Higg Index Advisory Tool Trial Session

December 2015

SFBC
Organizer

製衣業訓練局 CLOTHING INDUSTRY TRAINING AUTHORITY

HKPC

Implementation agents

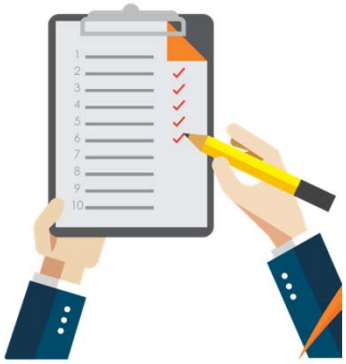
工業貿易署 Trade and Industry Department

Funded by SME Development Fund

Agenda

- Environment Module
  1. FAC-4 Waste Water
  2. FAC-2 GHG
  3. FAC-6 Waste Management

Case background



Reporting entity:

ABC Company Limited –
Tuen Mun Garment Factory

Reporting period:
01/01/2014 to 31/12/2014

Materials provided:

- Internal records
- Published reports
- Email conversations

FAC-4 Waste Water

FAC-4 Waste Water

Dyeing

Finishing treatment

Laundry

FAC-4 Waste Water

Lvl 1

- Basic understanding on the amount of waste water generated and its treatment

Lvl 2

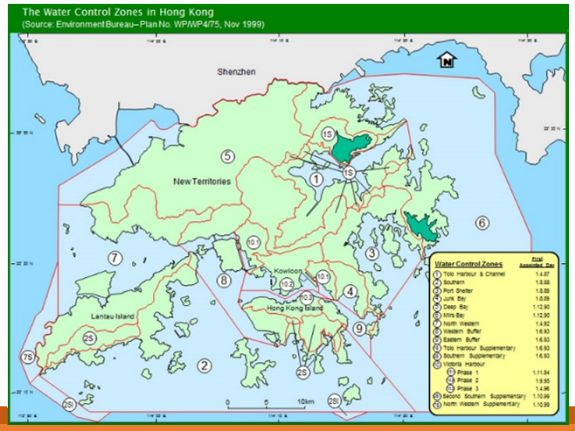
- Target(s) and plan(s) for waste water quality improvement / volume reduction

Lvl 3

- Result(s) of waste water improvement plan(s)

FAC-4 Waste Water

- Primary treatment methods include pH and temperature control, sedimentation (separation of sludge, and oil and grease from wastewater)
- Secondary treatment method includes degradation of organic content with aerobic and/or anaerobic biological treatment
- Tertiary treatment is additional method to further improve water quality (e.g. disinfection or nutrient removal)
- In HK, type of treatment depends on the Water Control Zone



Source: http://www.epd.gov.hk/epd/wqo_review/en/pdf/Water%20Control%20Zones%20map.pdf

FAC-4 Waste Water

Testing parameters	Testing methods
pH	pH paper/ pH meter
COD	potassium dichromate
BOD	5-day BOD test
SS	Weighing
DO	Meter sensor

Potential supporting documents:

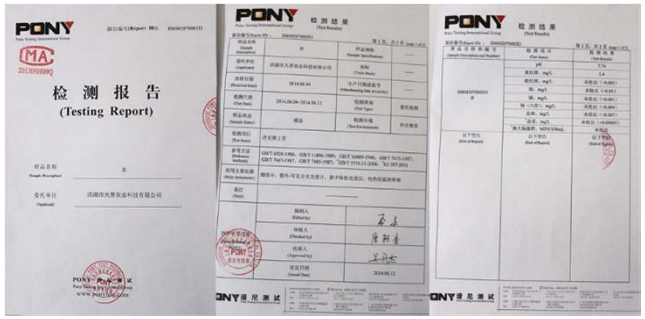


表1 现有企业水污染物排放浓度限值及单位产品基准排水量

单位：mg/L（pH 值，色度除外）

序号	污染物项目	限值		污染物排放监控位置
		直接排放	间接排放	
1	pH 值	6～9	6～9	企业废水总排放口
2	化学需氧量(COD_{Cr})	100	200	
3	五日生化需氧量	25	50	
4	悬浮物	60	100	
5	色度	70	80	
6	氨氮	12 20 (1)	20 30 (1)	
7	总氮	20 35 (1)	30 50 (1)	
8	总磷	1.0	1.5	
9	二氧化氯	0.5	0.5	
10	可吸附有机卤素（AOX）	15	15	
11	硫化物	1.0	1.0	
12	苯胺类	1.0	1.0	
13	六价铬	0.5		车间或生产设施废水排放口
单位产品基准排水量（m^3/t 标准品）2)	棉、麻、化纤及混纺机织物	175		排水量计量位置与污染物排放监控位置相同
	真丝绸机织物（含练白）	350		
	纱线、针织物	110		
	精梳毛织物	560		
	粗梳毛织物	640		

