

Info and Scheduled Waste (Toxic Waste) Management Report in UTeM 2023

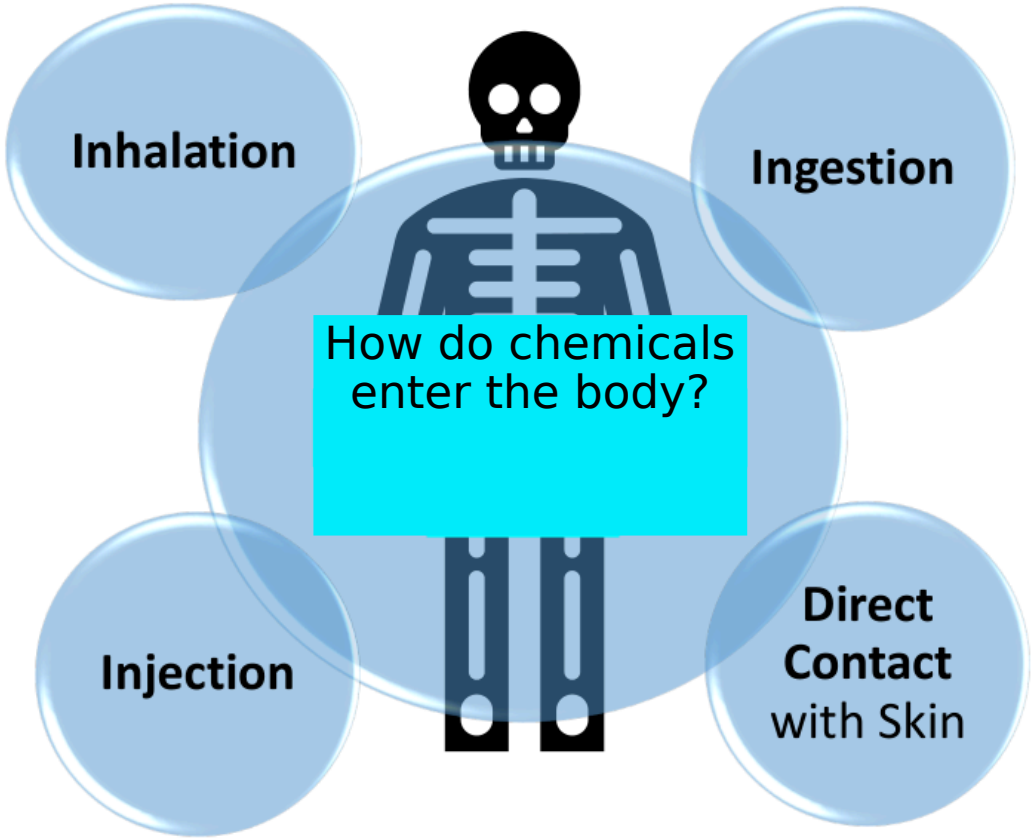
CENTRE FOR SMART ENVIRONMENT (CENSEi), UTeM

DR. KHAIRUL FADZLI BIN SAMAT

Waste Coordinator, CENSEi / Senior Lecturer, FKP

CePSWaM

Exposure to Chemical Pollution?



How can chemicals / toxic waste be prevented from entering the body?

- PPE- Personal protective equipment ✓
- Correct Labelling & Storage ✓
- Handling process ✓

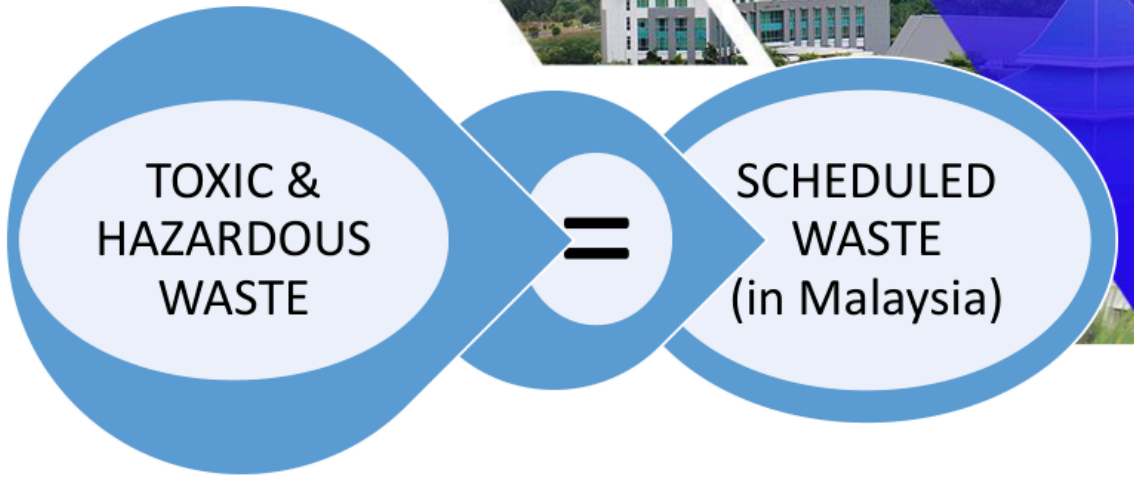
DEFINITION OF SCHEDULED WASTE



What is meant by scheduled waste?

