

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

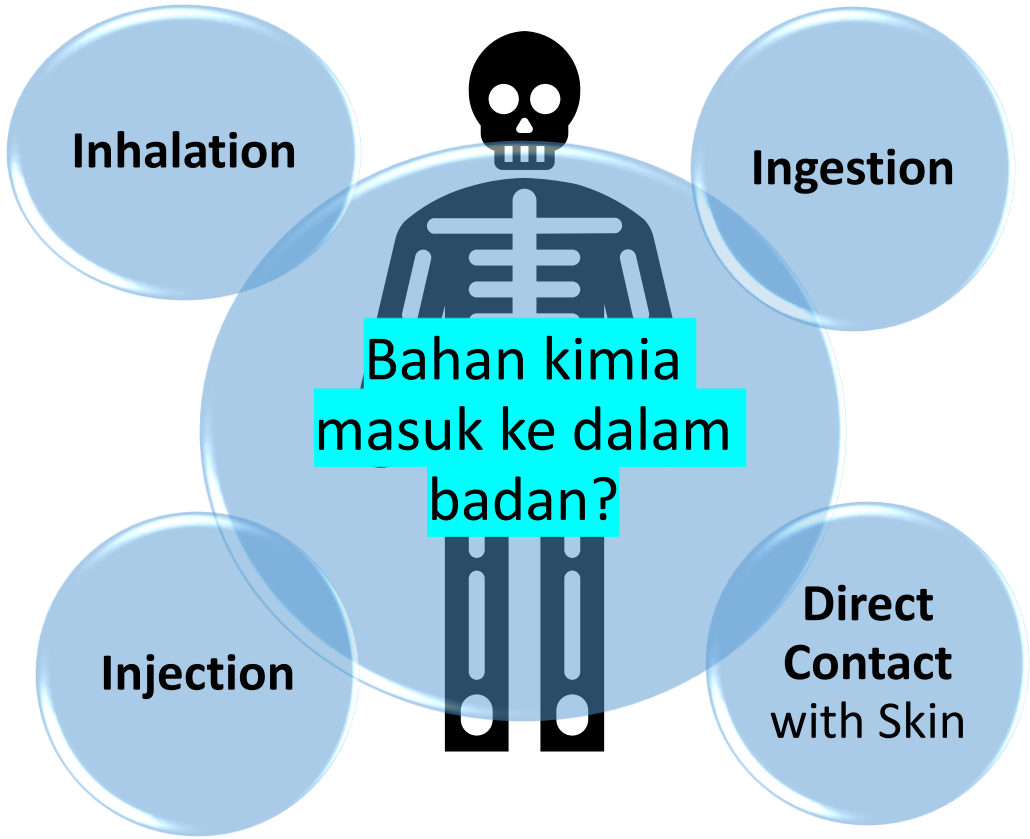
PUSAT ALAM SEKITAR PINTAR (CENSEi), UTeM

DR. KHAIRUL FADZLI BIN SAMAT

Waste Coordinator, CENSEi/ Pensyarah Kanan, FKP

CePSWaM

Pendedahan kepada Pencemaran Bahan Kimia?



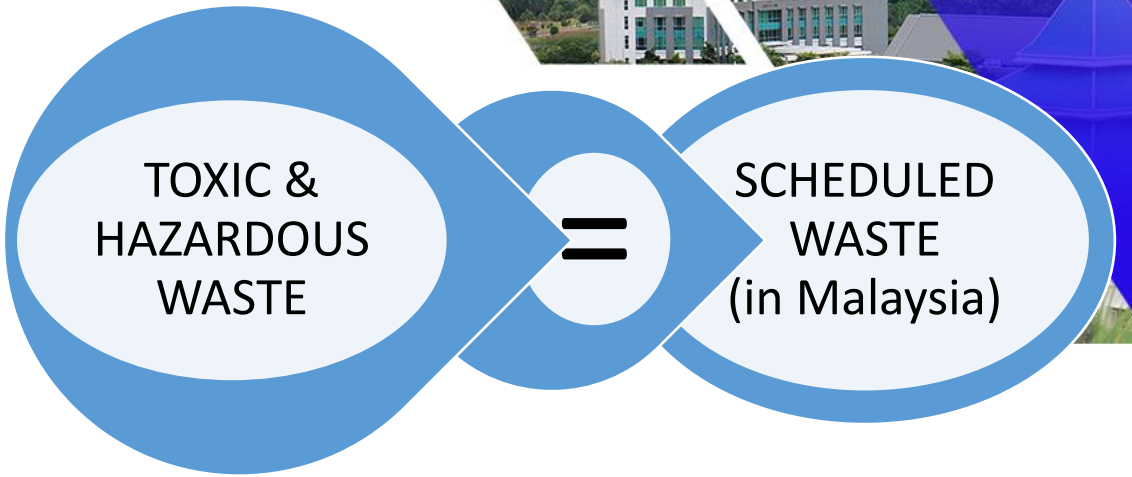
Bagaimana kaedah untuk elak bahan kimia/sisa toksik masuk ke dalam badan?

