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

NATIONAL ENVIRONMENTAL (CHEMICALS AND PESTICIDES) REGULATIONS, 2023

ARRANGEMENT OF REGULATIONS

Regulation :

S. I. No. 92 of 2023

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

NATIONAL ENVIRONMENTAL (CHEMICALS AND PESTICIDES) REGULATIONS, 2023

In exercise of the powers conferred on me by section 34 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) (Amendment) Act 2007 as amended, and all other powers enabling me in that behalf, I, DR. IZIAQ ADEKUNLE ADEBOYE SALAKO, Honourable Minister of State, Environment and Ecological Management, makes the following Regulations—

[*8th Day of November,* 2023] Commencement.

PART I—OBJECTIVE AND APPLICATION

1. The objectives of these Regulations are to — Objectives.

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

(*i*) promote safety in their use,

(*ii*) control the import, export, sale and handling of chemicals, and

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

(*b*) ensure an Environmentally Sound Management (ESM) of chemical and pesticides within their life cycle for the protection of human health and environment ;

(*c*) support and strengthen the domestication and implementation of chemicals related MEAs (Bamako, Basel, Rotterdam, Stockholm, Minamata Conventions) as well as other voluntary framework (SAICM goal 2020, FAO/WHO International Code of Conduct on Pesticide Management) in Nigeria ;

(*d*) enforce 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 (MEA) that may be domesticated by Nigeria ;

(*e*) enforce the ban on Persistent Organic Pollutants (POPs) ;

(*f*) control the trans boundary movement of chemicals, pesticides, agrochemicals, wastes and their disposal ;

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

(*h*) minimize pollution arising from the manufacture, use and disposal of mercury-added products ;

(*i*) enforce the ban on Mercury-Added Products (MAPs) ;

(*j*) enforce the ban on —

(*i*) mercury supply sources and trade,

(*ii*) manufacturing process in which Mercury and Mercury compounds are used, and

(*iii*) mercury emissions and releases ;

(*k*) reduce the use of mercury in Artisanal and Small Scale Gold Mining;

(*l*) ensure environmentally sound interim storage of Mercury other than Mercury waste in sectors where Mercury is allowed ;

(*m*) promote public information and education on Mercury hazards ;

(*n*) enforce the concentration of Lead-in-paint and coatings in Nigeria to be in line with globally accepted or permissible limits ;

(*o*) regulate the manufacture, sale and import of paints and coatings that contain lead above established permissible limits ;

(*p*) eliminate the use of paints and coatings containing added lead compounds ;

(*q*) eliminate the production, distribution, import, and export of paint products exceeding specified lead levels and limits ;

(*r*) provide standardized warning labels for all paints and other coating products to better inform consumers and workers of the hazards of lead exposure from paint products ;

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

(*t*) regulate chemicals and pesticides in international trade imported, manufactured, exported or sold and in use in Nigeria that can impact adversely on human health and the environment.

Application

2. These Regulations shall apply to —

(*a*) banned chemicals as listed in the First Schedule to these Regulations ;

(*b*) the import or export of substances listed as restricted substances contained in the Second Schedule to these Regulations and other chemicals and pesticides ;

(*c*) the storage, usage, and marketing of chemicals, pesticides and other agrochemicals ;

(*d*) the manufacture and import, of Mercury-Added Products (MAPs) ; and

(*e*) the manufacture and import of paints in Nigeria.

Exemption

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

(*a*) pharmaceutical products, cosmetics, food or drugs, (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 Nuclear Safety and Radiation Protection 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 Chemicals Weapon Convention (OPCW) ;

(*h*) Mercury-Added-Products essential for civil protection and military uses ;

(*i*) replacement switches and relays, Cold Cathode Fluorescent Lamps (CCFLs), External Electrode Fluorescent Lamps (EEFLs) or measuring devices listed in the Sixteenth Schedule to these Regulations that are components of larger equipment manufactured before the effective date of prohibition, which have no feasible mercury-free alternatives ;

(*j*) a mixture at a concentration of less than 0.1 percent by weight active ingredient imported or exported by or to an individual for their personal use or for research purposes ; and

(*k*) chemicals in quantities not likely to affect human health or the environment imported for the purpose of research or analysis, calibration of equipment, reference standards or for personal use.

(2) The quantity of chemicals mentioned under sub regulation (1) (*k*) of these Regulations shall not be more than 1Kg for an individual and 20kg for a tertiary and research institution.

PART II — CHEMICALS AND PESTICIDES

Chemicals and pesticides.

4. A chemical shall be regarded as hazardous where it contains the characteristics listed under the Twenty-Fifth Schedule to these Regulations.

Banned and restricted chemicals and pesticides

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

(*a*) banned chemicals and pesticides listed under the First Schedule to these Regulations ; and

(*b*) restricted chemicals and pesticides listed under the Second Schedule to these Regulations unless a clearance to that effect is issued or obtained.

Importation or exportation of restricted chemicals and pesticides

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

(*a*) employ or engage the services of a chartered Chemist or persons certified by Institute of Chartered Chemists of Nigeria (ICCON) ;

(*b*) comply with the conditions specified in the clearance certificate issued by the Agency ; and

(*c*) have liability insurance coverage for every shipment in respect of any —

(*i*) risk or damage for which the importer or exporter may be liable, and

(*ii*) costs imposed by the applicable laws on the importer or exporter for any clean up or remediation related to his activity.

Prohibitions on mercury-added products

7. A person shall not import, export or manufacture any of the prohibited Mercury-Added Products as contained in Sixteenth Schedule to these Regulations.

Manufacturing processes in which mercury or mercury compounds are used

8.—(1) A facility shall not use Mercury or Mercury compounds as listed in Nineteenth Schedule to these Regulations in their manufacturing processes after the phase out date.

(2) A person shall take appropriate measure to restrict the use of Mercury or Mercury compounds in the processes listed in Twentieth Schedule to these Regulations.

Hazard signs

9. A person importing or exporting chemicals and pesticides shall affix placard or mark of hazard on the cargo or transport media in accordance with Globally Harmonised System (GHS).

Labelling of containers

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

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

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

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

(*d*) chemicals or pesticides shall be physically segregated from other merchandize to prevent contamination or mistaken identity and where appropriate, pesticides shall be clearly marked as 'hazardous materials' during transportation ;

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

(*f*) 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 Fifth Schedule to these Regulations.

(3) All labelling shall be in English language.

(4) Pesticide Industry shall use labels that —

(*a*) include, in the appropriate language or languages, a warning against the reuse of containers and instructions for decontamination and safe disposal of used containers ;

(*b*) identify each lot or batch of the product in numbers or letters that can be understood without the need for additional code references ;

(*c*) clearly show the release date (month and year) of the lot or batch, expiry date (as appropriate) and contain relevant information on the storage stability of the product ; and

(*d*) include appropriate symbols and pictograms where possible, with their signal words or hazard and risk phrases, in addition to written instructions, warnings and precautions in the appropriate language or languages.

Advertisement

11. A pesticide industry shall ensure that —

(*a*) all statements used in advertising are technically justified ;

(*b*) advertisements do not contain any statement or visual presentation which, directly or by implication, omission, ambiguity or exaggerated claim, is likely to mislead the buyer, particularly with regard to the "safety" of the product, its nature, composition or suitability for use, official recognition or approval ;

(*c*) pesticides which are legally restricted for use by trained or registered operators are not publicly advertised ;

(*d*) no facility or individual shall simultaneously market different pesticide active ingredients or combinations of ingredients under a single brand name ;

(*e*) advertising does not encourage uses other than those specified on the approved label ;

(*f*) promotional material does not include recommendations at variance with national regulatory decisions ; and

(*g*) advertisements do not misrepresent research results, quotations from technical and scientific literature or scientific jargon to make claims appear to have a scientific basis they do not possess.

