

# **EM&A Report**

# **EcoPark Operation**Quarterly EM&A Compliance Report

November 2010 to January 2011









# **EM&A Report**

# **EcoPark Operation**Quarterly EM&A Compliance Report

Another Religions

November 2010 to January 2011

Certified By

**Antony WONG** 

ET Leader

Verified By

Sharifah OR

IEC

Approved By

Dr Lawrence WONG

Principal EPO

Project/Deliverable Number:	J494A   D01/02
Project Name:	EcoPark Operation EM&A
Report Name:	Quarterly EM&A Compliance Report – November 2010 to January 2011
Report Date:	April 2011
Report for:	Serco Guardian JV

#### PREPARATION, REVIEW AND AUTHORISATION

Revision #	Date	Prepared by	Reviewed by	Approved for Issue by
1	18 Feb 11	Carman CHUNG	Antony WONG	Alexi BHANJA
2	1 Apr 11	Carman CHUNG	Antony WONG	Alexi BHANJA
		Zonon	Antmy	Meni Brengt.

#### **ISSUE REGISTER**

Distribution List	Date Issued	Number of Copies	
Serco Guardian JV – Noel AU	Apr 11	1 hardcopy	
EPD (EIAO Office)	Apr 11	3 hardcopies + 1 CD	
EPD – Dr Lawrence WONG	Apr 11	1 hardcopy	
IEC – Sharifah OR	Apr 11	1 hardcopy	
SMEC Project File:	Apr 11	1 electronic	

#### **SMEC COMPANY DETAILS**

#### **SMEC Asia Limited**

27/F Ford Glory Plaza, 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong T +852 3995 8100 | F +852 3995 8101 smecasia@smec.com | www.smec.com

The information within this document is and shall remain the property of SMEC Asia Limited



# **CONTENTS**

	EXEC	UTIVE S	UMMARY	E-1
1	PROJ	ECT DE	SCRIPTION	1-1
	1.1	Overvi	ew	1-1
	1.2	Operat	ion Programme	1-1
	1.3	EM&A	Organisation	1-2
2	SUMN	IARY OF	EM&A REQUIREMENTS	2-1
	2.1	Monito	ring Parameters	2-1
	2.2	Enviro	nmental Quality Performance Limits and EAP	2-1
	2.3	Enviro	nmental Audit of Non-Monitored Parameters	2-2
	2.4	Enviro	nmental Mitigation Measures	2-2
	2.5	Enviro	nmental Requirements in Tenancy Agreements	2-2
3	OPER	ATION S	STATUS	3-1
	3.1	Tenan	ts and Processes	3-1
		3.1.1	Tenancy EP07-03 (Phase 1)	3-1
		3.1.2	Tenancy EP08-03 (Phase 1)	3-1
		3.1.3	Tenancy EP06-034 (Phase 1)	3-1
		3.1.4	Tenancy EP07-02 (Phase 1)	3-2
		3.1.5	Tenancy EP08-01 (Phase 1)	3-2
		3.1.6	Tenancy EP08-04 (Phase 1)	3-2
		3.1.7	Tenancy P7 (Phase 2)	3-2
		3.1.8	Tenancy P5 (Phase 2)	3-3
	3.2	Throug	hput Statistics	3-3
4	IMPLE	MENTA	TION STATUS OF ENVIRONMENTAL PROTECTION MEASURES	4-1
5	MONI	FORING	RESULTS	5-1
	5.1	Monito	ring Date, Time, Frequency and Duration	5-1
	5.2	Monito	ring Methodology, Parameters and Equipment	5-1
	5.3	Types	of Equipment Used and Calibration Details	5-2
	5.4	Result	s and Graphical Plots of Monitoring Parameters	5-2
6	WAST	E GENE	RATION STATISTICS	6-1
7	SUMM	IARY OF	ENVIRONMENTAL AUDIT	7-1
	7.1	Novem	nber 2010	7-1
		7.1.1	Tenant Audits	7-1
		7.1.2	General EcoPark Audit	7-1



9	CONC	LUSION	IS	9-1
8	COMP	LAINTS	)	8-1
		7.3.2	General EcoPark Audit	7-3
		7.3.1	Tenant Audits	7-2
	7.3	Januar	ry 2011	7-2
		7.2.2	General EcoPark Audit	7-2
		7.2.1	Tenant Audits	7-2
	7.2	Decem	nber 2010	7-2

# **APPENDICES**

Appendix 1	Enviro	Environmental Mitigation Measures (from the Implementation Schedule)		
Appendix 2	Enviro	Environmental Requirements in Tenancy Agreement		
Appendix 3	Mater	ial and Waste Throughputs		
Appendix 4	Calibr	ration Certificate of Infrared Gas Analyser		
Appendix 5	Graph	nical Plots of LFG Monitoring		
Appendix 6	Tenar	Tenant-Specific Audit Checklists for the Reporting Quarter		
	6.1	Champway (EP07-03)		
	6.2	Shiu Wing (EP08-03)		
	6.3	Hung Wai (EP06-034)		
	6.4	Li Tong (EP07-02)		
	6.5	Yan Oi Tong (P7)		
	6.6	St. James' Settlement (P5)		
Appendix 7	Gene	ral EcoPark Checklists for the Reporting Quarter		



# **TABLES**

Table 1-1	EM&A Personnel Contact Details
Table 2-1	Operation Phase LFG Monitoring Locations in EcoPark
Table 2-2	Action Levels, Limit Levels and Event and Action Plan for LFG
Table 5-1	Sampling Schedule of LFG Monitoring
Table 5-2	Parameters and Measurement Ranges of LFG Monitoring
Table 5-3	LFG Monitoring Results

# **FIGURES**

Figure 1-1	Location of EcoPark in Tuen Mun Area 38
Figure 1-2	Organisation Chart of SGJV
Figure 1-3	Organisation Chart of EM&A Works (Operation)
Figure 2-1	LFG Monitoring Locations within EcoPark
Figure 2-2	Replacement Figure for EM&A Manual Figure 6.1
Figure 3-1	Current Lot Usage Within EcoPark



#### **EXECUTIVE SUMMARY**

#### General

EcoPark is a key element in the Government's waste management policy that aims to promote the local recycling industry and jump-start a circular economy to provide a sustainable solution to our waste problems.

EcoPark has been developed in two phases (Phase 1 and Phase 2) under construction contract EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38, which was awarded to Kaden Construction by the Environmental Protection Department (EPD) in June 2006. Phase 1 construction was completed in July 2009 and Phase 2 construction was completed in November 2010. The seven-year contract for the operation of EcoPark EP/SP/53/06 Provision of Management Services for EcoPark in Tuen Mun Area 38 was awarded to Serco Guardian Joint Venture (SGJV) by EPD in November 2006.

Effective from August 2010 onwards, SGJV ("the Operator") has appointed SMEC Asia Ltd (SMEC) as the Environmental Team (ET) for the Environmental Monitoring and Audit (EM&A) works, replacing the previous ET who were engaged by SGJV from May 2007 to July 2010. Effective from January 2011 onwards, SGJV has appointed Atkins China Ltd (Atkins) as the Independent Environmental Checker (IEC) for the EM&A works, replacing the previous IEC who were engaged by EPD from May 2007 to December 2010. The ET and the IEC carry out the EM&A works for EcoPark as required by the EM&A Manual and in accordance with the conditions of the Environmental Permit.

This is the fifteenth quarterly EM&A report prepared for the operation phase of EcoPark and covers November 2010 to January 2011.

The tenants' recycling activities are audited on a monthly basis and the results are summarised in this report. At present, there are eight tenants in EcoPark:

#### 1. Phase 1

- Champway Technology Limited (Champway) waste cooking oil;
- Shiu Wing Steel Limited (Shiu Wing) waste metals;
- Hong Kong Hung Wai Wooden Board Company (Hung Wai) waste wood;
- Li Tong Group (Li Tong) Waste Electrical and Electronic Equipment (WEEE);
- Hong Kong Telford Envirotech Group Limited (Telford) waste plastics; and
- Cosmos Star Holdings Co., Limited (Cosmos) waste lead-acid batteries.

#### 2. Phase 2

- YOT EcoPark Plastic Resources Recycling Centre (Yan Oi Tong) waste plastics; and
- St. James' Settlement "WEEE GO GREEN" EcoPark (St James' Settlement) WEEE.

The ET has conducted monthly site inspections, the IEC has carried out quarterly inspections, and some general observations have been made. The approved checklist has been used in the monthly site inspections for various tenants since October 2009.



#### **Throughput of Materials / Waste Generated**

As of end-January 2011, six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have commenced recycling activities within their lots. Two tenants, Telford and Cosmos, have not commenced full recycling activities but were carrying out preparatory works within their lots, however Telford commenced trial commissioning on 4 November 2010. The following throughputs occurred during the reporting quarter:

- 1. **Champway.** 334,895kg of cooking oil and 293,750kg of grease-trap waste were delivered and processed, producing 520,968kg of treated cooking oil, 784,160kg of biodiesel and 23,524kg of glycerine. A total of 155,838kg of waste was generated, including 30,640kg of inorganic waste, 53,575kg of organic waste and 71,623kg of water waste (semi-solid and slurry inclusive).
- 2. **Shiu Wing.** 1,913,150kg of waste metal was delivered and processed, producing the same amount of sheared heavy ferrous scrap on site. No waste was generated.
- 3. **Hung Wai.** 888,830kg of waste wood was delivered and processed, resulting in 1,449,000kg of wood chips as product output. No waste was generated.
- 4. **Li Tong.** 77,339kg of WEEE was delivered and processed, producing 6,168kg of metals and 27,293kg of non-metals. 1,752kg of general refuse was generated.
- Telford. Although formal recycling activities are not currently being carried out, 110,000kg of waste plastics were delivered. Telford commenced trial commissioning on 4 November 2010.
- Cosmos. No recycling activities are being carried out and no waste has been delivered.
- 7. **Yan Oi Tong.** 264,601kg of waste plastics were delivered and 213,741kg were processed. 36,350kg of general refuse was generated from mixed waste plastics.
- 8. **St James' Settlement.** 58,763kg of WEEE was delivered and processed, producing 915 pieces of repaired / refurbished Electrical and Electronic Equipment (EEE), 16,065kg of metals and 7,522kg of non-metals. 2,925kg of general refuse was generated.

#### **Exceedances of any Measured Action / Limit Levels**

In terms of monitoring during operation phase EM&A, only quarterly monitoring of landfill gas (LFG) is required "following construction". Construction of Phase 1 was completed in July 2009, so LFG monitoring commenced in the next reporting quarter (August to October 2009). Construction of Phase 2 was completed in November 2010, so LFG monitoring commenced in the next reporting quarter (November 2010 to January 2011).

LFG monitoring during this quarter was undertaken on 17 January 2011 at five locations (three in Phase 1 and two in Phase 2). No exceedance of Action/Limit Level was recorded.

#### Summary of Complaints, Summons and Prosecutions

Numbers of complaints, summons and successful prosecutions are summarized below:

- Zero Complaints;
- Zero Summons; and
- Zero Successful Prosecutions.



#### **Reporting Changes**

Effective from January 2011, Atkins China Ltd (Atkins) have been engaged by SGJV as the Independent Environmental Checker (IEC) for the EM&A works, replacing the previous IEC who were engaged by EPD from May 2007 to December 2010. The nominated IEC from Atkins is Ms Sharifah OR.

#### **Future Key Issues**

By end of this reporting quarter, two tenants of Phase 1, Telford and Cosmos, had not commenced full recycling activities but were carrying out preparatory works within their lots. After commencing trial commissioning on 4 November 2010, Telford are expected to commence formal recycling activities in the first quarter of 2011.

In the next reporting quarter, operation phase LFG monitoring for Phase 1 and Phase 2 will continue.



# 1 PROJECT DESCRIPTION

#### 1.1 Overview

In the document "A Policy Framework For The Management Of Municipal Solid Waste (2005-2014)" the government set out a comprehensive policy to support the recycling industry. This included allocating suitable land, encouraging research and development, introducing environmental legislation and providing effective support measures. To this end, EcoPark is a key element that aims to promote the local recycling industry and jump-start a circular economy to provide a sustainable solution to our waste problems. By encouraging and promoting the reuse, recovery and recycling of our waste resources and returning them to the consumption loop, EcoPark will help to realise the full potential of the local recycling industry and alleviate the heavy reliance on the export of recyclable materials recovered from Hong Kong.

EcoPark has been developed in Tuen Mun Area 38 (see *Figure 1-1*) in two phases (Phase 1 and Phase 2) under construction contract *EP/SP/52/06 Development of EcoPark in Tuen Mun Area 38*, which was awarded to Kaden Construction by the Environmental Protection Department (EPD) in June 2006. Phase 1 construction was completed in July 2009 and Phase 2 construction was completed in November 2010. The seven-year contract for the operation of EcoPark *EP/SP/53/06 Provision of Management Services for EcoPark in Tuen Mun Area 38* was awarded to Serco Guardian Joint Venture (SGJV) by EPD in November 2006.

Effective from August 2010 onwards, SGJV ("the Operator") has appointed SMEC Asia Ltd (SMEC) as the Environmental Team (ET) for the Environmental Monitoring and Audit (EM&A) works, replacing the previous ET who were engaged by SGJV from May 2007 to July 2010. Effective from January 2011 onwards, SGJV has appointed Atkins China Ltd (Atkins) as the Independent Environmental Checker (IEC) for the EM&A works, replacing the previous IEC who were engaged by EPD from May 2007 to December 2010. The ET and the IEC carry out the EM&A works for EcoPark as required by the EM&A Manual and in accordance with the conditions of the Environmental Permit.

# 1.2 Operation Programme

By end of January 2011, two tenants, Telford and Cosmos, had commenced preparatory works within their lots. Telford commenced trial commissioning on 4 November 2010. Six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have started recycling activities.

Environmental observations noted during this quarter's site inspections are detailed in **Section 7**. In brief, these are as follows:

- Champway. Produced a significant amount of biodiesel from waste cooking oil. By
  the end of January 2011, a small amount of biodiesel has been temporarily stored
  in the area reserved for the EcoPark wastewater treatment Plant (WWTP), next to
  Telford's lot. The key environmental concerns identified include uncovered oil
  bucket and oil stain on bare ground; as a result, Champway was reminded to place
  chemicals/ chemical wastes in proper containers with covers, remove the oil stain
  and dispose of it properly.
- Shiu Wing. Sheared waste metal into heavy ferrous scrap, although the misting system and industrial dust collector are not yet in place. While the collection and disposal of Asbestos Containing Materials (ACM) shall be followed up in the next



monthly audit, debris and materials inside surface channels and oil leakage were recorded in Shiu Wing's lot in this reporting quarter. The tenant was therefore suggested to provide regular maintenance to surface channels and clean up the oil spillage by absorbent.

- 3. **Hung Wai.** Shredded large amount of waste wood into wooden chips. No critical environmental issues were observed and the lot was generally tidy.
- 4. **Li Tong.** Started checking and dismantling WEEE manually. No critical environmental issues were observed and the lot was generally tidy.
- 5. Yan Oi Tong. The key environmental concerns were wastewater overflow at the working area, stagnant water and refuse inside the gully gratings as well as housekeeping. The tenant was therefore reminded to improve housekeeping, clear the overflow and materials inside the gully regularly. The tenant was also suggested to consider the provision of covers to the surface channels.
- 6. St. James' Settlement. Commenced sorting and checking WEEE. Issues on the handling of unwanted refrigerant and potential LFG hazard were identified and rectified. Other key environmental concerns include refuse inside surface channels, unlabelled chemical waste containers and chemical waste storage, the tenant was thus reminded to provide regular maintenance to surface channels, label all chemical waste containers and place all chemical containers inside the area with secondary containment. Also the chemical waste storage areas should be locked when not in use.

Remedial actions were recommended to tenants, and the remedial status shall be followed up in the next monthly site inspection.

# 1.3 EM&A Organisation

The EM&A works are carried out by the ET and the IEC on behalf of the Operator for the Project Proponent. The key personnel contact details (effective January 2011) are summarised in *Table 1-1*.

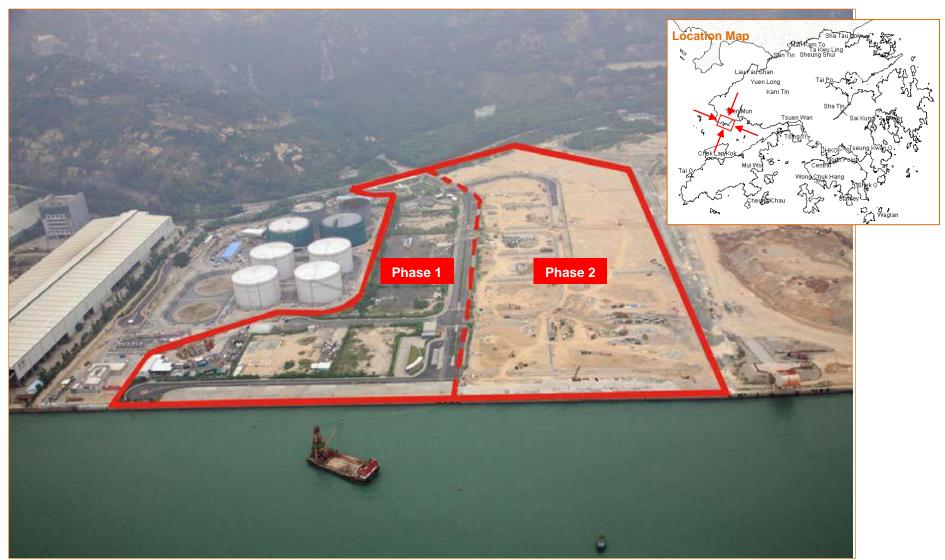
Table 1-1 EM&A Personnel Contact Details

Position	Name	Email Address	Telephone No.			
Project Proponent – EPD						
Principal EPO	Dr Lawrence WONG	lawrwong@epd.gov.hk	2872 1700			
Operator – SGJV						
Project Manager Noel AU		nkfau@ecopark-mgnt.com	2496 7633			
Park Manager Morgan CHIU		morganchiu@ecopark-mgnt.com	2212 5910			
IEC - Atkins						
IEC Sharifah OR		sharifah.or@atkinsglobal.com	2972 1802			
IEC Site Inspector Keith CHAU		keith.chau@atkinsglobal.com	2972 1721			
ET - SMEC	ET - SMEC					
ET Leader	Antony WONG	antony.wong@smec.com	3995 8120			
ET Site Inspector Carman CHUNG		carman.chung@smec.com	3995 8138			

The organisation of SGJV is shown in *Figure 1-2* and the current EM&A organisation is illustrated in *Figure 1-3*.



Figure 1-1 Location of EcoPark in Tuen Mun Area 38



Source: EPD Records (October 2009)



Figure 1-2 Organisation Chart of SGJV

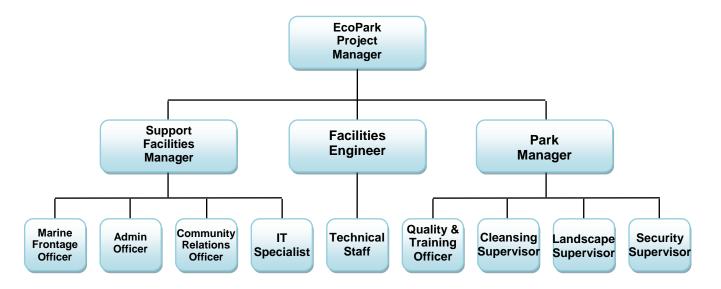
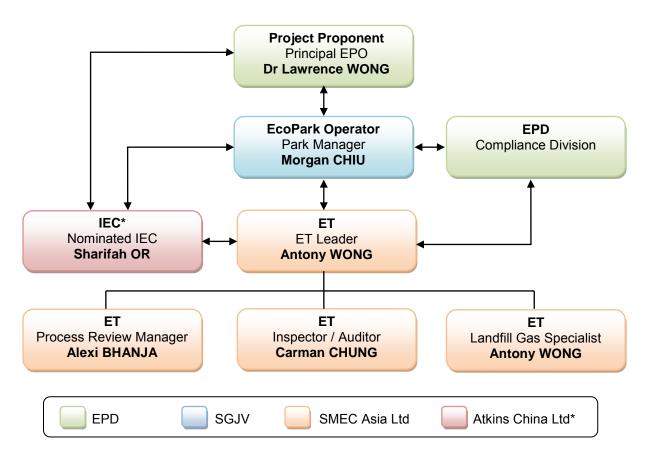


Figure 1-3 Organisation Chart of EM&A Works (Operation)



Note: \*Effective January 2011



### 2 SUMMARY OF EM&A REQUIREMENTS

# 2.1 Monitoring Parameters

In terms of monitoring during operation phase EM&A, only quarterly monitoring of landfill gas (LFG) is required at service voids and utility boxes "following construction". This is because part of EcoPark lies within the 250m "LFG consultation zone" for Siu Lang Shui Landfill, which is located to the north of EcoPark.

Construction of Phase 1 was completed in July 2009, so LFG monitoring commenced in the next reporting quarter (August to October 2009). Construction of Phase 2 was completed in November 2010, so LFG monitoring commenced in the next reporting quarter (November 2010 to January 2011).

The location for LFG monitoring was not specified in the EM&A Manual since the final design of EcoPark had not been completed when the EM&A Manual was approved. Therefore, during the joint site inspection on 27 July 2009, three monitoring locations in Phase 1 were identified and agreed as suitable monitoring locations by the ET, IEC and SGJV. Subsequently, two monitoring locations in Phase 2 were proposed by ET and agreed by IEC and SGJV via email in January 2011. These five monitoring locations are listed in *Table 2-1* and shown in *Figure 2-1*.

Table 2-1 Operation Phase LFG Monitoring Locations in EcoPark

Monitoring Station ID	Туре	Locations	
EP1-1	LFG vent pipe	Inside the landscaping area of Administration Building	
EP1-2	Service void	PCCW below-ground chamber outside Lot EP08-01	
EP1-3	Service void	HGC Broadband below-ground chamber outside Lot EP08-03	
EP2-1	Service void	HGC Broadband below-ground chamber outside Lot P1	
EP2-2	Service void	HGC Broadband below-ground chamber outside Lot P3	

Figure 2-2 is a replacement page for the EM&A Manual, in accordance with footnote to Figure 6.1 in the approved EM&A Manual, and shall be deemed to be included in the EM&A Manual.

Routine LFG monitoring shall be carried out on a quarterly basis. Should EPD alert the Operator that high LFG levels had been detected during monthly monitoring under the Siu Lang Shui Landfill restoration contract, then the Operator may be required to increase LFG monitoring to monthly until such time as EPD inform the Operator that quarterly monitoring can be resumed. To-date, EPD have not alerted the Operator.

# 2.2 Environmental Quality Performance Limits and EAP

The Action / Limit Levels and Event Action Plan (EAP) for LFG are shown in *Table 2-2*, below. These refer to LFG detected in excavations, utilities and any enclosed on-site areas. No other A/L Levels or EAPs are specified in the EM&A Manual for operation phase EM&A.



Table 2-2 Action Levels, Limit Levels and Event and Action Plan for LFG

Parameter	Level	Action		
	Action Level <19% O <sub>2</sub>	<ul> <li>Ventilate trench/void to restore O<sub>2</sub> to &gt; 19%</li> </ul>		
Oxygen (O <sub>2</sub> )	Limit Level <18% O <sub>2</sub>	<ul> <li>Stop works</li> <li>Evacuate personnel / prohibit entry</li> <li>Increase ventilation to restore O<sub>2</sub> to &gt; 19%</li> </ul>		
Methane	Action Level >10% LEL	<ul> <li>Post "No Smoking" signs</li> <li>Prohibit hot works</li> <li>Increase ventilation to restore CH<sub>4</sub> to &lt;10% LEL</li> </ul>		
(CH <sub>4</sub> )	Limit Level >20% LEL	<ul> <li>Stop works</li> <li>Evacuate personnel / prohibit entry</li> <li>Increase ventilation to restore CH<sub>4</sub> to &lt;10% LEL</li> </ul>		
	Action Level >0.5% CO <sub>2</sub>	<ul> <li>Ventilate to restore CO<sub>2</sub> to &lt; 0.5%</li> </ul>		
Carbon Dioxide (CO <sub>2</sub> )	Limit Level >1.5% CO <sub>2</sub>	<ul> <li>Stop works</li> <li>Evacuate personnel / prohibit entry</li> <li>Increase ventilation to restore CO<sub>2</sub> to &lt;0.5%</li> </ul>		

#### 2.3 Environmental Audit of Non-Monitored Parameters

Site inspections provide a direct means to trigger and enforce the environmental protection and pollution control measures specified in the Environmental Impact Assessment (EIA) Report. To examine operational practice, site inspections are to be undertaken regularly by the ET once per month, and joint site inspections are to be carried out by the ET and IEC once per quarter. Ad hoc site inspections are also carried out if significant environmental problems are identified. In addition, inspections may be required subsequent to receipt of an environmental complaint, or as part of the investigation work, as specified in the EAP.

The following parameters are required to be audited as part of the operation phase EM&A programme:

- 1. Air Quality;
- 2. Water Quality;
- 3. Waste Management; and
- 4. Land Contamination.

# 2.4 Environmental Mitigation Measures

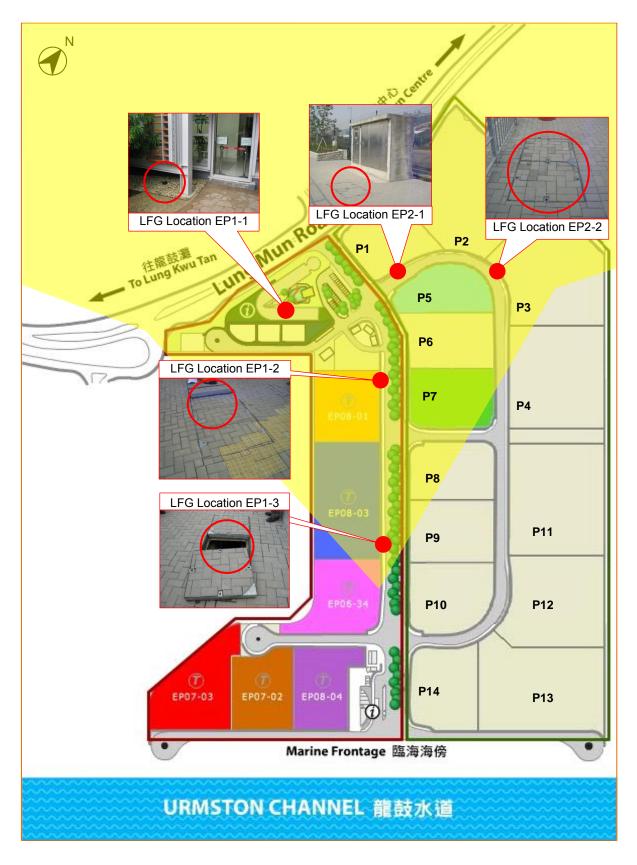
Environmental mitigation measures applicable to the operation phase EM&A as stated in the Implementation Schedule are summarised in *Appendix 1*.

# 2.5 Environmental Requirements in Tenancy Agreements

Environmental requirements specified in tenancy agreements are summarised in *Appendix 2*.