- PPE- Personal protective equipment ✓
- *Labelling & Storage* yang betul ✓
- Handling process ✓

MAKSUD BUANGAN TERJADUAL

Apakah yang dimaksudkan dengan Buangan Terjadual?

- Apa-apa buangan yang termasuk dalam ketegori buangan yang disenaraikan dalam Jadual Pertama (tafsiran Peraturan-Peraturan[1])
- Buangan terjadual adalah apa-apa buangan yang mempunyai ciri-ciri berbahaya yang berpotensi memberi kesan negatif kepada orang awam dan alam sekitar[2].



INTERNATIONAL DEFINITIONS

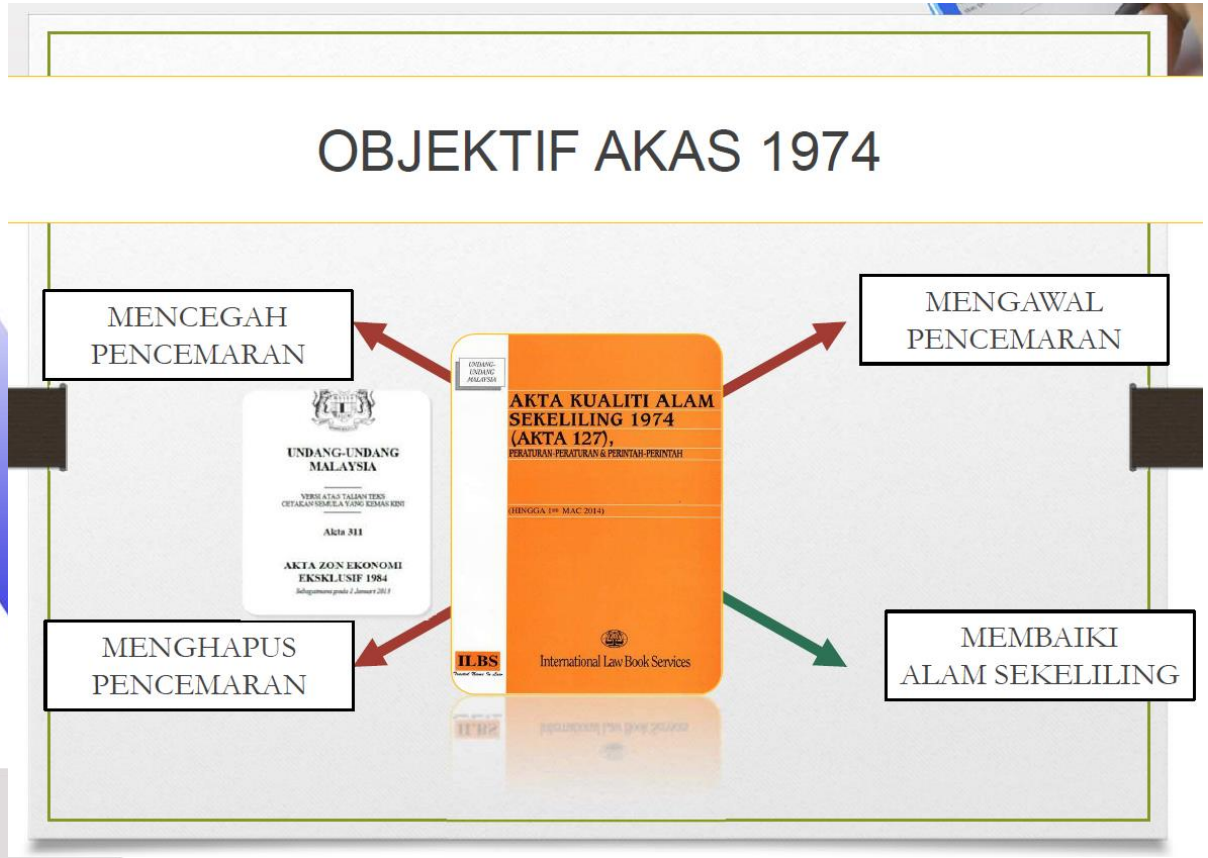
BASEL CONVENTION	• "substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law"
EUROPEAN UNION (EU)	• "an object the holder discards, intends to discard or is required to discard."