Transportation clearance and requirement

12.—(1) A person that transports chemicals and pesticides by land and waterway shall —

(*a*) obtain Transportation Clearance from the Designated Authority ; and

(*b*) carryout loading and unloading of chemical in accordance with standard safety operation procedure prescribed in Seventh Schedule to these Regulations.

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

(3) A vehicle transporting chemicals and pesticides shall not be cleared 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 such as wearing PPEs for safety.

Tracking of restricted chemicals and pesticides

13. A registered distributor and retailer of restricted chemicals or pesticides shall —

(*a*) be registered with the Agency ;

(*b*) employ or engage the services of a Chartered Chemist or persons certified by ICCON ; and

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

Storage and safe use of restricted chemicals and pesticides

14.—(1) Restricted chemicals shall not be sold in open market, or for any other purpose other than the purpose for which it is meant.

(2) A person with a Clearance to store and use chemicals and pesticides shall —

(*a*) keep a record of the quantity of such substances stored in accordance with the guidelines specified in the Eight and Nineth Schedules to these Regulations ;

(*b*) not store the chemical for any purpose other than that specified in the Clearance ;

(*c*) store chemical in line with the MSDS and as outlined in Third Schedule to these Regulations ; and

(*d*) ensure that his agents and users have received relevant and continuous training on safe use and other safe management processes.

(3) Interim storage of mercury and mercury containing products shall be done in an environmentally sound manner recommended by the Agency taking into account the guidelines developed under the global Basel Convention.

(4) A person, who generates, distributes or stores chemical and pesticides as specified, shall demonstrate sound knowledge and capacity for environmentally sound management of such chemicals or by engaging the services of a registered or certified Chartered Chemist or persons certified by ICCON.

Waste classification and labelling

15.—(1) A chemical waste type shall be as listed and classified in Tenth Schedule and Eleventh Schedule to these Regulations.

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

Handling and treatment

16.—(1) A person who generates chemicals and pesticides wastes including expired or obsolete chemicals and pesticides as well as spent packaging materials shall handle and treat them in an Environmentally Sound Manner and in line with guidelines specified by the Agency.

(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 as specified by the Agency.

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

(4) The person refer to in sub-regulation (1) and (2) of this regulation shall demonstrate sound knowledge and capacity for environmentally sound management of such chemicals or by engaging the services of a registered or certified chartered Chemist or persons certified by ICCON.

Transit permit

17.—(1) A person shall not import or export chemicals or wastes without a valid Clearance by the Federal Ministry of Environment.

(2) The Agency shall, in collaboration with Nigeria Customs Service (NCS), monitor the transit of any chemicals or wastes meant for other countries through the territory of Nigeria.

(3) An applicant for a clearance shall satisfy the Agency that he —

(*a*) has subscribed to an insurance policy covering the risks likely to arise from the activity for which the Clearance is required ; and

(*b*) possesses sound knowledge and capacity for environmentally sound management of such chemicals or by engaging the services of a registered or certified Chartered Chemist or persons certified by ICCON.

Part III — Registration of Chemicals and Issuance of Clearance

Registration of chemicals and pesticides

18.—(1) A person who imports or exports chemicals and pesticides shall register both the business and chemicals with the Agency.

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

(*a*) name and address of the business ;

(*b*) name and the country of the manufacturer ;

(*c*) information contained in the Material Safety Data Sheet (MSDS) for the chemicals ; and

(*d*) facilities intended for transportation, storage and handling of all chemicals and pesticides including its wastes and spills.

Issuance of clearance

19.—(1) A person shall not import, export, distribute, store or trade in any restricted chemical and pesticides without a valid Environmental Import or Export Clearance from the Agency.

(2) An Environmental Import or Export Clearance shall —

(*a*) relate to a specific transaction or year (for annual clearance) and shall not be valid for any subsequent transaction or year ; and

(*b*) not be transferable.

(3) Notwithstanding the provisions of this regulation, a person may import or export chemicals and pesticides without clearance where the chemical is solely for research and the total quantity of the Chemical or pesticide in a calendar year is not more than 1kg for individuals and 20kg for tertiary and research institutions.

Requirement for issuance of import or export clearance

20. A person importing or exporting restricted chemicals and pesticides shall provide the following information for every shipment —

(*a*) copy of any previous clearance ;

(*b*) Pro-forma Invoice ;

(*c*) list of Chemicals to be imported (for annual clearance) ;

(*d*) Material Safety Data Sheet (MSDS) and labelling in line with the GHS Classification and Labelling of Chemicals (GHS) as prescribed in Third Schedule to these Regulations ;

(*e*) a written consent from the Designated National Authority (DNA)-FMENV for the importation or exportation of the substance ;

(*f*) chemical safety card which shall contain information prescribed in Fourth Schedule to these Regulations : and

(*g*) prescribed in the Sixth Schedule to these Regulations.

Clearance procedure

21.—(1) A person shall not —

(*a*) import a mercury-added product unless the Agency issues Clearance to allow such import ; and

(*b*) manufacture or export a mercury added product unless the Federal Ministry of Environment issues clearance to allow such export.

(2) All Environmental import or export clearance applications and processing shall be in accordance with the provisions of these Regulations and the Agency's procedure for Environmental Import Clearance as contained in Seventeenth Schedule to these regulations.

(3) The Agency and Federal Ministry of Environment shall issue a clearance to exempt a certain mercury-added product type or category from the prohibited lists in Sixteenth Schedule to these Regulations only after determining that the product type or category provides significant public health or environmental benefits and no comparable mercury free alternatives are available.

(4) An application for environmental import clearance under sub-regulation (1) (*a*) of this regulation shall be submitted to the Agency with necessary information and documents as contained in Eighteenth Schedule in addition to the general requirements in Seventeenth Schedule to these Regulations.

(5) The Agency shall not issue clearance where —

(*a*) there are reasonable grounds to believe that the applicant has provided false or misleading information in support of their application ;

(*b*) the information and documents required under regulation (2) of these Regulations have not been provided or are insufficient to enable the Agency process the application ; or

(*c*) the intended chemical to be imported is listed under the Stockholm Convention on Persistent Organic Pollutant.

(6) A clearance shall expire one year after the date of issuance, unless it is renewed.

(7) For the purpose of renewal of clearance, a holder shall submit a renewal application to the Agency in accordance with regulation 18(4) within 30 days before the day on which the clearance expires.

(8) A person that manufactures or imports a mercury-added product as contained in regulations 7 and 21 shall submit a report to the Agency in respect of the calendar year.

(9) The report refer to in sub regulation 8 of these Regulations shall include the following information —

(*a*) name, civic and postal addresses, telephone number and if any, fax number and email address ;

(*b*) name, civic and postal addresses, telephone number and if any, fax number and email address of their duly authorized representative;

(*c*) the common or generic name, trade name and batch number of the product ;

(*d*) product category ;

(*e*) the total quantity of mercury contained in the product, expressed in milligrams ;

(*f*) the quantity of the product manufactured during the calendar year in question, where applicable ; and

(*g*) the quantity of the product imported during the calendar year in question, where applicable.

