiles more frequently.	Water spraying vehicle has been provided for dust suppression. More water sprinklers have been installed and operated at several locations along the side of Lung Mun Road since 27 Feb 09.	On- going		
Feb 09	Domestic and C&D wastes was observed at several locations in Phase II construction site.	Contractor was reminded to locate wastes in the assigned temporary storage area.	Action taken as advised. Performance observes in weekly site inspection.	06 Feb 2009		
06 Feb 09 13 Feb 09	Stagnant water was observed at the entrance of Phase II site and near water front	•	Action taken as advised. No accumulated water has been observed on 20 Feb 09 site inspection	20 Feb 09		
06 Feb 09 13 Feb 09		Contractor was reminded to provide specified instrument with valid calibration certificate for weekly oxygen monitoring as soon as possible.	Another oxygen meter (GasAlert Max XT) has been provided by contractor on 20 Feb 2009 for temporary use. As informed by contractor, a permanent oxygen meter with calibration certificate will be provided on site.	20 Feb 09		
13 Feb 09	Two oil drums without drip trays were observed in the Chemical Storage Area	Contractor was reminded to place all chemical drums inside chemical storage cabinet.	Action taken as advised. Drums have been placed into drip trays on 27 Feb 09 inspection	27 Feb 09		

# 3.2 Air Dust

Excavation work commenced in Phase II construction site. Dust problem may be arisen when stockpiles of excavated materials are not enclosed, covered or dampened during

dry or windy conditions.

#### 3.3 Noise

The major noise source was vehicle movement and machinery in the EcoPark. Since the nearby NSRs were remote, the noise impact was minimal. There was no specific observation noted regarding noise issue. The Contractor has obtained the Construction Noise Permit on 07 August 2007 but it had been expired on 28 Feb 2008. The contractor should renew the permit as necessary.

#### 3.4 Surface Water Quality

Since there was no water discharge at manhole, the Contractor removed the silt curtain installed at discharge point on 4 April 2007, as agreed by the Engineer's Representative. No muddy water was observed at discharge point for Phase I construction site. As informed by Engineer's Representative, there was no direct water discharge at manhole in Phase II construction site. No muddy water discharge is expected.

Chemical toilets (1 nos.) have been provided in Phase II construction site by a licensed contractor, of which sewage generated is collected every three to five days without causing contamination on surface water. The Effluent Discharge License was issued to the Contractor on 20 November 2006.

The temporary storage tank was used to store the effluent of aerobic wastewater treatment system and the stored effluent was pumped away regularly. As checked by the ET, there was no effluent discharge into the storm water drain. To avoid any sewage overflow, frequent checking is required after the commencement of Phase II construction works.

#### 3.5 Visual and Landscape Impact

Hoarding was erected at the site egress and aligned along the site boundary along Lung Mun Road. Hoardings were specially designed to be movable for future re-use in other locations. Some of the hoardings have been removed at the interface between Phase I

and Phase II construction site. As of inspection carried out on 27 February 2009, re-installation was in progress.

3.6 Waste / Chemical Waste

The Contractor implemented visual inspection and distributed flyers/ notices to ensure all dump trucks have mechanical covers closed when leaving EcoPark site.

Separate waste collection bins were made available for collecting aluminum cans, waste paper and plastic bottles etc. The Contractor has provided the revised site layout plan for refuse collection points as shown in Appendix 3.

Waste dumpers were used for the collection and storage of general waste. Temporary storage areas for waste metals and waste tyres were established in Phase I construction site. For Phase II construction site, a designated refuse collection point has been established and location is shown in Appendix 3.

Excavated materials are reused as back-fill material to balance cut and fill and hence reduce the generation of materials. Surplus materials are returned to stock in centralized area with suitable protective measures. The Contractor was reminded to comply with the requirements and conditions for disposal at public fill facility and all oversized aggregates should be crushed to less than 250mm before delivering to the public fill.

Materials are recycled and re-used at site as much as practicable to minimize waste generation. Timbers are recycled to make temporary tools and assess ladders etc. Excavated rocks, concrete and asphalts are stored for future re-use in land formation and structural construction etc.

Registered waste collectors will be arranged to collect and transport the wastes whenever necessary.

The Contractor has provided sufficient drip trays for all temporary electricity generators at site. These drip trays should be covered by tarpaulin sheet to minimize rainfall

accumulation.

