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REGULATIONS ENFORCEMENT AGENCY
(ESTABLISHMENT) ACT, 2007
NATIONAL ENVIRONMENTAL (HAZARDOUS CHEMICALS
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SCHEDULES

S. I. No. 65 of 2014

**NATIONAL ENVIRONMENTAL STANDARDS AND
REGULATIONS ENFORCEMENT AGENCY
(ESTABLISHMENT) ACT, 2007**

**NATIONAL ENVIRONMENTAL (HAZARDOUS CHEMICALS
AND PESTICIDES) REGULATIONS, 2014**

In exercise of the powers conferred on me by section 34 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007 ; and all other powers enabling me in that behalf, I, MRS. LAURENCIA LARABA MALLAM, Honourable Minister of Environment, hereby make the following Regulations—

[9th Day of December, 2014]

Commence-
ment.

PART I—OBJECTIVE AND SCOPE OF APPLICATION

1. The objective of these Regulations is to—

Objectives.

(a) protect human health and the environment from the harmful effects of hazardous chemicals and pesticides, and other agrochemicals and to—

(i) promote safety in their use,

(ii) control the import, export, sales and handling of hazardous chemicals, and

(iii) contribute to the sustainable development of agriculture and the conservation of the environment ;

(b) ensure the environmentally sound management (ESM) of hazardous chemicals and pesticides within their life cycle for the protection of human health and the environment ;

(c) implement the Rotterdam Convention (RC) on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and any other related Multilateral Environmental Agreements (MEAs) that may be domesticated by Nigeria ;

(d) enforce the ban on Persistent Organic Pollutants (POPS) ;

(e) control the trans-boundary movement of hazardous chemical wastes and their disposal ;

(f) enforce the provisions of the Harmful Waste (Special Criminal Provision, etc) Act ;

(g) strengthen the sound management of hazardous chemicals and pesticides, by preventing and reducing its adverse effects and accidents ; and

(h) regulate all other hazardous chemicals and pesticides in international trade, imported, manufactured, exported or sold, and in use that can impact adversely on human health and the environment.

Scope of Application.

2. These Regulations shall apply to—

- (a) banned chemicals as listed in Schedule I to these Regulations ;
- (b) the import or export of substances in the list of restricted substances contained in Schedule II to these Regulations and other chemicals and pesticides ; and
- (c) the storage, usage, and marketing of hazardous chemicals , pesticides and other agrochemicals.

Exemption.

3.—(1) These Regulations shall not apply to the following except their wastes—

- (a) pharmaceutical products, cosmetics, food or drug, as defined in the National Agency for Food and Drug Administration and Control Act ;
- (b) substances as defined in the National Drug Law Enforcement Agency Act ;
- (c) prepared, processed or cooked foodstuff ;
- (d) explosives as defined in the Explosives Act ;
- (e) radioactive substances as defined in the Nigeria Nuclear Regulatory Authority Act ;
- (f) veterinary drugs other than pesticides used in veterinary practices ;
- (g) the development, production, stockpiling and use of chemical weapons as defined by the Organisation for the Prohibition of Chemical Weapon Convention (OPCW) ;
- (h) a mixture at a concentration of less than 0.1 per cent by weight active ingredient imported or exported by or to an individual for their personal use ; and
- (i) chemicals in quantities not likely to affect human health or the environment, imported for the purpose of research or analysis or for personal use.

(2) The quantity of chemicals mentioned under sub-regulation (1) (i) of this regulation shall not be more than 1kg for an individual and 10kg for a Tertiary and Research Institution.

PART II—HAZARDOUS CHEMICALS AND PESTICIDES

Hazardous Chemicals and Pesticides. Banned and Restricted Hazardous Chemicals and Pesticides.

4. A Chemical shall be regarded as hazardous where it contains the characteristics listed under Schedule X to these Regulations.

5. A person shall not import, export or be in possession of—

- (a) banned hazardous chemicals and pesticides listed under Schedule I to these Regulations ; or
- (b) restricted chemicals and pesticides listed under Schedule II to these Regulations unless a permit to that effect is issued or obtained.

6. A person who imports or exports restricted hazardous chemicals and pesticides shall—

- (a) employ or engage the services of a Chartered Chemist ;
- (b) follow the conditions specified in the permit ; and
- (c) have liability insurance coverage for every shipment in respect of any—
 - (i) damage for which the importer or exporter may become liable, and
 - (ii) cost imposed by the applicable laws on the importer or exporter for any clean-up and remediation related to his activity.

Importation
or
Exportation
of Restricted
Chemicals
and
Pesticides.

7. A person importing or exporting hazardous chemicals and pesticides shall, in accordance with the Globally Harmonized System of labelling and Classification of Chemicals (GHS), affix placards or marks of hazards on the cargo or transport media.

Hazard
Signs.

8.—(1) A person importing or exporting hazardous chemicals and pesticides shall affix to every package or container a label, with the following information—

Labelling of
Containers.

(a) name, address and telephone number of the manufacturer, importer, exporter or any other relevant person ;

(b) the trade name, chemical name, common name and Chemical Abstract System (CAS) number of the substance and the manufacture and expiry dates of the substance ;

(c) signal word such as “Danger”, “Warning” and pictograms, in accordance with UN GHS ;

(d) any associated hazard to human health and the environment ; and

(e) precautionary measures to be taken to minimize or prevent adverse effect that may result from exposure, improper storage or handling.

(2) Hazard and precautionary statements shall be made in accordance with the GHS standards prescribed in schedule V to these Regulations.

9.—(1) A person that transports chemicals and pesticides by road or waterway shall—

Transportation
Permit and
Requirement.

(a) obtain transportation permit from the Designated Authority; and

(b) carry out loading and unloading of hazardous substance in accordance with standard safety operation procedure prescribed in Schedule VII to these Regulations.

(2) A Vehicle for transportation of restricted hazardous chemicals and pesticides shall meet the national transportation safety standards prescribed by the Federal Road Safety Corps (FRSC).

(3) A vehicle transporting hazardous chemicals and pesticides shall not be permitted to enter a restricted zone without approval from the relevant authority.

(4) A driver of a vehicle and his escorts shall—

(a) have on board a copy of the relevant Material Safety Data Sheet (MSDS);

(b) be trained on emergency procedures; and

(c) take appropriate protective measures for safety.

Tracking of
Restricted
Hazardous
Chemicals
and
Pesticides.

10. Distributors and retailers of restricted hazardous chemicals and pesticides shall—

(a) be registered with the Agency; and

(b) keep record of all the stocks, sales and supplies in such form as approved by the Agency for effective tracking.

Storage of
Restricted
Hazardous
chemicals
and
pesticide.

11. A person with a permit to store and use hazardous chemicals and pesticides shall—

(a) keep a record of the quantity of such substances stored in such form as approved by the Agency;

(b) not store the substance for any purpose other than that specified in the permit;

(c) store the substance in line with the MSDS and as outlined in Schedules VIII and IX to these Regulations; and

(d) ensure that his agents have received relevant and continuous training.

Waste
Classification
and Labelling.