- Any waste falling within the categories listed in the First Schedule (definition under the Regulations[1]).

- Scheduled waste is any waste with hazardous characteristics that may adversely affect the public and the environment[2].



INTERNATIONAL DEFINITIONS

BASEL CONVENTION	• "substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law"
EUROPEAN UNION (EU)	• "an object the holder discards, intends to discard or is required to discard."

[1] Environmental Quality (Scheduled Wastes) Regulations 2005

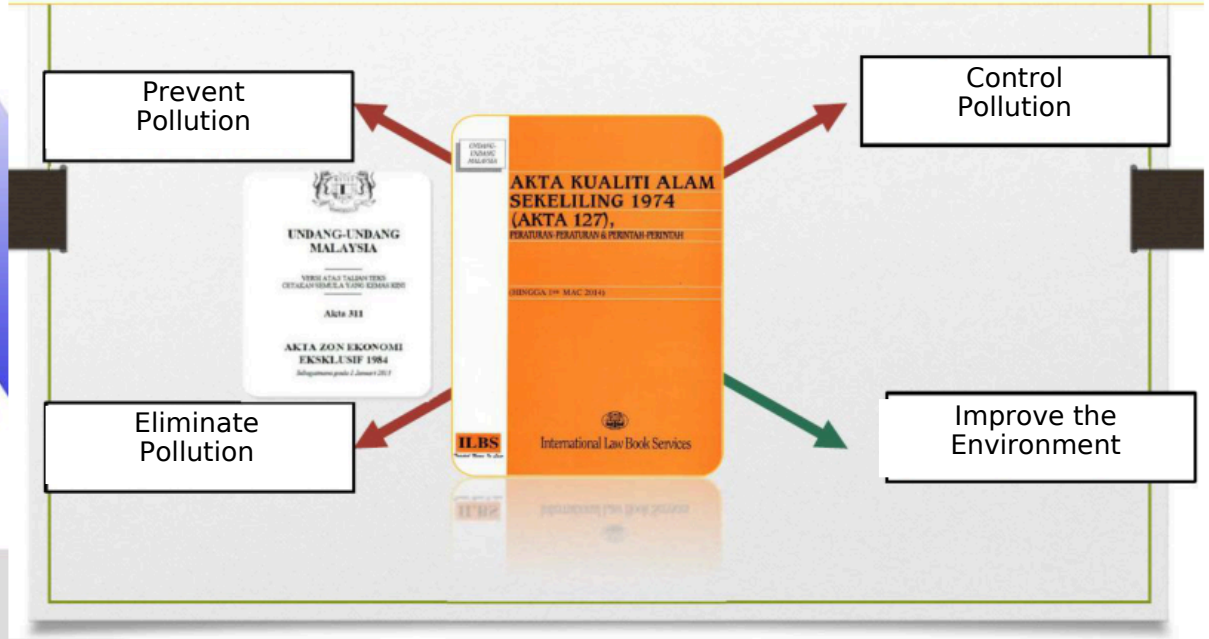
[2] https://www.doe.gov.my

SCHEDULED WASTE ACT AND REGULATIONS

Environmental Quality Act 1974 (Act 127)

Environmental Quality (Scheduled Wastes) Regulations 2005

OBJECTIVES OF THE EQA 1974



TAMBAHAN PERUNDANGAN PERSEKUTUAN

AKTA KUALITI ALAM SEKELILING 1974 *[AKTA 127]*

P.U. (A) 294/2005

PERATURAN-PERATURAN KUALITI ALAM SEKELILING (BUANGAN TERJADUAL) 2005

Mengandungi pindaan terkini - P.U. (A) 158/2007

Tarikh diterbitkan dalam Warta : 15 Ogos 2005
Tarikh mula berkuatkuasa : 15 Ogos 2005

SUSUNAN PERATURAN

Mukadimah

Peraturan 1. Nama dan permulaan kuat kuasa
Peraturan 2. Tafsiran
Peraturan 3. Pemberitahuan tentang pengeluaran buangan terjadual
Peraturan 4. Pelupusan buangan terjadual
Peraturan 5. Pengolahan buangan terjadual
Peraturan 6. Pemerolehan kembali bahan atau hasil daripada buangan terjadual
Peraturan 7. Permohonan bagi pengurusan khas buangan terjadual
Peraturan 8. Tanggungjawab pengeluar buangan
Peraturan 9. Penstoran buangan terjadual
Peraturan 10. Pelabelan buangan terjadual
Peraturan 11. Pengeluar buangan hendaklah menyimpan inventori buangan terjadual
Peraturan 12. Maklumat hendaklah diberikan oleh pengeluar buangan, kontraktor dan penduduk premis yang ditetapkan
Peraturan 13. Buangan terjadual yang diangkut di luar premis pengeluar buangan hendaklah disertakan dengan maklumat
Peraturan 14. Pertumpahan atau pelepasan tidak sengaja
Peraturan 15. Penjalanan latihan
Peraturan 16. Pengkompaunan kesalahan
Peraturan 17. Pembatalan