Table 3.4 provides a summary table of waste disposal in February 2009 The Contractor has been reminded to keep good record at site in order to have a clear presentation of waste disposal.

Table 3.4 Summary of Waste Disposal in February 2009					
Type of Waste Disposal Site Quantity Remarks					
General Waste	WENT Landfill	6 tonnes	-		
Inert C&D Material	Public Fill Facility	0 tonnes	-		

#### 3.7 Landfill Gas

Landfill gas (LFG) monitoring was carried out in February 2009 when there were excavations of 1m depth or more in Phase II construction site. LFG monitoring was carried out on site at four (4) locations, as instructed by the Engineer's Representative. LFG measurements on 06, 13, 20 and 27 February 2009 are summarized in Table 3.5. Measurement results are within the Action / Limit Levels in accordance with the EM&A Manual, as shown in Table 3.6.

Table 3.5 Summary of LFG Measurement for February 2009						
Sampling Location	Date of Measurement	Sampling Time	Weather Condition	Methane (CH <sub>4</sub> ) %LEL	Carbon Dioxide (CO <sub>2</sub> ) %LEL	Oxygen (O <sub>2</sub> )
FMH 37	06 February 09	09:56	Overcast	0.00%	0.00%	N/A*
FMH 35	06 February 09	10:06	Overcast	0.00%	0.00%	N/A*
FMH 33 – 34	06 February 09	10:09	Overcast	0.00%	0.00%	N/A*
FMH 33	06 February 09	10:11	Overcast	0.00%	0.00%	N/A*
		1		l		
FMH 37	13 February 09	11:44	Cloudy	0.00%	0.00%	N/A*
FMH 35	13 February 09	11:47	Cloudy	0.00%	0.00%	N/A*
FMH 33 – 34	13 February 09	11:49	Cloudy	0.00%	0.00%	N/A*
FMH 33	13 February 09	11:52	Cloudy	0.00%	0.00%	N/A*
FMH 37	20 February 09	11:58	Drizzle	0.00%	0.00%	20.9%**
FMH 35	20 February 09	12:02	Drizzle	0.00%	0.00%	20.9%**
FMH 33 – 34	20 February 09	12:05	Drizzle	0.00%	0.00%	20.9%**
FMH 33	20 February 09	12:07	Drizzle	0.00%	0.00%	20.9%**
				1		
FMH 37	27 February 09	10:20	Sunny	0.00%	0.00%	20.9%**
FMH 35	27 February 09	10:25	Sunny	0.00%	0.00%	20.9%**
FMH 33 – 34	27 February 09	10:32	Sunny	0.00%	0.00%	20.9%**
FMH 33	27 February 09	10:36	Sunny	0.00%	0.00%	20.9%**

Table 3.5 Summary of LFG Measurement for February 2009

Sampling	Date of		Weather	Methane	Carbon Dioxide	Orrigon (O.)
Location	Measurement	Time	Condition	(CH <sub>4</sub> ) %LEL	(CO <sub>2</sub> ) %LEL	Oxygen (O <sub>2</sub> )
			•			

#### Remarks:

- 1) As agreed by the Engineer's Representative, the landfill gas measurements on February 2009 were carried out with two instruments: one for the measurements of methane and carbon dioxide (GEM 2000 Plus), another for the measurement of oxygen (GasAlert MicroClip).
- \*  $O_2$  level data was unavailable for 06 Feb 2009 and 13 Feb 2009 as instrument has been sent for maintenance and calibration.
- \*\* Oxygen levels were measured with GasAlert MaxXT provided by contractor.

		Event and Action Plan for LFG (From
EM&A Man	,	
Parameter	Level	Action
Oxygen	Action Level < 19% O <sub>2</sub>	Ventilate trench/ void to restore O <sub>2</sub> to >19%
	Limit Level $< 18\% O_2$	Stop works
		Evacuate personnel/prohibit entry
		Increase ventilation to restore $O_2$ to > 19%
Methane	Action Level >10% LEL	Post "No Smoking" signs
$(CH_4)$		Prohibit hot works
		Increase ventilation to restore CH <sub>4</sub> to <10%
		LEL
	Limit Level >20% LEL	Stop works
		Evacuate personnel/prohibit entry
		Increase ventilation to restore CH <sub>4</sub> to <10%
		LEL
Carbon Dioxide	Action Level >0.5% CO <sub>2</sub>	Ventilate to restore $CO_2$ to $< 0.5\%$
$(CO_2)$	Limit Level >1.5% CO <sub>2</sub>	Stop works
		Evacuate personnel/prohibit entry
		Increase ventilation to restore CO <sub>2</sub> to <
		0.5%