注：（1）蜡染行业执行该限值。

（2）当产品不同时，可按 FZ/T 01002-2010 进行换算。

4.2 自 2015 年 1 月 1 日起，现有企业执行表 2 规定的水污染物排放限值。

4.3 自 2013 年 1 月 1 日起，新建企业执行表 2 规定的水污染物排放限值。

Discharge standards of water pollutants for dyeing and finishing of textile industry

http://210.6.198.21/ich_flag/kjs.mep.gov.cn/hjbhbz/bzwb/shjbh/swrwpfbz/201211/W020121116662298626393.pdf
http://tianjiedadou.com/upfile/image/20141115/20141115132408158 15.jpg

Materials provided

- Extract of published *Sustainability Report 2014 (Section on Wastewater Treatment)*

Wastewater Treatment

Background

Wastewater quality has been a major area of concern for the Tuen Mun Garment Factory (the Factory) due to the heavy use of chemicals and solvents used in finishing treatments of the garment. The amount of effluent is measured bi-weekly.

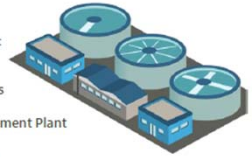
of effluent is produced from finishing treatments annually

Effluent is transferred to sewage treatment plant based on the location of the factory:

Site: Pillar Point Sewage Treatment Works

Type: Chemically Enhanced Primary Treatment Plant

Operator: Drainage Services Department



Wastewater Quality Monitoring

To closely monitor the wastewater quality, the Factory conducts the following tests internally:

Testing method	Parameter	Frequency
Potassium dichromate	Chemical Oxygen Demand (COD)	bi-weekly
Portable pH meters	pH	bi-weekly

Entering the tool

Assess from the website
http://higgweb.sfbc.org.hk

Website

http://higgweb.sfbc.org.hk

FAC-2 GHG

Greenhouse Gases

6 Major Greenhouse Gases

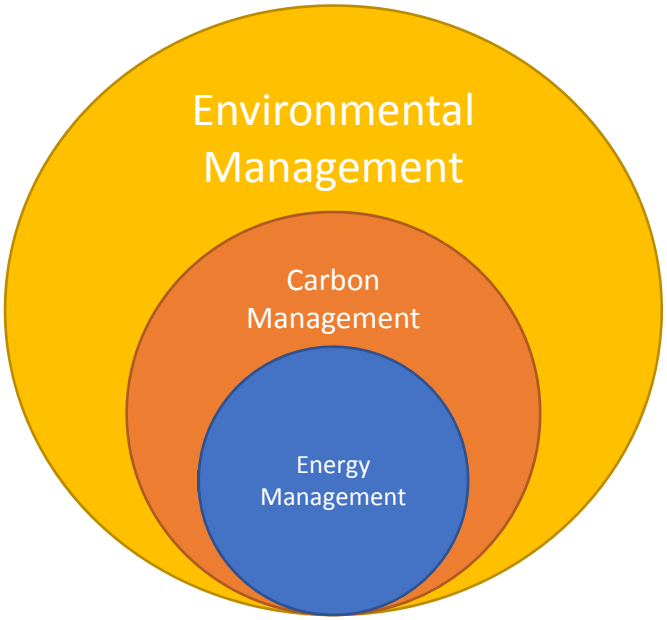
Climate Change

FAC-2 GHG

Lvl 1	• Basic understanding on the amount of energy use and its GHG emission
Lvl 2	• Target(s) and plan(s) for GHG reduction
Lvl 3	• Implemented improvement measure(s) and its achieved reduction

What is Carbon Audit?

- A means of measuring and recording the carbon footprint of an organization or building within a defined system boundary
- *Guidelines To Account For And Report On Greenhouse Gas Emissions And Removals For Buildings In Hong Kong*, published by EPD and EMSD



What is Carbon Audit?