Part IV — Testing of Pesticides

22. A Pesticide industry shall — Testing of pesticide

(*a*) ensure that each pesticide and pesticide product is adequately and effectively tested by recognized procedures and test methods so as to fully evaluate its inherent physical, chemical or biological properties, efficacy, behavior, fate, hazard and risk with regard to the various anticipated uses and conditions in regions or countries of use ;

(*b*) ensure that such tests are conducted in accordance with sound scientific and experimental procedures and the principles of good laboratory and experimental practice ;

(*c*) make available copies or summaries of the original reports of such tests for assessment by responsible government authorities in all countries where the pesticide is to be offered for sale or use, provided that where translated documents are provided, their accuracy shall be certified ;

(*d*) ensure that the proposed use, label claims and directions, packages, safety data sheets, technical literature and advertising truly reflect the outcome of these scientific tests and assessment ;

(*e*) provide, at the request of a country, methods for the analysis of any active ingredient, co-formulant or relevant impurity or formulation that they manufacture, and provide the necessary analytical standards ;

(*f*) provide advice and assistance in the training of technical staff involved in the relevant analytical work, and formulators shall actively support this effort ; and

(*g*) conduct residue trials prior to marketing, at least in accordance with Codex Alimentarius and FAO guidelines on good analytical practice and on crop residue data in order to provide a basis for establishing appropriate maximum residue limits.

Part V — Control of Lead in Paints and Coatings

Lead in paint

23.—(1) This regulation shall apply to the —

(*a*) importers ;
(*b*) distributors ;
(*c*) manufacturers ;
(*d*) industrial users ;
(*e*) recyclers ; and
(*f*) waste service providers.

(2) A person or entity newly involved in the importation, manufacture, distribution and use of any lead-additive and lead compounds and engaged in recycling, treatments, storage and disposal of lead- containing waste paints and coatings shall register with the agency by submitting a duly completed business registration form.

(3) Paints and similar surface-coating materials shall not contain lead calculated as lead metal in excess of 90 parts per million of the weight of the total non-volatile content of the paint or the weight of the dried paint film.

(4) A person shall not manufacture, import, export, distribute or retail paints with a total lead concentration higher than 90 parts per million (ppm).

(5) Manufacturers and importers of paints and similar surface coating materials shall submit to the Agency evidence that the products have been subjected to the National Conformity Assessment Program (SONCAP) to ensure compliance with Nigerian Industrial Standards (NIS).

(6) Manufacturers and importers of paints shall conform to the provisions of Global Harmonized System of labelling and Classification of Chemicals (GHS).

(7) Manufacturers of paint in Nigeria shall treat their effluents to ensure that the lead content do not exceed the National Permissible Limits of 0.1mg/l as stipulated in the National Environmental (Chemical, Pharmaceutical, Soap and Detergent Manufacturing Industries) Regulations.

(8) Obsolete paints or products that use lead in paint as an input shall be disposed in an environmentally sound manner.

(9) The principles and techniques of environmentally sound management and disposal of hazardous wastes shall be applicable to the disposal of paints and coatings with lead additive and products that use lead in paint as an input.

(10) A facility engaged in the processing, sale or management of paints or products that use paint with lead additive as an input shall take the necessary measure to adequately safeguard the health and safety of the workers.

(11) The demolition of buildings which are painted with high concentration of paint with lead additive shall be carried out with adequate safety measures including—

(*a*) use of Personal Protective Equipment (PPEs) ;

(*b*) ensuring that surfaces are wet to minimize dust emission ; and

(*c*) making provision for containment of dust within demolition area.

PART VI — PLAN FOR CHEMICALS

Emergency preparedness and response plan

24.—(1) A person authorised to deal on any chemical substance, shall in accordance with the Thirteenth Schedule to these Regulations, prepare a comprehensive Emergency Preparedness and Response Plan to contain any spillage, leakage, release, accident or emergency that may arise.

(2) A person authorised to transport, store or use chemicals or 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 with the following information —

(*i*) circumstances of the accidental release;

(*ii*) quantity released,

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

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

(v) measures taken to prevent re-occurrence.

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

General code of practice for the safe use of pesticides and other agrochemicals

25.—(1) The general code of practice for operators and sprayers of agrochemicals shall be in accordance with Fourteenth Schedule 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 chemicals within their life cycle.

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

(3) Packaging or repackaging shall be carried out only on licensed premises that comply with safety standards where the responsible authority is satisfied that —

(a) staff are adequately protected against toxic hazards ; and

(b) adequate measures are in place to avoid environmental contamination.

(4) Measures shall be taken to control chemicals to protect human health as specified in Fifteenth Schedule to these Regulations.

(5) The repackaging or decanting of any pesticide into food, beverage, animal feed or other inappropriate containers is prohibited.

(6) An industry shall, through the services of an expert recognised by the Agency, inventorize obsolete or unusable stocks of pesticides and used containers, establish and implement an action plan for their disposal, or remediation in the case of contaminated stores or sites.

(7) An industry shall ensure that treatment and disposal of pesticide wastes are carried out in an environmentally sound manner that complies with national and regional regulations, relevant international standards and multilateral environmental agreements.

(8) For the purpose of the Buy-Back programme of the Agency, an industry shall —

(a) establish a Spray Service Provider (SSP) model for safe use and safe disposal of pesticide products and containers as detailed in Twenty Fourth Schedule to these Regulations ; and

(b) subscribe to an Extended Producer Responsibility (EPR) programme of the Agency as detailed in Twenty Third Schedule to these Regulations.

Part VIII — Enforcement

Enforcement notice

26.—(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 Registration or Clearance Permit.

(2) An Enforcement Notice shall specify the —

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

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

(*c*) period within which the steps shall be taken.

Powers of agency

27. The Agency shall —

(*a*) enter at reasonable times, any facility or warehouse in which pesticides, mercury-added products, paint or similar surface-coating materials are manufactured or stored.

(*b*) inspect and test, at reasonable times and in a reasonable manner, such pesticides, mercury-added products or paint and similar surface-coating materials to assess compliance with these Regulations ; and

(*c*) undertake post registration surveillance and conducting monitoring studies to determine the fate of pesticide or wastes from lead paint or mercury –added products and environmental effects under operational conditions.

Mode of delivery of enforcement notice

28. 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.

Enforcement notice reminder

29. Where a person fails to comply with enforcement notice within the period specified under regulation 26 (2) of these Regulations, a second notice shall be served.

Violation of enforcement notice

30.—(1) Where a person fails to comply with the second enforcement notice within the specified period, a suspension notice shall be served or any other punitive action may be taken.

(2) Where a suspension notice is served pursuant to this regulation, the Clearance 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 provision of these Regulations.

PART IX — OFFENCES AND PENALTIES

Contravention of clearance conditions

31. A person contravenes the provisions of these Regulations where he handles, stores, supplies or transport any chemicals or pesticides without complying with —

(*a*) the condition of a Clearance ;

(*b*) the requirements of an enforcement notice, or a closure notice under these Regulations ;

(*c*) any requirement imposed by a notice served by the Agency; and

(*d*) generates, distributes or disposes chemicals or pesticides without engaging the services of a registered or certified expert.

False statement

32. 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 imposed by or under any provision of these Regulations ;

(*b*) for the purpose of obtaining a clearance for the facility for variation, transfer or surrender of a clearance ;

(*c*) to intentionally make a false entry in any record relating to the Clearance ; and

(*d*) with intent to deceive, forge or use a document issued or authorized to be issued under a condition of the Clearance.

Failure to comply with abatement measures

33. 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 chemical 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 chemical into the environment when requested by the inspector ;

(*e*) produce document when requested by the inspector ;

(*f*) comply with guidelines on handling, storing and transporting of any hazardous material ; and

(*g*) ensure the use of appropriate Personnel Protective Equipment(PPE) while handling, storing, or disposing the chemicals or pesticides.

Failure to report accidental release and emergencies

34. A person contravenes the provisions of these Regulations where he fails to —

(*a*) report the accidental release of chemicals or emergencies ;

(*b*) maintain records of any release into the environment of the chemical mentioned under paragraph (*a*) of this regulation ; and

(*c*) submit a pollution prevention plan to the Agency.