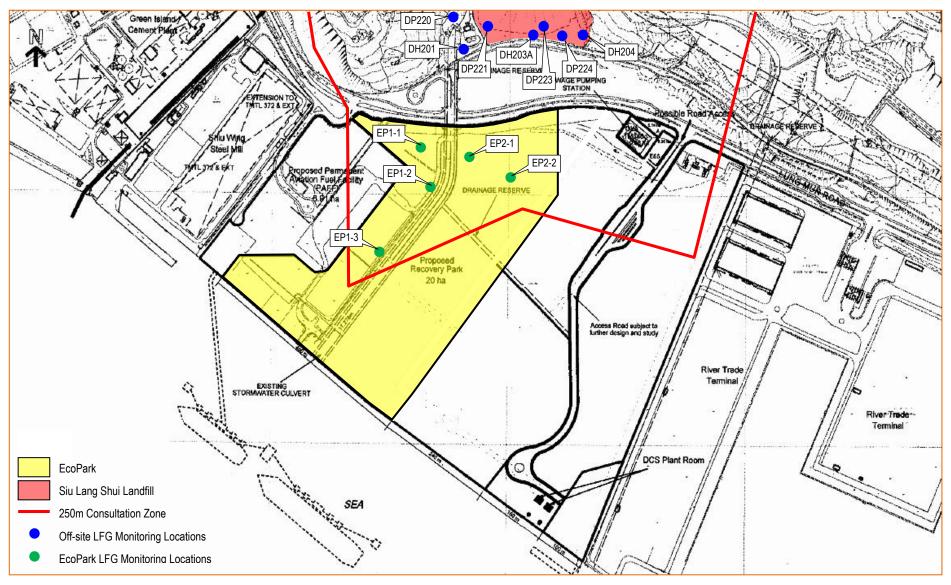
Figure 2-1 LFG Monitoring Locations within EcoPark



Area Within the Shiu Lang Shui Landfill Gas Consultation Zone



Figure 2-2 Replacement Figure for EM&A Manual Figure 6.1





# 3 OPERATION STATUS

#### 3.1 Tenants and Processes

*Figure 3-1* shows the location of lots within EcoPark, the tenancy reference numbers and tenant names.

#### 3.1.1 Tenancy EP07-03 (Phase 1)

• Lot Size: Approx. 6,000m<sup>2</sup>

• Activity: Recycling of Organic Waste (Waste Cooking Oil)

Tenant: Champway Technology Limited

 Recycling Process: Turn waste cooking oil into biodiesel by extraction, neutralisation, separation and distillation

Following a trial run in May and June 2010, recycling activities commenced in July 2010. In this reporting quarter, a significant amount of treated cooking oil and biodiesel have been processed and produced, respectively. Starting from December 2010, Champway has temporarily stored a small amount of biodiesel in the reserved area for the WWTP, next to Telford's lot. A summary of waste throughputs is provided in **Section 3.2**.

#### 3.1.2 Tenancy EP08-03 (Phase 1)

• Lot Size: Approx. 9,500 m<sup>2</sup>

· Activity: Recycling of Waste Metals

Tenant: Shiu Wing Steel Limited

 Recycling Process: Turn waste metals into light ferrous scrap and heavy ferrous scrap by sorting, baling and shearing

Following a trial run in May and June 2010, recycling activities commenced in July 2010. In this reporting quarter, large amounts of waste metal/steel scrap have been processed. A summary of waste throughputs is provided in **Section 3.2**.

#### 3.1.3 Tenancy EP06-034 (Phase 1)

• Lot Size: Approx. 5,000m<sup>2</sup>

Activity: Recycling of Waste Wood

Tenant: Hong Kong Hung Wai Wooden Board Company

 Recycling Process: Shred waste wood into wooden chips for further processing in Mainland China. Ferrous metals will be separated by magnets.

Following a trial run in May and June 2010, recycling activities commenced in July 2010. In this reporting quarter, large quantities of wood chips (product output) have been produced. A summary of waste throughputs is provided in **Section 3.2**.



#### 3.1.4 Tenancy EP07-02 (Phase 1)

• Lot Size: Approx. 6,500m<sup>2</sup>

• Activity: Recycling of WEEE

Tenant: Li Tong Group

 Recycling Process: Manually dismantling of WEEE, particularly CRT glass and LCD panels into metals (ferrous materials, aluminium, etc.) and non-metals (fibres, plastics, etc.).

Following a trial run in September 2010, recycling activities commenced in October 2010. A summary of waste throughputs is provided in **Section 3.2**.

#### 3.1.5 Tenancy EP08-01 (Phase 1)

• Lot Size: Approx. 5,000m<sup>2</sup>

· Activity: Recycling of Waste Plastics

Tenant: Hong Kong Telford Envirotech Group Limited

Recycling Process: Sorting, shredding and extrusion of waste plastics

As of end-January 2011, the tenant has commenced preparatory works but has not yet commenced formal recycling activities. Telford commenced trial commissioning on 4 November 2010. Plastic bags have been stockpiled in the lot since July 2009, and other plastic waste and some recycling equipments could also be found.

#### 3.1.6 Tenancy EP08-04 (Phase 1)

• Lot Size: Approx. 4,000 m<sup>2</sup>

Activity: Recycling of materials arising from industrial and commercial activities

Tenant: Cosmos Star Holdings Co., Limited

 Recycling Process: Separate waste lead-acid and lithium batteries by mechanical / physical means. The battery acid will be drained and treated by the on-site wastewater treatment system

A building contractor was engaged in October 2010 and construction works have commenced since December 2010. As of end-January 2011, construction was in progress, and works, such as site formation and foundations, have been carried out.

#### **3.1.7** Tenancy P7 (Phase 2)

• Lot Size: Approx. 5,000 m<sup>2</sup>

• Activity: Recycling of waste plastics

Tenant: YOT EcoPark Plastic Resources Recycling Centre

 Recycling Process: Convert mixed waste plastics into pellets / flakes / baled materials by pre-washing, sorting, flaking, secondary washing, drying, extrusion and chip-forming

Recycling activities commenced after trial operation in March 2010. In this reporting quarter, large amount of waste plastics have been sorted. A summary of waste throughputs is provided in *Section 3.2*.



# 3.1.8 Tenancy P5 (Phase 2)

Lot Size: Approx. 5,000 m<sup>2</sup>
 Activity: Recycling of WEEE

• Tenant: St. James' Settlement "WEEE GO GREEN" EcoPark

Recycling Process: WEEE will be sorted on site first. The WEEEs suitable for reuse
will be repaired and refurbished, whilst those irreparable / not suitable for repair will
be manually dismantled to recover the reusable parts and recyclable materials

After completion of construction works in September 2010, recycling activities commenced in October 2010. A summary of waste throughputs is provided in *Section 3.2*.

#### 3.2 Throughput Statistics

As of end-January 2011, six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have commenced recycling activities within their lots. Two tenants, Telford and Cosmos, have not commenced full recycling activities as they are still carrying out preparatory works within their lots, however Telford commenced trial commissioning on 4 November 2010. The following throughputs occurred during the reporting quarter:

- 1. **Champway.** 334,895kg of cooking oil and 293,750kg of grease-trap waste were delivered and processed, producing 520,968kg of treated cooking oil, 784,160kg of biodiesel and 23,524kg of glycerine. A total of 155,838kg of waste was generated, including 30,640kg of inorganic waste, 53,575kg of organic waste and 71,623kg of water waste (semi-solid and slurry inclusive).
- Shiu Wing. 1,913,150kg of waste metal was delivered to and processed, producing the same amount of sheared heavy ferrous scrap on site. No waste was generated.
- 3. **Hung Wai.** 888,830kg of waste wood was delivered to and processed, resulting in 1,449,000kg of wood chips as product output. No waste was generated.
- 4. **Li Tong.** 77,339kg of WEEE was delivered to and processed, producing 6,168kg of metals and 27,293kg of non-metals. 1,752kg of general refuse was generated.
- Telford. Although formal recycling activities are not currently being carried out, 110,000kg of waste plastics were delivered. Telford commenced trial commissioning on 4 November 2010.
- Cosmos. No recycling activities are being carried out and no waste has been delivered.
- 7. **Yan Oi Tong.** 264,601kg of waste plastics were delivered and 213,741kg were processed. 36,350kg of general refuse was generated from mixed waste plastics.
- 8. **St James' Settlement.** 58,763kg of WEEE was delivered and processed, producing 915 pieces of repaired / refurbished EEE, 16,065kg of metals and 7,522kg of non-metals. 2,925kg of general refuse was generated.

Detailed throughput figures are provided in *Appendix 3*.



Figure 3-1 Current Lot Usage Within EcoPark





# 4 IMPLEMENTATION STATUS OF ENVIRONMENTAL PROTECTION MEASURES

Environmental mitigation measures applicable to the operation phase EM&A as stated in the implementation schedule are summarised in *Appendix 1*. Environmental requirements specified in tenancy agreements are summarised in *Appendix 2*.

As of end-January 2011, six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have commenced recycling activities within their lots. Appropriate environmental protection measures are in place.



### 5 MONITORING RESULTS

# 5.1 Monitoring Date, Time, Frequency and Duration

LFG monitoring is conducted on a quarterly basis. In this reporting quarter, monitoring was undertaken during the joint ET and IEC site inspection on 17 January 2011. Monitoring details are shown in *Table 5-1*, below.

Table 5-1 Sampling Schedule of LFG Monitoring

Station ID	Date	Time	Duration	Air Temp	Weather
EP1-1	17 January 2011	10:36 – 10:40	4 minutes	11°C	Fine
EP1-2		10:16 – 10:20	4 minutes	10°C	Fine
EP1-3		10:10 – 10:14	4 minutes	10°C	Fine
EP2-1		10:24 – 10:28	4 minutes	11°C	Fine
EP2-2		10:29 – 10:33	4 minutes	12°C	Fine

# 5.2 Monitoring Methodology, Parameters and Equipment

The LFG monitoring requirement and methodology are stipulated in Section 6 of the EM&A Manual. The LFG monitoring parameters and their measurement ranges are detailed in *Table 5-2*, below.

Table 5-2 Parameters and Measurement Ranges of LFG Monitoring

Parameters	Measurement Ranges		
Methane (CH <sub>4</sub> )	0-100% LEL & 0-100% v/v		
Oxygen (O <sub>2</sub> )	0-25% v/v		
Carbon Dioxide (CO <sub>2</sub> )	0-100% v/v		
Barometric Pressure	mBar (absolute)		

LFG monitoring shall be carried out using intrinsically-safe, portable multi-gas monitoring instruments. The gas monitoring equipment shall:

- 1. Where possible, comply with BS 6020 and be approved by BASEEFA as intrinsically safe, suitable for use in a Zone 2 are to BS 5345.
- 2. Be capable of continuous monitoring of methane, oxygen and carbon dioxide.
- 3. Be capable of continuous barometric pressure and gas pressure measurements.
- 4. Normally operate in diffusion mode unless required for spot sampling, when it should be capable of operating by means of an aspirator or pump.
- 5. Have low battery, fault and over range indication incorporated.
- 6. Store monitoring data, and shall be capable of being down-loaded directly to a PC.
- 7. Measure in the following ranges:

Methane
 0-100% LEL & 0-100% v/v

Oxygen 0-25% v/v
 Carbon dioxide 0-100% v/v
 Barometric pressure mBar (absolute)



The monitoring equipment shall alarm (both audibly and visually) in the event that the concentrations of the following are exceeded:

- 1. Methane rise to 10% LEL.
- 2. Oxygen fall to 18% by volume.
- 3. Carbon monoxide maximum short term (1-hour) exposure of 300ppm with long term average (8-hours) not to exceed 50ppm.

## 5.3 Types of Equipment Used and Calibration Details

One Infra Red Gas Analyser Model GA94A (serial number GA3385) was used for LFG measurements. The gas analyser is calibrated every 18 months. *Appendix 4* presents the monitoring equipment calibration records.

# 5.4 Results and Graphical Plots of Monitoring Parameters

LFG monitoring results are summarised in *Table 5-3* and compared with the Action and Limit Levels tabulated in *Table 2-2*. Graphical plots of the monitoring results are also provided in *Appendix 5*.

**Table 5-3 LFG Monitoring Results** 

	Monitoring Results					
Station ID	CH₄ (% v/v)	CH₄ (% LEL)	O <sub>2</sub> (% v/v)	CO <sub>2</sub> (% v/v)	Barometric Pressure (mBar)	
EP1-1	0.0	0	20	0.3	1026	
EP1-2	0.0	0	21	0.0	1026	
EP1-3	0.0	0	21	0.0	1026	
EP2-1	0.0	0	21	0.0	1026	
EP2-2	0.0	0	21	0.0	1026	

As can be seen above, no Action or Limit Level exceedance was recorded.



### **6 WASTE GENERATION STATISTICS**

As of end-January 2011, six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have commenced recycling activities within their lots. The details of waste generation are shown in *Appendix 3*.

- Champway. A total of 155,838kg of waste, including 30,640kg of inorganic waste, 53,575kg of organic waste and 71,623kg of water waste (semi-solid and slurry inclusive), was generated. These organic waste and water waste were collected by licence collectors, transported to and disposed of at WENT Landfill as general refuse.
- 2. **Shiu Wing.** Has not generated any non-ferrous scrap / general refuse from the waste metal / steel scrap in this reporting quarter.
- 3. **Hung Wai.** Has not produced any general refuse from the waste wood in this reporting quarter.
- 4. **Li Tong.** 1,752kg of general refuse was produced from the WEEE, and subsequently disposed of at WENT Landfill.
- 5. **Yan Oi Tong.** 36,350kg of general refuse was sorted from the mixed waste plastics, and subsequently disposed of at WENT Landfill.
- 6. **St. James' Settlement.** 2,925kg of general refuse was produced from the WEEE, and subsequently disposed of at WENT Landfill.



# 7 SUMMARY OF ENVIRONMENTAL AUDIT

#### 7.1 November 2010

Environmental audits of active tenants and the general EcoPark audit were carried out by the ET on 23 November 2010.

#### 7.1.1 Tenant Audits

Six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) had commenced recycling activities and a summary of their audits is provided below. Telford commenced trial commissioning on 4 November 2010. The audits were conducted based on the approved site inspection checklist. The completed audit checklists for tenants are provided in *Appendix* 6.

- Champway. Previous observations of environmental deficiency were rectified. One new observation of stagnant water was recorded. The tenant was reminded to clear the water as soon as possible. The completed checklist for Champway is provided in *Appendix 6.1*.
- 2. Shiu Wing. Previous observation of chemical waste handling was rectified, whereas the observation on collecting and disposing ACM shall be followed up in the next monthly audit. One new observation of wastewater generation and discharge was recorded. The tenant was reminded to provide appropriate treatment for wastewater and to apply for a discharge licence. The completed checklist for Shiu Wing is provided in *Appendix 6.2*.
- 3. **Hung Wai.** Previous observation of fugitive dust generation was rectified. No new observations were recorded during the audit. The completed checklist for Hung Wai is provided in *Appendix* 6.3.
- 4. **Li Tong.** No follow-up action was required from the previous site audit. No new observations were recorded during the audit. The completed checklist for Li Tong is provided in *Appendix 6.4*.
- 5. Yan Oi Tong. Previous observations of environmental deficiency remained outstanding and the tenant was again reminded to improve housekeeping, install a screen at the drain inlet and provide covers for the surface channels. No new observations were recorded. The completed checklist for Yan Oi Tong is provided in *Appendix 6.5*.
- 6. **St. James' Settlement.** No follow-up action was required from the previous site audit. Two new observations of the handling of unwanted refrigerant and potential LFG hazard were recorded during the audit. The tenant was suggested to follow the equipment manufacturer's instruction while operating the equipment and adopt several LFG precautionary and protection measures on site. The completed checklist for St. James' Settlement is provided in *Appendix* 6.6.

#### 7.1.2 General EcoPark Audit

Following the site audit in October 2010, the observation of an oily patch at Telford's lot was rectified. One new environmental observation of diesel odour at Telford's lot was recorded during the audit. The tenant was therefore reminded to cap all oil containers. The completed general checklist for EcoPark (and non-active tenants) is provided in *Appendix 7*. The remedial status shall be followed up in the next audit.



#### 7.2 December 2010

Environmental audits of active tenants and the general EcoPark audit were carried out by the ET on 21 December 2010.

#### 7.2.1 Tenant Audits

Six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) had commenced recycling activities and a summary of their audits is provided below. Telford commenced trial commissioning on 4 November 2010. The audits were conducted based on the approved site inspection checklist. The completed audit checklists for tenants are provided in *Appendix* 6.

- Champway. Previous observations of environmental deficiencies were rectified. No new observations were recorded. The completed checklist for Champway is provided in *Appendix 6.1*.
- Shiu Wing. Previous observation of wastewater generation and discharge was rectified, whereas the observation of collecting and disposing of ACM shall be followed up in the next monthly audit. No new observations were recorded. The completed checklist for Shiu Wing is provided in *Appendix 6.2*.
- Hung Wai. No follow-up action was required from the previous site audit. No new observations were recorded. The completed checklist for Hung Wai is provided in Appendix 6.3.
- 4. **Li Tong.** No follow-up action was required from the previous site audit. No new observations were recorded. The completed checklist for Li Tong is provided in *Appendix 6.4*.
- 5. Yan Oi Tong. Previous observations of waste plastics inside gully and soil inside surface channels were rectified, whilst the observations of refuse on bare ground and wastewater overflow remained outstanding. The tenant was again reminded to improve housekeeping and clear wastewater regularly. No new observations were recorded. The completed checklist for Yan Oi Tong is provided in *Appendix 6.5*.
- St. James' Settlement. Previous observations of the handling of unwanted refrigerant and potential LFG hazard were rectified. No new observations were recorded. The completed checklist for St. James' Settlement is provided in Appendix 6.6.

#### 7.2.2 General EcoPark Audit

Following the site audit in November 2010, the observation on diesel odour at Telford's lot was rectified. No new environmental observations were recorded. The completed general checklist for EcoPark (and non-active tenants) is provided in *Appendix 7*.

# 7.3 January 2011

Environmental audits of active tenants and the general EcoPark audit were carried out by the ET and the IEC in a joint inspection on 17 January 2011.

#### 7.3.1 Tenant Audits

Six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) had commenced recycling activities and a summary of their audits is provided below. Telford commenced trial commissioning on 4 November 2010. The



audits were conducted based on the approved site inspection checklist. The completed audit checklists for tenants are provided in *Appendix* 6.

- Champway. No follow-up action was required from the previous site audit. One
  new observation of uncovered oil bucket and oil stain at the reserved area for
  EcoPark's WWTP was recorded, and the tenant was reminded to place chemicals/
  chemical wastes in proper containers with covers, remove the oil stain and dispose
  of it properly. The completed checklist for Champway is provided in *Appendix 6.1*.
- Shiu Wing. Previous observations of collecting and disposing ACM shall be
  followed up in the next monthly audit. Two new observations of debris and
  materials inside surface channels and oil leakage were recorded. The tenant was
  reminded to provide regular maintenance to surface channels and clean up the oil
  spillage by absorbent. The completed checklist for Shiu Wing is provided in
  Appendix 6.2.
- Hung Wai. No follow-up action was required from the previous site audit, and no new observations were recorded. The completed checklist for Hung Wai is provided in *Appendix* 6.3.
- 4. **Li Tong.** No follow-up action was required from the previous site audit, and no new observations were recorded. The completed checklist for Li Tong is provided in **Appendix 6.4**.
- 5. Yan Oi Tong. Previous observations of environmental deficiency remained outstanding and the tenant was again reminded to improve housekeeping, remove the stagnant water as soon as possible and clear the overflow at the working area regularly. One new observation about stagnant water and refuse inside the gully gratings was recorded, and the tenant was advised to clear the materials inside the gully on a regular basis. On the other hand, the tenant was also suggested to consider the provision of covers to the surface channels. The completed checklist for Yan Oi Tong is provided in *Appendix 6.5*.
- 6. St. James' Settlement. No follow-up action was required from the previous site audit. Three new observations of refuse inside surface channels, unlabelled chemical waste containers and chemical waste storage were recorded. The tenant was reminded to provide regular maintenance to surface channels, label all chemical waste containers and place all chemical containers inside the area with secondary containment. Also the chemical waste storage areas should be locked when not in use. The completed checklist for St. James' Settlement is provided in Appendix 6.6.

#### 7.3.2 General EcoPark Audit

Following the site audit in December 2010, no follow-up action was required.

Six new environmental deficiencies were recorded, and the tenants / Operator were reminded to implement appropriate mitigation measures to address these issues. The completed general checklist for EcoPark (and non-active tenants) is provided in *Appendix 7*. The remedial status shall be followed up in the next audit.

During the joint site inspection, LFG monitoring was undertaken at the five monitoring locations (three in Phase 1 and two in Phase 2) agreed by the ET, IEC and SGJV. These five monitoring locations are listed in *Table 2-1* and shown in *Figure 2-1*. The monitoring results are presented in *Section 5.4*. No Action/Limit Level exceedance was recorded.



# 8 COMPLAINTS

As of end-January 2011, six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have commenced recycling activities within their lots. Telford commenced trial commissioning on 4 November 2010. No complaints related to recycling activities have been received in this reporting quarter.



#### 9 CONCLUSIONS

This is the fifteenth quarterly EM&A report prepared for the operation phase of EcoPark and covers November 2010 to January 2011.

At present, there are eight tenants in EcoPark. As of end-January 2011, six tenants (Champway, Shiu Wing, Hung Wai, Li Tong, Yan Oi Tong and St. James' Settlement) have commenced recycling activities within their lots. Two tenants, Telford and Cosmos, have not commenced recycling activities as they are still carrying out preparatory works within their lots. The following throughputs occurred during the reporting quarter:

- Champway. 334,895kg of cooking oil and 293,750kg of grease-trap waste were delivered and processed, producing 520,968kg of treated cooking oil, 784,160kg of biodiesel and 23,524kg of glycerine. A total of 155,838kg of waste was generated, including 30,640kg of inorganic waste, 53,575kg of organic waste and 71,623kg of water waste (semi-solid and slurry inclusive).
- 2. **Shiu Wing.** 1,913,150kg of waste metal was delivered and processed, producing the same amount of sheared heavy ferrous scrap on site. No waste was generated.
- 3. **Hung Wai.** 888,830kg of waste wood was delivered and processed, resulting in 1,449,000kg of wood chips as product output. No waste was generated.
- 4. **Li Tong.** 77,339kg of WEEE was delivered and processed, producing 6,168kg of metals and 27,293kg of non-metals. 1,752kg of general refuse was generated.
- Telford. Although formal recycling activities are not currently being carried out, 110,000kg of waste plastics were delivered. Telford commenced trial commissioning on 4 November 2010.
- 6. **Cosmos.** No recycling activities are being carried out and no waste has been delivered.
- 7. **Yan Oi Tong.** 264,601kg of waste plastics were delivered and 213,741kg were processed. 36,350kg of general refuse was generated from mixed waste plastics.
- 8. **St James' Settlement.** 58,763kg of WEEE was delivered and processed, producing 915 pieces of repaired / refurbished EEE, 16,065kg of metals and 7,522kg of non-metals. 2,925kg of general refuse was generated.

In terms of monitoring during operation phase EM&A, only quarterly monitoring of landfill gas (LFG) is required at service voids and utility boxes "following construction". This is because part of EcoPark lies within the 250m "LFG consultation zone" for Siu Lang Shui Landfill, located to the north of EcoPark. Construction of Phase 1 was completed in July 2009, so LFG monitoring commenced in the next reporting quarter (August to October 2009). Construction of Phase 2 was completed in November 2010, so LFG monitoring commenced in the next reporting quarter (November 2010 to January 2011). LFG monitoring was undertaken on 17 January 2011 in this reporting quarter, and no Action/Limit Level exceedance was recorded.

The ET has conducted monthly site inspections based on the approved checklist. Since October 2009, the checklist has been used in the monthly site inspections for various tenants. Environmental deficiencies and general observations noted during the monthly site inspections were detailed in **Section 7**. Remedial actions were recommended to tenants, and the remedial status shall be followed up in the next monthly site inspection.

In the coming quarter, operation phase LFG monitoring for Phase 1 and Phase 2 shall continue.



# **APPENDIX 1**

Environmental Mitigation Measures (from the Implementation Schedule)



EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines
General			<u> </u>	'	•
5.5.23 to 5.5.25, 10.2.24 & 10.2.37	4.2.5 to 4.2.8	The Operator shall develop and implement an Emergency Response Plan (ERP) that lists the procedures to be followed in case of fire, fuel or chemical spillage or other emergency within the EcoPark.	Throughout the duration of the operation.	Operator	
12.2	7.2	No process shall be allowed to operate within EcoPark without approval from WFBU. Approval will be based on the ten-step Process Review, which may include a Design Audit if deemed to be necessary.	Throughout the duration of the operation.	ET IEC Project Proponent	
	8.1.2	All reports (including Process Review Checklists and any Design Audits) shall be prepared and certified by the ET, verified by the IEC and approved by the Project Proponent.	Throughout the duration of construction works until construction is substantially completed. Throughout the duration of the operation.	ET IEC Project Proponent	
12.3	7.3	The Operator shall prepare and implement an Environmental Management Plan (EMP) to define mechanisms for achieving the environmental requirements specified in the EIA, EP and in statutory regulations.	Throughout the duration of the operation.	Operator	
Air Quality	у				
13.2		The Operator shall ensure that the EcoPark "base case" assumptions for air quality shown in Table 13.1 of the Final EIA Report are met by tenants, as a whole.	Throughout the duration of the operation.	Operator	Table 13.1 of the Final EIA Report
Water Qua	ality				1
5.4.11 & 5.6.7		To minimise the chance of accidental spillage during loading and unloading, and thereby reduce marine water quality impacts, well established cargo handling guidelines should be followed.	Adjacent to EcoPark marine frontage when loading or unloading goods.	Operator Operators of bulk carriers	Sections 5 & 6 of IMO Code of Practice for the Safe Loading/Unloading of Bulk Carriers
5.5.19		Contaminated water collected in the surface drainage systems shall be treated at the WTF or other appropriate treatment facility.	Within EcoPark throughout the life of the facility.	Operator	
5.5.23 to 5.5.25	4.2.5 to 4.2.7	An Emergency Response Plan (ERP) will be formulated to address various accident scenarios. The ERP will be certified by the Environmental Team (ET) and verified by the Independent Environmental Checker (IEC) under the operation EM&A programme.	Within EcoPark throughout the life of the facility.	Operator	
5.6.4		For uncovered areas where recovery process identified as causing potentially high level of contamination are located, stop-logs will be installed in the perimeter drainage system to isolate contamination.	Within EcoPark throughout the life of the facility.	Operator	



EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines
	4.2.2	The ET should develop an audit checklist, with the agreement of the IEC, to ensure that each mitigation measure is implemented when appropriate and operated correctly when implemented.	Within EcoPark throughout the life of the facility.	ET with IEC	
Waste Ma	nagemer	nt			
6.8.7	5.2.4	The Operator should register with EPD as a chemical waste producer.	Within EcoPark throughout the life of the facility.	Operator	Waste Disposal (Chemical Waste) (General) Regulation
6.8.16		The dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.	Within EcoPark throughout the life of the facility.	Operator	Practice Note for disposal of dusty waste at landfills & Admission Ticket System
6.8.18 & 6.8.22	5.2.4	Sludge will be disposed of at WENT landfill, or at any future dedicated sludge treatment facility. Sludge will be collected by a Licensed collector at regular intervals, as determined by the operation of the WTF	Within EcoPark throughout the life of the facility.	Operator	
6.8.21	5.2.4	Chemical wastes shall be stored in appropriate containers in a covered area. "No Smoking" signs will be clearly displayed to prevent accidental ignition of flammable materials. Drip trays capable of storing 110% of the volume of the largest container will be used to mitigate possible leakage.	Within EcoPark throughout the life of the facility.	Operator	Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
	5.2.3 & 5.2.5	The ET should develop an audit checklist, with the agreement of the IEC, to ensure that each mitigation measure is implemented when appropriate and operated correctly when implemented.	Within EcoPark throughout the life of the facility.	ET with IEC	
Preventio	n of Con	taminated Land			<u>'</u>
7.3.1	5.3.2	Any spillages of contaminating material shall be cleaned up immediately through the use of an absorbent. Any such used material should then be considered chemical waste and disposed of appropriately.	Within EcoPark throughout the life of the facility.	Operator	
7.3.3		Any areas within the lot to be used for recycling processes shall be concrete paved before recycling activities commence.	Within EcoPark throughout the life of the facility.	Operator	
7.3.5	5.3.2	During operation, the greatest risk of land contamination will come from storage of chemical wastes, therefore the measures should be followed:	Within EcoPark throughout the life of the facility.	Operator	
		<ul> <li>All chemical storage areas shall be provided with locks and be sited on sealed areas. The storage areas shall be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled oil and chemicals from contaminating the ground.</li> </ul>			
		Management of chemical waste is implemented through the control of waste storage, labelling of waste, transportation and treatment of chemical waste at an appropriate facility.			