Scope 1

- Stationary sources combustion ✓
- Mobile sources combustion ✓
- Releases from equipment and systems
- Assimilation of CO_2 into biomass ✓

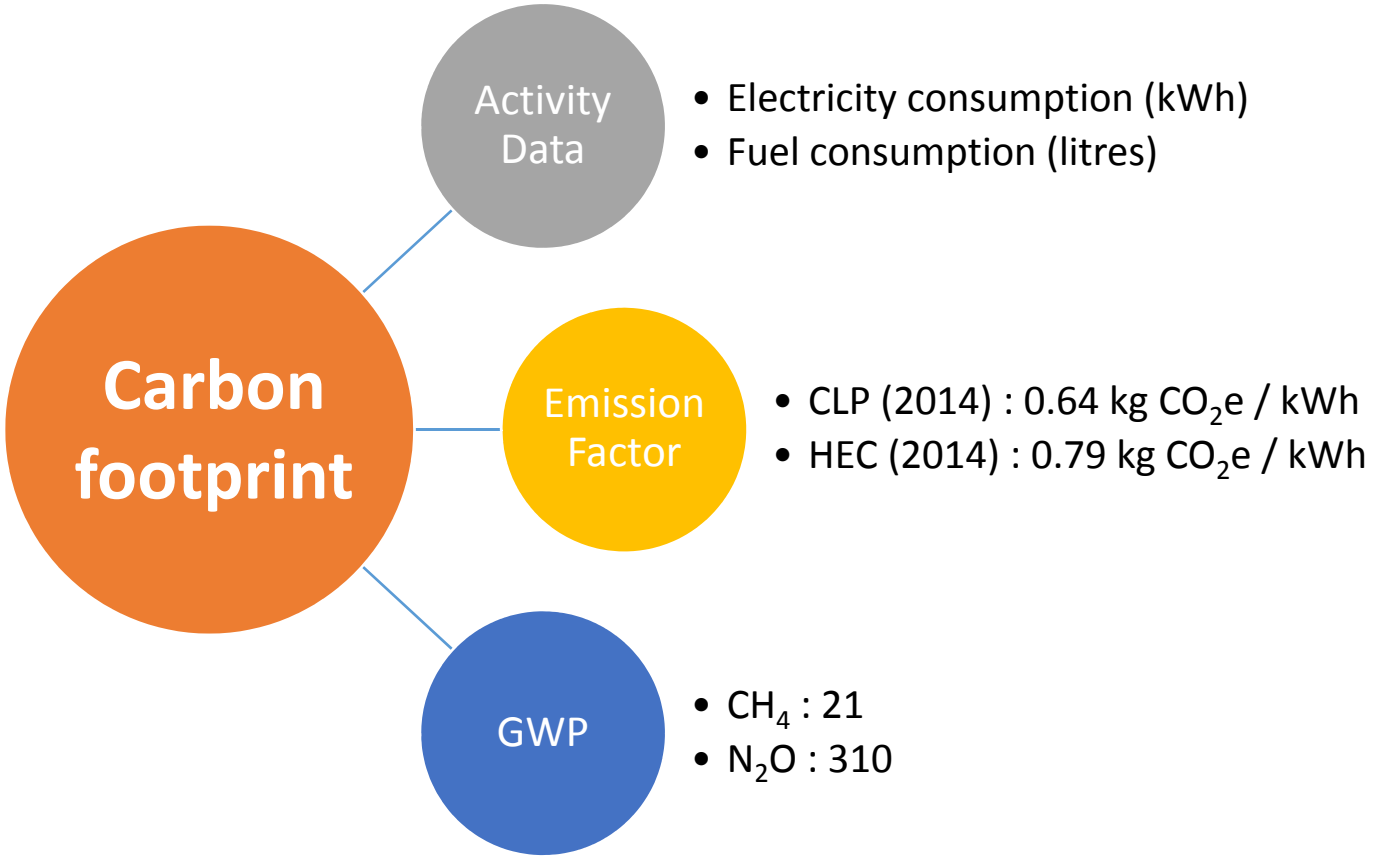
Scope 2

- Purchased electricity ✓
- Purchased Towngas ✓

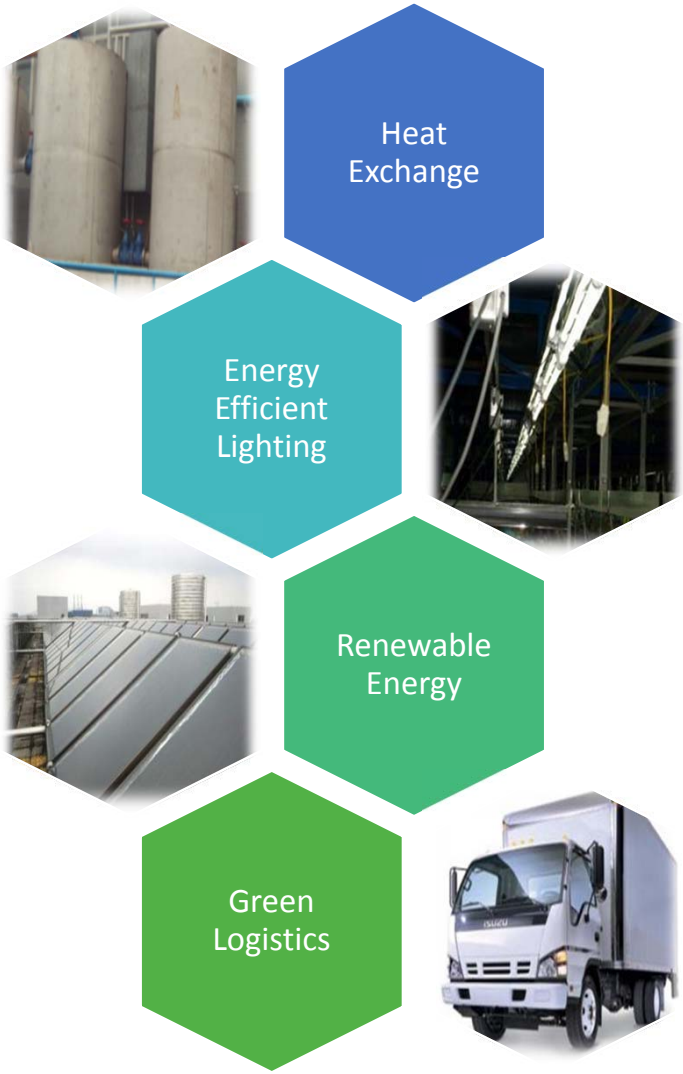
Scope 3

- Paper waste disposal
- Use of fresh water
- Sewage discharge

What is Carbon Audit?



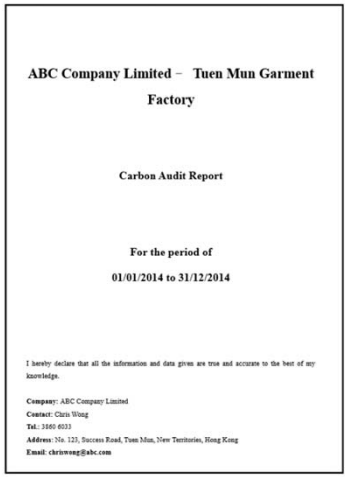
Carbon reduction measures



Planting Trees
23 $kgCO_2e$/ year

https://vienna-wv.com/images/tree.jpg

Materials provided