#### 4. SUMMARY OF ENVIRONMENTAL PERMIT AND LICENCES

ET has checked with the Contractor for the status of all environmental permits and licenses for this project as at February 2009, which is summarized in Table 4.1. ET will follow the application process of the outstanding permits / licenses and will provide suitable assistance whenever appropriate.

Table 4.1 Summary of Environmental Permits/ Licences							
Description	License / Permit	Date of	Date of	Status/Remarks			
	No.#	Issue	Expiry				
Environmental Permit	EP-226/2005	9-Sept-2005		Issued			
Registration of Waste Producer	5111-421-K2869-02	27-Jul-2006		Issued			
Construction Noise Permit	GW-RW0402-07	07-Aug-2007	28-Feb-2008	Expired			
Effluent Discharge Licence	EP760/421/011762/I	20-Nov-2006	1-Dec-2011	Issued			

#### 5. CUMULATIVE LOG OF COMPLAINTS AND REMEDIAL ACTION

The cumulative log of complaints is referred in Appendix 5.

# 6. CUMULATIVE LOG OF NOTIFICATION OF SUMMONS AND PROSECUTIONS

No notification of summons and no prosecutions occurred during February 2009.

#### 7. CONCLUSION

There is no summon nor prosecutions reported during February 2009.

Several environmental issues, such as dust problem arising from open stockpiles of excavated materials and improper accommodation of chemical drums, have been identified by ET during weekly site inspections in the reporting month. Contractor has implemented some mitigation measures to address those problems as advised by ET. Some of the measures taken by the contractor were considered as effective to minimize negative impact to the environment. On-going investigation will be carried out to

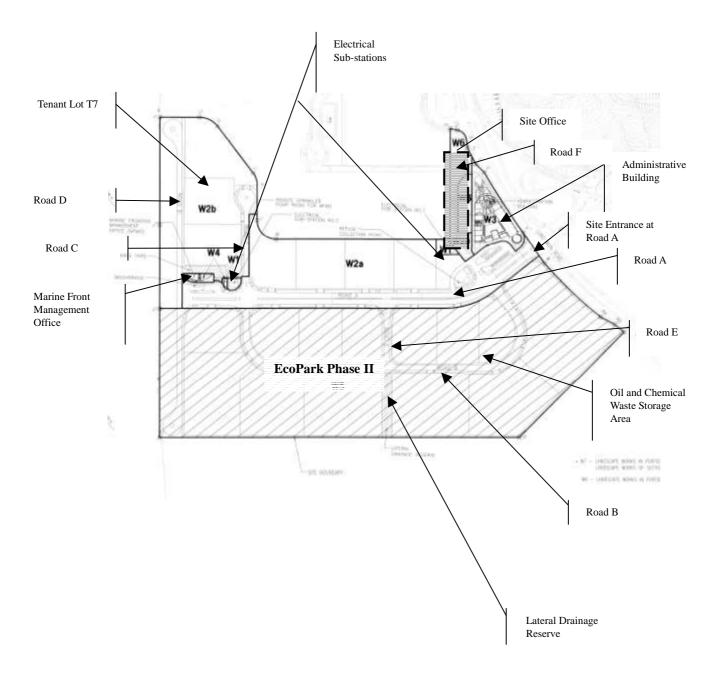
observe performance and effectiveness of those measures. Outstanding environmental items will be inspected in the following month.

The Contractor has been using the waste management and record system including allocation of waste storage areas and the trip ticket system as proposed in the Environmental Management Plan.

LFG monitoring was carried out in February, on weekly basis, when instruments were available. The measurement results from ET shown in Table 3.5 were within Action and Limit Levels in accordance with EM&A manual.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement.