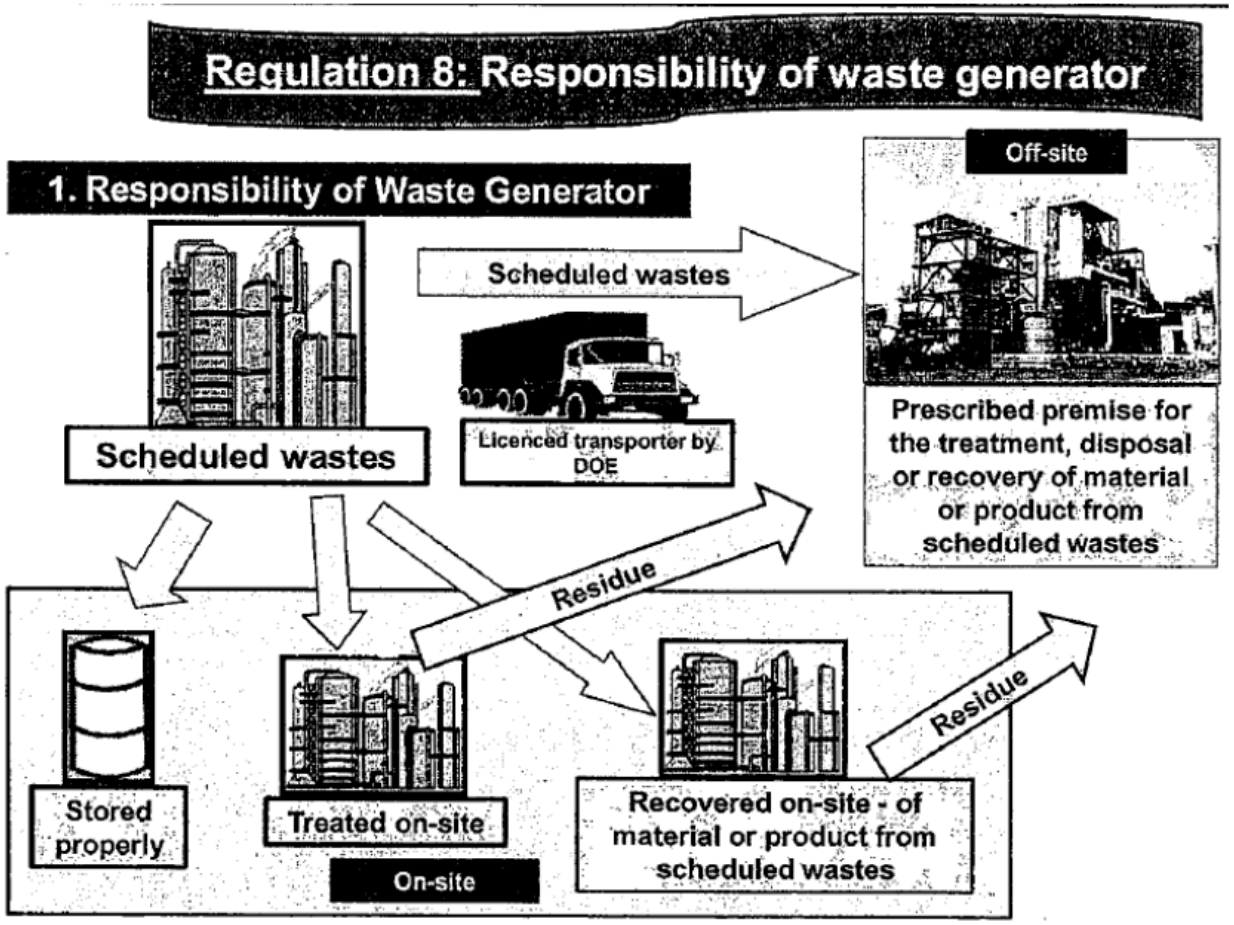
JADUAL PERTAMA
JADUAL KEDUA
JADUAL KETIGA
JADUAL KEEMPAT
JADUAL KELIMA
JADUAL KEENAM
JADUAL KETUJUH

SENARAI PINDAAN

PRINCIPLES OF SCHEDULED WASTE DISPOSAL

The Environmental Quality (Scheduled Wastes) Regulations 2005 contain 17 regulations.

Regulation 8: Responsibility of the Waste Generator



Waste Reduction
- Can quantity of waste produced be minimized?

Reuse/Recover /Recycling
- Can waste be reused or recycled?