ABC Company Limited – Tuen Mun Garment Factory

Carbon Audit Report

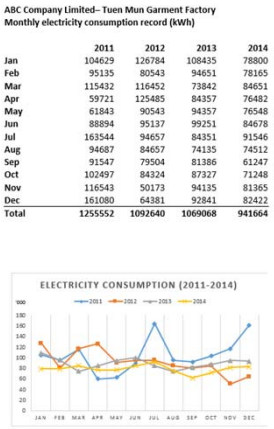
For the period of

01/01/2014 to 31/12/2014

I hereby declare that all the information and data given are true and accurate to the best of my knowledge.

Company: ABC Company Limited
Contact: Chris Wong
Tel.: 3660 6033
Address: No. 123, Success Road, Tuen Mun, New Territories, Hong Kong
Email: chriswong@abc.com

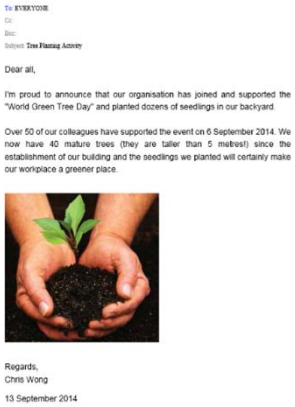
Carbon Audit Report 2014



ABC Company Limited– Tuen Mun Garment Factory
Monthly electricity consumption record (kWh)