12.—(1) A Hazardous Substance waste type shall be as listed and classified in Schedule X and XI to these Regulations.

(2) A person who generates hazardous chemicals and pesticides waste shall ensure that every container or package for storing such waste is secured, marked and labelled in accordance with Schedule XII to these Regulations.

Handling and
Treatment.

13.—(1) A person who generates hazardous chemicals and pesticides wastes including expired or obsolete hazardous chemicals and pesticides as well as spent packaging materials shall handle and treat them in an Environmentally Sound Manner and in line with best practices.

(2) Any residue of the waste treated in accordance with sub-regulation (1) of this regulation shall be disposed, treated and handled in an environmentally sound manner.

(3) A person that handles hazardous chemicals and pesticides waste shall use appropriate Personal Protective Equipment (PPE).

14.—(1) A person shall not import, export or transport hazardous wastes without a valid permit by the Federal Ministry of Environment. Transit Permit.

(2) The Agency shall monitor the transit of any hazardous waste meant for other countries through the territory of Nigeria.

PART III—REGISTRATION AND ISSUANCE OF PERMIT

15.—(1) A person who imports or exports hazardous chemicals and pesticides shall register both the business and the substance with the Agency. Registration of Hazardous Chemicals and Pesticides.

(2) Application for registration shall be submitted to the Agency, indicating the—

- (a) name and address of the business ;
- (b) information contained in the Material Safety Data Sheet (MSDS) ; and
- (c) facilities for storing the chemicals and pesticides.

16.—(1) A person shall not import, export, distribute, store or trade in any restricted hazardous chemicals and pesticides without valid permit from the Agency. Issuance of Permit.

(2) A permit shall—

- (a) relate to a specific transaction and shall not be valid for any subsequent transaction ; and
- (b) not be transferable.

(3) Notwithstanding the provisions of this regulation, a person may import or export hazardous chemicals and pesticides without a permit where the substance is solely for research and the total quantity of the substance in a calendar year is not more than 1kg for individuals and 10kg for Tertiary and Research Institutions.

17. A person importing or exporting restricted hazardous chemicals and pesticides shall provide the following information for every shipment— Requirements for issuance of Import or Export Permits.

- (a) a copy of any previous permit ;
- (b) the Material Safety Data Sheet (MSDS) and labelling in line with the GHS as prescribed in Schedule III to these Regulations ;
- (c) a written consent from the Designated National Authority (DNA) for the importation or exportation of the substance ;
- (d) a Chemical Safety Card containing information prescribed in Schedule IV to these Regulations ; and
- (e) an insurance policy covering the risks likely to arise from the activity for which the permit is required.

Permit
Procedure.

18. All permit procedures such as application, refusal, suspension, cancellation, appeal and amendment shall be made in accordance with the provisions of the National Environmental (Permitting and Licensing System) Regulations, 2009 and Schedule VI to these Regulations.

PART IV—EMERGENCY PLAN

Emergency
Preparedness
and
Response
Plan.

19. A person authorised to deal on any hazardous substance shall, in accordance with Schedule XIII to these Regulations, prepare a comprehensive Emergency Preparedness and Response Plan to contain any spillage, leakage, release, accident or emergency that may arise.

Notification
of Accidents
and
Emergencies.

20. A person authorised to transport, store or use hazardous chemicals and pesticides shall in the event of an accidental spillage, leakage or release—

(a) take immediate actions and mitigative measures in accordance with the established Emergency Preparedness and Response plan to contain the release ;

(b) have the affected areas immediately cleaned-up, decontaminated and remediated ;

(c) immediately notify the relevant authorities providing the following information, the—

(i) circumstances of the accidental release,

(ii) quantity released,

(iii) immediate actions or mitigative measures taken to control or contain the release,

(iv) measures taken to remediate the affected areas, and

(v) measures taken to prevent re-occurrence.

PART V—GENERAL CODE OF PRACTICE FOR THE SAFE USE
OF PESTICIDES AND OTHER AGROCHEMICALS

Responsibility
for Safe Use
of Pesticides
and other
Agro-
chemicals.

21.—(1) The general code of practice for operators and sprayers of agrochemicals shall be in accordance with schedule XIV to these Regulations, to ensure—

(a) the safety of the general public and the environment ; and

(b) that employees are properly trained and supervised in the safe handling and use of Substances within their life cycle.

(2) The control of employee exposure to hazardous substances shall be in accordance with Schedule XV to these Regulations.

PART VI—ENFORCEMENT

22.—(1) An Enforcement Notice shall be served where the Agency is of the opinion that an operator has contravened, is contravening or is likely to contravene any condition of a permit. Enforcement Notice.

(2) An Enforcement Notice shall specify the—

(a) activities and matters constituting the contravention or making it likely that the contravention will arise ;

(b) steps that must be taken to remedy the contravention or to remedy the activities and matters making it likely that the contravention will arise ; and

(c) period within which those steps must be taken.

23. An Officer of the Agency may, in the course of his duty under these Regulations— Powers of Officers.

(a) enter and search any premises to take samples or specimen for analysis and measurements ; and

(b) seize and detain any article which he reasonably believes to have contravened any provision of these Regulations, for such time and at such place as may be necessary.

24. An Enforcement Notice shall be delivered by hand, registered post or courier, Newspaper publication or pasting at the address of the owner or occupant of the premises or facility. Mode of Delivery.

25. Where a person fails to comply with an enforcement notice within the period specified under regulation 22 of these Regulations, a second notice shall be served. Enforcement Notice Reminder.

26.—(1) Where a person fails to comply with the second enforcement notice within the specified period contained therein, a suspension notice shall be served or any other punitive action may be taken as may be necessary. Violation of Enforcement Notice.

(2) Where a suspension notice is served pursuant to this regulation, the permit shall on the service of such notice, cease to have effect as stated in the notice.

(3) The Agency may withdraw a suspension notice after verifying that the operator has complied with these Regulations.

(4) Notwithstanding the provisions of these Regulations, the Agency shall have the power to enter and seal any facility found contravening any of the provisions of these regulations.

PART VII—OFFENCES AND PENALTIES

- Contravention of Permit Conditions.
- 27.** A person contravenes the provisions of these Regulations where he handles, stores, supplies or transports any hazardous chemicals and pesticides without complying with—
- (a) the condition of a permit ;
 - (b) the requirements of an enforcement notice, or a closure notice under these regulations ; and
 - (c) any requirement imposed by a notice served by the Agency.
- False Statement.
- 28.** A Person contravenes the provisions of these Regulations where he is in possession of or circulate a document that is likely to mislead or deceive the Agency or make a statement which is known to be false or misleading particularly, where the statement is made—
- (a) in purported compliance with a requirement to furnish any information under any provision of these Regulations ;
 - (b) for the purpose of obtaining a permit for a facility for variation, transfer or surrender of a permit ;
 - (c) to intentionally make a false entry in any record relating to the permit ; and
 - (d) with intent to deceive, forge or use a document issued or authorized to be issued under a condition of the permit.
- Failure to comply with Abatement Measures.
- 29.** A Person contravenes the provisions of these Regulations where he fails to—
- (a) take appropriate measures to clean-up, decontaminate and restore areas affected by a release, leakage or spillage of any hazardous Substance ;
 - (b) remediate the contaminated area to the standard prescribed by the Agency ;
 - (c) furnish all required information to the Agency ;
 - (d) remove equipment or containers causing release of hazardous substance into the environment when requested by the inspector ;
 - (e) produce document when requested by the inspector ;
 - (f) comply with guidelines with respect to the handling, storage and transporting of any hazardous material ; or
 - (g) ensure the use of appropriate Personnel Protective Equipment (PPE) while handling, storing, or disposing the hazardous chemicals and pesticides and their wastes.

