WASTE MANAGEMENT REGULATIONS, 2006

APPLICATION AND RENEWAL FOR LICENCE TO OWN WASTE TREATMENT OR DISPOSAL SITE

APPLICATION AND RENEWAL FOR LICENCE TO TRANSPORT WASTE

GENERAL GUIDELINES FOR WASTE MANAGEMENT LICENCE APPLICATION

REPUBLIC OF KENYA

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LEGAL NOTICE NO. 121

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WASTE MANAGEMENT) REGULATIONS 2006

ARRANGEMENT OF REGULATIONS

SCHEDULES

	IN EXERCISE of the powers conferred by Sections 92 and 147 of the Environmental Management and Co-ordination Act No. 8, of 1999, the Minister for Environment and Natural Resources, on the recommendation of the National Environment Management Authority and upon consultation with the relevant lead agencies makes the following Regulations:
	PART I: PRELIMINARY PROVISIONS
Citation	1. These Regulations may be cited as the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.
Application	2. These Regulations shall apply to all categories of waste as is provided for herein.
Interpretation	3. In these Regulations unless the context otherwise requires:
Cap 243	**"Act"** means Environmental Management and Co-ordination Act No.8 of 1999. **"Applicant"** means any person who applied to the Authority or lead agency for authorization to perform specific activities connected with chemicals, pesticides, radioactive substances and waste management. **"Authority"** means the National Environment Management Authority (NEMA) established under Section 7 of the Act. **"Biodegradable substance"** means a substance that can be degraded by microorganisms. **"Biomedical waste"** means any waste which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals and including categories mentioned in Ninth Schedule of these Regulations. **"Board"** means the Radiation Protection Board as established under the Radiation Protection Act, Cap. 243 Laws of Kenya. **"Disposal site"** means any area of land on which waste disposal facilities are physically located or final discharge point without the intention of retrieval but does not mean a re-use or re-cycling plant or site. **"Domestic Waste"** means waste generated from residences. **"Environmentally Sound Management of Waste"** means taking all practical steps to ensure that waste is managed in a manner which will protect human health and the environment against the adverse effects which may result from the waste.

Cap 346	**"Incineration"** means the controlled burning of solids, liquids, gaseous combustible waste to produce gases and residues containing little or no combustible materials. **"Industrial Waste"** means waste arising from processing and manufacturing industries or trade undertakings and can take the form of liquid, non-liquid, solid and gaseous substances. **"Pesticide"** has the meaning assigned to it under the Pests Control Products Act Cap. 346 of the Laws of Kenya. **"Prior Informed Consent"** means the international operation procedure for exchanging, receiving and handling notification information by the competent authority on waste. **"Radioactive Waste"** means any radioactive material that has been, or will be, discarded as of being of no further use. **"Recycling of waste**" means the processing of waste material into a new product of similar chemical composition. "**Reprocessing"** means the processing of waste into a new product of different chemical composition. **"Reuse"** means waste reused with or without cleaning and/or repairing. **"Segregation"** means any activity that separates waste materials for processing. **"Sludge"** means a none flowing mixture of solids and liquids. **"Storage"** means temporary placement of waste in a suitable location or facility where isolation, environmental and health protection and human control are provided in order to ensure that waste is subsequently retrieved for treatment and conditioning and/or disposal. **"Toxic Chemical"** means any substance, which on entry into an organism through ingestion, inhalation and dermal contact is injurious, causes physiological, or biochemical disturbances or otherwise causes deterioration of the functions of the organism in any way. **"Treatment"** means any method, technique or process for altering the biological, chemical or physical characteristics of wastes to reduce the hazards it presents. **"Waste Generator"** means any person whose activities or activities under his or her direction produces waste or if that person is not known, the person who is in possession or control of that waste. **"Waste Management"** means the activities, administrative and operational, that are used in handling, packaging, treatment, conditioning, reducing, recycling, reusing, storage and disposal of waste.

	PART II – GENERAL PROVISIONS
Responsibility of Waste Generator	(1) No person shall dispose of any waste on a public highway, street, road, recreational area or in any public place except in a designated waste receptacle. (2) Any person whose activities generate waste shall collect, segregate and dispose or cause to be disposed off such waste in the manner provided for under these Regulations. (3) Without prejudice to the foregoing, any person whose activities generates waste has an obligation to ensure that such waste is transferred to a person who is licensed to transport and dispose off such waste in a designated waste disposal facility.
Segregation of Waste by Generator	5. (1) Any person whose activities generate waste, shall segregate such waste by separating hazardous waste from non-hazardous waste and shall dispose of such wastes in such facility as is provided for by the relevant Local Authority.
Cleaner Production Principles	6. (1) Any person who owns or controls a facility or premises which generates waste shall minimize the waste generated by adopting the following cleaner production principles: improvement of production process through: conserving raw materials and energy (ii) eliminating the use of toxic raw materials within such time as may be prescribed by the Authority (iii) reducing toxic emissions and wastes monitoring the product cycle from beginning to end by: identifying and eliminating potential negative impacts of the product. (ii) enabling the recovery and re-use of the product where possible. (iii) reclamation and recycling. (c) incorporating environmental concerns in the design, process and disposal of a product.
Waste Transportation	7. (1) No person shall be granted a licence under the Act to

Licence		transport waste unless such person operates a transportation vehicle approved by the Authority upon recommendation from the relevant lead agency. Any vehicle used for transportation of waste or any other means of conveyance shall be labelled in such a manner as may be directed by the Authority. The Authority in consultation with the relevant lead agency may designate particular geographical areas as areas for operation for licensed waste transporters. The application for a licence to transport waste shall be in Form I of the First Schedule to these Regulations and shall be accompanied by the prescribed fee set out in the Second Schedule. A licence issued under the Act for the transportation of waste shall be in Form II of the First Schedule to these Regulations and shall be valid for one year from the date of issue.
Mode of transporting waste.		A person granted a licence to transport waste shall ensure that: (1) the collection and transportation of such waste is conducted in such a manner that will not cause scattering, escaping and/or flowing out of the waste; (2) the vehicles and equipment for the transportation of waste are in such a state that shall not cause the scattering of, escaping of, or flowing out of the waste or emitting of noxious smells from the waste; (3) the vehicles for transportation and other means of conveyance of waste shall follow the scheduled routes approved by the Authority from the point of collection to the disposal site or plant; and (4) he or his agent(s) possess at all times during transportation of the waste, a duly filled tracking document as set out in Form III of the First Schedule to these Regulations and shall produce the same on demand to any law enforcement officer.
Transportation of waste by licensed transporter	9.	Any person licensed to transport waste shall collect waste from the designated area of operations or storage areas and shall deliver such waste to the designated storage site, disposal site or plant.
Transitional Provision for transporting waste	10.	Any person, who before the commencement of these Regulations was carrying on the business of transporting waste, shall apply to the Authority for a licence for the transportation of waste within ninety days after the commencement of these Regulations in the prescribed Form I as set out of the First Schedule to these Regulations.

Licence for disposal facility	11.	(1) Any person granted a licence under the Act and any other licence that may be required by the relevant Local Authority to operate a waste disposal site or plant, shall comply with all conditions imposed by the Authority to ensure that such waste disposal site or plant operates in an environmentally sound manner. (2) An application for a licence to operate a waste disposal site or plant shall be in Form IV of the First Schedule to these Regulations and shall be accompanied by the prescribed fee set out in the Second Schedule. A licence issued under the Act for the operation of a waste disposal site or plant shall be as in Form V as set out in the First Schedule to these Regulations.
Transitional Provision for disposal facilities	12.	Any person who before the commencement of these Regulations was carrying on the business of operating a waste disposal site or plant shall apply to the Authority for a licence as prescribed in these Regulations within ninety days after the commencement of these Regulations.
Waste treatment by operators of disposal sites. Cap 265	13.	Any operator of a disposal site or plant shall apply the relevant provisions on waste treatment under the Local Government Act and Regulations thereunder to ensure that such waste does not present any imminent and substantial danger to public health, the environment and natural resources.
Validity of license and renewals	14.	A licence to operate a waste disposal site or plant shall be valid for a period of one year from the date of issue and may be renewed for a further similar period on such terms and conditions as the Authority may deem necessary or impose for purposes of insuring public health and sound environmental management.
Requirement for Environmental Audit	15.	Every licensed owner or operator of a waste disposal site or plant shall carry out an annual environmental audit pursuant to the provisions of the Act.
Re-use and recycling plants	16.	Notwithstanding any provisions to the contrary herein, these Regulations shall apply to plants and sites established for re-use or re-cycling of wastes.
	PART III– INDUSTRIAL WASTES	
General Obligation to mitigate pollution	17.	(1) Every trade or industrial undertaking shall install at its premises anti-pollution technology for the treatment of waste emanating from such trade or industrial undertaking; (2) Anti-pollution technology installed pursuant to

	Regulation 17(1) shall be based on the best available technology not entailing excessive costs or other measures as may be prescribed by the Authority.
Treatment of Industrial Waste	18. No owner or operator of a trade or industrial undertaking shall discharge or dispose of any waste in any state into the environment, unless the waste has been treated in a treatment facility and in a manner prescribed by the Authority in consultation with the relevant lead agency.
Application of Existing Regulations	19. The provisions of Part II above shall apply *mutatis mutandis* to solid wastes generated by industrial or trade undertakings.
Application of Existing Regulations	20. The provisions of the Act relating to water quality regulations shall apply *mutatis mutandis* to effluents discharged into the aquatic environment from industrial or trade undertakings.
Application of Existing Regulations	21. The provisions of the Act relating to air quality regulations shall apply *mutatis mutandis* to gaseous emissions from industrial or trade undertakings.
	PART IV: HAZARDOUS WASTES
Hazardous Waste Specifications	22. For the purposes of this part, waste considered as hazardous, shall be any waste specified in the Fourth Schedule or any waste having the characteristics defined in the Fifth Schedule, and any wastes which do not fit the said categories of classification will be treated as non-hazardous waste.
Requirement for Environmental Impact Assessment	23. No person shall engage in any activity likely to generate any hazardous waste without a valid Environmental Impact Assessment licence issued by Authority under the provisions of the Act.
Handling, storing, and transporting of hazardous waste	24. (1) Every generator of hazardous waste shall ensure that every container or package for storing such waste is secure and labelled in easily legible characters, written in English and Kiswahili. (2) The label shall contain the following information: (a) the identity of the hazardous waste. (b) the name, physical address and telephone contact of the generator of waste. (c) the waste composition and total weight of waste. (d) the normal storage stability and methods of storage. (e) the name and percentage of weight of active

	ingredients and names and percentages of weights of other ingredients or half-life of radioactive material. (f) warning or caution statements which may include any of the following as appropriate: (i) the words **“WARNING”** or **“CAUTION”**; (ii) the word **“POISON”** (marked indelibly in red on a contrasting background; and (iii) the words **“DANGER! KEEP AWAY FROM UNAUTHORIZED PERSONS”**; and (iv) a pictogram of a skull and crossbones. (g) a statement of first aid measures, including the antidote when inhaled, ingested or dermal contact and a direction that a physician must be contacted immediately. (3) The provisions of Part II of these Regulations relating to the license for transportation of waste and mode of transporting waste shall apply *mutatis mutandis* to this Part.
Application of existing Regulations	25. The provisions of Part II of these Regulations relating to disposal facilities, plants or sites shall apply *mutatis mutandis* to hazardous wastes.
Treatment of Hazardous Waste	26. (1) Every person who generates toxic or hazardous waste shall treat or cause to be treated such hazardous waste using the classes of incinerators prescribed in the Third Schedule to these Regulations or any other appropriate technology approved by the Authority. (2) Any leachate or other by-products of such treated waste shall be disposed of or treated in accordance with the conditions laid down in the license or in accordance with guidelines issued by the Authority in consultation with the relevant lead agency. (3) In issuing a licence for the disposal of waste, the Authority shall clearly indicate the disposal operation permitted and identified for the particular waste
Export Permit	27. **(1)** No person shall export hazardous wastes without a valid permit issued by the Authority and a valid Prior Informed Consent document issued by the designated national authority of the receiving country. (2) An application for exportation of toxic or hazardous

	waste shall be submitted to the Authority in Form I set out in the Sixth Schedule accompanied by the prescribed fee and a copy of the Prior Informed Consent document from the receiving country. (3) Where the Authority is satisfied that all the requirements have been complied with, it shall issue an export permit as set out in Form II of the Sixth Schedule. (4) Where a permit is issued under these Regulations, the permit holder shall be send a copy of the permit to the Kenya Revenue Authority for the necessary customs verification and control.
Validity of Export Permit	28. An export permit issued under these Regulations shall relate to the specific export transaction and shall not be valid for any subsequent export transactions.
Non-Transferability of Permit	29. A permit for the export of toxic or hazardous wastes issued under these Regulations shall not be transferable.
Transit of Hazardous Waste	30. No person shall transit toxic or hazardous waste destined for another country through the territory of Kenya without a valid Prior Informed Consent for such movement issued by the Authority, the prescribed document for transboundary movement of waste set out in Form I of the Sixth Schedule, the transit permit set out in Form II of the Sixth Schedule and any other documents prescribed by the competent customs authority.
Insurance	31. (1) An applicant for a permit issued under the Act and these Regulations, shall satisfy the Authority that he or she has subscribed to an insurance policy covering the risks likely to arise out of the activity for which the license is required (2) A generator of waste which has been characterized as toxic or hazardous under these Regulations, shall upon written instructions from the Authority, subscribe to an insurance policy to cover the risks caused by the waste.
Application of Existing Regulations	32. The provisions of the Act relating to management of toxic and hazardous chemicals and materials shall apply *mutatis mutandis* to this part.
	PART V: PESTICIDES AND TOXIC SUBSTANCES
Classification, registration, labeling, packaging, advertising, import, export, distribution, storage, transportation, handling and disposal of pesticides. *Cap 346*	33. The Regulations made under the Pests Control Products Act relating to the classification, registration, labeling, packaging, advertising, import, export, distribution, storage, transportation, handling and disposal of pesticides shall apply to this Part.