	2011	2012	2013	2014
Jan	104629	126784	108435	78800
Feb	95135	80543	94651	78165
Mar	115432	116452	73842	84651
Apr	59721	125485	84357	76482
May	61843	90543	94357	76548
Jun	88894	95137	99251	84678
Jul	163544	94657	84351	91546
Aug	94687	84657	74135	74512
Sep	91547	79504	81386	61247
Oct	102497	84324	87327	71248
Nov	116543	50173	94135	81365
Dec	161080	64381	92841	82422
Total	1255552	1092640	1069068	941664

Monthly electricity consumption record



To: EVERYONE
Cc:
Bcc:
Subject: Tree Planting Activity

Dear all,

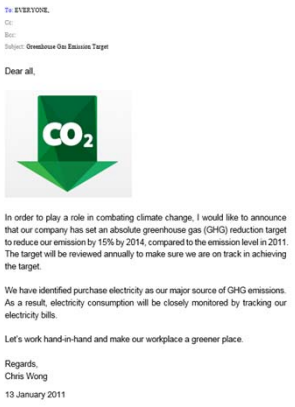
I'm proud to announce that our organisation has joined and supported the "World Green Tree Day" and planted dozens of seedlings in our backyard.

Over 50 of our colleagues have supported the event on 6 September 2014. We now have 40 mature trees (they are taller than 5 metres!) since the establishment of our building and the seedlings we planted will certainly make our workplace a greener place.

Regards,
Chris Wong

13 September 2014

Email on tree planting activity



To: EVERYONE
Cc:
Bcc:
Subject: Greenhouse Gas Emission Target

Dear all,

CO_2

In order to play a role in combating climate change, I would like to announce that our company has set an absolute greenhouse gas (GHG) reduction target to reduce our emission by 15% by 2014, compared to the emission level in 2011. The target will be reviewed annually to make sure we are on track in achieving the target.

We have identified purchase electricity as our major source of GHG emissions. As a result, electricity consumption will be closely monitored by tracking our electricity bills.

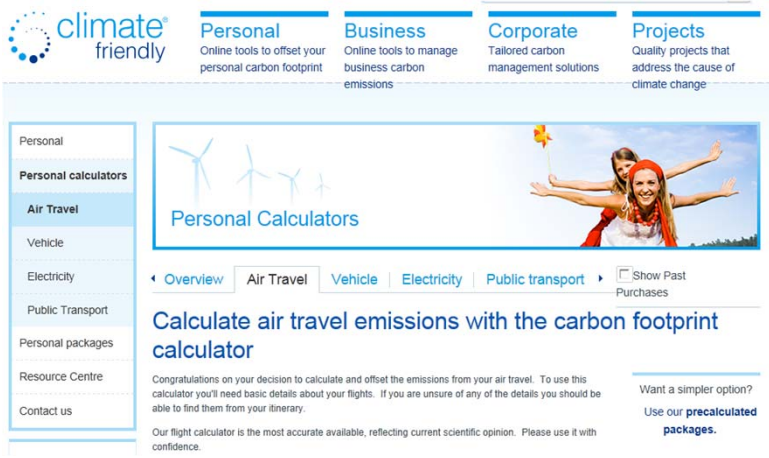
Let's work hand-in-hand and make our workplace a greener place.

Regards,
Chris Wong

13 January 2011

Email on carbon reduction target

Carbon Calculation Tools



FAC-6 Waste Management

FAC-6 Waste Management

Lvl 1

- Basic understanding on the amount and handling procedure of disposed and recycled waste

Lvl 2

- Target(s) and plan(s) for waste reduction

Lvl 3

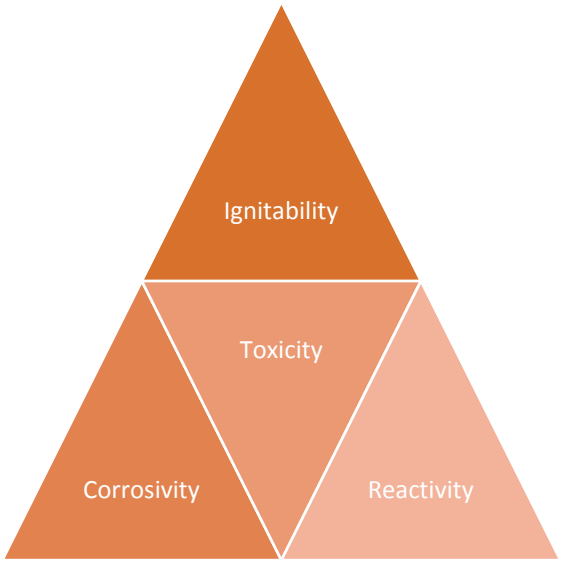
- Achieved amount of waste reduction

Hazardous waste disposal

- A hazardous waste is a waste that could cause harm to public health and/or the environment because of its chemical, physical, or biological characteristics
- Examples:
  - Chemicals and solvents used in production
  - Cleaners and pesticides used in housekeeping
  - E-waste