30. A Person contravenes the provisions of these Regulations where he fails to—
- (a) report the accidental release of a substance or emergencies ;
 - (b) maintain records of any release into the environment, of the Substance mentioned under paragraph (a) of this regulation ; and
 - (c) submit a pollution prevention plan to the Agency.
31. A Person contravenes the provisions of these Regulations where he operates without a permit.
32. A Person contravenes the provisions of these Regulations where he :
- (a) gives false information of the items stated in the application form ;
 - (b) presents a substance that has a high degree of persistence on soil thereby causing harm to the environment and human health ;
 - (c) gives names to substance that may cause any misunderstanding of the main constituents and efficacy of the active ingredient ;
 - (d) presents a substance that does not conform to the standards ;
 - (e) refuses or obstructs examination or collection of samples of the chemicals for analysis ;
 - (f) fails to comply with an order for the removal or destruction of chemicals ;
 - (g) fails to submit report or has made false reports on matters concerning the control hazardous chemicals and pesticides and their wastes ; and
 - (h) violates other provisions of these Regulations.
- 33.—(1) Any person who contravenes the provisions of these Regulations commits an offence and shall be liable on conviction to a fine, not exceeding ₦1,000,000.00 or imprisonment for a term not exceeding 5 years.
- (2) Where an offence in these Regulations is committed by a body corporate, it shall on conviction, be liable to a fine, not exceeding ₦1,000,000.00 and an additional fine of ₦50,000.00 for every day the offence subsists.

PART VIII—MISCELLANEOUS

34. In these Regulations—

“Act” means the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 ;

“Agency” means the National Environmental Standards and Regulations Enforcement Agency (NESREA) ;

“Agrochemical” means any chemical used for agricultural purpose ;

Failure to Report Accidental Release and Emergencies.

Operating without Permit.

Violation of Registration Requirement.

Penalties.

Interpretation.

“*Banned Chemicals and Pesticides*” means chemicals and pesticides, the uses of which have been prohibited in order to protect human health or the environment as listed in Schedule I to these Regulations ;

“*CAS registry number*” means the identification number assigned to a chemical substance by the Chemical Abstract Service (CAS) Division of the American Chemical Society (ACS) ;

“*Chemicals*” means a substance whether by itself or in a mixture or preparation and whether manufactured or obtained from nature, but does not include any living organism ;

“*Designated Authority (DA)*” means the Agency that issues permit ;

“*Designated National Authority (DNA)*” means an authority designated by a Party to act on its behalf for the administration of the Rotterdam Convention ;

“*Distributor*” means a person that buys hazardous chemicals and pesticides, warehouses them, and resells them to retailers or to the end users or customers directly ;

“*Environmentally Sound Management (ESM)*” means taking all practicable steps to ensure that hazardous chemicals and pesticides and their wastes are managed in a manner that will protect the environment and human health against the adverse effect that may result from such substances ;

“*Emergency Preparedness and Response Plan*” is a plan, which outlines what action is to be taken or a particular strategy to be followed in an unexpected event, which is beyond the normal day to day activity and requiring prompt action in order to ensure the safety of the people, public, environment and equipment ;

“*Enforcement Notice*” means a letter of compliance or abatement notice, informing a person of observed violations and the need to remedy same within a time limit, failure of which, the person shall be sanctioned in accordance to the provision of these Regulations ;

“*Exporter*” means a person who exports or intends to export from Nigeria, a substance on the List of Controlled Substances ;

“*GHS*” means the Globally Harmonised System of Classification and Labelling of Chemicals ;

“*Hazard*” means inherent property of a Chemical having a potential to cause adverse effect to the health of a person or the environment when exposed to it ;

“*Hazardous Chemicals and Pesticides*” refer to highly toxic substances which are inflammable or combustible, corrosive, reactive, toxic, explosive, and can do harm to people, facilities or the environment ;

“*Importer*” means a person who imports or intends to import into Nigeria, a restricted hazardous chemicals and pesticides on the List of Restricted Substances ;

“*Label*” means an appropriate group of written, printed or graphic information elements concerning a hazardous product selected as relevant to the target sector, affixed to, printed on or attached to outside packaging of a hazardous product ;

“*Material Safety Data Sheet (MSDS)*” means a document intended to provide workers and emergency personnel with procedures for handling or working with a substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid measures, reactivity, storage, disposal, protective equipment, and spill-handling procedures ;

“*MEAs*” means Multilateral Environmental Agreements ;

“*Minister*” means the Minister responsible for matters relating to Environment ;

“*NAFDAC*” means National Agency for Food, Drug Administration and Control ;

“*NDLEA*” means National Drug Law Enforcement Agency ;

“*Officer*” means an officer who has the legal authority to enter facility to conduct an inspection under environmental Legislations, Regulations or Guidelines ;

“*Pasting*” means the posting of a notice at the address of the owner or occupant of the premises or facility ; or the putting of a notice in a public or conspicuous place so that people including those the notice is meant for, can see it ;

“*Pesticides*” means any substance meant for preventing, destroying or mitigating any pest ;

“*PIC*” means Prior Informed Consent ;

“*Person*” includes individual, body corporate, or legal entity ;

“*Restricted Chemicals and Pesticides*” means a chemical for virtually all use of which within one or more categories, has been prohibited by final regulatory action in order to protect human health or environment, but for which certain specific uses remain allowed, including a chemical that has for virtually all use been refused for approval or been withdrawn by industry either from the domestic market or from further consideration in the domestic approval process, and where there is clear evidence that such action has been taken in order to protect human health or environment ;

“*Retailers*” means a person who sells hazardous chemicals and pesticides directly to users ;

“*Rotterdam Convention (RC)*” means the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, as may be amended from time to time ;

“*Shipping document*” means a document that relates to the import and export of chemicals and pesticides and contains information that describes a substance, its handling, and offer for transport, etc ;

“*Storage*” means the keeping of any Chemical in use or in a ready-to-use condition ;

“*Substance*” means Chemicals, pesticides or other agro-chemicals ;

“*Supplier*” means a person who supplies chemicals and includes a formulator, a manufacturer, an importer or a distributor ;

“*Transport Media*” includes Vehicle, Wagon, Container, and Tanks etc ;

“*Toxic*” means chemicals and preparations, which if inhaled or ingested or penetrate into the skin may involve serious acute or chronic health risks or even death ;

“*Warehouse*” means a building where large quantities of chemicals and pesticides are stored before use or sale ; and

“*Waste*” means a substance or object which is disposed of, intended to be disposed of or required to be disposed of by the provisions of national law ;

Citation.