EIA Ref.	EM&A Ref.	Environmental Protection Measures Identified in the Implementation Schedule that are Applicable to the Operation Phase of EcoPark	Location / Duration of Measures / Timing of Completion of Measures	Implementation Agent	Relevant Legislation and Guidelines
		<ul> <li>Chemical wastes will be collected, stored and disposed of in accordance with the Regulation. Disposal of other construction waste will be undertaken by Licensed contractors in accordance with applicable statutory requirements in the WDO.</li> </ul>			Waste Disposal (Chemical Waste) (General) Regulation
		<ul> <li>Chemical wastes shall be handled according to the relevant code of practice. Spent chemicals shall be stored and collected by an approved operator for disposal at a licensed facility in accordance with the relevant regulation.</li> </ul>			Code of Practice on the Packaging, Labelling and Storage of Chem Wastes & Chemical Waste (General) Regulation
	5.3.3	The ET should develop an audit checklist, with the agreement of the IEC, to ensure that each mitigation measure is implemented when appropriate and operated correctly when implemented.	Within EcoPark throughout the life of the facility.	ET with IEC	
Landfill G	as				•
8.7.10 & 8.7.11	6.1.2	<ul> <li>Alert workers and visitors of possible LFG hazards</li> <li>Prohibit smoking and open fires on site</li> <li>Conduct regular (quarterly) LFG monitoring at mobile offices, equipment stores, etc.</li> </ul>	Within EcoPark throughout the life of the facility.	Operator	
	6.4.3	Following construction, routine monthly monitoring may be required at service voids and utility boxes. The monitoring requirement and specific locations of monitoring points shall be established based on the findings of the monitoring carried out during construction (i.e. if no LFG is detected during construction then no routine monitoring is required). The need for continued monitoring shall, however, be reviewed through discussion with EPD.	Within EcoPark throughout the life of the facility.	Operator	
Hazard to	Life				
10.4.3		Building height limit within EcoPark shall be applied to structures within which people may work at elevated levels.	Within EcoPark throughout the life of the facility.	Operator	EIA Report Table 10.2
Landscap	e and Vis	sual			
9.4.4		It recommended that this commonality be promoted throughout EcoPark by the Operator and adopted by tenants, if practicable.	Within EcoPark throughout the life of the facility.	Operator	



# **APPENDIX 2**

**Environmental Requirements in Tenancy Agreement** 



#### **GENERAL ENVIRONMENTAL RESPONSIBILITIES**

- 9.1 The Tenant shall at its own cost(s) comply with and shall ensure that the Premises is used, designed, constructed, operated and maintained in accordance with:-
  - (a) All relevant Ordinances, by-laws, regulations, statutory technical memorandums, codes of practice, rules, non-statutory guidance notes, schemes and abatement notices for the time being in force in Hong Kong including those relating to the environment and governing the control of any form of pollution (see specific Ordinances mentioned hereinbelow) and licensing requirements under relevant Ordinances and regulations.
  - (b) All information, mitigation measures, prohibitions, restrictions, recommendations and requirements under the Environmental Impact Assessment Report for Development of an EcoPark in Tuen Mun Area 38 with Appendices, i.e. the EIA Report (Register No.: AEIAR-086/2005) dated April 2005, the Final EM&A Manual dated April 2005, the application documents including all attachments (Application No. AEP-226/2005) and other relevant documents in the Register (or in any other places, any internet websites or by any other means as specified by the Director), including the prohibitions and mitigation measures for processes in Table 14.1 and the material throughputs, processes and remarks in Table B.1 of the EIA Report (in so far as applicable).
  - All information, conditions, submissions, mitigation measures, orders, notices, (c) requirements, prohibitions, restrictions and time limits under the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No.VEP-221/2006 (including updated information about the Permit, any amended permit and any further permit) and all mitigation measures recommended and to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit - Application No.VEP-221/2006 (including updated information about the Permit, any amended permit and any further permit). The Tenant shall refer to, inter alia, Conditions 4.1 to 4.14 (and Annexes A and B) and Conditions 3.7 and 3.8 (and Figures 2 and 3) of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit - Application No.VEP-221/2006 regarding measures to mitigate air quality impact, measures to mitigate hazard to life impact, measures to prevent land contamination, measures to mitigate landfill gas hazard, maintenance of landscape and visual measures (see also hereinbelow regarding Condition 5 of the Environmental Permit and specified Ordinances).
  - (d) All information, conditions, submissions, mitigation measures, orders, notices and requirements under ongoing surveillance and monitoring activities during all stages of the Project and during the tenancy under the Tenancy Agreement (e.g. any additional mitigation measures recommended and to be recommended under the Process Review and Design Audit (carried out and to be carried out in accordance with the EM&A Manual) for various environmental impacts including, but not limited to, noise pollution, air quality, hazard to life, landfill gas hazard, landscape and visual measures, waste management and land contamination).
  - (e) All recommendations referred to in the documents of the EIAO Register which are not expressly referred to in Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit Application No.VEP-221/2006 and any amended Environmental Permit (unless expressly excluded or impliedly amended in the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit Application No.VEP-221/2006 and any amended Environmental Permit).
- 9.2 Further to Condition Nos. 6 and 8 hereinabove, the Tenant shall at its own cost provide relevant environmental monitoring data, information, documents and assistance to the Director and/or the Environmental Protection Department and shall permit authorised representatives of the Environmental Protection Department to access, inspect, take samples and monitor the Premises and operations for the Process Review and the Design Audit carried out and/or to be carried out pursuant to Conditions 4.1 and 5 of the Environmental



Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No.VEP-221/2006 (and any updated Permit, amended permit and further permit).

- 9.3 If the Tenant's operations (i.e. activities and facilities for recovery and/or recycling and/or reprocessing) are not covered by the EIA Report and/or deviate from the development parameters mentioned in inter alia the EIA Report, the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit - Application No.VEP-221/2006 (including the parameters at Annex A) and/or any environmental licence (e.g. the Water Treatment Facility ("WTF") Discharge Licence), and if additional mitigation measures are not available or are not effective in the opinion of the Director, to ensure compliance with the EIA Report, the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit - Application No.VEP-221/2006 (including any updated Permit, amended permit and further permit) and the relevant environmental licence(s), the Tenant shall comply with any modified parameters and/or the Tenant shall immediately modify its operations in such a way that the findings and requirements of the EIA Report, the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit - Application No.VEP-221/2006 (including any updated Permit, amended permit and further permit) and the environmental licence(s) are complied with and shall immediately cease to continue the offending part of the operations or activity in question.
- 9.4 The Tenant shall at its own cost(s) apply for, obtain, renew, maintain and comply with all the relevant licences related to compliance with all relevant Ordinances, by-laws, regulations, statutory technical memorandums, codes of practice, rules, non-statutory guidance notes, schemes, abatement notices and the environmental permits for the time being in force in Hong Kong (including those relating to the environment and governing the control of any form of pollution). The Tenant shall obtain, renew and comply with all the said licences within the relevant time limits (in any event, within one (1) calendar month of the date of signing and/or execution of the Tenancy Agreement), shall comply with all abatement notices, orders, directions and requests of the relevant authorities and public officers and shall be responsible for paying all relevant fees, costs, fines and penalties.
- 9.5 The Tenant shall not do anything or omit to do anything which would cause, contribute to or involve a breach or potential breach by the Director relating to any of the matters mentioned in Conditions 9.1 to 9.4 hereinabove (and other Conditions hereinbelow).
- 9.6 The Tenant shall fully indemnify the Government and/or the Director for any fees, costs, damages, expenses, fines, penalties, losses and claims arising (a) out of any breach of any of the matters mentioned in inter alia Conditions 9.1 to 9.4 hereinabove (and other Conditions hereinbelow) or (b) from the use of the Premises or (c) out of any works carried out at any time during the term to or at the Premises or (d) out of anything now or during the term attached to or projecting from the Premises or (e) from any neglect or default by the Tenant or by its respective servants or agents or by any express licensee of the Tenant.

### SPECIFIC ENVIRONMENTAL RESPONSIBILITIES

#### Air Pollution

- 10. Save with an appropriate exemption under the Air Pollution Control Ordinance (Cap. 311 of the Laws of Hong Kong) any regulations made thereunder and any amending legislation, the Tenant shall not install or permit or suffer to be installed upon the Premises or any part thereof or any building(s) or structure(s) or part of any building(s) or structure(s) erected or to be erected thereon any furnace, oven, chimney or flue or any other combustion equipment or use or permit or suffer to be used any fuel or any method or process of manufacture or treatment that might in any circumstance result in, cause or contribute to the discharge or emission of any pollutant or any noxious, harmful or corrosive matter, whether it be in the form of gas, smoke, liquid, solid or otherwise (including but not limited to air pollutant as defined in Section 2 of the Air Pollution Control Ordinance (Cap. 311 of the Laws of Hong Kong)), which exists or which is imminent, without the prior written approval of the Director.
- 11. No alteration to the installation and method of manufacture shall be made without the prior written consent of the Director. In any event, the Tenant shall at its own cost(s) comply with, inter alia, Conditions 4.2 to 4.7 and Annex A of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit Application No.VEP-221/2006 regarding



design, installation and operation of chimney, location of fresh air intakes and use of ultra-low sulphur or other cleaner fuel(s) as agreed by the Director (and the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate air quality impact), good practices and relevant provisions of the EIA Report and Final EM&A Manual.

#### Noise Pollution

- 12. The Tenant shall take all necessary measures as may be required by and to the satisfaction of the Director to ensure that the operation of all plant and equipment, installed or used on the Premises or in any building(s) or structure(s) or any part of any building(s) or structure(s) erected or to be erected thereon, will not result, not cause and/or will not contribute any noise (which exists or which is imminent) which disturbs or annoys the residents or occupiers of any adjoining or neighbouring lot or lots or premises, or causes and/or contributes to disturbance to the general public under the Noise Control Ordinance (Cap. 400 of the Laws of Hong Kong) any regulations made thereunder and any amending legislation.
- 13. The decision of the Director as to whether any such plant and equipment are causing disturbance or annoyance as aforesaid shall be final and binding on the Tenant.

#### Waste Management

- 14. The Tenant shall not permit, allow or suffer any fuel or chemical and any sewage, waste water or effluent containing sand, cement, silt or any suspended or dissolved material to flow, escape or run from the Premises onto any adjoining land or allow any waste matter which does not form part of the recovery and/or recycling and/or reprocessing operation or is not part of the final product of such operation to be deposited, kept, held or stored anywhere within the Premises and other areas of EcoPark. The Tenant shall at its own cost(s) have all such matters and all waste arising from recycling activities, chemical waste arising from maintenance of plant and equipment, sewage sludge (from WTF) and general daily waste from the operation removed from the Premises or any building(s) or structure(s) or any part of any building(s) or structure(s) erected or to be erected thereon in a proper manner to the satisfaction of the Director.
- 15. In any event, the Tenant shall at its own cost(s) comply with, inter alia, Conditions 4.11 and 4.12 of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit Application No.VEP-221/2006 regarding paving all areas of the Premises with concrete/using concrete hardstanding and siting all fuel tanks and chemical storage areas on the specified sealed areas, respectively (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to prevent land contamination). The Tenant shall at its own cost(s) comply with relevant provisions of the Waste Disposal Ordinance (Cap.354 of the Laws of Hong Kong) good practices and relevant provisions of the EIA Report and Final EM&A Manual.

#### Water Pollution

- 16. In the event that the Tenant produces, generates, permits, causes, allows or suffers any discharge which is subject to control under the Water Pollution Control Ordinance (Cap. 358 of the Laws of Hong Kong) any regulations made thereunder and any amending legislation, and is not covered by a WTF Discharge Licence issued under the Water Pollution Control Ordinance (Cap. 358 of the Laws of Hong Kong) the Tenant shall apply to the Director for a licence and comply with the terms and conditions stipulated in the licence and the WTF Discharge Licence at the Tenant's own cost(s). Otherwise, the Tenant is not allowed to discharge directly or indirectly or to produce, generate, permit, cause, allow or suffer any discharge into any public sewer, storm-water drain, channel, stream-course, sea or any area inside or outside the Premises any trade effluent or foul or contaminated water or cooling or hot water. Subject to the said licence from the Director and WTF Discharge Licence, the Tenant shall at its own cost(s) separate, collect, discharge and send all process or industrial wastewater to the WTF for treatment to the standard required for discharge into a sewer leading to the sewage treatment works at Pillar Point or other treatment works specified in the licence.
- 17. Subject to obtaining advance written approval of the Director, the Tenant shall at its own cost(s) provide, install, operate and maintain its own waste water pre-treatment plants within the Premises if such process or industrial wastewater could not meet the influent limits / exceeds the maximum influent criteria of the WTF (in accordance with paragraph 7.2.9 of the



Final E&MA Manual). The Tenant shall at its own cost(s) separate, collect, discharge and send all domestic wastewater (i.e. other than process or industrial wastewater) to the Pillar Point Sewage Treatment Works directly for treatment or other treatment works specified in the licence.

18. In any event, the Tenant shall prevent any spilled materials from entering the surface water drainage system and prevent contamination of the sea at its own cost(s) by, inter alia, providing, installing, operating and maintaining stop-logs or interceptors in the surface water drainage system and at the marine frontage area, respectively, or as required by the licence. The Tenant shall at its own cost comply with relevant provisions of the Dumping at Sea Ordinance (Cap 466 of the Laws of Hong Kong) good practices and relevant provisions of the EIA Report and Final EM&A Manual.

#### Hazard to Life Impact

- 19. To mitigate hazard to life impact, the Tenant shall comply with, inter alia, Conditions 4.8 to 4.10 of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit Application No.VEP-221/2006 (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate hazard to life impact) and shall not:-
  - (a) Bring, keep, store or transport chlorine within the Premises and other areas of EcoPark;
  - (b) Bring, keep, store, locate or transport dangerous goods, substances and fuels supporting combustion including oxygen, acetylene, hydrogen peroxide, rubber tyres and diesel within 10 metres from the boundary of the site of EcoPark; and
  - (c) Exceed the building height restrictions for buildings on the Premises which are on/near the western boundary of the site of EcoPark as mentioned in Annex B to the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit Application No.VEP-221/2006 (including any updated Permit, amended permit and further permit).

#### Landfill Gas Hazard

20. To mitigate landfill gas hazard, the Tenant shall at its own cost(s) comply with, inter alia, Condition 4.13 of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No.VEP-221/2006 regarding raising clear of the ground all buildings and enclosed structures as specified in inter alia Condition 3.7 (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate hazard to life impact).

#### Landscape and Visual Impacts

21. To mitigate landscape and visual impacts, the Tenant shall at its own cost(s) comply with, inter alia, Condition 4.14 of the Environmental Permit No. EP-226/2005 as amended by the Variation of Environmental Permit – Application No.VEP-221/2006 regarding maintaining landscape, planting, treatment and mitigation measures as specified in inter alia Condition 3.8 and Figure 3 (and comply with the conditions of any updated Permit, amended permit and further permit regarding measures to mitigate landscape and visual impacts).



# **APPENDIX 3**

Material and Waste Throughputs



# A3.1 CHAMPWAY TECHNOLOGY LIMITED (EP07-03)

	V	Vaste Input (k	g)		Product O	utput (kg)		Waste Disposal (kg)				
Date	Cooking Oil	Grease Trap Waste	Total	Treated Cooking Oil	Biodiesel	Glycerin	Total	Inorganic Waste	Organic Waste	Water Waste [Note 1]	Total	
Oct-Dec 08	130,000	-	130,000	-	-	-	-	-	-	-	-	
Jan-Dec 09 [Note 2]	1,277,241	726,140	2,003,381	1,863,143	-	-	1,863,143	-	100,169	40,068	140,237	
Jan-10	122,673	19,780	142,453	132,481	-	-	132,481	-	7,123	2,849	9,972	
Feb-10	105,641	-	105,641	98,246	-	-	98,246	-	5,282	2,113	7,395	
Mar-10	110,579	-	110,579	102,838	-	-	102,838	-	5,529	2,212	7,741	
Apr-10	110,624	69,780	180,404	167,776	-	-	167,776	-	9,020	3,608	12,628	
May-10 [Note 2]	110,943	142,630	253,573	235,823	-	-	235,823	-	12,679	5,071	17,750	
Jun-10 [Note 2]	113,741	74,940	188,681	175,474	-	-	175,474	-	9,434	3,774	13,208	
Jul-10 [Note 2]	117,570	150,840	268,410	249,621	354,730	17,737	622,088	15,264	13,420	5,368	34,052	
Aug-10 [Note 2]	123,459	134,180	257,639	216,418	440,590	22,030	679,038	16,200	14,685	5,147	36,032	
Sep-10 [Note 2]	107,014	145,980	252,994	235,285	374,180	18,709	628,174	11,664	12,650	5,060	29,374	
Oct-10 [Note 2]	96,075	231,380	327,455	304,533	125,380	6,269	436,182	26,208	16,373	6,549	49,130	
Nov-10	103,531	62,830	166,361	139,697	245,410	7,362	392,469	12,640	9,510	17,154	39,304	
Dec-10	125,151	114,360	239,511	190,158	381,880	11,456	583,494	14,000	27,744	39,129	80,873	
Jan-11	106,213	116,560	222,773	191,113	156,870	4,706	352,689	4,000	16,321	15,340	35,661	

#### Notes:

- 1. Water waste includes slurry and semi-solid waste and is disposed of at landfill
- 2. Updated throughout data as advised by Tenant after the corresponding Quarterly EM&A Reports were submitted



# A3.2 SHIU WING STEEL LIMITED (EP08-03)

	Waste Input (kg)		Product Output (kg)		Waste Disposal (kg)	
Date	Waste Metal/Steel Scrap/ Construction Waste	Light Ferrous Scrap (Baled)	Heavy Ferrous Scrap (Sheared)	Total	Non-ferrous Scrap / General Refuse	
Apr-10 [Note 1]	220,000	-	220,000	220,000	-	
May-10	-	-	-	-	-	
Jun-10	-	-	-	-	-	
Jul-10	1,396,000	-	1,396,000	1,396,000	-	
Aug-10	398,000	-	398,000	398,000	-	
Sep-10	870,660	-	870,660	870,660	-	
Oct-10	1,166,850	-	1,166,850	1,166,850	-	
Nov-10	275,790	-	275,790	275,790	-	
Dec-10	234,240	-	234,240	234,240	-	
Jan-11	1,403,120	-	1,403,120	1,403,120	-	

#### Note:

1. Updated throughout data as advised by Tenant after the corresponding Quarterly EM&A Report was submitted



# A3.3 HONG KONG HUNG WAI WOODEN BOARD COMPANY (EP06-034)

Dota	Waste Input (kg)	Product Output (kg)	Waste Disposal (kg)
Date -	Waste Wood	Wooden Board	General Refuse
Jun-Dec 08	38,000	-	-
Jan-Dec 09	120	-	-
Jan-10	-	-	-
Feb-10	-	-	-
Mar-10	-	-	-
Apr-10	141,880	-	-
May-10 [Note 1]	1,758,000	-	-
Jun-10 <sup>[Note 1]</sup>	1,000,000	-	-
Jul-10 <sup>[Note 1]</sup>	90,000	-	-
Aug-10 [Note 1]	204,000	472,000	-
Sep-10 [Note 1]	264,500	-	-
Oct-10 [Note 1]	365,120	-	-
Nov-10	415,830	300,000	-
Dec-10	253,000	300,000	-
Jan-11	220,000	849,000	-

#### Note:

1. Updated throughout data as advised by Tenant after the corresponding Quarterly EM&A Reports were submitted



# A3.4 LI TONG GROUP (EP07-02)

	Waste Input (kg)		Product Output (kg)		Waste Disposal (kg)
Date	WEEE	Metals (e.g. ferrous metals, aluminium)	Non-metals (e.g. fibres, plastics)	Total	General Refuse
Sep-10	8,103	430	3,085	3,515	-
Oct-10	35,672	3,548	8,919	12,467	-
Nov-10	24,918	3,674	12,876	16,550	-
Dec-10	16,483	1,521	8,727	10,248	657
Jan-11	35,938	974	5,690	6,664	1,095



# A3.5 HONG KONG TELFORD ENVIROTECH GROUP LIMITED (EP08-01)

Date	Waste Input (kg)	Product Output (kg) [Note 1]	Waste Disposal (kg)			
	Waste Plastic	PO, PE, PET, PWC	General Refuse			
Jul-Dec 09	20,000	-	-			
Jan-10	-	-	-			
Feb-10	-	-	-			
Mar-10	-	-	-			
Apr-10	-	-	-			
May-10	2,600	-	-			
Jun-10	5,300	-	-			
Jul-10	13,000	-	-			
Aug-10	13,000	-	-			
Sep-10	-	-	-			
Oct-10	9,700	-	-			
Nov-10	10,000	-	-			
Dec-10	70,000	-	-			
Jan-11	30,000	-	-			

#### Note:

<sup>1.</sup> Tenant has not yet commenced formal recycling process within the lot



# A3.6 YOT EcoPark Plastic Resources Recycling Centre (P7)

Data	Waste Input (kg)	Product Output (kg)	Waste Disposal (kg)
Date	Waste Plastic	Processed Plastic	General Refuse
Apr-10 [Note 1]	80,878	44,790	14,849
May-10 [Note 1]	23,806	23,414	4,666
Jun-10 [Note 1]	91,852	22,366	7,321
Jul-10 [Note 1]	40,878	30,901	12,669
Aug-10	29,603	34,240	21,745
Sep-10	96,868	47,638	13,636
Oct-10	80,897	55,446	10,154
Nov-10	60,538	67,047	10,458
Dec-10	109,858	79,992	15,496
Jan-11	94,205	66,702	10,396

#### Note:

1. Updated throughout data as advised by Tenant after the corresponding Quarterly EM&A Report was submitted



### A3.7 St. James' Settlement "WEEE GO GREEN" EcoPark (P5)

	Waste Input (kg)			Product Output (F	(g)		Waste Disposal (kg)
Date	WEEE	Repaired / Refurbished EEE (pieces) <sup>[Note 1]</sup>	Reusable Parts	Metals (e.g. ferrous metals, aluminium)	Non-metals (e.g. fibres, plastics)	Total	General Refuse
Oct-10 [Note 2]	3,471	47	-	-	-	47 pieces	-
Nov-10	15,997	331	-		190	331 pieces + 190kg	288
Dec-10	21,827	277	-	-	350	277 pieces + 350kg	1,637
Jan-11	20,939	307	-	16,065	6,982	307 pieces + 23,047kg	1,000

#### Notes:

- 1. Updated unit as advised by Tenant after the corresponding Quarterly EM&A Report was submitted
- 2. Updated throughout data as advised by Tenant after the corresponding Quarterly EM&A Report was submitted



# **APPENDIX 4**

Calibration Certificate of Infrared Gas Analyser

### **FUGRO TECHNICAL SERVICES LIMITED**

MateriaLab Division,

Fugro Development Centre, 5 Lok Yi Street, 17 M.S. Castle Peak Road, Tai Lam, Tuen Mun, N.T., Hong Kong. Tel :+852-2450 8233 Fax :+852-2450 6138 E-mail :matlab@fugro.com.hk



# REPORT ON CALIBRATION OF INFRA RED GAS ANALYSER

Website: www.materialab.com.hk

Client

Fugro Technical Services Limited - MateriaLab Division

Sample description

One sample of Infra Red Gas Analyser (GA94A)

Sample identification

E / 084 / 1

Serial number

GA3385

Test required

Calibration

Date of calibration

29/12/2010

Next calibration date

29/06/2011

Method used

In-house method (Comparison with Standard Gas)

### Results:

Parameters	Standard Gas Concentration, % volume	Infra Red Gas Analyser Reading, % volume	Deviation, % volume
Methane (CH₄)	1.02	1.0	-0.02
Carbon dioxide (CO <sub>2</sub> )	15.1	14.9	-0.2
Oxygen (O₂)	1.03	1.2	-0.17

Calibrated by : C. F. Leung

Certified by:

Approved Signatory: Raymond K. F. Wong Assistant Manager — Chemical & Environmental

Date

29/12/2010

Note: This report refers only to the sample(s) tested.



# **APPENDIX 5**

**Graphical Plots of LFG Monitoring** 

# Contract No. EP/SP/53/06 Provision of Management Services for EcoPark in Tuen Mun Area 38 EM&A Services

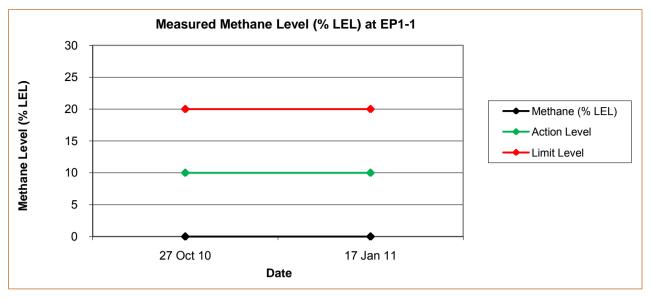
### Landfill Gas Monitoring Results - Jan 2011

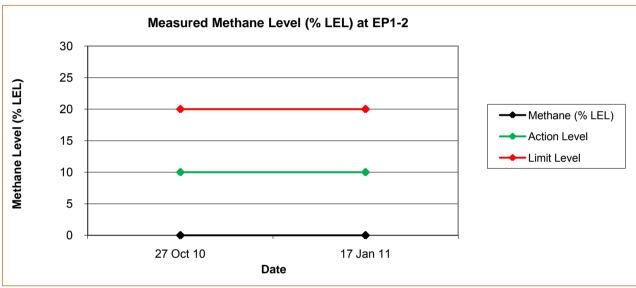
								M	easuremer	nt Results		А	ction Leve	el	I			
Monitoring Station ID	Monitoring Locations	Date	Weather Conditions	Temperature (degree)	Start Time	End Time	Meti	nane	Oxygen	Carbon Dioxide	Barometric Pressure	Methane	Oxygen	Carbon Dioxide	Methane	Oxygen	Carbon Dioxide	Remarks
							% v/v	% LEL	% v/v	% v/v	mBar (absolute)	% LEL	% v/v	% v/v	% LEL	% v/v	% v/v	
EP1-1	Inside the landscaping area of Administration Building			11	10:36	10:40	0.0	0	20	0.3	1026							Nil
EP1-2	PCCW below- ground chamber outside Lot EP08-01			10	10:16	10:20	0.0	0	21	0.0	1026							Nil
EP1-3	HGC Broadband below-ground chamber outside Lot EP08-03	17 Jan 11	Fine	10	10:10	10:14	0.0	0	21	0.0	1026	> 10	< 19	> 0.5	> 20	< 18	> 1.5	Nil
	HGC Broadband below-ground chamber outside Lot P1			11	10:24	10:28	0.0	0	21	0.0	1026							Nil
EP2-2	HGC Broadband below-ground chamber outside Lot P3			12	10:29	10:33	0.0	0	21	0.0	1026							Nil

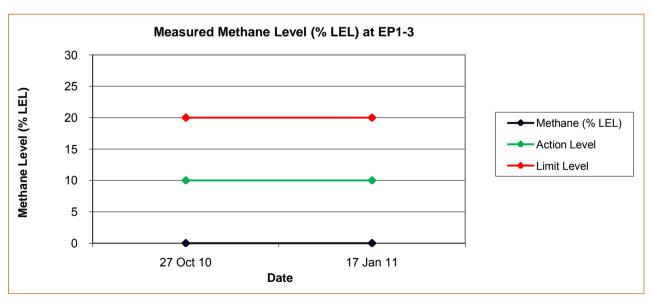
#### Note

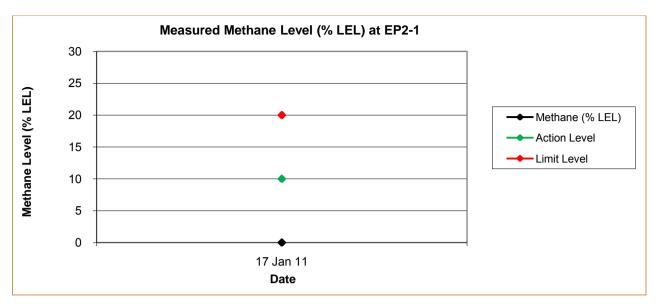
<sup>(1)</sup> Underlined figure indicates an exceedance of Action Level