Operating without clearance

35. A person contravenes the provisions of these Regulations where he operates without a clearance permit.

Violation of registration requirement

36. A person contravenes the provisions of these Regulations where he —

(*a*) gives false information of the items stated in the application form ;

(*b*) present a chemical that have a high degree of persistence on soil thereby causing harm to the environment and human health ;

(*c*) gives names to chemical that may cause any misunderstanding of the main constituents and efficacy of the active ingredient ;

(*d*) present a chemical that do 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 of chemicals and pesticides ; and

(*h*) violates other provisions of these Regulations.

General offences

37. A person commits an offence where the person —

(*a*) manufacture, import, or export a mercury-added product in contravention to these Regulations ;

(*b*) fails to submit required documents or information within the specified time period in these Regulations ;

(*c*) is a body corporate, or organization and fails to comply with any clearance permit conditions, enforcement or closure notice, or with any reasonable requirement imposed by a notice served by the Agency under these Regulations ;

(*d*) manufacture, import, export, distribute or retail paints with a total lead concentration higher than 90 parts per million (ppm) ;

(*e*) import, export or is in possession of; banned chemicals and pesticides listed under First Schedule to these Regulations; or in possession of restricted chemicals and pesticides listed under Second schedule to these Regulations, unless a clearance to that effect is issued or obtained ;

(*f*) make a statement which is known to be false or misleading, including but not limited to where the statement is made —

(*i*) in purported compliance with a requirement to furnish any information pursuant to the provisions of these Regulations,

(*ii*) for the purpose of obtaining a clearance for the body corporate or organization,

(*iii*) to intentionally make a false entry in any record pertaining to a clearance, or

(*iv*) with intent to deceive, forge or use any document issued or authorized to be issued under any clearance condition ;

(*g*) is a body corporate, or organization which —

(*i*) fails to produce documents or release information when required by the inspector ;

(*ii*) knowingly obstructs the inspectors from performing their duties ; or

(*iii*) dismisses, suspends, sanctions, or otherwise penalizes employees who report any violations of the Act, or who report instances of contraventions of these Regulations ; and

(*h*) sell, offer for sale, manufacture for sale, distribute in commerce, import into Nigeria, any paint or similar surface-coating material that contains lead or lead compounds and in which the lead (calculated as lead metal) is in excess of 90 ppm of the weight of the total non-volatile content of the paint or the weight of the dried paint film.

Penalties

38.—(1) A person who contravenes the provisions of these Regulations commits an offence and is liable on conviction to a fine, not less than ₦5,000,000 or imprisonment for a term not exceeding 5 years or both.

(2) Where an offence in these Regulations is committed by a body corporate, it shall on conviction, be liable to a fine, not less than ₦50,000,000 and an additional fine of ₦50,000 for every day the offence subsists.

(3) In addition to the penalty specified in these Regulations, a person convicted of an offence under these Regulations shall be responsible for the —

(*a*) proper management and disposal of the mercury-added products, HHPs, Leaded Paints manufactured, imported, or exported unlawfully ; and

(*b*) remediation of releases to the standards prescribed by the Agency arising from the unlawful manufacture, import, or export.

PART X — MISCELLANEOUS

Revocation

39. The National Environmental (Chemicals and Pesticides) Regulations, 2014 is revoked.

Savings

40. Nothing in these Regulations shall invalidate or otherwise prejudicially affect anything done or purported to be done under the revoked Regulations.

Interpretation

41. In these Regulations —

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

"*Active ingredient*" means the part of the product that provides the pesticidal action ;

"*Agency*" means the National Environmental Standards and Regulations Enforcement Agency (NESREA) ;

"*Banned chemicals and pesticides*" means chemicals and pesticides, the uses of which have been prohibited in order to protect human health or the environment ;

"*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 ;

"*Container*" means any object used to hold a pesticide product ;

"*Designated Authority* (*DA*)" means the Agency that issues Clearance ;

"*Designated National Authority* (*DNA*)" means an authority designated by a Party (globally) to act on its behalf for the administration of the Basel, Rotterdam Stockholm or Minamata Conventions ;

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

"*Disposal*" means the treatment, temporary storage and systematic destruction of lead and lead compound waste in accordance with the applicable provisions of the law regulating hazardous wastes ;

"*Environment*" means surroundings, including water, air, soil and their interrelated potential to cause undesirable consequences (e.g. properties that can cause adverse effects or damage to health, the environment or property) ;

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

"*Emergency Preparedness and Response Plan*" means a plan, which outlines how a thing is to be done or what actions are 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 concerns or abatement notice, informing a person of observed violations and the need to remedy the 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 ;

"*Formulation*" means the combination of various ingredients designed to render the product useful and effective for the purpose claimed and for the envisaged mode of application ;

"*HHPs*" (*Highly Hazardous Pesticides*) means pesticides that are acknowledged to present particularly high levels of acute or chronic hazards to health or environment according to internationally accepted classification systems such as WHO or Global Harmonized System (GHS) or their listing in relevant binding international agreements or conventions. In addition, pesticides that appear to cause severe or irreversible harm to health or the environment under conditions of use in a country may be considered to be and treated as highly hazardous" ;

"*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 it ;

"*ICCON*": means Institute of Chartered Chemists of Nigeria, established by Decree 91 (ICCON ACT, CAP 1.12,LFN 2004) ;

"*Importer*" means a person who imports or intends to import into Nigeria a restricted chemicals and pesticides on the List of restricted Substances ;

"*Industry*" means Manufacturers, Importers, Suppliers, Distributors, and Retailers etc. ;

"*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 ;

"*Lead Compounds*" means chemical compounds that contain lead ;

"*Lead Paints*" means paints or other similar surface coating materials containing lead or lead compounds (calculated as lead metal) in excess of .009 percent (90 ppm) of the weight of the total non-volatile content of the weight of the dried paints film ;

"*Lead Wastes*" means discarded materials that contain or have been contaminated with lead or lead compounds that are without any safe commercial, industrial, agricultural or economical usage and contain the updated standard of Hazardous Wastes based on the analysis of the extract under the Toxicity Characteristics Leaching Procedure (TCLP) method ;

"*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 ;

"*Manufacturer*" means any person who undertakes the physical or chemical transformation of substances into a new product, performed either by power-driven machines or by hand and markets it under his/her name or trademark or private label ;

"*Material Change*" means a change that the manufacturer or importer makes to the design, manufacturing process or the source of component parts, for the paint or similar surface-coating material ;

"*MEAs*" means Multilateral Environmental Agreements (MEAs) ;

"*Mercury*" means metallic mercury ;

"*Mercury compounds*" means any substance consisting of atoms of mercury and one or more atoms of other chemical elements that can be separated into different components only by chemical reactions ;

"*Mercury-added Products*" means a product or product component that contains mercury or mercury compound that was intentionally added ;

"*Mercury Wastes*" means metallic mercury that qualifies as waste ;

"*Minister*" means the Hon. 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 legislation (Acts), regulations or guidelines ;

"*Operator*" means an individual, partnership, association or non-profit organization that operates a manufacturing, production or storage facility of chemicals ;

"*Paint*" means varnishes, lacquers, enamels, glazes, primers or other similar surface-coating materials used for any purpose; and is typically a mixture of resins, pigments, fillers, solvents and other additives that constitutes a finished product ; it does not include materials which become part of the substrate, or materials which are actually bonded to the substrate, such as by electroplating or ceramic glazing ;

"*Pigment*" means a material that changes the colour of reflected or transmitted light as the result of wavelength-selective, absorption used for colouring paints, inks, plastic, fabric, cosmetic, food and other materials ;

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

"*Person*" means an individual, partnership, association or non-profit organization ;

"*Packaging*" means the container together with the protective wrapping used to carry pesticide products via wholesale or retail distribution to users ;

"*Personal Protective Equipment*" means any clothes, materials or devices that provide protection from pesticide exposure during handling

and application ; it includes both specifically designed protective equipment and clothing reserved for pesticide application and handling ;