35. These Regulations may be cited as the National Environmental (Hazardous Chemicals and Pesticides) Regulations, 2014.

SCHEDULE I
BANNED HAZARDOUS CHEMICALS AND PESTICIDES

[Regulation 2 (a), 5(a)]

<i>Chemical/Pesticide</i>	<i>CAS Number</i>
2,4,5-Trichlorophenoxy-acetic acid and its salts and esters	93-76-5
Aldrin	309-00-2
Binapacryl	485-31-4
Captafol	2425-06-1
Chlordane	57-74-9
Chlordimeform	6164-98-3
Chlorobenzilate	510-15-6
Dichloro-diphenyltrichloroethane (DDT)	50-29-3
Dieldrin	60-57-1
<u>Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)</u>	534-52-1 ; 2980-64-5 ; 5787-96-2 ; 2312-76-7
<u>Dinoseb and its salts and esters</u>	88-85-7
<u>EDB (1,2-dibromoethane)</u>	106-93-4
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Fluoroacetamide	640-19-7
<u>HCH (mixed isomers)</u>	608-73-1
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Lindane	58-89-9
Monocrotophos	6923-22-4
Parathion	56-38-2
Pentachlorophenol and its salts and esters	87-86-2
Toxaphene	8001-35-2
All tributyltin compounds including :	
—Tributyltin Oxide	56-35-9
—Tributyltin Fluoride	1983-10-4
—Tributyltin Metacrylate	2155-70-6
—Tributyltin Benzoate	4342-36-3
—Tributyltin Chloride	1461-22-9
—Tributyltin Linoleate	24124-25-2
—Tributyltin Naphthenate	85409-17-2

<u>Dustable Powder (DP) formulations containing a formulations of:</u>	
— <u>Benomyl at or above 7 percent</u>	17804-35-2
— <u>Carbofuran at or above 10 percent</u>	1563-66-2
— <u>Thiram at or above 15 percent</u>).	137-26-8
<u>Methamidophos</u> (soluble liquid formulations of the substances that exceed 600g active ingredient/l)	10265-92-6
<u>Phosphamidon (soluble liquid formulations of the substances that exceed 1000g active ingredient/l)</u>	13171-21-6 23783-984 297-99-4
<u>Methyl-parathion (emulsifiable concentrate at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)</u>	298 - 00 - 0
<u>Pentachlorophenol</u>	87-86-5
<u>Toxaphene (Camphechlor)</u>	8001-35-2
<u>Dustable Powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%</u>	17804-35-2 ; 1563-66-2 ; 137-26-8
<u>Actinolite asbestos</u>	77536-66-4
<u>Amosite, asbestos</u>	12172-73-5
<u>Anthophyllite asbestos</u>	77536-67-5
<u>Crocidolite asbestos</u>	12001-28-4
<u>Tremolite asbestos</u>	77536-68-6
<u>Tetraethyl lead</u>	78-00-2
<u>Tetramethyl lead</u>	75-74-1
<u>Tremolite</u>	77536-68-6
<u>Tri(2,3 dibromopropyl)phosphate</u>	126-72-7
<u>Alachor</u>	15972-60-8
<u>Aldicarb</u>	116-06-3
<u>Dioxins</u>	1746-01-6
<u>Endrin</u>	72-20-8
<u>Furans</u>	110-00-9
<u>Heptachlor</u>	76-44-8
<u>Mirex</u>	2385-85-5
<u>α- hexachlorocyclohexane</u>	319-84-6
<u>β- hexachlorocyclohexane</u>	319-85-7

Chlordecone	143-50-0
Hexabromobiphenyl	36355-01-8
Hexabromodiphenyl ether and heptabromodiphenyl Ether	68631-49-2 189084-68-2
Pentachlorobenzene	608-93-5
Tetrabromodiphenyl ether and pentabromodiphenyl ether	5436-43-1 32534-81-9
Perfluorooctanesulfonic acid (PFOS) its salt and perfluorooctanesulfonyl fluoride (POFS)	2795-39-3 307-35-7
Trichlorofluoromethane	75-69-4
Dichlorodifluoromethane	75-71-8
Trichlorotrifluoroethane	76-13-1
Dichlorotetrafluoroethane	76-14-2
Bromochlorodifluoromethane	353-59-3
Bromotrifluoromethane	75-63-8
Dibromotetrafluoroethane	76-15-3
Chlorotrifluoromethane	75-72-9
Pentachlorofluoroethane	354-56-3
Tetrachlorodifluoroethane	76-12-0
Tetrachloromethane or carbon tetrachloride	56-23-5
Trichloroethane or methyl chloroform	71-55-6
Chlorodifluoromethane	75-45-6
Dichlorotrifluoroethane	306-83-2
Chlorotetrafluoroethane	2837-89-0
Dichlorofluoroethane	1717-00-6
Chlorodifluoroethane	75-68-3
Azinphos-methyl	86-50-0
Octabromodiphenyl ether commercial mixture	32536-52-0

SCHEDULE II

RESTRICTED CHEMICALS AND PESTICIDES

[Regulation 2 (b), 5(b)]

<i>Chemical/Pesticide</i>	<i>CAS Number</i>
Polybrominated Biphenyls (PBBs)	36355-01-8(hexa-) 27858-07-7(octa-) 13654-09-6(deca-)
Polychlorinated Biphenyls (PCBs)	1336-36-3
Polychlorinated Terphenyls (PCTs)	61788-33-8
Methyl Bromide or Bromoethane	74-83-9
Ethylene - Dibromide	106-93-4
<i>All wastes arising from the Hazardous Chemicals</i>	
<i>Others</i>	
Acetic acid	64-19-7
Acetyl bromide	506-96-7
Allyl isothiocyanate	57-06-7
Ammonia (35% or greater)	7664-41-7
Ammonia (less than 35%)	7664-41-7
Antimony pentachloride	7647-18-9
Antimony trihydride	7803-52-3
Arsine	7784-42-1
Arsenical substances	7440-38-2
Boric acid ; Sodium borate	10043-35-3, 1330-43-4
Boron tribromide	10294-33-4
Boron trichloride	10294-34-5
Boron trifluoride	7637-07-2
Bromine; Bromine solutions	7726-95-6,
Captafol	2939-80-2, 2425-06-1
Carbamates,	598-55-0
Bendiocarb	22781-23-3
BPMC (Fenobucarb)	3766-81-2
Mercaptodimethur (methiocarb)	2032-65-7
Carbon monoxide	630-08-0
Carbon tetrafluoride	75-73-0
Chlorinated hydrocarbons	85422-92-0