[1]Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005
[2]https://www.doe.gov.my

AKTA DAN PERATURAN BUANGAN TERJADUAL

Akta Kualiti Alam Sekeliling 1974 (Akta 127)

Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005



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

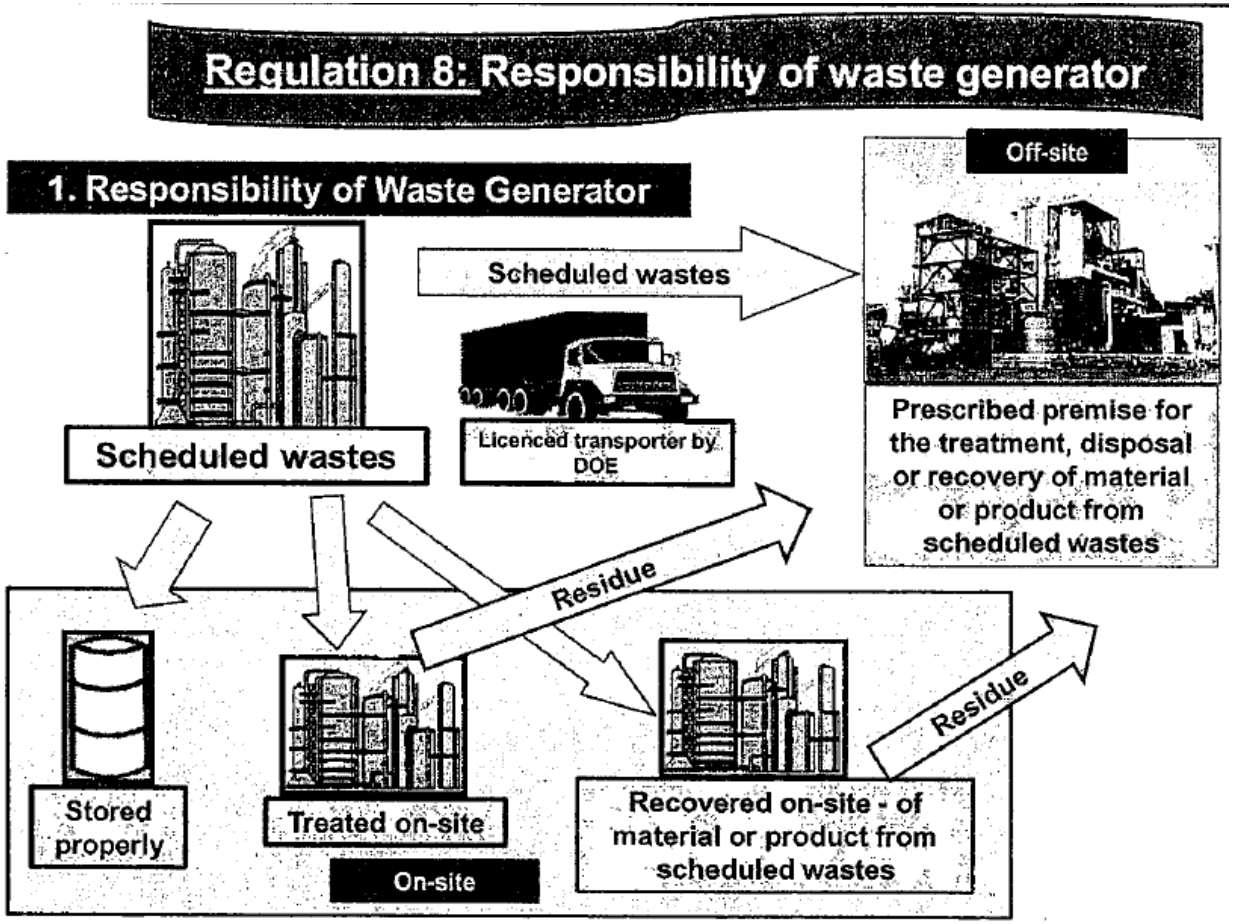
JADUAL PERTAMA
JADUAL KEDUA
JADUAL KETIGA
JADUAL KEEMPAT
JADUAL KELIMA
JADUAL KEENAM
JADUAL KETUJUH

SENARAI PINDAAN

Prinsip Proses Pelupusan Buangan Terjadual

❖ Ada **17** Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005

Peraturan 8: Tanggungjawab penjana buangan



Waste Reduction

- Can quantity of waste produced be minimized?