"*PIC*" means Prior Informed Consent as defined and applied in the Rotterdam Convention ;

"*Person*" includes individual, body corporate, or legal entity ;

"*Recyclers*" means any person or corporation that engages in reusing and reprocessing activities of any materials intended for commercial, industrial, agricultural and economic purposes ;

"*Recycling*" means Treating of used or waste materials through a process of making them suitable for beneficial use and for other purposes, and includes any process by which waste materials are transformed into new products in such a manner that the original products may lose their identity, and which may use raw materials for the production of other goods or services ;

"*Registration*" means the process whereby the responsible national government or regional authority approves the sale and use of a pesticide, mercury added product or paint with lead additive following the evaluation of scientific data aimed at demonstrating that the product is effective for its intended purposes and does not pose an unacceptable risk to human or animal health or the environment under the conditions of use in the country or region ;

"*Repackaging*" means the transfer of a pesticide from any authorized commercial package into any other, usually smaller, container for subsequent sale ;

"*Residue*" means any specified substances in or on food, agricultural and other types of commodities or animal feed as well as in environmental media including soil, air and water resulting from the use of a pesticide ; it includes any derivatives of a pesticide, such as conversion products, metabolites, breakdown products, reaction products and impurities considered to be of toxicological or ecotoxicological significance. The term "pesticide residue" includes residues from unknown or unavoidable sources (e.g. environmental contamination) as well as know ;

"*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 chemicals or pesticides directly to users ;

"*Risk*" means the probability and severity of an adverse health or environmental effect occurring as a function of a hazard and the likelihood and the extent of exposure to a pesticide ;

"*Rotterdam Convention (RC)*" means the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade ;

"*SAICM*" means Strategic Approach to International Chemicals Management ;

"*Secretariat*" means the Secretariat for all the MEAs ;

"*Shipping document*" means a document that relates to the import and export of a chemical and pesticide 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 agrochemicals ;

"*Sufficient samples*" means the number of samples the 'agency' determines necessary to provide a high degree of assurance that the tests conducted accurately demonstrate compliance with the 90 ppm total lead limit ;

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

"*Total lead content*" means a weight percentage of the total non-volatile portion of the paint or as a percentage of the weight of the dried paint film ;

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

"*Transport Media*" includes vehicles, wagon, container and tanks ;

"*Warehouse*" means a building where large quantities of chemicals 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

42. These Regulations may be cited as the National Environment (Chemicals and Pesticides) Regulations, 2023.

FIRST SCHEDULE [*Regulation 2 (a), 5 (a) and 37 (e)*]

BANNED CHEMICALS AND PESTICIDES

CHEMICALS	*CAS NO.*
Aldrin	309-00-2
a-Hexachlorocyclohexane	319-84-6
ß-Hexachlorocyclohexane	319-85-7
Chlordane	57-74-9
Chlordecone	143-50-0
Decabromodiphenyl ether	1163-19-5
DDT	50-29-3
Dicofol	115-32-2
Dieldrin	60-57-1
Endosulfan	115-29-7, 959-98-8, 33213-65-9
Endrin	72-20-8
Heptachlor	76-44-8
Hexabromobiphenyl	36355-01-8
Hexabromocyclododecane	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7 134237-52-8
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Lindane	58-89-9
Mirex	2385-85-5
Pentachlorobenzene	608-93-5
Pentachlorophenol and its salts and esters	various
Perfluorooctanoic acid(PFOA), its salts and PFOA-related compounds	various
Perfluorooctane sulfonic acid(PFOS), its salts and perfluorooctane sulfonyl fluoride	various
Polychlorinated biphenyls(PCBs)	various
Chlorinated naphthalenes	70776-03-3
Polychlorinated dibenzodioxins and dibenzofurans (PCDD/PCDF)	various
Polychlorinated naphthalenes	various
Tetrabromodiphenyl ether and pentabromodiphenyl ether	various
Decabromodiphenyl ether	1163-19-5
Short-chain chlorinated paraffins (C_{10-13}; chlorine content > 48 %)	85535-84-8, 68920-70-7, 71011-12-6, 85536-22-7, 85681-73-8, 108171-26-2

SECOND SCHEDULE [*Regulation 2 (b), 5 (b) and 37 (e)*]

RESTRICTED CHEMICALS AND PESTICIDES

CHEMICALS	*CAS NO.*
Toxaphene	8001-35-2
2,4,5-T and its salts and esters	93-76-5
Alachlor	15972-60-8
Aldicarb	116-06-3
Aldrin	309-00-2
Azinphos-methyl	86-50-0
Binapacryl	485-31-4
Captafol	2425-06-1
Carbofuran	1563-66-2
Chlordane	57-74-9
Chlordimeform	6164-98-3
Chlorobenzilate	510-15-6
DDT	50-29-3
Dieldrin	60-57-1
Dinoseb and its salts and esters	88-85-7 (*)
Chlordimeform	6164-98-3
EDB (1,2-dibromoethane)	106-93-4
Endosulfan	115-29-7
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Fluoroacetamide	640-19-7
HCH (mixed isomers)	608-73-1
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Lindane (gamma-HCH)	58-89-9
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	CAS numbers
Methamidophos	10265-92-6
Monocrotophos	6923-22-4
Parathion	56-38-2

Pentachlorophenol and its salts and esters	87-86-5 (*)
Phorate	298-02-2
Toxaphene (Camphechlor)	8001-35-2
EDB (1,2-dibromoethane)	106-93-4
Endosulfan	115-29-7
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Fluoroacetamide	640-19-7
HCH (mixed isomers)	608-73-1
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Lindane (gamma-HCH)	58-89-9
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	CAS numbers
Methamidophos	10265-92-6
Monocrotophos	6923-22-4
Parathion	56-38-2
Pentachlorophenol and its salts and esters	87-86-5 (*)
Phorate	298-02-2
Toxaphene (Camphechlor)	8001-35-2
Tributyl tin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2
Trichlorfon	52-68-6
Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	137-26-8, 1563-66-2, 17804-35-2
Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	298-00-0
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	13171-21-6
Actinolite asbestos	77536-66-4
Anthophyllite asbestos	77536-67-5
Amosite asbestos	12172-73-5

Crocidolite asbestos	12001-28-4
Tremolite asbestos	77536-68-6
Commercial octabromodiphenyl ether (including Hexabromodiphenyl ether and Heptabromodiphenyl ether)	36483-60-0, 68928-80-3
Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)	32534-81-9, 40088-47-9
Hexabromocyclododecane	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3194-55-6
Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls	1691-99-2, 1763-23-1, 24448-09-7, 251099-16-8, 2795-39-3, 29081-56-9, 29457-72-5, 307-35-7, 31506-32-8, 4151-50-2, 56773-42-3, 70225-14-8
Polybrominated Biphenyls (PBBs)	13654-09-6, 27858-07-7, 36355-01-8
Polychlorinated Biphenyls (PCBs)	1336-36-3
Polychlorinated Terphenyls (PCTs)	61788-33-8
Short-chain chlorinated paraffins (SCCP)	85535-84-8
Tetraethyl lead	78-00-2
Tetramethyl lead	75-74-1
Tributyltin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2
Tris(2,3 dibromopropyl)phosphate	126-72-7
Ethylene oxide	75-21-8
Fluoroacetamide	640-19-7
HCH (mixed isomers)	608-73-1
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Lindane (gamma-HCH)	58-89-9
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	CAS numbers
Methamidophos	10265-92-6
Monocrotophos	6923-22-4
Parathion	56-38-2
Pentachlorophenol and its salts and esters	87-86-5 (*)