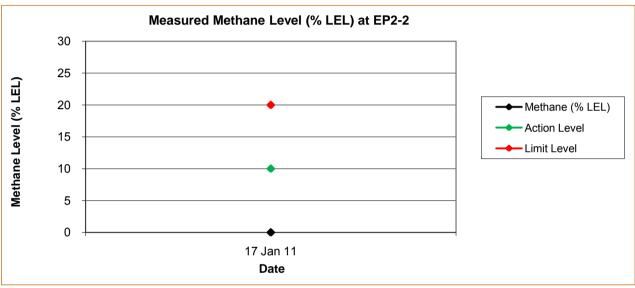
<sup>(2)</sup> Shaded area indicates an exceedance of Limit Level

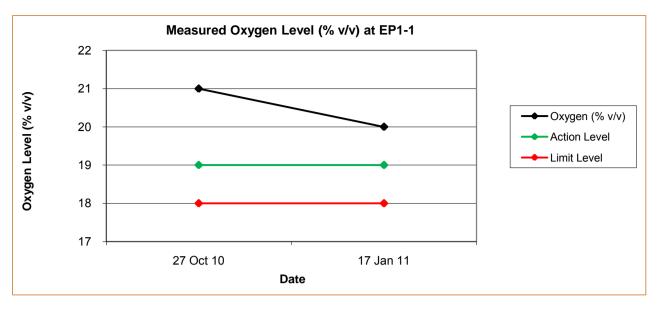


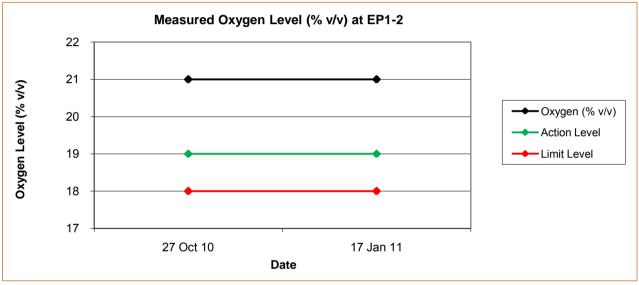


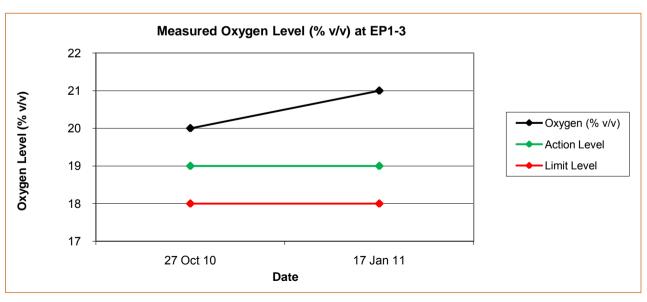


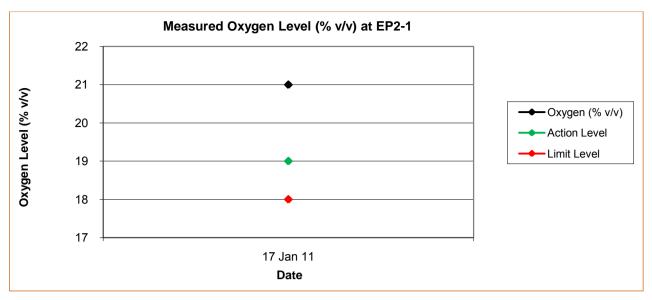


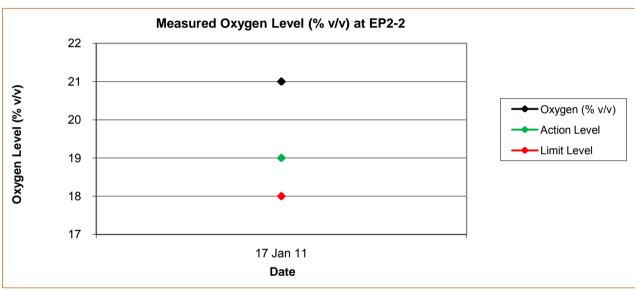


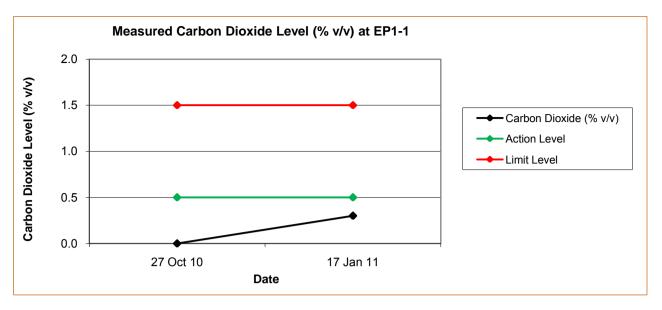


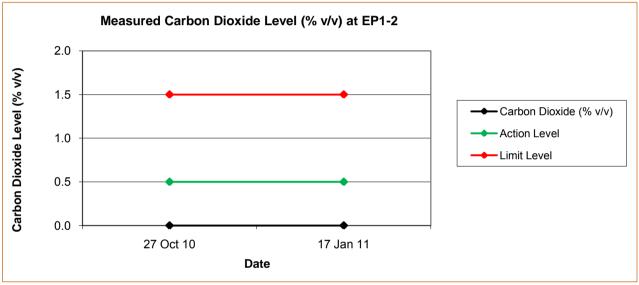


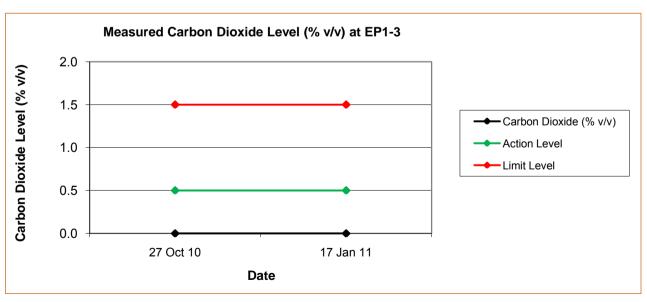


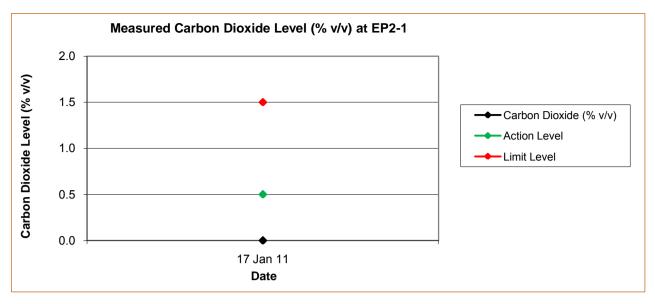


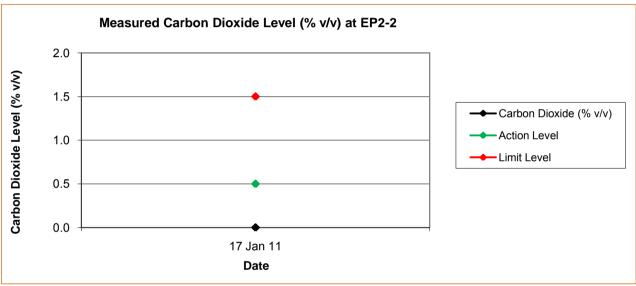


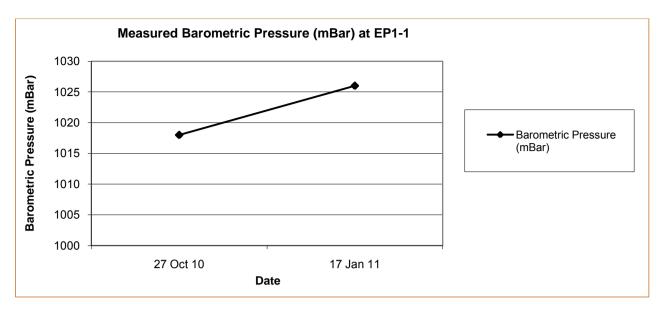


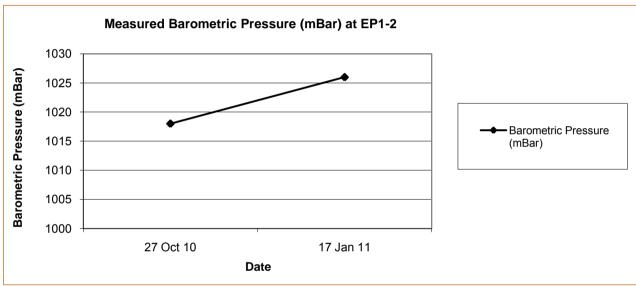


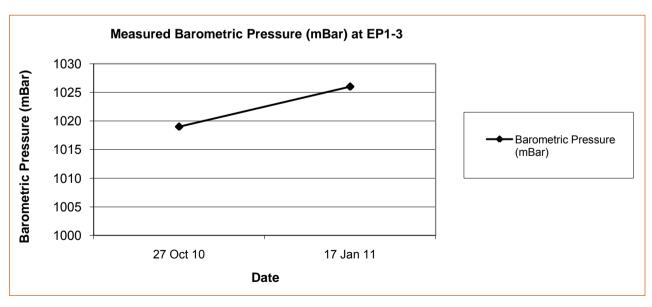


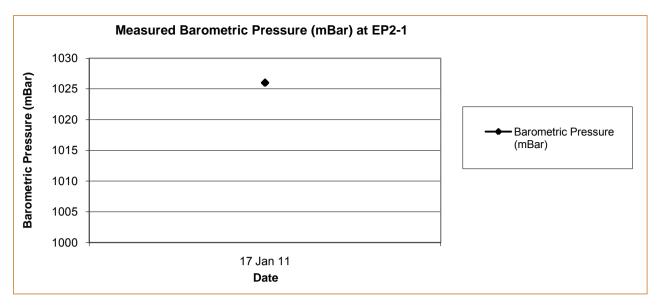


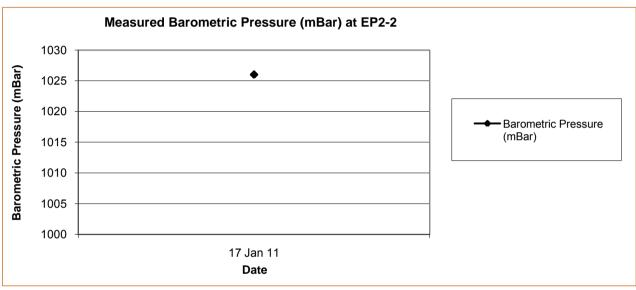














# **APPENDIX 6**

Tenant-specific Audit Checklists for the Reporting Quarter



### **APPENDIX 6.1**

Tenant-specific Audit Checklists for the Reporting Quarter

Champway (EP07-03)



	Audit Details						
Ten	ant	Champway Technol	ogy	Ltd			
Date	e & Time	Date 23 November	r 201	10		Tin	ne 2:30pm
Lot	No.	EP07-03					
Aud	it Ref.	4					
IEC	Joint Inspection	☐ Yes ⊠	No	)			
Wea	ther Conditions	⊠ Fine □	] Ha	azy			Overcast Rain
Win	d	☐ Calm	Lig	ght Bre	eeze		Strong Wind
Tem	perature	25 °C					
Hun	nidity	⊠ Low □	Me	edium			High
	1. General						
	Description			Yes	No	N/A	Remarks
1.1	EP for Tenant displ	ayed on notice boards	s/			$\boxtimes$	EP for EcoPark (EP-226/2005/A) is
	at entrance?						displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Police	cy documented?					Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Man	agement Plan update	d?			$\boxtimes$	
				_	_	_	
1.4	a. Emergency Resp documented?	oonse Plan (ERP)				$\boxtimes$	Operator's ERP is documented. Tenant follows this.
	b. Drill / training red	cords available?			$\boxtimes$	$\Box$	Tenant does not keep records for ERP
	5. 2 a.ag . c c						training.
1.5	Employee's training	record available?		$\boxtimes$			Tenant keeps a training record for BPI.
1.6	Any record of proce	equition / complaint?			$\square$		
1.6	Any record of prose	cution / complaint?		Ш		Ш	
1.7	Waste Managemer	it Plan?				$\boxtimes$	Operator's WMP is documented.
							Tenant follows this.



### 2. Water Quality **Description** Yes No N/A Remarks 2.1 Valid Effluent Discharge License available? ☐ Licence No.: WT00004430-2009. 2.2 Any wastewater treatment facility prior to Oil interceptor & grease trap. effluent discharge? If yes, facility is properly maintained and function normally? **Effluent Monitoring** $\boxtimes$ As per the discharge licence, selfmonitoring shall be performed when 2.3 a. Sampling / Monitoring Record available? required. b. Monitoring frequency met the license $\boxtimes$ No sampling was undertaken. requirement? No sampling was undertaken. c. Any exceedance? $\boxtimes$ No sampling was undertaken. d. If yes, follow-up action taken? Surface run-off control measures in place and adequately maintained? 2.5 Surface run-off discharging into drainage $\boxtimes$ See Action #1. system? 2.6 All manholes are covered? Foam, oil, grease, litter or other 2.7 objectionable matters in water of nearby drain / sewer are avoided? Drainage system is well maintained to 2.8 prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				
2.9	a. Processes / activities are located under a covered area?				
-	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
-	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Oil replacement (of the heat (oil) transmission system) is carried out offsite when needed. This may be needed once every ten years or so.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?				
-	b. If yes, oil and grease removed regularly?				
-	c. Collected by licenced collector?	$\boxtimes$			
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				
-	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				SP No. L-25-017 (1).
	b. SP License conditions / monitoring requirements met?	$\boxtimes$			The monitoring result indicates very low methanol emission from the facilities.
	Odour	$\boxtimes$			
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?				From the storage of grease trap waste.
	c. Odorous materials are covered?				
	d. If odour control system is installed, is it operating normally?	$\boxtimes$			
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				No dusty materials were found to be used on-site.
3.4	Dust Monitoring a. Monitoring Record available?			$\boxtimes$	Dust monitoring is not required according to PRC.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				
3.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?				Used by all diesel vehicles, fork-lift truck and emergency generator.



### 4. Waste / Chemical Management **Description** Yes No N/A Remarks **Chemical Waste Producer Registration** Registration No. 6311-421-C3617-01 4.1 completed? for spent lubricating oil and spent mineral oil. 4.2 Provision of sufficient waste disposal points/ $\square$ $\square$ receptacles? Waste disposed of regularly and properly? 2-3 times a week. 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at 4.6 regular intervals? Packaging of Chemical Waste a. Stored in suitable container? 4.7 b. Container properly closed or sealed? c. Spillage cleaned up immediately through $\boxtimes$ No spillage. the use of an absorbent? $\square$ $\square$ $\square$ d. Approval obtained for capacity of containers > 450L? Labelling of Chemical Waste a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\square$ $\square$ $\square$ bilingual? c. Information is accurate and sufficient?



	Description	Voc	No	N/A	Remarks
	•	res	140	_	
4.9	a. Proper "Chemical Waste" signs are displayed?				Not observed.
	b. Incompatible wastes separated by an impermeable partition?			$\boxtimes$	Not observed.
-	c. Containers kept in receptacle of suitable material and construction ( <i>if quantity &lt;50L</i> ) or drip trays capable of storing 110% of the volume of largest ( <i>if quantity &gt;50L</i> )?				Not observed.
	d. Enclosed on 3 sides with no less than 2m in height or height of tallest container or stack of containers?				Not observed.
-	e. Containers with chemical waste are properly stored and locked at designated area which is clean and dry?			$\boxtimes$	Not observed.
•	f. Adequacy of area ventilation?			$\boxtimes$	Not observed.
	g. Outdoors storage area should be covered?			$\boxtimes$	
4.10	Chemical wastes are collected by a licensed chemical waste collector? (retention of trip ticket copies for 12 months)				No collection.
4.11	Storage of Liquid Waste  a. Storage area floor/surface permeation-proof?			$\boxtimes$	No bulk storage.
	b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage?				No bulk storage.
-	c. Walls or partitions of stacked container storage area constructed of impermeable material?				No bulk storage.



### 5. Other Issues **Description** Yes No N/A Remarks Outside the LFG Consultation Zone. Landfill Gas Hazard $\boxtimes$ (within LFG Consultation Zone) 5.1 a. Workers and visitors alerted to possible LGF hazards? b. Smoking and open fires prohibited? $\square$ $\square$ $\boxtimes$ 5.2 Security lighting directed downward into the $\boxtimes$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? Any areas within the lot to be used for recycling processes are concrete paved? 5.5 Valid calibration certificate for any No monitoring equipment. monitoring equipment? $\square$ DG licences for storing methanol, sulphuric **Dangerous Goods** acid and fatty acid methyl esters (FAME) 5.6 a. Valid license for manufacturing / storing obtained (Nos. 021229, 021228 & 021227, dangerous goods? and 021225 & 021226). DG licence for manufacturing FAME obtained (No. 001456). b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely locked? d. Total storage capacity in compliance with $\square$ $\square$ the relevant statutory requirement? e. Proper Labelling? f. Dangerous goods properly packaged? $\square$ $\square$ $\square$ Potential stagnant pools cleared and $\boxtimes$ See Action #1. mosquito breeding prevented?



### **Action Items from This Audit**

#### No. Action

**Expected By** 

1. Stagnant water was found on the ground near the office. The Tenant was reminded to clear the water ASAP.

26 Nov 2010



### **Follow-up from Previous Audits**

### No. Follow-up from Previous Audit Dated 27 October 2010

**Status** 

1. The chemical drums placed outside the laboratory were removed.

Closed



2. The area of oil stain found at the reserved area for EcoPark's Wastewater Treatment Plant (WWTP) was reduced.

Closed





### **Audit Summary and Sign-off**

The site is generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Champway	Serco Guardian JV
Signed By	Carman CHUNG	-	Hoppy CHAN	Morgan CHIU
Role	ET Site Auditor	-	Sales and Procurement Manager	Park Manager
Signature	Zonon		PR GJ	14

**Note:** \* IEC to sign-off only for a joint ET+IEC Inspection



	Audit Details						
Tenant Champway Technology				gy Ltd			
Date & Time		Date 21 Decem	nber	2010		Tin	ne <u>10:20am</u>
Lot No.		EP07-03		_			
Audit Ref.		5		_			
IEC Joint Inspection		Yes		No			
Weather Conditions		Fine		Hazy			Overcast Rain
Wind		⊠ Calm		Light Bre	eeze		Strong Wind
Te	emperature	21 °C					
Hu	umidity			Medium			High
	1. General						
	Description			Yes	No	N/A	Remarks
1.1	EP for Tenant disp	layed on notice bo	ards	/		$\boxtimes$	EP for EcoPark (EP-226/2005/A) is
	at entrance?						displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Pol	icy documented?			Ш		Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Mar	nagement Plan upo	dated	l?		$\boxtimes$	
1.4	a. Emergency Res documented?	ponse Plan (ERP)				$\boxtimes$	Operator's ERP is documented. Tenant follows this.
	b. Drill / training re	cords available?			$\boxtimes$	П	Tenant does not keep records for ERP
	•			_		_	training.
1.5	Employee's trainin	g record available?	)				Tenant keeps a training record for BPI.
1.6	Any record of pros	ecution / complaint	?		$\boxtimes$		
٠.٠	7.1., 70001d of pios	Sauciti Complaint	•				
1.7	Waste Manageme	nt Plan?				$\boxtimes$	Operator's WMP is documented. Tenant follows this.
							TCHAIR IOIIOWS IIIIS.
							,



# 2. Water Quality **Description** Yes No N/A Remarks Valid Effluent Discharge License available? Licence No.: WT00004430-2009 valid $\square$ $\square$ until 31 July 2014. Any wastewater treatment facility prior to Oil interceptor & grease trap. 2.2 effluent discharge? If yes, facility is properly maintained and function normally? **Effluent Monitoring** $\boxtimes$ As per the discharge licence, selfmonitoring shall be performed when 2.3 a. Sampling / Monitoring Record available? required. No sampling was undertaken in this month. As advised by the Tenant, grease trap effluent samples were collected and tested by HKPC. b. Monitoring frequency met the license requirement? $\boxtimes$ c. Any exceedance? $\boxtimes$ d. If yes, follow-up action taken? 2.4 Surface run-off control measures in place and adequately maintained? 2.5 Surface run-off discharging into drainage system? All manholes are covered? $\square$ $\square$ $\square$ 2.7 Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided? 2.8 Drainage system is well maintained to prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination	$\boxtimes$			
.9	a. Processes / activities are located under a covered area?				
•	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
•	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Oil replacement (of the heat (oil) transmission system) is carried out off- site when needed. This may be needed once every ten years or so.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?	$\boxtimes$			
	b. If yes, oil and grease removed regularly?	$\boxtimes$			
	c. Collected by licenced collector?	$\boxtimes$			
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?			$\boxtimes$	
•	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				SP No. L-25-017 (1).
	b. SP License conditions / monitoring requirements met?	$\boxtimes$			
	Odour	$\boxtimes$			
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?				From the storage of grease trap waste.
	c. Odorous materials are covered?				
	d. If odour control system is installed, is it operating normally?				
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?			$\boxtimes$	No dusty materials were found to be used on-site.
3.4	Dust Monitoring a. Monitoring Record available?			$\boxtimes$	Dust monitoring is not required according to PRC.
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?				
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				
3.8	Vehicles and equipment are switched off while not in use?				
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
-	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
-	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				
3.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
-	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			Used by all diesel vehicles, fork-lift truck and emergency generator.



# 4. Waste / Chemical Management **Description** Yes No N/A Remarks **Chemical Waste Producer Registration** Registration No. 6311-421-C3617-01 4.1 completed? for spent lubricating oil and spent mineral oil. 4.2 Provision of sufficient waste disposal points/ $\square$ $\square$ receptacles? Waste disposed of regularly and properly? 2-3 times a week. 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at 4.6 regular intervals? Packaging of Chemical Waste a. Stored in suitable container? 4.7 b. Container properly closed or sealed? c. Spillage cleaned up immediately through $\boxtimes$ No spillage. the use of an absorbent? $\square$ $\square$ $\square$ d. Approval obtained for capacity of containers > 450L? Labelling of Chemical Waste a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\square$ $\square$ $\square$ bilingual? c. Information is accurate and sufficient?



	4. Waste / Chemical Management (continued)									
	Description	Yes	No	N/A	Remarks					
4.9	Storage of Chemical Waste  a. Proper "Chemical Waste" signs are displayed?				Not observed.					
	b. Incompatible wastes separated by an impermeable partition?				Not observed.					
	c. Containers kept in receptacle of suitable material and construction ( <i>if quantity</i> <50L) or drip trays capable of storing 110% of the volume of largest ( <i>if quantity</i> >50L)?			$\boxtimes$	Not observed.					
	d. Enclosed on 3 sides with no less than 2m in height or height of tallest container or stack of containers?				Not observed.					
,	e. Containers with chemical waste are properly stored and locked at designated area which is clean and dry?			$\boxtimes$	Not observed.					
	f. Adequacy of area ventilation?			$\boxtimes$	Not observed.					
•	g. Outdoors storage area should be covered?			$\boxtimes$						
4.10	Chemical wastes are collected by a licensed chemical waste collector? (retention of trip ticket copies for 12 months)				No collection.					
4.11	Storage of Liquid Waste  a. Storage area floor/surface permeation-proof?			$\boxtimes$	No bulk storage.					
	b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage?				No bulk storage.					
•	c. Walls or partitions of stacked container storage area constructed of impermeable material?			$\boxtimes$	No bulk storage.					



# 5. Other Issues **Description** Yes No N/A Remarks Outside the LFG Consultation Zone. Landfill Gas Hazard $\boxtimes$ (within LFG Consultation Zone) 5.1 a. Workers and visitors alerted to possible LGF hazards? b. Smoking and open fires prohibited? $\square$ $\square$ $\boxtimes$ 5.2 Security lighting directed downward into the $\bowtie$ work areas to prevent glare to the surrounding receivers? $\square$ $\square$ 5.3 Good housekeeping? Any areas within the lot to be used for recycling processes are concrete paved? 5.5 Valid calibration certificate for any No monitoring equipment. monitoring equipment? $\square$ DG licences for storing methanol, **Dangerous Goods** sulphuric acid and fatty acid methyl 5.6 a. Valid license for manufacturing / storing esters (FAME) obtained (Nos. 021229, dangerous goods? 021228 & 021227, and 021225 & 021226). DG licence for manufacturing FAME obtained (No. 001456). b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely locked? d. Total storage capacity in compliance with $\square$ $\square$ the relevant statutory requirement? e. Proper Labelling? $\square$ $\square$ f. Dangerous goods properly packaged? $\square$ $\square$ The stagnant water with a thickness of 5.7 Potential stagnant pools cleared and $\boxtimes$ mosquito breeding prevented? ~1-2mm should be accepted and so suggest to close this observation.



No. Action Expected By

1. No critical issues were identified NIL

### **Follow-up from Previous Audits**

### No. Follow-up from Previous Audit Dated 23 November 2010

Status

1. No stagnant water which might cause mosquito growth was found.

Closed



### **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Champway	Serco Guardian JV
Signed By	Carman CHUNG	-	Kenji WONG	Morgan CHIU
Role	ET Site Auditor	-	Technical Manager	Park Manager
Signature	Zonon		buji	12



	Audit Details					
Ten	ant	Champway Technology	Ltd			
Dat	e & Time	Date 17 January 2011			Tin	ne 10:35am
Lot	No.	EP07-03				
Auc	dit Ref.	6				
IEC	Joint Inspection		0			
Wea	ather Conditions		azy			Overcast Rain
Win	ıd	⊠ Calm ☐ Li	ght Bre	eze		Strong Wind
Ten	nperature	<u>12</u> °C				
Hur	midity	⊠ Low	ledium			High
	1. General					
	Description		Yes	No	N/A	Remarks
1.1	EP for Tenant displat entrance?	layed on notice boards /				EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?				Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Mar	nagement Plan updated?			$\boxtimes$	
1.4	a. Emergency Resp documented?	oonse Plan (ERP)			$\boxtimes$	Operator's ERP is documented. Tenant follows this.
	b. Drill / training rec	cords available?				Tenant does not keep records for ERP training.
1.5	Employee's training	g record available?				Tenant keeps a training record for BPI.
1.6	Any record of prose	ecution / complaint?		$\boxtimes$		
1.7	Waste Managemer	nt Plan?			$\boxtimes$	Operator's WMP is documented. Tenant follows this.



# 2. Water Quality **Description** Yes No N/A Remarks Valid Effluent Discharge License available? Licence No.: WT00004430-2009 valid until 31 July 2014. 2.2 Any wastewater treatment facility prior to Oil interceptor & grease trap. $\square$ $\square$ effluent discharge? If yes, facility is properly maintained and $\square$ function normally? **Effluent Monitoring** $\boxtimes$ As per the discharge licence, self-monitoring shall be performed when required. No sampling was undertaken a. Sampling / Monitoring Record available? 2.3 in this month. As advised by the Tenant, the grease trap effluent samples collected in December 2010 were insufficient for testing. Samples will be re-collected and results would be available in February. $\bowtie$ b. Monitoring frequency met the license requirement? c. Any exceedance? d. If yes, follow-up action taken? 2.4 Surface run-off control measures in place $\square$ $\square$ and adequately maintained? 2.5 Surface run-off discharging into drainage system? $\square$ $\square$ $\square$ All manholes are covered? 2.7 Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided? Drainage system is well maintained to prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				
.9	a. Processes / activities are located under a covered area?				
-	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
-	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Oil replacement (of the heat (oil) transmission system) is carried out offsite when needed. This may be needed once every ten years or so.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?	$\boxtimes$			
_	b. If yes, oil and grease removed regularly?	$\boxtimes$			
_	c. Collected by licenced collector?	$\boxtimes$			
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				
-	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				SP No. L-25-017 (1).
	b. SP License conditions / monitoring requirements met?	$\boxtimes$			
3.2	Odour  a. Any odour detected?	$\boxtimes$			
	b. If yes, can the source be identified?	$\boxtimes$			From the storage of grease trap waste.
	c. Odorous materials are covered?	$\boxtimes$			
	d. If odour control system is installed, is it operating normally?	$\boxtimes$			
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				No dusty materials were found to be used on-site.
3.4	Dust Monitoring a. Monitoring Record available?				Dust monitoring is not required according to PRC.
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			,



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				
3.8	Vehicles and equipment are switched off while not in use?				
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour				
-	b. >35kg of conventional solid fuel per hour				
-	c. >1,150 MJ of any gaseous fuel per hour				
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.			$\boxtimes$	
3.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
_	b. If yes, record of refrigeration equipment service available?				
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?				Used by all diesel vehicles, fork-lift truck and emergency generator.