Hazardous Waste Management System

Better Sourcing



Materials provided

Waste Management Record
Goal Identification Form

Name of Organisation / Company (English): ABC Company Limited– Tuen Mun Garment Factory
Nature of Business : Manufacturing
No. of Staff : 70
Address (English): No. 123, Success Road, Tuen Mun, New Territories, Hong Kong
Contact Person : Chris Wong **Position :** General Manager
E-mail : chriswong@abc.com.hk **Telephone No. :** 3860 6033 **Fax No. :** NA
Goal Implementation Period of current Cycle : From 01/01/2014 To 31/12/2014
Last Goal Review Date 31/12/2013 **Next Goal Review Date :** 31/12/2014

Goal	Material concerned	Current Situation	Anticipated Change	Category
G1: To increase total waste paper recycling amount by 10%.	Waste paper and carton	The recycling amount of metal container in the 2013 was 73 kg.	The amount of waste paper collected for recycling should be at least 80kg	Recycle Non-hazardous
Actions: A1.1 To place clearly labelled waste paper collection bins/boxes in the offices or site.			Responsible parties: 1.1 Administration team	Completion Date: 1.1 31/12/2014
Goal	**Material concerned**	**Current Situation**	**Anticipated Change**	**Category**
G2: To increase total metal container recycling amount by 10%	Metal container	The recycling amount of metal container in the 2013 was 32 kg.	The amount of metal container collected for recycling should be at least 36kg	Recycle Non-hazardous
Actions: A2.1 To set up a metal container collection point.			Responsible parties: 2.1 Administration team	Completion Date: 2.1 31/12/2014
Goal	**Material concerned**	**Current Situation**	**Anticipated Change**	**Category**
G3: To increase total glass bottles recycling amount by 25%	Glass bottle	The recycling amount of glass bottles in the 2013 was 12kg.	The amount of glass bottle collected for recycling should be at least 15kg	Recycle Non-hazardous
Actions: A3.2 To contact recycling agents to collect glass bottle.			Responsible parties: 3.2 Administration team	Completion Date: 3.2 31/12/2014

Waste reduction action plan

環保回收紀錄

		2014年											
		1月	2月	3月	4月	5月	6月	7月	8月	9月	10月	11月	12月
全年回收計劃	舊衣(公斤)	-	-	-	-	-	-	-	-	-	-	-	-
	光碟(隻)	-	-	-	-	-	-	-	-	-	-	-	-
	光碟(公斤)	-	-	-	-	-	-	-	-	-	-	-	-
	電腦(件)	-	-	-	-	-	-	-	-	-	-	-	-
	碳粉匣(件)	-	-	-	-	-	-	-	-	-	-	-	-
	充電池(枚)	-	-	-	-	-	-	-	-	-	-	-	-
	電器(件)	-	-	-	-	-	-	-	-	-	-	-	-
	光管(枚)	-	-	-	-	-	-	-	-	-	-	-	-
	慳電膽(枚)	-	-	-	-	-	-	-	-	-	-	-	-
	玻璃樽(公斤)	0	0	8	0	0	0	3	0	1	1	4	0
	仁愛堂-塑膠(公斤)	-	-	-	-	-	-	-	-	-	-	-	-
	多回獎賞計劃禮品換領(份)	-	-	-	-	-	-	-	-	-	-	-	-
	廢紙(公斤)b	5	5	15	6	10	9	10	8	4	10	8	4
	金屬(公斤)c	5	5	6	2	2	2	1	8	2	3	3	1
	塑膠(公斤)d	-	-	-	-	-	-	-	-	-	-	-	-
	光碟(隻)	-	-	-	-	-	-	-	-	-	-	-	-
	碳粉匣(件)	-	-	-	-	-	-	-	-	-	-	-	-
	舊衣(公斤)	-	-	-	-	-	-	-	-	-	-	-	-
季節性回收計劃	舊書(本)	-	-	-	-	-	-	-	-	-	-	-	-
	利是封(公斤)	-	-	-	-	-	-	-	-	-	-	-	-
	賀年食品轉贈計劃(盒)	-	-	-	-	-	-	-	-	-	-	-	-
	月餅轉贈計劃(盒)	-	-	-	-	-	-	-	-	-	-	-	-
	月餅罐(紙盒)	-	-	-	-	-	-	-	-	-	-	-	-
	月餅罐(鐵盒)	-	-	-	-	-	-	-	-	-	-	-	-
	聖誕樹(公斤)	-	-	-	-	-	-	-	-	-	-	-	-