Disposal of pesticides	34. No person shall dispose of any pesticide or toxic substance other than at a designated site or plant approved by the Authority.
Application of Existing Regulations.	35. The provisions of Part IV of the Regulations shall apply *mutatis mutandis* to disposal of pesticide wastes.
	PART VI: BIOMEDICAL WASTES
Requirement for Environmental Impact Assessment from bio-medical waste generator	36. No person shall own or operate any institution that generates bio-medical waste without a valid Environmental Impact Assessment licence issued by the Authority under the provisions of the Act.
Approval of biomedical waste generating facility	37. Any person who generates biomedical waste shall ensure that the generating facility has been approved by the appropriate lead agency and Local Authority.
Segregation of biomedical waste	38. Any person who generates biomedical waste shall at the point of generation and at all stages thereafter segregate the waste in accordance with the categories provided under the Seventh Schedule to these Regulations
Securing and packaging of bio-medical waste.	39. All biomedical waste shall be securely packaged in biohazard containers which shall be labeled with the symbols set out in Part I and II of the Eighth Schedule to these Regulations.
Treatment of biomedical waste	40. Any person who generates waste shall treat or cause to be treated all biomedical waste in the manner set out in the Ninth Schedule to these Regulations, before such biomedical waste is stored or disposed of.
Monitoring by lead agency	41. The relevant lead agency shall monitor the treatment of all biomedical waste to ensure that such waste is treated in a manner that will not adversely affect public health and the environment.
Storage of biomedical waste.	42. No person shall store biomedical waste above 0º C for more than seven days without the written approval of the relevant lead agency, provided that untreated pathological waste shall be disposed of within 48 hours.
Transportation of biomedical waste	43. **(1)** No person shall transport biomedical waste without a valid permit issued by the Authority in consultation with the relevant lead agency. (2) No person shall transport or allow to be transported biomedical waste save in a specially designed vehicle or other means of conveyance so as to prevent scattering, escaping, flowing, spillage or leakage of the waste.

Transfer Stations.	44. The provisions of these regulations relating to storage and transportation of bio-medical waste shall apply to owners or operators of transfer stations.
Requirement of Environmental Impact Assessment for biomedical waste disposal site or plant and license to operate	45. No person shall own or operate a biomedical waste disposal site or plant without an Environmental Impact Assessment licence issued by the Authority under the provisions of the Act and an operating license issued by the Authority.
Requirement of Environmental Audits	46. Within six months after the commencement of these Regulations, operators of bio-medical waste disposal sites or plants shall submit an Environmental Audit reports and thereafter annual Audit Reports to the Authority.
Standards for Biomedical Waste disposal sites or plants	47. No person shall be issued with a licence to operate a biomedical waste disposal site or plant unless such site or plant complies with the requirements set out in the Third and Tenth Schedule to these Regulations.
	PART VII: RADIOACTIVE SUBSTANCES
Application of Radiation Protection Act Cap 243	48. The Provisions of the Regulations made under the Radiation Protection Act in relation to the classification, registrations, labelling, packaging, transportation, importation, exportations, waste disposal and health and safety requirements with regard to radioactive substances shall apply to this part.
Requirement for Environmental Impact Assessment	49. No person shall dispose of any radioactive substance or waste other than at a designated site or plant approved by the Authority.
	PART VIII: MISCELLANOUS
Register of licences and permits	50. The Authority shall maintain a register of all licences and permits issued under these Regulations.
Offences and Penalties	51. Any person who violates the provisions of these Regulations commits an offence and is liable on conviction to imprisonment for such a term and such fine as provided for in the Act.
Operation of Regulations	52. These Regulations shall, without prejudice, operate in addition to any other Regulations and Standards made under any other law.

FIRST SCHEDULE

(To be completed in Triplicate)

FORM I

FORM NEMA/WM/1

APPLICATION/RENEWAL FOR A LICENCE FOR TRANSPORTATION OF WASTE
(Regulation 7)

I hereby apply for a license to transport waste, of which particulars are given below:

Name and address o f applicant ……………………………………………………………………….

....

PIN Number ………………………………………………………………………………………..

Registration number and type of vehicles to transport waste ……………………………………………

……………………………………………………………………………………...........................

Quantity of waste per vehicle to be transported …………………………………………………………

……

Licensed sites/plant to which waste is to be transported ………………………………………………...

……

Collection schedule ……………………………………………………………………..................

……

Any other information ……………………………………………………………………................

……

Attach Recommendation document(s) from the relevant lead agency.

Is Application for: ☐ Initial licence ☐ Renewal

Previous License Number ……………………………………………………………………………….

Date …………………………………… …. Signature……………………………………………

Designation/Title:……………………………………………………………………..………………..

FOR OFFICIAL USE ONLY

Application received by ……………………………………………..… on ……………20.............

Fee paid KShs………………………….(in words) …………………………………………………..

……………………………………………………………………………………………………….

Director General
National Environment Management Authority

FORM II

FORM NEMA/WM/2

LICENCE TO TRANSPORT WASTE
(Regulation 7)

Licence No TR/HW……………….

Name…………………………………………………………………………………………………..

Address

……………………………………………………………………………………………….……….

………………………………………………………………………………………………………..

You are hereby licenced to transport waste to:

……

(location/district)

from…………………………………………………………………………………………………..

(location/district)

Type and registration number of vehicles licensed …………………………………………………

……………………………………………………………………………………………………….

This licence is valid from …………………………………………………………… 20…….

….to……………………………………………………………………………………… 20……………

This licence is granted subject to the following conditions:

……………………………………………………………………………………………………….

……………………………………………………………………………………………………….

……………………………………………………………………………………………………….

Date:……………………………………   Signature………………………………….

. …………………………………………………………………………………………………

Director General
National Environment Management Authority

FORM NEMA/WM/3

FORM III

(To be completed in Five Copies)

TRACKING DOCUMENT
(Regulation 8)

<table>
<tr><td>A

Transporter</td><td>Serial No.
Registered Name of Transporter……………………….……………………..
Usual Municipality/District of operation…………..………………………..……
License number ………………………………………………………………….
Issuing Authority ……………………………………………….……………….</td></tr>
<tr><td colspan="2">CONSIGNMENT NOTE FOR THE CARRIAGE AND DISPOSAL OF SOLID WASTE</td></tr>
<tr><td>B

Description of the waste</td><td>Area collected ..…………………………..……………………………..
Type of Waste…………………………..………………………………..
Description and physical nature of waste…………….…………….………………
Quantity/size of waste ………………………………….….………………
Number of containers…………………………………..……………..</td></tr>
<tr><td>C

Disposer's Certificate</td><td>I certify that I have received the waste as described in A and B above..
The waste was delivered in vehicle
______________________________________(Registration No.) at
_____________________ (time) on
_______________________________ (date) and the carrier gave
his/her name as ____
on behalf of ____.
The waste shall be disposed off as per disposal licence issued by the Authority.

Signed: ____
Name:____
Position: ____
Date: ____
On behalf of:

____</td></tr>
</table>

FORM NEMA/WM/4

FORM IV

(To be completed in Triplicate)

APPLICATION/RENEWAL FOR A LICENCE TO OWN/OPERATE A WASTE TREATMENT OR DISPOSAL SITE

(Regulation 11, 24, 25)

I hereby apply for a licence to own/operate a waste treatment plant/disposal site, of which particulars are given below:-

Name and address of applicant…………………………………………………………………...

..………………………………………………………………………………………………..

..………………………………………………………………………………………………..

PIN Number ……….…………………………………………………………………………….

Location and district of plant/site ………………………………………………………………

..………………………………………………………………………………………………

..………………………………………………………………………………………………

..………………………………………………………………………………………………

Approval of Town/Country Planning Authority ………………………………………………...

..………………………………………………………………………………………………..

..………………………………………………………………………………………………..

..………………………………………………………………………………………………..

Types of waste to be disposed of at plant/site

……………………………………………………..

..………………………………………………………………………………………………..

..………………………………………………………………………………………………..

Quantity being disposed of/per annum (tonnes/kg) ……………………………………………..

..………………………………………………………………………………………………..

..………………………………………………………………………………………………..

Type of facilities/treatment to be carried on at plant/site:

(a) Land fill ……………………………………………………………………………………

(b) Compost……………………………………………………………………………………

(c) Incinerator…………………………………………………………………………….

Other (specify)……………………………………………………………………………..

Estimated life span of plant/site………………………………………………….……………

Proposed hectarage/area of plant/site (include plan or designs)…………………………………………

..………………………………………………………………………………………………

Executive summary of environmental impact statement (please attach)

Is Application for: ☐ Initial license ☐ Renewal

Previous License Number ………………………………………………………………………………

E.I.A. License Number …………………………………………………………………………………

Any other information…………………………………………………………………………………..

..………

..………

………………………………………………………..

Date:……………………………………… Signature:…………………………………………..

Designation/Title:…………………………………………………………………………………

FOR OFFICIAL USE ONLY

Application received by………………………………………on……………………20…………

Fee paid KShs.………………………..(in words)……………………………………………………

..……..

……………………………………………………………………………………………...…………

Director General
National Environment Management Authority

FORM NEMA/WM/5

FORM V

LICENCE TO OWN/OPERATE WASTE TREATMENT PLANT/DISPOSAL SITE

(Regulation 11, 24, 25)

Licence No. WD/HW……………………..

Name………………………………………………………………………………………………

……….

Address……………………………………………………………………………………………

……….

You are hereby licensed to own/operate a treatment plant/waste disposal site:

……

(Plot No., division, district, province)

This licence is valid from……………………20… to……………………….................20………….

This licence is subject to the following conditions:

..……………………………………………………………………………………………………….

..……………………………………………………………………………………………………….

..……………………………………………………………………………………………………….

..……………………………………………………………………………………………………….

..……………………………………………………………………………………………………….

..……………………………………………………………………………………………………….

Date:…………………………………………. Signature…………………………

……

Director General
National Environment Management Authority

SECOND SCHEDULE

(Regulations 7, 11, 24, 25, 27)

FEES

1. Application for licence/Permit:

for transportation of waste ....…………… KShs.3,000.00

To own/operate a waste processing plant/site KShs.3,000.00

to own/operate a waste disposal plant/site KShs.3,000.00

to export/transit waste KShs.3,000.00

2. Licence/Permit

For a licence/permit to:

Transport waste KShs.5,000.00

Own/operate a waste processing plant/site… KShs.40,000.00

Own/operate a waste disposal plant/site KShs.75,000.00

to export/transit waste KShs.30,000.00

THIRD SCHEDULE

(Regulations 26, 47)

STANDARD FOR TREATMENT AND DISPOSAL OF WASTES

A. Classification of Incinerators

Class 1: Industrial Plants Burning Waste as an Additional/Alternative Fuel

Incinerators in which the waste serves as the fuel or supplementary fuel in an industrial process (e.g. the use of cement kilns or any other industrial boilers or furnaces for the disposal of noxious or hazardous materials).

Class 2 Industrial Incinerators
Class 2A: Commercial

Incinerators for the disposal of waste that contains hazardous, potential hazardous and bio-medical waste where the operator exceeds 100 Kg/day.

Class 2B: Small Scale Incinerators for Private Use

Incinerators for the disposal of hazardous, potential hazardous and bio-medical waste where the operator does not exceed 100 kg/ day.

Class 3: General waste Incinerators

Incinerators for general waste that is non toxic, non hazardous, non medical or does not contain organic halogens, i.e., selected customs, police, contraband goods, offices waste, commercial waste and industrial wastes) where the operator does not exceed 1 ton/ day.