Chlorine	7782-50-5
Chlorine trifluoride	7790-91-2
Chlorobenzenes	108-90-7
Chlorophenols	25167-80-0
Chlorophenoxyacids; their salts, esters, amines	94-74-6,
Chlorosilanes	13465-78-6
Chlorosulphonic acid	7790-94-5
Chromic acid	1333-82-0
Cyanides	
Diborane	19287-45-7
Dibromochloropropane	96-12-8
Diethyl sulphate	77-78-1
Epichlorohydrin	106-89-8
Ethyl mercaptan	75-08-1
Ethylene imine	151-56-4
Ferric chloride	7705-08-0
Fipronil	120068-37-3
Fluorine	7782-414
Formic acid	64-18-6
Germane	7782-65-2
Hydrazine anhydrous ; Hydrazine aqueous solutions	302-01-2
Hydrochloric acid	7647-01-0
Hydrofluoric acid	7664-39-3
Hydrogen chloride	7647-01-0
Hydrogen cyanide ; Hydrocyanic acid	74-90-8,
Hydrogen selenide	7783-07-5
Isocyanates	
Mercury compounds including inorganic mercury compound, alkyl mercury compounds, alkyloxyalkyl and aryl mercury compounds, and other organic compounds of mercury	
Metanil yellow (sodium salt of metanilylazo-diphenylamine)	587-98-4
Methyl chloride	74-87-3
Methyl mercaptan	74-93-1
Monomethyltetrachloro diphenyl methane	76253-60-6
Monomethyl-dichloro-diphenyl methane	76253-60-24
Monomethyl-dibromodiphenyl methane	99688-47-8

Neonicotinoid compounds used as pesticides	138261-41-3
Nitric acid (95% or greater)	7697-37-2
Nitric acid (less than 95%)	7697-37-2
Nitric oxide	10102-43-9
Nitrogen trifluoride	7783-54-2
Oleum	8014-95-7
Orange II [sodium salt of p-(2-hydroxy-1-naphthylazo) benzenesulphonic acid]	633-96-5
Organic peroxides	
Organo-tin compounds	
Perchloromethyl mercaptan	594-42-3
Perfluorooctane sulfonate (PFOS)	29457-72-5
Phenols	108-95-2
Phenol ethoxylate	9016-45-9
Phosgene	75-44-5
Phosphides	
Phosphine	603-35-0
Phosphorus compounds, excepting Dimethoate Fenclorphos Fenitrothion Phenthoate Profenophos Prothiophos Quinalphos	
Phosphorus oxybromide	7789-59-5
Phosphorus oxychloride	10025-87-3
Phosphorus pentabromide	7789-69-7
Phosphorus pentachloride	10026-13-8
Phosphorus pentafluoride	7647-19-0
Phosphorus trichloride	7719-12-2
Polybrominated diphenyl ethers	
Potassium hydroxide	1310-58-3
Prochloraz	67747-09-5
Pyrethroid compounds used as pesticides	
Sodium azide	26628-22-8

Sodium hydroxide	1310-73-2
Sulphur tetrafluoride	7783-60-0
Sulphur trioxide	7446-11-9
Sulphuric acid	7664-93-9
Sulphuryl chloride	7791-25-5
Sulphuryl fluoride	2699-79-8
Titanium tetrachloride	7550-45-0
Tungsten hexafluoride	7783-82-6
Liquid formulations (emulsifiable concentrate and soluble concentrate) containing paraquat ion at or above 200g/l	4685-14-7
PRECURSOR CHEMICALS	
<i>Chemicals commonly used as precursor for the manufacture of explosives</i>	
Ammonium Nitrate	6484-52-2
Ammonium Perchlorate	87110-01-8
Barium nitrate	10022-31-8
Guanidine nitrate	506-93-4
Hydrogen peroxide	7722-84-1
Potassium chlorate	3811-04-9
Potassium nitrate	7757-79-1
Potassium perchlorate	7778-74-7
Sodium chlorate	7775-09-9
Sodium nitrate	7631-99-4
Sodium nitrite	7632-00-0
Sodium perchlorate	7791-07-3
Perchloric acid	95998-58-6
Tetranitromethane	509-14-8
Mercury Fulminate	628-86-4
Arsenic trichloride ;	7784-34-1
Benzilic acid ;	76-93-7
Diethyl ethylphosphonate	78-38-6
Diethyl methylphosphonite	15715-41-0
Diethyl-N,N-dimethylphosphoroamidate;	2404-03-7
N,N-Diisopropyl-beta-aminoethane thiol;	5842-07-9
N,N-Diisopropyl-beta-aminoethyl chloride hydrochloride	4261-68-1

N,N-Diisopropyl-beta-aminoethanol ;	96-80-0
N,N-Diisopropyl-beta-aminoethyl chloride ;	96-79-7
Dimethyl ethylphosphonate ;	6163-75-3
Dimethyl methylphosphonate	756-79-6
Ethyl phosphonous dichloride [Ethyl phosphinyl dichloride ;	1498-40-4
Ethyl phosphonus difluoride [Ethyl phosphinyl difluoride] ;	430-78-4
Ethyl phosphonyl dichloride ;	1066-50-8
Pinacolyl alcohol ;	464-07-3
3-Quinuclidinol ;	1619-34-7
Thiodiglycol ;	111-48-8
Methylphosphonic acid ;	993-13-5
Diethyl methylphosphonate	683-08-9
N,N-dimethylamino-phosphoryl dichloride ;	677-43-0
Methylphosphonothioic dichloride.	676-98-2
Diethyl phosphate	762-04-9
Dimethyl phosphate	868-85-9
Phosphorus oxychloride	10025-87-3
Phosphorus pentachloride	10026-13-8
Phosphorus trichloride ;	7719-12-2
Sulfur monochloride ;	10025-67-9
Sulfur dichloride ;	10545-99-0
Thionyl chloride ;	7719-09-7
Triethanolamine ;	102-71-6
Triethyl phosphite;	122-52-1
Trimethyl phosphate	121-45-9
Ethyldiethanolamine.	139-87-7

SCHEDULE III
MATERIAL SAFETY DATA SHEETS (MSDS)

[Regulation 17 (b)]

A. *Criteria for producing an MSDS*

An MSDS should be provided for all chemicals and mixtures which meet the criteria for physical, health or environmental hazards under the Globally Harmonized System (GHS):

B. *Elements of MSDS*

- (i) Identification (trade name, chemical name, common name, CAS number, etc).
- (ii) Hazard(s).
- (iii) Composition/information on ingredients.
- (iv) First-aid measures.
- (v) Fire fighting measures.
- (vi) Accidental release measures.
- (vii) Handling and storage.
- (viii) Exposure controls and personal protection.
- (ix) Physical and chemical properties.
- (x) Stability and reactivity.
- (xi) Toxicological information.
- (xii) Ecological information.
- (xiii) Disposal considerations.
- (xiv) Transport information.
- (xv) Regulatory information.
- (xvi) Other Information.

SCHEDULE IV
INFORMATION TO BE INDICATED IN A CHEMICAL SAFETY CARD

[Regulation 17 (d)]

- Physical State* : Appearance.
- Physical Dangers* : Any reaction upon exposure to air or water ?
- Chemical Dangers* : Any reaction upon heating or contact with elements or compound ?
- Occupational Exposure Limits* : Time Weighted Average (TWA) for skin exposure?
- Routes of Exposure* : Through inhalation, contact with the skin or eyes or ingestion?
- Inhalation Risk* : high, medium or low ?
- Effects of Short or Long-Term or Repeated Exposure* : Acute or chronic ?
- Liability* : Who is liable in case of accident ?
- Environmental Data* : Is the substance very toxic to aquatic organisms ?
In the food chain is it Important To Humans ? Does Bioaccumulation
Take Place specifically in Fish ?
- Physical Properties* : Liquid or solid, stable or unstable ?
- Spillage*: How to prevent and control.
- Disposal* : Safe disposal method.
- Storage* : What is the duration of storage , temperature requirement,
under dry or moist condition ?
- Packaging and Labelling* : Based on GHS or otherwise ?
- First Aid/Fire Fighting* : Emergency treatment in case of accident
and the fire fighting method.