Reuse/Recover /Recycling

- Can waste be reused or recycled?

Treatment

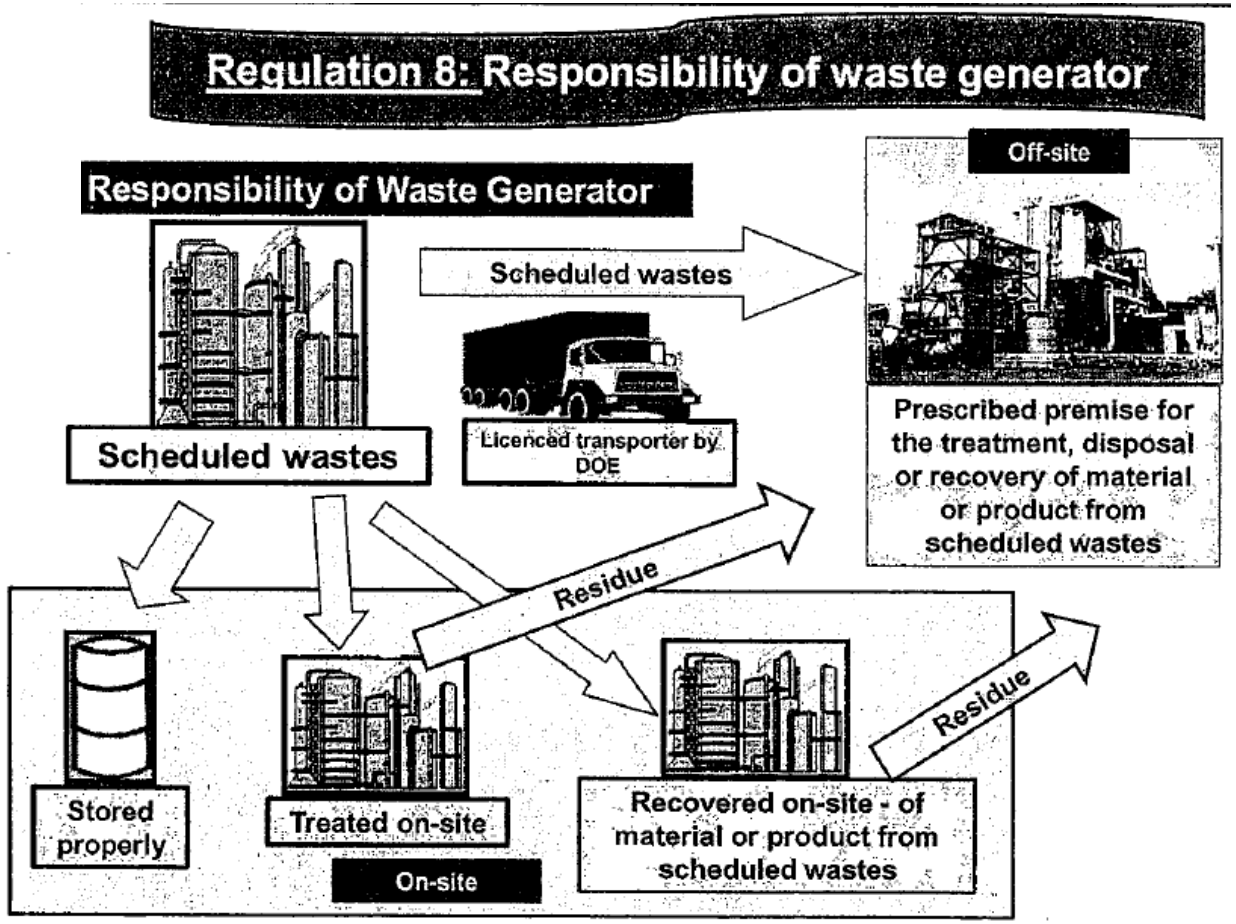
- Does hazardous nature of waste need to be reduced?