STANDARDS, GUIDELINES, CRITERIA, PROCEDURE FOR INSTALLING/OPERATING INCINERATORS

No.	Parameter	Standards, Guideline, Criteria and Procedure
1	Basic Plant Design	An approved plant must have four distinct sections that demonstrate three principles of **Turbulence**, **Residence Time** and **Temperature** are inbuilt in the plant design .The regulated sections may include but not limited to: Overall plant layout. Feed chamber/ charging Primary Combustion Chamber. Secondary Combustion Chamber. Particulate Scrubbers Acid Gas Scrubbers The stack/ chimney.
2	**Feeding And Charging**	Controlled hygienic, mechanical or automatic feeding methods have to be used which will not influence the air temperature in the primary and secondary chambers of the incinerator negatively. No waste is to be fed into the incinerator: 1. Until the minimum temperatures have been reached. 2. If the minimum combustion temperatures are not maintained. 3. Whenever the previous charge has not been completely combusted in the case of batch feeding. 4. Until such time as the addition of more waste will not cause the design parameters of the incinerator to be exceeded.
3	**Primary Combustion Chamber**	The primary combustion chamber must: 1. Be accepted as the primary combustion zone. 2. Be equipped with a burner/s burning gas/fuel or low sulphur liquid fuels. Other combustion methods will be judged on merits. 3. Ensure primary air supply is controlled efficiently 4. Ensure minimum exit temperature is not less than 850^{o}C
4	**Secondary Combustion Chamber (Afterburner).**	The secondary combustion chamber must: 1. Be accepted as secondary combustion zone. 2. Be fitted with secondary burner/s burning gas or low sulphur liquid fuel or any suitable fuel. 3. Ensure secondary air supply is controlled efficiently. 4. Ensure flame contact with all gases is achieved. 5. Ensure residence time is not less than two (2) seconds. 6. Ensure the gas temperature as measured against the inside wall in the secondary chamber & not in the flame zone, is not less than 1100^{o}C. 7. Ensure the oxygen content of the emitted gases is not less than 11%. 8. Ensure both primary and the combustion temperatures are maintained until all waste has been completely combusted
5	**Particulate Removers**	A mechanical particulate collector must be incorporated after secondary combustion chamber for removal of particulate pollutants entrained in the flue gas stream. The particulate collectors may include any of the following or a combination thereof:

		Cyclone separator Electrostatic precipitators Fabric filters
6	**Chimney / Stack**	1. The chimney should have a minimum height of 10 meters above ground level and clear the highest point of the building by not less than 3 meters for all roofs. The topography and height of adjacent buildings within 50 meters radius should be taken into account. 2. If possible the chimney should be visible to the operator from the feeding area. 3. The addition of dilution air after combustion in order to achieve the requirement of these guidelines is unacceptable. 4. The minimum exit velocity should be 10 m/s and at least twice the surrounding wind speed (Efflux velocity = wind speed x 2) whichever is higher to ensure no down washing of exiting gases. 5. Point for the measurement of emissions shall be provided.
7	**Instrumentation**	Instrument for determining the inside wall temperature and not burner flame temperature **must** be provided for both primary and secondary chambers. 2. An audible and visible alarm **must** be installed to warn the operator when the secondary temperature drops to below the required temperature. 3. In addition to the above the following instruments **may** also be required. A carbon monoxide and/or oxygen meter/recorder A smoke density meter/recorder A gas flow meter/recorder A solid particulate meter/recorder Any other instrument or measurement that may be considered necessary
8	**Location / Siting**	1. Must be sited in accordance with the relevant local municipal authority planning scheme, the topography of the area and be compatible with premises in the neighborhood, 2. Must be housed in a suitably ventilated room.
9	**Emission Limits**	1. Combustion efficiency: Combustion efficiency (CE) shall be at least 99.00% The Combustion efficiency is computed as follows; $C.E= \frac{\% CO_2}{\% CO_2 + CO} \times 100$ 2. The temperature of the primary chamber shall be 800 ± 50^o C 3. The secondary chamber gas residence time shall be at least 1 (one) second at 1050 ± 50^o C, with 3% Oxygen in the stack gas. 4 Opacity of the smoke must not exceed 20% Viewed from 50 meters with naked eyes 5. All the emission to the air other than steam or water vapour must be odourless and free from mist, fume and droplets. 6. The Authority may require that the certificate holder have tests carried out by an accredited institution to determine stack and/or ground level concentrations of the following substances.

		Cadmium and compounds as Cd Mercury Hg Thallium Tl Chromium Cr Beryllium Be Arsenic As Antimony Sb Barium Ba Lead Pb Silver Ag Cobalt Co Copper Cu Manganese Mn Tin Sn Vanadium V Nickel Ni Hydrochloric HCL Hydrofluoric acid HF Sulphur dioxide $S0_2$ 7. A 99.99% destruction and removal efficiency (DRE) for each principal organic hazardous constituent (POHC) in the waste feed where: DRE = [(Win - Wout)/Win]*100 Where: Win = mass feed rate of the POHC in the waste stream fed to incinerator, and Wout = mass emission rate of POHC in the stack prior to the release to the atmosphere. 8. The average dioxin and furan concentration in the emissions should not exceed 80ng/m^3 total dioxins and furans if measured for a period of 6 to 16 hours. ***Note:*** *All pollutant concentrations must be expressed at O^o C and 1.013 x 10^5 N/m^2, dry gas and 11% oxygen correction.* Oxygen correction is computed as: $E_s = \frac{21 - O_s}{21 - O_M} \times E_M$ Where: E_s = Calculated emission concentration at the standard percentage oxygen concentration E_M = Measured emission concentration O_s = Standard oxygen concentration O_M = measured oxygen concentration
10	**Operation**	1. Materials destined for incineration should be of known origin and composition and must be only incinerated in a furnace that is registered for the particular type of waste. 2. A record must be kept of the quantity, type and origin of the waste to be incinerated. 3. The incinerator must be preheated to working temperature before charging any waste. 4. The incinerator must not be overcharged. 5. The incinerator must be in good working order at all times and must not be used if any component fails. Any malfunction should be recorded in a log book and reported to the relevant authority. 6. The incinerator operator and all relevant staff must be trained to the satisfaction of the relevant control authority.

11	**Housekeeping**	The site where the incinerator is built must: 1. Have running water. 2. Have a solid floor. 3. Have lighting if 24hrs operation 4. Have fly ash containerization and storage before disposal.
12	**Health & Safety (Protective Gear)**	1. Staff handling waste must be well trained on safe handling of hazardous wastes 2. Staff must be provided with appropriate protective gear such as, gas mask, aprons, gumboots, helmets, gloves, goggles. 3. Caution and Warning signs must be provided. 4. Fire fighting equipment must be provided 5. There should be no smoking or eating on the site.

FOURTH SCHEDULE

(Regulation 22)

WASTES CONSIDERED HAZARDOUS

The following wastes shall be considered hazardous wastes:

Y0 All wastes containing or contaminated by radio-nuclides the concentration of properties of which result from human activity.

Y2 Wastes generated from medical care and/or medical examination in hospitals, clinics, elderly medical care centers and maternity wards and in medical care centers and wastes from medical examination in medical examination laboratories.

Y3 Waste pharmaceutical, drugs and medicines.

Y4 (a) Wastes generated from the production and import of the chemicals including germicides, fungicides, bactericides, ratcides, herbicides and other chemicals for prevention of the breeding and extermination of animals, plants and viruses; and growth promoting chemicals, germination control and other chemicals for the promotion and suppression of physiological activities of plants (hereafter referred to as "biocides etc.").

(b) Wastes generated from formulation of biocides etc. for sales and grant.

(c) Wastes generated from sales and use of biocides etc.

Y5 (a) Wastes generated from the production and import of decay-preventing agents, insect control agents and other chemicals for wood preservation (hereafter referred to as "wood preserving chemicals").

(b) Wastes generated from formulation of wood preserving chemicals for sales and grant.

(c) Wastes generated from sales and use of wood preserving chemicals.

Y6 (a) Wastes generated from the production and import of organic solvents.

(b) Wastes generated from formulation of organic solvents for sales and grants.

(c) Wastes generated from sales and use of organic solvents.

Y7 Wastes from heat treatment and tempering operations containing cyanides.

Y8 Waste mineral oils unfit for their originally intended use.

Y9 Waste oils/water, hydrocarbons/water mixtures, emulsions.

Y10 Waste substances and articles containing or contaminated with Polychlorinated Biphenyls:(PCBs) and/or Polychlorinated Triphynyls (PCTs) and/or Polybrominated Biphenyls (PBBs)

Y11 Waste tarry residues arising from refining, distillation and any parlytic treatment (b) Wastes generated from formulation of inks, etc. for sales and grant.

Y12 (a) Wastes generated from the production and import of inks, dyes, pigment paints, lacquers and varnishes (hereafter referred to as "inks, etc.").

(b) Wastes generated from formulation of inks, etc. for sales and grant.

Y13 (a) Wastes generated from production and import of resins, latex, plasticizers, glues/adhesives (hereafter referred to as “resins, etc.”).

(b) Waste generated from formulation of resins, etc. for sales and grant.

c) Wastes generated form sales and use of resins, etc.

Y14 Waste chemical materials arising from research and development or teaching activities, in the following facilities, which are not identified and/or are new and whose effects on man and/or the environment are not known.

(a) research and examination institutions owned by central and local governments;

(b) universities, colleges, junior colleges, professional schools and their subsidiary research and study institutions, and;

(c) institutions for research and development of products and technologies.

Y15 Wastes of an explosive nature not subject to the **Explosives Act, Cap 115**

Y16 (a) Wastes generated from the production and import of sensitive chemicals and materials for photographs (hereafter referred to as “photographic chemicals, etc.”).

(b) Wastes generated from the formulation of photographic chemicals, etc. for sales and grant.

(c) Wastes generated from the sales and use of photographic chemicals, etc.

Y17 Wastes resulting from the surface treatment of metals and plastics.

Y18 Residues arising from industrial waste disposal operations.

Y19 Wastes containing metal carbonyls listed as follows:

(a) Wastes containing 0.1% or more by weight or any of the following metal carbonyls:

Iron-pentacarbonyl, Nickel-tetracarbonyl, Methyl cyclopentadienyl manganese-tricarbonyl.

(b) Wastes containing other metal carbonyls.

Y20 Wastes containing beryllium and/or beryllium compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following beryllium and/or beryllium compounds.

Beryllium, Beryllium chloride, Beryllium oxide, Beryllium nitrate, Beryllium hydroxide, Beryllium flouride, Beryllium sulfate.

(b) Wastes containing other beryllium and/or beryllium compounds

Y21 Wastes containing hexavaleut chromium compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the follow hexavalent chromium compounds:

Chromium oxychloride, Chromic acid solution, zinc chromate, Potassium zinc chromate, Potassium chromate, Silver chromate, Strontium chromate, Sodium chromate, Lead chromate, Barium chromate, Bismuth chromate, chromosulphuric acid, chromium trioxide, anhydroulic, Ammonium dichromate, Potassium dichromate, Sodium dichromate, Lead chromate molybdate sulfate.

(b) Wastes containing other hexavalent chromium compounds.

(c) Wastes to be exported for the purpose of DI to D4 or R10 of Annex IV of the Basel Convention which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency.

Y22 Wastes containing copper compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following copper compounds:
Copper acetoarsenite, Copper N, N = Ethylenebis (saricylideneaminate), Cuprous chloride, Cupric chloride, Copper cyanide, Sodium cuprocyanide, Cupriethylenediamine solution, Copper arsenate, and Copper sulfate.

(b) Waste containing 1% or more by weight of any of the following compounds:
Copper (II) diammonium chloride dihydrate, Potassium cupric chloride, Copper acetate, Potassium cuprocyanide, Cupric nitrate, Cupric carbonate, Cuprous thiacyanate, Copper pyrophospate, Cupric fluoride and Cuprous iodide.

(c) Wastes containing copper compounds other than those listed in a) and b) above.

(d) Wastes in solid form to be exported for the purpose of RI0 of Annex IV of the Basel Convention, which cannot meet the Ambient Soil Quality Standards in terms of copper compounds.

Y23 Wastes containing zinc compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following zinc compounds:
Zinc dithionite, Zinc arsenite, Zinc chloride, Zinc cyanide, Zinc arsenate.

(b) Wastes containing 1% or more by weight of any of the following zinc compounds:

Zinc chlorate, Zinc peroxide, Zinc permanganate, Zinc chromate, zinc fluorosilicate, Zinc acetate, Diethlyl zinc, 2,5-Diethoxy 4-morpholinobenzenediazonium zinc chloride, Dimethyl zinc, 4-Dimethylamino-6-(2-dimethyaminoethoxy) toluence -2-diazonium zinc chloride, zinc oxalate, Zinc bromate, Zinc nitrate, zinc thiocyanate, 3-(2-Hydroxyethoxy) 4-pyrrolidin- 1–ylbenzenediazonium zinc chloride, zinc

pyrophosphate, Zinc Fluoride, 4-{Benzyl(ethyl) amino}-3- ethoxybenzenediazonium zinc chloride 4-{ Benzyl 9methyl) amino}-3-etlioxybenzenediazonium zinc chloride, zinc methylthiocarbamate, zinc sulfate, Zinc phosphide, Zinc phosphate.

(c) Wastes containing zinc compounds other than those listed in (a) and (b) above.

(d) Wastes containing arsenic and/or arsenic compounds listed as follows:

Y24 Wastes containing 0.1% or more by weight of any of the following arsenic and/or arsenic conipounds:

(a) Arsenic, Copper acetoarsenite, zinc arsenite, Calcium arsenite, Silver arsenite, Strontium arsenite, Ferric arsenite, Copper arsenite, Sodium arsenite, Lead arsenite, Alkylarsenic compounds, Ethyldichloroarsine, cacodylic acid, Sodium cacodylate, Diarsenic pentoxide, Arsenic pentaflouride, Arsenic trichloride, Arsenous trioxide, Arsenic tribromide, Acia managenese arsenate, Arsenic trifluoride, Diphenylamine chloroarsine, Diphenylchloroarsine, Tetrarsenic tatrasulfide, Vinyzene, Arsenic acid, Zinc arsenate, Ammonium arsenate, Potassium arsenate, Calciul arsenate, Sodium arsenate dibasic, Calcium arsenate, Ferrous arsenate, Mercuric Ferric arsenate, Copper arsenate, Sodium arsenate, Lead arsenate, magnesium arsenate, Calcium arsenate flouride, benzenearsonic acid, Potassium Metaarsenite, Sodium metaarsenite, Calcium methanearsonate, Ferric methanearsonate, Arsenic disulfide, Arsenic trisulfide.

