

1.0 Purpose

This instruction outlines the practices to be adopted for waste management and to comply with legal and other requirements.

2.0 Scope

This instruction is applicable to all activities and operations in the company which generates wastes and includes the best practice procedures for managing:

- Solid Waste; and
- Chemical Wastes.

Some solid wastes in which HKGEC produces include:

- Packaging materials (plastic strips, carton boxes, etc.)
- General refuse from office activities
- Metal wastes such as copper, nickel and alloys
- Recyclable wastes (e.g. paper, plastic bottles, aluminum cans, etc.)

Some chemical wastes in which HKGEC produces include wastes from:

- Degreasing agents and NaOH from degreasing process
- Plating chemicals such as copper, nickel, silver, gold and palladium-nickel salts
- Caustic soda, hydrochloric acid, sulphuric acid and hydrogen peroxide used in wastewater and deionised (DI) water systems
- Paint, acetylene, adhesives, lube oil, hydraulic oil, aerosols, heat transfer oil and organic solvents used in general facility maintenance.
- Empty chemical containers

3.0 Procedure**3.1 Application for permits/licences**

The EMR shall ensure that:

- a chemical waste producer licence is obtained for the company, and that the licence covers all the types of chemical waste produced by the company.

3.2 Practices for Waste Management**3.2.1 General Waste Management****A. Segregation**

i. Segregate the following solid wastes for disposal or recycling:

- Non-recyclable solid wastes (general refuse, spent filters after cleaning, non-recyclable packaging bags/wraps, etc.)
- Paper wastes for recycling (do not place non-recyclable paper including carbon paper, plastic laminated paper, glossy paper and

contaminated papers in the recycle paper container)

- Packaging wastes (cartons, boxes) for recycling
 - Wooden pallets for recycling
 - Metal wastes (e.g. copper, nickel) for recycling
 - Toner cartridges for recycling (return to suppliers)
 - Plastic bottles for recycling
 - Aluminium cans for recycling
 - Bulky items (e.g. furniture, machinery) fluorescent tubes, batteries, for disposal
- ii. Clearly labelled containers must be located for the initial collection of these wastes as near as conveniently possible to the point of generation.
 - iii. A designated member of staff (usually cleaning staff) should be assigned to collect the wastes and transfer them to the waste storage area regularly.

B. Storage

- i. Segregate chemical waste and general waste in accordance with the allowable waste types listed on the containers.
- ii. Store all waste containers in dedicated storage areas.
- iii. Put lids/covers on all refuse containers.
- iv. Label all waste containers and waste storage areas.
- v. Store all waste containers on sealed ground to avoid land contamination

C. Disposal

- i. General refuse shall be collected daily by Building Management Office (BMO)'s collector.
- ii. Return toner cartridges, wooden pallets, metal workpieces to suppliers
- iii. All recyclable wastes : paper, cartons, plastic bottles, aluminium cans, batteries and fluorescent tubes collected shall be placed to the recycling bins provided by BMO for recycling (collected by BMO's waste collectors and recyclers)

3.2.2 Chemical Wastes Management

A. Chemical wastes include :

- spent acid (from acid dip bath),
- spent alkali (from degreasing bath)
- spent metal concentrate (spent plating baths)
- sludge and spent resin (from wastewater treatment plant)
- contaminated rags and gloves
- chemical containers

- spent lube oil, hydraulic oil, solvent from maintenance works
- B. Register with Environmental Protection Department (EPD) as Chemical Waste Producer and apply for a revision if the types of chemical waste to be disposed of change.
- C. Appoint licensed collector(s) (from EPD's list of approved registered chemical waste collectors) to collect and dispose of chemical wastes
- D. Maintain records (trip tickets) of chemical wastes generated / collected.
- E. Adopt alternative working practices / processes to eliminate / reduce / generate less toxic chemical wastes
- F. Adopt storage, handling, transportation and disposal practices in accordance to the EPD publication "*Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*":
- Provide appropriate wastes containers for each type of chemical waste generated on site. (Use container with capacity less than 450 litre unless specification approved by EPD.)
 - Ensure that containers are in good condition, closed/ sealed.
 - Put chemical waste labels with the appropriate information (in Chinese and English) on chemical waste containers
 - maintain waste containers upright to minimise spillage/leakage.
 - Designate separate storage facilities for incompatible chemical waste, and provide these areas with prominent signage, lock, etc.
 - Provide secondary containment (e.g. drip trays or impermeable floor and bunding) and adequate ventilation for storage areas. (Capacity of the secondary containment should be able to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored, whichever is greatest.)
 - Provide storage area with impermeable floor and bunding, and adequate ventilation.

4.0 Monitoring and Checking

The EMR shall ensure that:

- waste facilities specified in this EI are provided adequately and operated in satisfactory conditions; and
- Waste management practices specified in this EI are followed by staff and contractors.

The Plant Manager or his / her delegate shall:

- Check weekly if practices in Section 3.2 are correctly and fully implemented by random visual inspection.
- When nonconformity are identified, corrective action measures shall be defined and implemented in accordance with EP-07 Enquiry / Complaint / Nonconformity Handling.

5.0 Records

Record Description	Record Location/ Retention Responsibility	Minimum Retention Time
Lists of chemicals wastes and storage locations (Refer to Production Manager)	EMR	Two previous versions
Information on waste collection company and frequency of collection locations (Refer to individual trip-ticket records and general waste collection records from subcontractor)	EMR	3 years
MSDS for all chemicals (Refer to Production Manager)	EMR	3 years
Trip Tickets (Refer to Production Manager)	EMR	3 years

6.0 Appendix

Nil.