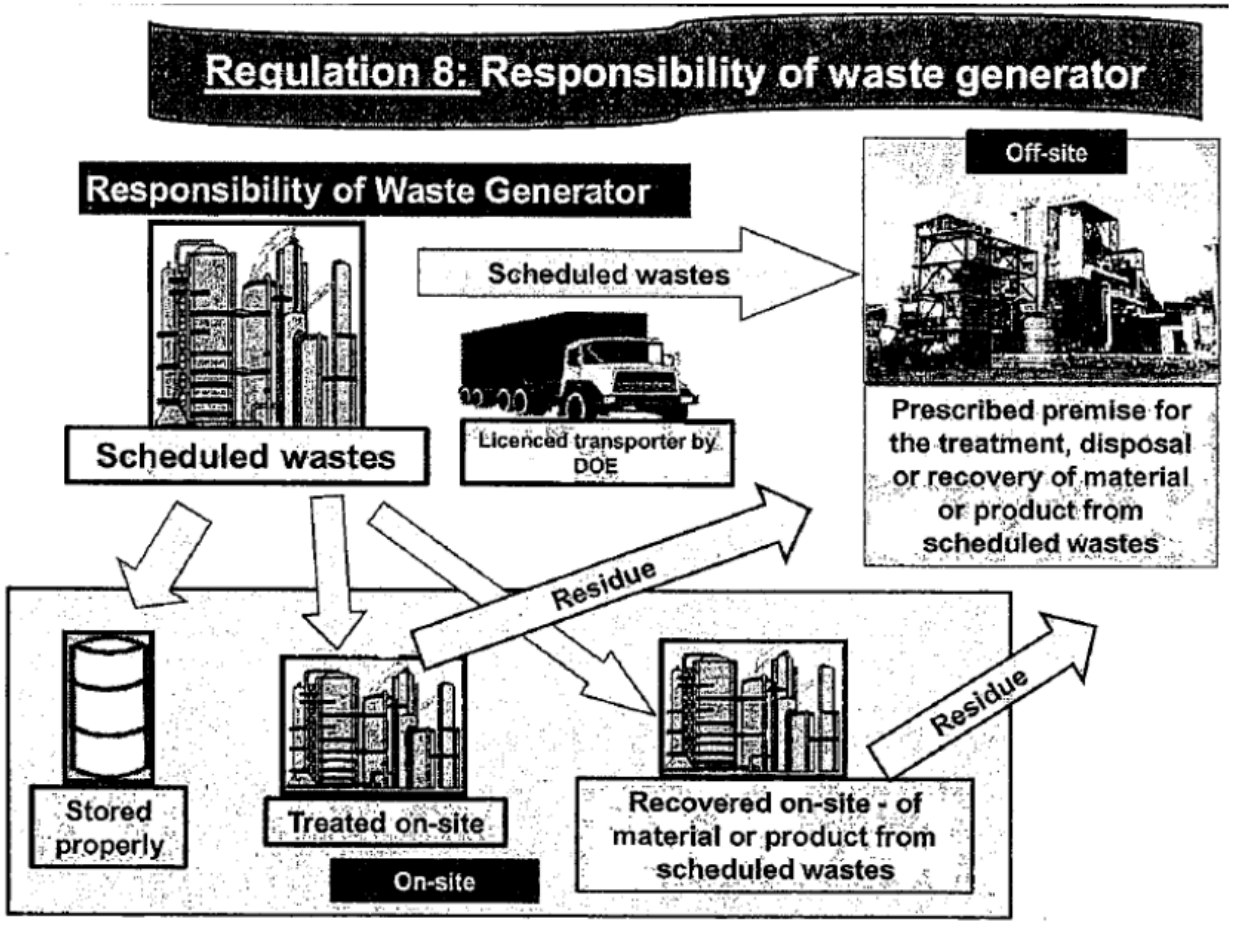
Treatment
- Does hazardous nature of waste need to be reduced?

Safe Landfill/ Disposal

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WASTE MANAGEMENT AT UTeM

Policy on Solid Waste and Scheduled Waste Management at Universiti Teknikal Malaysia Melaka (UTeM), 2016

Solid Waste

- Identification & Segregation
  - → Cleaning Contractor
- Reuse
- Recycling
- Sorting of Recyclable Items
  - → Scrap Sale



Personal items / items other than university inventory/assets

Scheduled Waste

77 Types of Scheduled Waste
Codes: SW1-SW5

- **SW404 Clinical Waste**
- ***SW110 E-Waste**
- Codes Other Than SW404 & SW110*

*E-Waste classified as UNIVERSITY ASSETS/INVENTORY
Refer to Financial Circular No. 18 of 2021: Panel Companies for Asset Disposal through the Sale of Scrap and E-Waste.

Scheduled Waste Management Flowchart at UTeM



Generation of Scheduled Waste → **Sorting & Segregation** → **Waste Storage** → **Waste Packaging & Collection** → **Waste Transportation** → **Scheduled Waste Treatment & Disposal Facilities**

- ❖ All the chemical/toxic wastes need to register (declare) by following the Malaysia's Regulation under the Malaysia Department of Environment (DoE) and UTeM's policy
- ❖ The identification and classification of the chemical/toxic wastes need to be done before storing process in order to avoid the potential of incompatibility issues. (Reactivity, Ignitability, Corrosiveness, Infectious and Toxicity)

- ❖ All the chemical/toxic wastes have to store according to the safe practice of storage guidelines as referred to Regulation under the Department of Environment (DoE).

- ❖ Only the licensed contractor (licensed by DoE) can handle the packaging and transportation processes for treatment and disposal procedure.
- ❖ University will ensure only the non-expired licensed contractor is being appointed.

- ❖ Consignment note will be received by the licenced (by DoE) Treatment & Disposal Facility regarding the chemical/toxic wastes have been treated & disposed according to the Malaysia's Regulation.