(b) Wastes containing arsenic and/or arsenic compounds other than those listed in (a) above.

(c) Wastes to be exported for the purpose of D1 to D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards in terms of arsenic and/or arsenic compounds.

(ii) Wastes in liquid form, which cannot meet the waste water discharge standards in terms of arsenic and/or arsenic compounds.

(d) Wastes to be exported for the purposes other than those listed in c) above and which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of arsenic and/or arsenic compounds.

(ii) Wastes in liquid form, which cannot meet the effluent quality standards in terms of arsenic and/or arsenic compounds.

Y25 Wastes containing selenium and/or selenium compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following selenium and/or selenium compounds:

Selenium, Sodium selenite, Selenium oxychloride, Selenium chloride, Selenic acid, Sodium selenite, Selenium dioxide, Selenium disulphide, cadmium red.

(b) Wastes containing 1% or more by weight of any of the following selenium and/or selenium compounds:

Selenious acid, Barium selenite, Ferrous selenide.

(c) Wastes containing selenium and/or selenium compounds other than those listed in (a) and(b) above.

Y26 Wastes containing cadmium and/or cadmium compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following cadmium and/or cadmium compounds:

Cadmium, Cadmium Chloride, Cadmium acetate, dihydrate, Cadmium oxide, Cadmium cyanide, Dimethyl cadmium, Cadmium bromide, Cadmium nitrate, Cadmium hydroxide, Cadmium stearate, Cadmium carbonate, Cadmium iodide, Cadmium laurate, Cadmium sulfate, Cadmium yellow, Cadmium red.

(b) Wastes containing cadmium and/or cadmium compounds other than those listed in the (a) above.

(c) Wastes to be exported for the purpose of D) 1 to D4 or RI0 of Annex IV of the Basel Convention, which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards in terms of cadmium and/or cadmium compounds;
(ii) Wastes in liquid form, which cannot meet waste water discharge standards to soil ir terms of cadmium and/or cadmium compound.

(d) Wastes to be exported for purposes other than those listed in the 8 above which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet standards to be determined by the relevant lead agency in terms of cadmium and/or cadmium compounds;

(ii) Wastes in liquid form, which cannot meet the effluent quality standards in terms of cadmium and/or cadmium compounds.

Y27 Wastes containing antimony and/or antimony compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following antimony and/or antimony compounds:

Sodium antimonate, Lead antimonate, Antimony pentachloride, Antimonypentoxide, Antimonypentaflouride, Antimony trichloride, Antimony trioxide, Potassium hexahydroxoantimonate (V), Antimony trifluoride, Potassiumantimonyl tartrate, Antimony lactate, Sodiummetaantimonate.

(b) Wastes containing 1% or more by weight of antimony.

(c) Wastes containing antimony and/or antimony compounds other than those listed in (a) and (b) above.

Y28 Wastes containing tellurium and/or tellurium compounds listed as follows:

(a) Wastes containing 1% or more by weight of any of the following tellurium and/or tellurium compounds:
Tellurium, Diethyl tellurium, Dimethyl tellurium.

(b) Wastes containing tellurium and/or tellurium compounds other than those listed in the (a) above.

Y29 Wastes containing mercury and/or mercury compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following mercury and/or mercury compounds:

Mercury, Mercury benzoate, Ethylmercury chloride, Mercurous chloride, Mercuric chloride, Mercury ammonium chloride, Methylmercuric chloride, Mercuric oxycyanide, Mercery oleate, Mercury gluconate, Mercury acetate, Mercury salicylate, Mercuric oxide, Mercury cyanide, Mercury potassium cyanide, Diethyl mercury, Dimethyl mercury, Mercury (1) bromide, Mercurous, Nitrate, Mercuric nitrate, Phenryl mercuric hydroxide, Mercuric thiocyanate, Mercuricarsenate, Mercury (II) iodide, Mercury potassium iodide, Mercury fulminate, Mercury suphide, Mercurous sulfate, Mercuric sulfate.

(b) Wastes containing 1% or more by weight of any of the following mercury and/or mercury compounds:

Mercury nucleate, Mercurous acetate, Phenylmercury acetate, Phenylmercuric nitrate, Thimerosal.

(c) Wastes containing mercury and/or mercury compounds other than those listed in (a) and (b) above.

(d) Wastes to be exported for the purpose of Dl to D4 or Rl0 of Annex IV of the Basel Convention, which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of mercury and/or mercury compounds.

(ii) Wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of mercury and/or mercury compounds.

(e) Wastes to be exported for the purposes other than those listed in (d) above and which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of mercury and/or mercury compounds.

(ii) Wastes in liquid form, which cannot meet the effluent quality standards in terms of mercury and/or mercury compounds.

Y30 Wastes containing thallium and/or thallium compounds listed as follows:

(a) Waste, containing 0.1% or more by weight of any of (lie following thallium arid/or thallium compounds:

Thallium chlorate, Thallium acetate, Thallic oxide, Thallium bromide, Thallous nitrate, Thallium iodide, Thallium sulfate.

(b) Wastes containing 1% or more by weight of thallium.

(c) Wastes containing thallium and/or thallium compounds other than those listed in (a) and (b) above.

Y3I Wastes containing lead and/or lead compounds listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following lead and/or lead compounds:

Lead, Lead azide, Lead arsenite, Lead monoxide, Lead chloride, Basic lead silicate, Lead perchlorate, Lead chromate, Lead silicate, lead acetate, Tribasic lead sulfate, lead cyanamide, tetraalkyllead, Lead cyanide, Lead tetroxide, lead nitrate, Lead hydroxide, lead styphnate, Lead stearate, Lead carbonate, Lead naphtenate, Calcium plumbate, dibasic lead sulfite, Dibasic lead phosphite, Lead srearate dibasic, basic lead phthalate Lead dioxide, Lead flouroborate solution, Lead phosphite dibasic, Lead arsenate, Lead flouride, Lead metaborate, Lead methanesuphonate, Lead iodide, Lead sulfate, Lead iodide, Lead sulfate, Lead chromate molybdate sulfate.

(b) Wastes containing lead and/or lead compounds other than those listed in (a) above.

(c) Wastes to be exported for the purpose of DI or D4 or RI0 in Annex IV of the Basel Convention, which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of lead and/or lead compounds.

(ii) Wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of lead and/or lead compounds.

(d) Wastes to be exported or imported for purposes other than those listed in (c) above, which can not meet the following criteria:

(i) Wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of Lead and/or lead compounds.

(ii) Wastes in liquid form, which cannot meet the effluent quality standards in terms of Lead and or Lead compounds.

Y32 Wastes containing inorganic flourine compound excluding calcium flouride listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following inorganic flourine compounds:

Flourosilicic acid, Bromide pentaflouride, Bromide trifluoride, Bromide trifluoride dihydrate, Pottasium biflouride, Difluorphosphoric acid, Ammonium fluoride, Potassium fluoride (spray dide), Chromic fluoric, Hydrofluoride, Ammonium hydrogenfluoride, Hydrofluoric acid, Sodium fluoride, Fluorosulphonic acid, Fluorophosphoric acid Anhydrous, hexafluorophosphoric acid, Fluobolic acid.

(b) Wastes containing 1% or more by weight of any of the following inorganic fluorine compounds:

Ammonium fluoroborate, Ammoniumfluorosilicate, Barium fluorids, Barium fluorosilicate, Iodine pentafluoride, Lithium borofluoride, magnesium borofluoride, Magnesium fluorosilicate, manganese fluorosilicate, Potassium fluoroborate, Potasium fluorosilicate, Potassium hydrogen fluoride, Sodium fluorosilicate, sodium hydrogen flouride, stannous fluoride, sodium fluoroborate, zinc fluorosilicate.

(c) Wastes containing inorganic flourine compounds other than those listed in (a) and (b) above.

Y33 Wastes containing inorganic cyanides listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following inorganic cyanides:

Cyanogen bromide, hydrogen cyanide, hydrocyanic acid aqueous, leadcyanide, mercurycyanide, mercuric potassium cyanide, nickel cyanide, Potassium cyanide, Silver cyanide, sodiumcuprocyanide, Sodiumcyanide, Zinc cyanide.

(b) Wastes containing 1% or more by weight of any of the following inorganic cyanides:

Barium cyanide, Barium platinum cyanide, Calcium cyanide, Copper cyanide, Potassium cobalt cyanide, Potassium cuprocyanide; Potassium gold cyanide, Potassium nickel cyanide.

(c) Wastes containing inorganic cyanide other than those listed in a) and b) above.

(d) Wastes to be exported or imported for the purpose of Dl to D4 or R10 of the Basel Convention which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of inorganic cyanide.

(ii) Wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of inorganic cyanide.

(e) Wastes to be exported or imported for the purposes other than those listed in (d) above, which cannot meet the following criteria:

(i) Waste in solid form, which cannot meet the standards determined by the relevant lead agency for hazardous wastes in terms of inorganic cyanide;

(ii) Wastes in liquid form, which cannot meet the effluent quality standards in terms of inorganic cyanide.

Y34 Acidic solutions or acid in solid form with pH value of 2.0 or less, or basic solutions or bases in solid form with pH value of 11.5 or more by weight (in case of substances in solid form, pH value of the solution of water-substance has a ratio 1:3 in weight).

Y35 Basic solutions or bases in solid form.

Y36 Wastes containing asbestos in the form of dust or fibers.

Y37 Wastes containing organic phosphorus compounds listed is follows:

(a) Wastes containing 0.1% or more by weight of any of the following organic phosphorus compounds:

Azinphos-ethyl, Azinphos-methyl, Butyl phosphorotrithionate, Carbophenothion, Chlorfenvinphos (I SO), Chlormephos, S{ (6-Chloro-2-oxo-3-brenzosyazolyl) methyl} 0, 0-diethyl phosphorodithioate, ChIorthiophos, Camaphos, Cresyldiphenyl Phosphote, Crotoxyphos, Crufomate, Demephion, Demeton-O-methyl, Demeton-S-methyl, Dialifos, dichlofenthion, dichloromethylphosphine, Dicrotophos, 0, 0-Diethyl-S-2 (ethylthio) ethyl phosphorodithioate, diethyl = 4-nitobenzylaphosphonate, 0-0-Diethyl-0 (5-phenyl-3-isooxazolyl) phosphorothioate, 0, 0-Diethyl-0-3,5,6-trichloro-2-pyriylnphosphorothioate, Dimefox, 0, 0-Dimethyl-S (1,2-etylthioethyl phosphodithioate, Dimethyl 2,2-dichlorovinylphospate, Dimethyl etylthicethyl dithiophosphate, Dimethylhydrogen phosphite, Dimethyl-methylcarbonylethylthioethyl thiophosphate, 0-0-Dimethyl N-methylcarbamoyl-methyl dithiophosphate, dimethyl-S-(N-methyl-N-formoylcarbamoylmethyl) dithiophosphate 0, 0-Dimethyl-0{3-methyl-4- (methylthio) phenyl} thiophosphate, 0-0-Dimethyl-0-(3-methyl-4-nitrophny) thiophosphate, 0-0-Dimethyls-S-(phenylaceticacidethylester) dithiophosphate, 0, 0-Dimethy phthaloimid methylthiophosphate, Diomethylthiophosphory chloride Dimethyl 2,2,2-richloro-1 hydroxyethyl phosphorate, Dioxathiory, Diphenyl-2, 4,6-trimethylbenzoylphosphine-oxide, Edifenphos, Endothior Ethion, Ethoatemethyl,Ethoprophos, 0-ethyl-0-p-nitrophenylthionobenzenephosphate, Fenamiphos, Fensulfothion, Fonofos, Hexaethyl tetraphosphate, Hexamethylphosphoric triamide, heptenophos, Isodecyl diphenylphosphate 2-Isopropy 1-4 methylpryrimidyl 6-diethylthiophosphate, Isothioate, Mecarbam, Menazon, Mephosfolan Methamidophos, 2-Methos-4H-1,3,4-thiadiazolyl-(3)-methyl} dimethyl phospholothiolothionate, Methyl parathion, Methyltrithion, Mevinphos Naled, Omethoate, Oxydisulfoton, Oxydemetonmethyl, Paraoxon, Parathion, Pirimiphosethly, Phenkapton, Phorate, Phosfolan, Phosphamidon, Prothoate, Propaphos, Pyrazophos, Pyrazoxon, Quinalphos, Scharadan, Sulprofos, Tetraethyl dithiopyrophosphate, Thionazin, Temephos, Terbfos, Tris (1-aziridinly) phosphine oxide, Triamiphos, Triazophos, Trichloronate, Triethylphosphate Tris (1-aziridinly) phosphine

sulphide, Tris (4-methoxy-3, 5 dimethylpehnyl) phosphine, Trixyly phosphate, Tributyl phosphates-S-3- (dimethoxyphosphinyloxy)-N-methylics-crotonamide, Di-(ethylhexyl) phospholic acid, di-(ethylhexyl) phosphoric acid, Triallyl phosphate, Tricresyl phosphate, Tris (isoropylphenyl) phosphate, Tri (2,3-dibromopropyl) phosphate.