# 4. Waste / Chemical Management **Description** Yes No N/A Remarks **Chemical Waste Producer Registration** Registration No. 6311-421-C3617-01 4.1 completed? for spent lubricating oil and spent mineral oil. 4.2 Provision of sufficient waste disposal points/ $\square$ $\square$ receptacles? Waste disposed of regularly and properly? 2-3 times a week. 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at 4.6 regular intervals? Packaging of Chemical Waste a. Stored in suitable container? 4.7 b. Container properly closed or sealed? c. Spillage cleaned up immediately through $\boxtimes$ No spillage. the use of an absorbent? $\square$ $\square$ $\square$ d. Approval obtained for capacity of containers > 450L? Labelling of Chemical Waste a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\square$ $\square$ $\square$ bilingual? c. Information is accurate and sufficient?



on	Yes	No	N/A	Remarks
f Chemical Waste "Chemical Waste" signs are ed?				Not observed.
atible wastes separated by an eable partition?			$\boxtimes$	
ers kept in receptacle of suitable I and construction (if quantity <50L) rays capable of storing 110% of time of largest (if quantity >50L)?			$\boxtimes$	
ed on 3 sides with no less than 2m it or height of tallest container or containers?			$\boxtimes$	
ers with chemical waste are stored and locked at designated ich is clean and dry?			$\boxtimes$	
cy of area ventilation?			$\boxtimes$	
rs storage area should be ?			$\boxtimes$	
wastes are collected by a hemical waste collector? of trip ticket copies for 12 months)			$\boxtimes$	No collection.
f Liquid Waste area floor/surface permeation-			$\boxtimes$	No bulk storage.
y of retention structure sufficient mmodate contents of the largest er or 20% volume of waste in ?			$\boxtimes$	
partitions of stacked container area constructed of impermeable I?			$\boxtimes$	
are				



# 5. Other Issues **Description** Yes No N/A Remarks Outside the LFG Consultation Zone. Landfill Gas Hazard (within LFG Consultation Zone) 5.1 a. Workers and visitors alerted to possible LGF hazards? b. Smoking and open fires prohibited? $\square$ $\square$ $\boxtimes$ 5.2 Security lighting directed downward into the $\boxtimes$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? 5.4 Any areas within the lot to be used for recycling processes are concrete paved? 5.5 Valid calibration certificate for any No monitoring equipment. monitoring equipment? $\square$ DG licences for storing methanol, **Dangerous Goods** sulphuric acid and fatty acid methyl 5.6 a. Valid license for manufacturing / storing esters (FAME) obtained (Nos. 021229, dangerous goods? 021228 & 021227, and 021225 & 021226). DG licence for manufacturing FAME obtained (No. 001456). b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely locked? d. Total storage capacity in compliance with $\square$ $\square$ the relevant statutory requirement? e. Proper Labelling? $\square$ $\square$ f. Dangerous goods properly packaged? $\square$ $\square$ 5.7 Potential stagnant pools cleared and mosquito breeding prevented?



#### No. Action

**Expected By** 

15 Feb 2011

 Uncovered oil bucket and oil stain were found at the reserved area for EcoPark's Wastewater Treatment Plant (WWTP). The Tenant was reminded to use proper containers with covers for containing all chemicals/chemical wastes, remove the oil stain and oily contaminated soil, and dispose of it properly.







### **Follow-up from Previous Audits**

No. Follow-up from Previous Audit Dated 21 December 2010

**Status** 

1. NIL N/A

## **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	Champway	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	Teddy CHOI	Morgan CHIU
Role	ET Leader	IEC	Executive Director	Park Manager
Signature	That my	Grafal	Teldy	1



# **APPENDIX 6.2**

Tenant-specific Audit Checklists for the Reporting Quarter

Shiu Wing (EP08-03)



	Audit Details						
Ten	ant	Shiu Wing Steel Li	mited				
Dat	e & Time	Date 23 November	er 20	10		Tin	ne 4:05pm
Lot	No.	EP08-03					
Aud	dit Ref.	4					
IEC	Joint Inspection	Yes	⊠ No	0			
We	ather Conditions		] Ha	azy			Overcast Rain
Wir	nd	☐ Calm	⊠ Li	ght Bre	eeze		Strong Wind
Ten	nperature	24_°C					
Hur	midity	⊠ Low [	M	edium			High
	1. General						
, , , ,	Description  ED for Toward display		-1/	Yes	No		Remarks
1.1	at entrance?	layed on notice board	ds/		Ш		EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?					The Tenant is going to integrate the Environmental Policy into their Safety Operations Manual soon.
1.3	Environmental Mar	nagement Plan updat	ted?				The Tenant is going to integrate the EMP into their Safety Operations Manual soon.
1.4	a. Emergency Res documented?	ponse Plan (ERP)					The ERP has been included in the Tenant's Safety Operations Manual.
	b. Drill / training red	cords available?					The Tenant advised the training records were kept at their HR department.
1.5	Employee's training	g record available?					The Tenant keeps a training record for BPI.
1.6	Any record of prose	ecution / complaint?					
1.7	Waste Managemer	nt Plan?				$\boxtimes$	Operator's WMP is documented.
<b>\</b>							



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				See Action #1.
2.2	Any wastewater treatment facility prior to effluent discharge?				
	If yes, facility is properly maintained and function normally?				
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?				
	d. If yes, follow-up action taken?				
2.4	Surface run-off control measures in place and adequately maintained?				
2.5	Surface run-off discharging into drainage system?	$\boxtimes$			
2.6	All manholes are covered?				
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?				
2.8	Drainage system is well maintained to prevent flooding and overflow?				



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination  a. Processes / activities are located under a				The risk of contamination for the recycling process is low.
	covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
0	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				No equipment oil and lubrication replacement were performed inside the tenant lot.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
٠	b. If yes, oil and grease removed regularly?				
,	c. Collected by licenced collector?				
12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				Not required.
,	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
3.2	Odour  a. Any odour detected?				
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?				
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				No dusty materials were found to be used on-site.
3.4	Dust Monitoring a. Monitoring Record available?				
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed on-site.
.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:			$\boxtimes$	
-	<ul><li>a. &gt;25L of conventional liquid fuel per hour</li><li>b. &gt;35kg of conventional solid fuel per hour</li></ul>			$\boxtimes$	
-	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11 ·	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				Misting system and industrial dust collector are not yet installed.
.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
_	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	
.13	All air pollution control systems are properly maintained and function normally?			$\boxtimes$	Not yet installed.
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



# 4. Waste / Chemical Management **Description** Yes No N/A Remarks Registration No. 3839-421-S3054-02 Chemical Waste Producer Registration 4.1 $\square$ completed? for spent lubricating oil. 4.2 Provision of sufficient waste disposal points/ $\square$ $\square$ receptacles? Waste disposed of regularly and properly? The collection frequency depends on the quantity of waste generated. $\square$ $\square$ $\square$ 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? 4.5 Record of quantities of waste generated, recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ See Follow-up Action #2. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? ☐ ☐ ☐ See Follow-up Action #2. c. Spillage cleaned up immediately through $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\sqcap$ $\sqcap$ $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ See Follow-up Action #2. a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and See Follow-up Action #2. bilingual? c. Information is accurate and sufficient? $\boxtimes$ See Follow-up Action #2.



## 4. Waste / Chemical Management (continued) **Description** Yes No N/A Remarks Storage of Chemical Waste See Follow-up Actions #1 & 2. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an See Follow-up Actions #1 & 2. impermeable partition? c. Containers kept in receptacle of suitable See Follow-up Actions #1 & 2. material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ See Follow-up Actions #1 & 2. in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ See Follow-up Actions #1 & 2. properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? See Follow-up Actions #1 & 2. $\boxtimes$ g. Outdoors storage area should be covered? 4.10 Chemical wastes are collected by a licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste 4.11 a. Storage area floor/surface permeationproof? b. Capacity of retention structure sufficient $\square$ $\square$ to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container storage area constructed of impermeable material?



## 5. Other Issues **Description** Yes No N/A Remarks The lot is within the LFG Consultation Landfill Gas Hazard $\square$ $\square$ $\square$ Zone and the Tenant has alerted (within LFG Consultation Zone) workers/visitors about possible LFG 5.1 a. Workers and visitors alerted to possible hazards. A notice is also posted at the LGF hazards? entrance. b. Smoking and open fires prohibited? $\square$ $\square$ 5.2 Security lighting directed downward into the $\bowtie$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? Any areas within the lot to be used for Most of the areas are covered by metal recycling processes are concrete paved? plates. $\boxtimes$ 5.5 Valid calibration certificate for any No monitoring equipment. monitoring equipment? $\boxtimes$ Diesel storage was 400L which is **Dangerous Goods** within the exempted quantity of 5.6 a. Valid license for manufacturing / storing 2,500L. dangerous goods? b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely $\boxtimes$ locked? d. Total storage capacity in compliance with $\sqcap$ $\sqcap$ $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? f. Dangerous goods properly packaged? $\sqcap$ $\sqcap$ $\boxtimes$ Potential stagnant pools cleared and mosquito breeding prevented?



#### No. Action

1. As advised by the Site Agent, in order to reduce the amount of dust generated during metal shearing, water was sprayed on metals. The wastewater generated should then be treated appropriately prior to discharge. A valid waste water discharge licence should be applied by the Tenant. In addition, information on the wastewater treatment process should be provided to the Environmental Team for revising the Process Review Checklist, which will then be re-issued.

**Expected By** 

15 Dec 2010



### **Follow-up from Previous Audits**

#### No. Follow-up from Previous Audit Dated 30 August 2010

**Status** 

 A copy of the Chemical Waste Producer Registry was passed to the Operator for record. Closed

2. Following the confirmation from the laboratory on the presence of asbestos attached on waste metal, the Tenant has handled such waste carefully e.g. provided full coverage to the waste and placed it in a covered place. The Tenant has also engaged Waylung Waste Services Ltd. which is a licenced collector for Asbestos Waste (including Vehicle Brake/Clutch Linings) to collect and process the waste, which will take place shortly.

Expected to be completed by 15 Dec 2010

#### **Audit Summary and Sign-off**

The site is generally tidy. The Tenant should provide appropriate treatment to the wastewater generated from metal shearing.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Shiu Wing	Serco Guardian JV
Signed By	Carman CHUNG	-	Alex WAI	Morgan CHIU
Role	ET Site Auditor	-	Manager	Park Manager
Signature	Zognam		Ku	3



	Audit Details						
Ter	nant	Shiu Wing Steel L	_imit	ted			
Dat	te & Time	Date 21 December	ber	2010		Tin	ne 9:35am
Lot	t No.	EP08-03		_			
Au	dit Ref.	5		_			
IEC	Joint Inspection	Yes	$\boxtimes$	No			
We	eather Conditions	Fine	$\boxtimes$	Hazy			Overcast Rain
Wir	nd	⊠ Calm		Light Bre	eeze		Strong Wind
Ter	mperature	<u>20</u> °C					
Hui	midity			Medium			High
	1. General						
	Description			Yes	No	N/A	Remarks
1.1	EP for Tenant disp at entrance?	layed on notice boa	rds	/			EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	icy documented?			$\boxtimes$		The Tenant is going to integrate the Environmental Policy into their Safety Operations Manual soon.
1.3	Environmental Mar	nagement Plan upda	ated	?	$\boxtimes$		The Tenant is going to integrate the EMP into their Safety Operations Manual soon.
1.4	a. Emergency Res documented?	ponse Plan (ERP)		$\boxtimes$			The ERP has been included in the Tenant's Safety Operations Manual.
	b. Drill / training rea	cords available?		$\boxtimes$			The Tenant advised the training records were kept at their HR department.
1.5	Employee's trainin	g record available?		$\boxtimes$			The Tenant keeps a training record for BPI.
1.6	Any record of pros	ecution / complaint?	•		$\boxtimes$		
1.7	Waste Manageme	nt Plan?				$\boxtimes$	Operator's WMP is documented.
(							



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				See Follow-up Action #2.  No wastewater is generated from the recycling process.
2.2	Any wastewater treatment facility prior to effluent discharge?				
	If yes, facility is properly maintained and function normally?				
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?				
	d. If yes, follow-up action taken?				
2.4	Surface run-off control measures in place and adequately maintained?				
2.5	Surface run-off discharging into drainage system?	$\boxtimes$			
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?				
2.8	Drainage system is well maintained to prevent flooding and overflow?				



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				The risk of contamination for the recycling process is low.
	a. Processes / activities are located under a covered area?				
•	b. Stop-logs installed in the perimeter drainage system for uncovered areas?		$\boxtimes$		The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
•	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
0	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				No equipment oil and lubrication replacement were performed inside the tenant lot.
1	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
•	b. If yes, oil and grease removed regularly?				
	c. Collected by licenced collector?				
2	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				Not required.
	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?			$\boxtimes$	
	Odour		$\boxtimes$		
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?				
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				No dusty materials were found to be used on-site.
3.4	Dust Monitoring a. Monitoring Record available?				
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
3.5	Enclosures are provided around the main dust-generating activities?				
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed on-site.
3.8	Vehicles and equipment are switched off while not in use?				
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:			$\boxtimes$	
-	<ul><li>a. &gt;25L of conventional liquid fuel per hour</li><li>b. &gt;35kg of conventional solid fuel per hour</li></ul>			$\boxtimes$	
-	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				Misting system and industrial dust collector are not yet installed.
3.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
-	b. If yes, record of refrigeration equipment service available?				
3.13	All air pollution control systems are properly maintained and function normally?			$\boxtimes$	Not yet installed.
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



# 4. Waste / Chemical Management **Description** Yes No N/A Remarks Registration No. 3839-421-S3054-02 Chemical Waste Producer Registration 4.1 $\square$ completed? for spent lubricating oil. 4.2 Provision of sufficient waste disposal points/ $\square$ $\square$ receptacles? Waste disposed of regularly and properly? The collection frequency depends on the quantity of waste generated. $\square$ $\square$ $\square$ 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ See Follow-up Action #1. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? ☐ ☐ ☐ See Follow-up Action #1. c. Spillage cleaned up immediately through $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\sqcap$ $\sqcap$ $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ See Follow-up Action #1. a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\square$ See Follow-up Action #1. bilingual? c. Information is accurate and sufficient? $\boxtimes$ See Follow-up Action #1.



## 4. Waste / Chemical Management (continued) **Description** Yes No N/A Remarks Storage of Chemical Waste See Follow-up Action #1. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an See Follow-up Action #1. impermeable partition? c. Containers kept in receptacle of suitable See Follow-up Action #1. material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ See Follow-up Action #1. in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ See Follow-up Action #1. properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? See Follow-up Action #1. $\boxtimes$ g. Outdoors storage area should be covered? 4.10 Chemical wastes are collected by a See Follow-up Action #1. licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste 4.11 a. Storage area floor/surface permeationproof? b. Capacity of retention structure sufficient $\square$ $\square$ to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container storage area constructed of impermeable material?



## 5. Other Issues **Description** Yes No N/A Remarks The lot is within the LFG Consultation Landfill Gas Hazard $\square$ $\square$ $\square$ Zone and the Tenant has alerted (within LFG Consultation Zone) workers/visitors about possible LFG 5.1 a. Workers and visitors alerted to possible hazards. A notice is also posted at the LGF hazards? entrance. b. Smoking and open fires prohibited? $\square$ $\square$ 5.2 Security lighting directed downward into the $\bowtie$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? Any areas within the lot to be used for $\boxtimes$ Most of the areas are covered by metal recycling processes are concrete paved? plates. $\boxtimes$ 5.5 Valid calibration certificate for any No monitoring equipment. monitoring equipment? $\boxtimes$ Diesel storage was 400L which is **Dangerous Goods** within the exempted quantity of 5.6 a. Valid license for manufacturing / storing 2,500L. dangerous goods? b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely $\boxtimes$ locked? d. Total storage capacity in compliance with $\sqcap$ $\sqcap$ $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? f. Dangerous goods properly packaged? $\sqcap$ $\sqcap$ $\boxtimes$ Potential stagnant pools cleared and mosquito breeding prevented?



No. Action Expected By

1. No critical issues were identified. NIL

### **Follow-up from Previous Audits**

#### No. Follow-up from Previous Audit Dated 23 November 2010

**Status** 

- 1. The Tenant continued to handle the asbestos containing materials (ACM) carefully e.g. provided full coverage to the ACM and placed it in a covered place. While the approval of Chemical Waste Disposal Licence is pending, the Tenant has engaged Waylung Waste Services Ltd., a licenced collector for ACM (including Vehicle Brake/Clutch Linings) to collect and process the materials, which will take place as soon as the licence is ready. (Repeated observation since 30 August 2010)
- Expected to be completed by 15 Jan 2011
- 2. As advised by the Tenant, water was no longer sprayed on metals to reduce the amount of dust generated during metal shearing. Consequently no wastewater is generated at the lot, and there is no need to apply the Wastewater Discharge Licence and revise the Process Review Checklist. The Environmental Team will continue to examine if the recycling process would generate any wastewater.

Closed



### **Audit Summary and Sign-off**

The site is generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Shiu Wing	Serco Guardian JV
Signed By	Carman CHUNG	-	Alex WAI	Morgan CHIU
Role	ET Site Auditor	-	Manager	Park Manager
Signature	Zonan		De s	12



	Audit Details					
Ter	ant	Shiu Wing Steel Limit	ed			
Dat	e & Time	Date 17 January 20	11		Tin	ne 9:35am
Lot	No.	EP08-03	_			
Aud	dit Ref.	6				
IEC	Joint Inspection		No			
We	ather Conditions		Hazy			Overcast Rain
Wir	nd	⊠ Calm □	Light Bre	eze		Strong Wind
Ten	nperature	<u>10_</u> °C				
Hui	nidity		Medium			High
_						
	1. General					
	Description		Yes	No	N/A	Remarks
.1	EP for Tenant disp at entrance?	layed on notice boards				EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
.2	Environmental Pol	icy documented?				The Tenant is going to integrate the Environmental Policy into their Safety Operations Manual soon.
.3	Environmental Man	nagement Plan updated	?			The Tenant is going to integrate the EMP into their Safety Operations Manual soon.
.4	a. Emergency Res documented?	ponse Plan (ERP)				The ERP has been included in the Tenant's Safety Operations Manual.
	b. Drill / training re	cords available?				The Tenant advised the training records were kept at their HR department.
.5	Employee's trainin	g record available?	$\boxtimes$			The Tenant keeps a training record for BPI.
.6	Any record of pros	ecution / complaint?		$\boxtimes$		
.7	Waste Manageme	nt Plan?			$\boxtimes$	Operator's WMP is documented.



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				No wastewater is generated from the recycling process.
2.2	Any wastewater treatment facility prior to effluent discharge?				
	If yes, facility is properly maintained and function normally?			$\boxtimes$	
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?				
	d. If yes, follow-up action taken?				
2.4	Surface run-off control measures in place and adequately maintained?			$\boxtimes$	
2.5	Surface run-off discharging into drainage system?				
2.6	All manholes are covered?				
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?		$\boxtimes$		See Action #1.
2.8	Drainage system is well maintained to prevent flooding and overflow?				See Action #1.



	Description	Yes	No	N/A	Remarks
)	Processes with high Risk of Contamination  a. Processes / activities are located under a				The risk of contamination for the recycling process is low.
	covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				No equipment oil and lubrication replacement were performed inside the tenant lot.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
•	b. If yes, oil and grease removed regularly?				
•	c. Collected by licenced collector?				
•	Cargo Handling			$\boxtimes$	Not required.
12	a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				
•	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
3.2	Odour  a. Any odour detected?		$\boxtimes$		
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				No dusty materials were found to be used on-site.
3.4	Dust Monitoring a. Monitoring Record available?			$\boxtimes$	
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?				
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
•	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed on-site.
.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
-	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
-	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?				
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				Misting system and industrial dust collector are not yet installed.
.12	Approval from Authority for the use of controlled refrigerant?				
-	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	
.13	All air pollution control systems are properly maintained and function normally?			$\boxtimes$	Not yet installed.
.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



# 4. Waste / Chemical Management **Description** Yes No N/A Remarks Registration No. 3839-421-S3054-02 Chemical Waste Producer Registration 4.1 $\square$ completed? for spent lubricating oil. 4.2 Provision of sufficient waste disposal points/ $\square$ $\square$ receptacles? Waste disposed of regularly and properly? The collection frequency depends on the quantity of waste generated. $\square$ $\square$ $\square$ 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at 4.6 $\boxtimes$ regular intervals? Packaging of Chemical Waste $\boxtimes$ See Follow-up Action #1. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? ☐ ☐ ☐ See Follow-up Action #1. c. Spillage cleaned up immediately through $\boxtimes$ See Action #2. П the use of an absorbent? d. Approval obtained for capacity of $\sqcap$ $\sqcap$ $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ See Follow-up Action #1. a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\square$ $\square$ See Follow-up Action #1. bilingual? c. Information is accurate and sufficient? $\boxtimes$ See Follow-up Action #1.



### 4. Waste / Chemical Management (continued) **Description** Yes No N/A Remarks Storage of Chemical Waste See Follow-up Action #1. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an See Follow-up Action #1. impermeable partition? c. Containers kept in receptacle of suitable See Follow-up Action #1. material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ See Follow-up Action #1. in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ See Follow-up Action #1. properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? See Follow-up Action #1. $\boxtimes$ g. Outdoors storage area should be covered? 4.10 Chemical wastes are collected by a See Follow-up Action #1. licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste 4.11 a. Storage area floor/surface permeationproof? b. Capacity of retention structure sufficient $\square$ $\square$ to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container storage area constructed of impermeable material?



# 5. Other Issues **Description** Yes No N/A Remarks The lot is within the LFG Consultation Landfill Gas Hazard $\square$ $\square$ $\square$ Zone and the Tenant has alerted (within LFG Consultation Zone) workers/visitors about possible LFG 5.1 a. Workers and visitors alerted to possible hazards. A notice is also posted at the LGF hazards? entrance. b. Smoking and open fires prohibited? $\square$ $\square$ 5.2 Security lighting directed downward into the $\bowtie$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? Any areas within the lot to be used for $\boxtimes$ Most of the areas are covered by metal recycling processes are concrete paved? plates. $\boxtimes$ 5.5 Valid calibration certificate for any No monitoring equipment. monitoring equipment? $\boxtimes$ Diesel storage was 400L which is **Dangerous Goods** within the exempted quantity of 5.6 a. Valid license for manufacturing / storing 2,500L. dangerous goods? b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely $\boxtimes$ locked? d. Total storage capacity in compliance with $\sqcap$ $\sqcap$ $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? f. Dangerous goods properly packaged? $\sqcap$ $\sqcap$ $\boxtimes$ Potential stagnant pools cleared and mosquito breeding prevented?



### **Action Items from This Audit**

#### No. Action

Expected By

1. Debris and materials were found inside surface channels. The tenant was reminded to clear the materials ASAP and provide regular maintenance to all surface channels.

15 Feb 2011



Oil leakage was found at various places around the lot. The tenant was reminded to clean up the spillage by absorbent and oily contaminated soil, and properly handed the wastes ASAP. 15 Feb 2011





### **Follow-up from Previous Audits**

# No. Follow-up from Previous Audit Dated 21 December 2010

**Status** 

 The Tenant continued to handle the asbestos containing materials (ACM) carefully e.g. provided full coverage to the ACM and placed it in a covered place. The Chemical Waste Disposal Licence was approved on 1 December 2010 and valid between 2 December 2010 and 31 January 2011. Waylung Waste Services Ltd. will collect the materials before end January 2011. (Repeated observation since 30 August 2010) Expected to be completed by 31 Jan 2011



### Audit Summary and Sign-off

The Tenant should clean up the oil spillage and provide regular maintenance to U-channels.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	Shiu Wing	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	Alex WAI	Morgan CHIU
Role	ET Leader	IEC	Manager	Park Manager
Signature	Dutay	Grafal	Hy	1

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



# **APPENDIX 6.3**

Tenant-specific Audit Checklists for the Reporting Quarter

Hung Wai (EP06-034)



# Audit Details

Ten	ant	Hong Kong Hung	g Wa	ai Wooden Bo	ard	Compan	у
Dat	e & Time	Date 23 Noven	nber	2010		Time	3:45pm
Lot	No.	EP06-034		_			
Auc	lit Ref.	3		_			
IEC	Joint Inspection	Yes	$\boxtimes$	No			
Wea	ather Conditions			Hazy		Ove	ercast Rain
Win	ıd	Calm	$\boxtimes$	Light Breeze	9	Stro	ong Wind
Ten	nperature	25 °C					
Hur	nidity			Medium		☐ HigI	1
	1. General						
	Description			Yes	No	N/A	Remarks
1.1	EP for Tenant disp at entrance?	layed on notice bo	ards	/			EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?				$\boxtimes$	Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Mar	nagement Plan upo	dated	l? 🗌		$\boxtimes$	
1.4	a. Emergency Res documented?	ponse Plan (ERP)				$\boxtimes$	Operator's ERP is documented. Tenant follows this.
	b. Drill / training red	cords available?				$\boxtimes$	Training has been provided but the records are not available.
1.5	Employee's training	g record available?	)			$\boxtimes$	Training has been provided but the records are not available.
1.6	Any record of prose	ecution / complaint	?		$\boxtimes$		
1.7	Waste Managemen	nt Plan?					Operator's WMP is documented. Tenant follows this.
							,



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				Not required
2.2	Any wastewater treatment facility prior to effluent discharge?				
	If yes, facility is properly maintained and function normally?			$\boxtimes$	
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?				
	d. If yes, follow-up action taken?				
2.4	Surface run-off control measures in place and adequately maintained?				
2.5	Surface run-off discharging into drainage system?	$\boxtimes$			
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?				The Tenant has provided wooden plates covering the U-channel to prevent debris from entering the channel.
2.8	Drainage system is well maintained to prevent flooding and overflow?				The Tenant advised the U-Channel was regularly cleared.



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				The risk of contamination for the recycling process is low.
9_	Processes / activities are located under a covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
_	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Not observed.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
-	b. If yes, oil and grease removed regularly?				
_	c. Collected by licenced collector?			$\boxtimes$	
-	Cargo Handling			$\boxtimes$	Not required.
12	<ul> <li>a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?</li> </ul>				
_	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
	Odour		$\boxtimes$		
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				
3.4	Dust Monitoring  a. Monitoring Record available?		$\boxtimes$		Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?	$\boxtimes$			
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?				
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				The collected dust was the input material of the recycling process.
3.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
	b. If yes, record of refrigeration equipment service available?				
3.13	All air pollution control systems are properly maintained and function normally?				
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** $\boxtimes$ 4.1 Not required. completed? $\boxtimes$ 4.2 Provision of sufficient waste disposal points/ receptacles? Waste disposed of regularly and properly? $\boxtimes$ 4.3 $\boxtimes$ П 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste No chemical wastes were observed. 4.8 a. Label is securely attached, clean and visible? $\boxtimes$ b. Label is in proper dimension and bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable П $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ covered? 4.10 Chemical wastes are collected by a $\Box$ $\boxtimes$ No chemical wastes were licensed chemical waste collector? observed. (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid waste was observed. 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? $\boxtimes$ c. Walls or partitions of stacked container storage area constructed of impermeable material?



	5. Other Issues				
	Description	Yes	No	N/A	Remarks
	Landfill Gas Hazard (within LFG Consultation Zone)			$\boxtimes$	Outside the LFG Consultation Zone.
5.1	Workers and visitors alerted to possible LGF hazards?				
	b. Smoking and open fires prohibited?			$\boxtimes$	
5.2	Security lighting directed downward into the work areas to prevent glare to the surrounding receivers?				
5.3	Good housekeeping?	$\boxtimes$			
5.4	Any areas within the lot to be used for recycling processes are concrete paved?	$\boxtimes$			
5.5	Valid calibration certificate for any monitoring equipment?			$\boxtimes$	No monitoring equipment.
5.6	Dangerous Goods a. Valid license for manufacturing / storing dangerous goods?				There were no DGs stored on site.
	b. Storage area in compliance with the approved plan?			$\boxtimes$	
	c. Storage area(s) has been securely locked?				
	d. Total storage capacity in compliance with the relevant statutory requirement?				
	e. Proper Labelling?			$\boxtimes$	
	f. Dangerous goods properly packaged?			$\boxtimes$	
5.7	Potential stagnant pools cleared and mosquito breeding prevented?	$\boxtimes$			



### **Action Items from This Audit**

No. Action

**Expected By** 

1. No critical issues were identified.

NIL.