每660公升(Litre)桶相等於100公斤(kg)

日期: 16 SEP 2015

01/2012 version

Monthly recycling record

To: EVERYONE,
Cc:
Bcc:
Subject: Training on hazardous waste handling

Dear all,

An internal training on hazardous waste handling and segregating is scheduled for all employees. Details as follows:

Date: 30 May 2014
Venue: Meeting Room A
Instructor: Mr. Arthur Chan, Safety Manager
Topics:
1) Identification of hazardous waste
2) Procedures for handling and segregating hazardous and non-hazardous waste

Please register by replying to this email. Thank you for your kind attention.

Regards,
Chris Wong

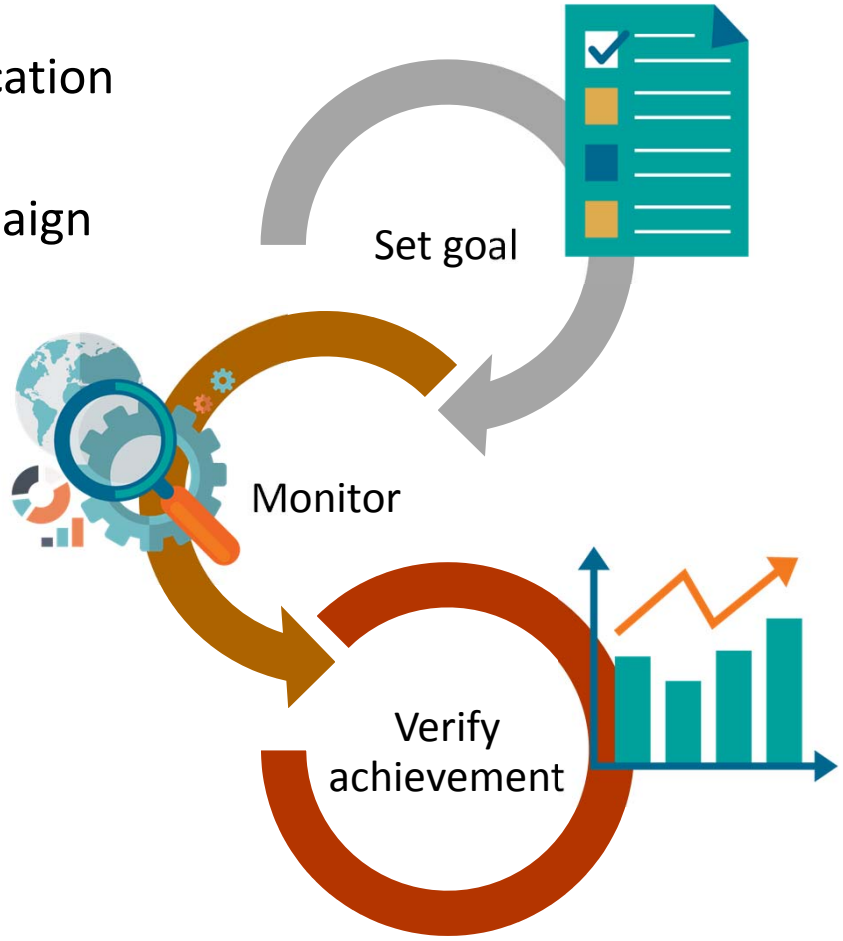
13 April 2014

Email on hazardous waste management training

Waste Reduction Tools

- Hong Kong Green Organisation Certification - **Wastewi$e Certificate**
- Organised by the Environmental Campaign Committee (ECC)

減廢
Wastewi$e
Hong Kong Awards for Environmental Excellence
香港環保卓越計劃
Excellence 卓越



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Helpdesk

Clothing Industry Training Authority

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