(b) Wastes containing 1% or more by weight of any of the following organic phosphorus compounds:

Amidothiaate, Bialaphos, 0-4-Bromo-2-chlorophenyl-0-ethyl-S-phopyl phosphorotioate Bromophosethyl, Butamifos, 0-Buthyl-S-benzyl-S-ethyl phosphorodithioate, 2-chloro-1-(2,4 dichlorophenyl) vinyldiethyl phosphate, DEF, Demeton, Demeton-0, Dialkyl phosphodithioate, 0-2, 4-Dichlorophenyl-0-ethyl-S-propylphosphorodithioate, Diethyl-S-benzyl thiophosphate, Diethyl-4-chlorophenylmercaptoethyldithiophosphate, Diethyl-(1,3 dithiocyclopentylidene) thiophosphoramide, Diethyl-4 methylsulfinylphenyl-thiophosphate, 0, 0-Diethyl-0-(3-oxo-2-phenyl-2H-pyridazin-6-yl) phosphorothionate Diethyl-paradimethylamino sulfonylphenylthio phosphate, Diethylthiophosphorylchrolide, 0, 0-Diisopropyl-S-benzylthiophosphate, Diisopropyl-S-(ehtylsulfinylmethyl)-dithiophosphate, Dimethyl-S-pchlorophenylthiophosphate, 0, 0-Dimethyl-0-4 cyanophenyl phosphorothioate, 2,3 (Dimethyldithiophosphro) paradioxan, 0, 0-0-dimethyl-S-2 (ethylsulfiny)- isopropyl-thiophosphate, Dimethyl-{2- (1-methylbenzyloxycarbonyl)-1-methylethylen)-phosphate 0, 0-Dimethyl 0-0 (3,5,6-trichloro-2-pyridinyl) phosphorothioate, Ehtyl-2-dichlorophenylthionobenzene phosphorate, 0-6-Ethoxy-2-ethylpirimidinyl-0, 0-dimethyl-phosphorothioate, Fosthiazate, Leptopho Mesulfenfos, Meythylcyclohexyl-4-chlorophenylthiophosphate Octyldiphenyl Phosphate, Phenylphosphonic dichloride, Phenylphosphoro thiodichloride, Piperophos, Propetamphos, Pyraclofos, Sulfote Tetraethylpyrophosphate, Temivinphos, Tributoxyethyl phosphate, Tributyl phosphine, S,S,S-Tributyl phosphorotrithioate, Trietyl phosphate Trimethys phosphate, Trimethyl phosphite, Trioctyl phosphate Tris (chloroethyl) phosphate, Tris (B-chlorophropyl) phosphate, Tris (dichloropropyl) phospate.

(c) Wastes containing organic phosphorus compounds other than those listed in (a) and (b) above.

(d) Wastes to be exported for the purpose of D1 and D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of organic phosphorus compounds.

(ii) Wastes in liquid form, which cannot meet the waste water discharge standards to oil in terms of organic phosphorus compounds.

(e) Wastes to be exported for the purposes other than those listed in the (d) above, which cannot meet the following criteria:

(i) Wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of organic phosphorous compounds.

(ii) Wastes in liquid form, which cannot meet the effluent quality standards in terms of organic phosphorus compounds.

Y38 Wastes containing organic cyanides listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following organic cyanides:

Acetone cyanhydrin, Acrylonitrile, Adiponitrile, 2-Amino-5 (2-chloro-4-nitrophenylazo) 4-methyl-3-thiophenecarbonitrile, 2,2 B Azobis-{2- (hydroxymethyl) proprienitrile} 2,2, B Azobis B (methylbutyronitrile), Benzonitrile, Bromobenzylcyanides, Bromoxynil, 3-Chloro-4-methylphenyl isocyanate, Cyanazine, a-Cyano-3-phenoxybenzyl-bis (trifluoromethyl) methyl 1-(3,4-isopropylidene) butene-1, 4-decarboxylate, Cyclohexyl isocyanate, 2,6-Dichlorobenzonitrile, dichlorophenylisocyanate, 3,3, B Dimethyl-4-4 B biphenylenediisocyanate, Diphenylmethane-4, 4-diisocyanate, Ethylene Cyanhydrin, Fenpropathrin, Ioxynyl, Isophor diisocyanate, lactonitrile, Melononitrile, Methacrylonitrile, met isocyanate Phenylacetonitrile, Phenyl isocyanate, 0-phthalodinitrile, Propionitrile, Trimethylhexamethylene diisacyanate, Tolylenediisocyanate.

(b) Waste containing 1% or more by weight of any of the following organic cyanides:

Acrylonitrile, 2,2 B Azobis isobutyronitrile, 2,2 B Azobis (2,4- dimethyl-4-methoxyvaleronitrile) 1,1,- B Azobis (2,4-(hexahydrobenzonitrile), Butyronitrile, N-cyanoethyl-monochloroacetoamide, Cyanofenphos (CYP), (RS)-a-cyanophenoxybenzyl, Cyhalothrin, Cyphenothrin, Cyfluthrin, 2, Dibromopropionitrile, 2-Dimethylaminoacetonitryl, Ethyl cyanoacetate, Ethyl isocyanate, Fluvalinate, Hexamethylene diisocyanate, Isobut isocyanate, Isobutyronitrile, Isocyanatobenzotrifluoride, Isoprop isocyanate, Methoxymethyl isocyanate, Methyl isothiocyanate, 3-(N-Nitrosomethylamino) propionitrile, N-Propyl isocyanate, Terephthalonitrile, Tralomethrin, 1,2,5-Trithiocycloheptadiene-3,4,6,7-Tatranitrile (TCH).

(c) Wastes containing organic cyanides other than those listed in (a) and (b) above.

Y39 Wastes containing phenol and/or phenol compounds:

(a) Wastes containing 0.1% or more by weight of any of the following phenol and/or phenol compounds:

2-Aminoanthraquinon, 7-Amoni-4-hydroxy-2 naphthalene sulfonic acid, p-t Butylphenol, Carbolic oil, Chlorophenol, Coal tar, Cresols, Cyclohexylaminophenol, dichiorophenols, 2,4-dichloro-3-methylphenol, 1,4-Dihydro-9, 10 dihydroxyanthracene, 2,4-Dinitro-6-secbuthylphenoldimethyl acrylate, 4,6 Dinitro-0-cresol, 2,4-Dinitrophenol, Dinoseb, Dinosebacetate, Dinoterb, Dinoterbacetate, Dodecylphenol, 0-Ethylphenol Heptyl- 1{2,5 dimethyl-4 (2-methylphenylazo) phenylazo-2-naphthol, Hydroxybenzene, Isoamyl salicylate, Medinoterb, Methyl silicylate, Nitrocresols, Nitrophenols, Nonylphenol, Nonylphenol poly (4-12) ethoxylates, Pentachlorophenol, 4-phenoxyphenol, Picric acid, Sodium pentachlorophenate, Trichlorophenols, 2-(thiocyanatomethylthio) benzothiasol, Xylenols.

(b) Waste containing 1% or more by weight of any of the following phenol and/or phenol compounds:

2-Amino-4-chlorophenol, Aminophenols, Ammonium dinitro-0-cresolate Ammonium picrate, Chlorocresols, Diazodinitrophenol, 2,4-Dinitro-cyclohexylpenol, 2,4-Dinitro-6-(1-methylpropyl) phenol Dinitrophenolate, alkali metals, Dinitroresorcinol, Dyes, Hydroquinone, Hydroxysulfonic acid, N-Methylcarbamyl-2-chlorophenol (CPMC), 1 naphtho, Resorcinol, Sodium-2 4-Dichloro-6-nitrophenolate (DNCP) Sodiumdinitro-0-cresolate, 2,4,6-Trinitroresolcinol.

(c) Wastes containing phenol and/or phenol compounds other than those listed in (a) and (b) above.

Y40 Wastes containing ethers listed as follows:

(a) Wastes containing O.1% or more by weight of any of the following ethers:

o-Anisidine, 2-(2-aminoethoxy) ethanol, 2-Amino-dimethoxypirimidine, a-{1-[(Allyloxy) methyl] -2(nonylphenoxy) ethyl} -w-hydroxypoli (n=1-100) (oxyethylene), Allylglycidylether, Alkaryl polyether (C9-C20 Alcohol (C6-C17) sec-poly (3-12) thoxylates, alcohol (C12-C15) poly (1-11) ethoxylates, Alcohol (C13-C1 5) lyethoxylates, 1,2-Butylene oxide, Butyl glycidyl ether, Butyl hydroxy anisol, 2-tButyl-

6-nitro-5-[p-(1,1,3,3-tetramethylbutyl) phenoxy] benzoxazole, Carbofran, 4-Chlorobenzyl-4ethoxyphenyl ether, p-(2-Chloroethyl) anisol, m-Chloromethylanisol, Coumafuryl, p-Cresidine, Endothal sodium, 2, 3-Epoxy-1-propanol, 2,3-Epoxypropyl-acetate, 2-(2,3-Epoxyproyl)-6methoxyphenyl-acetate, a-2, 3-Epoxypropoxyphenyl-w-hydtropoli(n=17) [2-(2,3- epoxypropoxy) benzylidene-2,3-epoxypropoxyphenylene], Ethyleneglycol isopropyl ether, Ethyleneglycol phenyl ether, Ethyleneglycol methylbutyl ether, Ethyleneglycol monoacrylate, Ethyleneglycol monobutyl ether, Ethyleneglycol monobutyl ether acetate, Ethyleneglycol monoethyl ether, Ethyleneglycol monoethyl ether acetate, Ethyleneglycol monomethyl ether, Ethyleneglycol monomethyl ether acetate, Ethyleneglycol mono-n-propyl ether, Ethyl 3-ethoxypropionate, Safrole, Propylene oxide, Di-(2chloro-iso-propyl) ether, B, B '-Dichloroethyl ether, 3,3' -Dichloro-4 4' -diaminodiphenyl ether, 1,3Dichloro-2-methoxy-5-nitrobenzene, Disodium=6-(4-amino-2,5-dimethoxyphenylazo)-3-[4-(4-amino-sulfonatephenylazo)-2, 5-dimethoxyphenylazo]-4- hydroxy-2-naphthalenesulfonate, Diphenyl ether, Dipropyleneglycol monobutyl ether, Dipropyleneglycol monomethyl ether, Din-pentyl ether, Styreneoxide, Petroleum ether, Tetrahydrofuran, Dodecylphenoxybenzene disulphonate (solns.), Drazoxolan, Triethyleneglycol monoethyl ether, Triethyleneglycol monomethyl ether, 2, 4, 6-Tris(chloromethyl)-1, 3, 5-trioxane, 3, 3, 3-Trifluoro-1, 2-epoxypropane, Tripropyleneglycol monomethyl ether, Trimethylolpropane polyethoxylate, 5-[N,N-Bis(2-acetoxyethyl)amino]-2-(2bromo-4,6-dinitorphenylazo)-4-methoxyacetanillide, 1,6-Bis(2,3-epoxypropoxy) naphthalene, 4,4' - Bis (,3-epoxypropoxy) biphenyl, 1,1-Bis[p-(2,3-epoxypropoxy) phenyl] ethane, 1,1-Bis[p-(3-chloro2-hydroxypropoxy) phenyl] ethane, Bis(chloromethyl) ether,4,6-Bis(difluoromethoxy)-2-methylthiopyrimidine, Tributyltin oxide, Bisphenol A diglycidyl ether, Diglycidyl ether of Bisphenol F, Ethyl vinyl ether, Phenylglycidylether (RS)-1-(4-Phenoxyphenoxy)-2-propanol, Dihydro-2 (3H) - furanone, Butoxyl, Brucine, Furfural, Furfurylalcol, B-Propiolactone, 2,3-Epoxypropyl-propyonate, Propyleneglycol monoalkyl. ether,Propyleneglycol monomethyl ether acetate,ropoxur, 1-Bromo-4-(2,2 dimethoxyethoxy)-2,3-dimethylbenzene, 1,1' -[Oxybis(methylene)bis(benzene)] Polyethyleneglicol monoalkyl ether, Methylhloromethyl ether, 2-Methoxy-2-methylpropane, 4-Methoxy-2,2', 4' - trimethyldiphenylamine, 1-(4-Methoxyphenoxy_-2-(2-methylphenoxy) ethane, Morpholine, Resorcinol diglycidyl ether, Rotenone

(b) Wastes containing 1% or more by weight of any of the following ethers:

Acetal, Anisol, N-Aminopropylmorpholine, Allilethylether, Ethylpropyl ether, Ethyleneglycol diethyl ether, Ethyleneglycol diglycidyl ether,Ethyleneglycol dimethyl ether, 3-Ethoxypropylamine, 1,2-Epoxy-3ethoxypropane, Glycidol, Chloroethyl vinyl ether, Chloromethyl ethyl ether, Diallil ether, Diethyleneglycol dimethyl ether, Diethyleneglyco 1 monobutyl ether, Di-2-ethoxyethyl peroxydicarbonate, 3, 3 Diethoxypropene, Diethoxymethane 2,5-Diethoxy-4-morpholino benzenediazonium zinc chloride, 1,3-Dioxane, Dioxolan, 2,3 -Dihydropylae, Diphenylsulphide, Dibutyl ether, Dipropyl ether, 4-Dimethylamino-6 (2-dimethyaminoethoxy) toluene-2-diazonium zinc chloride,Dimethyldiethoxysilane, Dimethyldioxane, Dimethoxyisopropylperoxydicarbonate, 1,1Dimethoxyethane, Di-methoxybutyl peroxydicarbonate, 2,2-Dimethoxypropane, Tetrahydrofurfurylamine, Triglycol dichloride, Trinitroanisole, Trinitrophenetole, Nitroanisol, Neopentylglycol diglycidyl ether, 3-(2-Hydroxyethoxy)-4-pyrrolidin-1-ylbenzenediazonium zinc chloride, Isobutyl vinylether, Phenetidines,Phenetole, Phenoxyethylacrylate, Ethylbutyl ether, n-Butyl methyl ether, Furan, Furfurylamine, Furfurylmercaptan, 2-Bromoethylethylether, 4-[Benzyl (ethyl) amino] -3-ethoxybenzenediazonium zinc chloride-[Benzyl(methyl) amino]-3ethoxybenzenediazonium zinc chloride, benfuracarb, Tetrahydrofurfuryl methacrylate, methylal,Methyltetrahydrofuran, 2-Methylfuran, Methylpropyl ether, Methyl-3-methoxybutanol, NMethylmorpholine, 4-Methoxy-4-methylpentane-2-one