SCHEDULE V

GUIDELINES FOR HAZARD AND PRECAUTIONARY STATEMENTS

[Regulation 8 (2)]

1. Labelling with Hazard and Precautionary Statements shall be in accordance with UN Globally Harmonized System (GHS) of Classification and Labelling of Chemicals.

2. The wording of Hazard and Precautionary Statements shall be in accordance with the UN GHS.

3. Although the final choice of the most appropriate hazard and precautionary statements is primarily governed by the need to give all necessary information, consideration shall also be given to the clarity and impact of the label and the necessary information shall be clearly expressed in a minimum number of statements.

4. As a general rule, all hazard and precautionary statements on the basis of which the substance or mixture is classified shall be indicated on the label.

5. Where the classification of flammability and hazards to health results in more than four (4) hazard statements, it is possible to eliminate some of the statements which refer to the lowest degree of hazard, provided the overall effectiveness is not reduced.

6. The hazard statements which indicate danger for the environment are obligatory.

7. The final choice of precautionary statements shall have regard to the hazard statements indicated on the label and to the intended use of the substance or mixture.

8. Certain precautionary statements have particular relevance to substances and mixtures intended to be used by the general public whereas other statements have particular relevance to persons at work.

9. Statements shall be chosen with the intended use in view.

10. Particular attention shall be given, in the choice of precautionary statements, to the foreseen conditions of use of certain substances and mixtures e.g. spraying or other aerosol effects.

11. In the case of danger to the environment, a minimum of one and a maximum of 4 precautionary statements shall be used.

12. Precautionary statements which obviously correspond to hazard statements shall appear on the label only if it is intended to emphasize a specific warning.

SCHEDULE VI

INFORMATION REQUIRED IN AN IMPORT OR EXPORT PERMIT APPLICATION

[Regulation 18]

In addition to the information prescribed in the Permitting and Licensing form, an importer or exporter shall provide a transport document containing the following shipment details :

- (a) United Nations Number, proper shipping name, hazard class and subsidiary hazard, packaging group ;
- (b) number and kind of packages ;
- (c) shipper's declaration ; and
- (d) Shipper/consignor/consignee.

SCHEDULE VII

GUIDELINES FOR TRANSPORTATION OF HAZARDOUS SUBSTANCES

[Regulation 9 (1) (b)]

(1) The following are to be submitted before transporting hazardous Substances, the :

(a) description of the category and quantity of highly toxic Substances for transportation ;

(b) detail regarding the place of departure and the place of destination, expected transportation time and route ;

(c) composition or constituent information of Substances, physical and chemical properties, hazard class, etc ; and

(d) hazard identification, classification and chemical safety label.

(2) The following precautionary measures shall be observed when transporting hazardous Substances, the :

(a) trough containers and other containers for transporting hazardous Substances should be sealed tightly to protect it from any leakage and sparkle leakage arising from any change of temperature, moisture or pressure ;

(b) overflow and pressure relief devices shall be set accurately and be easy to work ;

(c) drivers, crewmen, loading and unloading management personnel, transport escorts, declarers, and on-site container stuffing inspectors for transporting of hazardous substances shall be trained to understand the hazard properties of the transported hazardous substances, the requirements for the use of packaging materials and containers, and emergency response measures in case of accidents ;

(d) Private vehicles shall not be used to transport hazardous substances except a permit is obtain from the Designated Agency ; and

(e) Only competent and appropriately registered carriers shall be used to transport hazardous substances.

(3) When transporting any hazardous substances, the carrier shall have in it, at all times a visibly displayed Transport Emergency Card (TREM CARD) containing details of the substances being carried, its hazard, action to be taken in the event of an emergency, including the name and telephone number that the emergency services can contact in the event of an accident, where delivery has been made, the TREM CARD shall be removed from view and records of all shipments shall be kept.

(4) Chemical shall be classified according to UN number (the International System for Identifying Hazardous Substances) and the classification of the chemical according to hazard and the appropriate packaging group has to be determined.

(5) All packaging shall be secured to ensure that the hazardous substance cannot escape, leak or cause any risk to health and safety when exposed to normal stresses and strains of transport depending on the type of container used for the substance (e.g. glass bottle or plastic container) and the hazard of the substance (e.g. explosive, corrosive or category of the infectious agent).

(6) The package(s) must be appropriately labeled and must meet the GHS requirement for labeling. Transport labels are diamond in shape and have different coloured backgrounds according to the hazard. Each diamond includes a pictogram describing the hazard, written details of the hazard and should include the transport classification number.

(7) The models, category, specification, unit quantity and mark of packaging must meet the standard requirements.

(8) The packaging method must meet the standard requirement and the use of package should be appropriate.

(9) The packages must be sealed tightly and should be leakage free.

(10) Certificate of conformation must be issued from the point of lifting.

SCHEDULE VIII

GUIDELINES FOR THE STORAGE OF HAZARDOUS SUBSTANCES

[Regulation 11. (c)]

1. Chemicals shall be stored according to the manufacturer's instructions on the safety data sheet.
2. Premises shall only keep the minimum quantity of hazardous substances necessary.
3. Incompatible substances shall be stored separately.
4. Facilities and operators handling chemicals shall take steps to prevent release or leakage of dangerous substances.
5. Facilities and operators handling chemicals shall keep a spill kit near to storage areas, and ensure that staff are trained on management of spill.
6. Facilities and operators handling chemicals shall clean up any leaks or spills that may occur.
7. Facilities and operators handling chemicals shall use appropriate precautions when handling substances, for example, wearing appropriate protective clothing or ensuring adequate ventilation.
8. Facilities shall ensure that employees who store and handle dangerous substances are properly trained.
9. Facilities shall check that containers used for short-term storage are properly labeled.
10. Facilities shall ensure that flammable substances are correctly stored in suitable containers and are not stored near to a source of ignition such as a heater.
11. Stores of liquid must be located above ground where they're unlikely to be damaged, e.g. away from traffic routes.
12. Overfilling of containers must be avoided.
13. Deliveries shall be supervised.
14. Facilities shall maintain gauges, valves and pipe work.
15. Facilities shall monitor chemical/pesticides use - unexpectedly high use may indicate a leak.
16. Facilities shall have procedures for dealing with emergency leakages.
17. Facilities shall use a secondary containment system such as a drip tray or bund (a storage area designed to prevent liquids escaping).

18. Containers must be labeled. Labels must, at a minimum, state the chemical name (as it appears on the MSDS and chemical inventory), the manufacturer, importer, or supplier's name and contact information, and the chemicals' hazard information. Existing labels on incoming containers must not be removed or defaced unless the container is immediately marked with the required information.