### **Follow-up from Previous Audits**

### No. Follow-up from Previous Audit Dated 27 October 2010

Status

Closed

 The shredding process was not in operation during the site audit. The gap between the outlet and packaging bags was greatly reduced.



### **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Hung Wai	Serco Guardian JV
Signed By	Carman CHUNG		Mr. CHEUNG	Morgan CHIU
Role	ET Site Auditor		Representative	Park Manager
Signature	7 on an		MAN	3

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



Humidity



#### **Audit Details Tenant** Hong Kong Hung Wai Wooden Board Company **Date & Time** Date 21 December 2010 **Time** 10:00am Lot No. EP06-034 Audit Ref. No **IEC Joint Inspection** Yes **Weather Conditions** Fine Overcast Rain Wind Light Breeze ☐ Strong Wind 20 °C **Temperature**

Medium

High

Description	Yes	No	N/A	Remarks
EP for Tenant displayed on notice boards / at entrance?				EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
Environmental Policy documented?			$\boxtimes$	Operator's Environmental Policy is documented. Tenant follows this.
Environmental Management Plan updated?				
a. Emergency Response Plan (ERP) documented?			$\boxtimes$	Operator's ERP is documented. Tenant follows this.
b. Drill / training records available?				Training has been provided but the records are not available.
Employee's training record available?			$\boxtimes$	Training has been provided but the records are not available.
Any record of prosecution / complaint?				
Waste Management Plan?			$\boxtimes$	Operator's WMP is documented. Tenant follows this.



	Description	Yes	No	N/A	Remarks
	Valid Effluent Discharge License available?				Not required.
	Any wastewater treatment facility prior to effluent discharge?			$\boxtimes$	
	If yes, facility is properly maintained and function normally?				
	Effluent Monitoring a. Sampling / Monitoring Record available?			$\boxtimes$	
	b. Monitoring frequency met the license requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
	Surface run-off control measures in place and adequately maintained?			$\boxtimes$	
	Surface run-off discharging into drainage system?	$\boxtimes$			
	All manholes are covered?	$\boxtimes$			
	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?	$\boxtimes$			The Tenant has provided wooden plates covering the Uchannel to prevent debris from entering the channel.
,	Drainage system is well maintained to prevent flooding and overflow?	$\boxtimes$			The Tenant advised the U- Channel was regularly cleared



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				The risk of contamination for the recycling process is low.
9_	Processes / activities are located under a covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
_	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Not observed.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
-	b. If yes, oil and grease removed regularly?				
_	c. Collected by licenced collector?			$\boxtimes$	
-	Cargo Handling			$\boxtimes$	Not required.
12	<ul> <li>a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?</li> </ul>				
_	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?			$\boxtimes$	
	Odour		$\boxtimes$		
3.2	a. Any odour detected?			_	
	b. If yes, can the source be identified?				
	c. Odorous materials are covered?				
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?	$\boxtimes$			
3.4	Dust Monitoring a. Monitoring Record available?				Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?				
3.6	Open burning is avoided?				



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?				
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				The collected dust was the input material of the recycling process.
3.12	Approval from Authority for the use of controlled refrigerant?			$\boxtimes$	
	b. If yes, record of refrigeration equipment service available?				
3.13	All air pollution control systems are properly maintained and function normally?				
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** $\boxtimes$ Not required. 4.1 completed? $\boxtimes$ 4.2 Provision of sufficient waste disposal points/ receptacles? Waste disposed of regularly and properly? $\boxtimes$ 4.3 $\boxtimes$ П 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.8 a. Label is securely attached, clean and visible? $\boxtimes$ b. Label is in proper dimension and bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable П $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ covered? 4.10 Chemical wastes are collected by a $\Box$ $\boxtimes$ No chemical wastes were licensed chemical waste collector? observed. (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid waste was observed. 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



	5. Other Issues				
	Description	Yes	No	N/A	Remarks
	Landfill Gas Hazard (within LFG Consultation Zone)			$\boxtimes$	Outside the LFG Consultation Zone.
5.1	a. Workers and visitors alerted to possible LGF hazards?				
	b. Smoking and open fires prohibited?			$\boxtimes$	
5.2	Security lighting directed downward into the work areas to prevent glare to the surrounding receivers?				
5.3	Good housekeeping?	$\boxtimes$			
5.4	Any areas within the lot to be used for recycling processes are concrete paved?	$\boxtimes$			
5.5	Valid calibration certificate for any monitoring equipment?				No monitoring equipment.
5.6	Dangerous Goods  a. Valid license for manufacturing / storing dangerous goods?			$\boxtimes$	There were no DGs stored on site.
	b. Storage area in compliance with the approved plan?				
	c. Storage area(s) has been securely locked?			$\boxtimes$	
	d. Total storage capacity in compliance with the relevant statutory requirement?			$\boxtimes$	
	e. Proper Labelling?				
	f. Dangerous goods properly packaged?			$\boxtimes$	
5.7	Potential stagnant pools cleared and mosquito breeding prevented?	$\boxtimes$			



### **Action Items from This Audit**

No. Action

**Expected By** 

1. No critical issues were identified.

NIL

### Follow-up from Previous Audits

No. Follow-up from Previous Audit Dated 23 November 2010

Status

1. NIL

N/A

### **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Hung Wai	Serco Guardian JV
Signed By	Carman CHUNG	2	Mr. CHEUNG	Morgan CHIU
Role	ET Site Auditor	-	Representative	Park Manager
Signature	Zonan		MARIA	3

Note: \* IEC to sign-off only for a joint ET+IEC Inspection





## Audit Details

Ten	ant	Hong Kong Hung	g Wa	ai Wooden Board	l Compar	ny
Date	e & Time	Date 17 Janua	ry 20	)11	Time	10:20am
Lot	No.	EP06-034		_		
Auc	lit Ref.	5		_		
IEC	Joint Inspection			No		
Wea	ather Conditions			Hazy	Ove	ercast Rain
Win	d			Light Breeze	Str	ong Wind
Ten	nperature	<u>11_</u> °C				
Hun	nidity			Medium	☐ Hig	Jh
	1. General					
	Description			Yes No	N/A	Remarks
1.1	EP for Tenant displat entrance?	layed on notice bo	ards	/		EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?				Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Man	nagement Plan upo	dated	1? 🗌 📗	$\boxtimes$	
1.4	a. Emergency Resp documented?	ponse Plan (ERP)				Operator's ERP is documented. Tenant follows this.
	b. Drill / training rec	cords available?				Training has been provided but the records are not available.
1.5	Employee's training	g record available?	)		$\boxtimes$	Training has been provided but the records are not available.
1.6	Any record of prose	ecution / complaint	?			
1.7	Waste Managemer	nt Plan?			$\boxtimes$	Operator's WMP is documented. Tenant follows this.
\						



	Description	Yes	No	N/A	Remarks
	Valid Effluent Discharge License available?				No wastewater is generated fro the recycling process.
2	Any wastewater treatment facility prior to effluent discharge?			$\boxtimes$	
	If yes, facility is properly maintained and function normally?			$\boxtimes$	
	Effluent Monitoring a. Sampling / Monitoring Record available?			$\boxtimes$	
	b. Monitoring frequency met the license requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
	Surface run-off control measures in place and adequately maintained?			$\boxtimes$	
,	Surface run-off discharging into drainage system?	$\boxtimes$			
;	All manholes are covered?	$\boxtimes$			
•	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?	$\boxtimes$			The Tenant has provided wooden plates covering the Uchannel to prevent debris from entering the channel.
	Drainage system is well maintained to prevent flooding and overflow?	$\boxtimes$			The Tenant advised the U-Channel was regularly cleared.



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination	$\boxtimes$			The risk of contamination for the recycling process is low.
9	a. Processes / activities are located under a covered area?				
_	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
-	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Not observed.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
-	b. If yes, oil and grease removed regularly?			$\boxtimes$	
-	c. Collected by licenced collector?				
- 12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				Not required.
-	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
	Odour		$\boxtimes$		
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				
3.4	Dust Monitoring  a. Monitoring Record available?		$\boxtimes$		Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?	$\boxtimes$			
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?				
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				The collected dust was the input material of the recycling process.
3.12	Approval from Authority for the use of controlled refrigerant?				
	b. If yes, record of refrigeration equipment service available?				
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** $\boxtimes$ Not required. 4.1 completed? $\boxtimes$ 4.2 Provision of sufficient waste disposal points/ receptacles? Waste disposed of regularly and properly? $\boxtimes$ 4.3 $\boxtimes$ 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.8 a. Label is securely attached, clean and visible? $\boxtimes$ b. Label is in proper dimension and bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable П $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ covered? 4.10 Chemical wastes are collected by a $\Box$ $\boxtimes$ No chemical wastes were licensed chemical waste collector? observed. (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid waste was observed. 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



	5. Other Issues				
	Description	Yes	No	N/A	Remarks
	Landfill Gas Hazard (within LFG Consultation Zone)			$\boxtimes$	Outside the LFG Consultation Zone.
5.1	Workers and visitors alerted to possible LGF hazards?				
	b. Smoking and open fires prohibited?				
5.2	Security lighting directed downward into the work areas to prevent glare to the surrounding receivers?				
5.3	Good housekeeping?	$\boxtimes$			
5.4	Any areas within the lot to be used for recycling processes are concrete paved?				
5.5	Valid calibration certificate for any monitoring equipment?			$\boxtimes$	No monitoring equipment.
5.6	Dangerous Goods  a. Valid license for manufacturing / storing dangerous goods?				There were no DGs stored on site.
	b. Storage area in compliance with the approved plan?			$\boxtimes$	
	c. Storage area(s) has been securely locked?			$\boxtimes$	
	d. Total storage capacity in compliance with the relevant statutory requirement?				
	e. Proper Labelling?			$\boxtimes$	
	f. Dangerous goods properly packaged?			$\boxtimes$	
5.7	Potential stagnant pools cleared and mosquito breeding prevented?				



### **Action Items from This Audit**

No. Action

**Expected By** 

1. No critical issues were identified.

NIL

## Follow-up from Previous Audits

No. Follow-up from Previous Audit Dated 21 December 2010

Status

1. NIL

N/A

# Audit Summary and Sign-off

The site was generally tidy.

		IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	Hung Wai	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	Mr. CHEUNG	Morgan CHIU
Role	ET Leader	IEC	Representative	Park Manager
Signature	Atmy	Grafal	MAN	1

Note: \* IEC to sign-off only for a joint ET+IEC inspection



# **APPENDIX 6.4**

Tenant-specific Audit Checklists for the Reporting Quarter

Li Tong (EP07-02)



## Audit Details

Ten	ant	Li Tong Group				
Dat	e & Time	Date 23 Novem	ber	2010	Time	3:15pm
Lot	No.	EP07-02		_		
Aud	lit Ref.	2		_		
IEC	Joint Inspection	Yes	$\boxtimes$	No		
Wea	ather Conditions			Hazy	Ove	ercast Rain
Win	nd	Calm	$\boxtimes$	Light Breeze	Stro	ong Wind
Ten	nperature	<u>25</u> °C				
Hur	nidity			Medium	Hig	ıh
	1. General					
	Description			Yes No	N/A	Remarks
1.1	EP for Tenant displ at entrance?	layed on notice boa	ards	/		EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Police	cy documented?				The Tenant's Environmental Policy is documented.
1.3	Environmental Man	nagement Plan upd	lated	<u>1?</u> ⊠ □		The Tenant's EMP is documented.
1.4	a. Emergency Resp documented?	oonse Plan (ERP)				The Tenant's ERP is documented.
	b. Drill / training rec	cords available?				
1.5	Employee's training	g record available?				
1.6	Any record of prose	ecution / complaint	?			
1.7	Waste Managemen	nt Plan?				The Tenant's WMP is documented.



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				The application of Effluent Discharge Licence is pending.
2.2	Any wastewater treatment facility prior to effluent discharge?			$\boxtimes$	
	If yes, facility is properly maintained and function normally?			$\boxtimes$	A chemical/container toilet is maintained on a monthly basis.
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				
	b. Monitoring frequency met the license requirement?			$\boxtimes$	
	c. Any exceedance?				
	d. If yes, follow-up action taken?			$\boxtimes$	
2.4	Surface run-off control measures in place and adequately maintained?			$\boxtimes$	
2.5	Surface run-off discharging into drainage system?				
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?	$\boxtimes$			
2.8	Drainage system is well maintained to prevent flooding and overflow?	$\boxtimes$			



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				The risk of contamination for the recycling process is low.
2.9	Processes / activities are located under a covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Not required.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?			$\boxtimes$	Not required.
•	b. If yes, oil and grease removed regularly?				
	c. Collected by licenced collector?			$\boxtimes$	
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?			$\boxtimes$	Not required.
	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
3.2	Odour a. Any odour detected?		$\boxtimes$		
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?			$\boxtimes$	
3.4	Dust Monitoring  a. Monitoring Record available?			$\boxtimes$	Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
3.5	Enclosures are provided around the main dust-generating activities?				
3.6	Open burning is avoided?	$\boxtimes$			



#### 3. Air Quality (continued) **Description** Yes No N/A **Remarks** 3.7 Dark smoke emitted from chimney or $\boxtimes$ There is no chimney installed onpowered plant is avoided? site. Vehicles and equipment are switched off $\boxtimes$ 3.8 while not in use? 3.9 Approval certificate issued by the Authority $\Box$ $\boxtimes$ is available for furnace, oven or chimney consuming: a. >25L of conventional liquid fuel per hour b. >35kg of conventional solid fuel per hour $\boxtimes$ c. >1,150 MJ of any gaseous fuel per hour $\Box$ $\boxtimes$ $\boxtimes$ 3.10 Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity? 3.11 Dust collected by any air pollution control $\boxtimes$ equipment installed by tenants must be tested to ensure compliance for landfill disposal. 3.12 a. Approval from Authority for the use of $\Box$ $\boxtimes$ Not required. controlled refrigerant? $\boxtimes$ b. If yes, record of refrigeration equipment service available? 3.13 All air pollution control systems are properly $\boxtimes$ maintained and function normally? 3.14 Only Ultra-Low Sulphur Diesel is used? $\boxtimes$



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** 4.1 $\boxtimes$ Registration No. 3840-421completed? L2676-01 for various types of chemical waste. 4.2 Provision of sufficient waste disposal points/ $\boxtimes$ receptacles? $\boxtimes$ 4.3 Waste disposed of regularly and properly? Chemical Waste Disposal Licence (No.: 3810-421-L2676-OS) for CRT and LCD Monitor was obtained. $\boxtimes$ 4.4 Sorting of materials on-site for reuse or Recyclable materials were disposal to designated outlet? passed to other recyclers. Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ No spillage. the use of an absorbent? d. Approval obtained for capacity of $\Box$ $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\boxtimes$ bilingual? c. Information is accurate and sufficient? $\boxtimes$



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable $\boxtimes$ $\Box$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ Chemical waste was stored covered? indoor. 4.10 Chemical wastes are collected by a $\bowtie$ $\Box$ licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? $\boxtimes$ c. Walls or partitions of stacked container storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A **Remarks** Landfill Gas Hazard Outside the LFG Consultation (within LFG Consultation Zone) Zone. 5.1 a. Workers and visitors alerted to possible LGF hazards? $\boxtimes$ b. Smoking and open fires prohibited? $\boxtimes$ 5.2 Security lighting directed downward into the work areas to prevent glare to the surrounding receivers? $\boxtimes$ П 5.3 Good housekeeping? $\boxtimes$ 5.4 Any areas within the lot to be used for recycling processes are concrete paved? 5.5 Valid calibration certificate for any $\boxtimes$ No monitoring equipment. monitoring equipment? **Dangerous Goods** $\boxtimes$ There were no DGs stored on site. 5.6 a. Valid license for manufacturing / storing dangerous goods? b. Storage area in compliance with the $\boxtimes$ approved plan? c. Storage area(s) has been securely $\Box$ $\boxtimes$ locked? d. Total storage capacity in compliance with $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? $\boxtimes$ $\boxtimes$ f. Dangerous goods properly packaged? $\Box$ Potential stagnant pools cleared and $\boxtimes$ mosquito breeding prevented?



### **Action Items from This Audit**

No. Ac	tion	Expected By
1. No	critical issues were identified.	NIL.

### **Follow-up from Previous Audits**

No. Follow-up from Previous Audit Dated [Month Year]

**Status** 

1. NIL.

NIL.

## **Audit Summary and Sign-off**

The site was generally tidy.								

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Li Tong	Serco Guardian JV
Signed By	Carman CHUNG	-	Teresa HO	Morgan CHIU
Role	ET Site Auditor	-	Environmental Health and Safety Officer	Park Manager
Signature	Zoman		*	1



		-	_			
м	ш	αп	 רו	$\mathbf{a}$	-	ils

Ter	nant	Li Tong Group					
Dat	e & Time	Date 21 Dece	mber 201	10		Time	11:20am
Lot	No.	EP07-02					
Aud	dit Ref.	3					
IEC	Joint Inspection	Yes	⊠ No	0			
We	ather Conditions	Fine	⊠ Ha	azy		Ove	ercast Rain
Wir	nd		☐ Lig	ght Bree	ze	Stro	ong Wind
Ter	nperature	22 °C					
Hui	midity		☐ M	edium		Hig	h
	1. General						
	Description			Yes	No	N/A	Remarks
1.1	EP for Tenant disp at entrance?	layed on notice b	oards /				EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	icy documented?					The Tenant's Environmental Policy is documented.
1.3	Environmental Man	nagement Plan up	odated?	$\boxtimes$			The Tenant's EMP is documented.
1.4	a. Emergency Res documented?	ponse Plan (ERP	)	$\boxtimes$			The Tenant's ERP is documented.
	b. Drill / training red	cords available?		$\boxtimes$			
1.5	Employee's training	g record available	?	$\boxtimes$			
1.6	Any record of pros	ecution / complair	nt?		$\boxtimes$		
1.7	Waste Managemen	nt Plan?		$\boxtimes$			The Tenant's WMP is documented.



#### 2. Water Quality **Description** Yes No N/A **Remarks** 2.1 Valid Effluent Discharge License available? $\bowtie$ Licence No. WT00007957-2010 valid until 31 Dec 2015. 2.2 Any wastewater treatment facility prior to $\boxtimes$ Not required for domestic effluent discharge? wastewater. If yes, facility is properly maintained and $\boxtimes$ A chemical/container toilet is function normally? maintained on a monthly basis. $\boxtimes$ **Effluent Monitoring** As per the discharge licence, self-monitoring shall be 2.3 a. Sampling / Monitoring Record available? performed when required. No sampling was undertaken in this month. b. Monitoring frequency met the license П $\boxtimes$ requirement? $\boxtimes$ c. Any exceedance? $\boxtimes$ d. If yes, follow-up action taken? Surface run-off control measures in place $\boxtimes$ 2.4 and adequately maintained? 2.5 Surface run-off discharging into drainage $\boxtimes$ system? $\boxtimes$ $\Box$ 2.6 All manholes are covered? 2.7 Foam, oil, grease, litter or other $\bowtie$ objectionable matters in water of nearby drain / sewer are avoided? 2.8 Drainage system is well maintained to $\boxtimes$ $\Box$ prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination				The risk of contamination for the recycling process is low.
2.9	Processes / activities are located under a covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Not required.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?			$\boxtimes$	Not required.
•	b. If yes, oil and grease removed regularly?				
	c. Collected by licenced collector?			$\boxtimes$	
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?			$\boxtimes$	Not required.
	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
3.2	Odour a. Any odour detected?				
	b. If yes, can the source be identified?			$\boxtimes$	
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?			$\boxtimes$	
3.4	Dust Monitoring  a. Monitoring Record available?			$\boxtimes$	Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?				
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?				
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour				
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				
3.12	Approval from Authority for the use of controlled refrigerant?				Not required.
	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** Registration No. 3840-421-4.1 $\boxtimes$ completed? L2676-01 for various types of chemical waste. 4.2 Provision of sufficient waste disposal points/ $\boxtimes$ receptacles? $\boxtimes$ 4.3 Waste disposed of regularly and properly? $\boxtimes$ П 4.4 Sorting of materials on-site for reuse or Recyclable materials were disposal to designated outlet? passed to other recyclers. Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ No spillage. the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ 4.8 a. Label is securely attached, clean and visible? $\boxtimes$ b. Label is in proper dimension and bilingual? c. Information is accurate and sufficient? $\bowtie$



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ Chemical waste was stored covered? indoor. 4.10 Chemical wastes are collected by a $\bowtie$ $\Box$ The Tenant itself is a licensed licensed chemical waste collector? chemical waste collector (Licence (retention of trip ticket copies for 12 months) No.: 3810-421-L2676-OS) for CRT and LCD monitors. Storage of Liquid Waste $\bowtie$ 4.11 a. Storage area floor/surface permeationproof? b. Capacity of retention structure sufficient $\Box$ $\boxtimes$ to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A **Remarks** Landfill Gas Hazard Outside the LFG Consultation (within LFG Consultation Zone) Zone. 5.1 a. Workers and visitors alerted to possible LGF hazards? $\boxtimes$ b. Smoking and open fires prohibited? $\boxtimes$ 5.2 Security lighting directed downward into the work areas to prevent glare to the surrounding receivers? $\boxtimes$ П 5.3 Good housekeeping? 5.4 Any areas within the lot to be used for recycling processes are concrete paved? 5.5 Valid calibration certificate for any $\boxtimes$ No monitoring equipment. monitoring equipment? **Dangerous Goods** $\boxtimes$ There were no DGs stored on site. 5.6 a. Valid license for manufacturing / storing dangerous goods? b. Storage area in compliance with the $\boxtimes$ approved plan? c. Storage area(s) has been securely П $\boxtimes$ locked? d. Total storage capacity in compliance with $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? $\boxtimes$ $\boxtimes$ f. Dangerous goods properly packaged? $\Box$ Potential stagnant pools cleared and $\boxtimes$ mosquito breeding prevented?



## **Action Items from This Audit**

No. Action Expected By

1. No critical issues were identified. NIL

## **Follow-up from Previous Audits**

No. Follow-up from Previous Audit Dated 23 November 2010 Status

1. NIL NIL

# **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Li Tong	Serco Guardian JV
Signed By	Carman CHUNG	-	Teresa HO	Morgan CHIU
Role	ET Site Auditor	-	Environmental Health and Safety Officer	Park Manager
Signature	Zonan		B	12

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



# Audit Details

Ten	ant	Li Tong Group				
Dat	e & Time	Date 17 Januar	y 20	11	Time	11:00am
Lot	No.	EP07-02		_		
Auc	lit Ref.	4		_		
IEC	Joint Inspection			No		
Wea	ather Conditions	Fine		Hazy	Ove	ercast Rain
Win	nd			Light Breeze	Stro	ong Wind
Ten	nperature	<u>13</u> °C				
Hur	nidity			Medium	Hig	h
	1. General					
	Description			Yes No	N/A	Remarks
1.1	EP for Tenant displ at entrance?	layed on notice boa	ards	/		EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Police	cy documented?				The Tenant's Environmental Policy is documented.
1.3	Environmental Man	nagement Plan upd	lated	l? □		The Tenant's EMP is documented.
1.4	a. Emergency Resp documented?	ponse Plan (ERP)				The Tenant's ERP is documented.
	b. Drill / training rec	cords available?				
1.5	Employee's training	g record available?				
1.6	Any record of prose	ecution / complaint	?			
1.7	Waste Managemen	nt Plan?				The Tenant's WMP is documented.



#### 2. Water Quality **Description** Yes No N/A **Remarks** 2.1 Valid Effluent Discharge License available? $\bowtie$ Licence No. WT00007957-2010 valid until 31 Dec 2015. 2.2 Any wastewater treatment facility prior to $\boxtimes$ Not required for domestic effluent discharge? wastewater. If yes, facility is properly maintained and $\boxtimes$ A chemical/container toilet is function normally? maintained on a monthly basis. $\boxtimes$ **Effluent Monitoring** As per the discharge licence, self-monitoring shall be 2.3 a. Sampling / Monitoring Record available? performed when required. No sampling was undertaken in this month. b. Monitoring frequency met the license П $\boxtimes$ requirement? $\boxtimes$ c. Any exceedance? $\boxtimes$ d. If yes, follow-up action taken? Surface run-off control measures in place $\boxtimes$ 2.4 and adequately maintained? 2.5 Surface run-off discharging into drainage $\boxtimes$ system? $\boxtimes$ $\Box$ 2.6 All manholes are covered? 2.7 Foam, oil, grease, litter or other $\bowtie$ objectionable matters in water of nearby drain / sewer are avoided? 2.8 Drainage system is well maintained to $\boxtimes$ $\Box$ prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
2.9	Processes with high Risk of Contamination  a. Processes / activities are located under a				The risk of contamination for the recycling process is low.
	covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				The stop-logs have been passed to Tenant, who shall install in the perimeter drainage channel as and when necessary.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Not required.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
-	b. If yes, oil and grease removed regularly?			$\boxtimes$	
•	c. Collected by licenced collector?			$\boxtimes$	
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				Not required.
	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
	Odour		$\boxtimes$		
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?				
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				
3.4	Dust Monitoring  a. Monitoring Record available?			$\boxtimes$	Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



#### 3. Air Quality (continued) **Description** Yes No N/A **Remarks** 3.7 Dark smoke emitted from chimney or $\boxtimes$ There is no chimney installed onpowered plant is avoided? site. Vehicles and equipment are switched off $\boxtimes$ 3.8 while not in use? 3.9 Approval certificate issued by the Authority $\Box$ $\boxtimes$ is available for furnace, oven or chimney consuming: a. >25L of conventional liquid fuel per hour b. >35kg of conventional solid fuel per hour $\boxtimes$ c. >1,150 MJ of any gaseous fuel per hour $\Box$ $\boxtimes$ $\boxtimes$ 3.10 Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity? 3.11 Dust collected by any air pollution control $\boxtimes$ equipment installed by tenants must be tested to ensure compliance for landfill disposal. 3.12 a. Approval from Authority for the use of $\Box$ $\boxtimes$ Not required. controlled refrigerant? $\boxtimes$ b. If yes, record of refrigeration equipment service available? 3.13 All air pollution control systems are properly $\boxtimes$ maintained and function normally? 3.14 Only Ultra-Low Sulphur Diesel is used? $\boxtimes$



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** Registration No. 3840-421-4.1 $\boxtimes$ completed? L2676-01 for various types of chemical waste. 4.2 Provision of sufficient waste disposal points/ $\boxtimes$ receptacles? $\boxtimes$ 4.3 Waste disposed of regularly and properly? $\boxtimes$ 4.4 Sorting of materials on-site for reuse or Recyclable materials were disposal to designated outlet? passed to other recyclers. Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ No spillage. the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ 4.8 a. Label is securely attached, clean and visible? $\boxtimes$ b. Label is in proper dimension and bilingual? c. Information is accurate and sufficient? $\bowtie$



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ Chemical waste was stored covered? indoor. 4.10 Chemical wastes are collected by a $\bowtie$ $\Box$ The Tenant itself is a licensed licensed chemical waste collector? chemical waste collector (Licence (retention of trip ticket copies for 12 months) No.: 3810-421-L2676-OS) for CRT and LCD monitors. Storage of Liquid Waste $\bowtie$ 4.11 a. Storage area floor/surface permeationproof? b. Capacity of retention structure sufficient $\Box$ $\boxtimes$ to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A **Remarks** Landfill Gas Hazard Outside the LFG Consultation (within LFG Consultation Zone) Zone. 5.1 a. Workers and visitors alerted to possible LGF hazards? $\boxtimes$ b. Smoking and open fires prohibited? $\boxtimes$ 5.2 Security lighting directed downward into the work areas to prevent glare to the surrounding receivers? $\boxtimes$ П 5.3 Good housekeeping? 5.4 Any areas within the lot to be used for recycling processes are concrete paved? 5.5 Valid calibration certificate for any $\boxtimes$ No monitoring equipment. monitoring equipment? **Dangerous Goods** $\boxtimes$ There were no DGs stored on site. 5.6 a. Valid license for manufacturing / storing dangerous goods? b. Storage area in compliance with the $\boxtimes$ approved plan? c. Storage area(s) has been securely П $\boxtimes$ locked? d. Total storage capacity in compliance with $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? $\boxtimes$ $\boxtimes$ f. Dangerous goods properly packaged? $\Box$ Potential stagnant pools cleared and $\boxtimes$ mosquito breeding prevented?