(c) Wastes containing ethers other than those listed in a) and b) above

Y41 Wastes containing halogenated organic solvents listed as follows:

(a) Wastes containing O.1% or more by weight of any of the following halogenated organic solvents:

Chloropropanes, Chloropropenes, Chlorobenzene,Chloroform, Carbontetrachloride, Dichloroethanes, Dichloroethylenes, Dichloropropanes Dichloropropenes, Dichlorobenzene, Methylenehloride, Dibromoethanes, Tetrachloroethane, Tetrachloroethylene, Tetrabromoethane, Tetrabromomethane, Trichloroethanes, Trichloroethylene, Trichloro-trifluoroethane, 1,2,3Trichloropropane, 1,2,4Trichlorobenzene, Pentachloroethane

(b) Wastes containing 1% or more by weight of any of the following halogenated organic solvents: 1,1-Dichloro-1-nitroethane, 1,4-Dichlorobutane, Dichloropentanes, Bromoform

c) Wastes containing halogenated organic solvents other than those listed in a) and b) above

(d) Wastes in liquid form to be exported for the purpose of D1 to D4 or R10 of Annex VI of the Basel Convention, which cannot meet the waste water discharge standards to soil in terms of tetra-chloroethylene and/or tri-chloro-ethylene

(e) Wastes to be exported for the purposes other than those listed in the above d), which cannot meet the following criteria;

(i) Wastes in solid form, which cannot meet the standards determined by the relevant lead agency for hazardous wastes in terms of tetra-chloro-ethylene and/or tri-chloro-ethylene;

(ii) Wastes in liquid form, which cannot meet the standards of the effluent quality standards in terms of tetra-chloro-ethylene and/or tri-chloro-ethylene

Y42. Wastes containing organic solvents excluding halogenated solvents

(a) Wastes containing 0.1% or more by weight of any of the following organic solvents: Acrolein, Diisononyly adipate, Acetaldehyde, Ethyl acetoacetate, Methyl acetoacetate, Acetophenone, Acetone, Aniline Allylalcohol,Alkylbenzenes,benzylbenzoate, Methyl benzoate, Isoamyl alcohol,Isooctanol, Isooctane,isononyl alcohol, Isobutanol, Iso Butylamine, 4-Methyl-2-pentanone, Isopropylamine, Isopropyl alcohol, Isopropyl cyclohexane, isopropyl toluene, 3-Methyl-2-butanone, Isopentane, Isopentene, Isobutyric acid, Ethanolamine, Ethylanilines, Ethylamine, Ethylcyclohexane, NEthyl cyclohexylamine, 2-Ethylbutanol, N Ethylbutylamine, Ethyl-butylketone, 2-Ethyl-3-propyl acrolein, Ethyln-propyl ketone, 2-Ethylhexanol, 2-Ethylhexylamine, Ethyl n-penthyl ketone, 2-Butanone, Ethyleneglycol diacetate, Ethylene glycol, Ethylenediamine, Octanol, Octane, Octanes, Formic acid, Isobutyl formate, n-Butyl formate, Methyl formate, Quinoline, Dimethyl succianate, Acetic acid, Isobutyl acetate, isopropyl acetate, isopentyl acetate, Ethyl acetate, Ethylbutyl acetate, n-Octyl acetate, Cychlohexyl acetate, n-Decyl acetate, n-Nonyl acetate, Vinyl acetate, 2-Phenyl ethyl acetate, Butyl acetate, sec-Butyl acetate, n-Propyl acetate, n-Hexyl acetate, sec-Hexy acetate, Heptyl acetate, Benzyl acetate, pentyl acetate, sec-Pentyl acetate, methyl acetate, Methylpentyl acetate, Mesityl oxide, Diisobutylamine, Diisobutyl ketone, Diisopropanolamine, Diisopropylamine, N, N e,Diethylaminoethanol, Diethylamine, Diethylenetriamine, Cyclohexanol, Cyclohexanone,Cyclohexane, Cyclohexylamine, Cycroheptane,Cyclopentane, Cyclopentene, Dicyclohexylamine, Di-n—butylamine, Dipropylamine, Dipentene, N, N-Dimethylacetamide, N, N-Dimethylaniline, Dimethylamino azobenzene, 2-dimethylaminoethanol, 2,6-Dimethyl-4-heptanol, N, N-Dimethyl formamide, Diethyl oxalate, Camphor oil, Styrene, Butyl stearate, Tetrahydrothiophene-1, I-dioxide, Petroleum naphtha,Petroleum benzine, Dimethyl sebacate, Solvent naphtha, Diethyl carbonate, Dimethyl carbonate,Decanol, Decene, Tetraethylenepentamine, Tetrahydronaphthalene, Turpentine oil, Dodecanol, 1-Dodecylamine, Triethanolamine, Triethylamine,Trietylenetetramine, Tributylamine, Tripropylamine, Toluidine, Naphthalene, Nitroethane, Nitroxylenes,O-Nitrotruene, Nitoropropanes, Nitrobenzene, Nitromethane, Ethyl lactate, Butyl lactate, Carbon disulfide, Nonanol, Nonane, Nonene, Paraldehyde, Methyl palmitate, Picolines, 4-Hydroxy-4-methyl-2-pentanone, Pinenes, Pyridine, Phenyl ethyl alkyl, 1-Phenyl-1-xylylethane, n-Butanol, 2-Butanol, Dialkyl phtalates, Bis (diethyleneglycol) phthalate, Butyl benzylphthalate, Butanediols, n-Butylamine, sec-Butylamine, tert-Butylamine, 1,3-Propane sultone, Propionic acid, n-Amyl propionate, Ethyl propionate, n-Butyl propionate, Methylpropionate, Propylamine, Hexanol, Hexane, Hexenes, Heptanols, Heptane, n—Heptene, Benzyl alcohol, Benzene, 1,3-Pentadiene, Pentanols, n-Pentane, Pentenes, Formamide, White spirit, Di-n-butyl maleate, Methyl myristate, Methanol, Methallyl alcohol, Methylamine, Methyl iso-amylketone, 7-Methyl-1, 6-octadiene, 2-Methylcyclohexanol, Methylcyclohexanone, Methycyclohexane, Methylcyclopentane, I-Methyl naphthalene, Methyl n-pentyl ketone, Methyl butanol Metju; nitu; letame, Methyl butanol, 2-Methyl hexane, Methyl n-hexylketone, Methyl heptyl ketone, Methylpentanol, 2-Methyl pentane, 2-Methyl-1pentane, 4-Methyl-1-pentane, Ethyleneglycol monoacetate, Methyl laurate, Butyric acid, Ethyl butyrate, Vinyl butyrate, n-Butyl butyrate, Methyl butyrate, Ligroin, Dimethylsulfide, Dimethylsulfate

(b) Wastes containing 1% or more by weight of any of the following organic solvents: Allylamine, Methyl valerate, Methyl isopropenyl ketone, Isobutyl isobutyrate, Isopropyl isobutyrate, Ethyl isobutyrate, N-Undecane, Ethyl alcohol, N-ethyltoluidine, Allyl formate, Ethyl formate, Propyl formate, Pentyl formate, Allyl acetate, Isopropenyl acetate, tert-Butyl acetate, Diallilamine, Diisopropyl ketone, Diethyl ketone, Diethylenglycol, Cyclohexene, Cycroheptene, Cycropentanol, Cycropentanone, Dipropyl ketone, Dimethylcyclohexane, Dimethyl sulfoxide, 2,3-Dimethylbutane, 1,3-Dimethylbutylamine, Dioctyl sebacate, Dibutyl sebacate, Thiophene, n-Decane, Tetrahydrothiophene, Terpinolene, Triallilamine, Trimethylene glycol, Methyl lactate, Dimethyl disulphide, Acetyl methyl carbinol, Vinyltoluene, Piperidine, 3-Butanol, Butylmercaptan, 1,4-Butynediol, n-Propanol, Isopropyl propionate, Isobutyl propionate, 4-Methyl-1,3 -dioxacyclopentan-2-one, 1,2-Propylenediamine, 2Methyl-2,4-pentanedil, Pentamethylheptane, Pentane-2,4-dione, Triisopropyl borate, Ethyl borate, Trimethyl borate, Butyric anhydride, N-methylaniline, Methyl vinyl ketone, N-Methylpiperidine, Methyl propyl ketone, 5-Methylhexan-2-one, Isopropyl butyrate, Isopentyl butyrate, Pentyl butyrate

(c) Wastes containing organic solvents other than those listed in a) and b) above

Y43 Any congener of Polychlorinated debenzo-foran.

Y44 Any congener of Polychlorinated dibenza-p-dioxin.

Y45 Wastes containing organohalogen compounds other than substances referred to in this Schedule, listed as follows:

(a) Wastes containing 0.1% or more by weight of any of the following organohalogen compounds: 1-(Acetylamino)-4-bromoanthraquinone, Atrazine, 2-Amino-2-chloro-5-nitrobenzophenone, (6R,7R)7-Amino-3-chloromethyl-8-oxo-5-thia-1-azabic ycro(4,2,O)-octa-2-ene-2-carbonicacid=4methoxybenzyl, Methyl aminodithio-2-chloropropionate hydrochloride, 2-Amino-3,5dibromothiobenzamide, 2-Chloro-2', 6'-diethyl-N-(methoxymethyl) acetanilide, Alidochlor, Aldrin, Isodrin, Imazalil, Ethyl-3, 5-dichloro-4-hydroxybenzoate, Ethyl-3, 5-dichloro-4hexadecyloxycarbonyloxybenzoate Ethylene chlorohydrine, Epichlorohydrin, Acetyl chloride, Anisoil chloride, Allyl chloride, Choline chloride, Chlorinated paraffins (C10-13), Pyrosulphuryl chloride, Benzylidene chloride, Benzyl chloride, Benzoyl chloride, Endrin, Captafol, Canphechlor, Coumachlor, Crimidine, Chloral, Chlordimeform, Chlordane, Chlorendic acid, Chloroacetaldehyde, Chloroacetone, Chloroanilines, 4-Chloro-2-aminotoluene hydrochloride, 1-Chlorooctane, 1Chloroethylchloroformate, 1-Chloro-3-(4-Chlorophenyl)hydrazone-z-propanol Monochloroacetic acid, Chlorodinitrobenzene, 3-Chloro-1, 2-dibromopropane, 1-Chloro-3, 3-dimethyl-2-butanol, Ethylchlorothioformate, 2-Chloro-5-trifluoromethylnitrobenzene, Chlorotoluidines, Chlorotoluenes, 2Chloronicotinic acid, Chloronitroanilines, 4-Chloro-2-nitrotoluene, N-(2-Chloro-3-nitro-6-pyridyl) acetamide, 4-(2-Chloro-4-nitrophenylazo)-N-(2-cyanoethyl)-N-phenety aniline, Chloronitrobenzenes, Chloropicrin, Chlorohydrins, Chlorophacinone, 4-Chloro-o-phenylenediamine, 3-Chloro-2fluoronitrobenzene 3-Chrolo-4-fluoronitrobenzene, Chloroprene, 2-Chloropropionic acid, 3Chloropropyonic acid, 1-chlorohexane, 1-chloroheptane, p-Chlorobenzylchloride, pChlorobenzotrichloride, Chloromethyl=p-tolyl=ketone, 2-(4-Chloromethyl-4-hydroxy-2-thiazoline-2yl guanidine=chloride, Methyl 2-[(chloromethyl) phenyl] propionate, (2S)-3-Chloro-2-methylpropyonic acid, (Z)-4-Chloro-2-(methoxycarbonylmethpoxyimiono)-3-oxob utyric acid, 2-Chlorobutyric acid, kepone, Kelevan, 1-Chroloformyl-1-methylethyl acetate, 1-Bromoformyl-1-methylethyl acetate, Benzotrichloride, 3,5-Diaminochlorobenzene, Diallate, Silicon tetrachloride, Diglycol chlorohydrin, Cycrohaexenyltrichlorosilane, 3,4-Dichloroaniline 4, 5-Dichloro-p-n-octylisothiazole-3-one, Dichloroacetic acid, Methyldichloroacetate, 3, 3'-Dichloro-4,4' -diaminodiophenylmethane, 3,5Dichloro-4-(1,1,2,2-tetrafluoroethoxy) aniline, 1,4-Dichloro-2-trichlorosiryl-2-butee, 2,4-Dichloro-5-trifluoromethylnitrobenzene, 1,4-Dichloro-2-nitrobenzene, 2,2-Dichloro-5-nitrobenzophenon, 2,4Dichlorophenoxyacetic acid diethanolamine, 2,4-Dichlorophenoxyacetic acid diethylamine, 2,4Dichlorophenoxyacetic acid triisopropanolamine, 2,4-Dichloro-3-fluorene trobenzene, 1,3-Dichloro4-fluorobenzene, 2,3-Dichloro-1-propanol, 2,2-Dichloropropioniccid, Methyl 2,3-dichloropropionate, Dichlorobromomethane, 1,6-Dichlorohexane, 2,6-Dichloro-3-perchloromethyltoluene, 4,5-Dichloro2-perchloromethyltoluene, Dichrolobenzidine, 2,2-Dichloro-3-pentanon, 2,4-Dichloro-3-pentanon, 2,6-Difluoroaniline, 3,4-Difluoronitrobenzene, 2-Dibromoethylene 2'-(2,6-Dibromo-4nitrophenylazo)-5'-diethylaminoace toaniride, 2,3-Dibromopropionate,, Dibromomethane, Simazine, Acetyl bromide, Allyl bromide, Sulfallate, Cyclohexyl-1-iodoethyl=carbonate, DDT (chlorophenothane), 2,4-DB((2,4-dichlorophenoxy) butyric acid), Dieldrin, 2,26,6Tetrachlorocycrohexanon 2,2', 4,4'-Tetrachlorobenzophenon, Tetrahedra-5, 5-dimethyl-2(1H)pyrimidinone [p-trifluorome thyl)-a-[p-(trifluoromethyl) styryl]Cynamiliden] hydrazone, 2,2,3,3Tetrafluoroxetane, Diuron, Telodrin, Toxaphene, 1-(4-Chlorophenonxy)-3,3-dimethyl-1-(lH-l, 2,4triazol-1-y1)-2-butanone Trichloroacetylchloride, 2,2,6-Trichloro-6-(1-chloroisobutyl) cycrohexanon, Trichloroacetic acid, 2,4,6-Trichloro-1,3,5-triazine, 2,2,3 -Trichloro-3-phenyl-1, 1-propanediol, 2,4,5Trichlorophenoxyacetic acid, Trichlorobutene, Perchloromethylmercapan, 2-Trichloromethyl-5-(4hydroxystyryl)-1,3,4-oxadiazole, Sodium trifluoroacetate, 2,3,4-Trifluoronitrobenzene, Nitrobenzotrifluoride, Trimethylacetylchloride, Trimethylchlorosilane, Sodium=4-(2,4-dichloro-mtoluol)-1,3-