19. Secondary or "transfer" containers must be labeled if the chemical will not be used within one work shift or if the container will not be constantly attended and under the users immediate supervision. It is best practice to always label secondary containers. Secondary container labeling must include the name of the substance and hazard warnings.

20. In order to avoid accidental spills and/or contamination, proper storage, use, and handling procedures must be established and followed.

21. All facilities and operators handling chemicals shall keep only a quantity of hazardous chemicals and pesticides that will be used during that shift are permitted out of approved storage locations.

22. Work areas shall be kept clean and orderly.

23. Containers should be kept tightly sealed. Stoppers and other loosely fitting lids are not acceptable for permanent chemical storage.

24. Chemicals or products that are no longer needed should be disposed of properly. Do not simply pour liquids down the drain! If the container label does not specify the proper disposal method, contact the Agency for guidance.

25. Chemical containers should be inspected regularly for signs of leaking, rust, or deterioration which may make them inherently dangerous (e.g. crystal formations).

26. When it is necessary to move chemical containers "in-house", additional precautions may be necessary. Flammable liquids or corrosives should be transported in an appropriate safety-carrying container. Compressed gas cylinders must be in an upright position, regulators removed, cylinder caps in place, and secured in a cart manufactured for such purposes.

27. Corrosive chemicals should be stored in safety-coated containers on shelves below eye level.

28. Acids and bases must be stored in their proper chemical classes and segregated from other incompatible chemicals.

29. Separate storage areas must be provided for chemicals that may react with each other and create a hazardous condition. Rubber tubs are a convenient and economical solution for separating chemicals into compatible chemical groups. They should be clearly labeled for the chemical group. However, in the case of volatile, incompatible chemicals, there is no substitute

for segregation in separate spaces. Chemicals, such as ether and glacial acetic acid, can react violently in the presence of nitric acid in an enclosed cabinet.

30. Highly toxic chemicals should be stored in unbreakable containers, or in unbreakable secondary containers.

31. Cylinders of highly toxic gases should be stored in gas cabinets designed for that purpose, or in a functioning laboratory fume hood designed to contain the accidental release of the cylinder contents.

32. While all chemicals are reactive to some degree, special attention must be given to some inherently unstable and potentially reactive/explosive chemicals which are susceptible to rapid decomposition or reaction. These chemicals can react alone, or with other substances in a violent manner, giving off heat and toxic gases or leading to an explosion. Reactions of these chemicals often accelerate out of control and may result in injuries or costly accidents.

33. All operators handling chemicals shall always read and understand the protocols for manipulating the chemicals and managing any chemical waste appropriately.

34. Chemical containers must be arranged so that forklift trucks and other handling or emergency equipment is not obstructed.

35. Flammable liquids stored outside of an approved cabinet in an emergency exit path are strictly prohibited.

SCHEDULE IX

GUIDELINES FOR WAREHOUSING HAZARDOUS SUBSTANCES

[Regulation 11 (c)]

1. The layout of warehouses should be designed in accordance with the nature of materials to be stored with adequate provision for emergency exits. If necessary, the floor area and the volume of storage should be limited by compartmentalizing the building in order to allow the necessary segregation of incompatible hazardous chemicals.

2. Warehouses should be substantially closed in and capable of being locked. The construction materials should be non-flammable and the frame of the building should be in reinforced concrete or steel. A steel frame should preferably be protected from heat by insulation.

3. Doors in internal walls should have a fire resistance similar to that of the wall itself and be self-closing, i.e. fitted with a fusible link or a link activated by the automatic fire detection system, to ensure automatic closure in the event of a fire. The space required for closure should be kept free from obstruction.

4. Emergency exits other than those afforded by the main doors should be provided with not less than two exits from every floor. Emergency exits shall be clearly and conspicuously marked by a notice printed in red letters of an adequate size. They should be fitted so as to open outwards from the room, passage or staircase and shall not be kept locked or fastened and should be free from obstruction. They should be easy to open in the dark.

5. Foundations and floors shall be of sufficient strength to sustain the loads for which they are designed. Floors should be of safe construction so as to prevent a risk of persons falling and structurally sound so as to prevent a risk of collapse and shall be properly maintained and kept from any loose material. They also should be impermeable to liquids. They should be smooth, but not slippery, and free from cracks to allow for easy cleaning and be designed to contain leakage and contaminated fire-fighting water, for instance by means of a surrounding sill or curb.

6. Narrow aisles or tight corners will increase the risk of damage to packs. All aisles as well as gangways and forklift truck routes should be clearly defined by markings on the floor and kept free from obstructions and from pedestrians to avoid injury.

7. All facilities and operators handling chemicals shall ensure that stacking heights should not exceed three metres except with the use of racking.

8. All facilities and operators handling chemicals shall prevent overloading the lower tiers and ensure stability.

9. Where racking is not provided, chemical containers must not be stacked to a height which is likely to cause damage to the lower tiers.

10. All facilities handling chemicals shall have a layout plan drawn up showing the nature of hazard in each part of the warehouse.

11. Unless otherwise specified by the manufacturer, chemicals shall be stored in a cool, dry, well-ventilated location that is out of direct sunlight.

12. All chemical storage rooms must be reviewed and approved by the Agency.

13. Highly toxic chemicals must be stored away from fire hazards, heat and moisture, and be isolated from corrosive and reactive chemicals.

14. Access to the storage areas for highly toxic substances must be restricted.

15. All facilities handling chemicals shall not be located in flood-prone and geologic hazard areas.

16. All facilities handling chemicals shall set up visible safety signs in the warehouse/sites.

17. All facilities handling chemicals shall employ trained personnel to manage specialized warehouse, field or store room where hazardous chemicals shall be stored.

18. All facilities and operators handling chemicals shall establish a system of in and out stock checking and registration.

19. All facilities and operators handling chemicals shall conduct regular testing and inspection on the safety facilities and installation.

20. Be well ventilated and illuminated.

21. Saver protector to cover electrical upset.

SCHEDULE X
TYPES OF HAZARDOUS WASTE (HAZWASTE)

[Regulation 4, 12 (1)]

Types of Hazardous Waste include :

(a) Wastes that are :

- (i) Explosive ;
- (ii) Corrosive ;
- (iii) Flammable or inflammable ;
- (iv) Poisonous ;
- (v) Toxic ;
- (vi) Eco toxic ;
- (vii) Infectious ; and
- (viii) Reactive.

(b) Wastes that belong to any of the following categories :

- (i) Clinical wastes ;
- (ii) Gases ;
- (iii) Organic peroxides and self-reactive substances ;
- (iv) Radioactive materials ;
- (v) Waste oils or water, hydrocarbons or water mixtures, emulsions ;
- (vi) Wastes from the production, formulation and use of resins, latex, plasticizers, glues/adhesives ;
- (vii) Wastes resulting from surface treatment of metals and plastics; and
- (viii) Miscellaneous dangerous goods and articles.