Phorate	298-02-2
Toxaphene (Camphechlor)	8001-35-2
Tributyl tin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2
Trichlorfon	52-68-6
Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	137-26-8, 1563-66-2, 17804-35-2
Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	298-00-0
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	13171-21-6
Actinolite asbestos	77536-66-4
Anthophyllite asbestos	77536-67-5
Amosite asbestos	12172-73-5
Crocidolite asbestos	12001-28-4
Tremolite asbestos	77536-68-6
Commercial octabromodiphenyl ether (including Hexabromodiphenyl ether and Heptabromodiphenyl ether)	36483-60-0, 68928-80-3
Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)	32534-81-9, 40088-47-9
Hexabromocyclododecane	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3194-55-6
Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls	1691-99-2, 1763-23-1, 24448-09-7, 251099-16-8, 2795-39-3, 29081-56-9, 29457-72-5, 307-35-7, 31506-32-8, 4151-50-2, 56773-42-3, 70225-14-8
Polybrominated Biphenyls (PBBs)	13654-09-6, 27858-07-7, 36355-01-8
Polychlorinated Biphenyls (PCBs)	1336-36-3
Polychlorinated Terphenyls (PCTs)	61788-33-8
Short-chain chlorinated paraffins (SCCP)	85535-84-8
Tetraethyl lead	78-00-2

Tetramethyl lead	75-74-1
Tributyltin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2
Tris(2,3 dibromopropyl)phosphate	126-72-7
Hexachlorobenzene	118-74-1
Lindane (gamma-HCH)	58-89-9
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds	CAS numbers
Methamidophos	10265-92-6
Monocrotophos	6923-22-4
Parathion	56-38-2
Pentachlorophenol and its salts and esters	87-86-5 (*)
Phorate	298-02-2
Toxaphene (Camphechlor)	8001-35-2
Tributyl tin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-
	25-2, 4342-36-3, 56-35-9, 85409-17-2
Trichlorfon	52-68-6
Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	137-26-8, 1563-66-2, 17804-35-2
Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	298-00-0
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	13171-21-6
Actinolite asbestos	77536-66-4
Anthophyllite asbestos	77536-67-5
Amosite asbestos	12172-73-5
Crocidolite asbestos	12001-28-4
Tremolite asbestos	77536-68-6

Commercial octabromodiphenyl ether (including Hexabromodiphenyl ether and Heptabromodiphenyl ether)	36483-60-0, 68928-80-3
Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)	32534-81-9, 40088-47-9
Hexabromocyclododecane	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3194-55-6
Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls	1691-99-2, 1763-23-1, 24448-09-7, 251099-16-8, 2795-39-3, 29081-56-9, 29457-72-5, 307-35-7, 31506-32-8, 4151-50-2, 56773-42-3, 70225-14-8 13654-09-6, 27858-07-7, 36355-01-8
Polybrominated Biphenyls (PBBs)	1336-36-3
Polychlorinated Biphenyls (PCBs)	61788-33-8
Polychlorinated Terphenyls (PCTs)	85535-84-8
Short-chain chlorinated paraffins (SCCP)	78-00-2
Tetraethyl lead	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2,
Tributyltin compounds	4342-36-3, 56-35-9, 85409-17-2
Tris(2,3 dibromopropyl) phosphate	126-72-7

THIRD SCHEDULE

[*Regulation* 14 (2)(*c*) and 20 (*d*)]

MATERIAL SAFETY DATA SHEETS (MSDS)

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

(*a*) identification (trade name, chemical name, common name, CAS number, etc) ;

(*b*) hazard(s) ;

(*c*) composition and/information on ingredients ;

(*d*) first-aid measures ;

(*e*) fire fighting measures ;

(*f*) accidental release measures ;

(*g*) handling and storage ;

(*h*) exposure controls and personal protection ;

(*i*) physical and chemical properties ;

(*j*) stability and reactivity ;

(*k*) toxicological information ;

(*l*) ecological information ;

(*m*) disposal considerations ;

(*n*) transport information ;

(*o*) regulatory information ; and

(*p*) other Information.

FOURTH SCHEDULE

[*Regulation* 20 (*f*)]

INFORMATION TO BE INDICATED IN A CHEMICAL SAFETY CARD

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-Term 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 & Labelling : Based on GHS or otherwise ?
First Aid/Fire Fighting : emergency treatment in case of accident and the fire fighting method.

FIFTH SCHEDULE

[*Regulation* 10 (2)]

GUIDELINES FOR HAZARD AND PRECAUTIONARY STATEMENTS

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. With clarity in mind, the necessary information shall be 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.

SIXTH SCHEDULE

[*Regulation* 20]

INFORMATION REQUIRED IN AN IMPORT OR EXPORT CLEARANCE APPLICATION

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

(*i*) 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.

SEVENTH SCHEDULE

[*Regulation* 12 (1) (*b*)]

GUIDELINES FOR TRANSPORTATION OF HAZARDOUS SUBSTANCE

1. The following are to be submitted before transporting hazardous substances :

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

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

(*c*) the composition/constituent information of substances physical and chemical properties, hazard class ; and

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

2. The following precautionary measures shall be observed when transporting hazardous substances :

(*a*) the trough containers and other containers for transporting hazardous substances should be sealed tightly to protect the chemicals from any leakage and sparkle leakage because of any change of temperature, moisture or pressure ;

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

(*c*) the 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 should not normally be used to transport hazardous substances. Any person intending to transport hazardous substances by private vehicle shall obtain Clearance from the Designated Agency ;

(e) only competent and appropriately registered carriers should be used to transport hazardous substances ; and

(f) clearance Letter from the FRSC.

3. When transporting any chemicals and pesticide, the carrier should have a Transport Emergency Card (TREMCARD) inside the vehicle. The TREMCARD should have details of the substances being carried, its hazard(s) and what actions should be taken in the event of an emergency. It should also contain a contact name and telephone number that the emergency services can contact in the event of an accident. This TREMCARD should be visibly displayed in the vehicle at all times when transporting hazardous substances. Once the load has been delivered, the TREMCARD should be removed from view. Records of all shipments of hazardous substances should be kept.

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

5. All packaging should be secured and 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. The type of packaging will depend on the container that the substance is in (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) shall be appropriately labeled and shall meet the GHS requirement for labeling. Transport labels are diamond in shape and have different colored 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 shall meet the standard requirements.

8. The packing method shallt meet the standard requirement and the use of package should be appropriate.

9. The packages shall be sealed tightly and should be leakage free.

10. Certificate of conformation shall be issued from the point of lifting.

EIGHT SCHEDULE

[*Regulation* 14 (2) (*a*)]

GUIDELINES FOR THE STORAGE OF CHEMICALS

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 labelled.

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 shall 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 and 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 shall be labelled ; Labels shall, 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 shall not be removed or defaced unless the container is immediately marked with the required information.

19. Secondary or "transfer" containers shall be labelled 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 labelling shall include the name of the substance and hazard warnings.

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

21. All facilities and operators handling chemicals shall keep only a quantity of chemicals and pesticides that will be used during that shift are Clearance 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 shall 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 shall be stored in their proper chemical classes and segregated from other incompatible chemicals.

29. Separate storage areas shall 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 labelled 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 and 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 wastes appropriately.

34. Chemical containers shall 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.

36. Records of paints manufacture and import should be properly maintained and stored.

NINTH SCHEDULE

[*Regulation* 14 (2) (*a*)]

GUIDELINES FOR WAREHOUSING HAZARDOUS SUBSTANCES

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 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. 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.

3. 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.

4. 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.

5. 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.

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

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

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

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

10. Unless otherwise specified by the manufacturer, store chemicals in a cool, dry, well-ventilated location that is out of direct sunlight. General guidelines for each type of chemical are provided below.