Safe Landfill/ Disposal

PRINSIP PROSES PELUPUSAN BUANGAN TERJADUAL

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PENGURUSAN SISA DI UTeM

Polisi Pengurusan Sisa Pepejal Dan Buangan Terjadual Di Universiti Teknikal Malaysia Melaka (UTeM) 2016

Sisa/Buangan Pepejal

Mengenalpasti & Pengasingan

Kontraktor Pembersihan

Guna Semula

Kitar Semula

Pengasingan Barangan Kitar Semula

Jualan sisa



Buangan Terjadual

77 Jenis Buangan Terjadual
Code: SW1- SW5

SW404 Sisa Klinikal

Selain kod SW404 & SW110*

***SW110 E-Waste**

Barang persendirian/ selain inventori-aset universiti

*E-Waste Status **ASET/INVENTORI UNIVERSITI**
Rujuk: **Surat Pekeliling Kewangan Bilangan 18 Tahun 2021** : Syarikat Panel Pelupusan Aset Bagi Kaedah Jualan Sisa Dan Ewaste

Carta Alir Pengurusan Buangan Terjadual @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.

Prosedur Tetap Pengurusan Buangan Terjadual di Malaysia-UTeM



Tanggungjawab penjana buangan

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

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Perancangan Aktiviti Proses Pelupusan di UTeM



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

Contoh perancangan aktiviti bagi proses pelupusan

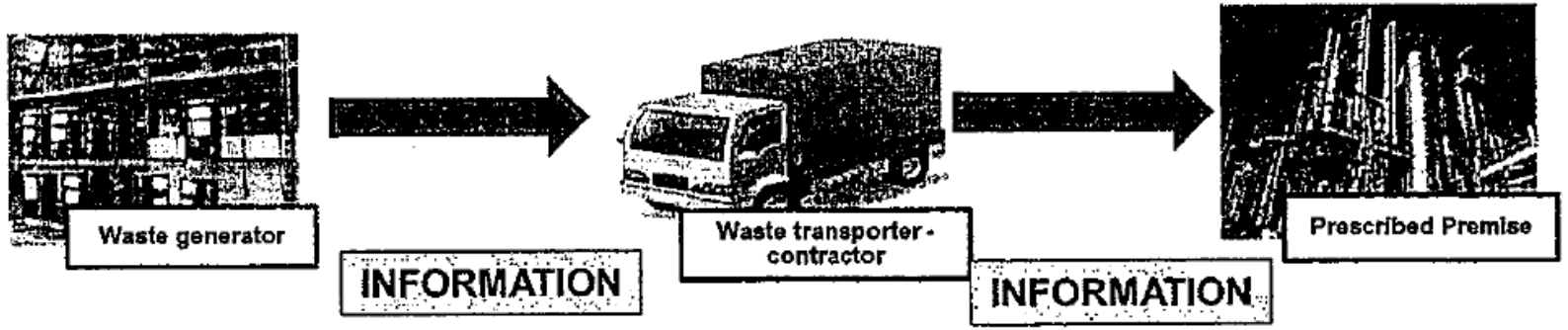
Aktiviti Mengikut Fasa	Julai 2023				Ogos 2023				
	W1	W2	W3	W4	W1	W2	W3	W4	W5
1. Pengumpulan Data Scheduled Waste (SW)									
1.1 Pungutan data terkini inventori PTj									
1.2 Analisa data beserta gambar									
2. *Quotation*, Pendaftaran data @DOE & LO									
2.1 Lawatan tapak Syarikat Panel									
2.2 Proses pengeluaran *quotation* syarikat									
2.3 Daftar data ke **eSWIS** DOE									
2.4 Proses Permohonan LO dan serahan LO									
3. *Packaging*, *Collection* dan Bayaran									
3.1 Daftar Collection di **EIWIS** Kualiti Alam									
3.2 Proses *Packaging* & *Collection*									
3.3 Penerimaan *Consignment Note* dan bayar melalui LO*									

*Pembayaran daripada UTeM hanya boleh dilaksanakan selepas syarikat hantar *Consignment Note*.

Apa itu *Consignment Note* ?

Peraturan 12: Jadual 6- *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.