## **Action Items from This Audit**

No. Action Expected By

No critical issues were identified.

NIL

## Follow-up from Previous Audits

No. Follow-up from Previous Audit Dated 21 December 2010 Status

1. NIL NIL

# **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	Li Tong	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	Teresa HO	Morgan CHIU
Role	ET Leader	IEC	Environmental Health and Safety Officer	Park Manager
Signature	Dutay.	Grafal	No.	1

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



# **APPENDIX 6.5**

Tenant-specific Audit Checklists for the Reporting Quarter

Yan Oi Tong (P7)



	Audit Details						
Te	nant	Yan Oi Tong Lim	ited				
Da	ate & Time	Date 23 Novem	nber	2010		Tin	ne 4:40pm
Lo	ot No.	P7		_			
Αι	ıdit Ref.	4		_			
IE	C Joint Inspection	Yes	$\boxtimes$	No			
W	eather Conditions	Fine		Hazy			Overcast Rain
W	ind	Calm	$\boxtimes$	Light Bre	eeze		Strong Wind
Te	mperature	23 °C					
Hu	ımidity			Medium			High
	1. General						
	Description			Yes	No	N/A	Remarks
1.1	EP for Tenant disp at entrance?	layed on notice boa	ards	/ 🗆			EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?				$\boxtimes$	The Operator's Environmental Policy is documented.
1.3	Environmental Mar	nagement Plan upd	lated	J? ⊠			The Tenant's EMP is documented.
1.4	a. Emergency Res documented?	ponse Plan (ERP)		$\boxtimes$			The Tenant's ERP is documented.
	b. Drill / training red	cords available?		$\boxtimes$			
1.5	Employee's training	g record available?	1				
1.6	Any record of prose	ecution / complaint	?				
1.7	Waste Managemen	nt Plan?					The Tenant has included the WMP into the EMP.



### 2. Water Quality **Description** Yes No N/A Remarks Valid Effluent Discharge License available? Licence No. WT00006013-2010 valid 2.1 until 28 Feb 2015. 2.2 Any wastewater treatment facility prior to effluent discharge? If yes, facility is properly maintained and function normally? **Effluent Monitoring** $\boxtimes$ As per the discharge licence, selfmonitoring shall be performed when a. Sampling / Monitoring Record available? required. b. Monitoring frequency met the license $\boxtimes$ No sampling was undertaken. requirement? $\boxtimes$ c. Any exceedance? No sampling was undertaken. d. If yes, follow-up action taken? $\boxtimes$ No sampling was undertaken. Surface run-off control measures in place See Follow-up Action #3. 2.4 and adequately maintained? 2.5 Surface run-off discharging into drainage See Follow-Up Action #2. system? 2.6 All manholes are covered? 2.7 Foam, oil, grease, litter or other See Follow-up Action #3. objectionable matters in water of nearby drain / sewer are avoided? Drainage system is well maintained to See Follow-up Action #3. prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination	$\boxtimes$			Works for recycling were undertaken at covered areas.
2.9	a. Processes / activities are located under a covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?			$\boxtimes$	Stop-logs are not required for the lots of Phase 2.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	Water is unlikely to be contaminated within the lot.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Only grease is used at the lot.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?			$\boxtimes$	Not required.
	b. If yes, oil and grease removed regularly?			$\boxtimes$	
	c. Collected by licenced collector?			$\boxtimes$	
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?			$\boxtimes$	Not required.
,	b. Materials and bulk cargo are properly packed?				



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?			$\boxtimes$	Ditto
3.2	Odour a. Any odour detected?	$\boxtimes$			See Follow-up Action #3.
	b. If yes, can the source be identified?	$\boxtimes$			See Follow-up Action #3.
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?				
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer				No dusty materials were found to be used on-site
3.4	operation?  Dust Monitoring  a. Monitoring Record available?				
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



#### 3. Air Quality (continued) **Description** Yes No N/A Remarks Dark smoke emitted from chimney or $\boxtimes$ There is no chimney installed on-3.7 powered plant is avoided? $\boxtimes$ П 3.8 Vehicles and equipment are switched off while not in use? $\boxtimes$ 3.9 Approval certificate issued by the Authority is available for furnace, oven or chimney consuming: a. >25L of conventional liquid fuel per hour $\boxtimes$ b. >35kg of conventional solid fuel per hour $\boxtimes$ c. >1,150 MJ of any gaseous fuel per hour 3.10 Approval from Authority is available for the $\boxtimes$ use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity? 3.11 Dust collected by any air pollution control $\boxtimes$ equipment installed by tenants must be tested to ensure compliance for landfill disposal. 3.12 a. Approval from Authority for the use of $\boxtimes$ controlled refrigerant? b. If yes, record of refrigeration equipment $\boxtimes$ service available? П $\Box$ 3.13 All air pollution control systems are properly $\boxtimes$ maintained and function normally? 3.14 Only Ultra-Low Sulphur Diesel is used? $\boxtimes$



# 4. Waste / Chemical Management **Description** Yes No N/A Remarks **Chemical Waste Producer Registration** Registration No. 9211-421-Y2453-03. 4.1 completed? 4.2 Provision of sufficient waste disposal points/ receptacles? Waste disposed of regularly and properly? $\boxtimes$ Twice a week. 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ No chemical waste was produced. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\boxtimes$ the use of an absorbent? $\bowtie$ d. Approval obtained for capacity of containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical waste was produced. a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A Remarks Storage of Chemical Waste $\boxtimes$ No chemical waste was produced. 4.9 a. Proper "Chemical Waste" signs are displayed? $\boxtimes$ b. Incompatible wastes separated by an impermeable partition? c. Containers kept in receptacle of suitable $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? $\boxtimes$ d. Enclosed on 3 sides with no less than 2m in height or height of tallest container or stack of containers? $\boxtimes$ e. Containers with chemical waste are properly stored and locked at designated area which is clean and dry? П $\boxtimes$ f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be covered? 4.10 Chemical wastes are collected by a $\boxtimes$ licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid waste was produced. 4.11 a. Storage area floor/surface permeationproof? ПП $\bowtie$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



# 5. Other Issues **Description** Yes No N/A Remarks The lot is within the LFG Consultation Landfill Gas Hazard Zone and the Tenant has alerted (within LFG Consultation Zone) workers/visitors about possible LFG 5.1 a. Workers and visitors alerted to possible hazards. A notice is also posted at the LGF hazards? entrance. b. Smoking and open fires prohibited? 5.2 Security lighting directed downward into the work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? See Follow-up Action #1. Any areas within the lot to be used for Most of the areas used for recycling recycling processes are concrete paved? are concrete-paved. $\bowtie$ 5.5 Valid calibration certificate for any monitoring equipment? $\boxtimes$ There were no dangerous goods **Dangerous Goods** stored on site. 5.6 a. Valid license for manufacturing / storing dangerous goods? b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely $\boxtimes$ locked? d. Total storage capacity in compliance with $\sqcap$ $\sqcap$ $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? $\boxtimes$ f. Dangerous goods properly packaged? Potential stagnant pools cleared and See Follow-up Actions #2 and #3. mosquito breeding prevented?



#### **Action Items from This Audit**

No. Action Expected By

1. NIL. NIL.

# **Follow-up from Previous Audits**

#### No. Follow-up from Previous Audits Dated 30 August 2010

Status

 While Housekeeping within the lot has improved, refuse was still observed on the bare ground within the waste storage area. The Tenant was reminded to further improve housekeeping. Outstanding



 Same as the previous audits, overflow at the wastewater collection system of the working area was observed. In addition to the provision of screen at the inlet of the system, the Tenant was reminded to maintain the system regularly so as to improve its efficiency. Outstanding



3. Stagnant water and waste plastics were still found inside gully gratings of the site. Odour was again noted and considered to be arising from the stagnant water. It was suggested to install a screen such as silt curtain at the drain inlet to prevent unwanted materials entering the drains in order to prevent storm water pollution.

Outstanding





# **Follow-up from Previous Audits**

In addition, soil and rubbish were still found inside the U-channel adjacent to the WWTP. The Tenant was again reminded to clean up the U-channels regularly, and suggested to provide covers to the U-channels.





# **Audit Summary and Sign-off**

The Tenant should improve the overall tidiness of the lot and maintain the drainage system regularly.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Yan Oi Tong	Serco Guardian JV
Signed By	Carman CHUNG	-	Victor WANG	Morgan CHIU
Role	ET Site Auditor	-	STO	Park Manager
Signature	Zognam		JA.	14

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



	Audit Details	
Ten	ant	Yan Oi Tong Limited
Dat	e & Time	Date 21 December 2010 Time 10:50am
Lot	No.	P7
Auc	lit Ref.	5
IEC	Joint Inspection	☐ Yes          No
Wea	ather Conditions	☐ Fine ☐ Hazy ☐ Overcast ☐ Rain
Win	d	☐ Calm ☐ Light Breeze ☐ Strong Wind
Ten	nperature	<u>21</u> °C
Hur	nidity	
	1. General	
	Description	Yes No N/A Remarks
1.1	EP for Tenant disp at entrance?	ayed on notice boards /   EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	y documented?    The Operator's Environmental Policy is documented.
1.3	Environmental Mar	agement Plan updated?    The Tenant's EMP is documented.
1.4	a. Emergency Res documented?	onse Plan (ERP)
	b. Drill / training red	ords available?
1.5	Employee's training	record available?
1.6	Any record of prose	cution / complaint?
1.7	Waste Managemen	t Plan?



# 2. Water Quality **Description** Yes No N/A Remarks Valid Effluent Discharge License available? Licence No. WT00006013-2010 valid 2.1 until 28 Feb 2015. Any wastewater treatment facility prior to 2.2 effluent discharge? If yes, facility is properly maintained and function normally? **Effluent Monitoring** $\boxtimes$ As per the discharge licence, selfmonitoring shall be performed when a. Sampling / Monitoring Record available? required. No sampling was undertaken in this month. b. Monitoring frequency met the license $\boxtimes$ requirement? $\boxtimes$ c. Any exceedance? d. If yes, follow-up action taken? Surface run-off control measures in place See Follow-up Action #3. 2.4 and adequately maintained? ☐ ☐ See Follow-Up Action #2. 2.5 Surface run-off discharging into drainage system? 2.6 All manholes are covered? 2.7 Foam, oil, grease, litter or other See Follow-up Action #3. objectionable matters in water of nearby drain / sewer are avoided? Drainage system is well maintained to See Follow-up Action #3. prevent flooding and overflow?



	Description	Yes	No	N/A	Remarks
2.9	Processes with high Risk of Contamination  a. Processes / activities are located under a				Works for recycling were undertaken at covered areas.
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				Stop-logs are not required for the lots of Phase 2.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	Water is unlikely to be contaminated within the lot.
2.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Only grease is used at the lot.
2.11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
	b. If yes, oil and grease removed regularly?			$\boxtimes$	
	c. Collected by licenced collector?			$\boxtimes$	
.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?			$\boxtimes$	Not required.
•	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?			$\boxtimes$	Ditto
3.2	Odour  a. Any odour detected?				See Follow-up Action #3.
	b. If yes, can the source be identified?			$\boxtimes$	See Follow-up Action #3.
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				No dusty materials were found to be used on-site
3.4	Dust Monitoring a. Monitoring Record available?				
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



#### 3. Air Quality (continued) **Description** Yes No N/A Remarks Dark smoke emitted from chimney or $\boxtimes$ There is no chimney installed on-3.7 powered plant is avoided? $\boxtimes$ П 3.8 Vehicles and equipment are switched off while not in use? $\boxtimes$ 3.9 Approval certificate issued by the Authority is available for furnace, oven or chimney consuming: a. >25L of conventional liquid fuel per hour $\boxtimes$ b. >35kg of conventional solid fuel per hour $\boxtimes$ c. >1,150 MJ of any gaseous fuel per hour 3.10 Approval from Authority is available for the $\boxtimes$ use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity? 3.11 Dust collected by any air pollution control $\boxtimes$ equipment installed by tenants must be tested to ensure compliance for landfill disposal. 3.12 a. Approval from Authority for the use of $\boxtimes$ controlled refrigerant? b. If yes, record of refrigeration equipment $\boxtimes$ service available? П $\Box$ 3.13 All air pollution control systems are properly $\boxtimes$ maintained and function normally? 3.14 Only Ultra-Low Sulphur Diesel is used? $\boxtimes$



#### 4. Waste / Chemical Management **Description** Yes No N/A Remarks Chemical Waste Producer Registration Registration No. 9211-421-Y2453-03 4.1 completed? for spent mineral oil and spent lubricating oil. 4.2 Provision of sufficient waste disposal points/ receptacles? Waste disposed of regularly and properly? $\boxtimes$ Twice a week. 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\Box$ $\boxtimes$ No chemical waste was produced. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\boxtimes$ the use of an absorbent? ПП $\bowtie$ d. Approval obtained for capacity of containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical waste was produced. a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\boxtimes$ bilingual? $\boxtimes$ c. Information is accurate and sufficient?



	Description	Yes	No	N/A	Remarks
9	Storage of Chemical Waste  a. Proper "Chemical Waste" signs are displayed?				No chemical waste was produced.
	b. Incompatible wastes separated by an impermeable partition?			$\boxtimes$	
	c. Containers kept in receptacle of suitable material and construction ( <i>if quantity &lt;50L</i> ) or drip trays capable of storing 110% of the volume of largest ( <i>if quantity &gt;50L</i> )?				
•	d. Enclosed on 3 sides with no less than 2m in height or height of tallest container or stack of containers?				
•	e. Containers with chemical waste are properly stored and locked at designated area which is clean and dry?			$\boxtimes$	
•	f. Adequacy of area ventilation?			$\boxtimes$	
	g. Outdoors storage area should be covered?			$\boxtimes$	
0	Chemical wastes are collected by a licensed chemical waste collector? (retention of trip ticket copies for 12 months)				
1	Storage of Liquid Waste  a. Storage area floor/surface permeation-proof?			$\boxtimes$	No liquid waste was produced.
•	b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage?				
	c. Walls or partitions of stacked container storage area constructed of impermeable material?				



# 5. Other Issues **Description** Yes No N/A Remarks The lot is within the LFG Consultation Landfill Gas Hazard Zone and the Tenant has alerted (within LFG Consultation Zone) workers/visitors about possible LFG 5.1 a. Workers and visitors alerted to possible hazards. A notice is also posted at the LGF hazards? entrance. b. Smoking and open fires prohibited? 5.2 Security lighting directed downward into the work areas to prevent glare to the surrounding receivers? $\boxtimes$ 5.3 Good housekeeping? See Follow-up Action #1. Any areas within the lot to be used for Most of the areas used for recycling recycling processes are concrete paved? are concrete-paved. $\bowtie$ 5.5 Valid calibration certificate for any monitoring equipment? $\boxtimes$ There were no dangerous goods **Dangerous Goods** stored on site. 5.6 a. Valid license for manufacturing / storing dangerous goods? b. Storage area in compliance with the $\boxtimes$ approved plan? c. Storage area(s) has been securely $\boxtimes$ locked? d. Total storage capacity in compliance with $\sqcap$ $\sqcap$ $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? $\boxtimes$ f. Dangerous goods properly packaged? Potential stagnant pools cleared and See Follow-up Actions #2 and #3. mosquito breeding prevented?



# **Action Items from This Audit**

No. Action Expected By

1. NIL NIL

#### **Follow-up from Previous Audits**

# No. Follow-up from Previous Audits Dated 23 November 2010

Status

 While housekeeping within the lot has generally improved, refuse was still observed on the bare ground within the waste storage area. The Tenant was reminded to further improve housekeeping. (Repeated observation since 30 August 2010) Outstanding



 Same as the previous audits, overflow at the wastewater collection system of the working area was observed. The Tenant was reminded to clear the wastewater regularly. (Repeated observation since 29 September 2010) Outstanding







#### **Follow-up from Previous Audits**

# No. Follow-up from Previous Audits Dated 23 November 2010

Status

 Screens were provided at some gully gratings. Waste plastics insider gully and odour were no longer noted. The Tenant was suggested to install such kind of screens to all drain inlets near the working area so as to prevent unwanted materials entering the drains. (Repeated observation since 29 September 2010)





In addition, soil and rubbish were no longer found inside the U-channel adjacent to the WWTP. The Tenant was suggested to maintain the U-channels regularly. (Repeated observation since 29 September 2010)



#### **Audit Summary and Sign-off**

The Tenant should improve the overall tidiness of the lot and clear the overflow at the working area regularly.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Yan Oi Tong	Serco Guardian JV
Signed By	Carman CHUNG	-	Victor WANG	Morgan CHIU
Role	ET Site Auditor	-	STO	Park Manager
Signature	Zonon		A	12

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



nant te & Time t No. dit Ref. C Joint Inspection eather Conditions	P7 6	n Oi Tong Lim  17 Janua  Yes  Fine	ry 20	11		Tin	me 11:25am
t No. dit Ref. C Joint Inspection eather Conditions	P7 6 ⊠	Yes		11		Tin	me 11:25am
dit Ref.  C Joint Inspection eather Conditions	6 			_			
C Joint Inspection eather Conditions	$\boxtimes$			_			
eather Conditions							
nd		Fine		No			
				Hazy			Overcast Rain
	$\triangle$	Calm		Light B	reeze		Strong Wind
mperature	15	o <sub>C</sub>					
midity	$\boxtimes$	Low		Mediur	n		High
1. General							
Description				Yes	s No	N/A	Remarks
-	layed	on notice bo	ards	/ 🗆			EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
Environmental Poli	icy do	cumented?					The Operator's Environmental Policy is documented.
Environmental Mar	nagen	nent Plan upo	dated	? 🛛			The Tenant's EMP is documented.
a. Emergency Res documented?	ponse	e Plan (ERP)					The Tenant's ERP is documented.
b. Drill / training red	cords	available?		$\boxtimes$			
Employee's training	g reco	ord available?	)	$\boxtimes$			
Any record of pros	ecutio	on / complaint	?		$\boxtimes$		
Waste Managemen	nt Plai	n?		$\boxtimes$			The Tenant has included the WMP into the EMP.
	Description EP for Tenant dispat entrance?  Environmental Polician a. Emergency Resdocumented?  b. Drill / training red  Employee's training	Description EP for Tenant displayed at entrance?  Environmental Policy do Environmental Managen  a. Emergency Response documented?  b. Drill / training records  Employee's training records	Description EP for Tenant displayed on notice bo at entrance?  Environmental Policy documented?  Environmental Management Plan upon documented?  a. Emergency Response Plan (ERP) documented?  b. Drill / training records available?  Employee's training record available?	Description EP for Tenant displayed on notice boards at entrance?  Environmental Policy documented?  Environmental Management Plan updated a. Emergency Response Plan (ERP) documented?  b. Drill / training records available?  Employee's training record available?  Any record of prosecution / complaint?	Description EP for Tenant displayed on notice boards / at entrance?  Environmental Policy documented?  Environmental Management Plan updated?  a. Emergency Response Plan (ERP) documented?  b. Drill / training records available?  Employee's training record available?	Description  EP for Tenant displayed on notice boards / at entrance?  Environmental Policy documented?  Environmental Management Plan updated?  a. Emergency Response Plan (ERP)	Description Yes No N/A EP for Tenant displayed on notice boards / at entrance?  Environmental Policy documented?



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				Licence No. WT00006013-2010 valid until 28 Feb 2015.
2.2	Any wastewater treatment facility prior to effluent discharge?	$\boxtimes$			
	If yes, facility is properly maintained and function normally?	$\boxtimes$			
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				As per the discharge licence, self- monitoring shall be performed when required. No sampling was undertaken in this month.
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
2.4	Surface run-off control measures in place and adequately maintained?				
2.5	Surface run-off discharging into drainage system?		$\boxtimes$		See Follow-Up Action #2.
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?				
2.8	Drainage system is well maintained to prevent flooding and overflow?				



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination	$\boxtimes$			Works for recycling were undertaken at covered areas.
2.9	a. Processes / activities are located under a covered area?				
	b. Stop-logs installed in the perimeter drainage system for uncovered areas?			$\boxtimes$	Stop-logs are not required for the lots of Phase 2.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	Water is unlikely to be contaminated within the lot.
.10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?			$\boxtimes$	Only grease is used at the lot.
.11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
	b. If yes, oil and grease removed regularly?			$\boxtimes$	
	c. Collected by licenced collector?			$\boxtimes$	
2.12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?			$\boxtimes$	Not required.
•	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



# 3. Air Quality Yes No N/A **Description** Remarks a. Valid Specified Process License for all Not required. 3.1 specified process available? b. SP License conditions / monitoring requirements met? **Odour** 3.2 a. Any odour detected? b. If yes, can the source be identified? $\boxtimes$ c. Odorous materials are covered? d. If odour control system is installed, is it operating normally? All dusty materials are sprayed with water $\boxtimes$ No dusty materials were found to be or covered by impervious sheeting prior to used on-site any loading, unloading or transfer operation? **Dust Monitoring** 3.4 a. Monitoring Record available? b. Monitoring frequency met the $\boxtimes$ requirement? $\sqcap$ $\sqcap$ $\boxtimes$ c. Any exceedance? d. If yes, follow-up action taken? $\boxtimes$ Enclosures are provided around the main 3.5 dust-generating activities? Open burning is avoided?



#### 3. Air Quality (continued) **Description** Yes No N/A Remarks Dark smoke emitted from chimney or $\boxtimes$ There is no chimney installed on-3.7 powered plant is avoided? $\boxtimes$ П 3.8 Vehicles and equipment are switched off while not in use? $\boxtimes$ 3.9 Approval certificate issued by the Authority is available for furnace, oven or chimney consuming: a. >25L of conventional liquid fuel per hour $\boxtimes$ b. >35kg of conventional solid fuel per hour $\boxtimes$ c. >1,150 MJ of any gaseous fuel per hour 3.10 Approval from Authority is available for the $\boxtimes$ use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity? 3.11 Dust collected by any air pollution control $\boxtimes$ equipment installed by tenants must be tested to ensure compliance for landfill disposal. 3.12 a. Approval from Authority for the use of $\boxtimes$ controlled refrigerant? b. If yes, record of refrigeration equipment $\boxtimes$ service available? П $\Box$ 3.13 All air pollution control systems are properly $\boxtimes$ maintained and function normally? 3.14 Only Ultra-Low Sulphur Diesel is used? $\boxtimes$



#### 4. Waste / Chemical Management **Description** Yes No N/A Remarks Chemical Waste Producer Registration Registration No. 9211-421-Y2453-03 4.1 completed? for spent mineral oil and spent lubricating oil. 4.2 Provision of sufficient waste disposal points/ receptacles? Waste disposed of regularly and properly? 4.3 $\boxtimes$ Twice a week. 4.4 Sorting of materials on-site for reuse or disposal to designated outlet? Record of quantities of waste generated, 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\Box$ $\boxtimes$ No chemical waste was produced. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\boxtimes$ the use of an absorbent? ПП $\bowtie$ d. Approval obtained for capacity of containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical waste was produced. 4.8 a. Label is securely attached, clean and visible? b. Label is in proper dimension and $\boxtimes$ bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A Remarks Storage of Chemical Waste П $\boxtimes$ No chemical waste was produced. 4.9 a. Proper "Chemical Waste" signs are displayed? $\boxtimes$ b. Incompatible wastes separated by an impermeable partition? c. Containers kept in receptacle of suitable $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? $\boxtimes$ d. Enclosed on 3 sides with no less than 2m in height or height of tallest container or stack of containers? $\boxtimes$ e. Containers with chemical waste are $\Box$ properly stored and locked at designated area which is clean and dry? П $\boxtimes$ f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be covered? 4.10 Chemical wastes are collected by a $\boxtimes$ licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid waste was produced. 4.11 a. Storage area floor/surface permeationproof? ПП $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A Remarks Landfill Gas Hazard The lot is within the LFG Consultation Zone and the Tenant has alerted (within LFG Consultation Zone) workers/visitors about possible LFG 5.1 a. Workers and visitors alerted to possible hazards. A notice is also posted at the LGF hazards? entrance. b. Smoking and open fires prohibited? 5.2 Security lighting directed downward into the work areas to prevent glare to the surrounding receivers? $\boxtimes$ 5.3 Good housekeeping? See Follow-up Action #1. Any areas within the lot to be used for Most of the areas used for recycling recycling processes are concrete paved? are concrete-paved. $\bowtie$ 5.5 Valid calibration certificate for any monitoring equipment? $\boxtimes$ There were no dangerous goods **Dangerous Goods** stored on site. 5.6 a. Valid license for manufacturing / storing dangerous goods? b. Storage area in compliance with the $\boxtimes$ approved plan? c. Storage area(s) has been securely $\boxtimes$ locked? d. Total storage capacity in compliance with $\boxtimes$ the relevant statutory requirement? e. Proper Labelling? $\boxtimes$ f. Dangerous goods properly packaged? Potential stagnant pools cleared and See Follow-up Action #2. mosquito breeding prevented?



#### **Action Items from This Audit**

#### No. Action

**Expected By** 

 Stagnant water and refuse were found inside the gully gratings along the access road. The tenant was reminded to clear the materials inside the gully gratings regularly to prevent potential water pollution. 15 Feb 2011



#### **Follow-up from Previous Audits**

# No. Follow-up from Previous Audits Dated 21 December 2010

**Status** 

While housekeeping within the lot has generally improved, refuse was still
observed on the bare ground within the waste storage area. The Tenant was
reminded to further improve housekeeping. (Repeated observation since 30
August 2010)

Outstanding



2. Whilst overflow at the wastewater collection system of the working area has improved, stagnant water underneath refuse storage containers was observed. The Tenant was reminded to remove the stagnant water asap and clear the wastewater regularly. (Repeated observation since 29 September 2010)

Outstanding







# **Audit Summary and Sign-off**

The Tenant should improve the overall tidiness of the lot, remove the stagnant water underneath refuse storage containers asap and clear the overflow at the working area regularly.

For the ease of maintenance and safety, it may be considered to provide proper covers to the surface drain subject to compliance with the standards of relevant authorities (e.g. HyD, BD, DSD, etc).