11. All chemical storage rooms shall be reviewed and approved by the Agency.

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

13. Access to the storage areas for highly toxic substances shall be restricted.

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

15. All facilities handling chemicals shall set up visible safety signs in the warehouse or sites

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

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

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

19. All facilities handling chemicals shall be well ventilated and illuminated.

20. All facilities handling chemicals shall have saver protector to cover electrical (upset).

TENTH SCHEDULE

[*Regulation* 15 (1)

CLASSIFICATION AND TYPES OF HAZARDOUS WASTE (HAZWASTE)

Types of Hazardous Waste include-

(*a*) wastes that are —

(*i*) explosive,
(*ii*) corrosive,
(*iii*) flammable,
(*iv*) poisonous,
(*v*) Toxic,
(*vi*) ecotoxic, and
(*vii*) infectious ;

(*b*) waste 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 and adhesives,
(*vii*) wastes resulting from surface treatment of metals and plastics, and
(*viii*) miscellaneous dangerous goods and article;

(*c*) waste arising from industrial processes ; and
(*d*) wastes with the characteristics listed in the Eleventh Schedule.

ELEVENTH SCHEDULE

[*Regulation* 15 (1)]

HAZARDOUS WASTE CHARACTERISTICS

UN CLASS	*CODE*	*CHARACTERISTICS*
1	H1	*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 60.5°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, 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	*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 0-0-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.

TWELFTH SCHEDULE

[*Regulation* 15 (2)]

GUIDELINES FOR LABELLING AND PACKAGING OF HAZARDOUS WASTES

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

(*a*) Name, physical address and telephone contact of the generator of waste ;

(*b*) Waste composition and total weight of waste ;

(*c*) Normal storage, stability and methods of storage ; and

(*d*) Name and percentage of weight of active ingredients and names and percentages of weights of other ingredients or half-life of radioactive material.

(*e*) 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.

THIRTEENTH SCHEDULE

[*Regulation* 24(1)]

GUIDELINES FOR EMERGENCY PREPAREDNESS AND RESPONSE PLANS

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

This shall cover off-site impact including the :

(*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.

FOURTEENTH SCHEDULE

[*Regulation* 25 (1)]

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

(1) Transport of chemicals in the cabin of the vehicle, or on any vehicle containing food, feedstuffs or fertilizer is prohibited.

(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) The storage, loading or mixing of chemicals adjacent to, or near, environmentally sensitive areas such as water bodies, forest reserves and wildlife are not allowed

(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 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, and 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.

FIFTEENTH SCHEDULE

[*Regulation* 25 (2) *and* (4)]

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH)

Prevention or reduction of workers' exposure to substances hazardous to health shall 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*) making sure they are used ;

(*v*) keeping all control measures in good working order ;

(*vi*) providing information, instruction and training for employees and others ;

(*vii*) providing monitoring and health surveillance in appropriate cases ; and

(*viii*) Planning for emergencies.

SIXTEENTH SCHEDULE

[*Regulation* 3(1) (*i*), 7 *and* 21 (3)]

PROHIBITED MERCURY-ADDED PRODUCTS

The following products (if containing mercury) are prohibited—

(*a*) batteries, except for button zinc silver oxide batteries with a mercury content < 2% and button zinc air batteries with a mercury content < 2%;

(*b*) switches and relays, except very high accuracy capacitance and loss measurement bridges and high frequency radio, frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20mg per bridge, switch or relay ;

(*c*) compact fluorescent lamps (CFLs) for general lighting purposes that are < 30 watts with a mercury content exceeding 5mg per lamp burner, effective ;

(*d*) triband phosphor linear fluorescent lamps (LFLs) for general lighting purposes < 60 watts with a mercury content exceeding 5 mg per lamp ;

(*e*) halophosphate phosphor linear fluorescent lamps (LFLs) for general lighting purposes < 40 watts with a mercury content exceeding 10 mg per lamp ;

(*f*) high pressure mercury vapour lamps (HPMV) for general lighting purposes ;

(*g*) mercury in cold cathode fluorescent lamps (CCFLs) and external electrode fluorescent lamps (EEFLs) for electronic displays including :

(*i*) short (<500mm) with mercury content exceeding 3.5 mg per lamp;

(*ii*) medium (>500mm and < 1500mm) with mercury content exceeding 5 mg per lamp ;

(*iii*) long length (>1500mm) with mercury content exceeding 13 mg per lamp ;

(*h*) Cosmetics (with mercury content above 1ppm), including skin lightening soaps and creams, and not including eye area cosmetics where mercury is used as preservatives and no effective and safe substitute preservatives are available ; and

(*i*) Non-electronic measuring devices (Barometers, Hygrometers, Manometers, Thermometers, Sphygnomanometers) except those installed in large-scale equipment or those used for high precision measurement, where no suitable mercury-free alternative is available.

SEVENTEENTH SCHEDULE

[Regulation 21 (4)]

ENVIRONMENTAL IMPORT CLEARANCE REQUIREMENT

As part of the annual clearance exercise for importation of chemicals, importers are to meet the following requirements —

Annual Registration with NESREA

All importers of regulated products are to register with a registration fee of One Hundred And Fifteen Thousand (₦115,000) Naira. Registration will be renewed annually with a renewal fee of Fifty Thousand (N50, 000) Naira with the following documents :

(*a*) Copy of Certificate of Incorporation ; and
(*b*) Copy of current Tax Clearance Certificate.

NESREA Annual Import Clearance (for Importers of Chemicals)

Importers wishing to import NESREA regulated items are to submit the following documents prior to the shipment of the items —

(*a*) Copy of Certificate of Incorporation ;
(*b*) Proforma Invoice ;
(*c*) Copy of current Tax Clearance Certificate ;
(*d*) Evidence of annual registration with NESREA ;
(*e*) NAFDAC permit (chemicals for pharmaceuticals and food & beverage industries) ;
(*f*) The list of chemicals stating quantities to be imported (standard units) and the intended use (s) of the chemicals ;
(*g*) The Material Safety Data Sheet (MSDS) and Transport Emergency Card for the chemicals to be imported ;
(*h*) Evidence of registration with Pharmaceuticals Manufacturers Group of the Manufacturers Association of Nigeria (PMG-MAN) (for pharmaceutical industries) ; and
(*i*) Evidence of membership with Food and Beverage Recycling Alliance (FBRA) (for food, beverage and tobacco industries).

Importers of chemicals are to note the following —

(*i*) Annual registration is a prerequisite for obtaining environmental import clearance ;
(*ii*) Any item or quantity not cleared within the year will not be carried over to the next year but treated as fresh import ;
(*iii*) Where there is need to import more items or quantity after obtaining the annual clearance, a fresh application will be required;
(*iv*) Charges shall be based on certain environmental parameters such as volume and eco-toxicity ;

(*v*) A release letter will be issued for each import by the nearest NESREA field office to all those who have obtained the Annual Clearance Certificate. The quantity released will be deducted from the annual approved quantity to be imported ;

(*vi*) All the above shall apply to obtain an Export Clearance Permit.

EIGHTEENTH SCHEDULE

[*Regulation* 21 (4)]

SUPPORTING DOCUMENTS AND INFORMATION REQUIRED FROM IMPORTERS OF MERCURY-ADDED PRODUCTS

Applications for Environmental Import Clearance for Mercury-added products under regulation 21(1) shall be submitted to the Agency and shall contain the following information and documents —

(*a*) the product's common or generic name and trade name, if any ;

(*b*) the total quantity of mercury contained in the product, expressed in milligram ;

(*c*) the estimated quantity to be manufactured or imported by the applicant in a calendar year ;

(*d*) an identification and description of each known use ;

(*e*) evidence that, at the time of the application, there is no technically or economically feasible alternative to or substitute for the product that achieves a similar result as would be achieved by using the product containing mercury, and has a less harmful effect on the environment or on human health than the product containing mercury ;

(*f*) copy of a plan that identifies and describes the measures that the applicant will take to minimize or eliminate any harmful effect that the mercury contained in the product has or may on the environment and human health including measures to ensure that the mercury is handled safely and is not released into the environment during normal use of the product and at the end of its useful life ;

(*g*) a statement that the plan is to be implemented within 30 days after the day on which the clearance is issued ; and

(*h*) the location where the information and supporting documents are kept.