Standard Procedures for Scheduled Waste Management in Malaysia - UTeM



Responsibility of the Waste Generator

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Planning Disposal Activities at UTeM



Generation of Toxic Waste → **Sorting and Segregation** → **Scheduled Waste Storage** → **Scheduled Waste Transporter**

Example of activity planning for the disposal process

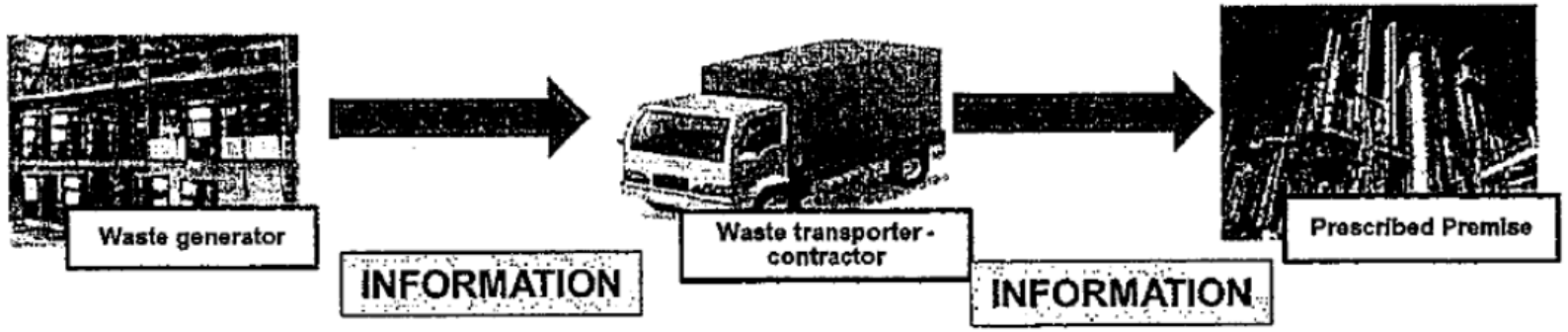
Activities by Phase	July 2023				August 2023				
	W1	W2	W3	W4	W1	W2	W3	W4	W5
1. Scheduled Waste (SW) Data Collection 1.1 Collect current PTj inventory data									
1.2 Data analysis with photographs									
2. Quotation, DoE Data Registration & LO 2.1 Site visit by the panel company									
2.2 Company quotation issuance									
2.3 Register data in DoE eSWIS									
2.4 Apply for and submit the LO									
3. Packaging, Collection & Payment 3.1 Register collection in Kualiti Alam EWIS									
3.2 Packaging & collection process									
3.3 Receive consignment note and make payment through the LO*									

*UTeM may make payment only after the company submits the consignment note.

What is a Consignment Note?

Regulation 12: Sixth Schedule - Consignment Note

Regulation 12(1) A **waste generator, contractor and occupier of the prescribed premises** shall **provide information** in accordance with the Sixth Schedule in the manner provided in this regulation or Director General shall determine other method as he thinks fit.



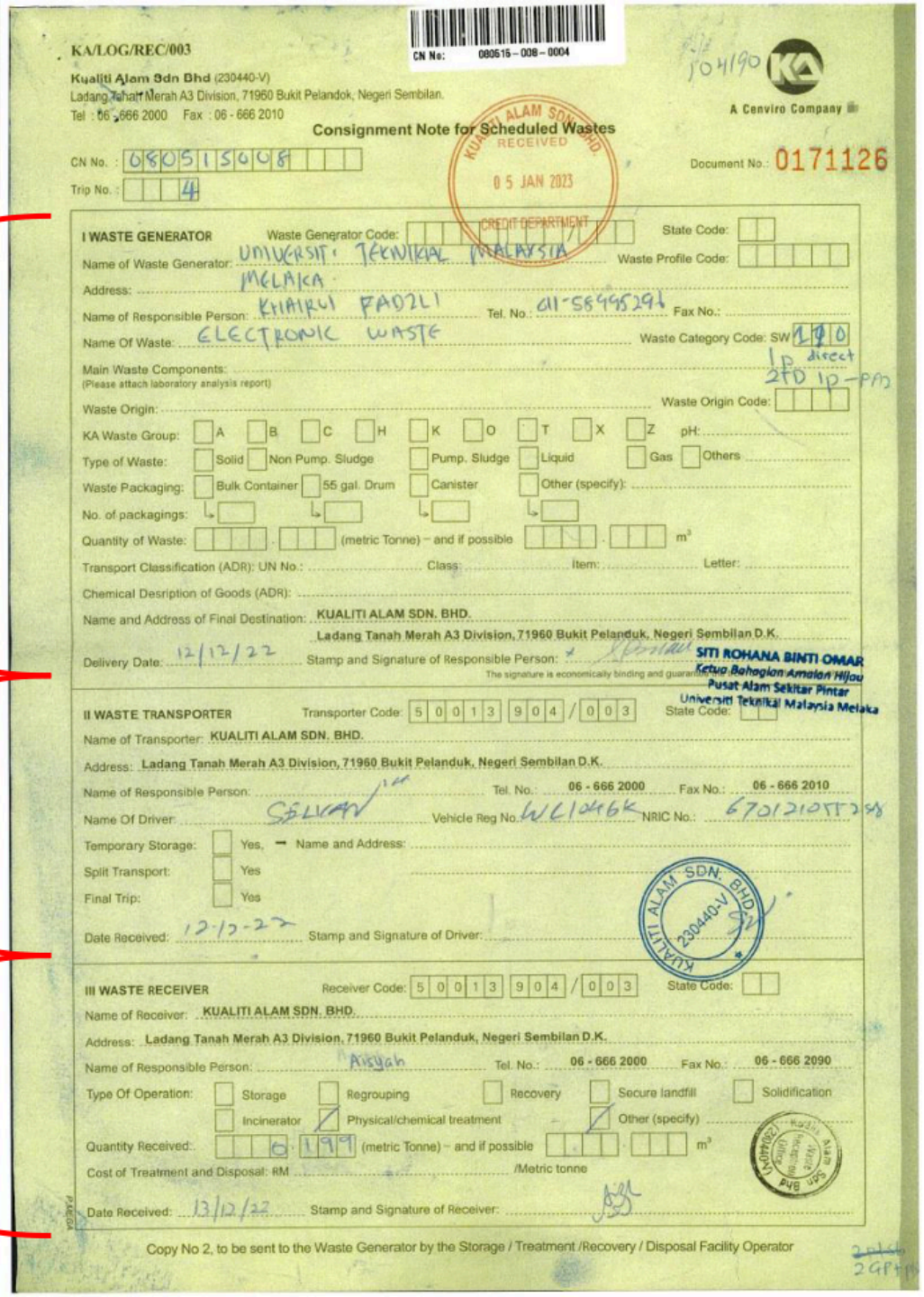
- Waste code
- Name of waste generator.
- Name of waste and category code.
- Type of waste
- Waste component.
- Waste source and source code
- Waste packaging.
- Total quantity of wastes.
- Name and address of waste receiver.
- Date.