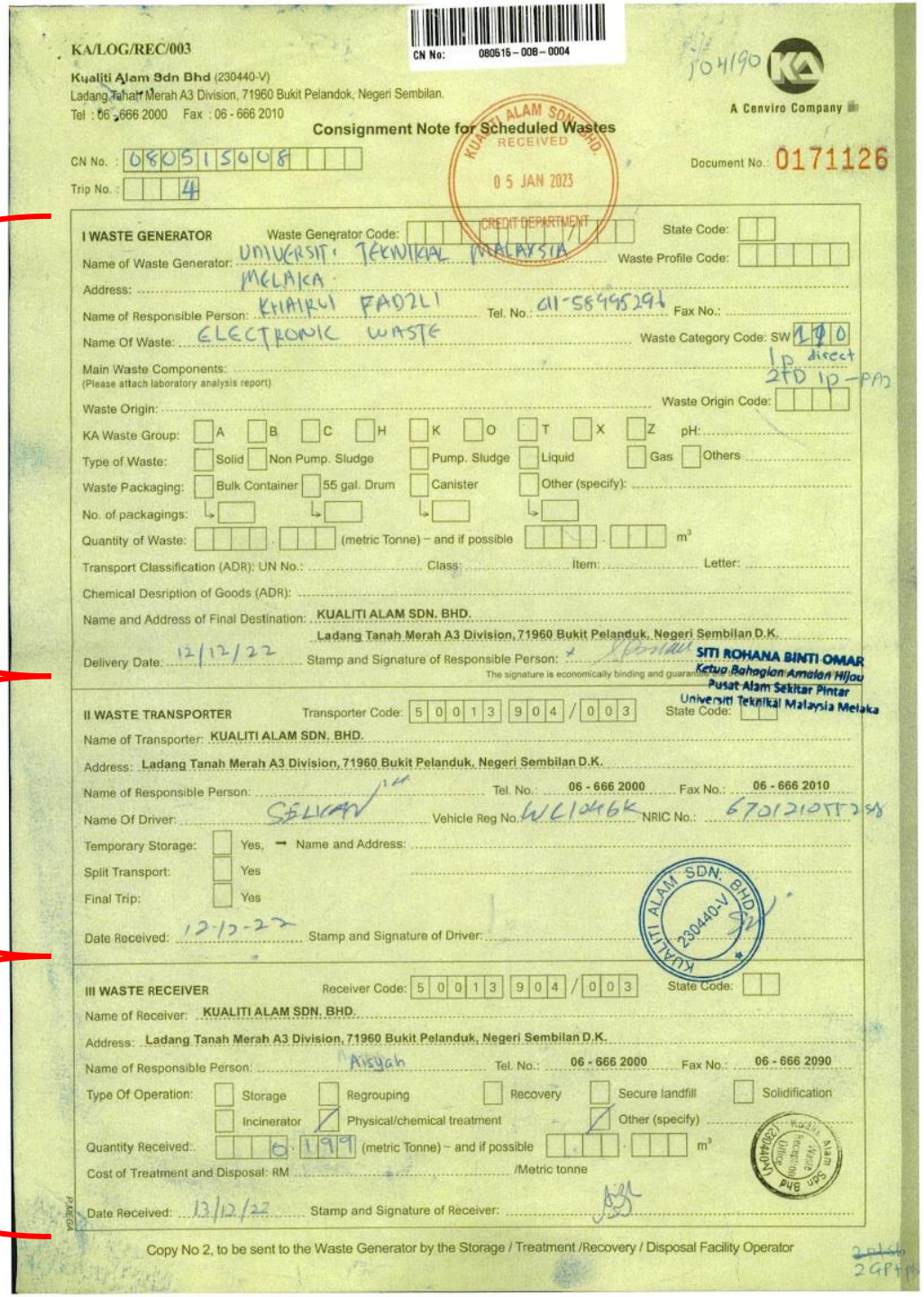
- Waste code
- Name of waste generator.
- Name of waste and category code.
- Type of waste
- Waste component.
- Waste source and source code
- Waste packaging.
- Total quantity of wastes.
- Name and address of waste receiver.
- Date.