SCHEDULE XI

HAZARDOUS SUBSTANCE WASTE CHARACTERISTICS

[Regulation 12 (1)]

- (a) Waste arising from industrial processes ;
 (b) Waste with the following UN characteristics.

<i>UN Class Code</i>	<i>Characteristics</i>
1. HI	<i>Explosive :</i> 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	<i>Flammable Liquids :</i> 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 60.5°C, closed-cup test ; or not more than 65.6°C 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.
4.1. H4.1	<i>Flammable Solids :</i> 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	<i>Substances or wastes liable to spontaneous combustion :</i> Substances 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 *Oxidizing* :
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 O-O-structure are thermally unstable substances.

(c) Residues arising from industrial waste disposal operations ;

(d) Wastes which contain certain compounds such as: copper, zinc, cadmium, mercury, lead and asbestos ;

(e) End-of-Life waste of household electrical and electronic appliances or residues arising from the incineration of same ; and

(f) Waste that contains dangerous substance(s) (as identified by the Agency) above standard limits as established by the Agency based on scientific factors or as a result of international commitment.

SCHEDULE XII

GUIDELINES FOR LABELLING AND PACKAGING OF HAZARDOUS WASTES

[Regulation 12 (2)]

The label shall contain the following information in legible characters, written in English :

1. Name, physical address and telephone contact of the generator of waste.
2. Waste composition and total weight of waste.
3. Normal storage, stability and methods of storage.
4. Name and percentage of weight of active ingredients and names and percentages of weights of other ingredients or half-life of radioactive material.
5. 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 ;
 - (iii) the words "DANGER! KEEP AWAY FROM UNAUTHORIZED PERSONS" ;
 - (iv) a pictogram such as a skull and crossbones ;
 - (v) a statement of first aid measures, including the antidote when inhaled, ingested or on dermal contact ;
 - (vi) a direction that a physician must be contacted immediately ; and
 - (vii) The UN Globally Harmonised System (GHS) guidelines for labelling hazardous chemical containers shall also apply.

SCHEDULE XIII

GUIDELINES FOR EMERGENCY PREPAREDNESS AND RESPONSE PLANS

[Regulation 19]

The Emergency Preparedness and Response Plan is to be implemented in the event of any accident or emergency involving any hazardous chemical handling, transporting, storing or usage.

This shall cover off-site impact including the following :

- (a) Identification of likely accident scenarios and establishment of the likely impact zones ;
- (b) Notification and activation procedures ;
- (c) Response actions to control and contain the release and to mitigate the impact of the release ;
- (d) Names of personnel with assigned roles and responsibilities in dealing with the emergency ;
- (e) List of emergency response equipment, including protective gears, fire fighting equipment, etc.
- (f) Schedule for monitoring the affected areas ; and
- (g) Procedures for decontamination and clean-up of affected areas.

SCHEDULE XIV

GENERAL CODE OF PRACTICE FOR THE SAFE USE OF PESTICIDES
AND OTHER AGROCHEMICALS

[Regulation 21 (1)]

1. Do not transport chemicals in the cabin of the vehicle, or on any vehicle containing food, feedstuff or fertilizer.
2. Wash hands thoroughly with soap and water after spraying.
3. Wash thoroughly personal protective equipment at the completion of each job, and store to ensure it does not become contaminated or damaged.
4. Report any symptom of ill health.
5. Do not allow the storage, loading or mixing of chemicals adjacent to, or near, environmentally sensitive areas such as water bodies, forest reserves and wildlife.
6. Do not allow the contamination of surface water bodies or ground water with spray drift, or with waste chemicals or containers.
7. Ensure that appropriate arrangements and facilities for the proper disposal of waste chemicals and containers are provided.
8. Ensure that recyclable or refillable containers are used wherever possible.
9. Install check (or non-return) valves which prevent back-flow when filling spray tanks from surface waters, and in suction lines for chemical irrigation systems which draw directly from surface waters.
10. Avoid the application of chemical on to paddocks under irrigation, to prevent contamination of water bodies and/or drainage channels. In some situations, the use of vegetation shelter belts and/or drainage filters may be useful.
11. Use ground rigs in preference to aerial application to minimize drift, especially when crops and adjacent plants are flowering.
12. Ensure that you have clean washing water and soap for personal use.
13. Do not mix chemicals if the label prohibits or warns against it, or if you are unsure of the impact of the mixture in the spray solution or on the target crop.
14. Observe wind direction, wind speed, temperature and humidity, and check that they are within acceptable limits before spraying takes place to avoid unpredictable spray drift.
15. Monitor and record wind direction, wind speed, temperature and humidity prior to every spraying operation. Do not spray when the wind is

blowing towards sensitive crops or areas, unless an appropriate vegetation buffer or buffer distance is imposed.

16. Where possible, spray with a crosswind working towards the unsprayed area.

17. Be alert to changes in wind direction and be prepared to modify or cancel a spray operation as necessary.

18. Where inversions are not likely to occur, spraying should ideally be carried out when temperatures for the day are at their lowest, and when atmospheric conditions are neutral.

19. During ground application, Pesticide Owner or Manager or Operator or Sprayer etc shall :

(a) Notify neighbours and erect signs if appropriate, to prevent inadvertent entry into sprayed areas within an unsafe period ;

(b) Set the release height of the boom as low as possible consistent with nozzle specifications and coverage requirements, not exceeding optimum boom height specified by the nozzle manufacturer ;

(c) Spray pressure should be as low as possible, consistent with nozzle specifications and coverage requirements ;

(d) Select nozzles that minimize the number of fine droplets that have the potential to drift, consistent with good coverage of the crop ;

(e) Consider spraying only when the wind is blowing away from the sensitive area. If this is not possible, spray only the upwind section of the area, in order to provide a practicable buffer distance, having regard for the chemical, its formulation, the sensitivity of the adjoining area and the wind speed and direction.

20. During aerial operation Pesticide Owner or Manager or Operator or Sprayer etc shall :

(a) Notify neighbours and erect signs if appropriate, to prevent inadvertent entry into sprayed areas within an unsafe period ;

(b) Do not apply chemicals by aircraft if the label specifically prohibits this method of application ; and

(c) Consider spraying only the upwind section of the area in order to provide a practicable buffer distance, having regard for the chemical, its formulation, the sensitivity of the adjoining area and the wind speed and direction.

SCHEDULE XV

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH)

[Regulation 21 (2)]

Prevention or reduction of workers' exposure to hazardous substances can be achieved by the following :

- (i) finding out what the health hazards are ;
- (ii) deciding how to prevent harm to health ;
- (iii) providing control measures to reduce harm to health ;
- (iv) keeping all control measures in good working order ;
- (v) providing information, instruction and training for employees and others ;
- (vi) providing monitoring and health surveillance in appropriate cases ; and
- (vii) Planning for emergencies.

MADE at Abuja this 9th day of December, 2014.

MRS LAURENTIA LARABA MALLAM
Honourable Minister of Environment

EXPLANATORY NOTE

*(This Note does not form part of these Regulations
but is intended to explain its purport)*

These Regulations provide a legal framework for the protection of human health and the environment from the harmful effects of hazardous chemicals and pesticides in Nigeria.