Example of a Consignment Note

Information from Waste Generator

Information from Waste Transporter

Information from Waste Receiver



KA/LOG/REC/003

CN No: 080515-008-0004

Kualiti Alam Sdn Bhd (230440-V)
Ladang Tanah Merah A3 Division, 71960 Bukit Pelandok, Negeri Sembilan.
Tel : 06 - 666 2000 Fax : 06 - 666 2010

A Cenviro Company

Consignment Note for Scheduled Wastes

RECEIVED 05 JAN 2023 CREDIT DEPARTMENT

CN No. : 0 8 0 5 1 5 0 0 8

Trip No. : 4

Document No.: 0171126

I WASTE GENERATOR

Waste Generator Code: State Code:

Name of Waste Generator: UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Waste Profile Code:

Address:

Name of Responsible Person: KHAIRUL FADZLI Tel. No.: 011-58995291 Fax No.:

Name Of Waste: ELECTRONIC WASTE Waste Category Code: SW 1 1 0

Main Waste Components: (Please attach laboratory analysis report)

Waste Origin: Waste Origin Code:

KA Waste Group: A B C H K O T X Z pH:

Type of Waste: Solid Non Pump. Sludge Pump. Sludge Liquid Gas Others

Waste Packaging: Bulk Container 55 gal. Drum Canister Other (specify):

No. of packagings:

Quantity of Waste: (metric Tonne) – and if possible m^3

Transport Classification (ADR): UN No.: Class: Item: Letter:

Chemical Desription of Goods (ADR):

Name and Address of Final Destination: KUALITI ALAM SDN. BHD.
Ladang Tanah Merah A3 Division, 71960 Bukit Pelandok, Negeri Sembilan D.K.

Delivery Date: 12/12/22 Stamp and Signature of Responsible Person:

The signature is economically binding and guaran

SITI ROHANA BINTI OMAR
Ketua Bahagian Amalan Hijau
Pusat Alam Sekitar Pintar
Universiti Teknikal Malaysia Melaka

II WASTE TRANSPORTER

Transporter Code: 5 0 0 1 3 9 0 4 / 0 0 3 State Code:

Name of Transporter: KUALITI ALAM SDN. BHD.

Address: Ladang Tanah Merah A3 Division, 71960 Bukit Pelandok, Negeri Sembilan D.K.

Name of Responsible Person: Tel. No.: 06 - 666 2000 Fax No.: 06 - 666 2010

Name Of Driver: SELVAN Vehicle Reg No. WLC1046K NRIC No.:

Temporary Storage: Yes, → Name and Address:

Split Transport: Yes

Final Trip: Yes

Date Received: 12-12-22 Stamp and Signature of Driver:

KUALITI ALAM SDN. BHD. 230440-V

III WASTE RECEIVER

Receiver Code: 5 0 0 1 3 9 0 4 / 0 0 3 State Code:

Name of Receiver: KUALITI ALAM SDN. BHD.

Address: Ladang Tanah Merah A3 Division, 71960 Bukit Pelandok, Negeri Sembilan D.K.

Name of Responsible Person: Aisyah Tel. No.: 06 - 666 2000 Fax No.: 06 - 666 2090

Type Of Operation: Storage Regrouping Recovery Secure landfill Solidification
Incinerator Physical/chemical treatment Other (specify):

Quantity Received: 6 . 199 (metric Tonne) – and if possible m^3

Cost of Treatment and Disposal: RM /Metric tonne

Date Received: 13/12/22 Stamp and Signature of Receiver:

Copy No 2, to be sent to the Waste Generator by the Storage / Treatment /Recovery / Disposal Facility Operator

e-SWIS

Online version of Schedule 5 and Schedule 6

FIFTH SCHEDULE
(Regulation 11)
ENVIRONMENTAL QUALITY ACT 1974
ENVIRONMENTAL QUALITY (SCHEDULED WASTES) REGULATIONS 2005
INVENTORY OF SCHEDULED WASTES