Contoh *Consignment Note*

Info daripada *Waste Generator*

Info daripada *Waste Transporter*

Info daripada *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

KUALITI ALAM SDN. BHD. RECEIVED 05 JAN 2023 CREDIT DEPARTMENT

CN No. : 0805150084 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.: 011-58495291 Fax No.:
Name Of Waste: ELECTRONIC WASTE Waste Category Code: SW 110
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 m³
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:
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. WC1046K NRIC No.:
Temporary Storage: Yes, → Name and Address:
Split Transport: Yes
Final Trip: Yes
Date Received: 12-12-22 Stamp and Signature of Driver:

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 m³
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

Jadual 5 and Jadual 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

						WASTE HANDLING		
#	DATE [a]	*WASTE CATEGORY CODE	WASTE OF NAME	BALANCE B/F (mT)	*QUANTITY GENERATED (mT)	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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Proses *Packaging & Collection* Tahun 2023

Syarikat panel pelupusan UTeM (2022-2024): Kualiti Alam Sdn Bhd















Proses *Packaging & Collection SW* Tahun 2023

Pengurusan Pelupusan Buangan Terjadual Melibatkan Proses *Packaging & Collection* Untuk Semua Jenis Buangan Terjadual Yang Dihasilkan Termasuk Sisa Klinikal dan Sisa Bahan Kimia







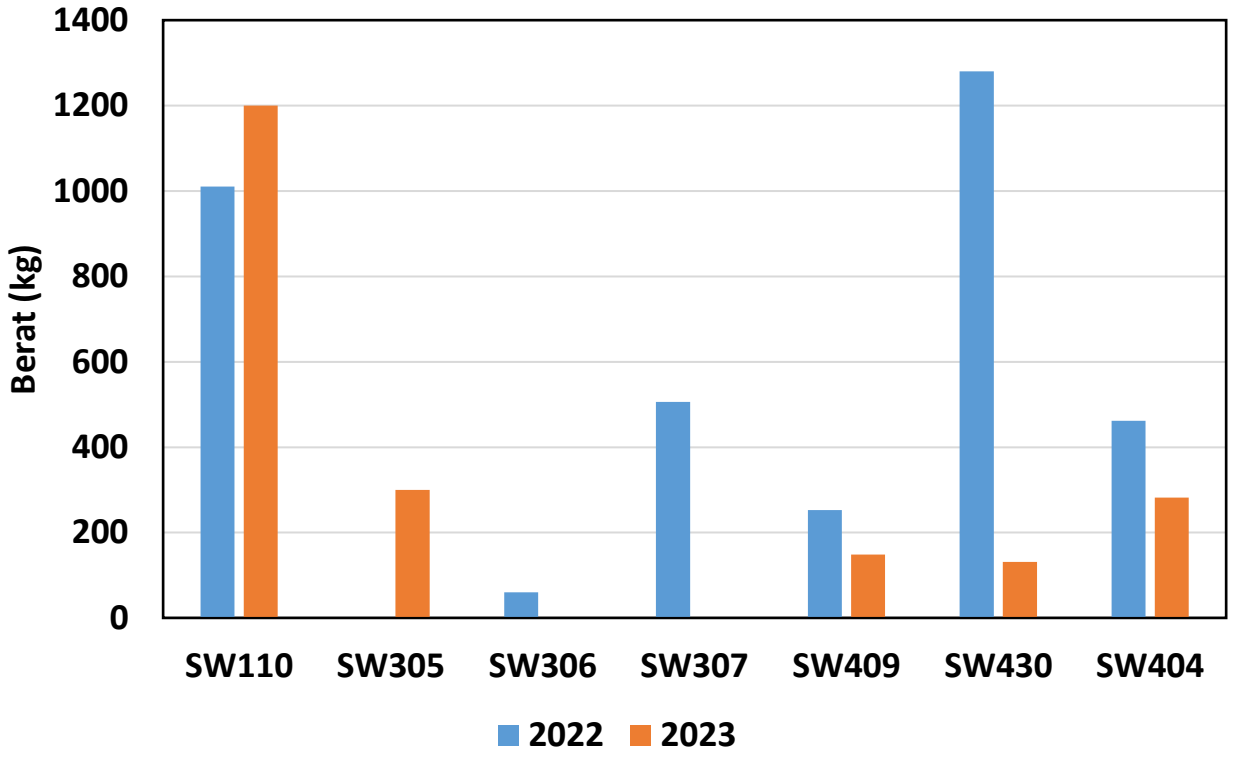








Data Berat Mengikut Kod Buangan Terjadual



Tahun	2022	2023*
Berat Keseluruhan	**3.37 MT**	**2.1 MT**

* Data anggaran 30/9/2023 sebelum dinilai semula oleh panel pelupusan selepas *collection* (Kualiti Alam Sdn Bhd)

Kod SW	Jenis Bahan
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



Terima Kasih

www.utem.edu.my