dimethylpyrazole-5-oleate, Nitrofen, Paraquat, 5'-tBis(2-acetoxyethyl) amino]-2'-(2-chloro-4-nitrophenylazo) acetanilide 4- (p-Bis(2-chloroethyl) aminophenyl) butyric acid, odomethylpivalate 2-t-Butyl-5-chloro-6-nitro-benzooxazole, O-3-t-Butylphenyl -chlorothioformate, 2-Chloro-1-propanol, 4-Bromo-3-oxobutyroanilide, 1-Bromo-2-chloroethane, Ethyl bromoacetate, 3Bromopropionic acid, Ethyl 3-bromopropionate, (E)-3-[p-(Bromomethyl) phenyl) acrylic acid, Ethyl (E)-3-[p-(bromomethyl) phenyl] acrylate, 3-Bromo-2-methylpropionic acid 4-Bromo-2methoxyimino-3-oxobutyryl=chloride, Hexachlorocyclohexane, hexachloro-1, 3-butadiene, Hexachlorobenzene, Heptachlor, Perfluoroprpoxy-1,1,2-trifluoroethylene, I-Benzyl-2-(chloromethyl) imidazole=chloride, Hexachloro-hexahedra-methano-dioxathiepine oxide, N-[B-(benzol) furan-2-yl) acrylol-N'-trichloroacetohydrazid, Pentachloronaphthalene, Pentafluoroiodoethane, Mirex, 2-Methyl-4chlorophenoxy-acetic acid, Methyltrichlorosilane, 2-Methyl-3-trifluoromethylaniline, Methylphenyldichlorosilane, Methrachlor, 2-Mercaptobenzothiazol, Monofluoroacetic amide, Acetyl iodide, Allyl iodide, Methyl iodide, 3-Iodopropionic acid

(b) Wastes containing 1% or more by weight of any of the following organohalogen compounds: Isopropyl-N-(3-chlorophenyl) carbamate (IPC), Imidacloprid, Echlomezole, Ethychlozate, Epibromohydrin, (4-Chloro-2-methylphenxoy) acetic acid, Isobutyryl chloride, Butyryl chloride, Propionyl chloride, Pentyl chloride N'-(2-Methyl-4-chlorophenyl)-N,N-dimethylformamizine chloride, Oxadiazon, 2-Chloro-4, 5-dimethylphenyl-N-methylcarbamate, Chlorphenamidinel-[3, 5-Dichloro-4(3-chloro-5-trifluoromethyl-2-pyridylox y) phenyl]-3-(2, 6-difluorobenzoyl) urea, Chlormequat, Chloroacetonitryl, Chloro acetophenone, Chloroanisidine, Allyl chloroformate, Isobutyl chloroformate, Isopropyl chloroformate, Ethyl chloroformate, 2-Ethylhexyl chloroformate, 2-Ethoxyethyl chloroformate, Chloromethyl chloroformate, Cyclobutyl chloroformate, Phenyl chloroformate, n-Butyl chloroformate, sec-Butyl chloroformate, t-Butylcyclohexyl chloroformate, 2-Butoxyethyl chloroformate, n-Propyl chloroformate, Benzyl chloroformate, Methyl chloroformate, Isopropyl chloroacetate, Ethyl chloroacetate, Sodium chloroacetate, Vinyl chloroacetate, Methyl monochloroacetate, 1-Chloro-1,2-dibromoethane, 2-Chloropridine, Chlorobutanes, 3-Chloro-1propanol, Glycerol a-monochlorohydrin, Isopropyl 2-chloropropionate, Ethyl 2-chloropropionate, Methyl 2-chloropropionate, I-Chloro-3-bromopropane, Dichlorobenzylicacid ethyl ester, p - Chlorobenzoyl chloride, Chlorobenzotrifluorides, 1,1-Bis(p-chlorophenyl)-2,2,2 - trichloroethanol, 2,4,6-Trichlorophenyl-4'-nitrophenyl ether, 1,4,5,6,7,7-Hexachlorobicyclo(2,2,1) hept-5-ene-2,3-d carboxylic acid di-2-propenylester, Dicloro dinitromethane, Dichlorobutyne, 1,3-Dichloroacetone, 2,5-Dichloroaniline, 3,5-Dichloroaniline, B, B'-Dichloroethyl hormal 1,1'-Ethylene-2, 2'dipyridiliumdibromide, Dibromochloropropane 3,5-Dibromo-4-hydroxy-4'-nitroazobenzene (BAB), 1,2-Dibromobutan-3-one, m-Dibromobenzen, Bromoacetone, Isopropyl bromide, Ethyl bromide, Xylol bromide, Diphenylmethyl bromide, Phenacyl bromide, n-Buthyl bromide, 2-Bromobutane, Benzyl bromide, Thiochlormethyl, 1,1,2,2-Tetrachloronitoroethane, Methyl tricloroacetate, Trichloronitroethylene, 2,4,5-Trichlorophenoxyacetic acid butoxyethylester, 2,4,5Trichlorophenoxyacetic acid methoxyethylester, 2,4,6-Trinitrochlorobenzene, Trinitrofluorenone, Trifluoroacetate acid, Trifluoromethanesulfonic acid 2-Trifluoromethylaniline, 3-Trifluoromethylaniline, N,N'-[1,4-Priperazinediylbis(2,2,2,-trichloroethylide ne)] bisformamide, Nitrobromobenzene, n-Valerylchloride, Halofuginone, Isopropyl p,p'-dibromobenzilate, Fluoroaniline, Fluoroacetic acid, Fluorotoluene, Fluorobenzene, Fulsulfamide, Methyl bromoacetate, 3Bromopropyne, Bromobenzene, 2-Bromopentane, I-Bromo-3-methylbutane, Bromomethylpropane, Hexachloroacetone, Hexachloro-1,3-cyclopentadiene, Hexachlorophene, Hexythiazox, Permethrin, Benzotrifluoride, Benzoate Pentyltrichlorosilane, Methylallyl chloride, Methyl bromoacetone, Sodium fluoroacetate, Monofluoroacet-p-bromoanilide, N-(p-Bromobenzyl) monofluoroacetamide, n-Butyl iodide, Benzyl iodide, 2-Iodobutane, Iodopropanes, Iodomethylpropane, Hexafluoroacetone

(c) Waste containing or contaminated with polychlorinated biphenyls (PCBs) and/or polychlorinated triphenyls (PCTs) and/or polybrominated biphenyls (PBBs) of 50 ppm or more by weight.

(d) Wastes other than the organic halogen compounds given in a), b), and c) (excluding wastes listed in other items)

(e) Wastes to be exported for the purpose of D1 to D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria:

   (i) Wastes in solid form, which cannot meet the Ambient Soil Quality Standards in terms of PCB determined by the relevant lead agency.

   (ii) Wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of PCB.

(f) Wastes to be exported or imported for purposes other than those in e) above, which cannot meet the following criteria:

   (i) Wastes in solid form, which cannot meet the standards in for hazardous wastes in terms of PCB

   (ii) Wastes in liquid form, which cannot meet the standards for effluent quality standards in terms of PCB.

FIFTH SCHEDULE

(Regulation 22)

LIST OF HAZARDOUS CHARACTERISTICS

UN CODE CHARACTERISTICS CLASS

UN CLASS	**CODE**	**CHARACTERISTICS**
1	HI	Explosive An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction or producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.
3	H3	Flammable Liquids The word “flammable” has the same meaning as “inflammable”. Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example paints, varnishes, lacquers and others but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5ºC, closed-cup test, or not more than 65.6ºC open-cup test (since the results of open-cup tests and closed-up tests are not strictly comparable and even individual results by the same tests are often variable, regulations varying from the above figures to make allowance for such difference would be within the spirit of this definition).
4.1	H4.1	Flammable Solids Solids or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.
4.2	H4.2	Substances or wastes liable to spontaneous combustion Substance or wastes which are liable to spontaneous heating under normal conditions encountered in transport or to heating up on tract with air, and being then liable to catch fire.
4.3	H4.3	Substances or wastes which, in contact with water emit flammable gases; substances or wastes which, by interaction with water, are liable to become spontaneously flammable or give off flammable gases in dangerous quantities.
5.1	H5.1	Oxiding Substances or wastes which, while in themselves not necessary combustible, may generally, by yielding oxygen, cause or contribute to the combustion of other materials.
5.2	H5.2	Organic Peroxides Organic substances or wastes which contain the bivalent 0-0-structure are thermally unstable substances which may

undergo exothermic self accelerating decomposition.

6.1	H6.1	Toxic or Poisonous (Acute)
		Substances or wastes liable either to cause death or serious injury to the human health if swallowed or inhaled or by skin contact.
6.2	H6.2	Infectious substances extremely hazardous to health
		Substances or wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.
8	H8	Corrosives
		Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or in the case of leakage will materially damage, or even destroy, other goods in the means of transport; they may also cause other hazards.
9	9.H10	Liberation of toxic gases in contact with air or water
		Substances or wastes which by interaction with air or water, are liable to give out toxic gases in dangerous quantities.
9	H11	Toxic (delayed or chronic)
		Substances or wastes which, by interaction with air or water, are liable to give out toxic gases in dangerous quantities.
		Substances or wastes which, if they are inhaled or ingested or if they penetrate through the skin may involve delayed or chronic effects, including carcinogenicity.
9	H12	Ecotoxic
		Substances or wastes which, if released present or may present immediate or delayed adverse impacts to the environment by means of bio-accumulation and/or toxic effects upon biotic systems.
9	H13	Capable, by means, after disposal, of yielding another material e.g. leachate which possesses any of the characteristics listed above.
10	H14	Radioactive waste
11	H15	Persistent waste; waste which contaminate the environment for long periods of time.
12	H16	Carcinogenic wastes which may lead to development of cancer in human beings or animals.