1.IDENTIFICATION	
FILE REFERENCE NO:	JAS.MHQ.600-3/8/021
INVENTORY NO	
(i) PREMISE NAME	LOJI PENGOLAHAN KUMBAHAN PERSENDIRIAN - UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTEM) (LOJI PENGOLAHAN KUMBAHAN PERSENDIRIAN - UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTEM))
PREMISE ADDRESS	KAMPUS DURIAN TUNGGAL, ALOR GAJAH, MELAKA.
STATE	MELAKA
STATUS	SUBMIT
INVENTORY OF SCHEDULED WASTES FOR THE MONTH OF	NOVEMBER
INVENTORY OF SCHEDULED WASTES FOR THE YEAR OF	2022

#	DATE [a]	*WASTE CATEGORY CODE	WASTE OF NAME	BALANCE B/F (mT)	*QUANTITY GENERATED (mT)	WASTE HANDLING		
						METHOD [b]	QUANTITY (mT)	PLACE [c]
1	03/11/2022	SW109	Buangan mengandungi Mercury	0.0000	0.5000			
2	03/11/2022	SW110	elektronik waste	0.0000	0.2000			
3		SW305	MINYAK PELINCIR TERPAKAI	0.0000	0.0000			
4		SW306	MINYAK HIDRAULIK TERPAKAI	0.0000	0.0000			
5	03/11/2022	SW307	coolant	0.0000	0.4000			
6		SW404	CLINICAL WASTE	0.0000	0.0000			
7		SW404	SISA KLINIKAL	0.0300	0.0000			
8	03/11/2022	SW409	BEKAS BAHAN KIMIA	0.0000	0.3000			
9		SW410	SARUNG TANGAN GETAH TERPAKAI	0.0000	0.0000			
10	03/11/2022	SW430	BAHAN KIMIA MAKMAL USANG	0.0000	1.0000			

Note:
* Inventory of the current generation of scheduled wastes
a Date when the scheduled wastes are the first generated
b Stored, processed,recovered for materials or product from such scheduled wastes, incinerated, exchanged or other methods (specify)
c Give name and address of facility

DECLARATION
I hearby declare that all information given in this form is to best of my knowledge and believe true and correct in all respect.

NAME OF REPORTING OFFICER ***	Rusni binti Hasan
NRIC No.	760719045472
DESIGNATION	Admin
DATE	03/11/2022

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CONSIGNMENT NOTE FOR SCHEDULED WASTE

CONSIGNMENT NO: 2023032810CET0J6
DATE SUBMIT: 28/03/2023
STATUS: Received

I. WASTE GENERATOR

NAME OF WASTE GENERATOR: LOJI PENGOLAHAN KUMBAHAN PERSENDIRIAN - UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTEM)
ADDRESS: KAMPUS DURIAN TUNGGAL ALOR GAJAH MELAKA., ALOR GAJAH, MELAKA
SERIAL NO: 20230327DY63KGUJ
WASTE ORIGIN:
NAME OF RESPONSIBLE PERSON: DR. MOHD HAIZAL BIN MOHD HUSIN
WASTE ORIGIN CODE:
POSITION: Admin
WASTE PACKAGING : PLASTIC BAG
FAKS NO: 06-3316780
TYPE OF WASTE: Solid
TELEPHONE NO: 0126181447
OTHER WASTE PACKAGING:
EMAIL: kpka@utem.edu.my
WASTE COMPONENT:
COST OF TREATMENT AND DISPOSAL (RM): 0.00
QUANTITY PER PACKAGE: 4
QUANTITY (*METRIC TONNE*): 0.1450 *METRIC TONNE*
WASTE CODE: SW404 - Pathogenic wastes, clinical wastes or quarantined materials
WASTE NAME: CLINICAL WASTE

II. CONTRACTOR

NAME OF CONTRACTOR: KUALITI ALAM SDN BHD (KEMUDAHAN PENGANGKUTAN) (PYDT BT)
ADDRESS: LADANG TANAH MERAH A3 DIVISION BUKIT PELANDOK, PORT DICKSON, NEGERI SEMBILAN
NAME OF RESPONSIBLE PERSON: Harish Mirza Bin Harminder Singh @ Haidh
POSITION:
TEL NO: 066662112
FAKS NO: 06-6672300
EMAIL : harish@cenviro.com
NAME OF DRIVER: MOHAMAD IQBAL BIN MOHD ZAIMI
NRIC: 941024065349
VEHICLE NO: PNU8357
TEMPORARY STORAGE:

III. STORAGE/TREATMENT/RECOVER/DISPOSAL/FACILITY OPERATOR

NAME OF FACILITY: KUALITI ALAM SDN. BHD. (KEMUDAHAN PENSTORAN LUAR TAPAK)
ADDRESS: LADANG TANAH MERAHA3 DIVISION P. O. BOX 126PORT DICKSONNEGERI SEMBILAN
TELEPHONE NO: 066662000
NAME OF RESPONSIBLE PERSON: Rahayu Rais
FAX NO: 06-6672300
EMAIL: rahayu@kualitialam.com
TYPE OPERATION: Incineration
OTHER TYPE OPERATION:
QUANTITY (*METRIC TONNE*): 0.1450 *METRIC TONNE*
DATE RECEIVED/REJECTED: 29/03/2023
REMARK:

29/03/2023 10:02:09 PM

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Packaging & Collection Process in 2023

UTeM disposal panel company (2022-2024): Kualiti Alam Sdn Bhd













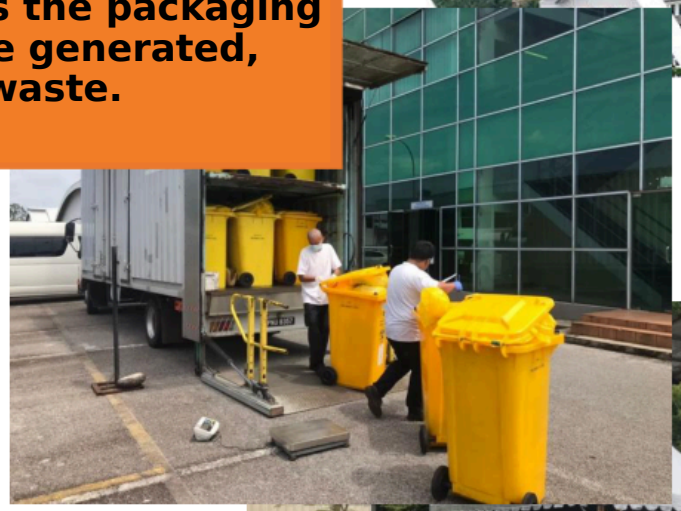


Scheduled Waste Packaging & Collection in 2023

Scheduled waste disposal management involves the packaging and collection of all types of scheduled waste generated, including clinical waste and chemical waste.







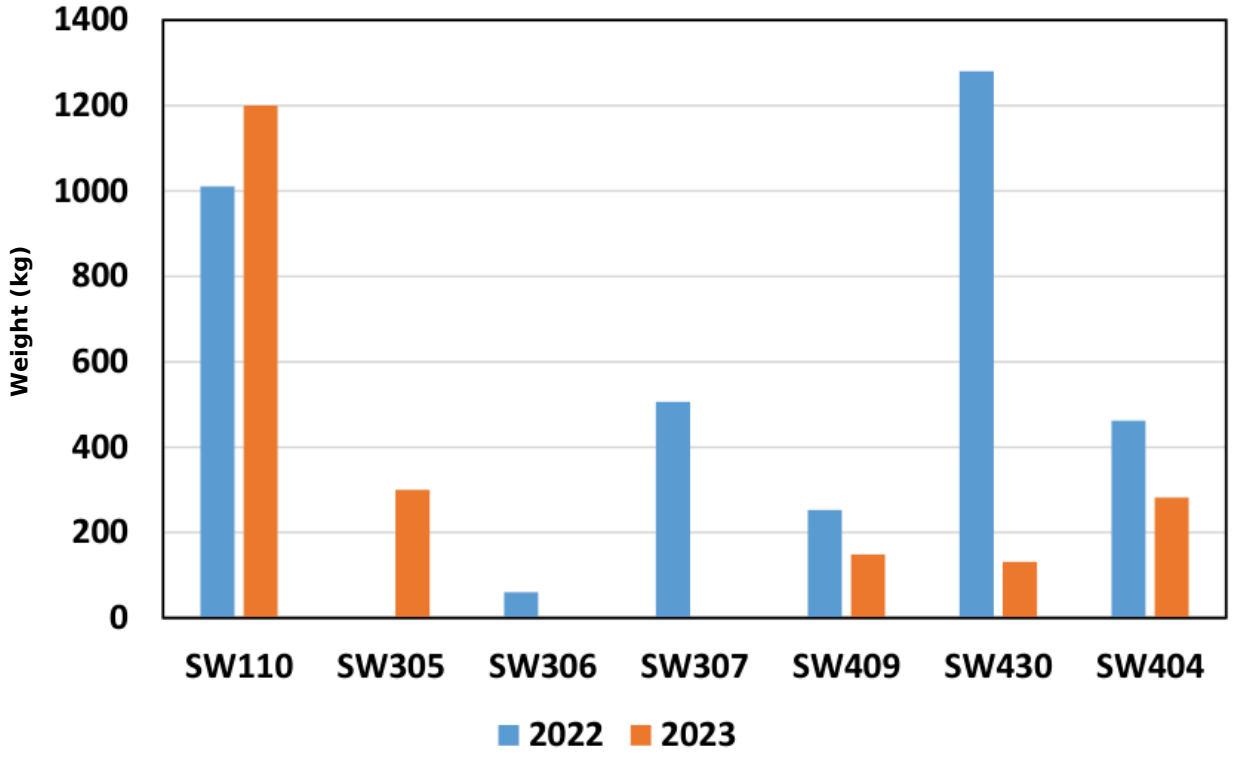








Weight Data by Scheduled Waste Code



Year	2022	2023*
Total Weight	**3.37 MT**	**2.1 MT**

*Estimated data as at 30 September 2023, before reassessment by the disposal panel company after collection (Kualiti Alam Sdn Bhd).

SW Code	Material Type
SW110/ SW109	LED Bulb, PCB, Fluorescent Tube, Wires
SW305	Lubricating Oil
SW306	Spent hydraulic oil
SW307	Emulsion waste
SW409	Contaminated Container
SW430	Obsolete Laboratory Chemicals
SW404	Clinical Waste



Thank You

www.utem.edu.my