# **APPENDIX 1 - SITE LAYOUT PLAN**



# APPENDIX 2 - THE CONTACT PERSONS, TELEPHONE NUMBERS OF KEY PERSONNEL FOR DEVELOPMENT OF ECOPARK IN TUEN MUN AREA 38

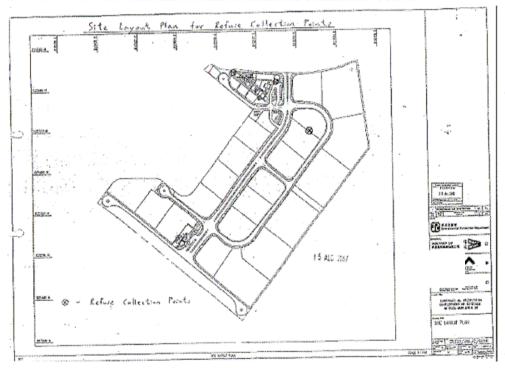
Company/Department	Name	Position	Telephone	
		Independent		
Scott Wilson Ltd.	Harold Insley	Environmental	2410 3858	
		Checker		
Scott Wilson Ltd.	Mr. Andy	Resident	6111 9703	
Scott Wilson Ltd.	Cheung	Engineer	0111 9/03	
Scott Wilson Ltd.	Mr. T W Wong	Inspector	6111 9705	
	M KMD 1	Project	0102.0600	
Kaden Construction Limited	Mr. K M Book	Manager	9193 8680	
Kaden Construction Limited	Mr. Stephen	Section A cent	9071 7657	
Raden Construction Limited	Leung	Section Agent	90/1/03/	
Environmental Pioneers & Solutions	Miss. Patricia	Environmental	2185 0123	
Limited	Chung	Team Leader	2183 0123	
Environmental Pioneers & Solutions	Mr. William	Environmental	2185 0154	
Limited	Wong	Technician	2105 0154	
Environmental Pioneers & Solutions	Mr. Stephen	Environmental	2185 0172	
Limited	Tsang	Technician	2183 0172	

#### APPENDIX 3 – REVISED SITE LAYOUT PLAN FOR REFUSE COLLECTION POINTS

Development of EcoPark in Tuen Mun Area 38

Contract No. EP/SP/52/06 EM&A Report No. 30 (December 2008)

#### APPENDIX 3 - REVISED SITE LAYOUT PLAN FOR REFUSE COLLECTION POINTS



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# APPENDIX 4 - ORIGINAL LANDFILL GAS FIELD MEASUREMENT RECORDING SHEETS

Environmental Pioneers and Solutions Limited

Contract No.: EP/SP/52/06 - Development of EcoPark in Tuen Mun Area 38

#### Landfill Gas Monitoring - Field Measurement Recording Sheet

Date of Monitoring: 06 Feb 2009

Weather condition: Overcart

Monitoring performed by: Zichtan Way

Monitoring instrument:

Instruments	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
Instruments	S/N: GM-08793	Next calibration:	17 Dec 2009

#### Monitoring results:

		Results				
Location	Time	Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	10'11	0.00	0.00	N/A*	84.6	30,71
FMH 33 – 34	10:09	9,50	000	N/A*	£4.4	30.71
FMH 35	10:00	0 25	0.00	NIA	84.5	3271
FMH 37	09.56	0.00	0.00	N/A*	84.5	30.71

Instrument for O2 measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348

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Environmental Pioneers and Solutions Limited

Contract No.: EP/SP/52/06 - Development of EcoPark in Tuen Mun Area 38

## Landfill Gas Monitoring - Field Measurement Recording Sheet

Date of Monitoring: 13 Ja. 2009

Weather condition: Cloudy

Monitoring performed by: William Way

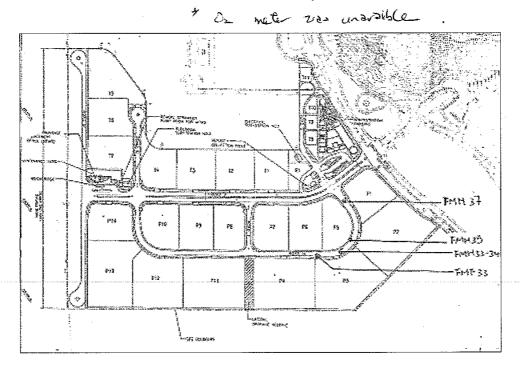
Monitoring instrument:

_	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
Instruments	S/N: GM-08793	Next calibration:	17 Dec 2009