Corresponds to the hazardous classification system included in the United Nations Recommendations on the Transport of Dangerous Goods (ST/SG/AC.10/1/Rev.5, United Nations New York, 1988

FORM NEMA/WM/I

SIXTH SCHEDULE

FORM I

(To be filled in triplicate)

APPLICATION FOR TRANSBOUNDARY MOVEMENT OF WASTE

(FOR EXPORT OR TRANSIT PURPOSE ONLY)

(Regulation 27, 30)

1. NOTIFIER*

Name: Address:	Telephone:……………………………….. Telefax:………………………………….. E-mail…………………………………….
Contact person (name, address, telefax, e-mail)	

2. GENERATOR (S) OF WASTE

Name:……………………………………… Address:……………………………………. .	Telephone……………………………… Telefax:………………………………….. E-mail…………………………………….
Contact person (name, address, telephone, telefax, e-mail) ………………………………	
Process by which the waste was generated:……………………………………………….	
Site of generation:…………………………………………………………………………	

3. REASON FOR WASTE EXPORT

Why the waste cannot be disposed of in the country of origin
Why the waste has to be exported/imported through Kenya

4. WASTE

Description of the waste:
Y number H number UN class UN number: Shipping name IWIC code
Physical state at 20^{o}C:
ĩ Powder ĩ Solid ĩ Paste/viscous ĩ Sludge ĩ Liquid ĩ gaseous ĩ Other (specify)
Estimated quantity (Kg or L) of the shipment:
Type of packaging:…………………………………….. Number of packages:……………………………………..
Special handling requirements including emergency provisions in case of accidents:
Method of disposal:

5. EXPORT/IMPORTER OF THE WASTE

Competent Authority and details of approval
Exporter/Importer of the waste in the country of origin/destination Name:………………………………….Telephone: Telefax E-mail

6. DISPOSER OF WASTE

Contact person in case of emergency: Name:……………………….Telephone ………………………Telefax E-mail:
Approximate date of disposal:
Actual site of disposal:
Signature and official stamp of disposer:

7. TRANSIT

Projected length of time the waste shipment shall be in transit in Kenya territory
Expected date of entry Expected date of exit
Means of transport envisaged:
Information relating to insurance:

8. DECLARATION

I/we* ……………………………………………………………….being the exporter/importer* hereby declare that on………………………………I/we entered into a contract with the disposer and that I/we shall be bound by the terms of the said contract (Attach a copy of contract) Signed: (Exporter /Importer*)
I/we * ……………………………………………………………being the exporter/importer* hereby guarantee/declare that the above information is correct and true. Signed: ………………………………………………………………. Signed: ………………………………………………………………. (Exporter/Importer*)

*delete whichever is not applicable

FORM NEMA/WM/II

SIXTH SCHEDULE

FORM II

(To be filled in triplicate)

PERMIT TO EXPORT/TRANSIT WASTE

(Regulations 26)

Permit No……………………………….

Name and address of exported/notifier……………………………………………………..

………………………………………………………………………………………………
(Physical and Mailing Address)

You are hereby granted permission to export/transit the following waste:

1. ……………………………………………………………………………………...
2. ..…………………………………………………………………………………….
3. ………………………………………………………………………………………
4. ..…………………………………………………………………………………….
5. ……………………………………………………………………………………..
6. ..…………………………………………………………………………………….
7. ..…………………………………………………………………………………….
8. ..…………………………………………………………………………………….

To the following address: (Name, Physical and Mailing Address of the Importer)

……………………………………………………………………………………...

……………………………………………………………………………………...

This export shall be made through ……………………………………. Border/custom control post. This Permit is valid from (date) ……………………………………………….. to (date) ……………………………………………………………………………………… This permit is subject to the following conditions: (Attach a copy of authorization by the state to which the export is to be made)

..……………………………………………………………………………………………….

..……………………………………………………………………………………………….

Date………………………………………………. Signature…………………………

..……………………………………………………………………………………………….

Director General
National Environment Management Authority

SEVENTH SCHEDULE

(Regulation 38)

Categories of Biomedical Waste

1.	Infections Waste	Waste suspected to contain pathogens e.g. laboratory cultures, waste from isolation wards, tissues (swabs), materials, or equipment that have been in contact with tubings, catheters, IGS toxins, live or attenuated vaccines, soiled plaster costs and other materials contaminated with blood infected patients, excreta.
2.	Pathological waste	Human and animal tissues or fluids. e.g body parts blood and other body fluids, fetuses, animal carcasses.
3.	Sharps	Sharp waste. e.g needles, infusion sets, scalpels, knives, blades, broken glass that may cause puncture and cuts. This includes both used and unused sharps.
4.	Pharmaceutical waste	Waste containing pharmaceutical e.g pharmaceuticals that are expired or no longer needed; items contaminated by or containing pharmaceuticals (bottles, boxes).
5.	Genotoxic Waste	Waste containing substances with genotoxic properties. e.g waste containing cytostatic drug (often used in cancer therapy), genotoxic chemicals.
6.	Chemical waste	Waste containing chemical substances e.g laboratory reagents; film developer, disinfectants,(disinfectants) that are expired or no longer needed solvents
7.	Waste with high content of heavy metals	Batteries, broken thermometers, blood-pressures gauges, etc
8.	Pressurized containers	Gas cylinders, gas cartridges, aerosol cans.
9.	Radioactive waste	Waste containing radioactive substances e.g unused liquids from radiotherapy or laboratory research, contaminated glassware, packages, or absorbent paper, urine and excreta from patients treated or tested with unsealed radionuclides, sealed sources.
10.	General solid waste	Waste generated from offices, kitchens, packaging material from stores.
11.	Microorganisms	Any biological entity, cellular or non-cellular capable of replication or of transferring genetic material.

EIGHTH SCHEDULE

PART I

(Regulation 39)

Colour code for Biomedical adopted from the WHO colour code

	Type of Waste	Colour of Container and Markings	Type of Container
1.	Infectious	**Yellow**	Strong leak proof-plastic bag with biohazard symbol
2	Pathological	**Yellow**	Strong leak proof-plastic bag with biohazard symbol
3	Sharps	**Yellow – (marked sharps)**	Puncture proof
4	Chemical and Pharmaceutical	**Brown**	Plastic bag or container
5	Non-infectious/non hazardous (Non-clinical)	**Black**	Plastic bag or container
6	Radioactive waste		Lead box, labeled with radioactive symbol
7	Non-infectious/non hazardous (Non-clinical)	**Black**	Plastic bag or container

Infectious, Pathological and Sharp waste should also be marked with the international biohazard symbol.

Chemicals should also be marked with the appropriate international chemical hazard symbol

Radioactive must be labeled with the appropriate warning symbol as in Schedule Eight Part II.

Note:

Colour coding of waste categories with multiple treatment options as defined in Schedule Nine, shall be selected depending on treatment option chosen, which shall be as specified in Schedule Nine.

Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.

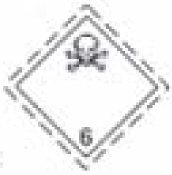
EIGHTH SCHEDULE PART II
Symbols
(Regulation 39)

Class 5

(No 5.1)
Division 5.1
Oxidizing substances
Symbol (flame over circle) : black ;
Background : yellow ;
Figure '5.1' in bottom corner

(No. 5.2)
Division 5.2
Organic peroxides
Symbol (flame over circle) : black ;
Background : yellow ;
Figure '5.2' in bottom corner

Class 6



(No. 6.1)
Division 6.1
Toxic substances
Symbol (skull and crossbones) : black;
Background : white ;
Figure '6' in bottom corner

(No.6.2)
Division 6.2
Infectious substances
The lower half of the label may bear the inscriptions: 'INFECTIOUS SUBSTANCE' and 'In the case of damage or leakage immediately notify Public Health Authority' ;
Symbol (three crescents superimposed on a circle) and inscriptions : black ; Background : white ;
Figure '6' in bottom corner

Class 7 Radioactive material

(No. 7A)
Category I - White
Symbol (trefoil) : black ;
Background : white
Text (mandatory) : black in lower half of label:
'RADIOACTIVE'
'Contents.........'
Activity.........'
Figure '7' in bottom corner

(No. 7B)
Category II - Yellow
Symbol (trefoil) : black ;
Background : upperhalf yellow with white border, lower half white
Text (mandatory) : black in lower half of label:
'RADIOACTIVE'
'Contents.........'
'Activity.........'
In a black outlined box - 'Transport Index'
Two red bars should follow the word 'Radioactive'
Figure '7' in bottom corner

(No. 7C)
Category II - Yellow
Symbol (trefoil) : black ;
Background : upperhalf yellow with white border, lower half white
Text (mandatory) : black in lower half of label:
'RADIOACTIVE'
'Contents.........'
'Activity.........'
In a black outlined box - 'Transport index'
Three red bars should follow the word 'Radioactive'
Figure '7' in bottom corner

Class 8 Corrosive substances

(No. 8)
Category I - White
Symbol (liquids, spilling from two glass vessels and attacking a hand and a metal) : black
Background : upper half white,
lower half black with white border ;
Figure '8' in white in bottom corner

Class 9 Miscellaneous dangerous substances and articles

(No. 9)
Category I - White
Symbol (seven vertical stripes in upper half) : black ;
Background : white,
lower half black with white border ;
Figure '9' underlined in bottom corner

NINTH SCHEDULE

(Regulation 40)

Treatment methods of Bio-Medical Wastes

Waste category	Treatment method
Contaminated animal carcasses	Incineration
Cultures and stock	Steam sterilization
Contaminated bedding/patient care waste	Steam sterilization or Incineration
Contaminated small equipment	Steam sterilization or incineration
Contaminated large equipment	Formaldehyde decontamination
Waste biological	Steam sterilization or incineration
Surgery waste	Steam sterilization or incineration
Human blood	Steam sterilization or incineration
Autopsy waste	Incineration
Human blood products	Steam sterilization or Incineration
Contaminated laboratory waste	Steam sterilization
Pathological waste	Steam sterilization or Incineration/Grinding
Dialysis unit waste	Steam sterilization
Contaminated and unused sharps	Steam sterilization and Incineration/grinding
Pharmaceutical waste	See separate Pharmaceutical waste guidelines
Anti-neoplastic drug waste	Incineration
Low level radioactive waste	Consult Radiation Protection Board

Note:

Chemical treatment using at least 1% hypochlorite solution or any other equivalent chemical reagent. It must be ensured that the chemical treatment.

Mutilation/shredding must be such so as to prevent unauthorized reuse.

There will be no chemical pretreatment before incineration.

Chlorinated plastics shall not be incinerated.

Deep burial shall be an option available only in towns with population less than five hundred thousand and in rural areas.

TENTH SCHEDULE

(Regulation 47)

STANDARDS FOR WASTE AUTOCLAVING

The autoclave should be indicated for the purposes of disinfecting and treating bio-medical waste,

I. When operating a gravity flow autoclave, medical shall be subjected to:

a temperature of not less than 121°C and pressure of 15 pounds per square inch (psi) for an autoclave residence time of not less than 60 minutes; or

a temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 45 minutes; or

a temperature of not less than 149°C and a pressure of 52 psi for an autoclave residence time of not less than 30 minutes

II. When operating a vacuum autoclave, medical waste shall be subjected to a minimum of one pre-vacuum pulse to purge the autoclave of all air. The waste shall be subjected to the following:

a temperature of not less 121°C and a pressure of 15 psi per autoclave residence time of not less than 45 minutes; or

a temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 30 minutes;

III. Medical waste shall not be considered properly treated unless the time temperature and pressure indicators indicate that the required time, temperature and pressure were reached during the autoclave process. If for any reasons, time temperature, pressure or residence time was not reached, the entire load of medical waste must be autoclaved again until proper temperature, pressure and residence time were achieved.

IV Recording of operational parameters

Each autoclave shall have graphic or computer recording devices, which will automatically and continuously monitor and record dates, time of the day, load identification number and operating parameters throughout the entire length of the autoclave cycle.

V Validation test

Spore testing**:**

The autoclave should completely and consistently kill biological indicator at the maximum design capacity of each autoclave unit. Biological indicator for autoclave shall be *Bacillus stearothermophilus* spore using vials or spore strips, with at least 1 x 10^4 spores per milliliter. Under no circumstances will an autoclave have minimum operating parameters less than a residence time 30 minutes, regardless of temperature and pressure, a temperature less than 121°C or pressure less than 15 psi.

VI Routine Test

A chemical indicator strip/tape that changes colour when a certain temperature is reached can be used to verify that a specific temperature has been achieved. It may be necessary to use more than one strip over the waste package at different location to ensure that the inner content of the package has been adequately autoclaved.

STANDARDS FOR LIQUID WASTE

The effluent generated from the hospital should conform to the following limits:

PARAMETERS	PERMISSIBLE LIMITS
pH	6.5-9.8.5
Suspended solids	100 mg/l
Oil and grease	Nil
BOD	30 mg/l
COD	50 mg/l
Bio-assay test	90% survival of fish after 96 hours in 100% effluent

These limits are applicable to those hospitals, which are either connected with sewers without terminal sewage treatment plant or not connected to sewage. For discharge into public sewers with terminal facilities, the general standards as notified under the Environmental Management and Co-ordination (Water Quality) Regulations 2006 shall be applicable.

STANDARDS FOR MICROWAVING

Microwave treatment shall not be used for cytotoxic, hazardous or radioactive wastes, contaminated animal carcasses, body parts and large metal items.

The microwave system shall comply with the efficacy test/routine tests and a performance guarantee may be provided by the supplier before operation of the unit.

The microwave should completely and consistently kill the bacteria and other pathogenic organisms that is ensured by approved biological indicator at the maximum design capacity of each microwave unit. Biological indicators for microwave shall be *Bacillus subtilis* spores using vials strips with at least 1 x 10^4 spores per milliliter.

STANDARDS FOR DEEP BURIAL

A pit trench should be dug about 2 metres deep. It should be filled with waste, and then covered with lime within 50 cm of the surface, before filling the rest of the pit with soil.

It must be ensured that animals do not have any access to burial sites. Covers of galvanized iron/wire meshes may be used.

On each occasion, when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes.

Burial must be performed under close and dedicated supervision.

The deep burial site should be relatively impermeable, and no shallow well should be close to the site.

The pits should be distant from habitation, and sited so as to ensure that no contamination occurs of any surface water or groundwater. The area should not be prone to flooding or erosion.

7. The Authority will authorize the location of the deep burial site.

8. The institution shall maintain a record of all pits for deep burial.

MADE ON: ……………………..……………………………………………………2006

<u>HONOURABLE KIVUTHA KIBWANA</u>
MINISTER FOR ENVIRONMENT AND NATURAL RESOURCES