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	Yan Oi Tong	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	Victor WANG	Morgan CHIU
Role	ET Leader	IEC	STO	Park Manager
Signature	Antry	Grafal	by Lauria VIII	1

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



# **APPENDIX 6.6**

Tenant-specific Audit Checklists for the Reporting Quarter

St. James' Settlement (P5)



#### Audit Details

	Addit Dotalls					
Ter	nant	St. James Settle	men	t		
Dat	e & Time	Date 23 Novem	ber	2010	Time	5:05pm
Lot	No.	P5		_		
Aud	dit Ref.	2		_		
IEC	Joint Inspection	Yes	$\boxtimes$	No		
We	ather Conditions			Hazy	O\	vercast Rain
Wir	nd	Calm	$\boxtimes$	Light Breeze	St	rong Wind
Ter	nperature	<u>23</u> °C				
Hui	midity			Medium	☐ Hi	gh
	1. General					
	Description			Yes No	N/A	Remarks
1.1	EP for Tenant disprat entrance?	layed on notice boa	ards	/		EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?				The Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Mar	nagement Plan upd	lated	i? 🛛 🗌		The Tenant's EMP is documented.
1.4	a. Emergency Res documented?	ponse Plan (ERP)				The Tenant's ERP is documented.
	b. Drill / training red	cords available?				
1.5	Employee's training	g record available?	1			
1.6	Any record of prose	ecution / complaint	?			
1.7	Waste Managemer	nt Plan?				The Tenant's WMP is documented.
(						



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				Licence No. WT00007365-2010 valid until 31 Aug 2015.
2.2	Any wastewater treatment facility prior to effluent discharge?	$\boxtimes$			
	If yes, facility is properly maintained and function normally?	$\boxtimes$			
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?				As per the discharge licence, self-monitoring shall be performed when required. No sampling was undertaken in this month.
	b. Monitoring frequency met the license requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
2.4	Surface run-off control measures in place and adequately maintained?	$\boxtimes$			
2.5	Surface run-off discharging into drainage system?				
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?	$\boxtimes$			
2.8	Drainage system is well maintained to prevent flooding and overflow?	$\boxtimes$			



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination	$\boxtimes$			The risk of contamination for the recycling process is low.
9	a. Processes / activities are located under a covered area?				
•	b. Stop-logs installed in the perimeter drainage system for uncovered areas?			$\boxtimes$	Stop-logs are not required for the lots of Phase 2.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Not observed.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
•	b. If yes, oil and grease removed regularly?			$\boxtimes$	
	c. Collected by licenced collector?				
12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				Not required.
	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?				
	Odour		$\boxtimes$		
3.2	a. Any odour detected?				
	b. If yes, can the source be identified?				
	c. Odorous materials are covered?			$\boxtimes$	
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?				
3.4	Dust Monitoring  a. Monitoring Record available?			$\boxtimes$	Not required.
	b. Monitoring frequency met the requirement?			$\boxtimes$	
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?	$\boxtimes$			



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour				
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				
3.12	Approval from Authority for the use of controlled refrigerant?				See Action #1.
	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** 4.1 $\boxtimes$ Registration No. 9211-421completed? S3222-08 for spent lubricating oil, unwanted refrigerant and CRT. 4.2 Provision of sufficient waste disposal points/ $\boxtimes$ receptacles? $\boxtimes$ Waste disposed of regularly and properly? $\boxtimes$ П 4.4 Sorting of materials on-site for reuse or Recyclable materials were disposal to designated outlet? passed to other recyclers. Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Label is securely attached, clean and 4.8 visible? b. Label is in proper dimension and $\Box$ $\boxtimes$ bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable $\Box$ $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ covered? 4.10 Chemical wastes are collected by a $\Box$ $\boxtimes$ No chemical wastes were licensed chemical waste collector? observed. (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid wastes were observed. 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? $\boxtimes$ c. Walls or partitions of stacked container storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A **Remarks** Landfill Gas Hazard Lot is inside LFG Consultation (within LFG Consultation Zone) Zone. Advice on LFG hazards has been provided to the Tenant 5.1 a. Workers and visitors alerted to possible for their action / implementation. LGF hazards? See Action #2. b. Smoking and open fires prohibited? 5.2 Security lighting directed downward into the $\Box$ $\boxtimes$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? $\boxtimes$ $\Box$ Any areas within the lot to be used for recycling processes are concrete paved? Valid calibration certificate for any $\boxtimes$ 5.5 No monitoring equipment. monitoring equipment? $\boxtimes$ There were no DGs stored on **Dangerous Goods** site. 5.6 a. Valid license for manufacturing / storing dangerous goods? $\boxtimes$ b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely П $\boxtimes$ locked? $\boxtimes$ d. Total storage capacity in compliance with the relevant statutory requirement? $\boxtimes$ e. Proper Labelling? $\Box$ $\boxtimes$ f. Dangerous goods properly packaged? $\boxtimes$ 5.7 Potential stagnant pools cleared and mosquito breeding prevented?



#### **Action Items from This Audit**

#### No. Action Expected By

1. As advised by the Tenant, unwanted refrigerant will be extracted from fridges and air conditioners. According to the Ozone Layer Protection (Controlled Refrigerants) Regulation, any person who recovers or recycles a controlled refrigerant must use equipment approved by the Director of Environmental Protection, and operate the equipment according to the instructions issued by the equipment's manufacturer. Details about the regulation will be provided to the Tenant separately, and the Tenant is suggested to seek further advice from EPD prior to refrigerant removal.

15 Dec 2010

15 Dec 2010

- 2. The Tenant was advised that since their lot was located within the LFG Consultation Zone, the following precautionary measures should be adopted: following precautionary and protection measures should be adopted during the operational phase:
  - Alert workers and visitors of possible LFG hazards; and
  - Prohibit smoking and open fires on site.

Regular monitoring for LFG will be carried out by the ET in Phase 2 – this it not the tenant's responsibility.

#### **Follow-up from Previous Audits**

No. Follow-up from Previous Audit Dated 27 October 2010

**Status** 

1. NIL. NIL.

# **Audit Summary and Sign-off**

	The site was generally tid	у.
--	----------------------------	----

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	St. James	Serco Guardian JV
Signed By	Carman CHUNG	-	MAK Fung Chi	Morgan CHIU
Role	ET Site Auditor	-	Assistant Manager	Park Manager
Signature	Zognam		My function	14

Note: \* IEC to sign-off only for a joint ET+IEC Inspection



#### Audit Details

	Addit Dotalls					
Ter	nant	St. James Settler	men	t		
Date & Time		Date 21 December 2010			Time 11:40am	
Lot	No.	P5		_		
Aud	dit Ref.	3		_		
IEC	Joint Inspection	Yes	$\boxtimes$	No		
We	ather Conditions	Fine	$\boxtimes$	Hazy	Ove	ercast Rain
Wir	nd	⊠ Calm		Light Breeze	Str	ong Wind
Ter	nperature	24 °C				
Hui	midity			Medium	Hig	h
	1. General					
	Description			Yes No	N/A	Remarks
1.1	EP for Tenant disp at entrance?	layed on notice boa	ards	/		EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy documented?				The Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Mar	nagement Plan upd	atec	<u>1?</u> ⊠ □		The Tenant's EMP is documented.
1.4	a. Emergency Res documented?	ponse Plan (ERP)				The Tenant's ERP is documented.
	b. Drill / training red	cords available?				
1.5	Employee's training	g record available?				
1.6	Any record of prose	ecution / complaint	?			
1.7	Waste Managemer	nt Plan?				The Tenant's WMP is documented.
(						



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				Licence No. WT00007365-2010 valid until 31 Aug 2015.
2.2	Any wastewater treatment facility prior to effluent discharge?	$\boxtimes$			
	If yes, facility is properly maintained and function normally?	$\boxtimes$			
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?			$\boxtimes$	As per the discharge licence, self-monitoring shall be performed when required. No sampling was undertaken in this month.
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
2.4	Surface run-off control measures in place and adequately maintained?			$\boxtimes$	
2.5	Surface run-off discharging into drainage system?				
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?	$\boxtimes$			
2.8	Drainage system is well maintained to prevent flooding and overflow?				



Description	Yes	No	N/A	Remarks
Processes with high Risk of Contamination				The risk of contamination for the recycling process is low.
a. Processes / activities are located under a covered area?				
b. Stop-logs installed in the perimeter drainage system for uncovered areas?				Stop-logs are not required for the lots of Phase 2.
c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?			$\boxtimes$	No contaminated water was found.
Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Not observed.
a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
b. If yes, oil and grease removed regularly?			$\boxtimes$	
c. Collected by licenced collector?				
Cargo Handling			$\boxtimes$	Not required.
a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				
b. Materials and bulk cargo are properly packed?			$\boxtimes$	
	Contamination  a. Processes / activities are located under a covered area?  b. Stop-logs installed in the perimeter drainage system for uncovered areas?  c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?  Equipment oil and lubrication replacements are performed only in bunded maintenance area?  a. Oil interceptor provided for drainage discharging from maintenance area?  b. If yes, oil and grease removed regularly?  c. Collected by licenced collector?  Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?  b. Materials and bulk cargo are properly	Contamination  a. Processes / activities are located under a covered area?  b. Stop-logs installed in the perimeter drainage system for uncovered areas?  c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?  Equipment oil and lubrication replacements are performed only in bunded maintenance area?  a. Oil interceptor provided for drainage discharging from maintenance area?  b. If yes, oil and grease removed regularly?  c. Collected by licenced collector?  Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?  b. Materials and bulk cargo are properly	Contamination  a. Processes / activities are located under a covered area?  b. Stop-logs installed in the perimeter drainage system for uncovered areas?  c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?  Equipment oil and lubrication replacements are performed only in bunded maintenance area?  a. Oil interceptor provided for drainage discharging from maintenance area?  b. If yes, oil and grease removed regularly?  c. Collected by licenced collector?	Contamination  a. Processes / activities are located under a covered area?  b. Stop-logs installed in the perimeter drainage system for uncovered areas?  c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?  Equipment oil and lubrication replacements are performed only in bunded maintenance area?  a. Oil interceptor provided for drainage discharging from maintenance area?  b. If yes, oil and grease removed regularly?  c. Collected by licenced collector?



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?			$\boxtimes$	
	Odour		$\boxtimes$		
3.2	a. Any odour detected?			_	
	b. If yes, can the source be identified?				
	c. Odorous materials are covered?				
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?			$\boxtimes$	
3.4	Dust Monitoring a. Monitoring Record available?				Not required.
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?				



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour				
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?				
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.				
3.12	Approval from Authority for the use of controlled refrigerant?				See Follow-up Action #1.
•	b. If yes, record of refrigeration equipment service available?				Recorded by EPD.
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** 4.1 $\boxtimes$ Registration No. 9211-421completed? S3222-08 for spent lubricating oil, unwanted refrigerant and CRT. 4.2 Provision of sufficient waste disposal points/ $\boxtimes$ receptacles? $\boxtimes$ Waste disposed of regularly and properly? $\boxtimes$ П 4.4 Sorting of materials on-site for reuse or Recyclable materials were disposal to designated outlet? passed to other recyclers. Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through П $\boxtimes$ the use of an absorbent? d. Approval obtained for capacity of $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ No chemical wastes were observed. a. Label is securely attached, clean and 4.8 visible? $\boxtimes$ b. Label is in proper dimension and $\Box$ bilingual? $\boxtimes$ c. Information is accurate and sufficient?



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ No chemical wastes were observed. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable П $\boxtimes$ material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ covered? 4.10 Chemical wastes are collected by a $\Box$ $\boxtimes$ No chemical wastes were licensed chemical waste collector? observed. (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid wastes were observed. 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? c. Walls or partitions of stacked container $\boxtimes$ storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A **Remarks** Landfill Gas Hazard Lot is inside LFG Consultation $\boxtimes$ (within LFG Consultation Zone) Zone. Advice on LFG hazards has been provided to the Tenant 5.1 a. Workers and visitors alerted to possible for their action / implementation. LGF hazards? See Follow-up Action #2. b. Smoking and open fires prohibited? 5.2 Security lighting directed downward into the П $\boxtimes$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? $\boxtimes$ $\Box$ Any areas within the lot to be used for recycling processes are concrete paved? Valid calibration certificate for any $\boxtimes$ 5.5 No monitoring equipment. monitoring equipment? $\boxtimes$ There were no DGs stored on **Dangerous Goods** site. 5.6 a. Valid license for manufacturing / storing dangerous goods? $\boxtimes$ b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely П $\boxtimes$ locked? d. Total storage capacity in compliance with П $\boxtimes$ the relevant statutory requirement? $\boxtimes$ e. Proper Labelling? $\Box$ $\boxtimes$ f. Dangerous goods properly packaged? $\boxtimes$ 5.7 Potential stagnant pools cleared and mosquito breeding prevented?



## **Action Items from This Audit**

No. Action Expected By

1. No critical issues were identified. NIL

## **Follow-up from Previous Audits**

## No. Follow-up from Previous Audit Dated 23 November 2010

**Status** 

1. As advised by the Tenant, all equipments for extracting unwanted refrigerant from fridges and air conditioners are provided by EPD. This implies that the equipments used are approved by the Director of Environmental Protection.

Closed

2. As advised by the Tenant, workers and visitors are alerted about the possible LFG hazards. A notice is also been placed in the visitor centre.

Closed

**Warning** 此處可能有易燃氣體 切勿吸煙及生火 Possible Presence of Flammable gas, no smoking and no lighting of fire

## **Audit Summary and Sign-off**

The site was generally tidy.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	St. James	Serco Guardian JV
Signed By	Carman CHUNG	-	MAK Fung Chi	Morgan CHIU
Role	ET Site Auditor	-	Assistant Manager	Park Manager
Signature	Zonon		MARKINZAM	12



Ter	nant	St.	James' Settl	emer	nt			
Dat	e & Time	Da	te 17 Janua	ary 20	11		Time	11:45am
Lot	No.	P5	i		_			
Aud	dit Ref.	4			_			
IEC	Joint Inspection	$\boxtimes$	Yes		No			
We	ather Conditions	$\boxtimes$	Fine		Hazy		Ov	ercast Rain
Wir	nd	$\boxtimes$	Calm		Light Bre	eze	Str	ong Wind
Ter	nperature	<u>15</u>	_oc					
Hui	midity	$\boxtimes$	Low		Medium		☐ Hig	<b>jh</b>
	1. General							
	Description				Yes	No	N/A	Remarks
1.1	EP for Tenant disp at entrance?	layed	d on notice bo	oards	/			EP for EcoPark (EP-226/2005/A) is displayed at the entrance of EcoPark. EP for tenant is not required.
1.2	Environmental Poli	cy do	ocumented?					The Operator's Environmental Policy is documented. Tenant follows this.
1.3	Environmental Mar	nagei	ment Plan up	dated	l? 🔀			The Tenant's EMP is documented.
1.4	a. Emergency Res documented?	pons	e Plan (ERP)	)				The Tenant's ERP is documented.
	b. Drill / training red	cords	s available?		$\boxtimes$			
1.5	Employee's training	g rec	ord available	?	$\boxtimes$			
1.6	Any record of prose	ecutio	on / complain	t?		$\boxtimes$		
1.7	Waste Managemen	nt Pla	an?					The Tenant's WMP is documented.
(								



	2. Water Quality				
	Description	Yes	No	N/A	Remarks
2.1	Valid Effluent Discharge License available?				Licence No. WT00007365-2010 valid until 31 Aug 2015.
2.2	Any wastewater treatment facility prior to effluent discharge?	$\boxtimes$			
	If yes, facility is properly maintained and function normally?	$\boxtimes$			
2.3	Effluent Monitoring a. Sampling / Monitoring Record available?			$\boxtimes$	As per the discharge licence, self-monitoring shall be performed when required. No sampling was undertaken in this month.
	b. Monitoring frequency met the license requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?			$\boxtimes$	
2.4	Surface run-off control measures in place and adequately maintained?			$\boxtimes$	
2.5	Surface run-off discharging into drainage system?	$\boxtimes$			
2.6	All manholes are covered?	$\boxtimes$			
2.7	Foam, oil, grease, litter or other objectionable matters in water of nearby drain / sewer are avoided?		$\boxtimes$		See Action #1.
2.8	Drainage system is well maintained to prevent flooding and overflow?		$\boxtimes$		See Action #1.



	Description	Yes	No	N/A	Remarks
	Processes with high Risk of Contamination	$\boxtimes$			The risk of contamination for the recycling process is low.
9	a. Processes / activities are located under a covered area?				
•	b. Stop-logs installed in the perimeter drainage system for uncovered areas?				Stop-logs are not required for the lots of Phase 2.
	c. Contaminated water collected in the surface drainage systems is treated at water treatment facility / other appropriate treatment facility?				No contaminated water was found.
10	Equipment oil and lubrication replacements are performed only in bunded maintenance area?				Not observed.
11	a. Oil interceptor provided for drainage discharging from maintenance area?				Not required.
•	b. If yes, oil and grease removed regularly?			$\boxtimes$	
•	c. Collected by licenced collector?				
12	Cargo Handling  a. Cargo Handling Guideline available and followed to minimise chance of accidental spillage when loading or unloading?				Not required.
-	b. Materials and bulk cargo are properly packed?			$\boxtimes$	



	3. Air Quality				
	Description	Yes	No	N/A	Remarks
3.1	a. Valid Specified Process License for all specified process available?				Not required.
	b. SP License conditions / monitoring requirements met?			$\boxtimes$	
	Odour		$\boxtimes$		
3.2	a. Any odour detected?			_	
	b. If yes, can the source be identified?				
	c. Odorous materials are covered?				
	d. If odour control system is installed, is it operating normally?			$\boxtimes$	
3.3	All dusty materials are sprayed with water or covered by impervious sheeting prior to any loading, unloading or transfer operation?			$\boxtimes$	
3.4	Dust Monitoring a. Monitoring Record available?				Not required.
	b. Monitoring frequency met the requirement?				
	c. Any exceedance?			$\boxtimes$	
	d. If yes, follow-up action taken?				
3.5	Enclosures are provided around the main dust-generating activities?			$\boxtimes$	
3.6	Open burning is avoided?				



	3. Air Quality (continued)				
	Description	Yes	No	N/A	Remarks
3.7	Dark smoke emitted from chimney or powered plant is avoided?				There is no chimney installed onsite.
3.8	Vehicles and equipment are switched off while not in use?	$\boxtimes$			
3.9	Approval certificate issued by the Authority is available for furnace, oven or chimney consuming:  a. >25L of conventional liquid fuel per hour			$\boxtimes$	
	b. >35kg of conventional solid fuel per hour			$\boxtimes$	
	c. >1,150 MJ of any gaseous fuel per hour			$\boxtimes$	
3.10	Approval from Authority is available for the use of liquid fuel with a viscosity point of ignition >30 centistokes or an equivalent viscosity?			$\boxtimes$	
3.11	Dust collected by any air pollution control equipment installed by tenants must be tested to ensure compliance for landfill disposal.			$\boxtimes$	
3.12	Approval from Authority for the use of controlled refrigerant?				All relevant equipment are provided by EPD.
	b. If yes, record of refrigeration equipment service available?			$\boxtimes$	Recorded by EPD.
3.13	All air pollution control systems are properly maintained and function normally?	$\boxtimes$			
3.14	Only Ultra-Low Sulphur Diesel is used?	$\boxtimes$			



#### 4. Waste / Chemical Management **Description** Yes No N/A **Remarks Chemical Waste Producer Registration** Registration No. 9211-421-4.1 $\boxtimes$ completed? S3222-08 for spent lubricating oil, unwanted refrigerant and CRT. 4.2 Provision of sufficient waste disposal points/ $\boxtimes$ receptacles? $\boxtimes$ 4.3 Waste disposed of regularly and properly? $\boxtimes$ П 4.4 Sorting of materials on-site for reuse or Recyclable materials were disposal to designated outlet? passed to other recyclers. Record of quantities of waste generated, $\boxtimes$ 4.5 recycled and disposed properly kept and easily retrieved for inspection? Sludge is collected by a licensed collector at $\boxtimes$ 4.6 regular intervals? Packaging of Chemical Waste $\boxtimes$ a. Stored in suitable container? 4.7 b. Container properly closed or sealed? $\boxtimes$ c. Spillage cleaned up immediately through $\Box$ $\boxtimes$ No spillage. the use of an absorbent? d. Approval obtained for capacity of $\Box$ $\boxtimes$ containers > 450L? Labelling of Chemical Waste $\boxtimes$ See Action #2. a. Label is securely attached, clean and 4.8 visible? $\boxtimes$ b. Label is in proper dimension and bilingual? c. Information is accurate and sufficient? $\boxtimes$



#### 4. Waste / Chemical Management (continued) **Description** Yes No N/A **Remarks** Storage of Chemical Waste $\boxtimes$ See Action #3. 4.9 a. Proper "Chemical Waste" signs are displayed? b. Incompatible wastes separated by an $\boxtimes$ impermeable partition? c. Containers kept in receptacle of suitable $\boxtimes$ See Action #3. material and construction (if quantity <50L) or drip trays capable of storing 110% of the volume of largest (if quantity >50L)? d. Enclosed on 3 sides with no less than 2m $\boxtimes$ in height or height of tallest container or stack of containers? e. Containers with chemical waste are $\boxtimes$ See Action #3. properly stored and locked at designated area which is clean and dry? f. Adequacy of area ventilation? $\boxtimes$ g. Outdoors storage area should be $\boxtimes$ covered? 4.10 Chemical wastes are collected by a $\bowtie$ $\Box$ licensed chemical waste collector? (retention of trip ticket copies for 12 months) Storage of Liquid Waste $\boxtimes$ No liquid wastes were observed. 4.11 a. Storage area floor/surface permeationproof? $\boxtimes$ b. Capacity of retention structure sufficient to accommodate contents of the largest container or 20% volume of waste in storage? $\boxtimes$ c. Walls or partitions of stacked container storage area constructed of impermeable material?



#### 5. Other Issues **Description** Yes No N/A **Remarks** Landfill Gas Hazard The lot is within the LFG $\boxtimes$ (within LFG Consultation Zone) Consultation Zone and the Tenant has alerted workers/visitors about 5.1 a. Workers and visitors alerted to possible possible LFG hazards. A notice is LGF hazards? also posted at the visitor centre. b. Smoking and open fires prohibited? 5.2 Security lighting directed downward into the П $\boxtimes$ work areas to prevent glare to the surrounding receivers? 5.3 Good housekeeping? $\boxtimes$ $\Box$ Any areas within the lot to be used for recycling processes are concrete paved? Valid calibration certificate for any $\Box$ $\boxtimes$ 5.5 No monitoring equipment. monitoring equipment? $\boxtimes$ There were no DGs stored on **Dangerous Goods** site. 5.6 a. Valid license for manufacturing / storing dangerous goods? $\boxtimes$ b. Storage area in compliance with the approved plan? c. Storage area(s) has been securely П $\boxtimes$ locked? d. Total storage capacity in compliance with П $\boxtimes$ the relevant statutory requirement? $\boxtimes$ e. Proper Labelling? $\Box$ $\boxtimes$ f. Dangerous goods properly packaged? $\boxtimes$ 5.7 Potential stagnant pools cleared and mosquito breeding prevented?



## **Action Items from This Audit**

## No. Action

1.

**Expected By** 

15 Feb 2011

Refuse was found inside surface channels. The tenant was reminded to clear the refuse ASAP and provide regular maintenance of surface channels. For the ease of maintenance and safety, it is recommended to properly cover the channels.





Whilst some chemical waste containers were attached with proper labels, a few containers were not labelled. The tenant was reminded to attach proper labels to all chemical waste containers. 15 Feb 2011



3. Observations about chemical waste storage include: only Chinese version of "Chemical Waste" signs were displayed at the storage area; the storage area was not locked; and some containers were not placed inside the secondary containment area. The tenant was reminded to provide bilingual signs and place all the containers inside the area with secondary containment. To maintain good practice, the storage areas should be locked when not in use. 15 Feb 2011







No. Follow-up from Previous Audit Dated 21 December 2010

Status

1. NIL

N/A

## Audit Summary and Sign-off

The tenant should provide regular maintenance to surface channels, label all chemical waste containers properly, lock and provide bilingual signs to chemical waste storage areas, and place all the containers inside the area with secondary containment.

	ET	IEC*	Tenant	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	St. James	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	MAK Fung Chi	Morgan CHIU
Role	ET Leader	IEC	Assistant Manager	Park Manager
Signature	Dutay	Grafal	HAR Fun Gerf	1



# **APPENDIX 7**

General EcoPark Checklists for the Reporting Quarter



Date & Time	Date 23 Nov	vember 2010	Time 2:30pm to	o 5:45pm
<b>Weather Conditions</b>		☐ Hazy	Overcast	Rain
Wind	Calm		☐ Strong Wind	
Temperature	<u>24</u> °C			
Humidity	⊠ Low	Medium	High	

## **Action Items from This Audit**

## ID ET Findings / Recommendations

## Hong Kong Telford Envirotech Group Ltd.

 The lot was generally tidy. However, odour of diesel was noted during the site visit, which might come from the uncapped oil containers stored on-site.

## **Cosmos Star Holdings Co.**

 The lot was locked during the site visit and no Cosmos Star staff was present. No critical issues were observed.



## **Other Areas**

3. No new observations

odour emission.

**Operator /Tenant Follow-up Action** 

All the oil containers should be capped to avoid

NIL

NIL



## ID ET Findings / Recommendations

## Hong Kong Telford Envirotech Group Ltd.

1. Oily patch was found underneath a machine.





## **Operator/Tenant Follow-up Action**

Oil buckets were placed under the machine to collect the oil, and sand was used to absorb the oily patch. The Tenant was reminded to dispose of the sand as chemical waste. (Closed)





## Cosmos Star Holdings Co.

2. NIL NIL

Other Areas

3. NIL NIL

## **Observations and Sign-off**

The lots were generally tidy.

	ET	IEC*	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Serco Guardian JV
Signed By	Carman CHUNG	-	Morgan CHIU
Role	ET Site Auditor	-	Park Manager
Signature	Zonan		14



Date & Time	Date 21 Dec	ember 2010	Time 9:30am to	12:15pm
Weather Conditions	Fine		Overcast	Rain
Wind		☐ Light Breeze	☐ Strong Wind	
Temperature	22 °C			
Humidity		Medium	High	
\				

## **Action Items from This Audit**

ID ET Findings / Recommendations

## **Operator /Tenant Follow-up Action**

## Hong Kong Telford Envirotech Group Ltd.

1. The lot was generally tidy. Large amount of plastics was stored in the lot.

NIL



## Cosmos Star Holdings Co.

2. Site formation works were in progress. No critical issues were observed.

NIL



### **Other Areas**

3. No new observations

NIL



## **ID ET Findings / Recommendations**

## Hong Kong Telford Envirotech Group Ltd.

 Odour of diesel was noted during the site visit, which might come from the uncapped oil containers stored on-site.

Cosmos Star Holdings Co.

2. NIL

NIL

**Operator/Tenant Follow-up Action** 

found in the lot. (Closed)

Odour of diesel was no longer noted during the

site visit, and uncapped oil containers were not

Other Areas

3. NIL

NIL

## **Observations and Sign-off**

The lots were generally tidy.

	ET	IEC*	Operator
Organisation	SMEC Asia Ltd	Scott Wilson Ltd	Serco Guardian JV
Signed By	Carman CHUNG	-	Morgan CHIU
Role	ET Site Auditor	-	Park Manager
Signature	Zonon		12



Date & Time	Date 17 Janu	ary 2011	Time 9:30am to	12:30pm
<b>Weather Conditions</b>		Hazy	Overcast	Rain
Wind	⊠ Calm	☐ Light Breeze	☐ Strong Wind	
Temperature	<u>15 °C</u>			
Humidity		Medium	High	
\				

## **Action Items from This Audit**

## **ID ET Findings / Recommendations**

## Hong Kong Telford Envirotech Group Ltd.

1. Refuse was found inside the surface channels.



## **Operator /Tenant Follow-up Action**

The tenant should remove the refuse ASAP and provide regular maintenance of the surface channels.

 No secondary containment was provided to chemical drums. Some chemical drums were uncovered.



The tenant should provide cover and secondary containment (drip tray, etc) underneath all chemical drums.

3. A large number of oil stains were found near the machines.



The tenant should clear the oil stains and oilcontaminated soil by absorbent and dispose of them properly. As advised by the tenant, this area will soon be paved by concrete.



## **Action Items from This Audit**

## **ID ET Findings / Recommendations**

 Uncovered oil buckets and diesel odour were noted.



## **Operator /Tenant Follow-up Action**

The tenant should provide appropriate containers with cover so as to eliminate the emission of diesel odours.

## **Cosmos Star Holdings Co.**

 The construction of the lot was in progress. A chemical drum without secondary containment underneath was found.



The tenant should provide secondary containment underneath all chemical drums.

## Other Areas

6. Muddy trail was found outside the lot of P9.



SGJV was advised to liaise with the RE for cleaning the entrance of P9. The contractor of P9 should provide appropriate measures such as wheel-washing facilities at the entrance.



ET Findings / Recommendations Operator/Tenant Follow-up Action

Hong Kong Telford Envirotech Group Ltd.

1. NIL

Cosmos Star Holdings Co. 2.

NIL NIL

Other Areas

3. NIL NIL

## Observations and Sign-off

Several observations were found at the lots. The tenants / contractor should implement appropriate measures to address these issues.

	ET	IEC*	Operator
Organisation	SMEC Asia Ltd	Atkins China Ltd	Serco Guardian JV
Signed By	Antony WONG	Sharifah OR	Morgan CHIU
Role	ET Leader	IEC	Park Manager
Signature	Dutay (	Grafal	12