#### Monitoring results:

		Results				
Location	Time	Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	11252	0.00	0.00	N.A	f4.7	29.69
FMH 33 – 34	11-49	0.00	0.00	N.A.	f4.7	29,69
PMH 35	11347	0.00	n 02	ν.α	84.7	29.69
FMH 37	11:44	0.00	0.00	N.A.	84,6	29.69

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348



Environmental Pioneers and Solutions Limited

Contract No.: EP/SP/52/06 - Development of EcoPark in Tuen Mun Area 38

#### Landfill Gas Monitoring - Field Measurement Recording Sheet

Date of Monitoring: 20 Feb 2007
Weather condition: Over Cact, hund.
Monitoring performed by: William Way
Monitoring instrument:

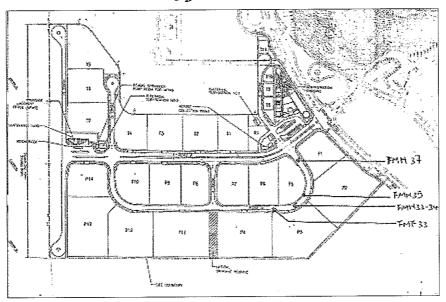
T1	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
Instruments	S/N: GM-08793	Next calibration:	17 Dec 2009

#### Monitoring results:

Location	Time	Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	1207	0.00	0,00	9. vs	84,8	30,11
FMH 33 – 34	1205	0.00	0.00	20.8	84.7	30.11
FMH 35	12:02	0.00	0.00	20.9	f4.5	30.11
FMH 37	11=58	0.00	0.06	20,9	84.8	30.(1

Instrument for O2 measurement: GasAlert MicroClip GAMIC 4-DL2 Serial no.: \$103-13348

\*\*O2 level relatived 25:th Cas Alert Max X 7



Environmental Pioneers and Solutions Limited

Contract No.: EP/SP/52/06 - Development of EcoPark in Tuen Mun Area 38

## Landfill Gas Monitoring - Field Measurement Recording Sheet

Weather condition:

Monitoring performed by:

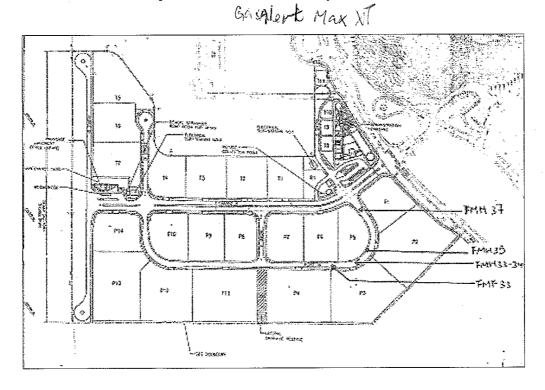
Monitoring instrument:

	Model: GEM 2000 Plus	Last calibration:	18 Dec 2008
Instruments	S/N: GM-08793	Next calibration:	17 Dec 2009

#### Monitoring results:

		Results				
Location	Time	Methane (CH <sub>4</sub> ) %	Carbon Dioxide (CO <sub>2</sub> ) %	Oxygen (O <sub>2</sub> ) %	Bal. Gas %	Baro. Pressure %
FMH 33	1030	10.0%	00.0%	20.9%	J4.7%	31.10
FMH 33 – 34	1032	00.0%	0.0.0%	20.9%	84.8%	31,10
FMH 35	1025	00.0%	100%	20.9%	14.8%	31,10
FMH 37	1020	00.0%	00.0%	20.9%	84.6%	31,10

Instrument for O<sub>2</sub> measurement: GasAlert MicroClip GAMIC-4-DL2 Serial no.:S103-13348



## **APPENDIX 5 – CUMULATIVE LOG OF COMPLAINTS**

# **CUMULATIVE LOG OF COMPLAINTS**

Environmental Parameters	No. of Outstanding Complaints	<u> </u>	Cumulative no. of complaints received since the commencement of project
Air	0	0	2
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	2

Log Ref.	Date of Compliant received	Location	Complainant /Date	Details of Complaint	Investigation /Mitigation Action	Investigated by/ Date
-	-	-	-	-	-	-

## DETAILS OF COMPLAINTS AND REMEDIAL ACTIONS