All the above shall apply to obtain an Export Clearance Permit.

NINETEENTH SCHEDULE

[*Regulation* 8(2)]

MANUFACTURING PROCESSESS IN WHICH MERCURY AND MERCURY COMPOUNDS ARE USED

Manufacturing processes in which mercury and mercury compounds are used	Phase out date
Chlor-Alkali production	2025
Acetaldehyde production in which mercury or mercury compounds are used as a catalyst	2018

TWENTIETH SCHEDULE

[*Regulation* 8]

MANUFACTURING PROCESSESS

Measures to be taken by the parties shall include but not limited to :

(*a*) reduce the use of mercury in terms of per unit production by 50 per cent by the year 2020 or as soon as the effective date of these Regulations ;

(*b*) promoting measures to reduce the reliance on mercury from primary mining;

(*c*) taking measures to reduce emissions and releases of mercury to the environment ;

(*d*) supporting research and development in respect of mercury-free catalysts and processes ;

(*e*) not allowing the use of mercury five years after the Conference of the Parties to the Minamata Convention shall have established that mercury-free catalysts based on existing processes have become technically and economically feasible ; and

(*f*) reporting to the Conference of the Parties to the Minamata Convention on its efforts to develop and/or identify alternatives and phase out mercury use in accordance with Article 21 Article 21 of the Minamata Convention.

Measures to be taken by the parties shall include but not to be limited to :

(*a*) measures to reduce the use of mercury aiming at the phase out of this use as fast as possible and within 10 years of the entry into force of the Minamata convention or on the effective date of these Regulations;

(*b*) reduce emissions and releases in terms of per unit production by 50 per cent by 2020 or on the effective date of these Regulations Prohibiting the use of fresh mercury from primary mining ;

(*c*) supporting research and development in respect of mercury-free processes ;

(*d*) not allowing the use of mercury five years after the conference of the parties has established that mercury-free processes have become technically and economically feasible ;

(*e*) reporting to the conference of the parties on its efforts to develop and identify alternatives and phase out mercury use in accordance with Article 21 of the Minamata Convention.

Measures to be taken by the parties shall include but not limited to :

(*a*) taking measures to reduce the use of mercury, aiming at the phase out of this use as fast as possible in Nigeria, and shall be within 10 years of the entry into force of the Minamata convention or on the effective date of these Regulations.

(*b*) taking measures to reduce the reliance on mercury from primary mining ;

(*c*) taking measures to reduce emissions and releases of mercury to the environment ;

(*d*) encouraging research and development in respect of mercury-free catalysts and processes ;

(*e*) reporting to the conference of the parties on its efforts to develop and identify alternatives and phase out mercury use in accordance with Article 21 of the Minamata Convention.

Paragraph 6 of Article 5 of the Minamata Convention shall not apply to this manufacturing process.

Production of polyurethane using mercury containing catalysts.

TWENTY-FIRST SCHEDULE

[Regulation 9]

LIMITS FOR PROCESS WASTEWATER AND CONTAMINATED STORM WATER FROM CHEMICALS PRODUCTION PLANTS DISCHARGED TO SURFACE WATERS

S/NO	*Pollutant or parameter*	*Limit*
1.	pH	6–9
2.	BOD	50 mg/l
3.	COD	250
4.	Oil and grease	10
5.	TSS	50 mg/l
6.	Heavy metals, total	10 mg/l
7.	Arsenic	0.1 mg/l
8.	Cadmium	0.1 mg/l
9.	Copper	0.5 mg/l
10.	Iron	3.5 mg/l
11.	Lead	0.1 mg/l
12.	Total Mercury	0.005mg/l
13.	Nickel	0.5 mg/l
14.	Selenium	0.1 mg/l
15.	Silver	0.5 mg/l
16.	Zinc	2.0 mg/l
17.	Chromium Hexavalent	0.1 mg/l
18.	Chromium Total	0.5 mg/l
19.	Ammonia	10 mg/l
20.	Fluoride	20 mg/l
21.	Chlorine, total residual	0.2 mg/l
22.	Phenols	0.5 mg/l
23.	Phosphorus	2.0 mg/l
24.	Sulfide	1.0 mg/l

TWENTY-SECOND SCHEDULE

[*Regulation 9*]

MERCURY LIMITS IN AIR

S/No.	*Pollutant or parameter*	*Limits* ($ng\ L^{-1}$)
1.	Total Mercury	5-80
2.	Elemental Mercury Hg(0)	<0.005
3.	Reactive Gaseous Mercury (RGM)	5-50
4.	Total Particulate Mercury, TPM	5-50
5.	Methyl Mercury. MeHg	0.005-0.5

TWENTY-THIRD SCHEDULE

[*Regulation 9*]

MERCURY LIMITS IN SOIL

S/No.	*Pollutants or parameters*	*Limits (mg/kg)*
1.	Aluminium (Al)	10,000-300,000
2.	Arsenic (As)	1-50, 1-40
3.	Antimony (Sb)	
4.	Barium (Ba)	100-3,000
5.	Beryillium (Be)	
6.	Cadmium (Cd)	0.01-0.7
7.	Chromium (Cr)	1-1,000;5-3,000
8.	Copper (Cu)	2-100
9.	Iron (Fe)	7,000-550,000
10.	Lead (Pb)	2-200
11.	Magnesium (Mn)	20-3,000
12.	Mercury (Hg)	0.01-0.3
13.	Nickel (Ni)	5-500
14.	Selenium (Se)	0.01-2.0
15.	Silver (Ag)	0.01-5.0
16.	Thallium (Ti)	
17.	Zinc (Zn)	10-300

TWENTY-FOURTH SCHEDULE

[Regulation 25 (8) (a)]

GUIDELINES FOR IMPLEMENTING THE SPRAY SERVICE PROVIDER (SSP) MODEL

The Spray Service Provider (SSP) is a proven intervention model that addresses issues of inappropriate use and waste disposal of pesticides and agro-chemical by end users. The manufacturers and importers of pesticide and agro-chemicals shall establish SSP model with the Agency as it relates to their product, which involves the following steps :

(*a*) training of agents and retailers on appropriate application and waste disposal of their pesticides and agro-chemicals of their company ;

(*b*) selection and training of relatively literate farmers as end-users of the companies on proper handling and appropriate way of praying the pesticides and agro-chemicals of their company ;

(*c*) safe use of Personal Protective Equipment (PPE) ;

(*d*) safe handling and disposal of the empty pesticide and agro-chemical container through the Buy-Back programme of the Agency ;

(*e*) facilitate the trained SSPs to in turn provide spray services to other farmers in their community for a fee ;

(*f*) facilitate proper linkage between the trained SSPs and the trained retailers for access to good quality pesticides and agro-chemicals ; and

(*g*) provide evidence of establishing functional SSP programme to the Agency.

Agency to verify claims by companies and issue necessary certification to the Company as an integral part of the EPR programme of the Agency.

TWENTY-FIFTH SCHEDULE

[*Regulation 4*]

CHARACTERISTICS OF HAZARDOUS CHEMICALS

The Characteristics of hazardous chemicals include —

(*a*) flammable ;

(*b*) corrosive ;

(*c*) reactive ;

(*d*) toxic ; and

(*e*) Environmentally bio-accumulative.

MADE at Abuja this 8th day of November, 2023.

DR. IZIAQ ADEKUNLE ADEBOYE SALAKO
Honourable Minister of State, Environment and Ecological Management